

Lucent Technologies
Bell Labs Innovations



INTUITYTM CONVERSANT[®] System

Version 7.0

System Reference

585-313-205
Comcode 108173642
Issue 1.0
May 1998

Notice

Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

Your Responsibility for Your System's Security

Toll fraud is the unauthorized use of your telecommunications system by an unauthorized party, for example, persons other than your company's employees, agents, subcontractors, or persons working on your company's behalf. Note that there may be a risk of toll fraud associated with your telecommunications system and, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

You and your system manager are responsible for the security of your system, such as programming and configuring your equipment to prevent unauthorized use. The system manager is also responsible for reading all installation, instruction, and system administration documents provided with this product in order to fully understand the features that can introduce risk of toll fraud and the steps that can be taken to reduce that risk. Lucent Technologies does not warrant that this product is immune from or will prevent unauthorized use of common-carrier telecommunication services or facilities accessed through or connected to it. Lucent Technologies will not be responsible for any charges that result from such unauthorized use.

Lucent Corporate Security

Whether or not immediate support is required, all toll fraud incidents involving Lucent products or services should be reported to Lucent Corporate Security at 1 800 821-8235. In addition to recording the incident, Lucent Corporate Security is available for consultation on security issues, investigation support, referral to law enforcement agencies, and educational programs.

Lucent Technologies Fraud Intervention

If you *suspect that you are being victimized* by toll fraud and you need technical support or assistance, call the Lucent Technologies National Customer Care Center Toll Fraud Intervention Hotline at 1 800 643-2353.

Federal Communications Commission Statement

Part 15: Class A Statement. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Part 68: Network Registration Number. This equipment is registered with the FCC in accordance with Part 68 of the FCC Rules. It is identified by an FCC registration number.

Part 68: Answer-Supervision Signaling. Allowing this equipment to be operated in a manner that does not provide proper answer-supervision signaling is in violation of Part 68 Rules. This equipment returns answer-supervision signals to the public switched network when:

- Answered by the called station
- Answered by the attendant
- Routed to a recorded announcement that can be administered by the CPE user

This equipment returns answer-supervision signals on all DID calls forwarded back to the public switched telephone network. Permissible exceptions are:

- A call is unanswered
- A busy tone is received
- A reorder tone is received

Canadian Department of Communications (DOC)

Interference Information

This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le Présent Appareil Numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A prescrites dans le reglement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Trademarks

See the section titled "About This Book."

Ordering Information

Call: Lucent Technologies BCS Publications Center
Voice 1 800 457-1235 International Voice 317 322-6416
Fax 1 800 457-1764 International Fax 317 322-6699

Write: Lucent Technologies BCS Publications Center
2855 N. Franklin Road
Indianapolis, IN 46219

Order: Document No. 585-313-205
Comcode 108173642
Issue 1.0, May 1998

For additional documents, refer to the section in "About This Document" entitled "Related Resources."

You can be placed on a standing order list for this and other documents you may need. Standing order will enable you to automatically receive updated versions of individual documents or document sets, billed to account information that you provide. For more information on standing orders, or to be put on a list to receive future issues of this document, contact the Lucent Technologies Publications Center.

Warranty

Lucent Technologies provides a limited warranty on this product. Refer to the "Limited Use Software License Agreement" card provided with your package.

European Union Declaration of Conformity

Lucent Technologies Business Communications Systems declares that the equipment specified in this document conforms to the referenced European Union (EU) Directives and Harmonized Standards listed below:

EMC Directive 89/336/EEC
Low-Voltage Directive 73/23/EEC



The "CE" mark affixed to the equipment means that it conforms to the above directives.

Comments

To comment on this document, return the comment card at the front of the document.

Acknowledgment

This document was prepared by Product Publications, Lucent Technologies, Columbus, OH.

OH.

Contents

<u>Contents</u>	<u>iii</u>
<u>1 Troubleshooting</u>	<u>1</u>
■ <u>Overview</u>	<u>1</u>
■ <u>Purpose</u>	<u>1</u>
■ <u>Repairing Power-Up Troubles</u>	<u>2</u>
■ <u>Repairing Boot-Up Troubles</u>	<u>3</u>
■ <u>Repairing System Installation, Upgrade, or Set-Up Troubles</u>	<u>6</u>
■ <u>Repairing Application-Related Troubles</u>	<u>7</u>
<u>Repairing Script Builder Troubles</u>	<u>10</u>
<u>Repairing Script Builder FAX Actions Troubles</u>	<u>12</u>
■ <u>Repairing Administrative Troubles</u>	<u>14</u>
■ <u>Repairing Operational Troubles</u>	<u>15</u>
■ <u>Repairing Feature Licensing Troubles</u>	<u>16</u>
■ <u>Repairing Other Voice System Troubles</u>	<u>16</u>
<u>Repairing Switching Control Center System (SCCS) and Alarm Relay Unit (ARU) Troubles</u>	<u>16</u>
<u>Repairing Call-Transfer Troubles</u>	<u>19</u>
<u>Repairing Performance Troubles</u>	<u>20</u>
<u>Repairing Diagnostics Troubles</u>	<u>20</u>
<u>Repairing Touch-Tone Input Troubles</u>	<u>21</u>
<u>Repairing Report Troubles</u>	<u>21</u>
<u>Repairing Channel/Card State Troubles</u>	<u>22</u>
■ <u>Reducing Load</u>	<u>23</u>
<u>Indicators of Performance Problems</u>	<u>23</u>
<u>Identifying Load Culprits</u>	<u>24</u>
<u>Reducing Load for Host</u>	<u>30</u>
<u>Reducing Load for Database</u>	<u>30</u>
<u>Reducing Load for Custom DIPs/IRAPI Processes</u>	<u>31</u>
<u>Reducing Load for Voice Processing</u>	<u>31</u>
<u>Reducing CPU Usage</u>	<u>33</u>
<u>Reducing Disk Usage</u>	<u>34</u>
<u>Reducing Memory Usage</u>	<u>35</u>

<u>2</u>	<u>Diagnostics</u>	<u>37</u>
■	<u>Overview</u>	<u>37</u>
■	<u>Purpose</u>	<u>37</u>
■	<u>Circuit Card Diagnostics</u>	<u>38</u>
	<u>Checking Cable Connections for Cables other than the TDM Bus Cable</u>	<u>38</u>
	<u>Checking the Terminating Resistors</u>	<u>39</u>
	<u>Checking the Backplane Slot</u>	<u>40</u>
	<u>Checking the Switch Settings</u>	<u>41</u>
	<u>Checking the Other Circuit Cards</u>	<u>42</u>
	<u>Checking a Circuit Card Using the INTUITY CONVERSANT Windows</u>	<u>42</u>
	<u>Checking an EQUINOX Multi-Port Serial Circuit Card</u>	<u>50</u>
	<u>Checking an Speech and Signal Processor Circuit Card</u>	<u>59</u>
■	<u>Database Diagnostics</u>	<u>61</u>
■	<u>Extents Diagnostics</u>	<u>62</u>
■	<u>ORACLE Network Diagnostics</u>	<u>63</u>
■	<u>TDM Bus Diagnostics</u>	<u>65</u>
	<u>Using the Command Line</u>	<u>65</u>
	<u>Using the INTUITY CONVERSANT Windows</u>	<u>67</u>
■	<u>Voice Port Loop Around Test</u>	<u>68</u>
■	<u>ASAI Trace Utility</u>	<u>71</u>
	<u>Low Detail</u>	<u>71</u>
	<u>Normal Detail</u>	<u>72</u>
	<u>High Detail</u>	<u>75</u>
■	<u>LAN Trace Utilities</u>	<u>78</u>
	<u>Using the arp Command</u>	<u>78</u>
	<u>Using the netstat Command</u>	<u>79</u>
	<u>Using the ping Command</u>	<u>80</u>
	<u>Using the traceroute Command</u>	<u>80</u>
	<u>Using the tcpdump Command</u>	<u>81</u>
■	<u>INTUITY CONVERSANT Simple Network Management Protocol</u>	<u>83</u>
	<u>Management Information Bases Available with INTUITY CONVERSANT SNMP</u>	<u>83</u>

	SNMP Configuration	84
	Guidelines for Using SNMP on the INTUITY CONVERSANT	86
	INTUITY CONVERSANT MIB Definition	87
3	Common System Procedures	99
	■ Overview	99
	■ Purpose	99
	■ About Cartridge Drives and Tapes	100
	Types of Cartridge Tape Drives	100
	When to Change Cartridge Tapes	100
	Inserting and Removing Cartridge Tapes	100
	Formatting Cartridge Tapes	103
	■ About Diskette Drives and Diskettes	104
	Types of Diskettes	104
	Inserting and Removing Diskettes	104
	Formatting Diskettes	105
	■ Backing Up the INTUITY CONVERSANT System	106
	Backup the INTUITY CONVERSANT System Using BRU	106
	Backing Up the INTUITY CONVERSANT System Using mkimage	118
	■ Backing Up Speech Files and ORACLE Database Tables Using a LAN	123
	Identifying Speech Files and Database Tables	123
	Backing Up Speech Files and Database Tables	126
	■ Restoring the INTUITY CONVERSANT System	128
	Restore the INTUITY CONVERSANT System Using BRU	128
	Performing a System Restoration Using mkimage	132
	Restoring the Database Directory from System Backup	134
	Restoring Speech Files and ORACLE ® Database Tables Using a LAN	134
	■ Administering the Voice System	137
	Starting the Voice System	137
	Stopping the Voice System	139

Shutting Down the Voice System	141
■ Administering the Operating System	142
Shutting Down the Operating System	142
Rebooting the UNIX System	144
■ Administering the Database System	144
Starting the Database System	144
Stopping the Database System	145
Dropping a Database Table	145
■ Recreating the System Traffic Tables	147
■ Verifying the Date and Time	147
Checking the UNIX Date and Time Window	147
Changing the UNIX Date and Time Window	148
4 Alarms and Log Messages	153
■ ADM Alarms and Log Messages	153
ADM001	153
ADM002	154
ADM003	154
ADM004	155
■ ALERT Alarms and Log Messages	156
ALERT001	156
ALERT002	156
ALERT003	156
ALERT004	157
ALERT005	157
ALERT006	158
ALERT007	158
■ ASAI Alarms and Log Messages	159
ASAI001	159
ASAI002	159
ASAI003	160
ASAI004	160
ASAI005	161
ASAI006	162
ASAI007	162
ASAI008	163

ASAI009	163
ASAI010	164
ASAI011	164
ASAI012	165
ASAI013	165
ASAI014	166
ASAI015	166
ASAI016	167
ASAI017	167
ASAI018	168
ASAI019	168
ASAI020	169
ASAI021	169
ASAI022	170
ASAI023	170
ASAI024	171
ASAI025	171
ASAI026	172
ASAI027	172
ASAI028	173
ASAI029	173
ASAI030	173
ASAI031	174
ASAI032	174
■ BRDG Alarms and Log Messages	175
BRDG001	175
BRDG002	175
BRDG003	176
BRDG004	176
BRDG005	177
■ CGEN Alarms and Log Messages	178
CGEN001	178
CGEN002	178
CGEN003	179
CGEN004	180

CGEN005	180
CGEN006	181
CGEN007	182
CGEN008	183
CGEN009	183
CGEN010	184
CGEN011	184
CGEN012	185
CGEN013	185
CGEN014	186
CGEN015	187
CGEN016	187
CGEN017	188
CGEN018	188
CGEN019	189
CGEN020	189
CGEN021	190
CGEN022	191
CGEN023	191
CGEN024	192
CGEN025	193
CGEN026	193
CGEN027	194
CGEN028	194
CGEN029	195
CGEN030	195
CGEN031	195
CGEN032	196
CGEN033	197
CGEN034	197
CGEN035	198
CGEN036	198
CGEN037	199
CGEN038	199
CGEN039	199

CGEN040	200
■ CHRIN Alarms and Log Messages	200
CHRIN001	200
CHRIN002	201
■ CIOX Alarms and Log Messages	202
CIOX001	202
CIOX002	202
■ DB Alarms and Log Messages	203
DB001	203
DB002	204
DB003	206
DB004	207
DB005	208
DB006	209
DB007	210
DB008	210
DB009	211
DB010	212
DB011	213
DB012	214
DB013	214
DB014	216
DB015	217
DB016	217
■ DIP Alarms and Log Messages	218
DIP001	218
■ DSKMG Alarms and Log Messages	219
DSKMG001	219
DSKMG002	219
■ DWIP Alarms and Log Messages	220
DWIP001	220
■ ET Alarms and Log Messages	221
ET001	221
ET002	221
ET003	221

ET004	222
ET005	223
ET006	224
■ EXTA Alarms and Log Messages	224
EXTA001	224
EXTA002	224
EXTA003	225
EXTA004	225
EXTA005	226
EXTA006	226
EXTA007	227
EXTA008	228
EXTA009	228
EXTA010	229
EXTA011	229
■ FFE Alarms and Log Messages	230
FFE001	230
FFE002	231
FFE003	231
FFE004	231
FFE005	232
FFE006	233
FFE007	233
FFE008	234
FFE009	234
■ FTS Alarms and Log Messages	235
FTS001	235
FTS002	235
FTS003	236
FTS004	236
FTS005	237
FTS006	237
FTS007	238
FTS008	238
FTS009	239

FTS010	240
FTS011	240
FTS012	241
■ FXAUD Alarms and Log Messages	241
FXAUD001	241
FXAUD002	242
FXAUD003	242
FXAUD004	242
FXAUD005	243
FXAUD006	243
FXAUD007	243
FXAUD008	244
FXAUD009	244
FXAUD010	244
FXAUD011	245
FXAUD012	245
FXAUD013	245
FXAUD014	246
FXAUD015	246
FXAUD016	246
FXAUD017	247
FXAUD018	247
FXAUD019	247
FXAUD020	248
FXAUD021	248
FXAUD022	248
FXAUD023	249
FXAUD024	249
■ FXMON Alarms and Log Messages	250
FXMON001	250
FXMON002	250
FXMON003	250
FXMON004	251
FXMON005	251
FXMON006	251

FXMON007	252
FXMON008	252
FXMON009	252
FXMON010	253
FXMON011	253
FXMON012	254
FXMON013	254
FXMON014	254
FXMON015	255
FXMON016	255
FXMON017	256
FXMON018	256
FXMON019	256
FXMON020	257
FXMON021	257
FXMON022	257
FXMON023	258
FXMON024	258
FXMON025	258
FXMON026	259
FXMON027	259
FXMON028	259
FXMON029	260
FXMON030	260
FXMON031	260
FXMON032	261
FXMON033	261
FXMON034	261
FXMON035	262
FXMON036	262
FXMON037	263
FXMON038	263
FXMON039	263
FXMON040	264
■ FXNSF Alarms and Log Messages	264

FXNSF001	264
FXNSF002	264
FXNSF003	265
FXNSF004	265
FXNSF005	265
■ GEN Alarms and Log Messages	266
GEN001	266
GEN002	266
GEN020	267
GEN022	267
GEN024	267
GEN050	268
■ HOST Alarms and Log Messages	268
HOST001	268
HOST002	269
HOST003	269
HOST004	270
HOST005	271
HOST006	272
HOST007	273
HOST008	274
HOST009	275
HOST010	275
HOST011	275
HOST012	276
HOST013	277
HOST014	281
HOST015	281
HOST016	281
HOST017	282
HOST018	282
■ ICK Alarms and Log Messages	283
ICK001	283
ICK002	283
ICK003	284

ICK004	284
ICK005	284
ICK006	285
ICK007	285
ICK008	286
ICK009	286
ICK010	287
ICK011	287
■ INIT Alarms and Log Messages	288
INIT001	288
INIT002	288
INIT003	289
INIT004	289
INIT005	289
INIT006	290
INIT007	290
INIT008	292
INIT009	292
INIT010	293
■ LOG Alarms and Log Messages	294
LOG001	294
LOG002	294
LOG006	294
LOG007	295
■ MTC Alarms and Log Messages	297
MTC001	297
MTC002	298
MTC003	299
MTC004	300
MTC005	301
MTC006	301
MTC007	301
MTC008	302
MTC009	302
MTC010	304

MTC011	304
MTC012	305
MTC013	305
■ PRI Alarms and Log Messages	306
PRI001	306
PRI002	308
PRI003	308
PRI004	309
PRI005	309
PRI007	310
■ RECOG Alarms and Log Messages	313
RECOG001	313
RECOG002	313
RECOG003	314
RECOG004	314
■ SBIRFAX Alarms and Log Messages	315
SBIRFAX001	315
SBFAX002	315
SBIRFAX003	316
SBIRFAX004	316
■ SP Alarms and Log Messages	317
SP001	317
SP002	317
SP003	317
SP004	318
SP005	318
SP006	319
SP007	319
■ SPIP Alarms and Log Messages	320
SPIP001	320
SPIP002	321
SPIP003	322
SPIP004	323
SPIP005	323
SPIP009	323

■ SYS Alarms and Log Messages	324
SYS001	324
■ THR Alarms and Log Messages	325
THR001	325
THR002	325
THR003	326
THR004	327
TR001	327
TR002	328
TRIP001	328
TRIP002	328
TRIP003	329
TRIP004	329
TRIP005	331
TRIP006	331
TSM001	332
TSM002	332
TSM003	333
TSM004	334
TSM006	336
TSM008	338
TSM009	339
TTS001	339
TTS002	340
TTS003	340
TTS004	341
TTS005	341
TTS006	342
TWIP001	342
TWIP002	344
TWIP003	345
TWIP004	345
TWIP005	346
TWIP006	346
TWIP007	347

TWIP008	348
TWIP009	349
TWIP010	349
TWIP011	350
TWIP012	350
TWIP013	351
TWIP014	352
TWIP015	353
TWIP016	354
TWIP017	355
TWIP018	356
TWIP019	357
TWIP020	357
TWIP021	358
TWIP022	359
TWIP023	360
■ UNIX Alarms and Log Messages	361
UNIX001	361
UNIX002	361
UNIX003	362
UNIX004	362
■ VROP Alarms and Log Messages	363
VROP001	363
VROP002	363
VROP003	364
VROP004	365
VROP005	366
VROP006	366
VROP007	367
VROP009	368
VROP010	370
VROP011	370
VROP012	371
VROP013	371
VROP014	372

VROP015	372
VROP016	373
VROP017	373
VROP018	374
VROP019	374
VROP020	375
VROP020, #2	375
VROP021	376
VROP022	376
VROP023	377
■ VXMDI Alarms and Log Messages	377
VXMDI001	377
VXMDI002	377
VXMDI003	378
VXMDI004	378
VXMDI005	379
GL Glossary	380
IN Index	412

Troubleshooting

1

Overview

This chapter describes some basic troubleshooting procedures for the most common system problems.

Purpose

The purpose of this chapter is to provide the on-site technician or system administrator with repair procedures for the most common system procedures.

The following assumptions are made in this chapter:

- You have checked the Message Log for any relevant messages. See Chapter 1, "Getting Started" in *INTUITY™ CONVERSANT® Version 6.0 System Alarms and Log Messages*, 585-310-182, for the procedure.
- The procedures in the second column of the tables are intended to provide a starting point to isolate a problem and may not be exhaustive.
- The procedures in the second column assume general editing knowledge and script familiarity, as most of the commands and procedures are performed from the command line.
- You have already performed a visual inspection of the system.

Repairing Power-Up Troubles

Power-up troubles are those that occur when first turn the system on. [Table 1-1](#) lists the indications related to power-up troubles:

Table 1-1. Repairing Power Up Troubles

Indication	Corrective Action
The system will not power up.	<ol style="list-style-type: none"> 1. Verify that the power toggle switch on the front is in the ON position. 2. Verify all external system connections (power cords and monitor cables) are correct (for example, the blue cable connects to the 3270 card and not to the system parallel port). 3. Verify all external system connections are secure.
<p>During start-up, the system displays the following message:</p> <p>"Shared memory is marked as invalid. cvis_menu exiting."</p>	<ol style="list-style-type: none"> 1. Stop the voice system. See "Stopping the Voice System" in Chapter 3, "Common System Procedures". 2. Start the voice system. See "Starting the Voice System" in Chapter 3, "Common System Procedures". 3. Enter cvis_mainmenu 4. If the problem persists: <ol style="list-style-type: none"> a. Stop the voice system. See "Stopping the Voice System" in Chapter 3, "Common System Procedures". b. Enter cp /gendb/shmem/devtbl gendb/shmem/devtbl.old c. Enter rm /gendb/shmem/devtbl d. Start the voice system. See "Starting the Voice System" in Chapter 3, "Common System Procedures".
The start_vs command takes a long time to initialize on a system with many analog lines.	<ol style="list-style-type: none"> 1. Starting at the Switch Administration screen, set Dial-Tone Training to "No." See Chapter 5, "Switch Interface Administration," of <i>INTUITY™ CONVERSANT® System Version 6.0 Administration</i>, 585-310-591. <div style="margin-left: 40px;"> <p> NOTE: If dial-tone training is "no," you should specify the dial-tone frequency to be used with a particular switch (350 and 440 is the default for DEFINITY®).</p> </div> 2. Verify that the transfers being performed in the application are still functioning properly.

Repairing Boot-Up Troubles

Boot-up troubles are those that occur when the system crashes and reboots itself or when you reboot the system. [Table 1-2](#) lists the indications and possible repair procedures related to boot-up troubles.

Table 1-2. Repairing Boot-Up Troubles

Indication	Corrective Action
Cards are not recognized during boot up.	<ol style="list-style-type: none"> 1. Enter pkginfo 2. Make sure the driver software is installed (SP, Tip/Ring, or T1). 3. Check the circuit cards. See “Circuit Card Diagnostics” in Chapter 2, “Diagnostics”. 4. Make sure that cards have the proper switch settings and correct placement of terminating resistors if attached to the TDM bus cable.
<p>When the system boots, it displays messages in the message log report or on the console similar to the following:</p> <p>Unable to attach shared memory, Bad DEVTBL, and/or VROP respawning too rapidly.</p>	<ol style="list-style-type: none"> 1. Stop the voice system. See “Stopping the Voice System” in Chapter 3, “Common System Procedures”. 2. Enter cp /gendb/shmem/devtbl /gendb/shmem/devtbl.old 3. Enter rm /gendb/shmem/devtbl 4. Start the voice system. See “Starting the Voice System” in Chapter 3, “Common System Procedures”.
<p>The system displays the following message:</p> <p>Non-system disk or disk error. Replace and hit any key to continue.</p>	<ol style="list-style-type: none"> 1. Check the diskette drive and confirm that it is empty. 2. Check the cartridge tape drive and confirm that it is empty. 3. Check the power connections. 4. Reboot the system. See “Rebooting the UNIX System” in Chapter 3, “Common System Procedures”.

Continued on next page

Table 1-2. Repairing Boot-Up Troubles — *Continued*

Indication	Corrective Action
<p>The system passes run level four then reboots continuously (rolling reboot).</p>	<ol style="list-style-type: none"> 1. Power off the platform immediately after the system reboots. 2. Remove one optional circuit card (for example, SP, T1, Tip/Ring). 3. Reboot the system. See “Rebooting the UNIX System” in Chapter 3, “Common System Procedures”. 4. Repeat Steps 1–3 until the system reboots properly. 5. Replace the circuit cards.
<p>The system is experiencing continuous automatic reboots.</p>	<ol style="list-style-type: none"> 1. Reboot the system. See “Rebooting the UNIX System” in Chapter 3, “Common System Procedures”. 2. While rebooting the system, hold down the (ENTER) key when the system displays the UnixWare graphics. 3. When the system prompts you for a previously saved kernel, enter unix.old or enter the name of a kernel that you saved manually at a previous time. <p>This file is created automatically each time the kernel is rebuilt.</p> 4. Check the size of the static kernel by entering size /stand/unix <p>If the kernel is larger than 4 Mbytes, remove some of the packages.</p>

Continued on next page

Table 1-2. Repairing Boot-Up Troubles — *Continued*

Indication	Corrective Action
A file system check shows a file system with 0 files, 0 blocks, or 0 free.	<ol style="list-style-type: none"><li>1. Verify the disk partition was adequate. See “Initializing the Hard Disk Drives” in the “Installing Base System Software” chapter of your platform maintenance book.<li>2. Restore the system software from the mkimage backup tape. See “Restoring the Intuity CONVERSANT System” in Chapter 3, “Common System Procedures”. If no backup is available, reload the system software. See the “Installing Base System Software,” the Installing Intuity CONVERSANT System Software,” and the “Installing Optional Feature Software,” chapters of your platform maintenance book.
The system hangs after a reboot and the screen is blank.	<ol style="list-style-type: none"><li>1. Check the diskette drive and confirm that it is empty.<li>2. Check the power connections.<li>3. Check the power supply by watching for hard disk access with the disk access light.<li>4. Reboot the system. See “Rebooting the UNIX System” in Chapter 3, “Common System Procedures”.

Repairing System Installation, Upgrade, or Set-Up Troubles

Repairing system installation, upgrade, and set-up troubles are those that occur during initial installation of the voice system, while upgrading either hardware or software, or when adding additional hardware or software. [Table 1-3](#) lists the indications and possible repair procedures related to these troubles.

