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DMS-100 Family

DMS VoiceMail

Maintenance Messages (SEER) Manual

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About this document

This reference manual lists and describes the System Event and Error Reports (SEERs) generated by the DMS VoiceMail system software. It is used primarily by system administrators, field technicians, and other maintenance personnel to either verify the proper functioning of a DMS VoiceMail system or to diagnose its problems.

This manual is organized into three parts. First, the Introduction, describes how the SEERs are to be used and interpreted. Second, the SEER classes, which make up the bulk of the guide, give such information as the Type, Severity, Cause, Impact, and Action of each SEER that may be produced by the DMS VoiceMail system software. Third, the Appendix, lists various lower-level error and return codes produced by a SEER which gives the user even more detailed information.

Introduction

What is a SEER?

The acronym SEER stands for System Event and Error Report. It is a report generated by the system software that identifies, either on a terminal or on a printer, every significant system event or error communicated to it by the DMS Voicemail system software components. The information provided in the report is used primarily by system administrators and maintenance personnel to either identify that a system is running correctly or to diagnose a problem.

An Event, for example, may be the completion of a backup and generate a SEER. Events do not usually indicate any problem with DMS VoiceMail functionality.

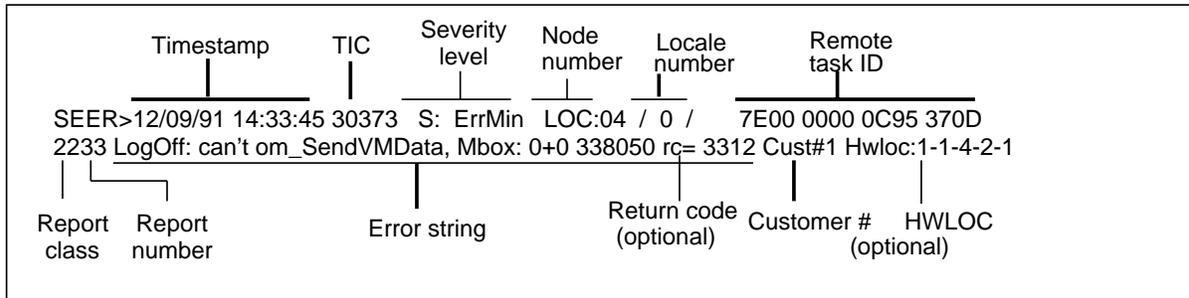
An Error is a hardware or software fault, which may prevent DMS VoiceMail from functioning properly. For example a failed backup would generate a SEER but would not alter functionality.

The system administrator must be able to read, interpret, and judge the severity of SEERs in order to know the difference between regular system events and system errors and be able to diagnose potential problems. The system administrator must also be ready to provide a collection of SEER reports to the support personnel in the case of a major system problem. SEERs provide important information on the history of an error which the maintenance personnel need in order to diagnose the problems effectively.

SEERs are generated and stored on disk at the time of error or event. SEERs can be printed as the events or errors happen or they can be viewed and printed at a later time.

A sample SEER is shown in Figure 1.

Figure 1
Parts of a SEER



Each SEER is identified by a number. This number consists of two parts:

- 1 Report Class
- 2 Report number

Report classes

This manual devotes a chapter to each class. The overview page of each chapter defines the function of the software component and the impact that errors in the component have on the system. For example, volume server (Class 11) errors prevent access to accounts on the volume associated with the volume server. In other classes, the system may require rebooting.

The different classes of SEERs are used to communicate information that varies depending on the status or problem that is being reported. To accommodate these different types of information, each class of SEERs has a slightly different format and different parameters, as described in the overview page for each class. For example, Class 24 SEERs contain locale and channel numbers and the overview page explains how the channels are numbered.

DMS VoiceMail returns errors in lower level software to a higher or calling program, which in turn generates a SEER containing the lower level return code. For example, when the Voice Processor (Class 24) encounters an error, the Voice Processor passes a return code to the Voice Service Shell (Class 27) which produces a SEER.

Reports

Each class contains up to 99 reports. Depending on the problem, reports may generate one of several messages. Figure 1 shows a SEER as it appears on the printer and terminal.

A SEER generally contains the following information:

- Timestamp

- Tic (Time in Centiseconds)
- Severity Level
- Node Number
- Locale number
- Remote Task ID
- Report class
- Report number
- Error String
- Return code (optional)
- Customer # (optional)
- HWLOC (Hardware Location) # (optional)

Timestamp

The timestamp can be configured and indicates the time that the SEER is put out. It is generated by the Real Time Clock on the Bus controller.

TIC

TIC is the time in centiseconds between the production of the SEER and the last reboot of DMS VoiceMail. However, due to the accuracy of the timestamp, the TIC is rarely used.

Severity level

The severity level indicates the significance of a SEER event or error. The level also identifies the support personnel who should be concerned with each SEER message. Examples of severity levels in the SEER message are ErrCri, AdmMaj and DebInf (expanded on in the *SEER filtering* and *SEER severity* sections).

Node number

Node number indicates the node where the program reporting the SEER is running.

Locale number

This number ranges from 0 to 99 and represents the area in memory in which the program was running. SEERs from the same locale and same node occurring within a short period of time are probably related.

Remote task ID

This number is the TASK ID of the task that issued the SEER. The first two hex digits indicate which node issued the SEER:

Node 1: 01	Node 11: 21
Node 2: 05	Node 12: 25
Node 3: 17	Node 13: 12

Node 4: 16	Node 14: 0D
Node 5: 0C	Node 15: 32
Node 6: 09	Node 16: 2D
Node 7: 37	Node 17: 13
Node 8: 36	Node 18: 06
Node 9: 2C	Node 19: 33
Node 10: 29	Node 20: 26

Report class

The report class is a group of reports pertaining to a particular component, for example, Class 26 reports are about the Peripheral Processor.

Report number

This number ranges from 0 to 99 and represents a particular report for a particular class. For example, Report Number 01 in Class 20 concerns an integrity error in the Voice Handler.

Error string

This is a short description of the problem. Abbreviations and codes are used in the message because of space limitations.

Return code

An optional field, a return code is issued from lower level software where the problem originates. It may be a special code, such as call progress status. The return codes are listed in Appendix A. It is important to look up the return code, because they often indicate the real cause of the problem.

Customer number

The customer number is an optional field that identifies the customer affected by a problem within the DMS VoiceMail Multi-customer feature. In single customer systems, the SEERs will always indicate the customer number as number 1. Some problems can affect all customers. Therefore, the customer number is printed only when the problem is specific to one customer.

Hardware location

The hardware location is an optional field that identifies the hardware affected by the problem. Some problems can affect several components so the location is printed only when the problem is localized. See "Hardware database" section for information on interpreting hardware location fields.

Hardware database

The DMS VoiceMail Hardware database contains about 500 HWLOC (Hardware Database Locations) entries. Each HWLOC refers to a particular piece of hardware such as a Voice processor card or a piece of external cabling such as the T1 Links. This information is provided to correlate the HWLOCs and Task IDs printed on the SEERs to the physical hardware that sits inside the SPM cabinet.

Nodes

In SPM 02 there are 14 nodes. They are numbered from 1 to 10 and 13 to 16. In the Hardware database the HWLOC is 1-1 for node 1 and 1-2 for node 2 and so on. A node consists of: a 68K card, one or two associated cards, and one or two transition modules.

For each node the table below specifies the location of the 68K card within the SPM.

Node Num	Position of 68K card Shelf	Slot	First 8 Digits of Program TaskID	Node Type
1	Lower	8	01000000	MSP
2	Lower	12	05000000	MSP
3	Lower	30	17000000	SPN
4	Lower	29	16000000	SPN
5	Lower	19	0C000000	SPN
6	Lower	16	09000000	SPN
7	Upper	30	37000000	SPN
8	Upper	29	36000000	SPN
9	Upper	19	2C000000	SPN
10	Upper	15	28000000	SPN
11	Reserved for future use.			
12	Reserved for future use.			
13	Lower	25	12000000	TIFN
14	Lower	20	0D000000	TIFN
15	Upper	25	32000000	TIFN
16	Upper	20	2D000000	TIFN

Telephony channels

A T1 channel may be identified in one of four ways. The 22nd channel on the first T1 Link is used as an example and is summarized in the first line of the table below.

- 1 In the MMI it is identified as Link A Channel 22. The software that corresponds to that channel is a VSS that runs on Node 3. All link A VSSs run on Node 3.
- 2 The Primary HWLOC is reported by the Primary T1 Link Handler which runs on Node 13. It is 1-13-1-1-22 which read Module 1, Node 13, Card 1, Span 1, Channel 22.
- 3 The Secondary HWLOC is reported by the Secondary T1 Link Handler which runs on Node 14.
- 4 The External equipment HWLOC is reported by the VSS. This is a logical HWLOC that refers to the external cable rather than an actual piece of hardware and this fact is denoted by putting 250 as the node number. It is 1-250-1-1-22, which reads, Module 1, (250-nothing), First Pair of TIFNS, First Span, Channel 22.

Note the Span is identified by dropping the Channel number from the HWLOC.

(1) MMI Link Channel Node	(2) Primary HWLOC	(3) Secondary HWLOC	(4) External Equipment HWLOC
A 22 3	1-13-1-1-22	1-14-3-1-22	1-250-1-1-22
B 22 4	1-13-1-2-22	1-14-3-2-22	1-250-1-2-22
C 22 5	1-13-1-3-22	1-14-3-3-22	1-250-1-3-22
D 22 6	1-13-1-4-22	1-14-3-4-22	1-250-1-4-22
E 22 7	1-15-1-1-22	1-16-3-1-22	1-250-2-1-22
F 22 8	1-15-1-2-22	1-16-3-2-22	1-250-2-2-22
G 22 9	1-15-1-3-22	1-16-3-3-22	1-250-2-3-22
H 22 10	1-15-1-4-22	1-16-3-4-22	1-250-2-4-22

DSP Ports

There are two ways to identify a DSP Port. The MMI numbers the DSPs from 1 to 24. On each node there are two VP-12 cards both of which have 12 DSP ports. On node 3 and 7 the VP-12 cards are in positions 2 and 3, while on nodes 4,5,6,8,9 and 10 they are in positions 1 and 2. A SEER with an HWLOC of 1-3-2-1-1 corresponds to Port number 1 on Node 3 in the MMI DSP Port Status screen and it reads Module 1, Node 3, Card 2, DSP1, Port 1.

MMI Port Num	Node 3 HWLOC	Node 4 HWLOC
1	1-3-2-1-1	1-4-1-1-1
2	1-3-2-1-2	1-4-1-1-2
3	1-3-2-1-3	1-4-1-1-3
4	1-3-2-2-1	1-4-1-2-1
5	1-3-2-2-2	1-4-1-2-2
6	1-3-2-2-3	1-4-1-2-3
7	1-3-2-3-1	1-4-1-3-1
8	1-3-2-3-2	1-4-1-3-2
9	1-3-2-3-3	1-4-1-3-3
10	1-3-2-4-1	1-4-1-4-1
11	1-3-2-4-2	1-4-1-4-2
12	1-3-2-4-3	1-4-1-4-3
13	1-3-3-1-1	1-4-2-1-1
14	1-3-3-1-2	1-4-2-1-2
15	1-3-3-1-3	1-4-2-1-3
16	1-3-3-2-1	1-4-2-2-1
17	1-3-3-2-2	1-4-2-2-2
18	1-3-3-2-3	1-4-2-2-3
19	1-3-3-3-1	1-4-2-3-1
20	1-3-3-3-2	1-4-2-3-2
21	1-3-3-3-3	1-4-2-3-3
22	1-3-3-4-1	1-4-2-4-1
23	1-3-3-4-2	1-4-2-4-2
24	1-3-3-4-3	1-4-2-4-3

SEER descriptions

A SEER description contains the *Type* and *Severity* of each SEER, a *Cause* for the SEER, the *Action* to be taken to correct an error, and usually the *Impact* that an error may have on the rest of the DMS VoiceMail System. Figure 2 shows a sample SEER description.

Figure 2
Sample SEER description

<p>35 Type: Admin Severity: Major Cause: Request to test invalid memory size. Impact: Diagnostics not performed. Action: Check parameter and retry the test.</p>

Often, the *Action* is to look up the return code to determine the underlying cause.

If the SEER was merely an event announcement, *Impact* is omitted and no *Action* is necessary.

Some problems require you to contact your Northern Telecom support organization for further assistance.

Analyzing SEERs

If you are not familiar with the parameters in the SEER's class, read the overview pages to learn how to decipher the numbers in the SEER.

Often a SEER is preceded by a related SEER from lower level software. The related SEER may have the same return code, same locale and similar time or the same parameter, such as mailbox number. If recommended, look for related SEERs. (Usually the first SEER is the cause of the problem.) Since hardware problems can cause software problems, investigate hardware problems first.

Example 1

If you try to add a directory entry to a full volume, a directory error will occur and a SEER will be generated. The SEER will have the number 3116 (31 in the Report Class field and 16 in the Report number field) and a return code of 1103 (rc=1103 will appear in the Return code field). The report class number indicates that something has happened to the Directory Server software component and the return code indicates that the Volume Server has been affected. You can discover this information by finding the description of the SEER in this NTP and by looking up the return code in the appendix.

By analyzing the return code first, you will discover that the volume is full. Free up space on the volume, to add the directory entry.

In this example, the Directory server addresses the volume server. The volume server failed to perform a particular function and, therefore, passed a return code back to the Directory Server. The Directory Server issued a SEER and provided the volume server's return code.

Example 2

If SEER 2230 is produced in a session, this means that the Voice Messaging component failed to close a message. As the manual will explain, this SEER is preceded by other SEERs that have the same mailbox number or return code. By working with all the various pieces of information in the SEER reports and the Maintenance Messages Manual and by following its logical path, you will be able to solve a problem or identify an event.

SEER filtering

DMS VoiceMail systems are capable of “filtering” SEERs so that only those relevant to the viewer of the SEERs are displayed.

SEER filtering allows the total number of SEERs being presented on a system to be minimized to those requiring the administrator's attention, which should reduce the effort required to process them. This will allow the administrator to concentrate on those SEERs which are important and which may be indicative of system trouble.

SEER filtering types

SEER filtering is adjustable, depending on the user and the use of the SEERs. The SEER filtering on a particular system can be set through the use of a special utility (SE_UTIL) which is available to the DMS VoiceMail craftsperson. The values are:

- 1 **ERROR**-Error-level SEERs are those which may indicate a system problem, to be corrected by the administrator, possibly with the assistance of technical support. Examples of Error-level SEERs include: hardware errors; software errors; indications that a hardware error may develop. Error-level SEERs use one of the Critical, Major, Minor, or Info *Severity* levels described in the following section.
- 2 **ADMIN**-Administration-level SEERs are those which indicate system problems or configuration difficulties that are likely to be handled by the system administrator without external assistance (for example, a non-DMS VoiceMail user whose calls are forwarded to the DMS VoiceMail system). When the filtering level is set to Admin, the Error-level SEERs are also printed. Admin-level SEERs use one of the Critical, Major, Minor, or Info *Severity* levels described in the following section.

- 3 **SYSTEM**-System-level SEERs are those which indicate normal system behaviour, and others which do not require action (for example, nightly audits by the various sub-systems of DMS VoiceMail). When the filtering level is set to System, the Error- and Admin-level SEERs are also printed. System-level SEERs are for information only and use the Info *Severity* level described in the following section.
- 4 **DEBUG**-Debug-level SEERs are those which provide detailed information on low-level system behaviour, for further analysis when a system problem is suspected. When the filtering level is set to Debug, *all* SEERs (including those for all other levels) are printed. Debug-level SEERs are for information only and use the Info *Severity* level described in the following section.

Regardless of the SEER filtering level, all SEERs are stored in the SEER file for as long as possible. This allows a technician who is alerted to a possible problem by an Error-level SEER to look back at any System-level SEERs that were also generated at that time but which were not printed or displayed for the administrator.

SEER throttling

One root cause event may trigger the generation of many SEERs. For instance, disabling a node and causing its disk to disappear will create SEERs from any other node attempting to access that disk. To reduce SEER proliferation, the system has the capability of acting as a throttle for the SEERs—in other words, it controls their output.

When SEER throttling is invoked, a SEER is generated to alert users of that action. All SEERs are still captured in the SEER log; however, it is only the printing of them that is inhibited.

SEER throttling will “timeout” after an interval and allow the system to continue to print the prohibited SEER type. If the original error condition still exists, another spurt of SEERs will be printed prior to throttling setting in again. This provides you with an ongoing monitor of the error situation.

SEER severity levels

The Error and Admin-Level SEERs can use any one of the four levels of severity, i.e., *Critical*, *Major*, *Minor*, or *Info*. However, the System and Debug filtering levels only use the *Info* severity level.

The four levels of severity are defined as follows:

Critical: Any service-affecting problem subject to the following:

- turns on critical alarm relay if SPM, or maps alarm to major (RSM)
- requires immediate attention by the administrator or technician.
- a dropped call is not treated as critical

- “non-essential” services are not treated as critical

Examples of critical faults include: major base feature not operating, system reboot, any Software Configuration problem.

Major: Any service-threatening problem

- turns on major alarm relay
- does not require immediate attention but requires work soon from either the administrator or technician. Major problems should be cleared within 3 hours.

Examples of major faults includes an unrecovered hardware fault to a non-critical component such as a tape drive or voice card; volume nearly full; a recovered fault to a critical component; and excessive minor problems.

Minor: Problems with no impact to the system or users

- no immediate attention required
- fault can exist for some time
- turns on minor alarm relay

Info: Normal event worthy of logging.

- does not turn on alarm

Four types of *Info* messages are defined

System Info:	event expected to occur
Error Info:	event not expected to occur
Admin Info:	information for administrator
Debug Info:	information for designer

Normal operation

The default SEER filtering level (which is recommended for normal operation) is SYSTEM.

System-level SEERs are those which indicate normal system behaviour, and others which do not require action (for example, nightly audits by the various sub-systems of DMS VoiceMail). When the filtering level is set to SYSTEM, the ERROR- and ADMIN-level SEERs are also printed.

Special circumstances

The ADMIN level of filtering is designed to allow the administrator to concentrate on those SEERs which are important, and not overload the administrator with informational SEERs. This will eliminate the nightly audit SEERs and others which do not require the attention of the typical system administrator.

During any system debugging or analysis by a technician, the SEER filtering level is set to SYSTEM or DEBUG, so that the normal operation of the system can be verified. The SEER filtering level is automatically set to SYSTEM.

When a DMS VoiceMail system's user configuration and day-to-day maintenance is being done a by a third-party administrator, the SEER filtering level can be set to ERROR. This would allow any potentially urgent error-indicating SEERs to be displayed at the customer's site, so that the customer is able to bring the problem to the attention of the administrator. The administrator could reset the filtering level to ADMIN when using the system in order to check for less urgent problems.

Note 1: Some SEERs have not yet been categorized and may be printed regardless of their severity. Further refinements to the categorization process will be made in subsequent releases of DMS VoiceMail software. SEERs that are not categorized are treated as minor errors.

Note 2: When system options procedures are run, the SEER filtering level will be reset to the default SYSTEM level. Ask the NT Support technician to reset the SEER filtering level to its original state after the procedures have been run, if the level is other than SYSTEM.

Changing SEER filtering level

Only your NT support organization can make changes to the SEER filtering level. Call them if you wish to change your SEER filtering level. To change the level, refer to the "SEER Utility (se_util)" chapter in the *ETAS Utilities Guide* (NTP 297-7001-520).

Class 11 Volume Server (VS)

A volume is a subdivision of a disk consisting of two “sub-volumes”; one for text, one for voice data. A volume is identified by an integer. Each volume has its own volume server which

- allows access to the volume by application programs (“clients”)
- controls concurrent access to files on the volume
- manages a list of free disk blocks for the volume
- keeps track of the amount of space used by each user
- performs garbage collection to remove expired messages
- Each volume server runs an audit every night to recover any disk blocks during the day (normally blocks are lost only due to program restarts or other error conditions. SEERs mark the beginning and end of the audit. These are normal.

Most VS SEERS represent normal events such as audits or minor errors affecting single user operations. Serious errors can indicate either that the volume server is not running properly or that the volume is corrupted in some way-any or all accesses to the volume may fail. In the case of a user volume, this denies access to all mailboxes on that volume. In the case of the system volume (VS1), the entire system may become non-operational.

A class 11 SEER may contain

- name of the volume server (e.g., VS2)
- path of the problem file (i.e., /volume/cabinet/file)
- lower level return code
- explanatory text
- hex data

01

Type: Error

Severity: Minor

Cause: One of the following tasking errors occurred resulting in failed inter-task communication. If the text says

1. "VS_n:tasking error in VSProcs i", a client trying to communicate with volume server n encountered task error i. This may indicate that a volume server is not running, resulting in denial of service to some or all users. Normally a volume server will be restarted automatically.
2. "VS_n:buffer problem sending to OFS 21", VS_n could not inform an OFS of an update to a cached file due to inadequate buffers on the OFS. Clients may not see the update.
3. "VS_n:send to update of OFS failed i", VS_n could not inform an OFS of an update to a cached file due to taskresult. Clients may not see the update.

Action: Case 1. If the volume server does not restart automatically, contact your Northern Telecom support organization.

Cases 2-3. Redo the update or reboot the system.

NT: In case 1 above, use PRM_CONTROL to ensure that the specified VS is running. Start it if necessary. Notify your Northern Telecom development organization about chronic problems.

03

Type: Admin

Severity: Major/Critical

Cause: The volume is full. The text volume has reached 90-95% (Major) or more than 95% (Critical) of its physical or virtual capacity, or the voice volume is at or has reached more than 90% (Major) of its physical or virtual capacity.

Impact: No more files can be increased in size or added to the volume. The operation in progress has failed.

Action: Check that the nightly audit is functioning. Remove files on the volume in question. If the operation involved VS1, remove directory entries or OM files. The effect of corrective actions may be delayed until the night audit is run. Consider redistribution of users on multi-node systems, turning on automatic message deletion, or buying a storage upgrade.

NT: Use VSMUP to manually start an audit. Use MD to delete unnecessary files.

04

Type: Error

Severity: Minor

Cause: A bad blockID has been passed to the VS. If the text says

1. “VS_n:Bad BlockID passed into vs_ReadBlock”, a client attempted to read an invalid block on volume n. May be a problem with the task issuing the SEER.
2. “VS_n:Bad BlockID passed into vs_WriteBlock”, a client attempted to write an invalid block on volume n. May be a problem with the task issuing the SEER.
3. If the text says “VS_n:GiveBlk *xxxx*” then the VS noticed an invalid blockID when trying to free up a block.

Impact: May indicate a corrupted file. If so, subsequent accesses to that file may also fail. Impact to users depends what file it is.

Action: Look at previous SEERs to try to identify reason for corruption or identify the offending client program. If possible, remove the bad file. The problem could be the result of a hardware problem. Run hardware diagnostics. If the error persists, contact your Northern Telecom support organization.

NT: If a corrupted file is suspected, remove it using MD. Serious corruption may require restore from backup. Notify your Northern Telecom development organization if this occurs chronically.

05

Type: Error

Severity: Minor

Cause: The VS for a certain volume was not found. This could be because the VS is not running, or a FID has a bad volume ID or volume ID = 0.

Impact: The operation attempted by the user will fail until the problem is fixed.

Action: Ensure that the system is fully operational and all nodes are running. Look at Locale Number and Remote TaskID parts of SEER to identify offending client program. If the problem persists, contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to ensure all volume servers are running. If file corruption is suspected, attempt to identify bad file and recreate it. Restore from backup if necessary. Notify your Northern Telecom development organization if this occurs chronically.

06

Type: Debug

Severity: Info

Cause: Two clients tried to update the same file at the same time.

Impact: The second client will not be able to update the file until the first client is finished.

Action: Try the operation later. If the problem persists, disable and re-enable the nodes mentioned in the SEER.

NT: None.

07

Type: Error

Severity: Minor

Cause: The volume server has opened the maximum number of files for its volume.

Impact: No more files can be opened until some are closed.

Action: Problem is likely to be transient. If it persists, it may be cleared by disabling or re-enabling the node on which the volume server is running.

NT: Notify your Northern Telecom development organization of a possible engineering problem. Use the ADJUST command in VSMUP to increase MAXOFR parameter.

08

Type: Error

Severity: Minor

Cause: The VS has reached its limit for number of queues.

Impact: Effect should be transient, some operations will fail until some files are closed.

Action: Reduce the maximum message length in the MMI through the Voice System Administration/Options menu screens.

NT: Notify your Northern Telecom development organization of a possible engineering problem.

09

Type: Error

Severity: Minor

Cause: The volume server has reached the limit for number of clients.

Impact: Usually transient. The operation fails but the error should stop occurring after some files are closed.

Action: There may be too many users. For multi-node systems, ensure the users are distributed evenly on each node. If the problem persists, contact your Northern Telecom support organization.

NT: May indicate an engineering problem. If the system has been properly set up and the volume parameters are correct, notify your Northern Telecom development organization. The VSMUP ADJUST command can be used to increase MaxCR slightly.

10

Type: Error

Severity: Minor

Cause: A client had a file open in quick-read-write mode too long and VS closed the file.

Impact: The client will have to reopen the file.

Action: May indicate an overloaded system or an excessively big cabinet. If the error persists, contact your Northern Telecom support organization.

NT: Determine the filename from the FID; see SEER 1118. Then try to find out why VS closed the file. You may need to increase the qRWTimeout parameter using the VSMUP ADJUST command. Notify your Northern Telecom development organization.

11

Type: Error

Severity: Minor

Cause: A client passed an invalid FID to the volume server or tried to access a file which was closed by the VS.

Impact: The client will have to reopen the file. Usually minor impact affecting only one client.

Action: Look for previous SEERs indicating files closed by the Sweeper or due to quick-read-write timeouts. Investigate those SEERs. If the problem persists, contact your Northern Telecom support organization.

NT: This is usually a result of some previous abnormal condition. Notify your Northern Telecom development organization if this occurs chronically.

12

Type: Error

Severity: Minor

Cause: A client tried to open a file using a NIL taskID.

Impact: Operation fails.

Action: Collect all SEERs and contact your Northern Telecom support organization.

NT: May indicate software bug. Obtain all SEERs and notify your Northern Telecom development organization.

13

Type: Error

Severity: Minor

Cause: A client tried an invalid or non-existent function.

Impact: The operation fails.

Action: Collect all SEERs and contact your Northern Telecom support organization.

NT: May indicate software bug. Obtain all SEERs and notify your Northern Telecom development organization.

15

Type: Error

Severity: Minor

Cause: A client frees up a block that the VS thinks is not in use.

Impact: May indicate corruption on a volume.

Action: Collect all SEERs and contact your Northern Telecom support organization.

NT: If this problem occurs in normal operation it may indicate corruption of a volume. Force an audit using VSMUP and watch for SEERs during audit. A successful audit may repair the problem, but other forms of volume corruption may have already been caused. In cases of serious corruption, it may be necessary to recover from backup. Notify your Northern Telecom development organization.

16

Type: Error

Severity: Minor

Cause: Corrupted block buffer.

- Impact:** May indicate a problem with application software but not volume corruption.
- Action:** Disable and re-enable the node mentioned in this SEER. If problem persists Contact your Northern Telecom support organization.
- NT:** Notify your Northern Telecom development organization if this is a chronic problem.

17

- Type:** Error
- Severity:** Minor
- Cause:** Bad media type.
- Impact:** See SEER 16.
- Action:** See SEER 16.
- NT:** If the problem persists, contact your Northern Telecom development organization.

18

- Type:** Error
- Severity:** Minor
- Cause:** Volume Server limit for Block Records (BRs) exceeded.
- Impact:** The volume server closes the file. Subsequent accesses may result in SEER 11. The operation in progress fails.
- Action:** May be transient problem. If it persists, contact your Northern Telecom support organization.
- NT:** This SEER prints out the remote task ID and the file id (FID) (in hexadecimal). For example, the following message may be printed:

1118 VS202: closing FID 7C0000000405550500CB31100000EEFD1D7

This FID is set in the format:

ddddddddddddddVVVVxxxxAAAAAAAAssss

where:

dddddddddddddd is the remote task ID (in hexadecimal) of the task that opened the file,

VVVV is the volume of the file (in hexadecimal).

xxxx is internal information,

AAAAAAAA is the address (in hexadecimal) of the root block,

ssss is internal information.

Determine the filename from the FID (file volume and block address) using utility VS_TRAVCAB, and then try to establish why the file is running out of block records.

19

Type: Error

Severity: Minor

Cause: Client attempted to write a block to the OFS.

Impact: The operation fails.

Action: Collect all SEERs and contact your Northern Telecom support organization.

NT: Notify your Northern Telecom development organization.

21

Type: Error

Severity: Critical

Cause: The disk could not be accessed.

Impact: All operations requiring access to that disk will fail.

Action: The return code is an MI_SERVER diagnostic code. Look it up in the Appendix. Possible hardware problem with the disk subsystem. Run disk diagnostic.

NT: The disk may be faulty or is not running.

22

Type: Error

Severity: Minor

Cause: Bad parameters passed to VS by a client.

Impact: Operation fails.

Action: Contact your Northern Telecom support organization.

NT: If this occurs in normal operation it may indicate a software problem, notify your Northern Telecom development organization.

23

Type: Error

Severity: Minor

Cause: Volume server detected termination of an Open File Server (OFS).

Impact: Access may be slower for files which are normally cached.

Action: Look for SEERs giving reason for OFS termination. Disable and re-enable the node on which the OFS was running.

NT: This SEER is normal if the node that the OFS was running on died. Otherwise, collect all SEERs and notify your Northern Telecom development organization.

24

Type: Error

Severity: Critical

Cause: Insufficient memory for volume server to perform operation.

Impact: If it occurs on startup, no accesses to that volume will work. Otherwise either an on-line backup or audit may fail. Chronic audit failure can result in loss of disk space and a volume full condition.

Action: If the administrator is using network, hardware, or voice service administration, free memory by exiting these menus. Ensure that no tools or utilities are in use. The condition can be cleared by disabling and re-enabling the node. Memory can also be freed by disabling DSP ports on that node. If the problem persists, contact your Northern Telecom support organization.

NT: Check system configuration. Memory fragmentation can occur, particularly if utilities have been used. If the problem is chronic, it indicates an engineering problem. Notify your Northern Telecom development organization with details of customer configuration.

26

Type: Error

Severity: Minor

Cause: The volume server found a discrepancy between its volume name and the volume name stored on disk. Can be caused by renaming a volume or restoring one to a different name.

Impact: The volume server cannot start and the volume cannot be accessed.

Action: Contact your Northern Telecom support organization.

NT: Ensure that a restore or autobuild operation was performed correctly. If necessary, use BURP RENAMEVOL command to rename the volume to its original name.

27

Type: Error

Severity: Minor

Cause: A client passed a bad key to the volume server.

Impact: The client's activity will fail.

Action: Look for preceding SEERs indicating files closed. Collect SEERs and contact your Northern Telecom support organization if the error persists.

NT: Possible software bug, notify your Northern Telecom development organization if a chronic problem.

28

Type: Error

Severity: Minor

Cause: Volume server has reached limit of quick-read-write files.

Impact: Usually a transient error resulting in some failed operations until files are closed.

Action: If the error persists, contact your Northern Telecom support organization.

NT: May indicate an engineering problem with this system configuration. Notify your Northern Telecom development organization. If necessary, use VSMUP ADJUST command to increase MaxqRW parameter on that VS.

29

Type: Error

Severity: Minor

Cause: Volume server complains of a control conflict when asked to perform two mutually exclusive tasks. Can be caused by trying to perform an on-line backup during an audit or volume compress operation.

Impact: Cannot perform second operation until first one is complete.

Action: Wait until volume server is in normal state for the operation. If the problem was due to a scheduled backup, change the schedule time so that it does not coincide with the nightly audit. If the volume server appears to be stuck in a bad state, disable and re-enable the node where the Volume Server is running.

NT: Find out the state of the VS from VSMUP's OMDisplay command. If the state is not "normal", look at SEERs printed at an earlier time and determine the operation VS has started.

30

Type: Error

Severity: Critical

Cause: A disk error occurred reading or writing a block.

Impact: May indicate transient or serious disk problems.

Action: Look up the MI_SERVER error code in the Appendix. If these occur consistently on a user volume, consider moving users to a disk which is less heavily used. If the problem persists contact your Northern Telecom support organization. Other error codes may indicate hardware problems with the disk subsystem. Run disk diagnostic.

NT: Chronic occurrence in particular configurations may indicate engineering problems. Notify your Northern Telecom development organization. Ensure disk load is evenly distributed across available disks. If hardware problems are suspected, follow disk maintenance procedures.

31

Type: Error

Severity: Critical

Cause: Volume Server could not write some of its system data.

Impact: Space may be lost on the volume.

Action: Wait for nightly audit, or try deleting files on the volume. If the problem persists, contact your Northern Telecom support organization.

NT: Use VSMUP to run an audit. Use MD to remove small files if audit fails.

32

Type: System

Severity: Info.

Cause: A nightly volume server audit is being run. Depending on the text of the SEER, this may be perfectly normal or may indicate minor or major system problems. The following SEERs are normal; if the text says

1. "VS_n:Starting Audit", a normal audit has begun.
2. "VS_n:Finished Audit: # blocks recovered = n", a normal audit has completed and n blocks have been recovered.
3. "VS_n:Starting Garbage Demon dd/mm/yy hh:mm:ss", a normal garbage demon has started removing files which were obsolete as of the specified time.

4. “VSn:Garbage Demon Finished-files deleted=m”, the garbage demon completed. The number of files it removed is m.
5. “VSn:Starting Shadow Disk Audit...”, the shadow disk audit has started.
6. “VSn:Finished Audit: # blocks mismatched=x”, the shadow disk audit has finished. If x is non-zero, this indicates that the shadow disks are not in sync.

Other SEERs are abnormal and indicate problems encountered during either the audit, garbage demon, or on-line backup. The auditor accesses every file on the volume so it will tend to catch any file corruptions.

Impact: Cases 1–5: None.

Case 6: Different data may be read from the shadow disks causing file inconsistency.

Action: Cases 1 to 5: None.

Case 6: Disable the shadow disk feature on the node the VS is running on, and then run a regular VS audit to check for file integrity. Any error reported during the audit may indicate file corruption. It may be necessary to restore the volume from backup.

NT: Cases 1–5: None.

Case 6: Disable the shadow disk feature on the node the VS is running on, and then run a regular VS audit to check for file integrity. Any error reported during the audit may indicate file corruption. It may be necessary to restore the volume from backup.

33

Type: Error

Severity: Critical

Cause: The volume server has discovered a damaged bit map.

Impact: Up to 8192 free blocks may be lost.

Action: Look up the return code in the Appendix. Check that the nightly audit recovers space without error by viewing the overnight SEER messages.

NT: Use VSMUP to run audit.

34

Type: Error

Severity: Critical

Cause: The volume server has failed to start due to an error given as the return code.

Impact: No access to the volume.

Action: Look up the return code in the Appendix. If the problem persists contact your Northern Telecom support organization.

NT: May be caused by volume corruption. Check hardware. Restore from backup.

35

Type: Error

Severity: Minor/Major

Cause: One of several internal failures in the Volume Server. If the text says

1. “VSn:Audit bit map error (text) m” or “VSn:Audit bit map error (voice) m”, the auditor is correcting an error in the volume block allocation bit maps. This error can occur normally in some rare circumstances when files are being deleted during an audit. If it occurs often, it may indicate a more serious consistency problem, contact your Northern Telecom support organization. The block number is given as m.
2. That a task crashed, an internal task has terminated abnormally for reasons given in the SEER. The task will be restarted automatically.

Impact: Normally no impact, but may indicate serious problems.

Action: If problem persists, collect SEERs and contact your Northern Telecom support organization.

NT: Notify your Northern Telecom development organization with details of chronic occurrences.

36

Type: Error

Severity: Minor

Cause: A user is trying to exceed his or her space allocation.

Impact: The user will not be able to add files.

Action: Ask the user to delete files or give the user more space.

NT: Find out the space allocated for the user and compare it with the space the user is currently using. If space allocated is less than the space used, notify your Northern Telecom development organization with details of chronic occurrences.

37

Type: Error

Severity: Minor

Cause: The Volume Server is being told to bill space to a user which it does not know about. If a system reboots or a volume server restarts, and new users had been added that day, this error may result if those users attempt to access their mailboxes.

Impact: New users may not be able to use the system until the next day.

Action: Ensure the audit runs correctly that night. This will cause the new users to be recognized by the VS. Alternatively, delete and re-add the users.

NT: Problem is corrected by using VSMUP to run an audit.

38

Type: Error

Severity: Minor

Cause: An error occurred writing some of the Space Records and some data was lost. The return code indicates cause of the error.

Impact: The audit failed to write some user's space records to disk. Those users may be unable to compose messages.

Action: Look up the return code in the Appendix.

NT: Try running audit using VSMUP.

39

Type: Error

Severity: Minor

Cause: The volume server has reached the limit for number of users.

Impact: No more users can be added to the volume.

Action: Redistribute users to other volumes. If all volumes are full, consider expanding system.

NT: The customer is trying to exceed the maximum number of users in the system. The ADJUST users command in VSMUP can be used to increase the MaxSR parameter slightly, but other system engineering problems may occur.

41

Type: Error

Severity: Minor

Cause: A volume compress operation is being run to reduce the size of a volume. This is normally done only during installation, conversion or expansion. Depending on the text of the SEER there may or may not be a problem. The return code may give more information about any errors.

Impact: If the SEER indicates failure to compress, the volume has not been compressed.

Action: Investigate the return code if one is given. If the text says "Specified size to compress into too small!" then delete some files and re-try the operation.

NT: Investigate the return code if one is given. If the text says "Specified size to compress into too small!" then delete some files and re-try the operation.

42

Type: Error

Severity: Minor

Cause: The temporary volume ran out of space during an on-line backup due to too much activity on the volume during the backup or due to the backup taking too long (e.g., it stopped while waiting for a new tape to be put in).

Impact: The on-line backup fails.

Action: Perform the backup when the system is less busy. Do not leave the system waiting for a new tape for long periods.

NT: Perform the backup when the system is less busy. Do not leave the system waiting for a new tape for long periods.

43

Type: Error

Severity: Minor

Cause: vs_e Lock Timeout. Server table locked too long by client s/w.

Impact: No further volume table updates on that processor. No user input.

Action: Disable and re-enable node.

NT: Disable and re-enable node.

45

Type: Error

Severity: Minor

Cause: Too many Open File Servers registered with VS.

Impact: OFS caching partially disabled, possible performance impact.

Action: Contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

46

Type: Error

Severity: Minor

Cause: Audit failed. See the text in the SEER for the actual cause.

Impact: Problems resulting in "Audit Failure" mean that lost blocks are not recovered. Since blocks are usually lost only due to abnormal system conditions, the impact may be minimal unless the audit fails every time. Consistent audit failure will lead to the volume full condition (see SEER 03) due to lost blocks.

Problems resulting in garbage demon failure mean that some or all of the obsolete messages may not have been deleted from users' cabinets. In time, this too can lead to a full volume. Other problems encountered during an audit do not prevent the audit from recovering lost blocks, but may indicate problems with particular system files or users' cabinets.

Action: Periodically check the SEERs to ensure that all nightly audits are completing successfully. If problems persist, contact your Northern Telecom support organization.

NT: If the SEER contains a return code, look it up to find the underlying cause. If the SEER contains a pathname to a file other than a user's cabinet, attempt to determine the problem with the file using MD. If the return code is 1007, use MD to remove the file indicated by the pathname. Notify your Northern Telecom development organization of chronic problems in normal system operation.

If a SEER includes a file name, the problem can often be fixed by removing the indicated file or cabinet. In particular, if the file name refers to a userID (e.g., "/2/users/Smit2345") try removing files in the user's cabinet or deleting and re-adding the user. (In this case the user is Smith at box 2345.)

47

Type: Debug

Severity: Info.

Cause: Task which had a file open died without closing the file.

Impact: None. VS cleans up.

Action: If problems occurs too frequently contact the Northern Telecom support organization.

NT: If a task died without closing a file, the VS sweeper task will close the file at a rate determined by the Volume's sweeping rate parameter.

48

Type: Error

Severity: Minor

Cause: Error during online backup. Look up error code to determine reason for failure.

Impact: Backup fails

Action: Retry backup.

NT: Backup can only be run when VS is in normal state. Check the state of the VS.

49

Type: Admin

Severity: Info.

Cause: Normal Backup. If "VS_n:starting on-line backup" then an on-line backup operation has started. If "VS_n:On-line backup done, #roots=m" then an on-line backup operation is complete. If m is greater than 900, consider doing the backup at a quieter time.

Impact: None.

Action: None.

NT: None.

50

Type: Debug

Severity: Info

Cause: A client task still has an obsolete version of a file open even though the file has been updated.

Impact: Normally none. It can result in the same problems as SEER 18, if it persists.

Action: If problem persists, contact your Northern Telecom support organization.

NT: See SEER 18 for information on how to determine which task and file are involved.
Get the client task to close and reopen the file so that a new version is seen.

51

Type: Error

Severity: Minor

Cause: VS had error invoking Open File Server.

Impact: Some tasks may not see new data.

Action: Disable and re-enable node defined in the SEER.

NT: The OFS may have died due to some previous OFS error. Collect all SEERs and notify the development organization.

Class 12 Cabinet Access Method (CM)

A cabinet stores system files and user files (voice messages). A user's personal cabinet is often called a "mailbox". The Cabinet Access Method is a set of routines that

- stores, retrieves, and updates files and related information in cabinets
- maintains and retrieves counters for different types of files
- performs buffered operations on a cabinet

Cabinet errors can cause

- a service, such as Express Messaging, to become unusable, if a system cabinet (for example, Corporate Directory) is affected
- messages to go undelivered, if an MTA cabinet is affected
- a mailbox to become inaccessible, if a user's personal cabinet is affected
- volume server audit errors to occur

A Class 12 SEER contains

- cabinet File ID
 - record ID
-

50

Type: Error

Severity: Minor

Cause: A cabinet may be corrupt. For example part of the cabinet may be missing.

Impact: The cabinet cannot be accessed.

Action: Attempt to determine which cabinet is corrupted. If it is a user's cabinet, delete and re-add the user. If the error persists, collect SEERs and contact your Northern Telecom support organization.

NT: Can be caused by volume corruption. Check for other evidence of bad data on this volume. If necessary, restore from backup. Notify your Northern Telecom development organization if this is a chronic problem.

51

Type: Error

Severity: Minor

Cause: Attempt to access a cabinet with an incompatible version of software. The software version is shown in the SEER.

Impact: No cabinets are accessible making the system unusable.

Action: Ensure that the system is correctly installed or converted. Contact your Northern Telecom support organization.

NT: If the problem occurs only on one cabinet, try to delete or recreate that cabinet. If there is evidence of volume corruption, restore from backup.

80

Type: Error

Severity: Minor

Cause: A bad parameter was passed to a CM function. May result from previous file system error.

Impact: The operation fails.

Action: Investigate any errors preceding this one. If the error persists, collect SEERs and contact your Northern Telecom support organization.

NT: If this occurs during normal system operation, it is likely a minor software problem. Notify your Northern Telecom development organization.

82

Type: Debug

Severity: Info.

Cause: A minor failure has occurred while attempting a CM operation. The return code and text give the underlying cause. Usually results from cleaning up after some previous failure. For example, trying to delete a file which is no longer there.

Impact: In most cases there is no impact except a few lost blocks which should be recovered by the nightly VS audit.

Action: If the error persists, collect SEERs and contact your Northern Telecom support organization.

NT: If this occurs frequently during normal system operation, it is likely a minor software problem. Contact your Northern Telecom development organization.

Class 13 Open File Server (OFS)

An Open File Server program runs on each node of the system. It manages an area of memory called a “cache” which is used to hold blocks of frequently read disk files in order to speed up access to these files by reducing the number of disk reads needed. On multi-node systems, the OFS also manages an area on the locally attached disk. This area is used to reduce the number of times data has to be obtained from other nodes. Both voice and text blocks can be cached. These errors can cause slow response from Voice Messaging and increased load on the MI_SERVER.

A Class 13 SEER may contain a lower level return code.

03

Type: Error

Severity: Minor

Cause: A tasking error occurred when the OFS tried to register with a Volume Server. The tasking error is given in the SEER.

Impact: Usually negligible. The OFS in question will not cache files from the VS in question. This may result in a minor performance slowdown.

Action: Disable and re-enable the node running the OFS.

NT: Check to see if the VS that the OFS could not register is running. Disable and re-enable the node running the OFS.

04

Type: Error

Severity: Minor

Cause: An error occurred when the OFS tried to register with a volume server. The error code is given in the SEER.

Impact: See SEER 03.

Action: Look up the error code given in the SEER. Disable and re-enable the node running the VS.

NT: Look up the error code given in the SEER. Disable and re-enable the node running the VS.

05

Type: Error

Severity: Minor

Cause: The Open File Server could not load files in its control file. This usually means:

1. The volume server, related to the files, is down.
2. The control file has errors.

Impact: The file will not be cached. Some prompts may be inaccessible.

Action: Contact your Northern Telecom support organization.

NT: Check Starlist. Check central file /1/ofsvm. Check that files exist and are not corrupted. Look up lower layer return code.

06

Type: Error

Severity: Minor

Cause: The size of a shared memory file has changed in the interval between segment allocation and reading of the file.

Impact: The file will not be cached.

Action: Disable and re-enable the node.

NT: Disable and re-enable the node.

09

Type: Error

Severity: Minor

Cause: A tasking error occurred when pushing data to client program. It can be caused if a client program dies while reading data from OFS.

Impact: User operation fails.

Action: Look up task result given in SEER. If the problem persists, collect SEERs and contact your Northern Telecom support organization.

NT: If this is a chronic problem not resulting from other programs dying, contact your Northern Telecom development organization.

10

Type: Error

Severity: Minor

Cause: Open File Server had the startup error specified by the error code in the SEER.

Impact: The OFS will not start. Voice Messaging will not work on that node.

Action: Look up error code. Contact your Northern Telecom support organization.

NT: Look up error code. Check Startlist. Check control file /1/OFS/VM. Check that all the files mentioned in the control file exist and are not corrupted.

Class 14 MI Server and Interface (MI)

The MI layer is a virtual disk handler. All disk requests pass through the MI layer. There is one mi_server on each node. Disk requests on the local node just pass through the MI interface, while disk requests for remote nodes pass through the mi_server on the remote node. Each disk, or pair of disk if they are shadowed, has a unique name; the name starts with 'FAST' and since there is only one disk associated with each node, nodes greater than node 1 have the node number appended to the FAST, e.g. the disk on node 5 would have the name FAST5.

Class 14 errors occur when data can not be read from, or written to, the disk. The severity of the error depends on what part of the disk is affected. In some extreme situations the system will not boot-up if the programs can not be read from disk. Less severe problems would only affect a single user, or possibly a single message. The actual disk error is reported by the disk driver software. If a disk is reported faulty it should be replaced.

13

Type: Error

Severity: Minor

Cause: Not applicable.

Impact: None.

Action: See Appendix A for return code information.

NT: This is a disk error. Look for any disk related SEERs.

20

Type: Error

Severity: Minor

Cause: The mi_procs has problems invoking mi server entries or the mi server failed to perform the requested operation.

Impact: The mi operation will fail.

Action: The SEER contains the tasking result or error code. Check the tasking result/error code against the SEER manual for more information.

NT: Check the return code in the SEER to determine the actual cause of the problem.

30

Type: Error

Severity: Minor

Cause: The mi_procs could not rendezvous with the mi_server.

Impact: A client could not read a block from disk, or write a block to disk. An associated SEER indicates the service that was affected.

Action: The return code is a task result which indicates the reason why the rendezvous failed. If an invalid task ID is returned then the most likely error is that the remote node has failed; check for SEERs indicating the failure of a node.

NT: This indicates a possible problem with the bus interconnecting the nodes, the sanity of the remote node, or the remote mi_server.

34

Type: Error

Severity: Minor

Cause: The mi_procs could not rendezvous with the mi_server.

Impact: The control operation to the mi_server could not be executed. An associated SEER indicates the service that was affected.

Action: The return code is a task result which indicates the cause of the problem. If an invalid task ID is returned then the most likely error is that the remote node has failed; check for SEERs indicating the failure of a node. This problem can only occur when creating or deleting a volume, which for normal operation is only during a backup.

NT: This indicates a possible problem with the bus interconnecting the nodes, the sanity of the remote node, or the sanity of the mi_server.

40

Type: Error

Severity: Critical

Cause: The mi_procs in the Monitor could not allocate, or find the shared memory segment 'MIVSSEG'.

Impact: The system will not operate if it can not allocate this memory.

Action: Repair the hardware.

NT: The most likely cause will be hardware failure in the CPU or Memory.

42

Type: Error

Severity: Critical

Cause: The mi_server in the OSP could not allocate memory for buffering.

Impact: The system will not operate if it can not allocate this memory.

Action: Repair the hardware.

NT: The system will not operate if it can not allocate this memory. The most likely cause will be hardware failure in the CPU or Memory. In a Classic DMS VoiceMail system the most likely cause will be a bad SCSI/RAM card, as this memory is allocated in the SCSI RAM.

57

Type: Error

Severity: Minor

Cause: The mi_server could not send data that it read from disk to the client. This means that the disk was successfully read, but the data could not be transferred to the client, usually on a remote node.

Impact: The client did not receive data from disk.

Action: Try to match this SEER code (1457) with another SEER that reports the 1457 as a return code. If the remote node is alive and receives the error, then the client will report the error as well with the 1457 as part of it's SEER. The severity of the problem will be based on the severity of the operation of the client.

If no matching SEER can be found, then there could be a bus inter-connection problem, or a problem with the remote node. Check for SEERs that indicate a failure of the client or the node. Contact your Northern Telecom Support organization.

NT: This indicates a possible problem with the bus interconnecting the nodes, the sanity of the remote node, or the client on the remote node. Check the SEERs for problems with nodes or internode communication.

The SEER contains the Task Result, and a hex dump of the remote pointer. Usually the Task Result will be adequate to determine why the the push failed. The hex dump contains additional information which is sometimes useful; the first 8 characters of the hex dump are the virtual address for the push, the next four characters are the locale, and the last 8 characters are the physical node.

58

Type: Error

Severity: Minor

Cause: The mi_server could not receive data from a client that it was supposed to write to the disk. This means that no attempt was even made to write to the disk.

Impact: The data from the client was not written to disk.

Action: Try to match this SEER code (1458) with another SEER that reports the 1458 as a return code. If the remote node is alive and receives the error, then the client will report the error as well, with the 1458 as part of it's SEER. The severity of the problem will be based on the severity of the operation of the client.

If no matching SEER can be found, then there could be a bus inter-connection problem, or a problem with the remote node. Check for SEERs that indicate a failure of the client or the node. Contact your Northern Telecom Support organization.

NT: This indicates a possible problem with the bus interconnecting the nodes, the sanity of the remote node, or the client on the remote node. Check the SEERs for problems with nodes or internode communication.

The SEER contains the Task Result, and a hex dump of the remote pointer. Usually the Task Result will be adequate to determine why the the pull failed. The hex dump contains additional information which is sometimes useful; the first 8 characters of the hex dump are the virtual address for the push, the next four characters are the locale, and the last 8 characters are the physical node.

65

Type: Error

Severity: Critical

Cause: The mi_server failed its sanity test.

Impact: All disk access for that node will fail.

Action: Determine the cause of the sanity failure from the associated SEERs. This would usually be caused by bad hardware, the most likely being the CPU or memory.

NT: Go to VMSUP. Run the commands “miinfo vtable” and “miinfo mitable”. Also run the command “conbrolb all”. Collect all info and notify your Northern Telecom development organization.

67

Type: Debug

Severity: Minor

Cause: An unknown disk error has occurred.

Impact: The mi control request will fail.

Action: Check for disk problem.

NT: This is possibly a software problem. Determine the return code from the SEER and notify your Northern Telecom development organization.

69

Type: Debug

Severity: Minor

Cause: An attempt was made to re-allocate memory which has already been allocated.

Impact: No impact.

Action: This SEER is for information only, no action is required unless it occurs recurrently. This SEER is expected after a mi_server is restarted, as the mi_server allocates the memory when the system boots up. During normal operation this SEER should not occur. If problem persists contact your Northern Telecom support organization.

NT: None.

71

Type: Debug

Severity: Info

Cause: A mi_server defer queue was allocated and has timed out.

Impact: No impact.

Action: This SEER is for information only, no action is required unless it occurs recurrently. An allocated defer queue is released if it has been allocated for a specified time. This is a recovery mechanism in the event that the SCSI driver never returns with a disk operation. It could indicate a possible problem with the disk or SCSI hardware. In that case contact your Northern Telecom support organization.

NT: The disk may be bad. Run disk diagnostic.

72

Type: Error

Severity: Critical

Cause: The internal MI-table is corrupted.

Impact: All disk access for that node is unreliable.

Action: Try to re-initialize the disk again (warning: all previous data stored on the disk will be lost). If problem persists, contact your Northern Telecom support organization.

NT: The disk may be bad or not initialized. Run disk diagnostic.

75

Type: Error

Severity: Minor

Cause: The mi_server could not send the Control Block that it read from disk to the client.

Impact: This means that the disk was successfully read, but the data could not be transferred to the client. This SEER only occurs when changes are made to the virtual volumes on disk, and hence would be associated with a backup to tape, or during the installation of a system.

Action: Try to match this SEER code (1475) with another SEER that reports the 1475 as a return code. If the remote node is alive and receives the error, then the client will report the error as well with the 1475 as part of its SEER. The severity of the problem will be based on the severity of the operation of the client.

The return code of the SEER contains the Task Result, and a hex dump of the remote pointer. Usually the Task Result will be adequate to determine why the the push failed. The hex dump contains additional information which is sometimes useful; the first 8 characters of the hex dump are the virtual address for the push, the next four characters are the locale, and the last 8 characters are the physical node.

If no matching SEER can be found, then there could be a bus inter-connection problem, or a problem with the remote node. Check for SEERs that indicate a failure of the client or the node. If problem persists contact your Northern Telecom support organization.

NT: This indicates a possible problem with the bus interconnecting the nodes, the sanity of the remote node, or the client.

76

Type: Error

Severity: Minor

Cause: The `mi_server` could not receive the Control Block from a client that it was supposed to write to the disk.

Impact: This means that no attempt was even made to write to the disk. This indicates a possible problem with the bus interconnecting the nodes, the sanity of the remote node, or the client on the remote node. This SEER only occurs when changes are made to the virtual volumes on disk, and hence would be associated with a backup to tape, or during the installation of a system.

Action: Try to match this SEER code (1476) with another SEER that reports the 1476 as a return code. If the remote node is alive and receives the error, then the client will report the error as well, with the 1476 as part of it's SEER. The severity of the problem will be based on the severity of the operation of the client.

If no matching SEER can be found, then there could be a bus inter-connection problem, or a problem with the remote node. Check for SEERs that indicate a failure of the client or the node. If problem persists contact your Northern Telecom support organization.

NT: This indicates a possible problem with the bus interconnecting the nodes, the sanity of the remote node, or the client.

The return code of the SEER contains the Task Result, and a hex dump of the remote pointer. Usually the Task Result will be adequate to determine why the the pull failed. The hex dump contains additional information which is sometimes useful; the first 8 characters of the hex dump are the virtual address for the push, the next four characters are the locale, and the last 8 characters are the physical node.

77

Type: Error

Severity: Minor

Cause: A tasking error occurred while trying to read or write the mi control block to disk; the control block contains the list of virtual volumes defined on the disk.

Impact: This SEER only occurs when changes are made to the virtual volumes on disk, and hence would be associated with a backup to tape, or during the installation of a system. It usually would indicate a disk, or disk driver hardware problem. Another SEER with a return code of 1477 will indicate the actual operation that failed.

Action: If the error occurred during backup then try the backup again. The return code of the SEER contains the Task Result which indicates why the disk operation failed.

NT: This could be caused by a node failing, or a failure in the interconnection bus or hardware.

78

Type: Error

Severity: Minor

Cause: A tasking error occurred while trying to do a direct read from disk; a direct read is when the operation does not rendezvous with the mi_server.

Impact: The client did not receive data from disk. An associated SEER indicates the service that was affected.

Action: The return code of the SEER contains the Task Result which indicates why the disk operation failed.

NT: The disk may be too busy or bad. If the problem persists, run disk diagnostic.

79

Type: Error

Severity: Minor

Cause: A tasking error occurred while trying to do a direct write to disk; a direct write is when the operation does not rendezvous with the mi_server. It usually would indicate a disk, or disk driver hardware problem.

Impact: The client did not write data to disk. An associated SEER indicates the service that was affected.

Action: The return code of the SEER contains the Task Result which indicates why the disk operation failed.

NT: The disk may be too busy or bad. If the problem persists, run disk diagnostic.

80

Type: Error

Severity: Critical

Cause: There was an error in processing the mi internal volume tables in RAM. These volume tables are read from the mi control block on the disk, and saved in RAM.

Impact: The system will not operate correctly.

Action: The return code of the SEER contains indicates the cause of the problem. The most probable error would be that there was an error reading the control block, which would normally indicate a disk drive or SCSI hardware failure. After this error the system will not operate correctly, and will have to be repaired. Contact your Northern Telecom support organization.

NT: The return code will give an indication of the hardware that should be replaced. This is most likely the disk or SCSI hardware, but could also be RAM or CPU on the specific node.

88

Type: Debug

Severity: Minor

Cause: The mi_tools cannot allocate memory for the requested control function.

Impact: The mi_control request will fail.

Action: Repair the hardware.

NT: The most likely cause will be hardware failure in the CPU or memory.

89

Type: System

Severity: Info

Cause: Bad data was supplied to the mi_server. This occurs normally when a single node is re-booted and the other nodes are active.

Impact: The mi_server ignores the data.

Action: This can be ignored if it occurs occasionally during the warm boot of a node. However if it occurs during normal operation then there could be a possible memory or inter node bus communication problem. Contact your Northern Telecom support organization.

NT: Check the memory and inter node busses for a possible hardware error.

Class 15 Backup and Restore (BURP)

The Backup and Restore Program (BURP) backs up system and user data automatically at a time set by the System Administrator or whenever it is invoked by a user. Depending on the number of nodes in the system, the Backup and Restore Program backs up to disk or tape.

Usually, BURP errors have no or little impact on system operation. But the backup must be tried again. If the backup fails again, then the problem should be solved immediately. Backing up data periodically is strongly recommended.

Problems that persist after the recommended actions have been taken may indicate a hardware problem. In this case contact your support organization.

A Class 15 SEER generally contains a lower level return code.

01

Type: Error

Severity: Minor

Cause: The tape successfully recovered from an error. This is an error report of the recovery. Under normal operation this error condition should not occur. It would indicate media or hardware problems.

Impact: The tape operation failed.

Action: Clean the tape heads and then retry operation with a new tape cartridge.

NT: Replace the tape drive.

02

Type: Error

Severity: Minor

Cause: The tape drive can not be accessed or the tape cartridge is not inserted correctly.

Impact: The tape operation failed.

Action: Remove and re-insert the tape cartridge. If that does not work then try again with a new tape cartridge.

NT: This could also indicate a tape or SCSI hardware error. Check the jumpers on the tape drive. Check the SCSI cabling and SCSI hardware. The tape drive, cabling or SCSI hardware might have to be replaced.

03

Type: Error

Severity: Minor

Cause: There was a flaw in the tape medium or an error in the recorded data.

Impact: The tape operation failed.

Action: Clean the heads of the tape drive. Try the operation again. If that fails clean the heads again and retry the operation with a new tape cartridge.

NT: Replace the tape drive.

04

Type: Error

Severity: Minor

Cause: The tape drive hardware is faulty.

Impact: The tape operation failed.

Action: Contact your Northern Telecom support organization.

NT: Replace the tape drive.

06

Type: Error

Severity: Major

Cause: An error occurred on the SCSI bus. The software has attempted to recover by resetting the SCSI bus.

Impact: Tape and disk operations during the reset are aborted.

Action: No action required. Any operations that were accessing the SCSI bus report errors as part of the recovery action.

NT: If this problem occurs frequently there could be a hardware problem with the Tape drive, disk drive SCSI cabling or SCSI hardware.

07

Type: Error

Severity: Minor

Cause: The tape cartridge is write protected or the incorrect type.

Impact: Tape operation failed.

Action: If the tape is write protected turn the write protect dial to allow writing to tape. Also check that it is the correct cartridge type for the tape drive. (Refer to the Administrator Guide for correct tape cartridges.)

NT: If the tape is write protected turn the write protect dial to allow writing to tape. Also check that it is the correct cartridge type for the tape drive. (Refer to the *System Administration Guide* for correct tape cartridges.)

08

Type: Error

Severity: Minor

Cause: No data was found on the tape.

Impact: Data was not found on the tape drive.

Action: Clean the tape heads. Check that data exists on the tape cartridge by using the list command from BURP. Retry the operation.

NT: Clean the tape heads. Check that data exists on the tape cartridge by using the list command from BURP. Retry the operation.

10

Type: Error

Severity: Minor

Cause: This error should not occur as the SCSI copy command is not used by the software.

Impact: Tape operation failed.

Action: Contact your Northern Telecom support organization.

NT: Check SCSI hardware for possible faults.

11

Type: Error

Severity: Minor

Cause: The tape drive aborted a SCSI command.

Impact: The tape operation failed.

Action: Try operation again.

NT: If the error occurs frequently the tape drive should be replaced.

13

Type: Error

Severity: Minor

Cause: An end of tape was reached without writing all the data to the tape cartridge.

Impact: The tape operation failed.

Action: Clean the heads and try the operation again. If the problem still occurs repeat the operation with a new tape.

NT: If the error occurs frequently the tape drive should be replaced.

15

Type: Error

Severity: Minor

Cause: Faulty SCSI hardware, as this is an invalid return code from the tape drive.

Impact: The tape operation failed.

Action: Try the operation again.

NT: Check the SCSI hardware, tape drive and disk drive for possible faults.

17

Type: Error

Severity: Minor

Cause: Faulty SCSI hardware.

Impact: The tape operation failed.

Action: Try the operation again.

NT: Check the SCSI hardware, tape drive and disk drive for possible faults.

18

Type: Error

Severity: Minor

Cause: Faulty SCSI hardware.

Impact: The tape operation failed.

Action: Repair the faulty hardware.

NT: Check the SCSI hardware, tape drive and disk drive for possible faults.

19

Type: Error

Severity: Minor

Cause: No tape drive was detected when attempting a tape operation. This would usually occur during tape backup operations.

Impact: The tape operation will fail.

Action: Ensure that a tape drive is present and connected correctly.

NT: This usually indicates a problem with the tape drive hardware or SCSI cabling.

35

Type: Error

Severity: Minor

Cause: An error occurred reading the disk during a tape backup.

Impact: There will be errors if a recovery is attempted from the tape backup.

Action: Check the disk for possible faults. Restart the backup. The SEER reports the volume and block that could not be read.

NT: The disk drive might have to be replaced. Try to re-map the faulty blocks using the SCSI utilities.

36

Type: Error

Severity: Major

Cause: Restore could not find the source cabinet for restoring user profiles.

Impact: No user profiles for specified node were restored.

Action: This would usually be as a result of trying to restore a node that was never backed up originally. If restoring from a disk backup then restart the restore for that node from a tape backup. If restoring from tape then restart the restore for that node from a different set of backup tapes.

NT: This would usually be as a result of trying to restore a node that was never backed up originally. If restoring from a disk backup then restart the restore for that node from a tape backup. If restoring from tape then restart the restore for that node from a different set of backup tapes.

37

Type: Error

Severity: Major

Cause: Restore could not open the source cabinet for restoring user profiles.

Impact: No user profiles for specified node were restored.

Action: This could be as a result of trying to restore a node that was never backed up originally. If restoring from a disk backup then restart the restore for that node from a tape backup. If restoring from tape then restart the restore for that node from a different set of backup tapes.

NT: This could be as a result of trying to restore a node that was never backed up originally. If restoring from a disk backup then restart the restore for that node from a tape backup. If restoring from tape then restart the restore for that node from a different set of backup tapes.

38

Type: Error

Severity: Major

Cause: The restore could not find the destination user cabinet for copying user profiles.

Impact: No user profiles for specified node were restored.

Action: This would be as a result of an error earlier in the restore procedure. Check the SEERs for any errors and restart the restore for the specific node.

NT: This would be as a result of an error earlier in the restore procedure. Check the SEERs for any errors and restart the restore for the specific node.

39

Type: Error

Severity: Minor

Cause: An unexpected error was returned from the SCSI driver.

Impact: The tape operation failed.

Action: Attempt the operation again. This could indicate possible hardware problems with the tape drive or any of the SCSI bus hardware.

NT: Check all the SCSI bus hardware. Replace the defective components.

40

Type: Error

Severity: Minor

Cause: The return code indicates the cause of failure, possibly with associated SEERs.

Impact: The tape backup failed.

Action: This SEER will produce a return code. Look up the SEER in the main section of the NTP which corresponds to the return code number in the Appendix. Follow the action for correcting the problem given in that SEER and try the backup again.

NT: This SEER will produce a return code. Look up the SEER in the main section of the NTP which corresponds to the return code number in the Appendix. Follow the action for correcting the problem given in that SEER and try the backup again.

41

Type: Error

Severity: Minor

Cause: The return code indicates the cause of failure, possibly with associated SEERs.

Impact: The disk to disk backup failed.

Action: Correct the problem indicated by the return code by looking up the matching SEER in this NTP and then try the backup again.

NT: Correct the problem indicated by the return code by looking up the matching SEER in this NTP and then try the backup again.

42

Type: Error

Severity: Minor

Cause: Could not allocate required memory resources.

Impact: Backup or Restore software will not start up or run correctly.

Action: Try the backup again when the system is less busy.

NT: Alternatively unload another utility which is using the memory. This could also be as a result of BURP already running in another window.

43

Type: Error

Severity: Minor

Cause: Could not initiate backup task.

Impact: Backup and Restore will not start up or run correctly.

Action: Contact your Northern Telecom support organization.

NT: This could be a result of burp already running in another window, or the tape being simultaneously accessed by the MMI. Check that there is no other program accessing the tape. If no other program is accessing the tape then the backup status may be reset by running RESETBACKUP in BURP.

44

Type: Error

Severity: Minor

Cause: The backup task could not inform MMI or BURP that the backup was completed.

Impact: The backup is valid, but future backups might not work.

Action: Contact your Northern Telecom support organization.

NT: This is an unexpected SEER and would possibly indicate software corruption or a software bug. If backup was being run from the MMI then restart the MMI. If the backup was run from BURP quit out of BURP and restart it.

45

Type: Error

Severity: Major

Cause: The restore could not open the destination user cabinet for copying user profiles.

Impact: No user profiles for specified node were restored.

Action: This would be as a result of an error earlier in the restore procedure. Check the SEERs for any errors, correct any problems, and restart the restore for the specific node.

46

Type: Error

Severity: Minor

Cause: Could not find the volume specified in the SEER.

Impact: The tape operation failed.

Action: There are problems with the volumes on disk. Contact your Northern Telecom support organization.

NT: Check the volumes using the LIST command in MUP_PKG.

47

Type: Error

Severity: Minor

Cause: Could not create the destination volume for a disk to disk backup or restore.

Impact: The backup or restore operation failed.

Action: Contact your Northern Telecom support organization.

NT: There could be insufficient space on the disk, or hardware problems related to the disk or SCSI bus. Verify the disk configuration using LIST in MUP_PKG; if the disk configuration is incorrect it should be corrected before the backup or restore is attempted again. If the LIST fails then the disk or SCSI hardware will have to be repaired.

48

Type: Error

Severity: Minor

Cause: Could not obtain volume statistics.

Impact: The backup or restore operation failed.

Action: Usually this would be as a result of attempting an operation on an unknown volume. It could also be as a result of a faulty node on which the volume resides. Check for any associated SEERs to confirm the possible cause.

NT: If the node or disk reveal problems, they may have to be replaced.

49

Type: Error

Severity: Minor

Cause: Blocks could not be read off the disk for the tape backup. The number of blocks lost are given in the SEER. The associated SEERs will indicate which blocks were not read correctly.

Impact: A restore from the backup might fail, depending on which blocks were not recoverable.

Action: Contact your Northern Telecom support organization.

NT: Use SCSI utilities to re-map the bad blocks and retry. The disk may be bad and may need replacement.

50

Type: Error

Severity: Minor

Cause: Could not delete the temporary online backup volume.

Impact: The backup was successful but BURP failed to delete the temporary backup volume. Future backups might fail.

Action: This error is not expected during normal operation and would indicate hardware failure. Perform diagnostics on the system and the disk to isolate the faulty component. This could also indicate that a remote node failed during the backup. If no faulty components are found, contact your Northern Telecom support organization.

NT: If no faulty components exist, contact the development organization with the complete SEER using "se_pkg".

51

Type: Error

Severity: Minor

Cause: There was a tasking error while checking to see if the user wanted to abort the backup operation.

Impact: The backup operation failed.

Action: Retry the operation, possibly at a different time when the system is not as busy.

NT: Retry the operation, possibly at a different time when the system is not as busy.

52

Type: Error

Severity: Minor

Cause: Could not locate VS for an online backup.

Impact: The online backup operation failed.

Action: Usually this would be as a result of attempting an operation on an unknown volume. Correct the volume number before retrying the operation. It could also be as a result of a faulty node on which the volume resides. Check for any associated SEERs to confirm the possible cause.

NT: Ensure that the node and the associated disk are healthy. If necessary, hardware may have to be replaced.

53

Type: Error

Severity: Minor

Cause: Could not rendezvous with the backup task. The task result indicates why the rendezvous failed.

Impact: The backup operation failed.

Action: Contact your Northern Telecom support organization.

NT: If the operation was performed from MMI then restart the MMI. If the operation was performed from burp then run ABORTBACKUP, quit out of BURP, and then restart BURP.

54

Type: Error

Severity: Minor

Cause: An error occurred while copying a user profile during backup or restore. The SEER indicates which user profile was affected and the additional return code will indicate the actual problem.

Impact: The user will not be recovered during restore and recovery.

Action: If it was during a backup then correct the problem with the user and repeat the operation. If it was during a restore and recovery then the user will have to be added after the system has been restarted.

NT: If it was during a backup then correct the problem with the user and repeat the operation. If it was during a restore and recovery then the user will have to be added after the system has been restarted.

55

Type: Error

Severity: Minor

Cause: A backup was attempted while one was already running. For example, a backup may have been started using the MMI and a second one attempted using BURP.

Impact: The second operation fails.

Action: Wait for first operation to finish.

NT: Wait for first operation to finish.

57

Type: Error

Severity: Minor

Cause: The backup task could not locate the volume to be restored on the tape.

Impact: The backup operation fails.

Action: Retry the operation with a tape that does contain the requested volume. If sure that the tape has the volume clean the tape heads and retry with same tape.

NT: Retry the operation with a tape that does contain the requested volume. If sure that the tape has the volume clean the tape heads and retry with same tape.

58

Type: Error

Severity: Minor

Cause: The backup task could not inform MMI or BURP of a backup error.

Impact: The backup operation failed.

Action: Contact your Northern Telecom support organization.

NT: This is an unexpected SEER and would possibly indicate software corruption or a software bug. If backup was being run from the MMI then restart the MMI. If the backup was run from BURP quit out of burp and restart it.

59

Type: Error

Severity: Minor

Cause: Insufficient memory available to create a heap for a user profile backup.

Impact: The backup operation failed.

Action: Contact your Northern Telecom support organization.

NT: Unload other utilities or packages that are using the memory.

60

Type: Error

Severity: Minor

Cause: Insufficient memory to create a heap for running the backup task.

Impact: The backup operation fails.

Action: Contact your Northern Telecom support organization.

NT: Unload other utilities or packages that are using the memory.

61

Type: Error

Severity: Minor

Cause: The backup task could not be registered.

Impact: The backup operation fails.

Action: The name server is full, possibly due to too many tasks running. Try the backup when the system is less busy.

NT: If the backup simply cannot be run, even during a time of less traffic, and it is acceptable to reboot the system, perform the reboot. If the problem persists contact your Northern Telecom development organization.

62

Type: Error

Severity: Minor

Cause: An offline backup can not be performed when the VS for that volume is running.

Impact: The backup operation fails.

Action: Perform an online backup, or shut down the volume server.

NT: Perform an online backup, or shut down the volume server.

63

Type: Error

Severity: Minor

Cause: An error while verifying the volume. The SEER indicates the volume name that had the error. The error block could be up to 8 blocks greater than the number specified in the SEER if it is a text volume.

Impact: The backup or restore failed.

Action: Contact your Northern Telecom support organization.

NT: Use the SCSI utilities to check the operation of the disk. Map out bad blocks on the disk and then retry the backup or restore operation. May have to replace hard disk.

64

Type: Error

Severity: Minor

Cause: A recoverable error occurred during backup, usually due to bad media or dirty tape heads.

Impact: None.

Action: Clean tape heads, and follow recovery action given on the screen. See SEER 49.

NT: Clean tape heads, and follow recovery action given on the screen. See SEER 49.

71

Type: Error

Severity: Minor

Cause: An error occurred trying to read the backup volume while patching the volume. Patching occurs after an online disk to disk backup, or after the restore from tape of a volume that was created from an online backup.

Impact: The backup or restore failed.

Action: Attempt operation again. If it fails check the disk drive for errors. Associated SEERS might indicate the cause of the problem.

NT: If the problem persists, the disk drive may have to be replaced.

72

Type: Error

Severity: Minor

Cause: An error occurred patching a volume after a disk to disk backup, or a restore.

Impact: The backup or restore failed.

Action: Attempt operation again. If it fails check the disk drive for errors. Associated SE-ERS might indicate the cause of the problem.

NT: If the problem persists, the disk drive may have to be replaced.

73

Type: Error

Severity: Minor

Cause: The backup volume time differs more than expected. This is a warning that could indicate that the online backup volume.

Impact: The backup or restore could be faulty.

Action: No action possible. If the restore does not work then a restore from an older backup will have to be performed.

NT: No action possible. If the restore does not work then a restore from an older backup will have to be performed.

74

Type: Error

Severity: Minor

Cause: Invalid root block in backup volume.

Impact: The backup or restore failed.

Action: For disk to disk backup try the operation again. For restore try restoring from another set of backup tapes.

NT: For disk to disk backup try the operation again. For restore try restoring from another set of backup tapes.

75

Type: Error

Severity: Minor

Cause: A tasking error occurred while trying to prompt for a new tape.

Impact: The backup failed.

Action: Retry the operation when the system is not as busy.

NT: If the problem persists, you may have to reboot the system at a convenient time.

76

Type: Error

Severity: Minor

Cause: A backup was attempted while a backup task was already running. This situation should not occur during regular operation.

Impact: The attempted backup would not begin.

Action: This situation should not occur during regular operation. If it is acceptable to reboot your system, then reboot it at a convenient time; otherwise, contact your Northern Telecom support organization.

NT: If any other backups are running (e.g., from BURP), either let them finish or kill them. Otherwise, kill the MMI and retry the operation when the MMI comes back up.

77

Type: Error

Severity: Minor

Cause: Could not shut down the profile backup volume.

Impact: Backup operation failed.

Action: The return code will indicate the cause of the problem. Retry operation when system is not as busy.

NT: This could also indicate a possible problem with the VS901 or VS902 entries in the startlist.

78

Type: Error

Severity: Minor

Cause: Could not start up the volume server for the profile backup volume.

Impact: Backup operation failed.

Action: The return code will indicate the cause of the problem. Retry operation when system is not as busy.

NT: This could also indicate a possible problem with the VS901 or VS902 entries in the startlist.

79

Type: Error

Severity: Minor

Cause: The restore software expected a voice volume on tape, but it could not be found. Usually this would occur when trying to restore from an invalid backup tape.

Impact: The restore operation failed.

Action: Use a valid tape. If problem persists contact your Northern Telecom support organization.

NT: Use the TAPELIST command in BURP to verify that the correct volumes are on the tape.

80

Type: Error

Severity: Minor

Cause: The restore software expected a backup volume on tape, but it could not be found. Usually this would occur when trying to restore from an invalid backup tape.

Impact: The restore operation failed.

Action: Use a valid tape. If problem persists contact your Northern Telecom support organization.

NT: Use the TAPELIST command in BURP to verify that the correct volumes are on the tape.

83

Type: Error

Severity: Minor

Cause: An error occurred reading from tape during a restore. Associated SEERs indicate the actual cause of the error.

Impact: The restore operation failed.

Action: This would usually be caused by dirty tape heads. Clean the tape heads and try operation again. If problem persists the tape is probably bad. Use a previous backup tape.

84

Type: Error

Severity: Minor

Cause: An error occurred trying to write data to the disk.

Impact: The restore operation failed.

Action: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation. See SEER 49.

NT: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation. See SEER 49.

85

Type: Error

Severity: Minor

Cause: An error occurred trying to read data from the disk.

Impact: The tape archive operation failed.

Action: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation. See SEER 49.

NT: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation. See SEER 49.

86

Type: Error

Severity: Minor

Cause: An error occurred trying to read data from the disk.

Impact: The disk to disk copy operation failed.

Action: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation. See SEER 49.

NT: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation. See SEER 49.

87

Type: Error

Severity: Minor

Cause: An error occurred trying to write data to the disk during a disk to disk copy.

Impact: The disk to disk copy operation failed.

Action: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation. See SEER 49.

NT: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation. See SEER 49.

88

Type: Error

Severity: Minor

Cause: An error occurred during a disk to disk copy from BURP.

Impact: The disk to disk copy operation failed.

Action: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation. See SEER 49.

NT: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation. See SEER 49.

89

Type: Error

Severity: Minor

Cause: An error occurred during the VSRESTORE command from BURP.

Impact: The operation failed.

Action: Associated SEERs and the return code indicates the actual cause of the problem. Correct the problem and retry operation.

NT: Follow the actions documented under associated SEERs and return codes.

94

Type: Error

Severity: Minor

Cause: The software initiating the backup is unable to communicate with the backup task.

Impact: The backup will not run.

Action: This situation should not occur during regular operation. If it is acceptable to reboot your system, then reboot it at a convenient time; otherwise, contact your Northern Telecom support organization.

NT: If the cause is software related, then killing the MMI and retrying the operation should clear the problem. Otherwise, the hardware may be faulty.

Class 16 Software Configuration (SC)

On a DMS VoiceMail system Software Configuration installs or updates the software on a hardware platform.

The following SEERs may occur during one of SC operations which include:

- installation
- upgrade
- conversion
- feature expansion
- hardware modification(add channels, add nodes)
- platform conversion
- disk operations (storages expansion, disk-to-disk back up, disk shut-downs).

For resolution of most SEERs in this class the Action required is to “Follow the appropriate recovery steps ...” The appropriate recovery steps are listed below:

- power the system off
- check that all boards are properly inserted
- check that all cables are connected
- check that the disk is inserted into the drive and that the drive door is closed
- power on system and check that the power has been turned on for all nodes
- after disk boots type <Ctrl> **W** and a ‘Console and Printer’ box will pop-up. Type **P** at this point and this will generate a more detailed printout of your operation. If the operation completes successfully type <Ctrl> **W** and after the ‘Console and Printer’ box pops up press **P** followed by <Ctrl> <Print Screen>. This will take the system out of print mode. If the operation fails again please have the printout ready when talking to your Northern Telecom support organization.

00

Type: Error

Severity: Critical

Cause: A file could not be opened.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

01

Type: Error

Severity: Minor

Cause: A file could not be closed.

Impact: The operation will continue without impact.

Action: If the problem persists, collect the SEER information and contact your Northern Telecom support organization.

NT: Usually this happens when attempting to close a file which has not been opened or is already closed. The operation will continue without impact.

02

Type: Error

Severity: Critical

Cause: A file could not be read.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

03

Type: Error

Severity: Critical

Cause: The file could not be closed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

04

Type: Error

Severity: Critical

Cause: 14The data file contains inconsistencies.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

05

Type: Error

Severity: Critical

Cause: The directory server could not be forked.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

06

Type: Info

Severity: Info

Cause: There was an error deleting the cache volumes.

Impact: None. Might cause backups from node 2 to fail if there is inadequate space on the disk.

Action: None.

NT: Delete the cache volumes on node 2 if there is inadequate disk space. This should only occur on very old vintage 300MB disk drives.

07

Type: Error

Severity: Critical

Cause: Could not find Volume Server.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

08

Type: Error

Severity: Info

Cause: The system was unable to shut down a volume server. The volume number that could not be shut down is given in the SEER. The lower level return code describes the reason why the volume server could not be shutdown.

Impact: Depends the reason for shutting down the volume server. Refer to related SEERs and messages displayed to the screen to determine the impact.

Action: If the operation fails then follow the appropriate recovery steps and re-try the operation.

NT: If the problem persists after the disk and hardware problems have resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

09

Type: System

Severity: Info

Cause: The system was unable to shut down a volume server. The volume number that could not be shut down is given in the SEER. The lower level return code indicates the reason why the volume server could not be shut down.

Impact: Depends on the reason for shutting down the volume server. Refer to related SEERs and messages displayed to the screen to determine the impact.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after disk and hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

10

Type: Error

Severity: Info

Cause: The system was unable to shut down the helix server. The name of the server that could not be shut down is given in the SEER. The lower level return code provides the reason why the volume server could not be shut down.

Impact: Depends on the reason for shutting down the helix server. Refer to related SEERs and messages displayed to the screen to determine the impact.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after the hardware problems have been resolved, there may be a software problem. Collect all the appropriate SEER information and contact your Northern Telecom development organization.

11

Type: Error

Severity: Info

Cause: Failed to audit requested volume.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk. This SEER can also be caused by a faulty message stored in user volume. In order to correct this problem, remove faulty messages and rerun the audit.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

12

Type: Error

Severity: Info

Cause: Too many retries were attempted on the same operation. Associated SEERs will give the actual cause of the problem.

Impact: Depends on the actual function that was being retried. The operation will normally abort.

Action: If the operation fails, then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after disk and hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

13

Type: Error

Severity: Critical

Cause: The system detected an invalid filter type and was unable to perform a data filtering operation.

Impact: The operation may abort.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: This could be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

14

Type: Error

Severity: Critical

Cause: The system detected an invalid substitution token and was unable to perform a data substitution operation.

Impact: The operation may abort.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: This could be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

15

Type: Error

Severity: Major

Cause: Could not copy helix file.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

16

Type: Error

Severity: Critical

Cause: The hardware database was not created.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

17

Type: Error

Severity: Critical

Cause: The hardware database could not be opened.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

18

Type: Error

Severity: Info

Cause: The hardware database could not be closed.

Impact: The operation will continue without impact.

Action: If the problem persists, collect the SEER information and contact your Northern Telecom support organization.

NT: If the problem persists, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

19

Type: Error

Severity: Critical

Cause: A component could not be added to the hardware database.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

20

Type: Error

Severity: Critical

Cause: A search of the hardware database could not be initiated.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

21

Type: Error

Severity: Critical

Cause: Search of the hardware database could not be initiated.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

22

Type: Error

Severity: Info

Cause: A DD file could not be closed.

Impact: The operation will continue without impact.

Action: If the problem persists, collect the SEER information and contact your Northern Telecom support organization.

NT: If the problem persists, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

23

Type: Error

Severity: Critical

Cause: A DD record could not be created.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

24

Type: Error

Severity: Info

Cause: Error locating :RAM or :B00T100. Too many retries were attempted on the same operation. Associated SEERs will give the actual cause of the problem.

Impact: Depends on the actual function that was being retried. The operation will normally abort.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after the disk and hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

25

Type: Error

Severity: Critical

Cause: A DD commit operation failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

26

Type: Error

Severity: Critical

Cause: Could not read a record from the file /1cust/cptd_data. The lower level return code will indicate the actual cause of the problem.

Impact: The operation will abort, since it was not able to create the Call Progress Tone Detection configuration file.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

27

Type: Error

Severity: Critical

Cause: A Cabinet Manager FID could not be obtained.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

28

Type: Error

Severity: Critical

Cause: A cabinet could not be opened.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

29

Type: Error

Severity: Critical

Cause: A copy could not be performed on a cabinet file.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

30

Type: Error

Severity: Minor

Cause: The specified cabinet could not be closed.

Impact: The operation will continue without impact.

Action: If the problem persists, collect the SEER information and contact your Northern Telecom support organization.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

31

Type: Debug

Severity: Info

Cause: The specified file could not be added to a cabinet.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: Usually this happens when attempting to close a file which has not been opened or is already closed. The operation will continue without impact.

32

Type: Error

Severity: Critical

Cause: A FIR could not be obtained from the given pathname.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

34

Type: Error

Severity: Info

Cause: The CM_Traverse operation failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

35

Type: Error

Severity: Critical

Cause: The model users were not created.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

36

Type: Error

Severity: Critical

Cause: The hardware detection operation failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

37

Type: Error

Severity: Minor

Cause: An unknown system type is detected.

Impact: Usually no impact but operations can fail afterwards if there is insufficient space on the volume.

Action: None.

NT: None.

38

Type: System

Severity: Info

Cause: An audit on a volume server did not complete. The volume number is given in the SEER. The reason why the audit could not be completed is given in the lower-level return code.

Impact: Usually no impact, but operations can fail afterwards if there is insufficient space on the volume.

Action: No action.

NT: No action.

39

Type: Error

Severity: Critical

Cause: The write OS operation failed.

Impact: The SC operation will abort.

Action: Check the return code of 'nnn' in the SEER text. Follow instruction of that SEER code. Retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

40

Type: Error

Severity: Critical

Cause: The operation of initialize MICB failed.

Impact: The SC operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and disk problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

41

Type: Error

Severity: Critical

Cause: The operation of configure a disk failed.

Impact: The SC operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

42

Type: Error

Severity: Critical

Cause: The operation of initialize and configure a disk failed.

Impact: The SC operation will abort.

Action: This SEER appears together with SEER code 40. Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

43

Type: Error

Severity: Critical

Cause: The operation of loading os to the voice nodes failed.

Impact: The SC operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

44

Type: Error

Severity: Minor

Cause: The getting disk model operation failed.

Impact: The SC operation will continue and a non-GPT disk model is assumed.

Action: Report the problem to your Northern Telecom support organization to log the issue.

NT: Forward the SEER information to your Northern Telecom development organization for future reference.

45

Type: Error

Severity: Critical

Cause: Could not convert a language from helix format to dd.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

46

Type: Error

Severity: Critical

Cause: Could not find a specific record in the file /1/cust/cptd_data. The record number that could not be found will be given in the SEER. The lower level return code will indicate the actual cause of the problem.

Impact: The operation will abort as it will not be able to create the Call Progress Tone Detection configuration file.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

47

Type: Error

Severity: Critical

Cause: The Corporate Directory was not initialized.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

48

Type: Error

Severity: Critical

Cause: Error opening a file. The file name is specified in the SEER. The lower level return code indicates the actual cause of the problem.

Impact: Depends on the actual function that was performed. Refer to related SEERs and messages displayed to the screen to determine the impact.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

49

Type: Error

Severity: Critical

Cause: Could not allocate Segment.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

50

Type: Error

Severity: Critical

Cause: Could not allocate Heap using new segment.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

51

Type: Error

Severity: Critical

Cause: The hardware database could not be modified.

Impact: The operation may abort.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: This could be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

52

Type: Error

Severity: Critical

Cause: The specified volume was not created.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

53

Type: Error

Severity: Critical

Cause: The MI_LogVol operation failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

54

Type: Error

Severity: Critical

Cause: The specified volume was not formatted.

Impact: The operation will abort.

Action: The version of Meridian Mail running on the disk does not match the version on the disk. You must either get the correct version of the disk or upgrade the disk to match the disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

55

Type: Error

Severity: Critical

Cause: The disks on the system are not large enough for the specified storage hours.

Impact: The operation will abort.

Action: Ensure that all disks are of the recommended sizes and replace any disks that are not. Follow the appropriate recovery steps and retry the operation. If the problem persists contact your Northern Telecom support organization.

NT: If the problem persists after hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

56

Type: Error

Severity: Critical

Cause: Failed to validate version on disk matches version on disk.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

57

Type: Info

Severity: System Info

Cause: The cache volumes could not be created on node 2 because it has a smaller than normal disk.

Impact: The system may slow down during periods of heavy traffic.

Action: None. If periods of heavy traffic are expected, replace the disk with a larger one.

NT: None.

58

Type: Error

Severity: Critical

Cause: The number of channels on the specified node could not be retrieved from the hardware database.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

59

Type: Error

Severity: Critical

Cause: The total number of channels on the system could not be retrieve from the hardware database.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

60

Type: Error

Severity: Critical

Cause: The Guest Access Console names could not be retrieved from the hardware database.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

61

Type: Error

Severity: Critical

Cause: Failed to obtain statistics for a volume server.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

62

Type: Error

Severity: Critical

Cause: Failed to shutdown the DR_Server

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

63

Type: Error

Severity: Critical

Cause: Failed to audit the DR_Server.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

64

Type: Error

Severity: Critical

Cause: DR_Server auditwait failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

65

Type: Error

Severity: Major

Cause: FS_CabToUser failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

66

Type: Error

Severity: Critical

Cause: FS_Compress failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

67

Type: Error

Severity: Critical

Cause: Although FS_Compress is alright, it failed to compress to the desired size.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

68

Type: Error

Severity: Critical

Cause: MI_SizeChg failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

69

Type: Error

Severity: Critical

Cause: FS_ExpandinPlace failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

70

Type: Error

Severity: Critical

Cause: VSGetOMs failure.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

71

Type: Error

Severity: Critical

Cause: Index into feature array not found.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

72

Type: Error

Severity: Critical

Cause: Error copying a helix file. The file name is specified in the SEER. The lower level return code indicates the actual cause of the problem.

Impact: Depends on the function performed at the time. Refer to related SEERs and messages displayed in order to determine impact.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

73

Type: Error

Severity: Critical

Cause: Could not create the file /1/dsp/dsp_config. The lower level return code will indicate the actual cause of the problem.

Impact: The operation will abort as it could not create the Call Progress Tone Detection configuration file.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

74

Type: Error

Severity: Critical

Cause: Could not get the statistics for a File server.

Impact: The operation has failed.

Action: One or more of the drive needs to be replaced with a larger drive. If a larger drive is not available, run Standardize Volume Sizes and boot back into service.

NT: The customer requires a larger drive. See the appropriate NTP or the SEER printout for the minimum size Volume Size required.

Note: A larger disk is always accepted.

75

Type: Error

Severity: Critical

Cause: Error determining the node number from the disk name. The lower level return code will indicate the actual cause of the problem.

Impact: The operation will abort.

Action: Check the hardware. Specifically check that all the nodes are operating correctly.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

76

Type: Error

Severity: Critical

Cause: Ad_CrtLangRec failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

77

Type: Error

Severity: Critical

Cause: nt_dbInit failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

78

Type: Error

Severity: Critical

Cause: mi-delvol failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

79

Type: Error

Severity: Critical

Cause: Error determining the free space on a volume. The lower level return code will indicate the actual cause of the problem.

Impact: The operation will abort.

Action: Check your hardware for proper installation and defects. Specifically check that all the nodes are operating properly. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

80

Type: Error

Severity: Info

Cause: Error shutting down the disk operations controlling task on node 1. The lower level return code will indicate the actual cause of the problem.

Impact: Depends on what operations follow. Look at SEERs following this one to determine the impact.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact the development organization.

81

Type: Error

Severity: Info

Cause: Error shutting down a disk operations task. The node number can be determined from the numeric characters at the end of the task name 'SCNV' in the SEER. The lower level return code will indicate the actual cause of the problem.

Impact: Depends on what operations follow. Look at SEERs following this one to determine the impact.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

82

Type: Error

Severity: Critical

Cause: Invalid link type.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

83

Type: System

Severity: Info

Cause: Error deleting a helix file. The lower level return code will indicate the actual cause of the problem.

Impact: None, but could indicate possible problems with disk, tape or file system.

Action: None.

NT: None.

84

Type: Error

Severity: Critical

Cause: Error starting up the organizational directory (DR). The lower level return code will indicate the actual cause of the problem.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

85

Type: Error

Severity: Critical

Cause: Error checking the organizational directory (DR). The lower level return code will indicate the actual cause of the problem.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If problem persists, contact your Northern Telecom support organization.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

86

Type: Error

Severity: Info

Cause: A timeout occurred waiting for a task to start up. The task name is printed in the SEER.

Impact: Depends on the actual function that was being performed.. Refer to related SEERs and messages displayed to the screen to determine the impact.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

87

Type: Error

Severity: Info

Cause: A timeout occurred while waiting for a task to shut down. It is not possible to determine the name of the task from the SEER.

Impact: Depends on the actual function that was being performed. Refer to related SEERs and messages displayed on the screen to determine the impact.

Action: If the operation fails, follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

89

Type: Error

Severity: Info

Cause: Error determining the size of a voice services file. The name of the file is printed in the SEER.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

90

Type: Error

Severity: Critical

Cause: dd_Open failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

91

Type: Error

Severity: Critical

Cause: Error starting the PRM. The text in the SEER will indicate the problem.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

92

Type: Error

Severity: Critical

Cause: Heap was not available to determine the nodes in the system.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

93

Type: Error

Severity: Critical

Cause: Error obtaining the node information from the PRM. The lower level return code will indicate the actual cause of the problem.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

94

Type: Error

Severity: Critical

Cause: Failed to change password to the default password.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

95

Type: Error

Severity: Critical

Cause: Error extracting the boot track file names from the system record. The lower level return code will indicate the actual cause of the problem.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

96

Type: Error

Severity: Critical

Cause: Failed to add system profile.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

97

Type: Error

Severity: Critical

Cause: Failed to add first customer profile.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

98

Type: Error

Severity: Critical

Cause: Not enough room on any volume to move Voice Services to.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad disk. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new disk.

NT: If the problem persists after disk and hardware problems are resolved, there is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

99

Type: Error

Severity: Critical

Cause: Internal software error. Incorrect fill type supplied to `sc_FillNodeList`. The lower level return code is the incorrect fill type.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

Class 17 Software Configuration (SC)

On a DMS VoiceMail system Software Configuration installs or updates the software on a hardware platform.

The following SEERs may occur during one of SC operations which include

- installation
- upgrade
- conversion
- feature expansion
- hardware modification(add channels, add nodes)
- platform conversion
- disk operations (storages expansion, disk-to-disk back up, disk shut-downs).

For resolution of most SEERs in this class the Action required is to “Follow the appropriate recovery steps ...” The appropriate recovery steps are listed below:

- power the system off
- check that all boards are properly inserted
- check that all cables are connected
- check that the tape is inserted into the drive and that the drive door is closed
- power on system and check that the power has been turned on for all nodes
- after tape boots type <Ctrl> **W** and a ‘Console and Printer’ box will pop-up. Type **P** at this point and this will generate a more detailed printout of your operation. If the operation completes successfully type <Ctrl> **W** and after the ‘Console and Printer’ box pops up press **P** followed by <Ctrl> <Print Screen>. This will take the system out of print mode. If the operation fails again please have the printout ready when talking to your Northern Telecom support organization.

01

Type: Error

Severity: Critical

Cause: Voice Service DeskNumber conversion has failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

02

Type: Error

Severity: Critical

Cause: Voice Service Definition conversion has failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom representative for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

03

Type: System

Severity: Info

Cause: User aborted moving the voice service cabinet.

Impact: None.

Action: None.

NT: None.

04

Type: Error

Severity: Critical

Cause: Error occurred while moving voice services to another volume. The lower level return code will indicate the actual cause of the problem.

Impact: The moving of voice services failed.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found.

NT: If the problem persists after hardware problems have been resolved, it could be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

05

Type: Error

Severity: Critical

Cause: Write to Billing Control Table failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

06

Type: Error

Severity: Critical

Cause: Failed to modify hardware database component.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

07

Type: Error

Severity: Critical

Cause: Failed to locate requested task in names server.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

08

Type: System

Severity: Info

Cause: Moving of Voice Services successfully completed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

09

Type: Error

Severity: Critical

Cause: Adding switch records failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

10

Type: Error

Severity: Critical

Cause: VSA_CabExists failed to ensure that the voice service cabinet exists.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

11

Type: Error

Severity: Critical

Cause: VSA_PrepMvSDF failed to prepare to move voiceservices file by file.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

12

Type: Error

Severity: Critical

Cause: VSA_MoverServiceDefn failed to move voiceservice file.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

13

Type: Error

Severity: Critical

Cause: VSA_MoveServiceDefn failed to move voice service.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

14

Type: Error

Severity: Critical

Cause: Error opening the organizational directory while trying to move voice services.

Impact: The moving of voice services failed.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

15

Type: Error

Severity: Critical

Cause: dr_Find failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

16

Type: Error

Severity: Critical

Cause: AD_MvUsrVol failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

17

Type: Error

Severity: Critical

Cause: Could not close corporate directory.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

18

Type: Error

Severity: Critical

Cause: Found an unknown storage hours number.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

19

Type: Error

Severity: Critical

Cause: Number of nodes cannot be reduced.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

20

Type: Error

Severity: Critical

Cause: Failed to obtain the UAT Data Port names.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

21

Type: Error

Severity: Critical

Cause: FS_AdjustVol failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

22

Type: Error

Severity: Critical

Cause: FS_AdjUsers failed.

Impact: The operation will abort.

Action: Verify that the number of users on the volume which the adjust failed to process does not exceed the engineering guidelines. Modify the system to conform to engineering specifications for the number of users, then re-attempt the conversion. Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. Check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

23

Type: Error

Severity: Critical

Cause: Error syncing voice service definitions.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

24

Type: Error

Severity: Critical

Cause: Error updating DR for voice service definitions.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

25

Type: Error

Severity: Critical

Cause: Error syncing voice form for a given volume.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

26

Type: Error

Severity: Critical

Cause: Not enough room on disk for the requested number of languages.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

27

Type: Error

Severity: Critical

Cause: Adjust Model users failed.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

28

Type: Error

Severity: Critical

Cause: Failed to communicate with another task.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

29

Type: Error

Severity: Critical

Cause: Failed to "Push" to another task.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

30

Type: Error

Severity: Critical

Cause: Failed on "Send" to another task.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

31

Type: Error

Severity: Critical

Cause: Failed on “Accept” from another task.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

32

Type: Error

Severity: Critical

Cause: Failed on completion of task.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

33

Type: Error

Severity: Critical

Cause: Tape or disk drive is damaged.

Impact: The operation will abort.

Action: Follow the appropriate recovery steps and retry the operation. If the problem persists, it may be due to faulty hardware or a bad tape. First check your hardware for proper installation and defects. If no hardware problems are found, contact your Northern Telecom support organization for a new tape.

NT: If the problem persists after tape and hardware problems are resolved, it is likely a software problem. Collect the SEER information and contact your Northern Telecom development organization.

35

Type: Error

Severity: Info

Cause: The system already has the maximum number of languages.

Impact: No new languages can be added.

Action: None.

NT: None.

36

Type: Error

Severity: Critical

Cause: Error trying to open the source cabinet while trying to move a file. The SEER text specifies the cabinet name. The lower level return code indicates the cause of the problem.

Impact: Depends on the actual function that was being performed. Refer to related SEERs and messages displayed to the screen to determine the impact.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

37

Type: Error

Severity: Critical

Cause: Error trying to open the destination cabinet while trying to move a file. The SEER text specifies the cabinet name. The lower level return code indicates the cause of the problem.

Impact: Depends on the actual function that was being performed.. Refer to related SEERs and messages displayed to the screen to determine the impact.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

38

Type: Error

Severity: Critical

Cause: Error determining if a file exists. The SEER text specifies the cabinet name. The lower level return code indicates the cause of the problem.

Impact: Depends on the actual function that was being performed. Refer to related SEERs and messages displayed to the screen to determine the impact.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

39

Type: Error

Severity: Critical

Cause: Error deleting the old voice services cabinet. The lower level return code indicates the cause of the problem.

Impact: The old voice services cabinet will remain in its original place.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

40

Type: System

Severity: Info

Cause: Warning that voice services can not be moved in Option 11 systems.

Impact: None.

Action: None.

NT: None.

41

Type: Error

Severity: Critical

Cause: Error registering the volume operations task in the name server. The cause of the problem is not available in the SEER.

Impact: The operation will fail.

Action: Look for other SEERs to determine the cause of the problem. Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

42

Type: Error

Severity: Info

Cause: Error de-registering the volume operations task from the name server. The cause of the problem is not available in the SEER.

Impact: Depends on the actual function that was being performed. Refer to related SEERs and messages displayed to the screen to determine the impact.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

43

Type: Error

Severity: Critical

Cause: Error determining the state of the disks on a node. The lower level return code is given in Appendix A of the SEER manual under the Major Heading 'Disk Syncing Error Codes' and minor heading 'sd_info'. The SCSI port for the query is also specified in the SEER.

Impact: The operation will fail.

Action: This is most likely to be a SCSI hardware or cabling problem. Check and correct the SCSI subsystem for the node. Run offline diagnostics on the node. Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

44

Type: Error

Severity: Critical

Cause: Error enabling SCSI SEER reporting. The lower level return code, is from a call `sd_verbose`.

Impact: The operation will fail.

Action: This is most likely to be a SCSI hardware or cabling problem. Check and correct the SCSI subsystem for the node. Run offline diagnostics on the node. Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

45

Type: Error

Severity: Critical

Cause: Error during disk operation.: The text of the SEER specifies the disk operation number, the SCSI IDs of the disks and the lower level return code. The disk operation and lower level return code can be decoded from the Disk Operation Lower Level Return Codes list found in the appendix of this manual.

Impact: The operation will fail.

Action: This is most likely to be a SCSI hardware or cabling problem. Check and correct the SCSI subsystem for the node. Run offline diagnostics on the node. Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

46

Type: Error

Severity: Critical

Cause: Error detected during disk operation. The text of the SEER contains the list of nodes that the disk operation affected and the operation number which can be decoded from the Disk Operation Lower Level Return Codes list found in the appendix of this manual, and a lower level return code, which is available in the table or part of a task result. There can sometimes be SEERs from individual nodes describing the same problem.

Impact: The operation will fail.

Action: This is most likely to be a SCSI hardware or cabling problem. Check and correct the SCSI subsystem for the node. Run offline diagnostics on the node. Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

47

Type: Error

Severity: Critical

Cause: Error determining the state of the disks on a node. The lower level return code can be a task result or an error described in Appendix A of the SEER manual under the Major Heading 'Disk Syncing Error Codes' and minor heading 'sd_info'.

Impact: The operation will fail.

Action: This is most likely to be a SCSI hardware or cabling problem. Check and correct the SCSI subsystem for the node. Run offline diagnostics on the node. Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

48

Type: Error

Severity: Critical

Cause: Error registering the volume control task in the name server.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

49

Type: Error

Severity: Critical

Cause: Error locating the node volume task in the name server, as part of a disk operation.. The SEER text also specifies the node number and the disk operation number. There is no lower level return code.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

50

Type: Error

Severity: Critical

Cause: Error locating the node volume task in the name server, as part of obtaining the disk information. The SEER text also specifies the node number and the SCSI port number. There is no lower level return code.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

51

Type: Error

Severity: Critical

Cause: Error sending information to the node volume task, as part of a disk operation.. The SEER text also specifies the node number and the disk operation number. There is no lower level return code.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

52

Type: Error

Severity: Critical

Cause: Error receiving information from the node volume task, as part of a disk operation. The SEER text also specifies the node number. The lower level return code can be a task result, in which case the node number will be invalid, or an error from the disk operation, in which case there should be an associated 1745 SEER.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

53

Type: Debug

Severity: Info

Cause: An error occurred when deregistering the volume control task.

Impact: None. Could indicate that there were other problems in the system.

Action: None.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

54

Type: Error

Severity: Critical

Cause: Task error during initiation of the volume control task.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

55

Type: Error

Severity: Critical

Cause: Task error creating buffers for the volume control task.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

56

Type: Error

Severity: Critical

Cause: Error logging on to a helix server. The server name is given in the SEER text.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

57

Type: Error

Severity: Critical

Cause: Error allocating memory from heap.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

64

Type: Error

Severity: Info

Cause: Cannot NEWPOOL in task UXMonBld. The System was unable to allocate enough memory resources in order to perform operation. The system was unable to allocate enough memory resources in order to perform operations.

Impact: The operation will abort.

Action: If the operation fails, check the hardware. Follow the appropriate recovery steps and try the operation again.

NT: If the problem persists after the hardware problems have been resolved, there may be a software problem. Collect all associated SEER information and contact your Northern Telecom development organization.

65

Type: Error

Severity: Info

Cause: Cannot NEWPOOL in task UXBldNode. The System was unable to allocate enough memory resources in order to perform operation.

Impact: The operation will abort.

Action: If the operation fails, check the hardware. Follow the appropriate recovery steps and try the operation again.

NT: If the problem persists, there may be a software problem. Collect all associated SEER information and contact your Northern Telecom development organization.

66

Type: Error

Severity: Info

Cause: Cannot ADDPOOL in task UXMonBld. The System was unable to allocate enough memory resources in order to perform operation.

Impact: The operation will abort.

Action: If the operation fails, check the hardware. Follow the appropriate recovery steps and try the operation again.

NT: If the problem persists, there may be a software problem. Collect all associated SEER information and contact your Northern Telecom development organization.

67

Type: Error

Severity: Info

Cause: Cannot initiate Task UXBldNode. The System was unable to allocate enough memory resources in order to perform operation.

Impact: The operation will abort.

Action: If the operation fails, check the hardware. Follow the appropriate recovery steps and try the operation again.

NT: If the problem persists, there may be a software problem. Collect all associated SEER information and contact your Northern Telecom development organization.

79

Type: Error

Severity: Critical

Cause: Error resetting a specific node.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

86

Type: Error

Severity: Critical

Cause: Error sending volume information to a node volume task. The destination node number and volume number are printed in the SEER text. The lower level return code is a task result.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

87

Type: Error

Severity: Critical

Cause: Error sending volume standardization command to a node volume task. The destination node number and operation number are printed in the SEER text. The lower level return code is a task result.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

88

Type: Error

Severity: Critical

Cause: Error accepting a reply from a node volume task, as part of volume standardization. The destination node number is printed in the SEER text. The lower level return code can be a task result, in which case the node number will be invalid, or an error from the disk operation, in which case there should be an associated class 17 SEERs.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

89

Type: Error

Severity: Critical

Cause: Disks that were expected to be shadowed for a specific operation are not in the shadowed state.

Impact: There will be not way to recover the system if the operation fails.

Action: Shadow disks and retry the operation.

NT: None.

90

Type: System

Severity: Info

Cause: User aborted operation that required disks to be in a shadowed state.

Impact: None.

Action: None.

NT: None.

91

Type: Admin

Severity: Info

Cause: User elected to continue an operation that required disks to be in a shadowed state.

Impact: None.

Action: None.

NT: None.

93

Type: Error

Severity: Critical

Cause: An invalid SCSI port was specified.

Impact: The operation will fail.

Action: Follow the appropriate recovery steps and retry the operation.

NT: If the problem persists after hardware problems have been resolved, there may be a software problem. Collect the SEER information and contact your Northern Telecom development organization.

94

Type: Error

Severity: Critical

Cause: Error converting the hardware database. The lower level return code will indicate the actual cause of the problem.

Impact: The operation may abort.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: This could be a software problem. Collect the SEER information and contact the development organization.

95

Type: Error

Severity: Critical

Cause: Error converting user profiles. The lower level return code will indicate the actual cause of the problem.

Impact: The operation may abort.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: This could be a software problem. Collect the SEER information and contact the development organization.

96

Type: Error

Severity: Critical

Cause: Error converting the system profile. The lower level return code will indicate the actual cause of the problem.

Impact: The operation may abort.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: This could be a software problem. Collect the SEER information and contact the development organization.

97

Type: Error

Severity: Critical

Cause: Error converting Voice Service files. The lower level return code will indicate the actual cause of the problem.

Impact: The operation may abort.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: This could be a software problem. Collect the SEER information and contact the development organization.

98

Type: Error

Severity: Critical

Cause: The system is currently running a software release that is not allowable for this conversion.

Impact: The operation will abort.

Action: Upgrade the system to the appropriate software release and retry the conversion.

NT: Advise customer of proper conversion path.

99

Type: Error

Severity: Critical

Cause: Error backing up the DSP configuration file. The lower level return code will indicate the actual cause of the problem.

Impact: The operation may abort.

Action: If the operation fails then follow the appropriate recovery steps and retry the operation.

NT: This could be a software problem. Collect the SEER information and contact the development organization.

Class 18 Bus Controller Diagnostics (BCD)

The program BUSDIAG provides a set of diagnostics to test the SPM bus controller card. This program is executed automatically at system bootup and can be executed on disable card via the MMI.

Should this program report a fault, the corresponding bus controller card is marked faulty in the hardware database Refer to the *Trouble Locating and Alarm Clearing Procedures* guide (NTP 297-7001-503) for action to take when diagnostics fail.

01

Type: Admin Info

Severity: Info

Cause: The bus controller diagnostics program has started.

Impact: None.

Action: None.

NT: None.

02

Type: Admin Info

Severity: Info

Cause: The bus controller diagnostics program has completed.

Impact: None.

Action: None.

NT: None.

03

Type: Error

Severity: Major

Cause: Fault was found on the bus controller by the bus controller diagnostics program.

Impact: Bus controller card is marked faulty.

Action: Refer to the *Trouble Locating and Alarm Clearing procedures guide* (NTP 297-7001-503) for action when bus controller diagnostics fail.

NT: None.

Class 20 Voice Handler (VH)

The Voice Handler is a procedural interface for applications that provides access to, and control of, voice records and voice segments. The Voice Handler

- initializes (session start) and releases (session termination) a voice channel, releases memory, and stops internal tasks
- creates, opens, closes, and deletes voice records
- plays a voice record, skips forward and backward in playback, records a voice record, and stops playback and recording
- obtains the total voice segment duration and changes the size limit of a voice segment
- initializes and releases system and service prompt files
- plays and stops the playback of a voice prompt as defined by a template

Some voice applications call the Voice Handler synchronously, and wait for it to complete its given task before they continue. Other voice applications do not call the Voice Handler synchronously, but provide a Voice IO Entry to the Voice Handler and continue to run at the same time as Voice Handler.

Impact of VH errors

Different voice applications may react differently to the same Voice Handler error. For example, if the Voice Handler cannot find any voice records, one application may terminate the call, another application might try the call again, and another application might play a message like “You have no voice messages” to the user.

These SEERs are reported either

- as part of the NAME=TVPIOTAS SEERs where the SEERs are generated by the application’s internal VPIO task
- as part of the application program’s SEERs. The class 20 return codes (for example: 2041) may be included in a SEER of this type.

Content of Class 20 SEERs

This chapter is primarily concerned with SEERs reported as part of the NAME=TVPIOTAS SEER. These SEERs contain the following types of information

1. Voice Handler error codes and text descriptions about the routine in which the error occurred, the nature of the error, and where appropriate:
 - a. the task result
 - b. the current voice operation that the internal task is executing
 - 0 vh_cNoOpr
 - 1 vh_cPlayVoice
 - 2 vh_cPlaySkip
 - 3 vh_cRecord
 - 4 vh_cPause
 - 5 vh_cContinue
 - 6 vh_cStopVoice
 - 7 vh_cStopPrompt
 - 8 vh_cPlayPrompt
 - 9 vh_cQueryCurUn
 - 10 vh_cUnlinkFCB
 - c. the message state of the internal task regarding the asynchronous activity of the voice compressor
 - 0 msUndefined
 - 1 msInit
 - 2 msIdle
 - 3 msSetPlyPsetting up for play operation
 - 4 msPlay
 - 5 msPlyEndPshutting down play operation
 - 6 msSetPPausePsetting up for pause while in play
 - 7 msPPausePpause while in play
 - 8 msSetPContPsetting up to continue playback
 - 9 msPlyStopPplayback stopped state
 - 10 msSetRecPsetting up for recording
 - 11 msRecord
 - 12 msSetRPausePsetting up for pause while recording
 - 13 msRPausePpause while in record
 - 14 msSetRContPsetting up to continue recording
 - 15 msLongSilPlong silence while in recording
 - 16 msRecStopPRecording stopped state
 - 17 msMaxState

- d. the application command currently in progress
 - 0 acUndefined
 - 1 acInit
 - 2 acIdle
 - 3 acPlyPausePpause while in play
 - 4 acPlay
 - 5 acSkipPskip forward or skip backward
 - 6 acPrompting
 - 7 acRecPausePpause while in record
 - 8 acRecord
 - 9 acStopVoice
 - 10 acStopPrompt
 - 11 acError
 2. Errors related to VP Handler communication such as send failures, response time-outs, aborted recordings, and bad VP Handler commands and data. The associated VP Handler will be reported in the formatted RTID (VPH remote task ID in hexadecimal).
 3. Return codes from lower level software, such as VS or DD.
-

00

Type: Error

Severity: Critical

Cause: Failure to allocate memory from the heap passed in by the application.

Impact: The impact depends on the current operation of the VH; either the prompt files are not initialized, or the current recording fails.

Action: Disable and re-enable the corresponding T1 channel.

NT: If the problem persists, contact your Northern Telecom development organization.

01

Type: Error

Severity: Minor

Cause: Integrity failures.

1. New Pool failures at load time.
 2. Bad command codes or record modes encountered and not immediately detected when first issued by the voice application (for example, asynchronous). These should result only if processor memory is corrupt.
-

3. Invalid VP Handler silence unit information encountered.
4. Voice unit data, as stored in the voice block, seems to be corrupted when traversing the voice block for appends or inserts while finishing the recording.
5. Failure to locate the correct position (unit or duration), or voice block, within a voice segment for playing, skipping forward or backward, or recording.

The SEER displays the task result or actual bad codes or modes encountered. If an integrity failure occurs in skipping forward or backward the output contains

- an error string that identifies the error location,
- the current unit for errors occurring before skip calculation and after the find block routine has been called,
- the current duration for errors occurring after the skip calculation,
- 10 byte hexadecimal dump of the FID of the file containing the voice and voice paragraph records,
- “PlySkp: Bef: ”, <current unit>, <FID>
- “PlySkp: Aft: ”, <current duration>, <FID>
- “PlySkp: Blk: ”, <current unit>, <FID>

Impact: The voice application will react to the error appropriately.

Action: Run bootup diagnostics to determine if there are processor memory problems, and where appropriate, save the recording and contact your Northern Telecom support organization.

NT: Look for corrupt data in the voice records and voice blocks.

03

Type: Debug

Severity: Info

Cause: The procedural interface missed a bad command and passed it to the VPIO task entry VPIOCmd where it was detected. This means that the processor memory is corrupt. Since the VPIO found this error while still in a blocked rendezvous, the return code will be passed back to the voice application, synchronously.

Impact: The Voice Handler rejects the command. The voice application will react appropriately.

Action: Check if the surrounding SEERs indicate any memory corruption problems and do a memory test or start up diagnostics. If the error persists, contact your Northern Telecom support organization.

NT: A software design error may exist. Contact the Northern Telecom development group.

04

Type: Error

Severity: Info

- Cause:
1. If the text says “VcRspTmO in MsgState: <message state>”, the VP Handler timed out while idling or pausing during record or playback and the application was deferred.
 2. If the text says “StVHTm: Timer Off due to bad state:, <message state>”, an internal call has been made to SetVHTimer for an unknown message state.
 3. The channel was released while still in recording state, as indicated by the text.

Impact: Case 1, 2. The VPIO task will cause an EXCEPTION to be raised in the application which will stop the VPIO task, clean up resources, and stop itself.
Case 3. The Voice Handler will not save the recording.

Action: Check if there are any VPH SEERs occurring. If there are, there may be a voice port problem. Disable and re-enable the port defined in the VPH SEERs in the HWLOC field. If these errors persist, contact your Northern Telecom support organization.

NT: A software design error may exist. Contact the Northern Telecom development organization.

05

Type: Debug

Severity: Info

- Cause:
1. If the text says “PrQ has unused data.1st SeqNum =, <prompt data sequence ID>”, there is no matching prompt playback command in the command queue for remaining data in the prompt data queue.
 2. The voice application has called a function that is not currently supported, as indicated by the text.

Impact: Case 1. The remaining data in prompt data queue are discarded.
Case 2. The Voice Handler rejects the command.

Action: Do a run voice card diagnostics memory test and login to any mailbox to see if the prompt files are corrupted. If these errors persist, contact your Northern Telecom support organization.

NT: Prompt files may need to be re-installed, or there may be a design error.

10

Type: Error

Severity: Info

Cause: The application requested the VH to manipulate (i.e., play, record) a voice file that has not been opened.

Impact: The file will not be played or recorded.

Action: Disable and re-enable the corresponding T1 channel.

NT: If the error persists, verify that the file and record to be manipulated actually exist, and that they are not corrupted on the disk.

12

Type: Error

Severity: Info

Cause: The voice application is trying to open a record which is not a voice record.

Impact: The voice application will react appropriately.

Action: If this error persists with a particular recording, save the recording and contact your Northern Telecom support organization.

NT: Save the record and find out the FID of the record to see if there is any memory corruption in the disk.

13

Type: Error

Severity: Info

Cause: While skipping forward or backward during playback, the voice segment's paragraph record could not be located.

Impact: The voice application will react appropriately.

Action: If this error persists with a particular recording, save the recording and contact your Northern Telecom support organization.

NT: Save the record and find out the FID of the record to see if there is any memory corruption in the disk.

15

Type: Error

Severity: Minor

Cause: Bad prompt set was submitted by the application.

Impact: Prompt will not play.

Action: Re-install prompt files.

NT: If reinstall fails and the problem persists, contact your Northern Telecom development organization.

22

Type: Error

Severity: Info

Cause: The prompt queue is full. This error is reported as a SEER only if the Voice Handler and voice application lose communication between themselves.

Impact: Minor to the Voice Handler.

Action: The system will usually recover itself automatically. If not, disable/re-enable the voice port defined in the HWLOC field SEER. Use the bootup diagnostics to test the memory.

NT: Check the OOS diagnostics SEERs (Class 53) for more information. If the problem persists, contact your Northern Telecom development organization.

30

Type: Error

Severity: Info

Cause: Cannot skip backward before the beginning of a voice segment and communication with the voice application has failed.

Impact: Minor to the Voice Handler.

Action: Check surrounding SEERs for indication of the application program's status. The application may be experiencing a temporary tasking problem.

NT: Contact your Northern Telecom development organization.

40

Type: Error

Severity: Info

Cause: The VP Handler has not replied to the VPIO task within a set time, causing the current operation to stop. For some VP Handler messages, a `vh_VPTimeout` is announced only after a retry.

Impact: The Voice Handler clears the command and prompt data queues, sets its operation code to no-op, resets its state to idle, and clears the Voice Handler timer.

Action: If the error occurs while the disks are being audited, then the problem is transient and can be ignored. Otherwise, disable the voice card where the affected voice port resides and perform off-line diagnostics on the card (VP12). If this error persists, contact your Northern Telecom support organization.

NT: Try replacing the voice card. If the error persists, contact your Northern Telecom development organization.

41

Type: Admin

Severity: Info

Cause

1. If the text says “RTID <VPH remote task ID in hexadecimal> :Vpio:DoTermRd: Bad RBufAddr sent by VP:, <RBufAddr>”, the Voice Handler has received an unexpected or invalid playback termination code and the code was rejected.
2. If the text says “RTID <VPH remote task ID in hexadecimal> :Vpio:VPReq:Bad command sent by VP:”, <VP Handler command>, <message state>”, the Voice Handler has received an unexpected or invalid VP Handler command.
3. If the text says “Delete caller”, return “RTID <VPH remote task ID in hexadecimal>:Vpio:SendToVPDH:, <Taskresult>” or “RTID <VPH remote task ID in hexadecimal>:Vpio:SendVPDHErr:Task error:, <Taskresult>”, a send to VP Handler has failed on the sending or receiving side.

Impact:

- Case 1. Minor to the Voice Handler.
- Case 2. Minor to the Voice Handler, but it resets its timer.
- Case 3. The Voice Handler clears the command and prompt data queues, sets its operation code to no-op, resets its state to idle, and clears its timer.

Action: Disable the voice card where the affected voice port resides and perform off-line diagnostics on the card (VP12).

NT: Check diagnostics SEERs. If the problem persists, contact your Northern Telecom development organization.

42

Type: Admin

Severity: Info

Cause: An expected VP Handler silence message has been lost.

Impact: The actual voice data stored in the voice blocks are not affected. The DD records maintained by Voice Handler, to reflect the current recording's voice and silence phases, will be written to disk as if the lost silence was not expected (for example, some silence phases will not exist). This may affect playing, skipping, or recording from the current position within this voice segment.

Action: Disable the voice card where the affected voice port resides and perform off-line diagnostics on the card. If this error persists, contact your Northern Telecom support organization.

NT: The number of VPH or VH buffers may need to be re-engineered if the problem is not transient.

43

Type: Debug

Severity: Info

Cause: 1. If the text says "SndToA:, <Taskresult>" or "SndSuErr:TskErr:", <TaskingError>", playback terminated while no data has been received. This SEER appears only if communication with the voice application has failed.

2. If the text says "Bad system/service prompt file segment index:, <index posn in file>, <message state>, the prompt segment (not a spoken name) cannot be indexed (using file system ddindex command), cannot be read (using filesystem ddread command), or has no voice data.

Impact: Case 1. Minor to the Voice Handler.

Case 2. The Voice Handler skips over this bad prompt segment and tries to process the next prompt segment. If this is the last prompt segment for a play prompt request which requires a reply to the application then the application will be told about this error, and the voice application will react appropriately.

Action: Case 1. Disable the voice card where the affected voice port resides and perform off-line diagnostics on the card (VP12). If this error persists, contact your Northern Telecom support organization.

Case 2. Contact your Northern Telecom support organization

NT: Run disk diagnostics. Prompt files may need to be re-installed.

50

Type: Error

Severity: Info

Cause: Playback has reached the end of a voice segment or the application has requested to skip forward beyond the end of a voice segment. This SEER appears only if communication fails between the Voice Handler and Voice Application.

Impact: Minor to the Voice Handler.

Action: Check surrounding SEERs for indication that the application is experiencing tasking problems. Disable the voice card where the affected voice port resides and perform off-line diagnostics on the card. Reboot the system and check startup diagnostics. If this error persists, contact your Northern Telecom support organization.

NT: See SEER 42.

51

Type: Error

Severity: Info

Cause: The voice application has requested prompt playback with acknowledgement when playback has ended but the acknowledgement has failed. This SEER appears only if communication fails between the Voice Handler and Voice Application.

Impact: Minor to the Voice Handler.

Action: Check surrounding SEERs for indication that the application is experiencing tasking problems. Disable the voice card where the affected voice port resides and perform off-line diagnostics on the card. If this error persists, contact your Northern Telecom support organization.

NT: See SEER 42.

52

Type: Error

Severity: Info

Cause: The recording limit has been exceeded. This error is reported as a SEER only if the Voice Handler and voice application lose communication.

Impact: Minor to the Voice Handler.

Action: Check surrounding SEERs for indication that the application is experiencing tasking problems. Disable the voice card where the affected voice port resides and perform off-line diagnostics on the card. Reboot the system and check startup diagnostics. If this error persists, contact your Northern Telecom support organization.

NT: See SEER 42.

53

Type: Error

Severity: Info

Cause: If the text says “Bad spoken name. Check FID: <FID> because , <original error>, <message state>”, one of the following things happened:

1. The voice record in the spoken name file was not found.
2. The file specified by the FID cannot be found.
3. A disk read of the voice record has failed.

If the text says “Bad spoken name. Check FID: <FID> because , 0, <message state>”, there are no voice blocks for the spoken name. This means that nothing was recorded or the spoken name was recorded with the handset on hook.

The return code isolates the cause.

Impact: The voice application will react appropriately.

Action: Find out why the bad spoken name exists and if any action has to be taken. For example, an old voice mail message may contain a reference to a spoken name of a person who has left the company and whose spoken name has been removed. Look up the return code for specific information.

NT: None.

54

Type: Error

Severity: Info

Cause: During recording, the Voice Handler timed out while waiting for long silence to end. This SEER appears only if communication fails between the Voice Handler and Voice Application.

Impact: Minor to the Voice Handler. The Voice Handler continues to wait for long silence to end and, after each time out interval, reports `vh_SilTmOut` to the voice application. The Voice Handler takes no corrective action.

Action: Check surrounding SEERs for indication that the application is experiencing tasking problems. Disabling and re-enabling the channel may eliminate the problem. Reboot the system and check startup diagnostics. If this error persists, contact your Northern Telecom support organization.

NT: See SEER 42.

90

Type: Error

Severity: Minor

Cause: A VPIO task could not be initiated or there was a task result on blocked rendezvous with VPIO task entries.

Impact: The Voice Handler rejects the command.

Action: Check surrounding SEERs for indication that the application is experiencing tasking problems. Disabling and re-enabling the channel may eliminate the problem. Reboot the system and check startup diagnostics. If this error persists, contact your Northern Telecom support organization.

NT: Examine the task error reported in the SEER and relay information to designers.

99

Type: Error

Severity: Info

Cause: Sometimes, the Voice Handler produces SEERs for errors that it found but did not create. The Voice Handler places these SEERs in the class: `vh_NonVHError`. A non-VH error has a major or minor priority. Here are some non-VH errors, messages and priorities:

1. File system errors while opening a voice record
 Message: `OpenV`, (non-VH error)
 Priority: Major
2. File system errors while finishing a recording
 Message: `FiniV`, (non-VH error)
 Priority: Major
3. Third party read errors during playback
 Message: (non-VH error): `TpRead block:`, (relative voice block #), (message state)
 Priority: Major
4. Third party write errors while recording
 Message: (non-VH error): `DoWBuf:VBlock is lost:`, (write buffer address), (message state)
 Priority: Major
5. Communication failed while sending file system errors to voice application
 Message: (non-VH error): `SndSuErr:TskErr:`, (Tasking Error)
 Priority: Minor
6. Aborted recording due to a file system error
 Message: (non-VH error): `RTID (VPH remote task ID in hexadecimal):`
 (procedure or reason): `OprCode:`, (operation), (message state)
 Priority: Major

Impact: Case 1. VH rejects request to open record. The voice application determines the action to take.

Case 2. The recording being finished may not be saved correctly on disk. The voice application will act appropriately.

Case 3. The block to be played will not be played. Playback continues.

Case 4. The block to be recorded will not be recorded. Recording continues.

Case 5. To the Voice Handler the impact is minor, so it takes no corrective action.

Case 6. The system will try to save the recording up to the point at which the abort occurred.

Action: Check the corresponding file system error code and surrounding SEERs. If these errors persist, save the recording and contact your Northern Telecom support organization.

NT: This is a file system problem. Verify that the volumes and disk are sane.

Class 21 Voice Prompt (VX)

The Voice Prompt (VX) program is called by the voice application to play prompts. Voice Prompt errors can

- prevent playing of voice prompts if an error occurs at the initialization level
- prevent playback or cause partial playback of a particular prompt
- cause unpredictable results if the software requires a prompt to finish playback and execute next step

A class 21 SEER contains

- lower level return code, such as a DD return code
 - template ID of the prompt (if relevant). This ID is printed in Decimal.
-

01

Type: Admin

Severity: Info

Cause: The voice application has not provided input to a variable field of a voice prompt template.

Impact: The prompt will probably not be played or it will be partially played. A non-zero VX return code will be returned to the application.

Action: Run bootup Diagnostics, and try disabling and re-enabling the port defined in the HWLOC field of the SEER. Contact your Northern Telecom support organization if the problem persists.

NT: Prompt files may be corrupted on disk. Re-install the prompt files for the bad language. There may be an application software design error. If problem persists, contact the Northern Telecom development organization.

02

Type: Error

Severity: Info

Cause: A variable field received data that was out of the correct range.

Impact: The prompt will probably not be played or it will be partially played. A non-zero VX return code will be returned to the application.

Action: Run bootup diagnostics; memory may be bad. Check if the system “clock” has been setup in the system. Contact your Northern Telecom support organization if the problem persists.

NT: Prompts may be corrupted. Reinstall the bad language. There may be an application design error. If problem persists, contact your Northern Telecom development organization.

03

Type: Debug

Severity: Info

Cause: The template ID is less than 1 or greater than the total number of templates.

Impact: No prompt can be played. A non-zero return code will be returned to the application.

Action: Run bootup diagnostics; memory may be bad. Contact your Northern Telecom support organization if the problem persists.

NT: There may be an application software error. Contact your Northern Telecom development organization.

04

Type: Error

Severity: Info

Cause: One of the following problems was encountered during initialization of the voice prompt files:

1. The Voice Handler failed to initialize the prompt files.
2. The field component could not be linked.
3. The template FCBs could not be linked.
4. The first voice segment record could not be found.
5. The first template definition record could not be found.
6. The first field component record could not be found.

7. The segment and template totals could not be read.
8. The last voice segment record could not be indexed.

The return code isolates the cause.

Impact: The prompt files will not be initialized, and the voice application will not operate. Also, previously linked files will be un-linked.

Action: Log in to a mailbox to see if the prompt file is corrupted. Run diagnostics on the hard disk of the volume holding the prompt file to determine if there is any data corruption. Look up the second return code for more information. Contact your Northern Telecom support organization if the problem persists.

NT: Prompts files may be corrupted. Reinstall the prompt files. There may be an application design error. If the problem persists, contact your Northern Telecom development organization.

05

Type: Error

Severity: Info

Cause: During the translation of a field of the voice prompt template into one or more voice prompt segments, one of two things happened:

1. If the text says “Simple field max. length exceeded after conversion”, the maximum length for a simple field was exceeded, after being converted from a compound field.
2. A field component record could not be read as indicated by the SEER text. Extra data following the SEER is the prompt ID that is causing the problem. This gives the prompt that has the problem.

The return code isolates the cause.

Impact: The prompt probably will not be played or it might be partially played. A non-zero VX return code will be returned to the application.

Action: Log in to the system to see if the prompt file is corrupted. Run diagnostics on the hard disk of the volume holding the prompt file to determine if there is any data corruption. Look up the second return code for more information. Contact your Northern Telecom support organization if the problem persists.

NT: See SEER 01.

06

Type: Error

Severity: Minor

Cause: During the translation of a voice prompt template into a sequence of one or more voice prompt segments, one of the following things happened:

1. A template FCB could not be linked.
2. A required template definition record could not be indexed.
3. The required template definition record could not be read.
4. The field component record could not be read.

The return code isolates the cause.

Impact: Cases 1-4. The prompt will not be played at all.

Action: Log in to the system to see if the prompt file is corrupted. Run diagnostics on the hard disk of the volume holding the prompt file to determine if there is any data corruption. Note whether any portion of the template is played. Look up the second return code for more information. Contact your Northern Telecom support organization if the problem persists.

NT: See SEER 04.

08

Type: Error

Severity: Critical

Cause: Bad data was found in a field component record.

Impact: The prompt will probably not be played or it might be partially played. A non-zero VX return code will be returned to the application.

Action: Log in to a mailbox to see if the prompt file is corrupted. Run diagnostics on the hard disk of the volume holding the prompt file to determine if there is any data corruption. Contact your Northern Telecom support organization if the problem persists.

NT: The prompt files may be corrupted. Re-install the prompt files. If the error persists, there may be a problem with the design of the prompt file. Contact your Northern Telecom development organization.

09

Type: Error

Severity: Critical

Cause: Bad data was found in a template definition record.

Impact: The prompt will probably not be played or it might be partially played. A non-zero VX return code will be returned to the application.

Action: Log in to a mailbox to see if the prompt file is corrupted. Run diagnostics on the hard disk of the volume holding the prompt file to determine if there is any data corruption. Contact your Northern Telecom support organization if the problem persists.

NT: See SEER 08.

10

Type: Error

Severity: Critical

Cause: Failure to allocate a prompt control block from the heap passed in by the application.

Impact: The prompt files will not be initialized, and the voice application will not operate.

Action: Disable and re-enable the corresponding T1 channel. Run bootup diagnostics to test memory. If the problem persists, contact your Northern Telecom support organization.

NT: Quit out of any utilities running on the node that has the offending channel. The memory may have to be re-engineered. Contact your Northern Telecom development organization.

Class 22 Voice Messaging (VM)

Voice Messaging (VM) receives the user's voice messaging commands and executes them by calling the Voice Handler and Voice Processor.

Most VM errors affect only one call or user's session (unless the error is a symptom of a hardware problem). For most serious problems diagnosed by VM, the call is routed to the system attendant DN and VM releases memory and files for the next call.

A class 22 SEER contains

- lower level return code
- the user's mailbox number or DN (if relevant). If a mailbox included in a SEER is the user's mailbox (i.e., the login user or the recipient in a call answering session), then the mailbox number is output in the administrator's (the prime) context. Thus, since the administrator is the one looking at the SEERs, the SEER will be more meaningful to him or her.

Class 22 SEERs are often preceded by a related SEER which has the same mailbox number or the same return code.

In addition, some Class 22 SEERs may be followed by one or two related SEERs which are used by Northern Telecom support organizations to trace problems. These debugging SEERs are normally not printed, but are stored in the SEER history file, and can be viewed/printed using the MMI or the SE_UTIL utility (to enable printing of these SEERs, the SEER filter level must be set to 'DEBUG' using the SE_UTIL utility). These debugging SEERs are intended to be used by the Northern Telecom support organization only.

Format of VM debugging SEERS

If the text of any Class 22 SEER begins with the '+' character, this means that additional related debugging SEERS will be written into the SEER file. These SEERS will have the same SEER class, number, and return code as the VM SEER containing the '+' character, and are printed AFTER the original VM SEER. The first debug SEER is 'VM Cmds' and can be used by the VM designers to determine the last 20 commands issued by the user. The second debug SEER is 'VM Procs' and can be used to determine the software execution path (this second debugging SEER is only printed if the Debug level is higher than zero, set using the AD_UTIL utility).

01

Type: Error

Severity: Minor

Cause: VM encountered a problem while playing.

1. If the text says "Create Acknowledgement", VM failed to create and send an acknowledgement.
2. If the text says "Playing NDN/ACK prompt", VM failed to open or play messages correctly.
3. If the text says "Playing NDN/ACK attachment" or "Playing attachment" or "Playing attachment prompt", VM failed to open or play attachments correctly.
4. If the text says "Playing from beginning" or "Playing start prompt", VM failed to open or play messages correctly.
5. If the text says "Spoken name", VM tried to play a corrupted, bad or deleted spoken name. This SEER prints the mailbox number of the user with the bad spoken name.
6. If the text says "Play Prompt called with prompt files released", VM tried to play a prompt before the prompt files were initialized or after they were released.
7. If the text says "Trying to skip forward in msg", VM encountered an error when the user skipped forward while playing a message. There are two possible causes: i) an attachment on the message could not be opened, or ii) the lower-level VH software could not perform the PlaySkip command.

8. If the text says “PlayPrompt problems”, VM was informed of an error by the lower level VX software while trying to play a system prompt (not user voice). A possible cause of this problem is corrupt data in a message header or user’s profile, or an invalid time-stamp. A related class 21 SEER is printed just before this, containing the prompt ID that it was attempting to play.

The return code isolates the cause.

- Impact: Case 1. The recipient of the original message will not hear any error prompts.
- Case 2-4. The user hears the error prompt “Your command cannot be complete at this time. Please try again later or contact your administrator.”
- Case 5. The system recovers and play the mailbox number instead of the spoken name. The owner of the mailbox should re-record the personal verification.
- Case 6. No prompt is played.
- Case 7. The user hears the prompt “Your command cannot be completed at this time ...”, and the skip forward command will fail. The skip forward command will not send a message delivery acknowledgement in this error condition.
- Case 8. The prompt will not be played, or will be partially played, or will be played as silence. In some cases, the software depends on successful playback of a prompt. In these cases the user’s session will appear to be inactive (i.e., the session may appear “hung”).
- Action: Cases 1-7. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Collect all relevant information and contact your Northern Telecom support organization.
- Case 8. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Collect all relevant information (including the prompt ID from the previous Class 21 SEER) and contact your Northern Telecom support organization.
- NT: Cases 1-7. If the return code does not point to the problem, collect all relevant information and contact your Northern Telecom development organization.
- Case 8. If the previous class 21 SEER says that data is out-of-range, check system data bases for corruption, looking specifically at data indicated by the prompt ID and user scenario.

04

Type: Error

Severity: Minor

- Causes:
1. VM encountered a problem while trying to start recording at the current position of a previously created message. The return code isolates the cause.
 2. If the text says "Failed to commit message" then VM had a problem doing incremental saves on a large message.

- Impact:
1. The user will hear the error prompt "Your command cannot be completed at this time. Please try again later or contact your administrator".
 2. Recording will be stopped and the user will hear an error prompt. If it is in a call answering session the call will be disconnected. The message may or may not exist as recorded or it may be corrupt. In addition, the user volume on the disk may reach a safety limit, which will prevent call answering from working. If this happens, the problem will clear automatically during the overnight audits.

- Action:
1. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
 2. User-recorded voice messages are auto-saved every 5 minutes of recording. This is failing, and your Northern Telecom support organization should be called. However, in the mean time, you may wish to temporarily reduce the maximum message length to less than 5 minutes. This will avoid the problem until it can be corrected.

- NT:
1. If the return code does not point to the problem, collect all relevant information and contact your Northern Telecom development organization.
 2. The message is committed every 5 minutes to free up block record resources in the volume server. If this is failing, the BR's may be improperly allocated. An audit on the affected user volume should be run to clean up the side effect of the problem.

06

Type: Error

Severity: Minor

- Cause:
- VM encountered a problem while trying to reply to the sender of an incoming message. The return code isolates the cause.

Impact: The user will hear one of three prompts:

1. “Your command cannot be completed at this time. Please try again later or contact your administrator.”
2. “Your mailbox is full. You cannot create new messages until some messages are deleted. Please contact your administrator if you need assistance.”
3. “The system has reached its storage limit. Your command cannot be continued. Please contact your administrator for assistance.”
4. “That number cannot be reached from this service. Command cancelled.”

Action: Case 1. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

Case 2. The user should delete some messages or the administrator should increase the user’s voice storage allocation. If this does not help, contact your Northern Telecom support organization.

Case 3. That user volume is full. Users should be reminded to delete all unnecessary messages. Auto-deletion of sent or read messages can be enabled. If this does not help, contact your Northern Telecom support organization.

Case 4. Ensure that the restriction/permission lists are set up properly. Contact Northern Telecom support if there is any problem accessing the restriction/permission lists.

NT: Case 1. If the return code does not point to the problem, collect all relevant information and contact your Northern Telecom development organization.

Case 2. Use the VSMUP utility to audit the user volume containing the mailbox of the user reported in the SEER. If this does not help, notify the development organization.

Case 3. Use the VSMUP utility to audit the user volume containing the mailbox of the user reported in the SEER. If this does not help, the system may be under-engineered for the customer’s current requirements. Voice storage expansion may be required.

Case 4. If the restriction/permission lists are corrupt, the customer profile must be rebuilt using the AD_UTIL utility.

07

Type: Error

Severity: Minor

Cause: VM had a problem playing the sent date/time of a message when the user attempted the “play envelope” command.

Impact: The sent time in the message envelope will not be played.

Action: Use the MMI screen to set the system time if necessary.

NT: Use the MD_MT utility to dump the message that had the problem. Determine if the sent time stamp is corrupt. Reset the system time if necessary.

08

Type: Error

Severity: Minor

Causes: 1. If the text says “Forwarding Msg”, VM failed to forward a message.
2. If the text says “Closing original”, VM failed to close the original message that was being forwarded.

The return code isolates the cause.

Impact: The user will hear one of three prompts:

1. “Your command cannot be completed at this time. Please try again later or contact your administrator.”
2. “Your mailbox is full. You cannot create new messages until some messages are deleted. Please contact your administrator if you need assistance.”
3. “The system has reached its storage limit. Your command cannot be continued. Please contact your administrator for assistance.”

Action: Case 1. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
Case 2. The user should delete some messages or the administrator should increase the user’s voice storage allocation. If this does not help, contact your Northern Telecom support organization.
Case 3. That user volume is full. Users should be reminded to delete all unnecessary messages. Auto-deletion of sent or read messages can be enabled. If this does not help, contact your Northern Telecom support organization.

NT: See SEER 06.

09

Type: Error

Severity: Minor

Cause: VM had a problem while trying to reply to all of the recipients and the sender of an incoming message. The return code isolates the cause.

Impact: See SEER 08.

Action: See SEER 08.

NT: See SEER 06.

10

Type: Error

Severity: Minor

Cause:

1. VM failed to gain access to, or validate mailbox numbers or distribution lists while addressing during compose. The return code isolates the cause.
2. If the text says “Failure checking DNU restriction/permission list”, then the user attempted to compose a message to a non-user but the system was unable to check the dialing restriction/permission list to tell if the user is allowed to use that number.

Impact: Case 1. The user will hear the error prompt “Your command cannot be completed at this time. Please try again later or contact your administrator,” and will not be able to compose to that user.

Case 2. The user will hear the prompt “That number can not be reached from this service” and will not be able to compose to that non-user.

Action: Case 1. It may help to delete and re-add the mailbox that the user was trying to compose to. If the networking feature is installed, ensure that the network administration screens show the correct information.

Case 2. Ensure that the dialing access restriction/permission codes in the voice security options screen have been set correctly.

If the problem persists, contact your Northern Telecom support organization.

- NT: Case 1. If the networking feature is installed, make sure the network database contains the correct information. If the network database cannot be opened using the MMI it should be re-initialized using NAINIT in the UI_NETWORK package. Also ensure that the composed-to user can be successfully retrieved from the DR using the MD_DR utility. More information can be obtained by enabling the VM debug flag in the Organization Profile using the AD_UTIL utility, then observing the console window while re-creating the scenario.
- Case 2. If the restriction/permission lists cannot be retrieved using the MMI, attempt to do so using the AD_UTIL utility. If they still cannot be retrieved or are corrupt, the OrgProfile must be rebuilt. If the problem is not with the restriction/permission lists, check for corruption in the composing user's profile using AD_UTIL, and rebuild the user if necessary.

12

Type: Error

Severity: Minor

- Cause: 1. If the text says "MTA error", VM failed to initialize the Message Transfer Agent (MTA) or failed to set the send time in the message header.
2. If the text says "Adding compose message", VM failed to add a new message to the cabinet or failed to update it.

The return code isolates the cause.

Impact: In both cases, the user will hear the error prompt "Your command cannot be completed at this time. Please try again later or contact your administrator."

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

- NT: Case 1. Ensure that the MTA software is running by using the PRM_CONTROL utility, and restart it if necessary. Ensure that a valid time has been set on the switch and that DMS VoiceMail has a valid time set.
- Case 2. If the message exists in the user's cabinet, it may have to be deleted using the MD utility.

13

Type: Error

Severity: Minor

Cause: VM encountered an error while a user was logging in. The error occurred during the initial login or after the user issued the login command. If the text says:

1. “New Var of UserInfo”, VM failed to acquire memory space for a new variable called “UserInfo”.
2. “Opening cabinet”, VM failed to open the user’s cabinet.
3. “Finding Profile”, VM failed to find the user’s personal profile.
4. “Opening Profile”, VM failed to open the user’s personal profile.
5. “Updating Org Directory”, VM failed to update the organizational directory if a user’s password had expired.
6. “Multi-log in check”, VM encountered an error while checking to see if the user is already logged on to VM.
7. “gtiLogout”, VM failed to log off from GTI under these conditions: the user was logged in, had used Call Sender and then tried the login command.
8. “Failed to associate client”, VM failed to register the user as currently using VM.
9. “vhCloseV called to close resources”, VM encountered an error while updating or closing the user’s cabinet after the user tried to use the login command.
10. “cmFlushM called to close resources”, VM encountered an error while updating or closing the user’s cabinet.
11. “cmCloseM called to close resources”, VM encountered an error while updating or closing the user’s cabinet.
12. “cmCloseC called to close resources”, VM encountered an error while updating or closing the user’s cabinet.
13. “ClosePrf called to close resources”, VM failed to close the personal profile while logging in from VM.
14. “Opening first message”, VM failed in the procedure “cm_MenuToFIR” which finds and opens the first message.
15. “Check/Playing summary”, VM encountered an error while inspecting the user who was logging in.
16. “Password Violation,” VM discovered someone consecutively entering more than the maximum allowed number of incorrect passwords. The affected mailbox and the calling DN, if known, are given and the mailbox is disabled.
17. “Cannot read MWI for guest”.

18. "Couldn't change node on ppAdminRec", there were problems with the user's personal profile.
19. "Error reading personal prof hosp rec", there were problems with the user's personal profile.
20. "Could not update Has Logged In", there were problems with the user's personal profile.
21. "Could not change ppAdminRec to rc mode", there were problems with the personal profile of the user.
22. "Could not update calling context" DN Update, VM encountered an error getting the calling context from the vsh.
23. "Problem in LoginFinish", "Problem in LoginCheck", or "Problem in PlyLoginStuff" there has been a problem in completing login and a password has been entered (or autologin).
24. "Cannot read component phone number record" or "Cannot read component time period", then an error was encountered while checking remote notification being turned off externally for a mailbox.
25. "Failed Redirect - inconsistent db", the user entered a mailbox which the DMS believed was on another SPM. However, after the redirection took place, the receiving SPM could not find the mailbox.

The return code isolates the cause.

- Impact:
- Case 1-8. The user will not be allowed to log in.
 - Case 9-12. The user will be allowed to log in. New messages or changes to existing messages may not be reflected the next time the user logs into the mailbox.
 - Case 13-15. The user will not be allowed to log in.
 - Case 16. The user will not be allowed to log in until the administrator re-enables the user's mailbox.
 - Case 17. The user will be able to login, but the MWI may not be correct.
 - Case 18-19. The user may not be able to log in.
 - Case 20. The user may always have the introductory greeting played when logging in.
 - Case 21. The incident is minor and there will probably be no effect.
 - Case 22. If the error occurs before the user has logged in, the login prompts may not come out in the language configured for the phone, and autologin may not work. Otherwise, there will probably be no visible impact.
 - Case 23. The user is given an error prompt and is allowed to try logging in again.

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- Case 24. The user will not be notified that his remote notification had been turned off externally (however, probably indicates that there will be further problems with remote notification).
- Case 25. The call will be disconnected.
- Action: Case 1-15. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- Case 16. The administrator must re-enable the mailbox. The administrator should investigate whether someone is attempting to gain unauthorized access to the mailbox or the user simply forgot the password. If unauthorized access is suspected, more information is available in the SEER. The DN from which the unauthorized access was attempted is printed in the SEER, if known, following "CGN". In addition, the information following "DEV" indicates if it is an internal call (DEV 0) or an external trunk caller (DEV 1). If the SEER happens frequently, due to the user forgetting the password, you can increase the maximum incorrect login attempts allowed using the Voice Security screen on the admin console
- Case 17. If the problem persists, contact your Northern Telecom support organization.
- Case 18-21. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
- Case 22. If problem persists, contact your Northern Telecom support organization.
- Case 23-24. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- Case 25. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
- NT: Case 2. Ensure that the user's cabinet exists and can be opened using MD_CM. Ensure that the user's cabinet FID in DR is correct using MD_DR.
- Case 3-4. The user's profile may be corrupt. Attempt to re-build it using AD_UTIL. If this does not help, notify the development organization
- Case 5. Ensure that the user's DR entry is accessible using MD_DR, and re-build it if necessary.
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- Case 6, 8. Ensure that the VCA program is running using PRM_CONTROL, and restart it if necessary.
- Case 14. Check for corruption in the user's cabinet using MD_CM.
- Case 16. The user's mailbox was disabled due to too many bad password attempts. The calling DN (person trying to illegally log in) is encoded at the end of the SEER in ASCII text string format.
- Case 22. Use AD_UTIL to turn on the VM debug flag, then check the console window for DNP debug messages for more information during similar scenarios.
- Case 24. The user's profile may be corrupt. Attempt to re-build it using AD_UTIL. If this does not help, notify the development organization

In all other cases, if the return code does not point to the problem, collect all relevant information and contact your Northern Telecom development organization.

14

Type: Error

Severity: Minor

Cause: VM encountered a greeting problem. The text indicates the cause. If the text says:

1. "Opening", VM encountered an error while gaining access to a system, custom or personal greeting.
2. "Opening System Greeting" or "Opening Custom Greeting", VM encountered an error while gaining access to a system or custom greeting.
3. "Update greeting" or "Update Custom Greeting", VM encountered an error while accessing, reading, or writing either a system, custom or personal greeting.
4. "Updating System Greeting" or "Updating Custom Greeting", VM encountered an error while gaining access to, reading, or writing a system or custom greeting.
5. "Delete greeting" or "Delete Custom Greeting", VM failed to delete either a system, custom or personal greeting.
6. "Delete system greeting" or "Delete Custom Greeting", VM failed to delete a system or custom greeting.
7. "Error getting correct parser table", the incorrect parser tables are loaded by the vss. pd. The table numbers are: 0 - generic meridian mail, 1 - guest voice messaging, 3 - post checkout and 4 - VMUIF call answering.

The return code isolates the cause.

- Impact:** Cases 1-4. The greeting will not be altered.
 Cases 5-6. The user will hear the error prompt “Your command cannot be completed at this time. Please try again later or contact your administrator”.
 Case 7. The service will not be available.
- Action:** Determine the scenario that caused the problem. Look up the return code for more information. If the code does not help, contact your Northern Telecom support organization. Note that persistent SEERs on opening or playing Custom Greetings could be caused by failing to record a greeting after setting the greeting record to “custom”.
- NT:** If a personal greeting is involved, the user’s profile may be corrupt. If a system greeting is involved, the OrgProfile may be corrupt. Re-build the affected profile if necessary, using AD_UTIL.
 Case 7. Replace the correct vss. pd.

15

- Type:** Error
- Severity:** Minor
- Cause:** VM had trouble disconnecting the user’s call to DMS VoiceMail.
- Impact:** In all cases where this could occur, the system will appear to the user to be dead. Since the prompt files are not open, VM cannot play out an error message.
- Action:** Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- NT:** This can happen if the VM task has trouble communicating with the VSS program. Either the VSS is dead or it has been improperly engineered during design. Check that all voice channels (VSS programs) are properly loaded by using the PRM_CONTROL utility and by ensuring that each channel can accept new calls.
 Disable and re-enable any channels not properly loaded (the particular channel that caused the SEER can be determined by the channel number printed in the SEER). If the problem still occurs when all channels are properly loaded, contact your Northern Telecom development organization (the IPC buffers in the VSS task may need to be re-engineered).

17

Type: Error

Severity: Minor

Cause: VM encountered a Call Sender problem. If the text says:

1. “Remote user DN too long”, VM was not supplied with the phone number of the remote sender and it failed to create the number correctly from the remote user’s mailbox number and remote site information. This is only possible when mailbox numbers are the same as extension numbers for the remote site.
2. “Getting phone number”, VM encountered an error while finding or reading the message or network information.
3. “Failed to initiate call”, VM failed to place a call.
4. “CSSState, VSS Status mismatch”, VM received the value of the field “GTI_Established” from the VSS during call sender.
5. “CSSState, GTI_Cmd mismatch”, VM received an unexpected GTI command while waiting for valid commands.
6. “VPHTid not available”, VM could not locate the Taskid of the Voice Processor Handler.
7. “GTI_Login failed with rc”, VM failed to log in to GTI.
8. “GTI_Login failed ”, VM received a bad login result from GTI.
9. “GTI Error”, VM received an error indication from GTI while waiting for a login result or call progress.
10. “GTI Logout failed”, VM received an error indication from GTI while waiting for a login result or call progress.
11. “Timeout waiting for GTI Login Result”, VM timed out waiting for GTI to respond to a login request.
12. “Timeout waiting for GTI Call Progress”, VM timed out waiting for call progress information from GTI after placing a call.
13. “Call Sender call not established”, VM received call progress information from GTI indicating the call was not completed. The user’s mailbox number will be indicated in this SEER.
14. “Phone probably not set up for call transfer, or COS restriction” (and if the return code is 9 and there is a related SEER with the text “Reason not established” and return code 9), the DN specified in the first SEER may not have transfer capability or it is already involved in a conference circuit. But if the return code of the related SEER is 8, the DN specified in the related SEER is forwarding to a non-existent DN. In this specific cause, the SEER code is Type: Admin. and Severity: Minor.

15. “Reason not estab & DN called”, VM received call progress information from GTI indicating the call was not completed. The target phone number is indicated in the SEER.
16. “Could not update DN for Call Sender”, VM was unable to get the DN type and number of the calling number on a DN Update (i.e., conference, someone hangs up, etc.) from vsh.

The return code isolates the cause.

- Impact:
- Case 1. The phone number is rejected and the call is not completed.
 - Case 2-3. The call is not completed. The user will hear the error prompt “Your command cannot be completed at this time. Please try again later or contact your administrator.”
 - Case 4. VM will ignore the error. There could be unknown side effects.
 - Case 5. VM will ignore the unexpected command. There could be other unknown side effects.
 - Case 6. If a user tried to use the “call sender” command during this session, the call will be transferred and the VM session terminated immediately.
 - Case 7. The call will be transferred and the VM session terminated.
 - Case 8. The call will be transferred and the VM session terminated.
 - Case 9-10. For a login result the call will be transferred and the VM session terminated immediately.
For a call progress, VM already tried to place the call and will now play an error prompt. The call will fail and the user will be returned to the VM session.
To hear this prompt, the user may have to use the “unhold” command to return to the VM session. If the user tries to issue another “call sender” command during this session, the call will be transferred and the VM session terminated immediately.
 - Case 11. The user will hear approximately 30 seconds of silence and then the call will be transferred and the VM session terminated immediately.
 - Case 12-15. The user will hear an error prompt. To hear this prompt the user may have to “unhold” the VM session. If the user attempts another call sender during this session, the call will be transferred and the VM session terminated immediately.
 - Case 16. User may not be able to perform Call Sender function during session.
- Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: Case 2: On systems with networking or NMS features, the user can obtain more information about the call setup by using the `ad_util` command to activate the Voice Messaging debug flag and then checking for related messages in the console window.

Case 12: See Case 2.

Case 13-15: The secondary return codes can be found in the Error Code Appendix under the headings “Call Progress Status” and “Supplementary Information”.

Case 16: Use `AD_UTIL` to turn on Voice Messaging debug flag. In console window, check “DNP” debug messages.

In all other cases, if the return code does not point to the problem, collect all relevant information and contact your Northern Telecom development organization.

18

Type: Error

Severity: Minor

Cause: VM could not revert a caller to the System Attendant because VM encountered initialization problems.

Impact: The user’s call to VM will be answered but it will be hung up. No prompt will be played because the prompt files were not opened during initialization.

Action: First of all, find out why VM could not initialize properly by reviewing the preceding SEERs. Then, make sure that the System Attendant DN has been defined as a valid phone number in the MMI (System General Options screen). Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: The revert-to-operator function is implemented as a transfer from the voice channel. Therefore, ensure that all voice ports used by MMail have the capability to transfer calls defined in the switch datafill. For multicustomer/tenant MMail, the system attendant DN as shown on the MMI may be translated before dialling. If the MMail voice ports are in a different customer/tenant group than the system attendant DN, then the customer DN prefix as shown in the Voice Messaging Options screen is inserted at the beginning of the DN before dialling. Ensure that this field is set correctly. In addition, the customer DN length must be set correctly.

21

Type: Error

Severity: Minor

Cause: VM encountered an error while gaining access to, reading, or writing the password information. The return code isolates the cause.

Impact: The user's password will not be updated. The user will hear the error prompt "Your command cannot be completed at this time. Please try again later or contact your administrator."

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: The user's profile may be corrupt. Check and re-build it if necessary using AD_UTIL.

22

Type: Error

Severity: Minor

Cause: VM encountered a spoken name problem.

1. If the text says "Committing spoken name", VM had a problem committing the spoken name.
2. If the text says "Opening a Spoken Name", VM failed to initialize or open the file for the spoken name.

The return code isolates the cause.

Impact: Case 1. Any changes to the spoken name may not take effect.
2. The user will hear one of three prompts:
a. "Your command cannot be completed at this time. Please try again later or contact your administrator."
b. "Your mailbox is full. You cannot create new messages until some messages are deleted. Please contact your administrator if you need assistance".
c. "The system has reached its storage limit. Your command cannot be continued. Please contact your administrator for assistance."

Action: Case 1. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

Case 2a. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

- Case 2b. The user should delete some messages or the administrator should increase the user's voice storage allocation.
- Case 2c. That system volume is full. Delete files and perform an audit.
- NT: Case 1. Determine the scenario that caused the problem. If the user was trying to update his own spoken name, then his own DR entry may be corrupt. But if the user has administrator capability, he may be trying to update another user's spoken name, and this other user's DR entry may be corrupt. Check and re-build the affected user's DR entry if necessary using MD_DR.
- Case 2a. Same as Cases 1 (above).
- Case 2b-c. See SEER 06, cases 2 and 3.

23

Type: Error

Severity: Minor

Cause: VM encountered a problem with a Personal Distribution List (PDL).

1. VM could not close the PDL, as indicated by the SEER text.
2. VM could not delete the PDL, as indicated by the SEER text.
3. VM could not open the PDL, as indicated by the SEER text.
4. VM could not record the PDL, as indicated by the SEER text.
5. VM could not create the PDL, as indicated by the SEER text.
6. If the text says "PDL second address", VM encountered an error while closing or validating the distribution list.
7. VM could not play the PDL, as indicated by the SEER text.

The return code isolates the cause.

Impact: The user's changes to the list may not take effect. The user will hear one of three prompts:

- a. "Your command cannot be completed at this time. Please try again later or contact your administrator."
- b. "Your mailbox is full. You cannot create new messages until some messages are deleted. Please contact your administrator if you need assistance".
- c. "The system has reached its storage limit. Your command cannot be continued. Please contact your administrator for assistance."

Action: Case a. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

- Case b. The user should delete some messages or the administrator should increase the user's voice storage allocation.
- Case c. That user volume is full and should be cleaned up and audited.
- NT: Personal Distribution Lists are stored in the user profile of each mailbox. Errors in handling PDLs can generally be cleaned up by deleting the affected PDL record in the Profile file. This can be done using the MD utility (record type is ByteStream, record ID = PDL number). The PDL record will be recreated (but empty) the next time the user enters that PDL number in the 8-5 command.
- If this fails to work, the entire Profile can be deleted then recreated using AD_UTIL (or by copying from another user and modifying appropriately). Also note that some PDL operations make use of a temporary copy of the Profile. If a PDL operation fails, this temporary file may not immediately be cleaned up properly. The result is that the text storage on the user volume may temporarily be increased erroneously. To delete this temporary file an audit of the user volume can be run (but this happens automatically overnight anyway).

25

Type: Error

Severity: Minor

- Cause:
1. VM failed to create a new message. The return code isolates the cause.
 2. If the text says "Open msg for DNU ack", then the original message sent to a non-user could not be re-opened to get the address for acknowledgement.
 3. If the text says "Close msg for DNU ack", then the original message sent to a non-user could not be closed after sending the acknowledgement.

- Impact:
- Case 1. The user may encounter more problems performing further operations on the message. A call answering or express message may not have been created in the user's mailbox.
- Case 2. The DNU message will not have an acknowledgement.
- Case 3. A heap loss may be detected at task completion, and the T1 channel will then reload. The DNU acknowledgement will be sent okay.

- Action:
- Case 1. Examine the preceding SEERs that have the same mailbox number or a SEER number matching the return code. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

Case 2-3. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: This will normally be caused by a problem with the file system (for example, volume full condition or incorrect VS formatting parameters) or a problem with the disk subsystem. Verify correct configuration of the volumes. Check and repair SCSI components if necessary.

26

Type: Error

Severity: Minor

Cause:

1. VM encountered an error while adding a message to the user's cabinet, as indicated by the SEER text.
2. If the text says "Adding new Arrival" or "New Arrival", VM encountered an error while adding a message to the user's message list.
3. If the text says "AddMsg failed in rnMsgArrival" then there was a failure telling the OCS that a message had been deposited for someone by VM.

The return code isolates the cause.

Impact: Case 1-2. The messages will be lost.

Case 3. The recipient will not be "remote-notified" of the message.

Action: Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: This scenario can occur when a new message is sent to a user who is currently logged in. Attempt to reproduce the problem by sending composed and call answering messages to a logged-in user. (The user must move to the next message before the new message can be received).

This scenario can also occur any time a new message is added to a mailbox by way of compose, send-receive, call answering, or express messaging. For cases 1 and 2, check for volume full condition. For case 3, check that the OCS software is loaded and running (use PRM_control utility).

27

Type: Error

Severity: Minor

Cause: VM encountered an error while gaining access to, opening, or reading the message. The return code isolates the cause.

Impact: The user will hear one of three error prompts:

1. “Your command cannot be completed at this time. Please try again later or contact your administrator.”
2. “Your mailbox is full. You cannot create new messages until some messages are deleted. Please contact your administrator if you need assistance”.
3. ”The system has reached its storage limit. Your command cannot be continued. Please contact your administrator for assistance.”
4. If the text says “Inconsistent Times in Msg” then there is no impact whatsoever. This SEER can be ignored in all cases; it should not have been printed.
5. If the text says ‘Late Msg’ or ‘More Info’, then a user has received a message that was sent more than 10 minutes ago.
6. If the text says “Deleted IP Msg in Guest Mbx”, then an acknowledgement or nondelivery notification was found in a guest mailbox. The message is deleted with no impact to the user. Hospitality voice messaging does not handle these types of messages.

Action: Case 1. Look up the return code for more information. If the code does not help, contact your Northern Telecom support organization. If the text of the SEER refers to “trying to open message” with a return code of 1007, this and subsequent 22-27 and 22-33 SEERs are not significant problems unless a number of them occur at once. The user can clean up any inconsistencies caused by this problem by deleting the offending message.

Case 2. See SEER 06, case 2.

Case 3. See SEER 06, case 3.

Case 4. None. Please ignore this SEER.

Case 5. Advise the user shown in the SEER not to delete any messages in the mailbox, so that these can be studied by your Northern Telecom support organization. Contact your Northern Telecom support organization for further instructions.

Information in this SEER is as follows:

- HDR.DR is the time the message was left/sent/time-delivered
- FIR.DC is the time the message arrived in the recipient’s mailbox

- R= is the number of recipients
- +B means this is a broadcast message
- +S means the message was sent to a system distribution list

The FID of the message is also included; if the user has deleted the message from his mailbox, the FID can be used to find the message if it exists in anyone else's mailbox. If the message was sent to a large system distribution list, or is a broadcast message, or if a broadcast message or one with a large distribution list exists in the users mailbox prior to the late message, then this SEER can be ignored. Otherwise print out the following information and contact your Northern Telecom development organization:

1. The message contents using the MD-MT utility.
2. The user's cabinet contents using "displaye" in the MD-CM utility.
3. The contents of any system distribution list that the message was sent to.

Case 6. None. This is simply an information SEER.

NT: If this SEER occurs with any regularity, you may find it useful to turn on the Session Trace feature. See the section Operation measurements section in the ETAS Utilities document. The Session Trace feature will track each interaction with a mailbox so that the resulting messages can be traced.

28

Type: Error

Severity: Minor

Cause: VM encountered an error while entering or committing the cabinet, or while updating the menu. The return code isolates the cause.

Impact: Changes, if any, may not take effect.

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: The user's cabinet may be corrupt. Attempt to open the cabinet using MD_CM, and delete and re-build the mailbox if any corruption is found.

29

Type: Error

Severity: Minor

Cause: 1. VM encountered an error while updating the menu.
2. VM encountered an error while gaining access to, or reading the personal profile, or while trying to turn off the message waiting indicator (MWI).

The return code isolates the cause.

Impact: Case 1. Any changes to the message may not be reflected the next time the user logs in.

Case 2. The MWI may be set incorrectly.

Action: Case 1-2. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

Case 2. To reset the MWI, send a new message to the user's mailbox, then have the user log in and read all messages that are new. The MWI should now be set correctly.

NT: Case 1. See SEER 28.

Case 2. The MWI can be reset using the GTI_PKG utility. If the problem persists, notify the development organization.

30

Type: Error

Severity: Minor

Cause: VM could not close a message. The return code isolates the cause.

Impact: The user may encounter more problems performing further operations on that message.

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: See SEER 28.

31

Type: Error

Severity: Minor

Cause: VM was unable to update a user's cabinet to reflect the deletion of a message.

1. If the text says "Opening Msg in DelAll", the message could not be opened for deletion/restoration during a request to delete messages.

- 2.. If the text says “Updating Msg in DelAll”, the message could not be marked as deleted/restored during a request to delete messages.

Impact: The message may not be deleted/restored.

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: See SEER 28.

32

Type: Error

Severity: Minor/Critical

Cause: VM was unable to acquire sufficient initial resources to begin a session. The text message indicates the cause. If the text says:

1. “Switching services: CA-VM”, the user tried to log in from a call answering or express messaging session and VM encountered a problem trying to switch to a voice messaging service.
2. “New prompt files switch”, VM had problems resetting the language of the system prompt files.
3. “Prompt files for boxnumber”, VM has problems resetting the language of the system prompt files.
4. “Problems in vm - Logoff called”, VM had already detected a problem and failed to obtain information from the voice services shell on details of the Calling and Called DNs.
5. “Getting call info. on service transfer”, VM had a problem obtaining information from the voice service shell after the VSS had invoked it.
6. “Getting vm control block”, VM had a problem obtaining heap to store its global data record.
7. “VM: VM svc - fails to bind routines”, a bad service ID was used in the procedure that associates the VM routines with the VSS.
8. “VM: CA svc - fails to bind routines”, a bad service ID was used in the procedure that associates the VM routines with the VSS.
9. “VM: QC svc - fails to bind routines”, a bad service ID was used in the procedure that associates the VM routines with the VSS.
10. (“phoneDN”)->(“calledDN””, VM encountered a serious problem and has terminated the call.

11. “Non-user forwarded to VM”, VM encountered a problem during call-answering and has terminated the call. Either a non-user of voice messaging had his phone forwarded to the DMS VoiceMail DN, or there was a serious directory problem. In this particular cause, the SEER code is considered Type: Admin. and Severity: Info.
12. “Could not find parser/state table”, the incorrect parser tables were loaded by vss.pd. The table numbers are: 0-generic DMS VoiceMail, 1-guest voice messaging, 3-post checkout and 4-VMUIF call answering.
13. “Finding user class”, the personal profile could not be read.
14. “Error playing custom login”, the custom login greeting was not recorded or some other greeting error has occurred.
15. “Error playing custom intro greeting”, the intro custom greeting was not recorded or some other greeting error has occurred.
16. If the text says “Debug flag enabled - performance degradation expected”, then Northern Telecom developers have been investigating Voice Messaging. In this particular cause, the SEER code is considered Type: Admin. and Severity: Info.
17. If the text says “Bad connection timestamp in StartVM”, then VM was unable to get the time of original connection to the service.
18. If the text says “Could not update DN for Call Sender”, VM was unable to get the DN type and number of the calling number in StartProc (VM initialization).
19. If the text says “Getting space alloc/used” then the space allocation and space used parameters could not be obtained from the VS for the mailbox indicated.
20. If the text says “Calling DN: x CalledDN: x Dev: x Type: x CustNum: x”, the call could not be answered or the initial prompt such as ‘DMS VoiceMail’ could not be played. Possible problems are link outages, VPIO task dead, and voice port faulty.

The return code isolates the cause.

- Impact:
- Case 1. The user will hear the error prompt and will return to where the log in command was entered.
 - Case 2. If the previous language was different from the new language, the system will try to switch back.
 - Case 3. For a Call Answering session, the session will be terminated and the system will attempt to revert to the Custom Operator or System Attendant (in that order, if they exist). For a logon session, the session will terminate.
 - Cases 4-6. The user will probably not be connected with the desired service.

- Cases 7-11. See Action.
 - Cases 12. The service will not be available.
 - Case 13. The session will be lost.
 - Case 14. If the greeting is not recorded, the service continues. If some other error is occurring, the service discontinues.
 - Case 15. The greeting is not played.
 - Case 16. Performance degradation in all services.
 - Case 17. OM reports on service usage may be incorrect and other features involving times may not work correctly (i.e. timed delivery, remote notification setup).
 - Case 18. User may not be able to perform Call Sender function during session.
 - Case 19. Session will continue. If the user's mailbox is full, this will not be announced during login, and call answering will not be blocked even if this feature is enabled.
 - Case 20. The call is disconnected and the user will hear a partial prompt or no prompt at all.
- Action:
- Case 1. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
 - Case 2. Examine the related SEERs. Check that the preferred language of the user is a valid, installed language. Note: "Preferred language override" only applies to Call Answering and Express Messaging.
 - Case 3. Examine subsequent SEERs containing the same DN or user or mailbox for more information.
 - Case 4. Examine the preceding SEERs for more information.
 - Case 5-9. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
 - Case 10. Examine the preceding SEERs for more information. If there are no preceding SEERs, the problem might be either that a non-VM user forwarded his or her phone to VM or the directory has a serious problem.
 - Case 11. Define a mailbox for the non-user or stop the offending telephone from being forwarded to VM.
 - Case 12. Contact your Northern Telecom support organization to replace the incorrect vss.pd.
 - Case 13. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
 - Case 14-15. Record a greeting, and if the problem persists, check the return code and contact your Northern Telecom support organization.

- Case 16. If Northern Telecom developers are not performing an investigation at the time, contact your Northern Telecom support organization to remove Voice Messaging debug flag.
- Case 17. Ensure that the time is set correctly. If problem persists, contact your Northern Telecom support organization.
- Case 18. If problem persists, contact your Northern Telecom support organization.
- Case 19. Act according to the return code indicated.
- Case 20. If problem persists, contact your Northern Telecom support organization.
- NT: Case 2-3. Ensure that prompt files exist in the correct cabinet on each user volume, using the MD utility.
- Case 11. The mailbox number in the SEER is actually the called-DN, which was set to forward to VM. If this DN is not supposed to have a mailbox, then change the DN definition on the switch so that it does not call forward or hunt to VM. If the DN is a secondary DN on a multi-line phone, then add this DN to the extension DN list of the mailbox. If the DN in the SEER is supposed to have a mailbox already, then use MD_DR to attempt to retrieve the mailbox DR entry. Re-build the DR entry if necessary.
- Case 16. Use AD_UTIL to disable the voice messaging debug flag (in the “Login” record).
- Case 17. The network database can be initialized using the UI_NETWORK package.
- Case 18. The calling DN given in the PCI from the switch should be checked.
- In all other cases, if the return code does not point to the problem, collect all relevant information and contact your Northern Telecom development organization.

33

Type: Error

Severity: Minor

Cause: VM encountered a problem during the logoff sequence.

Impact: Varies widely from an improper setting of the user’s MWI to a drastic loss of program resources. The user may not notice any problems until log in is tried again.

Action: The SEER text should describe the exact problem. If the action is not obvious from the description, contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information.

If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: This SEER will normally list one or more internal software procedures which could not be executed. The return code in the SEER applies to the first procedure which encountered a problem (the remaining procedures may have had problems as a result of the first problem). There will usually be several related SEERs preceding the 2233 SEER (they are related if the TaskID in the SEER is the same). These related SEERs should be studied closely to determine the cause of the problem.

Some of the possible errors shown in the SEERs are: "cmFlushM", "cmCloseM", "cmChgMode", "cmCloseC" and mean updates to the mailbox (ex msg deletions) may not take effect. Do the following:

1. Check for and clean any corruption in the user cabinet, using MD_CM; "rnNLogOut", "ocCallResult" means that remote notification for this user may not work.
2. Check that the OCS software is installed and running, using PRM_CONTROL; "gtiLogout" which means the user will not be able to perform call-sender in the same session.
3. Check that the AML/CSL/ISDN-AP link is up; "vhCloseV" means the customer profile may be corrupt.
4. Check and fix using MD; "Hosp:ChgMode", "Hosp:adRead", "ClosePrf" means changes to the user profile may not take effect.
5. The Profile file may be corrupt. Check it using AD_UTIL; "GstCntrs", "VCI PLH_VC" "MWI_PLH_VC" means guest voice counts may not be sent to the hotels PMS system (HVS systems only); "drChgEntry" means the user's DR entry could not be updated with password expired status.
6. Check for corruption in the DR using MD_DR; "Disconnect" means there was a problem disconnecting the call.
7. See SEER 2215; "om_SendVMDData" means that operational measurements information could not be saved for this session.
8. Check that the OMSERVER software is running PRM_CONTROL; "Disassociating Client" means the user could not be deregistered from the call and may not be able to log in again (prompt will say mailbox currently in use).
9. Disable and re-enable the channel.

34

Type: Error

Severity: Minor

Cause: VM encountered a error turning on the MWI while depositing a call answering message in a user's mailbox. The return code isolates the cause.

Impact: The MWI for the target user's mailbox may be set incorrectly.

Action: To reset the MWI, send a new message to the user's mailbox, then have the user log in and read all messages that are new. The MWI should now be set correctly. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: The MWI can be reset using the GTI_PKG utility. If the return code does not point to the cause of the problem, contact your Northern Telecom development organization.

35

Type: Error

Severity: Minor

Cause: VM is receiving error messages or unusual data from other software components. If the text says:

1. "StopVoice", VM requested the Voice Handler to stop the playing of voice and the Voice Handler returned an error.
2. "Received a bad digit", VM received an out of range DTMF digit (the digit was less than 1 or greater than 12).
3. "PlayPrompt Problems", VM had an error or internal time-out.
4. "Unexpected Call Progress Entry", VM had an error or internal time-out.
5. "Unexpected GTI_from Switch Entry", VM had an error or internal time-out.
6. "GTI Reference ID Mismatch", VM had an error or internal time-out.

The return code isolates the cause.

Impact: Case 1. The user may hear voice continue to play where it was expected to stop.
Case 2. None.
Case 3-6. Unpredictable.

Action: Look up the return code for more information. If the code does not help, contact your Northern Telecom support organization.

- NT: Cases 1-2 If the return code does not point to the problem, collect all relevant information and contact your Northern Telecom development organization.
- Cases 3-6. Use AD_UTIL to enable the VM debug flag, then check the console window during similar scenarios. The console window will show all call-progress information received from the switch. The “CallState” values can be found under the heading “Call Progress Status”, and the “otherInfo” values can be found under the heading “Supplementary Information to Call Progress Status”, both in Appendix 1 of this manual.

36

Type: Error

Severity: Minor

Cause: VM encountered a problem during a call answering or express messaging session. The message text indicates the cause. If the text says:

1. “Trouble Finding mailbox”, VM encountered an error looking up a mailbox for an Express Messaging session.
2. “Close the greeting”, VM had problems closing the greeting before starting to record a call answering message.
3. “Creating the message”, VM was unable to create a message for the call answering session.
4. “Closing Sys Greeting”, VM had problems closing the system greeting before starting to play the next prompt.
5. “Close voice in bad grtg”, VM had a problem playing a greeting and closing it.
6. “Error playing pers. grtg, subst std grt”, VM had a problem playing a non-system greeting or a telset busy prompt.
7. “Opening cabinet”, VM had a problem opening the user’s cabinet for an Express Messaging session.
8. “Finding Profile”, VM had a problem finding the user’s profile for an Express Messaging session.
9. “Read Profile”, VM had a problem finding the user’s profile for an Express Messaging session.
10. “Open User Profile”, VM had a problem finding the user’s profile while name addressing during an express messaging session.
11. “SetCallInfo failed in DNUpdate”, VM had a problem obtaining the caller’s DN or placing it in the call answering message.

12. “dd_Write failed in DNUpdate”, VM had a problem writing the caller’s address into the call answering message.
13. “dd_FindRec failed in DNUpdate”, VM had a problem finding the record in a call answering message which contains the senders address.
14. “Error playing system grtg, subst pers/std grtg”, VM had a problem playing the system greeting.
15. “dr_FindEnt on Caller”, VM encountered a problem finding the caller’s entry in the organization directory while trying to set up the call information.
16. “mkAddress on Caller”, VM encountered a problem formatting the callers addressing while trying to set up the call information.
17. “Error playing custom CA unans greeting” or “Error playing custom busy greeting” or “Error playing custom dis/vac (disabled/vacant) greeting”, the applicable greeting was not recorded or some other greeting error occurred.
18. “Error playing system greeting, subst. pers/std greeting”, there was an error on playing the guest or staff system greeting.
19. “Could not update calling context” in DN Update, VM encountered an error getting the calling context from the VSS.
20. “CA max message length reduced” then the maximum call answering message length has been reduced for the mailbox indicated because the user has exceeded this space allocated (if the return code is 0). If the return code is non-zero, then the changing of maximum message length was unsuccessful.
21. “Call Answering message not recorded”, then the mailbox indicated has become so full that a call to that mailbox was reverted to the attendant.
22. “PlyCADefGrt: DN” or “PlyBusyGrt: DN” or “pspPlyPr:pCAPr: DN” then the dialing number could not be obtained for one of the default call answering greetings.

The return code isolates the cause.

- Impact:
- Case 1. The user will have just entered the mailbox number where they wanted to leave a message and instead of hearing the verification they will hear the error prompt. The express messaging session will then be terminated.
 - Case 2. None to the user, but a heap loss may occur after the user disconnects; the channel will reload.
 - Case 3. If this is the result of a full volume server the user will hear an error prompt and will be placed in the call answering empty state.
 - Case 4. None to the user, but a heap loss may occur after the user disconnects; the channel will reload.

- Case 5. See Action.
 - Case 6. A personal greeting or telset busy prompt is substituted with the system-provided standard greeting.
 - Case 7-9. If the user was in name addressing then he or she will hear "Call Answering cannot be continued at this time. Connecting to the attendant." The call will then be rerouted to the attendant. If the user was not in name addressing then they will hear "Your session cannot be continued. Please try again later or contact your administrator." The express messaging session will be terminated.
 - Case 10. The user will hear "Call Answering cannot be continued at this time. Transferring to an attendant." The call is rerouted to the attendant.
 - Case 11-13. The "from address" in the call answering message being left may be incorrect or incomplete.
 - Case 14. The user will hear just the personal or standard greeting instead of the system greeting and the personal or standard greeting.
 - Case 15-16. See Action.
 - Case 17. The default greeting is played instead of the custom greeting or the busy greeting is not played or the system reverts to the revert DN and does not play the disabled/vacant greeting.
 - Case 18. The greeting is not played.
 - Case 19. The recipient of the call answering/Express Messaging may not be able to use the Call Sender function on the message, and the "from" information in the message header may be incorrect.
 - Case 20. If the return code is non-zero, the maximum message length could not be reset. Otherwise, callers to this mailbox will not be able to leave messages which are greater than one minute in length.
 - Case 21. This is a feature. Callers to this mailbox will not be allowed to leave messages and will not be transferred to the attendant.
 - Case 22. The caller may hear the incorrect number in the call answering message.
- Action:
- Case 1. This SEER provides the mailbox number that the Express Messaging user tried to enter. Use it and the return code to solve the problem.
 - Case 2-4. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
 - Case 5. Examine related SEERs for more information.
 - Case 6. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

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- Case 7-10. Examine the 22-50 SEER, which follows this SEER.
- Case 11. Examine the 22-36 SEER, which precedes this SEER.
- Case 12-14. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- Case 15-16. Refer to subsequent class 22 SEERs for more information. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- Case 17. Record the applicable greeting if it is not already recorded. If the error persists, check the return code and contact your Northern Telecom support organization.
- Case 18. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
- Case 19. If problem persists, contact your Northern Telecom support organization.
- Case 20. Act on the return code if non-zero. If unclear, contact your Northern Telecom support organization.
- Case 21. System administrator should inform the user that his mailbox is too full and he should clean it up and/or the user may require more space.
- Case 22. Look up the error code and act accordingly. If unclear, contact your Northern Telecom support organization.
- NT: Case 1. Use MD_DR to search the DR for the mailbox number shown in the SEER. Rebuild the DR entry for this mailbox if necessary.
- Case 2. The user's profile may be corrupt. Check and rebuild it if necessary, using AD_UTIL.
- Case 3. The user's cabinet may be corrupt. Use MD_CM to verify and delete/rebuild the cabinet if necessary.
- Case 4. The OrgProfile may be corrupt. Use AD_UTIL to check it and rebuild it if necessary.
- Case 5-6. See Case 2.
- Case 7-8. See Case 3.
- Case 9-10. See Case 2.
- Case 14. See Case 4.

- Case 15. The mailbox number in the SEER is actually the calling DN. Use MD_DR to look up the calling DN in the DR. If there are errors in the DR, contact your Northern Telecom development organization.
- Case 19. Use AD_UTIL to activate the voice messaging debug flag and check “DNP” messages in the console window.
- Case 20-21. If these SEERs occur when the mailbox is not actually full, then attempt to free up the unusable space in the mailbox by deleting the user’s personal greetings and auditing the user volume of the affected user by using VSMUP. To disable this feature, set the “CA blocking factor” field to 0 in the OrgProfile using AD_UTIL.
- Case 22: Use AD_UTIL to activate the voice messaging debug flag. Messages in the console window may be helpful to the designers.

37

Type: Error

Severity: Minor

Cause: VM encountered a case which its software does not handle. If the text says:

1. “Turn on timer”, VM tried to reset its delay timer with an undefined value.
2. “Illegal state”, the state tables in VM indicate that a non-existent prompt should be played. This is usually a software error, but it could also be caused by corrupt memory (i.e., bad RAM hardware). Software causes could be errors in state tables or digit parser in the wrong state.
3. “Illegal procedure”, the state tables in VM indicate that a non-existent procedure should be executed.
4. “VoiceIOEvent”, VM received an undefined or inconsistent VOICEIOEVENT interrupt.
5. “RN State not handled in PlayRNPrompt”, a prompt could not be played because VM is in an illegal state.
6. “Internal Error: Bad RN schedule RecIDpassed to RNRead”, or “Internal Error: Bad RN schedule passed to RNWrite”, VM encountered an unknown Notification schedule type.
7. “Bad RN cmd entered in PSPRNMenu”, VM has encountered an invalid state.

Impact: Case 1. This could cause a disruption of the normal sequence of delay prompts and affect the normal disconnect time out sequences. The entry of any command by the user may correct this condition.

Case 2. The user’s commands will not be understood correctly and the resulting error prompt will not be played.

- Case 3. Unpredictable.
- Case 4. Unpredictable.
- Case 5. Unpredictable.
- Case 6. The schedule cannot be read/added/changed/deleted.
- Case 7. The user will hear the prompt “Your command cannot be completed at this time. Please try again later or contact your administrator.”
- Action: Case 1. Contact your Northern Telecom support organization and supply SEER printouts covering the hour before and the hour after this SEER occurred.
- Case 2: Contact the owner of the mailbox shown and determine the sequence of commands that were given by the user to cause the problem. Contact your Northern Telecom support organization.
- Case 3-7: Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- NT: These are internal source errors within the software implementation. They are expected to occur only in faulty hardware conditions (either RAM disk or subsystem faults) or periods of extremely heavy loads (outside the supported engineering limits). Any other occurrence indicates a software bug. Contact your Northern Telecom development organization since the data in the SEERs references internal state IDs which cannot be interpreted without access to the source code.

38

Type: Error

Severity: Minor

Cause: A problem occurred within VM and not at a lower level.

Impact: The user may hear a system error prompt. Normal operation may proceed upon user entry or VM may be shut down with the caller forwarded to the attendant as in the case of a non-user forwarded to VM.

Action: Look at the accompanying SEERs for more information. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: If the SEER text indicates a problem while playing or recording, this problem is a result of an unexpected voice I/O event and may indicate a software bug. Contact your Northern Telecom development organization.

If the SEER text indicates a problem closing a custom greeting then the customer profile may be corrupt. Check for corruption and clean it up, if necessary, using the MD utility.

If the SEER text indicates a problem closing a menu, this means that the user message list may be corrupt (there may be a related class 2213 SEER indicating an underlying cause). Check for, and clean up, any corruption in the user cabinet using MD_CM.

39

Type: Error

Severity: Minor

Cause: VM encountered an error while executing the skip backward command on a Non-Delivery Notification or an Acknowledgement. The return code isolates the cause.

Impact: The user will hear the error prompt “Your session cannot be continued. Please try again later or contact your administrator.”

Action: Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: This SEER indicates a possible corruption in a NDN or Acknowledgement message in the user’s mailbox. Use MD_CM to open the affected user’s cabinet and find the filename of any message which has a subject field beginning with and “ACK” or “NDN”. Then use MD_MT to open each of these messages and check for corruption. Using MD_CM, delete any messages that are corrupt.

50

Type: Error

Severity: Minor

Cause: Case 1: If the text says “Quick Compose setup failed”, VM encountered an error while setting up an express messaging session. The return code isolates the cause.

Case 2: If the text says “couldn’t get Mbox Num”, VM had problem translating the Mailbox Number to be played back to the user.

- Impact:** Case 1: The express messaging session is terminated. If the user has yet to hear the spoken name verification then the user will hear the error prompt “Your session cannot be continued. Please try again later or contact your administrator.” If the spoken name verification has already been played then the user will hear your call cannot be continued at this time. Transferring to an attendant” and the system will make the connection.
- Case 2: The user will not get proper confirmation of the mailbox number to which message is being sent. The session will continue and the message can be recorded and left.
- Action:** This SEER is often preceded by a related SEER, one having the same mailbox number or a SEER number matching the return code. Examine this SEER. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- NT:** Case 1: This may indicate corruption in the mailbox to which the user was trying to send an express message. Check and fix corruption in the user cabinet using MD_CM. Check and fix corruption in the user Profile using AD_UTIL.
- Case 2: When the user types a mailbox number for express messaging, it is played back to the user for confirmation. In an NMS system, the mailbox number may be translated before playback to indicate the location of spoken name. This translation is failing. Instead of a translated mailbox number and location spoken name, the user will hear the digits typed in without any translation (the message will still be deposited in the correct mailbox, however). The translation of the mailbox number is done using the network database. In diagnosing this problem, check that the network prefixes are properly defined.

51

Type: Error

Severity: Minor

Cause: VM encountered a call processing problem while trying a custom operator revert. The return code isolates the cause.

Impact: The user is not transferred to the custom operator. The user will hear the error prompt “Your connection cannot be completed at this time. Please try again later or contact your administrator.” If the user was in call answering, then the user will be returned to the place where 0 was pressed. If the user was logged in to a mailbox, then the user will be placed at the end of it. When using proprietary call answering,

if the user is told the call can't be completed, the user can still continue the mail session. If residential call answering is used the mail session ends as well as the call.

Action: Look up the return code for more information. If the code does not help, contact your Northern Telecom support organization. One possibility is that the DN being transferred to is out of order. Try calling the DN directly.

NT: Use AD_UTIL to enable the VM debug flag, then check the console window during similar scenarios. The console window will show all call-progress information received from the switch. The "CallState" values can be found under the heading "Call Progress Status", and the "otherInfo" values can be found under the heading "Supplementary Information to Call Progress Status", both in Appendix 1 of this manual.

53

Type: Error

Severity: Minor

Cause: VM was unable to retrieve a digit that was entered by the user causing the digit to be lost. The return code isolates the cause.

Impact: The user may hear prompts or messages continuing to play when they should have been interrupted. Subsequent digits may be incorrectly interpreted as different commands.

Action: Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: This can happen if the VM task has trouble communicating with the VSS program. Either the VSS is dead or it has been improperly engineered during design. Check that all voice channels (VSS programs) are properly loaded by using the PRM_CONTROL utility and by ensuring that each channel can accept new calls.

Disable and re-enable any channels not properly loaded (the particular channel that caused the SEER can be determined by the channel number printed in the SEER). If the problem still occurs when all channels are properly loaded, contact your Northern Telecom development organization (the IPC buffers in the VSS task may need to be re-engineered).

54

Type: Error

Severity: Minor

Cause: VM encountered a problem while trying to update the message information with the acknowledge or time delivery tags. The return code isolates the cause.

Impact: The current message tagged for acknowledgement or timed delivery will not be tagged as desired. The user will hear the error prompt.

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: Examine the message envelope using MD_CM and delete the message if it is corrupt.

55

Type: Error

Severity: Minor

Cause: VM encountered a problem playing an address or mailbox ID. The text message indicates the cause. If the text says

1. “Expanding Distribution list”, the user was addressing a message with a personal distribution list which contains mailbox IDs of deleted users, one of which VM had a problem handling.
2. “Failed to get site info”, VM had trouble translating an address for playing purposes.
3. “Failed to get mailbox number”, VM had trouble translating an address for playing purposes.
4. “Site should be remote”, VM found an address with a non-existent mailbox ID which is either not “remote” or is in a Coordinated Dialing Plan (CDP).
5. “Site should not be inCDP”, VM found an address with a non-existent mailbox ID which is either not “remote” or is in a Coordinated Dialing Plan (CDP).
6. “External address not from”, VM was trying to play “to a non-user” or some prompt including the segment “system” which is not the prompt “from system”.
7. “mt_RecType - TmptBase mismatch”, VM was trying to play “to a non-user” or some prompt including the segment “system” which is not the prompt “from system”.
8. “OnNet Address not FROM” then VM was trying to play the prompt “a message from an OnNet user”.

9. "OnNetAddr: DN", then an OnNet Address could not be converted for playback in the user's context.
10. "NonUser: DN", then an external non-user address could not be converted for playback in the user's context.

The return code isolates the cause.

- Impact:
- Case 1. The user will hear the error prompt "There is no mailbox at: (digits)."
 - Case 2-3. If VM encountered an undefined site ID, the user will hear "Deleted Site" otherwise the user will hear the error prompt "The caller's number isn't known".
 - Case 4-5. The user will hear the prompt "Deleted Site".
 - Case 6-8. The user will hear the error prompt "The caller's number isn't known".
 - Case 9. The address may be voiced incorrectly.

Action: Look up the return code for more information. If the code does not help, contact your Northern Telecom support organization.

NT: More information on system translation of network address can be seen in the console window. This information is available for systems with networking when the debug flag is activated using AD_UTIL.

56

Type: Error

Severity: Minor

Cause: VM encountered a problem during name addressing.

1. If the text says "Failed to reset advice in NADetermine", or "Failed to reset advice in FindAllNames", or "Failed to reset advice in pspNam2Addr", or "Failed to reset advice in pspNamList", or "Failed to reset advice in ps pPNam2Addr", the VM failed to reset the keypad language after the user had cancelled name addressing or encountered an error.
2. If the text says "Keypad lang ND or ChgAdvice failed", the keypad language is undefined or VM failed to reset the keypad language. This error would occur just after the user enters the name addressing prefix.
3. If the text says "Could not find or write out record", VM was unable to add a name address to the address list of either a message or a distribution list.
4. If the text says "Could not MkAddress for name", VM was unable to create an address for a user found by name addressing.
5. If the text says "could not find next name", VM had problems finding entries in the Organization Directory or found less than two entries while creating a user requested list for name addressing.

6. If the text says “Problem in pspNam2Addr”, VM had a problem searching the Organization Directory for a specific name.
7. If the text says “Insufficient memory available”, VM does not have enough space to create a list of the names that may be matched.

The return code isolates the cause.

- Impact:
- Case 1. Searches in the Organization Directory may produce incorrect results.
 - Case 2. The user will hear the error prompt. Name addressing will be terminated and the user returned to the point where the prefix had been entered.
 - Case 3. The user will hear an error prompt and then be placed on the current message in the mailbox.
 - Case 4. If this happens while VM was collecting names for a user requested list of matches there are two possible results. The first result is that one name (per SEER) will be left out of the list. The second occurs if the list ended up with less than 2 valid addresses thereby causing a second SEER. The user will hear the error prompt and then is returned to where he or she accessed name addressing, either in the user’s mailbox or at the beginning of express messaging.
This could happen during a “Name Addressing” unique match. The result in this situation is identical to the second result but the extra SEER is not generated.
 - Case 5-7. The user will hear the error prompt “Your command cannot be completed. Please try again later or contact your administrator.” If the user had been addressing a message or a distribution list then the user is placed back in their mailbox, otherwise the user is placed at the beginning of Express Messaging.
- Action: Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- NT:
- Cases 1-2 If the return code does not point to the problem, collect all relevant information and contact your Northern Telecom development organization.
 - Case 3. If addressing a message, the message may be corrupt. Use MD_CM and MD_MT to check the message envelope and header, and delete the message if necessary. If adding a name to a personal distribution list, the user profile may be corrupt. Check and rebuild if necessary using AD_UTIL.
 - Case 4-7. See cases 1-3.

57

Type: Error

Severity: Minor

Cause: VM encountered a problem during Remote Notification.

1. If the text says “Failure reading PersProf RemNotif Record”, or “Failure reading RemNotif Temporary Schedule Record”, or “Failure reading RemNotif BusinessDays Schedule Record”, or “Failure reading RemNotif Non-Business Days Schedule Record”, or “Failure calling dd_QuickInfo on PersProfile”, VM encountered an error reading the Remote Notification section of the user’s personal profile.
2. If the text says “Failure writing/adding/deleting RemNotif Temporary Schedule Record”, or “Failure writing/adding/deleting RemNotif Business Days Schedule Record”, or “Failure writing/adding/deleting RemNotif Non-Business Days Schedule Record”, VM encountered an error updating the Remote Notification section of the user’s personal profile.
3. If the text says “Failure writing PersProf RemNotif Record”, VM encountered an error updating the Remote Notification section of the user’s personal profile.
4. If the text says “Failure in ChgMode of PersProfile for write”, VM could not get exclusive write access to the user’s personal profile. For example, there might be simultaneous access to the user’s personal profile if the MM1 or OCS is currently updating the user’s mailbox.
5. If the text says “Could not read PersProfile Msg’ing record”, or “Failure updating current view of profile”, the user’s remote notification schedules could not be read in before they were updated.
6. If the text says “Failure converting netDN for RemoteNotif <dn>”, VM could not convert a Network DN to a phone number to announce relative to the user’s context. A phone number in the user’s remote notification schedule or the network database may be corrupt. The return code isolates the cause.
7. If the text says “Failure converting input DN for RemoteNotif <dn>”, VM could not convert a phone number entered by the user to a Network DN.
8. If the text says “Failure checking RemNotif dial restriction/permission list”, VM could not check a phone number against the restriction/permission list.
9. If the text says “Could not NewVar the OutCalling variables”, VM did not have enough memory for required operation. May be caused by memory fragmentation over extended system usage, or if it happens frequently, then the system was engineered incorrectly. This is a major problem caused by lack of memory. The return code isolates the cause.