Table 1-3. Repairing System Installation/Upgrade/Set-Up Troubles

Indication	Corrective Action
The system cannot initialize the IPCI card.	<ol style="list-style-type: none"> 1. Check for possible conflict with memory and I/O addresses or interrupt conflicts. 2. Log in as root. 3. Enter crash 4. Enter strstat <p>The system displays a screen similar to the screen shown in Figure 1-1.</p> <ol style="list-style-type: none"> a. Increase the values to slightly higher than what is listed in the <code>CONFIG</code> column. b. If anything other than 0 is listed in the <code>FAIL</code> column, use the <code>/etc/conf/bin/ldtune</code> command to increase the tunable parameter. The parameters to tune are <code>NSTREAM</code>, <code>NQUEUE</code> (should be 4 X <code>NSTREAM</code>), <code>NBLK4</code>, <code>NBLK16</code>, <code>NBLK64</code>, <code>NBLK128</code>, <code>NBLK256</code>, <code>NBLK512</code>, <code>NBLK1024</code>, <code>NBLK2048</code>, and <code>NBLK4096</code>. c. After you have changed the tunable parameters, use the <code>/etc/conf/bin/ldbuild</code> command to rebuild the UNIX kernel. 5. Reboot the system. See "Rebooting the UNIX System" in Chapter 3, "Common System Procedures".

```

> strstat
ITEM                CONFIG  ALLOC  FREE    TOTAL  MAX  FAIL
streams             106    106    0       592   109  0
queues              522    522    0      1926   530  0
message blocks      75     57    18     24269  77   0
data blocks         68     57    11     18271  68   0
link blocks         16     16    0        16   16   0
stream events       6      4     2         6    6   0
Count of scheduled queues:  0

```

Figure 1-1. strstat Sample Output

Repairing Application-Related Troubles

These troubles are experienced when the voice system is not taking calls or when the voice system is taking calls but the application is not working as expected. There are a number of subgroups for application troubles, such as speech, database, Text-to-Speech, and Speech Recognition. [Table 1-4](#) lists the indications and possible repair procedures related to these troubles.

Table 1-4. Repairing Application-Related Troubles

Indication	Corrective Action
The voice system is ringing but is not answering the telephone or the voice system is busy.	<ol style="list-style-type: none"> 1. Scan the Message Log Report for messages related to the trouble. See Chapter 1, "Getting Started," in <i>INTUITY™ CONVERSANT® System Version 6.0 System Alarms and Log Messages</i>, 585-310-182. 2. Enter display card all 3. Check the status of all the circuit cards. 4. Check if the application is properly assigned to the channel(s). 5. Make sure the application contains the Answer Phone action.

Continued on next page

Table 1-4. Repairing Application-Related Troubles — *Continued*

Indication	Corrective Action
The voice system answers the call, but does not play any speech.	<ol style="list-style-type: none"> 1. Scan the Message Log Report for messages related to the trouble. See Chapter 1, "Getting Started," in <i>INTUITY™ CONVERSANT® System Version 6.0 System Alarms and Log Messages</i>, 585-310-182. 2. Enter display card all 3. Verify that the spadm script is not assigned to any channels. 4. Check the status of all the circuit cards. 5. If spadm is assigned, reassign the channel to the correct script name. See Chapter 3, "Configuration Management," of <i>INTUITY™ CONVERSANT® System Version 6.0 Administration</i>, 585-310-591. 6. Place test calls to determine if this is occurring on every channel. 7. If this occurs only on certain channels, it could be a hardware problem. Place the problem channels in a MANOOS state until the card can be replaced. 8. Enter trace tsm chan all tee /tmp/trace.out This sends the trace output to the console and to the file /tmp/trace.out 9. Review the trace output for failure indications or error messages.

Continued on next page

Table 1-4. Repairing Application-Related Troubles — *Continued*

Indication	Corrective Action
All calls are dropped.	<ol style="list-style-type: none"><li>1. Scan the Message Log Report for messages related to the trouble. See Chapter 1, "Getting Started," in <i>INTUITY™ CONVERSANT® System Version 6.0 System Alarms and Log Messages</i>, 585-310-182.<li>2. Enter hstatus all This will allow you to check the status of the host if this feature is being used. If all sessions are recovering or logging in, this could explain the trouble.<li>3. Enter who -rpb<li>4. Search for different time stamps on the processes. A recent date different from most of the others may indicate the process respawned.<li>5. Record the scenario that caused the problem.<li>6. If the process is specific to a feature package, see the trouble table for that feature package in this chapter.

Repairing Script Builder Troubles

[Table 1-5](#) provides information on troubles related to the Script Builder package.

Table 1-5. Repairing Script Builder Troubles

Indication	Corrective Action
Messages are cut off.	<p>Add a few seconds of initial silence (0.2 to 0.5 seconds) to the beginning of the message to be played.</p> <p>Another way to avoid missing any segment of a message is to construct a phrase consisting of a few seconds of silence and play that phrase first.</p>
The terminal is locked-up.	<p>Use the following key sequence to release your terminal keypad:</p> <p>(CONTROL) (J) stty sane (CONTROL) (J)</p>
<p>The system displays the following message:</p> <p>No Space On Root File System.</p>	<ol style="list-style-type: none"> 1. Press (EXIT) from Script Builder. 2. Clean up the root file system. <ul style="list-style-type: none"> Try to free a minimum of several hundred blocks. 3. Re-enter Script Builder with your application. <p>You may find that everything is functioning properly with your application. You may be able to continue right where you left off and just retype any previous changes that were not saved. However, depending on where you were in the application when root ran out of space, some files may be corrupted.</p> 4. If Script Builder fails completely with this application, complete the following Steps a and b: <ol style="list-style-type: none"> a. Remove the transaction part of the application by pressing REMOVE in the Script Builder Applications screen. b. Restore it from a backup. See <i>INTUITY™ CONVERSANT® System Version 6.0 Application Development with Script Builder</i>, 585-310-760.

Continued on next page

Table 1-5. Repairing Script Builder Troubles — *Continued*

Indication	Corrective Action
There is no speech output.	<ol style="list-style-type: none"> 1. Make sure the phrase actually exists. If it does not, record it. See the Speech Administration screen in Chapter 7, "Producing Speech," of <i>INTUITY™ CONVERSANT® System Version 6.0 Application Development with Script Builder</i>, 585-310-763. 2. Make sure the OVOL and IVOL parameters are correctly set in the Switch Interface screen. See Chapter 6, "Switch Interface Administration," of <i>INTUITY™ CONVERSANT® System Version 6.0 Administration</i>, 585-310-591. 3. Enter display card sp 4. Check the status of the SP cards.
Host sessions recover repeatedly.	<ol style="list-style-type: none"> 1. Scan the Message Log Report for messages related to the trouble. See Chapter 1, "Getting Started," in <i>INTUITY™ CONVERSANT® System Version 6.0 System Alarms and Log Messages</i>, 585-310-182. 2. Make sure a Transaction Base screen has been specified. 3. Make sure the Login and Recovery sequences both leave the host session at a Transaction Base screen.
A ring no answer occurs for an application that has a host interface.	<ol style="list-style-type: none"> 1. Scan the Message Log Report for messages related to the trouble. See Chapter 1, "Getting Started," in <i>INTUITY™ CONVERSANT® System Version 6.0 System Alarms and Log Messages</i>, 585-310-182. 2. Check the host timeout value and verify that the host response time is not exceeded.

Repairing Script Builder FAX Actions Troubles

[Table 1-6](#) provides information about trouble related to the Script Builder FAX Actions package. See this table for appropriate corrective action if a trouble with Script Builder FAX Actions arises.

Table 1-6. Repairing Script Building FAX Actions Troubles

Trouble Indication	Corrective Action
The ASCII to TIFF conversion process failed.	<p>The << SBFAX006 SBF_ASCTOTIFF_FAILED >> line above and similar lines throughout this chapter are explain message identifiers and mnemonics. They can be used as arguments to the explain function. The explain function is used to obtain the explain text associated with the error message. For example, to obtain the information below, enter explain SBFAX006 at the UNIX shell prompt.</p> <p>The script made a request to transmit a text file to the caller. Before the text file can be sent, it must be converted into the appropriate format. This conversion failed for the text file specified.</p> <p>Most likely, the file requested is not suitable for transmission. Make sure the file is either a text file or a FAX file entered through the Fax Response Workspace.</p>
The FAX combine process failed.	<p>The system attempted to combine two or three files into a single FAX file. This operation failed. For this operation to be completed, file conversions are performed to get the information into a form suitable for transmission.</p> <p>Most likely, one or more of the files requested are not suitable for transmission. Make sure the files requested are either text files or FAX files entered through the Fax Response Workspace.</p>
The FAX cover page process failed.	<p>The script request to join two files into a single FAX file (possibly for use as a cover page) failed. For this operation to be completed, file conversions are performed to get the information into a form suitable for transmission.</p> <p>Most likely, one or both of the files requested are not suitable for transmission. Make sure the files requested are either text files or FAX files entered through the Fax Response Workspace.</p>

Continued on next page

Table 1-6. Repairing Script Building FAX Actions Troubles — *Continued*

Trouble Indication	Corrective Action
FAX file not found.	<p>The script request to transmit a FAX file to the caller failed because the FAX file requested could not be found. Verify that the FAX file exists either in the Fax Response Workspace or at the full path specified in the script.</p> <p>The caller did not receive the FAX requested. Consider manually transmitting the FAX message requested by the caller using the delivery number contained in the error message.</p>
Text file not found.	<p>The script request to transmit a file to the caller failed because the file requested could not be found. Verify that the file exists and was specified in the script with the appropriate path.</p> <p>The caller did not receive the FAX requested. Consider transmitting it manually to the caller using the delivery number contained in the error message.</p>
The FAX send process failed.	<p>The script request to transmit one or two FAX messages to the caller failed. The return code reported in the error message indicates the result of the delivery request.</p> <p>This error may be the result of the failure of earlier FAX Actions. For example, if another FAX Action failed and the script did not check its return value, it is likely that the associated FAX_Send action would also fail. Consult the list below to determine the source of the problem.</p> <ul style="list-style-type: none"> ■ 6003FAX file missing ■ 6105FAXMGR not running/FAX channels not in service/No telephone lines attached
The execute UNIX command failed.	<p>The script request to execute a UNIX command or shell script failed.</p> <p>Most likely, the problem is with the command or shell script. Check that the command or shell script that was attempted works when executed manually. If it does, make sure that its full path name is provided to the script.</p>

Repairing Administrative Troubles

Administrative troubles are those that occur while performing a task you have initiated (for example, a trouble arises while performing a mkimage of the system software). [Table 1-7](#) contains troubles related to administrative tasks.

Table 1-7. Repairing Administrative Troubles

Trouble Indication	Corrective Action
UNIX commands are failing or the disk reported failures.	<ol style="list-style-type: none"> 1. Scan the Message Log Report. See Chapter 1, "Getting Started," in <i>INTUITY™ CONVERSANT® System Version 6.0 System Alarms and Log Messages</i>, 585-310-182, for the procedure.
ccasum never finishes its cron job.	<ol style="list-style-type: none"> 1. Determine if you are transferring to more than 100 numbers. If you are, kill the cron job by completing the following Steps a through c: <ol style="list-style-type: none"> a. Enter ps -ef grep ccasum b. Search for the parent process id (PID) for ccasum (it is located in the second column from the left). c. Enter kill -9 pid# where <i>pid#</i> is the PID number. 2. Create an index for ccasum by completing the following Steps a through c: <ol style="list-style-type: none"> a. Log in to SQL*Plus as sti/sti b. Enter create index cca_idx on cca(phone_num); c. Enter :quit to exit the SQL*Plus Utility. 3. When the call traffic is light, enter /vs/bin/util/ccasum 4. Enter /vs/bin/util/ccadel when ccasum is finished.
Using the vi editor causes a core dump.	<ol style="list-style-type: none"> 1. To split the file into multiple segments, enter split -n filename name where -n is the number of lines in each piece (1000 is the default, <i>filename</i> is the name of the files you want to split, and <i>name</i> is the new segment you are creating).

Repairing Operational Troubles

Operational troubles are experienced with the physical components of the voice system, such as a blank monitor or an inoperable modem. These troubles can occur at any time. [Table 1-8](#) contains troubles related to operational tasks.

Table 1-8. Repairing Operational Troubles

Trouble Indication	Corrective Action
The monitor screen is blank, but the voice system is still taking calls.	<ol style="list-style-type: none"> 1. Check the power on the voice system. If on, place a test call to the system. 2. Check the LED on the monitor. If on, check the contrast and brightness controls on the monitor. 3. Check the monitor connection to the voice system. 4. Unplug/plug in the monitor cable to the voice system. 5. Check the on/off switch on the monitor. 6. Log in remotely to check out the system and see if the voice system is taking calls. 7. If the problem persists, replace the monitor and or the video controller circuit card.
The shutdown and init commands will not bring the system down.	<ol style="list-style-type: none"> 1. Perform a hard reboot of the system. See “Rebooting the UNIX System” in Chapter 3, “Common System Procedures”, for the procedure.

Repairing Feature Licensing Troubles

Feature Licensing troubles are those that occur when the user is unable to access certain features of the INTUITY™ CONVERSANT® system. [Table 1-9](#) contains troubles related to operational tasks.

Table 1-9. Repairing Feature Licensing Troubles

Trouble Indication	Corrective Action
Feature licensing is no longer active.	1. If the name of your system has been changed, notify the TSC.

Repairing Other Voice System Troubles

The following tables contain some general trouble areas that do not fall into the other classes listed above. Specifically, these troubles include:

- Switching Control Center System (SCCS) and Alarm Relay Unit (ARU) troubles
- Call-transferring troubles
- Performance-related troubles
- Speech-related troubles
- Diagnostic troubles
- Touch-tone input troubles
- Report troubles
- Channel state troubles

Repairing Switching Control Center System (SCCS) and Alarm Relay Unit (ARU) Troubles

[Table 1-10](#) lists the procedures for repairing Switching Control Center System (SCCS) and Alarm Relay Unit (ARU) troubles.

Table 1-10. Repairing SCCS/ARU Troubles

Indication	Corrective Action
<p>ARU/SCCS hardware is not responding to alarms from the voice system.</p>	<ol style="list-style-type: none"> 1. Check the hardware/cabling connections. See Chapter 3, "Making Cable Connections," in your system installation book. 2. Verify that the serial port on the eight-port asynchronous unit is properly configured on the voice system. 3. Verify that the CPU (tty00) is properly configured on the voice system. 4. Verify that the software is communicating with the ARU by completing the following Steps a and b: <ol style="list-style-type: none"> a. Enter load_aru_b if the ARU is a J1P158B-1 without scan points. Enter load_aru_c if the ARU is a J1P158C-1 with scan points. As you enter this command, one of the two LEDs on the front of the ARU will flicker, and the word "DOWNLOAD" should flash on the display panel. These LEDs correspond to serial ports A and B on the ARU. b. If the LED did not flicker or DOWNLOAD was not displayed, try swapping the connection to the other serial port on the ARU and repeat the procedure. If the LED does not flicker, there is a cabling/port configuration problem. If the second port works and it has the same switch settings as the 1st, this may indicate a bad serial port on the ARU. 5. Verify that there are no other processes communicating with the TTY port assigned to the ARU. The getty for the TTY port used by the ARU should be initialized at the baud rate configured for the ARU. Once the getty has been initialized for that port, it should be turned off. It will be turned off when the CompuLert/SCCS/ARU package is loaded. If not, complete the following Steps a and b: <ol style="list-style-type: none"> a. Manually turn off the getty process. b. Check all other processes, dips, etc. and ensure they are not attempting to send/retrieve data from that port.

Continued on next page

Table 1-10. Repairing SCCS/ARU Troubles — Continued

Indication	Corrective Action
<p>Error message ERROR 03, ERROR 04, or ERROR 10 shows up on the ARU when the unit is powered-on or reset, or when receiving a message from the voice system.</p>	<ol style="list-style-type: none"> 1. Hold the LK-OUT and RESET keys in at the same time for approximately 2 seconds to verify that the BAUD rate of the ARU (according to switch settings on the back of the unit) for Port A match the BAUD rate of the TTY port used for communication. 2. Press RESET again to get back to the NORMAL mode. 3. Check the ARU users manual if changes to the DIP switch settings are necessary. <p>If changes are made, the ARU must be reset or powered off/on for the new settings to take effect on the unit.</p>
<p>Error message ERROR 06, ERROR 07, or ERROR 11 shows up on the ARU when the unit is powered-on or reset, or when receiving a message from the voice system.</p>	<ol style="list-style-type: none"> 1. Hold the LK-OUT and RESET keys in at the same time for approximately 2 seconds to verify that the BAUD rate of the ARU (according to switch settings on the back of the unit) for Port B match the BAUD rate of the TTY port used for communication. 2. Press RESET again to get back to the NORMAL mode. 3. Check the ARU users manual if changes to the DIP switch settings are necessary. <p>If changes are made, the ARU must be reset or powered off/on for the new settings to take effect on the unit.</p>
<p>The red LED for port A/B of the ARU stays on when it is connected to the voice system.</p>	<ol style="list-style-type: none"> 1. Perform the procedure from "ARU/SCCS hardware is not responding to alarms from the voice system." 2. Check the behavior of the serial port with another device, like an asynchronous modem. <p>If the port works with the modem, it is probably fine and just needs to be cabled and configured properly for the ARU.</p>
<p>The wrong priority (critical, major, informational) level is assigned for a particular message.</p>	<p>Enter chg_alarm to change the priority level for a particular message sent to the ARU.</p>

Repairing Call-Transfer Troubles

[Table 1-11](#) lists the repair procedures for repairing call-transfer troubles.

Table 1-11. Repairing Call Transfer Troubles

Indication	Corrective Action
Voice system not transferring calls properly.	<ol style="list-style-type: none"> 1. Scan the Message Log Report. See Chapter 1, "Getting Started," in <i>INTUITY™ CONVERSANT® System Version 6.0 System Alarms and Log Messages</i>, 585-310-182, for the procedure. 2. Verify the values on the Switch Administration screen as described in Chapter 6, "Switch Interface Administration," of <i>INTUITY™ CONVERSANT® System Version 6.0 Administration</i>, 585-310-591. If this screen has changed, complete the following Steps a through d: <ol style="list-style-type: none"> a. Save the values. b. Stop the voice system. See "Stopping the Voice System" in Chapter 3, "Common System Procedures". c. Start the voice system. See "Starting the Voice System" in Chapter 3, "Common System Procedures". d. Reinstall the application. See "Installing the Script Builder Package" in the "Installing Optional Feature Software" chapter of your platform maintenance book. 3. Try to transfer a call manually, by completing the following Steps a through d: <div style="margin-left: 40px;"> <p> NOTE: You need an analog telephone for this test.</p> <ol style="list-style-type: none"> a. Plug the line going into the voice system into the telephone. b. Place the call to this telephone. c. Answer the call. d. Try to transfer to another extension. </div> 4. Assign the feature test script to the channel and place test calls. 5. Enter trace tsm chan all trip tee /tmp/trace.out 6. Check the logic of the application that is doing the transfer.

Continued on next page

Table 1-11. Repairing Call Transfer Troubles — Continued

Indication	Corrective Action
Direct agent calls do not work properly.	<p>Make sure all fields within the ASAI external actions are defined as the documentation states.</p> <p>When Script Builder must convert fields from one type to another (that is, char to num), sometimes fields do not contain the values expected.</p> <p>For a direct agent call to be successful, the <code>Split Extension</code> field must contain the number identifying a valid ACD split.</p> <p>If the field is corrupted, the direct agent call will not work.</p>

Repairing Performance Troubles

[Table 1-12](#) lists the repair procedures for repairing performance troubles.

Table 1-12. Repairing Performance Troubles

Indication	Corrective Action
The system is slow or delayed in speaking.	1. Reduce the load. See “Reducing Load” .
<p>The system performance is degraded. For example:</p> <ul style="list-style-type: none"> ■ Speech breaks are occurring ■ There is bad response time to commands 	

Repairing Diagnostics Troubles

[Table 1-13](#) lists the repair procedures for repairing diagnostics troubles.

Table 1-13. Repairing Diagnostics Troubles

Indication	Corrective Action
Card diagnostics failed.	Check the circuit cards. See “Circuit Card Diagnostics” in Chapter 2, “Diagnostics” .

Repairing Touch-Tone Input Troubles

[Table 1-14](#) lists the repair procedures for repairing touch-tone input troubles.

Table 1-14. Repairing Touch-Tone Input Troubles

Indication	Corrective Action
User touch-tone input is not being correctly interpreted by the system.	<ol style="list-style-type: none"> <li>1. Verify the Prompt and Collect action matches the intended use in the script. <li>2. If this is channel related (that is, the trouble only appears on a particular channel) and you have another card, see if the trouble occurs on the other card. If not, replace the original card. See the "Replacing or Installing Circuit Cards" chapter of your platform maintenance book..

Repairing Report Troubles

[Table 1-15](#) lists the repair procedures for repairing report troubles.

Table 1-15. Repairing Report Troubles

Indication	Corrective Action
Call data reports are not accurate or they are not complete.	<ol style="list-style-type: none"> <li>1. Determine if there is any additional free space in the database by entering dbfrag <li>2. Scan the Message Log Report. See Chapter 1, "Getting Started," in <i>INTUITY™ CONVERSANT® System Version 6.0 System Alarms and Log Messages</i>, 585-310-182, for the procedure.

Repairing Channel/Card State Troubles

[Table 1-16](#) lists the repair procedures for repairing channel/card state troubles.

Table 1-16. Repairing Channel/Card State Troubles

Indication	Corrective Action
Channel/card is in state Manoos.	<p>Restore the channel or card by entering restore [channel/card] [channel/card #]</p> <p>See Appendix A, "Summary of Commands," in <i>INTUITY™ CONVERSANT® System Version 6.0 Administration</i>, 585-310-591.</p>
Channel/card is in state Foos.	<p>Enter display channel <channel number></p> <p>If T1.5, PRIB, or PRID is displayed, check the error log for a message in the range TWIP013–TWIP018. Follow the recommended repair procedure for that message.</p> <p>If VRS6, IVP4, or IVP6 is displayed:</p> <ol style="list-style-type: none"> 1. Enter diagnose card <card number>. 2. If the channel remains Foos, check the telephone connection to the card.
Channel/card is in state Broken.	<p>Follow the repair procedure for message MTC003 provided in Chapter 2, "System Message Listings," in <i>INTUITY™ CONVERSANT® System Version 6.0 Alarms and Log Messages</i>, 585-310-182 for the procedure.</p>

Reducing Load

This repair procedure is provided to enable application developers and system administrators to troubleshoot the root cause of system problems. Problems related to performance depend on a wide range of variables; understanding the nature of the problem requires a good understanding of the attributes of the system which effect performance. See Chapter 7, "Performance Information," in *INTUITY™ CONVERSANT® System Version 6.0 System Description*, 585-310-241, before attempting to troubleshoot complex performance-related problems.

**NOTE:**

Every INTUITY CONVERSANT system must have a minimum of 32 Mbyte of memory.

The information provided in this section is platform related. Rule out application related performance problems first before proceeding this procedure.

Indicators of Performance Problems

Most performance-related problems become noticeable through either reports of slow response time from end users or performance- or load-related error messages in the alarm log.

Reports of Poor Response Time

If poor response time is reported but no load-related messages are reported to the alarm log, it is likely that the response time delays are a result of

- Host transactions
- Database transactions
- Delays in custom database interface processes (DIPs) or customer IRAPI processes
- Large, complex TSM applications (for example, an application that contains multiple language options)

An application rarely experiences unacceptable delays because of voice processing (playing and coding phrases and recognizing touch tones) without alarms in the alarm log. Voice processing shows little change in response time as system load increases. Typically, if load increases to a point where the system cannot serve voice processing requests in real time, alarms are logged.

Reports of System Inaccessibility

Typically, if load increases to a point where the system cannot serve voice processing requests in real time, alarms are logged. However, if the system is inaccessible, the alarms logged are also inaccessible. UNIX interprocess communication (IPC) message queues may indicate that the system may be nearing its load threshold.

Load-Related Messages in the Alarm Log

Load-related messages in the alarm log indicate that voice processing cannot be carried out in real time because of excessive system load. Components of the system which affect voice processing include

- Central processing unit (CPU)
- Memory
- Hard disk drives

Identifying Load Culprits

Before attempting to analyze the application for load liabilities, it is important to remember that processing external to the application may be the cause of load related problems. Check that none of the following occur at times when load-related alarms are reported:

- Use of the INTUITY CONVERSANT Script Builder application generator on a production machine during peak load hours
- Excessive use of call data event tracking
- Excessive requests to the 3270 host interface
- Reading of large (more than 500 records) database tables that are not indexed
- Reading of and writing to database tables exclusively
- Use of the system monitor program with a fast refresh rate
A fast refresh rate is anything less than the default rate of 5 seconds.
- Requests of call data reports during peak load periods
- Performance of other operation, administration, and maintenance (OA&M) functions (includes backups, speech administration, etc)
- ASCII to FAX conversions when using Script Builder FAX Actions
- System cron jobs

NOTE:

Every day at 12:15 a.m. all call data is summarized. If this coincides with even low voice processing activity, alarms may be reported. A possible solution is to modify the crontab entry for a time with less load.

If sources of external load have been ruled out, continue with the following sections.

Checking CPU Resources

To check the CPU resources do the following

1. Enter **sar**



NOTE:

The **sar** command reports system activity reports for a wide variety of system resources. (See **sar(1m)** in the *UNIX SVR4.2 Command Reference* for a complete description.)

The system displays the CPU Resources screen ([Figure 1-2](#)).

```
00:00:00  %usr      %sys      %wio      %idle
01:00:00    0         0         0         100
02:00:00    0         0         0         100
03:00:00    0         0         0         100
04:00:00    0         0         0         100
05:00:00    0         0         0         100
06:00:00    0         0         0         100
07:00:00    0         0         0         100
08:00:00    0         0         0         100
08:20:00    0         0         0         100
08:40:00    0         0         0         100
09:00:00    0         0         0         99
09:20:00    0         0         0         99
09:40:00    0         4         1         95
10:00:00    9         43        3         45
10:20:00   10         36        2         52
10:40:00   10         23        2         65
11:00:00    9         23        2         65
11:20:00    2         4         1         93
11:40:00    0         0         0         99
```

Figure 1-2. CPU Resources Screen



NOTE:

To display current CPU usage every 5 seconds for 50 seconds, enter **sar 5 50**

If the CPU Resources screen shows CPU usage (the sum of columns 2 and 3, **usr + sys**) over 60 percent during the busy hour or when alarms are logged, it is likely that alarms are a result of over utilization of CPU resources.

The output of the second command should only be considered during the busy hour and CPU usage should again be below 60 percent. If either of these test show CPU utilization consistently over 60 percent it is likely that the CPU is the problem.

See [“Reducing CPU Usage”](#) below.

Checking Disk Resources

To check the disk resources do the following

1. Enter **sar -c** or **sar -c 5 50**

The system displays the Disk Resources screen ([Figure 1-3](#)).

	scall/s	sread/s	swrit/s	fork/s	exec/s	rchar/s	wchar/s
00:00:00							
01:00:00	58	4	0	0.14	0.15	5219	42
02:00:00	37	2	0	0.04	0.04	202	3
03:00:00	35	2	0	0.02	0.02	180	2
04:00:00	38	3	0	0.03	0.04	522	6
05:00:00	48	3	0	0.06	0.06	634	6
06:00:00	108	16	15	0.05	0.07	2021	794
07:00:00	2246	48	1256	0.02	0.03	12984	46369
08:00:00	1841	47	804	0.11	0.13	9475	36937
08:20:00	1036	34	25	0.02	0.02	2649	17658
08:40:00	1067	39	38	0.03	0.04	3985	26619
09:00:00	246	19	5	0.10	0.10	873	3999
09:20:00	76	19	3	0.09	0.10	1956	1347
09:40:00	65	16	0	0.08	0.08	424	6
10:00:00	74	20	1	0.12	0.12	567	38
10:20:00	72	20	1	0.08	0.08	423	15
10:40:00	73	20	1	0.08	0.08	464	17
11:00:00	87	24	5	0.11	0.11	2005	857
11:20:00	78	22	2	0.10	0.10	1001	82
11:40:00	103	27	2	0.27	0.30	3206	195

Figure 1-3. Disk Resources Screen

NOTE:

If the sum of the **rchar/s** and **wchar/s** columns is consistently greater than 320000 during the busy hour, then it is likely that the disk is the problem. See [“Reducing CPU Usage”](#) for repair procedures.

Checking Memory Resources

To check the CPU resources do the following

1. Enter **sar -p** or **sar -p 5 50**

The system displays the Memory Resources screen ([Figure 1-4](#)).

	atch/s	pgin/s	ppgin/s	pflt/s	vflt/s	slock/s
18:42:03	0.00	7.75	9.54	0.00	12.13	0.00
18:42:08	4.79	22.75	28.14	0.00	28.34	0.00
18:42:13	6.96	34.79	40.76	0.00	42.74	0.00
18:42:18	3.19	17.93	23.31	0.00	25.10	0.00
18:42:23	9.56	9.96	11.95	0.00	19.52	0.00
18:42:28	5.18	10.16	11.75	0.00	15.54	0.00
18:42:33	3.19	6.37	7.17	0.00	11.95	0.00
18:42:38	3.17	8.33	9.13	0.00	13.29	0.00
18:42:43	0.60	13.94	17.33	0.00	19.52	0.00
18:42:48	0.00	8.76	9.16	0.00	16.33	0.00
18:42:53	0.80	11.16	11.35	0.00	21.12	0.00
18:43:03	0.40	5.98	5.98	0.00	10.76	0.00
18:43:08	0.00	9.38	10.58	0.00	15.57	0.00
18:43:13	0.20	9.36	10.96	0.00	17.53	0.00
18:43:18	0.60	10.76	13.75	0.00	17.93	0.00
18:43:23	3.59	5.79	6.79	0.00	8.98	0.00
18:43:28	1.39	8.95	9.74	0.00	13.92	0.00
18:43:33	6.79	9.18	12.18	0.00	17.96	0.00
18:43:38	0.20	6.96	7.95	0.00	12.33	0.00
18:43:43	0.00	6.97	8.76	0.00	12.75	0.00
18:43:48	0.00	6.35	6.94	0.00	12.30	0.00
18:43:53	0.00	12.50	14.88	0.00	19.64	0.00
18:43:58	0.80	6.96	7.95	0.00	12.92	0.00

Figure 1-4. Memory Resources Screen

2. Check the column labeled `vflt/s`. Note if this value is consistently close to or greater than 50.00 and continue with Step 3.

⇒ NOTE:

Processes being created and terminated regularly will also cause `vflt/s` to increase. If this is the case, memory may be sufficient, but the creation of processes is forcing the operating system to *page* processes to disk and back into memory. When processes are paged, they respond more slowly and speech processing may be interrupted.

3. Enter **sar -g** or **sar -g 5 50**

The system displays the Memory Resources screen ([Figure 1-5](#)).

	pgout/s	ppgout/s	pgfree/s	pgscan/s
18:42:03				
18:42:08	4.97	20.87	27.04	49.30
18:42:13	10.18	35.93	40.52	152.69
18:42:18	5.37	16.90	20.08	68.99
18:42:23	7.97	32.87	33.47	21.71
18:42:28	5.58	11.16	15.54	43.82
18:42:33	3.78	19.52	21.31	23.71
18:42:38	4.58	7.57	14.54	52.39
18:42:43	6.55	9.72	13.69	39.09
18:42:48	7.57	28.09	32.47	34.46
18:42:53	9.16	18.33	25.90	62.75
18:42:58	13.94	16.93	29.28	98.41
18:43:03	6.97	15.94	17.73	18.53
18:43:08	7.39	31.74	34.13	16.97
18:43:13	8.17	23.11	29.88	47.41
18:43:18	16.93	45.82	52.19	58.37
18:43:23	5.79	36.73	36.73	0.00
18:43:28	4.77	29.42	29.42	0.00
18:43:33	2.99	14.77	15.97	5.59
18:43:38	8.75	28.43	35.59	158.05
18:43:43	7.97	31.87	32.87	30.88
18:43:48	5.56	31.94	32.54	22.82
18:43:53	10.91	33.93	41.27	90.48
18:43:58	12.92	45.33	50.89	60.64

Figure 1-5. Memory Resources Screen

4. Check the column labeled `pgscan/s`. Note if this value is consistently close to or greater than 100 and continue with Step 5.
5. Enter `sar -r`

The system displays the Memory Resources screen ([Figure 1-6](#)).

```
18:42:03 freemem freeswp
18:42:08      82  10406
18:42:13      92  10406
18:42:18     105  10406
18:42:23     102  10405
18:42:28      94  10405
18:42:33      99  10405
18:42:38      96  10405
18:42:43      86  10405
18:42:48     113  10405
18:42:53      87  10405
18:42:58      79  10405
18:43:03     107  10405
18:43:08     106  10405
18:43:13      93  10405
18:43:18      98  10405
18:43:23     167  10405
18:43:28     136  10405
18:43:33     106  10405
18:43:38      86  10405
18:43:43      97  10405
18:43:48      90  10405
18:43:53      79  10405
18:43:58      84  10405
```

Figure 1-6. Memory Resources Screen

6. Check the column labeled `freemem`. Note if this value is consistently close to or less than 100.
7. If two or more values consistently follow the pattern listed below, see ["Reducing Memory Usage"](#) for more information.

```
vflt/s > 50.00
```

```
pgscan/s > 100
```

```
freemem < 100
```

Also, make sure that the appropriate number of SP/SSP circuit cards in your system are assigned the VOICE function. See "SP/SSP Functions" in Chapter 3, "Voice System Administration," of *INTUITY™ CONVERSANT® System Version 6.0 Administration*, 585-310-591.

Reducing Load for Host

Tune the 3270 host interaction.

The following procedures should be considered for reducing the load for the host.

- Limit the number of screens that must be sent to or retrieved from the host, making the voice system less dependent on host performance.
- The parameters associated with the host can impact system performance. Make sure that time-out periods are long enough for the host to respond but not too long so that the caller must wait unnecessarily. Be aware of how the parameters are used and what is typical for the host system. Keep track of how many LUs the system has and how many channels are to be used. For example, if a system with one host communication board (32 LUs available) has 48 calls active each of which needs to access the host, 16 callers are locked out of the host if LUs are not shared (that is, if the LUs are reserved).
- For host systems that are known to be slow at times, one way of hiding the pause from the host is to use an announce statement between the send host screen and the get host screen statements. For example:
 1. Prompt and Collect (get card number)
 2. Get Host Screen A
 3. Send Host Screen A (send the card number to the host application)
 4. Announce (repeat the card number to the caller)
 5. Get Host Screen (retrieve caller data)

This would cover part of the time that the host is slow in processing the user-input card number with an announce statement that repeats the number back to the user. By the time the announce is completed, the host may have responded. Thus the user does not realize the gap caused by the slow host response.

- Consider checking the speed of the host link. Increasing the speech of the link to 19.2 or 56 Kbps may decrease any delays in host processing.

Reducing Load for Database

The following should be considered to reduce load because of use of the local database.

- For large tables (over 500 records) that are being read by the application, indexing the tables reduces the access time and impact on system performance. However, note that making changes to indexed tables can also impact system performance.

- The insert (add) record operation is a much faster operation than the update (change) operation. One way to replace a change record with an add record is to add records to a table during the normal call hours and write a shell routine using SQL*PLUS to summarize and delete records during nonpeak hours.
- Attempt using SQL*Views to encapsulate common database queries which require multiple accesses on a single table or accesses from multiple tables.
- Keep in mind that each call data event is a unique record in more than one table. Therefore, every time a call data event is accessed, the database table is updated at the end of the call.

Reducing Load for Custom DIPs/IRAPI Processes

Since DIPs can vary widely in size and complexity there is little specific information that can be given about DIP performance. In general, DIPs should

- Avoid using excessive memory (more than 200 pages)
- Avoid creating new processes (by using **fork(2)** and **exec(2)** or **system(3)**)
- Rely on minimal communication with the script to reduce message sending

Reducing Load for Voice Processing

See Chapter 7, "Performance Information," in *INTUITY™ CONVERSANT® System Version 6.0 System Description*, 585-310-241, for a more detailed explanation the performance of voice processing. The information below simply attempts to give a step-by-step approach to reducing speech-processing load.

Voice Play

Voice play performance is affected by the

- Coding algorithm
- Phrase length
- Speech pool

Coding Algorithm

Coding algorithm primarily determines how much data must be transferred to do voice processing. Coding algorithms such as SBC16, ADPCM16, and CELP16 pack 4 seconds of speech in a single 8-Kbyte block and show the best performance. PCM64 is at the other extreme of the spectrum; it packs 1 seconds of speech in a single block, and therefore requires the system to do four times the work in the same time. ADPCM32 is the standard coding rate. ADPCM32 is a

middle ground between performance and sound quality. It packs 3 seconds per block. SBC 24 packs 3 seconds per block. Sound quality must be considered before moving to the SBC16 or ADPCM16 coding algorithms.

Phrase Length

Short phrases (less than 2 seconds for ADPCM32), particularly when played back-to-back (such as through a single Script Builder Announce action), place more load on the system than a single longer phrase. The load manifests itself as increased CPU usage, memory occupancy and, if the speech pool size (see the following paragraph) is larger than the speech buffer cache, disk accesses.

For optimal performance, phrase length should be as close to the total capacity of its block count as possible. Block count is the number of speech blocks required to contain the phrase. If speech does not use blocks efficiently, space is wasted in memory and since data is copied over from disk in block sized chunks, disk accesses and CPU usage increase. For example, a phrase that uses an odd number of seconds (that is, 1, 3, 5, etc) uses only 50 percent of a block, whereas a 2-second phrase uses the entire block. However, the system utilizes CPU and disk resources more efficiently when speaking a 5-second phrase rather than 5 individual 1-second phrases. Placing longer phrases into one Announce step is much better than using separate short phrases.

Speech Pool

The speech pool is the quantity of speech data required by an application. It can be thought of as the *working set* for those familiar with virtual memory operating system terminology. The voice system caches speech in main memory. This is called the speech buffer cache, and it allows speech data to be reused without having to constantly retrieve it from disk. If all the active speech data can fit into memory simultaneously, the voice system will not have to continually access the disk for speech data. This results in a substantial savings in both CPU usage and disk accesses. If, however, the speech pool size is larger than the speech buffer cache, then the voice system will have to access the disk more frequently for speech. The larger the speech pool, the more likely speech will have to read from disk.

Calculating speech pool size requires knowing which phrases are usually played during normal script processing and how many blocks of speech these phrases require. See the paragraph above regarding block capacity for various coding algorithms. Calculating the size of the buffer cache requires a meticulous analysis of the application and an understanding on how users progress through a typical call scenario.

The size of the buffer cache is tunable by adding the `nbufs` parameter in the `/vs/data/spchconfig` file. VROP sets this value dynamically based on the number of telephone network connections in the system. The entry in the `/vs/data/spchconfig` file overrides the VROP setting. Note that you may not set this value to more than 250. A system showing signs of heavy disk activity, a large speech pool, and no appreciable paging activity may be a candidate for specifying the `nbufs` parameter. Modifying this dynamically assigned value

should be done with extreme caution. Making this number too large may result in system paging, which is the worst condition the voice system can get into with respect to performance.

Reducing Voice Play Load

Reducing load because of voice play requires maximizing speech buffer efficiency, matching the speech pool size to the speech buffer cache, or considering the use of different coding rates which pack more speech into a single block or disk load balancing.

Maximal speech buffer efficiency may be achieved through the concatenation of several small phrases into a single larger phrase. The common practice of trimming silence from the ends of phrases and replacing the silence with short silent phrases is particularly inefficient. Playing silence to introduce delays is also inefficient. Try using the **sleep** instruction as described in Appendix A, "Summary of Script Instructions," of *INTUITY™ CONVERSANT® System Version 6.0 Application Development with Advanced Methods*, 585-310-761.

Matching the speech pool size with the speech buffer cache may be achieved through increasing speech buffer efficiency as described above, and ensuring that phrases are shared both with and between applications.

Voice Code

Performance because of voice coding is affected as is voice play with respect to phrase length and coding algorithm. Voice coding differs in speech pool size. All coded phrases are *new*, that is, there is no benefit from the speech buffer cache. Indeed, it is likely that coding phrases will force other phrases, which may be likely to be played soon, to be flushed from the cache. Coding will also require a write to disk for each phrase coded. These two factors combine to increase load on the disk. Increased disk load because of coding may be addressed by switching coding algorithms, reducing channel counts or code times, or balancing the disk load.

Reducing CPU Usage

Application types making heavy use of CPU resources typically include those with heavy voice processing or local database loads. See ["Reducing Load for Voice Processing"](#) and ["Reducing Load for Database"](#) above for more information. If these software components do not appear to be responsible, the following sections suggest other possibilities.

Inefficient DIPs

See ["Reducing Load for Custom DIPs/IRAPI Processes"](#) above.

Run Away Processes

If the **sar(1m)** command consistently shows 0 percent idle time, it is likely that a process is in an infinite loop. The process can be identified with **ps(1m)** by examining the change in its CPU time and run status. If it is a system process, contact a service representative. If it is a user process, repair as required.

Inefficient Scripts

Script developers can writing applications that inherently use system resources inefficiently or are extremely large and complex. Since scripts are interpreted, attempting to use the script language or Script Builder for anything but basic call flow control may result in unacceptable inefficiencies. Code segments performing complex lexical or arithmetic calculations should be considered as candidates for DIPs. Also, increase efficiency by creating modular applications that execute several smaller applications from a main application. For example, a main application could allow a user to select a language application (that is, a version of an application in a particular language). The user input would then execute the language application from the main application.

Reducing Disk Usage

Applications making heavy use of voice processing or a local database typically place heavy loads on the disk. See the [“Reducing Load for Voice Processing”](#) and [“Reducing Load for Database”](#) sections. If problems persist, consider rechecking paging activity and memory usage. Also, consider adding more disks to your platform or disk load balancing or investigate more complex disk mirroring or disk striping. See the performance information in *INTUITY™ CONVERSANT® System Version 6.0 System Description*, 585-310-241, for information about the performance penalties for excessive use of call data events. Be sure that you application falls within the guidelines specified.

Reducing Memory Usage

If you have concluded that your system does not have sufficient memory, the first thing to consider is the processes you have running. Be sure to check [“Identifying Load Culprits”](#) above to rule out the effects of external processing. [Table 1-17](#) lists the processes that can be terminated if they are not providing a service to the application.

Table 1-17. Processes which may be Terminated

xferdip	This process is used only in bridging applications. Enter xferdip_off to terminate the process.
lpsched	This process is only required if a line printer is being used with the system. The command /usr/lib/lpshut can be used to turn off the lp scheduler. You may also rename the S80lp file from the /etc/rc2.d directory to s80lp . This action prevents the process from being execute during startup, but maintains the file on the system should the scheduler be needed in the future.
Network	Some networking processes such as rwhod and routed may be unnecessary.
sysmon	Do not run sysmon in systems with insufficient memory.

If no processes can be eliminated, be sure that all the packages on your system are being used and are not occupying memory unnecessarily.

Also be aware that script size, both code and data, affects memory usage. Application scripts should be shared across channels whenever possible, and redundant code and data should be eliminated.

Finally, if the `nbufs` parameter has been specified in the `/vs/data/spchconfig` file and a large number is specified (see [“Speech Pool”](#) above), consider reducing `nbufs`. The effect of reducing `nbufs` may be an increase in disk accesses for speech, however, the voice system is more tolerable to disk accesses for speech than for paging.

Diagnostics

2

Overview

This chapter describes diagnostic procedures for the INTUITY™ CONVERSANT® system.

Purpose

The purpose of this chapter is to provide the on-site technician or system administrator with the correct procedures to diagnose trouble with the INTUITY CONVERSANT system.

Circuit Card Diagnostics

The following diagnostics can be performed on

- Tip/Ring circuit cards
- SSP circuit cards

Checking Cable Connections for Cables other than the TDM Bus Cable

To check cable connections, do the following:

1. Route calls away from the system during this procedure.
2. Make sure that you know the type of card to be checked.
3. Write down the message text so that when the system is shutdown, you know for which card you are performing this procedure.
4. Shutdown the operating system. See "[Shutting Down the Operating System](#)", in [Chapter 3, "Common System Procedures"](#), for the procedure.
5. Access the circuit card cage. See the "Getting Inside the Computer" chapter of your platform maintenance book.
6. Check the cable connections to be sure they are properly connected to the appropriate cards. See the "Replacing or Installing Circuit Cards" chapter of your platform maintenance book.

If a cable is not seated properly, reseal the cable and continue with [Step 7](#).

If the cables appear to be inserted properly, complete the following Steps a through c before continuing with [Step 7](#).

- a. Remove the cables other than the TDM Bus cable.



NOTE:

Do not remove the TDM Bus cable at this time.

- b. Remove the circuit card from the system. See the "Replacing or Installing Circuit Cards" chapter of your platform maintenance book..
- c. Replace the circuit card. See the "Replacing or Installing Circuit Cards" chapter of your platform maintenance book.



NOTE:

Do not reseal the cables on the circuit card.

7. Reboot the operating system. See "[Rebooting the UNIX System](#)" in [Chapter 3, "Common System Procedures"](#), for the procedure.

8. Enter **diagnose card <card number>**

where <card number> is the number of the identified circuit card.

If the circuit card passes diagnostics, and is on the TDM bus, continue with Step [9](#).

If the circuit card passes diagnostics and is not on the TDM bus, replace the cables you removed earlier and restore the system to service.

If the circuit card fails diagnostics, replace the circuit card and restore the system to service. See the “Replacing or Installing Circuit Cards” chapter of your platform maintenance book.

9. Enter **diagnose bus x**

where x is the number of bus.

 **NOTE:**

X must be either 1 or all.

If the circuit card passes this diagnostic, replace the cables removed in [“Checking Cable Connections for Cables other than the TDM Bus Cable”](#).

If the circuit card fails this diagnostics, continue with the next procedure, [“Checking the Terminating Resistors”](#).

Checking the Terminating Resistors

To check the terminating resistors, do the following:

1. Shutdown the operating system. See [“Shutting Down the Operating System”](#) in [Chapter 3, “Common System Procedures”](#), for the procedure.
2. Verify that the terminating resistors are inserted correctly. See the “Replacing Other Components” chapter of your platform maintenance book.

 **NOTE:**

The AYC5B and AYC11 do not require orientation of the terminating resistors.

If the terminating resistors are inserted correctly, continue with Step [3](#).

If the terminating resistors have not been inserted correctly, complete Steps a through c:

- a. Insert the terminating resistors correctly.
- b. Reboot the system. See [“Rebooting the UNIX System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.

- c. Enter **diagnose card <card number>**
where <card number> is the number of the identified circuit card.
If the circuit card passes diagnostics, restore the system to service.
If the circuit card does not pass the diagnostic, continue with Step [3](#).
3. Verify that terminating resistors for the TDM bus exist only on the circuit cards connected at either end of the TDM bus.
If the other circuit cards do not have terminating resistors, continue with the next procedure [“Checking the Switch Settings”](#).
If the other circuit cards have terminating resistors, complete Steps a through c:
 - a. Remove the terminating resistors.
 - b. Reboot the system. See [“Rebooting the UNIX System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - c. Enter **diagnose card <card number>**
where <card number> is the number of the identified circuit card.
If the circuit card passes diagnostics, restore the system to service.
If the circuit card does not pass the diagnostic, continue with the next procedure, [“Checking the Backplane Slot”](#).

Checking the Backplane Slot

To check the backplane slot, do the following:

1. Shut down the system. See [“Shutting Down the Operating System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
2. Change the slot in which the circuit card resides.
3. Login as root.
4. Start the voice system. See [“Starting the Voice System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
5. Enter **display card <card number>**

where <card number> is number of the affected circuit card.

If the circuit card state has changed to MANOOS, enter **restore card <card number>**

where <card number> is the number of the affected circuit card.

You have repaired the circuit card problem.

If the circuit card state has not changed to MANOOS, continue with the next procedure [“Checking the Switch Settings”](#).

Checking the Switch Settings

To check the switch settings, do the following:

1. Check the circuit card for proper switch settings. See the “Replacing or Installing Circuit Cards” chapter of your platform maintenance book.
2. Toggle the switches to ensure a clean closure.
3. Check the chips on the card.

If any are not properly seated, reseal them.

4. Check the switches on all other similar circuit cards in the system.

For example, if the circuit card is a Tip/Ring circuit card, check the switch settings on all of the Tip/Ring circuit cards. See the “Replacing or Installing Circuit Cards” chapter of your platform maintenance book.

5. Toggle the dip switches to ensure a clean closure.
6. Reboot the system. See [“Rebooting the UNIX System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
7. Login as root.
8. Start the voice system. See [“Starting the Voice System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.

9. Enter **displaycard <card number>**
where <card number> is number of the affected circuit card.

If the circuit card state has changed to MANOOS, enter **restorecard <card number>**

where <card number> is the number of the affected circuit card.

You have repaired the circuit card.

If the circuit card state has not changed to MANOOS, continue with Step [10](#).

10. Shut down the system. See [“Shutting Down the Operating System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
11. Reverse the switch settings of the suspect circuit card with a similar circuit card in the system.
12. Reboot the system. See [“Rebooting the UNIX System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
13. Login as root.
14. Start the voice system. See [“Starting the Voice System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.

15. Enter **display card <card number>**

where <card number> is number of the affected circuit card.

If the circuit card state has changed to MANOOS, enter **restore card <card number>**

where <card number> is the number of the affected circuit card.

If the problem migrates with the switch setting, it is attributable to a software problem and not a hardware problem.

If the problem remains with the suspect circuit card, replace the suspect circuit card. See the "Replacing or Installing Circuit Cards" chapter of your platform maintenance book.

Checking the Other Circuit Cards

If the above procedures have been attempted and the problem still exists, the problem may be attributed to another circuit card in the system. To determine which card, do the following:

1. Run diagnostics on all remaining cards in the system by entering **diagnose card all**
2. Observe the diagnostics for any failures.

If any circuit card fails diagnostics, perform the above procedures on that circuit card to determine if it is the source of the problem.

If all cards pass diagnostics, contact your service representative.

Checking a Circuit Card Using the INTUITY CONVERSANT Windows

The INTUITY CONVERSANT windows can be used to check the status of

- Tip/Ring circuit cards
- IPCI circuit cards
- Fax circuit cards

Checking a Tip/Ring Circuit Card

It is possible to check the entire Tip/Ring circuit card or to check a single channel on the Tip/Ring circuit card.

Checking the Tip/Ring Circuit Card

To check a circuit card using the INTUITY CONVERSANT windows, do the following:

1. Start at the Voice System Administration menu ([Figure 2-1](#)).

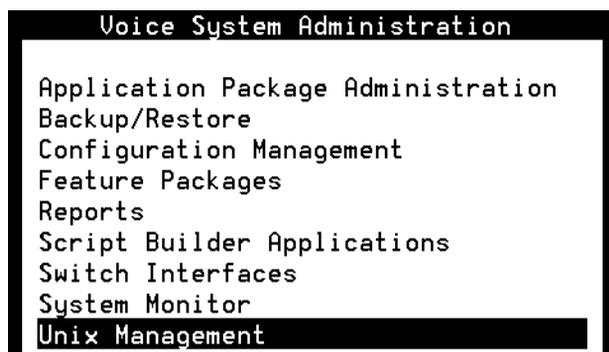
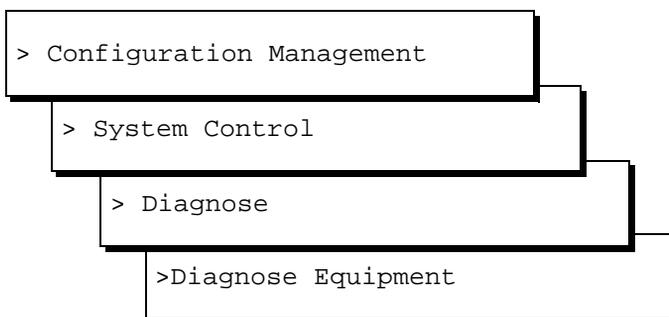


Figure 2-1. Voice System Administration Menu

2. Select



The system displays the Diagnose Equipment Window ([Figure 2-2](#)).