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- Impact:
- Case 1. The Remote Notification information cannot be determined. The user may not be allowed to change the remote notification schedules.
 - Case 2. The schedule cannot be added/changed/deleted. The previous schedule (if it existed) may or may not be overwritten.
 - Case 3. The outcalling data/fields cannot be added/changed/deleted. The previous data (if it existed) may or may not be overwritten.
 - Case 4. The Remote Notification information could not be read/added/changed/deleted. This problem will clear within a short time and the user should be able to try again with success.
 - Case 5. The Remote Notification information, which is currently in effect, may be overwritten with old data.
 - Case 6. The user may hear the Network DN played back in an incorrect format.
 - Case 7. The user will hear the prompt “Your command cannot be completed at this time. Please try again later or contact your administrator” and the specified phone number will not be stored in the user’s remote notification schedule.
 - Case 8. The user will hear the prompt “That number cannot be reached from this service”. and the specified phone number will not be entered into the user’s remote notification schedule.
 - Case 9. If this message appears while the user is trying to log in, the user will not be able to log in to that mailbox, but will be prompted to try again or to log in to another mailbox. If this message appears while the user is already logged in, and tries to use the remote notification setup command, the user will not be allowed to use the command and will hear an error prompt.
- Action:
- Case 1-8. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
 - Case 9. Disable and then re-enable the offending T1 channels. Contact your Northern Telecom support organization.
- NT:
- Case 1-3. The user’s profile may be corrupt. Check and rebuild the profile if necessary using AD_UTIL.
 - Case 4. If the administrator was updating the user via the MMI at the time of the SEER then there is no problem. Otherwise if the problem persists then the OCS or MMI may be stuck while accessing this user. Restart the MMI and/or OCS using PRM_CONTROL.
 - Case 5. See Cases 1-3.
 - Cases 6-7. If the system has the networking features installed then ensure that the network database is set up correctly. If you can’t access the network
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information using the MMI then the database can be rebuilt using the UI_NETWORK package. More information can be obtained by enabling the VM debug flag using AD_UTIL then checking the console window in similar scenarios. Case 6 may also indicate corruption in the user profile. This can be checked and corrected using AD_UTIL.

Case 8. Check the restriction/permission lists in the OrgProfile using AD_UTIL. If any problems are encountered, the OrgProfile may be corrupt and should be rebuilt. Otherwise, the user's profile may be corrupt. This can also be checked and rebuilt using AD_UTIL.

Case 9. If disabling/re-enabling of T1 channels on DMS VoiceMail does not help, then a problem with the hardware (RAM, ESBC or SCSI boards) may be indicated. You can perform a full memory test during bootup diagnostics to determine this.

58

Type: Error

Severity: Minor

Cause: VM encountered a problem with the change of the user's Operator Assistance Number.

1. If the text says "Failure converting netDN for CustOpRev <dn>", VM could not convert the Operator Assistance Number for playback in the user's context.
2. If the text says "Failure converting input DN for CustOpRev <dn>", VM could not convert a phone number.
3. If the text says "Failure checking CustRev dial permission/restriction list", VM could not check a phone number against the permission/restriction list.
4. If the text says "Failure in ChgMode of PersProfile for write", VM could not get exclusive write access to the user's personal profile.
5. If the text says "Could not read PersProfile Msging record", or "Failure writing the Operator Assistance Number", VM could not access the user's personal profile.
6. If the text says "Failure in ChgMode of PersProfile for read", VM could not relinquish exclusive write access to the user's personal profile.

The return code isolates the cause.

Impact: Case 1. The user will hear the Network DN played.

Case 2. The user will hear the prompt "Your command cannot be completed at this time. Please try again later or contact your administrator."

- Case 3. The user will hear the prompt “That number cannot be reached from this service”.
- Case 4-5. The user will hear the prompt “Your command cannot be completed at this time. Please try again later or contact your administrator”. The Operator Assistance number could not be changed.
- Case 6 The user will hear the prompt “Your command cannot be completed at this time. Please try again later or contact your administrator”. The operator assistance number will be changed as specified by the user. A SEER will signify when the user’s profile is closed and cleaned up by the VS sweeper.

Action: Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

- NT: Case 1-2. See SEER 57, Cases 6-7.
- Case 3. See SEER 57, Case 8.
- Case 4. See SEER 57, Case 4.
- Case 5. The user’s profile may be corrupt. Check and rebuild if necessary using AD_UTIL.
- Case 6. See SEER 57, Case 4.

61

Type: Error

Severity: Minor

Cause: VM has read/written corrupt or inconsistent data on the disk.

1. If the text says “Cabcounter wrong” or “cm_tCounters” then the counters for the number of unread, urgent, or total voice messages in the user’s mailbox is wrong.
2. If the text says “Can’t Play Msg Create Date”, or “Can’t Play Msg Sent Date”, then a time/date stored in a message header or user mailbox/cabinet is corrupt.

Impact: Case 1. The number of new or urgent messages announced to the user may be wrong (during login). For example, it might say there are no new messages when really there is one new message. If the user subsequently discovers the new message (i.e., at the next login), it may appear as if the message delivery had been delayed.

- Case 2. A time/date will not be played, or will be played incorrectly or partially. Impact varies depending on the feature being used at the time. For example, the date/time a message was received may be incorrect or not announced.
- Action: Case 1. Contact the user whose mailbox is shown in the SEER and determine the scenario causing the SEER. Ask the user not to change his/her mailbox (by reading, deleting, composing, or sending messages until the problem is investigated further. Make a copy or write down the information in the SEER which says "cm_tCounters", then contact your Northern Telecom support organization.
- Case 2. Contact the user whose mailbox is shown in the SEER and determine the scenario causing the SEER (the current feature can be determined by the secondary return code). Contact your Northern Telecom support organization.
- NT: Case 1. The information in the SEER containing "cm_tCounters" is the CabCounter record at the time of the problem. Ask your Northern Telecom development organization to interpret this. The current CabCounter record for this user's mailbox can be viewed using the MD_CM utility.
- Case 2. Check the "DateCreated" field of all messages in the users' mailbox using the MD_CM utility. Check the "Sent Date" field of all messages in the user's mailbox using the MD_MT utility. If the SEER contains "mt_oOrigDate" then the date in an NDN or ACK type message is corrupt. Delete any messages found to have corrupt dates.

Class 23 Modem Diagnostics (MD)

The Modem Diagnostics (MD) program provides a set of diagnostics to test the on-board modem in the SPM system. This program will only test the port if it is configured as a modem in the hardware database. The diagnostic is automatically executed at system bootup time and is part of ESBC Out of Service diagnostics. If the diagnostics fail, the ESBC card and the failed port are marked faulty in the hardware database.

00

Type: Error

Severity: Info

Cause: General startup and result information from DIAGMODEM.

Impact: None.

Action: Retry the maintenance operation. If this is not successful, contact your Northern Telecom support organization.

NT: Check that the DIAGMODEM program, MA.AREA and MA.SRLSUIT are present and are the correct versions. DIAG_ID is the first token in the parameter list received by DIAG_MODEM.

01

Type: Error

Severity: Info

Cause: Parameter list received by the DIAG_MODEM program is not complete. Refer to the SEER for the problem parameter.

Impact: Modem Diagnostics is not executed.

Action: Retry the operation. If unsuccessful, disable the node and retry the diagnostics. If the problem persists, contact your Northern Telecom support organization.

NT: Check that the related software (DIAG_MODEM, MA.AREA and MA_RESULTS) are present and of the correct version. SEER_FLAG is the second token in the parameter list provided to; DIAG_MODEM.

02

Type: Error

Severity: Info

Cause: The RST.MODEM overlay could not perform the operation requested by DIAG-MODEM.

Impact: Modem Diagnostics not fully executed.

Action: Disable the node and try the operation again. If the problem persists, consult the *Trouble Locating and Alarm Clearing Procedures* (NTP 297-7001-503) for information on the SBC diagnostics failure.

NT: Check the related software (DIA_MODEM, MA.AREA and MA_SRESULT) are present and of the correct version. The TEST_DURATION is the third token in the parameter string provided to the DIAG_MODEM.

03

Type: Error

Severity: Info

Cause: Cannot locate the RST_MODEM overlay on this node.

Impact: Modem Diagnostics will not be a executed.

Action: Disable the node and try the operation again. If the problem persists, contact your Northern Telecom support organization.

NT: Check the related software (DIA_MODEM, MA.AREA and MA_SRESULT) are present and of the correct version. The TEST_NUMBER is the fourth token in the parameter string provided to the DIAG_MODEM.

04

Type: Error

Severity: Info

Cause: Cannot locate a modem port.

Impact: The modem port and the corresponding SBC card are marked faulty.

Action: Retry the operation. Refer to the *Trouble Locating and Alarm Clearing Procedures* (NTP 297-7001-503) and the *Card Replacement Procedures* manual (NTP 297-7001-502) for information on how to replace this card. If the problem persists, contact your Northern Telecom support organization.

NT: Check if all modem ports on the node were able to register successfully.

05

Type: Error

Severity: Info

Cause: Modem diagnostics failed on port.

Impact: Port and SBC are marked faulty. Refer to the *Trouble Locating and Alarm Clearing Procedures* (NTP 297-7001-503) and the *Card Replacement Procedures* manual (NTP 297-7001-502) for information on how to replace this card.

Action: Check that only ports with on-board modems are defined as modems in the hardware database and retry the operation. If the problem persists, consult the *Trouble Locating and Alarm Clearing Procedures* (NTP 297-7001-503).

Class 24 Voice Processor Handler (VPH)

The Voice Processor Handler (VPHDLR or VPH) subsystem

- transfers commands between the Voice Processor card and the Voice I/O package in the application program
- initiates voice data transfers to and from disk
- transfers DTMF digit reporting from the DTR algorithm on the Voice Processor card to the application
- monitors the health of the “driver” (sub-band coding and DTR) portion of the software for the voice processor card
- performs 2500 set emulation for non-CSL (non-ISDN/AP) configurations

Failures in the VPH can cause abnormal termination of a current voice session and corruption of a voice message. The software usually recovers, so no action is required for most one-time occurrences of a given SEER. If a SEER appears persistently, contact your Northern Telecom support organization. Sometimes a port should be disabled and re-enabled.

A class 24 SEER generally contains

- a text description of the problem or event
- the DN that is output is the DN assigned in the Channel Allocation table (CH=DN).

01

Type: Error

Severity: Minor

Cause: An error occurred while sending to the VPIO task.

Impact: Varies. Often none, at worst the current recording will be lost.

Action: If the error persists, disable and enable the port. If it still persists, contact your Northern Telecom support organization.

NT: If the task result is 21 or 27, the problem is transient. Otherwise, contact your Northern Telecom development organization.

02

Type: Error

Severity: Minor

Cause: Firmware on the Voice Processor Peripheral does not respond.

Impact: Varies. Often none. At worst the last ten seconds of recording are lost.

Action: The firmware will be automatically reloaded. If the error persists on the same port, there might be a hardware problem, in which case disable the card where the port is located and run the off-line tests on the card. If the problem still can't be identified, contact your Northern Telecom support organization.

NT: Contact the DSP group in your Northern Telecom development organization.

03

Type: Error

Severity: Minor

Cause: Disk or software too slow to read or write a block of voice data within expected time. This may happen when the system audits are running.

Impact: Varies. At worst, the session will take itself down (if the problem occurs continuously). Ordinarily, a few seconds of recording may be lost.

Action: If the error persists outside of audit time, contact your Northern Telecom support organization.

NT: This is most likely caused by the VPIO task running too slowly. Contact your Northern Telecom development organization.

05

Type: Error

Severity: Minor

Cause: Peripheral Voice Processor Firmware message queue problem.

Impact: Varies. Often none. At worst the last 10 seconds of recording are lost.

Action: If the error persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: A problem may exist in the DSP software.

06

Type: Error

Severity: Minor

Cause: Sending a message to the VSS has failed.

Impact: The VSS may lose call progress information and/or digit arrivals. The user may not be able to perform telephony functions, such as call transfer. Calls may not be answered.

Action: If the error persists, disable and enable the port. If it still persists, contact your Northern Telecom support organization.

NT: If the task result is 21 or 27, the problem is transient. Otherwise, contact your Northern Telecom development organization.

07

Type: Error

Severity: Info

Cause: An invalid command was sent by the voice processor firmware.

Impact: Varies. Three to four seconds of recording may be lost. Three to four seconds of playback may be distorted.

Action: If the error persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

08

Type: Error

Severity: Minor

Cause: Application and filing software too slow to clear buffer of recorded voice.

Impact: Three to four seconds of recording may be lost.

Action: If the error persists, disable and enable the port.

NT: None.

09

Type: Error

Severity: Minor

Cause: Possible data corruption.

Impact: Playback may be garbled for a few seconds.

Action: If error persists, disable the card where the port is located, run off-line tests, then re-enable the card. Problem resolution requires the analysis of surrounding SEERs. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs.

10

Type: Error

Severity: Minor

Cause: May be excessive load on system.

Impact: Three to four seconds of recording may be lost.

Action: If error persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs.

11

Type: Error

Severity: Minor

Cause: Communication error between the VPHDLR and voice processor firmware.

Impact: Varies. A few seconds of voice may be lost. The session may be taken down.

Action: If error persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs.

12

Type: Error

Severity: Minor

Cause: Communication error between the VPHDLR and voice processor firmware.

Impact: Varies. A few seconds of voice may be lost; session may be taken down.

Action: If error persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs.

13

Type: Error

Severity: Minor

Cause: Error in reading voice data from disk.

Impact: Imperfect playback for a few seconds.

Action: If error persists, contact your Northern Telecom support organization.

NT: There may be a problem with the disk or MI software. The disk may have to be replaced.

14

Type: Error

Severity: Minor

Cause: Disk write error.

Impact: A few seconds of voice are lost.

Action: If error persists, contact your Northern Telecom support organization.

NT: There may be a problem with the disk or MI software. Contact your Northern Telecom development organization.

17

Type: Error

Severity: Minor

Cause: On-error entry invoked on sending to VPIO task.

Impact: Varies from nothing to losing message currently being recorded.

Action: If error persists, disable and enable the port. If it still persists, contact your Northern Telecom support organization.

NT: If the task result is 21 or 27, the problem is transient. Otherwise, contact your Northern Telecom development organization.

18

Type: Error

Severity: Minor

Cause: On-error entry invoked on sending to application.

Impact: Playback may be truncated. Recording may be lost. Calls may not be answered. Digits may be lost.

Action: If error persists, disable and enable the port. If it still persists, contact your Northern Telecom support organization.

NT: If the task result is 21 or 27, the problem is transient. Otherwise, contact your Northern Telecom development organization.

19

Type: Error

Severity: Info

Cause: Disk and filing software too slow during heavy load.

Impact: Voice may be played with gaps of silence interrupting playback.

Action: If error persists, or appears to happen during light load or outside of disk audit time, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: This is caused by the VPIO task running too slowly. Contact your Northern Telecom development organization.

22

Type: Error

Severity: Minor

Cause: Communication problem between VPHDLR and voice processor firmware.

Impact: Varies from no impact to garbled/no playback to 10-15 seconds of current recording being lost.

Action: If error persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs.

25, 26, 27

Type: Error

Severity: Minor

Cause: Problems in starting up voice processor firmware.

Impact: Channel out of service.

Action: Disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

28

Type: Error

Severity: Minor

Cause: Communication problem between the VPHDLR and the voice processor firmware.

Impact: A port will be unavailable.

Action: If error persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

29

Type: Error

Severity: Minor

Cause: Unexpected block during playback.

Impact: Varies from no impact to silence during playback or garbled playback/prompts.

Action: If error persists, disable and enable the port. If it still persists, contact your Northern Telecom support organization.

NT: The file that the block belongs to may have to be searched out and deleted if the same block repeatedly causes problems.

30

Type: Error

Severity: Minor

Cause: Cannot assign timer from OS.

Impact: VPH will die. A port will not be available until the VPH is reloaded.

Action: Affected VPH will be reloaded. If error persists, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

31

Type: Error

Severity: Minor

Cause: End of block report from voice processor not during playback or record. Software logic or communication problem.

Impact: None.

Action: If error persists, disable the card where the port is located. run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

32

Type: Error

Severity: Info

Cause: Communication problem between VPHDLR and voice processor firmware.

Impact: Varies from no impact to garbled/no playback to 10-15 seconds of current recording being lost.

Action: If error persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

33

Type: Error

Severity: Minor

Cause: File IO problems while starting up voice processor firmware.

Impact: Channel out of service.

Action: If error persists, disable and enable port. If it still persists, contact your Northern Telecom support organization.

NT: Check the integrity of the DSP files on disk. They may have to be re-installed from tape.

34

Type: Error

Severity: Minor

Cause: Problem detected on call initiation.

Impact: Transfer or out-dial attempt fails.

Action: If error persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: If the SEER string contains the word "PSPMacAbort", then a problem occurred while making a direct call or a call transfer via the DSP. Outcalls are made when calling an external number, when transferring the user to another number, or when logging in our out an agent on the switch. The outcall is performed by a macro that us run on the DSP, in the TelScan module.

The 4-digit hex codes at the end of the SEER are meaningful only to the designer.

'PSPMacAbort - Fails to seize line on call initiation 1';

The DSP macro tried to go offhook or do a flash-hook, but the DSP did not respond. Check that the line is properly connected and that the line type setting on the GSP card actually matches the physical line type.

'PSPMacAbort - NoDialTone after Offhook on call initiation 2';

The DSP macro successfully performed an offhook command, but no dial-tone was heard. Check that the line is properly connected and produces dialtone, and that the line type setting on the GSP card actually matches the physical line type. Often, it is caused by a call collision where a call coming in just as the outcall was being made causes the incoming call to be answered, and no dial tone is heard. This is a normal condition and no action is required in this case.

'PSPMacAbort - Dial Tone not broken by digit on call initiation 3';

This line verification feature is not implemented in the DSP, and therefore, will never appear.

'PSPMacAbort - UnExpected interrupt received on call initiation 4';

The DSP received an unexpected event from the line while trying to perform a call initiation. It is often caused by a user who begins a thrudial or call-sender operation, but then hangs up prematurely.

Check also that the switch did not drop the line prematurely due to maintenance activity.

This SEER may also occur during call collision, as the DSP will detect a ringing signal before it goes offhook. This is a normal condition and no action is required in this case.

'PSPMacAbort - Tone Generator did not reply on call initiation 5';

The DSP failed to pulse out the digits to the line. This is an indication of a DSP firmware design error. The DSP designer group should be contacted.

35

Type: Error

Severity: Info

Cause: Software logic in VPIO or VPHDLR, or communication problem.

Impact: Varies from no impact to some “system error” prompts.

Action: If error persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn’t apparent, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

36

Type: Error

Severity: Minor

Cause: Disk corruption or software logic problem.

Impact: Playback may be stopped.

Action: If error persists, disable and enable port. If it still persists, contact your Northern Telecom support organization.

NT: The disk may be corrupted, and the offending file may have to be removed.

38

Type: Error

Severity: Minor

Cause: Software logic or communication problem between VPHDLR and VPIO.

Impact: Varies. At worst, a few seconds of recently recorded voice may be lost.

Action: If error persists, disable and enable the port. If it still persists, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact NT-TOR. Error may also be due to a buffer problem between the VPH and VPIO tasks.

40

Type: Error

Severity: Minor

Cause: Communication problem between the VPHDLR and the voice channel allocator.

Impact: Voice port may be out of service until the channel is manually disabled and re-enabled.

Action: If the channel has problems playing or recording, disable and enable the port. If the problem persists, system may require a reboot.

NT: None.

41

Type: Error

Severity: Minor

Cause: VPHDLR initiate failed.

Impact: Channel out of service.

Action: Disable the associated card, run off-line tests, then re-enable the voice card. If that fails, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs. Memory re-management may be required.

42

Type: Error

Severity: Critical

Cause: Newpool fails for VPHDLR.

Impact: Channel out of service.

Action: Disable the associated card, run off-line tests, then re-enable the voice card. If that fails, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

43

Type: Error

Severity: Critical

Cause: AddPool fails for VPHDLR.

Impact: Channel out of service.

Action: Disable the associated card, run off-line tests, then re-enable the voice card. If that fails, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

46

Type: Error

Severity: Minor

Cause: Communication problem between the VPHDLR and the voice channel allocator.

Impact: VCA loses state of VPH. The port may become unavailable.

Action: If error persists, disable and enable the port. If this does not work, contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

49

Type: Error

Severity: Minor

Cause: Communication problem between the VPHDLR and SMDI link. Most likely, the SMDI link handler is not operating.

Impact: Calls will not be answered.

Action: Contact your Northern Telecom support organization.

NT: Ensure that the SMDI link handler is running.

50

Type: Error

Severity: Info

Cause: VPHDLR does not allow the requested command to be executed in its current state.

Impact: None.

Action: If the problem persists, disable and re-enable the channel.

NT: None.

51

Type: Error

Severity: Info

Cause: The command received by the VPHDLR is not supported.

Impact: None.

Action: Contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

52

Type: Error

Severity: Minor

Cause: The VPHDLR has an internal state table error.

Impact: The call may not be answered or may disconnect unexpectedly.

Action: Contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

53

Type: Error

Severity: Info

Cause: The VPHDLR timed out with an unknown timer value.

Impact: None.

Action: Contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

54

Type: Error

Severity: Info

Cause:

1. On an incoming call, the VPHDLR timed out while waiting for the call information from the SMDI link handler.
2. VPHDLR timed out waiting for the incoming call detection after receiving call information from the SMDI link handler.

Impact: The default service will be started.

Action: Make sure that the CSE can support the call load. Disable the card where the port is located, run off-line tests, then re-enable the card. If the error persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: If the problem persists, make sure the SMDI link handler is operating and line connections to the GP cabinet are secure. Ensure that the CSE can support the call load. Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs.

55

Type: Error

Severity: Minor

Cause: The voice processor firmware informs VPHDLR of problems with the voice lines from the switch to the DMS VoiceMail machine.

Impact: Calls may not be answered.

Action: Check the voice line associated with the bad channel, and run line diagnostics on the CSE. On DMS VoiceMail, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs.

56

Type: Error

Severity: Info

Cause: A DTMF tone of two or more minutes has continuously been detected by the voice processor firmware.

Impact: None.

Action: If the problem persists, disable the card where the port is located, run off-line tests, then re-enable the card. If the error still persists and the cause of the problem isn't apparent, contact your Northern Telecom support organization.

NT: Check that the lines to the switch are quiet.

57

Type: Error

Severity: Minor

Cause: Internal VPHDLR software error.

Impact: No voice will be heard or recorded. Calls may not be answered.

Action: Contact your Northern Telecom support organization.

NT: A software design error may be present. Contact your Northern Telecom development organization.

59

Type: Error

Severity: Info

Cause: An unknown signal or digit has been detected by the voice processor software.

Impact: A digit may be missed.

Action: 1. Run voice processor diagnostics program.
2. Check ports for unusual noise conditions.

NT: None.

60

Type: Error

Severity: Info

Cause: Application task request to start voice detection while voice detection is already in progress.

Impact: The request is ignored by VPHDLR.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization to see if incorrect software is installed.

61

Type: Error

Severity: Info

Cause: Bad or undefined message is received from the DSP while waiting for voice detection result.

Impact: The message is ignored.

Action: If the SEER persists, disable affected voice card, run off-line tests and enable the voice card.

NT: Contact your Northern Telecom development organization to see if incorrect software is installed.

62

Type: Error

Severity: Minor

Cause: A tasking error occurs when VPH_PROCS was communicating with the VPHDLR.

Impact: The requested operation will fail.

Action: Contact your Northern Telecom support organization.

NT: Determine the reason for the tasking error. May need to disable and enable the associated voice port to recover.

64

Type: Error

Severity: Problem

Cause: Failure to communicate with the VCM.

Impact: Information sent to the VCM may be lost.

Action: Check the surrounding VCM SEERs and act accordingly. If the VCM is functioning, disable then re-enable the corresponding node.

NT: If the problem persists, contact your Northern Telecom development organization.

70

Type: Error

Severity: Info

Cause: The re-login timer was not previously cancelled.

Impact: The port may not be logged into the ACD/UCD group in switch side and will not receive any calls. All outgoing calls on this port will fail.

Action: May have to disable and then enable the port.

NT: None.

71

Type: Error

Severity: Info

Cause: Port being disabled or enabled incorrectly.

Impact: Port may remain out of service.

Action: If the port is out of service, enable it.

NT: None.

72

Type: Error

Severity: Minor

Cause: Port failed to log in or log out of the group when enabled or disabled.

Impact: Port remains out of service. If the logout disable fails, calls will still be presented to the table.

Action: Consult other SEERs for reason for failure of login or logout. Check line status and resources on the CSE-they should be idle.

NT: None.

73

Type: Error

Severity: Info

Cause: Port failed trying to log in or log out of group.

Impact: Port will automatically retry.

Action: None.

NT: None.

74

Type: Error

Severity: Critical

Cause: Failure to allocate memory during the system start-up time.

Impact: The corresponding node will run without DSP ports.

Action: Disable and then re-enable the node.

NT: This is an engineering problem. Contact your Northern Telecom development organization.

75

Type: System

Severity: Info

Cause: The VPM tried to make a call out and time out while waiting for a dial tone return from the DMS.

Impact: The call will be reported a failure.

Action: Check the location of the DSP port. If the problem in the port is persistent, run an out-of-service diagnostic on the VP and replace the card if necessary. Check the location of the T1 channel. If the problem with the channel is persistent, check the DMS and channel a Bank setup.

NT: Contact your Northern Telecom development organization.

76

Type: Error

Severity: Minor

Cause: Outgoing call has not been established yet.

Impact: None.

Action: None.

80

Type: Error

Severity: Critical

Cause: VPH parent program could not get required memory on startup.

Impact: Voice ports are not available on the node.

Action: Analyze the other SEERs around to determine the problem. If you are unclear about the problem, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs.

81

Type: Error

Severity: Critical

Cause: Could not assign the appropriate space for heaps.

Impact: Voice ports are not available on the node.

Action: Analyze the other SEERs around to determine the problem. If you are unclear about the problem, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs.

82

Type: Error

Severity: Info

Cause: The memory requested is not the same as the memory used.

Impact: None.

Action: None.

NT: If the problem persists, contact your Northern Telecom development organization.

83

Type: Error

Severity: Info

Cause: More VPH child task are been asked to startup than were specified in the startlist.

Impact: No more ports can be enabled.

Action: Contact your Northern Telecom support organization.

NT: Check that the # voice channels specified in the startlist match the # channels that can be enabled for the node.

84

Type: Error

Severity: Minor

Cause: Could not send information to the child task. Check task result.

Impact: The port is not started up properly.

Action: Disable then re-enable the port.

NT: None.

85

Type: Error

Severity: Minor

Cause: The internal table storing this information is corrupt.

Impact: The port is not enabled.

Action: May require disabling all the voice ports on this node and then re-enabling them. If problem persists, reboot the node.

NT: None.

86

Type: Error

Severity: Minor

Cause: A child task has crashed or terminated, but the parent does not know which port.

Impact: A port is out of service and cannot be automatically re-enabled as it is not reported to the VCM.

Action: Analyze the other SEERS around to determine the problem. Enable the port that is out of service. If problem persists, reboot the node.

NT: None.

87

Type: Error

Severity: Minor

Cause: Data is not passed correctly on startup.

Impact: Voice ports are not available on the node.

Action: Contact your Northern Telecom support organization.

NT: Analyze the other SEERs around to determine the problem. Check the VPH entry in the startlist is correct.

88

Type: Error

Severity: Minor

Cause: Unable to get and allocate the required memory.

Impact: Voice ports are not available on the node.

Action: Analyze the other SEERs around to determine the problem. If you are unclear about the problem, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization. Problem resolution requires the analysis of surrounding SEERs.

89

Type: Error

Severity: Minor

Cause: PPComm task is not up or has not registered properly. Check the return code and contact your Northern Telecom support organization.

Impact: Voice ports will not function.

Action: Contact your Northern Telecom support organization.

NT: Make sure the PPComm task comes up first.

90

Type: Error

Severity: Critical

Cause: Could not register parent with VCM. Check the return code.

Impact: Voice ports are not available on the node.

Action: Analyze the other SEERs around to determine the problem. If you are unclear about the problem, contact your Northern Telecom support organization.

NT: None.

91

Type: Error

Severity: Info

Cause: A VPH experienced an exception error.

Impact: The DSP port is temporarily out of service but will reconnected itself later.

Action: No action is required since the DSP port will be reconnected itself later.

NT: None.

92

Type: Admin

Severity: Info

Cause: A VPH experienced a completion. This may be the result of an exception or a Courtesy/Maintenance Disable by the administrator.

Impact: If the exception is the result of the exception, the port will be restarted.

Action: Check surrounding SEERs to determine the problem. If you are unclear about the problem, contact your Northern Telecom support organization.

NT: None.

93

Type: Error

Severity: Minor

Cause: The VCM is trying to start a VPH on a channel that already has a VPH.

Impact: The channel will not load completely.

Action: Disable and re-enable the channel.

NT: None.

95

Type: Error

Severity: Minor

Cause: The application has invoked the vph_VDstart command with time parameters that are either negative or out of range.

Impact: Voice/silence detection will not be started.

Action: Contact your Northern Telecom development organization.

NT: Software design error. The application designer should ensure that all time parameters are between 0 and cMaxtime (300) seconds and that $0 \leq \text{MinDuration} \leq \text{Period} \leq \text{cMaxtime}$ (where " \leq " means "less than or equal to").

99

Type: Debug

Severity: Info

Cause: Debugging SEERs for the VPH.

Impact: None.

Action: None.

NT: None.

Class 26 Peripheral Processor (PP)

The Peripheral Processor (PP) Subsystem, also known as the DSP, has two main parts: the PP_LOADER and the PP_COMM.

The PP_LOADER maintains and loads the PPs according to a predefined logical state diagram.

The PP_COMM sets up the Digital Signal Processor (DSP) shared memory, executive registers and message queues; sets up the interrupt message queue; handles DSP interrupts and the dispatching of driver events; provides voice tap control, DSP driver control, and DSP executive commands.

Errors in the peripheral processor can cause loss of control over the DSPs, resulting in subsequent loss of voice and even a system crash if the errors are fatal. Some errors are about boards or devices which cannot be located.

A class 26 SEER usually contains

- status message on peripheral processor state changes
- status message on the DSP loading process
- task results

00

Type: Error

Severity: Major

Cause: Message 1: **“PP_Base: PP_Comm task re-initialized...”**

Reason: the PP_Comm task was not recovered. Reset the node.

Message 2: **“PP_Base: PP_Loader task re-initialized...”**

Reason: The PP_Loader task was not recovered. Reset the node.

Action: None. It will recover itself.

02

Type: Debug

Severity: Info

Cause: If the message text says

1. "PP_Comm: Kill_DSP, Killed PP*100+Drv_ID = ", then one of the DSP is killed by VCM.
2. "PP_Comm: Do_PP_AUDIT, # events after PP halted = ", this is an indication of lost events for the DSP that will be killed.
3. "PP_Comm: PP_Update, On→Offline. PP =", there is a change of DSP State from online to offline.
4. "PP_Comm: PP_Update, On→MtcBusy, PP =", there is a change of DSP State from online to Maintenance Busy.

Impact: None.

Action: None.

NT: None.

07

Type: Error

Severity: Major

Cause: Task communication error.

1. PP_Loader: DspReset, PP_Comm.PP_Update Task Error.
2. PP_Loader: DspReset, PP_Comm.PP_Update Failed.
3. PP_Loader: DspRun, PP_Comm.PP_Update Task Error.
4. PP_Loader: DspRun, PP_Comm.PP_Update Failed.
5. PP_Loader: Cannot register globally.

Impact: No voice.

Action: The following steps should be performed if any of the SEER messages listed are seen.

1. Disable and Enable node.
2. Contact your Northern Telecom Support Organization if error persists.

NT: The following steps should be performed if any of the SEER messages listed are seen.

1. Check the task error or the return code.
2. If failed to resolve the problem, report to designer.

08

Type: Debug

Severity: Info

Cause: If the message text says “PP_Loader: Probable Timeout waiting for diagnostics”, then there is a timeout waiting for the VP diagnostic program to run.

Impact: None.

Action: None.

NT: None.

09

Type: Error

Severity: Major

Cause:

1. PP_Comm: DSP is in infinite loop
2. PP_Comm: PP_Intr invalid msg
3. PP_Comm: Init_Resrc, cannot allocate Exec Driver_ID
4. PP_Comm: Hn_ExecMsg, No Exec msg for TO_PP
5. PP_Comm: Do_PP_Audit wrong msg, real aud_seq & msg
6. PP_Comm: Do_PP_Audit, GetMsg failed
7. PP_Comm: Do_PP_Audit, PutMsg failed
8. PP_Comm: Do_PP_Audit, Audit failed
9. PP_Comm: Drv_Start invoked for offline
10. PP_Comm: Drv_Start, No Driver_Id
11. PP_Comm: Drv_Start, Not enough DSP CPU capacity
12. PP_Comm: Drv_Start, No internal data memory
13. PP_Comm: Drv_Start, No shared data memory
14. PP_Comm: Drv_Start, No private program memory
15. PP_Comm: Drv_Start, Error put msg
16. PP_Comm: Drv_Start, communicating with DSP Exec
17. PP_Comm: Drv_Start, DSP Exec returns incorrect msg type
18. PP_Comm: Drv_Stop, DSP not online
19. PP_Comm: Drv_Stop, Cannot stop an inactive driver
20. PP_Comm: Drv_Stop, Error putting stop msg to the DSP Exec
21. PP_Comm: Drv_Stop, DSP Exec response tmout in Stop cmd
22. PP_Comm: Drv_Stop, wrong msg returned

23. PP_Comm: Drv_Stop, wrong Drv_Id returned
24. PP_Comm: Set_PP_Run, wrong msg
25. PP_Comm: Set_PP_Run, Get Exec
26. PP_Comm: Set_PP_Run, Exec TmOut
27. PP_Comm: Invalid TimeSlot number
28. PP_Comm: Cannot register with name server

Impact: No voice for that card or part of the card.

Action: Do the following:

1. Disable the Node
2. Run OOS diagnostic
3. If OOS diagnostic failed, replace the VP card.
4. If OOS diagnostic is OK, but problem persists, replace the VP card.
5. Enable the Node
6. If the problem persists after replacing the VP card, contact your Northern Telecom support organization

NT: Do the following:

1. For most of the cases, please follow the Administrator Action Plan.
2. Check the Hardware Database DSP record to make sure the DSP load (16k or 32k) against the actual hardware VP card.
3. Check the dip switches on NVP card.
4. Check the Network Loop Connector on both sides for GPT, XCabinet, EC and Modular Option. Check the front connector for Card Option (Option 11).
5. Use MD to check the DSP bin files.
The first 4 bytes for 16k DSP bin should be 8000 0001
The first 4 bytes for 32k DSP bin should be 8000 0002

74

Type: Error

Severity: Major

Cause: Load build failure.

Impact: No voice for that node.

Action: Do HwModify from release Tape.

- NT: 1. Go to CI and modify the startlist
2. Put the VP12 card slot number (7) for that node in the VOM_PP argument.
3. Disable and enable the node, if the error occurs again, reboot the node.

75

Error Text: 'PP: Failed to map VP Control Register.'

Type: Error

Severity: Major

Cause: Bad Voice Processor Card.

Impact: No Voice for that Node.

Action: Do the following:

1. Disable the node.
2. Replace the VP card.
3. OOS diagnostic the VP card.
4. Enable the VP card.

NT: None.

76

Type: Error

Severity: Major

Cause: A subtask has been completed/terminated.

Impact: The node will reboot and recover itself.

Action: None. It will recover by itself.

NT: None.

77

Type: Error

Severity: Case 1: Major

Case 2: Major

Case 3: Major

Case 4: Minor

Cause: Case 1. PP: failed to open Hardware Database.

- Case 2. PP: search RSMnBus card in Hardware Database failed. Use default setting.
- Case 3. PP: search DSP record in Hardware Database failed.
- Case 4. PP: Close Hardware database failed.
- Impact: Case 1. No voice for that node.
- Case 2. No voice, if the voice port and SL-1 TN setting is not matched with the default setting.
- Case 3. No voice for that node.
- Case 4. None.
- Action: Case 1. Refer to the return code. Contact your Northern Telecom support organization.
- Case 2. Refer to the return code. Contact your Northern Telecom support organization.
- Case 3. Refer to the return code. Contact your Northern Telecom support organization.
- Case 4. Refer to the return code. The problem is transient.
- NT: Case 1:
- Refer to the return code
 - Check the hardware database; if the hardware database has disappeared, try to copy the hwd.orig to hwd from MD or MD_MA.
 - If both hwd and hwd.orig have disappeared, rebuild the system from tape, if necessary.
- Case 2.
- Refer to the return code. If the return code is '3901' (no match), then use the MD_MA to recreate the record. One for each Utility Card.
>> Type = RMSnBUS
>> j4 = {SL-1 loop number connected to J4 connector}
>> j5 = {SL-1 loop number connected to J5 connector}
- Case 3.
- Refer to the return code.
 - Check the hardware database.
 - copy the hwd.orig to hwd from MD or MD_MA.
 - If both hwd and hwd.orig have disappeared, rebuild the system from tape, if necessary.

- Check the hardware database for DSP record. If there is no match then rebuild the system from tape, if necessary.

Case 4.

- None.

Class 27 Voice Base Service Shell (VSS)

The Voice Base Voice Service Shell (VSS) subsystem

- starts up a voice service task
- initializes resources to set up a voice connection
- processes call-processing requests from voice service task and monitors the progress of the operation
- sets up and tears down a call connection that originates from or terminates on a voice channel
- buffers digits entered by the user
- collects the call duration for OM

Each voice channel has its own VSS.

If a VSS cannot be started, incoming calls to that VSS channel cannot be handled. This reduces the number of channels available on the system. If a VSS fails when it is running, a call session may be terminated.

A Class 27 SEER generally contains a lower level return code.

01

Type: Error

Severity: Minor

Cause: The UCD DN or Channel DN or Dialed DN were not found in the VSDN table.

Impact: The voice service of the UCD DN will not be accessible.

Action: Use the Voice System Configuration Option on the Voice System Administration Menu to add the UCD DN into the VSDN table.

NT: If the problem persists, contact your Northern Telecom development organization.

02

Type: Error

Severity: Minor

Cause: VSS was requested to start a voice service with an invalid service ID.

Impact: The voice service cannot be started.

Action: Contact your Northern Telecom support organization.

NT: Should never happen in a release tape. Check any other SEERs as they may indicate which component requested the service. Try reloading the system with a good release tape.

03

Type: Error

Severity: Minor

Cause: VSS was requested to start a voice service but the service was not loaded. This indicates that the release tape has problems.

Impact: The voice service cannot be started.

Action: Contact your Northern Telecom support organization.

NT: Provide a valid package in the release tape.

05

Type: Error

Severity: Minor

Cause: VSS was asked to start a voice service when one was already running. This could be the result of service request collision when only one channel was left available.

Impact: The voice service will not be started.

Action: Evaluate the usage of the voice channels if the SEER persists and voice channels are heavily used. Consider installing more voice channels on the system.

NT: If the voice channels are not under-engineered and the problem persists, analyze other SEERs to determine the cause.

06

Type: Error

Severity: Minor

Cause: VSS failed to start a voice service.

Impact: VSS will start up a voice menu service to play an error prompt to the user and then disconnect the call.

Action: Contact your Northern Telecom support organization.

NT: Examine other SEERs to determine why the voice service cannot be started.

07

Type: Error

Severity: Minor

Cause: A tasking error occurred when VSS wanted to communicate with other components.

Impact: Depends on the situation. The VSS may fail on only one operation.

Action: If the error persists, contact your Northern Telecom support organization.

NT: From the SEER, find out which component caused the tasking error and determine the reason for the error. If the error persists, disable and enable the T1 channel.

08

Type: Error

Severity: Minor

Cause: VSS was asked for a voice prompt file in a language that is not supported. This indicates that the Organization Profile and voice service files are inconsistent.

Impact: The specified language cannot be used. A default one will be used instead.

Action: Use the Voice Service Administration menu to update the language field of the voice service file that is inconsistent.

NT: Refer to SEER 2232 for further information.

10

Type: Error

Severity: Minor

Cause: Too many digits were received and overflowed the buffer in the VSS. The overflowed digits were thrown away.

Action: If the error persists, disable and enable the T1 channel. If it still persists, contact your Northern Telecom support organization.

Impact: Voice service will not receive all the dialed digits, for example: incomplete passwords and commands.

NT: Examine other SEERs from the voice service, and determine why the digits are not consumed fast enough.

11

Type: Error

Severity: Minor

Cause: Not enough memory for VSS to start up.

Impact: Case 1: If channel is already running, DMS VoiceMail will reload channel software automatically.

Case 2: If it occurs during loading of channel software, then VSS will not run channel and voice channel cannot be used.

Action: Case 1: No action.

Case 2: Contact your Northern Telecom support organization.

NT: Change the configuration by updating the Startlist file. Then, reboot the system.

12

Type: Error

Severity: Minor

Cause: An error occurred when VSS was initializing data for a new call session (for example, the VSS failed to re-read the Organization profile).

Impact: The service will not be started. The VSS will start up a voice menu service to play an error prompt to the user and then disconnect the call.

Action: If the error persists, disable and enable the T1 channel. If it still persists, contact your Northern Telecom support organization.

NT: From the SEER, find out what data VSS failed to read, and evaluate the cause.

13

Type: Error

Severity: Minor

Cause: An error occurred in disconnecting a call.

Impact: The call will be disconnected. In some situation, the VSS will be restarted.

Action: From the text of the SEER, determine what the error is. If unclear, Contact your Northern Telecom support organization.

NT: If the problem persists, contact your Northern Telecom development organization.

15

Type: Error

Severity: Minor

Cause: An error occurred during the process of switching voice services.

Impact: The switching will not be done. The call will be disconnected.

Action: Contact your Northern Telecom support organization.

NT: Evaluate what caused the failure. Look for related SEERs for the other voice service.

16

Type: Error

Severity: Minor

Cause: An error occurred in initialization when the VSS was first started up.

Impact: The VSS will not run. The voice channel for the VSS will not be usable.

Action: Contact your Northern Telecom support organization.

NT: From the SEER, find out what caused the failure and take appropriate action. For example, if the VSS failed to open the VSDN file, you can create this file from the Voice Services Administration Menu.

17

Type: Error

Severity: Minor

Cause: A time-out occurred in the VSS.

Impact: A call may be taken down, or a voice service may be taken down.

Action: If the error persists, disable and enable the T1 channel. If it still persists, contact your Northern Telecom support organization.

NT: Evaluate the traffic situation for the time when the time-out occurred. If the traffic was high, the DMS may have been slow in processing requests from DMS Voice-Mail (and vice-versa) causing a time-out.

18

Type: Error

Severity: Minor

Cause: A VSS procedure was called by Voice Services before the VSS was started.

Impact: Minor. No operation will be done in the procedure that generated the SEER. There may be an effect on the voice service that called the procedure.

Action: None.

NT: Look at surrounding SEERs that contain this value as a return code for more info.

19

Type: Error

Severity: Minor

Impact: Voice service will not receive all the dialed digits. eg. incomplete passwords, commands, etc.

Cause: A bad digit (for example, out of key-pad range) was received and thrown away.

Action: If the digit (specified at the end of the SEER text) is 13, 14, 15 or 16 the SEER should be ignored. For other bad digits, if the SEER occurs frequently, then run the voice processor diagnostics.

NT: Check results of voice processor diagnostics (check SEER class 53).

21

Type: Error

Severity: Minor

Cause: An error occurred in trying to shut down a voice service.

Impact: The voice service will be forced to shut down.

Action: None.

NT: Analyze surrounding SEERs to determine the reason for the shutdown.

22

Type: Error

Severity: Minor

Cause: A time-out occurred when waiting for permission to access the buffer that stores digits, so some digits may be lost.

Action: If the error persists, disable and enable the T1 channel. If it still persists, contact your Northern Telecom support organization.

NT: Analyze surrounding SEERs to determine the problem.

23

Type: Error

Severity: Minor

Cause: The VSS could not dial out because of failure to start a VPIO task.

Impact: The VSS will not be able to dial out from the voice channel.

Action: Verify that the data related to the voice operation is set up properly in the Organization profile and voice services profile. If the error persists, disable and enable the voice channel.

NT: Note return code of SEER and contact Northern Telecom development organization.

31

Type: Error

Severity: Minor

Cause: The voice service task issued a call processing command in the wrong context.

Impact: Minor. The VSS will reject the request.

Action: None. If the error persists, contact your Northern Telecom support organization.

NT: Analyze surrounding SEERs to determine the problem.

32

Type: Error

Severity: Minor

Cause: Either your support organization has turned on Voice Messaging debugging, or it is one of the miscellaneous errors in VSS, which is due to the reported system slowdown that messages from DMS are out of sync with the external state of VSS.

Impact: If the SEER is caused by an error, the severity depends on the error encountered. The VSS will be restarted in the worst case. If the debugging flag has been turned on, the SEER merely indicates an incoming call to DMS VoiceMail.

Action: Check the surrounding SEERs to determine the cause of the slowdown.

NT: If the SEER indicates an error, analyze the SEER by looking up the codes in the Appendix. Voice Messaging debug information is listed in the Appendix under 2700 error codes.

34

Type: Error

Severity: Minor

Cause: A call could not be answered because it was already answered.

Impact: The answer call request from the voice service task will be rejected.

Action: None.

NT: Note the shell state at the end of the reported SEER and also note the surrounding SEERs to determine the voice service that is trying to answer the call, contact your Northern Telecom development organization.

37

Type: Error

Severity: Minor

Cause: The VSS failed to send the outgoing call progress status to voice service task because of a tasking error.

Impact: The call will be disconnected.

Action: If the SEER persists, disable and enable the T1 channel.

NT: Analyze surrounding SEERs to determine the problem. Evaluate what caused the failure.

44

Type: Error

Severity: Minor

Cause: Failed to acquire a voice port.

Impact: During loading phase, channel may not be enabled. During call processing, call may be rejected.

Action: Check to ensure that the voice ports are enabled. If they are not, enable them. If they are, contact your Northern Telecom support organization.

NT: Check to see if the DSP ports are enabled. If the problem occurs during system recovery or system Courtesy down/activate operation, disable and re-enable all affected voice channels.

Class 28 Generic Telephony Interface (GTI)

The Generic Telephony Interface (GTI) provides a procedural interface for DMS VoiceMail applications to gain access to call processing functions on different switches. The interface uses a universal set of commands. Call processing commands can be executed on voice channels or third party telephony devices.

GTI errors can prevent call processing commands from being executed.

A Class 28 SEER generally contains

- lower level return code
- DN involved in the command

01

Type: Error

Severity: Minor

Cause: A tasking error occurred.

Impact: The requested call processing operation will fail.

Action: Contact your Northern Telecom support organization.

NT: Determine the reason for the tasking error. Check the Startlist file to see if the proper link handler is included to be started.

03

Type: Error

Severity: Info

Cause: The application used bad parameters (for example, Nil task id) when calling GTI procedures. This error indicates that the release tape may have problems.

Impact: The requested operation will fail.

Action: Contact your Northern Telecom support organization.

NT: Check surrounding SEER to see if problem is caused by another component. Fix said problem. Otherwise, disable and then re-enable channel.

04

Type: Error

Severity: Info

Cause: The user profile did not have the correct message waiting indicator (MWI) link id, or the message waiting indicator server task did not exist.

Impact: The message waiting indicator cannot be set properly, and hence will not be updated.

Action: Check the user profile. If this does not solve the problem, contact your Northern Telecom support organization.

NT: Make certain the user profile has the correct MWI link id. If this does not solve the problem, then check the Startlist file to ensure the link handler to be started is included.

Class 30 Administration Base (AD)

The Administration Base (AD) is a layer of software which stores and retrieves the Organization Profile (customer and system) and Personal Profile files. It uses the file system and the Organization Directory (OrgDir or DR).

If the problem is with the reading or writing of a personal profile, only one user will be affected. If the problem involves the customer profile, operation for that particular customer will be affected. If the problem involves the system profile, operation of the entire system may be affected.

- **CRITICAL:** Should not continue.
- **MAJOR:** May continue. Results are not guaranteed.
- **MINOR:** May continue without adverse effect.

A Class 30 SEER generally contains

- an indication of which AD operation failed
- a lower level return code

Most of the following codes are return codes rather than SEERs, however they are in this section of the manual because they are reported by other applications and their SEERs and may be used for debugging purposes.

01

Type: Error

Severity: Minor

Cause: An error occurred obtaining the FID of a personal profile.

Impact: The personal profile cannot be accessed. Only one user will be affected.

Action: Try the operation again. Look up the lower level return code in its associated section of the SEER manual and take the action appropriate for that return code. If the problem persists you can add the user again under a new mailbox number. Existing messages will not be available under the new mailbox. If the problem continues to occur, contact your Northern Telecom support organization.

NT: Use AD_UTIL to attempt to read the affected personal profile. If the same error occurs, then the file might be corrupted. The user's cabinet and profile might need to be removed from the system which will cause all messages to be lost. Either use AD_UTIL to remove the user by invoking the DELUSER command, or do it manually. To do it manually (a last resort procedure), delete the user from the OrgDir using MD_DR. Then delete the user's cabinet from the user volume using MD.

02

Type: Error

Severity: Major

Cause: Number of bytes read is not as expected.

Impact: There appears to be an inconsistency in the data requested by an application and the actual data returned to the application. If the problem is with a personal profile, only one user will be affected. If the problem involves the customer profile, operation for that particular customer will be affected. If the problem is with the system profile, then the operation of the entire system may be affected.

Action: Contact your Northern Telecom support organization and give the support personnel the name of the file and the particular record that caused this error to occur.

NT: Use the utility MD to open the file and determine the size of the record that caused the error. Compare the size of the actual record with the size specified in the AdminBase Design document. If the two are the same, then there is a problem with the application that tried to access the file; this can only be fixed by a change to the source code. If the two are not the same, then the file has been corrupted. If the file in question is a personal profile, use either AD_UTIL or the MMI to delete the user and add him back in; any messages that the user had would be lost.

If the file in question is a customer profile, then extreme caution must be exercised in performing the following procedures:

1. record all special settings in the profile, such as the feature set, the selected Classes of Service, any special settings in the profile, etc.
2. Once that has been done, use the MD utility to remove the customer profile, and use the MD_DR utility to remove the customer's DR entry from the Organization Directory.

3. Now, use either AD_UTIL or the MMI to add the customer back onto the system.
4. Set the new profile to have the same content as the old one by using the list of recorded settings that was generated at the beginning of this procedure.

For the system profile, call your Northern Telecom development organization for assistance.

03

Type: Error

Severity: Major

Cause: An error occurred when an application tried to open a customer profile but did not specify a valid customer.

Impact: The operations that the application was attempting to perform on the intended customer profile cannot be performed, which may affect the entire customer group's users. The probable cause of this problem is programming error which can only be fixed by the Northern Telecom development organization.

Action: Note the SEER number that accompanies this return code and contact your Northern Telecom support organization with this information.

NT: Contact your Northern Telecom development organization with the information provided by the customer.

04

Type: Error

Severity: Major

Cause: An error occurred obtaining the file ID of a customer profile and that of the parent cabinet but did not specify a valid customer.

Impact: The operations that the application was attempting to perform on the intended customer profile cannot be performed, which may affect the entire customer group's users. The probable cause of this problem is a programming error, which can only be fixed by the Northern Telecom development organization.

Action: Note the SEER number that accompanies this return code and contact your Northern Telecom support organization with this information.

NT: Contact your Northern Telecom development organization with the information provided by the customer.

05

Type: Error

Severity: Major

Cause: The pointers to profile(s) have not been set up properly.

Impact: The operations that the application was attempting to perform on the intended profile(s) cannot be performed, which may affect a single user, a customer group, or the entire system, depending on whether the application was trying to access the personal, customer, or system profiles. The probable cause of this problem is programming error, which can only be fixed by your Northern Telecom development organization.

Action: Note the SEER number that accompanies this return code, as the application that encountered this return code should generate a SEER. Contact your Northern Telecom support organization and give them the information.

NT: Contact your Northern Telecom development organization for support. Give them the information passed along by the customer.

06

Type: Error

Severity: Major

Cause: Could not update the system profile with the information in the system record file.

Impact: If this problem occurs after initial installation, conversion, or upgrade/expansion then the system profile will not reflect the installation of any new features, languages, or switches.

Action: Contact your Northern Telecom support organization and report the problem. Report any SEERs.

NT: First verify that the system record file has not been removed. If the file is there, then use the second return code to determine the error. Look up the return code in the appropriate section of the SEER manual to determine what steps to take next.

If the second return code is the same as the first code (i.e. they are both 3006), this signifies either the system record file has not been set up properly or that the system environment was not correct at the time of the system profile update. In both cases, contact your Northern Telecom development organization and inform them of the SEER message and return code.

07

Type: Error

Severity: Minor

Cause: The personal profile to be added already exist on the system.

Impact: This should cause no major problems as the personal profile already exist, so any further operation on the profile should be successful.

Action: See if the user can be located through the MMI via the Find a Local User screen. If yes, then look at the profile to see that it contains all the data that should be in there. If not, modify it until it contains the right data. If the user cannot be found, then contact your Northern Telecom support organization to inform them of the problem.

NT: If the user cannot be found in the Find a Local User screen, yet the profile exists, then use the MD utility to remove the user profile and the corresponding cabinet from the system. Note that when the user profile and cabinet are removed, all messages are lost. Add the user back into the system using the MMI.

08

Type: Error

Severity: Minor

Cause: The customer profile to be added already exist on the system.

Impact: This should cause no major problems as the customer profile already exist, so any further operation on the profile should be successful.

Action: See if the customer can be located through the MMI via the Customer Administration Find screen. If yes, then look at the profile to see that it contains all the data that should be in there. If not, modify it until it contains the right data. If the customer cannot be found, then contact your Northern Telecom support organization to inform them of the problem.

NT: Do the following:

1. If the customer cannot be found in the Customer Administration Find screen, yet the profile exists, then use the MD utility to remove the customer profile from the system. Add the customer back into the system using the MMI.
2. Now invoke AD_UTIL to ensure that the customer count field is accurate. Once the AD_UTIL window is up, go to that window and enter OPMOD.
3. When prompted for the type of access, enter System_Only. Modify the Admin record. One of the field deals with the number of customers defined on the system. Make sure the value in that field corresponds to the number of customer profiles on the system. If the value is incorrect, change it to the right value.

(To find out how many customer there are on the system, use MD to go to /1/cust and list the directory content. Count the number of customer profiles there are and correlate that with the value in the system profile.)

09

Type: Error

Severity: Major

Cause: This error occurs when an application tries to read from a personal profile specifying a user class other than the Personal Class but failed to supply a pointer to the file that contains the desired class of service record.

Impact: The immediate impact is that the intended operation cannot be performed. However, this does not mean other application cannot read records from the personal profile in question. The problem lies with the first application only.

Action: The intended operation cannot be performed while the user belongs to a class other than the Personal Class. Change the user to the Personal Class and try again. However, note that changing the user to the Personal Class does not guarantee the operation would succeed; it just gives it a better chance of succeeding.

Note the SEER number that accompanies this return code, as the application that encountered this return code should generate a SEER. Contact your Northern Telecom support organization and give them the information.

NT: Contact your Northern Telecom development organization and inform them of the SEER message and return code.

10

Type: Error

Severity: Minor

Cause: This error occurs when an application tries to read from a personal profile and supplied an invalid class of service number. Please note that this does not mean a wrong number, but an invalid number, i.e. a number that could not possibly be a class of service number.

Impact: The immediate impact is that the intended operation cannot be performed, but it only affects a single personal profile.

Action: Most likely the problem lies with faulty data setup. Using the MMI, change the user's COS assignment to put the right value into the user's COS field. Try the operation again. If the operation fails again, note the SEER that accompanies this return code as the application that encountered this return code should generate a SEER. Contact your Northern Telecom support organization and give them the information.

NT: Contact your Northern Telecom development organization and inform them of the SEER message and return code.

20

Type: Error

Severity: Major

Cause: Unable to retrieve a class of service record from the specified organization profile. This can occur when an application tries to read the COS record or when an application tries to read the personal profile of a user that belongs to a class other than the Personal Class.

Impact: If the problem lies with the application, then only the intended operation will fail. However, if the class of service record had been accidentally deleted, then all users who belong to the deleted class will be affected.

Action: If the problem occurs when trying to access the class of service record by itself, or when trying to read a user profile, then the error is probably with the software. However, verify that the class of service record does exist. This can be done through the MMI.

If the record is there, then there is a problem with the application that was trying to read the COS record or the personal profile. Note the SEER number that accompanies this return code, as the application that encountered this return code should generate a SEER. Contact your Northern Telecom support organization and give them the information.

If the record is not there, then add it back into the system via the MMI. That should solve the problem.

NT: Contact your Northern Telecom development organization and inform them of the SEER message and return code.

21

Type: Error

Severity: Major

Cause: Unable to update a class of service record from the specified organization profile. This can occur when an application tries to update the COS record.

Impact: If the problem lies with the application, then only the intended operation will fail. However, if the class of service record had been accidentally deleted, then all users who belong to the deleted class will be affected.

Action: This error is probably with the software. However, verify that the class of service record for that user does exist. This can be done through the MMI. If the record is there, then there is a problem with the application that was trying to read the personal profile. Note the SEER number that accompanies this return code, as the application that encountered this return code should generate a SEER. Contact your Northern Telecom support organization and give them the information. If the record is not there it may not be added in from the MMI.

NT: Contact your Northern Telecom development organization and inform them of the SEER message and return code.

22

Type: Error

Severity: Major

Cause: Unable to locate the COS offset record, which means the entire COS data structure in the specified organization profile is now corrupted.

Impact: All previously defined COS records will now be inaccessible.

Action: Contact your Northern Telecom support organization and inform them of the situation.

NT: Use the MD utility to open the organization profile that contains the corrupted COS records. Through MD, delete all records of the type 'User COS'. Use the MD_DR utility, delete all DR entries of the COS records that were just deleted. With the help of the system administrator, add all the COS records back into the profile via the MMI.

23

Type: Error

Severity: Major

Cause: The retrieved class of service record from the specified organization profile is not of the right length. This can occur when an application tries to read the COS record or when an application tries to read the personal profile of a user that belongs to a class other than the Personal Class.

Impact: This usually occurs when the specified COS record is corrupted, hence all users who belong to that class will be affected.

Action: Contact your Northern Telecom support organization and inform them of the situation.

NT: Use the MD utility to open the organization profile that contains the corrupted COS record. Through MD, delete the corrupted COS records. Use the MD_DR utility, delete the associated DR entry of the COS record that was just deleted. With the help of the system administrator, add the COS record back into the profile via the MMI.

24

Type: Info

Severity: Minor

Cause: Unable to delete a specified COS record either because no such record exists, or because there are users who are still assigned to it.

Impact: This return code informs the system administrator that he tried to perform an invalid operation. It simply means that he cannot delete the specified COS record because the conditions are not right for it to be deleted.

Action: If the COS record exists, and the administrator really wishes to delete it, then first un-assign all users who currently belong to this class before attempting the deletion again. If the COS record does not exist, then consider the deletion a success.

NT: None.

25

Type: Error

Severity: Minor

Cause: An application tried to add another customer to the system when the system had been defined as a single customer system.

Impact: The second customer cannot be defined, since the system is suppose to be a single customer system.

Action: None, since no new customers was suppose to be added in the first place.

NT: None.

26

Type: Error

Severity: Minor

Cause: An application tried to add a defined customer to the system.

Impact: The request to add an existing customer was probably an error in the first place, so this prevented an error condition on the system.

Action: None, since the same customer is not supposed to be added twice in the first place.

NT: None.

27

Type: Error

Severity: Minor

Cause: An application had specified an invalid record when it attempted to add a component record that has COS fields in it.

Impact: The operations that the application was attempting to perform affects only personal profiles, which means only individual users are affected. The probable cause of this problem is programming error, which can only be fixed by the Northern Telecom development organization.

Action: Note the SEER number that accompanies this return code, as the application that encountered this return code should generate a SEER. Contact your Northern Telecom support organization and give them the information.

NT: Contact your Northern Telecom development organization for support; give them the information passed along by the customer.

30

Type: Error

Severity: Critical to minor.

Cause: Unable to install the language records in the system profile.

Impact: The language records in the system profile is needed for the modification of both the customer and personal profiles. Without them, voice messaging would not know how to use that particular language to communicate with a user.

If this error occurs during initial installation, then the error is Critical. If it occurs during upgrades or feature expansion and the second return code is something other than this value, then the error is Major. If the second return code is the same as this code, then it is a Minor error caused by the number of records in the system profile being greater than the number of languages specified in the system record file. Since there are already more records than specified by the system record file, the impact should be minimal.

Action: This error only occurs after initial installation, upgrade, or feature expansion. Try it again. If it fails again, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

31

Type: Error

Severity: Major

Cause: Unable to install the switch records in the system profile.

Impact: The switch records that were not installed would affect the voice channels that are connected to those switches. Without the records, the system would not know how to communicate with those switches, thus rendering those voice channels useless. The voice channels that are connected to switches whose records are in the system profile would not be affected.

Action: This error only occurs after initial installation, upgrade, or feature expansion. Try it again. If it fails again, contact your Northern Telecom support organization.

NT: Look up the second return code for source of the problem. If still unable to solve the problem, contact your Northern Telecom development organization.

51

Type: Error

Severity: Minor

Cause: An error occurred accessing the Organization Directory (DR).

Impact: Operation of the Organization Directory fails. This error only occurs when invoking AD_UTIL (a utility), so it should have minimal impact on the system.

Action: Look up the lower level return code in its associated section of the SEER manual. Take action appropriate for that return code or contact your Northern Telecom support organization.

NT: Use MD_DR to investigate any problems with the Organization Directory. If unable to open the Organization Directory, call the Northern Telecom development organization and inform them of the situation. If opening of the Org. Directory was successful, then there is a problem with AD_UTIL. File a PR against AD_UTIL.

70

Type: Error

Severity: Major

Cause: A major error caused the conversion process to abort.

Impact: This occurs during conversion of profiles from one release to the next. If conversion fails then the affected profiles will not be consistent for the new release.

Action: Contact your Northern Telecom support organization. Report any SEERs.

NT: Examine the conversion log file listing and identify which profiles failed in the conversation. Use the reported SEERs to determine the next step to take.

71

Type: Error

Severity: Minor

Cause: Minor error occurred during the conversion process however, none were serious enough to cause the conversion to abort.

Impact: Minor. This occurs during conversion of profiles from one release to the next. Usually this return code is encountered when there are some things in the profile that the conversion program cannot decide on and requires the administrator to do manually: a warning would have been logged in the log file.

Action: Examine the log file and identify which profiles need manual intervention. Go through those profiles and make the necessary changes.

NT: Make sure all the things that caused the warnings to be logged have been changed manually.

Class 31 Directory Server (DR)

The Directory Server

- provides an Organization Directory which includes names, phone numbers, personal verifications for people and services in the organization (users and non-users) and system distribution lists
- provides a User Directory
- provides a system database storing voice services and VSDN entries

The Directory subsystem has two parts

- a server (DR_SERVER) that caches a directory index and performs all directory updates
- client software to support a user's access to the directory

Directory server failures may lead to

- inability of users to log on
- problems with users' accounts
- inability to update the directory
- problems with certain voice services

A Class 31 SEER generally contains

- lower level return code
- name of a file, such as the secondary index file
- location of the error and time when the error was detected. For example: dr435 disp:34001 vers:88 means that a problem was detected in version 88 of file /1/dr/dr/dr435 at displacement 34001 bytes.

05

Type: Error

Severity: Minor

Cause: Error starting Directory Server. The server could not allocate sufficient memory for its cache or working memory because of memory fragmentation, a change in system configuration or new directory entries taking up space.

Impact: If the cache could not be allocated, no directory operations will work and no users will be able to log on. If the working memory could not be allocated, you may be able to perform all operations except directory updates (including administration operations and the recording by users of personal verification names).

Action: Disable MSP1. When MSP1 is out of service, re-enable it to eliminate memory fragmentation. If the error persists, contact your Northern Telecom support organization.

NT: Change the system configuration to make more memory available to the DR_SERVER.

06

Type: Error

Severity: Minor

Impact: Same as SEER 05.

Cause: DR_Server could not allocate enough memory.

Action: Same as SEER 05.

NT: Same as SEER 05.

07

Type: Error

Severity: Minor

Cause: The Directory Server could not allocate enough memory to run the update agent.

Impact: It will not be possible to update the directory.

Action: Same as SEER 05.

NT: Same as SEER 05.

16

Type: Error

Severity: Minor

Cause: The Directory Server found a Filesystem error while accessing the directory file. The message may indicate an error during the Directory Server audit and the presence of duplicate entries.

Impact: Depends on the return code. Some entries may not be retrieved by their retrieval keys. Duplicate entries may be retrieved by some retrieval keys if the SEER text says "DUPS MAY EXIST". Secondary index files may be corrupted and some users may be inaccessible.

Action: Look up the return code in Appendix A and try the indicated action. If the error occurred during a Directory Server audit, see if it recurs the next time the audit is run. The "DUPS MAY EXIST" message indicates that the problem caused the Directory Server audit to create duplicate entries. These may be repaired automatically as the directory is updated and audited. If necessary (or to play it safe), restore from a consistent backup or recreate the directory.

NT: Use Dump and Reload procedure (PREFIX_PKG) described in the MD_DR user guide.

17

Type: Error

Severity: Minor

Cause: Bad Secondary Index File. The primary index is inconsistent with the secondary index files.

Impact: Some entries may not be retrieved.

Action: The problem may be fixed by the nightly DR audit. If not, restore VS1 from backup.

NT: Run MD_DR. Type DRCONTROL AUDIT to rebuild the primary index.

18

Type: Error

Severity: Minor

Cause: The directory update task was unable to obtain the entry to update using the pull mechanism.

Impact: The directory update will fail. The specific failure will depend on the type of operation attempted. For example, a user may not have been added or changed, class of service administration may fail, a new spoken name may not be added for a user etc.

Action: Retry the operation. If not known, the operation can be determined by matching this SEER (3118) with another SEER that reports the 3118 as a return code. If the remote node or invoking task is alive and receives the error, then the client will report the error with 3118 as part of its SEER. The severity of the problem will be based on the severity of the operation of the client. The SEER contains a task result and a hex dump of the remote task id. Usually the task result will be adequate to deter-

mine why the pull failed. The hex dump contains additional information which is sometimes useful; the first eight characters of the hex dump are the physical remote node and the last eight are the task id on that node. If no matching SEERs can be found, then there could be a bus inter-connection problem, or a problem with a remote node. Contact your Northern Telecom support organization.

NT: This SEER indicates a possible problem with the bus interconnecting the nodes, the sanity of a remote node or internode communication. Check SEERs for problems with nodes or internode communication.

19

Type: Error

Severity: Minor

Cause: The directory server was unable to return directory operational measurements to an application by using the push mechanism.

Impact: The application will not receive operational measurements from the directory. In general this is not service affecting since directory OMs are maintained for informational purposed only.

Action: Retry the operation. If not known, the operation can be determined by matching this SEER (3119) with another SEER that reports the 3119 as a return code. If the remote node or invoking task is alive and receives the error, then the client will report the error with SEER 3119 as one of its SEERs.

The severity of the problem will be based on the severity of the operation of the client, if the SEER contains a task result and a hex dump of the remote pointer. Usually the task result will be adequate to determine why the push failed. The hex dump contains additional information which is sometimes useful; the first eight characters of the hex dump are the virtual address for the push, the next four characters are the locale and the last eight characters are the physical node.

If no matching SEERs can be found, then there could be a bus inter-connection problem, or a problem with a remote node. Contact your Northern Telecom support organization.

NT: This SEER indicates a possible problem with the bus interconnecting the nodes, the sanity of a remote node or internode communication. Check SEERs for problems with nodes or internode communication.

22

Type: Error

Severity: Minor

Cause: Internal Software Consistency Failure.

Impact: Some Directory Server update operations may not work.

Action: Contact your Northern Telecom support organization immediately. *DO NOT* update the directory, add users, services,. system distribution list, etc. !

NT: Restore or recreate the directory. The directory can be restored by running MD_DR, loading DRFIX_PKG and using DRDUMPDIR and DRELOADIR as described in the MD_DR user guide. If you suspect a conversion problem, restore all volumes from backup and try the conversion again.

23

Type: Error

Severity: Minor

Cause: The directory entry is inconsistent with the available keyboard language modules. This SEER may indicate a corrupt directory.

Impact: Some Directory Server update operations may not work.

Action: Contact your Northern Telecom support organization.

NT: Restore or recreate the directory, or change system configuration so that language modules loaded match those which were loaded the last time the directory was updated.

24

Type: Error

Severity: Minor

Cause: Directory entry indexed under unknown key type. May be caused by a corrupted directory file or software that was incorrectly converted from a previous release.

Impact: Same as SEER 23.

Action: Contact your Northern Telecom support organization.

NT: Restore or recreate the directory. The directory can be restored by running MD_DR, loading DRFIX_PKG and using DRDUMPDIR and DRELOADIR as described in the MD_DR user guide. If you suspect a conversion problem, restore all volumes from backup and try the conversion again.

26

Type: Error

Severity: Minor

Cause: Entry without ClientID. This SEER may indicate a corrupt directory.

Impact: One or more entries may not be accessed.

Action: Same as SEER 24.

27

Type: Error

Severity: Minor

Cause: Inserting Key Out of Order-internal consistency error. This SEER may indicate a corrupt directory.

Impact: Some update operations may not work.

Action: Same as SEER 24.

30

Type: Error

Severity: Minor

Cause: The application software is not using the Directory Server properly.

Impact: The application operation will not work.

Action: Contact your Northern Telecom support organization.

NT: Obtain complete SEER using SE_PKG. This will give the program address and locale. Determine the problem from the locale. Then notify your Northern Telecom development organization of the program error.

31

Type: Error

Severity: Minor

Cause: An Application is not providing enough memory for directory access.

Impact: The application will not be able to access the directory.

Action: Disable and re-enable the node issuing the SEER.

NT: Obtain complete SEER using SE_PKG. This will give the program address and locale. Determine the problem from the locale. Then notify your Northern Telecom development organization of the program error.

32

Type: Error

Severity: Minor

Cause: The application is trying to use an invalid DRCB. Usually, this is because of a previous Directory Server error; if so, you may ignore this error.

Impact: Subsequent Directory Server accesses by the application software in this session will not work. If another DR SEER precedes this one, investigate it and ignore this SEER.

Action: Investigate previous Directory Server error. If there was none, contact your Northern Telecom support organization.

NT: Obtain complete SEER using SE_PKG. This will give the program address and locale. Determine the problem from the locale. Then notify your Northern Telecom development organization of the program error.

34

Type: Error

Severity: Minor

- Cause:
1. Directory Server unavailable. The SEER message may include a return code. If the SEER came from the server, this code indicates a reason for server termination. If the SEER came from the client, this code details a communication problem (taskresult) between client and server.
 2. If the text says “****DR_SERVER ERROR****”, an error occurred while starting up the Directory Server. The server will terminate with an exception and should restart automatically.
 3. If the text says “DR Error”, the client software could not communicate with the Directory Server. The SEER also includes the task result from the failed communication. Usually this means that the Directory Server is not running.
 4. If the text says “New System ID allocated: nnn”, then a new system ID has been generated to allow unique clientIDs to be created. Occurs normally when systems are installed. (SEVERITY= System info.)
 5. If the text says “****DR ERROR GETTING LOCAL SITEID****”, then the DR_Server could not get the local site ID from the network data base but will start up anyway. Addressing may be affected.
 6. If the text says “DR ERROR READING dr0 FILE, TRYING dr00”, then the DR_Server could not read its primary index file and will try its backup copy /1/dr/dr/dr00.

7. If the text says “DR ERROR READING dr00 FILE, TRYING DUMMY”, then the backup copy of the primary index file was also bad. An audit will be performed to recreate it.
8. If the text says “***DR SERVER COULD NOT START***”, then the DR_Server could not get its primary index file. It kills itself and will be automatically restarted. (SEVERITY = Error Critical)
9. If the text says “DR CONTROL FAILURE”, then an attempt to perform a control operation on the DR_Server failed for the reason given. The return code will be a task result encountered by the client trying to communicate with the DR_Server.

Impact: Unless the server recovers, no directory accesses will work. See SEER 01.

Action: Look up the return code in Appendix A. If the problem persists, contact your Northern Telecom support organization.

NT: Look up the return code, if it is provided. Use PRM_CONTROL to restart the Directory Server or reboot the system.

35

Type: Error

Severity: Minor

Cause: The Update Agent was unavailable in the DR_Server. The SEER occurs normally as part of night-time Directory Server audit. At any other time, this SEER may indicate a more serious problem. Sometimes a return code is provided. This code gives a reason for server termination or details a communication problem between the client and server.

1. If the text says “***DR LANGUAGE TABLE REMOVED***”, an attempt was made to start the Directory Server with fewer language modules. Updates are disabled to prevent directory corruption.
2. If the text says “DR Audit Begun: []”, a Directory Server Audit has been started to re-balance the directory. Updates will be disabled until the audit is complete. The audit parameters (if any) are displayed between the square brackets. (SEVERITY = System info.)
3. If the text says “DR Audit Done, n passes”, the Directory Server Audit finished after the indicated number of passes through the secondary index files. Updates should now be re-enabled. If the directory is still not completely re-balanced, the SEER will include “n OFlows” giving the number of secondary index files which are still larger than optimum size. If the audit was stopped because it took longer than the audit time limit, the SEER will include “TIME”. (SEVERITY = System info.)

4. If the text says “***DR Entry Duplication Possible***”, the Directory Server Audit stopped in such a way that might have resulted in duplicate entries being created in the directory.
5. If the text says “DR Update Agent-class:n EXCEPTION,type:m”, a runtime error occurred in a Directory Server task. The SEER may instead indicate an exception in the Cache Mgr or Auditor tasks. If n=4, then m is a file system or Directory Server return code, otherwise it identifies the runtime error detected by the operating system. The Directory Server will try to recover by restarting the failed task.
6. If the text says “***error starting DR audit”, the Directory Server Audit could not be started due to the error given as the return code.
7. If the text says “***DR update agent save error”, the update agent could not save the server state for the reason given as the return code.
8. If the text says “***could not start DR update agent”, the Directory Server update agent could not be started for the reason given in the return code. No directory updates will be possible until the problem is corrected.
9. If the text says “***DR Audit-***” n DUP ENTRIES NOT SPILLED BACK” (or FWD) indicates that the auditor found duplicate entries in the directory and eliminated n of them.
10. If the text says “DR Error” indicates that the client software had a problem communicating with the update agent task in the Directory Server. The task result is given as the return code. This error can result from trying to perform an update while updates are disabled or during a Directory Server audit.
11. If the text says “Error reading /1/dr/updates/log, try spare newlog”, then the DR_Server encountered an error reading its log file and is trying to read the backup log file.
12. If the text says “Error copying /1/dr/updates/newlog”, then the backup log file was bad too. The extra return code isolates the cause.
13. If the text says “DR Retried aborted xxxx”, where xxxx is “addEntry”, “delEntry”, “chgEntry”, “addMember”, or “delMember”, then the DR_Server has retried an update operation which was in progress when the system died. The surname of the directory entry may also be given. If the result code is zero, the retry was successful (SEVERITY = System info.). Otherwise the retry failed (SEVERITY = Error Minor).

The return code isolates the cause.

Impact: The directory may not be updated (including the recording of personal verification names) until the update agent becomes available again. This SEER is normal during the night-time. If this SEER occurs at other times, there may be a serious problem.

Action: Look up the return code. Find out if an audit is actually running. If so, wait for it to complete. If not, contact your Northern Telecom support organization.

NT: Case 1 Check the installation of the software.
Case 2, 3, 13(result 0) Normal, no action.
Case 4, 9 This is a minor corruption with no expected user impact. It should fix itself over time, if not, dump and reload the directory.
Case 5 Look up the exception in Appendix A. If the problem persists, reboot. If necessary, dump and reload.
Case 6,7,8 Look up the return code. Try rebooting. If the problem persists, dump and reload the directory.
Case 10 This problem is normal if DR Audit was running, Use “*Md_dr*” to check and change the server state.
Case 11 Look up return code. This problem should recover itself.
Case 12 Dump and reload.

38

Type: Error

Severity: Minor

Cause: Secondary index file not found. May indicate corrupted directory.

Impact: Some directory operations will not work.

Action: Same as SEER 16.

39

Type: Error

Severity: Minor

Cause: Secondary Index File Too Short (readKeyBlock).

Impact: Some directory operations will not work.

Action: See SEER 16.

40

Type: Error

Severity: Minor

Cause: Missing Secondary Index File (open1stFile).

Impact: Some directory operations will not work.

Action: See SEER 16.

42

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-Entry Length Bad (unPackAttr).

Impact: Some directory operations will not work.

Action: See SEER 16.

43

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-Bad Packed Entry (scUnPack).

Impact: Some directory operations will not work.

Action: See SEER 16.

44

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-File Too Short (unPackFilter).

Impact: Some directory operations will not work.

Action: See SEER 16.

45

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-Entry Too Short (unPackFilter).

Impact: Some directory operations will not work.

Action: See SEER 16.

46

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-File Too Short (unPackFilter).

Impact: Some directory operations will not work.

Action: See SEER 16.

47

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-Entry Too Big (unPackFilter).

Impact: Some directory operations will not work.

Action: See SEER 16.

48

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-File Too Short (unPackFilter).

Impact: Some directory operations will not work.

Action: See SEER 16.

49

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-Bad Entry Format (unPackFilter).

Impact: Some directory operations will not work.

Action: See SEER 16.

50

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-Missing List End (skipList).

Impact: Some directory operations will not work.

Action: See SEER 16.

51

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-Wrong List End (skipList).

Impact: Some directory operations will not work.

Action: See SEER 16.

52

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-No List End (expandMembers).

Impact: Some directory operations will not work.

Action: Use Dump and Reload procedure (PREFIX_PKG) described in the MD_DR user guide.

53

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-File Too Short (nextRef).

Impact: Some directory operations will not work.

Action: See SEER 16.

54

Type: Error

Severity: Minor

Cause: Bad Secondary Index File-File Too Short (dr_References).

Impact: Some directory operations will not work.

Action: See SEER 16.

55

Type: Error

Severity: Minor

Cause: COS entry had an invalid DN field.

Impact: Directory operations on that entry will not work.

Action: See SEER 16.

59

Type: Error

Severity: Minor

Cause: Consistency Error-Couldn't make key (processPattern).

Impact: Unpredictable.

Action: Contact your Northern Telecom support organization.

NT: Obtain complete SEER using SE_PKG. This will give the program address and locale. Determine the problem from the locale. Then notify your Northern Telecom development organization of the program error.

60

Type: Error

Severity: Minor

Cause: Consistency Error-Couldn't make key (processPattern).

Impact: Unpredictable.

Action: Contact your Northern Telecom support organization.

NT: Obtain complete SEER using SE_PKG. This will give the program address and locale. Determine the problem from the locale. Then notify your Northern Telecom development organization of the program error.

64

Type: Error

Severity: Minor

Cause: A retrieval operation failed. Sometimes, this error occurs if an entry was improperly added to the directory. For example, initials were improperly included in the given name or surname fields or a generational qualifier, such as Jr. or Sr., was improperly included in the surname.

Impact: A consistency check of the directory found an entry which cannot be retrieved by all its keys. If the return code is 1, 2, 3, or 4, and the entry is a user, that user may be unable to log on. Otherwise, the only inconvenience may be that the entry is not visible in some administrator retrievals.

Action: Try deleting the entry and adding it again or changing the entry.

66

Type: Error

Severity: Minor

Cause: Error Checking a Directory Entry-Missing Reference. A consistency check that was run on the directory found an entry with inconsistent links to other entries (for example, contacts, manager or list membership). The SEER text includes the surname and clientID of the entry and a return code indicating which retrieval operation failed.

Impact: Further updates or retrievals on this entry or those related to it may not work.

Action: Restore from a consistent backup tape.

NT: Delete and re-add the entry using MD_DR. If the problem persists, restore the directory from a consistent backup tape or dump and reload the directory.

67

Type: Error

Severity: Minor

Cause: A consistency check was performed and it was discovered that two copies of the same entry were indexed under the same key. The SEER includes a return code indicating which retrieval operation failed.

Impact: The entry may be retrieved twice when certain retrievals are done.

Action: Change the entry to itself, for example, perform a directory update on this entry but do not actually change any field values. If the problem persists, restore the directory from tape.

NT: Dump or reload the directory.

68

Type: Error

Severity: Minor

Cause: Error Checking a Directory Entry-Entry not in list. The SEER includes a return code indicating which retrieval operation failed.

Impact: A single entry is shown to be in a list when in fact it is not. Attempts to change or add the entry may fail.

Action: Delete and re-add the entry. You must also add the name to any system distribution lists again. If the problem persists, restore the directory from tape.

NT: Dump or reload the directory.

Class 32 Message Transfer Agent (MTA)

The Message Transfer Agent (MTA) accepts voice mail from users and the Network Message Transfer Agent (NMTA) and delivers mail to the addressed recipients and the NMTA.

The MTA receives an argument string containing the number of delivery tasks required and a list of volume numbers. An MTA can transfer mail for several volumes. Each volume has an MTA cabinet which stores messages for delivery. The cabinet is: /<volume number>/mt. A volume is always associated with the same MTA.

Failure of an MTA will block mail submission for all users on the MTA's volumes.

A Class 32 SEER may contain

- File ID
- Client ID
- Mailbox number
- Directory number
- Site number. If networking is not enabled, the site number is "0".
- Lower level return code
- Taskresult.

If a SEER shows a Client ID rather than a user's mailbox number and you wish to identify the user, follow these steps:

1. Run utility MD_DR.
2. Enter "heap 100".
3. Enter "dropen".
4. Enter "drsimplf CID" <Client ID>.

01

Type: Admin

Severity: Info

Cause: This indicates that the MTA has been started up.

Impact: None.

Action: None.

NT: None.

09

Type: Error

Severity: Minor

Cause: An exception occurred in a delivery task.

Impact: The affected delivery task will be restarted if possible. A message may not be delivered due to the failure and if so an NDN will be generated.

Action: Contact your Northern Telecom support organization if this happens repeatedly.

NT: If this problem persists, contact your Northern Telecom development organization.

10

Type: Error

Severity: Minor

Cause: Low level system error or broadcast messages are delivered in phases.

Impact: A message or broadcast messages will be delivered late.

Action: None. If the problem is chronic, contact your Northern Telecom support organization.

NT: Use MD_MT (MTDUMPMSG) to get information about the late message in the recipient's cabinet and call your Northern Telecom development organization.

12

Type: Error

Severity: Minor

Cause: Low level system error.

Impact: Some messages might not be delivered.

Action: Look up the return code for more information. If necessary, contact Northern Telecom's support organization.

NT: Ensure that the customer profile is accessible.

13

Type: Error

Severity: Major

Cause: Fails to access user profile.

Impact: One or more users cannot receive messages.

Action: Contact your Northern Telecom support organization.

NT: Ensure that the volume has been started up. If the user profile is corrupted delete the user and create the user again.

17

Type: Debug

Severity: Info

Cause: The line is disconnected.

Impact: The networking session will be terminated. If this happens while our system is sending an AMIS message, our system will retry later. If this happens while our system is receiving an AMIS message, it is up to the remote system to retry or generate a non-delivery message.

Action: None.

NT: None.

20

Type: Error

Severity: Minor

Cause: Low level system error.

Impact: Users will not be notified on their "other" phones (pagers, etc.) about a message that has arrived in their mailbox.

Action: None. If the problem is chronic, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

60

Type: Error

Severity: Minor

Causes: One of the following Non-Delivery Notification (NDN) error.

.Case 1. The disk volume is full.

Case 2. The heap space is insufficient.

Case 3. The disk is not operational.

The return code isolates the cause.

Impact: NDN message will be lost.

Action: Inform sender (whose mailbox number is provided in SEER) of loss of the message.

Case 1. Call administrator to remove messages.

Case 2. Contact your Northern Telecom support organization.

Case 3. Check other SEERs for more information.

NT: Follow the action described for the return code. If necessary, contact your Northern Telecom development organization.

61

Type: Error

Severity: Minor

Cause: Error in reading recipient addresses in the message.

Impact: One or more recipients will not receive the message. NDNs will be sent back to the sender for messages not delivered.

Action: Monitor the frequency of this SEER. If it persists, contact your Northern Telecom support organization.

NT: Follow the action described for the return code. If necessary, contact your Northern Telecom development organization.

68

Type: Error

Severity: Minor

Cause: Copy table is not large enough to handle all recipients.

Impact: One or more recipients will not receive the message.

Action: Contact your Northern Telecom support organization to rebuild the MTA with a larger copy table, by a compiling source code.

NT: Contact the Northern Telecom development organization.

69

Type: Error

Severity: Minor

Cause: The list expansion table is not large enough to handle all list members.

Impact: Recipients in one or more lists specified in the message will not receive the message.

Action: Contact your Northern Telecom support organization to rebuild the MTA with a larger list expansion table to by recompiling source code.

NT: Contact the Northern Telecom development organization.

72

Type: Error

Severity: Minor

Cause: A problem in delivering messages.

1. If the text says "Cab Not accessible", MTA could not gain access to the cabinet.
2. If the text says "PP", MTA could not gain access to the Personal Profile.
3. If the text says "Cp to Vol", a volume could not be copied.
4. If the text says "Close on Vol", a volume could not be closed.
5. If the text says "Dup Sup Er", a duplicate message could not be suppressed.
6. If the text says "Add file fails", a file could not be added to a volume.
7. A distribution list could not be expanded.

The problem may result from corrupted file system data. The return code isolates the cause.

Impact: Some users will not receive their messages.

Action: Look up the return code for further information and contact your Northern Telecom support organization.

NT: Follow the action described for the return code. If necessary, contact your Northern Telecom development organization.

73

Type: Error

Severity: Major

Cause: File system error most likely caused by corrupt cabinet.

Impact: Users of the volume will not be able to send messages and may also lose messages.

Action: Contact your Northern Telecom support organization.

NT: Rename the corrupt cabinet (using the `moverpath` command in MD). Set up a new cabinet using the `mkcab` command, for example, `mkcab /2/mt +custom`. Restore messages in the bad cabinet.

74

Type: Error

Severity: Minor

Cause: Notification failed because of a General Telephony Interface (GTI) or Voice Channel Allocator (VCA) error. The return code isolates the cause.

Impact: If error occurred during a VM session, a recipient will not be notified of the new message. If MWI is mentioned in the SEER, the user's message waiting indicator may not be set properly.

Action: Contact your Northern Telecom support organization.

NT: Follow the action described for GTI, VCA error. If necessary, notify your Northern Telecom development organization.

75

Type: Error

Severity: Minor

Cause: Delivery task crashed and cannot be restarted. This will only occur after an Exception (3209) and indicates that the delivery task was not currently working on a message when the error occurred.

Impact: Message delivery efficiency will be reduced because there is one less delivery task.

Action: Contact your Northern Telecom support organization.

NT: If necessary, contact your Northern Telecom development organization.

76

Type: Error

Severity: Minor

Cause: Volume ID appears more than once in the MTA argument list. In other words, more than one MTA has been assigned the same volume.

Impact: Some heap memory will be used up because the MTA sets aside heap for each volume.

Action: Contact your Northern Telecom support organization.

NT: Fix the MTA argument list in the Startlist so that all volumes appear and none are duplicated. See the Release Notes for reference.

78

Type: Error

Severity: Major

Cause: Error occurred in VA (deferred delivery queue).

Impact: The MTA will try to rebuild the deferred delivery queue. During the rebuild, the MTA will not accept mail.

Action: Contact your Northern Telecom support organization.

NT: Check the return code to isolate the cause of the problem. If necessary, contact your Northern Telecom development organization.

79

Type: Error

Severity: Major

Cause: Error occurred in accessing the Organizational Directory.

Impact: The delivery task will shut down and MTA will try to restart it.

Action: Look up the return code in the Appendix to this manual for more information. Examine surrounding SEERs, which may indicate a DR problem. If the source of the problem is not apparent, contact your Northern Telecom support organization.

NT: Follow action described for the return code. If the problem persists, contact your Northern Telecom development organization.

81

Type: Error

Severity: Major

Cause: Error in file handling or cabinet operation, which is indicative of an unstable file system. The return code isolates the cause.

Impact: Other errors are likely to occur.

Action: Look up the return code in the Appendix to this manual for more information. Examine surrounding SEERs, which may indicate the problem. If the source of the problem is not apparent, contact your Northern Telecom support organization.

NT: Follow action described for the return code. If the problem persists, contact your Northern Telecom development organization.

82

Type: Error

Severity: Critical

Cause: User profile is not consistent with organization directory.

Impact: One user cannot send messages.

Action: Look up the return code in the Appendix to this manual for more information. Examine surrounding SEERs, which may indicate the problem. If the source of the problem is not apparent, contact your Northern Telecom support organization.

NT: Follow action described for the return code. If the problem persists, contact your Northern Telecom development organization.

85

Type: Error

Severity: Major

Cause:

1. No delivery tasks are specified.
3. No volumes are specified.
4. More than twenty volumes are specified.
5. Invalid characters are in the argument list.

Impact: MTA will not run.

Action: Contact your Northern Telecom support organization.

NT: Update the Startlist (particularly the MT entry) according to Release Notes.

86

Type: Error

Severity: Critical

Cause: MTA cannot allocate memory on the node.

Impact: MTA will not run.

Action: Contact your Northern Telecom support organization.

NT: The system is not configured correctly, or there is an engineering design problem. Ensure that the Startlist is correct.

87

Type: Error

Severity: Critical

Cause: MTA cannot register with the Name Server.

Impact: The MTA will not run.

Action: Contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

88

Type: Error

Severity: Critical

Cause: Delivery task shut down and cannot be restarted. This will only occur after an Exception (3209) and indicates that the delivery task was not currently working on a message when the error occurred.

Impact: MTA will shut down.

Action: Contact your Northern Telecom support organization to have them restart the MTA.

NT: Kill the MTA using the debugger. The MTA will restart automatically.

89

Type: Error

Severity: Critical

Cause: The MTA failed to start.

1. If the text says "Int DT: TR : <Taskresult>", a delivery task failed to start.
2. If the text says "OrgProf:RC", Organizational Profile access failed.

3. Volumes may already have been registered.

The task result or return code isolates the cause.

Impact: MTA will shut down.

Action: Contact your Northern Telecom support organization.

NT: Ensure that system volume is online, Organization Profile is not corrupt, MTA argument string is correct, and no other MTA is using the same volumes. Restart MTA.

90

Type: Error

Severity: Critical

Cause: Failed to rebuild the deferred message queue.

Impact: None.

Action: None. Normally the MTA program will be restarted automatically. If you cannot send messages, contact Northern Telecom's support organization to restart the MTA program.

NT: Kill the MTA program using Debugger. The MTA will restart automatically.

91

Type: Debug

Severity: Info

Cause: A broadcast message was sent.

Impact: None.

Action: None.

NT: None.

Class 33 Operational Measurements (OM)

OM is a multi-server of the Program Resource Manager. The OM collects data, calculates statistics and reports on Voice Messaging (VM) and MISA Volume Servers (VS) traffic.

The administrator uses the MMI to schedule traffic reports for VM and VS. The MMI is also used to enable and disable data collection and the capability of generating reports.

The OM

- tracks the schedule
- collects VM traffic data
- invokes VSs at end of traffic schedule
- stores VM session data if enabled
- stores traffic data as per schedule if enabled
- starts the user usage data collector at night

These errors have a minor impact on the system, since OM is a self-contained subsystem and it shuts down properly in the event of a serious error.

A Class 33 SEER usually contains a lower level return code, which is a DD return code.

11

Type: Error

Severity: Minor

Cause: Tasking Error. Failure to communicate with the OM Server.

Impact: OM options will not be updated.

Action: If error persists, contact your Northern Telecom support organization.

NT: Restart the OM Server using PRM_PKG.

12

Type: Error

Severity: Minor

Cause: OM Server not running. Failure to locate the OM Server.

Impact: OM options will not be saved, or one billing record will be lost.

Action: If error persists, contact your Northern Telecom support organization.

NT: Restart the OM Server using PRM_PKG.

17

Type: Error

Severity: Minor

Cause: Error occurred while storing the OM data. If the text indicates failure to commit the data to disk, the current data will be lost. If the text indicates failure to open the cabinets, data will not be written to disk. Otherwise, the OM recovers by writing to a new file. The return code isolates the cause.

Impact: The OM data to be stored for that interval is lost.

Action: Look up the return code for specific information. If the error persists, contact your Northern Telecom support organization.

NT: Verify that there are OM cabinets on the System Volume Server. Restart the server using PRM_PKG.

21

Type: Error

Severity: Minor

Cause: Error in deleting old traffic, billing or usage files.

Impact: None.

Action: None. If this SEER persists over several days, contact your Northern Telecom support organization.

NT: Audit VS volume 1. Restart OM Server. Old files should be deleted the next time the specified OM file is updated.

31

Type: Error

Severity: Minor

Cause: Could not access the system profile. The return code isolates the cause.

Impact: OM Server will not collect any data until restarted.

Action: Look up the MISA return code for specific information.

NT: Check the system profile using ad_util. Ensure OM options are set up, then restart OM_SERVER using PRM_PKG.

32

Type: Error

Severity: Minor

Cause: Failure in polling server. The return code isolates the cause. The problem may be that

- data could not be collected due to disabling of option
- server for given feature is not running
- traffic data files could not be obtained

Impact: OM Data for the request service will not be collected.

Action: Look up the return code for specific information. If unclear, contact your Northern Telecom support organization.

NT: Check that all appropriate programs for the specified service are in the STARTLIST. Ensure that the programs are running.

33

Type: Error

Severity: Minor

Cause: Failure to write OM data to disk. The return code isolates the cause.

Impact: OM data will be lost for the specified interval.

Action: Look up the return code for specific information. If unclear, contact your Northern Telecom support organization.

NT: Ensure that all OM cabinets are available on the system volume server. Restart the OM_SERVER using PRM_PKG.

38

Type: Error

Severity: Minor

Cause: Failure to register the OM server.

Impact: OM Server will not start.

Action: Contact your Northern Telecom support organization.

NT: Verify the status of the name server and restart the OM server using PRM_PKG.

41

Type: Error

Severity: Minor

Cause: PRM failed to start OM_COLLECT.

Impact: User usage data will not be collected for the previous day.

Action: Contact your Northern Telecom support organization.

NT: Check for OM_Collect in Startlist. Ensure the MMI does not have an overlay loaded so that the system will have enough memory to run the OM.

50

Type: Error

Severity: Info

Cause: "Error Getting OM data from MS Server." The OM Server had an error getting data from the MS Server. This could be caused by the OM Server running before the MS Server.

Impact: The request will be made at the next OM Agent poll interval.

Action: None.

NT: None.

60

Type: System

Severity: Info

Cause: Information SEER on the status of the OM_COLLECT program. Check the SEER text. If SEER indicates that OM_COLLECT was not started then take action according to problem as recorded in SEER text.

Impact: None.

Action: Depends on SEER text. If unclear, contact your Northern Telecom support organization.

NT; Take appropriate action according to SEER text.

62

Type: Error

Severity: Minor

Causes: One of the following could be the cause:

1. Could not open, read, update, or close the Organization Profile.
2. Could not close save file.
3. Could not get org profile FID.
4. Could not open cabinet.
5. Unable to get billing class.
6. Processing error.
7. Unable to initialize.

The return code isolates the cause.

Impact: Could not create user usage reports from billing information.

Action: Look up the DD return code for specific information. If unclear, contact your Northern Telecom support organization.

NT: Ensure that all OM cabinets are available on the system volume server. Restart the OM_SERVER using PRM_PKG.

66

Type: System

Severity: Info

Cause: Information SEER on the status of the OM_SERVER program.

Impact: None.

Action: None.

NT: None.

67

Type: Error

Severity: Minor

Causes: Case 1. Error occurred in OM audit.
Case 2. No memory to start OM server.

Impact: Case 1. OM audit will not clean up old data.
Case 2. OM server will not start.

Action: SEER will indicate what type of files were not deleted, e.g., VMBillFile, NMBill-File, TrafficFile, VMPEGFile. If the problem persists over several days, contact your Northern Telecom support organization.

NT: Disable OM traffic collection. Use OM_Util and MD to delete old traffic files. Use PRM_Control to restart OM Server. Re-enable OM traffic collection.

69

Type: Error

Severity: Minor

Causes: 1. DD_read failed.
2. Find/get record failed.
3. Unable to find record.
4. Unable to close last file from cab.
5. GETFID failed.
6. Open cabinet failed.

The return code isolates the cause.

Impact: Problem with reading traffic or billing file. Data cannot be retrieved.

Action: Look up the return code for specific information. If unclear, contact your Northern Telecom support organization.

NT: Ensure that all OM cabinets are available on the system volume server. Restart the OM_SERVER using PRM_PKG.

75

Type: Error

Severity: Minor

Cause: Error in adding the Billing or Traffic records.

Impact: OM data will not be committed to disk. File may be corrupted.

Action: None.

NT: Ensure that all OM cabinets are available on the system volume server. Restart the OM_SERVER using PRM_PKG.

91

Type: Error

Severity: Minor

Cause: Failed to locate OM_SERVER.

Impact: The OM billing record will not be sent to the OM Server.

Action: Make sure the System time is set. Check to see if the OM Server is running.

NT: Restart OM Server using PRM_Control. If the SEER persists, contact your Northern Telecom support organization.

93

Type: Error

Severity: Minor

Cause: Failed to locate OM_SERVER.

Impact: The OM billing record will not be sent to the OM Server.

Action: None. If the SEER persists, contact your Northern Telecom support organization.

NT: Restart OM Server using PRM-Control.

Class 34 Voice Channel Allocator (VCA)

The Voice Channel Allocator (VCA) is responsible for allocating system resources such as Telephony Channels, DSP ports, and Time slots.

VCA Seer printouts are frequently accompanied with VCA Control Blocks. Each the control block contains the HWLOC of the affected device.

20

Type: Error

Severity: Minor

Cause: An internal error occurred (for example tasking) causing an outcall to be delayed.

Impact: The outcall will immediately retry.

Action: None.

NT: None.

40

Type: Error

Severity: Major

Cause: Internal Sanity Check on hash table failed.