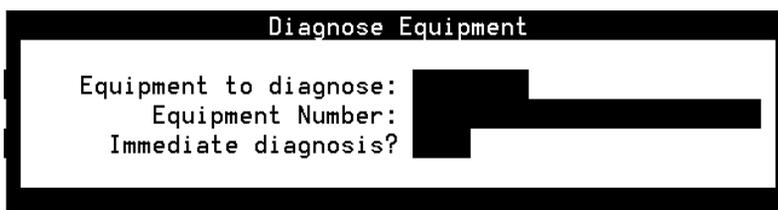


Figure 2-2. Diagnose Equipment Window

3. Enter **card** in the `Equipment to diagnose` field.
4. Enter a card number, valid range, or all in the `Equipment Number` field.

**NOTE:**

Enter circuit card ranges using one of the following formats:

0,1,2

0 1 2

0-2

5. If you want to conduct an immediate diagnosis, enter **y** in the `Immediate diagnosis` field.

**NOTE:**

Immediate diagnosis takes the specified channels out of service immediately even if a call is in progress.

If you do not want to conduct an immediate diagnosis, enter **n** in the `Immediate diagnosis` field.

**NOTE:**

The system waits until all specified channels are idle before beginning the diagnosis.

6. Press `(SAVE)` (F3).

The system removes the circuit card from service and runs the diagnostics.

If the circuit card passes the diagnostics, the system displays the following message before placing the circuit card back in service:

```
Diag <card>, Passed
```

If the circuit card did not pass the diagnostics, the system displays the following message:

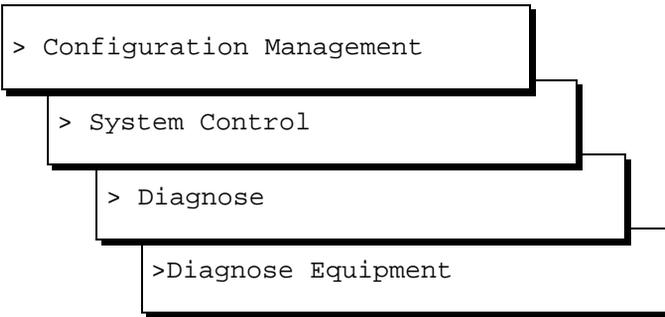
```
Diag <card>, Failed
```

Replace the circuit card.

Checking a Tip/Ring Circuit Card Channel

To check a Tip/Ring circuit card channel using the INTUITY CONVERSANT windows, do the following:

1. Starting at the Voice System Administration menu ([Figure 2-1](#)), select



The system displays the Diagnose Equipment Window ([Figure 2-2](#)).

2. Enter **channel** in the `Equipment to diagnose` field.
3. Enter a channel number, valid range, or all in the `Equipment Number` field.

**NOTE:**

Enter circuit card ranges using one of the following formats:

```
0,1,2
0 1 2
0-2
```

4. If you want to conduct an immediate diagnosis, enter **y** in the `Immediate diagnosis` field.

**NOTE:**

Immediate diagnosis takes the specified channels out of service immediately even if a call is in progress.

If you do not want to conduct an immediate diagnosis, enter **n** in the `Immediate diagnosis` field.

**NOTE:**

The system waits until all specified channels are idle before beginning the diagnosis.

5. Press **(SAVE)** (F3).

The system removes the channel from service and runs the diagnostics.

If the channel passes the diagnostics, the system displays the following message:

```
Found loop current on Channel X
Channel X state changed to INSERV.
Request to diagnose Tip/Ring chan X completed
```

If the circuit card did not pass the diagnostics, replace the circuit card.

Checking an IPCI Circuit Card

To check an IPCI circuit card, do the following:

1. Starting at the Voice System Administration menu ([Figure 2-1](#)), select

```
> Feature Packages
> ASAI Administration
> Diagnose IPCI Board
```

The system displays the Diagnose IPCI Board window ([Figure 2-3](#)).

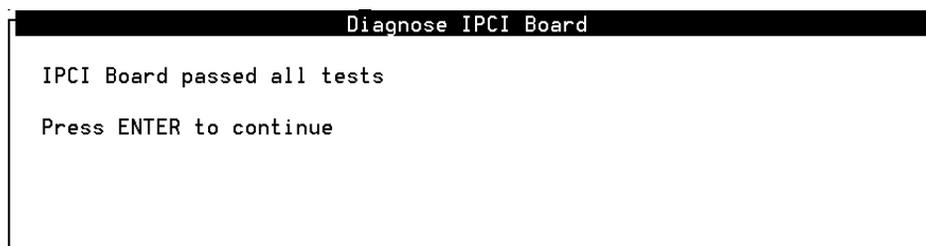


Figure 2-3. Diagnose IPCI Board Window

2. Press **(ENTER)**.

The system displays the ASAI Administration menu ([Figure 2-4](#)).

```
ASAI Administration
Channel Administration
>Diagnose IPCI Board
Domain Administration
Initialize IPCI Board
Parameter Administration
Show ASAI Software Version
Show Status of ASAI Link
Take IPCI Board Off-Line
```

Figure 2-4. ASAI Administration Menu

If the IPCI circuit card passes the diagnostics, you have completed the procedure.

If the IPCI circuit card fails the diagnostics, replace the circuit card.

Checking a FAX Circuit Card

It is possible to check the entire FAX circuit card or to check a single channel on the FAX circuit card.

Checking the FAX Circuit Card

To check a FAX circuit card, do the following:

1. Starting at the Voice System Administration menu ([Figure 2-1](#)), select

```
>Application Package Administration
```

```
>Script Builder FAX Actions
```

```
>FAX Equipment Operations
```

```
>FAX Equipment Diagnostics
```

The system displays the FAX Equipment Diagnostics window ([Figure 2-5](#)).

Diagnose FAX Equipment	
Equipment to Diagnose:	_____
Equipment Number:	_____
Immediate Diagnosis?:	___

Figure 2-5. FAX Equipment Diagnostics Window

2. Enter **card** in the `Equipment to diagnose` field.
3. Enter a card number, valid range, or all in the `Equipment Number` field.



NOTE:

Enter circuit card ranges using one of the following formats:

0,1,2

0 1 2

0-2

4. If you want to conduct an immediate diagnosis, enter **y** in the `Immediate diagnosis` field.



NOTE:

Immediate diagnosis takes the specified channels out of service immediately even if a call is in progress.

If you do not want to conduct an immediate diagnosis, enter **n** in the `Immediate diagnosis` field.



NOTE:

The system waits until all specified channels are idle before beginning the diagnosis.

5. Press **(SAVE)** (F3).

The system displays the FAX Equipment Diagnostics Results window ([Figure 2-6](#)).

```
FAX Equipment Diagnostic Results

Non-Immediate Diagnosis Requested

Diagnosing FAX Card 1...

FAX Channel 4 (Port 0) Passed Test
FAX Channel 5 (Port 1) Passed Test
FAX Channel 6 (Port 2) Passed Test
FAX Channel 7 (Port 3) Passed Test
```

Figure 2-6. FAX Equipment Diagnostics Results Window

6. If the FAX circuit card passes the diagnostics, you have completed the procedure.

If the FAX circuit card fails the diagnostics, replace the circuit card.

Checking a FAX Circuit Card Channel

To check a FAX circuit card channel, do the following:

1. Starting at the Voice System Administration menu ([Figure 2-1](#)), select

```
> Application Package Administration
> Script Builder FAX Actions
> FAX Equipment Operations
> FAX Equipment Diagnostics
```

The system displays the FAX Equipment Diagnostics window ([Figure 2-5](#)).

2. Enter **channel** in the `Equipment to diagnose` field.
3. Enter a channel number, valid range, or all in the `Equipment Number` field.

➤ NOTE:

Enter circuit card ranges using one of the following formats:

```
0,1,2
0 1 2
0-2
```

4. If you want to conduct an immediate diagnosis, enter **y** in the `Immediate diagnosis` field.

**NOTE:**

Immediate diagnosis takes the specified channels out of service immediately even if a call is in progress.

If you do not want to conduct an immediate diagnosis, enter **n** in the `Immediate diagnosis` field.

**NOTE:**

The system waits until all specified channels are idle before beginning the diagnosis.

5. Press `(SAVE)` (F3).

The system displays the FAX Equipment Diagnostics Results window ([Figure 2-6](#)).

6. If the FAX circuit card channel passes the diagnostics, you have completed the procedure.

If the FAX circuit card channel fails the diagnostics, replace the circuit card.

Checking an EQUINOX Multi-Port Serial Circuit Card

To check a multi-port serial circuit card, do the following:

1. At the UNIX prompt, enter `/usr/bin/megadiag`

The system displays the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-7](#)).

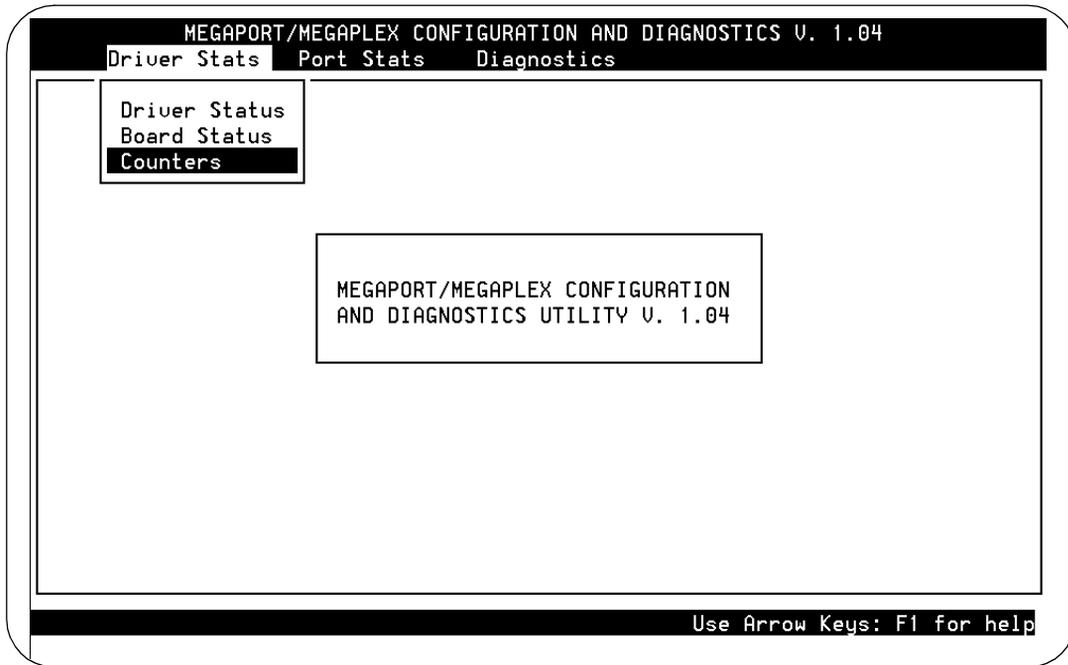


Figure 2-7. Megaport and Megaplex Configuration and Diagnostics Screen

The Megaport and Megaplex Configuration and Diagnostics screen contains a menu bar with the options Driver Stats, Port Stats, and Diagnostics.

Use the right and left arrow keys on the keyboard to move between the menu bar options.

Use the up and down arrow keys to move between menu options.

Press **(ENTER)** to select a menu option.

Press **(F1)** for help.

Press **(ESC)** to exit.

Displaying Serial Port Driver Stats

The serial port driver stats include:

- Drive Status
- Board Status

Driver Status

The Driver Status option displays the device driver's current configuration including the driver version, number of boards configured, number of boards found, and memory mapping.

To display the drive status, do the following.

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-7](#)).
2. Place the cursor on `Driver Stats`.
3. Place the cursor on `Driver Status`.
4. Press `(ENTER)`.

The system displays the Driver Status window ([Figure 2-8](#)).

```
Driver Status
Equinox Megaport STREAMS Device Driver, Version 2.24a
Currently configured for 1 board(s) (logical).
Number of boards found: 1
Board address      BUFFER          REGISTER
Board # 1         0x000D0000    0x000D2000
```

Figure 2-8. Driver Status Window

Board Status

To display the board status, do the following.

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-7](#)).
2. Place the cursor on `Driver Stats`.
3. Place the cursor on `Board Status`.
4. Press `(ENTER)`.

The system displays the Board Status menu ([Figure 2-9](#)).

```
Board
/dev/ttysa[a-x]
/dev/ttysb[a-x]
/dev/ttysc[a-x]
/dev/ttysd[a-x]
/dev/ttyse[a-x]
/dev/ttysf[a-x]
/dev/ttysg[a-x]
/dev/ttys h[a-x]
/dev/ttysi[a-x]
/dev/ttysj[a-x]
```

Figure 2-9. Board Status Menu

Displaying Port Stats

Three options are available on the Port Stats menu:

- Port Status
- Termio
- Register Dump

These options allow the system to show certain port characteristics.

Port Status

The Port Status selection is a real-time representation of the RS-232 leads. It includes:

- Transmit rate
- Receive rate
- Total characters received
- Total characters transmitted
- Buffered data counts

The Port Status display is useful in troubleshooting wiring problems, chattering lines or devices (modems) and in monitoring load activity over a single line. Activity measurements can be taken by noting the Transmitted and Received counts and comparing them with other serial ports.

To display the port status, do the following.

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-7](#)).
2. Place the cursor on `Port Stats`.
3. Place the cursor on `Port Status`.
4. Press `(ENTER)`.

The system displays the Prompt window ([Figure 2-10](#)).

```
device: /dev/ttyxaa
```

Figure 2-10. Prompt Window

5. Enter the name of the device to be verified.

The system displays the Port Status window ([Figure 2-11](#)).

```

                                     /dev/ttyxaa
      OUTPUT                          INPUT
      TD                               RD   OFF
      DTR                              DCD  OFF

      XON/XOFF                         XON'ed
      Status                            CLOSED
      CPS                               CPS   0
      Transmitted                       Received 0
      Buffered                           Buffered 0
  
```

Figure 2-11. Port Status Window

Termio

The Termio option displays the general terminal interface data associated with the serial card. It is similar to the “stty” command in that it prints all enabled termio flags.

To display the termio, do the following.

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-7](#)).
2. Place the cursor on `Port Stats`.
3. Place the cursor on `Termio`.
4. Press `(ENTER)`.

The system displays the Prompt window ([Figure 2-10](#)).

5. Enter the name of the device to be verified.

The system displays the Termio window .

Register Dump

The Register Dump option displays a real-time window of the on-board registers. The data is in raw form and useful to only Equinox technical personnel. It is used to obtain information about the hardware status and various software flags.

To display the Register Dump, do the following.

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-7](#)).
2. Place the cursor on `Port Stats`.
3. Place the cursor on `Register Dump`.
4. Press `(ENTER)`.

The system displays the Prompt window ([Figure 2-10](#)).

5. Enter the name of the device to be verified.

The system displays the Register Dump window ([Figure 2-12](#)).

```

Reg. dump for /dev/ttyxaa
State: 00 mp_flags: 00
cflag: 00 iflag: 522 oflag: 00 lflag: 00

txbase: 00 txidx: 00 txend: 00
rxbase: 01 rxidx: 00 rxend: 00
txcsr: 88 txbaud: FE out_ct: 3
rxcsr: 88 rxbaud: FE in_ctl: FF
txcsr: 2081 rxcsr: 2081 sample: 21
mie: 00 cie: 00 cis: C200
rxtdm: CF txtdm: C3
equlz: 00 eqmin: 00 eqmax: 00 linkst: 00
Transmit: 00 Receive: 00

```

Figure 2-12. Register Dump Window

Diagnostics

There are two options on the Diagnostics menu:

- Loopback
- Send

They are intended for the experienced user. The Loopback test is designed to diagnose the board's primary components and their functionalities. There are two types of loopback tests: internal and external. The Send test simply writes a continuous stream of data to the specified port which is helpful in resolving wiring issues.

Serial Port External Loopback Test

Although the option for the serial port external loopback test appears on the screen, this option is not available. You should use the internal loopback test option.

Serial Port Internal Loopback Test

The internal loopback test is the same as the external loopback test except that it does not require that the transmit and receive pins be wired together. Because it does not test the full cabling of the port, the internal loopback test is not as thorough as the external loopback test.

To perform the serial port internal loopback test, do the following:

1. Starting at the Megaport and Megaplex Configuration and Diagnostics screen ([Figure 2-7](#)).
2. Place the cursor on `Diagnostics`.
3. Place the cursor on `Loopback`.
4. Press `(ENTER)`.

The system displays the Loopback menu ([Figure 2-13](#)).

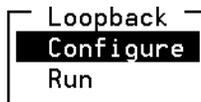


Figure 2-13. Loopback Menu

5. Place the cursor on `Configure`.
6. Press `(ENTER)`.

The system displays the Configure menu ([Figure 2-14](#)).



Figure 2-14. Configure Menu

7. Place the cursor on `Board`.
8. Press `(ENTER)`.
The system displays the Board menu ([Figure 2-9](#)).
9. Press `(ENTER)` to select the first group of ports.
10. Press `(ESC)`.
The system displays the Loopback menu ([Figure 2-13](#)).
11. Place the cursor on `Run`.
12. Press `(ENTER)`.

The system displays the Run menu ([Figure 2-15](#)).



Figure 2-15. Run Menu

13. Place the cursor on 8 Ports.
14. Press **(ENTER)**.

The system displays the Loop Type menu ([Figure 2-16](#)).

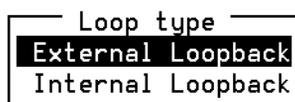


Figure 2-16. Loop Type Menu

15. Place the cursor on Internal Loopback.
16. Press **(ENTER)**.

The system displays the Internal Loopback window ([Figure 2-17](#)).

Port	Xmit	Rcu	Errors	Rate
saa	156825	151264	0	3874
sab	156825	151237	0	3874
sac	156825	151258	0	3875
sad	156825	151230	0	3876
sae	156825	151219	0	3875
saf	156825	151195	0	3870
sag	156825	151170	0	3861
sah	156825	151160	0	3857

Note
ESC to exit
F2 Reset Errors
F3 Reset Test
F4 Refresh Screen

Figure 2-17. Internal Loopback Window

Checking an Speech and Signal Processor Circuit Card

Check the SSP circuit card using the **spar** command by doing the following:

1. To create a report showing peak percent usage for the entire circuit card and each of the different algorithms, enter **spar -ap**

The system displays a message similar to the following message:

```
Signal Processing Activity Report(Peak Percent Usage By Algorithm) 10/20/1997
```

```

CARD 5  STATE: Inserv      CLASS: Signal_Processor(SP)  O.S.INDEX: 0
        NAME:  AYC2        OPTIONS: slave,tdml
        FUNCTION: play+code

        brd   wwr   fwr   echo   cca   tts   dpr   play   code   celp   fax
00:20   NA    NA
00:40   NA    NA
01:00   0     0     0     0     0     0     0     0     0     0     0
.       .     .     .     .     .     .     .     .     .     .     .
.       .     .     .     .     .     .     .     .     .     .     .
.       .     .     .     .     .     .     .     .     .     .     .
08:20   16    5     0     8     1     2     0     0     0     0     0
08:40   22    13    0     5     3     2     0     0     0     0     0
09:00   32    15    0     9     5     3     0     0     0     0     0
09:20   47    26    0     10    5     6     0     0     0     0     0
09:40   55    33    0     12    4     6     0     0     0     0     0
10:00   57    28    0     9     11    10    0     0     0     0     0
10:20   68    37    0     11    13    8     0     0     0     0     0
10:40   69    42    0     10    9     8     0     0     0     0     0
11:00   71    44    0     11    10    9     0     0     0     0     0
11:20   66    42    0     4     10    11    0     0     0     0     0
11:40   91    58    0     15    8     10    0     0     0     0     0
12:00   80    47    0     12    16    5     0     0     0     0     0
12:20   77    39    0     10    15    13    0     0     0     0     0

```

Column headings reflect percent usage for the following:

- brd — all algorithms allocated to the board; note that in a given row, the peak percentage for the board may be slightly different than the sum of the algorithm percentages because the peaks may not have occurred during the same interval. For example, if the **spadc** command collects data at 5-minute intervals, and the **spar** report displays the peak percentages for 20-minute periods, the peak percentage for the board and for each of the algorithms may have occurred during any of the four different 5-minute **spadc** periods that provide data for the 20-minute **spar** interval.
- wwr — WholeWord Recognition
- fwr — FlexWord Recognition
- echo — Echo Cancellation
- cca — Call Classification Analysis

- tts — Text to Speech
- dpr — Dial Pulse Recognition
- play — Play speech
- code — Record speech
- celp — Record speech with CELP algorithm
- fax — FAX

2. To create a report showing the average percent usage for licenses for each of the algorithms, enter **spar -l**

This command creates a report showing average percent usage of licenses for each algorithm. A partial sample output is shown below.

RTU Report (Average Percent License Utilization Across System) 10/23/1997

	tts	dpr	flex	whole	swtts	fax
00:20	0	0	0	0	0	0
00:40	0	0	0	0	0	0
01:00	0	0	0	0	0	0
.
.
.
07:00	23	0	0	0	0	2
07:20	23	0	0	0	0	2
07:40	26	0	0	0	0	3
08:00	12	0	21	0	0	0
08:20	NA	NA	NA	NA	NA	NA
08:40	NA	NA	NA	NA	NA	NA
09:00	31	0	14	0	0	0
09:20	32	0	14	0	0	1
09:40	19	0	15	0	0	0
10:00	18	0	12	0	0	3
10:20	13	0	19	0	0	3
10:40	13	0	22	0	0	3

Column headings reflect percent usage for the following:

- tts — Text to Speech
- dpr — Dial Pulse Recognition
- flex — FlexWord recognition
- whole — Whole Word recognition
- swtts — Software Text to Speech
- fax — FAX

Database Diagnostics

To check the database free space, do the following:

1. Execute the **dbfrag** command.

The system displays the System Tablespace screen ([Figure 2-18](#)).

⇒ NOTE:

The data in your System Tablespace screen may be different from the data shown in [Figure 2-18](#).

SYSTEM Tablespace, Space is in Oracle Blocks (4096 Bytes/Block)

ALLOCATED	FREE	%FREE	AVG/FRAG	LARGEST	FRAGMENTS	DB_FILES	ROLLBACK
33000	21448	64.99	7149	2148	3	1	1750

Figure 2-18. System Tablespace Screen

See Chapter 6, “Database Administration,” and Appendix A, “Summary of Commands,” in *INTUITY™ CONVERSANT® System Version 6.0 Administration*, 585-310-591, for information on the **dbfrag** command.

2. If the number in the %FREE field is less than 10, add more space to the database.

See Chapter 6, “Database Administration,” in *INTUITY™ CONVERSANT® System Version 6.0 Administration*, 585-310-591, for information on increasing the database size.

You have completed this procedure.

Extents Diagnostics

An extent is an user defined unit of storage in the ORACLE “storage” clause when defining an ORACLE object. It is used as MINEXTENTS or MAXEXTENTS in the storage clause. An ORACLE object (that is, a table, an index, a rollback segment) grows one extent in size each time the object needs to be expanded.

When the maximum allowed number of extents is reached, the object will not be able to grow further. The object needs to be redefined so that either the size of each extent is increased or the initial object size is increased, to reduce the number of extents required for the storage of this object.

The maximum allowed number of extents in an INTUITY CONVERSANT system is 249.

To check the number of extents, do the following:

1. Enter **dbused**

The system displays the Space Allocated screen ([Figure 2-19](#)).

⇒ NOTE:

The data in your Space Allocated screen may be different from the data shown in [Figure 2-19](#).

Usage for “sti/sti”

Space allocated to objects, Oracle Blocks (4096 Bytes/Block)

NAME	TYPE	BLOCKS	MBYTES	EXTENTS	MAX_EXTENTS
CCASUM	TABLE	10	.02	1	249
TRASUM	TABLE	10	.02	1	249
ABCD	TABLE	10	.02	1	249
CCA	TABLE	200	.39	1	249
EVSUM	TABLE	10	.02	1	249
RCS	TABLE	2405	4.70	121	249
CDHSUM	TABLE	10	.02	1	249
EVENTS	TABLE	1025	2.00	1	249
CALL	TABLE	515	1.01	1	249
SERVICE	TABLE	515	1.01	1	249
LDBCOLS	TABLE	10	.02	1	249
E1	INDEX	1025	2.00	1	249
C1	INDEX	515	1.01	1	249
S1	INDEX	515	1.01	1	249

Figure 2-19. Space Allocated Screen

2. Compare the value in the `EXTENTS` column to the value in the `MAX_EXTENTS` column.
3. If the value in the `EXTENTS` column is greater than or equal to the value in the `MAX_EXTENTS` column, the table has reached its maximum size.
4. Redefine the database table storage. See Chapter 6, "Database Administration," in *INTUITY™ CONVERSANT® System Version 6.0 Administration*, 585-310-591, for information on increasing the database size.

You have completed this procedure.

ORACLE Network Diagnostics

To check the ORACLE network, do the following:

1. Determine the machine name. See Chapter 6, "Database Administration," in *INTUITY™ CONVERSANT® System Version 6.0 Administration*, 585-310-591.
2. Enter **telnet *host_name***

where *host_name* is the name of the remote machine to which the database process is connected.

If the log in prompt appears on the screen, the network appears to be functioning properly. Continue with Step [3](#).

If the log in prompt does not appear on the screen, the network is not functioning properly. Contact the network support personnel for help.

3. Press `(Ctrl-d)` to return to the local machine.
4. Enter **netstat -a**

The system displays a table similar to the following table:

Active Internet connections (including servers)

Proto	Recv-Q	Send-Q	Local Address	Foreign Address	(state)
tcp	0	0			ESTABLISHED
tcp	0	0			ESTABLISHED
tcp	0	0			LISTEN
tcp	0	0			LISTEN
tcp	0	0			
tcp	0	0			
tcp	0	0			

5. Verify that the remote machine name appears on the screen under the *Foreign Address* column and the corresponding *state* field shows ESTABLISHED.

If the remote machine name does not appear, contact network support personnel for help.

If the remote machine name appears on the screen, verify that the ORACLE SQL*Net package is installed on the remote machine.

6. Verify that the network tunable parameters are correct according to the recommendations in the *INTUITY™ CONVERSANT® System Version 6.0 Communication Development*, 585-310-763.
7. Verify the database connection by completing the following Steps a through c:

- a. Invoke the ORACLE utility SQL*PLUS by entering
/oracle/bin/sqlplus sti/sti

The system displays the following message:

```
SQL>
```

- b. Connect the SQL*PLUS session to the remote database by entering
connect sti/sti \@T:host_name:DB_SID;

The *host_name* is name of the remote machine and the *DB_SID* is the name of the remote database obtained in the *DB_SID* field in Database Access ID Table under Database Administration. See Chapter 6, "Database Administration," in *INTUITY™ CONVERSANT® System Version 6.0 Administration*, 585-310-591.

**NOTE:**

You must type a backslash sign (an escape character) following the *sti/sti* and before the @ sign.

- c. If the screen displays the following message the network and remote database are functioning.

```
connected
```

Continue with Step d.

If *connected* does not appear on the screen, contact the database administrator of the remote machine for help.

- d. Exit from the SQL*PLUS utility by entering **quit**

You have completed this procedure.

TDM Bus Diagnostics

The TDM Bus can be diagnosed

- From the command line
- Through the INTUITY CONVERSANT windows

Using the Command Line

To diagnose the TDM Bus using the command line, do the following:

1. Confirm that the VIS associates the suspect card with “tdm1,” by entering **display card <card number >**

where *card number* is the suspect card.

If the card is not configured for tdm1, there is a configuration error.

Complete the following Steps a through f:

- a. Record the current system configuration and service assignments. See the “System Configuration” appendix of your platform maintenance book.
 - b. Stop the voice system. See [“Stopping the Voice System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - c. Move the system configuration and service assignments by entering **mv /gendb/shmem/devtbl /gendb/shmem/devtbl.old**
 - d. Start the voice system. See [“Starting the Voice System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
 - e. Reconfigure the system. See the “System Configuration” appendix of your platform maintenance book.
2. To confirm that the TDM master/slave configuration is appropriate, enter **display card all |pg**

 **NOTE:**

The | before *pg* is a pipe symbol, not a lower case *L*.

The system displays the Circuit Card Configuration screen ([Figure 2-20](#)).

 **NOTE:**

The data in your Circuit Card Configuration screen may be different from the data shown in [Figure 2-20](#).

```

CARD 0      STATE: Inserv      CLASS: Digital (E1)      O.S.INDEX: 0
            NAME:  AYC21      OPTIONS: master1,tdm1,PRI1,DCHAN
            FUNCTION: PRI

```

CD.PT	CHN	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS	TYPE
0.0	0	Manoos	Oct 25 17:25:32	-	-	4	tdm	FRM
0.1	1	Inserv	Oct 25 17:32:48	-	-	4	tdm	PRIB
0.2	2	Inserv	Oct 25 17:32:47	-	-	4	tdm	PRIB
0.3	3	Inserv	Oct 25 17:29:46	-	-	4	tdm	PRIB
0.4	4	Inserv	Oct 25 17:32:46	-	-	4	tdm	PRIB
0.5	5	Inserv	Oct 25 17:29:46	-	-	4	tdm	PRIB
0.6	6	Inserv	Oct 25 17:29:46	-	-	4	tdm	PRIB
0.7	7	Inserv	Oct 25 17:29:45	-	-	4	tdm	PRIB
0.8	8	Inserv	Oct 25 17:29:45	-	-	4	tdm	PRIB
0.9	9	Inserv	Oct 25 17:29:44	-	-	4	tdm	PRIB
0.10	10	Inserv	Oct 25 17:29:45	-	-	4	tdm	PRIB
0.11	11	Inserv	Oct 25 17:29:44	-	-	6	tdm	PRIB
0.12	12	Inserv	Oct 25 17:29:44	-	-	6	tdm	PRIB
0.13	13	Inserv	Oct 25 17:29:44	-	-	6	tdm	PRIB
0.14	14	Inserv	Oct 25 17:29:43	-	-	6	tdm	PRIB
0.15	15	Inserv	Oct 25 17:29:44	-	-	6	tdm	PRIB
0.16	16	Inserv	Oct 25 17:29:21	-	-	6	tdm	PRID
0.17	17	Inserv	Oct 25 17:29:43	-	-	6	tdm	PRIB

:

Figure 2-20. Circuit Card Configuration Screen

3. Confirm that there is only one card associated with the following configurations for tdm1.
 - master1
 - master2
 - master3

There can be multiple cards designated slave.

Use **(ENTER)** to page through the Circuit Card Configuration screen.

If more than one card is configured as master1, master2, or master3, there is a configuration error. Complete the following Steps a through e:

- a. Record the current system configuration and service assignments. See the “System Configuration” appendix of your platform maintenance book.
- b. Stop the voice system. See [“Stopping the Voice System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
- c. Move the system configuration and service assignments by entering **mv /gendb/shmem/devtbl /gendb/shmem/devtbl.old**

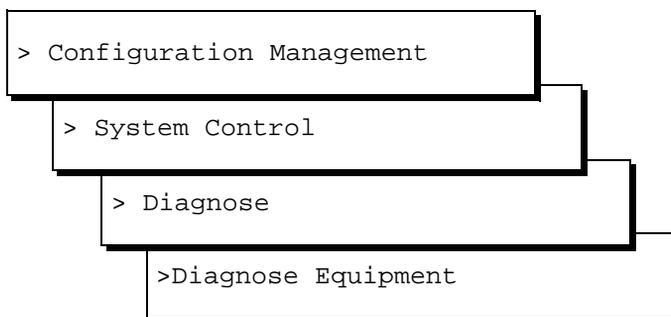
- d. Start the voice system. See [“Starting the Voice System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
- e. Reconfigure the system. See the “System Configuration” appendix of your platform maintenance book.
4. Shutdown the operating system. See [“Shutting Down the Operating System”](#), in [Chapter 3, “Common System Procedures”](#), for the procedure.
5. If the problem persists, check the TDM resistors. See [“Checking the Terminating Resistors”](#) above for the procedure.
6. If the problem persists, check the circuit card switch settings. See [“Checking the Switch Settings”](#) above for the procedure.

You have completed this procedure.

Using the INTUITY CONVERSANT Windows

To diagnose the TDM Bus using the INTUITY CONVERSANT windows, do the following:

1. Starting at the Voice System Administration menu ([Figure 2-1](#)), select



The system displays the Diagnose Equipment Window ([Figure 2-2](#)).

2. Enter **bus** in the Equipment to diagnose field.

The system automatically places a 1 in the Equipment Number field.

3. If you want to conduct an immediate diagnosis, enter **y** in the `Immediate diagnosis` field.

**NOTE:**

Immediate diagnosis takes the cards, attached to the TDM bus, out of service immediately even if a call is in progress.

If you do not want to conduct an immediate diagnosis, enter **n** in the `Immediate diagnosis` field.

**NOTE:**

The system waits until all specified channels are idle before beginning the diagnosis.

4. Press **F3** (Save).

The system removes the cards attached to the TDM bus from service and runs the diagnostics.

If the TDM bus passes the diagnostics, the system displays the following message:

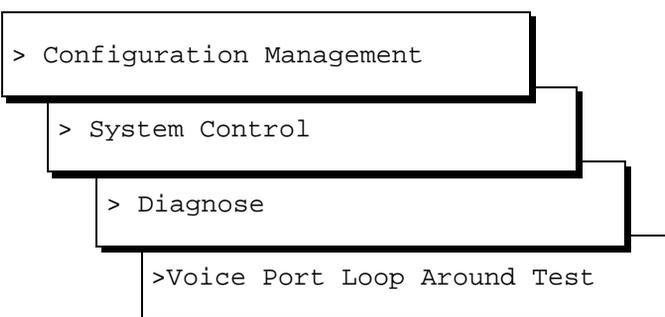
```
Diag <bus>, Passed
```

If the TDM bus did not pass the diagnostics, replace the cable.

Voice Port Loop Around Test

To perform a voice port loop around test, do the following:

1. Starting at the Voice System Administration menu ([Figure 2-1](#)), select



The system displays the Voice Port Loop Around Test window ([Figure 2-21](#)).

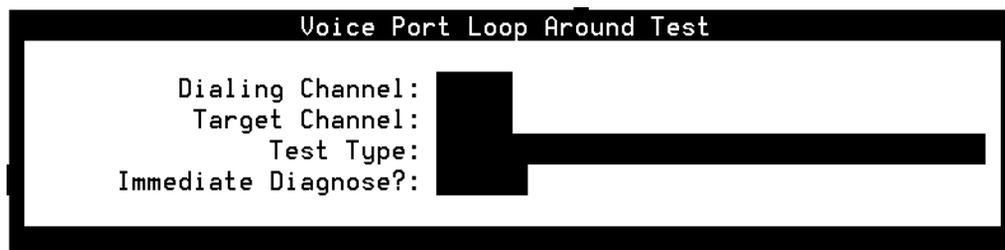


Figure 2-21. Voice Port Loop Around Test Window

2. Enter a channel number in the `Dialing Channel:` field.

The dialing channel is the channel which sends the signal used to diagnose the target channel.

You can enter **AUTO** in this field to allow the system to choose the dialing channel.

3. Enter the number of the channel you want to diagnose in the `Target Channel:` field.
4. Enter a test type in the `Test Type:` field.

The following tests can be run on the voice port:

- all
- code
- fax receive
- fax transmit
- gain control
- loop current/dial tone detection
- manipulation of hook state
- play
- ring detection
- speed control
- touch tone receive
- touch tone transmit

⇒ NOTE:

The gain control, loop current/dial tone detection, manipulation of hook state, ring detection, speed control, touch tone receive, and touch tone transmit test types will be run during a voice port loop around test regardless of the entry in the `Test Type:` field.

5. Enter **no** in the Immediate Diagnose? field.

If you enter **yes** in this field the diagnosis will be performed immediately regardless of the current state of the dialing channel.

**NOTE:**

Immediate diagnosis cannot be done when **AUTO** is entered in the Dialing Channel: field.

6. Press **F3** (Save).

The system completes the diagnostics and displays the Voice Port Loop Around Test Results screen ([Figure 2-22](#)).

Voice Port Loop Around Test Results

manipulation of hook state	pass
gain control	pass
speed control	pass
ring detection	pass
touch tone transmit	pass
play	pass
touch tone receive	pass
record	pass
fax receive	pass
fax transmit	pass
loop current/dial tone detection	pass

Press Enter to continue.

Figure 2-22. Voice Port Loop Around Test Results Screen

7. Press **ENTER**.

The system displays the Voice Port Loop Around Test window ([Figure 2-21](#)).

You have completed this procedure.

ASAI Trace Utility

To invoke the ASAI trace feature, type `trace dip7` at the system prompt. Additional VIS processes can be monitored by adding arguments to the command (for example, `trace dip7 chan 1`).

NOTE:

All ASAI trace information displayed by `trace` is preceded by `ASAI:.` If `trace` is used to monitor other VIS processes, that information is preceded by other key words.

To cancel a trace command, press the DELETE key. The Trace Level parameter in the ASAI Parameters screen controls the amount of detail that is displayed when you use the `trace dip 7` command to monitor messages and events being processed by the ASAI system. The trace feature facilitates the debugging of new applications and is an optional feature that is not required for normal system operations.

Three Trace Levels are available:

- The Low setting displays only ASAI error and warning conditions.
- The Normal setting displays information pertaining to the process of the `A_Callinfo`, `A_Event`, `A_RouteSel`, and `A_Tran` script actions, in addition to the information displayed by the Low setting. Such information is useful when attempting to debug new application scripts which use these actions.
- The High setting provides additional information on ASAI messages that are sent and received between the VIS and the DEFINITY Generic 3i PBX, in addition to the information displayed by the Low and Normal settings.

Low Detail

The Low setting displays only ASAI error and warning conditions. This is the default setting. Use this setting when there is live traffic to minimize processing overhead from the trace feature.

Error message preceded by `ASAI: ERROR:` typically indicate a malfunction in the processing of the ASAI link between the VIS and the PBX, an improperly written script, or an incorrect configuration. Error messages are displayed by `trace` to give additional insight into problems that are reported as system messages and as error codes in the Return Fields of the external actions. If you receive an error messages in the Message Log Report. The ASAI-related system messages are numbered from `ASAI001` through `ASAI031` and are discussed in Chapter 3, "System Message Listings." Follow the instructions provided for the message to remedy the problem.

If you receive error messages in the trace output and no ASAI system messages are reported, you may be experiencing a problem with the `A_Callinfo`, `A_Event`,

A_RouteSel, or A_Tran actions. In this case, one of these actions is probably returning an error code in its Return Field and also in the Cause Value field.

If you receive neither ASAI system message nor error return codes from an ASAI script action but are still receiving error messages in the trace output, you are probably experiencing a system problem and should escalate the problem.

Warning messages indicate a low-severity problem detected by the ASAI system. These message are preceded by `ASAI: WARNING:` and are usually the result of an incorrectly configured system or a manual out of service (manooos) ACD, VDN, or CTL domain that is receiving messages from the PBX. These messages may also correspond to a system message that appears in the Message Log Report. For example, the following message is displayed if you use A_Tran to transfer to an extension for which there is no domain administered in the Domain Administration screen.

```
ASAI: WARNING: Event 'C' Discarded, no CTL Domain for Ext  
'1234'
```

At the same time, system message number ASAI031 appears in the Message Log Report. Similarly, the following message is displayed if you use A_Tran to transfer to an extension or domain which is not in service.

```
ASAI: WARNING: Event 'C' Discarded, Domain 'name' not active
```

In this case no system message appears in the Message Log Report because it is not necessarily considered an error.

Normal Detail

In addition to the information displayed by the Low setting, the Normal setting displays information pertaining to the processing of the A_Callinfo, A_Event, A_RouteSel, and A_Tran script actions. Such information is useful when attempting to debug new application scripts which use these actions. The format is specific to each ASAI action being processed.

A_Callinfo trace information

When A_Callinfo is used in a voice script on a Tip/Ring or LST1 channel, trace displays the following information. The first line indicates which channel requested the information. The remaining indented lines contain the information that is returned to the A_Callinfo action in the voice script.

```
ASAI: A_Callinfo: Sending Info for chan 1  
ASAI:Calling party Number:''  
ASAI:Called Party Number: '5100'  
ASAI:Switch Data: ''  
ASAI:Trunk Group Id: '5', Call Id: '163'  
ASAI:Cause Value: '0', Return Field: '0'
```

If an error occurs in the processing of A_Callinfo, a message preceded by ASAI : Error: A_Tran is displayed along with a description of the problem.

A_Event trace information

When A_Event is used in a monitoring or routing script that is assigned to a domain, the following trace messages are examples of what is displayed when each event is reported.

```
ASAI: A_Event: Reporting Event 'C' to Domain
      'name'
ASAI:Connected Party Number: '5609'
ASAI:Calling Party Number: '', Trunk Grp Id: '5'
ASAI:Called Party Number: '5100'
ASAI:Switch Data:"
ASAI:Call id: '170', Other Call Id: '160'
ASAI:LAI Display Info: "
ASAI:VIS Data: "
ASAI:Routing Id: '30'
ASAI:Return Field: '67'
```

The first line indicates the type of event that is reported and the domain to which it is reported. The event type is one of the following:

- A (ABANDON) — The caller was abandoned before the call was answered.
- C (CONNECT) — The call was alerted or connected.
- E (END) — The call has ended after being answered.
- R (ROUTE REQUEST) — PBX is requesting the call be routed.

The indented lines that follow the first line contain information that is returned in the corresponding fields of the A_Event action form.

A_RouteSel trace information

When A_RouteSel is used in a routing script that is assigned to an RTE domain, the following trace messages are examples of what is displayed.

```
ASAI: A_RouteSel: Routing call in Domain 'name'
      (Route ID 1234)
ASAI:Destination Number: '5019'
ASAI:Split Extension: ''
ASAI:Priority Call? Yes
```

If the Route Select could not be sent to the PBX, a trace message preceded by ASAI: ERROR: A_RouteSel: is displayed along with a description of the problem. In some cases a cause value is also displayed. See Chapter 6 of *INTUITY™ CONVERSANT® System Version 6.0 Application Development with Script Builder, 585-310-760*, for a list of A_RouteSel Cause Values.

A_Tran trace information

When A_Tran is used in a voice script on a T/R or LST1 channel, trace displays messages such as the following indicating a successful transfer.

```
ASAI: A_Tran: requested on chan 1
ASAI: A_Tran: Taking Control of call on chan 1
           (CLID 304)
ASAI: A_Tran: Placing caller on hold, chan 1
ASAI: A_Tran: Make Call on chan 1 (CLID 308)
ASAI:Destination Number: '5019'
ASAI:Split Ext: ''
ASAI:Priority Call? No
ASAI: A_Tran: Make Call completed on chan 1
ASAI:Call State: 'ALERTING'
ASAI: A_Tran: Merging calls on chan 1
```

The first line indicates which channel requested the transfer.

⇒ NOTE:

Each line beginning ASAI: A_Tran: indicates the beginning of the next processing step required to perform the transfer operation and contains the channel number on which the operation is taking place. See Chapter 6 of *INTUITY™ CONVERSANT® System Version 6.0 Application Development with Script Builder*, 585-310-760, for an explanation of the steps required to perform a transfer. Processing steps may not be displayed contiguously depending on the amount of activity in the system (that is, other trace statements may appear in between each processing step for A_Tran).

The indented lines contain additional information about the current processing step. The Make Call step is followed by three lines of information which correspond to input fields in the A_Tran action form. The Make Call completed steps is followed by a line indicating the outcome of the call. A successful transfer is indicated by the Merging calls message.

In the following example the outbound call (Make Call completed) was to a busy destination. In this case, the transfer (merge) was not attempted and the caller was reconnected to the voice script.

The sequence ends with the following message:

```
ASAI: A_Tran: requested on chan 1
ASAI: A_Tran: Taking Control of call on chan 1
           (CLID 304)
ASAI: A_Tran: Placing caller on hold, chan1
ASAI: A_Tran: Make Call on chan 1 (CLID 308)
ASAI:Destination Number: '5019'
ASAI: Split Ext: ''
ASAI:Priority Call? No
ASAI: A_Tran: Make Call completed on chan 1
ASAI:Call State: 'BUSY'
```

```
ASAI: A_Trان: Dropping call on chan 1
ASAI: A_Trان: Reconnecting caller on chan 1
ASAI: A_Trان: Relinquishing control of chan 1
```

Should an error occur in one of the processing steps, trace displays a message preceded by `ASAI: ERROR: A_Trان:` with a description of the problem.

NOTE:

If you receive error return codes from the `A_Trان` action and do not see errors while tracing `dip7`, the problem is detected by the voice script before making the request to the ASAI subsystem.

High Detail

In addition to the information displayed by the Low and Normal settings, the High setting gives additional information on ASAI messages that are sent and received between the VIS and the DEFINITY Generic 3i PBX. High detail causes trace to display information concerning call event and routing event messages as well as requests for domain enable/disable, channel login/logout, and heartbeat.

Call events

ASAI messages (call events) received from the PBX contain information about a call on a domain. This information may be useful when attempting to debug an application script which is monitoring the progress of calls on the PBX. The format of the call event message is as follows:

```
ASAI: Received EVENT on Domain "name" (CLID num CID
num)
```

The *EVENT* can be one of the following

- ALERTING — The call is ringing at an extension.
- CALLEND — All parties have dropped from the call causing the call to end.
- CONFERENCED — The call has been conferenced.
- CONNECTED — The call has been answered.
- CUT THROUGH — The call is interworking with a non-ISDN trunk.
- DENIAL — The call has been routed to an invalid number (intercept).
- DROP — A party on the call has dropped from the call.
- OFFERED — The call has entered the specified domain.
- QUEUED — The call has been placed in a queue and is awaiting delivery to an extension.
- 3P CALLEND — A call that was originated by `A_Trان` has ended.

- TRANSFERRED — The call has been transferred.
- TRUNK SEIZED — The call has been routed to a trunk and the trunk has been seized.

The *name* is the name of domain which receives the event as specified in the Domain Administration screen. See Chapter 4, "Feature Package Administration" of *INTUITY™ CONVERSANT® System Version 6.0 Administration*, 585-310-591, for additional information.

The name will be null for call events received that are not directly associated with a domain administered in the Domain Administration screen (for example, call events received for an outbound call placed by the A_Transcript action). The CLID *num* is the ASAI Cluster ID that identifies the specified domain. The CID *num* is the Call ID that identifies the call. The PID is the party ID that identifies which Party dropped from the call and is reported with a DROP message only.

Routing Events

There are two ASAI messages received from the PBX which contain routing information. This information may be useful when debugging a routing application script which is assigned to a RTE domain. The following trace message is printed for each route request received. The format of the trace message is as follows:

```
ASAI: Received ROUTE REQUEST on Domain 'name' (Route ID
num)
```

Another trace message is printed when the PBX has acknowledged or canceled a previous route request. The format of this message is as follows:

```
ASAI: Received ROUTE END on Domain 'name' (Route ID
num)
ASAI: Cause: X
```

NOTE:

The second line indicates the reason why the route requested ended. After the receipt of this message a Route Selection can no longer be made (that is, A_RouteSel fails) for the specified Route ID. The Route ID is a number which identifies a particular route request.

Domain Enable/Disable Requests

When ACD or VDN domains are enabled or disabled, a message must be sent to the PBX requesting to activate or deactivate the sending of call events for the domain. Following are examples of the trace output that appears when these messages are sent.

```
ASAI: Sending ENABLE for domain 'name', ext '4321',  
type 1 (CLID 224)  
ASAI: Sending DISABLE for domain 'name', ext '5678'  
type 2 (CLID 364)
```

The *name* and *ext* displayed correspond to the parameters administered for the domain in the Domain Administration screen. Note that Type 1 domains are ACD domains and Type 2 domains are VDN domains.

If an enable or disable request fails, a message is displayed which is preceded by ASAI: ERROR: ENABLE Domain: along with a description of the problem. If a Cause Value is provided in the message, the request was denied by the PBX.

Channel Login/Logout Requests

In order to log a channel in or out, an ASAI message must be sent to the PBX. Following are examples of the trace output that appears when these messages are sent.

```
ASAI: Sending LOGIN for chan 1, ext 1234 (CLID 778)  
ASAI: Sending LOGOUT for chan1, ext 1234 (CLID 388)
```

The *chan* and *ext* displayed correspond to the parameters administered for the domain in the Channel Administration screen.

If a login or logout request fails, a message is displayed which is preceded by ASAI: ERROR: LOGIN CHANNEL: along with a description of the problem. If a Cause Value is provided in the message, the request was denied by the PBX.

Heartbeat Requests

To insure that the PBX and the VIS are in constant communication event when there is no traffic, messages are sent back and forth between the two systems. These messages, called heartbeat messages, typically appear only after periods of idleness of longer than 1 minute.

Generally, these trace messages can be ignored unless you suspect a loss of communication between the PBX and the VIS. The messages should alternate every minute during idle periods. Following are examples of these heartbeat messages:

```
ASAI: Received Heartbeat (CLID 7898 ind 1)  
ASIA: Sending Heartbeat (CLID 2345)
```

LAN Trace Utilities

The LAN activity can be traced using the following commands:

- **arp**
- **netstat**
- **ping**
- **tracert**
- **tcpdump**

The LAN trace utilities enable the TSC personnel to diagnose problems on the customer's LAN. The LAN trace utilities have the following disadvantages:

- Only traffic on the subnet to which the product is attached can be traced.
- In some modes, tcpdump will seriously degrade the performance of the server.
- When traffic on the LAN is very heavy, some packets may be lost because the server cannot keep up with the flow.

Using the arp Command

The **arp** command provides information about Ethernet/IP address translation. The command can be used to detect systems on the LAN that are configured with an incorrect IP address. Use the **arp** command in the following manner:

- To display all of the current ARP entries by reading the table from the file kmem (default /dev/kmem) based on the kernel file unix (default /kernel/unix), use the **arp -a [unix[kmem]]** option.
- To delete an entry for the host called hostname, use the **arp -d hostname** option.

NOTE:

This option may only be used by the super-user.

- To read the file named filename and set multiple entries in the ARP tables, use the **arp -f filename** option.
- To create an ARP entry for the host called hostname with the Ethernet address ether_address, use the **-s hostname ether_address [temp] [pub] [trail]** option.

For more information on the **arp** command, see Appendix A, "Summary of Commands" in *INTUITY CONVERSANT System Release 7.0 Administration*.

Using the netstat Command

The **netstat** command is used to display statistics about

- Each network interface
- Each network socket
- The network routing table

Use the **netstat** command in the following manner:

- To show the state of all sockets and all routing table entries, use the **-a** option.
- To limit the statistics or address control block reports to those of the specified family, use the **-f address_family** option



NOTE:

The address family can be **inet** for the AF_INET family or **unix** for the AF_UNIX family

- To show the multicast group memberships for all interfaces, use the **-g** option.
- To show the state of the interfaces that are used for TCP/IP traffic, use the **-i** option.
- To show the STREAMS statistics, use the **-m** option.
- To show the network addresses as numbers, use the **-n** option.
- To show the address resolution tables, use the **-p** option.
- To show the routing tables, use the **-r** option.
- To show the per-protocol statistics, use the **-s** option.
- To show additional information for the sockets and the routing table, use the **-v** option.
- To show the state of a particular interface, use the **-I interface** option.
- To show the multicast routing tables, use the **-M** option.
- To limit the display of statistics or state of all sockets to those applicable to protocol, use the **-P protocol** option.

For more information on the **netstat** command, see Appendix A, “Summary of Commands” in *INTUITY CONVERSANT System Release 7.0 Administration*.

Using the ping Command

The **ping** command indicates whether a remote host can be reached. It can also display statistics about packet loss and delivery time. Use the **ping** command in the following manner:

- To set the SO_DEBUG socket option, use the **-d** option.
- To send the packet to the given host and back again, use the **-l** option in the IP address.
- To turn off loopback of multicast packets, use the **-L** option.
- To show the network addresses as numbers, use the **-n** option.
- To bypass the normal routing tables and send directly to a host on an attached network, use the **-r** option.
- To set the IP record rout option, which will store the route of the packet inside the IP header, use the **-R** option.
- To list any ICMP packets, other than ECHO_RESPONSE, that are received, use the **-v** option.
- To specify the outgoing interface to use for multicast packets, use the **-i** option.
- To specify the interval between successive transmissions, use the **-I** option.
- To specify the IP time to live for multicast packets, use the **-t ttl** option.