Impact: Channel may not handle calls but will remain in service.

Action: None.

NT: None.

41

Type: Error

Severity: Minor

Cause: VSS tried to release a resource it did not own.

Impact: Request ignored by VCA.

Action: Disable and re-enable port/channel specified in SEER.

NT: Disable and re-enable port/channel specified in SEER.

42

Type: Error

Severity: Minor

Cause: The VCA Control Block passed in by the client was invalid.

Impact: Request ignored by VCA.

Action: Disable and re-enable port/channel.

NT: Analyze other SEERs for more information. If the problem persists, contact your Northern Telecom development organization.

43

Type: Error

Severity: Minor

Cause: Internal Sanity check failed.

Impact: None.

Action: Disable and re-enable ports/channels if necessary.

NT: None.

45

Type: System Information

Severity: Info

Cause: VCA has finished recovering after a restart/recovery.

Impact: None.

Action: None.

NT: None.

46

Type: Error

Severity: Minor

Cause: A timeout has occurred during VCA/VCM recovery.

Impact: None.

Action: None.

NT: Ensure that all channels recover automatically. If they do not, disable and re-enable the affected channels.

47

Type: Error

Severity: Minor

Cause: Variable out of range.

Impact: Request ignored by VCA.

Action: File a problem report including associated SEERs and scenario.

NT: If the problem persists, contact your Northern Telecom development organization.

52

Type: Debug

Severity: Info

Cause: An outcall selected a port that was already in use.

Impact: None. It will retry the operation.

Action: None, but too many of these can indicate that the system is overloaded or under-engineered.

NT: None.

55

Type: Error

Severity: Critical

Cause: Could not read the hardware database at startup.

Impact: System will not function.

Action: Contact you Northern Telecom support organization.

NT: Determine if /1/hwd is available; Confirm that VS1 (volume server 1) is running; Check the class 39 return code; Restart the VCM via PRM control; as a last resort reboot the system.

61

Type: Error

Severity: Critical

Cause: There was no memory at startup for the VCA.

Impact: System will not function.

Action: Contact your Northern Telecom support organization.

NT: Examine memory usage. If there are too many channels on the primary node disable some. Restart the VCM via PRM control. As a last resort reboot system.

64

Type: Error

Severity: Minor

Cause: A tasking error occurred. This may occur at startup, when the system is very busy or during system recovery.

Impact: Minimal.

Action: Wait and disable and re-enable ports if necessary.

NT: Check the surrounding SEERs for results of the Tasking error. Recover any devices that are affected.

65

Type: Error

Severity: Minor

Cause: Bad parameter passed in by client.

Impact: Request ignored.

Action: Disable and re-enable port/channel.

NT: Disable and re-enable port/channel.

66

Type: Error

Severity: Critical

Cause: An unexpected event occurred.

Impact: Indeterminate.

Action: Disable and re-enable ports/channels if necessary.

NT: Analyze the surrounding SEERs. If the problem persists, contact your Northern Telecom development organization.

71

Type: Error

Severity: Minor

Cause: A device was in an incorrect state for the requested operation.

Impact: Minimal.

Action: Disable and re-enable port/channel if it does not recover by itself.

NT: Disable and re-enable port/channel if it does not recover by itself.

75

Type: Error

Severity: Critical

Cause: There was no memory at startup for the VCA or there was some other initialization problem.

Impact: System will not Function.

Action: Contact your Northern Telecom support organization.

NT: Examine memory usage and system configuration. If there are too many channels on the primary node disable some. Restart the VCM via PRM control. As a last resort reboot system.

80

Type: Error

Severity: Minor

Cause: During a sanity check, an idle VSS was found to own an incorrect number of ports.

Impact: VSS is restarted.

Action: None.

NT: None, but if the problem occurs frequently, contact your Northern Telecom development organization.

81

Type: Error

Severity: Minor

Cause: Could not find port in internal table to release.

Impact: None.

Action: Disable and re-enable T1 channel.

NT: Check other VCA SEERs printed and repeat this SEER's Action.

82

Type: Error

Severity: Major

Cause: Could not acquire device for diagnostic routine.

Impact: None.

Action: Contact your Northern Telecom support organization.

NT: Use VCM_PKG to print timeslot map. 'VCAPRT TS YES'.

88

Type: Error

Severity: Minor

Cause: Problem cleaning up dying program.

Impact: None.

Action: Disable and re-enable channel.

NT: None.

90

Type: Error

Severity: Minor

Cause: Internal Sanity Check failed.

Impact: None.

Action: Disable and re-enable ports/channels if necessary.

NT: Disable and re-enable ports/channels if necessary.

94

Type: Error

Severity: Minor

Cause: Unexpected device acquiring a time slot.

Impact: None.

Action: Contact your Northern Telecom support organization.

NT: Use VCM_PKG to print times lot map. 'VCAPRT TS YES'.

95

Type: Error

Severity: Minor

Cause: Failed to PUSH OM or status PUSH to MMI.

Impact: Lose OM or status for period.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: If the problem persists, contact your Northern Telecom development organization.

97

Type: Error

Severity: Minor

Cause: Error occurred during recovery.

Impact: Indeterminate.

Action: Disable and re-enable ports/channels if necessary.

NT: This problem should only happen under system recovering under load. Internal VCM tables could be corrupted. Best to disable re-enable affected channels. If that fails, disable and re-enable all ports.

99

Type: Debug

Severity: Minor

Cause: An unexpected event occurred.

Impact: Indeterminate.

302 Class 34 Voice Channel Allocator (VCA)

Action: Disable and re-enable ports/channels if necessary.

NT: Analyze surrounding SEERs and contact your Northern Telecom development organization.

Class 35 SEER Server (SS)

The SEER server collects and reports System Event and Error Reports (SEERs). They are reported on the console and printer. Event SEERs are used to announce a system task, such as starting automatic backup. Error SEERs are used to diagnose system problems, which are usually related to software.

Most of DMS VoiceMail software generates SEERs through a procedure, "is_report", which has three parameters:

1. ReportNum (integer): ReportNum DIV 100 = class, ReportNum MOD 100 = report number
2. ExtraStr (string): text describing the problem
3. ExtraInt (longint): extra error code, which is usually a return code from another component

SEER server failure is very serious. Without SEERs, it is difficult to identify and solve DMS VoiceMail problems.

00

Type: System

Severity: Info

Cause: "SEER: xx being throttled."

"SEER: Reset throttle - total throttled x, unique SEERs y".

More than the configured number of the same SEER have been produced during the time allocated.

Impact: You will not see this SEER printed again until throttling is reset.

Action: None.

NT: None.

01

Type: System

Severity: Info

Cause: SEER file is not found in cabinet.

Impact: SEER file will be automatically recreated.

Action: None.

02

Type: Error

Severity: Major

Cause: File system error.

Impact: Major.

Action: Contact your Northern Telecom support organization.

NT: Either delete or rename the current SEER file, then reboot. A new SEER file will be created.

03

Type: Error

Severity: Minor

Cause: An error occurred during the indexing of a SEER.

Impact: May indicate a file system problem.

Action: Contact your Northern Telecom support organization.

NT: If the error persists, either delete or rename the current SEER file, then reboot. A new SEER file will be created.

04

Type: Error

Severity: Minor

Cause: A record could not be found and read.

Impact: May indicate a file system problem.

Action: Contact your Northern Telecom support organization.

NT: See SEER 03.

06

Type: Admin

Severity: Info

Cause: The administrator has specified an invalid date (one that is older than the oldest or more current than the newest SEER on record).

Impact: The operation will not be completed.

Action: Check and correct the date input. Re-issue the command.

08

Type: Admin

Severity: Info

Cause: No SEER records were found in the specified time interval.

Impact: None.

Action: Check specified time interval input.

09

Type: Error

Severity: Major

Cause: Difficulty communicating with the SEER server, probably due to lack of memory buffers.

Impact: Some SEERs may be lost.

Action: Reboot the system. If the error persists, contact your Northern Telecom support organization.

NT: A software engineering problem-check the allocated buffer size.

10

Type: Error

Severity: Major

Cause: Tasking error encountered, probably due to lack of memory buffers.

Impact: Some SEERs may be lost.

Action: Reboot the system. If the error persists, contact your Northern Telecom support organization.

NT: A software engineering problem-check the allocated buffer size.

11

Type: Error

Severity: Major

Cause: Inability to restart the SEER messenger. A file system problem is indicated.

Impact: SEER server crash.

Action: Contact your Northern Telecom support organization.

NT: See SEER 03.

12

Type: Error

Severity: Minor

Cause: This message is issued when the administrator tries to View or Print SEERs through the MMI. A file system problem is indicated.

Impact: The operation will not be completed.

Action: Contact your Northern Telecom support organization.

NT: See SEER 03.

13

Type: Error

Severity: Minor

Cause: Tasking error encountered, probably due to incorrect database or hardware.

Impact: The system alarm may not be correct.

Action: Contact your Northern Telecom support organization.

NT: Check Bus controller unit and/or existence of COCLKAL.CODE unit in OSP.PD.TEXT.

14

Type: Error

Severity: Info

Cause: Redundant SEER Server taking control could not locate previous server.

Impact: None.

Action: None.

NT: None.

14

Type: Error

Severity: Minor

Cause: Tasking error occurred sending SEERs to the DMS.

Impact: Logs will be routed in redundant mail log system. This error will not be service affecting.

Action: None. If problem persists, contact your Northern Telecom support organization.

NT: May be a symptom of a bigger problem.

Class 36 Network Message Transfer Agent (NMTA)

The Network Message Transfer Agent (NMTA) transfers messages between DMS VoiceMail and AMIS sites. Outbound messages are received from the Message Transfer Agent (MTA) and sent using the Analog Transfer Agent (ATA) or the Open Access Transfer Agent (OTA). Inbound messages from the ATA and OTA are delivered to the MTA. The NMTA initiates and manages the connections to remote and AMIS sites providing network traffic statistics and billing information.

Each network site has one NMTA. The NMTA stores messages in a cabinet (/<volume>/network) before delivering them. The volume number is passed to the NMTA as an argument in the Startlist.

NMTA is a critical program. If the NMTA program (NM) fails to recover from serious error and shuts down, the Program Resource Manager restarts it immediately so that networking traffic is not blocked. NMTA errors can prevent connection to another site or cause messages to be lost.

A Class 36 SEER may contain

- File ID
- Client ID
- Mailbox number
- Directory number
- Site number. If networking is not enabled, site number is "0".
- Lower level return code
- Task result

04

Type: Error

Severity: Major

Cause: Case 1. The NMTA has insufficient memory for a new remote site.

Case 2. The NMTA has insufficient memory for a networking port.

Impact: Case 1. Users will not be able to send messages to the new site.

Case 2. The new networking port cannot be used.

Action: The maximum number of sites allowed is 50. If you need to add a new site, remove one of the currently defined sites using the Network administrator program.

The maximum number of networking ports supported in the system is 20. Verify that the entries in the Hardware Database are correct. If you need to add a new port, you'll have to remove an old port first. If the problem persists, contact your Northern Telecom support organization.

NT: If the problem persists, contact your Northern Telecom development organization.

05

Type: Error

Severity: Critical

Cause: The return code isolates the cause.

1. If the text says "Cannot open message cabinet" or "out of room for message", there is a cabinet problem.
2. If the test says "Cannot NEWPOOL TempBuf" or "Cannot ADDPOOL to MYID" or "Cannot ADDPOOL to Buffer", there is a buffer pool problem.
3. If the text says "fails to open Org profile" or "read fails to read CM org record" or "Close fails to close Org. Profile", there is a problem gaining access to the Organization Profile.
4. If the text says "ReadNetDB: Fails to open the Network database" or "Read-NetDB: Fails to get the local site networking information" or "ReadNetDB: fails to identify the remote sites in the system", there is a problem using the Network Database.
5. If the text says "cannot open Hardware Database" or "fail to do hd_search" or "fail to do hd_initSearch", there is a problem gaining access to the Hardware Database.

6. If the text says “# of remote sites exceeds NM capacity” or “NMTA cannot re-build queues”, there is insufficient memory for the internal database.
7. If the text says “Cannot register NMTA”, there was a problem registering NMTA with the Name Server.
8. The Startlist argument might be invalid.
9. If the text says “Fails to get the local site networking status”, then usually the network database has not been configured or it has been re-initialized.
10. If the text says “Networking service disable”, then NMTA failed to read the networking status flag and it assumes the flag is set to disable.

Impact: NMTA will not run and networking will not be possible.

Action: Wait for the program to restart automatically. If it does not restart, contact your Northern Telecom support organization.

NT: Perform the following steps:

1. Verify the argument string for NM in the Startlist and ensure that the specified network message cabinet exists.
2. Verify that the volume server is running. Use AD_UTIL or AD_TOOLS to list the directory on which the Organization Profile resides. If the volume is not accessible, run the VSMP program to start the volume server.
3. Verify that the system volume is up and that the Hardware Database resides on that volume.
4. Verify that the system volume is up and that the Network Database resides on that volume.
5. Run the Network Administrator program to reduce the number of remote sites defined to 50 or less.
6. Run the Network Administrator program to configure the local site maintenance parameters.

If the above are in order, and problems still occur, save the cabinet message and then remove and recreate the network message cabinet using the command “MKCAB /<vol>/network ” but save the cabinet messages first.

07

Type: Error

Severity: Major

- Cause:
1. Bad connection problem.
 2. Tasking problem.
 3. Modem problem.

4. Problem setting up call.
5. Problem transferring voice.
6. Problem with local NMTA.
7. Problem with file in delivery.
8. Miscellaneous problem.
9. Protocol problem.

Impact: The current connection or connection attempt has been stopped. The site originating the call will attempt another connection within the next five minutes.

- Action:**
- a. Verify that the trunk connection is not busy and the remote site is operational.
 - b. Verify that the dialing connection to the remote site as entered in the Network Database is correct.
 - c. Verify that the modems are operational and correctly set.
 - d. Verify that the dialing numbers of the modems as entered in the Hardware Administration screens are correct.
 - e. If the problem persists, contact your Northern Telecom support organization.

If a message file problem arises, a NDN will automatically be generated after three delivery attempts.

NT: Contact your Northern Telecom development organization if NDNs are continuously generated.

08

Type: Error

Severity: Minor

- Cause:**
1. If the text says: "ERROR state for remote site <site ID>", the remote site entered error state because a number of consecutive connection attempts to that site failed (default number is 3).
 2. If the text says: "Remote site <site ID> has exited from error state", a site returned to normal from the error state when a successful connection with the remote site was made.

Impact: While a site is in the error state, no connection attempts will be made for one hour. Messages may still be composed to the site, but they will not be delivered during this time.

Action: Investigate reason for connection failure. The error state can be cleared by using the “Clear Error” function in the Network Administration program. If no action is taken, the connection will be tried again after an hour. If this is successful, the error state will be cleared. If the problem persists, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization if the site cannot clear the error state.

09

Type: Error

Severity: Minor

Cause: 1. There is no networking port.
2. The networking port was changed.

Impact: Case 1. Network voice transfer is not possible.
Case 2. None.

Action: Case 1. Check the data port configuration to see if NWMODEM entries are correct. If there is a problem, contact your Northern Telecom support organization.
Case 2. None.

NT: The support organization should contact your Northern Telecom development organization if the problem cannot be resolved.

10

Type: Error

Severity: Major

Cause: NMTA encounters initialization problems. The return code isolates the cause.

Impact: NMTA will shutdown and will restart automatically.

Action: Look up the return code for specific information. If unclear, contact your Northern Telecom support organization.

NT: If the problem persists, contact your Northern Telecom development organization.

21

Type: Error

Severity: Major

Cause: NMTA has problems gaining access to the message cabinet. The message cabinet may not exist or the volume server may not be running. Check the return code.

Impact: Inbound messages can not be delivered to the message cabinet for the local user.

Action: Contact your Northern Telecom support organization.

NT: Ensure that VS1 is running. If not, use VSMUP to start up the volume server. Verify that the message cabinet exists. If not, create the cabinet using the command "MKCAB /<vol>/network" where <vol> is the volume specified in the NM argument in the Startlist.

22

Type: Error

Severity: Major

Cause: MTA cannot accept a message from the NMTA.

Impact: Inbound messages will not be delivered to local users immediately. NMTA will try delivery again until the message stale-dates.

Action: Contact your Northern Telecom support organization.

NT: If the MTA is not running, start it. Run the VSMUP program to verify that the volume server is running.

23

Type: Error

Severity: Major

Cause: OM cannot accept a billing record. The OM may not be running.

Impact: Billing record for that message will be lost.

Action: If problems persist, contact your Northern Telecom support organization.

NT: Ensure that the OM_SERVER is in the Startlist.

25

Type: Error

Severity: Major

Cause: NMTA failed to communicate with the Voice Channel Allocator (VCA).

Impact: Network voice transfer may not be possible.

Action: If problems persist, contact your Northern Telecom support organization.

NT: Check that the VCA task is running. If not start it. If the VCA task was running, look up the return code to isolate the cause of the problem.

26

Type: Error

Severity: Critical

Cause: NMTA internal database inconsistency.

Impact: NMTA will shut down and will restart automatically.

Action: Check if the network is still operational. If necessary, contact your Northern Telecom support organization.

NT: If the problem persists, contact the Northern Telecom development organization.

27

Type: Error

Severity: Major

Cause: The NMTA failed to open the Network Database. The volume server may not be running. Check the return code.

Impact: NMTA will do a warm restart and continue.

Action: Contact your Northern Telecom support organization.

NT: Ensure that the server for the volume on which the Network Database resides is active by using a CLI utility to list the volume directory. If this fails, start up the volume server using the VSMUP program.

31

Type: Error

Severity: Minor

Cause: The local site does not have enough ports to handle incoming calls.

Impact: Incoming calls will be rejected.

Action: If error persists, add networking ports. If the problem persists, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization if the problem persists.

32

Type: Error

Severity: Major

Cause: The remote site is not defined in the Network Database.

Impact: NMTA will do a warm restart to pick up the latest view of the Network Database.

Action: Ensure that the remote site is entered in the Network Database. If the problem persists, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization if the problem persists.

33

Type: Error

Severity: Major

Cause: NMTA cannot generate or send an NDN. The return code isolates the cause.

Impact: NDN message as well as the original message will be removed.

Action: If problems persist, contact your Northern Telecom support organization.

NT: Verify that the MTA is running. If necessary, check that the network message cabinet volume is in the system.

34

Type: Error

Severity: Major

Cause: 1. If the text says “exceeded bad message retry limit”, a message was unsuccessfully sent so many times that it will not be sent again.
2. The NMTA cannot retrieve or store a message in the /1/network cabinet.

The return code isolates the cause.

Impact: The message will be dropped from the system.

Action: Look up the return code for more information. contact your Northern Telecom support organization.

NT: Check the capacity of the network cabinet. Maximum capacity is 1500 messages. All message file names should be either “netfir” or “netfir1”.

40

Type: Error

Severity: Major

Cause: 1. Wrong release number received from remote site (ID is provided).
2. Information for initiating site (ID is provided) could not be found.

Impact: Connection cannot be established with the remote site.

Action: Add the remote site to the Network Database. If the problem persists, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization if the remote site cannot be added.

41

Type: Error

Severity: Major

Cause: NMTA received an invalid password from a remote site.

Impact: The connection will be unsuccessful. If the local site is the initiating site, the entry for the remote site will be tagged as in the error state.

Action: Call the administrator of the remote site to co-ordinate passwords. If the problem persists, call your Northern Telecom support organization.

NT: If the problem persists while using the valid password, contact your Northern Telecom development organization.

43

Type: Error

Severity: Major

Cause: The remote site is using a different software release.

Impact: The connection will be unsuccessful. If the local site is the initiating site, the entry for the remote site will be tagged as in the error state.

Action: Make sure that both sites are running the same software streams. Contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization if the problem persists.

45

Type: Error

Severity: Major

Cause: The NMTA received an invalid site identifier from a remote site.

Impact: No connection will be established because the site is unidentified.

Action: Update the Network Database with the correct remote site information. Call the administrator of the remote site for the correct site identifier. If the problem persists, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization if the problem persists.

51

Type: Error

Severity: Minor

Cause: The NMTA has run out of OTA control block.

Impact: The NMTA cannot deliver the incoming/outgoing AMIS messages temporarily.

Action: Contact your Northern Telecom support organization if the problem persists.

NT: Contact your Northern Telecom development organization if the problem persists.

52

Type: Debug

Severity: Info

Cause: OTA reports a particular session is disconnected. The reason is in the return code.

Impact: Incoming/outgoing messages will be either retried later or NDN.

Action: Check if the AMIS is still operational. If necessary, contact your Northern Telecom support organization.

NT: If the problem persists, contact your Northern Telecom development organization.

53

Type: Debug

Severity: Info

Cause: The system access number used for the outgoing session is invalid.

Impact: Outgoing messages will be NDN.

Action: Check that the system access number used for AMIS call is valid. If necessary, contact your Northern Telecom support organization.

NT: If the problem persists, contact your Northern Telecom development organization.

54

Type: Debug

Severity: Info

Cause: There is no associated outgoing OTA control block.

Impact: The outgoing AMIS session is ignored.

Action: Check that AMIS is still operational. If the problem persists, contact your Northern Telecom support organization.

NT: If the problem persists, contact your Northern Telecom development organization.

55

Type: Debug

Severity: Info

Cause: The outgoing AMIS session OTA control block is found not in use after the session has been started.

Impact: The current outgoing AMIS session is ignored.

Action: Check that the AMIS is still operational. If necessary, contact your Northern Telecom support organization.

NT: If the problem persists, contact your Northern Telecom development organization.

Class 37 Analog Transfer Agent (ATA)

The Analog Transfer Agent (ATA) sends network messages to other DMS VoiceMail sites.

There is one ATA for each connection to a given site. The Network Message Transfer Agent (NMTA) provides an ATA with several parameters including the DN you dial in order to connect to the specified site, the particulars of the modem, and the messages to be sent.

ATA errors lead to connections being terminated. However, the transfer is tried again within five minutes. These errors have minor impact on the system.

A Class 37 SEER usually contains a return code, such as a DD, GTI, VH, or VSS return code.

02

Type: Error

Severity: Major

Cause: Can not open the data port.

Impact: Failure of the networking session.

Action: Contact your Northern Telecom support organization for data port installation.

NT: Stop and restart the NMTA using the PRM_CONTROL program. Notify your Northern Telecom development organization

03

Type: Error

Severity: Critical

Cause: VSS failed to bind with ATA at start-up time.

Impact: Failure to send and receive networking messages.

Action: Courtesy disable and re-enable channels one by one.

NT: Contact your Northern Telecom development organization.

04

Type: Error

Severity: Major

Cause: An I/O error occurred when a read or write was requested on the specified data port. This is a software error.

Impact: Failure of the networking session.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Use the debugger to restart NMTA. Notify your Northern Telecom development organization.

05

Type: Error

Severity: Minor

Cause: A disk error occurred.

Impact: If the problem occurs three times on the same message an NDN will be generated and the message will be discarded.

Action: Look up the associated low level return code for more information. Contact your Northern Telecom support organization.

NT: Follow the action described for disk error (class 14). If necessary, notify your Northern Telecom development organization.

06

Type: Error

Severity: Minor

Cause: The specified message was corrupted.

Impact: The system will attempt three times to transmit the message. Then the message will be discarded and an NDN will be generated.

Action: Look at the surrounding SEERs. An associated SEER may indicate the problem. If you are unsure of the problem, contact your Northern Telecom support organization.

NT: Follow the action described for the surrounding SEERs. If necessary, contact your Northern Telecom development organization.

07

Type: Error

Severity: Minor

Cause: The ATA and the data link task fell out of synchronization. This usually happens to a very noisy line.

Impact: The message will be re-sent later.

Action: None. If the problem persists contact your Northern Telecom support organization.

NT: If the problem persists, contact your Northern Telecom development organization.

08

Type: Error

Severity: Minor

Cause: An unexpected call progress message was received from the VSS. The first number shown in the SEER is the GTI Call Progress Status. The second number is the supplementary information for the Call Progress Status in hexadecimal format.

Impact: Could be a hardware or software configuration problem.

Action: Look up the Call Progress Status in the Appendix for more information. Contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

09

Type: Error

Severity: Minor

Cause: The modem failed to hang up as instructed.

Impact: The modem will not be disconnected.

Action: If the problem persists on the same modem, the modem may be faulty. Install another modem.

NT: If the problem persists after the modem is installed, contact your Northern Telecom development organization.

10

Type: Error

Severity: Minor

Cause: The modem at the specified DN did not hear the carrier asserted by its counterpart at the remote site. The causes for this could be

1. A call setup problem happened at the remote site.
2. The modem at the remote or the local site is faulty.
3. The incorrect networking access number was dialed.
4. The quality of the line was bad.

Impact: The session will be terminated or tried again later.

Action: Case 1. If the problem persists, check with the administrator at the remote site to determine the status of networking there. Check the connection DNs specified in the remote site form of the site in question. Dial the connection DNs (the far end should answer, and after a short delay, a modem will assert its carrier signal).

Case 2. Dial the modem at the remote and the local site to ensure that they are working.

Case 3. Check the networking access number to ensure that it is correct and try dialing the remote system again.

Case 4. Try the session again. If the problem persists, contact your Northern Telecom support organization.

NT: Check the networking and modem setup. If necessary, contact your Northern Telecom development organization.

11

Type: Error

Severity: Minor

Cause: Networking dialed the specified DN and then instructed the modem at the DN to go off hook. But, networking did not detect that the call was answered. This could occur because

1. The modem set-up in the hardware database is wrong.
2. The switch set-up is wrong.
3. The modem and/or the connections are faulty.

Impact: The call/session is not initiated.

Action: Contact your Northern Telecom support organization.

NT: Check that the hardware database setup, dip switch setup, or modem connection setup is correct. If the problem persists, contact your Northern Telecom development organization.

13

Type: Error

Severity: Minor

Cause: The ATA expected a call progress message from the VSS but it did not arrive.

Impact: The session cannot be established.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Look at associated details in SEER. Contact your Northern Telecom development organization.

14

Type: Error

Severity: Major

Cause: Can not allocate buffers from VSS heap.

Impact: The call/session is not initiated.

Action: Contact your Northern Telecom support organization.

NT: VSS should reload itself. If problem persists, contact your Northern Telecom development organization.

15

Type: Error

Severity: Minor

Cause: The modem at the specified DN did not respond to a command sent by the ATA.

Impact: Case 1. If the session has been established, the session will be terminated.
Case 2. If the session has not been established, the session will not be established.

Action: Contact your Northern Telecom support organization.

NT: Check the modem setup and the connection to Meridian Mail. If necessary, contact your Northern Telecom development organization.

16

Type: Error

Severity: Minor

Cause: The ATA could not locate the NMTA.

Impact: The session cannot be established.

Action: Ensure that the system has a valid time. If the problem persists, contact your Northern Telecom support organization.

NT: Use the debugger program to ensure that the NMTA is running.

17

Type: Error

Severity: Minor

Cause: Due to a tasking error, the data link task could not be started.

Impact: The session cannot be established.

Action: If problem occurs frequently, contact your Northern Telecom support organization.

NT: Look up the task result for further information.

18

Type: Error

Severity: Minor

Cause: A tasking error occurred.

Impact: The session will be terminated.

Action: If problem occurs frequently, contact your Northern Telecom support organization.

NT: Look up the task result for further information.

19

Type: Error

Severity: Minor

Cause: A tasking error occurred during an operation involving a timer.

Impact: The session will be terminated.

Action: If problem occurs frequently, contact your Northern Telecom support organization.

NT: Look up the task result for further information.

20

Type: Error

Severity: Minor

Cause: The specified file is probably corrupt.

Impact: If the problem occurs three times on the same message (FID) an NDN will be generated and the message will be discarded.

Action: If the problem persists, save the NON message and contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

21

Type: Error

Severity: Minor

Cause: A Voice Handler related error occurred while transferring to the specified file.

Impact: If the problem occurs three times on the same message (FID) an NDN will be generated and the message will be discarded.

Action: See the list of VH errors for more information. If unclear, contact your Northern Telecom support organization.

NT: Look up the return code and follow the action described for VH error (class 20). If the problem persists, contact your Northern Telecom development organization.

22

Type: Error

Severity: Minor

Cause: An error was received from the Voice Services Shell (VSS).

Impact: The current session will be terminated.

Action: Look up the VSS return code for more information. If unclear, contact your Northern Telecom support organization.

NT: Follow the action described for the VSS error (class 27). If necessary, contact your Northern Telecom development organization.

53

Type: Debug

Severity: Info

Cause: Remote system disconnects the current connection unexpectedly.

Impact: Remote system may experience some difficulties and have to disconnect the current connection.

Action: Look at the remote system SEERs to further clarify the problem experienced by the remote site. Go to the Network Administration screen from the Main Menu and use Remote Site Maintenance to disable networking with that particular site.

56

Type: Debug

Severity: Info

Cause: Remote system does not answer the call.

Impact: The networking path may experience some difficulties. No answer from the called party.

Action: The administrator should check the networking path manually by dialing the connection DN to that particular site.

NT: Verify that the network installation is correct.

59

Type: Debug

Severity: Info

Cause: Poor line quality of the networking path.

Impact: The session will be terminated.

Action: Check the quality of the networking path by dialing the number from a telephone set and listening to the remote modem signal.

NT: If the problem persists, contact your Northern Telecom development organization.

Class 38 Simplified Message Desk Interface (SMDI)

The Simplified Message Disk Interface (SMDI) Link Handler transfers messages between the switch (DMS-100 or SL-100) and DMS VoiceMail. The SMDI Link Handler communicates with the switch using SMDI protocols and communicates with an application task, such as VSS, OS and MMI using the GTI interface.

Failures in the SMDI Link Handler can cause channels to be lost or a node to fail. This results in lost messages.

A Class 38 SEER may contain

- state of the SMDI link
- return code from lower level software

Note: The actual link name is used in the text of the SMDI SEERs and not the link number. Because the names and numbers that you use for your SMDI links do not have to be the same, you can use the hardware location that is also provided in the SEER along with the link name to identify which SMDI link is being reported in the SEER.

00

Type: Error

Severity: Critical

- Cause:
1. If the text says “Error registering the Link Handler”, the Link Handler failed to register with the Name Server.
 2. The Link Handler failed to allocate segment.
 3. The Link Handler encountered an error trying to allocate the buffer pool.
 4. The Link Handler obtained an invalid node number.

5. The Link Handler encountered an error opening the Hardware Database, as indicated by the text. If the return code is 1105, the volume server was not started. It must be started before the SMDI Link Handler.
6. If the text says "Error obtaining dataport information no record with node number nn", the system could not find a node record in the database that matched the number of the node on which the Link Handler will be loaded.
7. If the text says "Error obtaining dataport information. Not found." no dataport records of datatype SMDI were found in the database.
8. If the text says "Error obtaining dataport information. Parent record not found", no parent record for the dataport records was found. For example, if a dataport record with location 1 1 2 is defined then a record with location 1 1 must be defined. This record must be of component type SBC or RSM.
9. If the text says "Error obtaining dataport information. Wrong Component type.", the parent record of the dataport record is not of the appropriate component type. The only valid component types for a SMDI dataport record are SBC and RSM.
10. If the text says "Error obtaining dataport information. SBC port not valid : nn" where nn is the invalid port number, the SBC port number is not correct in the Hardware Database. The only values that can be entered for an SBC port are 1 or 2, where 1 indicates the console port and 2 indicates the dataport.
11. If the text says "Error on initializing interrupts" and the I/O error return code is 109, the SMDI Link Handler tried to get sole possession of the dataport but access was denied. Some other software must have control of the interrupts.
12. SMDI failed to initialize a task, as indicated by the text. The Task Result isolates the cause.
13. If the text says "More than 10 attempts made to connect to external modems", the onboard modem cannot establish connection to the external modem. Ten attempts have been made and will continue to attempt to connect.

Impact: The Link Handler will not be started.

Action: Contact your Northern Telecom support organization.

- NT:
- Case 1. Check that name server is running.
 - Case 2. Check that the memory for that node is OK by entering PUP level and typing "mem". If it is, replace the SMDI AREA file.
 - Case 3. Check that the memory for that node is OK by entering PUP level and typing "mem". If it is, replace the SMDI AREA file.
 - Case 5. Start the volume server, then the Link Handler.
 - Case 6. Put the node record in the Hardware Database.

- Case 7. Check if there are dataport records of type SMDI data in the database. If not, add some. If so, the number of the node on which the Link Handler will be running must match the node number for which the dataport records are defined. Change the Hardware Database accordingly.
- Case 8. If the parent record exists, the number of the node on which the Link Handler will be running must match the node number for which this record is defined.
- Case 9. Modify the parent record of the dataport record.
- Case 10. Change the values in the dataport records.
- Case 11. Run the Link Handler on some other port. You must change the Hardware Database to reflect the new situation.
- Case 12. Look up the TaskResult.
- Case 13. Verify the status of the external modem. If required, reset the external modem. Check the cable connections from the SPM modem transition module to the modem. You can also attempt to disable and re-enable the link. If the problem persists, disable the node and run OutofService diagnostics.

01

Type: Error
Severity: Minor
Cause: An asynchronous tasking error occurred.
Impact: The message sent to the application will be lost.
Action: Contact your Northern Telecom support organization if the problem persists.
NT: Analyze the SEER and error code to determine the problem.

02

Type: Error
Severity: Minor
Cause: A synchronous tasking error occurred.
Impact: The message sent to the application will be lost.
Action: Contact your Northern Telecom support organization if the problem persists.
NT: Analyze the SEER and error code to determine the problem.

03

Type: Admin

Severity: Info

Cause: This SEER announces that one of the SMDI internal counters has been reset.

Impact: The number in parenthesis corresponds to the following counters:

1. Trf_In_Msg - The number of messages sent from switch
2. Msg_Sent - The number of messages sent to application
3. Msg_Not_Sent - The number of errors sending detail call information to applications
4. InvMWIUpdate - The number of times there was a request to turn MWI on or off for an invalid DN (It does not include the invalid polling DN)
5. BIKMWIUpdate - The number of times there was a request to turn MWI on or off and acknowledgement was blocked
6. InvPollDNUpdate - The number of times there was a request to turn MWI on for the polling DN and we received the negative acknowledgment
7. MWIon - The number of times the request to turn MWI on was made
8. MWIoff - The number of times the request to turn MWI off was made
9. Logins - The number of times the applications logged into the devices
10. Logouts - The number of times the applications logged out of the devices
11. LinkDown - The number of times the link went down
12. Request Denied - The number of times request was made and the link was down. (For example: application tries to log in when link is down)
13. InvMsgs - The number of invalid PCI messages received from the switch
14. BadMsg - The number of bad packets or bad formats detected from the incoming messages
15. Trf_STBY-msg - The number of messages sent from standby modems for diagnostics
16. Trf-Con-msg - The number of messages sent from onboard modems attempting to connect the external modems
17. OKcommand - The number of good packets received from modem commands in the process of connecting
18. BadSTBYmsg - The number of bad packets or bad formats detected from incoming messages on standby links
19. BadCONMsg - The number of bad packets or bad formats detected from incoming messages when trying to connect modems

- 20. Connected - The number of times a connection was made
- 21. Connectattempt - The number of attempts at connection between onboard and external modem

Action: None.

NT: None.

04

Type: Admin

Severity: Minor

Cause: The Link Handler polled the DMS/SL-100 and did not receive an acknowledgment. This indicates that the SMDI link has gone down.

Impact: If the link is down, no communication will take place between the DMS and DMS VoiceMail. DMS VoiceMail will not be able to send or receive SMDI messages.

- Action:
1. Make sure that the SMDI device has been data filled to match the SMDI dataport entry in the DMS VoiceMail hardware database. Specifically, the baud rate and parity defined in table TERMDEV for the device must be the same as the baud rate and parity defined for the SMDI dataport on DMS VoiceMail.
 2. Make sure that the IOC card on the DMS/SL-100 side, which has the RS-232 cable connected to it, has been put into service. To do this, refer to the *Installation Procedures*, (NTP 555-7031-210).
 3. Restart the SMDI link on the switch side by utilizing the MAP terminal to BSY/RTS the link.

NT: Restart the SMDI on the switch side.

05

Type: Error

Severity: Minor

Cause: An error occurred in sending the PCI (Present Call Information) message to an application because the application was not logged into the voice channel. This will happen when a call comes through on a UCD line that is enabled on the DMS/SL-100 but disabled in the Hardware Database on the DMS VoiceMail side.

Impact: The message will be lost.

Action: Check the channel status via the MMI screen. The channel must be enabled in both the Hardware Database and the DMS side or disabled in both places. If the channel has to stay disabled on the DMS VoiceMail side then it must be disabled on the DMS/SL-100 side.

06

Type: Admin

Severity: Minor

Cause: An SMDI message came to the link but no corresponding message desk and terminal was set up in the DMS VoiceMail hardware database.

Impact: The message will be lost.

Action: Check the consistency of the DMS VoiceMail hardware database and the UCD lines on the DMS/SL-100 side. The following conditions can be checked:

1. Make sure that the message desk number and terminal number are defined properly for each channel. The message desk number for each channel on the DMS VoiceMail side must be the number defined in the UCDGRP table. The terminal numbers (or line numbers) defined for each channel on the DMS VoiceMail side must correspond to the line numbers given to each agent of the SMDI UCD group.
2. Make sure that the number of UCD agents that are in service on the DMS/SL-100 side corresponds to the number of channels that are in service on the DMS VoiceMail side.

NT: Use to MD_MA to confirm consistency.

07

Type: Admin

Severity: Minor

Cause: The argument string for the SMDI entry in the PRM Startlist was not set or is out of range. This is not critical but memory will be saved when the Argstring is set in the PRM Startlist. The SEER indicates the maximum number of channels.

Impact: The memory requirements for the SMDI Link Handler will increase.

Action: Contact your Northern Telecom support organization.

NT: Set the argstring for the SMDI entry in the Startlist correctly.

13

Type: Admin

Severity: Info

Cause: The driver was unsuccessful in stealing the interrupts.

Impact: The interrupts did not enable.

Action: Contact Northern Telecom.

18

Type: Admin

Severity: Info

Cause: The SEER announces that the SMDI has come up. Therefore, the Link Handler and the DMS are communicating with one another again.

Impact: None.

Action: None.

NT: None.

19

Type: Error

Severity: Minor

Cause: Bad Parameter passed in or used.

Impact: Certain function may not be performed.

Action: None.

NT: Contact your Northern Telecom development organization.

20

Type: Admin

Severity: Info

Cause: Restarting the link with more channels than originally having. Administrator/VEM added more channels and started up handler.

Impact: The extra added channels will not be included in for that link.

Action: Reboot the system, after changes made.

NT: If the problem persists, contact your Northern Telecom development organization.

21

Type: Error

Severity: Major

Cause: Registering with the name server failed.

Impact: Will not be able to locate the link handler. No applications can log in.

Action: Check return code. Contact your Northern Telecom support organization.

22

Type: Error

Severity: Major

Cause: VCM failed to register the parent SMDI.

Impact: No link handlers for the node the parent program was on.

Action: Contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

23

Type: Admin

Severity: Info

Cause: The SEER announces what the state link status is going to be (either in-service or out-of-service), or if a non-supported maintenance request has been received by the link handler.

Impact: None.

Action: None.

NT: None.

24

Type: Admin

Severity: Minor

Cause: No channel found for link in the hardware database.

Impact: Link Handler does not support any channels.

Action: Modify hardware database and add channels if required.

NT Verify that the database has channels/or ports assigned to the link and that the link ID corresponds with the SMDI link.

25

Type: Error

Severity: Major

Cause: Problem with the indexing into the CAT info tables memory. Indexing beyond 192 channel limit.

Impact: Could cause serious memory corruption.

Action: Verify that the total amount of channels defined in the system hardware database is not more than 192. Contact your Northern Telecom support organization.

NT: Verify that the total amount of channels defined in the system hardware database is not more than 192. Contact your Northern Telecom development organization.

26

Type: Error

Severity: Minor

Cause: Not able to inform VCM of status change for the link.

Impact: Link could remain in faulty status. No switch link performed.

Action: Contact your Northern Telecom support organization.

NT: Check the surrounding SEERs for VCM errors. If the problem persists, contact your Northern Telecom development organization.

27

Type: Error

Severity: Minor

Cause: The active link could not be located from the node which contains the standby link.

Impact: No information transferred from active to redundant. Some messages (MWI) may not be sent.

Action: Contact your Northern Telecom support organization.

NT: Check surrounding SEERs for more information. If the problem persists, contact your Northern Telecom development organization.

28

Type: Admin

Severity: Minor

Cause: LinkID being used was not originally in the hardware for that node.

Impact: Link might not be brought up or certain functions may not be performed.

Action: Check hardware database for LinkID. If wrong link, contact your Northern Telecom support organization.

29

Type: Error

Severity: Minor

Cause: The board type does not support switching links. Wrong board type.

Impact: The switch link will be ignored.

Action: If wrong board type, contact your Northern Telecom support organization.

NT: Check hardware database for board type (should be SBC/UBC).

30

Type: Admin

Severity: Minor

Cause: The type of system does not support redundant links.

Impact: Switch link command will be ignored.

Action: If not of type CO, contact your Northern Telecom support organization.

NT: Make sure system is of type CO.

31

Type: Admin

Severity: Minor

Cause: The port being used is not in the range 0-3.

Impact: Port may not be initialized.

Action: Contact your Northern Telecom support organization.

NT: Check hardware database for port number.

32

Type: Debug

Severity: Info

Cause: General information given during the processing of a PCI message.

Impact: None.

Action: None.

NT: None.

35

Type: Error

Severity: Major

Cause: The link reported a fault - no handshaking for 5 minutes. If the link is in REDALARM, the Link Handler has polled the DMS/SL-100 and not revived an acknowledgement. If link is in YELLOWALARM, then onboard modem is having problems connecting to the external modem.

Impact: The link will be down, no communication will take place. Mail will not be able to send or receive SMDI messages. If redundancy is available, when fault occurs the link will switch to the partner link. If redundancy is not available (that is, no redundancy, partner faulty or OutOfService), then link will report fault every 5 minutes. For every second fault reported, the modem on the link will be reset. it will try to re-establish the modem connection again.

Action:

1. If REDALARM, check the SMDI status on the switch side, resent the link on the switch side.
2. Verify the cable connections are still in place.
3. Disable/enable the SMDI link. Reset the link on switch side.
4. Consult the *Trouble Locating and Alarm Clearing Procedures*, (NTP 297-7001-503).

NT:

1. If REDALARM, check the SMDI status on the switch side, resent the link on the switch side.
2. Verify the cable connections are still in place.
3. Disable/enable the SMDI link. Reset the link on switch side.
4. Consult the *Trouble Locating and Alarm Clearing Procedures*, (NTP 297-7001-503).

36

Type: Error

Severity: Minor

Cause: Onboard standby modem self-test produced an error count.

Impact: The modem is faulty.

Action: Disable the standby modem. Run out of service diagnostics.

NT: Disable the standby modem. Run out of service diagnostics.

99

Type: Debug

Severity: Info

Cause: General information given during the processing of a PCI message.

Impact: None.

Action: None.

NT: None.

Class 39 Hardware Database (HD)

The Hardware Database HD keeps inventory of the hardware components, including nodes, channels, cards, mass storage devices and tape drives.

Usually only the requested operation fails and the Hardware Database stays intact.

A Class 39 SEER generally contains

- lower level return code
- hardware location code

These codes can be found in the Appendix of this document.

Class 40 Man Machine Interface Server (MS)

The Man Machine Interface (MMI) Server handles Text base administration arbitration and the gathering of dynamic status information from other SPM programs.

Text base arbitration is required for the Multi_administration feature. Similarly, the gathering of dynamic system, node, card dsp port, channel, T1 Link, SMDI link, Ethernet port and Disk status by the single source MMI Server will in future allow the MMI programs to display dynamic status on different administration terminals with minimal impact to performance.

00

Type: Error

Severity: Minor

Cause: The MMI Server failed to register the update task with the PRM or SEER Server.

Impact: If the SEER text indicates the failure is with the PRM, then the MMI Server will not receive dynamic status from the PRM regarding the Node Status. If the SEER text indicates the failure is with the SEER Server, then the MMI Server will not receive the contents of the last SEER.

The MMI Display of the Node Status or the display of the last Event on the system screen will be incorrect.

Action: Contact your Northern Telecom support organization.

NT: Restart MMI_Server program using PRM_CONTROL.

01

Type: Error

Severity: Minor

Cause: The MMI program cannot communicate with the MMI Server. The MMI Server is likely not running.

Impact: No Status and configuration record will be received by the MMI program. The MMI program may display wrong MMI screens based on incorrect platform information. The status and maintenance screens will not operate correctly.

Action: Contact your Northern Telecom support organization.

NT: Restart MMI_Server program using PRM_CONTROL.

02

Type: Error

Severity: Minor

Cause: The MMI Server cannot start some internal task.

Impact: Some dynamic status information will not be updated by the MMI Server program. The MMI status and maintenance displays will not display changes to various node, card, port, channel and link status.

Action: Contact your Northern Telecom support organization.

NT: Restart MMI_Server program using PRM_CONTROL.

03

Type: Error

Severity: Minor

Cause: The MMI Server could not read the Hardware Database.

Impact: The configuration record will not be received by the MMI program. The MMI program may display wrong MMI screens based on incorrect platform information.

Action: Contact your Northern Telecom support organization.

NT: Use utility MD_MA to ensure that a hardware database exists on the system, then Restart MMI_Server program using PRM_CONTROL.

05

Type: Error

Severity: Minor

Cause: The MMI Server could not read or write to bill control table.

Impact: The MMI program will not be able to read or change billing control information.

Action: Contact your Northern Telecom support organization.

NT: Use utility md to ensure that billcntl file exists on the system. Then restart the MMI_Server program using PRM_CONTROL.

06

Type: Admin

Severity: Info

Cause: BillingTable created successfully or BillingTable audited successfully.

Impact: None.

Action: None.

NT: None.

Class 41 Voice Channel Maintenance (VCM)

The purpose of Voice Channel Maintenance (VCM) is to perform maintenance actions on various voice based devices. They include ASP Link Handlers, T1 Link handlers, Telephony channels, DSP ports, SMDI link handlers; they also assist in other maintenance operations on nodes and cards. The VCM is also responsible for starting up all the voice based programs, such as the VSSs, VPHs, T1 link handlers, and SMDI link handlers.

Some general rules regarding VCM SEERs

- If a maintenance problem occurs the SEER will normally provide a TN that corresponds to a device in the hardware database.
- If a device is reporting problems it is not working properly do the following:
 1. Disable the device(s)
 2. Run OutOfService diagnostics if available
 3. Enable the device

If this does not produce satisfactory results do the same to its parent. For example, if you cannot disable a port then try to disable the Card.

In addition to the SEER number and the HWLOC the VCM also prints the device type, device status, event, command and cause of program termination when appropriate.

On some SEERs the Device type is printed (eg. DevType=TeleChan).

Value Printed	Explanation
SMDI	The SMDI link Handler
T1Span	The T1 Link Handler
TeleChan	The VSS associated with the Telephony channel
Vport	The VPH associated with the DSP port

Value Printed	Explanation
NODE	The Node which can be any node (MSP, SPN, TIFN)
TIFN	The Telephony Interface node
DSPChip	The DSP
System	The System

When a program terminates the cause will be printed on the SEER (eg. Cause=Exception).

Value printed	Explanation
Exception	An exception occurred or program died due to an error
Completion	A program completed.
Shutdown	A program was Shutdown by the PRM.
UnexpectedUnLoad	A program unloaded unexpectedly.
NotLoaded	A program could not be loaded.

On some SEERs the VCM Device Status will be printed. For example, DevStatus=isOnline means the device is Inservice online and ptrStatus=isStdby means the partner device is InService Standby.

Value printed	Explanation
isNotLded	InService, not loaded
isLding	InService, loading
isLded	InService, loaded
isOnLine	InService, OnLine
isStdBy	InService, standby
isPCtsy	InService, courtesy down, pending
isCtsyDown	InService, courtesy down
isUnLoading	InService, Unloading
oos	OutOfService
oosTesting	OutOfService, offline testing
oosTestOver	OutOfService, offline test over
Faulty	faulty
Unconfigured	unconfigured

On some SEERs the event reported by the device is printed (eg. DevEvent=ISOn1).

Value printed	Explanation
ISOn1	Going Inservice Online
ISOff1	Going Inservice Offline
ISErr	Error occurred
ISRed	Red Alarm occurred
ISYlw	Yellow Alarm occurred
ISBlue	Blue Alarm occurred
OoS	Going OutofService
POoS	Pending OutofService
ISCPnd	Pending a Courtesy Down
ISCDwn	Going into Courtesy Down state
DrvFlty	Fault detected (DSP)
1F	Fault 1 detected
2F	Fault 2 detected
3F	Fault 3 detected
ClrAlrm	Alarm cleared
Of1Diag	Offline Diagnostics
RefFlt	Bus Controller detected reference fault

22

Type: System Information

Severity: Info

Cause: VCM has selected a new T1 span as the clock source. Excessive occurrences may indicate a problem with the clock source.

Impact: None.

Action: Check T1 clock sources on DMS and T1 span connections.

NT: Check T1 clock sources on DMS and T1 span connections.

29-38

Type: Error

Severity: Minor

Cause: Problem loading DSPs or communicating with the VOM_PP. Lookup Class 41 codes in the Appendix for more Information.

Impact: Up to 3 channels or ports will be affected.

Action: Disable Voice Card form MMI and Run Out-of-service Diagnostics and re-enable the card.

NT: Disable Voice Card form MMI and Run Out-of-service Diagnostics and re-enable the card.

43

Type: Error

Severity: Minor

Cause: Could not get device status from the VCA for channels and ports.

Impact: Device status not reliable for reporting period.

Action: Look up the return code. If unclear, contact your Northern Telecom support organization.

NT: There are three circumstances where this SEER occurs:

1. A Voice Service Task passed in an invalid parameter to UserUpdate.
2. A private BNR utility has passed in a bad parameter.
3. The MMI_Server has passed a bad parameter into GetStatus.

Analyze the other SEERs for more information. If the problem persists contact the Northern Telecom development organization.

44

Type: Error

Severity: Minor

Cause: A maintenance action failed or was rejected.

Impact: The operation could fail for several reasons. For example, 'Enable' on a loading device would be rejected.

Action: Read the SEER text carefully and look up Class 41 return codes in the Appendix. The SEER text will specify the device type and HWLOC, it's state, and the command applied to it. Refer to the introduction of this class for the explanation of these values.

NT: The operation could fail for several reasons. For example, an enable request from the MMI on loading a device could be rejected.

46

Type: Error

Severity: Minor

Cause: An unexpected event occurred in device report.

Impact: None.

Action: If system fails to stabilize, disable the affected devices, run OOS diagnostics and re-enable.

NT: Examine the SEER to determine which device is reporting a problem. Check OOS diagnostics result. This may occur when a hardware pack has been pulled.

47

Type: Error

Severity: Major

Cause: Configuration problem. There are not enough SPN nodes to accommodate the number of configured T1 trunks in the hardware database.

Impact: No channels for the affected T1 trunks will start.

Action: Contact your Northern Telecom support organization.

NT: Unconfigure or remove the affected T1 data from the hardware database and reboot.

55

Type: Error

Severity: Major

Cause: There was a problem reading or writing to the hardware database.

Impact: On startup it will prevent the VCM from starting all devices.

Action: Disable and re-enable affected devices. Look up the return code printed. If it happens at bootup or recovery, contact your Northern Telecom support organization.

NT: If the problem occurred during bootup or recovery then restart the VCM.

58

Type: Error

Severity: Minor

Cause: An unexpected event occurred.

Impact: Maintenance action will fail.

Action: Disable, run OOS diagnostics and re-enable device.

NT: None.

61

Type: Error

Severity: Critical

Cause: Configuration problem. At startup could not get memory required. There are too many programs on the VCM node.

Impact: VCM and the system will not function.

Action: Examine system configuration and reboot. If you are unable to correct the configuration, contact your Northern Telecom support organization.

NT: Examine system configuration and reboot.

63

Type: Error

Severity: Major

Cause: Many alarms have been reported by a T1 link. There may be a possible far-end problem.

Impact: No channels on the T1 link will accept calls.

Action: Check T1 connections.

NT: Check T1 connections.

64

Type: Error

Severity: Minor

Cause: A tasking error occurred.

Impact: Maintenance action will fail.

Action: Disable, run OOS diagnostics and re-enable device.

NT: Check surrounding SEERs for results of tasking error. Recover any devices that are affected.

65

Type: Error

Severity: Minor

Cause: A nil task ID was found when a real one was expected.

Impact: Maintenance action will fail.

Action: Disable, run OOS diagnostics and re-enable device.

NT: Disable, run OOS diagnostics and re-enable device.

66

Type: Error

Severity: Critical

Cause: An unexpected event occurred.

Impact: Maintenance action will fail.

Action: Disable, run OOS diagnostics and re-enable device.

NT: Disable, run OOS diagnostics and re-enable device.

67

Type: Error

Severity: Minor

Cause: A program terminated. Normally this is due to a maintenance action. It can occur when a node dies or a program crashes.

Impact: The device is disabled momentarily.

Action: Wait for it to recover. If it does not then disable, run OOS diagnostics and re-enable device. Recovery should take less than one minute if it is an isolated case.

NT: If device does not recover, contact your Northern Telecom development organization.

68

Type: Error

Severity: Minor

Cause: A HWLOC was passed in that the VCM could not find in its tables. In most cases the Hardware Database has been improperly filled with regards to redundant partners.

Impact: The device related to the HWLOC will have recovery problems.

Action: Contact your Northern Telecom support organization.

NT: Check the hardware database for redundancy relationships.

73

Type: Error

Severity: Major

Cause: Could not start the device.

Impact: Maintenance action failed.

Action: Lookup the return code in the appendix. If unclear, contact your Northern Telecom support organization.

NT: There are three circumstances where this SEER occurs:

1. A Voice Service Task passed in an invalid parameter to UserUpdate.
2. A private BNR utility has passed in a bad parameter.
3. The MMI_Server has passed a bad parameter into GetStatus.

Analyze the other SEERs for more information. If the problem persists contact the Northern Telecom development organization.

75

Type: Error

Severity: Critical

Cause: A serious initialization problem occurred. Read the SEER text. It is probably due to a configuration problem.

Impact: System will not function.

Action: Contact your Northern Telecom support organization.

NT: Examine system configuration and reboot.

82

Type: Error

Severity: Minor

Cause: Could not start communication with the VSS.

Impact: Maintenance action failed.

Action: Disable, run OOS diagnostics and re-enable device.

NT: Disable, run OOS diagnostics and re-enable device.

85

Type: Error

Severity: Minor

Cause: The VCM has restarted for one of several reasons. The Warmstart prints several information messages.

Impact: Outstanding maintenance actions may fail.

Action: For any SEER with a specific HWLOC wait until the system stabilizes and then Disable, run OOS diagnostics and re-enable the device. You should wait for at least 15 minutes.

NT: For any SEER with a specific HWLOC wait until the system stabilizes and then Disable, run OOS diagnostics and re-enable the device. You should wait for at least 15 minutes.

86

Type: Error

Severity: Minor

Cause: Standby VCM unable to get information from active VCM.

Impact: Minimal

Action: If problem persists, contact your Northern Telecom support organization.

NT: If the problem persists, reboot. If problem persists further, contact your Northern Telecom development organization.

87

Type: Error

Severity: Minor

Cause: Client did not respond to maintenance request.

Impact: Maintenance action failed.

Action: Look up task results. Disable, run OOS diagnostics and re-enable the device.

NT: Look up task results. Disable, run OOS diagnostics and re-enable the device.

88

Type: Error

Severity: Minor

Cause: Could not start communication with the PRM.

Impact: Unknown.

Action: None.

NT: If the problem persists, reboot. If problem persists further, contact your Northern Telecom development organization.

89

Type: Error

Severity: Minor

Cause: Could not start communication with the VCA.

Impact: Minimal.

Action: None.

NT: None.

92

Type: Debug

Severity: Minor

Cause: An error occurred while registering a device.

Impact: Device that attempted registration will not be registered.

Action: Disable, run Out of Service Diagnostics, and re-enable the device.

NT: Disable, run Out of Service Diagnostics, and re-enable the device.

93

Type: Error

Severity: Minor

Cause: Once per hour the VCM will audit the VSS and T1LHs. A problem was found.

Impact: Device may not be functioning.

Action: Disable, run OOS diagnostics and re-enable device.

NT: Should recover by itself. If the problem persists, repeat Action.

94

Type: Error

Severity: Minor

Cause: On a hardwired system where the voice cables are routed directly to the voicecard, a channel was being enabled and there was no accompanying VPH.

Impact: Channel may not come up.

Action: If the return code is not 0 then disable, run OOS diagnostics, and re-enable device. If it is 0 then it recovered by itself.

NT: Verify that the number of channels equals the number of ports in the database, and verify that there are no startup VCM errors.

95

Type: Error

Severity: Minor

Cause: A maintenance action did not complete fully or two maintenance actions on one device occurred at the same time and the VCM lost track of the first one.

Impact: Minimal.

Action: Disable and re-enable device.

NT: If problematic, read the SEER text carefully and look up the class 41 return code in the Appendix. The SEER text will specify the device type and LENS, it's state, and the command applied to it. If unclear, contact your Northern Telecom development organization.

97

Type: System

Severity: Info

Cause: An information SEER.

Impact: None.

Action: If the SEER is reporting a problem such as a faulty device, consult the introduction of this SEER class for the general guidelines.

NT: None.

98

Type: Debug

Severity: Info

Cause: An assertion statement failed.

Impact: Minimal.

Action: Disable and run OOS diagnostics. Re-enable the device, if necessary.

NT: Check surrounding SEERs. If the problem persists, contact your Northern Telecom development organization.

99

Type: Debug

Severity: Info

Cause: An information SEER.

Impact: None.

Action: None.

NT: None.

Class 42 Open Access Transfer Agent (OTA)

Open Access Transfer Agent (OTA) sends network messages to another voice messaging system (may or may not be DMS VoiceMail) using Audio Messaging Interchange Specification Analog Protocol.

There is one OTA for each connection to a given voice messaging system. OTA needs to read system profile, customer profile, networking database file, sender profile, or recipient's profile in order to send or receive a message. NMTA provides OTA with the FID of a message, OTA opens the message and transmits the message by using the standard playback command. For incoming message, OTA receives the message by using the standard record command, and then changes the message format to DMS VoiceMail message format.

Errors in OTA leads to connection to be terminated. But transfer will be retried within an administrator specified period (e.g. 5 minutes). These errors have a minor impact on the system.

00

Type: Debug

Severity: Info

Cause: AMIS flag is turned on, and a session is completed.

Impact: None.

Action: Check if there are any other class 42 SEERs, and follow the procedure specified.

NT: None.

01

Type: Error

Severity: Minor

Cause: Error occurred in accessing or creating a message file. Return code isolates the cause.

Impact: If error occurred in accessing an outgoing message the system will continuously retry for a period of time specified by the administrator. If the error still occurred, the system would generate a NDN. If error occurred in accepting an incoming message, the system would terminate the session.

Action: Contact your Northern Telecom support organization.

NT: Look up the return code to isolate the problem. If necessary, contact your Northern Telecom development organization.

02

Type: Error

Severity: Minor

Cause: Error occurred during transferring voice. Return code isolates the cause.

Impact: If error occurred during transferring an outgoing message, the system will continuously retry for a period of time specified by the administrator. If the error still occurred, the system would generate a NDN. If the error occurred during transferring an incoming message, system would terminate the session.

Action: Contact your Northern Telecom support organization.

NT: Look up the return code to isolate the problem. If necessary, contact your Northern Telecom development organization.

03

Type: Error

Severity: Minor

Cause: Tasking error occurred. Return code isolates the cause.

Impact: If error occurred during transferring an outgoing message, the system will continuously retry for a period of time specified by the administrator. If the error still occurred, the system would generate a NDN. If the error occurred during transferring an incoming message, system would terminate the session.

Action: Collect SEERs and contact your Northern Telecom support organization.

NT: Look up the return code to isolate the problem. If necessary, contact your Northern Telecom development organization.

04

Type: Error

Severity: Minor

Cause: Error occurred during sending or receiving tones.

Impact: If error occurred during transferring an outgoing message, the system will continuously retry for a period of time specified by the administrator. If the error still occurred, the system would generate a NDN. If the error occurred during transferring an incoming message, system would terminate the session.

Action: Contact your Northern Telecom support organization.

NT: Ensure that the trunk is accessible to the destination system. If necessary, notify the Northern Telecom development organization.

05

Type: Error

Severity: Info

Cause: Error occurred during protocol exchange. One of the systems has not conformed with the AMIS protocol standard.

Impact: If error occurred during transferring an outgoing message, the system will continuously retry for a period of time specified by the administrator. If the error still occurred, the system would generate a NDN. If the error occurred during transferring an incoming message, system would terminate the session.

Action: Contact your Northern Telecom support organization.

NT: If the other system is not a Meridian Mail system, find out if it conforms to the AMIS A protocol standard. If necessary, notify the Northern Telecom development organization.

07

Type: Error

Severity: Minor

Cause: OTA could not locate NMTA. Return code isolates the cause.

Impact: If error occurred during transferring an outgoing message, the system will continuously retry for a period of time specified by the administrator. If the error still occurred, the system would generate a NDN. If the error occurred during transferring an incoming message, system would terminate the session.

Action: Contact your Northern Telecom support organization.

NT: Ensure that the NUTA task is running. If so, look up the return code to isolate the cause of the problem, otherwise contact your Northern Telecom development organization.

08

Type: Error

Severity: Minor

Cause: Error occurred during accessing networking database file. Return code isolates the cause.

Impact: If error occurred during transferring an outgoing message, the system will continuously retry for a period of time specified by the administrator. If the error still occurred, the system would generate an NDN. If the error occurred during transferring an incoming message, system would terminate the session.

Action: Contact your Northern Telecom support organization.

NT: Check to see if the network database exists and look up the return code in order to isolate the cause of problem. If necessary, contact your Northern Telecom development organization.

09

Type: Error

Severity: Minor

Cause: Could not find recipient in the message envelope.

Impact: The system will continuously retry for the period specified by the administrator. If the error still occurred, the system would generate a NDN.

Action: Contact your Northern Telecom support organization.

NT: The message is corrupted, or there is a software design error. If the problem persists, contact your Northern Telecom development organization.

10

Type: Error

Severity: Minor

Cause: Error occurred during reading recipient's information. Return code isolates the cause.

Impact: System will terminate the session.

Action: Contact your Northern Telecom support organization.

NT: Look up the return code to isolate the cause of the problem. If necessary, contact your Northern Telecom development organization.

11

Type: Debug

Severity: Info

Cause: If the system was making a call:
1. The user entered a wrong system access number when composing a message.
2. The receiving system is busy (e.g. There are no channels to answer the call in the remote system.)

Impact: For originating system:
The connection could not be established. The system will retry for 3 times, if it still cannot establish the call, it will generate a NDN.
For receiving system:
The channel will be active for 70 seconds and then drop the call.

Action: Collect SEERs. If this happens frequently, contact other system to find out if user entered a wrong number or if the other system is busy most of the time. If it is not caused by one of the above two reasons contact your Northern Telecom support organization.

NT: If this is not caused by the above reasons, contact your Northern Telecom development organization.

12

Type: Error

Severity: Info

Cause: 1. Error occurred because of poor line quality while transmitting analog signal.
2. One of the systems has not conformed with the AMIS A protocol standard.

Impact: If error occurred during transferring an outgoing message, the system will continuously retry for a period of time specified by the administrator. If the error still occurred, the system would generate a NDN. If the error occurred during transferring an incoming message, system would terminate the session.

Action: If the problem occurs frequently contact your Northern Telecom support organization.

NT: Ensure that the line quality is good. If the other system is not a Meridian Mail system, determine if it conforms to the AMIS A protocol standard. If necessary, contact your Northern Telecom development organization.

13

Type: Error

Severity: Minor

Cause: OTA failed to register.

Impact: If error occurred during starting outgoing session the system will retry for 3 times. IF the error still occurred, the system would generate a NDN. If error occurred during starting an incoming session, system would terminate the session.

Action: Collect SEERs and contact your Northern Telecom support organization.

NT: Look up the return code in order to isolate the cause of the problem. If necessary, contact your Northern Telecom development organization.

14

Type: Error

Severity: Info

Cause: Other system stopped while transmitting voice.

Impact: The system will terminate the session.

Action: Collect SEERs. If problem occurs frequently, contact your Northern Telecom support organization.

NT: Check if there is any problem with the other system during the transmission of the voice message. If necessary, contact your Northern Telecom development organization.

15

Type: Error

Severity: Minor

Cause: Other system detected an error while our system was transmitting voice.

Impact: The system will continuously retry for a period of time specified by the administrator. If the error still occurred, the system would generate a NDN.

Action: Collect SEERs and contact your Northern Telecom support organization.

NT: Ensure that the line quality is good. If the other system is not a Meridian Mail system, check if it can receive an eight-minute message. If necessary, contact your Northern Telecom development organization.

16

Type: Admin

Severity: Info

Cause: 1. A user entered a wrong number when composing an AMIS message.
2. The administrator entered a wrong number in the Remote Site Maintenance screen.

Impact: The system dialed to a person instead of an AMIS system.

Action: Check the Remote Site Maintenance screen (Network Administration) to see if the connection DN is entered correctly.

NT: If the number is correct, ensure that the trunk is accessible to the other AMIS system. If necessary, contact your Northern Telecom development organization.

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Class 43 Forms Manager (FM)

The Forms Manager (FM) stores and retrieves Voice Form Responses. Requests for the storage or retrieval of a response (or information about responses) are made by the Voice Forms Editor, Voice Forms Caller Response Service, and the Voice Forms Transcription Service.

FM errors may affect the usability of the entire Voice Forms Feature, be isolated to an individual call or Voice Form Edit session, or affect an individual voice form definition.

Acronyms used in the text of the SEERs

- VFS: (Voice Forms Services)
- CR: (Caller Response)
- T: (Transcription)
- VFE: (Voice Forms Editor)
- FMP: (The error is being reported from the VFE, CR or T through FM interface)
- FM: (The FM or one of its tasks has reported the error.)
- FMS: (The error is being reported by a backup restoration utility which is using Forms Manager restoration routines.)

Parameters

- Id# (This indicates the voice form definition id number.)
- R# (This indicates the response id number.)

01

Severity: Minor

Type: Error

Cause: A VFSU or VFE tried to communicate with the FM server but the communication failed due to the server not being found on the system.

Impact:

CR The user is played an error message, indicating to call again. A response is not recorded. No responses will be lost.

T The user is played an error message, indicating that a system error has occurred. All responses which have been transcribed will be recorded as having been transcribed.

VFEThe administrator will be displayed an error message indicating that the last operation has failed. (Another attempt can be made by the administrator pressing SAVE again or selecting the form definition and indicating the operation to be attempted, again.)

Action: Attempts will be made by the system to restart the FM. If these SEERs persist (more than 10 minutes) then this will indicate that this recovery has failed. Seers related to the failed restarting of the FM should be reviewed for their severity and action. Provided the FM is successfully restarted, normal service will be restored.

NT: Verify that the startlist contains the proper entry for the FM (Forms Manager). The entry should be: "fm multiserver 1 1 'SCSI <list of user volumes>' critical" where <list of user volumes> is a complete list of all user volumes on the system. For example on a 4 SPN node system, the entry would be "fm multiserver 1 1 'SCSI 203 204 205 206' critical. If the entry is complete, then look for the problem in surrounding SEERs.

02

Severity: Minor

Type: Error

Cause: A problem has occurred trying to access an information file which is associated with a voice form definition. These information files are accessed either directly by the VFE or through the FM. The error represents a problem accessing the information file.

Impact:

VFE The administrator will be displayed an error message indicating that the last operation had failed. Another attempt can be made by the administrator pressing SAVE again or selecting the form definition and indicating the operation to be attempted, again.

CR/T These services will not be operational for this voice form as they also need access to this information file.

Action: Contact your Northern Telecom support organization.

- NT: The lower level return code will indicate a VS, DD or CM error code. This may indicate that a volume is not operating or that the file has become corrupted. If the error condition is not simply that the volume is not operating (1105 error code) then a corruption has occurred in the information files. Information files can be recreated by the following steps:
1. Remove the file. Using ad_util, look at the Voice Form system record. Note the 'InfoVol' value. Note the 'InfoVol' value. This is the volume where information files are stored. Using MD, remove the following file: /<InfoVol>/vff/<Customer>/<Voice Form Defn. Id>.
 2. Using the MMI, modify the form definition (the New and Special MWI DN values will have to be filled in on the form again.) and SAVE the form.
 3. Restart the FM using PRM_CONTROL or by rebooting the system.(The recovery code of the FM will recreate the information file based on the responses which exist for the form. Note: The 'First In First Out' order of the arrival and transcription of the responses will be lost for existing responses when this recovery is done.

08

Type: Error

Severity: Minor

Cause: A CR service was unable to create/access the cabinet needed to hold a new response.

Impact: CR - The response, which has been recorded, will be lost. The SEER issued will indicate the volume number, customer number, form id, and response id of the response affected. The caller will be notified, provided they have not hung up. In the worst case, responses will not be available for transcription or addition, for this volume and the indicated form.

Action: Contact your Northern Telecom support organization.

NT: In the simplest case, the volume or node that the volume resides on may have just gone down. (Indicated by a lower return code value indicating that the volume does not exist 1105.) In this case, when the volume comes up again, responses will be able to be stored.

If the error condition is not simply that the volume is not operating (1105 error code) then a corruption has occurred in the cabinet. The response cabinet must be deleted to resolve this problem. (Note: All responses stored for the indicated form which reside on this user volume will be lost.)

Removing a response cabinet:

Using MD, remove the following file: /<VolumeId>/vfr/<Customer>/<Voice Form Defn. Id>.

If a large number of responses were waiting to be transcribed from this user volume (and indicated form) then the transcription service will report 'Delays' as transcribers attempt to retrieve the next response to be transcribed. This will occur until the responses, which have just been deleted, are removed from the form information files. (As transcribers call in to retrieve responses, responses which are found to be deleted will be removed from the form information files and no longer be handed out for transcription. Eventually, all the deleted responses will be removed from the form information files and the 'Delays' will no longer occur.)

09

Type: Error

Severity: Minor

Cause: A CR service was unable to add a new response to an existing response cabinet.

Impact: CR - The response, which has been recorded, will be lost. The SEER issued will indicate the volume number, customer number, form id, and response id of the response affected. The caller will be notified, provided they have not hung up. In the worst case, responses will not be available for transcription or addition, for this volume and the indicated form.

Action: If a SEER indicating that a volume server (VS) has gone down was issued prior to this SEER, the problem may be transient. Look at all surrounding SEERs to determine if this appears to be the case. If not, using the MMI, ensure that the offending volume is actually up and running. If the problem can not be resolved, contact your Northern Telecom support organization.

NT: In the simplest case, the volume or node that the volume resides on may have just gone down. This is indicated by a lower level code indicating that the volume does not exist 1105. In this case, when the volume comes up again, responses will be able to be stored.

If the lower level return code indicates another kind of VS, DD or CM error code, this may indicate that the cabinet has become corrupted. In this case the response cabinet must be deleted to resolve this problem. Note: All responses stored for the indicated form, which reside on this user volume, will be lost.

Using MD, remove the following file: /<VolumeId>/vfr/<Customer>/<Voice Form Defn. Id>.

If a large number of responses were waiting to be transcribed from this user volume (and indicated form) then the transcription service will report 'Delays' as transcribers attempt to retrieve the next response to be transcribed. This will occur until the responses, which have just been deleted, are removed from the form information files. As transcribers call in to retrieve responses, responses which are found to be deleted will be deleted from the form information files. Eventually, all the deleted responses will be removed from the form information files and the 'Delays' will no longer occur.

11

Type: Error

Severity: Minor

Cause: When a Transcription service has finished transcribing a response, it was unable to remove a response file which had been successfully transcribed.

Impact: The response will be presented to more than one transcriber. (Provided the response and response cabinet, still exist in a sane state.) In the worst case, responses will not be available for transcription or addition, for this volume and the indicated form.

Action: If the lower level return code is:

1224 - Then the response cabinet (or response) is missing or has been deleted. This could have occurred naturally if an active form was deleted by the administrator.

If the return code is not 1224 or an active form was not being deleted then contact your Northern Telecom support organization.

NT: If the lower level return code is:

1105 - The volume, used to store the response, is not currently operating.

Other Return Codes -

If the error condition is not either of the above conditions then a corruption has occurred in the response cabinet. The response cabinet must be deleted to resolve this problem. (Note: All responses stored for the indicated form, which reside on this user volume, will be lost.)

Removing a response cabinet:

Using MD, remove the following file: /<VolumeId>/vfr/<Customer>/<Voice Form Defn. Id>.

If a large number of responses were waiting to be transcribed from this user volume (and indicated form) then the transcription service will report 'Delays' as transcribers attempt to retrieve the next response to be transcribed. This will

occur until the responses, which have just been deleted, are removed from the form information files. As transcribers call in to retrieve responses, responses which are found to be deleted will be removed from the form information files and no longer be handed out for transcription. Eventually, all the deleted responses will be removed from the form information files and the 'Delays' will no longer occur.

12

Type: Error

Severity: Minor

Cause: When a Transcription service has finished transcribing a response, it was unable to change the state of the response file to indicate that the response had been transcribed.

Impact: The response was or will be presented to more than one transcriber.

Action: If the lower level return code is:

4310 - This indicates that the transcriber which is trying to change the state of the response is not the one which has locked the response for transcription. This should be a very rare occurrence. The only impact is that the response will be transcribed more than once. If this occurs more than once a day, contact your Northern Telecom support organization.

4337 - The state of the response was invalid. This indicates either a corruption in that state of the response file or in the view of the response file held by this service. The response will be released for transcription by another service. If that service finds it's state to be corrupted then a SEER (4313) will be issued, indicating that the response was found to be corrupted and that it has been removed from the system. Contact your Northern Telecom support organization.

Other Return Codes -

If the error condition is not simply that the volume is not operating (1105 error code) then a corruption has occurred in the response file. The response will be released for transcription by another service. If that service finds it to be corrupted then a SEER (4313) will be issued, indicating that the response was found to be corrupted and that it has been removed from the system. If this continues to occur (more than once a day), contact your Northern Telecom support organization.

NT: If this is continually occurring then there is a disk medium problem. The SEER text indicates the number of the volume which has the problem. Any disk medium problems should be repaired and the volume restored.

13

Type: Error

Severity: Minor

Cause: When a Transcription service is handed a response, to be transcribed, from the FM; the response file was found to be corrupted.

Impact: The response was removed from the system.

Action: If this continues to occur (more than once a day), contact your Northern Telecom support organization.

NT: If this is continually occurring then there is a disk medium problem. The SEER text indicates the number of the volume which has the problem. Any disk medium problems should be repaired and the volume restored.

14

Type: Error

Severity: Minor

Cause: When a Transcription service was handed a response, to be transcribed, from the FM; the response file could not be accessed.

Impact: The response will be given to another service for transcription. If the volume is found to be offline then transcription is delayed until the volume is online.

Action: If this continues to occur (more than once a day) contact your Northern Telecom support organization.

NT: If this is continually occurring then there is a disk medium problem. The SEER text indicates the number of the volume which has the problem. Any disk medium problems should be repaired and the volume restored.

15

Type: Debug

Severity: Info

Cause: The parameters given in the STARTLIST are not correct.

SEER Texts:

a) Startlist Format:FM [MemType] <Vol> <Vol>

b) Too many volumes specified for server.

c) No volumes passed.

Impact: The Forms Manager will not start until these parameters are resolved.

Action: Contact your Northern Telecom support organization.

NT: Ensure that the parameters for the FM in the startlist are correct. The entry should be: "fm multiserver 1 1 'SCSI <list of user volumes>' critical where <list of user volumes> is a complete list of all user volumes on the system. For example on a 4 SPN node system, the entry would be "fm multiserver 1 1 'SCSI 203 204 205 206' critical.

25

Type: Error

Severity: Minor

Cause: A problem has occurred trying to synchronize restored voice form data with data which already exists on disk. A file, cabinet, or service could not be accessed.

Impact: Only part of the restored data has been synchronized.

Action: Contact your Northern Telecom support organization.

NT: 1. If the file, cabinet, or service, listed, could not be accessed, or the problem persists:

Possible situations

- The DR is not running.
(Check using the debugger and restart the server using the PRM_PKG or by rebooting the system.)
- The stated volume server is not running.
(Check using the debugger and restart the server using the PRM_PKG or by rebooting the system.)
- The OFS is not running for the system profile to be accessed properly.
(Check using the debugger and restart the server using the PRM_PKG or by rebooting the system.)
- The indicated file system structure has become corrupted.
(Attempt to open the file using MD. If this cannot be done then remove the file using MD.)

2. Use PRM_CONTROL to shutdown the FM with NoRestart. From the PUP level:

```
> load FM_PKG
```

```
> FM_SYNCALL <Voll> .. <Voln>
```

where "<Voll> .. <Voln>" are the user volumes on this system.

If the FM_SYNCALL succeeds (i.e., there are no SEERs indicating a failure on an SPM or MSM), restart the FM using PRM_PKG.

3. If the problem still persists, contact your Northern Telecom development organization.

26

Type: Debug

Severity: Info

Cause: A status note from the forms manager indicating a significant event. (eg. Restart complete, etc).

Impact: None.

Action: None.

NT: None.

27

Type: Error

Severity: Minor

Cause: The forms manager has not been able to be started or restarted. The error which has occurred will be stated in the text of the SEER.

Impact: The PRM will attempt to restart the FM. If not successful then voice form responses cannot be recorded or transcribed. If successful, then service will be restored.

Action: If this problem occurs more than once a day, contact your Northern Telecom support organization.

NT: This can only have occurred as a result of a software design or operating system error. Contact your Northern Telecom development organization.

28

Type: Error

Severity: Minor

Cause: The FM's recovery task has encountered an error while trying to reset the MWIs for the indicated voice form. The voice form definition was found in the DR but the form information file, which contains the MWI DNs, could not be accessed. The lower level error indicated occurred while trying to access the information file.

Impact: If the file access problem was not transient, responses will not be available for transcription and responses cannot be left for the indicated form.

If the file access problem was transient (the volume was down and was restarted) then the MWIs associated with this form may not reflect their proper MWI values. A daily (midnight) audit will resolve this problem.

Action: If the Voice Form Editor software cannot view the indicated form then contact your Northern Telecom support organization. (Seer 4302 would appear during the viewing attempt.)

NT: The lower level return code will indicate a VS, DD or CM error code. This may indicate that a volume is not operating or that the file has become corrupted.

If the error condition is not simply that the volume is not operating (1105 error code) then a corruption has occurred in the information files. Information files can be recreated by the following steps:

1. Remove the file. (Using ad_util, look at the Voice Form system record. Note the 'InfoVol' value. Using MD, remove the following file: /<InfoVol>/vff/<Customer>/<Voice Form Defn. Id>.)
2. Using the MMI, modify the form definition (the New and Special MWI DN values will have to be filled in on the form again.) and SAVE the form.
3. Restart the FM using PRM_CONTROL or by rebooting the system. (The recovery code of the FM will recreate the information file based on the responses which exist for the form. Note: The 'First In First Out' order of the arrival and transcription of the responses will be lost for existing responses when this recovery is done.

29

Type: Error

Severity: Minor

Cause: A sub-task of the Forms Manager has crashed or has failed to communicate with the Forms Manager.

Impact: The FM will restart itself. Callers will not be able to leave responses or retrieve responses for transcription until the FM has restarted successfully. (The outage should last less than 1 minute.)

Action: If this problem occurs more than once a day, contact your Northern Telecom support organization.

NT: This can only have occurred as a result of a software design or operating system error. Contact your Northern Telecom development organization.

30

Type: Error

Severity: Minor

Cause: A sub-task of the FM could not be started.

Impact:

1. MWIs may not reflect the number of responses waiting for transcription.
2. A portion of existing responses may not be available until recovery has been performed.
3. If the administrator attempts to remove a form definition, the system may indicate that a channel is currently being used to record a response, when there is in fact no activity for that definition.

Action: An attempt to start this task will be made every 5 minutes by the FM. If the task is successfully started, the above impacts will be cleared. If this problem occurs more than once a day, contact your Northern Telecom support organization.

NT: This can only have occurred as a result of a software design or operating system error. Contact your development.

31

Type: Debug

Severity: Info

Cause: The FM was attempting to restart itself and found that it was unable to shut itself down properly, instead it elected to terminate itself and rely on the PRM to restart the FM.

Impact: The FM will be restarted by the PRM. Callers will not be able to leave responses or retrieve responses for transcription until the FM has restarted successfully. (The outage should last less than 1 minute.)

Action: If this problem occurs more than once a day, contact your Northern Telecom support organization.

NT: This can only have occurred as a result of a software design or operating system error. Contact your Northern Telecom development support organization.

34

Type: Error

Severity: Minor

Cause: The FM's recovery task has encountered an error. Responses exist on a volume for a form which does not exist in the DR.

Impact: Recovery for this volume will not complete successfully. The recovery will be attempted again in 5 minutes.

Action: If the error persists (that is, more than two or three times), contact your Northern Telecom support organization.

NT: If the DR is not corrupt, contact your Northern Telecom development organization.

38

Type: Error

Severity: Minor

Cause: A problem has occurred trying to synchronize restored voice form data with data which already exists on disk. A file or cabinet was found to be corrupted.

Impact: Only part of the restored data has been synchronized. The problem file or cabinet must be removed and the synchronization process performed again.

Action: Contact your Northern Telecom support organization.

NT: The file or cabinet listed was found to be corrupted. Remove the file using MD. Use PRM_CONTROL to shutdown the FM with NoRestart. From the PUP level:

```
> load FM_PKG
```

```
> FM_SYNCALL <Voll> .. <Voln>
```

where "*<Voll> .. <Voln>*" are the user volumes on this system.

If the problem still persists, contact your Northern Telecom development organization.

If the FM_SYNCALL succeeds (i.e., there are no SEERs indicating a failure on an SPM or MSM), restart the FM using PRM_CONTROL.

Note: Different files may have become corrupted and this process may have to be performed a series of times.

Class 44 T1 Diagnostics

This SEER class is used to provide T1 diagnostics information and faults. These diagnostics are automatically executed at bootup and can manually be invoked when the card is out-of-service.

Diagnostics results are only sent to the SEER printer if the diagnostics program is informed to do so by the controller/PRM.

All failure results should be investigated and the necessary hardware should be replaced.

00

Type: Admin

Severity: Info

Cause: General information from the T1_Diag program.

Impact: None.

Action: None.

NT: None.

01

Type: Admin

Severity: Minor

Cause: Argument string supplied for T1 diagnostics is incomplete.

Impact: Diagnostic not performed.

Action: If startup or offline diagnostics, then contact your Northern Telecom support organization. Otherwise check argument string and retry diagnostic.

NT: Contact your Northern Telecom support organization.

02

Type: Admin

Severity: Minor

Cause: Invalid T1 diagnostic test number supplied.

Impact: Diagnostic not performed.

Action: If startup or offline diagnostics, then contact your Northern Telecom support organization. Otherwise check argument string and retry diagnostic.

NT: Contact your Northern Telecom development organization.

03

Type: Admin

Severity: Minor

Cause: End address is larger than start address.

Impact: Diagnostic not performed.

Action: If startup or offline diagnostics, then contact your Northern Telecom support organization. Otherwise check argument string and retry diagnostic.

NT: Contact your Northern Telecom development organization.

04

Type: Admin

Severity: Minor

Cause: Invalid type supplied.

Impact: Diagnostic not performed.

Action: If startup or offline diagnostics, then contact your Northern Telecom support organization. Otherwise, check argument string and retry diagnostic.

NT: Contact your Northern Telecom development organization.

05

Type: Admin

Severity: Minor

Cause: Span number is out of range (0-3 is allowed).

Impact: Diagnostic not performed.

Action: If startup or offline diagnostics, then contact your Northern Telecom support organization. Otherwise check argument string and retry diagnostic.

NT: Contact your Northern Telecom development organization.

06

Type: Admin

Severity: Minor

Cause: Could not acquire timeslot to perform diagnostics.

Impact: Diagnostic not performed.

Action: Retry test. If problem still exists then may need to reboot node to release these time slots.

NT: Time slots are acquired from the VCA. Verify that the VCA is running. Also the VCA requires the diagnostic to provide TN verification that the HWDB definition of the T1 card and span are correct.

07

Type: Error

Severity: Minor

Cause: T1 diagnostics routine receive tasking error when attempting to communicate with another task.

Impact: Diagnostic may not have been performed or result could not be reported properly.

Action: Check return code provided in the SEER and take any action recommended for that error. Otherwise, contact your Northern Telecom support organization.

NT: Please investigate previous SEERs and any return code to determine the task and type of tasking error. Check if the task is running.

08

Type: Admin

Severity: Minor

Cause: T1 68K register test failed.

Impact: T1 card on this node is marked faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503) for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

09

Type: Admin

Severity: Minor

Cause: T1 68K connection memory test failed.

Impact: T1 card on this node is marked faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

10

Type: Admin

Severity: Minor

Cause: T1 68K Dual Port RAM test.

Impact: Some or all T1 spans on this node are faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

11

Type: Admin

Severity: Minor

Cause: T1 302 Dual Port RAM test failed.

Impact: Some or all T1 spans on this node are faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

12

Type: Admin

Severity: Minor

Cause: T1 302 Static RAM test failed.

Impact: Some or all T1 spans on this node are faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

13

Type: Admin

Severity: Minor

Cause: T1 302 Self test failed.

Impact: Some or all T1 spans on this node are faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

14

Type: Admin

Severity: Minor

Cause: T1 302 Register test failed.

Impact: Some or all T1 spans on this node are faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

15

Type: Admin

Severity: Minor

Cause: T1 302 voice tap loopback test failed.

Impact: Some or all T1 spans on this node are faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

16

Type: Admin

Severity: Minor

Cause: T1 302 Bus loopback test failed.

Impact: Some or all T1 spans on this node are faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

17

Type: Admin

Severity: Minor

Cause: T1 302 Line interface loopback test failed.

Impact: Some or all T1 spans on this node are faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

18

Type: Admin

Severity: Minor

Cause: T1 302 Relay loopback test failed.

Impact: Some or all T1 spans on this node are faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

19

Type: Admin

Severity: Minor

Cause: T1 302 Signalling test failed.

Impact: Some or all T1 spans on this node are faulty.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

20

Type: Admin

Severity: Minor

Cause: Result from T1 302 External loopback test.

Impact: T1 spans on this node are faulty failed.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

21

Type: Admin

Severity: Minor

Cause: T1 302 Span loopback test failed.

Impact: T1 spans on this node are faulty failed.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

22

Type: Admin

Severity: Minor

Cause: T1 302 Snake Loopback test failed.

Impact: T1 spans on this node are faulty failed.

Action: Replace T1 card. If this does not rectify the problem then replace the T1 Transition module. If the problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for more information. If the problem still cannot be resolved, contact your Northern Telecom support organization.

NT: Investigate the SEER for hardware faults on the system since they may be the result of some other faulty hardware.

23

Type: Admin Info

Severity: Info

Cause: Invalid test number provided to t1_diag program.

Impact: Diagnostics not complete.

Action: If testing via the DiagCntl utility, check parameters and try again. If the diagnostics fail, consult the *Trouble-locating and Alarm-clearing Procedures* guide (NTP 297-7001-503).

NT: If this problem occurs when running offline or starting diagnostics, there is potentially a memory corruption problem. Scan SEERs for any sign of corruption.

30

Type: Error

Severity: Major

Cause: Could not release timeslots.

Impact: Further activities on this node may be affected by timeslots that could not be released.

Action: Re-execute diagnostics to clear timeslots. If problem persists, contact your Northern Telecom support organization.

NT: It may be necessary to reboot the node. If the problem persists, try replacing the T1 cards.

31

Type: Error

Severity: Minor

Cause: Too many interrupts received from diagnostics firmware.

Impact: Result information may be lost.

Action: Retry the test. If problem persists, consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for information regarding T1 diagnostics failure.

NT: Verify that all cards were replaced on that node. If the problem persists, contact your Northern Telecom development organization.

32

Type: Error

Severity: Minor

Cause: Could not retrieve the diagnostic firmware file ID.

Impact: T1 diagnostics not completed.

Action: Contact your Northern Telecom support organization.

NT: Check if the T1D.Bin file exists in /1/T1. If not take necessary action to get file.

33

Type: Error

Severity: Major

Cause: Error trying to change span state to Diagnostics.

Impact: Cannot perform any diagnostics.

Action: Verify that the T1 Card and Spans are out-of-service. Repeat test. If problem persists try rebooting the node.

NT: Contact your Northern Telecom development organization.

34

Type: Error

Severity: Major

Cause: Error loading firmware into span.

Impact: If error loading diagnostics firmware then the diagnostics are not completed. If error loading T1 firmware then the span cannot be used to handle any calls.

Action: Check the return code provided and take necessary action. If problem persists, replace T1 card and execute diagnostics. If the diagnostics fail, refer to the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503), for information on diagnostics failure.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503).

35

Type: Admin

Severity: Major

Cause: Request to test invalid memory size.

Impact: Diagnostics not completed.

Action: If the problem occurs when executing Startup or Offline diagnostics, retry the operation. Reboot the node if possible. If the problem persists, contact your Northern Telecom support organization.

NT: Look for possible memory corruption.

36

Type: Admin

Severity: Major

Cause: T1 card memory test failed.

Impact: Some or all T1 spans are faulty.

Action: Replace T1 card and re-execute diagnostics. If diagnostics fail, refer to the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503).

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503).

37

Type: Admin

Severity: Minor

Cause: Invalid register number provided.

Impact: Diagnostics not performed.

Action: If running startup or offline diagnostics, retry the operation. If the problem persists try rebooting the node. If this does not help, refer to the *Trouble Locating and Alarm Clearing Procedures*, NTP 297-7001-503 for information on T1 diagnostics failure.

NT: Check the SEER for any sign of memory corruption.

38

Type: Admin

Severity: Minor

Cause: Invalid channel number provided.

Action: If running startup or offline diagnostics, retry the operation. If the problem persists try rebooting the node. If this does not help, refer to the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503) for information on T1 diagnostics failure.

NT: Check the SEER for any sign of memory corruption.

39

Type: Admin

Severity: Minor

Cause: Could not acquire timeslot to perform diagnostics.

Impact: Diagnostic not performed.

Action: Retry test. If problem still exists then may need to reboot node to release these time-slots.

40

Type: Error

Severity: Major

Cause: Could not map T1 card memory.

Impact: Unable to execute any diagnostics.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Check the previous SEERS for any sign of memory problems on the system. If none, contact your Northern Telecom development organization.

41

Type: Admin

Severity: Info

Cause: Secondary span not specified.

Impact: Diagnostics not completed.

Action: This problem should only occur in the manufacturing flow, if so, specify the secondary span and re-start the diagnostics.

NT: If the problem occurs when running starting or offline diagnostics, verify that the TID.AREA program or system is the correct version for the software load.

42

Type: Error

Severity: Major

Cause: Error writing timeslots for diagnostics.

Impact: Diagnostics not completed. Some or all of the T1 spans may be faulty.

Action: Refer to the *Card Replacement Procedures* manual, NTP 297-7001-502 and replace the T1 card. If the problem persists, contact your Northern Telecom support organization.

NT: Verify that the 68K card and Transition Module for the T1 has been replaced. If the problem persists, contact your Northern Telecom development organization.

43

Type: Error

Severity: Critical

Cause: Error acquiring firmware FID.

Impact: Some or all T1 spans are not functional.

Action: Execute diagnostics again. If the problem persists, contact your Northern Telecom support organization.

NT: By using the MD utility, check that the T1.BIN file exists in the /1/T1 directory.

44

Type: Error

Severity: Critical

Cause: Error loading firmware.

Impact: Firmware not loaded for specified span. These spans are not functional.

Action: Execute diagnostics again. If the problem persists, contact your Northern Telecom support organization.

NT: Use the MD Utility to check that the T1.BIN file exists in the /1/T1 directory and that the file is the correct version (that is, not patched). Try replacing the T1 card by following the procedures outlined in the *Card Replacement Procedures* manual, NTP 297-7001-502.

45

Type: Error

Severity: Major

Cause: Unexpected interrupt received from span.

Impact: Some or all the T1 spans are marked faulty.

Action: Consult the *Trouble-locating and Alarm-clearing Procedures*, (NTP 297-7001-503) for T1 diagnostic failure information.

NT: If all relevant cards on the node were replaced and the problem persists, contact your Northern Telecom development organization.

Class 45 T1 Loader

The T1 Loader is used to load S-record files to the 68302 SRAM. To accomplish this the loader requires the service of the T1 bootstrap file.

T1 loader errors generally reflect a fault in the hardware, the bootstrap file or the file to be loaded.

Errors encountered in the loader task may prevent the T1 span from being loaded and may even cause the node to crash, depending on the severity of the error.

00

Type: Error

Severity: Critical

Cause: Cannot locate T1 Loader task.

Impact: Current Loader task request will not be processed.

Action: If error persists disable and re-enable node specified in SEER. If problem still exists contact your Northern Telecom support organization.

NT: Check that the T1LC overlay exists in the startlist for this node.

01

Type: Error

Severity: Major

Cause: Error tasking with the T1 Loader.

Impact: Current Loader request will not be processed.

Action: Disable and re-enable the node. If error persists contact your Northern Telecom support organization.

NT: Check that the T1LC overlay exists in the startlist for this node.

02

Type: Error

Severity: Critical

Cause: T1 Loader memory tests indicate that the DPRAM is faulty.

Impact: Span will not be loaded.

Action: Use T1 Diagnostics to determine memory failure and replace the necessary hardware. If diagnostics cannot detect a hardware fault, try reloading span. If problem still exists try changing the T1 card. If all fails, contact your Northern Telecom support organization.

NT: If all relevant cards (T1, T1 Transition Module and 68K) have been replaced, contact your Northern Telecom development organization.

03

Type: Error

Severity: Critical

Cause: Loader polling of Bootstrap timed out.

Impact: Span will not be loaded.

Action: Try disabling and enabling node. If problem still exist, try the following:

1. Run T1 diagnostics to determine hardware sanity.
2. If diagnostics fail, replace the T1 card using the *Card Replacement Procedures* manual, NTP 297-7001-502.
3. If problem still exists, contact your Northern Telecom support organization.

NT: Check if the correct bootstrap file exists on disk. Use the MD utility to check /1/T1 for T1BT.BIN

04

Type: Error

Severity: Critical

Cause: BootStrap memory tests indicate that the 68302 SRAM is faulty.

Impact: Span will not be loaded.

Action: Run T1 Diagnostics to determine memory failure and replace necessary hardware. If no hardware fault can be detected by diagnostics try the following:

1. Reload span.
2. Change hardware (T1 card).

3. If problem still exists, contact your Northern Telecom support organization.

NT: If all relevant cards (T1, T1 Transition Module and 68K) have been replaced, contact your Northern Telecom development organization.

05

Type: Error

Severity: Critical

Cause: T1 Bootstrap detected checksum error in the T1 firmware s-record placed on DPRAM by T1 Loader.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

06

Type: Error

Severity: Critical

Cause: 68302 Bus error detected by BootStrap.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

07

Type: Error

Severity: Critical

Cause: 68302 interrupt detected by BootStrap.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

08

Type: Error

Severity: Critical

Cause: 68302 addressing detected by BootStrap.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

09

Type: Error

Severity: Critical

Cause: Illegal instruction reported by 68302 Bootstrap.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

10

Type: Error

Severity: Critical

Cause: Invalid status received from Bootstrap.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

11

Type: Error

Severity: Critical

Cause: Unexpected status received from Bootstrap.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

12

Type: Error

Severity: Critical

Cause: Incorrect status2 received from bootstrap.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

13

Type: Error

Severity: Critical

Cause: Character in S-Record not is not a digit as expected.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

NT: Check if the correct T1 firmware file exists on disk.

14

Type: Error

Severity: Critical

Cause: Cannot open file on disk to load span.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

15

Type: Error

Severity: Critical

Cause: Cannot find record 1 in S-record file on disk.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

16

Type: Error

Severity: Critical

Cause: Cannot read S-Record file on disk.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

17

Type: Error

Severity: Critical

Cause: File is not of expected S-Record format.

Impact: Span will not be loaded.

Action: Try disabling and enabling the span. If problem still exists contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

18

Type: Error

Severity: Major

Cause: Invalid span number received.

Impact: Task request will not be processed.

Action: Depending on what request this is occurring, a node disabling/enabling may be necessary. If problem continue contact your Northern Telecom support organization.

NT: Determine, based on the occurrence of the SEER and on other SEERs, which task is passing the invalid span number. Check for possible data corruption also verify HWDB span TN.

19

Type: Error

Severity: Major

Cause: A load request was made with the invalid Load type.

Impact: Request will not be processed.

Action: Disable and enable the node specified in the SEER. If problem continues, contact your Northern Telecom support organization.

NT: Determine, based on the occurrence of the SEER and on other SEERs, which task is requesting the invalid load type. Check for possible data corruption.

20

Type: Error

Severity: Critical

Cause: Could not get bootstrap FID. File may not exists.

Impact: Span will not be loaded.

Action: Disable and enable the Node. If the problem persists, contact your Northern Telecom support organization.

NT: Check that the correct T1 firmware and bootstrap files exist on disk. (Use the MD utility to check /1/T1 for T1.BIN and TIBT.BIN).

21

Type: Error

Severity: Minor

Cause: Could not close open file.