For more information on the **ping** command, see Appendix A, “Summary of Commands” in *INTUITY CONVERSANT System Release 7.0 Administration*.

Using the traceroute Command

The **traceroute** command displays the route packets take going to a remote system. Information about each hop is printed. Use the **traceroute** command in the following manner:

- To set the initial time-to-live used in the first outgoing probe packet, use the **-f** option.
- To set the “don’t fragment” bit, use the **-F** option.
- To enable socket level debugging, use the **-d** option.
- To specify a loose source route gateway, use the **-g** option.
- To specify a network interface to obtain the source IP address for outgoing probe packets, use the **-i** option.
- To use the ICMP ECHO instead of UDP datagrams, use the **-l** option.
- To set the max time-to-live (max number of hops) used in outgoing probe packets, use the **-m** option.

- To print hop address numerically rather than symbolically, use the **-n** option.
- To set the base UDP port number used in probes (default is 33434), use the **-p** option.
- To bypass the normal routing tables and send directly to a host on an attached network, use the **-r** option.
- To use the following IP address (which usually is given as an IP number, not a hostname) as the source address in outgoing probe packets, use the **-s** option.
- To set the type of service in probe packets to the following value, use the **-t** option.
- To list the ICMP packets other than `TIME_EXCEEDED` and `UNREACHABLE`, use the **-v** option.
- To set the time (in seconds) to wait for a response to a probe, use the **-w** option.
- To toggle checksums, use the **-x** option.

For more information on the **tracert** command, see Appendix A, “Summary of Commands” in *INTUITY CONVERSANT System Release 7.0 Administration*.

Using the tcpdump Command

The **tcpdump** command prints the headers of packets, that match a boolean expression, on a network interface. The command is used to analyze protocol problems. Use the **tcpdump** command in the following manner:

- To attempt to convert network and broadcast addresses to names, use the **-a** option.
- To exit after receiving count packets, use the **-c** option.
- To dump the compiled packet-matching code in a human readable form to standard output, use the **-d** option.
- To dump the packet-matching code as a C program fragment, use the **-dd** option.
- To dump the packet-matching code as decimal numbers, use the **-ddd** option.
- To print the link-level header on each dump line, use the **-e** option.
- To print foreign internet addresses numerically rather than symbolically, use the **-f** option.
- To use the file as input for the filter expression, use the **-F** option.
- To listen on the interface, use the **-i** option.
- To make stdout line buffered, use the **-l** option.

- To avoid converting addresses to names, use the **-n** option.
- To avoid printing domain name qualification of host names, use the **-N** option.
- To avoid running the packet-matching code optimizer, use the **-O** option.
- To avoid putting the interface into promiscuous mode, use the **-p** option.
- To print less protocol information, use the **-q** option.
- To read packets from a file, use the **-r** option.
- To snarf snaplen bytes of data from each packet rather than the default of 68, use the **-s** option.
- To force packets, selected by “expression,” to be interpreted as the specified type, use the **-T** option.
- To print absolute, rather than relative, TCP sequence numbers, use the **-S** option.
- To avoid printing a time stamp on each dump line, use the **-t** option.
- To print an unformatted time stamp on each dump line, use the **-tt** option.
- To produce a slightly more verbose output, use the **-v** option.
- To produce a more verbose output, use the **-vv** option.
- To write the raw packets to file rather than parsing and printing them out, use the **-w** option.
- To print each packet, without the link level header, in hex, use the **-x** option.

INTUITY CONVERSANT

Simple Network Management Protocol

SNMP is the current working standard of the TCP/IP protocol suite concerned with network management information. The SNMP feature on the INTUITY CONVERSANT allows network system administrators to use SNMP to consolidate the monitoring of remote INTUITY CONVERSANT systems from a central location. This remote monitoring takes place over a TCP/IP LAN or WAN. The SNMP feature makes this monitoring possible by providing a means for:

- Remote managed elements (INTUITY CONVERSANT systems) to send alarm and resolution event notifications to a central management workstation (specifically HP Openview)
- The management workstation to get system status information from the remote managed elements

Management Information Bases Available with INTUITY CONVERSANT SNMP

The INTUITY CONVERSANT SNMP agent provides the following:

- Support for the standard Management Information Base (MIB)-II definition
- A private MIB defined by Lucent Technologies

MIB-II Compliance

The INTUITY CONVERSANT SNMP agent is MIB-II compliant; however, not all MIB-II variables are supported.

Private MIB

In addition to MIB-II support, the INTUITY CONVERSANT SNMP agent provides a private (enterprise-specific) MIB for the following system information

- File system check
- IPC message queue status
- Voice system status
- Voice channels in service
- Software packages installed
- Circuit card information (display card)
- Channel information (includes channel number, card and port, state, service name, assignments, etc.)
- Service and DNIS information

- Hardware information (includes platform type, installed memory, size of the hard disk drive, and whether the RMB or a serial card is installed)
- Disk usage information
- Major, minor, and warning alarms active on the system

See [“Intuity CONVERSANT MIB Definition”](#) later in this chapter.

SNMP Configuration

You must configure both HP Openview and the SNMP agent on the INTUITY CONVERSANT system to communicate with each other. See HP Openview documentation for details on how to complete this and to confirm communication between the manager and agent applications.

Customizing SNMP for HP Openview

To customize HP Openview for INTUITY CONVERSANT, do the following:

NOTE:

The following procedure must be done at least once to configure HP Openview for the INTUITY CONVERSANT. If you are monitoring multiple INTUITY CONVERSANTs with a single HP Openview, you must only perform this procedure once.

1. Enter **`/vs/bin/util/snmp/util/snmpConfig.sh`**
2. Enter **9 ftp2mrg**
3. Enter **1** (Enter /Change FTP login information). This allows you to transfer files to the management station (HP Openview).
4. Enter the IP address for the management station.
5. Enter the user directory as **`/tmp/ov`**

NOTE:

The `/tmp/ov` directory must be created on the HP Openview prior to this procedure.

6. Enter **2** (FTP Intuity MIBs) to transfer Intuity MIBs.
7. Enter **3** (FTP HP Openview files) to transfer HP Openview related files.
8. Log onto the HP Openview.
9. Enter **`cd /tmp/ov`**
10. Enter **`chmod 744 setupIntuity.sh`**
11. Enter **`./setupIntuity.sh`**

Changing the Group Variable Names

You may change the group variable names contained in the default configuration file.

1. Enter **/vs/bin/util/snmp/util/snmpConfig.sh**
2. Enter **6** (listAgtConfig) to list the MIB-II group variable values.
 - **SysDescr** — The description of the system (default: INTUITY SNMP Agent - Lucent Technologies)
 - **SysLocation** — The location of the system (default: down on the farm)
 - **SysContact** — The owner of the system (default: System Administrator)
3. Change **SysLocation** to a meaningful location.
4. Make any other desired changes to the group variables.
5. Enter **8** (chgMgrAdd) to change the management station's IP address if desired.

Configuring the INTUITY CONVERSANT System for the HP Openview

To configure the INTUITY CONVERSANT system for the HP Openview, do the following:

1. Enter **cd /vs/bin/util/snmp/conf**
2. Enter **vi mrglist**
3. Enter **<Mgmtstation Name> public**, where **<Mgmtstation Name>** is the name of the HP Openview.
4. Enter **mkdir -p /vs/bin/util/snmp/data**
5. Enter **/vs/bin/util/snmp/util/snmpstart.sh** to start the SNMP process and register the alarmMon.sh process with inittab.
6. Enter **ps -ef**
7. Verify the following processes are running:
 - **snmpdm**
 - **mib2agt**
 - **csagt**
 - **Alarmon.sh**

Guidelines for Using SNMP on the INTUITY CONVERSANT

This section provides guidelines for using SNMP on the INTUITY CONVERSANT:

Getting Information from SNMP Agents

Once the MIB definition file is downloaded into HP Openview, you have access to the private (enterprise-specific) SNMP features on the INTUITY CONVERSANT.

See HP Openview documentation for information on how to integrate the INTUITY CONVERSANT SNMP feature with HP Openview.

Setting Polling Intervals

You can set the time intervals at which the HP Openview polls the SNMP agents on the INTUITY CONVERSANT systems. Set the polling interval low enough to give you information when you need it, but high enough that the polling does not slow down operations.

NOTE:

Lucent Technologies strongly recommends that you *not* use a polling interval of less than 15 minutes, as that puts a strain on system resources and slows down operations.

Obtaining MIB variables

Retrieve MIB variables one at a time. If you attempt to retrieve MIB variables all at once, this can cause idle time to fall below normal values. .

Setting the Timeout Interval

Set the timeout interval on the HP Openview for more than 60 seconds. This value will allow the INTUITY CONVERSANT enough time to respond to data requests. If the timeout interval is smaller than 60 seconds, data may not be available within the requested interval, thereby causing timeouts.

INTUITY CONVERSANT MIB Definition

```

CORNERSTONE-MIB DEFINITIONS ::= BEGIN

IMPORTS

    enterprises, OBJECT-TYPE, MODULE-IDENTITY
        FROM SNMPv2-SMI
    DisplayString, IpAddress, TimeTicks
        FROM SNMPv2-TC;

lucent                OBJECT IDENTIFIER ::= { enterprises 1751 }
lucentProducts       OBJECT IDENTIFIER ::= { lucent 1 }
lucentMibs           OBJECT IDENTIFIER ::= { lucent 2 }

intuityProducts      OBJECT IDENTIFIER ::= { lucentProducts 10 }
intuityMibs          OBJECT IDENTIFIER ::= { lucentMibs 10 }

platformMIB MODULE-IDENTITY

    LAST-UPDATED      "9705010000Z"
    ORGANIZATION      "Lucent Technologies, Bell Labs"
    CONTACT-INFO      ""

    DESCRIPTION
        "MIB Module for Cornerstone Platform Entities"

    ::= { intuityMibs 2 }

csSystemStatus       OBJECT IDENTIFIER ::= { platformMIB 1 }
csSsMtce             OBJECT IDENTIFIER ::= { csSystemStatus 1 }
csSsVs               OBJECT IDENTIFIER ::= { csSystemStatus 2 }
csSwInst             OBJECT IDENTIFIER ::= { platformMIB 2 }
csHwInst             OBJECT IDENTIFIER ::= { platformMIB 3 }

ssMtceFsChk         OBJECT-TYPE
    SYNTAX             DisplayString
    MAX-ACCESS          read-only
    STATUS              current
    DESCRIPTION         "file system check.This variable
                        returns a string stating whether
                        the check passed or failed."

    ::= { csSsMtce 1 }

ssMtceIpcQChk        OBJECT-TYPE
    SYNTAX             DisplayString
    MAX-ACCESS          read-only
    STATUS              current
    DESCRIPTION         "Ipc Queue Check. This variable
                        returns a string stating whether
                        the check passed or failed."

    ::= { csSsMtce 2 }

```

```

ssVsStatOBJECT-TYPE
    SYNTAX          DisplayString
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "Status of Voice System. Returns
                    a string saying whether it is up
                    or down depending on the run
                    level being 4 and some processes
                    in the running state"
    ::= { csSsVs 1 }

ssVsPurchvcprt OBJECT-TYPE
    SYNTAX          INTEGER(0..64)
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "Number of purchased voice
                    ports."
    ::= { csSsVs 2 }

ssVsSvcvcprtOBJECT-TYPE
    SYNTAX          INTEGER(0..64)
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "number of voice ports in service"
    ::= { csSsVs 3 }

ssVsPurchrspch OBJECT-TYPE
    SYNTAX          INTEGER(0..2000)
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "purchased hours of speech"
    ::= { csSsVs 4 }

ssVsUsedhrspch OBJECT-TYPE
    SYNTAX          INTEGER(0..2000)
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "used hours of speech"
    ::= { csSsVs 5 }

ssVsPothrspch OBJECT-TYPE
    SYNTAX          INTEGER(0..2000)
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "potential hours of speech"
    ::= {csSsVs 6}

swInstPkg OBJECT-TYPE
    SYNTAX SEQUENCE OF PkgInfo
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "Info on intuity packages installed.
                    This output is the same as pkginfo
                    on unix provides with the -l -c

```

```

                                options i.e. long and the category
                                intuition"
                                ::= { csSwInst 1 }

pkgInfo OBJECT-TYPE
    SYNTAX          PkgInfo
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "Info on package"
    INDEX           { pkgNumber }
    ::= { swInstPkg 1 }

PkgInfo ::=
    SEQUENCE {
        pkgNumber    INTEGER,
        pkgDescr     DisplayString
    }

pkgNumber OBJECT-TYP
    SYNTAX          INTEGER(0..50)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "Index for package description"
    ::= { pkgInfo 1 }

pkgDescr      OBJECT-TYPE
    SYNTAX      DisplayString
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION "package description"
    ::= { pkgInfo 2 }

displayCard OBJECT-TYPE
    SYNTAX SEQUENCE OF CardStatus
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "table of entries with each entry
                    corresponding to description of each
                    card on the system. Info is same as
                    output of display card all except for
                    channel info. Output includes card
                    number, state, class, os index, name,
                    options, and function"
    ::= { csHwInst 1 }

cardStatus OBJECT-TYPE
    SYNTAX          CardStatus
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "entry for each card"
    INDEX           { dsplCardNum }
    ::= { displayCard 1 }

```

```

CardStatus ::=
    SEQUENCE {
        dsplCardNumINTEGER,
        dsplInfoDisplayString
    }

dsplCardNum OBJECT-TYPE
    SYNTAX      INTEGER(0..24)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION "card number"
    ::= { cardStatus 1 }

dsplInfo OBJECT-TYPE
    SYNTAX      DisplayString
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION "card information"
    ::= { cardStatus 2 }

displayChan OBJECT-TYPE
    SYNTAX SEQUENCE OF ChanStatus
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION "table of entries with each entry
        corresponding to one channel. Info
        includes channel number card and port,
        state, state change time, service name,
        phone, group, opts and type"
    ::= { csHwInst 2 }

chanStatus OBJECT-TYPE
    SYNTAX      ChanStatus
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION "entry for each channel"
    INDEX      { dsplCsChanNum }
    ::= { displayChan 1 }

ChanStatus ::=
    SEQUENCE {
        dsplCsChanNumINTEGER,
        dsplCsChanInfoDisplayString
    }

dsplCsChanNum OBJECT-TYPE
    SYNTAX      INTEGER(0..96)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION "chan number"
    ::= { chanStatus 1 }

dsplCsChanInfo OBJECT-TYPE
    SYNTAX      DisplayString
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION "chan info"
    ::= { chanStatus 2 }

```

```

displaySvcs      OBJECT-TYPE
    SYNTAX SEQUENCE OF Svcs
    MAX-ACCESS    not-accessible
    STATUS        current
    DESCRIPTION   "List of services provided on the
                  system.Info includes serial number and
                  service name"
    ::= { csHwInst 3 }

svcs             OBJECT-TYPE
    SYNTAX        Svcs
    MAX-ACCESS    not-accessible
    STATUS        current
    DESCRIPTION   ""
    INDEX         { svcNum }
    ::= { displaySvcs 1 }

Svcs ::= SEQUENCE {
    svcNumINTEGER,
    svcNameDisplayString
}

svcNum          OBJECT-TYPE
    SYNTAX        INTEGER(0..50)
    MAX-ACCESS    not-accessible
    STATUS        current
    DESCRIPTION   "Service Name"
    ::= { svcs 1 }

svcName        OBJECT-TYPE
    SYNTAX        DisplayString
    MAX-ACCESS    read-only
    STATUS        current
    DESCRIPTION   "Service Name"
    ::= { svcs 2 }

displayDnis     OBJECT-TYPE
    SYNTAX SEQUENCE OF DnisAniSvcGp
    MAX-ACCESS    not-accessible
    STATUS        current
    DESCRIPTION   "display dnis an ani service groups"
    ::= { csHwInst 4 }

dnisAniSvcGp   OBJECT-TYPE
    SYNTAX        DnisAniSvcGp
    MAX-ACCESS    not-accessible
    STATUS        current
    DESCRIPTION   "One row corresponding to one service
                  with info on called from and to numbers
                  and calling from and to numbers"
    INDEX         { dnisIdx }
    ::= { displayDnis 1 }

DnisAniSvcGp ::=
    SEQUENCE {
        dnisIdx INTEGER,
        dnisEntryDisplayString
    }

```

```

dnisIdx OBJECT-TYPE
    SYNTAX          INTEGER(0..100)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "Index for entries displayed"
    ::= { dnisAniSvcGp 1 }

dnisEntry OBJECT-TYPE
    SYNTAX          DisplayString
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "Display dnis entry"
    ::= { dnisAniSvcGp 2 }

dsplAssgn OBJECT-TYPE
    SYNTAX SEQUENCE OF AssgnEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "Table of assignments to channels with
                    channel number, service name and startup
                    service"
    ::= { csHwInst 5 }

assgnEntry OBJECT-TYPE
    SYNTAX          AssgnEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "Entry for one channel "
    INDEX          { dspChanNum }
    ::= { dsplAssgn 1 }

AssgnEntry ::=
    SEQUENCE {
        dspChanNumINTEGER,
        dspAssgnEntryDisplayString
    }

dspChanNum OBJECT-TYPE
    SYNTAX          INTEGER(0..96)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "Channel Number"
    ::= { assgnEntry 1 }

dspAssgnEntry OBJECT-TYPE
    SYNTAX          DisplayString
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "Entry for Services assigned"
    ::= { assgnEntry 2 }

hwMtce OBJECT-TYPE
    SYNTAX SEQUENCE OF HwInfo
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "A sequence of items regarding the
                    hardware installed on the system. This
                    info includes chassis type, installed

```

```

                                memory, hard drive
                                info, rmb and serial card installed"
                                ::= { csHwInst 6 }

hwInfo OBJECT-TYPE
    SYNTAX          HwInfo
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     ""
    INDEX          { dummyidx }
    ::= { hwMtce 1 }

HwInfo ::=
    SEQUENCE {
        dummyidx      INTEGER,
        hwChassis     DisplayString,
        hwInstMem     DisplayString,
        hwHd          DisplayString,
        hwRmb         DisplayString,
        hwSerial      DisplayString
    }

dummyidx OBJECT-TYPE
    SYNTAX          INTEGER(0..1)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION     "Dummy index since hwinfo is only one
                    row"
    ::= { hwInfo 1 }

hwChassis OBJECT-TYPE
    SYNTAX          DisplayString
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "Chassis type - map40, map100 etc"
    ::= { hwInfo 2 }

hwInstMem OBJECT-TYPE
    SYNTAX          DisplayString
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "Installed memory"
    ::= { hwInfo 3 }

hwHd OBJECT-TYPE
    SYNTAX          DisplayString
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "Hard Drive Size and scsi id"
    ::= { hwInfo 4 }

hwRmb OBJECT-TYPE
    SYNTAX          DisplayString
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION     "RMB installed or not"
    ::= { hwInfo 5 }

```

```

hwSerial      OBJECT-TYPE
    SYNTAX      DisplayString
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION "Serial Card Installed or not"
    ::= { hwInfo 6 }

hwVs          OBJECT-TYPE
    SYNTAX      SEQUENCE OF VsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION "table of vs hardware installed on
                system with one row per card"
    ::= { csHwInst 7 }

vsEntry       OBJECT-TYPE
    SYNTAX      VsEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION "row with entries for one card"
    INDEX       { vsCard }
    ::= { hwVs 1 }

VsEntry ::=
    SEQUENCE {
        vsCard      INTEGER,
        vsCardInfo  DisplayString
    }

vsCard        OBJECT-TYPE
    SYNTAX      INTEGER(0..24)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION "Card number"
    ::= { vsEntry 1 }

vsCardInfo    OBJECT-TYPE
    SYNTAX      DisplayString
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION "OS Index"
    ::= { vsEntry 2 }

hwDiskUsage   OBJECT-TYPE
    SYNTAX      DisplayString
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION "Percentage of disk used on the system"
    ::= { csHwInst 8 }

csAlarms      OBJECT IDENTIFIER ::= { platformMIB 4 }

csMajAlarms   OBJECT-TYPE
    SYNTAX      INTEGER (0..255)
    MAX-ACCESS  read-only

```

```

        STATUS          current
        DESCRIPTION     "Number of active major alarms on the system"
        ::= { csAlarms 1 }

csMinAlarms OBJECT-TYPE
    SYNTAX             INTEGER (0..255)
    MAX-ACCESS         read-only
    STATUS             current
    DESCRIPTION        "Number of active minor alarms on the system"
    ::= { csAlarms 2 }

csWrnAlarms OBJECT-TYPE
    SYNTAX             INTEGER (0..255)
    MAX-ACCESS         read-only
    STATUS             current
    DESCRIPTION        "Number of active warning alarms on the
                        system"
    ::= { csAlarms 3 }

csAlarmsCurrLvl OBJECT-TYPE
    SYNTAX             INTEGER { normal(0), warning(1), minor(2),
                                major(3) }
    MAX-ACCESS         read-only
    STATUS             current
    DESCRIPTION        "Highest level/severity of the active alarms.
                        This is used by the alarm trap events to
                        determine the color of the Interchange
                        object."
    ::= { csAlarms 4 }

-- the alarm table contains a list of all the active alarms in the
-- system.
-- the columns available are: application id, alarm code, alarm
-- level and
-- a text string with the remaining fields.

csAlarmTable          OBJECT-TYPE
    SYNTAX SEQUENCE OF CsAlarmEntry
    MAX-ACCESS         not-accessible
    STATUS             current
    DESCRIPTION        "A table of all the active alarms in the
                        system"
    ::= { csAlarms 5 }

csAlarmEntry          OBJECT-TYPE
    SYNTAX             CsAlarmEntry
    MAX-ACCESS         not-accessible
    STATUS             current
    DESCRIPTION        "alarm entry - uniquely identified by
                        the application/module code and alarm
                        code"
    INDEX              { csAlarmApp, csAlarmCode }
    ::= { csAlarmTable 1 }

CsAlarmEntry ::=
    csAlarmIndex       SEQUENCE {
        csAlarmIndex   INTEGER (0..255),
        csAlarmApp     OCTET STRING,
        csAlarmCode    INTEGER (0..65535),

```

```

        csAlarmLvl            INTEGER,
        csAlarmText          DisplayString,
        csAlarmEvnInfo       DisplayString
    }
csAlarmIndex                OBJECT-TYPE
    SYNTAX                   INTEGER (0..255)
    MAX-ACCESS                read-only
    STATUS                     current
    DESCRIPTION                "Index into the active alarms table"
 ::= { csAlarmEntry 1 }

csAlarmApp                  OBJECT-TYPE
    SYNTAX                   DisplayString (SIZE (0..3))
    MAX-ACCESS                read-only
    STATUS                     current
    DESCRIPTION                "Two letter application code of the
                                module raising the alarm. Typical
                                modules - MT: maintenance, VP: platform
                                etc"

 ::= { csAlarmEntry 2 }

csAlarmCode                 OBJECT-TYPE
    SYNTAX                   INTEGER (0..65535)
    MAX-ACCESS                read-only
    STATUS                     current
    DESCRIPTION                "Application/module specific code of
                                the alarm."

 ::= { csAlarmEntry 3 }

csAlarmLvl                  OBJECT-TYPE
    SYNTAX INTEGER             normal(0), warning(1), minor(2), major(3)}
    MAX-ACCESS                read-only
    STATUS                     current
    DESCRIPTION                "Severity/level of the alarm, can take the
                                following values normal, major, minor,
                                warning. The normal value
                                indicates a resolution event and is only
                                used by the alarm traps."

 ::= { csAlarmEntry 4 }

csAlarmText                 OBJECT-TYPE
    SYNTAX                   DisplayString
    MAX-ACCESS                read-only
    STATUS                     current
    DESCRIPTION                "Text string of the other fields in the
                                alarm. This may be subdivided into each
                                individual field if required in later
                                versions."

 ::= { csAlarmEntry 5 }

csAlarmEvnInfo              OBJECT-TYPE
    SYNTAX                   DisplayString
    MAX-ACCESS                read-only
    STATUS                     current

```

Diagnostics

INTUITY CONVERSANT Simple Network Management Protocol

Page 97

```
DESCRIPTION      "maintenance log - contains the event-id,
                  type and description"
 ::= { csAlarmEntry 6 }

csTraps OBJECT IDENTIFIER ::= { platformMIB 5 }

csTrapAlarms NOTIFICATION-TYPE
OBJECTS      {csAlarmText, csAlarmEvnInfo,
              csAlarmsCurrLvl }

STATUS      current
DESCRIPTION "Traps sent by the agent for alarm and resolution
            events."
 ::= { csTraps 1 }

END
```


Common System Procedures

3

Overview

This chapter describes procedures for

- Cartridge tape and diskette drive operation
- Backup and restore
- Voice system administration
- Operating system administration

Purpose

The purpose of this chapter is to provide the information necessary to perform the most common procedures associated with the INTUITY™ CONVERSANT® system.

About Cartridge Drives and Tapes

Cartridge tapes provide for the storage of information used by the INTUITY CONVERSANT system. The MAP/5P reads information from and writes information to cartridge tapes through the tape drive. The tape drive is located in Bay 1.

Types of Cartridge Tape Drives

The MAP/5P uses two types of tape drives:

- 2-Gbyte
- 525-Mbyte

NOTE:

Any tapes, smaller than 525-Mbyte, created in a 2-Gbyte tape drive can be read by a 525-Mbyte tape drive provided the jumpers on the 525-Mbyte tape drive have been configured correctly.

Tapes created in a 525-Mbyte tape drive can be read by a 2-Gbyte tape drive provided the jumpers on the 525-Mbyte tape drive have been configured correctly.

When to Change Cartridge Tapes

The manufacturers of the cartridge tapes recommend that you replace a tape after approximately 30 full-capacity write or read operations. For example, if two tapes are being alternated for the unattended nightly backup, replace both tapes every two months.

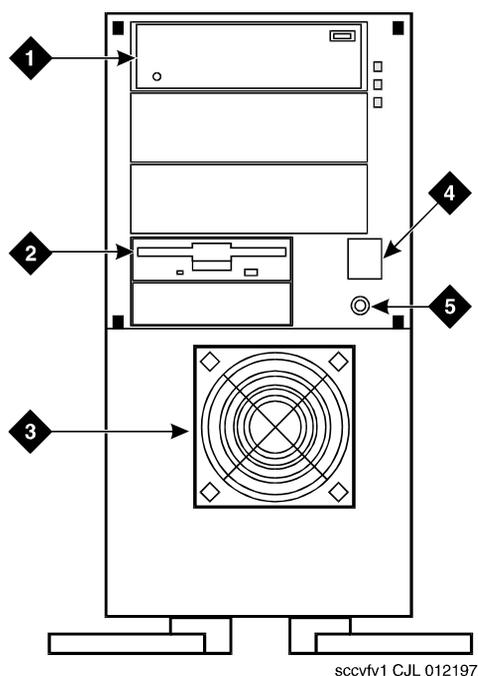
Inserting and Removing Cartridge Tapes

This section details the procedures for inserting and removing cartridge tapes from a 2-Gbyte tape drive.

Inserting the Cartridge Tape

To insert a 2-Gbyte cartridge tape, do the following:

1. Locate the tape drive on the front of the MAP/5P ([Figure 3-1](#)).



1. Cartridge tape drive
2. Diskette drive
3. Circuit card cage fan
4. Power button
5. Reset button

Figure 3-1. Front View of the MAP/5P

2. Check the read/write dial to make sure that the tape is not write-protected. The small dial on the front of the tape should be in the horizontal position.
3. Complete Steps a through c to insert the tape in the drive.
 - a. Press the button on the upper right corner of the drive to open the drive door.
 - b. Insert the tape ([Figure 3-2](#)).
 - c. Close the door to push in the tape.

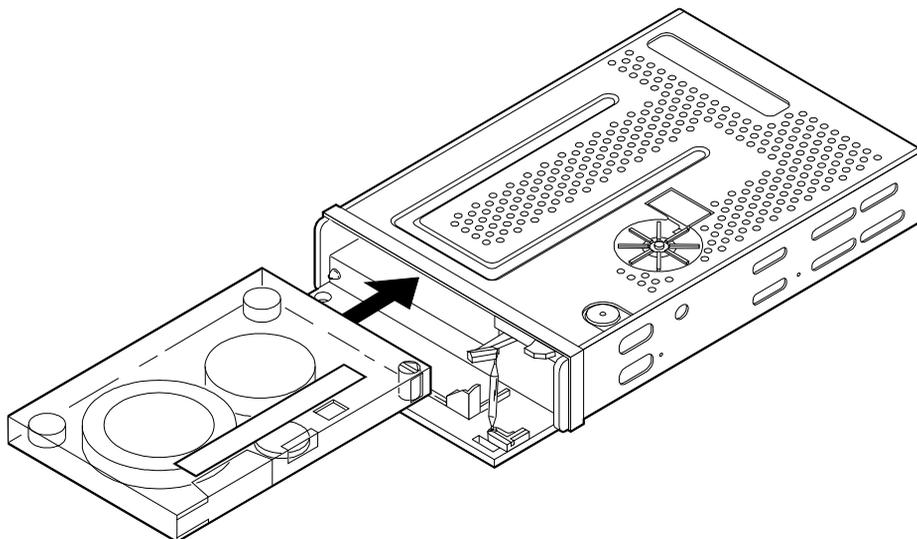


Figure 3-2. Tape Insertion with a 2-Gbyte Tape Drive



NOTE:

The light on the 2-Gbyte drive will blink when the drive is in use. If the light is lit and not blinking, the tape drive is idle.

Removing the Cartridge Tape



CAUTION:

You can only remove the tape when the drive is idle, that is, when the light is not blinking.

To remove a cartridge tape from a 2-Gbyte tape drive, do the following:

1. Press the button on the upper right corner of the drive to reveal part of the tape.
2. Pull out the tape.

Formatting Cartridge Tapes

To format a cartridge tape, do the following:

1. Start at the Voice System Administration Menu ([Figure 3-3](#))

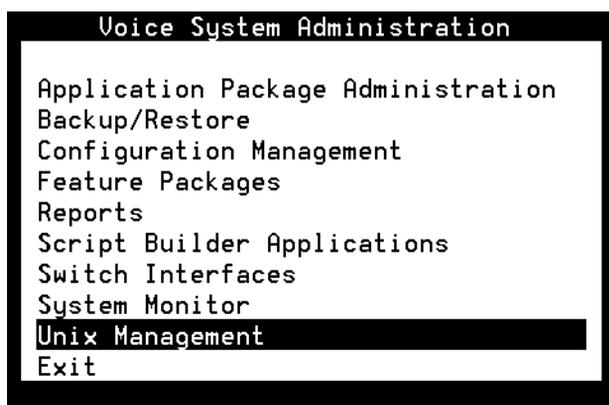


Figure 3-3. Voice System Administration Menu

2. Select

```
> UNIX Management
```

```
> Format UNIX Floppy/Tape
```

```
> Format Cartridge Tape
```

The system displays a Confirm window ([Figure 3-4](#)).

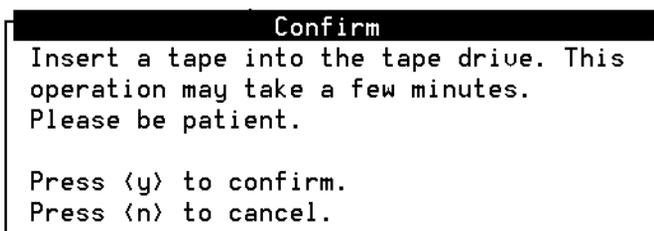


Figure 3-4. Confirm Window

3. Verify that the tape is not write-protected and insert the tape into the tape drive. See [“Inserting and Removing Cartridge Tapes”](#) above for more information.
4. Press **y**
The system displays a screen stating that the tape has been formatted.
5. Remove the tape from the tape drive.
6. Press **ENTER** to continue.

About Diskette Drives and Diskettes

Diskettes can provide for the storage of information used by the INTUITY CONVERSANT system. If information must be transferred from an INTUITY CONVERSANT system without a LAN card, diskettes must be used.

Types of Diskettes

The INTUITY CONVERSANT system is not shipped with disks. If you need disks, obtain unformatted 3.5-inch disks. The disks can be either

- High density (1.44-Mbyte)
- Low density (720-Kbyte)

Inserting and Removing Diskettes

This section details the procedures for inserting and removing diskettes.

Inserting the Diskette

To insert a diskette, do the following:

1. Locate the diskette drive on the front of the MAP/5P ([Figure 3-1](#)).
2. Check the read/write switch to make sure that the diskette is not write-protected.
3. Insert the diskette in the drive.

**NOTE:**

The light on the diskette drive is on when the drive is in use. If the light is not on, the diskette drive is idle.

Removing the Diskette

CAUTION:

You can only remove the diskette when the drive is idle, that is, when the light is not on.

To remove a diskette, do the following:

1. Press the button on the lower right corner of the diskette drive to reveal part of the diskette.
2. Pull out the diskette.

Formatting Diskettes

To format a diskette, do the following:

1. Starting at the Voice System Administration Menu ([Figure 3-3](#)), select

```
> UNIX Management
```

```
> Format UNIX Floppy/Tape
```

```
> Format 3.5 inch 1.44 Mbyte (High Density)
```

The system displays a Confirm window ([Figure 3-5](#)).

```
Confirm
Insert a diskette into the disk drive.
This operation may take a few minutes.
Please be patient.

Press <y> to confirm.
Press <n> to cancel.
```

Figure 3-5. Confirm Window

2. Verify that the diskette is not write-protected and insert the tape into the tape drive. See ["Inserting and Removing Diskettes"](#) above for more information.
3. Press **y**

The system displays a screen stating that the tape has been formatted.

4. Remove the tape from the tape drive.
5. Press **ENTER** to continue.

Backing Up the INTUITY CONVERSANT System

There are three ways you can backup and restore your system:

- BRU (backup/restore utility)
- mkimage
- Backing Up Speech Files and ORACLE® Database Tables Using a LAN

Backup the INTUITY CONVERSANT System Using BRU

The following section describes the procedure for backing up your INTUITY CONVERSANT system using the BRU.

CAUTION:

Make sure you use the 2.5 Gbyte cartridge tapes (comcode 407557073) when you back up your system.

NOTE:

Use the backup mechanisms described here to back up and restore files on the same machine only.

Types of BRU

- Root, or disk-level, backup - This is used to save the entire contents of a hard disk and is good to perform to baseline your new system after initial load.
- Full, or UNIX-level - This is a backup of all files and file systems.
- Differential, or UNIX-level differential - this is a backup of files which have changed dates since the last full backup.

When to perform a BRU backup

There are no specific times or rules as to when to perform a BRU backup. The following are a few suggestions:

- When the system is new. Perform a root and/or full backup to baseline your system.
- When your system has been upgraded to a new software release. Perform a differential backup.

- After your system has been upgraded or reconfigured with new or different hardware. Perform a full and/or differential backup.
- When you notice performing a differential backup is taking a long time to complete. Perform a full backup.

Performing a Root Backup



NOTE:

Make sure the INTUITY Backup/Restore Utility is loaded on the system before performing a disk backup. This is convenient for doing Verification, Full and Differential UNIX backup steps.

Backup of the entire disk consists of two parts: copy disk to tape and checksum verification. Each part takes about 1 Hour/Gbyte to complete.

To perform a root backup using the BRU tool, do the following:

1. Log in as root.
2. Enter **shutdown -g0 -y**
The system shuts down.
3. Insert the BRU Disk Backup diskette labeled "QuickStart" into the diskette drive. See ["Inserting and Removing Diskettes"](#) above for the procedure.
4. Press the reset button on the lower front of the MAP/5P peripheral bay.

The system boots from the BRU diskette. After a few minutes the system displays the BRU Main Menu ([Figure 3-6](#)).

QuickStart - System Recovery Tool
Copyright(c) 1997, Enhanced Software Technologies, Inc.

1. Select Recovery Archive Device.
2. Perform System Backup
3. Perform System Recover
4. Perform Archive Volume Verification
5. Recovery Help
9. Restart Native Operating System

Select Option >

Figure 3-6. BRU Main Menu

5. Enter 1

The system displays the BRU Select Recovery Device Type Menu Screen ([Figure 3-7](#)).

```
Please select the type of Backup Device to use.
```

- ```
1. Wangtek 525 MB QIC Tape Drive
2. Tandberg 2.5 GB QIC Tape Drive
Q. Quit
```

```
Select (1, 2, or Q)
```

**Figure 3-7. BRU Select Recovery Device Type Menu Screen**

6. Enter the number corresponding to your systems tape drive.

The system displays the following message:

```
Checking Device.
```

The system displays the BRU Main Menu Screen ([Figure 3-6](#)).

7. Enter **2**

The system displays the following message:

```
Scanning system hardware for attached hard drives
```

```
I found X hard drives attached to this system:
```

```
1. First SCSI Hard Drive Size = xxxxxxxxxx
Select Hard Drive to Backup; Separate multiple entries
with spaces [1]:
```

8. Enter the number of the hard disk drive to be backed up.

The system displays the following message:

```
Total backup size 2048 MBytes
```

```
Make sure that the prepared tape is unchanged
Press [ENTER] to continue.
```

9. Press **ENTER**

The system displays the following message:

```
Creating the recovery volume...
```

This operation can take from minutes to hours depending upon the speed of the tape drive being used.

For example:

```
Wangtek 525MB QIC drive - 12MB/min = 720MB/hr
Tanberg 2.5GB QIC drive - 17MB/min = 1GB/hr
```

```
Backing up X hard drive.
```

```
System backup operation completed successfully.
```

```
QuickStart will now verify the backup.
```

While EST recommends that you verify each backup, this is an optional process.

```
Enter V to verify or S to skip [V/S]:
```

**CAUTION:**

*Entering v will cause the system to verify the tape using the backup floppy. This procedure will take approximately two hours. During this time the system will be out of service.*

10. Enter **s**

The system displays the following message:

```
Verification Skipped!
```

You may verify a QuickStart tape at any time by using option 4 from the main QS menu.

```
Press [ENTER] to return to the main menu.
```

11. Press **ENTER**

The system displays the BRU Main Menu Screen ([Figure 3-6](#)).

12. Remove the "QuickStart" boot diskette from the diskette drive. See ["Inserting and Removing Diskettes"](#) above for the procedure.13. Enter **9**

## 14. The system reboots to the INTUITY CONVERSANT system.

15. Verify the root backup tape while the system is in operation. See ["Verifying a Root Backup Tape"](#) below for the procedure.

## Performing a Full Backup

This procedure can be performed while your system is up and running.

A full UNIX-level backup consists of two components:

- Estimate - this determines how much has changed since the last backup.
- Backup - this is the actual backup performance.

### ⇒ NOTE:

The estimated time required to perform a full backup is 1 Gbyte/hour.

To perform a Full UNIX-level backup, do the following:

1. Starting at the Voice System Administration Menu ([Figure 3-3](#)), select

```
> Backup/Restore
```

```
> Full Backup
```

```
> Estimate
```

The system displays a message similar to the following message:

```
Please be patient, depending on the size of the backup
this could take several minutes
```

```
Performing Full Backup estimate...
```

```
bru:lvolume xxxxx files, xxxxxxx archive blocks xxxxxx
Kbytes
```

```
Please press <ENTER> to return to menu.
```

2. Make sure you have enough backup tapes available to store the system data.
3. Label each cartridge tape with "Full UNIX Backup Tape X."
4. Press **ENTER**

The system displays the Full Backup menu ([Figure 3-8](#)).

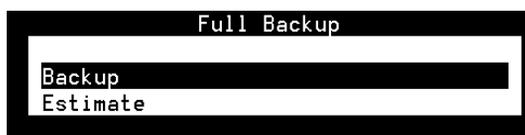


Figure 3-8. Full Backup Menu

## 5. Select

```
> Backup
```

The system displays the following message:

```
Please put a tape in the drive.
```

```
Press <Enter> to continue or q to quit.
```

6. Insert the first tape into the cartridge tape drive. See [“Inserting and Removing Cartridge Tapes”](#), above for the procedure.7. Press **ENTER**

The system displays the following message:

```
The Full UNIX backup is now complete. Please remove the
tape and label it as "Full UNIX Backup, created
[today's date]"
```

8. Verify the backup tape. See [“Verifying a Backup Tape”](#) below for the procedure.

## Performing a Differential Backup

Differential backups can be scheduled (to be performed at specified date(s) and time) or performed on demand.

To perform a Differential UNIX-level backup, do the following:

1. Starting at the Voice System Administration Menu ([Figure 3-3](#)), select

```
> Backup/Restore
```

```
> Differential Backup
```

```
> Estimate
```

The system displays a message similar to the following message:

```
Please be patient, depending on the size of the backup
this could take several minutes
```

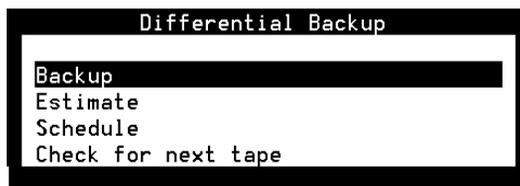
```
Performing Differential Backup estimate...
```

```
bru:lvolume xxxxxx files, xxxxxx archive blocks xxxxxx
Kbytes
```

```
Please press <ENTER> to return to menu.
```

2. Make sure you have enough backup tapes available to store the system data.
3. Label each cartridge tape with "Differential UNIX Backup Tape X."
4. Press **ENTER**

The system displays the Differential Backup menu ([Figure 3-9](#)).



---

**Figure 3-9. Differential Backup Menu**

5. Select



The system displays the following message:

```
Please put a tape in the drive.
```

```
Press <Enter> to continue or q to quit.
```

6. Insert the first tape into the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#), above for the procedure.
7. Press **ENTER**

The system displays the following message:

```
The Differential UNIX backup is now complete. Please
remove the tape and label it as "Differential UNIX
Backup, created [today's date]"
```

8. Verify the backup tape. See ["Verifying a Backup Tape"](#) below for the procedure.

## Scheduling a Differential UNIX-Level Backup

You can schedule a differential backup to be performed at a particular time on a weekly basis or on selected days during the week.

**⇒ NOTE:**

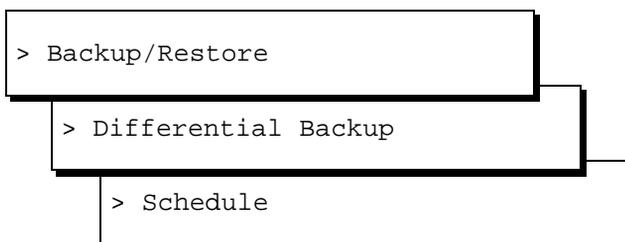
Be sure to have a tape loaded in the tape drive for a backup scheduled at a time when no operator is available.

**⇒ NOTE:**

The backup will wait for a tape to be inserted if there is not one already in the drive.

To schedule a differential UNIX-level backup, do the following:

1. Starting at the Voice System Administration Menu ([Figure 3-3](#)), select



The system displays the Differential Backup Schedule window ([Figure 3-10](#)).



**Figure 3-10. Differential Backup Schedule Window**

2. Set the hour at which the system backup will occur by completing the following Steps a through :
  - a. Use the left  and right  arrows on your keyboard to move within the Time: field.
  - b. In the hour portion of the Time: field, enter number between 00 and 23.

- c. In the minute portion of the `Time:` field, enter a number between 00 and 59.  
For example, entering 02:30 activates the backup process at 2:30 am.
3. Press the down (▼) arrow on your keyboard to move to the days of the week.
4. Type **YES** next to the day(s) that you want the differential backup to be performed.
5. Type **NO** next to the days that you do not want the differential backup to be performed.
6. Press (F3) (Save).

The system displays the Differential Backup menu ([Figure 3-9](#)).

## Verifying a Backup Tape

A backup tape can be verified using the INTUITY CONVERSANT windows or the backup utility boot floppy.

### Using the INTUITY CONVERSANT Windows

Verify your backup tape using the BRU once the system is in operation. Perform the verification on the same INTUITY CONVERSANT system or another INTUITY CONVERSANT system that has the BRU loaded.

The BRU verifies:

- Differential backup tapes
- Full backup tapes
- Root backup tapes

**Verifying a Differential or Full Backup Tape.** To perform a verification, do the following:

1. Insert the backup tape into the tape drive. See [“Inserting and Removing Cartridge Tapes”](#) above for the procedure.
2. Starting at the Voice System Administration Menu ([Figure 3-3](#)), select

```
> Backup/Restore
```

```
> Verify Backup
```

```
> Differential/Full
```

The system displays the following message:

```
The Backup Tape Verification is now complete. Please
remove the tape, check that the label reflects whether
the tape contains root, full, or differential backup
data, date and time it was created then store it.
```

**Verifying a Root Backup Tape.** To perform a verification, do the following:

1. Insert the backup tape into the tape drive. See [“Inserting and Removing Cartridge Tapes”](#) above for the procedure.
2. Starting at the Voice System Administration Menu ([Figure 3-3](#)), select

```
> Backup/Restore
> Verify Backup
> "QuickStart"
```

The system displays the following message:

```
The Backup Tape Verification is now complete. Please
remove the tape, check that the label reflects whether
the tape contains root, full, or differential backup
data, date and time it was created then store it.
```

## Using the Backup Utility Boot Floppy

### ⇒ NOTE:

You must shut down your CONVERSANT system to perform this verification.

To perform the verification, do the following:

1. Log in as root.
2. Enter **shutdown -g0 -y**  
The system shuts down.
3. Insert the BRU Disk Backup diskette labeled “QuickStart” into the diskette drive. See [“Inserting and Removing Diskettes”](#) above for the procedure.
4. Press the reset button on the lower front of the MAP/5P peripheral bay.  
The system boots from the BRU diskette. After a few minutes the system displays the BRU Main Menu ([Figure 3-6](#)).
5. Enter **4**

The system displays the following message:

Please insert the QuickStart archive media and press [ENTER] to continue.

6. Insert the backup tape into the cartridge tape drive. See [“Inserting and Removing Cartridge Tapes”](#) above for the procedure.
7. Press

The system displays the following message:

```
Checking the media contents...
```

```
Volume 1 = X SCSI fixed disk, size = 2097152 (2048 MB)
```

```
Verifying the X SCSI fixed disk.
```

8. If the verification was successful you have completed the backup procedure.

If the verification was unsuccessful, repeat the backup procedure.

## Backing Up the INTUITY CONVERSANT System Using **mkimage**

---

The following section describes the procedure for backing up your INTUITY CONVERSANT system using the **mkimage** command.

### NOTE:

The backup mechanisms described here should be used for backing up and restoring files on the same machine only.

The **mkimage** command backs up all files and speech to cartridge tapes. The **mkimage** command should only be used in the following situations:

- After initially loading a new system
- After upgrading to a new software release
- After upgrading hardware
- After reconfiguring the system

See Appendix A, “Summary of Commands,” in *INTUITY™ CONVERSANT® V6.0 Administration*, 585-310-591, for additional information about the **mkimage** command.

## Performing a System Backup

To conduct a full system backup using **mkimage**, do the following:

1. Log in as root.
2. Stop the voice system. See [“Stopping the Voice System”](#) below for the procedure.
3. Enter **mkimage**

The system displays the following message:

```
The UNIX kernel will be rebuilt now. This will take
some time. Please wait.
```

```
WARNING: This process will put the system in single
user mode!!!
```

```
Do you wish to continue (y/n)?
```

4. Enter **y**

The system displays the following message:

```
The system will now be put in single user mode.
Re-login after the prompt and re-execute this command
to continue the mkimage process.
```

```
Console Login:
```

5. Continue with the next procedure, [“Backing Up the Root File System”](#).

## Backing Up the Root File System

To back up the root file system, do the following:

1. Log in as root.
2. Enter **mkimage**

The system displays the following message:

```
Checking the system run level: Please wait
```

```
The system is in single user mode: Continuing
```

```
The following are approximate tape counts required for
this backup for various tape drive sizes
```

```
150 Mbyte drive: X tape(s)
320 Mbyte drive: X tape(s)
525 Mbyte drive: X tape(s)
1.2 Gbyte drive: X tape(s)
2.0 Gbyte drive: X tape(s)
```

Be sure to number the cartridge tapes consecutively in the order they will be inserted.

Label the tapes 'CONVERSANT Image Tape x' where x indicates the insertion sequence. Also include the current date.

Note: Very large files, such as database files, take several minutes to backup. During this time you will not see any progress reported to the console. If the tape drive is running and the system disk light is flashing, the operation is in progress.

Please insert the first tape now. Press 'ENTER' to start image tape creation.

3. Label the appropriate number of cartridge tapes.

Label the tapes *CONVERSANT Image Tape x*, where x indicates the insertion sequence. Also include the current date on the label.

4. Insert the cartridge tape labeled "CONVERSANT Image Tape 1" into the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.
5. Press **ENTER**.

The system takes approximately 30 minutes to load the information onto one cartridge tape.

If your system backup requires more than one cartridge tape, the system displays the following message:

```
End of medium on output
Change to part 2 and press RETURN key. (q)
```

If your backup requires more than one tape, complete Steps a through d:

- a. Remove the cartridge tape labeled "CONVERSANT Image Tape 1" from the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.
- b. Insert the cartridge tape labeled "CONVERSANT Image Tape 2" into the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.
- c. Press `[ENTER]`.
- d. Repeat Steps [a](#) through [c](#) for all necessary cartridge tapes.

If your backup does not require more than one tape, continue with Step [6](#).

6. When the system displays the following message, remove the last cartridge tape from the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.

The image tapes will be verified now.

Make sure the tapes are inserted in the order they are made.

Press 'Enter' to start verification.

7. Press `[ENTER]`.

The system displays the following message:

Please insert the first tape now. Press 'Enter' to continue.

8. Insert the cartridge tape labeled "CONVERSANT Image Tape 1" into the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.
9. Press `[ENTER]`.

The system takes as long to verify a cartridge tape as it did to create it.

The system will prompt for additional tapes if necessary.

10. If your system has speech files located on a second disk, perform the next procedure, ["Backing Up the Speech Files"](#).

If your system has only one disk, or is mirrored, continue with the procedure, ["Verifying the Back Up"](#).

## Backing Up the Speech Files

If your system contains speech files on Hard Disk Drive 2, the system will display the following message:

```
The following are approximate tape counts required for
this backup for various tape drive sizes
```

```
150 Mbyte drive: X tape(s)
320 Mbyte drive: X tape(s)
525 Mbyte drive: X tape(s)
1.2 Gbyte drive: X tape(s)
2.0 Gbyte drive: X tape(s)
```

Be sure to number the cartridge tapes consecutively in the order they will be inserted.

Label the tapes 'CONVERSANT Speech Tape x' where x indicates the insertion sequence. Also include the current date.

Note: Very large files, such as database files, take several minutes to backup. During this time you will not see any progress reported to the console. If the tape drive is running and the system disk light is flashing, the operation is in progress.

Please insert the first tape now. Press 'ENTER' to start image tape creation.

To back up the speech files, using the **mkimage** command, do the following:

1. Label the appropriate number of cartridge tapes.

Label the tapes 'CONVERSANT Speech Tape x' where x indicates the insertion sequence. Also include the current date on the label.

2. Insert the cartridge tape labeled "CONVERSANT Speech Tape 1" into the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.
3. Press `(ENTER)`.

The system takes approximately 30 minutes to load the information onto one cartridge tape.

If your system backup requires more than one cartridge tape, the system displays the following message:

```
End of medium on output
Change to part 2 and press RETURN key. (q)
```

If your backup requires more than one tape, complete Steps a through d:

- a. Remove the cartridge tape labeled "CONVERSANT Speech Tape 1" from the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.