Impact: A SEER may be received later indicating that file was not closed.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: If possible, use a utility to close the file. If the problem persists and is serious, then it may be necessary to reboot the node.

22

Type: Error

Severity: Minor

Cause: Loader request could not be performed with the span in its current state.

Impact: Current request will not be processed.

Action: Action depends on span state. If span state is faulty then run diagnostics on corresponding T1 card after disabling it. If problem persists, try disabling and enabling the node. If this does not help, contact your Northern Telecom support organization.

NT: Investigate SEERs from node bootup. Check for class 47 SEERs.

23

Type: Error

Severity: Critical

Cause: T1 Loader could not register.

Impact: No T1 service available on node.

Action: Try disabling and enabling the node. If problem continues, contact your Northern Telecom support organization.

NT: Check if this is a capacity problem.

24

Type: Error

Severity: Critical

Cause: Unable to allocate buffer to load T1 firmware.

Impact: Span will not be loaded.

Action: Try disabling and re-enabling the T1 card affected by the problem. If the problem persists, try disabling and re-enabling the node. If this does not help, contact your Northern Telecom support organization.

NT: Check for a memory problem on this node.

25

Type: Error

Severity: Critical

Cause: Bootstrap cannot interpret record placed on DPRAM.

Impact: Span will not be loaded.

Action: Try disabling and re-enabling the T1 card affected by the problem. If problem continues, try disabling and enabling the node. If this does not help, contact your Northern Telecom support organization.

- NT: 1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
2. Execute diagnostics on T1 card.
3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

26

Type: Error

Severity: Critical

Cause: Timeout waiting for firmware to respond with span-awake information.

Impact: Will not be able to load span.

Action: Try disabling and re-enabling the T1 card affected by the problem. If problem continues, try disabling and enabling the node. If this does not help, contact your Northern Telecom support organization.

-
- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

27

Type: Error

Severity: Critical

Cause: Expecting only one message (Span awake) from firmware, however more messages were received.

Impact: Span will not be loaded.

Action: Try disabling and re-enabling the T1 card affected by the problem. If problem continues, try disabling and enabling the node. If this does not help, contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

28

Type: Error

Severity: Critical

Cause: Firmware indicate span-awake failure.

Impact: Span will not be loaded.

Action: Use T1 diagnostics to test hardware and replace T1 card if faulty. If no hardware fault can be detected, contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

29

Type: Error

Severity: Critical

Cause: Expecting only one message from firmware but received more.

Impact: Span is marked faulty.

Action: Try disabling and re-enabling the T1 card affected by the problem. If problem continues, try disabling and enabling the node. If this does not help, contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

30

Type: Error

Severity: Critical

Cause: Firmware report failure in Span Setup. It is probably a hardware fault.

Impact: Span is not functional.

Action: Try disabling and re-enabling the T1 card affected by the problem. If problem continues, try disabling and enabling the node. If this does not help, contact your Northern Telecom support organization.

- NT:
1. Check if the correct T1 firmware file exists on disk (use the MD utility to check the /1/T1 for T1.BIN).
 2. Execute diagnostics on T1 card.
 3. Replace T1 card by following the *Card Replacement Procedures* manual, NTP 297-7001-502.

31

Type: Error

Severity: Minor

Cause: Link Handler attempted to login into span more than once.

Impact: None.

Action: None.

NT: None.

Class 46 T1 COMM

The T1 communication task is responsible for processing all T1 card interrupts, transmitting and receiving telephony messages and managing the T1 voicetap.

All message and time slot requests are queue for the relative T1 span link handler/firmware.

T1 Comm errors may cause loss of telephony messages or timeslots and may result in a node crash for fatal errors.

00

Type: Error

Severity: Critical

Cause: Cannot locate T1 Comm Task.

Impact: Current comm task request will not be processed.

Action: If problem persist, disable and re-enable the node. If this does not help contact your Northern Telecom support organization.

NT: Verify startlist for TILC on the problem node. If the node is not running, refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503) for information on how to recover the node.

01

Type: Error

Severity: Critical

Cause: Error tasking with T1 Comm task.

Impact: Current comm task request will not be processed.

Action: If problem persist, disable and re-enable the node. If this does not help contact your Northern Telecom support organization.

NT: Verify that the node is running. If the node is not running, refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503) for information on how to recover the node. If the problem persists, contact your Northern Telecom development organization.

02

Type: Error

Severity: Critical

Cause: Error mapping T1 card configuration space.

Impact: T1 node cannot be used.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

03

Type: Error

Severity: Critical

Cause: Error mapping T1 card I/O space.

Impact: T1 node cannot be used.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

04

Type: Error

Severity: Critical

Cause: Error mapping T1 card shared memory space.

Impact: T1 node cannot be used.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

05

Type: Error

Severity: Critical

Cause: T1 voice tap stuck in reset state.

Impact: T1 node cannot be used.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

06

Type: Error

Severity: Critical

Cause: Internal voice tap fault detected.

Impact: T1 node cannot be used.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

07

Type: Error

Severity: Major

Cause: Connection memory queue is full.

Impact: Current timeslot request will be ignored.

Action: If problem persist, disable and re-enable the node. If the problems continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

08

Type: Error

Severity: Major

Cause: Receive message queue is full.

Impact: Last message(s) received will be ignored.

Action: If problem persist, disable and re-enable the node. If the problems continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

09

Type: Error

Severity: Critical

Cause: Receive message queue is corrupted.

Impact: If redundant span is equipped then switching will occur.

Action: If problem persist, disable and re-enable the node. If the problems continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

10

Type: Error

Severity: Critical

Cause: Transmit message queue is full.

Impact: Last transmit request was rejected.

Action: If problem persist, disable and re-enable the node. If the problems continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

11

Type: Error

Severity: Minor

Cause: Span is not in an appropriate state for current request.

Impact: Request is not processed.

Action: Disable and re-enable the span. If the problem persists, disable and re-enable the node. If this does still not correct the problem, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

12

Type: Error

Severity: Minor

Cause: Link Handler did not register with T1 comm task.

Impact: Link Handler requests not processed.

Action: Disable and re-enable the span. If the problem persists, disable and re-enable the node. If this does still not correct the problem, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

13

Type: Error

Severity: Critical

Cause: Parity error writing to connection memory.

Impact: TSW fault is report and card switching will occur.

Action: If problem persist, disable and re-enable the node. If the problems continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

14

Type: Error

Severity: Critical

Cause: Access error writing to connection memory.

Impact: TSW fault is report and span switching will occur.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble Locating and Alarm Clearing Guide* (NTP 297-7001-503).

15

Type: Error

Severity: Critical

Cause: TSW queue is corrupted.

Impact: TSW fault is report and span switching will occur.

Action: If problem persist, disable and re-enable the node. If the problems continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

16

Type: Error

Severity: Major

Cause: Transmit message size is invalid.

Impact: Transmit request is not processed.

Action: Disable and re-enable the span. If the problem persists, disable and re-enable the node. If this does still not correct the problem, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

17

Type: Error

Severity: Major

Cause: Receive message size is invalid.

Impact: Receive request is not processed.

Action: Disable and re-enable the span. If the problem persists, disable and re-enable the node. If this does still not correct the problem, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

18

Type: Error

Severity: Major

Cause: TSW interrupt received but no interrupt pending bit is set.

Impact: No impact.

Action: If problem persist, disable and re-enable the node. If the problems continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

19

Type: Error

Severity: Major

Cause: T1 interrupt received but no interrupt pending bit is set.

Impact: No impact.

Action: If problem persist, disable and re-enable the node. If the problems continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

20

Type: Error

Severity: Critical

Cause: T1 comm task could not register.

Impact: Node cannot be used.

Action: Try disabling and re-enabling the node. If problem still exists, contact your Northern Telecom support organization.

NT: Check system capacity limits.

21

Type: Error

Severity: Critical

Cause: Span DPRAM does not exist.

Impact: Span is declared faulty.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

22

Type: Error

Severity: Critical

Cause: TSW stuck in initialization.

Impact: Node is declared faulty.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

23

Type: Error

Severity: Critical

Cause: Fault in requesting timer.

Impact: Node cannot be used.

Action: If problem persist, disable and re-enable the node. If the problems continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

24

Type: Error

Severity: Critical

Cause: Connection memory queue timeout occur.

Impact: Hardware is declared faulty.

Action: If problem persist, disable and re-enable the node. If the problems continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

25

Type: Error

Severity: Critical

Cause: Cannot locate T1 card configuration space.

Impact: Node cannot be used.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

27

Type: Error

Severity: Minor

Cause: Message received from a span to which the Link Handler has not logged in.

Impact: Message will not be processed immediately.

Action: Disable and re-enable the span. If the problem persists, disable and re-enable the node. If this does still not correct the problem, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

28

Type: Error

Severity: Major

Cause: TSW fault interrupt received from a span to which the Link Handler has not logged in. Fault could not be registered.

Impact: Node is faulty.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

29

Type: Error

Severity: Major

Cause: PLL interrupt received from a span to which the Link Handler has not logged in. Fault could not be registered.

Impact: Node is faulty.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

30

Type: Error

Severity: Critical

Cause: Could not perform diagnostics time slot requirements.

Impact: Span is marked faulty.

Action: Refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

31

Type: Error

Severity: Critical

Cause: WatchDog timeout has occurred for the specified span.

Impact: If redundancy exists, then switching will occur. Span is reset and reloaded.

Action: If the problem persists, check the T1 firmware and hardware.

32

Type: Error

Severity: Critical

Cause: Time switch queue corruption.

Impact: All spans will be marked faulty.

Action: If problem persists, disable and re-enable the node. If the problem continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

33

Type: Error

Severity: Critical

Cause: T1 Timewatch audit routine has detected a mismatch.

Impact: Possible timeslot corruption. May be double timeslot noise.

Action: If problem persists, disable and re-enable the node. If the problem continues to occur, refer to the *Card Replacement Procedures* guide (NTP 297-7001-501) and replace the T1 card.

NT: Refer to the *Trouble-locating and Alarm-clearing Procedures* (NTP 297-7001-503).

76

Type: Error

Severity: Critical

Cause: Parameter string received by T1_Base program is invalid.

Impact: T1 node is not fully loaded.

Action: Disable the node. If the problem persists, contact your Northern Telecom development organization.

NT: Check the parameter string in the startlist. On a regular system, no parameter is expected by the T1LC program (parameters may be used for debugging purposes). Remove any unwanted parameters. The following are associated return codes:

- 34 No external references selected on this T1 card. This is only a problem if an external reference was expected to be on this card.
- 35 Previous external reference is overwritten by this selection. This is only a warning to indicate that there was a previous reference selected.
- 36 The hardware register did not retain the external span selected. This indicates that the problem is most likely a hardware problem.
- 37 Could not enable external referencing on card. This indicates that the problem is most likely a hardware problem.

77

Type: Error

Severity: Major

Cause: Error initiating T1 Comm task.

Impact: Cannot use T1 node.

Action: Disable and re-enable the span. If the problem persists, disable and re-enable the node. If this does still not correct the problem, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

78

Type: Error

Severity: Major

Cause: Error initiating T1 Loader task.

Impact: Cannot use T1 node.

Action: Disable and re-enable the span. If the problem persists, disable and re-enable the node. If this does still not correct the problem, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

Class 47 T1 Link Handler (T1LH)

The functions of the T1 Link Handler (T1LH) are

- providing telephony signalling services to the application programs such as processing and answering an incoming call, making an add on call, conferencing and transferring a third party call, etc.
- presenting the T1 trunk as a single entity to the system for processing T1 trunk related maintenance operation such as disabling a T1-span, etc.

Software Architecture

The T1LH is composed of 5 different units:

1. The *Control module* is responsible for loading the firmware at the system initialization time and the initialization of the other modules.
2. The *Trunk module* is responsible for the maintenance operation of the span.
3. The *Channel module* co-ordinates with the other system programs to provide telephony services for the application. The channel module is not only required to take care of itself but also the 24 channels running on the T1-Span.
4. The *Timer module* is responsible for providing timing services for other modules.
5. The *Message Routing module* acts as a gateway to provide the communication between the T1LH and the lower layer software.

To classify these modules and channels the following numbering scheme is used in the design

- For the modules
 - 30 (Control Module)
 - 31 (Trunk Module)
 - 32 (Channel Module)
 - 33 (Message Dispatcher)
 - 34 (Timer Module)

- For the channels
 - The Channel number will be numbered from 0 to 23, where 0 represents the first channel and 23 represents the 24th channel.

Trunk Module

Associated with the module, a set of commands are supported by the trunk module in order to satisfy the maintenance operation. The possible commands are:

Trunk Command Code	Description
TrunkIdle	No command is currently active
S_InServ	Startup to InServe mode
S_Stdby	Startup to Standby mode
S_Disable	Startup to disable Offline mode
INSV	Enable a trunk + InService option
Standy	Enable a trunk + Standby option
Disable	Put a trunk out of service
Shutdown	Put a trunk and channels OOS
PSwitch	Polite switching
BSwitch	Brute force switching
OSwitch	Switch a trunk to online mode
DiagPass	Diagnostic on a faulty span is over, reset to OOS
Query	Query the current status of the module
RefMaster	Enable span to provide timing reference
RefSlave	Disable span to provide timing reference
DevDied	Shutdown a particular channel

Under normal working conditions no SEERs should be generated by the trunk module; however, if SEERs do get generated this is usually because of an unexpected event or an operation failure. The following is a list of all possible events with which one could decode and understand the SEERs generated by the trunk module.

Trunk Event Code	Description
E_S_INSV	StartUp to the InService mode
E_S_STDY	StartUp to the Standby mode
E_S_DIS	StartUp to the Disable Offline mode
E_INSV_ENABLE	Enable a trunk + InService option
E_STDY_ENABLE	Enable a trunk + Standby option
E_DISABLE	Put a trunk out of service
E_SHUTDOWN	ShutDown a trunk including channels
E_PSWITCH	Polite switching
E_BSWITCH	Brute force switching
E_OSWITCH	Switch a trunk to online mode
E_MSG_ACK	Maintenance message
E_UN_MSG	Unsolicited Maintenance message
E_HWFAULT	Hardware Fault detected by the T1 loader
E_TIMEOUT	Timeout occurs
E_IDLE	Report Channel goes idle
E_LOGOUT	Report Channel logout
E_DIAGPASS	Diagnostic on a faulty span is over
E_QUERY	Query the current status of the trunk module
E_REFMASER	Enable span to provide timing reference
E_REFSLAVE	Disable span to provide timing reference
E_DEVDIED	Shutdown a channel

The Trunk Module can also have different states.

Trunk Status	Description
Startup	a transient state in the T1 that indicates the TILM is bringing up the span
InService	The span is running in an active state
OutOfService	The span is disabled
Standby	The span is ready to go to the InService state on request
Faulty	Faults are detected in the span
AlarmActive	A red and/or yellow alarm is detected

Channel Module

The main concept in the Channel module is its set of commands which directly indicates which operation is currently working on by a particular channel. The following is the lists of commands supported by the Channel module.

Channel Command Code	Description
BaseCall	Originate a Base Call
AddOnCall	Originate an Add on Call
InitXferCall	Initiate a call transfer sequence
Transfer	Complete to transfer a Call
Conference	Conference a 3-party Call
Reconnect	Reconnect a Call
Disconnect	Disconnect a Call
Answer	Answer a Call
MainteEnable	Maintenance enable a channel
MainteDisable	Maintenance disable a channel
AgtEnable	Agent enable (enable a channel)
AgtDisable	Agent disable (disable a channel)
IncRing	Incoming call initiated with a ring
IncPCI	Incoming call initiated with the SMDI PCI message
IncIdle	Channel is servicing an incoming call
OutIdle	Channel is servicing an outgoing call
Idle	Channel is idle

Each command is composed of a sequence of primitives and these primitives pin point the current operation of the command. The following is the list of primitives used to construct the above commands.

Primitive Code	Description
1	Send a telephony message to firmware
2	Use DSP port to dial a number
3	Send a MSP to application

Like the trunk module, there is a set of events to drive the operation of the Channel module. The following are the list of events:

Channel Event Code	Description
E_TELE_ACK	Telephony acknowledgement message
E_FAR_DISC	Far end disconnect
E_FAR_OFFHOOK	Far end ready for digits
E_RDYKEY	Set Ready Key from VSS
E_AGENT_REG	Agent login/logout cmd
E_INFO_LINK	SMDI Link up and down
E_CHAN_REG	GTI login/logout process
E_TIMEOUT	Timeout reported
E_SPCHPATH	Connected or Disc. a speech path
E_QUERY	Query the channel status
E_CALL_PROG	OutDialing acknowledgement
E_AGT_REPLY	Maintenance Cmd acknowledgement
E_SHUTDOWN	Shutdown Reg from Trunk Module
E_ORIG_BASE	Originate a Base call
E_ORIG_ADD	Originate an Add on call
E_ORIG_XFER	Originate an InitXfer call
E_TRANSFER	Transfer a call
E_CONFERENCE	Conference a call
E_RECONNECT	Reconnect a call
E_DISCONNECT	Disconnect a call
E_ANSWER	Answer a call
E_MAINTEN_CMD	Maintenance Operations
E_INC_RING	Far end ringing
E_INC_PCI	PCI message from far end

Other acronyms used by the Channel Module indicate the status of calls in progress.

Call Progress Message	Description
VoiceAns	Call is answered by voice
Ringing	Call is still ringing
Busy	Call is busy
Re-order	Re-order tone is detected from switch
No Dial tone	No dial tone is detected from the switch

Other Modules

The Control module, Timer module, and the Message Dispatcher module have only a very limited operation. The SEERs generated by these modules are self-explanatory.

General Format

The format used is:

'SEER Code' [Span Number:Module or Channel Number] SEER text + location code

For example:

- 4731 [0:30] Fails to Comm with [T1Loader:FFFFFFFFFFFFFFFF:4602] 1-13-3-1

4731 is the SEER code used by the T1LH; [0:30] implies span 0, Control Module 30.

This SEER means the Control Module in Node 13, Card 3, Span 1 fails to communicate with the T1Loader with the task ID FFFFFFFFFFFFFFFFFF (which means not available) with error code 4602 returned from the T1Loader.

00

Type: System

Severity: Info

Cause: System boot-up; trunk being enabled/disabled; undesired events occurred.

Impact: If the SEER indicates a Faulty or Alarm mode, this implies that the span is no longer able to provide any services.

Action: If the span is Faulty or Alarm, service should be switched to the redundant span automatically if redundant span is available. Otherwise, check the cabling and run the offline diagnostic for the span.

NT: Run offline diagnostics and replace the card.

01

Type: System

Severity: Info

Cause: A summary indicates the failure of the T1LH in starting up the span

Impact: The span is no longer able to provide any services.

Action: Check the surrounding class 47 SEERs to obtain more information.

NT: None.

02

Type: Error

Severity: Info

Cause: When the T1LH tries to download the firmware, the lower layer (T1LH) indicates that the span is not in the expected state. Put the span into the standby state.

Impact: The span is no longer able to provide any services.

Action: Switch to the redundant span.

NT: Do an offline diagnostic on the corresponding T1 span. If necessary, replace the span.

03

Type: Error

Severity: Info

Cause: The T1LC fails to load the firmware.

Impact: This span is no longer able to provide any services.

Action: Switch to the redundant span and run offline diagnostics.

NT: Check the integrity of the binary file holding the firmware and replace if necessary.

04

Type: Error

Severity: Critical

Cause: T1LH failed to fetch the binary file for holding the firmware.

Impact: All T1 spans are no longer in service.

Action: Contact your Northern Telecom support organization.

NT:

1. Check if the build is done properly.
2. Check the integrity and existence (l/t1/t1.bin) of the file and replace if necessary.

05

Type: Error

Severity: Info

Cause: T1LH fails to reset the span when the T1LH is requested to take the span to the In-Service mode.

Impact: The span cannot go to the InService Mode. The redundant span will take over automatically if it is available.

Action: Try again or check the cable. Run offline diagnostics and replace the card if necessary. If error persists, contact your NT support organization.

NT: Reboot the TIFN node.

06

Type: Error

Severity: Info

Cause: T1LH failed to reset the Span hardware-wise.

Impact: Switching to the Redundancy span fails.

Action: Try again. Run offline diagnostics. If error persists, contact your NT support organization.

NT: Reboot the corresponding TIFN.

07

Type: System

Severity: Info

Cause: T1LH failed to release all the time slots assigned to its 24 channels.

Impact: If the T1LH comes up from a system boot-up, there should be no indirect impact.

Action: Run an offline diagnostic on the card.

NT: Reboot the corresponding T1FN.

08

Type: System

Severity: Info

Cause: The Trunk module keeps a 10-bit register to keep track of the operating status of the span. If there is any change in the bitmap this SEER is generated to report the changes.

“RedAlarm” means a loss of signalling from the Far end (DMS or channel bank).

“YellowAlarm” means that the Far end is experiencing red alarm and is transmitting yellow alarm to SPM. This is common after T1 switch and the yellow alarm is ignored, in this case, by the SPM.

“BlueAlarm” is sent by the Far end to signal its problem, and the SPM reports the condition via SEERs. The administrator should investigate the cause of this in the Far end equipment. If this alarm persists, the SPM will likely detect loss of frame which will cause the SPM to report RedAlarm. This, in turn, will cause the software to switch link.

The following terms are used in the SEER output.

SEER Term	Description
Red Alarm	RedAlarm(Critical)
Yellow Alarm	YellowAlarm (Critical)
Blue Alarm	BlueAlarm (Minor)
Bipolar Violation	Bipolar Violation OverFlow (Minor)
FrameBitErr	Framing Bit Errors (Minor)
Signal Quality	Signal Quality Drop below satisfactory standard. (Minor)
T1 Clock Slip	T1 Clock Slip below satisfactory standard. (Minor)
Hardware Fault	Firmware reported hardware fault detected. (Critical)
Software Fault	T1LH detected fault in the lower layer component and report no longer be able to operate any more. (Critical)
Span WatchDog Timer	T1 Span WatchDog timer expired (Critical)

SEER Term	Description
Voice Tap Fault	The Voice Tap experiences a hardware problem. (Critical)
PhaseLockLoop Timer	Phase-lock-loop Watch Dog timer expired. (Critical)

Impact: If the error is “Critical”, the span is no longer available for services. Otherwise, span is still operating as normal but with degradation.

Action: For Critical errors, run OOS diagnostics and if necessary replace the card. For Blue alarm, check the terminal equipment or the channel bank. For Bipolar violation overflow, Framing bit errors, excessive slip, or poor signal quality, check the configuration. (that is, line code and source of the timing reference on both sides.)

NT: Same as Action. Reboot the TIFN if necessary.

10

Type: System

Severity: Info

Cause: T1LH failed to disconnect all the outstanding calls when the span experienced a change of the state from InService to Standby/OOS/Faulty/Alarm.

Impact: The current services will not be shutdown properly.

Action: Check if the particular channel has been unloaded already. If this is the case, no action is required. However, if switching to the redundant span is performed, disable and enable the faulty channel again.

NT: Disable the problem span.

11

Type: System

Severity: Info

Cause: The T1LH receives calls in any states other than the “InService” state.

Impact: Call will not be presented to the upper layer programs.

Action: If disabling or switching taking place, ignore. Otherwise disable the channel on the DMS side to prevent further interruptions.

NT: None.

12

Type: Error

Severity: Info

Cause: T1LH fails to enable/disable a span to provide timing reference.

Impact: System may be running without a timing reference or multiple timing references.

Action: The system will eventually recover itself. If the problem persists, disable and re-enable the span and run OOS diagnostics.

NT: None.

13

Type: Error

Severity: Info

Cause: T1LH fails to check if the span is providing timing reference or not.

Impact: System may be running without a timing reference or multiple timing references.

Action: The system will eventually recover itself. If the problem persists, disable and re-enable the span and run OOS diagnostics.

NT: None.

16

Type: Debug

Severity: Info

Cause: T1LH Internal Software problem.

Impact: No direct user impact.

Action: None.

NT: None.

17

Type: Error

Severity: Info

Cause: The T1LH tried to execute a particular command for a channel but failed on timing out a particular primitive.

Impact: Has to wait for the far end to disconnect the call to regain the control of the faulty channel.

Action: If the problem persists, disable and re-enable the span. Run offline diagnostics.

NT: None.

18

Type: Error

Severity: Info

Cause: The T1LH tries to execute a particular maintenance command but fails on timing out a particular message sent to the firmware.

Impact: The current maintenance will be failed and span will got to faulty state.

Action: Run an offline diagnostic to the span. If the problem persists, call your Northern Telecom support organization.

NT: Reboot the corresponding TIFN.

19

Type: Error

Severity: Info

Cause: The T1LH fails to either get a ringing or a SMDI message within the timeout interval.

Impact: If T1LH fails to get Ringing/Seizure, the call will be dropped. If T1LH fails to get SMDI message, the default SMDI message is used.

Action: If problem persists, check the cabling for both the T1 and SMDI link.

NT: Examine the hardware database to check the consistency between the T1 channels, the SMDI configuration. Also check the configuration of the UCD agent in the DMS.

25

Type: System

Severity: Info

Cause: The T1LH received an unexpected message from the firmware.

Impact: No user impact.

Action: If problem persists, do an offline diagnostic to the span. There may be a memory problem.

NT: Reboot the TIFN node.

26

Type: Error

Severity: Info

Cause: The T1LH failed to retrieve a message from the firmware via the T1COMM.

Impact: The T1LH internal state may not be consistent with the actual state of the line. Depending on the circumstances, the call may be dropped by the application.

Action: If problem persists, do an offline diagnostic to the span. There may be a memory problem.

NT: Reboot the T1FN node.

27

Type: Debug

Severity: Info

Cause: The T1LH failed to communicate with the firmware and dumped the message to indicate the missed message.

Impact: None.

Action: Check the surrounding SEERs for additional information. If unclear, contact your Northern Telecom support organization.

NT: None.

28

Type: Debug

Severity: Info

Cause: Debugging SEERs.

Impact: None.

Action: None.

NT: None.

30

Type: Error

Severity: Info

Cause: The T1LH failed to register with a particular task during the startup.

Impact: The span will be unable to provide any services.

Action: Check the SEER to identify with which task the T1LH fails to register. Also, check the surrounding SEERs to see if there are any related SEERs for the failed tasks. If unclear, contact your Northern Telecom support organization.

NT: Reboot the corresponding TIFN.

31

Type: Error

Severity: Info

Cause: The T1LH fails to communicate with other task.

Impact: If the failed task is TICOM then the span is no longer be able to provide any services, otherwise, the current command has failed. The T1LH will try to correct the failure.

Action: If the failed task is TICOM, disable and re-enable the span, if not, ignore the problem, the TILH will recover the problem. If the problem persists, contact your Northern Telecom support organization.

NT: If the problem persists, run OOS diagnostics and reboot the TIFN.

35

Type: System

Severity: Info

Cause: The T1LH received an event not expected with the current state and operating commands.

Impact: The session may be dropped or the system will have to wait for the user to hang up in order to regain control of the channel.

Action: Disable and re-enable the channel.

NT: None.

36

Type: System

Severity: Info

Cause: The firmware complains the message is not valid currently.

Impact: The command will be failed and the channel will be recovered once the user disconnects the current call.

NT: None.

37

Type: Error

Severity: Major

Cause: The firmware detected a Red or Yellow Alarm and reported to the T1LH.

Impact: The span will be out-of-service.

Action: Check the corresponding T1 cable or run an offline diagnostic to the span that reported the alarm.

NT: Check the configuration between the SPM and the channel bank.

38

Type: Error

Severity: Major

Cause: The T1LH failed to perform some critical operation with the lower layer software.

Impact: The span will go to a faulty state. The redundant T1 span should take over.

Action: Check the surrounding SEERs for additional information or run an offline diagnostic to the faulty span.

NT: If necessary, reboot the TIFN.

39

Type: Error

Severity: Major

Cause: The lower layer software detected a hardware fault and reported it to the T1LH.

Impact: The span will go to the faulty state. The faulty components are logged in a 16 bit register and presented as decimal values:

- Span failure 1
- Static RAM 2
- Dual Port RAM 4
- Framer 8
- Line Driver 16
- Signalling Circuit 32
- Receiver Buffer 64
- 68K Sanity 128
- T1 Transition Module 256

Action: Run an offline diagnostic to the faulty span. If necessary, replace the card.

NT: Reboot the TIFN if necessary.

40

Type: System

Severity: Info

Cause: T1LH tried to communicate with a task that was registered with T1LH but no longer exists.

Impact: That channel is out-of-service temporarily until the application comes back again. Also, more similar SEERs may come out.

Action: No action is required. When the application comes back the application will recover the channel.

NT: None.

41

Type: Debug

Severity: Info

Cause: T1LH detected the channel number is out of range.

Impact: Debugging SEERs

Action: None.

NT: None.

44

Type: Error

Severity: Info

Cause: The T1LH fails to recover itself in an error situation.

Impact: The command will be failed and the channel will be recovered once the user disconnect the current call.

Action: Check the surrounding SEERs for additional information and work according to their Action items.

NT: Reboot the corresponding TIFN.

45

Type: Error

Severity: Info

Cause: The T1LH fails to set up the time slot for the application.

Impact: Application may terminate itself. Channel will be recovered once the user disconnects.

Action: Check the surrounding SEERs for additional information and work according to their action items.

NT: Reboot the corresponding TIFN.

46

Type: Error

Severity: Info

Cause: T1LH failed to use the Voice Port Handler to complete the out dialing activities.

Impact: The command indicated in the SEER has failed and the channel will go on hook.

Action: If the SEER indicates no dial tone, check the corresponding VPH SEER. This may be either a bad channel connection or DSP problem. This can be verified further by disabling and enabling the problem channel to see if the failure is consistent. If the SEER indicates Re-order and the current command is Maintenance enable/ disable or Agent enable/ disable, check the agent login/ logout code datafilled in the hardware database. If error persists, contact your Northern Telecom support organization.

NT: Switch to the redundant link to see if the problem still exists. If it does not, the problem is with the 68K or T1 card on the original node. Replace the card following the procedures outlined in the *Card Replacement Procedures* manual (NTP 297-7001-502).

47

Type: Admin

Severity: Info

Cause: The line is not configured properly.

Impact: The outgoing call or DMS agent login/logout action will fail. The system will retry.

Action: Make sure the interface type between the channel bank and the switch is the same.

NT: Run diagnostics on the lines card in the DMS and the channel bank.

Class 48 Diagnostic Control (DC)

Diagnostic Control (DC) provides the high level interface to the diagnostic capabilities provided in DMS VoiceMail.

Diagnostic Control runs as a background task in a CLI (Command Line Interpreter) shell. Its job is to interpret the commands entered in the shell, and then command the PRM (Program Resource Manager) to load and execute diagnostic programs. During the execution of a diagnostic program it may give updated information to the diagnostic control. When it is finished, it will pass back result information.

This program is for the shop and should never be run by the customer. This class also includes the SEER codes for the stress test programs: memhog, diskdog, busbang, and testdiag.

01

Type: Admin

Severity: Info

Cause: Cannot register the task ID in the name server.

Impact: Diagnostic programs cannot communicate with diagnostic control.

Action: Contact your Northern Telecom support organization.

NT: Check the configuration of the system and restart diagnostic control.

02

Type: Admin

Severity: Info

Cause: Most likely the number of instances of the program has reached its limit.

Impact: The job cannot load and has been deleted from memory.

Action: Contact your Northern Telecom support organization.

NT: Check that the diagnostic program is on the startlist and that it has the correct number of instances; if a change to the startlist is necessary, reboot and start sysdiag again.

03

Type: Admin

Severity: Info

Cause: A job was manually removed from the jobs list.

Impact: None.

Action: Contact your Northern Telecom support organization.

NT: Check all nodes to find what program reported the non-existing job, then take appropriate action.

05

Type: Admin

Severity: Info

Cause: Memory for job storage has reached maximum capacity.

Impact: New job requested with 'tst' command has been ignored.

Action: Contact your Northern Telecom support organization.

NT: Request job later when room becomes available, or send request to designer of controller to expand size of array PQueue.

06

Type: Admin

Severity: Info

Cause: Diagnostic control cannot register with PRM.

Impact: Diagnostic control cannot restart jobs on nodes where 68K cards have been pulled out.

Action: Contact your Northern Telecom support organization.

NT: If it is necessary to pull out 68K cards, check setup and configuration of system; then run sysdiag again.

07

Type: Admin

Severity: Info

Cause: A 68K card had been removed and is now being re-inserted.

Impact: Any diagnostic programs on that node has crashed, but are now being restarted.

Action: None.

NT: None.

08

Type: Admin

Severity: Info

Cause: Abnormal sequence of node status information sent from PRM.

Impact: Diagnostic control cannot restart jobs on dead node, if a node has died.

Action: Contact your Northern Telecom support organization.

NT: If 68K card(s) have been pulled out, re-insert them into slots one by one with a few seconds interval between re-insertion.

10

Type: Admin

Severity: Info

Cause: Problems with internal management of jobs.

Impact: Data management of jobs may be corrupted.

Action: Contact your Northern Telecom support organization.

NT: These problems should never occur. Contact your Northern Telecom development organization.

21

Type: Admin

Severity: Info

Cause: Testdiag is reporting.

Impact: None.

Action: None.

NT: None.

26

Type: Admin

Severity: Info

Cause: Memhog program is reporting.

Impact: If message indicates failure, memory is faulty or memory allocation error has occurred.

Action: Contact your Northern Telecom support organization.

NT: If a failure has occurred, replace 68K board on the node with a working board.

31

Type: Admin

Severity: Info

Cause: Diskdog program is reporting.

Impact: If message indicates failure, diskdog could not start.

Action: Contact your Northern Telecom support organization.

NT: Check SCSI cable and light indicator.

41

Type: Admin

Severity: Info

Cause: Busbang program is reporting.

Impact: None. The only negative message is that the parameters are incorrect.

Action: None.

NT: None.

45

Type: Admin

Severity: Info

Cause: Debug information. Used only in the test engineering environment.

Impact: None.

Action: None.

NT: None.

50

Type: Admin

Severity: Info

Cause: A diagnostic program has returned a result for which the pass count is less than the done count.

Impact: Diagcontl indicates a failure.

Action: Recycle the faulty card.

NT: Recycle the faulty card.

Class 53 Voice Processor Diagnostics (VPD)

The Voice Processor Diagnostics (VPD) program conducts sanity and integrity tests on voice processor cards.

If an error occurs while testing a card, the diagnostics on the card are terminated. If the test was run from the MMI, the DSP will be set to the Faulty state in the Hardware Database.

A class 53 SEER contains the location code for the card being tested. Note that DSPs are numbered starting from zero. Where a card replacement is indicated, refer to *DMS Voice Mail Card Replacement Procedures* (NTP 297-7001-502).

00

Type: System

Severity: Info

Cause: General information worthy of being noted, such as voice processor diagnostics started, restarting or destroying tasks, and buffer allocation problems.

Impact: None.

Action: None.

01

Type: Error

Severity: Info

Cause: VPD program start request failed.

Impact: Diagnostics are not run on that node.

Action: Contact your Northern Telecom support organization.

NT: Make sure the calling program such as Diagnostic Control or MA_VPxx, is passing VPD the correct parameters. Ensure that the correct card type is configured in the hardware database.

02

Type: Error

Severity: Info

Cause: VPD program failed its initialization process.

Impact: Diagnostics are not run on that node.

Action: Locate the node and card of the failing diagnostic. Ensure that the card exists and is properly installed in the correct slot. Correct the situation or replace the card. If the problem persists, contact your Northern Telecom support organization.

NT: Locate the node and card of the failing diagnostic. Ensure that the card exists and is properly installed in the correct slot. Correct the situation or replace the card. If this is a memory mapping or a buffer allocation problem, unload some programs to free up more memory for VPD.

03

Type: Error

Severity: Info

Cause: DSP under test failed diagnostics.

Impact: DSP will be set to "Faulty" in the Hardware Database.

Action: Replace the card and run Out-of-Service Diagnostics from MMI. After diagnostics have passed, enable the card, and ensure that all channels are enabled.

NT: Replace the card and run Out-of-Service Diagnostics from MMI. After diagnostics have passed, enable the card, and ensure that all channels are enabled.

04

Type: Error

Severity: Info

Cause: VPD program failed to start a DSP diagnostic task or received bad task result.

Impact: Diagnostics on that DSP are terminated.

Action: Contact your Northern Telecom Support organization.

NT: Ensure that there is enough memory available on this node to run the diagnostic.

05

Type: Error

Severity: Info

Cause: VPD program failed to talk to VOM_PP on that node, or VOM_PP rejected diagnostics.

Impact: Diagnostics on that DSP are terminated.

Action: Locate the node number of the failing diagnostic program. Check the Startlist file and make sure the VOM_PP program is configured on that node. Run Out-of-Service diagnostics from MMI. If problem persists, contact your Northern Telecom support organization.

NT: Locate the node number of the failing diagnostic program. Check the Startlist file and make sure the VOM_PP program is configured on that node. Also ensure that the DSP has been put "Out-of-Service" before running diagnostics. Re-run diagnostics.

06

Type: Error

Severity: Info

Cause: The voice bus loopback test failed for the DSP under test.

Impact: Diagnostics on that DSP are terminated.

Action: Contact your Northern Telecom support organization.

NT: Replace the VP card for which the diagnostic failed. If other VP cards fail the same test, verify correct functioning of all boards in the node.

07

Type: Error

Severity: Info

Cause: The DSP marching memory test took longer than expected to complete.

Impact: None.

Action: None.

08

Type: Error

Severity: Info

Cause: The linear-to-PCM loopback test failed for the DSP under test.

Impact: Diagnostic on that DSP are terminated.

Action: Contact your Northern Telecom support organization.

NT: Replace the VP card that had the test failure.

09

Type: Error

Severity: Info

Cause: DSP under test had host interrupt pending even after attempting to clear it.

Impact: Diagnostics on that DSP are terminated.

Action: Contact your Northern Telecom Support organization.

NT: Replace the VP card that had the test failure.

10

Type: Error

Severity: Info

Cause: VOM_PP failed to raise interrupt event for the DSP under test.

Impact: Diagnostics on that DSP are terminated.

Action: Contact your Northern Telecom support organization.

NT: Replace the VP card that had the test failure.

11

Type: Error

Severity: Info

Cause: Card type found by DSP test was different than the card type passed to the diagnostic.

Impact: The DSP self-test is not run.

Action: Check that the correct card type has been configured.

NT: Check the hardware database to ensure that the correct card type has been configured. Legal card types are NVP, NVP32, and GSP. If the hardware database matches the hardware and the problem persists, replace the card.

12

Type: Error

Severity: Info

Cause: The line test for the VP card detected a line problem.

Impact: The DSP on which the test failed is marked faulty.

Action: This error could indicate a line problem on the switch or with the wiring between the switch and Meridian Mail. The VP card may also be faulty. Contact your Northern Telecom support organization.

NT: For a GSP, check that the switch and the GSP card are both configured for the same type of signalling (loop or ground start). Check the connections between the GSP card and the switch. Ensure that the trunk is operational. If the problem persists, replace the GSP card and re-run the diagnostics.

Class 55 VSA Conversion Utilities

Class 55 VSA Conversion Utilities (CU) SEERs report the events and errors that may occur during the conversion of various Voice Services such as VSDN and Voice Services profile.

01

Type: System

Severity: Minor

Cause: Current time not available.

Impact: Holidays will be updated with time of January 1, 1980 00:00:01.

Action: None.

NT: None.

02

Type: System

Severity: Info

Cause: Conversion completed.

Impact: None.

Action: None.

NT: None.

03

Type: Error

Severity: Minor

Cause: Unable to close the cabinet.

Impact: None.

Action: None.

NT: None.

04

Type: Error

Severity: Minor

Cause: Unable to close the VSDN file.

Impact: None.

Action: None.

NT: None.

05

Type: Error

Severity: Minor

Cause: Unable to unlink FCB.

Impact: None.

Action: None.

NT: None.

06

Type: Error

Severity: Minor

Cause: Unable to close DR.

Impact: None.

Action: None.

NT: None.

07

Type: Error

Severity: Major

Cause: Unable to get the FID for cabinet.

Impact: Unable to continue the conversion process.

Action: Contact your Northern Telecom support organization.

NT: Check to see if the cabinet exists.

08

Type: Error

Severity: Major

Cause: Unable to open cabinet.

Impact: Unable to continue the conversion process.

Action: Contact your Northern Telecom support organization.

NT: Check to see if there is enough heap space.

09

Type: Error

Severity: Major

Cause: Unable to find the VSDN file in cust cabinet.

Impact: Unable to continue the conversion process.

Action: Contact your Northern Telecom support organization.

NT: Check to see if the file exists.

10

Type: Error

Severity: Major

Cause: Unable to obtain the FIR.

Impact: Unable to continue the conversion process.

Action: Contact your Northern Telecom support organization.

NT: Check to see if the file exists.

11

Type: Error

Severity: Major

Cause: Unable to open the VSDN file.

Impact: Unable to continue the conversion process.

Action: Contact your Northern Telecom support organization.

NT: .Check to see if there is enough heap space.

12

Type: Error

Severity: Major

Cause: DD_FindRec operation failed.

Impact: Unable to continue the conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

13

Type: Error

Severity: Minor

Cause: No DN record exists in the VSDN file.

Impact: None.

Action: Verify that a VSDN is defined before conversion. Contact your Northern Telecom support organization.

NT: Verify that a VSDN is defined before conversion.

14

Type: Error

Severity: Minor

Cause: Unable to delete the VSDN file.

Impact: None.

Action: Contact your Northern Telecom support organization.

NT: Delete the file manually.

15

Type: Error

Severity: Minor

Cause: Unable to move the VSDN file to the garbage cabinet.

Impact: None.

Action: Contact your Northern Telecom support organization.

NT: Move the file manually.

16

Type: Error

Severity: Major

Cause: DD_GetRecDesc operation failed.

Impact: Unable to continue the conversion process.

Action: Contact your Northern Telecom support organization.

NT: Check the return code.

17

Type: Error

Severity: Major

Cause: Unable to read DN from the VSDN file.

Impact: Unable to continue the conversion process.

Action: None.

NT: None.

18

Type: Error

Severity: Major

Cause: Unable to read the ServId Record for DN.

Impact: Unable to continue the conversion process.

Action: Contact your Northern Telecom support organization.

NT: Check the return code.

19

Type: Error

Severity: Major

Cause: The number of DN and ServId entries are not equal.

Impact: Unable to continue the conversion process.

Action: Contact your Northern Telecom support organization.

NT: Check the return code.

20

Type: Error

Severity: Major

Cause: Unable to open the DR.

Impact: Unable to continue the conversion process.

Action: Contact your Northern Telecom support organization.

NT: Check to see if there is enough heap space.

21

Type: Error

Severity: Major

Cause: DR_FindEntry operation failed.

Impact: Unable to continue the conversion process.

Action: Contact your Northern Telecom support organization.

NT: Check the return code.

22

Type: Error

Severity: Major

Cause: Unable to add DN to the DR Entry.

Impact: That particular DN cannot be converted to the DR Entry.

Action: Contact your Northern Telecom support organization.

NT: Recreate the DN manually after conversion is completed.

23

Type: Error

Severity: Major

Cause: Unable to link FCB.

Impact: Unable to continue the conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

24

Type: Error

Severity: Major

Cause: Number of DN fail to convert.

Impact: Certain DN failed to convert.

Action: Contact your Northern Telecom support organization.

NT: Recreate those DN which failed manually after conversion is completed.

25

Type: Error

Severity: Major

Cause: Conversion is partially done.

Impact: Certain DN fails to convert.

Action: Contact your Northern Telecom support organization.

NT: Recreate those DN which failed manually after conversion is completed.

26

Type: Error

Severity: Major

Cause: Conversion failed.

Impact: VSDN conversion failed.

Action: Contact your Northern Telecom support organization.

NT: Retry the conversion routine.

27

Type: System

Severity: Info

Cause: The VSDN file is moved to the garbage cabinet.

Impact: None.

Action: None.

NT: None.

28

Type: System

Severity: Info

Cause: Number of DN or ServId to be converted.

Impact: None.

Action: None.

NT: None.

29

Type: System

Severity: Info

Cause: The VSDN file is successfully deleted.

Impact: None.

Action: None.

NT: None.

30

Type: System

Severity: Info

Cause: DN already exists in the DR Entry.

Impact: No VSDN Conversion is required on this particular DN.

Action: None.

NT: None.

31

Type: System

Severity: Info

Cause: Converting DN into the DR VSDN Entry.

Impact: None.

Action: None.

NT: None.

32

Type: System

Severity: Info

Cause: DN successfully converted DR VSDN entry.

Impact: None.

Action: None.

NT: None.

33

Type: Error

Severity: Major

Cause: Information contained in the VSDN is incorrect. The number of digits in the VSDN entry is either less than the local DN length or greater than system DN length.

Impact: The VSDN cannot be converted.

Action: Check the VSDN, Local DN length or System DN length for errors or contact your Northern Telecom support organization.

NT: Check the VSDN, Local DN length or System DN length for errors.

34

Type: Error

Severity: Major

Cause: The sum of the length of the NPA supplied and the length of the VSDN itself is less than the system DN length so there is not enough information to fill the Expansion Digits field.

Impact: Conversion cannot be performed for this VSDN.

Action: Check VSDN, NPA and System DN length for errors or contact your Northern Telecom support organization.

NT: Check VSDN, NPA and System DN length for errors.

35

Type: Error

Severity: Major

Cause: The mailbox ID is too long. Either the mailbox ID itself or the mailbox ID together with the NPA is longer than the system DN length.

Impact: Unable to expand the mailbox ID.

Action: Check Mailbox ID and System DN length for errors or contact your Northern Telecom support organization.

NT: Check Mailbox ID and System DN length for errors.

36

Type: Error

Severity: Major

Cause: System DN length has not been defined.

Impact: Unable to continue the conversion process.

Action: Define a system DN length and re-run conversion or contact your Northern Telecom support organization.

NT: Define a system DN length and re-run conversion.

37

Type: Error

Severity: Major

Cause: Local DN lengths have not been defined for the customer OR they are greater than System DN length.

Impact: Expansion Digits cannot be filled for the customer. Only a partial conversion can be done: expansion of Mailbox IDs.

Action: Check customer local DN lengths and system DN length for errors or contact your Northern Telecom support organization.

NT: Check customer local DN lengths and system DN length for errors.

38

Type: Error

Severity: Minor

Cause: Unable to close a profile. This occurred when trying to close a customer or system profile and may indicate a possible corrupted profile.

Impact: Heap loss may occur. Otherwise, conversion may continue as usual.

Action: Contact your Northern Telecom support organization.

NT: Check the return code. Check profile noted in the SEER for possible corruption.

39

Type: Error

Severity: Major

Cause: dr_NextEntry operation failed. Possible System Error.

Impact: Unable to continue the conversion process.

Action: Try re-run conversion. Contact your Northern Telecom support organization.

NT: Check the return code. Try to re-run the conversion.

40

Type: Error

Severity: Major

Cause: Unable to add a Cabinet.

Impact: Unable to continue the conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

41

Type: Error

Severity: Minor

Cause: The Service ID is invalid.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

42

Type: Error

Severity: Minor

Cause: DD_Create operation failed.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

43

Type: Error

Severity: Minor

Cause: Unable to add the Service ID File.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

44

Type: Error

Severity: Major

Cause: Unable to open the Organization Directory.

Impact: Unable to continue the conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

45

Type: Error

Severity: Minor

Cause: DD_Read operation failed.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

46

Type: Error

Severity: Minor

Cause: DD_QuickInfo operation failed.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

47

Type: Error

Severity: Minor

Cause: DD_CrtRec operation failed.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

48

Type: Error

Severity: Minor

Cause: DD_Add operation failed.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

49

Type: Error

Severity: Minor

Cause: DD_Write operation failed.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

50

Type: Error

Severity: Minor

Cause: DD_CopyRec operation failed.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

51

Type: Error

Severity: Minor

Cause: cm_UpdtFile operation failed.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

52

Type: Error

Severity: Major

Cause: Unable to read the System Profile.

Impact: Unable to continue the conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

53

Type: Error

Severity: Major

Cause: Unable to read the Customer Profile.

Impact: Unable to continue conversion process.

Action: None.

NT: None.

54

Type: Error

Severity: Major

Cause: Unable to read the Admin Language Record.

Impact: Unable to continue conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

55

Type: Error

Severity: Major

Cause: Unable to read the Admin Login Record.

Impact: Unable to continue conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

56

Type: Error

Severity: Major

Cause: Unable to move the new Voice Service Cabinet.

Impact: Unable to continue conversion process.

Action: None.

NT: None.

57

Type: Error

Severity: Minor

Cause: Unable to read the Voice Services Profile.

Impact: Unable to continue conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

58

Type: Error

Severity: Minor

Cause: The FIR for the Voice Service File is invalid.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

59

Type: Error

Severity: Major

Cause: Unable to obtain the FIR for the Cabinet.

Impact: Unable to continue the conversion process.

Action: None.

NT: None.

60

Type: Error

Severity: Major

Cause: Unable to obtain the FID for the Cabinet.

Impact: Unable to continue the conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

61

Type: Error

Severity: Major

Cause: Unable to remove the old Voice Service Cabinet.

Impact: Unable to continue the conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

62

Type: Error

Severity: Minor

Cause: Unable to open the Voice Service File.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

63

Type: Error

Severity: Minor

Cause: Unable to find the specified record in the file.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

64

Type: Error

Severity: Minor

Cause: Unable to obtain FIR for the Voice Service File.

Impact: The Voice Service File is not converted and will be moved to garbage cabinet.

Action: None.

NT: None.

65

Type: Error

Severity: Minor

Cause: Unable to obtain FID for the Voice Service File.

Impact: The Voice Service file is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

66

Type: Error

Severity: Minor

Cause: Unable to find the DR entry.

Impact: The Voice Service File is not converted and will be moved to the garbage cabinet.

Action: None.

NT: None.

67

Type: Error

Severity: Minor

Cause: Unable to add the Voice Service entry to the DR.

Impact: The Voice Service file is not converted and will be moved to the garbage cabinet.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

68

Type: Error

Severity: Major

Cause: Unable to open the specified cabinet.

Impact: Unable to continue the conversion process.

Action: Check the return code. Contact your Northern Telecom support organization.

NT: Check the return code.

70

Type: Error

Severity: Minor

Cause: Unable to change the VSDN table entries.

Impact: Unable to automatically change the DNs.

Action: To get around this problem use the MD_DR utility. Contact your Northern Telecom support organization.

NT: Use the MD_DR utility.

71

Type: Error

Severity: Minor

Cause: Unable to fix the Voice Service definitions.

Impact: Unable to automatically change the Service definitions.

Action: To get around this problem use the MD_DR utility. Contact your Northern Telecom support organization.

NT: Use the MD_DR utility.

Class 56 Centralized Call Answering (CCA)

Centralized Call Answering (CCA) receives the user's voice messaging commands and executes them by calling the Voice Handler and Voice Processor.

Most CCA errors affect only one call or user's session (unless the error is a symptom of a hardware problem). For most serious problems diagnosed by CCA, the call is routed to the system attendant DN and CCA releases memory and files for the next call.

A class 56 SEER contains

- lower level return code
- the user's mailbox number or DN (if relevant). If a mailbox included in a SEER is the user's mailbox (i.e., the login user or the recipient in a call answering session), then the mailbox number is output in the administrator's (the prime) context. Thus, since the administrator is the one looking at the SEERs, the SEER will be more meaningful to him or her

Class 56 SEERs are often preceded by a related SEER which has the same mailbox number or the same return code.

In addition, some Class 56 SEERs may be followed by one or two related SEERs which are used by Northern Telecom support organizations to trace problems. These debugging SEERs are normally not printed, but are stored in the SEER history file, and can be viewed/printed using the MMI or the SE_UTIL utility (to enable printing of these SEERs, the SEER filter level must be set to 'DEBUG' using the SE_UTIL utility). These debugging SEERs are intended to be used by the Northern Telecom support organization only.

Format of CCA debugging SEERS

If the text of any Class 56 SEER begins with the '+' character, this means that additional related debugging SEERS will be written into the SEER file. These SEERS will have the same SEER class, number, and return code as the CCA SEER containing the '+' character, and are printed AFTER the original CCA SEER. The first debug SEER is 'VM Cmds' and can be used by the CCA designers to determine the last 20 commands issued by the user. The second debug SEER is 'VM Procs' and can be used to determine the software execution path (this second debugging SEER is only printed if the Debug level is higher than zero, set using the AD_UTIL utility).

01

Type: Error

Severity: Minor

Cause: VM encountered a problem while playing.

1. If the text says "Create Acknowledgement", VM failed to create and send an acknowledgement.
2. If the text says "Playing NDN/ACK prompt", VM failed to open or play messages correctly.
3. If the text says "Playing NDN/ACK attachment" or "Playing attachment" or "Playing attachment prompt", VM failed to open or play attachments correctly.
4. If the text says "Playing from beginning" or "Playing start prompt", VM failed to open or play messages correctly.
5. If the text says "Play Prompt called with prompt files released", VM tried to play a prompt before the prompt files were initialized or after they were released.
6. If the text says "Trying to skip forward in msg", VM encountered an error when the user skipped forward while playing a message. There are two possible causes: i) an attachment on the message could not be opened, or ii) the lower-level VH software could not perform the PlaySkip command.
7. If the text says "PlayPrompt problems", VM was informed of an error by the lower level VX software while trying to play a system prompt (not user voice). A possible cause of this problem is corrupt data in a message header or user's profile, or an invalid time-stamp. A related class 21 SEER is printed just before this, containing the prompt ID that it was attempting to play.

The return code isolates the cause.

Impact: Case 1 The recipient of the original message will not hear any error prompts.

Case 2-3. The user hears the error prompt "Your command cannot be complete at this time. Please try again later or contact your administrator."

-
- Case 4 “This message cannot be played. To delete it, press 3.”
- Case 5. No prompt is played.
- Case 6. The user hears the prompt “Your command cannot be completed at this time ...”, and the skip forward command will fail. The skip forward command will not send a message delivery acknowledgement in this error condition.
- Case 7. The prompt will not be played, or will be partially played, or will be played as silence. In some cases, the software depends on successful playback of a prompt. In these cases the user’s session will appear to be inactive (i.e., the session may appear “hung”).
- Action: Cases 1-6 Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Collect all relevant information and contact your Northern Telecom support organization.
- Case 7. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Collect all relevant information (including the prompt ID from the previous Class 21 SEER) and contact your Northern Telecom support organization.
- NT: Case 1-6. If the return code does not point to the problem, notify your Northern Telecom development organization.
- Case 7. If the previous class 21 SEER says that data is out-of-range, check system data bases for corruption, looking specifically at data indicated by the prompt ID and user scenario.

04

Type: Error

Severity: Minor

- Causes:
1. VM encountered a problem while trying to start recording at the current position of a previously created message. The return code isolates the cause.
 2. If the text says “Failed to commit message” then VM had a problem doing incremental saves on a large message.
- Impact:
1. The user will hear the error prompt “Your command cannot be completed at this time. Please try again later or contact your administrator”.
 2. Recording will be stopped and the user will hear an error prompt. If it is in a call answering session the call will be disconnected. The message may or may not exist as recorded or it may be corrupt. In addition, the user volume on the disk may reach a safety limit, which will prevent call answering from working.

If this happens, the problem will clear automatically during the overnight audits.

- Action:
1. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
 2. User-recorded voice messages are auto-saved every 5 minutes of recording. This is failing, and your Northern Telecom support organization should be called. However, in the mean time, you may wish to temporarily reduce the maximum message length to less than 5 minutes. This will avoid the problem until it can be corrected.
- NT:
1. If the return code does not point to the problem, notify your Northern Telecom development organization.
 2. The message is committed every 5 minutes to free up block record resources in the volume server. If this is failing, the BR's may be improperly allocated. An audit on the affected user volume should be run to clean up the side effect of the problem.

13

Type: Error

Severity: Minor

Cause: VM encountered an error while a user was logging in. The error occurred during the initial login or after the user issued the login command. If the text says:

- Case 1. "New Var of UserInfo", VM failed to acquire memory space for a new variable called "UserInfo".
- Case 2. "Opening cabinet", VM failed to open the user's cabinet.
- Case 3. "Finding Profile", VM failed to find the user's personal profile.
- Case 4. "Opening Profile", VM failed to open the user's personal profile.
- Case 5. "Updating Org Directory" VM failed to update the organizational directory if a user's password had expired.
- Case 6. "Failed to associate client", VM failed to register the user as currently using VM.
- Case 7. "vhCloseV", VM encountered an error while updating or closing the user's cabinet after the user tried to use the login command.
- Case 8. "cmFlushM", VM encountered an error while updating or closing the user's cabinet.

- Case 9. “cmCloseM”, VM encountered an error while updating or closing the user’s cabinet.
- Case 10. “cmCloseC”, VM encountered an error while updating or closing the user’s cabinet.
- Case 11. “ClosePrf”, VM failed to close the personal profile while logging in from VM.
- Case 12. “Opening first message”, VM failed in the procedure “cm_MenuToFIR” which finds and opens the first message.
- Case 13. “Check/Playing summary”, VM encountered an error while inspecting the user who was logging in.
- Case 14. “Password Violation,” VM discovered if “Password Violation by <DN>” someone consecutively entering more than the maximum allowed number of incorrect passwords. The affected mailbox and the calling DN, if known, are given and the mailbox is disabled. If a non-zero lockout reset time has been specified for the customer group (Voice Security screen), then the mailbox will automatically be re-enabled after that time.
- Case 15. “Cannot read MWI for guest”.
- Case 16. “Problem in logincheck/Playing Summary”.
- Case 17. “Cannot read component phone number record” or “Cannot read component time period”, then an error was encountered while checking remote notification being turned off externally for a mailbox.
- Case 18. “Failed to set volume level prior to login” VM had problems setting the volume level to the level stored in the calling DN’s personal profile.
- Case 19. “Failed to set volume level after login”. VM had problems setting the volume levels to the subscribers saved volume level.
- Case 20. “Cannot read outcalling record.” VM could not read the outcalling record for the subscriber.
- Case 21. “RN DN cannot be reached.” The number to be called for remote notification cannot be reached.
- Case 22. “Failed redirect - inconsistent db.” The entered mailbox number exists in the DNSCRN for the current SPM, however, the mailbox does not exist.
- Case 23. “...CloseSNFC13”. VM had problems closing the spoken name file cabinet when the subscriber pressed “*” from the main menu in order to login to another mailbox.
- Case 24. “...CloseTempProf..” VM had problems closing the PDL temporary file when the subscriber pressed “*” from the main menu to login again.

- Case 25. "...Intro Cntrs". VM had problems getting the cabinet counters for the mailbox.
- Case 26. "...Update MWI". VM had problems setting the subscribers MWI at log-off (preparing for login to another mailbox).
- Case 27. "...ChgMode CRej". The user is logging in from call answering and had calls rejected due to a full mailbox. VM attempted to change the mode that the profile control block is into quick read/write.
- Case 28. "...cmchgmode". Could not change the mode of the user's cabinet (variable) to quick read/write.
- Case 29. "...rnNlogout". Could not update the outcalling service.
- Case 30. "Failed to get default record". The subscriber has RN or DNU (delivery to non-user) capabilities. However, the outcalling record was not found so VM attempted to create a general outcalling record but failed to do so.

The return code isolates the cause.

- Impact:
- Case 1-6. The user will not be allowed to log in.
 - Case 7-10. The user will be allowed to log in. New messages or changes to existing messages may not be reflected the next time the user logs into the mailbox.
 - Case 10-13. The user will not be allowed to log in.
 - Case 14. The user will not be allowed to log in until the administrator re-enables the user's mailbox.
 - Case 17. The user will not be notified that his remote notification had been turned off externally (however, probably indicates that there will be further problems with remote notification).
 - Case 18. Volume level of prompts will remain at normal level.
 - Case 19. Volume level will remain the same.
 - Case 20. The Remote Notification Summary is not played during login.
 - Case 21. The user cannot be remotely notified with the present RN DN.
 - Case 22. At some point a user has been deleted from the DR but not from the DNSCRN table.
 - Case 23. VM will still attempt to log off the subscriber and set up for the user to log in again.
 - Case 24. Same as case 23.
 - Case 25. The MWI may not be set properly.
 - Case 26. MWI may be set incorrectly.
 - Case 27. Profile cannot be written to.

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- Case 28. Possibly the OCS (outcalling service) will not get updated and remote notification will not be activated.
- Case 29. See case 28.
- Case 30. The login attempt will fail and the user will be prompted for the mailbox/password again.
- Action: Case 1-12. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- Case 13. The Administrator must re-enable the mailbox.
- Case 17. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- Case 18. Check the VSL return code or contact your Northern Telecom support organization.
- Case 19. Check the VSL return code or contact your Northern Telecom support organization.
- Case 20. Check the ad return code or contact your Northern Telecom support organization.
- Case 21. The remote notification DN must be changed for the user.
- Case 22. Check the DR for the user (to make sure the record does not exist) and then delete the number from the DNSCRN table.
- Case 23. Check dd return code or Contact your Northern Telecom support organization.
- Case 24. Same as case 23.
- Case 25. Check rc or contact your Northern Telecom support organization.
- Case 26. Check rc or contact your Northern Telecom support organization.
- Case 27. Check rc or contact your Northern Telecom support organization.
- Case 28. Check rc or contact your Northern Telecom support organization.
- Case 29. See case 28.
- Case 30. Check the Ad return code or contact your Northern Telecom support organization.
- NT: Case 2. Ensure that the user's cabinet exists and can be opened using MD_CM. Ensure that the user's cabinet FID in DR is correct using MD_DR.

- Case 3-4. The user's profile may be corrupt. Attempt to re-build it using AD_UTIL. If this does not help, contact your Northern Telecom development organization.
- Case 5. Ensure that the user's DR entry is accessible using MD_DR, and re-build it if necessary.
- Case 6. Ensure that the VCA program is running using PRM_CONTROL, and restart it if necessary.
- Case 11. Check for corruption in the user's cabinet using MD_CM.
- Case 13. The user's mailbox was disabled due to too many bad password attempts. The calling DN (person trying to illegally log in) is encoded at the end of the SEER in ASCII text string format.
- Case 17. The user's profile may be corrupt. Attempt to re-build it using AD_UTIL. If this does not help, contact your Northern Telecom development organization.

In all other cases, if the return code does not point to the problem, notify your Northern Telecom development organization.

14

Type: Error

Severity: Minor

Cause: VM encountered a greeting problem. The text indicates the cause. If the text says:

1. "Opening", VM encountered an error while gaining access to a personal greeting.
2. "Update greeting". VM encountered an error while accessing, reading, or writing a personal greeting.
3. "Delete greeting". VM failed to delete personal greeting.
4. "Clear grt in prof". Voice messaging detected an inconsistency in the user's greeting in his/her personal profile. The attempt to rectify the inconsistency failed.
5. "Closing greeting", "Closing custom greeting", or "Second attempt to close custom greeting". An attempt to close a greeting failed.

The return code isolates the cause.

Impact: Cases 1-2. The greeting will not be altered.

Case 3 The user will hear the error prompt "Your command cannot be completed at this time. Please try again later".

Cases 4. Subsequent attempts to reference the greeting will fail. Call answering sessions will use the standard greeting.

Case 5. A heap loss may be detected when the call completes, resulting in a channel reload.

Action: Determine the scenario that caused the problem. Look up the return code for more information. If the code does not help, contact your Northern Telecom support organization. Note that persistent SEERs on opening or playing Custom Greetings could be caused by failing to record a greeting after setting the greeting record to “custom”.

NT: If a personal greeting is involved, the user’s profile may be corrupt. If a system greeting is involved, the OrgProfile may be corrupt. Re-build the affected profile if necessary, using AD_UTIL.

21

Type: Error

Severity: Minor

Cause: VM encountered an error while gaining access to, reading, or writing the password information. The return code isolates the cause.

Impact: The user’s password will not be updated. The user will hear the error prompt “Your command cannot be completed at this time. Please try again later or contact your administrator.”

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: The user’s profile may be corrupt. Check and re-build it if necessary using AD_UTIL.

22

Type: Error

Severity: Minor

Cause:

1. “Opening a spoken name.” VM could not open the file containing spoken names.
2. “Deleting Voice” or “Closing Voice”, or “Closing spoken name”. The requested action of deleting information or closing a file failed.
3. “opening detfid” or “closing detfid” or “Finding submailbox spoken name”. An error occurred trying to determine if a submailbox has a spoken name.
4. “SubMbx Maint: Opening Main Mbx Spoken Name”. Failed to open spoken name for the main mailbox.

5. "Open Detfid in SMDis" or "remove sn in SMDis" or "Close detfid in SMDis". Failed to remove the spoken name for a partially set submailbox that was cancelled.
 6. "Could not open sn". Could not open spoken name file during submailbox creation or spoken name change.
- Impact:
- Case 1. Depends on context.
 - Case 2. The spoken name may not be deleted. There may be a heap loss resulting in a channel reload once the call has completed.
 - Case 3. The application will treat the submailbox user as if he/she had no spoken name set up.
 - Case 4. Will default to no spoken name available.
 - Case 5. No impact on the caller.
 - Case 6. The action will not be allowed. The user will hear, "Your command cannot be completed at this time. Please try again later."
- Action:
- Case 1. Examine subsequent SEERs that will be issued.
 - Cases 2-5. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
 - Case 6. Check the return code for more information, along with previous SEERs issued. If this does not help, contact your Northern Telecom support organization.
- NT: 1-6 It is possible that the user's DR entry may be corrupt. Check and rebuild the affected user's DR entry if necessary using MD-DR. If this does not work contact your Northern Telecom development organization.

23

Type: Error

Severity: Minor

Cause: VM encountered a problem while attempting to use a Personal Distribution List (PDL). If the text says:

1. "Could not delete Pers Dist List". An attempt to delete a PDL failed.
2. "Could not record Pers Dist List". An attempt to create a new PDL or change an existing PDL failed.
3. "Read PDL entry", or "Reading PDL record". An attempt to an address in the PDL from the disk failed.
4. "Addr Conv PDL Entry". Bad data was found in a PDL entry read off the disk.

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5. "Validation of PDL Entry". Bad data was found in a PDL entry off the disk.
 6. "Could not close Pers Dist List". The PDL previously opened could not be closed.
 7. "NEmp PDL addressing" or, "PDL NU addressing", or "PDL AMIS Address". An error occurred during the validation of an address a user added to a PDL.
 8. "Emp PDL addressing". An error occurred during the attempt to cancel the last address a user added to the PDL.
 9. "Reading PDL/Map". An attempt to determine which PDLs are used and which are not failed.
- Impact: Case 1. The PDL may not have been deleted.
- Case 2. The user will hear "Your command cannot be completed at this time. Please try again later".
- Cases 3-5. The PDL could not be dealt with. The command will be cancelled and the user will be disconnected.
- Case 6. Any changes made to the PDL may not be saved.
- Cases 7-9. The PDL change will be cancelled.
- Action: Cases 1-9, Check the return code as well as any preceding or subsequent SEERs for more information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- NT: Personal Distribution Lists are stored in the user profile of each mailbox. Errors in handling PDLs can generally be cleaned up by deleting the affected PDL record in the Profile file. This can be done using the MD utility (record type is ByteStream, record ID = PDL number). The PDL record will be recreated (but empty) the next time the user enters that PDL number in PDL SETUP.
- If this fails to work, the entire Profile can be deleted then recreated using AD_UTIL (or by copying from another user and modifying appropriately). Also note that some PDL operations make use of a temporary copy of the Profile. If a PDL operation fails, this temporary file may not immediately be cleaned up properly. The result is that the text storage on the user volume may temporarily be increased erroneously. To delete this temporary file an audit of the user volume can be run (but this happens automatically overnight anyway).

25

Type: Error

Severity: Minor

Cause: VM failed to create a new message. The return code isolates the cause.

Impact: The user may encounter more problems performing further operations on the message. A call answering or express message may not have been created in the user's mailbox.

Action: Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: This will normally be caused by a problem with the file system (for example, volume full condition or incorrect VS formatting parameters) or a problem with the disk subsystem. Verify correct configuration of the volumes. Check and repair SCSI components if necessary.

26

Type: Error

Severity: Minor

Cause:

1. VM encountered an error while adding a message to the user's cabinet, as indicated by the SEER text.
2. If the text says "Adding new Arrival" or "New Arrival", VM encountered an error while adding a message to the user's message list.
3. If the text says "AddMsg failed in rnMsgArrival" then there was a failure telling the OCS that a message had been deposited for someone by VM.

The return code isolates the cause.

Impact: Case 1-2. The messages will be lost.

Case 3. The recipient will not be "remote-notified" of the message.

Action: Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: This scenario can occur when a new message is sent to a user who is currently logged in. Attempt to reproduce the problem by sending composed and call-answering messages to a logged-in user. (The user must move to the next message before the new message can be received).

This scenario can also occur any time a new message is added to a mailbox by way of compose, send-receive, call answering, or express messaging. For cases 1 and 2, check for volume full condition. For case 3, check that the OCS software is loaded and running (use PRM_control utility).

27

Type: Error

Severity: Minor

Cause: VM encountered an error while gaining access to, opening, or reading the message. The return code isolates the cause.

Impact: The user will hear one of six error prompts:

1. "Your command cannot be completed at this time. Please try again later or contact your administrator."
2. "Your mailbox is full. You cannot create new messages until some messages are deleted. Please contact your administrator if you need assistance".
3. "The system has reached its storage limit. Your command cannot be continued. Please contact your administrator for assistance."
4. If the text says "Inconsistent Times in Msg" then there is no impact whatsoever. This SEER can be ignored in all cases; it should not have been printed.
5. If the text says 'Late Msg' or 'More Info', then a user has received a message that was sent more than 10 minutes ago.
6. If the text says "Deleted IP Msg in Mbx", then an acknowledgement or non-delivery notification was found in a mailbox that supports call answering only. The message is deleted with no impact to the user.

Action: Case 1. Look up the return code for more information. If the code does not help, contact your Northern Telecom support organization. If the text of the SEER refers to "trying to open message" with a return code of 1007, this and subsequent 56-27 and 56-33 SEERs are not significant problems unless a number of them occur at once. The user can clean up any inconsistencies caused by this problem by deleting the offending message.

- Case 2. The user should delete some messages or the administrator should increase the user's voice storage allocation. If this does not help, contact your Northern Telecom support organization.
- Case 3. That user's volume is full. User's should be reminded to delete all unnecessary messages. Auto-deletion of sent or read messages can be enabled. If this does not help, contact your Northern Telecom support organization.
- Case 4,6. None. Please ignore this SEER.
- Case 5. Advise the user shown in the SEER not to delete any messages in the mailbox, so that these can be studied by Northern Telecom support organization. Contact your Northern Telecom support organization. Information in this SEER is as follows:
- HDR.DR is the time the message was left/sent/time-delivered .
 - FIR.DC is the time the message arrived in the recipient's mailbox.
 - R= is the number of recipients.
 - +B means this is a broadcast message.
 - +S means the message was sent to a system distribution list.

The FID of the message is also included; if the user has deleted the message from his mailbox, the FID can be used to find the message if it exists in anyone else's mailbox. If the message was sent to a large system distribution list, or is a broadcast message, or if a broadcast message or one with a large distribution list exists in the users mailbox prior to the late message, then this SEER can be ignored. Otherwise print out the following information and contact your Northern Telecom development organization:

1. The message contents using the MD-MT utility.
2. The user's cabinet contents using "displaye" in the MD-CM utility.
3. The contents of any system distribution list that the message was sent to.

NT: If this SEER occurs with any regularity, you may find it useful to turn on the Session Trace feature. See the Operations Measurements section in the *ETAS Utilities* (555-7001-260) document. The Session Trace feature will track each interaction with a mailbox so that the resulting messages can be traced.

28

Type: Error

Severity: Minor

Cause: VM encountered an error while entering or committing the cabinet, or while updating the menu. The return code isolates the cause.

Impact: Changes, if any, may not take effect.

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: The user's cabinet may be corrupt. Attempt to open the cabinet using MD_CM, and delete and re-build the mailbox if any corruption is found.

29

Type: Error

Severity: Minor

Cause: 1. VM encountered an error while updating the menu.
2. VM encountered an error while gaining access to, or reading the personal profile, or while trying to turn off the message waiting indicator (MWI).

The return code isolates the cause.

Impact: Case 1. Any changes to the message may not be reflected the next time the user logs in.

Case 2. The MWI may be set incorrectly.

Action: Case 1-2. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

Case 2. To reset the MWI, send a new message to the user's mailbox, then have the user log in and read all messages that are new. The MWI should now be set correctly.

NT: Case 1. See SEER 28.

Case 2. The MWI can be reset using the GTI_PKG utility. If the problem persists, contact your Northern Telecom development organization.

30

Type: Error

Severity: Minor

Cause: VM could not close a message. The return code isolates the cause.

Impact: The user may encounter more problems performing further operations on that message.

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: See SEER 28.

31

Type: Error

Severity: Minor

Cause: VM was unable to update a user's cabinet to reflect the deletion of a message.

1. If the text says "Opening Msg in DelAll", the message could not be opened for deletion/restoration during a request to delete messages.
2. If the text says "Updating Msg in DelAll", the message could not be marked as deleted/restored during a request to delete messages.

Impact: The message may not be deleted/restored.

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: See SEER 28.

32

Type: Error

Severity: Minor/Critical

Cause: VM was unable to acquire sufficient initial resources to begin a session. The text message indicates the cause. If the text says:

1. "Switching services: CA-VM", the user tried to log in from a call answering session and VM encountered a problem trying to switch to a voice messaging service.
2. "Cannot switch to prompt files for language", VM had problems resetting the language of the system prompt files.

3. “Problems in vm - Logoff called”, VM had already detected a problem and failed to obtain information from the voice services shell on details of the Calling and Called DNs.
4. “Getting call info. on service transfer”, VM had a problem obtaining information from the voice service shell after the VSS had invoked it.
5. “Getting vm control block”, VM had a problem obtaining heap to store its global data record.
6. “VM: VM svc - fails to bind routines”, a bad service ID was used in the procedure that associates the VM routines with the VSS.
7. “VM: CA svc - fails to bind routines”, a bad service ID was used in the procedure that associates the VM routines with the VSS.
8. “PhoneDN was calling Called DN”, VM encountered a serious problem and has terminated the call.
9. “User not subscribed to Call Answering forwarded to VM, DN”, VM encountered a problem during call-answering and has terminated the call. Either a non-user of voice messaging had his phone forwarded to the DMS VoiceMail DN (the user has a mailbox but it may not receive Call Answering messages), or there was a serious directory problem. In this particular cause, the SEER code is considered Type: Admin. and Severity: Info.
10. “Could not find parser/state table”, the incorrect parser tables were loaded by vss.pd. The table numbers are: 0-generic DMS VoiceMail, 1-guest voice messaging, 3-post checkout and 4-VMUIF call answering.
11. “Error playing custom login”, the custom login greeting was not recorded or some other greeting error has occurred.
12. “Error playing custom intro greeting”, the intro custom greeting was not recorded or some other greeting error has occurred.
13. If the text says “Bad connection timestamp in StartVM”, then VM was unable to get the time of original connection to the service.
14. If the text says “Could not get DN for Call Sender”, VM was unable to get the DN type and number of the calling number in StartProc (VM initialization).
15. If the text says “Getting space alloc/used” then the space allocation and space used parameters could not be obtained from the VS for the mailbox indicated.
16. If the text says “Calling DN: x CalledDN: x Dev: x Type: x CustNum: x”, the call could not be answered or the initial prompt such as ‘Welcome to Call Answering’ could not be played. Possible problems are link outages, VPIO task dead, and voice port faulty.
17. “get subcounters for mwisummary”, could not read in the message information for the mailbox or submailbox.

18. "play prompt". VM could not play the following message: "Messages waiting for...".
19. SEER says "Opening DetFID for MWI summary". VM could not open the file for spoken names.
20. SEER says "Cannot get DR entry". VM failed to get the directory info for a user logging in from a voice menu or Remote Notification.
21. "NewVar of UserInfo". VM could; not allocate memory to store the user information.
22. "Getting SPM info on Service Transfer". VM had problems get information from VSH on a redirected call (from another SPM).
23. "Play MWI Summary". VM had a problem playing the Spoken Name.
24. "Play rest of login after MWI summary". VM had problems playing the appropriate login prompt after playing the message waiting list (ie., please enter your password...").
25. "Problem Completing login of User". Occurs after the user has successfully logged in. VM had trouble finishing up the login stage. Could be accompanied by the SEER: "Problem in logincheck/Playing summary".

The return code isolates the cause.

- Impact:
- Case 1. The user will hear the error prompt and will return to where the log in command was entered.
 - Case 2. If the previous language was different from the new language, the system will try to switch back.
 - Cases 3-5. The user will probably not be connected with the desired service.
 - Cases 6-9. See Action.
 - Case 10. The service will not be available.
 - Case 11. If the greeting is not recorded, the service continues. If some other error is occurring, the service discontinues.
 - Case 12. The greeting is not played.
 - Case 13. OM reports on service usage may be incorrect and other features involving times may not work correctly (i.e. timed delivery, remote notification setup).
 - Case 14. User may not be able to perform Call Sender function during session.
 - Case 15. Session will continue. If the user's mailbox is full, this will not be announced during login, and call answering will not be blocked even if this feature is enabled.
 - Case 16. The call is disconnected and the user will hear a partial prompt or no prompt at all.

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- Case 17. The message waiting summary (for submailboxes) is not played. The user is still logged in.
 - Case 18. Same as 17.
 - Case 19. The message waiting summary will be given without the spoken name.
 - Case 20. The VM session will disconnect; however, the system will exit gracefully.
 - Case 21. The call will be dropped.
 - Case 22. The call will be dropped.
 - Case 23. The message waiting summary will stop playing and the user will begin to log in.
 - Case 24. The user will have to wait for the delay prompt (or press 0).
 - Case 25. May cause user to re-login or may just fail to turn RN back on.
- Action:
- Case 1. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
 - Case 2. Examine the related SEERs. Check that the preferred language of the user is a valid, installed language. Note: "Preferred language override" only applies to Call Answering and Express Messaging.
 - Case 3. Examine subsequent SEERs containing the same DN or user or mailbox for more information.
 - Case 4. Examine the preceding SEERs for more information.
 - Case 5-7. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
 - Case 8. Examine the preceding SEERs for more information. If there are no preceding SEERs, the problem might be either that a non-VM user forwarded his or her phone to VM or the directory has a serious problem.
 - Case 9. Define a mailbox for the non-user or stop the offending telephone from being forwarded to VM.
 - Case 10. Contact your Northern Telecom support organization to replace the incorrect vss.pd.
 - Case 11-12. Record a greeting, and if the problem persists, check the return code and contact your Northern Telecom support organization.
 - Case 13. Ensure that the time is set correctly. If problem persists, contact your Northern Telecom support organization.
 - Case 14. If problem persists, contact your Northern Telecom support organization.
 - Case 15. Act according to the return code indicated.
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- Case 16. If problem persists, contact your Northern Telecom support organization.
- Case 17. Check the return code in cm_EntryNotFound-_couldn't find the submbx info specified or in DD rc. If the problem persists contact your Northern Telecom support organization.
- Case 18. Check the return code. If the rc does not provide a solution contact your Northern Telecom support organization.
- Case 19. Check the rc. It is a DD return code from opening file.cabinet.
- Case 20. Check the return code. If the rc does not provide a solution contact your Northern Telecom support organization.
- Case 21. Check the return code. If the rc does not provide a solution contact your Northern Telecom support organization.
- Case 22. Check the return code. If the rc does not provide a solution contact your Northern Telecom support organization.
- Case 23. Check the return code. If the rc does not provide a solution contact your Northern Telecom support organization.
- Case 24. Check the VX return code. If the rc does not provide a solution contact your Northern Telecom support organization.
- Case 25. If the problem persists check the return code. If the rc does not provide a solution, contact your Northern Telecom support organization.
- NT: Case 2-3 Ensure that the prompt files exist in the correct cabinet or each volume, using the MD utility.
- Case 9. The mailbox number in the SEER is actually the called-DN, which was set to forward to VM. If this DN is not supposed to have a mailbox, then change the DN definition on the switch so that it does not call forward or hunt to VM. If the DN is a secondary DN on a multi-line phone, then add this DN to the extension DN list of the mailbox. If the DN in the SEER is supposed to have a mailbox already, then use MD_DR to attempt to retrieve the mailbox DR entry. Re-build the DR entry if necessary.
- Case 13. The network database can be initialized using the UI_NETWORK package.
- Case 15. The calling DN given in the PCI from the switch should be checked.
- In all other cases: If the return code does not point to the problem, notify your Northern Telecom development organization.

33

Type: Error

Severity: Minor

Cause: VM encountered a problem during the logoff sequence.

Impact: Varies widely from an improper setting of the user's MWI to a drastic loss of program resources. The user may not notice any problems until log in is tried again.

Action: The SEER text should describe the exact problem. If the action is not obvious from the description, contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: This SEER will normally list one or more internal software procedures which could not be executed. The return code in the SEER applies to the first procedure which encountered a problem (the remaining procedures may have had problems as a result of the first problem). There will usually be several related SEERs preceding the 5633 SEER (they are related if the TaskID in the SEER is the same). These related SEERs should be studied closely to determine the cause of the problem.

Some of the possible errors shown in the SEER are: "cmFlushM", "cmCloseM", "cmChgMode", "cmCloseC" mean updates to the mailbox (ex msg deletions) may not take effect. Check the following:

1. any corruption in the user cabinet. Clean it using MD_CM; "rnNLogOut", "oc-CallResult" means that remote notification for this user may not work.
2. the OCS software is installed and running, using PRM_CONTROL; "gtiLog-out" which means the user will not be able to perform call-sender in the same session.
3. the AML/CSL/ISDN-AP link is up; "vhCloseV" means the customer profile may be corrupt.
4. check and fix using MD; "Hosp:ChgMode", "Hosp:adRead", "ClosePrf" means changes to the user profile may not take effect.
5. the Profile file may be corrupt, check using AD_UTIL; "GstCntrs", "VCI PLH_VC" "MWI_PLH_VC" means guest voice counts may not be sent to the hotels PMS system (HVS systems only); "drChgEntry" means the user's DR entry could not be updated with password expired status.
6. check for corruption in the DR using MD_DR; "Disconnect" means there was a problem disconnecting the call.

7. see SEER 2215; “om_SendVMData” means that operational measurements information could not be saved for this session.
8. the OMSERVER software is running using PRM_CONTROL; “Disassociating Client” means the user could not be deregistered from the call and may not be able to log in again (prompt will say mailbox currently in use).
9. disable and re-enable the channel.

34

Type: Error

Severity: Minor

Cause: VM encountered a error turning on the MWI while depositing a call answering message in a user’s mailbox. The return code isolates the cause.

Impact: The MWI for the target user’s mailbox may be set incorrectly.

Action: To reset the MWI, send a new message to the user’s mailbox, then have the user log in and read all messages that are new. The MWI should now be set correctly. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: The MWI can be reset using the GTI_PKG utility. If the return code does not point to the cause of the problem, contact your Northern Telecom development organization.

35

Type: Error

Severity: Minor

Cause: VM is receiving error messages or unusual data from other software components. If the text says

1. “StopVoice”, VM requested the Voice Handler to stop the playing of voice and the Voice Handler returned an error.
2. “PlayPrompt Problems”, VM had an error or internal time-out.
3. “Unexpected Call Progress Entry”, VM had an error or internal time-out.
4. “GTI Reference ID Mismatch”, VM had an error or internal time-out.
5. “Recording Problem”. A user volume is completely full.

The return code isolates the cause.

Impact: Case 1. The user may hear voice continue to play where it was expected to stop.
Case 2-4. Unpredictable.

- Case 5. No more messages or voice prompts can be recorded on that volume until some disk space is freed up.
- Action: Cases 1-4. Look up the return code for more information. If the code does not help, contact your Northern Telecom support organization.
- Case 5. Check the distribution of users in a multi-volume system. Get a larger disk if necessary. Possibly arrange for “read” messages to be removed off the system faster.
- NT: Cases 3-4. Use AD_UTIL to enable the VM debug flag, then check the console window during similar scenarios. The console window will show all call-progress information received from the switch. The “CallState” values can be found under the heading “Call Progress Status”, and the “otherInfo” values can be found under the heading “Supplementary Information to Call Progress Status”, both in Appendix 1 of this manual.
- In all other cases: If the return code does not point to the problem, notify your Northern Telecom development organization.

36

Type: Error

Severity: Minor

Cause: VM encountered a problem during a call answering or express messaging session. The message text indicates the cause. If the text says:

1. “Close the greeting”, VM had problems closing the greeting before starting to record a call answering message.
2. “Creating the message”, VM was unable to create a message for the call answering session.
3. “Close voice in bad grtg”, VM had a problem playing a greeting and closing it.
4. “Error playing pers. grtg, subst std grt”, VM had a problem playing a non-system greeting or a telephone set busy prompt.
5. “Read Profile”, VM had a problem finding the user’s profile for a Call Answering session.
6. “Error playing system grtg, subst pers/std grtg”, VM had a problem playing the system greeting.
7. “dr_FindEnt on Caller”, VM encountered a problem finding the caller’s entry in the organization directory while trying to set up the call information.
8. “mkAddress on Caller”, VM encountered a problem formatting the callers addressing while trying to set up the call information.

9. "Unpack BillIDN". VM failed to bill the user for a call that the user is about to place.
10. "Opening DefFID for CA Menu". VM failed to open the file containing personal verifications for a user with submailbox capability.
11. "Playing 1st CA MENU item". VM failed to play the main mailbox's Custom personal verification or the standard verification during a Call Answering session to a user with active submailboxes.
12. "Closing deffid after selection". VM failed to close the personal verification file for a user during a Call Answering session to a submailbox.
13. "Check for submbx exist". In attempting to determine whether a particular submailbox is valid, an error occurred reading the user's personal profile.

The return code isolates the cause.

- Impact:
- Case 1. None to the user, but a heap loss may occur after the user disconnects; the channel will reload.
 - Case 2. If this is the result of a full volume server the user will hear an error prompt and will be placed in the call answering empty state.
 - Case 3. See Action.
 - Case 4. A personal greeting or telset busy prompt is substituted with the system-provided standard greeting.
 - Case 5. The user will hear "Your message cannot be taken at this time. Please try again later".
 - Case 6. The user will hear just the personal or standard greeting instead of the system greeting and the personal or standard greeting.
 - Case 7-8. See Action.
 - Case 9. The user will hear "Your command cannot be completed at this time. Please try again later".
 - Case 10. The caller leaving the message will not hear the customized personal verification for the main mailbox. Instead, standard prompts will be used; i.e., "To leave a message for [mbox #], press 1 or stay on the line".
 - Case 11. The user will hear nothing until the personal greeting is played for the main mailbox.
 - Case 12. None to the user, but a heap loss may occur after the user disconnects, and the channel will reload.
 - Case 13. None to the caller. The submailbox is assumed to exist and the message is deposited.

-
- Action: Case 1-2. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
- Case 3. Examine related SEERs for more information.
- Case 4. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
- Case 5. If the problem persists, contact your Northern Telecom support organization.
- Case 7-8. Refer to subsequent class 22 SEERs for more information. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.
- Case 9. Examine related SEERs. Contact your Northern Telecom support organization.
- Case 10. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
- Case 11. Examine related SEERs. Contact your Northern Telecom support organization.
- Case 12. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
- Case 13. Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.
- NT: Case 1. The user's profile may be corrupt. Check and rebuild it if necessary, using AD_UTIL.
- Case 2-6. The user's cabinet may be corrupt. Use MD_CM to verify and delete/rebuild the cabinet if necessary.
- Case 7. The mailbox number in the SEER is actually the calling DN. Use MD_DR to look up the calling DN in the DR. If there are errors in the DR, contact your Northern Telecom development organization.
- Case 8-9: If the return code does not point to the problem, contact your Northern Telecom development organization
- Case 10-13: See case 2.

37

Type: Error

Severity: Minor

Cause: VM encountered a case which its software does not handle. If the text says:

1. "Turn on timer", VM tried to reset its delay timer with an undefined value.
2. "Illegal state", the state tables in VM indicate that a non-existent prompt should be played. This is usually a software error, but it could also be caused by corrupt memory (i.e., bad RAM hardware). Software causes could be errors in state tables or digit parser in the wrong state.
3. "Illegal procedure", the state tables in VM indicate that a non-existent procedure should be executed.
4. "VoiceIOEvent", VM received an undefined or inconsistent VOICEIOEVENT interrupt.

Impact: Case 1. This could cause a disruption of the normal sequence of delay prompts and affect the normal disconnect time out sequences. The entry of any command by the user may correct this condition.

Case 2. The user's commands will not be understood correctly and the resulting error prompt will not be played.

Case 3. Unpredictable.

Case 4. Unpredictable.

Action: Case 1. Contact your Northern Telecom support organization and supply SEER printouts covering the hour before and the hour after this SEER occurred.

Case 2: Contact the owner of the mailbox shown and determine the sequence of commands that were given by the user to cause the problem. Contact your Northern Telecom support organization.

Case 3, 4: Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: These are internal source errors within the software implementation. They are expected to occur only in faulty hardware conditions (either RAM disk or subsystem faults) or periods of extremely heavy loads (outside the supported engineering limits). Any other occurrence indicates a software bug. Contact your Northern Telecom development organization since the data in the SEERs references internal state IDs which cannot be interpreted without access to the source code.

38

Type: Error

Severity: Minor

Cause: A problem occurred within VM and not at a lower level.

Impact: The user may hear a system error prompt. Normal operation may proceed upon user entry or VM may be shut down with the caller forwarded to the attendant as in the case of a non-user forwarded to VM.

Action: Look at the accompanying SEERs for more information. Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: If the SEER text indicates a problem while playing or recording, this problem is a result of an unexpected voice i/o event and may indicate a software bug. Contact your Northern Telecom development organization.

If the SEER text indicates a problem closing a custom greeting then the customer profile may be corrupt. Check for corruption and clean it up, if necessary, using the MD utility.

If the SEER text indicates a problem closing a menu, this means that the user message list may be corrupt (there may be a related class 5613 SEER indicating an underlying cause). Check for, and clean up, any corruption in the user cabinet using MD_CM.

51

Type: Error

Severity: Minor

Cause: VM encountered a call processing problem while trying a custom operator revert. The return code isolates the cause.

Impact: The user is not transferred to the custom operator. The user will hear the error prompt "Your connection cannot be completed at this time. Please try again later or contact your administrator." If the user was in call answering, then the user will be returned to the place where 0 was pressed. If the user was logged in to a mailbox, then the user will be placed at the end of it. When using proprietary call answering, if the user is told the call can't be completed, the user can still continue the mail session. If residential call answering is used the mail session ends as well as the call.

Action: Look up the return code for more information. If the code does not help, contact your Northern Telecom support organization. One possibility is that the DN being transferred to is out of order. Try calling the DN directly.

NT: Use AD_UTIL to enable the VM debug flag, then check the console window during similar scenarios. The console window will show all call-progress information received from the switch. The “CallState” values can be found under the heading “Call Progress Status”, and the “otherInfo” values can be found under the heading “Supplementary Information to Call Progress Status”, both in Appendix 1 of this manual.

53

Type: Error

Severity: Minor

Cause: VM was unable to retrieve a digit that was entered by the user causing the digit to be lost. The return code isolates the cause.

Impact: The user may hear prompts or messages continuing to play when they should have been interrupted. Subsequent digits may be incorrectly interpreted as different commands.

Action: Contact the owner of the mailbox shown in the SEER and determine the scenario that caused the SEER. Look up the return code for specific information. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: This can happen if the VM task has trouble communicating with the VSS program. Either the VSS is dead or it has been improperly engineered during design.

1. Check that all voice channels (VSS programs) are properly loaded by using the PRM_CONTROL utility and by ensuring that each channel can accept new calls.
2. Disable and re-enable any channels not properly loaded (the particular channel that caused the SEER can be determined by the channel number printed in the SEER).

If the problem still occurs when all channels are properly loaded, contact your Northern Telecom development organization (the IPC buffers in the VSS task may need to be re-engineered).

Class 57 COS Conversion (COS)

COS conversion assigns Classes of Service(COS) to users while the system is up and running (generally required after an MM8 to SPM 02 conversion).

Conversion starts in the MSP node by starting a master conversion task. The master task then invokes a slave task in each SPN node. The slave tasks run concurrently, perform the actual conversion and report their status to the master task. The master task continuously receives reports from the slave tasks and reports overall status to the user.

If the problem is with the master task, the conversion will fail. If the problem is with a slave task, only users in one SPN will be affected. If the problem involves the hardware database, the system profile or the DR conversion will fail. If the problem is with reading the customer profile, users under one customer will be affected. If the problem is with the personal profile, then only one user will be affected.

- MAJOR: Should not continue
- MINOR: May continue without adverse effect.
- INFO: Normal event worthy of logging.

A class 57 SEER contains an indication of which operation failed. It also may contain:

- customer number
- user mailbox number
- slave task name (i.e. prefix 'pcTask' followed by a 2-digit node number).
- task result
- a lower level return code.

01

Type: Admin

Severity: Info

Cause: Conversion started in the SPN node.

Impact: None.

Action: None.

02

Type: Admin

Severity: Info

Cause: PC final report. Conversion is complete.

Impact: None.

Action: Check the selection menu for number of errors, if it is not zero then check the SE-ERs.

03

Type: Admin

Severity: Info

Cause: Conversion is complete in the SPN node.

Impact: None.

Action: None.

04

Type: Admin

Severity: Info

Cause: Slave task is up and running. The slave task that has failed to report within the time interval, is reported again.

Impact: No interruption has occurred in conversion process in the SPN node.

Action: Discard the SEER 30 generated for the slave task on this SPN node.

05

Type: Admin

Severity: Info

Cause: No match with any UCOS. User features do not match with any classes of services that are assigned to the customer.

Impact: No class of service is assigned to the User. Will not be able to convert to ISN.

Action: Review classes of service that are assigned to the customer and assign some more classes of services to the customer if necessary. Rerun the PC utility again or manually assign COS to user(s) on the MMI.

09

Type: Admin

Severity: Info

Cause: No UCOS is assigned to the customer. Customer is not assigned a set of classes of service.

Impact: All users under this customer cannot be assigned a class of service.

Action: Assign a set of class of services to the customer and rerun the utility.

10

Type: Admin

Severity: Info

Cause: Fail to close a personal profile.

Impact: None.

Action: None.

11

Type: Admin

Severity: Info

Cause: Fail to close a customer profile.

Impact: None.

Action: None.

12

Type: Admin

Severity: Info

Cause: Fail to close the system profile.

Impact: None.

Action: None.

13

Type: Admin

Severity: Info

Cause: Fail to close DR.

Impact: None.

Action: None.

14

Type: Admin

Severity: Info

Cause: Fail to close the hardware database.

Impact: None.

Action: None.

20

Type: Error

Severity: Minor

Cause: Fail to open a user profile.

Impact: One user cannot be converted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

21

Type: Error

Severity: Minor

Cause: Fail to read a user profile.

Impact: One user cannot be converted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

22

Type: Error

Severity: Minor

Cause: Fail to read dynamic component. The dynamic component of a user profile cannot be read.

Impact: A class of service cannot be assigned to a user.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

23

Type: Error

Severity: Minor

Cause: Fail to write to a personal profile.

Impact: One user is not converted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

24

Type: Error

Severity: Minor

Cause: Fail to open a customer profile.

Impact: All users under one customer profile cannot be converted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

25

Type: Error

Severity: Minor

Cause: Fail to read a customer profile.

Impact: All users under one customer profile cannot be converted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

26

Type: Error

Severity: Minor

Cause: Fail to retrieve customer UCOSs. Classes of service that are assigned to the customer cannot be retrieved from the system profile.

Impact: All users under one customer cannot be assigned a class of service.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

27

Type: Error

Severity: Minor

Cause: Fail to register a slave task. A Slave task in one of the SPN node cannot be registered with the name server.

Impact: All users in one of the SPN node cannot be converted.

Action: Let the utility run to the completion in the other SPN nodes. Rerun the utility again to convert users in the remaining SPN node. If the problem persists contact your Northern Telecom support organization.

28

Type: Error

Severity: Minor

Cause: Fail to communicate with the master task. A slave task in an SPN node cannot communicate with the master task in the MSP node.

Impact: If all slave tasks report this SEER then conversion fails completely, otherwise conversion only fails in the SPN node reporting this SEER.

Action: If all SPN nodes generate this SEER, ensure that the MSP node is up and running. In either case, rerun the PC utility again. If the problem persists contact your Northern Telecom support organization.

29

Type: Error

Severity: Minor

Cause: Fail to fork a slave task. A slave task cannot be started in one of the SPN node.

Impact: All users in one SPN node cannot be converted.

Action: Let the utility run to the completion in the other SPNs nodes. Check to see if the SPN node is up then rerun the utility. If the problem persists contact your Northern Telecom support organization.

30

Type: Error

Severity: Minor

Cause: A slave task is deemed dead. One slave task didn't report to master task within the time interval.

Impact: If this seer is generated for all slave tasks almost at the same time then the conversion fails, otherwise the conversion will continue in some or all SPN nodes. In fact the slave task which is deemed dead may still be alive. If a SEER 5 is generated for the slave task that is deemed dead then the slave task is alive and there was no interruption in the conversion process.

Action: For each slave task that deemed dead if no SEER 5 is generated then the slave task is indeed dead. For any dead slave task, make sure the corresponding SPN node(s) is up and then rerun the utility. If the problem persists contact your Northern Telecom support organization.

31

Type: Error

Severity: Minor

Cause: Fail to kill a task. Shutdown wasn't completely successful.

Impact: Conversion may still continue.

Action: Rerun the shutdown option from the PC utility again. If the problem persists contact your Northern Telecom support organization.

32

Type: Error

Severity: Minor

Cause: Fail to locate the master task. Master conversion task in MSP node cannot be located by a slave task.

Impact: If this SEER generated by all slave task then conversion fails completely, otherwise conversion fails in the SPN nodes reporting this SEER.

Action: If conversion fails partially or completely, make sure MSP node is up and running then rerun the PC utility. If the problem persists, contact your Northern Telecom support organization.

40

Type: Error

Severity: Major

Cause: Fail to open the system profile.

Impact: Conversion is aborted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

41

Type: Error

Severity: Major

Cause: Fail to read the system profile.

Impact: Conversion is aborted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

42

Type: Error

Severity: Major

Cause: Fail to open DR.

Impact: Conversion is aborted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

43

Type: Error

Severity: Major

Cause: Fail to register the master task. Master task cannot be registered with the name server.

Impact: Conversion is aborted.

Action: Rerun the PC utility again. If the problem persists contact your Northern Telecom support organization.

44

Type: Error

Severity: Major

Cause: Fail to search DR.

Impact: Conversion is aborted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

45

Type: Error

Severity: Major

Cause: Invalid user selection. This error shouldn't be generated if PC utility is started from the TOOLS menu.

Impact: Conversion is aborted.

Action: Rerun the PC utility again if the problem persists contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

46

Type: Error

Severity: Major

Cause: Fail to open the hardware database.

Impact: Conversion is aborted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

47

Type: Error

Severity: Major

Cause: Fail to search the hardware database.

Impact: Conversion is aborted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

48

Type: Error

Severity: Major

Cause: Fail to create a buffer pool.

Impact: The selected operation fails.

Action: Rerun the PC utility again, if the problem persists contact your Northern Telecom support organization.

NT: Unload other utilities or packages that are using the memory.

49

Type: Error

Severity: Major

Cause: Fail to start up the master task.

Impact: Conversion is aborted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

50

Type: Error

Severity: Major

Cause: Fail to change a DR entry.

Impact: Conversion is aborted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

51

Type: Error

Severity: Minor

Cause: Fail to retrieve certain DR statistics.

Impact: Conversion is aborted.

Action: Rerun the PC utility again. If the problem persists then look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

52

Type: Error

Severity: Major

Cause: Fail to control operation of DR server.

Impact: Conversion is aborted.

Action: Look up the lower level return code in its associated section of the SEER manual. Take the action appropriate for that return code or contact your Northern Telecom support organization. Rerun the PC utility after the problem is corrected.

Class 60 Program Resource Manager (PRM)

The Program Resource Manager (PRM)

- loads the operating system into all voice nodes
- starts all system programs
- helps programs to control (for example, start and stop) other programs

The impact varies greatly from one error to another.

These SEERs provide the return code for runtime and I/O errors.

01

Type: Error

Severity: Critical

Cause: An unexpected situation was encountered.

Impact: The PRM will try to correct this unexpected state.

Action: If the system appears affected, contact your Northern Telecom support organization.

NT: Run PRM_CONTROL to determine the state of each node and program. Take the necessary actions to correct the nodes and programs.

02

Type: Error

Severity: Critical

Cause: A problem was detected in the STARTLIST. Either the STARTLIST are not there or the parameters in the file do not correspond to expected inputs.

Impact: If the STARTLIST is not there, the system will not run at all. If something is wrong in the STARTLIST, some programs may not be started and service will likely be affected.

Action: Contact your Northern Telecom support organization.

NT: Edit the STARTLIST and correct the line effected.

03

Type: Error

Severity: Major/Minor

Cause: Some program could not locate 'PRM' in Name Server, or PRM could not locate a needed file.

Impact: In the former case, the program appearing in the SEER listing could not request action from PRM. In the later case, PRM cannot load the program.

Action: If the problem persist, contact your Northern Telecom support organization.

NT: Contact the development organization. In the later case, check the system to see if the file appearing in the SEER listing exists. If not restore the file.

04

Type: Error

Severity: Critical

Cause: General tasking errors.

Impact: The program appearing in the SEER listing is not executed.

Action: Depending on the programs, some service may be lost. Please contact your Northern Telecom support organization.

NT: Determine the status of the programs using PRM_CONTROL. The problem may evident and you should be able to fix it up using PRM_CONTROL.

05

Type: Error

Severity: Critical/Minor

Cause: The PRM could not register its name with the name server.

Impact: The system will not function.

Action: Power down the system, wait 30 seconds, power up the system. If the problem persist, contact your Northern Telecom support organization.

NT: Check the name server HEAP size.

06

Type: Error

Severity: Minor/Critical

Cause: An unknown task ID was received by PRM.

Impact: In the case of the task completion, a node may not reboot properly. In the case of task registered to PRM, PRM cannot send node state information to the task.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to confirm nodes and programs are running.

07

Type: Error

Severity: Critical

Cause: An invalid control request was received by PRM to perform certain controls function, that is, reset nodes, turn audit controls on and off, turn debug on and off. The request is out of range and is ignored. The return code will identify the requesting function.

Impact: The request is ignored.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: The current PRM version may require an upgrade to support the newer application command calls.

12

Type: Error

Severity: Critical/Major

Cause: An error was detected in the STARTLIST. The string was too long. The return code will indicate the line number of the erroneous string.

Impact: The line containing the error will be ignored (the program in the STARTLIST is not executed).

Action: Restart the system. If this does not correct the problem, contact your Northern Telecom support organization.

NT: Edit the STARTLIST and correct the line affected.

13

Type: Error

Severity: Major

Cause: The PRM loader failed to load an overlay on a node.

Impact: The overlay is not loaded; the node may not reboot properly.

Action: If this problem persist, contact your Northern Telecom support organization.

NT: Start manual diagnostic on node, replace the node if found faulty.

14

Type: Error

Severity: Critical/Info/Minor

Cause: The diagnostic programs found a problem in one of the nodes during rebooting, or PRM could not get information from the agent of a node during autobuild, or invalid MSP ID tries to register/deregister with the watchdog.

Impact: In the first case above, the node will be restarted. In the second case, the autobuild may not get hardware information from PRM. In the third case, PRM will not get registered/deregistered with the watchdog.

Action: If this problem persist, contact your Northern Telecom support organization.

NT: Start manual diagnostic on node, replace the node if found faulty.

15

Type: Error

Severity: Major /Info

Cause: The program (provided in the SEER) could not be loaded on the node provided in the SEER probably because the file was not found. Another SEER (with the same error code) is provided to display the return string from the failed load.

Impact: The program is not loaded.

Action: Reboot the node. If this does not correct the problem, contact your Northern Telecom support organization.

NT: Start manual diagnostic on node, replace the node if found faulty.

17

Type: System

Severity: Info

Cause: Auditing information is provided.

Impact: No impact.

Action: No action required.

NT: None.

19

Type: Error

Severity: Critical

Cause: The PRM received a request for an action to be executed on a node that does not exist.

Impact: A node might not be loaded. See SEER 05.

Action: Contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

20

Type: Error

Severity: Minor/Info

Cause: PRM received a bad or an extra message from the boot ROM when booting a node.

Impact: In the first case above, the node is reset. In the second case, the extra message is ignored by PRM.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Start manual diagnostic, replace any equipment that is faulty.

21

Type: Error

Severity: Minor

Cause: The PRM received an incorrect packet count when booting a node.

Impact: The node is reset and another attempt is made at loading programs onto this node. PRM will reset the node.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Start manual diagnostic, replace any equipment that is faulty.

22

Type: Error

Severity: Minor

Cause: When booting a node, the transmission of a message to the BootROM for that node failed (this was detected in the timeout sequence).

Impact: The node may not be booted up. It will be reset to try to correct the problem.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Start manual diagnostic, replace any equipment that is faulty.

23

Type: Error

Severity: Info/Major

Cause: When booting a node, a BootROM of the node failed to respond to PRM within an expected time period.

Impact: Attempts will be made to restart the node if it is an XMS node. Should these attempts fail, SEER 24 actions can be followed.

Action: No action is required until SEER 24.

24

Type: Error

Severity: Major

Cause: The PRM has tried many times to reboot a node. The node may be faulty.

Impact: No service will be provided by the specified node. The PRM will stop attempting to reboot that node.

Action: Disable and enable the node. If the problem persists, start manual diagnostic, replace any equipment that is faulty.

NT: This is probably a hardware problem. Disable and re-enable the node. If the problem persists, check the hardware.

25

Type: Error

Severity: Minor

Cause: PRM could not run a startup diagnostic program.

Impact: Diagnostic could not be run. It is assumed that the device to be tested is working.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Contact the Northern Telecom development organization.

26

Type: Error

Severity: Minor

Cause: The Bus diagnostic program or the bus switchover diagnostic program finished with an unknown return string.

Impact: The diagnostics may have passed. The system will start rebooting.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Restart the system. If this problem persists, contact your Northern Telecom development organization.

27

Type: Error

Severity: Major

Cause: The Bus diagnostic program or the bus switchover program failed.

Impact: The system probably has problems.

Action: Restart the system. If the problem persists, contact your Northern Telecom support organization.

NT: Run the appropriate diagnostics. If the problem still persists, contact your Northern Telecom development organization.

28

Type: System

Severity: Info

Cause: Report Bus diagnostic status.

Impact: No impact.

Action: No action required.

30

Type: Error

Severity: Minor/Info

Cause: The task was ignored/killed by the PRM audit program or PRM is killed by the watchdog. Tasks including PRM are regularly audited to see if they are still running. If a task or the PRM did not respond to the audit program/watchdog, it was assumed to have a problem. The first time the PRM does not response, a warning message is issued. If the PRM does not respond on the second attempt, it is killed.

Impact: If a warning message was issued, there is no impact; otherwise, the task indicated in the SEER list that was killed (if it is not the PRM) will be re-started.

Action: If this problem persist, contact your Northern Telecom support organization.

NT: If the task does not restart itself, restart it using PRM_CONTROL.

31

Type: Error

Severity: Minor

Cause: Tasks are audited by the PRM and the watchdog is audited by the watchdog. This audit information (from the PRM or the watchdog) could not be sent to some task or the PRM.

Impact: The task is not audited. The PRM (or the watchdog) does not know the current state of this task (or the PRM). On the next audit session, another audition will be attempted.

Action: If this problem persist, contact your Northern Telecom support organization.

NT: The return code indicates the tasking error of the SEND statement. This result will determine the tasking errors that are generated by the system.

32

Type: Error

Severity: Minor

Cause: The audit table is full. This task could not be registered in the audit table.

Impact: This task is not audited during the normal audit cycle.

Action: This problem does not affect the operation of your system. If this problem persist, contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to gather the number of outstanding tasks. Report this number to your Northern Telecom development organization.

33

Type: Error

Severity: Minor

Cause: The PRM audit program or the watchdog received an unknown audit result from a task or the PRM.

Impact: The PRM audit program or the watchdog missed a response sent by a task. If this is a frequent occurrence, the task or the PRM will be killed by the auditor or the watchdog.

Action: Monitor the SEER listing for tasks killed by the PRM audit program. If tasks are frequently killed by the PRM audit program, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

35

Type: Error

Severity: Critical

Cause: The PRM could not open the Hardware Database.

Impact: The PRM will not know the states of a given node. The system will likely not function.

Action: Reboot the system. If the problem persists, contact your Northern Telecom support organization.

NT: The Hardware Database is likely corrupt and needs to be restored.

36

Type: Error

Severity: Info

Cause: The PRM could not close the Hardware Database properly. This may occur during system bootup or recovery operations.

Impact: This instance of the Hardware Database may or may not be closed. If the file is open, the sweeper will close it.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Call your Northern Telecom development organization.

37

Type: Error

Severity: Critical

Cause: The PRM has problem with opening the Hardware database or with reading and finding information in the Hardware Database.

Impact: Because certain information will not be available to the PRM, the PRM will not be able to perform updates or know the states of problem nodes. This may cause programs on a particular node not to load.

Action: Contact your Northern Telecom support organization.

NT: The Hardware Database, disk, or volume may be corrupt. Use MD_MA to modify or correct the corrupt data. organization.

38

Type: Status

Severity: Info

Cause: The PRM is reporting on the current state of the node indicated in the SEER.

Impact: No impact.

Action: No action is required.

NT: None.

40

Type: Error

Severity: Critical

Cause: The System Profile Record could not be opened. This System Profile Record will indicate what action should be taken on fatal system errors.

Impact: PRM cannot read the Profile to determine whether to turn off all the channels by shutting down the VCM program or not. Calls will always be accepted on fatal system errors (ie. non-recoverable disk error).

Action: North American users can ignore this problem. European users, please contact your Northern Telecom support organization if the problem persist.

NT: The System Profile Record is corrupt, attempt recovery with AD_UTIL.

42

Type: Error

Severity: Critical

Cause: The PRM could not read or close the System Profile Record.

Impact: If the PRM could not read the System Profile Record, refer to SEER 40. If the PRM could not close the System Profile Record, the seeper will close it.

Action: North American users can ignore this problem. European users, please contact your Northern Telecom support organization if the problem persist.

NT: The Login record in the System Profile Record is corrupt, attempt recovery with AD_UTIL.

43

Type: Error

Severity: Info

Cause: The PRM is reporting the action that will be taken when a fatal system error occurs.

Impact: No impact.

Action: No action is required.

NT: The action can be re-configured using AD_UTIL.

45

Type: Error

Severity: Minor/Critical/Info

Cause: The various tasks that require node status information are not updated due to a send failure or an invalid node specification.

Impact: The System Status display may show an incorrect node state, the Voice Channel Maintenance and Diagnostic Controller may not know the correct state of the nodes.

Action: If this problem persist, contact your Northern Telecom support organization.

NT: The return code indicates the tasking error of the SEND statement. This result will determine the tasking errors that are generated by the system. Contact your Northern Telecom development organization.

46

Type: Error

Severity: Major

Cause: The Hardware Database shows this node is unconfigured.

Impact: The node will not be brought up.

Action: Contact your Northern Telecom support organization.

NT: Configure the node and change the Hardware Database from an unconfigured state to a configured state. Modification of the Hardware Database can be done using MD_MA. The unconfigured node should be removed from the STARTLIST.

50

Type: Error

Severity: Critical

Cause: A problem occurred in the loading process. An attempt was made to send this information to the Prog Info entry of some task (ie. Diagnostic Controller, Voice Channel Maintenance).The attempt fail due to a lack of memory buffers.

Impact: The tasks are not made aware of the load failure.

Action: If this problem persist, contact your Northern Telecom support organization.

NT: Buffer requirements may require re-configuration, contact your Northern Telecom development organization.

51

Type: Error

Severity: Critical

Cause: The Loader task instance of the node could not be started due to a tasking error (generated by the system).

Impact: Programs cannot be loaded to this node.

Action: Contact your Northern Telecom support organization.

NT: Reset the node manually or by using PRM_CONTROL. If this does not solve the problem, consider rebooting.

52

Type: Error

Severity: Minor/Critical

Cause: A command that starts the loading sequence (programs onto a node) was not successfully sent to the loader.

Impact: Programs cannot be loaded to this node.

Action: Contact your Northern Telecom support organization.

NT: The return code indicates the tasking problem. If this problem persists, contact your Northern Telecom development organization.

55

Type: Error

Severity: Critical/Info

Cause: PRM received information from an unknown node.

Impact: Any command that can affect incorrect nodes will be ignored.

Action: If this problem persists, contact your Northern Telecom support organization.

NT: Identify the faulty node. Run diagnostic to confirm the problem and replace if necessary.

56

Type: Error

Severity: Critical/Minor

Cause: The PRM timed out waiting for a disk to spin up, or Disk spin had a problem.

Impact: The node will be rebooted and the disk will be spun up again.

Action: If this problem persists, contact your Northern Telecom support organization.

NT: The return code indicates the SCSI ID. Contact your Northern Telecom development organization.

57

Type: Error

Severity: Minor/Critical/Info

Cause: A tasking error occurred when the PRM was sending information to another task including the other PRM. The most likely occurrence is the system running out of buffers.

Impact: The other task will not receive up-to-date status information.

Action: If this problem persist, contact your Northern Telecom support organization.

NT: Buffer requirements may require re-configuration, contact your Northern Telecom development organization.

58

Type: Error

Severity: Critical

Cause: The nodes are frequently polled to determine their running state. In this problem, PRM has lost the polling response from the node. Or/ PRM received a request to shutdown the system.

Impact: The PRM will reboot the node in the former case.

Action: If this problem persist, contact your Northern Telecom support organization.

NT: Run the appropriate diagnostics on the node and replace, if necessary.

59

Type: Error

Severity: Major

Cause: The master MSP node was disabled or had problems.

Impact: The other MSP node became the master. The system will work well in the case of the MSP node disabling.

Action: If it did not result from disabling the master MSP node, check to see if the node will come up in the InService Standby mode. If it will not come up, try to bring it back by disabling and enabling it. If the problem persists after many such attempts, contact your Northern Telecom support organization.

NT: Contact your Northern Telecom development organization.

75

Type: Error

Severity: Major

Cause: Bus controller is not set up properly. PRM cannot switch over.

Impact: System will not switch over.

Action: Contact your Northern Telecom support organization.

NT: Enable the switch over from the backup MSP using PC_PKG. Manually switch over using PRM_CONTROL. If the problem persists, contact your Northern Telecom support organization.

98

Type: Info

Severity: Info

Cause: Debugging information.

Action: Ignore the information.

NT: None.

99

Type: System

Severity: Info

Cause: Displaying status information.

Impact: No impact.

Action: No action required.

NT: None.

Class 61 Maintenance Administrator (MA)

The Maintenance Administrator (MA)

- maintains the integrity of the Hardware Database
- maintains DMS VoiceMail configuration
- acts as an agent for manipulation of DMS VoiceMail software

If any DMS VoiceMail component has to be adjusted or enabled, the MA program will be run. MA errors prevent a component from being used.

A Class 61 SEER usually contains

- return code from the MA, HD, DD, VCA, or PRM
- Hardware Database location code

Other MA SEERs are reported in other hardware SEERs, such as HD or DD. These SEERs contain

- return code
- test result from an Offline Test
- Hardware Database location code
- number of the DSP card. DSP card numbers start at 0.

00

Type: Admin Info

Severity: Info

Cause: General maintenance information.

Impact: None.

Action: None.

NT: None.

01

Type: Error

Severity: Minor

Cause: Illegal request to add a component. No parent component.

Impact: Component not added.

Action: Verify that your request is correct and retry the operation. If the operation still fails, contact your Northern Telecom support organization.

NT: Check that the hardware database is sane. Verify that a system record exists.

02

Type: Admin

Severity: Minor

Cause: Component not in correct state for the request.

Impact: Request is not processed.

Action: Put component in correct state and repeat request.

NT: None.

03

Type: Admin

Severity: Minor

Cause: A Delete, Unload, Disable, or Courtesy Disable operation failed on a child process. The SEER provides a return code and the location of the failed component.

Impact: The requested operation failed on a child component of the requested component, but the operation may have been successful on other child components before the error occurred.

Action: Try the command again. If the error persists, contact your Northern Telecom support organization.

NT: Check the return code to find any possible error on other components. If there is, correct the situation and try again. The location of the child component is in the SEER.

04

Type: Error

Severity: Minor

Cause: Diagnostics failed hardware component. See SEER for more information on which component failed.

Impact: This component and its children and possibly its parent are marked faulty.

Action: Consult the *Trouble Locating and Alarm Clearing* guide (NTP 297-7001-503) for an action to perform when this type of diagnostics fail.

NT: None.

06

Type: Error

Severity: Minor

Cause: The requested operation is not supported for this component type.

Impact: Requested operation not completed.

Action: If the requested operation should be supported on this component, retry the operation. If the operation is unsuccessful, disable the node and retry the operation. If the problem persists, contact your Northern Telecom support organization.

NT: Verify that the hardware database is correctly set up.

08

Type: Admin

Severity: Minor

Cause: A Load, Enable, or ForceState operation failed. The SEER provides a return code which is another MA code or a code from a lower layer, such as HD, DD, VCA, or PRM.

Impact: The requested operation failed on a child component of the requested component, whose location is provided in the SEER. The operation may have been successful on other components, including the requested component, before the error occurred.

Action: Try the command again. If the error persists, contact your Northern Telecom support organization.

NT: Check the return code to find any possible error on other components. If there is, correct the situation and try again. The location of the child component is in the SEER.

09

Type: Admin

Severity: Minor

Cause: An operation was started but not completed. In case of offline test, hardware database is not changed.

Impact: Operation requested is not completed.

Action: Check the SEER for the cause. Repeat request.

NT: Investigate SEERs to see if the node is crashing or the hardware is possibly bad.

10

Type: Error

Severity: Minor

Cause: The hardware location code received by MA is invalid.

Impact: The requested operation is not completed.

Action: Retry the operation. If it is unsuccessful, contact your Northern Telecom support organization.

NT: Verify that the hardware database is correctly set up.

11

Type: Error

Severity: Minor

Cause: A component modification was attempted with changed key information.

Impact: Requested operation was not completed.

Action: Correct the request and retry.

NT: None.

12

Type: Admin

Severity: Minor

Cause: Action was requested on a VP card which contain no DSP in the correct state for testing.

Impact: Test not executed.

Action: Put DSP in correct state and repeat action.

NT: None.

13

Type: Admin

Severity: Minor

Cause: Offline test failed on all DSP of the card tested.

Impact: VP card is marked faulty.

Action: Replace card.

NT: None.

14

Type: Admin

Severity: Minor

Cause: The first chip of a DSP voice card, whose card number is provided, failed the Offline Test. The VPD return code isolates the cause.

Impact: The Offline test request failed.

Action: Depends on the return code from VCA or other components. Correct the situation and try again. If the problem persists, contact your Northern Telecom support organization.

NT: Check the card, DSP, and voice port in the hardware database. If it is not configured, use MD_MA to change it to Inservice and reboot the system.

15

Same as SEER 14 except the second chip failed instead of the first.

16

Type: Error

Severity: Minor

Cause: A DSP has failed diagnostics.

Impact: The DSP is marked faulty and therefore cannot service calls.

Action: Refer to the *Trouble Locating and Alarm Clearing* guide, NTP 297-7001-503, for information on VP diagnostics failure.

NT: None.

17

Type: Admin

Severity: Minor

Cause: Offline test was requested on a T1 card with T1 links in the correct state.

Impact: Test not executed.

Action: Place links in correct state and repeat request.

NT: None.

18

Type: Admin

Severity: Minor

Cause: Offline test failed on all T1 links tested.

Impact: T1 card marked faulty.

Action: Replace F1 card. If problem persists replace T1 TM card.

NT: None.

19

Type: Admin

Severity: Minor

Cause: At least one hardware fault was detected on T1 card tested.

Impact: T1 card and/or T1 link marked faulty.

Action: Replace T1 card. If problem persists replace T1 TM card.

NT: None.

20

Type: Admin

Severity: Minor

Cause: T1 offline test not completed because of cause specified in SEERs.

Impact: Test not executed.

Action: Correct situation specified in SEER and repeat test.

NT: None.

22

Type: Admin

Severity: Minor

Cause: Waiting for previous request on component to be completed.

Impact: Current request not processed.

Action: Try request later.

NT: None.

23

Type: Admin

Severity: Minor

Cause: Waiting for node to be loaded.

Impact: None.

Action: None.

24

Type: Admin

Severity: Minor

Cause: Node could not be loaded.

Impact: Node marked faulty.

Action: For MSP node check the Bus Controller card along with the 68K card. For all other nodes, try replacing the 68k card.

NT: Look for any SEER indicating a software problem. If this does not help, refer to the *Trouble Locating and Alarm Clearing Procedures*, NTP 297-7001-503 for node bootup problems.

25

Type: Admin

Severity: Minor

Cause: Node in an unexpected state.

Impact: Diagnostics not executed.

Action: Try running diagnostics again. If problem persists, contact your Northern Telecom support organization.

NT: Disable Node. Execute 68K diagnostics again.

26

Type: Admin

Severity: Minor

Cause: No modem on SBC card to be tested.

Impact: None.

Action: None.

NT: None.

27

Type: Admin

Severity: Minor

Cause: A hardware fault is detected on SBC card.

Impact: Port marked faulty.

Action: Replace card.

NT: None.

28

Type: Admin

Severity: Minor

Cause: SBC diagnostics report some execution problem. See previous SEERs for actual fault.

Impact: Diagnostics not completed.

Action: Follow the action suggested by the SEER which provides the actual fault.

NT: None.

30

Type: Admin

Severity: Minor

Cause: MA/VM II communication problem.

Impact: Request not processed.

Action: Contact your Northern Telecom support organization.

NT: Disable the SPN node on which the maintenance action was performed. Repeat the maintenance action that failed.

31

Type: Admin

Severity: Minor

Cause: Hardware fault(s) detected on Utility Card.

Impact: Card marked faulty.

Action: Replace card.

NT: None.

32

Type: Admin

Severity: Minor

Cause: RBD diagnostics report some execution problem. See previous SEERs for actual fault.

Impact: Diagnostics not completed.

Action: Follow the action suggested by the SEER which provides the actual fault.

NT: None.

33

Type: Admin

Severity: Minor

Cause: No voice ports found on node.

Impact: None.

Action: None.

NT: None.

34

Type: Admin

Severity: Info

Cause: A card of the specified type which the software could not detect previously on the specified node can now be detected.

Impact: None.

Action: Run diagnostics on the card before putting it in service.

NT: If the card was never removed, try replacing it. If this does not help, check the back-plane.

35

Type: Admin

Severity: Minor

Cause: The software can no longer detect a card of the specified type on a specific node.

Impact: The card and all the components on it are marked faulty.

Action: If the card is still seated in the system, run diagnostics. If the card was removed, execute diagnostics on the same card or a new card when installed. Be sure to follow standard card replacement procedures as outlined in the *Card Replacement Procedures* manual (NTP 297-7001-502).

NT: Same as SEER 6134.

36

Type: Admin

Severity: Minor

Cause: After an error of the type 6135 has occurred, an attempt has been made to update the hardware database (hwdb) in order to indicate the failure.

Impact: Not all of the components of the faulty card may be marked faulty in the hardware database.

Action: None. (However, you must execute diagnostics on the card before putting it back into service. If the problem persists, contact your Northern Telecom support organization.)

NT: Use MD_MA utility to open HWDB and verify the configuration of the component and its children.

37

Type: Admin

Severity: Minor

Cause: Maintenance procedures cannot get node status from PRM.

Impact: This depends on the operation in progress. Typically the impact will be minimal.

Action: Examine the return code provided in the SEER for more information. Check that the node is up and running. If it is not, disable and re-enable the node. Repeat the maintenance procedures. If the problem persists, contact your Northern Telecom support organization.

NT: Investigate the rc and other related SEERs. If this does not help, contact your Northern Telecom development organization.

38

Type: Admin

Severity: Minor

Cause: Attempt by the MA to communicate to with RST_Modem failed..

Impact: The maintenance operation is terminated. If this problem occurs on a node reboot, ignore it. The impact is minimal.

Action: If the node is running and this SEER is repeatedly printed, then it is possibly a startlist problem. Disable and re-enable the node. If the problem persists, contact your Northern Telecom support organization.

NT: Check that Rst_Modem is in the startlist for the problem node.

39

Type: Admin

Severity: Minor

Cause: Maintenance procedure was informed by PRM of a problem with a diagnostics program.

Impact: The diagnostic is not completed.

Action: Investigate the cause of the problem, provided in the SEER. Some possible causes of the problem could be: not enough memory, a program exception has occurred, or the program has crashed.

Retry diagnostics. If unsuccessful, consult the *Trouble Locating and Alarm Clearing Procedures*, NTP 297-7001-503 for information on an action to take when this diagnostic fails.

NT: Investigate the return code and related SEERs. Also verify that the node is in the appropriate state. If the problem persists, contact your Northern Telecom development organization.

40

Type: Admin

Severity: Minor

Cause: PRM could not reset the requested node.

Impact: The maintenance operation is not completed.

Action: Investigate the return code (rc) provided in the SEER. Repeat procedure. If the problem persists, refer to the section on node recovery in the *Trouble Locating and Alarm Clearing Procedures*, NTP 297-7001-503.

NT: Retry the operation that failed. If the problem persists, refer to the *Trouble Locating and Alarm Clearing Procedures*, NTP 297-7001-503.

60

Type: Admin

Severity: Minor

Cause: The maintenance action requested is only allowed for certain hwdb (hardware data base) states. The current state is not supported for this operation.

Impact: Maintenance operation not processed.

Action: Put the component in one of the supported states and repeat the procedure.

NT: Use MD_MA and MMI to change component status as necessary.

62

Type: Admin

Severity: Minor

Cause: The maintenance action requested is not supported for this component.

Impact: Maintenance operation not processed.

Action: Verify that the request is supported, if so, then make sure that the corresponding node and components are in states that are supported for this operation. Repeat the maintenance procedure. If the problem persists, contact your Northern Telecom support organization.

NT: If this operation should be supported, use MD_MA to verify the configuration of this component. If this does not help, contact your Northern Telecom development organization.

68

Type: Admin

Severity: Minor

Cause: Error updating hardware database.

Impact: The hardware database may not correctly reflect the node state.

Action: Disable the node and run diagnostics. Repeat the original operation if necessary. If the problem persists, contact your Northern Telecom support organization.

NT: Use MD_MA to verify configuration and update as necessary.

69

Type: Error

Severity: Minor

Cause: Error providing ENet status to MMI.

Impact: Enet status on MMI may not be accurate. This depends very much on when this problem occurs.

Action: No action necessary if the ENet status is recovered. If the status is wrong and it needs to be corrected, disable and re-enable the node.

NT: Use MD_MA to verify configuration and update as necessary.

70

Type: Error

Severity: Minor

Cause: Error providing node status to MMI.

Impact: Node status on MMI may not be accurate. This depends very much on when this problem occurs.

Action: No action necessary if the node status is recovered. If the status is wrong and it needs to be corrected, disable and re-enable the node.

NT: Use MD_MA to verify configuration and update as necessary.

97

Type: Error

Severity: Minor

Cause: MA tasking problem.

Impact: Request not completed.

Action: Follow any recommendations of RC/SEERs. If unclear, contact your Northern Telecom support organization.

NT: Retry the operation that failed. If the problem persists, refer to the *Trouble-locating and Alarm-clearing Procedures*, NTP 297-7001-503.

98

Type: Error

Severity: Minor

Cause: PRM could not start program.

Impact: Request not completed.

Action: Check if the node is running. If not then follow the procedures in the *Trouble-locating and Alarm-clearing Procedures*, NTP 297-7001-503 outlining how to bring the node into the proper state. If the node is running, then check the Return Code and related SEERs for more information.

99

Type: Error

Severity: Minor

Cause: Timeout waiting for diagnostic result.

Impact: Card marked faulty.

Action: Check SEERs if no good indication then replace card.

NT: Retry the operation that failed. If the problem persists, refer to the *Trouble-locating and Alarm-clearing Procedures*, NTP 297-7001-503.

Class 63 Clock and Alarm

The system clock and alarm functions are provided by the bus controller hardware of the DMS VoiceMail system. Class 63 usually contains information text only.

01

Type: Error

Severity: Problem

Cause: The Bus Controller clock returned INVALID TIME to user.

Impact: System and call functions may be affected.

Action: If this SEER persists, check the Bus Controller clock battery and run diagnostics on the Bus Controller card, correct the error and reboot the system.

NT: If this SEER persists, check the Bus Controller clock battery and run diagnostics on the Bus Controller card, correct the error and reboot the system.

02

Type: System

Severity: Info

Cause: The Bus Controller clock has been reset. Reset time difference is given out in seconds.

Impact: If you manually adjusted the time, this SEER is to be expected and nothing is wrong. If you did not adjust the time, this SEER points to an error with time.

Action: Check the Bus Controller clock battery and run diagnostics on the Bus Controller card.

NT: Check the Bus Controller clock battery and run diagnostics on the Bus Controller card.

03

Type: Info

Severity: Minor

Cause: Nil time stamp returned to user because system ran out of buffers.

Impact: Minor. User could not get correct time stamp.

Action: This SEER is a warning notifying the system administrator that some program did not receive the time properly. It can assist in the investigation of other problems. This problem should not occur continuously. If it persists contact your Northern Telecom support organization.

NT: A problem of this sort could point to an engineering problem of some sort. The site should be analyzed for some usage pattern that far exceeds what other sites are experiencing.

04

Type: System

Severity: Info

Cause: Bus Controller major alarm turned on by the Bus Controller software.

Impact: Critical hardware failure.

Action: Use diagnostics to check Bus Controller. If the alarm persists the Bus Controller card must be replaced. Inspect related SEERs and run the required diagnostics.

NT: Inspect SEERs issued by the system surrounding this SEER.

05

Type: System

Severity: Info

Cause: Major alarm turned on because of a previous SEER.

Impact: Major problems indicated.

Action: Use diagnostics to check Bus Controller. If the alarm persists the Bus Controller card must be replaced. Inspect related SEERs and run the required diagnostics.

NT: Inspect SEERs issued by the system surrounding this SEER.

06

Type: System

Severity: Info

Cause: Minor alarm has been turned on by the software.

Impact: A minor problem has been detected by the software. Turning the alarm on or off has no real impact.

Action: Check the SEER report that caused this alarm to be turned on and take the appropriate actions.

NT: Inspect SEERs issued by the system surrounding this SEER.

Class 64 Operating System Program (OSP)

The Operating System Program (OSP) is the heart of the DMS VoiceMail system. This program operates the system by delegating work to the other programs, such as PRM and VCA. This Operating System also interfaces with the hardware.

The SEERs produced in this class are very important. However, when severe errors occur in the OSP, everything else grinds to a halt including the SEER server so no SEERs are produced.

Any failure in the Operating System Program is reported directly to the attached terminal. Print this information out and contact your Northern Telecom support organization.

The part of the OSP that does not produce SEERs is the one controlling the Bus controller hardware, which is the hardware which controls MSP switchovers and controls communication between nodes.

01

Type: Error

Severity: Major

Cause: There are two possible causes for the error:

1. A Bus Controller card on an MSP node has been pulled out or pushed in.
2. The cable connecting both Bus Controller cards may have become disconnected or re-connected.

Impact: If this error occurs during node maintenance, there will be no impact. If this error occurs any other time, there may be an unscheduled MSP switchover taking place. Services should not be affected.

Action: If this happens during node maintenance, no further action is required. If this happens any other time, do the following:

- Go to the Node Status Screen and make sure the backup MSP is disabled.
- Check the Bus Controller cards and cabling.
- Try to enable the MSP node.
- If the node enable fails, contact your Northern Telecom support organization.

For more information, refer to the *Card Replacement Procedures* manual (NTP 297-7001-502).

NT: There is most likely a problem with the hardware. Check the Bus Controller cards and cabling. If the enable of the MSP fails again, replace the cards and cabling and re-enable the MSP. For more information, refer to the *Card Replacement Procedures* manual (NTP 297-7001-502).

02

Type: System

Severity: Info

Cause: Display of status information about Bus Controller card on MSP node.

Impact: None.

Action: None.

NT: None.

04

Type: Error

Severity: Problem

Cause: The system will run, but the Bus Controller card is getting old and will need to be replaced soon.

Impact: No immediate impact. However, it should be viewed as a warning that the bus controller is not as reliable as it once was and that the redundant attributes of the system as a whole could be at risk.

Action: Disable the MSP node that the Bus Controller card is on and replace the Bus Controller card. Re-enable the MSP node.

NT: Same as above. Check the cards and cables.

05

Type: Error

Severity: Problem

Cause: The system will run, but the Bus Controller card is getting old and will need to be replaced soon.

Impact: No immediate impact. However, it should be viewed as a warning that the bus controller is not as reliable as it once was and that the redundant attributes of the system as a whole could be at risk.

Action: Disable the MSP node that the Bus Controller card is on and replace the Bus Controller card. Re-enable the MSP node.

NT: Same as above. Check the cards and cables.

06

Type: Error

Severity: Problem

Cause: The system will run, but the Bus Controller card is getting old and will need to be replaced soon.

Impact: No immediate impact. However, it should be viewed as a warning that the bus controller is not as reliable as it once was and that the redundant attributes of the system as a whole could be at risk.

Action: Disable the MSP node that the Bus Controller card is on and replace the Bus Controller card. Re-enable the MSP node.

NT: Same as above. Check the cards and cables.

07

Type: Error

Severity: Major

Cause: Incompatible versions of hardware and software.

Impact: The system may not come up at all. If it does come to full service, it will remain in full service.

Action: Contact your Northern Telecom support organization.

NT: Install the correct Bus Controller firmware for the given software.

Class 65 Debugger

The Debugger is a tool used by designers to debug programs. The Debugger is also used by craftspeople (RSC) to find out about system resources, such as available memory. This program can also be used to change the contents of memory and to terminate programs.

Debugger output is displayed at the terminal. Because this is not a permanent record, Debugger output is reformatted into Class 65 SEERs which are sent to the printer. Each line of Debugger traceback is a separate SEER.

A Class 65 SEER usually contains a trace sequence number and trace output.

02

Type: Error

Severity: Problem

Cause: Improper memory area was accessed by software, causing ESBC sanity timer to become activated.

Impact: Possible performance degradation.

Action: This problem should be reported in conjunction with any other problem that warrants Northern Telecom support organization help. No action is required unless other problems are identified.

NT: This problem should be reported in conjunction with any other problem that warrants Northern Telecom support organization help. No action is required unless other problems are identified.

99

Type: Error

Severity: Problem

Cause: A program has crashed because of a software or hardware error.

Impact: It really depends on the program that has crashed. If the program is responsible for a voice session then that voice session will be abruptly terminated. If the program is a multiserver then that service will be temporarily down. If the program is essential to a nodes operation then a node will be temporarily down.

Action: Collect the trace identification information and contact your Northern Telecom support organization.

NT: The Northern Telecom support organization should pass the identification information along with details about the software release, hardware set up, frequency and associated SEERs back to the Northern Telecom development organization.

Class 66 Disk Manager (DM)

The disk manager is the operating system component that maintains disk configuration. It puts out SEERs to report errors encountered during disk accesses. If disk shadowing (also known as disk mirroring) is installed, the disk manager performs related maintenance operations and puts out SEERs to log these actions.

DM SEERs identify disks by node number and SCSI ID. On non-SPM platforms such as EC, Classic, and Card Option, there is only one SCSI bus; and SCSI IDs run from 0 to 7. There are two buses on SPMs; SCSI IDs on bus 0 run from 0 to 7, those on bus 1 run from 8 to 15.

All numbers are given in decimal.

The following Maintenance Procedures NTPs contain disk replacement procedures for the various platforms:

- NTP 297-7001-502 SPM
- NTP 555-7011-500 Options
- NTP 555-7041-500 Modular Option
- NTP 555-7051-500 Modular Option GP
- NTP 555-7061-500 Modular Option EC

00

Type: Admin

Severity: Info

Cause: Syncing is the disk shadowing operation to bring a new disk online. This SEER logs the beginning of a sync operation.

Impact: None.

Action: None.

NT: None.

01

Type: Admin

Severity: Info

Cause: This SEER logs the completion of a sync operation.

Impact: None.

Action: None.

NT: None.

02

Type: Case 1. Error
Case 2. Admin

Severity: Case 1. Major
Case 2. Info

Cause: One of the disks in a shadowed disk pair has gone down.

1. The disk is taken down by the system; that is, this report follows a SEER 6603/6604.
2. The disk is taken down by a utility.

Impact: Only a single copy of the data in the shadowed pair is now available. A failure in the surviving disk will disrupt service. Read throughput is also halved.

Action: If this SEER appears during normal operation, replace the failed disk and sync it from the survivor. If this SEER appears during disk pack or during 68k transition module replacement, continue to follow the replacement procedure.

If you manually disabled the disk, manually enable it.

NT: If this SEER appears during normal operation, replace the failed disk and sync it from the survivor. If this SEER appears during disk pack or during 68k transition module replacement, continue to follow the replacement procedure.

If you manually disabled the disk, manually enable it.

03

Type: Error

Severity: Major

Cause: A disk drive has reported an exception during a file system disk access. The sense key encodes the type of exception, and is standard across all disk drives. The error code gives additional information about the exact cause of the error. A block number may also be present. See Appendix A for a complete list of SCSI device sense keys and error codes.

Impact: Medium and hardware errors disrupt service on systems without disk shadowing.

Action:	Sense key	Meaning	Action
	1	Recovered error	A large number of recovered errors indicate that the device should be replaced.
	2	Not ready	The disk has not been spun up yet.
	3	Medium error	Replace disk.
	4	Hardware error	Replace disk.
	5	Illegal request	Possible software problem; contact your Northern Telecom support organization.
	6	Unit attention	Look for termination/cabling problems; if none are found contact your Northern Telecom support organization.
	7	Write protected	Remove write protect jumper from disk.
NT:	Sense key	Meaning	Action
	1	Recovered error	A large number of recovered errors indicate that the device should be replaced.
	2	Not ready	The disk has not been spun up yet.
	3	Medium error	Replace disk.
	4	Hardware error	Replace disk.
	5	Illegal request	Possible software problem; contact your Northern Telecom development organization.
	6	Unit attention	Look for termination/cabling problems; if none are found contact your Northern Telecom development organization.
	7	Write protected	Remove write protect jumper from disk.

04

Type: Error

Severity: Major

Cause: The SCSI device driver has reported an exception during a file system disk access. The driver error encodes the type of exception.

Impact: Disrupts service on systems without disk shadowing.

Action:	Driver error	Meaning
	129	selection timeout
	130	unexpected disconnect
	131	bus reset
	132	read parity error
	133	timeout
	255	driver queue full

This SEER almost always indicates some hardware failure along the SCSI data path, which consists of the 68k board, the 68k board transition module, SCSI cabling, disk/tape drive, and disk/tape power converter. Look for and clear hardware fault in SCSI subsystem.

NT:	Driver error	Meaning
	129	selection timeout
	130	unexpected disconnect
	131	bus reset
	132	read parity error
	133	timeout
	255	driver queue full

This SEER almost always indicates some hardware failure along the SCSI data path, which consists of the 68k board, the 68k board transition module, SCSI cabling, disk/tape drive, and disk/tape power converter. Look for and clear hardware fault in SCSI subsystem.

05

Type: Error

Severity: Minor

Cause: A disk drive has reported an exception during a disk manager disk access. The sense key encodes the type of exception, and is standard across all disk drives. The error code gives additional information about the exact cause of the error. A block number may also be present. See Appendix A for a complete list of SCSI device sense keys and error codes.

Impact: Medium and hardware errors disrupt service on systems without disk shadowing.

Action:	Sense key	Meaning	Action
	1	Recovered error	A large number of recovered errors indicate that the device should be replaced.
	2	Not ready	The disk has not been spun up yet.
	3	Medium error	Replace disk.
	4	Hardware error	Replace disk.
	5	Illegal request	Possible software problem; contact your Northern Telecom support organization.
	6	Unit attention	Look for termination/cabling problems; if none are found contact your Northern Telecom support organization.
	7	Write protected	Remove write protect jumper from disk.

NT:	Sense key	Meaning	Action
	1	Recovered error	A large number of recovered errors indicate that the device should be replaced.
	2	Not ready	The disk has not been spun up yet.
	3	Medium error	Replace disk.
	4	Hardware error	Replace disk.
	5	Illegal request	Possible software problem; contact your Northern Telecom development organization.
	6	Unit attention	Look for termination/cabling problems; if none are found contact your Northern Telecom development organization.
	7	Write protected	Remove write protect jumper from disk.

06

Type: Error

Severity: Minor

Cause: The SCSI device driver has reported an exception during a disk manager disk access. The driver error encodes the type of exception.

Impact: Disrupts service on systems without disk shadowing.

Action:	Driver error	Meaning
	129	selection timeout
	130	unexpected disconnect
	131	bus reset
	132	read parity error
	133	timeout
	255	driver queue full
	1	Recovered error
	2	Not ready
	3	Medium error
	4	Hardware error
	5	Illegal request
	6	Unit attention
	7	Write protected

This SEER almost always indicates some hardware failure along the SCSI data path, which consists of the 68k board, the 68k board transition module (SPM only), SCSI cabling, disk/tape drive, and disk/tape power converter. Look for and clear hardware fault in SCSI subsystem.

NT:	Driver error	Meaning
	129	selection timeout
	130	unexpected disconnect
	131	bus reset
	132	read parity error
	133	timeout
	255	driver queue full
	1	Recovered error

NT:	Driver error	Meaning
	2	Not ready
	3	Medium error
	4	Hardware error
	5	Illegal request
	6	Unit attention
	7	Write protected

This SEER almost always indicates some hardware failure along the SCSI data path, which consists of the 68k board, the 68k board transition module (SPM only), SCSI cabling, disk/tape drive, and disk/tape power converter. Look for and clear hardware fault in SCSI subsystem.

07

Type: Error

Severity: Major

Cause: The disk manager cannot access a member of disk pair during initialization.

Impact: Only a single copy of the data in the mirrored pair is now available. A failure in the surviving disk will disrupt service. Read throughput is also halved.

Action: Look for a preceding 6605 or 6606 SEER and act accordingly. This SEER almost always indicates some hardware failure along the SCSI data path, which consists of the 68k board, the 68k board transition module (SPM only), SCSI cabling, disk/tape drive, and disk/tape power converter. Look for and clear hardware fault in SCSI subsystem.

NT: Look for a preceding 6605 or 6606 SEER and act accordingly. This SEER almost always indicates some hardware failure along the SCSI data path, which consists of the 68k board, the 68k board transition module (SPM only), SCSI cabling, disk/tape drive, and disk/tape power converter. Look for and clear hardware fault in SCSI subsystem.

08

Type: Error

Severity: Minor

Cause: The disk manager cannot determine which member of a disk pair is more current.

Impact: The disk manager arbitrarily picks the first member. This may or may not be the correct choice.

Action: This SEER can come out if a node boots up with a pair of unsynchronized disks during a disk replacement procedure. Sync from the correct disk and reboot the node.

NT: This SEER can come out if a node boots up with a pair of unsynchronized disks during a disk replacement procedure. Sync from the correct disk and reboot the node.

09

Type: Error

Severity: Major

Cause: The disk manager finds that a disk pair is not in sync during initialization.

This SEER can appear if a disk goes down and its node is subsequently rebooted with the disk still in place.

Impact: Only a single copy of the data in the mirrored pair is now available. A failure in the surviving disk will disrupt service. Read throughput is also halved.

Action: Check earlier class 66 SEERs to find out why the disk was offline.

NT: Check earlier class 66 SEERs to find out why the disk was offline.

10

Type: Error

Severity: Major

Cause: A disk pair has just been synced on the partner node of the node producing the SEER. However, the disk manager on the latter node is unable to independently detect this state.

Impact: Data corruption may occur if the node is rebooted.

Action: Check for hardware, especially cabling, faults along the SCSI bus.

NT: Check for hardware, especially cabling, faults along the SCSI bus.

11

Type: Admin

Severity: Info

Cause: If a member of a synced disk pair goes down and is not brought back up, this SEER will come out every hour as a reminder.

Impact: Only a single copy of the data in the mirrored pair is now available. A failure in the surviving disk will disrupt service. Read throughput is also halved.

Action: Bring the disk back up.

NT: Bring the disk back up.

50

Type: Error

Severity: Minor

Cause: A disk sync invoked from the MMI has failed. This SEER contains a return code that indicates where the sync failed. Possible values are as follows:

6700 out of memory
6710 cannot determine amount to sync
6711 cannot initialize destination disk
6712 cannot enter sync mode
6713 sync primitive failure
6714 cannot leave sync mode

Impact: Cannot sync the disk pair.

Action: Look for and clear hardware fault in SCSI subsystem.

If RC 6700 occurs when syncing online, try the following:

- unload unnecessary utilities
- use a smaller transfer size

RC 6710 often has an associated 6605/6606 SEER. Follow the actions specified for these SEERs.

RC 6711 - check that the destination disk is writable:

1. From `scsi_util` enter
 - select *x*
 - copy *x x 0 0* where *x* is the SCSI ID identified in the SEER
2. Check that the disk is jumpered correctly.

RC 6712-Call your Northern Telecom support group.

RC 6713 often has an associated 6605/6606 SEER. Certain early vintages of 3.5-inch disks cause RC 6713s when synced with sufficiently large transfer sizes. Examples are DSP3105 Rls T370 and ST11200N Rls 8240, 8334

1. Check that the SCSI bus is correctly terminated.
2. Check that the disks are at least at the minimum vintage.
3. If the platform is Modular Option, check that the SCSI/RAM board is at release 25 or later.

RC 6714-call your Northern Telecom support group.

NT: Look for and clear hardware fault in SCSI subsystem.

If RC 6700 occurs when syncing online, try the following:

- unload unnecessary utilities
- use a smaller transfer size

RC 6710 often has an associated 6605/6606 SEER. Follow the actions specified for these SEERs.

RC 6711 - check that the destination disk is writable:

1. From scsi_util enter
 - select x
 - copy $x\ x\ 0\ 0$ where x is the SCSI ID identified in the SEER
2. Check that the disk is jumpered correctly.

RC 6712-Call your Northern Telecom development group.

RC 6713 often has an associated 6605/6606 SEER. Certain early vintages of 3.5-inch disks cause RC 6713s when synced with sufficiently large transfer sizes. Examples are DSP3105 Rls T370 and ST11200N Rls 8240, 8334

1. Check that the SCSI bus is correctly terminated.
2. Check that the disks are at least at the minimum vintage.
3. If the platform is Modular Option, check that the SCSI/RAM board is at release 25 or later.

RC 6714-Call your Northern Telecom development group.

Class 90 Outcalling Server (OCS)

The Outcalling Server (OCS) is a multi-server which schedules and controls the placement of outgoing calls for Remote Notification (RN) and Delivery to Nonusers (DNU).

The OCS communicates and uses many different parts of the DMS Voice-Mail system. Some problems may be isolated to just one user or may affect all outcalling operations. The severity of OCS SEERs vary

- **CRITICAL:** Outcalling will cease or not be operating properly.
- **MAJOR:** Some notifications or messages may be lost. Outcalling will continue but the results are not guaranteed.
- **MINOR:** May continue without adverse effect.
- **INFO:** Normal event worthy of logging.

A class 90 SEER contains

- an indication of which OCS operation failed (the Request Type refers to the type of outcalling service: RN or DNU)
- a lower level return code

00

Type: Error

Severity: Info

Cause: The ocs_util was not started.

Impact: The ocs_util cannot be used to monitor OCS activity.

Action: Contact your Northern Telecom support organization.

NT: This may be a memory management issue. Look for other related SEERs. If the condition persists, notify your Northern Telecom development organization.

01

Type: Admin

Severity: Major

Cause: The request type was not within the set configured for this system.

Impact: This request type will not be available.

Action: Reboot the system. Contact your Northern Telecom support organization if the problem is not cleared.

NT: Reload system tapes.

02

Type: Admin

Severity: Major

Cause: The request type was valid but not a part of this software load.

Impact: This request type will not be available.

Action: Reboot the system. Contact your Northern Telecom support organization if the problem is not cleared.

NT: Determine if the customer has access to this request type. If access is allowed, notify your Northern Telecom development organization.

03

Type: Admin

Severity: Minor

Cause: Due to an error opening a user's personal profile, an attempt was made to locate the user in DR. The user was not found. The user may have been removed since the message was sent.

Impact: The RN or DNU message will be cancelled for this user. The user's name and extension cannot be listed due to the fact that they are no longer in the DR.

Action: If this is occurring after a number of users have been removed from the system then this is normal. If not, then contact your Northern Telecom support organization.

NT: Try to determine why the DR is returning a NOMATCH value for users who are "valid". This may be a DR, or user administration problem. Notify your Northern Telecom development organization.

04

Type: Error

Severity: Critical

Cause: The system volume is not up yet. This is critical to the running of the all programs.

Impact: Until the system volume is up, no outcalling will take place.

Action: Contact your Northern Telecom support organization.

NT: Possible reasons for not being able to see the system volume are:

1. The volume is taking a very long time to load/run.
2. The system was not properly configured.
3. A node has gone down.

05

Type: Admin

Severity: Minor

Cause: Failed to commit or write an audit trail file.

Impact: The collection of audit trails will be disabled until the administrator turns their collection back ON from the Outcalling Options screen. The text of the SEER will indicate if the percentage of storage listed in the Outcalling Options screen was reached, the volume has become full, or an error has occurred.

Action: If a storage limit was reached, reduce the number of days to store outcalling audit trails and set the collection of audit trail information to "Enabled". If an error occurred while writing the audit trail file then look up the lower level return code and follow the advice given. Attempt to set the collection of audit trail information to "Enabled" in the Outcalling Options screen. If errors persist, contact your Northern Telecom support organization.

NT: Look at the lower level return code and check the text space on the volume using VSMUP. If the condition persists, notify your Northern Telecom development organization.

07

Type: Admin

Severity: Minor

Cause: An OCA/New Service has given the OCS an invalid session index value.

Impact: The OCS will schedule a new outcalling session. A duplicate call may occur.

Action: If this problem occurs frequently (more than once a day), contact your Northern Telecom support organization.

NT: This is an internal problem within the OCS. Notify your Northern Telecom development organization.

08

Type: Error

Severity: Critical

Cause: An OCS was not found on the system.

Impact: The OCS is not running (that is, no outcalling).

Action: Review previous outcalling SEERs to try to determine why OCS is no longer running. Contact your Northern Telecom support organization. However, if this SEER was printed within 15 minutes after the MSP nodes were switched, this can be ignored. Within a few minutes, the OCS on the newly active MSP node will be found.

NT: Determine if the OCS was placed in the startlist for the system. If so, see if it has terminated due to another problem. Try to determine why and how this has happened. This could be a configuration issue. A problem could have occurred earlier causing the multi-server to terminate. If nothing further can be determined, notify your Northern Telecom development organization.

09

Type: Admin

Severity: Major

Cause: The OCS was given an invalid time.

Impact: The outcalling will cease until a proper time is given to the OCS. It is possible that DNU or RN requests being processed may be lost.

Action: The user(s) affected will be included in the SEER by name and extension. If a short outage occurred then only these users will have been affected. If a longer outage occurs then a problem may exist with the Time Server. Contact your Northern Telecom support organization.

NT: Determine why a Nil Time is being received from the time server. The server itself may not be running. If the condition persists notify your Northern Telecom development organization.

10

Type: Admin/Debug

Severity: Info

Cause: This is a note indicating a state in the OCS.

Impact: None. This note is used to indicate when recovery is complete, when recovery is delayed, or when a change in the state of the outcalling server should be recorded.

Action: None.

NT: None.

11

Type: Admin

Severity: Critical

Cause: An error occurred when trying to read the organization profile.

Impact: The outcalling Server will not run until it is able to read this file.

Action: The lower level return code will be from AD. See Admin (AD, Class 30) to determine the problem within the organization profile. If unclear, contact your Northern Telecom support organization.

NT: Determine if organizational profile is not present, or corrupted. If profile is either not present or corrupt, notify your Northern Telecom development organization.

13

Type: Admin

Severity: Major

Cause: A lower level routine was not able to process the results of call.

Impact: The user's name and extension will be listed. The message or notification may have been lost. Only this user will be affected. Another SEER from the result-processing routine should explain the problem in further detail.

Action: Review the result-processing SEER (RN or DNU). Only this user should be affected. Follow the action indicated.

NT: Review the result-processing SEER (RN or DNU) and follow this SEER's Action.

14

Type: Admin

Severity: Minor

Cause: A recovery task (RN or DNU) has terminated unexpectedly.

Impact: The OCS will start a new recovery task. However, if this occurs repeatedly without a 9010 Debug SEER indicating **OCS: Recovery Complete**, outcalling may only function with user volumes/request types which have been successfully recovered.

Action: If the condition persists, contact your Northern Telecom support organization.

NT: Notify your Northern Telecom development organization.

15

Type: Admin

Severity: Minor

Cause: A problem occurred with the OCS's scheduling array.

Impact: The outcalling Server will try to restart.

Action: If the OCS fails to recover or this problem persists, contact your Northern Telecom support organization.

NT: Determine why the failure is occurring based on the lower level return code. This may simply be due to a lack of text space on the volume. If the condition persists, notify your Northern Telecom development organization.

16

Type: Error

Severity: Critical

Cause: Command line/Startlist parameters are not valid.

Impact: Until the proper command line parameters are given to the OCS it will not start.

Action: Contact your Northern Telecom support organization.

NT: The command line parameters for the OCS are as follows:
OCS [<SCSI>]_MaxChan_Vol1_Vol2_....VolN

17

Type: Admin

Severity: Minor

Cause: An OCA or started service (RN or DNU) has completed but results not reported back to the OCS. Another call will be scheduled; this may or may not result in a duplicate call being made.

Impact: There is a possibility of a duplicate call being made.

Action: If this problem occurred a series of times, contact your Northern Telecom support organization.

NT: As stated previously, OCA or RN or DNU services are not sending results back to the OCS. This may be due to crashes, or other forms of software problems with these programs. Check for these kinds of errors. If the condition persists, notify your Northern Telecom development organization.

18

Type: Admin

Severity: Major

Cause: Unable to validate a RN or DNU request.

Impact: The user's name and extension will be listed. The message or notification may have been lost. Only this user will be affected. Another SEER from the validation-processing routine should explain the problem in further detail.

Action: Review the validation-processing SEER (RN or DNU). Only this user should be affected. Follow the action indicated.

NT: Try to determine the problem at the lower level. If the problem persists, notify your Northern Telecom development organization.

20

Type: Error

Severity: Critical

Cause: Unable to register the OCS as a multi-server on the system.

Impact: The OCS will not be available on the system until which time it can "Register" on the system.

Action: Contact your Northern Telecom support organization.

NT: This may be a system engineering issue. Notify the Northern Telecom development organization.

21

Type: Admin

Severity: Major/Debug

Cause: An internal state problem has occurred.

Impact: An abnormal communication has occurred between the OCS and OCA. The OCS will attempt to recover from this problem and schedule a new OCA. (A duplicate call may or may not occur.)

Action: If the problem occurs frequently, contact your Northern Telecom support organization.

NT: Notify your Northern Telecom development organization.

22

Type: Admin

Severity: Major

Cause: A bad return code was received from a request formation routine (RN or DNU).

Impact: The message or notification may have been lost. Another SEER from the generation-processing routine should explain the problem in further detail.

Action: Review the generation-processing SEER (RN or DNU). Only this user should be affected. Follow the action indicated.

NT: Try to determine the problem at the lower level. Notify your Northern Telecom development organization.

23

Type: Error

Severity: Critical

Cause: Unable to determine the number of voice channels available on the system.

Impact: The OCS will not start (i.e., no outcalling).

Action: Contact your Northern Telecom support organization.

NT: The hardware database is not working properly or has become corrupted. Explore problem using MD_MA.

24

Type: Error

Severity: Critical

Cause: A critical internal problem within the OCS has caused it to terminate.

Impact: The OCS will not start (i.e., No outcalling).

Action: Contact your Northern Telecom support organization.

NT: This SEER is issued for a memory/buffering problem within the OCS. This may mean that the memory set aside for the OCS was not found on the node indicated or may be the type of memory stated was not available or some other system engineering issue could not be resolved. Notify your Northern Telecom development organization.

27

Type: Error

Severity: Info

Cause: Insufficient memory for OCS to open audit trail.

Impact: OCS will restart. It is possible that duplicate calls may occur and/or requests being processed may be lost.

Action: Note the return codes and look for other related SEERs. If the condition persists, contact your Northern Telecom support organization.

NT: This is a memory segment issue. Note the return codes and look for other related SEERs. If the condition persists, notify the Northern Telecom development organization.

29

Type: Admin

Severity: Info

Cause: The request is invalid or the request cannot be serviced due to a lack of channels with the correct capabilities.

Impact: The request type will not be available.

Action: If the request is invalid, reboot the system. If the problem is not cleared, contact your Northern Telecom support organization. If the request is valid, provide channels that are capable of handling the desired requests.

NT: If the request is invalid, reload the system tapes. The system may be configured without the channels required to perform the request. Verify by checking the number and the types of channels stated in the OCS startlist parameters.

Class 91 Message Waiting Indicator Audit (MWI)

The Message Waiting Indicator (MWI) Audit task is a background task which runs periodically to ensure that the MWI is properly turned on for all mailboxes which have new messages. Normally the MWI is turned on immediately whenever a new message is deposited in a mailbox. However, some conditions, such as a switch reboot or an outage in the SMDI or AML link, can cause the MWI to be lost for some or all mailboxes. The purpose of the MWI Audit is to ensure that no message waiting indications are lost permanently.

The MWI Audit is not essential to the normal operation of the system. It merely provides a “safety net” in case of certain unexpected failures.

In a system with multiple user volumes, there will be multiple MWI Audit tasks, one per user volume.

01

Type: Error

Severity: Minor

Cause: The MWIAudit task cannot register to the name server with the name “mwiaudit_<node>” where <node> is the node number that the MWIAudit task is running on.

Impact: MWI Audit will still run at scheduled times. This MWI Audit task cannot be triggered by link outage or setMWI utility.

Action: Look up the return code to identify the real problem.

NT: Look up the return code to identify the real problem.

02

Type: Error

Severity: Minor

Cause: There is a problem trying to obtain information from a particular user. The user cabinet name is specified in the SEER. Possible causes for the problem are:

1. Failed to open the specified user's cabinet.
2. Failed to obtain the 'Profile' FIR from the cabinet.
3. Failed to retrieve the client ID from the cabinet.
4. Failed to open the 'Profile' file.
5. Failed to read the personal message record from the profile.

Impact: There is no MWI audit being performed on the user specified in the SEER. This mailbox may be corrupted.

Action: Look up the return code to identify the real problem. Determine if the mailbox is working properly. If not try deleting and recreating the mailbox. If problem persists, contact your Northern Telecom support organization.

NT: Use the MD utility to open the mailbox. Ensure cabinet and profile are correct.

03

Type: Error

Severity: Minor

Cause: One of several failures in preparing for an audit.

1. Failed to obtain the System profile FID.
2. Failed to open the System profile.
3. Failed to read the Organization Basic Record.
4. Failed to read the Organization Feature Record.
5. Failed to obtain the FID of the “/<2 | 20x>/users” cabinet where <2 | 20x> is either 2 if MWIAudit is running on node 1 or 200+<node #> for all other nodes.

Impact: No MWIAudit will be performed for this session on this volume.

Action: Look up the return code to identify the real problem.

NT: Look up the return code to identify the real problem.

04

Type: System

Severity: Info

Cause: Time for a regular MWI audit.

Impact: A MWI audit has begun.

Action: None.

NT: None.

05

Type: System

Severity: Info

Cause: The MWIAudit either has checked through all users or there was a problem.

Impact: The MWI audit is finished.

Action: None.

NT: None.

06

Type: System

Severity: Info

Cause: Other task has triggered a MWI audit.

Impact: The MWI audit has begun.

Action: None.

NT: None.

07

Type: System

Severity: Info

Cause: Other task has requested the MWIAudit task to stop auditing.

Impact: The MWI audit will stop.

Action: None.

NT: None.

09

Type: Admin

Severity: Info

Cause: The mailbox either has not been logged into for at least 30 days or the mailbox was created when the system was not running normally.

Impact: Stale mailbox will consume disk space because it has been receiving broadcast messages. The fact that the mailbox was not created during normal system operation may indicate a security problem.

Action: Remove stale mailbox if it is not used. Remove and re-add the mailbox if the SE-ERs say that the mailbox has a bad creation time.

NT: Us MD utility to check the last mailbox login time and the creation date of the user's profile. Verify that the mailbox is still being used.

Class 92 Delivery to Nonusers (DNU)

Delivery to Nonusers (DNU) is part of the Outcalling Server. This DNU software schedules and controls the placement of outgoing Delivery to Non-user calls.

The DNU-OCS (Delivery to Nonusers-Outcalling Service) communicates with, and uses many different parts of the DMS VoiceMail system. Problems can be isolated to just one user or can affect all outcalling operations. There are four severities of problems:

CRITICAL: Outcalling will cease or not be operating properly.

MAJOR: Some notifications or messages may be lost. Outcalling will continue but the results are not guaranteed.

MINOR: May continue without adverse effect.

INFO: Normal event worth of logging

A Class 92 SEER contains

- an indication of which DNU-OCS operation failed
- a lower level return code

01

Type: Admin

Severity: Critical

Cause: Delivery to nonusers request processing routines could not be initialized.

Impact: Delivery to nonusers will not be available on the system.

Action: Reboot the system. Contact your Northern Telecom support organization if the problem is not cleared.

NT: Reload system tapes. If this does not fix the problem, notify your Northern Telecom development organization.

05

Type: Admin

Severity: Major

Cause: Trying to send a message which is not a DNU message.

Impact: DNU will not send the message.

Action: Contact your Northern Telecom support organization.

NT: Look for other related SEERs. If the condition persists, notify your Northern Telecom development organization.

06

Type: Admin

Severity: Major

Cause: Failed to read a DNU Message or DNU cabinet file information record.

Impact: The OCS will cancel the DNU message and list the cancellation in the audit trail. If the DNU cabinet could not be read then all DNU requests for that user volume will be cleared and recovered again.

Action: If recovery does not take place (9010 Debug SEER saying **OCS: Recovery Complete**) then a lower level problem may exist (e.g., the volume server or node has gone down). If the condition persists, contact your Northern Telecom support organization.

NT: Look for other related SEERs. If the condition persists, notify your Northern Telecom development organization.

07

Type: Error

Severity: Major

Cause: The version of a message is invalid.

Impact: A message with a version number greater than this release of software has been found. This may be due to a mis-match of software.

Action: Contact your Northern Telecom support organization.

NT: A wrong message version was found. This most likely is a software version mismatch. A site having a new version of software and then being restored with an older version of software. Notify the Northern Telecom development organization if you are still unable to determine the problem.

08

Type: Admin

Severity: Major

Cause: A command issued to the OCS failed. The OCS has possibly terminated.

Impact: The fact that the OCS is not alive will not cause the loss of any Delivery to Nonuser messages because the MT will try to deliver the message to the Outcalling Server after a series of delayed. If unable, a Non-delivery notification (NDN) will be returned. However, if the OCS has terminated and is not restarting then there may be no further outcalling sessions.

Action: A probable cause is that the OCS has terminated due to another kind of failure. Look for other SEERs related to the OCS's possible termination. Once restarted this problem should disappear. Another probable cause is that a node went out of service and then came back into service.

NT: If the OCS has terminated and has not restarted, look for related SEERs and check the startlist as well as the status of the nodes. If you cannot solve the problem, contact the Northern Telecom development organization.

09

Type: Admin

Severity: Major

Cause: A problem has occurred starting a recovery task.

Impact: Another recovery attempt will be made five minutes later. However, if this problem continues without the 9010 Debug **OCS: Recovery Complete** SEER, then DNU for this user volume may not work.

Action: If the non-recovery situation continues, contact your Northern Telecom support organization.

NT: Notify the Northern Telecom development organization.

Class 93 Remote Notification (RN)

Remote Notification (RN) is part of the Outcalling Server. This section of software schedules and controls the placement of outgoing Remote Notification calls.

The RN-OCS communicates and uses many different parts of the DMS VoiceMail system. Some problems may be isolated to just one user or may affect all outcalling operations.

CRITICAL: Outcalling will cease or not be operating properly.

MAJOR: Some notifications or messages may be lost. Outcalling will continue but the results are not guaranteed.

MINOR: May continue without adverse effect.

INFO: Normal event worthy of logging.

A Class 93 SEER contains

- an indication of which RN operation failed
- a lower level return code

02

Type: Error

Severity: Major

Cause: Outcalling has not been configured to handle RNs for the user's volume.

Impact: Outcalling has not been configured to handle RNs for the user's volume. The audit trail will show that the RN could not be delivered.

Action: This is a system configuration problem. Contact your Northern Telecom support organization.

NT: Make sure all user volumes are parameters to the OCS in the startlist. If the problem cannot be resolved, contact your Northern Telecom development organization.

03

Type: Admin

Severity: Critical

Cause: Remote Notification was unable to register itself as a request type with the OCS.

Impact: Remote Notification will not be available on the system.

Action: Reboot the system. If the problem does not clear, contact your Northern Telecom support organization.

NT: Reload the system tapes. If this does not fix the problem, contact your Northern Telecom development organization.

05

Type: Admin

Severity: Major

Cause: A command issued to the OCS failed. The OCS has possibly terminated.

Impact: The fact that the OCS is not alive will not cause the loss of any Remote Notifications because they will be recovered when the OCS restarts. However, if the OCS has terminated and is not restarting then there may be no further outcalling sessions.

Action: The probable cause is that the OCS has terminated due to another kind of failure. Look for other SEERs related to the OCS's possible termination. Once restarted this problem should disappear.

NT: If the OCS has terminated and has not restarted, look for related SEERs and check the startlist as well as the status of the nodes. If the problem cannot be resolved, contact your Northern Telecom development organization.

06

Type: Admin

Severity: Major

Cause: Failed to read or update a user's personal profile.

Impact: A Remote Notification will have been lost for a user.

Action: A personal profile has most likely become corrupted or unavailable due to some access problem (volume server/node has gone down). Look up the lower level return code and follow the advice given. This may involve removing and recreating the user.

NT: Look for other related SEER. If the SEER text refers to an orphan user cabinet, use MD to remove it. If the condition persists contact your Northern Telecom development organization.

07

Type: Admin

Severity: Major

Cause: Remote Notification recovery task problems.

Impact: Recovery will be re-attempted five minutes later. If the 9010 **OCS: Recovery Complete** Debug SEER does not appear, the RN for this user volume may not work.

Action: If the non-recovery situation continues, contact your Northern Telecom support organization.

NT: For some reason the OCS has not been able to recover remote notifications. This may be due to a user volume being Off-line or some other low level problem. Contact your Northern Telecom development organization if still unable to determine the problem.

Class 100 System Operation

On a Meridian Mail system System Operation installs or updates the software on a hardware platform.

The following SEERs may occur during one of SC operations which include:

- installation
- upgrade
- conversion
- feature expansion
- hardware modification(add channels, add nodes)
- platform conversion
- disk operations (storages expansion, disk-to-disk back up, disk shutdowns).

System operation checklist

To resolve most SEERs in this class the Action required is to “Follow the system operation checklist.” The checklist consists of the following steps:

- power the system off
- check that all boards are properly inserted
- check that all cables are connected
- check that the tape is inserted into the drive and that the drive door is closed
- power on system and check that the power has been turned on for all nodes
- after tape boots, type <Ctrl> **W** and a ‘Console and Printer’ box will pop up. Type **P** to generate a more detailed printout of your operation. If the operation completes successfully, type <Ctrl> **W**, and after the ‘Console and Printer’ box pops up press **P** followed by <Ctrl> <Print Screen>. This will take the system out of print mode. If the operation fails again please have the printout ready when talking to your Northern Telecom support organization.

- performing a tape re-tension will often solve problems reading a tape. To do this, boot from disk, write protect the tape by turning the lug to SAFE, and attempt to perform a backup to the tape. The tape will be re-tensioned, the backup will fail, and the software configuration operation can be retried.

Software configuration problems are often caused by tape errors. A complete list of SCSI device sense key and error codes can be found in Appendix A.

91

Type: Admin

Severity: Info

Cause: This is a status SEER and reports the start and stop of the MM8 to SPM 02 online conversion.

Impact: None.

Action: None.

NT: None.

92

Type: Admin

Severity: Info

Cause: Error adding an entry to the conversion directory during the MM8 to SPM 02 online conversion.

Impact: The currently running system is unaffected. However, if the remaining steps of the the conversion were to be completed certain users/customers/voice services/VSDNs/system distribution lists may be lost in the SPM 02 system.

Action: Re-run the conversion using the existing conversion directory. If the problem persists, re-run the conversion completely by removing the conversion directory in response to the prompts.

NT: Re-run the conversion using the existing conversion directory. If the problem persists, re-run the conversion completely by removing the conversion directory in response to the prompts.

93

Type: Admin

Severity: Info

Cause: Error adding an member to the a system distribution list in the conversion directory during the MM8 to SPM 02 online conversion.

Impact: The currently running system is unaffected. However, if all remaining steps of the conversion were to be completed then certain of the SPM 02 system distribution lists may be missing members.

Action: Re-run the conversion.

NT: Re-run the conversion.

94

Type: Admin

Severity: Info

Cause: Error expanding a mailbox during the MM8 to SPM 02 online conversion.

Impact: The currently running system is unaffected. However, if the remaining steps of conversion were to be completed without fixing the affected mailbox, then that user would be unable to access his/her mailbox in the SPM 02 system.

Action: Contact your Northern Telecom support organization.

NT: All affected users should be fixed and the conversion re-run using the existing conversion directory. Since the conversion disables updates on the main DR server, updates must first be re-enabled by the MD_DR command "DRCONTROL enableUpdates". The MMI can then be used to modify the affected users. For the conversion to succeed the length of at least one of the user's DNs, plus the length of the NPA code must be equal to the network DN length. The NPA code and network DN length are parameters supplied to the conversion software. Use the MMI to change one of the user's DNs.

95

Type: Admin

Severity: Info

Cause: When re-running the MM8 to SPM 02 online conversion an error occurred attempting to determine if the user has already been converted.

Impact: The currently running system is unaffected. However, the conversion directory is suspect. The SPM 02 system may experience problems after the remaining steps of the conversion if the existing conversion directory is used.

Action: Re-run the conversion using the existing conversion directory. If the problem persists re-run the conversion completely by removing the conversion directory in response to the prompts.

NT: Re-run the conversion using the existing conversion directory. If the problem persists re-run the conversion completely by removing the conversion directory in response to the prompts.

96

Type: Admin

Severity: Info

Cause: When re-running the MM8 to SPM 02 online conversion an error occurred when attempting to update a user entry in the conversion directory.

Impact: The currently running system is unaffected. However, the conversion directory is suspect. The SPM 02 system may experience problems after the remaining steps of the conversion if the existing conversion directory is used.

Action: Re-run the conversion using the existing conversion directory. If the problem persists re-run the conversion completely by removing the conversion directory in response to the prompts.

NT: Same as Action.

Class 101 User Interface (UI)

The User Interface (UI), better known as the Man-Machine Interface (MMI), is a set of instructions and screens that let the user view and change the contents of the DMS VoiceMail system, and operate various programs of the system.

Many of these SEERs reveal that data is corrupt. Sometimes, these errors are just temporary and all you have to do is exit and re-enter a screen or try a command again. Sometimes you have to reboot the system.

Since a SEER class can only hold 99 SEERs and the MMI produces over 99 SEERs, MMI SEERs overflow into other classes (102 and 103).

01

Type: Error

Severity: Minor

Cause: Attempt to add an already existing mailbox.

Impact: Mailbox cannot be added.

Action: Contact your Northern Telecom support organization.

NT: Use MD_DR and MD to clean up user files.

02

Type: Error

Severity: Minor

Cause: No users exist that satisfy the specified view criteria.

Impact: User cannot be found.

Action: Exit from User Administration and then re-enter and retry command. If the problem persists, contact your Northern Telecom support organization.

NT: Use MD_DR and MD to find out the problem.

10

Type: Error

Severity: Minor

Cause: Attempt to open new cab with old one(s) still open.

Impact: Cannot update the user.

Action: Exit from User Administration and then re-enter and retry command. If the problem persists, contact your Northern Telecom support organization.

NT: Use MD_DR and MD to find out the problem.

11

Type: Error

Severity: Minor

Cause: Write user not preceded by read user.

Impact: Cannot save the user.

Action: Exit from User Administration and then re-enter and retry command. If the problem persists, contact your Northern Telecom support organization.

NT: Use MD_DR and MD to find out the problem.

12

Type: Error

Severity: Minor

Cause: Delete user not preceded by read user.

Impact: Cannot delete the user.

Action: Exit from User Administration and then re-enter and retry command. If the problem persists, contact your Northern Telecom support organization.

NT: Use MD_DR and MD to find out the problem.

13

Type: Error

Severity: Minor

Cause: Write organization profile not preceded by read organization profile.

Impact: Cannot update the organizational information.

Action: Exit from User Administration and then re-enter and retry command. If the problem persists, contact your Northern Telecom support organization.

NT: Use MD_DR and AD_UTIL to find out the problem.

16

Type: Error

Severity: Minor

Cause: Client ID of list entry does not exist.

Impact: Cannot update the distribution list.

Action: Exit from User Admin and re-enter. Retry command. If the problem persists, contact your Northern Telecom support organization.

NT: Use MD_DR to delete the list.

Class 102 User Interface (UI)

The User Interface (UI), better known as the Man-Machine Interface (MMI), is a set of instructions and screens that let the user view and change the contents of the DMS VoiceMail system, and operate various programs of the system.

Many of these SEERs reveal that data is corrupt. Sometimes, these errors are just temporary and all you have to do is exit and re-enter a screen or try a command again. Sometimes, you have to reboot the system to freshen the memory again.

Since a SEER class can only hold 99 SEERs and the MMI produces over 99 SEERs, MMI SEERs overflow from Class 101 to Classes 102 and 103.

00

Type: Error

Severity: Minor

Cause: Error committing voice file.

Impact: Voice file not updated.

Action: Retry command. If the problem persists, contact your Northern Telecom support organization.

NT: Look up the lower level return code (usually at the end of the SEER) and examine the SEERs for more information.

01

Type: Error

Severity: Major

Cause: The System Volume (VS1) may be full or the Security file may be corrupt.

Impact: It will not be possible to log into the MMI.

Action: Contact your Northern Telecom support organization.

NT: Use the VSMUP utility to audit the system volume.

02

Type: Admin

Severity: Major

Cause: The system volume is full.

Impact: It will not be possible to change the Administrator's password.

Action: Try again after system audits have been performed.

NT: Use the VSMUP utility to audit the system volume.

03

Type: Admin

Severity: Info

Cause: The System Administrator failed to logon.

Impact: None.

Action: None.

NT: None.

04

Type: Admin

Severity: Info

Cause: Administrator Password changed.

Impact: None.

Action: None.

NT: None.

05

Type: Admin

Severity: Info

Impact: None.

Cause: Alarm silenced by Administrator.

Action: None.

NT: None.

15, 16

Type: Error

Severity: Minor

Cause: The Printer dataport or window could not be opened to send data.

Impact: Printing will not work. The MMI could be unstable.

Action: Try another print function. Check the printer. If the problem persists, contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

17

Type: Error

Severity: Major

Cause: The file, in which the MMI text is stored, is corrupt or does not match MMI software.

Impact: The MMI will not run.

Action: Contact your Northern Telecom support organization.

NT: Restore the file or MMI software from tape and restart it using PRM_CONTROL.

32

Type: Error

Severity: Minor

Cause: Tasking problem.

Impact: MMI will not poll for dynamic information.

Action: Contact your Northern Telecom support organization.

NT: Use the PRM_Control to restart the MMI.

33

Type: Error

Severity: Minor

Cause: The MMI failed to communicate with the MMI Server program.

Impact: No arbitration will be done between user administration terminals.

Action: Contact your Northern Telecom support organization.

NT: Restart MMI_Server program using PRM_CONTROL.

40 - 49

Type: Error

Severity: Minor

Cause: Problem with MMI, system, file system, Directory Server or Volume Server software.

Impact: The requested operation will be lost. This may lead to loss or corruption of User Profile data.

Action: Contact your Northern Telecom support organization.

NT: Restart MMI_Server program using PRM_CONTROL. If the problem remains, back up the system and restart.

50

Type: Error

Severity: Major

Cause: MMI could not allocate storage for the requested operation.

Impact: Add, Delete or Modify of User Profile Data cannot be performed.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

51

Type: Error

Severity: Minor

Cause: MMI failed to gain access to or close the Networking Database.

Impact: Remote Users and Networking validation will fail.

Action: Exit and re-enter User Administration.

NT: Use MD to verify existence of the Networking Database.

72

Type: Error

Severity: Minor

Cause: MMI failed to Print OM files, such as the traffic and Voice Menu files.

Impact: Specified OM Reports cannot be printed.

Action: Check the printer connection. If the problem persists, contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the OM Server. If this fails, use PRM_CONTROL to restart the MMI.

73

Type: Error

Severity: Minor

Cause: MMI failed to view the OM files, such as the traffic and Voice Menu files.

Impact: Specified OM Reports cannot be viewed.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the OM Server. If this fails, use PRM_CONTROL to restart the MMI.

75

Type: Error

Severity: Minor

Cause: MMI failed to view next SEER in SEER file.

Impact: Specified SEERS cannot be viewed.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the SEER server and if this fails, to restart the MMI.

76

Type: Error

Severity: Minor

Cause: MMI failed to view all SEERs in the SEER file.

Impact: The last SEER will not be displayed. Resources will not be released.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart SEER server and if this fails, to restart MMI.

77

Type: Error

Severity: Minor

Cause: MMI failed to read the first SEER in the SEER file.

Impact: No SEER history will be displayed.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the SEER server and if this fails, to restart MMI.

78

Type: Error

Severity: Minor

Cause: MMI was unable to get the specified alarm status because of a communication problem.

Impact: Alarm cannot be silenced.

Action: Contact your Northern Telecom support organization.

NT: Restart the SEER server using PRM_CONTROL.

80

Type: Error

Severity: Major

Cause: MMI failed to obtain storage to perform organization administration operations.

Impact: MMI unable to read or write to the organizational administration profile.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart MMI.

81

Type: Error

Severity: Major

Cause: MMI failed to obtain resources to perform Organization operations.

Impact: MMI unable to read or write to organizational profile.

Action: Contact your Northern Telecom support organization.

NT: Ensure no other utilities are running. Then use PRM_CONTROL to restart the MMI.

82

Type: Error

Severity: Minor

Cause: MMI failed to read the Organization Profile.

Impact: It will not be possible to perform Organization Administration operations.

Action: If problem persists, contact your Northern Telecom support organization.

NT: Ensure no other utilities are running and then use PRM_CONTROL to restart the MMI.

83

Type: Error

Severity: Minor

Cause: MMI failed to write the Organizational Profile.

Impact: Organization changes made in the session may be lost.

Action: If problem persists, contact your Northern Telecom support organization.

NT: Ensure no other utilities are running. Use PRM_CONTROL to restart the MMI.

84

Type: Error

Severity: Minor

Cause: MMI failed to restart the OM Server.

Impact: Changes made to the OM Schedule may not take effect.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the OM Server.

85

Type: Error

Severity: Minor

Cause: MMI failed to close all files.

Impact: The system may slow down because of this system resource problem.

Action: Exit and re-enter the screen. If the problem persists, contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

86

Type: Error

Severity: Minor

Cause: MMI failed to restart or stop the SEER printer.

Impact: Changes to start or stop SEER printing will not take effect.

Action: Try the command again. If the problem persists, contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

87

Type: Error

Severity: Minor

Cause: MMI encountered an error while validating a broadcast mailbox.

Impact: Change to the broadcast mailbox number is not accepted.

Action: Exit the form and try the command again. If the problem persists, contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

89

Type: Error

Severity: Major

Cause: Failed to access the Customer Profile during Customer Administration.

Impact: No customer administration will be available.

Action: Logout and log back into the customer administration screen. If the problem persists, contact your Northern Telecom support organization.

NT: Use MD and MD_DR to examine the Customer Profiles.

90

Type: Error

Severity: Minor

Cause: MMI failed to view user. May indicate data corruption.

Impact: The Find User command will not work.

Action: Contact your Northern Telecom support organization.

NT: Use VSMUP to audit the system and user volumes. Use MD_DR to verify the user in the DR.

91

Type: Error

Severity: Minor

Cause: Possible data corruption for the specified user.

Impact: It will not be possible to view the specified user.

Action: Contact your Northern Telecom support organization.

NT: Use MD_DR to delete the corrupt entry.

92

Type: Admin

Severity: Info

Cause: 95% or 100% of mailbox limitation reached.

Impact: Administrator will not be able to add users when 100% is reached.

Action: Contact your Northern Telecom support organization.

NT: Contact your Northern Telecom sales organization to determine if the customer desires to purchase additional mailboxes.

97

Type: Error

Severity: Minor

Cause: OCS did not register user or organizational changes.

Impact: Outcalling may temporarily not work properly.

Action: If this is a user change, the user's <site ID/location ID/mailbox number> will be indicated in the SEERs. Simply deposit a message in the user's mailbox to reactivate their remote notification, or try modifying the same user and saving the changes again.

If the change is for the organization-wide outcalling administration, try to modify and save the fields again; if it still fails, the changes will not be reflected in outcalling until the next reboot.

NT: If the change is for the organization-wide outcalling administration use PRM_CONTROL to restart the OCS.

98

Type: Error

Severity: Minor

Cause: Failed to modify/add dynamic personal or organizational records.

Impact: User or organizational information will be incomplete.

Action: Exit to Main Menu and re-select the command. If the problem persists, contact your Northern Telecom support organization.

NT: Use AD_UTIL to create or change the record.

99

Type: Error

Severity: Minor

Cause: Failed to record Personal Verification.

Impact: Personal Verification recording was not created or updated.

Action: Exit to Main Menu and re-select User Administration and retry the command. If the problem persists, contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

Class 103 User Interface (UI)

The User Interface (UI), better known as the Man-Machine Interface (MMI), is a set of instructions and screens that let the user view and change the contents of the DMS VoiceMail system, and operate various programs of the system.

Many of these SEERs reveal that data is corrupt. Sometimes, these errors are just temporary and all you have to do is exit and re-enter a screen or try a command again. Sometimes, you have to reboot the system.

Since a SEER class can only hold 99 SEERs and the MMI produces over 99 SEERs, MMI SEERs overflow from Class 101 to Classes 102 and 103.

00 - 03

Type: Error

Severity: Minor

Cause: Failed to perform the requested operation.

Impact: The requested operation will be lost. This may lead to loss or corruption of User Profile data.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI. Try AUDIT 1 from VSMUP.

04

Type: Error

Severity: Major

Cause: MMI failed to obtain storage to perform the Modify operation on a list.

Impact: The list cannot be modified.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI. Try AUDIT 1 from VSMUP. If the problem remains, reboot the system.

05

Type: Error

Severity: Minor

Cause: The terminal was reset during the operation.

Impact: Changes to the list will not be saved.

Action: Try the command again.

NT: None.

06

Type: Error

Severity: Minor

Cause: MMI failed to validate the mailbox for a list.

Impact: The specified mailbox cannot be used in a list.

Action: Try the command again.

NT: None.

07

Type: Error

Severity: Minor

Cause: MMI failed to read the list of mailboxes.

Impact: It will not be possible to display the lists of mailboxes.

Action: Try the command again.

NT: Use PRM_CONTROL to restart the MMI.

08

Type: Error

Severity: Minor

Cause: MMI failed to close all files in the lists operation.

Impact: Possible resource problem.

Action: Try the command again. If the problem persists, contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI. If this fails, reboot the system.

09

Type: Error

Severity: Major

Cause: MMI failed to obtain storage to perform this list operation.

Impact: The Distribution List cannot be modified.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

10

Type: Error

Severity: Major

Cause: MMI failed to obtain resources to perform this List operation.

Impact: The Distribution List cannot be modified.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart MMI. If this fails, reboot the system.

11

Type: Error

Severity: Minor

Cause: MMI failed to add a list.

Impact: Distribution List is not added.

Action: Contact your Northern Telecom support organization.

NT: Use VSMUP to audit the system and user volumes and try the command again.

12

Type: Error

Severity: Minor

Cause: MMI failed to delete a list.

Action: Contact your Northern Telecom support organization.

NT: Use VSMUP to audit the system and user volumes and try the command again.

20

Type: Error

Severity: Minor

Cause: Corruption in Hardware Database. Mismatch of hardware information.

Impact: It will not be possible to read hardware records.

Action: Log out. Log in. Try the command again. If the problem persists, contact your Northern Telecom support organization.

NT: Use MD_MA to check the hardware database.

21

Type: Error

Severity: Major

Cause: No Hardware Database cabinet exists which indicates that the Hardware Database is corrupt.

Impact: It will not be possible to read hardware records.

Action: Log out. Log in. Try the command again. If the problem persists, contact your Northern Telecom support organization.

NT: Use MD_MA to check the hardware database.

22

Type: Error

Severity: Minor

Cause: Tasking problem.

Impact: System Status Screen, System Card Screen, or System Channel Screen will not be updated.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

30

See SEER 20.

31

See SEER 21.

32

Type: Error

Severity: Major

Cause: The MMI has used all of its available heap.

Impact: It will not be possible to allocate storage for the operation.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

33

See SEER 20.

40

Type: Error

Severity: Major

Cause: The Volume Status information could not be obtained.

Impact: Volume Status screen information will not be available.

Action: Log out and log in again. Try the command again. If the problem persists, contact your Northern Telecom support organization.

NT: Check the return code in the SEER and take appropriate action for that return code.

41

Type: Error

Severity: Major

Cause: The Backup Task was found to be dead.

Impact: It will not be possible to perform a backup.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

42

Type: Error

Severity: Major

Cause: Failed to initiate the backup task.

Impact: It will not be possible to perform a backup.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI. If this fails, reboot the system.

43

Type: Error

Severity: Minor

Cause: An attempt was made to login to a multiple administration terminal without the Multiple Administrator Terminal feature having been enabled.

Impact: Login to a Multiple Administration Terminal is rejected.

Action: Contact your Northern Telecom support organization.

NT: If this feature was suppose to be enabled, enable the Multiple Administration Terminals feature using AD_UTIL.

44

Type: Error

Action: Minor

Cause: A scheduled backup was attempted while another backup was in progress.

Impact: Scheduled backup did not run.

Action: Reschedule the scheduled backup.

NT: None.

50

Type: Error

Severity: Minor

Cause: Failed to retrieve the Audit Trail records.

Impact: Cannot display the Audit Trail records.

Action: Try to view the Audit Trail the following day and if still incompatible, contact your Northern Telecom support organization.

NT: Check the return code on the audit trail SEER to determine if it is a disk access problem.

51

Type: Error

Severity: Minor

Cause: Incompatible version number for Audit Trail.

Impact: None. The old version of Audit Trail records will not be displayed.

Action: Wrong version of the Audit Trail files exist on the system. Contact your Northern Telecom support organization.

NT: Use MD utility to delete the old Audit Trail files under the cabinet /1/OCS.

60

Type: Error

Severity: Major

Cause: Failed to obtain resources for Class of Service Administration.

Impact: Class of Service Administration cannot be performed.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI.

61

Type: Error

Severity: Major

Cause: Failed to read the specified Class of Service.

Impact: The Class of service record may be corrupted.

Action: Contact your Northern Telecom support organization.

NT: Use AD_UTIL and MD_DR to check the entry. Delete it if it is corrupted.

62

Type: Error

Severity: Major

Cause: Failed to write the specified Class of Service.

Impact: The Class of Service record may be corrupted.

Action: Contact your Northern Telecom support organization.

NT: Use AD_UTIL and MD_DR to check the entry. Delete it if it is corrupted.

63

Type: Error

Severity: Major

Cause: Failed to delete the specified Class of Service.

Impact: The Class of Service record may be corrupted.

Action: Contact your Northern Telecom support organization.

NT: Use AD_UTIL and MD_DR to check the entry. Delete it if it is corrupted.

99

Type: Error

Severity: Major

Cause: Failed to register the MMI.

Impact: MMI passthru will not work.

Action: Contact your Northern Telecom support organization.

NT: Use PRM_CONTROL to restart the MMI. If the problem persists backup the system and reboot.

Class 104 Voice Menus, Announcements, and Time-Of-Day Services (VMU)

Voice Menus, Announcements, and Time-of-day are contained in one single piece of software (VMU).

With Voice Menus service, the Administrator can set up customized call processing applications allowing callers to listen to recorded information, leave messages in specific mailboxes or speak to specific mailbox owners. Each menu can have 12 actions, which correspond to the keys on a telephone.

The Announcements service provides an information recording.

The Time-Of-Day service starts another service based on business days and hours, non-business days and holidays.

VMU errors can cause Voice Menu, Announcement, or Time-Of-Day

- services to become inaccessible
- sessions to be terminated due to inaccessibility, disconnection or transfer to an operator

A Class 104 SEER generally contains

- the service file name “Serv. File [FILENAME]” (FILENAME is the voice service ID number defined by the administrator)
- an auxiliary string, “Aux [STRING]”, for example, DN
- an auxiliary integer, “AuxI [INTEGER]”, for example, Record ID
- a lower level return code, that gives more information on the problem

02

Type: Error

Severity: Minor

Cause: VMU failed to transfer a caller in a voice service to the System Attendant.

Impact: The service will be terminated and the call will be disconnected.

Action: Contact your Northern Telecom support organization.

NT: Look up the return code for more specific information on the problem.

03

Type: Error

Severity: Minor

Cause: VMU failed to disconnect call. The return code isolates the cause.

Impact: The call will be disconnected at a later point.

Action: Contact your Northern Telecom support organization.

NT: Look up the return code for more specific information on the problem.

04

Type: Error

Severity: Major

Cause: VMU failed to initialize the System and Voice Service prompt files.

Impact: The caller will be transferred to the revert DN. Depending on the kind of low level error, the prompts may not be available to other services.

Action: Contact your Northern Telecom support organization.

NT: Look up the lower level return code (usually appearing at the end of the SEER) and examine other SEERs to obtain more information.

05

Type: Error

Severity: Major

Cause: VMU failed to play a prompt from the System or Voice Service prompt files. The AuxI value is the prompt number.

Impact: The caller will be disconnected. Depending on the kind of low level error, prompts may not be available to other voice services.

Action: Call up the service and perform the set of actions that lead to this problem. If the problem persists, check the VX (class 21) SEER given by the return code and follow the instruction.

NT: Look up the return code and examine other SEERs.

06

Type: Error

Severity: Major

Cause: VMU failed to call revert DN. The return code isolates the cause.

Impact: The caller will be transferred to the System Attendant instead of the revert DN.

Action: Check that the revert DN, in the specified service file, is valid. If so, contact your Northern Telecom support organization.

NT: Look up the return code and examine other SEERs.

07

Type: Error

Severity: Major

Cause: VMU failed to open the System and Voice Service prompt files.

Impact: The caller will be transferred to the revert DN. Depending on the kind of low level error, the prompts may not be available to other services.

Action: Contact your Northern Telecom support organization.

NT: The AuxI value is the language number. Look up the lower level return code and examine other SEERs for more information.

08

Type: Error

Severity: Major

Cause: VMU failed to switch to specified service.

Impact: An error message will be played to the caller, but the caller will be allowed to perform other operations.

Action: Check the values in the Channel Allocation Table and contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information.

09

Type: Error

Severity: Minor

Cause: The Service Definition file found did not match the requested type, for example it is not a Voice Menu, Announcement or Time-Of-Day file. The request could have come from the VSDN table (directly dialed), a Voice Menu, or a Time-Of-Day controller.

Impact: An error message will be played to the caller and the service will be terminated.

Action: If the service definition matches, contact your Northern Telecom support organization.

NT: Confirm that the administrator has matched the service type in the VSDN table or Voice Menu definition with the type of the definition (using the ID number).

10

Type: Error

Severity: Minor

Cause: The voice service file version is not compatible with existing software after conversion.

Impact: An error message will be played to the caller, and the service will be terminated.

Action: Contact your Northern Telecom support organization.

NT: This is a software release problem. Old files were not upgraded during conversion; notify your Northern Telecom development organization.

11

Type: Error

Severity: Minor

Cause: Error occurred while reading a voice service file.

Impact: An error message will be played to the caller. The service may be terminated.

Action: Contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information.

12

Type: Error

Severity: Minor

Cause: A service file's voice prompts are corrupt. The return code isolates the cause.

Impact: An error message will be played to the caller. The service may be terminated.

Action: Delete and recreate the Voice Menu or Announcement Service file. If the problem remains or occurs again, contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information.

13

Type: Error

Severity: Minor

Cause: VMU failed to play a service file's voice prompt. The AuxI value is the file record ID number.

Impact: An error message will be played to the caller. The service may be terminated.

Action: Delete and recreate the Voice Menu or Announcement Service file. If the problem still remains or occurs again, contact your Northern Telecom support organization.

NT: Look up the lower level return code (usually appearing at end of SEER) and examine other SEERs for more information.

14

Type: Admin

Severity: Minor

Cause: No greeting, choices, or Announcement was recorded for the service file.

Impact: An error message will be played to the caller. The service may be terminated.

Action: If the service is a Voice Menu, record a greeting or choices prompt. If it is an Announcement, record the Announcement. If the error still occurs then contact your Northern Telecom support organization.

NT: Look up the lower level return code (usually appearing at end of SEER) and examine other SEERs for more information.

15

Type: Error

Severity: Minor

Cause: VMU failed to place a call from a Voice Menu. The Aux value is the DN being called and the AuxI value is the digit entered from the key pad.

Impact: An error message will be played to the caller, and the caller will be transferred to the service's Revert DN.

Action: Ensure that the DN specified in the voice menu is valid. If the DN is valid, look up the return code.

NT: Check the DN in the Voice Menu by dialing it. If the DN is valid, check it against the DN printed in the Aux value. If both checks are good, look up the return code in the VSS; it provides further information on the failed call.

16

Type: Error

Severity: Minor

Cause: The service stack is temporarily corrupt. The Aux value is the File ID being stacked.

Impact: An error message will be played to the caller and the service will be terminated.

Action: This is an internal software error. Contact your Northern Telecom support organization. If unclear, contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information. Contact your Northern Telecom development organization.

17

Type: Error

Severity: Minor

Cause: VMU failed to initiate the voice service task.

Impact: The call will be disconnected.

Action: This is an internal software error. Contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information. Contact your Northern Telecom development organization.

18

Type: Error

Severity: Major

Cause: Voice Menus cannot communicate with the lower level software.

Impact: A channel may not be able to bring up the Voice Menu, Announcement, or Time-Of-Day service.

Action: This is an internal software error. Contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information. Contact your Northern Telecom development organization.

19

Type: Error

Severity: Major

Cause: VMU failed to query VSS information.

Impact: The call will be terminated.

Action: This is an internal software error. Contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information. Contact your Northern Telecom development organization.

20

Type: Error

Severity: Major

Cause: VMU failed to close a Voice Control Block. The file, associated with the open voice control block, may not have closed properly.

Impact: The next voice prompt file may not be opened. On systems with multilingual prompts, if the prompts can still be played they may be in the wrong language.

Action: This is an internal software error. Contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information. Contact your Northern Telecom development organization.

21

Type: Error

Severity: Major

Cause: VMU failed to close the voice service file.

Impact: This may cause the next service file not to be opened. On systems with multi-lingual prompts, if the prompts can still be played they may be in the wrong language.

Action: This is an internal software error. Contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information. Contact your Northern Telecom development organization.

22

Type: Admin

Severity: Minor

Cause: A Voice Menu was found instead of the expected Announcement.

Impact: User will hear the Voice Menu instead of the Announcement.

Action: A Voice Menu service file ID has been set up as an Announcement in either the VSDN table or the Announcement. Change the requested service type to match the Service Definition ID.

NT: Changing either the VSDN entry or the Voice Service Definition ID to match the same type of service, should correct this problem. If the problem persists, then the service definition file is corrupt and requires a deletion. Delete the service ID and recreate it.

23

Type: Admin

Severity: Minor

Cause: An Announcement was found instead of the expected Voice Menu.

Impact: User will hear the Announcement rather than the Voice Menu.

Action: An Announcement service file ID has been set up as a Voice Menu in either the VSDN table or the Voice Menu. Change the requested service type to match the Service Definition ID.

NT: Changing either the VSDN entry or the Voice Service Definition ID to match the same type of service, should correct this problem. If the problem persists, then the service definition file is corrupt and requires a deletion. Delete the service ID and recreate it.

24

Type: Error

Severity: Minor

Cause: The VSS falsely told the service that the user entered a digit.

Impact: The digit will be ignored.

Action: If the error persists, contact your Northern Telecom support organization.

NT: Try to trace the problem by examining other SEERs.

25

Type: Admin

Severity: Minor

Cause: One of the internal lists of actions was found to be invalid.

Impact: The Voice Menu, Time-Of-Day or Announcement service will be unusable.

Action: Delete and re-create the service. Contact your Northern Telecom support organization if the error persists.

NT: Try to trace the problem by examining other SEERs.

26

Type: Error

Severity: Minor

Cause: One of the internal lists of actions, for a menu definition, was found to be invalid.

Impact: The Voice Menu service will be unusable.

Action: Delete and re-create the Voice Menu. Contact your Northern Telecom support organization if the error persists.

NT: Try to trace the problem by examining other SEERs.

27

Type: Error

Severity: Minor

Cause: An error code was returned as a prompt was being played.

Impact: The voice prompt may not play.

Action: Contact your Northern Telecom support organization if the error persists.

NT: A bad code was found in the VoiceIOevent. Run out-of-service diagnostics on all channels and review SEERs. If the source of the problem cannot be determined, notify your Northern Telecom development organization.

28

Type: Admin

Severity: Minor

Cause: The version of the Time-Of-Day service file is not valid.

Impact: The service file, listed in the SEER, cannot be used.

Action: Delete and re-create the service indicated. Contact your Northern Telecom support organization if the error persists.

NT: This file does not match the current version of Time-Of-Day software running on the system. Contact your Northern Telecom development organization.

29

Type: Error

Severity: Minor

Cause: Either the Time-Of-Day file or one of the files that it refers to could not be read.

Impact: An error message will be played to the user and the service will be disconnected.

Action: Check the Time-Of-Day file listed with the SEER. Make sure that the files that it refers to, which are the business, off hours, and holiday service files, exist. If the files are in order, contact your Northern Telecom support organization.

NT: The administrator may have defined a Time-Of-Day file without defining the service files which it calls. If the service files have been defined, another type of problem must exist. Look up the lower level return code (usually appearing at the end of the SEER) and examine other SEERs for more information.

30

Type: Error

Severity: Major

Cause: An incoming call could not be answered by the Voice Menu service.

Impact: After a time-out, the call will be reverted to another service, which will play an error message to the user.

Action: This is an internal software error. Contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information. Contact your Northern Telecom development organization.

31

Type: Error

Severity: Minor

Cause: Unable to send Voice Menu statistics to the OM.

Impact: The data collected during the user's session will be lost and the user's response time will slow down slightly.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Look up the lower level return code and examine other SEERs for more information. Contact your Northern Telecom development organization.

32

Type: Error

Severity: Major

Cause: Unable to open system file.

Impact: The call will be transferred to the revert DN.

Action: The return code indicates the problem with the file. If the problem persists, contact your Northern Telecom support organization.

NT: If the return code is good, there is difficulty in reading the file. Check with ad_utils.

33

Type: Error

Severity: Major

Cause: Unable to convert the service ID and customer number to a search pattern.

Impact: The service cannot be opened.

Action: Contact your Northern Telecom support organization.

NT: If the service was defined in the VSDN table, delete this entry and recreate it. If the problem occurred during a menu switch, delete and recreate the menu leading to this problem.

34

Type: System

Severity: Info

Cause: During an online upgrade procedure, the channels are expected to be idle. Should a user be connected to a service during this period, the user will be automatically disconnected.

Impact: The user will be automatically disconnected from the service.

Action: Should this problem occur during an offline upgrade procedure, contact your Northern Telecom support organization.

NT: This problem report should only be generated when an active call is disconnected from the service (during online upgrade). Should this problem occur during normal operations, calls will be dropped. Observe any problem text generated by the Voice Service Shell (VSS) to help isolate this problem. Should this problem persist, a restart of the VSS may be required.

Class 105 Voice Service Administration (VSA)

The Voice Service Administration (VSA) creates and maintains several files used to define various voice services.

Voice Service Administration contains these files

- Voice Service DN Table (VSDN)
- Voice Service Profile
- Thru-dial service definitions
- Time-of-day control service definitions
- Voice Menu service definitions
- Announcement service definitions

Note: VSA used to include the Channel Allocation Table (CAT) but it has been moved to System Status and Maintenance.

Voice Form Definitions contains Voice Forms files.

VSA errors are indicative of administration related problems with respect to any one of the above file types

If a file cannot be modified or deleted then its service or area of administration is not changed.

A Class 105 SEER generally contains

- a short descriptive message
- an additional value, usually a DN or ID
- lower level return code, usually from DD or CM.

01

Type: Error

Severity: Minor

Cause: VSA failed to find or open the Voice Service cabinet for a data menu.

Impact: An error message will be displayed stating that a system error has occurred and to try again later.

Action: Exit VSA and try again. If error persists, contact your Northern Telecom support organization.

NT: Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

02

Type: Error

Severity: Minor

Cause: VSA failed to delete a service file.

Impact: An error message will be displayed stating that the service file has not been deleted.

Action: Try again. If the problem persists, contact your Northern Telecom support organization.

NT: Look up the return code and examine other SEERs.

03

Type: Error

Severity: Minor

Cause: VSA failed to validate a service file ID or DN.

Impact: A message will be displayed stating the error and asking the user to try again later.

Action: Try again. If the problem persists, contact your Northern Telecom support organization.

NT: The service file ID or DN to be saved is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

04

Type: Admin

Severity: Minor

Cause: VSA failed to convert a customer number entered by an administrator into a valid customer name, not because there was non-existent customer, but because of an internal translation problem.

Impact: The administrator may not be able to access information about that customer.

Action: Exit from Voice Services Administration. Re-enter and try again. If the problem persists, contact your Northern Telecom support organization.

NT: Use AD_UTIL and MD_DR to investigate if there is a problem with the customer. Report any findings to your Northern Telecom development organization.

05

Type: Admin

Severity: Minor

Cause: VSA is unable to translate the service acronym entered by an administrator into a service type due to an internal translation problem with the software code.

Impact: The information about that particular service may not be accessible in terms of view/modify or delete scenarios.

Action: Exit from Voice Services Administration. Re-enter and try again. If the problem persists, contact your Northern Telecom support organization.

NT: Use AD_UTIL and MD_DR to investigate if there is a problem with the customer. Report any findings to your Northern Telecom development organization.

06

Type: Admin

Severity: Minor

Cause: VSA is unable to send VSDN table data or voice service definition data to the printer. Possible causes are that the printer is offline, out of paper, or jammed.

Impact: A printout of the data will not be possible until the printer problem is fixed.

Action: Determine the nature of the printer problem. If the problem persists, contact your Northern Telecom support organization.

NT: If the problem persists, contact your Northern Telecom development organization responsible for VSA.

07

Type: Debug

Severity: Info

Cause: The started form or menu required more memory than was available.

Impact: A system error will be displayed and the user will be returned to the previous menu.

Action: Exit the administration and try again. If the situation still exists, contact your Northern Telecom support organization.

NT: Speak with the Administrator and try to determine the depth of nesting in the user's call (for example, exec A calls exec B which called the administration routine which had the error.) Also examine other SEERs for more information.

08

Type: Admin

Severity: Major

Cause: VSA failed to read an organization profile (the system profile or the profile of a particular customer).

Impact: A message will be displayed on the Voice Administration action menu to the effect that the Voice Services Administration package could not be loaded. The impact is major because administration of voice services cannot proceed through the screen forms and menus interface.

Action: Try once again. If the situation still exists, contact your Northern Telecom support organization.

NT: Look up the lower level return code (usually at the end of the SEER) and examine other SEERs. Also, several of the Voice Services files can be manipulated via utilities such as: AD_UTIL for the voice services profile; MD_DR for the VSDN entries and service definition entries; and MD_MA for the Channel Allocation table. Use these utilities to further examine possible reasons for this error to occur.

09

Type: Admin

Severity: Minor

Cause: The MMI server is not responding to requests to get or release VSDN entries or voice service definition entries.

Impact: Access to VSDN entries and/or voice service definition entries will not be controlled. All access will be on the basis of the last admin terminal to make a change to an entry will have that change preserved. That is, if two or more terminals are accessing the same entry at the same time, both will be able to modify the entry and the last change made is the one that will take affect.

Action: It is possible that the MMI_Server is not running. If the problem persists, contact your Northern Telecom support organization.

NT: Use the PRM_CONTROL to investigate the nature of the problem with the MMI Server. Report any unresolved issues to your Northern Telecom development organization.

10

Type: Admin

Severity: Info

Cause: This is an information SEER produced when administering VSDNs or voice service definitions at an admin console.

Impact: Provides feedback to administrator and acts as transaction log.

Action: None.

NT: This SEER can be turned on or off in the Voice Services Profile menu in VSA.

12

Type: Error

Severity: Minor

Cause: VSA failed to read a Time-of-Day service file.

Impact: A system error will be displayed and the user will be returned to the previous data menu.

Action: Exit the administration and try again. If the situation still exists, contact your Northern Telecom support organization.

NT: The ID of the Time-of-day file will be provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs.

13

Type: Error

Severity: Minor

Cause: VSA failed to write a Time-of-Day service file.

Impact: A system error will be displayed.

Action: Try again to save the service file. If the situation still exists, contact your Northern Telecom support organization.

NT: The ID of the Time-of-day file is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

22

Type: Error

Severity: Minor

Cause: VSA failed to write the Voice Service Profile.

Impact: A system error will be displayed.

Action: Try again to save the profile. If the situation still exists, contact your Northern Telecom support organization.

NT: Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information. The Voice Service Profile exists as part of the customer's profile. You can use AD_UTIL to access the Voice Service record for that customer.

31

Type: Error

Severity: Minor

Cause: A record was discovered to be missing, when trying to add voice.

Impact: A system error will be displayed and the user will not be allowed to add voice to the service file in the session.

Action: Exit the session and try to add voice again. If the situation still exists, contact your Northern Telecom support organization.

NT: The file ID of the service is provided in the SEER. Speak with the Administrator to find out when and how the service file was created, and what updates have been made. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information. Write down the contents of the file, delete the file, and recreate it again.

32

Type: Error

Severity: Minor

Cause: VSA failed to read, create, or set up an Announcement Service file.

Impact: A system error will be displayed and the user will be returned to the calling data menu.

Action: Exit the session and try to access the service file again. If the situation still exists, contact your Northern Telecom support organization.

NT: The file ID of the service is provided in the SEER. Speak with the Administrator to determine when and how the service file was created, and what updates have been made.

33

Type: Error

Severity: Minor

Cause: VSA failed to write an Announcement Service file.

Impact: A system error will be displayed.

Action: Try to save the file again. If the situation still exists, contact your Northern Telecom support organization.

NT: The file ID of the service is provided in the SEER. Look up the return code and examine other SEERs. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

41

Type: Error

Severity: Minor

Cause: VSA failed to read, create, or set up a Thru-Dialing service file.

Impact: A system error will be displayed and the user will be returned to the calling data menu.

Action: Exit the session and try to access the service file again. If the situation still exists, contact your Northern Telecom support organization.

NT: The file ID of the service is provided in the SEER. Speak to the Administrator to determine when and how the service file was created, and what updates have been made. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

42

Type: Error

Severity: Minor

Cause: VSA failed to write a Thru-Dialing service file.

Impact: A system error will be displayed and the user will be allowed to try to save the service file again.

Action: Try to save the file again. If the situation still exists, contact your Northern Telecom support organization.

NT: The file ID of the service is provided in the SEER. Look up the return code and examine other SEERs. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

51

Type: Error

Severity: Minor

Cause: VSA failed to read the Channel Allocation Table.

Impact: A system error will be displayed and the user will be returned to the System Status and Maintenance menu.

Action: Exit the session and try to access the Channel Allocation Table again. If the situation still exists, contact your Northern Telecom support organization.

NT: Look up the lower level return code (usually at the end of the SEER) and use the MD_MA utility to check that the voice channels are defined. If there are no channels defined, define them.

61

Type: Error

Severity: Minor

Cause: VSA failed to validate DN. An error occurred reading the VSDN file.

Impact: A system error will be displayed and the user will be returned to the previous data menu.

Action: Exit the administration software and try again later. If the situation still exists, contact your Northern Telecom support organization.

NT: The DN is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

62

Type: Error

Severity: Minor

Cause: VSA failed to read or create a VSDN entry.

Impact: A system error will be displayed and the user will be returned to the previous data menu.

Action: Exit the administration software and try again later. If the situation still exists, contact your Northern Telecom support organization.

NT: An error occurred while trying to read or create the VSDN file. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information. VSDN table entries are stored in the corporate directory. You can use MD_DR to investigate any problems with respect to VSDN table entries.

63

Type: Error

Severity: Minor

Cause: VSA failed to write a VSDN entry.

Impact: A system error will be displayed.

Action: Try to save the file again. If a problem still exists, contact your Northern Telecom support organization.

NT: An error occurred while trying write the VSDN file. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information. VSDN table entries are stored in the corporate directory. You can use MD_DR to investigate any problems with respect to VSDN table entries.

64

Type: Error

Severity: Minor

Cause: VSA failed to delete a DN from a VSDN entry.

Impact: A system error will be displayed and the user will be returned to the previous data menu.

Action: Try to delete the DN again. If a problem still exists, contact your Northern Telecom support organization.

NT: An error occurred while trying write the VSDN file. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information. VSDN table entries are stored in the corporate directory. You can use MD_DR to investigate any problems with respect to VSDN table entries.

65

Type: Error

Severity: Minor

Cause: VSA failed to set up a VSDN Data menu.

Impact: A system error will be displayed and the user will be returned to the voice system configuration menu.

Action: Try to access the menu again. If a problem still exists, contact your Northern Telecom support organization.

NT: An error occurred while trying to find and open particular records in the VSDN table. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information. VSDN table entries are stored in the corporate directory. You can use MD_DR to investigate any problems with respect to VSDN table entries.

72

Type: Error

Severity: Minor

Cause: VSA failed to delete a voice record from a service definition file, typically from a voice menu file.

Impact: A system error will be displayed.

Action: Try to access the voice menu again. If a problem still exists, contact your Northern Telecom support organization.

NT: The ID of the voice menu and the record ID are provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

73

Type: Error

Severity: Minor

Cause: VSA failed to read, create, or set up a Voice Menu Service file.

Impact: A system error will be displayed and the user returned to the previous data menu.

Action: Try to access the voice menu again. If a problem still exists, contact your Northern Telecom support organization.

NT: The ID of the voice menu is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information. Also, the corporate directory contains entries for service definition types. You can use MD_DR to investigate possible problems with respect to service definition entries. MD may be used to investigate problems with service definition files in the Voice Service cabinet.

74

Type: Error

Severity: Minor

Cause: VSA failed to write a voice menu service file.

Impact: A system error will be displayed.

Action: Try to save the voice menu again. If a problem still exists, contact your Northern Telecom support organization.

NT: The ID of the voice menu is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

81

Type: Error

Severity: Minor

Cause: VSA failed to read, create, or set up a Voice Form service file.

Impact: A system error will be displayed and the user will get returned to the data menu.

Action: Exit the Voice Form Definitions service and try to create or access the voice form again. If a problem still exists, contact your Northern Telecom support organization.

NT: The ID of the voice form is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

82

Type: Error

Severity: Minor

Cause: VSA failed to lock the Form Information File associated with a Voice Form service file, or was unable to delete all existing caller responses.

Impact: A system error will be displayed and the user will be returned to the data menu or command line.

Action: Exit the Voice Form Definitions service and then try to perform the operation again. If a problem still exists, contact your Northern Telecom support organization.

NT: An error occurred either trying to lock a Form Information File with the Forms Manager multiserver, or trying to delete all of the voice form's existing caller responses on all user volumes. The ID of the voice form is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

83

Type: Error

Severity: Minor

Cause: VSA was unable to access a voice record in a Voice Form service file while setting up for a Voice operation.

Impact: A system error will be displayed.

Action: Exit the Voice Form Definitions service and then try to perform the operation again. If a problem still exists, contact your Northern Telecom support organization.

NT: An error occurred trying to position to a voice record within a Voice Form service file. The ID of the voice form is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

84

Type: Error

Severity: Minor

Cause: VSA failed to write information to a Voice Form service file.

Impact: A system error will be displayed.

Action: Try to save the changes again. If a problem still exists, contact your Northern Telecom support organization.

NT: An error occurred either trying to write the information for one field into the Voice Form service file, or trying to save the whole file. An error could result from: writing the information to disk, updating the Corporate Directory, or updating the Form Information File. The ID of the Voice form is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

85

Type: Error

Severity: Minor

Cause: VSA failed to update the status information for a Voice Form service file in the Corporate Directory.

Impact: A system error will be displayed and the status of the voice form may be left in an inconsistent state. This means that callers or transcribers may experience errors when attempting to access the voice form.

Action: Try to perform the operation again. To correct the status of a voice form, re-access it from the Voice Form Definitions data menu and press Save. If a problem still exists, contact your Northern Telecom support organization.

NT: An error occurred trying to update the voice service entry in the Corporate Directory for the voice form. The ID of the voice form is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

86

Type: Error

Severity: Minor

Cause: VSA was unable to read the information about a field in a Voice Form service file while constructing a menu for displaying the list of fields.

Impact: A partial list of fields will be displayed to the user.

Action: Exit the Voice Form Definitions service and then try to perform the operation again. If a problem still exists, contact your Northern Telecom support organization.

NT: An error occurred trying to read a field from the Voice Form service file. The ID of the voice form is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

87

Type: Error

Severity: Minor

Cause: VSA failed to read, create, or setup for a particular field in a Voice Form service file.

Impact: A system error will be displayed and the user will be returned to the data menu.

Action: Exit the Voice Form Definitions service and then try to create or access the field again. If a problem still exists, contact your Northern Telecom support organization.

NT: The ID of the Voice form is provided in the SEER. Look up the lower level return code (usually at the end of the SEER) and examine other SEERs for more information.

88

Type: Error

Severity: Minor

Cause: VSA failed to perform a requested operation on a particular field in a Voice Form service file. There has been a file or disk access/corruption problem.

Impact: The operation could not be performed A system error will be displayed and the user will be returned to the data menu.

Action: Exit the Voice Form Definitions service and then try to perform the Operation again. If a problem still exists, contact your Northern Telecom support organization.

NT: Data associated with a field in a Voice Form could not be accessed or modified. The ID of the Voice Form is given in the text of the SEER. An error code specifying the exact cause of the problem is given at the end of the SEER. Look up this error code in the SEER manual and correct the problem. Also look for other SEER s which may relate to this problem.

If the problem continues to happen to the same Voice Form, there may be a file corruption problem. Try to delete and re-create the field in the Voice Form. As a last resort, delete and re-create the entire Voice Form Definition.

91

Type: Error

Severity: Minor

Cause: The voice service cabinet and files have been moved to the field support cabinet but a destination voice service cabinet already exists and will not be replaced.

Impact: The move will fail unless the condition is corrected. To succeed in moving voice service files, the destination voice service cabinet should be empty and non-existent.

Action: Refer to instructions in the System Installation and Modification Guide.

NT: If certain that the destination voice service cabinet is empty or no longer needed, remove it using MD.

92

Type: Admin

Severity: Info

Cause: Warning that cabinet still contains some files; cabinet not deleted.

Impact: Cabinet will not be deleted until it is empty.

Action: Verify that the existing files are not significant and delete the associated service definitions using the VSA in the MMI. Then run the process again.

NT: Use vsp_util to synchronize the voice service cabinet and the Corporate Directory (commands are PATCHDR and SYNCCABINET). If the problem persists, MD may be used to investigate the cabinet.

93

Type: Error

Severity: Minor

Cause: One of the following phrases will appear in the SEER followed by 1 or more voice service file names:

Bad service definitions:

Dangling DR entries for:

Purging DR entries:

Moving Service Defns:

A problem occurred with a service definition file listed in this SEER when moving cabinets. See the field support garbage collection cabinet.

Impact:

- Case 1: Bad Service Definitions: The file of concern has been moved, if possible, to the field support cabinet for study.
- Case 2: Dangling DR entries for: A DR entry exists for a non-existent file.
- Case 3: Purging DR entries: A DR entry has been removed for a file transferred to the field support cabinet.
- Case 4: Moving Service Defns: The file of concern has been moved to the field support cabinet for study.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: The file can be moved back to the voice service cabinet, if desired, and PATCHDR can be run to re-associate any existing DR entry with the file. If this does not work as desired, then the service definition must be re-entered using the VSA in the MMI.

95

Type: Error

Severity: Minor

Cause: Source and destination cabinets are the same. (This should only occur as a result of node expansion.)

Impact: Move cabinet (and move service definition files) will fail if an attempt is made to move the voice service cabinet to itself.

Action: Refer to the hardware modification guidelines for instruction.

NT: Refer to the hardware modification guidelines for instruction.

96

Type: Admin

Severity: Info

Cause: Cannot retrieve a proper garbage collection cabinet from sc_types or one cannot be opened.

Impact: Any VSP_UTIL function which requires a field support cabinet will not succeed unless a /1/field support cabinet exists.

Action: Create a /1/fieldsupport cabinet or call your Northern Telecom support organization and arrange to have a representative do so.

NT: Create a /1/fieldsupport cabinet and re-run the process.

Class 106 Thru-dialing (TD)

The Thru-dialing Subsystem

- reverts the user to the revert DN on initial input time-out
- solicits the extension number or name of person to call
- places the call connection
- informs the user of a failed call connection attempt
- disconnects the service when call connection is made

Failures in Thru-dialing can cause

- loss of use of the service and transfer of the user to the revert DN defined for the service (if it is known) or to an attendant
- the user-specified action to fail, although the user can try again

A Class 106 SEER generally contains

- return code from lower level software
- additional information such as the DN of the user's phone, the language or the type of operation

01

Type: Error

Severity: Critical

Impact: The Thru-dialing service will not be started. Users who access Thru-dial directly will get transferred to the Custom Revert Number DN or the system attendant, if known. If these numbers are not known, the service will be disconnected. If the Thru-dialing service is accessed from a voice menu, the user will be returned to that voice menu. In either case, an error prompt will be played, if possible, before the user is transferred.

Action: Check that the system has been configured properly, for example that the system and voice service prompt files are installed, and check that the Thru-dialing service is set up properly. The access DN should be configured and the service definition file should be defined. Usually the error text and the return code identify the unavailable resource.

NT: The problem text will identify the initialization problem. If possible, check for the missing item using the software package provided with the system.

03

Type: Error

Severity: Minor

Cause: An unexpected return code was received from the Voice Handler in response to a voice operation.

Impact: The voice operation may not be completed, for example, a prompt may not be played. The user should be able to continue the session.

Action: Look up the return code for specific information. If unclear, contact your Northern Telecom support organization.

NT: The Voice Handler returned an unexpected return code. Check for any voice handler (class 20, 27) return code problem leading to this error. This may give an indication why the handler is returning an unknown value.

04

Type: Error

Severity: Minor

Cause: The Voice Processor did not process the voice operation request in time because the system is under load or there is a problem with the voice processor hardware. The return code isolates the cause.

Impact: The requested voice operation will not be completed. (For example, a prompt will not be played.)

Action: Check each Voice Processor status by running out-of-service diagnostics on the voice cards.

NT: Dial into a Voice Prompt Maintenance (VPM) service. If the problem is in the voice processor, the same situation should occur. Look for any voice processor problem that may identify this error. If this problem is isolated only to the Thru-dial service, try deleting and recreating it.

05

Type: Error

Severity: Minor

Cause: The ISDN/AP link may be down.

Impact: The connection to the specified extension number will not be made. The system will try to connect the user to the revert DN instead. If the ISDN/AP link is still down, the service would appear to be not responding.

Action: Check the system status screen in the MMI to confirm that the ISDN/AP link is down. This problem will clear when the link automatically comes back up.

NT: The return code identifies the problem. Look at the corresponding return code for further action.

06

Type: Error

Severity: Minor

Cause: The revert DN has an illegal character.

Impact: The custom revert operation will not be completed. The user will be connected to a system attendant if possible. If there is no attendant to which to revert, the session continues. If the link is still down, the service may appear to not be responding.

Action: Check the revert DN of the Thru-dial definition.

NT: Delete and reenter the system DN and system revert DN. If this does not correct the problem, use ad_util to examine the customer precode and length.

07

Type: Error

Severity: Minor

Cause: Help command was unexpectedly received.

Impact: The help command is ignored because the user is in a state where no help is defined or needed. Temporary data corruption may have occurred.

Action: Check the return code to see if the user is in an invalid state. The problem should clear itself, so no further action is required.

NT: If the problem does not correct itself, identify the channel causing the problem, and restart the Voice Service Shell (VSS) for that channel.

08

Type: Error

Severity: Minor

Cause: The system has entered an unknown time-out state.

Impact: The time-out is ignored. The service may be slow in responding. Temporary data corruption may have occurred.

Action: None. The problem should clear itself.

NT: If the problem does not correct itself, identify the channel causing the problem, and restart the Voice Service Shell (VSS) for that channel.

09

Type: Error

Severity: Minor

Cause: The cleaning up of computer resources failed. The operation may be closing a file or disconnecting the service.

Impact: The operation is not completed. If the operation was to close a file, that file is not closed properly. If the operation was to disconnect, the session will remain in service, but the service will eventually time out and disconnect.

Action: Look up the return code for specific information. If the error persists, contact your Northern Telecom support organization.

NT: A lower level component has failed. Review the lower level return code and any related SEERs (within the previous few minutes). If the source of the error cannot be determined, notify your Northern Telecom development organization.

10

Type: Error

Severity: Minor

Cause: The requested operation failed.

Impact: The operation will not be completed. If the operation was to switch the user back to the voice menu, the user will be transferred to the revert DN instead. If the operation was to retrieve a digit, the user will have to re-enter the digit or the data item which contains the digit.

Action: Check the return code to see if the voice service shell is functioning properly. If the error persists, contact your Northern Telecom support organization to restart the Voice Service Shells.

NT: Identify the channel causing the problem. Run the diagnostic for that channel and reload the Voice Service Shell (VSS).

11

Type: System

Severity: Info

Cause: During an online upgrade procedure, the channels are expected to be idle. Should a user be connected to a service during this period, the user will be automatically disconnected.

Impact: The user will be automatically disconnected from the service.

Action: Should this problem occur during a non-online upgrade procedure, contact your Northern Telecom support organization.

NT: This problem report should only be generated when an active call is disconnected from the service (during online upgrade). Should this problem occur during normal operations, calls will be dropped. Observe any problem text generated by the Voice Service Shell (VSS) to help isolate this problem. Should this problem persist, a restart of the VSS may be required.

Class 107 Voice Prompt Maintenance (VPM), Remote Activation (RA)

The Voice Prompt Maintenance (VPM) and the Remote Activation (RA) utility is part of the Voice Services.

Voice Prompt Maintenance:

- allows users to update voice prompts for Voice Menus, Announcements and Thru-Dialers
- provides a telephony interface to update these prompts

Failures in the VPM can cause inability to update voice prompts for Voice Menus, Announcements, and Thru-Dial, except by a text interface.

Remote Activation:

- allows users to change Voices Services (Voice Menus, Announcements, Thru-Dial, Time-Of-Day, Voice Forms) attached to active DN's.

A Class 107 SEER generally contains:

- string indicating the routine in which it was generated
- return code from lower level software
- Voice Menu, Announcement, Thru-Dial ID, Time-of-Day, Voice Forms (if relevant).

01

Type: Error

Severity: Minor

Cause: Problem with playback of a user-recorded voice prompt in a voice menu, Announcement, or Thru-Dial. The Service ID is provided in the SEER.

Impact: User will hear an error prompt. If the user prompt is corrupt, the problem may recur. If not, normal operation will proceed upon user entry.

Action: If the problem occurs repeatedly on a single voice service, the voice record may be corrupt, so delete the prompt or menu and recreate it using Voice Menu Applications administration.

NT: Identify the voice play recording. Play the voice recording under the intended service. If the problem is still there, delete and re-record the voice. If this solution does not correct the problem, try reloading the Voice Service Shell (VSS).

02

Type: Error

Severity: Minor

Cause: Problem with recording a voice prompt in a Voice Menu, Announcement, or Thru-Dial. The voice service ID is provided in the SEER.

Impact: User will hear an error prompt. If the user prompt is corrupt, the problem may recur. If not, normal operation will proceed upon user entry.

Action: If this problem occurs repeatedly on a single voice service, the voice record may be corrupt, so delete and recreate the prompt or menu using the text administration interface.

NT: Try recording the voice using the voice softkey. Should the error persist, examine the problem Class 20 (VH) to determine what caused the error.

03

Type: Error

Severity: Minor

Cause: Problem with disconnecting the session by the Voice Prompt Maintenance/ Remote Activation Utility after a problem. This SEER is not caused by the user hanging up.

Impact: User will still have a voice connection.

Action: Hanging up will restore things to normal. If this error persists, examine other SEERs to locate the source of the problem leading up to the disconnect. If unclear, contact your Northern Telecom support organization.

NT: Set up another VPM definition in the VSDN table. If the problem persists, contact your Northern Telecom development organization.

04

Type: Error

Severity: Critical

Cause: Problem with initializing the session due to inability to locate or open system prompt files. May also be caused by problems initializing voice operations (vxinit) or problems obtaining organization configuration information from the VSS.

Impact: The session will terminate. If the error is not temporary, more attempts to access VPM will fail.

Action: If the problem is caused by specification of an unsupported language in the Voice Services, correct the menu to specify only supported languages.

NT: Check that supported languages have system prompts set up. Examine other SEERs for further information.

05

Type: Error

Severity: Major

Cause: Internal problem occurred when the software encountered an unexpected situation. This may be a software error.

Impact: User will hear an error prompt in some cases. Normal operation will proceed upon next user command. Problem may recur again if the same situation is encountered.

Action: None. The problem should clear itself. If the problem persists, contact your Northern Telecom support organization.

NT: If the problem persists, try reloading the Voice Service Shell (VSS).

06

Type: Admin

Severity: Major

Cause: An invalid password was entered three times in succession for a Voice Menu, Announcements, Time-of-Day controller, Thru-Dial, or Voice Forms.

Impact: The user is disconnected after the third invalid password entry. If several of these SEERs appear, this could mean that an unauthorized person is trying to breach security and use the system.

This SEER is the only way the system reports repeated invalid entry into Voice Menu, Announcements, Time-of-Day controller, Thru-Dial, or Voice Forms.

Action: The SEER provides a 10-byte string containing the Service ID, a byte giving the calling device, and a string containing the extension from which VPM was accessed. The Service ID and extension are in ASCII, with the first byte indicating the length of the strings, for example, 0432323730 indicates extension "2270". If the calling device is a trunk or attendant console then the extension number is invalid. A calling device of 0 (internal phones) will yield a valid extension number.

NT: If a valid password is being entered and this problem still persists, try deleting and reentering the password.

07

Type: Error

Severity: Minor

Cause: A file operation (open or close) failed. This could be a temporary situation caused by disk errors or by a corrupt file.

Impact: The user will hear a system error prompt in some cases, normal operation will proceed upon next user command. The problem may recur if the same situation is encountered.

Action: Look up the return code. If the problem is caused by a full volume, obtain additional storage. If unclear, contact your Northern Telecom support organization.

NT: Try accessing the service ID using the VSA or by placing a call to the actual service itself. If this fails, try recreating the service. If you are able to access the service using VSA or by placing a call to the service, attempt to access this file using the "DD" tools package.

08

Type: Error

Severity: Minor

Cause: A voice operation (open or close) failed. This could be a temporary situation caused by voice processor hardware problems. The return code isolates the cause.

Impact: User will hear a system error prompt in some cases, normal operation will proceed upon next user command. If the problem was caused by a fatal voice processor problem, the session is disconnected.

Action: If the situation occurs repeatedly, contact your Northern Telecom support organization.

NT: Note the Menu ID and look up the lower level return code for more specific information.

09

Type: Debug

Severity: Info

Cause: The service file is currently being opened by another application.

Impact: The service cannot be updated unless the application holding the file closes it.

Action: Close the application holding the file or select another service to be updated.

NT: None.

10

Type: Error

Severity: Minor

Cause: The service ID is being mapped into a service information address. The service ID may corrupt.

Impact: The session will terminate. Users will hear an error prompt.

Action: Hanging up will restore things to normal.

NT: Identify the channel causing the problem. Run the diagnostic for that channel and reload the Voice Service Shell (VSS).

11

Type: Admin

Severity: Info

Cause: The following changes were made:

1. A change was made to the original voice recording using a telephony interface (Voice Prompt Maintenance).
2. A change to the VSDN table entry was made using a telephony interface (Remote Activation).

Impact: The problem text indicates what was changed in your system.

Action: If this was an unauthorized change, the update password should be changed. This will stop further unauthorized entry into your system. This SEER can be disabled by selecting no SEER information in the voice service profile menu.

NT: If SEERs are still printed even if disabled, check the SEER print field using ad_util.

12

Type: System

Severity: Info

Cause: During an online upgrade procedure, the channels are expected to be idle. Should a user be connected to a service during this period, the user will be automatically disconnected.

Action: Should this problem occur during a offline upgrade procedure, contact your Northern Telecom representative.

NT: This problem report should only be generated when an active call is disconnected from the service (during online upgrade). Should this problem occur during normal operations, calls will be dropped. Observe any problem text generated by the Voice Service Shell (VSS) to help isolate this problem. Should this problem persist, a restart of the VSS may be required.

99

Type: Error

Severity: Critical

Cause: The software encountered an unexpected problem. This problem may be caused by "binding startup" procedures.

Impact: The user may hear an error prompt. Normal operation could proceed upon user entry. If not, the session will terminate. If this is not a temporary condition, subsequent attempts to access VPM will fail.

Action: If the error persists, contact your Northern Telecom support organization.

NT: Look for related SEERs for further information.

Class 108 Network Administration (NA)

Network Administration (NA) lets the System Administrator view and modify the networking configuration data for the local and remote sites. In addition, NA provides a site verification test and a facility to reset the networking software.

A Class 108 SEER generally contains a return code from another component such as the Network Database or Directory Server.

01

Type: Error

Severity: Minor

Cause: NA failed to gain access to the Network Database.

Impact: Administrator cannot view/modify networking configuration.

Action: Look up the low level return code for specific information and contact your Northern Telecom support organization.

NT: It is likely a software problem. Notify your Northern Telecom development organization.

02

Type: Error

Severity: Minor

Cause: NA failed to gain access to the Network Message Transfer Agent (NMTA).

Impact: Administrator cannot view/modify networking configuration.

Action: Ensure that the system has a valid time and the system has finished rebooting. If the problem persists, contact your Northern Telecom support organization.

NT: Use the PRM_PKG program to ensure that the NMTA is running. If this problem occurs before the system completes booting, then NMTA has not yet been started by PRM.

03

Type: Error

Severity: Minor

Cause: NA failed to get dynamic information from the terminal (cobra VT).

Impact: Administrator cannot enter inputs from the terminal.

Action: Look up the low level return code for specific information and contact your Northern Telecom support organization.

NT: It is likely a software problem. Notify your Northern Telecom development organization.

04

Type: Error

Severity: Minor

Cause: NA failed to gain access to the Cabinet Access Method (CM).

Impact: Administrator cannot view/modify networking configuration.

Action: Look up the low level return code for specific information and contact your Northern Telecom support organization.

NT: It is likely a software problem. Notify your Northern Telecom development organization.

05

Type: Error

Severity: Minor

Cause: NA failed to gain access to the Disk Data interface (DD).

Impact: Administrator cannot view/modify networking configuration.

Action: Look up the low level return code for specific information and contact your Northern Telecom support organization.

NT: It is likely a software problem. Notify your Northern Telecom development organization.

06

Type: Error

Severity: Minor

Cause: NA failed to gain access to the Message Transfer Agent (MTA).

Impact: Administrator cannot view/modify networking configuration.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Use list program (debugger command LP) to ensure that the MTA is running.

07

Type: Error

Severity: Minor

Cause: NA failed to gain access to the Directory Server (DR).

Impact: Administrator cannot view/modify networking configuration.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Use list program (debugger command LP) to ensure that the DR is running.

08

Type: Error

Severity: Minor

Cause: An error occurred while using the Command Line Interpreter (CLI).

Impact: Administrator cannot enter inputs from the terminal.

Action: If the problem persists, contact your Northern Telecom support organization.

NT: Investigate memory or segment availability to determine cause. Kill and restart the MMI if necessary.

09

Type: Error

Severity: Minor

Cause: An error occurred while using the Remote Voice Services (RVS).

Impact: Administrator cannot view/modify networking configuration.

Action: Look up the low level return code for specific information. If the problem persists, contact your Northern Telecom support organization.

NT: It is likely a software problem. Notify your Northern Telecom development organization.

10

Type: Error

Severity: Minor

Cause: NA failed to gain access to the Hardware Database (HD).

Impact: Administrator cannot view/modify networking configuration.

Action: Look up the low level return code for specific information. If the problem persists, contact your Northern Telecom support organization.

NT: It is likely a software problem. Notify your Northern Telecom development organization.

11

Type: Error

Severity: Minor

Cause: NA failed to gain access to the Administration Base (AD).

Impact: Administrator cannot view/modify networking configuration.

Action: Look up the low level return code for specific information. If the problem persists, contact your Northern Telecom support organization.

NT: It is likely a software problem. Notify your Northern Telecom development organization.

Class 109 Remote Voice Services (RVS)

Remote Voice Services (RVS), also known as screen-based voice session

- places calls from a voice channel to a DN specified by the user
- enables users to perform, using softkeys, voice operations on voice contained in a form, for example, voice menus or thru-dial voice files
- supports these voice operations: play, record, and delete
- monitors the status of the call connection, for example, user hangs up

RVS errors can prevent calls from being connected or disconnect calls. Without a call connection, the administrator cannot record or play voice associated with voice menus, announcements or thru-dial voice services.

A Class 109 SEER generally contains a lower-level return code.

03

Type: Error

Severity: Minor

Cause: An error occurred while processing a call.

Impact: The call will not be made.

Action: Try again later.

NT: If the problem persists,

- Check if there are idle voice ports.
- Check if there are any idle T1 channels.
- Dedicate a few ports for outcalling in channel allocation table and try again.
- Contact your Northern Telecom support organization.

04

Type: Error

Severity: Minor

Cause: A tasking error occurred in RVS.

Impact: The call will be disconnected.

Action: Try again later.

NT: Note the task result and contact Northern Telecom development organization.

05

Type: Error

Severity: Minor

Cause: RVS failed to open or create a voice record in a file, due to a low-level disk problem.

Impact: The call will be disconnected.

Action: Check surrounding SEERs to identify and fix possible problem. Otherwise, contact your Northern Telecom support organization.

NT: Check the sanity of the volumes and disks. To check sanity of volumes, run an audit on the volume containing the files.

06, 07

Type: Error

Severity: Minor

Cause: Errors in reading or playing.

Impact: The call will be disconnected.

Action: Try again later. If condition persists, contact your Northern Telecom support organization.

NT: Check the sanity of the volumes and disks. To check sanity of volumes, run an audit on the volume containing the files.

08

Type: Error

Severity: Minor

Cause: Errors in disconnecting.

Impact: Call will be disconnected and in some cases the T1 channel will reload.

Action: None. The call will be disconnected later.

NT: Note the return code, and contact your Northern Telecom development organization.

09, 10

Type: Error

Severity: Minor

Cause: Time-out in a voice operation or VPIO task crashes occurred during a voice session.

Impact: The call will be disconnected.

Action: Try again later.

NT: Look at the trace back from the task crash and contact your Northern Telecom development organization.

11

Type: Error

Severity: Minor

Cause: Error occurred when RVS tried to delete some voice, possibly due to a corrupted file.

Impact: The call will be disconnected.

Action: Cancel the changes made to the form and try again later. If the problem persists, delete the file and recreate it.

NT: Note the result code at the end of the SEER and contact your Northern Telecom development organization.

Class 110 Outcalling Agent (OCA)

The Outcalling Agent (OCA) provides remote notification and delivery to non-user services. Failures in the OCA will only affect one call. For most serious problems, a duplicate call may occur.

A Class 110 SEER generally contains message text and a lower level return code.

01

Type: Admin

Severity: Problem

Cause: Outcalling Agent has encountered unavailable resources.

Impact: The Outcalling Agent will not place the call or a prompt will not be played.

Action: The error text and return code will identify the unavailable resource. Contact your Northern Telecom support organization.

NT: Examine return code.

04

Type: Admin

Severity: Minor

Cause: There is a problem with the voice processor hardware.

Impact: The requested voice operation will not be completed.

Action: The return code isolates the cause. Check the Voice Processor status by running out-of-service diagnostics on each voice card.

NT: Check for related SEERs to help determine hardware problem. Possible Class 20 SEERs (Voice Handler VH).

05

Type: Admin

Severity: Minor

Cause: The Help command was unexpectedly received.

Impact: The Help command is ignored because the user is in a state where no help is defined or needed. Temporary data corruption may have occurred.

Action: Check the return code to see if the user is in an invalid state. The problem should clear itself, so no further action is required.

NT: If the problem persists, check for source of data corruption.

06

Type: Admin

Severity: Minor

Cause: The system has entered an unknown timeout state.

Impact: The timeout is ignored. The service may be slow in responding. Temporary data corruption may have occurred.

Action: None. The problem should clear itself.

NT: If the problem persists, check for the source of the data corruption.

07

Type: Error

Severity: Minor

Cause: The delivery to non-user message cannot be read because it is a message with a version number greater than the version allowed for this release of software.

Impact: The call will be disconnected.

Action: A software release compatibility problem may have occurred. Contact your Northern Telecom support organization.

NT: Determine the software release of the DNU message.

08

Type: Admin

Severity: Minor

Cause: Problems were encountered while attempting to open a delivery to non-user message.

Impact: The call will be disconnected.

Action: Look up the return code for specific information. If unclear, contact your Northern Telecom support organization.

NT: Examine the return code.

09

Type: Admin

Severity: Minor

Cause: A request for something which has not been implemented has been received.

Impact: The request is ignored. The service may be slow in responding. Temporary data corruption may have occurred.

Action: None. The problem should clear itself.

NT: If the problem persists, check for the source of the data corruption.

10

Type: Admin

Severity: Minor

Cause: An error was encountered while cleaning up resources.

Impact: The operation is not completed. If the operation was to close a file, that file was not closed properly. If the operation was to disconnect, the session remains in service, but the service eventually times out and disconnects.

Action: The error text and return code will identify the unavailable resource. If the error persists, contact your Northern Telecom support organization.

NT: Look up the return code for further information. Also look at other SEERs during the previous few minutes. If the unavailable resource cannot be identified, notify your Northern Telecom development organization.

11

Type: Admin

Severity: Minor

Cause: The software encountered an unexpected problem.

Impact: The user may hear an error prompt after which the session will disconnect.

Action: The error text and return code will identify the unexpected problem. If the error persists, contact your Northern Telecom support organization.

NT: This level of software has encountered a problem with a lower level. Review the lower level return code and related SEERs (within the previous few minutes). If the source of the problem cannot be identified, notify your Northern Telecom development organization.

Class 111 Voice Forms Service Unit (VFSU)

The Voice Forms Service Unit (VFSU) provides two sets of functionality to a user. These are the Voice Forms Caller's Interface and the Transcription Service.

Most VFSU errors affect only one call or user session (unless the error is a symptom of a hardware problem). For serious problems encountered in the Caller's Interface the call is routed to the Form Revert DN, if available, otherwise to the System Attendant DN. In the case of the Transcription Service, a serious problem results in the playing of an error prompt, if possible, and the termination of the session. Recovery of resources is performed in all cases, if possible.

A class 111 SEER contains

- the routine which encountered the problem
- the service type
 - VFCI: Voice Forms Caller's Interface
 - VFST: Voice Forms Transcription Service
- a lower level return code
- the form ID
- the response ID (for Transcription Service)

Note: The contents of a class 111 SEER will contain as many of the above as possible, determined by availability at the time of issuance.

01

Type: Error

Severity: Major

Cause: Initial resources were not available to start up the service.

Impact: VFSU will not be able to start the requested service. In the case of the Caller's Interface, the call will be transferred to the Form Revert DN if available, otherwise it will be transferred to the System Attendant DN. In the case of the Transcription Service an error prompt is played, if possible, and the session is terminated.

Action: The error text and return code will identify the unavailable resource. Contact your Northern Telecom support organization for further instruction.

NT: Check if resource exists using the appropriate utility.

02

Type: Error

Severity: Minor

Cause: A Caller's Response file could not be created.

Impact: The Caller's Response is lost and the session is terminated.

Action: Look up the return code for specific information. If the code does not help, contact your Northern Telecom support organization.

NT: Examine lower level SEERS for additional information.

03

Type: Error

Severity: Minor

Cause: A request for something which has not been implemented has been received.

Impact: The request is ignored. Service may behave in an unpredictable manner.

Action: The problem should clear itself. If the problem persists, contact your Northern Telecom support organization, supplying them with the SEER printout. Try to determine the sequence of commands that were given by the caller to cause the problem.

NT: Contact your Northern Telecom development organization for assistance.

04

Type: Error

Severity: Minor

Cause: An error has occurred while trying to play voice.

Impact: The user will not hear the prompt or voice and the session will continue as if playing had succeeded.

Action: Try to determine the scenario that caused the SEER. Collect all relevant information and contact your Northern Telecom support organization.

NT: Attempt to determine the cause of the problem by examining the surrounding SEERs. Specifically, look for SEERs indicating a bad DSP port.

05

Type: Error

Severity: Minor

Cause: An error was encountered while cleaning up resources.

Impact: The operation is not completed. If the operation was to close a file, that file is not closed properly. If the operation was to disconnect, the session will remain in service, but the service will eventually time out and disconnect.

Action: The error text and return code will identify the problem resource. Contact your Northern Telecom support organization.

NT: If occurrence is frequent, contact your Northern Telecom development organization with the relevant information.

06

Type: Error

Severity: Minor

Cause: An attempt to revert the caller has failed.

Impact: The caller will not be transferred to an attendant and the session will be terminated.

Action: Ensure that the failing DN has been defined as a valid phone number. If the cause of the problem is still unclear, contact your Northern Telecom support organization.

NT: Use AD_UTIL to enable the DEBUG flag, then collect call progress information from the console window while recreating the problem scenario. Use the call progress information to determine where the problem lies.

07

Type: Error

Severity: Major

Cause: The forms manager has been deemed to have a major problem which prevents further use of this service.

Impact: The user may hear an error prompt after which the session will be disconnected.

Action: Look for accompanying Forms Manager SEERs and examine SEER documentation for recommended action.

NT: Examine related Forms Manager SEERS and take the appropriate action indicated by them.

08

Type: Error

Severity: Minor

Cause: A problem has occurred while attempting to access a Caller's Response file.

Impact: For the Transcription Service, the response is made inaccessible and the session continues. In the case of the Caller's Interface, the caller is reverted to the Form Revert DN.

Action: Examine the lower level return code and act accordingly. If the problem persists, contact your Northern Telecom support organization.

NT: Examine lower level SEERS for additional information. If there is file corruption, attempt to clean it up. As a last resort, remove the corrupted file.

09

Type: Error

Severity: Major

Cause: A problem has occurred while attempting to access a Voice Form Definition file.

Impact: For the Transcription Service, an error prompt is played and the session is terminated. In the case of the Caller's Interface, the caller is reverted to the System attendant.

Action: Examine the lower level return code and act accordingly. If the problem persists, contact your Northern Telecom support organization.

NT: The Form Definition file may be corrupt. Use the Voice Forms Editor to verify the integrity of the file.

10

Type: Admin

Severity: Minor

Cause: The Form Definition file for a particular session has been found to be out of service.

Impact: For the Transcription Service, an error prompt is played and the session is terminated. In the case of the Caller's Interface, the caller is reverted to the Form Revert DN.

Action: Ensure that the Form has been fully defined as described in the *Voice Form Editor User's Guide*. If the form is intended to be out of service, remove all references to said form.

NT: Remove all references to the out of service form.

11

Type: Error

Severity: Minor

Cause: A lower level error has been encountered which is beyond control of this service.

Impact: Impact varies depending upon the context in which the SEER is issued. The possible impacts are:

- Error is ignored and the session continues.
- Caller is reverted to Form Revert DN (Caller's Interface).
- Session is terminated.

Action: Examine lower level return code and handle according to SEER documentation for the specified return code.

NT: Look for the problem using the lower level return code and the surrounding SEERs. Take the action specified for these SEERs.

Class 112 Restore and Recovery (RR)

Restore and recovery is run after a hard disk failure. This process is initiated after booting from the INSTALL/DATA tape. Restore copies the information from a disk-backup or tape-backup onto the new disk. Recovery checks and corrects inconsistencies in the directory, user cabinets, voice menus and voice forms. The restore and recovery programs are part of the software configuration.

These SEERs will only occur when running from tape. Most lower level return codes would be from BURP (Class 15). If the restore and recovery fails it can be restarted from the beginning. The Meridian Mail system will not operate correctly unless the restore and recovery complete successfully.

02

Type: Error

Severity: Major

Cause: Failed to create a volume.

Impact: The volume was not created.

Action: Restart the restore from the beginning. If the problem persists, contact your Northern Telecom support organization.

NT: Use the return code to look up the problem in the SEER manual and follow the indicated actions.

04

Type: Error

Severity: Critical

Cause: An error occurred while trying to clean out messages from the user profiles.

Impact: The restore failed.

Action: The return code of the SEER will indicate the cause of the problem. Start the restore from the beginning. If error persists, contact your Northern Telecom support organization.

NT: Use the return code to look up the problem in the SEER manual and follow the indicated actions.

05

Type: Error

Severity: Critical

Cause: An error occurred copying the prompts from tape to VS2.

Impact: The restore failed.

Action: The return code indicates the cause of the problem. This would usually indicate a tape drive with dirty heads, or a faulty prompt tape. Try the operation again. If it fails, contact your Northern Telecom support organization.

NT: Copy the prompts from another installation tape.

06

Type: Error

Severity: Critical

Cause: Error reading the features of the system from VS1.

Impact: The restore failed.

Action: If no errors occurred up to this stage of the restore and recovery, and voice forms were not installed on the system, then this is not a serious error. If voice forms were installed on the system then the restore and recovery will have to be started from the beginning.

NT: If no errors occurred up to this stage of the restore and recovery, and voice forms were not installed on the system, then this is not a serious error. If voice forms were installed on the system then the restore and recovery will have to be started from the beginning.

07

Type: Error

Severity: Critical

Cause: Could not copy user profiles from volume VS901 or VS902 to the destination user volume.

Impact: The restore failed.

Action: The return code in the SEER will indicate the cause of the problem. The restore will have to be restarted from the beginning.

NT: The return code in the SEER will indicate the cause of the problem. The restore will have to be restarted from the beginning.

08

Type: Error

Severity: Major

Cause: An error occurred reading the system record from VS1.

Impact: The restore failed.

Action: The return code indicates the cause of the error. Attempt restore operation again. Could indicate invalid backup tapes. Attempt restore with an older set of backup tapes.

NT: The return code indicates the cause of the error. Attempt restore operation again. Could indicate invalid backup tapes. Attempt restore with an older set of backup tapes.

09

Type: Error

Severity: Major

Cause: An error occurred while formatting the disk on node 1.

Impact: The restore failed.

Action: Check the disk and SCSI path for possible hardware errors. Run the boot ROM diagnostics to check the hardware. Check the jumpers and terminating resistor configuration for all SCSI devices on the node. Check that the correct replacement disk drive has been used.

NT: Check the disk and SCSI path for possible hardware errors. Run the boot ROM diagnostics to check the hardware. Check the jumpers and terminating resistor configuration for all SCSI devices on the node. Check that the correct replacement disk drive has been used.

10

Type: Error

Severity: Major

Cause: Could not initialize and configure the disk on node 1.

Impact: The restore failed.

Action: The return code of the SEER will indicate the cause of the error. Ensure that the correct replacement disk drive has been used.

NT: The return code of the SEER will indicate the cause of the error. Ensure that the correct replacement disk drive has been used.

11

Type: Error

Severity: Critical

Cause: An error occurred while trying to restore VS1 from a disk backup.

Impact: The restore failed.

Action: The return code indicates the cause. Correct the error and attempt the restore operation again. This could indicate a possible problem with the hardware on node 2, or the bus interconnecting the nodes. If it fails repeatedly, then the restore should be done from a tape backup.

NT: The return code indicates the cause. Correct the error and attempt the restore operation again. This could indicate a possible problem with the hardware on node 2, or the bus interconnecting the nodes. If it fails repeatedly, then the restore should be done from a tape backup.

12

Type: Error

Severity: Critical

Cause: An error occurred during the restore of a volume from tape to disk. The return code in the SEER indicates the cause of the problem.

Impact: The restore failed.

Action: The restore and recovery procedure will have to be started from the beginning. If the SEER indicated a problem with the backup tape then an older set of backup tapes should be used for the restore.

NT: The restore and recovery procedure will have to be started from the beginning. If the SEER indicated a problem with the backup tape then an older set of backup tapes should be used for the restore.

13

Type: Error

Severity: Critical

Cause: An error occurred while checking the user cabinets against the directory.

Impact: The restore failed for the specific SPN.

Action: The restore and recovery will have to be redone for the SPN node that had the error. The return code of the SEER will indicate the cause of the problem. This SEER will not stop the recovery from proceeding.

NT: The restore and recovery will have to be redone for the SPN node that had the error. The return code of the SEER will indicate the cause of the problem. This SEER will not stop the recovery from proceeding.

14

Type: Error

Severity: Critical

Cause:

1. In most circumstances this report indicates that an error occurred while checking the user entries in the directory for matching cabinets.
2. If no users were added to the SPN, then this SEER is not a problem. It simply indicates that the user cabinet structures have not been set up.

Impact:

Case 1.	The restore failed for the specific SPN.
Case 2.	No impact.

Action:

Case 1.	The restore and recovery will have to be redone for the SPN node that had the error. The return code of the SEER will indicate the cause of the problem. This SEER will not stop the recovery from proceeding.
Case 2.	No action.

NT:

Case 1.	The restore and recovery will have to be redone for the SPN node that had the error. The return code of the SEER will indicate the cause of the problem. This SEER will not stop the recovery from proceeding.
Case 2.	No action.

17

Type: Error

Severity: Critical

Cause: An error occurred while synchronizing the voice services to the directory.

Impact: The restore failed. This SEER will not stop the recovery process.

Action: The return code from the SEER will indicate the cause of the problem. This error will only affect the voice services in the system.

NT: The return code from the SEER will indicate the cause of the problem. This error will only affect the voice services in the system.

18

Type: Error

Severity: Critical

Cause: An error occurred while synchronizing the directory to the voice services.

Impact: The restore failed. This SEER will not stop the recovery process.

Action: The return code from the SEER will indicate the cause of the problem. This error will only affect the voice services in the system.

NT: The return code from the SEER will indicate the cause of the problem. This error will only affect the voice services in the system.

19

Type: Error

Severity: Critical

Cause: An error occurred trying to synchronize the voice forms for the system.

Impact: The restore failed.

Action: The return code from the SEER will indicate the cause of the problem. This error will only affect the voice forms in the system.

NT: The return code from the SEER will indicate the cause of the problem. This error will only affect the voice forms in the system.

20

Type: Error

Severity: Major

Cause: An error occurred trying to synchronize the voice forms for a SPN.

Impact: The restore failed.

Action: The return code from the SEER will indicate the cause of the problem. This error will only affect the voice forms in the system.

NT: The return code from the SEER will indicate the cause of the problem. This error will only affect the voice forms in the system.

21

Type: Error

Severity: Major

Cause: An error occurred while formatting the disk on a SPN node.

Impact: The restore of the SPN node failed.

Action: Check the disk and SCSI path for possible hardware errors. Run the boot ROM diagnostics to check the hardware. Check the jumpers and terminating resistor configuration for all SCSI devices on the node. Check that the correct replacement disk drive has been used.

NT: Check the disk and SCSI path for possible hardware errors. Run the boot ROM diagnostics to check the hardware. Check the jumpers and terminating resistor configuration for all SCSI devices on the node. Check that the correct replacement disk drive has been used.

22

Type: Error

Severity: Major

Cause: Could not initialize and configure a SPN node.

Impact: The restore failed for the SPN node.

Action: The return code of the SEER will indicate the cause of the error. Ensure that the correct replacement disk drive has been used.

NT: The return code of the SEER will indicate the cause of the error. Ensure that the correct replacement disk drive has been used.

23

Type: Error

Severity: Major

Cause: The software version on tape differs to the original system version.

Impact: The system will not work after the restore and recovery completes.

Action: Ensure that the correct version Install/Data tape is used for the restore and recovery.
Restart the restore and recovery procedure from the beginning.

NT: Ensure that the correct version Install/Data tape is used for the restore and recovery.
Restart the restore and recovery procedure from the beginning.

Class 114 On-Line Upgrade Utility (OLUU)

The Online Upgrade Utility is used for performing on-line system maintenance functions on the SPM. These include software upgrades, enable features, hardware modifications, language expansions and moving voice services cabinets.

On-line Upgrade Error Return Code

Normally each SEER generated by the on-line upgrade utility will be associated with an error return code from the lower layer of software called by the on-line upgrade. The return code usually references another SEER associated with the lower level software, or it exists as a separate number indicating the reason of the error reported.

For SEERs 01 through 03, the return code shown is not the lower layer software error code, but rather an internal failure number from the on-line upgrade utility. It shows the support personnel exactly where during on-line maintenance process the error occurs. This will allow the support person to find out what has been done and what is still missing for on-line operation. It will also assist the support person in figuring out the proper manual recovery method to continue the operation.

Note: A detailed description of the on-line upgrade return code for SEERs 01 through 03 is given in the document entitled *OL_PKG Utility User Guide*. Since these return codes are meaningful only to experienced Northern Telecom support personnel with advanced training in On-line Upgrade procedures, it is beyond the scope of this document to describe these error return codes.

01

Type: Error

Severity: Major

Cause: A major error is detected during the Preparation stage of the On-line system maintenance.

Impact: The operation is aborted.

Actions: To find out the root cause of the error, the user should check the error message printed by On-line system maintenance and any additional SEER messages, and correct the error. Depending on the return code in this SEER (which indicates the exact point of failure within the Preparation stage) the user may be able to reset the on-line upgrade status and retry the operation again after fixing the problem. If the user cannot recover the error, please contact your Northern Telecom support organization for assistance.

NT: Check the log file and SEERs to locate the root cause of the failure. Depending on the return code in this SEER, invoke the proper manual recovery steps using `ol_pkg` (referring to the *OL_PKG User Guide*) to reset the system condition back to normal, and retry the selected on-line system maintenance operation again.

02

Type: Error

Severity: Major

Cause: A major error is detected during the Starting stage of the On-line system maintenance.

Impact: The operation is aborted.

Action: To find out the root cause of the error, the user should check the error message printed by On-line system maintenance and any additional SEER messages, and correct the error. Depending on the return code in this SEER (which indicates the exact point of failure within the Starting stage) the user may be able to reset the on-line upgrade status and retry the operation again after fixing the problem. If the user cannot recover the error, please contact your Northern Telecom support organization for assistance.

NT: Check the log file and SEERs to locate the root cause of the failure. Depending on the return code in this SEER, invoke the proper manual recovery steps using `ol_pkg` (referring to the *OL_PKG User Guide*) to reset the system condition back to normal, and retry the selected on-line system maintenance operation again. Users also have the choice of using `ol_pkg` to continue with the on-line maintenance operation manually after resolving the original problem, or restoring the system from the backup disk and running the on-line operation again from the beginning.

03

Type: Error

Severity: Major

Cause: A major error is detected during the ending stage of the on-line system maintenance.

Impact: The operation is aborted.

Action: To find out the root cause of the error, the user should check the error message printed by On-line system maintenance and any additional SEER messages, and correct the error. Depending on the return code in this SEER (which indicates the exact point of failure within the Ending stage) the user may be able to reset the on-line upgrade status and retry the operation again after fixing the problem. If the user cannot recover the error, please contact your Northern Telecom support organization for assistance.

NT: Check log the file and SEERs to locate the root cause of the failure. Depending on the return code in this SEER, invoke the proper manual recovery steps using `ol_pkg` (referring to the *OL_PKG User Guide*) to reset the system condition back to normal, and retry the selected on-line system maintenance operation again. Users also have the choice of using `ol_pkg` to continue with the on-line maintenance operation manually after resolving the original problem.

04

Type: Error

Severity: Minor

Cause: During the on-line system maintenance, an error was received either from the PRM or MMI indicating that it failed to update its internal status and turn the on-line upgrade status to ON or OFF.

Impact: Failed to update status.

Action: Check the return code in the SEER and any additional SEERs from the PRM or MMI for the root cause of the problem. If the problem persists, contact your Northern Telecom support organization for assistance.

NT: Check the return code in SEERs that are either from the PRM or MMI. Check for additional SEERs to get a further explanation of the problem. The root cause of the problem is in the PRM or MMI. In the case of the PRM, double check if both PRM are running properly in both of the MSP nodes. For MMI, restarting the MMI may help.

05

Type: Error

Severity: Critical

Cause: The system has been found not suitable for On-line system maintenance operation.

Impact: The operation is aborted.

Actions: Check the return code in the SEER and check for any additional SEERs to find out the root cause of the problem. Resolve the indicated problem and restart the on-line operation again.

NT: Check the return code and any additional SEERs for the cause of problem. It is most likely that the system is not in full redundancy mode or the on-line upgrade operation is being tried on a non-SPM platform. If no problems are found with the hardware and full redundancy mode is operational, double check the hardware database and make sure all of the hardware component redundancy records are OK and in service mode.

06

Type: Error

Severity: Critical

Cause: There is not enough free volume space to perform the on-line system maintenance operation.

Impact: Operation is aborted.

Actions: Check the additional data in the SEERs to see which volume is out of space. Check the volume space usage and try to reduce the usage to free up more volume space. Run volume audits to get more free space back.

NT: Check additional data in the SEERs to determine which volume is out of free space. Audit the VS1 and VS2 text and voice volumes. Use VSMUP to check the actual volume space usage. Delete all unused files in both VS1 and VS2.

07

Type: Error

Severity: Critical

Cause: During the Preparation stage of On-line Software Upgrade, it fails to disable the MSP2 disk as backup.

Impact: Operation is aborted.

Actions: Check the SEER return code and any additional SEERs for the explanation of the disk disable operation failure. Correct the hard disk problem, and enable and synchronize both MSP disks before trying the on-line software upgrade operation again.

NT: Check the SEER return code and any additional SEERs for the cause of the problem. The specified disk operation has failed on the MSP2 node. Use `MIRROR_PKG` to check the MSP2 disk status and condition. Replace the disk if necessary. Try to enable the MSP2 disk again and synchronize it with the MSP1 disk before retrying the on-line software upgrade.

08

Type: Error

Severity: Minor

Cause: Failed to perform a specified node maintenance operation. In the on-line system maintenance operation, only the node reset operation is supported from PRM.

Impact: The operation is aborted.

Actions: Check the SEER return code and any additional SEERs from the PRM to see why the node reset failed. Also check the hardware status of the specified node in the SEER. Make sure all nodes are in the InService state. You may need to restore and recover the system before retrying the on-line system maintenance operation again.

NT: Check the log file, SEER return code, and any additional SEERs for the root cause of the problem. Run Off-line diagnostics on the node in question. Also check the Bus Controller hardware status. Use `OL_PKG` to continue the on-line operation manually, or restore the system from backup disk and restart the on-line operation from the beginning again.

09

Type: Error

Severity: Major

Cause: Got an error from VCM that it failed to disable voice ports or channels. It could also be a timeout on a channel disable.

Impact: This is not a critical error. The user has the choice of continuing with the on-line operation, with the understanding that voice services may be disrupted and blocked during on-line operation.

Actions: Check the SEER return code and any additional SEERs to find the possible root cause of the problem. Run off-line diagnostics on all voice ports or channels. The user has the choice of continuing with the on-line system maintenance operation.

NT: Check the SEER return code, and VCM SEERs for any additional information about the possible problem. Run diagnostics for the questionable VP card and T1 span. Check and correct the hardware database for all VC ports, DSP, VC cards, T1 span and T1 channels status, etc.

11

Type: Error

Severity: Critical

Cause: PRM fails to reset the specified MSP node.

Impact: The on-line system maintenance operation is aborted.

Actions: Check the SEER return code and any additional SEERs for the root cause of the problem. Make sure the MSP node and SBC card are in the InService state. Run diagnostics on the questionable MSP node. Restore the system and run the on-line operation again, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code, and PRM SEERs to locate the root cause of the problem. Check the hardware database to make sure that the MSP node and all cards are in the InService state. Run diagnostics on the MSP node and bus controller. Use ol_pkg to reset the MSP node and continue the on-line operation manually, or restore the system from the backup disk and run the on-line operation again from the beginning.

13

Type: Error

Severity: Critical

Cause: Failed to reset either the specified SPN or TIFN node through PRM.

Impact: The on-line system maintenance operation is aborted.

Actions: Check the SEER return code and any additional SEERs to find out which node has failed and the possible cause of the problem. Check the questionable node status for the InService state. Run diagnostics on the questionable node. Restore the system from the backup disk and run the on-line operation from the beginning again, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code, PRM SEERs and any additional SEERs to locate the faulty node and the possible cause of the problem. Check the hardware database for the correct InService state for the node in question. Run diagnostics on the questionable node and MSP bus controller. Use PRM_CONTROL to reset the node in question and continue with the on-line operation manually using OL_PKG, or restore the system from the backup disk and run the on-line operation from the beginning.

15

Type: Error

Severity: Major

Cause: During on-line system maintenance, it fails to enable either the specified voice ports or channels.

Impact: Voice Services may not be resumed. Users will have the choice of continuing with the on-line operation for this non-critical problem.

Actions: Check the SEER return code and any additional SEERs for the possible root cause of the problem. Run diagnostics on the questionable VP card or T1 card. Make sure the SMDI link is up and InService. Since this is not a critical problem, users can continue with the on-line operation and use the MMI to re-enable these voice ports or channels after the completion of the on-line operation.

NT: Check the SEER return code, VCM SEERs and MA SEERs for possible cause of the problem. Check the hardware database to see that correct data and state exists for the voice ports or channels in fault. Run diagnostics on the questionable VP or T1 card. Use OL_PKG to re-enable the voice channels again and continue the on-line operation manually. Since this is not a critical problem, users can continue with the on-line operation and use the MMI to re-enable these channels again after the completion of the on-line operation.

16

Type: Error

Severity: Minor

Cause: Failed to enable and synchronize the MSP 2 backup disk from MSP 1 disk. This problem can only happen during an on-line software upgrade.

Impact: At the point of this failure, the system has been upgraded and is in full service. The only impact is that the system disk is not in 'full redundant' mode.

Actions: Check the SEER return code and any additional SEERs for the root cause of the problem. Check MSP 2 disk status and replace the disk, if necessary. Use the MMI disk utility to synchronize the MSP2 disk with the MSP1 disk again.

NT: Check the SEER return code, PRM SEERs, and any additional disk-related SEERs for the root cause of the problem. Use MIRROR_PKG to check both the MSP1 and MSP2 disk status, and use SCSI_PKG to run diagnostics on the disk in question. Resynchronize the MSP2 disk with MSP1, either using OL_PKG or MIRROR_PKG.

17

Type: Error

Severity: Major

Cause: The requested maintenance function on the specified T1 has failed.

Impact: Voice services may be disrupted. Users will have the choice of continuing with the on-line operation or aborting the process completely.

Actions: Check the SEER return codes and additional SEERs to find out the possible cause of the problem. Users have the choice of continuing with the on-line operation, with the understanding that voice services may not be available at all. Use the MMI to put the T1 in question back into service after the completion of on-line operation.

NT: Check the SEER return code, VCM SEERs, and MA SEERs for the possible cause of the problem. Check the hardware database for the correct state of the T1 in question. Run diagnostics on the faulty T1 card. Use OL_PKG to perform the same maintenance function again, and continue with the on-line upgrade manually. Since this error is not a critical error, users also have the choice of continuing with the on-line operation normally and performing a check on the T1 after the completion of the on-line operation.

18

Type: Error

Severity: Critical

Cause: This SEER should not be printed in the SPM 02 release. This feature is not supported in the current release.

Impact: None.

Actions: None.

NT: None.

19

Type: Error

Severity: Critical

Cause: This SEER should not be printed in the SPM 02 release. This feature is not supported in the current release.

Impact: None.

Actions: None.

NT: None.

20

Type: Error

Severity: Critical

Cause: This SEER should not be printed in the SPM 02 release. This feature is not supported in the current release.

Impact: None.

Actions: None.

NT: None.

21

Type: Error

Severity: Critical

Cause: Failed to start the tape server.

Impact: The on-line system maintenance operation is aborted.

Actions: Check the SEER return code and any additional SEERs for the possible cause of the problem. Check if the correct tape is inserted in the tape drive. Clean the tape drive and tape head. Try the tape operation again until the process is aborted.

NT: Check the SEER return code and any additional SEERs for the root cause of the problem. Check if the right tape is correctly inserted in the tape drive. Clean the tape drive and replace the tape, if necessary. If the tape operation has been aborted, use OL_PKG to repeat the operation again. (Use the log file to find out what tape operation is performing before the error.) Continue with the on-line operation manually using OL_PKG, or restore the system and run the on-line operation from the beginning.

22

Type: Error

Severity: Critical

Cause: Failure copying new SW Config data and software files.

Impact: Failed to copy one or more files located in the #TAPE:MMTAPE1:AUTOBUILD directory to disk. The On-line Software Upgrade operation is aborted.

Actions: Check the SEER return code and any additional SEERs for the root cause of the problem. Check if the tape and tape drive are operational. Clean the tape drive if necessary. Users can perform the same on-line system maintenance operation again from the beginning.

NT: Check the SEER return code and any SEERs from the Tape Server or VS1 volume server for the possible root cause of the problem. Audit VS1 and use OL_PKG to manually copy these files again. The user can use OL_PKG to step through the Preparation stage of the on-line upgrade manually, and repeat the Starting and Ending stages normally.

23

Type: Error

Severity: Major

Cause: Backup of Startlist, OFS and HWD files failed.

Impact: Failed to backup one or more of the three system files in VS1. A warning message will be displayed and users will have the choice of continuing with the specified on-line system maintenance operation without this backup.

Actions: Check the SEER return code and any additional SEERs for the possible cause of the problem. Check VS1 for free space and audit VS1. Users can continue with the on-line system maintenance operation without this backup. It is recommended that you backup these files manually before continuing.

NT: Check the SEER return code and VS1 server SEERs or any additional SEERs for the possible root cause of the problem. Audit VS1 and check if free space is available. Check that these three files exist on VS1. Use HX_PKG to backup these files manually before continuing the on-line system maintenance operation.

24

Type: Error

Severity: Minor

Text Failed to update command sequence in system record.

Cause: Failed to update the system record with the current completed on-line system maintenance stages status.

Impact: This stage is usually the last step in the stage. The on-line operation will not proceed to the next stage properly unless the system record is manually updated correctly. If this error is reported in the Ending stage of the on-line operation, this will have no effect on the on-line operation at all, but the next on-line system maintenance operation will not be performed properly until the system record status is corrected manually.

Actions: Check the SEER return code and any additional SEERs for the cause of the error. Check the status of VS1 and audit VS1. Restore the system and retry the on-line system maintenance operation again, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code, possible SEERs from the VS1 server, and any additional SEERs for the possible root cause of the problem. Check SYSREC in VS1. Audit and check the status of VS1. Use OL_PKG to update the SYSREC with the correct on-line operation status, and continue with the on-line operation in the normal way.

25

Type: Error

Severity: Major

Cause: Failed to open, read, write or close the on-line log file on the VS1 server.

Impact: This is not a critical problem. Users have the choice of continuing with the on-line system maintenance operation without the log file.

Actions: Check the SEER return code and additional SEERs for the cause of the error. If the maintenance printer is available, use it to log the progress of the on-line operation instead of using the log file. Users have the choice of continuing without any log file.

NT: Check the SEER return code, possible VS1 server SEERs, and any additional SEERs for the possible cause of error. Check the VS1 status and audit VS1. Fork a CI window and use HX_PKG to create an empty log file, and issue the TEE command. Use OL_PKG or load OL_MAIN in the CI window to run the on-line system maintenance operation again. It is recommended that you continue with the on-line operation without the log file and use the printer to monitor the progress instead.

26

Type: Error

Severity: Minor

Cause: Failed to remove the previous backup files after the completion of the on-line system maintenance operation.

Impact: There is no impact to the system except extra unused files will remain on the system disk. Users can ignore this error condition.

Actions: Check the SEER return code and any additional SEERs for the possible cause. Audit and check the VS1 server. This is not a critical error and has no major impact on the system. Users can ignore this error without doing any harm to the system.

NT: Check the SEER return code and possible VS1 SEERs for the possible cause of the error. Use HX_PKG to remove the backup files manually.

27

Type: Error

Severity: Major

Cause: Failed to copy new software/data files from tape to disk.

Impact: The on-line system maintenance function is aborted.

Actions: Check the SEER return code and any additional SEERs for the possible cause. Check if the correct tape was used. Check and clean the tape drive. Users can resume the on-line operation by starting the on-line operation again after resolving the tape problem. If the problem persists, contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code, possible SEERs from the tape server, or VS1 server SEERs for the possible root cause of the problem. Check if the correct INSTALL/DATA tape was used. Replace the used tape with another tape, if necessary. Clean the tape drive and audit VS1. Since the on-line operation is terminated at the beginning of the Starting stage, it is alright to restart the on-line operation again at the TOOLS level. It will resume the operation at the beginning of the Starting stage. Users can also use OL_PKG to continue with the on-line operation manually.

28

Type: Error

Severity: Minor

Cause: Got an error from VCM. The warning prompt is played and the call is disconnected.

Impact: This is not a critical problem. Users will have the choice of continuing with the on-line operation. Some voice call disruption may be experienced and may require re-enabling or disabling voice channels manually after the on-line operation is completed.

Actions: Check the SEER return code and any additional SEERs for the possible cause of the problem. It is recommended that you continue with the on-line operation at this stage. Usually there is no major impact to the system, except some users' calls will be disconnected by the system without any warning. Some channels may not be disabled properly so you may need to enable them manually at the end of the on-line operation.

NT: Check the SEER return code and any possible SEERs from VCM, VSS and voice service application to find out the possible cause of the problem. Users will have the choice of continuing with the on-line operation. Complete the on-line operation and check if all of the voice ports and channels are in the Inservice state. Enable any OutOfService voice ports and channels using the MMI.

29

Type: Error

Severity: Major

Cause: When the utility prompts the user to do a sanity test on the system, the user indicated the system is not functioning properly.

Impact: The on-line system maintenance operation is aborted.

Actions: Check any additional SEERs from the system to see if there is anything wrong with the system. Check if the link(s) are up and running. Make sure the DMS-100 or the switch is running properly. If the user answers NO to the prompt, the on-line operation will be aborted immediately. Users may ignore the error condition and continue with the on-line operation if he or she is sure that the error condition is not caused by the on-line operation. If the on-line operation is aborted, restore the system and try the on-line operation again from the beginning.

NT: Check for any suspected SEERs that explain why the system is not up and running. Use VCM_PKG to check the status of all voice ports and channels. Check the hardware database for the correct data and status. Use PRM_CONTROL to check all of the node statuses. Check if the links are up and running. Use OL_PKG to continue with the on-line operation, or restore the system and restart the on-line operation from the beginning.

30

Type: Error

Severity: Minor

Cause: Failed to remove all the unused files after the on-line system maintenance operation.

Impact: This is not a critical error. Users can continue with the on-line operation without any impact to the system.

Actions: Check the SEER return code and any additional SEERs for the cause of the problem. Users can continue with the on-line operation without any impact. Contact your Northern Telecom support organization to clean up these files manually, if necessary.

NT: Check the SEER return codes and any possible VS1 server SEERs for the cause of the problem. Continue with the on-line operation until it is completed. Use HX_PKG or MD to remove any unused files on VS1.

31

Type: Error

Severity: Minor

Cause: A timeout was received while waiting for the voice ports or channels to go into an OutOfService or CourtesyDown state.

Impact: This is not a critical problem. Users will have the choice of continuing with the on-line system maintenance operation.

Actions: Check the SEER return code and any additional SEERs for the cause of the problem. This is not a critical problem, and it is recommended that you continue with the on-line operation until it is completed. Some voice channels may experience call disruption and some channels may not appear in the proper state in hardware database. Use the MMI to check and enable or disable all channels after the on-line operation.

NT: Check the SEER return codes and any VCM, MA and VSS SEERs for the possible cause of the problem. Continue with the on-line operation until it is finished. Check the hardware database for the correct voice port, channel data, and statuses. Use the MMI to re-enable and disable voice ports or channels.

32

Type: Error

Severity: Minor

Cause: Failed to switch and activate the new set of voice prompts and DSP files. The on-line operation failed.

Impact: System maintenance operation is aborted.

Actions: Check the SEER return code and any additional SEERs for the possible cause of the problem. Restore the system, retry the on-line operation again from the beginning, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return codes and any additional SEERs for the cause of the error. Check if a new prompt is set and that the DSP files are copied correctly to a new temporary directory in VS1 and VS2. Make sure all voice prompt and DSP file names are correct. Use OL_PKG to switch the set of voice prompts and DSP files manually and continue with the on-line operation, or restore the system and restart on-line operation from beginning.

33

Type: Error

Severity: Minor

Cause: Failed to perform the requested maintenance function on the specified voice ports or channels.

Impact: It is not a critical error. Users can have the choice of continuing with the on-line operation.

Actions: Check the SEER return code and any additional SEERs for the possible cause of the problem. This is not a critical problem and it is recommended that you continue with the on-line operation until it is finished. Use the MMI to enable and disable voice ports and channels after the completion of the on-line operation.

NT: Check the SEER return code and possible SEERs from MA, VCM and VSS for the possible cause of the error. The user should continue with the on-line operation until it is completed. Check the hardware database voice port and channel status. Use the MMI to enable any remaining disabled channels.

34

Type: Error

Severity: Critical

Cause: Failed to locate valid voice ports or channels in the hardware database.

Impact: The On-line system maintenance operation is aborted.

Actions: Check the SEER return code and any additional SEERs for the possible cause of the problem. Restore the system and make sure it has returned to the working state and that all voice channels are available. Start the on-line operation again from the beginning, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code and possible HD and VS1 server SEERs for the root cause of the problem. Check the hardware database manually for the correct data structure and status. Use OL_PKG to continue with the on-line operation, or restore the system and start the on-line operation from the beginning.

35

Type: Error

Severity: Minor

Cause: Failed to query the PRM status on a specified node. Either it got an error return code from PRM or a timeout occurred on PRM.

Impact: The on-line system maintenance operation has aborted.

Actions: Check the SEER return code and any additional SEERs for the possible cause of the problem. Check the specified node and run diagnostics for that node. Restore the system and retry the on-line operation again from the beginning, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code and possible SEERs from PRM for the possible cause of the error. Use PRM_CONTROL to check the current node and PRM status. Use OL_PKG to continue with the on-line operation manually, or restore the system and start the on-line operation again from the beginning.

36

Type: Error

Severity: Critical

Cause: Failed to remove the unused voice service cabinet in the volume after moving.

Impact: This is not a critical problem. Users will have the choice of continuing with the on-line operation. This error does not have any major impact the operation of the system.

Actions: Check the SEER return code and any additional SEERs for the possible cause of the problem. This is not a critical problem and it is recommended that you continue with the on-line operation until it is completed. Contact your Northern Telecom support organization for assistance in removing the unused cabinet.

NT: Check the SEER return code and possible SEERs from the VS server for the cause of the error. Continue with the on-line operation until it is completed. Use MD to remove the unused cabinet manually.

41

Type: Error

Severity: Critical

Cause: Wrong system type.

Impact: The system is not suitable for on-line operation. The system does not have the proper SPM configuration for on-line operation. The On-line system maintenance function is aborted.

Actions: Check for the proper system configuration. Make sure the system is properly installed in the first place. Retry the on-line operation again. Contact your Northern Telecom support organization for assistance.

NT: The system is found to be an improper SPM type for on-line operation. Check that the System Record and hardware configuration are correct. Run diagnostics on the MSP node. If all of the configuration is correct, retry the on-line operation again.

42

Type: Error

Severity: Minor

Cause: The system is not in full redundant mode, and is not suitable for the on-line operation.

Impact: The on-line system maintenance operations aborted.

Actions: The system is not in full redundant mode. Check any additional SEERs to find out which part of the system is not in full redundant mode. Correct the problem and retry the on-line operation again.

NT: Check if the system is in full redundant mode. Both MSP nodes must be running, and both MSP disks must be shadowed and synchronized. Run diagnostics on all of these redundant components and retry the on-line operation again.

43

Type: Error

Severity: Minor

Cause: The system does not have enough free volume space to perform the on-line operation.

Impact: The on-line system maintenance operation is aborted.

Actions: Check both VS1 and VS2 for both text and voice free space. Run an audit on both VS1 and VS2. Retry the on-line operation again. If the problem persists, contact your Northern Telecom support organization for assistance.

NT: For both VS1 and VS2, use VSMUP to check the status and the total free space available. Remove all unused files on both VS1 and VS2. Audit both VS volumes. Retry the on-line operation again.

44

Type: Error

Severity: Minor

Cause: Received an error code from PRM that indicated it failed to reset a specified node.

Impact: The on-line system maintenance operation is aborted.

Actions: Check the SEER return code and any additional SEERs for the root cause of the problem. Check the failed node status and run diagnostics on this node. Restore the system and try the on-line operation again from the beginning, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code and possible PRM SEERs to indicate the cause of the problem. Run diagnostics on the node in question. Check the hardware database for the proper node configuration and status. Check the on-line log file to see that the proper on-line operation sequence has been performed (i.e., make sure the on-line operation is started from the Preparation stage, followed by the Starting stage and ending with the Ending stage). Use OL_PKG to continue with the on-line operation manually, or restore the system and retry the on-line operation from the beginning.

45

Type: Error

Severity: Minor

Cause: This is a software error.

Impact: The on-line system maintenance operation is aborted.

Actions: The node type is incorrect for the specified maintenance function (e.g., asking to switch T1 on TIFN node etc.). This is usually a software error or incorrect hardware database configuration problem. Contact your Northern Telecom support organization for assistance.

NT: This problem should not happen at all. If it does occur, check the hardware database for any possible data corruption. Restore the system and restart the on-line operation again from the beginning. If the problem persists, please contact your Northern Telecom development organization immediately.

46

Type: Error

Severity: Minor

Cause: The system does not have a working redundant T1 span.

Impact: This is not a critical problem. The user will have the choice of continuing with the on-line operation, with the understanding that no voice service will be available for an extended period of time in certain stages during the on-line operation.

Actions: The system does not have redundant T1 spans. Users will have the choice of continuing with the on-line process, but will experience no voice service for an extended period of time. If the on-line operation is aborted, resolve the T1 redundant problem, restore the system, and try the on-line operation again from the beginning.

NT: T1 is not in full redundant mode. Check the physical T1 configuration and hardware database configuration and status. Users can continue with the on-line process. If the on-line operation is aborted, resolve the T1 redundant problem. Use OL_PKG to continue with the on-line operation manually, or restore the system and retry the on-line operation from the beginning.

47

Type: Error

Severity: Critical

Cause: System configuration problem. There is no T1 span record found in the hardware database.

Impact: The on-line system maintenance operation has aborted.

Actions: The system is not configured properly in the hardware database. There is no T1 record found. Either the system is not installed properly in the first place, or the hardware database has been corrupted. Please contact your Northern Telecom support organization for assistance.

NT: The system is not configured properly. Check the hardware database for the correct T1 span record data and status. Restore the hardware database correctly, and make sure all T1s are in service. Retry the on-line operation again.

48

Type: Error

Severity: Critical

Cause: The on-line operation utility failed to acquire the necessary memory for the operation.

Impact: The on-line system maintenance operation has aborted.

Actions: Check the SEER return code to find out why there is a memory problem. Run diagnostics on all MSP nodes to make sure there is no memory problem. Retry the present on-line operation again. If the problem persists, contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code for the possible cause of the memory problem. Use the Debugger to find out the maximum free memory space available. Check and make sure there is no extra background utility task running. Run diagnostics on the MSP node. Continue with the on-line operation by trying the on-line upgrade stage again.

49

Type: Error

Severity: Critical

Cause: Failed to start a specified VS Helix Server.

Impact: The on-line system maintenance operation is aborted.

Actions: Check the SEER return code and any additional SEERs for the possible cause of the problem. Make sure there is no other utility running in the background that may have started the RW100 server. Retry the on-line operation again from the stage in which the problem was encountered.

NT: Check the SEER return code, possible SEERs from the VS Server, and any other SEERs to indicate the cause of the problem. Make sure there is no RW100 or RW1 running in the background with a different login ID and password. Make sure there is no extra utility running in the background. Use VSMUP to check the volume status on disk. Fork RW1 manually on the OL_PKG CI window and continue with the on-line operation manually, or restart the on-line operation stage again from the point of failure using the normal procedure.

50

Type: Error

Severity: Critical

Cause: Failed to read the system record.

Impact: The on-line system maintenance operation has aborted.

Actions: Check the SEER return code and any additional SEERs for the cause of the problem. Check the MSP disk status. Retry the on-line operation again. If the problem persists, contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code, possible SEERs from the VS server, and any additional SEERs for the possible cause of the problem. Use OL_PKG to access the system record manually. Check if the system record is corrupted. Rebuild the system record, if necessary. Retry the on-line operation again from the stage in which it failed.

51

Type: Error

Severity: Minor

Cause: Wrong on-line system maintenance command sequence is given by the user (e.g., Hardware Modification command is given right after the successful completion of the Software Upgrade Preparation stage).

Impact: The on-line system maintenance function has aborted.

Actions: Check if the proper on-line operation sequence is given. Retry the on-line system maintenance operation again. If the problem persists, contact your Northern Telecom support organization for assistance.

NT: Check the on-line log file and system record data to find out which on-line upgrade stage has been completed. Make sure no users have entered the wrong on-line function command. Retry the on-line command again. If it fails again, either memory is corrupted or the program data on disk is corrupted. Please contact your Northern Telecom development organization for assistance.

52

Type: Error

Severity: Minor

Cause: Failed to update the system record with the completed on-line upgrade stage data.

Impact: The on-line operation is aborted. Reset the system record again with the correct status before trying the on-line upgrade function again.

Actions: Check the SEER return code and any additional SEERs for the cause of the problem. Restore the system and retry the on-line operation again, or contact your Northern Telecom support organization for assistance. For more information about restoring your system, refer to the chapter "Online recovery" in *Trouble-locating and alarm-clearing procedures* (NTP 297-7001-503).

NT: Check the SEER return code and possible VS server SEERs for the cause of the error. Use OL_PKG to access the system record and update the record with the correct on-line stage status. Continue with the on-line operation manually, or restore the system and try the on-line operation from the beginning.

53

Type: Error

Severity: Critical

Cause: This is a software problem. This error should not happen.

Impact: The on-line system maintenance operation is aborted.

Actions: This error should not normally happen. If it happens, you may have a memory or program disk data corruption problem. Please contact your Northern Telecom support organization for assistance immediately.

NT: This problem should not happen unless a serious software error is occurring. Restore the system and try the on-line operation again. If this problem still occurs, contact your Northern Telecom development organization for assistance immediately.

54

Type: Error

Severity: Minor/Major

Cause: Failed to open a specified file.

Impact: Depending on the file type, this error may cause the on-line operation to be aborted or allow the user to continue. If you are prompted to continue, continue with the on-line operation.

Actions: Check the SEER return code and data for which file type could not be opened. Normally, when an attempt was made to open the on-line log file, this error is not a critical error. In this case, it is recommend that the user continue with the on-line upgrade (with a printer connected) to collect all of the on-line information. An audit of the VS server may also resolve the problem. Contact your Northern Telecom support organization for assistance, if necessary.

NT: Check the SEER return code and possible VS server SEERs for the cause of the problem. Use HX_PKG or MD to see if you can open the file in question manually. Check the VS server status and audit all volumes. If it fails with the on-line log file, you have the choice of continuing with the upgrade. Use OL_PKG to continue with the upgrade manually, or restore the system and try on-line operation from the beginning.

55

Type: Error

Severity: Minor

Cause: The upgrade utility is timing out on either PRM or VCM for the specified function.

Impact: If the function timed out on voice ports or channels, users will have the choice of continuing with the on-line operation. Otherwise, the operation is aborted.

Actions: Check the SEER return code and additional SEERs to find out the possible cause of the problem. If there is a timeout on the voice port or channel, the user will be able to choose to continue with the on-line operation. If the on-line operation is aborted, restore the system and try the operation again, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code and possible SEERs from VCM or PRM for the cause of the problem. Use OL_PKG to continue with the on-line operation manually, or restore the system and try the on-line operation again from the beginning.

56

Type: Error

Severity: Critical

Cause: An error occurred in the software due to an incorrect input parameter value.

Impact: The on-line system maintenance operations aborted.

Actions: This is a software error. If it happens, you may have memory or program disk data corruption. Restore the system from the backup disk and try the on-line operation again. If the problem persists, contact your Northern Telecom support organization for assistance immediately.

NT: This is a serious software error. Restore the system and try the on-line operation again. If it happens again, please contact your Northern Telecom development organization for assistance immediately.

57

Type: Error

Severity: Info

Cause: Failed to remove a specified helix file.

Impact: This is just a warning message. The user will be allowed to continue with the on-line system maintenance operation. Normally there is no major impact to the system by this error.

Actions: This is a warning message. Some unused helix files may remain in the system. The on-line system maintenance operation will be continued. The user can perform a manual clean up to remove these files after the completion of the on-line operation, or you can contact the Northern Telecom support organization to remove these files at a later time.

NT: Check the SEER return code and any additional SEERs for the explanation of the problem. Audit the VS server. Use HX_PKG to remove the unused files manually.

58

Type: Error

Severity: Info

Cause: This is a warning message to the user that the tape server has not been removed properly. Usually, this SEER is caused by killing the tape server when it already failed to start in the first place.

Impact: This SEER, itself, does not impose any impact to the on-line operation, and it will continue with the process.

Actions: The tape server could not be removed. Normally, it is caused by the tape server never having been started in the first place, or by the tape being removed before the tape server is killed. The error, itself, does not have any major impact on the system. The on-line operation will be continued by itself.

NT: Check the SEER return code, tape drive hardware, and tape condition for the cause of the problem. Fork the CI window and issue the KILLTAPE command to clear the tape drive and server again. Continue with the on-line operation.

59

Type: Error

Severity: Info

Cause: This message is to warn the user that some non-critical redundancy in the system is found.

Impact: The user will have the choice of continuing with the on-line operation. Although this non-critical problem will not stop the on-line operation, itself, it may have impact to the end user with some extended amount of voice service disruption.

Actions: Check the SEER return code and any additional SEERs to find out which area of system redundancy is in error. Usually it will be in the area of the SPN or TIFN. The user can choose to continue the on-line operation without the full redundancy. If the on-line operation is aborted, resolve the redundancy problem and restore the system. Restart the on-line operation from the beginning.

NT: Check the SEER return code and additional Upgrade Utility SEERs for the area of redundancy that is in error. Use the utility to resolve the redundancy problem, if possible. Either continue with the on-line operation that has the redundancy error, continue with the on-line operation manually using OL_PKG, or restore the system and retry the on-line operation from the beginning.

60

Type: Error

Severity: Minor

Cause: Failed to get a status from VCM.

Impact: Failed to communicate and obtain the necessary information from VCM. The on-line system maintenance operation is aborted.

Actions: Check the SEER return code and any additional SEERs for the cause of the problem. Restore the system and try the on-line operation from the beginning, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code and possible SEERs from VCM for the cause of the problem. Check if the VCM is working properly using the VCM utility. Use OL_PKG to continue with the on-line operation manually, or restore the system and try the on-line operation from the beginning.

61

Type: Error

Severity: Minor

Cause: VCM failed to perform the request maintenance function.

Impact: Depending on the type of maintenance function performed, in most cases, the error will be considered as non-critical and the user will have the choice of continuing with the on-line operation (with the understanding that the end-user may experience an extended period of time of voice service disruption).

Actions: Check the SEER return code and VCM SEERs for the possible cause of the problem. In most cases, the user will have the choice of continuing with the on-line operation. If it aborts, restore the system and retry the on-line operation again. If the problem persists, contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code and possible SEERs from VCM for the cause of the error. Use the VCM or MA utility to perform the same maintenance function again, and try to resolve the VCM maintenance problem. Check the hardware database for the proper configuration and status data. Either continue with the on-line operation from the point of failure detection, use OL_PKG to continue manually, or restore the system and try the on-line operation from the beginning.

62

Type: Error

Severity: Minor

Cause: PRM Control failed to perform the requested function.

Impact: PRM failed to perform the requested function through the PRM_PROCS. The on-line system maintenance function is aborted.

Actions: Check the SEER return code and PRM SEERs for the cause of the error. Restore the system and retry the on-line operation again from the beginning, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code and possible SEERs from PRM for the cause of the problem. Use PRM_CONTROL to check the PRM status. Use OL_PKG to continue with the on-line operation manually, or restore the system and try the on-line operation again from the beginning.

63

Type: Error

Severity: Minor

Cause: The MMI failed to honor the upgrade status update command from the upgrade utility.

Impact: The on-line operation is aborted.

Actions: Check the SEER return code and the MMI SEERs for the possible error. In most cases, this error is caused by running the on-line operation in the incorrect sequence, or trying the same on-line Preparation or Ending stage again in the incorrect fashion. Restore the system and try the on-line operation again from the beginning, or contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code and possible SEERs from PRM to find out the cause of the error. Check the on-line log file and system record on-line status for the proper on-line stages. Use the OL_PKG to set up the PRM and MMI upgrade status again. Continue with the on-line operation manually, or restore the system and try the on-line operation from the beginning.

64

Type: Error

Severity: Minor

Cause: A T1 span was found that is not in full redundant mode.

Impact: The user will have the choice of continuing with the on-line operation without T1 redundancy, with the understanding that the user may experience total loss of voice services for an extended period of time.

Actions: Check the SEER return code and any additional SEERs for the cause of the T1 redundancy problem. The user will have the choice of continuing with the on-line operation without full T1 redundancy, with the understanding that user may experience total loss of voice service for an extended period of time. If the on-line operation has aborted, restore the system and try the on-line operation again after resolving the T1 problem. If the problem persists, contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code and any additional SEERs for the cause of the problem. Check the hardware database for the correct T1 configuration and status. Check if there is any remote T1 alarm. Use the MA utility to recover the T1 redundancy. Continue with the on-line operation from the point of error detection, continue manually with OL_PKG, or restore the system and try the on-line operation from the beginning.

67

Type: Error

Severity: Minor

Cause: Failed to switch the active T1 span from the odd numbered TIFN node to the even numbered TIFN node.

Impact: This is not a critical problem. The user will have the choice of continuing with the on-line operation, with the understanding that the user may experience a total loss of voice services for an extended period of time.

Actions: Check the SEER return code and additional SEERs for the cause of the problem. This is not a critical problem; the user can select to continue with the on-line operation. If the on-line operation has aborted, restore the system and try the on-line operation again after resolving the T1 span problem. If the problem persists, contact your Northern Telecom support organization for assistance.

NT: Check the SEER return code and possible SEERs from VCM for the cause of the problem. Check the hardware database for the correct T1 configuration and status. Make sure there is no remote T1 alarm. Either continue with the on-line operation from the point of error detection, continue manually with OL_PKG, or restore the system and try the on-line operation again from the beginning.

68

Type: Error

Severity: Minor

Cause: Failed to keep a copy of the last on-line log file before creating a new one.

Impact: This is not a critical problem. The user can continue with the on-line operation without the log file.

Actions: Check the SEER return code and any additional SEERs for the cause of the error. Normally, this error does not have any impact on the on-line operation. The user can continue with on-line operation as long as there is no other major error detected.

NT: Check the SEER return code and any additional SEERs for the explanation of the problem. Audit the VS1 server. Continue with the on-line operation.

69

Type: Error

Severity: Minor

Cause: Failed to write the system record data back to disk.

Impact: The last performed on-line status will not be updated to disk. The user should not proceed to the next on-line operation until the system record data on disk is recovered.

Actions: Restore the system and try the on-line operation again, or contact your Northern Telecom support organization for assistance before proceeding further to the next on-line operation stage.

NT: Check the SEER return codes and any additional VS server SEERs for the possible cause of the problem. Use the on-line log file as a reference, and manually update the system record with the proper upgrade stage status and data using OL_PKG. If the problem is not happening in the Ending stage, continue to the next on-line operation stage (as normal) after recovering the system record on disk. If the problem is happening in the Ending stage, no further recovery action is needed except making sure the system record on-line status is changed back to the normal state on disk.

70

Type: Error

Severity: Minor

Cause: PRM has failed to reset the current master MSP node.

Impact: The operation has aborted.

Actions: The system is currently not running with the MSP1 node as the master, and PRM has failed to reset the MSP1 node and switch the master node to MSP2. Resolve the MSP node problem, and try the on-line operation again.

NT: Check both MSP1 and MSP2 node statuses. Run diagnostics on both MSP nodes. Try the on-line operation again.

Appendix A: Error/Return codes

MISA Error Codes

I/O Error results (Helix IO results -- IO Error class)

501	mixing I/O operation types (e.g. READLN, BLOCKREAD)
502	resource limit reached
520	illegal character written to terminal driver
530	out of bounds
540	attempting I/O operation on unopened file
541	file already open
542	file not committable
543	illegal attempt to seek
544	bad file set ID
545	server not found
546	operation not allowed across file systems
547	already logged on
548	client Helix resource limit
549	value overflow
551	accept timeout
554	invalid task ID
555	reply error - accepting task died
557	invalid time given to WAITTIME
559	initiate or re-initiate error
565	pool error
567	mini task tried to initiate another task
571	no appropriate buffer for tasking operation
572	no transmit buffer, network overloaded
573	invoker stack overflow
574	invalid push/pull parameters
575	parameter mismatch in remote operation
576	entry not found in remote operation
577	remote communication problem

578	trLocale
579	bad event passed to SetTimer
580	no control blocks
581	server accept time-out
584	bad task
600	mismatch in server/client interface
601	bad pathname
602	file not found
603	cannot create
604	attempt to create file with duplicate name
605	bad address
606	I/O operation attempted outside file limits
607	mode conflict
608	bad object type
609	access denied
610	invalid password
611	server does not support command
612	device off-line, could not communicate
613	server resource limit
614	parity error reading data from server
615	disk write protected
616	no directory
617	attempt to write read-only file
618	bad access mode
619	bad remote pointer
620	transaction timeout on close/commit of file set
621	date not set - attempted file commit with no time
630	no directory on floppy
631	too many files on floppy
632	no room on volume
633	new volume mounted
634	time-out on volume
640	serious error level
648	invalid site address
649	protocol error between communication servers
650	communication link failure
651	remote site failure
652	FID not recognized by server
653	software consistency check failed

654	file set transaction ID invalid
655	bad volume ID in FID
656	dpares field input non-zero
657	invalid Unix object type
658	file exists already
659	source pathname invalid
660	illegal parameter
661	destination pathname invalid
662	bad volume ID in destination FID
663	invalid input parameter
664	bad password input
665	bad volume control parameter
666	invalid agent ID on logout
667	no std delete of directory
668	bad instance key
669	read error in user data
670	write error in user data
671	bad agent or object task ID
672	bad command length
673	bad volume ID in source FID
674	permission denied
675	bad block count
676	bad sequence number
677	FOS data timeout

1000-Disk Data Interface (DD) codes

1000	insufficient memory space in heap to perform the function
1001	file too big to be opened using supplied advice
1002	file is corrupted
1003	record not found
1004	file has grown to its maximum size
1005	not implemented
1006	function does not work at EOF
1007	attempt to open non-existent or destroyed file
1008	bad parameters passed to DD function
1009	attempt to open file with no block table
1010	attempt to align FCBs of different files
1011	function called on unopened or uncreated file
1012	FCB is already being used or not initialized to nil before first use

1013	maximum FCB links limit exceeded
1014	DD internal error
1015	attempt to access data outside record boundary
1016	attempt to access block outside Block Sequence boundary
1017	attempt to update a read-only file instance
1018	block Seq op attempted on non block seq record
1019	lock time-out
1020	attempt to insert wrong media into BS
1021	cannot upgrade the mode of this file

1100-Volume Server (VS) codes

1101	tasking error
1102	operation on unopened or closed file
1103	server full - no free blocks on disk volume
1104	Invalid block ID received from client
1105	server not found for volume
1106	attempt to update a file by multiple programs
1107	too many files open
1108	too many file opens queued
1109	too many client tasks opening file
1110	file opened too long in quick RW mode
1111	bad FID
1112	bad TaskID on open
1113	function not allowed
1115	Rls; Corrupt blockid buffer
1116	get; Corrupt blockid buffer
1117	invalid media specified
1118	internal limit: Max BRs
1119	attempt to write OFS
1120	failed to init MI_SERVER I/F
1121	failed to logon to MI_SERVER
1122	bad parameters or argstring
1123	OF server crashed
1124	no memory for server
1125	internal limit: Max OutBRs
1126	Vol ID mismatch
1127	bad Key
1128	too many files open in qRW mode
1129	control function conflict

1130	Disk/MASI/MI_SERVER Error
1131	could not write system block
1132	normal audit
1133	bitmap is damaged
1134	startup error
1135	internal failure
1136	user has exceeded allocated disk space
1137	bad client ID passed in
1138	could not write SR table to disk
1139	internal limit: Max SRs. too many mailboxes on volume
1140	write protected
1141	error during Voice Volume Compress
1142	backup Volume out of space during on-line backup
1143	server table locked too long by client s/w
1144	vs_e File Unknown
1145	too many Open File Servers registered with VS
1146	Audit failed
1147	task which had a file open died without closing the file
1148	error during on-line backup
1149	normal backup
1150	client holds obsolete file view too long
1151	error invoking OFS
1152	block mismatch in shadow disk audit
1153	disk not shadowed

1200-Cabinet Access Method (CM) codes

1220	notACab: Target file is not a cabinet
1221	notAllowed: Insufficient access rights for requested operation
1222	noMemory: Client-provided heap space is too small
1223	badPath: PathName is not valid
1224	notFound: The requested target was not found
1225	limitReached: Internal CM limit encountered
1250	inconsistent: Cabinet file appears to be inconsistent
1251	badVersion: Incompatible versions of cabinet and CM
1280	badParm: Input parameter has illegal value
1281	notImplemented: Phase II feature
1282	defect: Logic error encountered.

1300-Open File Server (OFS) codes

- 1301 no memory available for OFS cache
- 1302 bad parameters passed to OFS
- 1303 tasking error talking to VS
- 1304 error from VS
- 1305 error during loading of shared memory file
- 1306 shared Memory file size has changed
- 1308 read misrouted to OFS by VS
- 1309 tasking error pushing to client
- 1310 OFS startup error

1400-MI Server and Interface (MI)

- 1410 DCB to SCSI driver invalid
- 1411 SCSI internal queue full
- 1412 SCSI driver is locked, try alternate node
- 1413 SCSI driver error, or for sd_cRD2 then error on primary disk read
- 1414 error for sd_cRD2 on shadowed disk read
- 1415 error for sd_cRD2 on primary and shadowed disk
- 1430 mi_procs tasking error with mi_server
- 1435 mup_pkg info tasking error with mi_server
- 1440 Internal segAlloc failed
- 1441 Internal segAlloc failed
- 1442 Internal segAlloc failed
- 1445 Client's read buffer address was bad
- 1446 Client's write buffer address was bad
- 1452 requested mi_server does not exist
- 1453 specified volume does not exist
- 1454 insufficient contiguous space on disk
- 1455 invalid transfer length
- 1456 invalid starting address
- 1457 task error on data push
- 1458 task error on data pull
- 1459 volume of specified name exists
- 1460 exceeded size of volume table
- 1461 specified block size is invalid
- 1463 control block corrupt or uninitialized
- 1464 Configured size provided is out of bounds
- 1465 sanity test failed
- 1466 mi layer is locked

1467	Unknown error returned from SD layer
1469	the memory segment already exists
1470	disk not defined in internal mi table
1471	A defer queue has been reset
1472	internal mi table has been corrupted
1473	internal volume table has been corrupted
1474	invalid control code for control entry
1475	task error on data push
1476	task error on data pull
1477	tasking error waiting for operation
1478	tasking error waiting for operation
1479	tasking error waiting for operation
1480	internal volume table could not be processed
1481	no hardware up for alternate node rendezvous
1482	ticket volume index was out of range on read
1483	ticket volume index was out of range on write
1484	volume index out of bounds in FindVolIndex
1485	volume index out of bounds in GenVolTable
1486	bad priority to mi_ReadDisk
1487	bad priority to mi_WriteDisk
1488	could not Segalloc for MICB in mi_tools
1489	Range error in ReadDisk or WriteDisk
1490	Read from SCSI layer timed out
1491	Write to SCSI layer timed out
1492	defer queues in use mismatch with counter

1500-Backup and Restore Program (BURP) codes

1501	Recovered error from tape SCSI driver
1502	Tape drive can not be accessed or cartridge not inserted.
1503	Flaw in the tape medium or heads are dirty.
1504	Tape hardware error.
1506	SCSI bus was reset.
1507	Tape cartridge is write protected or wrong type.
1508	No data found on tape.
1511	Tape drive aborted SCSI command.
1513	End of tape reached without writing all the data.
1517	Timeout during tape operation.
1518	SCSI Tape driver error.
1519	No Tape drive found for tape operation.

1533	End of media detected.
1534	End of file detected.
1535	Error reading disk during tape backup.
1536	Could not find source volume for restore.
1537	Could not open source volume for restore.
1538	Could not find destination volume for restore.
1539	Unexpected error from the tape SCSI driver.
1540	Error during tape backup.
1541	Error during disk backup.
1542	Error acquiring memory for backup or restore operation
1543	Error initiating backup task.
1544	Tasking error trying to inform client of completion.
1545	Could not open destination cabinet to copy profile
1546	Volume requested does not exist.
1547	Error creating the destination volume for disk backup.
1548	Error obtaining statistics for volume.
1549	Disk read error during tape backup
1550	Error deleting the temporary on-line backup volume.
1551	Tasking error checking to see if user wanted to abort backup.
1552	Volume server for an on-line backup not up.
1553	Tasking error communicating with backup task.
1554	Error copying a user profile during a partial backup or restore.
1555	Could not open destination volume for restore.
1557	The backup task could not locate the volume to be restored on the tape
1558	Tasking error informing client of a backup error.
1559	Error creating heap for user profile backup.
1560	Error creating heap for backup task.
1561	Error registering the backup task.
1562	off-line backup attempted when volume is on-line.
1563	Error verifying the volume on disk.
1564	Recoverable media error during tape backup.
1566	Bad or unknown source volume name.
1567	Wrong version of tape backup.
1568	Tape and disk volume sizes do not match.
1569	Block sizes on disk and tape do not match.
1570	Not the first backup tape.
1571	Disk read error patching volume from on-line backup.
1572	Disk Write error patching volume from on-line backup.
1573	Time stamp for on-line backup differs more than expected.

1574	Invalid root block in backup volume while patching on-line backup.
1575	Tasking error while prompting for a new tape.
1576	Tasking error talking to backup task.
1577	Error shutting down the profile backup volume.
1578	Error starting the profile backup volume.
1579	Voice volume not on tape.
1580	Backup volume not on tape.
1583	Error reading tape.
1584	Error writing to disk.
1585	Error reading disk.
1586	Error reading disk during a disk to disk copy.
1587	Error writing to disk during a disk to disk copy.
1588	Error during disk to disk copy.
1589	Error during VSRESTORE command
1590	Tape headers do not match.
1591	Tape out of sequence.
1592	Tape time stamps do not match.
1593	Tape block does not overlap previous tape.
1594	Previous backup task still exists.

Supplemental codes for BURP

1	end of tape
43	start of tape volume
50	tape drive not ready
52	tape cartridge defective
53	no tape in drive
54	end of tape volume reached
55	tape is busy
58	no tape buffer available
60	bad command to tape drive
61	hardware error in tape drive
62	try tape operation again
64	tape drive is busy
65	tape is blank
71	tape read/write not supported
107	mode conflict while accessing tape drive
109	access denied
111	command not supported by tape drive
112	tape drive is offline

- 113 tape server resource limit reached
- 114 parity error from tape drive
- 115 tape is write-protected
- 132 tape overflow (end of tape reached)
- 200 block address must be a multiple of 1024
- 300 tape/disk write failed: xfer byte size; check byte size

1600-Software Configuration (SC)

- 1600 Failed to Open File FILENAME, RC = nnn
- 1601 Failed to Close File FILENAME, RC = nnn
- 1602 Failed to Read from File FILENAME, RC = nnn
- 1603 Failed to Write to File, FILENAME, RC = nnn
- 1604 Failed Searching a Data File for a given token, FILENAME, RC = nnn
- 1605 Failed to Fork DRServer, RC = nnn
- 1606 Failed to start tpserver program after successfully forked
- 1607 Could not find Volume Server
- 1608 Could not start Volume Server
- 1609 Could not find Helix Server
- 1610 Could not start Helix Server
- 1611 Failed to audit requested Volume
- 1612 Could not find cabinet
- 1613 Could not remove cabinet/file
- 1614 Could not remove helix file
- 1615 Could not copy helix file
- 1616 Could not create hwd, RC = nnn
- 1617 Could not open hwd, RC = nnn
- 1618 Could not close hwd, RC = nnn
- 1619 Could not add component to hwd, RC = nnn
- 1620 Failed to init hwd search, RC = nnn
- 1621 Failed on hwd search. RC = nnn
- 1622 Could not close dd file, RC = nnn
- 1623 Failed to create dd record, RC = nnn
- 1624 Failed on ddcopy, RC = nnn
- 1625 Could not commit dd file FILENAME, RC = nnn
- 1626 Could not destroy dd file FILENAME, RC = nnn
- 1627 Could not get cm FID, PATHNAME, RC = nnn
- 1628 Could not open cabinet, PATHNAME, RC = nnn
- 1629 Could not copy cabinet file FILENAME, RC = nnn
- 1630 Could not close cabinet PATHNAME, RC = nnn

1631	Could not add file to cabinet PATHNAME, RC = nnn
1632	Could not get FIR from pathname PATHNAME, RC = nnn
1633	Could not Open Parent Cabinet PATHNAME, RC = nnn
1634	CM_Traverse failed PATHNAME, RC = nnn
1635	Failed to add model users, RC = nnn
1636	Prm_Getinfo Failed, RC = nnn
1637	Unknown System
1638	Cannot add system type directory token
1639	Cannot write OS boot tracks.RC = nnn
1640	Cannot intialize MICB, RC = nnn
1641	Cannot Configure disk, RC = nnn
1642	Cannot Init/Config Disk, RC = nnn
1643	Cannot Load OS to Voice nodes, RC = nnn
1644	Cannot get disk model
1645	Could not copy from helix to DD
1646	DDFindRec failed
1647	DR_Prime failed, RC = nnn
1648	Could not obtain heap for directory prime. RC = nnn
1649	Could not allocate segment
1650	Could not allocate heap using new segment
1651	Could not DeAllocate segment
1652	Failed to make volume VOLNum, RC = nnn
1653	MI_LogVol failed, VOLName, RC = nnn
1654	FS_FormatVol failed VOLName, RC = nnn
1655	SC_DiskVerify detected incorrect disk sizes on NODENUM
1656	Failed to validate version on disk matches version on tape
1658	Failed to obtain the number of channels on a given node, NODENUM, RC = nnn
1659	Failed to obtain the total number of channels on the system, RC = nnn
1660	Failed to obtain the GAC names, RC = nnn
1661	Failed to obtain statistics for a volume server.
1662	Failed to shutdown the DR_Server
1663	Failed to audit the DR_Server.
1664	DR_Server auditwait failed.
1665	FS_CabToUser failed.
1666	FS_Compress failed.
1667	Although FS_Compress is alright, it failed to compress to the desired size.
1668	MI_SizeChg failed.
1669	FS_ExpandinPlace failed.

- 1670 VSGetOMs failure.
- 1671 Index into feature array not found.
- 1672 Failed to Move Voice Services.
- 1673 Failed to create DD.
- 1674 MI_Stat Failed on Node NODENUM, RC = nnn
- 1675 Move voice cabinet.
- 1676 Ad_CrtLangRec failed.
- 1677 nt_dbInit failed.
- 1678 mi)delvol failed.
- 1679 Failed to detect the version file of the preMM8 release.
- 1680 Cannot convert form not SP6, MM7, or Opt11 systems.
- 1681 Invalid format of the version file.
- 1682 Invalid link type.
- 1683 Invalid System type.
- 1684 ad_OrgOpen failed.
- 1685 ad_GetCompList failed.
- 1686 ad_Read failed.
- 1687 ad_CompList failed.
- 1688 cm_FiltersToFIR failed
- 1689 dd_Info Failed.
- 1690 dd_Open failed.
- 1691 hd_convert failed.
- 1692 Conversion of PCO information has failed.
- 1693 VoiceServices on VS301 will not fit on any volume.
- 1694 Failed to change password to the default password.
- 1695 Cannot write to history file.
- 1696 Failed to add system profile.
- 1697 Failed to add first customer profile.
- 1698 Not enough room on any volume to move Voice Services to.
- 1699 No matching definition for specified volume.

1700-Software Configuration (SC)

- 1701 Voice Service DeskNumber conversion has failed.
- 1702 Voice Service Definition conversion has failed
- 1703 Personal profile conversion failed
- 1704 Network Database conversion failed.
- 1705 Write to Billing Control Table failed.
- 1706 Failed to modify hardware database component.
- 1707 Failed to locate requested task in names server.

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- 1708 Conversion of PCO information has failed.
 - 1709 Adding switch records failed.
 - 1710 VSA_CabExists failed to ensure that the voiceservice cabinet exists.
 - 1711 VSA_PrepMvSDF failed to prepare to move voiceservices file by file.
 - 1712 VSA_MoverServiceDefn failed to move voiceservice file.
 - 1713 VSA_MoveServiceDefn failed to move voiceservice.
 - 1714 Failed to locate requested task in names server
 - 1715 dr_Find failed
 - 1716 AD_MvUstrVol failed.
 - 1717 Could not close corporate directory.
 - 1718 Found an unknown storage hours number
 - 1719 Number of nodes cannot be reduced.
 - 1720 Failed to obtain the UAT Data Port names.
 - 1721 FS_AdjustVol failed.
 - 1722 FS_AdjUsers failed.
 - 1723 Error syncing voice service definitions.
 - 1724 Error updating DR for voice service definitions
 - 1725 Error syncing voice form for a given volume.
 - 1726 Not enough room on disk for the requested number of languages
 - 1727 Adjust Model users failed.

1900-File Server Pascal Utilities (FS Tools)

- 1901 the server is up and it should be down
- 1902 text volume size is too small to format
- 1903 NewMaxSR is too small for MaxSR used
- 1904 New Volume size < Old Volume Size in Expand
- 1905 Helix file does not have a MISA data
- 1906 MISA destination file already exists
- 1907 Helix file has bad block sequence
- 1908 bad volume number in pathname /nnn/...
- 1909 could not open cabinet
- 1910 could not allocate segment
- 1911 could not get heap
- 1912 error returned from rendezvous
- 1913 could not logon to server
- 1914 compress size was actually an expand
- 1915 inadequate free space in volume to compress to requested size

2000-Voice Handler (VH) codes

- 2000 no memory available to perform the function
- 2001 integrity failure
- 2002 bad command sequence
- 2003 a bad parameter has been passed to the function
- 2004 an operation occurred in a bad state
- 2005 software problem in VH
- 2010 Voice Record is neither created nor opened
- 2011 empty voice segment
- 2012 this record is not a voice record
- 2013 bad paragraph
- 2015 Bad prompt set was submitted by the application.
- 2020 command queue is full
- 2021 command queue is empty
- 2022 prompt queue is full
- 2023 prompt queue is empty
- 2030 cannot skip backward before the beginning of a voice segment
- 2040 VPTimeout - voice compressor has not replied within a set time
- 2041 a voice processor device handler error has occurred
- 2042 lost silence message
- 2043 play request for voice data which is bad or non-existent
- 2050 at end of voice segment
- 2051 prompt has ended
- 2052 recording has exceeded a set limit
- 2053 bad spoken name
- 2054 time-out occurred due to long silence
- 2090 tasking error with respect to vh_TaskVPPIO
- 2099 non VH error

2100-Voice Prompt (VX) codes

- 2101 input not found for variable field
- 2102 invalid data input to variable field of template
- 2103 template ID passed by application out-of-range
- 2104 failure has occurred in vx_init function
- 2105 failure has occurred in the TransField function
- 2106 failure has occurred in the TransPrompt function
- 2107 failure has occurred in one of the PlayXFld functions
- 2108 invalid data found in field component record

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- 2109 invalid data found in template definition record
 - 2110 no memory available to perform the function

2200-Voice Messaging (VM) codes

- 2201 playing problem
- 2204 record problem
- 2206 reply problem
- 2207 play envelope problem
- 2208 forward problem
- 2209 reply all problem
- 2210 compose problem
- 2212 send problem
- 2213 login problem
- 2214 greeting problem
- 2215 disconnect problem
- 2217 call sender problem
- 2218 attendant problem
- 2221 change password problem
- 2222 spoken name problem
- 2223 personal distribution problem
- 2225 creating a message
- 2226 adding a message
- 2227 opening a message
- 2228 updating a message
- 2229 altering a message
- 2230 closing a message
- 2231 deleting a message
- 2232 initial resources not available
- 2233 could not clean up resources
- 2234 failed to turn on message waiting indicator
- 2235 entry called out of sync.
- 2236 call answering problems
- 2237 code does not handle all possibilities
- 2238 no additional information is available
- 2239 skip backward problem
- 2250 quick compose set up failed
- 2251 extension dialling request failed
- 2253 unable to get sent digit
- 2254 message tagging failed

2255		unable to play address
2256		problem while name addressing
2257		problem in remote notification administration
2258		problem in Chargeable Operator Assistance Number Service
2259		no memory available to perform the function
2260		user's mailbox is too full
2261		inconsistent data found on disk

2300-Modem Diagnostics (MD)

2300	minor	controller did not provide the Diag_ID
2301	minor	controller did not provide the SEER FLAG
2302	minor	controller did not provide the Test_Duration
2303	minor	controller did not provide the TEST NUMBER
2304	minor	response to the controller is negative
2305	minor	operator realized if the test failed or passed

2400-Voice Processing (VP) codes

2401	major	tasking error on sending to VPIO
2402	major	driver time-out
2403	major	disk I/O time-out
2405	major	DSP Putcommand error
2406	major	tasking error on send to Application
2407	minor	invalid message from driver
2408	major	rcd buffer not cleared
2409	major	longint error in updating playback buffer
2410	major	rcd buffers b/w handler & driver out of sync.
2411	major	cannot retrieve data from DSP data queue
2412	major	cannot retrieve data from driver message queue
2413	major	DD error on vs_ReadBlock request
2414	major	DD error on vs_WriteBlock request
2417	major	onerror clause invoked after send to VPIO
2418	major	onerror clause invoked after send to Application
2419	minor	driver data underflow-playback
2420	minor	driver data overflow-recording
2422	major	driver echo wrong sequence number
2423	major	bytesread error reading driver parms
2424	major	no file name for driver parms.
2425	major	Dsp_Stop_Drv failure: cannot stop driver
2426	major	Dsp_Start_Drv failure: cannot start driver

2427	major	odd shared memory address returned by PP_Base
2428	major	cannot pass codec byte to driver
2429	major	unexpected blk received - playback
2430	critical	request Timer failed in startup
2431	major	unexpected end_of_block msg. from driver
2432	minor	invalid message value from driver
2433	major	some error in reading driver parms
2434	major	driver rejects command
2435	minor	cmd received when driver off line
2436	major	block stamp doesn't match stamp in play cmd.
2438	major	bad command sequence from vh_vpjo
2440	major	cannot find VCA to report a driver fault
2441	critical	cannot initiate VPHandler
2442	critical	newpool failed
2443	critical	addpool failed
2444	minor	newvar failed for debug buffer
2446	major	cannot inform VCA
2449	major	problem logging into SMDI Link Handler
2450	minor	application command not executed
2451	minor	application command not supported
2452	major	internal state table error
2453	minor	unknown timeout
2454	minor	InCallDetail or call detention time-out
2455	major	invalid line status reported from the DSP
2456	minor	long tone message from DSP
2457	major	proc variable is nil
2458	critical	NewVar failed
2459	minor	unknown digit detected by DTR
2460	minor	voice detection request in the wrong context
2461	minor	bad or undefined dsp message received
2462	major	tasking error with VPHDLR
2466	info	MainteReq-coud not report status to VCM
2470	minor	re-login timer has expired in the wrong state
2471	minor	channel being enabled/disabled in the wrong state
2480	critical	Is_SegAlloc failed for locale
2481	critical	NEWHeap VPHP_DDHeap failed. NEWHeap VPHP_Space Heap failed.
2482	Info	GetBuffers Mem used NEQ need.

2483	Info	More tasks requested than specified (the Nth channel being enabled, and the maximum channels that can be enabled for the node)
2484	minor	StartChild- Error in sending to child task. SendError to child task (task result).
2485	minor	StartChild- No room in table for TN & TaskID
2486	minor	TaskID not found in table.
2487	minor	Could not get Node/Ports # from ARGSTRING
2488	critical	GetMem failed.
2489	minor	Failed to allocate CommTask
2490	critical	RegParent failed.
2491	info	exception with child (# of active voice ports remain TN)
2492	info	completinoon with child (# of active voice ports remain TN)
2493	minor	The VCM is trying to start a VPH on a channel that already has a VPH.
2499	info	debugging SEERs for the VPH

2600-Peripheral Processor (PP) codes

2611	DSP is MtcBusy or online
2612	DSP not online
2613	DSP not offline
2614	DSP does not exist
2615	Failed to Segalloc memory
2617	Diagnostic request arrived too late
2619	Load File open error
2620	No Package Parameter Block.
2621	Bad Load Package Id.
2622	Load file read error.
2623	PP_Load tasking problem invoking PP_Update
2624	Not enough memory
2626	Failed to set H/W status register
2627	PP_Reset tasking problem invoking PP_Update
2628	DSP not loaded
2630	Bad private program memory
2631	Bad private table memory
2632	Bad shared data memory
2633	Bad control/status registers
2634	Bad DSP processor
2635	Bad DSP interrupts

2636	Bad voice tap
2637	Bad Dsp-Dsp memory
2639	PP_Run tasking problem invoking PP_Update
2640	H/W status register HdIA+Reset+VmMtc
2643	Cannot allocate Driver Id
2644	Cannot allocate DSP load
2645	Cannot allocate Int. Data memory
2646	Cannot allocate Prv. Prog memory
2647	Cannot allocate Prv. Tabl memory
2648	Cannot allocate Shr. Data memory
2649	Cannot allocate Dsp - Dsp memory
2650	Cannot allocate Voice memory
2651	Cannot allocate Terminal numbers
2652	Cannot send message to DSP Executive
2653	Timeout on DSP Response to Start Command
2654	Interrupt received but cannot get message
2655	Wrong response message type
2656	Bad allocation tables
2657	DSP Exec Error: RetCode in bits <6:0>
	DSP Executive Errors
	These error codes are in the lower 7 bits of the DSP executive error, these error codes are returned from DSP firmware.
	00 No error
	01 Message length error
	02 Invalid command
	16 INIT Command Errors
	32 AUDIT Command Errors
	48 START Command Errors
	49 No Driver instances available
	50 Nil DCT_Ptr in Driver Index Table
	51 No available DCT record
	52 No Internal Data Memory Page allocated
	53 No foreground and no background program
	64 STOP Command Errors
	65 No foreground record found
	66 No background record found
	67 No foreground and no background records
2659	Driver or Executive Driver not active
2660	Cannot send command to DSP Executive

2661	Timeout on DSP response to Stop Command
2662	Cannot get response message
2663	Wrong response message type
2664	Wrong Driver_Id in response message
2665	De-Allocation error
2666	DSP Exec Error: RetCode in bits <6:0>
2668	Invalid Driver Id (not active)
2670	Cannot get response message
2671	Wrong response message type
2672	Timeout on DSP Response to PPMPg command
2673	Cannot send PPMPg command
2674	Need the slot number in argument (SPM only)
2675	Failed to map VP12 control register
2676	A subtask died
2677	Read Hardware database related error
2678	CardNumber out of range

2700-Voice Base Voice Service Shell (VSS) codes

2701	critical	invalid called DN, cannot map to a service
2702	major	invalid service ID
2703	critical	start-up procedure is not defined for a voice service
2704		VSS is already in a call session, when the RM passes the incoming call request to the VSS; possible collision of outgoing and incoming call
2705	critical	VSS is already in use when VCA passes the service request to the VSS.
2706	critical	VSS failed to start a voice service
2707	critical	VSH_PROCS routines fail to talk to the VSS. It is likely that the remote voice service forgot to call vsh_BindVSSTid or the VSS crashed
2708		an invalid language value was passed to vsh_GetPrmptFid
2709	minor	no digit stored in the VSS
2710	minor	too many digits overflowed the buffers in VSS
2711	critical	VSS generates SEER
2712	minor	errors occurred during attempts to initialize data for new session
2713	minor	errors occur when in the process of disconnecting a call.
2714	critical	incoming call's service ID does not match the running service of the VSS
2715	minor	errors occur during the process of switching services

2716	critical	errors occur in the initialization process of the VSS
2717	minor	time-out while waiting for FromCSL, StartCall or Disconnect
2718	critical	procedures in VSH_PROCS called before initialization complete
2719	minor	receives bad digit from tone detector; digit will be thrown away
2720	minor	failure to request VPDH to place an outgoing call
2721	major	failure to tell service task to shutdown
2722	minor	time-out in setting the lock to access the digits buffer in VSS
2723	major	error in CAT data; failure to dial out
2724	minor	negative call duration
2730	minor	requested operation is not supported
2731	minor	bad call processing command
2732	minor	miscellaneous error
		<u>Shellstate (VSS internal states)</u>
		0 loaded, logging in with handlers
		1 logged on, no service on call (idle)
		2 allocated for a service
		3 correcting an incoming call
		4 starting an outgoing call
		5 handling call collision
		6 call is established
		7 adding a third party
		8 transferring a call
		9 disconnecting a call
		10 shutting down the service on VSS
		11 waiting for timeout to initiate addon call
		<u>DMS call state:</u>
		0 idle
		1 2-party call is established
		2 an incoming call is being presented
		3 the called party is being rung
		4 call is on hold
		5 addon call is being rung
		6 addon call has been answered
		7 conference call is established
		8 called party is busy
		9 receiving reorder tone
		10 half disconnect
2733	minor	invalid information type is specified in the vsh_QueryInfo routine
2734	minor	call cannot be answered because it is already disconnected or answered

2735	major	the service record size is incorrect
2736	minor	VSS was told by VCA to shutdown during registration
2737	minor	failed to send outgoing call progress status to service task
2744		failed to acquire a voice port

(27 32) VSS Incoming call debug information

SYNTAX: VSS Incoming CGN: <DN1> <DNType1> CDN: <DN2> <DNType2>.

Call Type: <CallType>

DN1	DN of the calling party	
DN2	DN of the called party	
DNType0	Unknown	
1	International	
2	National	
3	Special	
4	Subscriber	
5	ESN (location code call, e.g., ESN)	
6	Coordinated Dialing Plan (CDP)	
7	Reserved	
8	Internal extension	
9	Route Access Code and member number	
10	Route Access Code only	
11	Attendant code and member number	
12	UCD DN and position ID	
13	UCD position and DNIS	
14	IANI UCD DN and position ID	
15	InBand ANI	
16	UCD DN	
CallType	0 Direct call	
1	Call-forwarded call	
2	Call-forwarded on busy	
3	Call-forwarded on no answer	
4	Call-forwarded on Do Not Disturb	
2751	minor	the call-redirect operation has failed.
2752	minor	the link is temporarily not inservice.
2753	minor	the requested DN is not found on the SPM.
2754	minor	the requested called DN is invalid.
2755	minor	the supplied client DN is invalid.

2800-Generic Telephony Interface (GTI) codes

2801	major	tasking error
2802	major	command not supported for the configuration
2803	major	bad parameter in procedure call
2804	major	MWI server does not exist
2805	minor	bad calling manner
2806	minor	syntax of DN is incorrect
2807	minor	invalid digit
2810		DN already logged in
2811		DN was not found in link handler table
2812		Link is not in service
2813	minor	the device status is already set.
2814	minor	miscellaneous error.
2815	minor	no more entries in the device DN table.
2816	minor	not an associate set.
2817	minor	channel allocation failed.
2818	minor	channel deallocation failed.
2819	minor	query information operation failed.
2820	major	broken communication between link handler and application.

3000-Administration Base (AD) codes

3001	Error occurred obtaining the FID at a personal profile
3002	Number of bytes read is not as expected
3003	Invalid customer number specified when trying to open a customer profile
3004	Invalid customer number specified when trying to get the FID of the customer profile and the parent cabinet
3005	Pointer(s) to the profile(s) are not setup correctly
3006	Could not update system profile with information in the system record file
3007	Personal profile to be added already exists on the system
3008	Customer profile to be added already exists on the system
3009	File pointer to the COS profile is missing when reading a user profile
3010	Invalid COS number specified when reading a user profile
3020	Unable to retrieve a COS record from the specified organization profile
3021	Unable to update a COS record in the specified organization profile
3022	Unable to locate the COS offset record
3023	Retrieved COS record is of the wrong length
3024	Unable to delete the specified COS record
3025	Trying to add a second customer to a uni-customer system
3026	Trying to add a defined customer to the system

- 3027 Invalid record specified when adding a component record that has COS fields
- 3030 Unable to install the language record
- 3031 Unable to install the switch record
- 3051 Error occurred accessing the DR
- 3070 Major error caused the conversion process to abort
- 3071 Minor error(s) were encountered during the conversion process

3100-Directory Server (DR) codes

- 3101 bad primary index file - file too short
- 3102 bad primary index file - file too short
- 3105 server cache segAlloc returned newSeg false
- 3106 server cache segAlloc failed, no memory
- 3107 unable to initiate update agent
- 3109 error performing control function (dr_Control)
- 3116 file system error, directory may be corrupted
- 3117 bad sec index - continuation flag, no next file
- 3122 consistency check - keyRegenerate filter reject
- 3123 consistency check - keyRegenerate bad language
- 3124 consistency check - keyRegenerate bad keyType
- 3126 consistency check - entry w/o clientID
- 3127 consistency check - out of order key
- 3130 DRCB already in use (dr_OpenOD)
- 3131 insufficient Memory (dr_OpenOD)
- 3132 invalid DRCB used in DR operation
- 3134 DR server could not be accessed
- 3135 update agent unavailable, "updDisabled" or auditing
- 3138 secondary index file not found (drErr)
- 3139 bad secondary index file - too short (readKeyBlock)
- 3140 bad secondary index file - (open1stFile)
- 3142 bad secondary index file - attr len bad (unPackAttr)
- 3143 bad secondary index file - bad packed entry (scUnPack)
- 3144 bad secondary index file - file too short (unPackFilter)
- 3145 bad secondary index file - entry too short (unPackFilter)
- 3146 bad secondary index file - file too short (unPackFilter)
- 3147 bad secondary index file - entry too big (unPackFilter)
- 3148 bad secondary index file - file too short (unPackFilter)
- 3149 bad secondary index file - bad entry format (unPackFilter)
- 3150 bad secondary index file - missing list end (skipList)

3151	bad secondary index file - wrong list end (skipList)
3152	bad secondary index file - no list end (dr_ExpandMembers)
3153	bad secondary index file - file too short (nextRef)
3154	bad secondary index file - file too short (dr_References)
3159	consistency - couldn't make key (processPattern)
3160	consistency - couldn't make key (processPattern)
3164	consistency - entry is/is not findable (dr_Tools)
3166	consistency - entry is/is not referenced (dr_Tools)
3167	consistency - entry is present twice (dr_Tools)
3168	consistency - entry is/is not in a list (dr_Tools)
3170	language unknown (dr_SetCompParms)
3172	bad pattern - bad use of "?" (processPattern)
3173	DRCB locked or in use by another task
3174	max cost advice exceeded - pattern too loose?
3175	entry already in list (dr_AddMember)
3176	bad call sequence - no scan active (dr_NextEntry)
3177	bad call sequence - no scan active (dr_PrevEntry)
3178	bad call sequence - no scan active (dr_LastEntry)
3179	bad call sequence - no ref scan (dr_NextReferrer)
3180	invalid data in an entry during add or change
3182	clientID supplied is already in use
3183	entry not found (entryFind, entryTrot)
3184	member not found (listTrot)
3185	no next file, reached end of dir (delList)
3186	entry not found in dr_DelEntry
3187	entry not found in dr_ChgEntry
3188	list entry not found in dr_AddMember, dr_DelMember
3189	member entry not found in dr_AddMember
3190	entry not found in dr_References
3191	list entry not found in dr_ExpandMembers
3192	bad entry type - not a list (dr_ExpandMembers, etc)
3193	bad entry type - list/non-list (rChgEntry)
3195	attempt to update entry without locking (scan)
3196	entry already locked (tLock)
3197	entry not yet locked by you (tUnLock)
3198	cannot lock - too many entries locked (tLock)
3199	unimplemented feature used

3200-Message Transfer Agent (MTA) codes

3203		Operational Measurement Statistics not complete
3204		unimplemented operation
3205		unimplemented function
3206		cancelled message is not in deferred delivery queue (DDQ)
3207		invalid message ID
3208		MTA task not accepting messages
3209	major:	mtProcs had a tasking error with MTA program
3210	minor:	MTA delivered a message late
3213	major:	fails to access user profile
3220	minor:	MTA failed to pass a message to OCS
3250		MTA task not found
3251		restart operation failed; MTA will shut down
3260	minor	problem in generating NDN msg
3261	minor	error in record structure
3262		cannot get MTA cabinet counts
3265		cannot deliver to system address types
3266		recipient is off node
3268	minor	copy table overflow; some recipients will not receive message; NDN generated for such recipients
3269	minor	list table overflow; list won't become expanded
3270		CSL error occurred
3272	minor	reported error prevented message delivery to one or more recipients
3273	major	could not gain access to an MTA cabinet; mail delivery from this volume is blocked
3274	minor	failed to set MWI or notify a voice messaging session of new message
3275	minor	delivery task went away and MTA has chosen not restart it
3276	minor	one or more of the specified volumes is already registered with another MTA
3277	major	system volume is not yet online
3278	major	problem in accessing the deferred queue and the queue will be rebuilt
3279	major	could not open the OrgDir; a delivery task may shut down
3280		message format conversion error
3281	major	DD/CM error occurs in file/cabinet operation
3282	minor	user profile is not consistent with organization directory

3285	major	bad argstring
3286	critical	attempt to allocate MTA heap failed
3287	critical	registration of MTA program failed
3288	critical	all delivery tasks have died or failed to start
3289	critical	reported error prevents MTA from starting
3290		cannot build the deferred queue

3300-Operational Measurements (OM) codes

3311	task error occurred
3312	OM Server not running
3317	failure in storing OM data
3321	failed to delete file
3331	cannot access Organization Profile
3332	cannot poll server
3333	data not written to disk
3338	failed to register the server
3341	PRM failed to start the server
3350	error getting data from MS server
3360	OM_COLLECT status
3362	OM_COLLECT problem
3366	general OM_SERVER message
3367	general OM_SERVER error
3369	general O_S OM_Retrieve error
3375	general OM_STORAGE error
3399	extra code used for debugging only

3400-Voice Channel Allocator (VCA) codes

3440	Internal Sanity Check on hash table failed
3441	VSS tried to release a resource it did not own
3442	The VCA Control Block passed in by the client was invalid
3443	Internal Sanity check failed
3444	Operation not supported on this platform
3445	Information message
3453	Service does not exist and no general purpose VSSs are Idle.
3454	Service is datafilled but no VSSs of that service are available.
3455	Could not read the hardware database at startup
3456	The VSS is already in a call
3457	Device being searched for was not found
3458	VCA us abandoning recovery operation

- 3461 There was no memory at startup for the VCA
- 3464 A tasking error occurred
- 3465 Bad parameter passed in by client
- 3466 An unexpected event occurred
- 3467 User is already registered with the service specified to UserUpdate
- 3469 Maintenance has disabled all logins or system is not yet up
- 3271 A device was in an incorrect state for the requested operation
- 3475 There was no memory at startup for the VCA or there was some other initialization problem
- 3479 User is not registered in the VCA
- 3488 Problem cleaning up dying program
- 3489 Generic OnError Entry invoked
- 3490 Internal Sanity Check failed
- 3491 No available ports found
- 3492 Request more than two ports
- 3493 The resources is not ready yet
- 3494 Unexpected device acquiring a timeslot
- 3495 Failed to PUSH OM or status PUSH to MMI
- 3496 VSS or VPH requested invalid event
- 3497 Error occurred during recovery
- 3499 An unexpected event occurred

3500-SEER server (SS) codes

- 3500 SEER notice of event-not an error
- 3501 SEER file was not found in cabinet
- 3502 Indicates a DD error-file may be corrupted
- 3503 Error indexing a SEER
- 3504 Error recording a SEER
- 3505 SEER file is full-pointer must be reset to permit overwrite
- 3506 Date is outside of range of valid SEER dates
- 3508 No records were found in the specified interval
- 3509 Difficulty communicating with the SEER server
- 3510 Tasking error encountered-retry send
- 3511 SEER crash-recovery was attempted
- 3512 Record not found
- 3513 Tasking error encountered, probably due to incorrect database or hardware.
- 3514 Problem communicating with active messenger.
- 3516 Map physical to bus controller failed.

3600-Network Message Transfer Agent (NMTA) and Network Database codes

3601		NMTA is not accepting messages
3602		tasking error with NMTA
3603		cannot locate NMTA task
3604	major	NMTA has run out of memory space
3605	critical	reported error prevents the NMTA from starting
3606		invalid input parameter
3607	major	ATA has invoked nm_CallError
3608	minor	remote site has entered/existed from ERROR state
3609	minor	has or has not networking port
3621	critical	fail to access message cabinet
3622	major	fail to submit to MTA
3623	major	fail to send billing record to OM
3624		do not commit file from MTA
3625	major	communicate with VCA failed
3626	critical	NM has encountered an internal logic error
3627	critical	fail to open Network Database
3628	minor	current connection failed
3631		no free networking data port
3632	major	destination site is not in the network
3633	major	NMTA has a problem with NDN
3634	major	message has been dropped by the NMTA
3640	major	cannot find remote site info
3641	major	received password is invalid
3643	major	software release does not agree
3644		function call not expected
3645	major	received session header contains invalid site ID
3651	minor	the NMTA has run out of OTA control block
3652	info	OTA reports a particular session is disconnected
3653	info	the system access number used for the outgoing session is invalid
3654		there is no associated outgoing OTA control block.
3655		the outgoing AMIS session OTA control block is found not in use after the session has been started
3656		no messages found in the message queue after an outgoing AMIS session is started
3670		networking database is not open
3671		database is already open

3672	site or location has not been defined
3673	site is already defined
3674	failed to associate Location Code
3675	failed to disassociate Location Code
3677	invalid mailbox number
3678	no more sites to list
3679	fatal error, possible database corruption
3680	networking not enabled in Organizational Profile
3682	invalid data
3683	location prefix underlaps an existing prefix
3684	location prefix overlaps an existing prefix
3685	no location code found
3689	location prefix matches an existing prefix
3690	no spoken name is present
3691	DN cannot be determined
3692	specified context is undefined
3693	database commit not carried out
3694	the system access number for an AMIS site cannot be dialed

3700-Analog Transfer Agent (ATA) codes

3702	cannot open dataport
3703	I/O error on modem dataport
3704	received DD error on FID
3705	unexpected end of record on FID
3706	datalink synchronization error
3707	bad callprogress received
3709	cannot put modem on-hook at DN
3710	failed to detect far end carrier at DN
3711	modem will not answer addon call at DN
3712	cannot escape to modem command mode at DN
3713	no call progress received - callstate
3714	cannot allocate buffers from VSS heap
3715	modem fails to respond at DN
3716	tasking error with the NMTA
3717	cannot start datalink task
3718	internal tasking error
3719	tasking error while accessing software timer
3720	failed to receive end of voice on FID
3721	detected error in voice segment on FID

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- 3722 VSS error - VSS code
 - 3753 call disconnect unexpectedly
 - 3756 no answer from called party
 - 3759 message retry limit expired

3800-Simplified Message Desk Interface (SMDI)

- 3800 SMDI program did not load
- 3801 asynchronous error on send
- 3802 synchronous error on send
- 3803 a counter was reset
- 3804 link status - down message
- 3805 DN not logged in
- 3806 TN is not defined in the table
- 3807 argstring not set
- 3808 could not open hardware database
- 3809 invalid DN on request to turn MWI on/off
- 3810 blocked request to turn MWI on/off
- 3811 bad packet format when processing packet
- 3812 SMDI buffer overflowed
- 3813 error trying to enable interrupt
- 3814 DN is too long
- 3815 no buffer pool
- 3816 error trying to register
- 3817 error trying to dump the channel table
- 3818 link status - up message
- 3819 bad parm passed in
- 3820 Restarting link with more channels than originally having, will only use the original amount
- 3821 error in registering LH with VCM
- 3822 error registering parent with VCM
- 3824 no channels found for the link
- 3825 SMDI channel table end boundary has passed the max channel limit
- 3826 failed to inform the VCM of the link status change
- 3827 could not locate the mirrir/brother link
- 3828 could not find linkid in the static table
- 3829 boardtype does not support redundant links. No switching
- 3830 system type does not support redundant links. i.e. standalone
- 3831 port found not between 0-3 for boardtype

- 3832 only issued if debug option is used
- 3899 only used if debug option turned on during compile

3900-Hardware Database (HD) codes

- 3901 operation was successful but no match was found
- 3902 failed to add because the address is already used by another component
- 3903 cannot modify or delete because the record was not found
- 3904 cannot add another component because of the configuration constraints
- 3905 the key fields cannot be interpreted by HD
- 3906 modify failed because component has changed since the host task last looked at it

4000-MMI Server (MS)

- 4000 MMI Server failed to register with the PRM or SEER Server program.
- 4001 MMI program cannot communicate with the MMI Server. The MMI Server is likely not running.
- 4002 The MMI Server cannot start some internal task.
- 4003 The MMI Server could not read the Hardware Database.
- 4005 The MMI server could not read or write to bill control table.
- 4006 Billing Control Table was created or audited successfully.

4100-Voice Channel Maintenance (VCM)

- 4120 The requested resource is unavailable. The requestor should try again.
- 4129 Failed to load a DSP on PP
- 4130 Failed to run a DSP on PP
- 4131 Failed to test a DSP on PP
- 4132 Failed to reset a DSP to PP
- 4133 DSP was started too many times
- 4134 PP software not loaded
- 4135 failed to load DSP on PP
- 4136 DSP does not exist CL5
- 4137 the internal DSP state is faulty or a fault is pending
- 4138 problem doing ForceUnconfig
- 4139 DSP has bad status
- 4140 Device already online in maint cmd
- 4141 Invalid system status for operation
- 4143 Get status failed
- 4144 maintenance operation failed
- 4146 Error in DevReport

4147	Too many T1 spans have been configured
4148	Could not find VSS node for device
4151	Device is not in standby mode. The requested operation is allowed only when device is in standby mode.
4152	device cannot be found in the device tables
4153	maintenance command is not supported for the device.
4154	maintenance command is pending new commands cannot be accepted
4155	cannot perform operation on Hardware Database
4156	device is faulty, cannot be enabled
4157	device is not configured.
4158	unexpected report or mte reply received from client
4160	function has not been implemented
4161	not enough memory
4162	The VCM task could not be located
4164	a tasking error occurred in the VCM
4165	a nil Tid was passed in unexpectedly
4166	this should never happen
4167	a ProgInfo or TaskInfo was invoked
4168	internal TNtoIndex routine failed
4169	unexpected combination of status and cmd in MainteReply
4170	Cmd in Reply Routine does not match
4171	device in an incorrect state for the operation being requested
4172	device not registered, retry operation
4173	request to start device task/program failed
4174	some of the devices are not OOS
4175	the VCM is dying due to a SEGALLOC or config problem
4176	timer has not expired
4177	the parent program is not up yet
4178	the node is not up yet
4179	the system is not up yet
4180	the span is not up yet
4181	no mte reply was expected
4182	cannot talk to VSS
4183	failed to find the CSL
4185	Error on WarmStart
4186	Error providing info for driver
4187	OnError Entry invoked
4188	Error communicating with the PRM
4189	Error communicating with the VCA

- 4190 could not put dev isOnline since partner was isOnline
- 4191 the Link is not up
- 4192 error in DevRegister
- 4193 error in Sanity Device
- 4194 error in need port on hardwired system
- 4195 error in Mte Reply
- 4197 information SEER
- 4198 Asserting in VCM failed
- 4199 Debug statement

4200-Open Access Transfer Agent (OTA)

- 4201 Error occurred in accessing or creating a message file.
- 4202 Error occurred during transferring voice.
- 4203 Tasking error occurred.
- 4204 Error occurred during sending or receiving tones.
- 4205 Error occurred during protocol exchange. One of the systems has not conformed with the AMIS protocol standard.
- 4206 Other system is temporarily disabled; other system's volume is full; the recipient's mailbox is full; or the recipient does not want to accept the message.
- 4207 OTA could not locate NMTA.
- 4208 Error occurred during accessing networking database file.
- 4209 Could not find recipient in the message envelope.
- 4210 Error occurred during reading recipient's information.
- 4211 The user entered a wrong system access number; the receiving system is busy
- 4212 Error occurred because of poor line quality while transmitting analog signal; one of the systems has not conformed with the AMISA protocol standard.
- 4213 OTA failed to register.
- 4214 Other system stopped while transmitting voice.
- 4215 Other system detected an error while our system was transmitting voice.
- 4216 a wrong number was entered during composition of an AMIS message.
- 4217 VSS disconnected the call.

4300-Forms Manager (FM)

- 4301 A problem occurred trying to communicate with the FM.
- 4302 A problem occurred trying to access the required form information file.
- 4308 Response cabinet still not found
- 4309 A problem adding a response to a response cabinet.

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- 4310 A response was being returned, after transcription, from a task which has not locked it for transcription.
 - 4311 Failed to remove response.
 - 4312 Failed to return a response after transcription or flagging for a new state. (MakeSpecial, etc)
 - 4313 The indicated response file is corrupted.
 - 4314 The indicated response file could not be accessed.
 - 4315 Problem with startlist parms
 - 4316 An operation was requested while the FM was in a transition state (restart, etc.). A temporary outage of service will occur during this period.
 - 4318 The form name, customer number, or service id is not in the correct format. ie the length is incorrect or it is non-numeric, excluding filler characters (“*”).
 - 4320 Version number problem with a definition file.
 - 4321 This is a return code which indicates that a problem exists trying to access a form information file. The fm_procs software will attempt to add a new FIF and retry the communication with the forms manager.
 - 4325 Failure to synchronize the voice form data after a recovery or certain expansions. A file, cabinet, or service could not be accessed.
 - 4326 A status note from the forms manager. (Ex. Restart complete)
 - 4327 The forms manager multiserver has failed to start or be restarted. (Another attempt will be made by the PRM.)
 - 4328 The forms manager has failed to initialize the MWI for all Voice Form Definitions.
 - 4329 A communication error occurred when a sub-task tried to communicate with the Forms Manager.
 - 4330 A problem occurred trying to initiate a system sub-task.
 - 4331 A form information file was found to be in an open (INUSE) state after all requests had been removed. The server will be terminated and restarted by the PRM.
 - 4332 The size of the record expected was not found.
 - 4333 A memory fragmentation or allocation problem has occurred with the memory provided to the FM.
 - 4334 The specified form definition is not in the DR.
 - 4335 During a request to add a response cabinet, it was found that the form definition had been taken out of service.
 - 4337 The state of a response was found to be invalid on return from transcription.
 - 4338 Failure to synchronize the voice form data after a recovery or certain expansions. A file or cabinet was found to be corrupted.

- 4340 A voice forms response could not be recorded because all disks were full or not available.
- 4341 A service unit could not be assigned an index into the channel array. This could be due to the channel location being invalid or all of the indices may have been allocated.

4400-T1 Diagnostics

- 4401 Argument string supplied for T1 diagnostics is incomplete.
- 4402 Invalid T1 diagnostic test number supplied.
- 4403 End address is larger than start address.
- 4404 Invalid type supplied.
- 4405 Span number is out of range
- 4406 Could not acquire timeslot to perform diagnostics.
- 4407 T1 diagnostics routine receive tasking error when attempting to communicate with another task
- 4408 Result from T1 68K register test.
- 4409 Result from T1 68K connection memory test.
- 4410 Result from T1 68K Dual Port RAM test.
- 4411 Result from T1 302 Dual Port RAM test.
- 4412 Result from T1 302 Dual Port RAM test.
- 4413 Result from T1 302 Self test.
- 4414 Result from T1 302 Register test.
- 4415 Result from T1 302 voice tap loopback test.
- 4416 Result from T1 302 Bus loopback test.
- 4417 Result from T1 302 Line interface loopback test.
- 4418 Result from T1 302 Relay loopback test.
- 4419 Result from T1 302 Signalling test.
- 4420 Result from T1 302 External loopback test.
- 4421 Result from T1 302 Span loopback test.
- 4422 Result from T1 302 Snake Loopback test.
- 4430 Could not release timeslots.
- 4431 Too many interrupts received from diagnostics firmware.
- 4432 Could not retrieve the diagnostic firmware file ID.
- 4433 Error trying to change span state to Diagnostics.
- 4434 Error loading diagnostics/call-processing firmware into span.
- 4435 Request to test invalid memory size.
- 4436 Memory test failure detected.
- 4437 Invalid register number provided.
- 4438 Invalid channel number provided.

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- 4439 Could not acquire timeslot to perform diagnostics
 - 4440 Attempt to find the T1 card memory failed.
 - 4442 Failed to write time slot.
 - 4443 Could not locate the call-processing firmware file.
 - 4444 Could not load call-processing firmware.

4500-T1 Loader

- 4500 Cannot locate T1 Loader task.
- 4501 Error tasking with the T1 Loader.
- 4502 T1 Loader memory tests indicate that the DPRAM is faulty.
- 4503 Loader polling of Bootstrap timed out.
- 4504 BootStrap memory tests indicate that the 68302 SRAM is faulty.
- 4505 T1 Bootstrap detected checksum error in the T1 firmware s-record placed on DPRAM by T1 Loader.
- 4506 68302 Bus error detected by BootStrap.
- 4507 68302 interrupt detected by BootStrap.
- 4508 68302 addressing detected by BootStrap.
- 4509 Illegal instruction reported by 68302 Bootstrap.
- 4510 Invalid status received from Bootstrap.
- 4511 Unexpected status received from Bootstrap.
- 4512 Incorrect status2 received from bootstrap.
- 4513 Character in S-Record not is not a digit as expected.
- 4514 Cannot open file on disk to load span.
- 4515 Cannot find record 1 in S-record file on disk.
- 4516 Cannot read S-Record file on disk.
- 4517 File is not of expected S-Record format.
- 4518 Invalid span number received.
- 4519 A load request was made with the invalid Load type.
- 4520 Could not get bootstrap FID. File may not exists.
- 4521 Could not close open file.
- 4522 Loader request could not be performed with the span in its current state.
- 4523 T1 Loader could not register.
- 4524 Unable to allocate buffer to load T1 firmware.
- 4525 Bootstrap cannot interpret record placed on DPRAM.
- 4526 Timeout waiting for firmware to respond with span-awake information
- 4527 Expecting only one message (Span awake) from firmware, however more messages were received.
- 4528 Firmware indicate span-awake failure.
- 4529 Too many messages received from T1 firmware. Span is not loaded.

- 4530 Firmware report span fault.
- 4531 T1 debug port is already logged in. Logout first.

4600-T1 COMM

- 4600 Cannot locate T1 Comm Task.
- 4601 Error tasking with T1 Comm task
- 4602 Error mapping T1 card configuration space.
- 4603 Error mapping T1 card I/O space.
- 4604 Error mapping T1 card shared memory space.
- 4605 T1 voice tap stuck in reset state.
- 4606 Internal voice tap fault detected.
- 4607 Connection memory queue is full.
- 4608 Receive message queue is full.
- 4609 Receive message queue is corrupted
- 4610 Transmit message queue is full
- 4611 Span is not in an appropriate state for current request.
- 4612 Link Handler did not register with T1 comm task
- 4613 Parity error writing to connection memory.
- 4614 Access error writing to connection memory.
- 4615 TSW queue is corrupted.
- 4616 Transmit message size is invalid.
- 4617 Receive message size is invalid.
- 4618 TSW interrupt received but no interrupt pending bit is set.
- 4619 T1 interrupt received but no interrupt pending bit is set.
- 4620 T1 comm task could not register.
- 4621 Span DPRAM does not exist.
- 4622 TSW stuck in initialization.
- 4623 Fault in requesting timer.
- 4624 Connection memory queue timeout occur.
- 4625 Cannot locate T1 card configuration space.
- 4627 Message received from a span to which the Link Handler has not logged in.
- 4628 TSW fault interrupt received from a span to which the Link Handler has not logged in. Fault could not be registered.
- 4629 PLL interrupt received from a span to which the Link Handler has not logged in. Fault could not be registered.
- 4630 Error in performing Diagnostics timeslot requirement.
- 4631 68302 watchdog timeout.
- 4632 T1 Transmit queue is corrupted.
- 4633 Time switch audit routine detected mismatch in audit and actual memory

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- 4634 No external references selected on this T1 card
 - 4635 Previous external reference is overwritten by this selection
 - 4636 The hardware register did not retain the external span selected
 - 4637 Could not enable external referencing on card
 - 4677 Error initiating T1 Comm task
 - 4678 Error initiating T1 Loader task

4700-T1 Link Handler

- 4700 report T1 status change
- 4701 T1LH failed to startup the span
- 4702 unexpected loader state detected
- 4703 error in loading up the firmware
- 4704 error in reading firmware bin file
- 4705 failed to reset a trunk to the offline state
- 4706 loader fails to toggle the reset line
- 4707 failed to release all timeslots for the span
- 4708 report Operating status word changes
- 4710 error encountered when shutting down the channel
- 4711 Incoming call dropped
- 4712 Change T1 clock reference failed
- 4713 Get T1 clock reference failed
- 4717 channel command primitive timeout
- 4718 timeout in sending a message
- 4719 timeout when establishing an incoming call
- 4725 unknown message from the T1 firmware
- 4726 error in fetching messages from T1COM
- 4727 Dump the message sent by the firmware
- 4728 message routed incorrectly
- 4730 failed to register the T1LH with other task
- 4731 failed to communicate with other task
- 4735 unexpected event
- 4736 message rejected by the firmware
- 4737 Red/Yellow alarm detected
- 4738 software fault detected
- 4739 hardware fault detected
- 4740 no application has login to the channel
- 4741 invalid channel number
- 4742 fails to disconnect a call
- 4743 fails to execute a primitive

- 4744 error encountered during recovery
- 4745 error in setting up connection memory
- 4746 Voice Port fails to execute the desired command
- 4747 retry for outcalling failed

5300-Voice Processor Diagnostics (VPD)

- 5300 General information worthy of being noted, such as voice processor diagnostics started, restarting or destroying tasks, and buffer allocation problems.
- 5301 VPD program start request failed.
- 5302 VPD program failed its initialization process.
- 5303 DSP under test failed diagnostics
- 5304 VPD program failed to start a DSP diagnostic task or received bad task result.
- 5305 VPD program failed to talk to VOM_PP on that node, or VOM_PP rejected diagnostics
- 5306 DSP under test had time slot allocation problems during voice bus loop back test.
- 5307 DSP under test had to wait an extra delay cycle for the DSP marching test.
- 5308 DSP under test had time slot allocation problems during linear to PCM voice bus loop back test.
- 5309 DSP under test had host interrupt pending even after attempting to clear it.
- 5310 VOM_PP failed to raise interrupt event for the DSP under test.

5500-Conversion Utilities (CU)

- 5501 Current time not available
- 5502 Conversion completed.
- 5503 Unable to close the Cabinet.
- 5504 Unable to close the VSDN file.
- 5505 Unable to unlink FCB
- 5506 Unable to close DR.
- 5507 Unable to get the FID for cabinet.
- 5508 Unable to open cabinet.
- 5509 Unable to find the VSDN file in cust cabinet.
- 5510 Unable to obtain the FIR
- 5511 Unable to open the VSDN file.
- 5512 DD_FindRec operation failed.
- 5513 No DN record exists in the VSDN file.
- 5514 Unable to delete the VSDN file.
- 5515 Unable to move the VSDN file to the garbage cabinet.

5516	DD_GetRecDesc operation failed
5517	Unable to read DN from the VSDN file.
5518	Unable to read the ServId Record for DN.
5519	The number of DN and ServId entries are not equal.
5520	Unable to open the DR
5521	DR_FindEntry operation failed.
5522	Unable to add DN to the DR Entry.
5523	Unable to link FCB.
5524	Number of DN fail to convert.
5525	Conversion is partially done
5526	Conversion Failed
5527	The VSDN file is moved to the garbage cabinet
5528	Number of DN or ServId to be converted.
5529	The VSDN file is successfully deleted.
5530	Dn already exists in the DR Entry.
5531	Converting DN into the DR VSDN Entry
5532	DN successfully converted into DR VSDN Entry.
5533	The number of digits in the VSDN entry is incorrect.
5534	Not enough information to fille the Expansion Digits field.
5535	Mailbox ID is too long.
5536	System DN length has not been defined.
5537	Local DN lengths not defined or greater than system DN length.
5538	Unable to close a profile.
5539	The dr_NextEntry operation failed.
5540	Unable to add a Cabinet.
5541	The Service ID is Invalid
5542	DD_Create operation failed.
5543	Unable to add the Service ID File
5544	Unable to open the Organization Directory.
5545	DD_Read operation failed.
5546	DD_QuickInfo operation failed
5547	DD_CrtRec operation failed.
5548	DD_AddFile operation failed.
5549	DD_Write operation failed.
5550	DD_CopyRec operation failed.
5551	cm_UpdtFile operation failed.
5552	Unable to read the System Profile.
5553	Unable to read the Customer Profile.
5554	Unable to read the Admin Language Record.

- 5555 Unable to read the Admin Login Record.
- 5556 Unable to move the NEW Voice Service Cabinet.
- 5557 Unable to read the Voice Services Profile.
- 5558 The FIR for the Voice Service File is invalid.
- 5559 Unable to obtain the FIR for the Cabinet.
- 5560 Unable to obtain the FID for the Cabinet.
- 5561 Unable to remove the OLD Voice Service Cabinet.
- 5562 Unable to open the Voice Service File.
- 5563 Unable to find the specified record in the file.
- 5564 Unable to obtain FIR for the Voice Service File.
- 5565 Unable to obtain FID for the Voice Service File.
- 5566 Unable to add the DR entry.
- 5567 Unable to add the Voice Service entry to the DR.
- 5568 Unable to open the specified cabinet.
- 5570 Unable to change the VSDN table entries.
- 5571 Unable to fix the Voice Service definitions.

5600-Centralized Call Answering (CCA) codes

- 5601 playing problem
- 5604 record problem
- 5613 login problem
- 5614 greeting problem
- 5621 change password problem
- 5625 creating a message
- 5626 adding a message
- 5627 opening a message
- 5628 updating a message
- 5629 altering a message
- 5630 closing a message
- 5631 deleting a message
- 5632 initial resources not available
- 5633 could not clean up resources
- 5634 failed to turn on message waiting indicator
- 5635 entry called out of sync.
- 5636 call answering problems
- 5637 code does not handle all possibilities
- 5638 no additional information is available
- 5651 extension dialling request failed
- 5653 unable to get sent digit

6000-Program Resource Manager (PRM) codes

- 6001 An unexpected state was encountered.
- 6002 An error in the Startlist.
- 6003 Program cannot locate the PRM by name server.
- 6004 Tasking error from the kernel.
- 6005 The PRM could not register its name with the name server.
- 6006 Program could not be found in PRM's table.
- 6007 Function is not implemented.
- 6012 No closing quote in the argument string or the string is too long.
- 6013 Overlay failed to be loaded on a node.
- 6014 Node problem, diagnostic detected error, or node is not healthy.
- 6015 Program could not be loaded.
- 6017 Auditing information.
- 6019 Node request is out of range.
- 6020 Problem downloading programs to other nodes - incorrect message.
- 6021 Problem downloading programs to other nodes - incorrect packet count.
- 6022 Transmission error detected on sending node.
- 6023 Bootrom startup timeout.
- 6024 Maximum number of bootrom retries.
- 6025 Error starting diagnostic programs.
- 6026 Diagnostic returned an unknown result.
- 6027 Diagnostic returned a fault condition.
- 6028 Diagnostic information.
- 6030 The auditor killed the program.
- 6031 Bad task result in sending audit commands to tasks.
- 6032 The audit table is full.
- 6033 Unknown audit result received from task.
- 6035 Problem in opening hardware database.
- 6036 Problem in closing hardware database.
- 6037 Problem in reading/opening hardware database.
- 6038 Report of node information obtained from hardware database.
- 6040 Problem in opening organization profile.
- 6042 Problem in reading/closing information from organization profile.
- 6043 Report of PRM action going to be taken.
- 6045 PRM cannot send the various nodes any update information.
- 6046 The node in the Startlist is marked unconfigured in the hardware database.
- 6050 Task error in sending program information.
- 6051 Not able to start Loader task, tasking error.
- 6052 Not able to start loading sequence.

- 6055 Virtual node address does not exist.
- 6056 Error in spinning disk.
- 6057 Tasking error in the SEND command.
- 6058 Lost polling from node.
- 6059 Switching MSP.
- 6098 Debugging information.
- 6099 General PRM information - any useful user/state information.

6100-Maintenance Administrator (MA) codes

- 6101 incompatible parent or sibling component in Hardware Database: requested component not added
- 6102 invalid state for requested operation
- 6103 error in propagating operation to child entities in the Hardware Database: entity not changed
- 6104 failure of an Online or Offline Test
- 6105 operation rejected due to Offline Test in progress on this node
- 6106 operation is invalid or not supported
- 6107 operation would cause Hardware Database to become corrupted
- 6108 operation succeeded on entity requested, but failed to propagate to child entities
- 6109 Offline Test was started but result is unknown
- 6110 location code passed to MA is not valid
- 6111 attempt was made to change keys on an ma_Modify
- 6112 an Offline Test was requested for a voice card which does not contain any DSPs in the correct state or there are no DSPs on the VP at all
- 6113 both DSPs on the VP failed the Offline Test
- 6114 the first DSP on the VP failed the Offline Test
- 6115 the second DSP on the VP failed the Offline Test
- 6117 Offline test was requested on a T1 card with T1 links in the correct state
- 6118 Offline test failed on all T1 links tested.
- 6119 At least one hardware fault was detected on T1 card tested
- 6120 T1 offline test not completed because of cause specified in SEERs.
- 6122 Waiting for previous request on component to be completed.
- 6123 Waiting for node to be loaded.
- 6124 Node could not be loaded.
- 6125 Node in an unexpected state.
- 6126 No modem on SBC card to be tested.
- 6127 A hardware fault is detected on SBC card.
- 6130 MA/VM II communication problem.

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- 6131 Hardware fault(s) detected on Utility Card.
 - 6133 No voice ports found on node.
 - 6197 MA tasking problem.
 - 6198 PRM could not start program.
 - 6199 Timeout waiting for diagnostic result.

6600-Disk Manager (DM)

- 6600 Start of synchronization
- 6601 End of synchronization
- 6602 Disk going offline
- 6603 Disk error during file system access
- 6604 Driver error during file system access
- 6605 Disk error during disk manager access
- 6606 Driver error during disk manager access
- 6607 Disk missing
- 6608 Cannot determine which disk is more current
- 6609 Disk offline
- 6610 Partner node fails to bring disk online
- 6611 Disk offline reminder
- 6609 Disk synchronization failure

6700-SCSI Driver Pascal Utilities (SD Tools)

- 6700 out of memory
- 6701 cannot talk to dm on home node
- 6702 cannot talk to dm on partner node
- 6710 cannot determine amount to sync
- 6712 cannot enter sync mode
- 6713 sync primitive failure
- 6714 cannot leave sync mode
- 6715 cannot determine amount to sync
- 6716 cannot initialize first disk in pair
- 6717 cannot initialize second disk in pair
- 6718 cannot leave in sync mode
- 6720 invalid request
- 6721 cannot update surviving disk
- 6722 cannot take unshadowed disk down
- 6730 invalid request
- 6731 invalid request
- 6732 no disk detected

6733 cannot spin up
6734 cannot determine size
6740 out of memory
6741 compare primitive failure
6742 mismatch
6750 format failure
6751 cannot stamp disk
6760 cannot read mi control block
6761 cannot initialize mi control block
6762 cannot configure mi maximum size
6763 cannot move volume up
6764 cannot move volume down
6765 cannot add volume to mi control block

8000-IS_NAMES

8000 is_name server full
8001 is failed locate

9000-Outcalling Server (OCS) codes

9001 Request type not configured for system
9002 Request type not part of this software release
9003 Error opening a user's personal profile; user not found
9005 Failed to commit or write audit file
9008 OCS not found on system
9009 OCS was given an invalid time
9015 Problem occurred with OCS's scheduling array
9021 Internal state problem occurred
9022 Bad return code received from a request-formation routine (RN or DNU)
9025 Requested service has not been implemented or is not in service
9029 Request invalid or cannot be serviced due to lack of channels with the correct capabilities

9200-Delivery to Nonusers (DNU) codes

9204 Volume requested is not in the OCS set or is not accessible
9205 Trying to send a message that is not a DNU message
9206 Failed to read a DNU message or DNU cabinet file information record
9207 Message version is invalid
9209 Internal DNU error

9300-Remote Notification (RN) codes

- 9302 Volume requested not in startlist parameter set for OCS
- 9307 RN recovery task problems

101/102/103-User Interface (UI) codes, known also as Man Machine Interface (MMI)

- 10101 attempt to add already existing mailbox
- 10102 no users exist that satisfy the specified view criteria
- 10110 attempt to open new cab with old one(s) still open
- 10111 write user not preceded by read user
- 10112 delete user not preceded by read user
- 10113 write organization profile not preceded by read organization profile
- 10116 client ID of list entry does not exist
- 10200 Error committing voice file.
- 10201 unable to read Security file
- 10202 failed to write Security file
- 10203 invalid administrator logon attempt
- 10204 administrator password changed
- 10205 alarm silenced by administrator
- 10215 failed to open console printer
- 10216 failed to create print buffer
- 10217 file in which MMI text is stored does not match MMI software
- 10232 failed to initiate polling task
- 10233 MMI failed to communicate with the MMI Server program
- 10240 problem with MMI system, Directory Server or Volume Server
- 10241 problem with MMI system, Directory Server or Volume Server
- 10242 problem with MMI system, Directory Server or Volume Server
- 10243 problem with MMI system, Directory Server or Volume Server
- 10244 problem with MMI system, Directory Server or Volume Server
- 10245 problem with MMI system, Directory Server or Volume Server
- 10246 problem with MMI system, Directory Server or Volume Server
- 10247 problem with MMI system, Directory Server or Volume Server
- 10248 problem with MMI system, Directory Server or Volume Server
- 10249 problem with MMI system, Directory Server or Volume Server
- 10250 could not allocate storage
- 10251 failed to open Network Database
- 10252 error condition related to models
- 10272 failed to Print OM files, such as traffic and Voice Menu
- 10273 failed to obtain the traffic OM record

- 10275 failed to view next SEER in SEER file
- 10278 MMI was unable to get the specified alarm status because of a communication problem
- 10280 failed to allocate storage for Organization operation
- 10281 failed to obtain resources for Organization operation
- 10282 failed to read Organization Profile
- 10283 failed to write Organization Profile
- 10284 failed to Restart OM Server
- 10285 failed to close all files
- 10286 failed to restart or stop SEER printer
- 10287 failed to check User Mailbox
- 10289 failed to access the Customer Profile during Customer Administration.
- 10290 failed to view user; possible data corruption
- 10292 95% or 100% of mailbox limitation reached
- 10297 failed to notify OCS of user or organizational changes
- 10298 failed to modify/add dynamic personal or organizational records
- 10299 failed to record personal verification
- 10300 problem with MMI system, Directory Server or Volume Server
- 10301 problem with MMI system, Directory Server or Volume Server
- 10302 problem with MMI system, Directory Server or Volume Server
- 10303 problem with MMI system, Directory Server or Volume Server
- 10304 failed to allocate storage to modify list
- 10305 re-set occurred during an add, modification or deletion to a list; no change made
- 10306 failed to validate Mailbox for lists
- 10307 failed to read List of Mailboxes
- 10308 failed to close all files in List operation
- 10309 failed to obtain storage for List operation
- 10310 failed to obtain resources for List operation
- 10311 failed to add list
- 10312 failed to delete list
- 10320 failed to find hardware record
- 10321 failed to open Hardware Database
- 10322 failed to initiate ScreenTask
- 10330 getdata - failed to find hardware record
- 10331 failed to open Hardware Database
- 10332 no heap
- 10333 failed to read Hardware Database
- 10340 could not obtain Volume Status information

10341	backup failed
10342	failed to initiate backup task
10343	UI Main: attempt to login from User Admin terminal without feature enabled
10344	Backup was attempted when one was already in progress
10350	failed to retrieve Audit Trail records
10351	incompatible version number for Audit Trail
10352	failed to create Audit Trail form
10360	Failed to obtain resources for COS operation
10361	Failed to read the specified COS
10362	Failed to write the specified COS
10363	Failed to delete the specified COS
10399	Failed to register the MMI

104-Voice Menus, Announcements and Time-of-day (VMU) codes

10402	minor	unable to disconnect to operator
10403	minor	unable to properly disconnect the service
10404	major	unable to initialize system and Voice Service prompt files
10405	major	unable to play a prompt from the Voice Service prompt file
10406	major	unable to call revert DN
10407	major	unable to open the system or voice service prompt files
10408	major	unable to switch to specified service
10409	minor	the class of the service file is unknown
10410	minor	Voice Service file version is not compatible
10411	major	error reading the Voice Service file
10412	minor	the Voice recorded indicators are corrupt in the Voice Service file
10413	minor	unable to play voice in the service
10414	minor	no greeting or choices was found in the Voice Service file
10415	minor	unable to place a call
10416	minor	unable to add to the service stack
10417	minor	unable to initiate the Voice Service task
10418	major	unable to bind start and clean up procs.
10419	major	unable to query VSS information
10420	major	unable to perform close voice on VCB
10421	major	unable to close Voice Service
10422	minor	a menu was found instead of the expected announcement
10423	minor	an announcement was found instead of the expected menu
10424	minor	unable to get a digit from the VSS

10425	minor	unknown menu action choice found; file corrupt
10426	minor	unknown or invalid action value found; Voice Menu service corrupt
10427	minor	an error code was given in the "voiceioevent" entry
10428	minor	Time-of-day Service file version is not up-to-date
10429	minor	object file not found or problem reading the Time-of-day file
10430	major	cannot answer incoming call
10431	minor	cannot send peg counts to OM
10432	Major	unable to open system file
10433	Major	Unable to convert the service ID and customer number to a search pattern
10434	Info	The Service Application was asked to terminate because the on-line update is about to begin.

105-Voice Service Administration (VSA) codes

10501	unable to set up a data menu
10502	unable to delete a Voice Service file
10503	unable to validate a Voice Service file ID
10504	unable to translate a Voice Service file ID
10505	unable to determine the correct VSH service type
10506	unable to print voice service data
10507	form or menu requires more memory than in the CLI heap
10508	unable to read system/customer profiles on startup
10509	failed to communicate with the MMI Server
10510	info only. A Service definition of VSDN entry has been added, modified, or deleted.
10512	unable to read Time-of-day file
10513	unable to write Time-of-day file
10522	unable to write Voice Service Profile
10531	a record was found to be missing when trying to create voice
10532	unable to read, create, or set up for an Announcement Service file
10533	unable to write Announcement Service file
10541	unable to read, create, or set up for a Thru-dial Service file
10542	unable to write Thru-dial Service file
10551	unable to read the Channel Allocation Table
10561	unable to validate DN; error reading the VSDN file
10562	unable to read or create the VSDN file
10563	unable to write the VSDN file
10564	unable to delete DN from VSDN file

-
- 10565 unable to set up VSDN data menu
 - 10572 unable to delete voice record from Voice Service file
 - 10573 unable to read, create, or set up for a Voice Menu Service file
 - 10574 unable to write Voice Menu Service file
 - 10581 unable to read, create, or set up for a Voice Form service file
 - 10582 unable to lock a Form Information File, or delete caller responses
 - 10583 unable to access a voice record in a Voice Form service file
 - 10584 unable to write Voice Form service file
 - 10585 unable to update status of Voice Form service file in Corporate Directory
 - 10586 unable to set up List of Fields data menu
 - 10587 unable to read, create, or set up for a field in a Voice Form service file
 - 10588 unable to manipulate a field in a Voice Form service file
 - 10591 existing voice service cabinet will not be replaced by new VS cabinet and files
 - 10592 Warning that cabinet still contains some files; cabinet not deleted.
 - 10593 A problem occurred with a service definition file listed in this SEER when moving cabinets
 - 10595 Source and destination cabinets are the same
 - 10596 Cannot retrieve a proper garbage collection cabinet from sc_types or one cannot be opened.

106-Thru-dialing codes

- 10601 critical initial resources not available
- 10603 minor bad opcode received from VH
- 10604 minor VP synchronization error
- 10605 minor failed to make the connection request
- 10606 minor failed to make the connection request during custom revert
- 10607 minor asking for help when none is expected
- 10608 minor unknown time-out state
- 10609 minor could not clean up resources
- 10610 minor general purpose error code
- 10611 info the Thru-dial application was asked to terminate because the online update is about to begin

107-Voice Prompt Maintenance (VPM) codes

- 10701 minor playing problem
- 10702 minor record problem
- 10703 minor disconnect problem
- 10704 critical initial resources not available

10705	major	code does not handle all possibilities
10706	major	attempt to access with invalid password
10707	minor	bad operation on a file
10708	minor	some synchronization or miscellaneous error
10709	info	service file is currently being opened by another application
10710	minor	service ID is being mapped is not a service information address
10711	info	voice recording changed using Voice Prompt Maintenance
10712	info	the Voice Prompt Maintenance/Remote Activation was asked to terminate because the online update is about to begin
10799	critical	the software encountered an unexpected problem

108-Network Administration (NA) codes

10801		failed to gain access to Network Database
10802		failed to gain access to Network Message Transfer Agent
10803		failed to get dynamic information from terminal
10804		failed to gain access to Cabinet Access Method
10805		failed to gain access to Disk Data interface
10806		failed to gain access to Message Transfer Agent
10807		failed to gain access to Directory Server
10808		error occurred while using Command Line Interpreter
10809		error occurred while using Remote Voice Services
10810		failed to gain access to the Hardware Database
10811		failed to gain access to Administration Base

109-Remote Voice Services (RVS) codes

10901		when prompted for DN, user entered the Cancel key; the Vce-Size will not be valid
10902		all channels are busy so call cannot be placed
10903	minor	error during call processing
10904		tasking error with Voice Service task
10905		failed while opening or creating voice
10906		failed to record or stop recording
10907	minor	failed to play voice
10908	minor	errors in disconnecting process
10909	minor	VP/VPDH time-out
10910	minor	VPIO task crashed
10911	minor	failed to delete voice record
10912		failed to make a call to the user specified DN because user entered an invalid DN

10913 call is not answered

110-Outcalling Agent (OCA)

11007 the delivery to non-user message cannot be read because it is a message with a version number greater than the version allowed for this release of software

11011 the software encountered an unexpected problem

111-Voice Forms Service Unit (VFSU)

11101 Initial resources were not available to start up the service.

11102 A Caller's Response file could not be created.

11103 A request for something which has not been implemented has been received.

11104 An error has occurred while trying to play voice.

11105 An error was encountered while cleaning up resources.

11106 An attempt to revert the caller has failed.

11107 The forms manager has been deemed to have a major problem which prevents further use of this service.

11108 A problem has occurred while attempting to access a Caller's Response file.

11109 A problem has occurred while attempting to access a Voice Form Definition file.

11110 The Form Definition file for a particular session found to be out of service.

11111 A lower level error has been encountered which is beyond control of this service.

112-Restore and Recovery (RR)

11202 An error occurred while trying to create a volume.

11203 An error occurred while trying to create a cabinet.

11204 An error occurred while trying to clean out messages from the user profiles.

11205 An error occurred copying the prompts from tape to VS2.

11206 Error reading the features of the system from VS1.

11207 Could not copy user profiles from volume VS901 or VS902 to the destination user volume.

11208 An error occurred reading the system record from VS1.

11209 An error occurred while formatting the disk on node 1.

11210 Could not initialize and configure the disk on node 1.

11211 An error occurred while trying to restore VS1 from a disk backup.

11212 An error occurred during the restore of a volume from tape to disk.

11213 An error occurred while checking the user cabinets against the directory.

11214 An error occurred while checking the user entries in the directory for matching cabinets.

- 11217 An error occurred while synchronizing the voice services to the directory.
- 11218 An error occurred while synchronizing the directory to the voice services.
- 11219 An error occurred trying to synchronize the voice forms for the system.
- 11220 An error occurred trying to synchronize the voice forms for a SPN.
- 11221 An error occurred while formatting the disk on a SPN node.
- 11222 Could not initialize and configure a SPN node.
- 11223 The software version on tape differs to the original system version.

BOOTROM diagnostic codes

System configuration diagnostics

- 000F SP configuration setup tests

SBC diagnostics

- 0035 CPU self tests
- 0036 BOOTROM checksum tests
- 0037 exception handling tests
- 0038 memory mapper tests
- 0039 memory protection tests
- 003A mapper adders tests
- 003B timer tests
- 003C TAP register tests
- 003D TAP data lines tests
- 003E TAP memory tests

SBC DRAM diagnostics

- 0031 data lines test
- 0032 address lines test
- 0033 DRAM memory tests
- 0034 parity tests

SCSI/RAM diagnostics

- 0041 data lines test
- 0042 address lines test
- 0043 DRAM memory tests
- 0044 parity tests
- 0045 DMA register tests
- 0046 DMS transfer tests
- 0047 SCSI bus tests
- 0048 SCSI disk diagnostics

Internal States of VSS

- 0 VSS loaded, logging in with handlers
- 1 idle
- 2 allocated for a service
- 3 connecting an incoming call
- 4 making an outgoing call
- 5 waiting for service completion on collision
- 6 a call is established
- 7 adding a third party to a call
- 8 transferring a call
- 9 disconnecting a call
- 10 shutting down the service or VSS
- 11 waiting for time out to initiate call transfer

Call Progress Status

- 1 call is established
- 3 called party is being rung
- 8 called party is busy
- 9 call request is rejected, receiving re-order tone
- 11 call connection attempt failed
- 12 call requests collision
- 13 call transfer/conference/re-connect completed

Supplementary Information to call Progress Status (Voice Services generates SEER)

- 1 waiting in UCD queue
- 2 waiting in Attendant queue
- 3 a trunk has been seized
- 4 the call is parked
- 5 waiting in ESN off-hook queue
- 6 an idle UCD agent is found and being rung
- 7 an idle attendant is found and is being rung
- 8 blocked due to no resources
- 9 access restricted
- 10 bad originating DN
- 11 bad called DN
- 12 internal error of the switch
- 13 incomplete originating DN

14	incomplete called DN
15	originating party is busy
16	originating party is maintenance busy
17	500/2500 set is onhook
18	originating party disconnects before call is answered
19	originating party is multiple appearance single call arrangement with another user using the DN
20	invalid TN
21	incorrect customer number
22	initiate transfer failed
23	re-connect failed
24	complete conference failed
25	complete transfer failed
26	the other party does not answer
27	unrecognized signal
28	long silence is detected
29	SIT-based tone is detected
58	pager tone is detected
59	voice is detected
60	short silence is detected
61	collision with the same service
62	collision with a different service
63	GTI internal error

Service ID

0	Voice Messaging
1	Call Answering
2	Express Messaging
3	Thru-dialing
4	Analog Transfer Agent (Networking)
5	Voice Menus
6	Voice Announcements
7	Meridian Access
8	Outcalling Agent
9	Voice Administration
10	Voice Prompt Maintenance
11	Time-of-Day Control
12	Hospitality Voice Messaging
13	Hospitality Post Check-Out Service

14	Remote Activation Service
15	Delivery to Non-User Service
16	Remote Notification Service
17	Test Tool Service
18	Open Access Transfer Agent
19	Voice Form Transcription Service
20	Voice Form Call Interpreter.
21	CCA Change Greeting Service

SCSI Sense Keys (SEER 6603)

0	no sense key information - successful command
1	recovered error - command successful
2	not ready - disk drive cannot be accessed
3	medium error - non-recoverable error likely due to media flaw
4	hardware error - non-recoverable hardware error in disk drive
5	illegal request - bad parameters supplied to disk drive command
6	unit attention - disk drive has been reset
7	data protect - a write operation attempted on a write protected device
8	blank check - end of a recorded date encountered
11	aborted command

SCSI Driver Errors

129	selection timeout
130	unexpected disconnect
131	bus reset
132	parity error
133	timeout

tt htape Error Codes

02	not ready - no tape drive
03	medium error - bad tape
04	hardware error - bad drive
06	unit attention - drive reset
07	data protect - tape write protected
16	see SCSI sense keys
17	time out - tape operation timed out
18	SCSI driver exception
19	no tape drive present
20	seek error - tape positioning operation out-of-bound

Disk Syncing Error Codes

scl_up1

- 1 cannot determine amount to sync
- 2 cannot initialize destination disk
- 3 out of memory
- 4 cannot enter sync mode
- 5 sync primitive failure
- 6 cannot leave sync mode

scl_up2

- 1 cannot determine amount to sync
- 2 cannot initialize first disk in pair
- 3 cannot initialize second disk in pair
- 4 cannot leave sync mode

sd_down

- 1 tasking error
- 1 invalid request
- 2 cannot update surviving disk
- 3 cannot take unmirrored disk down

sd_info

- 1 tasking error
- 1 invalid request

sd_exist

- 1 tasking error
- 1 invalid request
- 2 no disk detected
- 3 cannot spin up
- 4 cannot determine size

Volume Expansion Error codes

volexp

- 1 out of memory
- 2 cannot read MI control block
- 3 cannot initialize
- 4 cannot configure MI maximum size
- 10-19 cannot move volume up
- 20-29 cannot move volume down
- 30-39 cannot add volume to MI control block

format

- 1 failed

wb/ko

- 1 out of memory
- 2 failed

Operating System Error Classes

- 1 run time errors
- 2 tasking errors
- 3 I/O errors
- 4 user errors
- 5 PIO errors
- 6 kernel errors
- 7 program errors
- 8 boot errors

Run Time Errors

- 0 bus error
- 1 divide by zero
- 2 odd address
- 3 illegal construction
- 4 range error
- 5 stack overflow
- 6 privilege exception
- 8 no pool
- 9 no control blocks
- 10 segment error
- 11 region timeout
- 12 parity error
- 13 kernel error
- 14 floating point overflow
- 15 NIL pointer reference
- 16 set error
- 17 long integer error
- 18 long integer divide error
- 19 multiplication overflow
- 20 exit error
- 21 mini error
- 22 inv neg input
- 23 floating point format error

Task Result Errors

1	accept time-out
4	invalid task ID
5	reply error - accepting task died
7	invalid time given to WAITTIME
9	initiate or re-initiate error
15	pool error
17	mini task tried to initiate another task
21	no appropriate buffer for tasking operation
22	no transmit buffer, network overloaded
23	invoker stack overflow
24	invalid push/pull parameters
25	parameter mismatch in remote operation
26	entry not found in remote operation
27	remote communication problem
28	trlocale
29	bad event passed to SetTimer
30	no control blocks

I/O Error Results (Helix IO results -- IO Error Class)

-1	end of file
0	no error
1	mixing I/O operation types (e.g. READLN, BLOCKREAD)
2	resource limit reached
20	illegal character written to terminal driver
30	out of bounds
31	task killed by other application
40	attempting I/O operation on unopened file
41	file already open
42	file not committable
43	illegal attempt to seek
44	bad file set ID
45	server not found
46	operation not allowed across file systems
47	already logged on
48	client Helix resource limit
49	value overflow
51	accept timeout
54	invalid task ID

55	reply error - accepting task died
57	invalid time given to WAITTIME
59	initiate or re-initiate error
65	pool error
67	mini task tried to initiate another task
71	no appropriate buffer for tasking operation
72	no transmit buffer, network overloaded
73	invoker stack overflow
74	invalid push/pull parameters
75	parameter mismatch in remote operation
76	entry not found in remote operation
77	remote communication problem
78	trLocale
79	bad event passed to SetTimer
80	no control blocks
81	acceptor was killed
100	mismatch in server/client interface
101	bad pathname
102	file not found
103	cannot create
104	attempt to create file with duplicate name
105	bad address
106	I/O operation attempted outside file limits
107	mode conflict
108	bad object type
109	access denied
110	invalid password
111	server does not support command
112	device off-line, could not communicate
113	server resource limit
114	parity error reading data from server
115	disk write protected
116	no directory
117	attempt to write read-only file
118	bad access mode
119	bad remote pointer
120	transaction timeout on close/commit of file set
121	date not set - attempted file commit with no time
130	no directory on floppy

131	too many files on floppy
132	no room on volume
133	new volume mounted
134	time-out on volume
140	serious error level
148	invalid site address
149	protocol error between communication servers
150	communication link failure
151	remote site failure
152	FID not recognized by server
153	software consistency check failed
154	file set transaction ID invalid
155	bad volume ID in FID
156	spares field input non-zero
157	invalid Unix object type
158	file exists already
159	source pathname invalid
160	illegal parameter
161	destination pathname invalid
162	bad volume ID in destination FID
163	invalid input parameter
164	bad password input
165	bad volume control parameter
166	invalid agent ID on logout
167	no std delete of directory
168	bad instance key
169	read error in user data
170	write error in user data
171	bad agent or object task ID
172	bad command length
173	bad volume ID in source FID
174	permission denied
175	bad block count
176	bad sequence number
177	FOS data timeout

Kernel Error Class

1	no supervisor
2	daddy no buffers

3	supervisor no buffers
4	rendez bad buffer
5	bind no delay
6	illegal bind
7	non-nil event queue
8	error parity
9	unknown interrupt
10	map not present
11	map out of range
12	map supervisor protected
13	map write protected
14	no debug buffers
15	bad queue
16	bad monitor code
17	bad monitor data
18	bad OSP code
19	bad OSP data

Program Control Error Class

1	could not open file
2	locale gone away
3	disk read error
4	bad file type
5	link error/modules mismatch
6	unable to create locale
7	unable to initiate program
8	exec error
9	bad PD
10	no task segment
11	no program
12	more than one program
13	no buffers
14	unit not compiled for this kernel
15	bad program ID
16	no segment
17	no PD File
20	no buffer memory
22	no heap init
25	no openPD memory

26	wrong PD version
27	error reading PD
28	insufficient space in data segment
29	monitor mismatch
30	version error
32	too many units in used list
33	out of heap
34	adopted error
35	bad state
36	no program agent
37	not the right parent
38	not an orphan
39	access denied
40	try to load a new segment
41	try to start process again
42	master segment is gone

User Error Type

1	audit failed
2	switch over attempt before backup ready
3	user initiated switch over - not an error
4	bus controller detected bus error

Disk Operation Lower Level Return Codes

These codes are displayed only for disk errors encountered during a hardware modification or installation. They can be identified in the SEER by the heading 'Disk Operation'. If one of these errors appears, document the error and any related SEERs and contact your hardware technician.

The general format of the text that appears for Disk Operation Lower Level Return Codes is:

op=
Disk Operation
Major Heading
Minor Heading

The following list contains the corresponding information that you can receive for these return codes:

1
Format
Volume Expansion Error Codes
format

2
Fast Sync
Disk Syncing Error Codes
sc_up1

3
Slow Sync
Disk Syncing Error Codes
sc_up1

4
Fast Restore
Disk Syncing Error Codes
sc_up1

5
Slow Restore
Disk Syncing Error Codes
sc_up1

6
Enable Shadow
Disk Syncing Error Codes
sc_up2

7
Primary Disable
Disk Syncing Error Codes
sc_up2

8

Secondary Disable

Disk Syncing Error Codes

sc_up2

9

SCSI Initialize

Volume Expansion Error Codes

wblk0

List of terms

AD_TOOLS

Move user utility (TOOLS level)

AD_UTIL

Administration utility (RSC level)

ATA

Analog Transfer Agent (see Class 37 SEERs)

BKUPSET

Disk backup switch utility (TOOLS level)

BURP

Backup and Restore program (RSC level utility), using tapes or disk (see Class 15 SEERs)

Cabinet

A DMS VoiceMail directory which stores system and user files. A user's personal cabinet is also known as a "mailbox".

CCA

Centralized Call Answering (see Class 54 SEERs)

CM

Cabinet Access Method (see Class 12 SEERs)

CSE

Circuit Switch Equipment, a generic reference to the telephone switch

DN

Directory Number

DR

Directory Server (see Class 31 SEERs)

DSP

Digital Signal Processor

ESBC	Enhanced Single Board Computer, a printed circuit pack (also known as SBC)
ETAS	Emergency Technical Assistance (Northern Telecom)
FID	File identifier. Every DMS VoiceMail file (including voice messages) is assigned a unique file identifier number.
GAC	Guest Administration Console in Hospitality systems
GSP	General-purpose Signal voice Processor, the voice processor card used with Meridian SL-100 or Meridian Digital Cenrex
GTI	Generic Telephony Interface (see Class 28 SEERs)
HD	Hardware Database (see Class 39 SEERs)
HW_MODIFY	Hardware modify utility (TOOLS level)
ISDN/AP	ISDN (Integrated Services Digital Networks) Applications Protocol
Locale number	Represents the area in memory in which a program was running
MA	Maintenance Administrator (see Class 61 SEERs)
MASI	
MD	MISA file utility (ETAS level)
MD_CM	MISA cabinet utility (ETAS level)
MD_DR	Corporate directory utility (ETAS level)
MD_MA	Hardware maintenance utility (ETAS level)

MI	MASI Interface Server (see Class 14 SEERs)
MISA	Meridian Integrated Services Architecture
MMI	Man Machine Interface; generally refers to System Administration (using the administration terminal)
MSP	Multi-Server Processor in SPM
MTA	Message Transfer Agent (see Class 32 SEERs)
NA	Network Administration (see Class 108 SEERs)
NMTA	Network Message Transfer Agent (see Class 36 SEERs)
NVP	Network Voice Processor, the voice processor card used with the SL-1
OCA	OutCalling Agent (see Class 110 SEERs)
OM	Operational Measurements (see Class 33 SEERs)
OM_UTIL	Operational Measurements utility (RSC level)
OFS	Open File Server (see Class 13 SEERs)
OS	Operating System (see also OSP)
OSP	Operating System Program (see Class 64 SEERs)
PCI	Present Call Information
PP	Peripheral Processor (see Class 26 SEERs)

PRM	Program Resource Manager (see Class 60 SEERs)
PRM_CONTROL	Program management utility (ETAS level)
PUP	Program Utility Package; controls access to TOOLS, RSC and ETAS level utilities
RSC	Regional Service Craftsperson
RVS	Remote Voice Services (see Class 109 SEERs)
SBC	Single Board Computer, a printed circuit pack (also known as ESBC)
SCSET	Silence Compression setting utility (TOOLS level)
SE_UTIL	SEER utility (RSC level)
SEER	System Error and Event Report
SMDI	Simplified Message Desk Interface (see Class 38 SEERs)
SS	SEER Server (see Class 35 SEERs)
TIC	Time in centiseconds between production of a SEER and the last reboot of DMS VoiceMail
TK	Voice Toolkit (see Class 51 SEERs)
TKM	Toolkit Master (see Class 50)
UBD	Utility Card Diagnostics (see Class 54)

UI	User Interface (see Class 101, 102 and 103 SEERs)
VCA	Voice Channel Allocator (see Class 34 SEERs)
VH	Voice Handler (see Class 20 SEERs)
VM	Voice Messaging (see Class 22 SEERs)
VMU	Voice Menus, Announcements, and Time-of-Day Services (see also Class 104 SEERs)
VP	Voice Processor, generally referring to the voice processor cards (NVP, GSP, VP12, etc.)
VPD	Voice Processor Diagnostics (see Class 62 SEERs)
VPH	Voice Processor Handler (see Class 24 SEERs)
VPM	Voice Prompts Maintenance (see Class 107 SEERs)
VS	Volume Server (see Class 11 SEERs)
VSA	Voice Service Administration (see Class 105 SEERs)
VSMUP	VS/MASI utility (ETAS level)
VSS	Voice Service Shell (see Class 27 SEERs)
VX	Voice Prompts (see Class 21 SEERs)

DMS-100 Family

DMS VoiceMail

Maintenance Messages (SEER) Manual

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