- b. Insert the cartridge tape labeled "CONVERSANT Speech Tape 2" into the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.
- c. Press `(ENTER)`.
- d. Repeat Steps [a](#) through [c](#) for all necessary cartridge tapes.

If your backup does not require more than one tape, continue with Step [4](#).

4. When the system displays the following message, remove the last cartridge tape from the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.

The speech tapes will be verified now.

Make sure the tapes are inserted in the order they are made.

Press 'Enter' to start verification.

5. Press `(ENTER)`.

The system displays the following message:

```
Please insert the first tape now. Press 'Enter' to
continue.
```

6. Insert the cartridge tape labeled "CONVERSANT Speech Tape 1" into the cartridge tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.
7. Press `(ENTER)`.  
The system takes as long to verify a cartridge tape as it did to create it.  
The system will prompt for additional tapes if necessary.
8. Continue with the procedure, ["Verifying the Back Up"](#).

## Verifying the Back Up

When the system is done verifying a cartridge tape it automatically reboots, returns to multi-user format, and displays the console login. To verify the back up, do the following:

1. Log in as root.
2. Enter `vi /SaveVsData/mkimage.log`

If the system displays the following message, the mkimage back up was successful.

```
Creation and verification of the CONVERSANT Image Tape
is complete.
```

If the system does not display this message, the mkimage back up was not successful. Repeat the procedure.

## Performing Other Backups

See the *Novell UnixWare Backup and Restore Services* book, which is part of the *UnixWare Documentation Set*, 585-350-908, for information on:

- Establishing an automatic backup using **bkreg**
- Backing up the UnixWare system
- Performing a UnixWare incremental backup
- Copying files using **cpio**
- Backing up non-Script Builder Applications
- Backing up a database

See *INTUITY™ CONVERSANT® V6.0 Application Development with Script Builder*, 585-310-760, for information on:

- Backing up Script Builder applications

See *INTUITY™ CONVERSANT® V6.0 Speech Development, Processing and Recognition*, 585-310-762, for information on:

- Backing up speech files using **spsav**

## Backing Up Speech Files and ORACLE Database Tables Using a LAN

---

### NOTE:

The backup server must have an ftp program. Most operating systems have a built in ftp program.

## Identifying Speech Files and Database Tables

---

This section describes the procedures for identifying speech files and database tables.

## Locating and Identifying Speech Files

Before the speech files can be backed up, you must:

- Locate the speech files
- Identify which talkfiles are being used

## Locating Speech Files

To locate speech files, do the following:

1. Enter **grep SPEECHDIR /vs/data/irAPI.rc**

The system displays a message similar to the following message:

```
SPEECHDIR=/home2/vfs/talkfiles
```

This is the directory in which all of the speech files are located.

2. Enter **cd <directory name>**

### ⇒ NOTE:

Using the example in Step 1, enter **cd /home2/vfs/talkfiles**

3. Enter **ls**

The system displays a message similar to the following message:

```
1 100 102 104 106 108 110 112 201 40 9
10 101 103 105 107 109 111 2 206 41
```

### ⇒ NOTE:

These are the talkfiles used by all applications on the INTUITY CONVERSANT system.

## Identifying Talkfiles

To identify the talkfiles being used, do the following:

1. Enter **cd /speech/talk**
2. Enter **ls**

The system displays a message similar to the following message:

```
FFtemplate.pl feature_tst.pl transcribe.pl
```

3. View the .pl file associated with your application.

For example, to view the .pl file associated with the feature test application, enter **head feature\_tst.pl**

The system displays a message similar to the following message:

```
1 Standard Speech for feature_tst
sit.det 1000 Special Information Tone detected
recog.1.3.no1001 to use recognition type 1-3 and no,
enter 4
to.test 1002 To test
cant.dial.lul003 unable to dial into line unit
full.cca.b.11004 For full cca call bridge enter 1#
```

4. Locate the first field in the first line of the output. This is the talkfile that application uses.

In the example above the feature test application uses talkfile 1.

5. Record the number.
6. Repeat Steps [3](#) through [5](#) for all appropriate applications.

## Identifying Database Tables

To identify the database tables the system uses, do the following:

1. Enter **cd /<save directory>**

where <save directory> is the name of the directory you want to use as the intermediate directory during a backup or restore.

2. Enter **sb\_table -l <application name>**

where <application name> is the name of the application you are using.

The system displays a message similar to the following message:

```
TAB1
TAB2
TAB3
TAB4
TAB5
```

The tables listed in the message are the tables being used by the application.

3. Record the table names.
4. Enter **tblsav <application name> <tables>**

where <application name> is the name of the application you are using and <tables> are the tables recorded in Step [3](#).

### NOTE:

Table names are case sensitive and must be separated by spaces.

### NOTE:

An explanation of the **tblsav** command can be found by entering **tblsav**, without any additional arguments, on the Intuity CONVERSANT system. Information is also available in *Intuity CONVERSANT System Version 5.0 Command Reference*.

5. Repeat Steps [2](#) through [4](#) for every application for which you want to save tables.

## Backing Up Speech Files and Database Tables

---

This section provides the procedures for backing up speech files and database tables.

### Backing Up Speech Files

To backup speech files, do the following:

#### NOTE:

On the server, create a directory for each talkfile to be backed up. It is advisable to have the same directory names on your server as is on your INTUITY CONVERSANT system. For example, place files from talkfile 1 in a directory called 1.

#### NOTE:

The following procedure applies to Windows NT or Windows 95 servers.

1. From a DOS prompt on the server, enter **cd <backup directory>**  
where <backup directory> is the name of the directory you want to use as the backup directory for the application speech.
2. Enter **ftp <CONVERSANT machine address or name>**  
The system asks for the user login.
3. Enter an appropriate login id.  
The system asks for the user password.
4. Enter the user password.
5. Enter **cd <directory name>** using the directory name entered in Step [2](#) of ["Locating Speech Files"](#) above.
6. Enter **prompt**  
This command toggles between interactive mode on and interactive mode off. The system should be set to interactive mode off.
7. Enter **bin**  
This command indicates binary transfer.
8. Enter **cd <talkfile>**  
where <talkfile> is the talkfile being used by the application. This is the file that was identified in Step [4](#) of ["Identifying Talkfiles"](#) above.
9. Enter **mget \***  
This command copies all files in the directory.

10. If there are additional talkfiles which need backed up complete the following Steps a through c for each talkfile.
  - a. Enter **cd ../<new talkfile>**
  - b. Enter **lcd ../<new backup directory>**
  - c. Enter **mget \***
11. Exit the ftp program.

## Backing Up Database Tables

To backup database tables, do the following:

1. From a DOS prompt on the server, enter **cd <backup directory>**  
where <backup directory> is the name of the directory you want to use as the backup directory for the ORACLE tables.
2. Enter **ftp <CONVERSANT machine address or name>**  
The system asks for the user login.
3. Enter an appropriate login id.  
The system asks for the user password.
4. Enter the user password.
5. Enter **cd /<save directory>**  
where <save directory> is the name of the directory in which the database tables were saved in Step [1](#) of ["Identifying Database Tables"](#) above.
6. Enter **prompt**  
This command toggles between interactive mode on and interactive mode off. The system should be set to interactive mode off.
7. Enter **bin**  
This command indicates binary transfer.
8. Enter **get <application name>** for every file that you created in Step [4](#) in ["Identifying Database Tables"](#) above.  
where <application name> is the name of the application you are using.
9. Exit the ftp program.

## Restoring the INTUITY CONVERSANT System

---

The following section describes the procedure for restoring your INTUITY CONVERSANT system.

There are two tools available for you to use to restore your system:

- BRU (Backup/Restore utility)
- mkimage
- Restoring Speech Files and ORACLE Database Tables Using a LAN

### Restore the INTUITY CONVERSANT System Using BRU

---

The following section describes the procedure for restoring your INTUITY CONVERSANT system using the BRU.

The BRU restores up to one or more tapes and has a checksum verification option available. BRU restore is a 3-step process:

- Root, or disk-level, restore.
- Full, or UNIX-level, restore.
- Differential, or UNIX-level differential restore.

### Performing a Root Restore

**NOTE:**

The INTUITY CONVERSANT system must be shut down in order to restore an entire disk.

To perform a root restore using the BRU tool, do the following:

1. Log in as root.
2. Enter **shutdown -g0 -y**  
This message will shutdown the system.
3. Insert the BRU Disk Backup diskette labeled “QuickStart” into the diskette drive. See [“Inserting and Removing Diskettes”](#) above for the procedure.
4. Press the reset button on the lower front of the MAP/5P peripheral bay.  
The system will boot from the BRU diskette. After a few minutes, the system displays the BRU Main Menu Screen ([Figure 3-6](#)).
5. Enter **1**

The system displays the BRU Select Recovery Device Type Menu Screen ([Figure 3-7](#)).

6. Enter the number corresponding to your systems tape drive.

The system displays the following message:

```
Checking Device...
```

The system displays the BRU Main Menu Screen ([Figure 3-6](#)).

7. Enter **3**

The system displays the following message:

```
Please insert the QuickStart tape in the tape drive and
press [ENTER].
```

8. Insert the recovery tape in the tape drive. See "[Inserting and Removing Cartridge Tapes](#)" above for the procedure.

9. Press **[ENTER]**

The system displays the following message:

```
Verifying the tape and reading the contents listings.
```

```
Tape contains a QuickStart backup and is ready.
```

```
There is 1 drive volume on this tape
Volume 1 = X SCSI Hard Drive size = 2097152 (2048 MB)
```

```
Press [ENTER] to continue.
```

10. Press **[ENTER]**

The system displays the following message:

```
Restoring the X hard drive.
```

 **NOTE:**

The restore speed is about 1GByte/hour.

```
Press [ENTER] to return to the main menu.
```

11. Press **[ENTER]**

The system displays the BRU Main Menu Screen ([Figure 3-6](#)).

12. Remove the "QuickStart" boot diskette from the diskette drive. See "[Inserting and Removing Diskettes](#)" above for the procedure.

13. Enter **9**

14. The system reboots to the INTUITY CONVERSANT system.

15. Continue with "[Performing a Full Restore](#)".

## Performing a Full Restore

A Full Restore is the second step in the recovery process.

To perform a Full Restore, do the following:

1. Starting at the Voice System Administration Menu (Figure 3-6), select

```
> Backup/Restore
```

```
> Restore
```

The system checks to see if the INTUITY CONVERSANT Voice System is running. If the voice system is running, continue with step 2, otherwise go to step 3.

The system displays the following message:

```
The Voice System is running, do you want to stop it for
Restore?
```

2. Enter **y**

**⇒ NOTE:**

If you choose N, the voice system is not stopped and the restoration does not continue.

3. Insert the tape labelled "Full Backup Created [latest date available]." See ["Inserting and Removing Cartridge Tapes"](#) for the procedure.

The system displays a message similar to the following message:

```
Do you want to recover the following volume:
Full Backup created on April 3, 1997: 2:30 A. M.
Enter y to recover (y):
```

4. Enter **y**

**⇒ NOTE:**

If more than one tape is required to restore, the system will prompt you to insert the additional tapes when they are needed.

5. Continue with ["Performing a Differential Restore"](#).

## Performing a Differential Restore

A Differential Restore is the third step in the recovery process.

To perform a Differential Restore, do the following:

1. Starting at the Voice System Administration Menu (Figure 3-6), select

```
> Backup/Restore
```

```
> Restore
```

The system checks to see if the CONVERSANT Voice System is running. If the voice system is running, continue with step 2, otherwise go to step 3.

The system responds with the following message:

```
The Voice System is running, do you want to stop it for
Restore?
```

2. Enter **y**

**⇒ NOTE:**

If you choose N, the voice system is not stopped and the restoration does not continue.

3. Insert the tape labelled "Differential Backup Created [latest date available]." See ["Inserting and Removing Cartridge Tapes"](#) for the procedure.

The system displays a message similar to the following message:

```
Do you want to recover the following volume:
Differential Backup created on April 3,1997: 2:30 A. M.
Enter y to recover (y):
```

4. Enter **y**

**⇒ NOTE:**

If more than one tape is required to restore, the system will prompt you to insert the additional tapes when they are needed.

5. Press the reset button on the lower front of the MAP/5P peripheral bay.

## Performing a System Restoration Using mkimage

To perform a system restoration, do the following:

1. From the “Installing Base System Software,” chapter of your platform maintenance book, perform the following procedures:
  - a. “Beginning the UnixWare Installation”
  - b. “Setting Up the UnixWare Environment”
  - c. “Initializing the Hard Disk Drives”
  - d. “Transferring the UnixWare Files”

The system displays the Application Server Media Type screen ([Figure 3-11](#)).

The Application Server software is available on diskette or tape or network server. You must select the source you will use to install the software.

Your choices are:

1. Diskette Drive 1
2. Unixware for Intuity CONVERSANT
3. Network Install Server
4. Intuity Image/Snap Tape

Press a number between '1' and '4' followed by 'ENTER':

### **Figure 3-11. Application Server Media Type Screen**

2. Insert your system backup cartridge tape labeled “CONVERSANT Image Tape 1” into the tape drive. See [“Inserting and Removing Cartridge Tapes”](#) above for the procedure.
3. Type 4
4. Press **ENTER**.

The system displays the Insert Tape screen ([Figure 3-12](#)).

Please insert the Intuity Image/Snap cartridge tape into the tape drive and press 'ENTER'.

Your choices are:

1. The tape has been inserted in the tape drive.
2. Go back to previous menu.

Press '1' or '2' followed by 'ENTER':

Figure 3-12. Insert Tape Screen

5. Press **ENTER**.

This will accept the default of 1 to indicate the tape has been inserted and is ready for access.

The system displays the following message:

Installation in progress. This will take several minutes. Please do not remove the tape.

The installation process will take two to three hours to complete. When the system installation is complete the system will display a message stating that you are able to remove the tape from the drive.

6. Remove the tape labeled "CONVERSANT Image Tape 1" from the tape drive. See ["Inserting and Removing Cartridge Tapes"](#) above for the procedure.
7. Press **ENTER**.

The system reboots.

8. If your system has more than one hard disk drive clean the secondary hard disk drives. See the "Replacing a Hard Disk Drive" chapter of your platform maintenance book.



**CAUTION:**

*Do not remove the partition on the root hard disk drive.*

9. Reboot the system. See [“Rebooting the UNIX System”](#), below for the procedure.
10. Perform the “Activating the Volume Manager”, procedure in the “Installing Base System Software” chapter of your platform maintenance book.

The system is now ready for you to restore speech files or activate mirroring. To restore the speech files, see “Saving and Restoring,” in Chapter 1, “Overview of Speech,” in *INTUITY™ CONVERSANT® Version 6.0 Speech Development, Recognition, and Processing*, 585-310-762. To activate mirroring, see the “Replacing a Hard Disk Drive” chapter of your platform maintenance book.

## Restoring the Database Directory from System Backup

---

### CAUTION:

*Current data, system traffic data, and application data may be lost depending on the date of the last system backup.*

1. If the database system is running, perform the [“Stopping the Database System”](#) procedure below.
2. Perform the “Selective System Restore” procedure described in *Novell UnixWare Backup and Restore Services* book which is part of the *UnixWare Documentation Set*, 585-350-908. Specify the directory **/oracle/dbs**.
3. If there are other database files created outside the **/oracle/dbs** directory, perform the “Selective System Restore” procedure for each of the files. See the *Novell UnixWare Backup and Restore Services* book which is part of the *UnixWare Documentation Set*, 585-350-908, for this procedure.
4. Perform the [“Starting the Voice System”](#) procedure below to start the database and the voice system.

## Restoring Speech Files and ORACLE® Database Tables Using a LAN

---

This section provides the procedures for restoring speech files and database tables.

### Restoring Speech Files

To restore speech files, do the following:

1. On the Intuity CONVERSANT system, using the root login, enter **chmod 777 <directory>/\***

where <directory> is the name of the speech directory as found in Step [1](#) of [“Locating Speech Files.”](#)

2. On the server, enter **ftp <CONVERSANT machine address or name>**  
The system asks for the user login.
3. Enter an appropriate login id.
4. Enter the user password.
5. Enter **cd <directory name>** using the directory name entered in Step [2](#) of "[Locating Speech Files](#)" above.
6. Enter **cd <talkfile>**  
where <talkfile> is the speech file being used by the system. This is the file that was identified in Step [4](#) of "[Identifying Talkfiles](#)" above.
7. Enter **prompt**  
This command toggles between interactive mode on and interactive mode off. The system should be set to interactive mode off.
8. Enter **lcd <backup directory>**  
where <backup directory> is the directory on the server to which the speech files were backed up.
9. Enter **mput \***  
This command will put all files in the <talkfile> directory.
10. If there are additional talkfiles which need restored in a different server directory than those which were restored in Steps 5 through 8, complete the following Steps a through c for each talkfile.
  - a. Enter **cd ../<new talkfile>**
  - b. Enter **lcd <new backup directory>**
  - c. Enter **mput \***
11. Exit the ftp program.
12. On the Intuity CONVERSANT system, using the root login, enter **chmod 644 <directory>/\***  
where <directory> is the name of the speech directory as found in Step [1](#) of "[Locating Speech Files](#)."

## Restoring Database Tables

To restore database tables, do the following:

1. On the server, enter **ftp <CONVERSANT machine address or name>**  
The system asks for the user login.
2. Enter an appropriate login id.  
The system asks for the user password.
3. Enter the user password.

4. Enter **cd /<save directory>**

where <save directory> is the name of the directory in which the database tables were saved in Step [1](#) of [“Identifying Database Tables”](#) above.

5. Enter **lcd <backup directory>**

where <backup directory> is the directory on the server to which the database tables were backed up.

6. Enter **prompt**

This command toggles between interactive mode on and interactive mode off. The system should be set to interactive mode off.

7. Enter **put <application name>** for every application with tables that need restored.

where <application name> is the name of the application you are using.

This command will put all files in <backup directory> on the server.

## 8. Exit the ftp program.

## 9. Drop each table to be restored. See the maintenance document for your platform for table dropping procedures.

**CAUTION:**

*If the existing tables are not dropped, the INTUITY CONVERSANT system appends the existing tables with the restored tables.*

10. On the INTUITY CONVERSANT system, enter **tblres <application>****NOTE:**

An explanation of the **tblres** command can be found by entering **tblres**, without any additional arguments, on the Intuity CONVERSANT system.

11. Repeat Step [10](#) for each database table to be restored.

## Administering the Voice System

---

Administering the voice system includes:

- Starting the voice system
- Stopping the voice system
- Shutting down the voice system

### Starting the Voice System

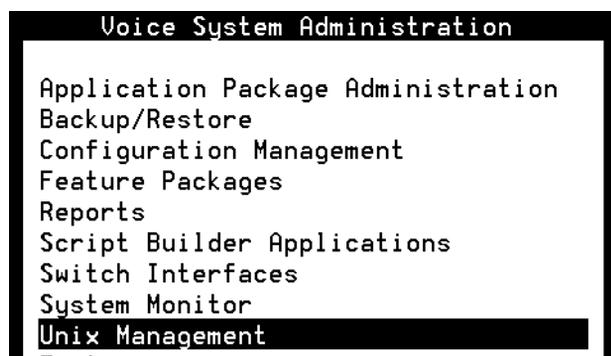
---

You can stop the voice system from either the INTUITY CONVERSANT windows or the command line.

### Using the INTUITY CONVERSANT Windows

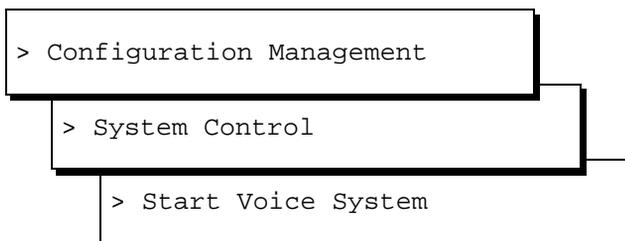
To start the voice system, do the following:

1. Starting at the Voice System Administration menu ([Figure 3-13](#)), select



---

Figure 3-13. Voice System Administration Menu



The system displays the following messages:

```
running bitmapmgr...
bitmapmgr completed.
```

```
Form Filler Audit complete. No errors found.
```

```
ORACLE RDBMS is already started.
```

```
The Voice System is starting
```

```
The Voice System is initializing cards
```

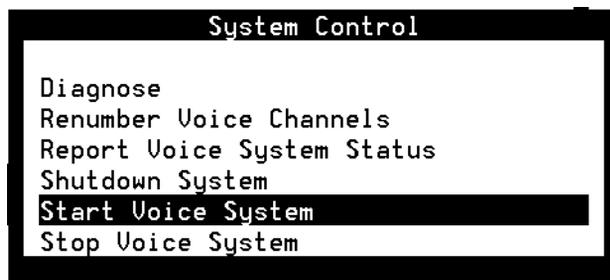
```
The Voice System is still initializing cards
Please wait...
```

```
Startup of the Voice system is now complete.
```

```
Hit acknowledge key to continue.
```

2. Press **F1** (acknowledge).

The system displays the System Control menu ([Figure 3-14](#)).



---

Figure 3-14. System Control Menu

## Using the Command Line

To start the voice system, do the following:

1. Enter **start\_vs**

The system displays the following messages:

```
running bitmapmgr...
bitmapmgr completed.
```

```
Form Filler Audit complete. No errors found.
```

```
ORACLE RDBMS is already started.
```

```
The Voice System is starting
```

```
The Voice System is initializing cards
```

The Voice System is still initializing cards  
Please wait...

Startup of the Voice system is now complete.

## Stopping the Voice System

---

You must stop the voice system to complete the following tasks:

- Replacing a component in the MAP/5P
- Performing routine backup and restore procedures

When the voice system is stopped, the entire system is placed in the idle state when all lines are free, the internal system tables are saved, and all processes are turned off.

The voice system can be stopped from either the INTUITY CONVERSANT windows or the command line.

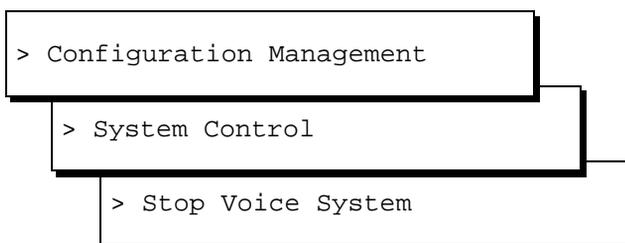
## Using the INTUITY CONVERSANT Windows

To stop the voice system, do the following:

### ☰ NOTE:

Have the system administrator route calls away from the system before beginning this procedure.

1. Starting at the Voice System Administration menu ([Figure 3-13](#)), select



The system displays the Wait Time window ([Figure 3-15](#)).



**Figure 3-15. Wait Time Window**

2. Enter a number between 60 and 600.

This is the number of seconds you want the system to wait for all calls to clear before stopping the voice system.

3. Press **F3** (save).

The system displays the following messages:

The Voice System is now stopping.

Initiating request to clear all calls in the next **X** seconds.

Orderly idling of the system succeeded.

After the voice system has completely stopped, use the "Start Voice System" choice from the system control menu to restart the voice system.

The Voice System has stopped.

Press Enter to continue.

4. Press **ENTER**.

The system displays the System Control menu ([Figure 3-14](#)).

## Using the Command Line

To stop the voice system, do the following:

### ⇒ NOTE:

Have the system administrator route calls away from the system before beginning this procedure.

1. Enter **stop\_vs time**

where *time* is the time (60 to 600 seconds) that you want the system to wait before it begins the shut down procedure. The default wait time is 180 seconds.

The system displays the following message:

```
The Voice System is now stopping.
```

```
Initiating request to clear all calls in the next X
seconds.
```

```
Orderly idling of the system succeeded.
```

After the voice system has completely stopped, use the "Start Voice System" choice from the system control menu to restart the voice system.

## Shutting Down the Voice System

---

To shut down the voice system, do the following:

1. Starting at the Voice System Administration menu ([Figure 3-13](#)), select

```
> Configuration Management
```

```
> System Control
```

```
> Shutdown System
```

The system displays the Wait Time window ([Figure 3-15](#)).

2. Enter a number between 0 and 60.

This is the number of seconds you want the system to wait for all calls to clear before shutting down the voice system.

3. Press **F3** (save).

The system displays the following messages:

```
The Voice System is now stopping.
```

```
Initiating request to clear all calls in the next X
seconds.
```

```
Orderly idling of the system succeeded.
```

After the voice system has completely stopped, use the "Start Voice System" choice from the system control menu to restart the voice system.

## Administering the Operating System

---

Administering the operating system includes

- Shutting down the operating system
- Rebooting the operating system

### Shutting Down the Operating System

---

You can shut down the operating system

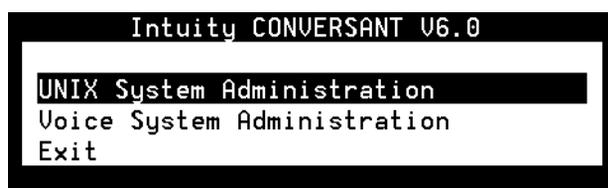
- Using the INTUITY CONVERSANT windows
- Using the command line

#### ⇒ NOTE:

The system automatically resets the machine clock for daylight savings time. If your system is down at the time at that daylight savings time is updated (April and October), your machine clock will not indicate the correct time.

### Using the INTUITY CONVERSANT Windows

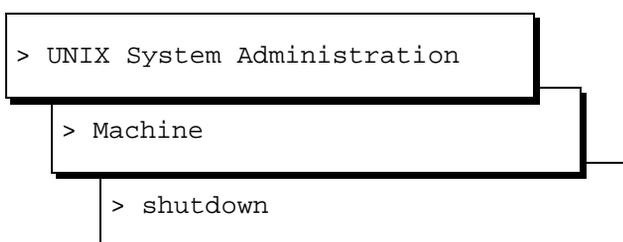
1. Stop the voice system. See [“Stopping the Voice System”](#), above
2. Start at the INTUITY CONVERSANT system menu ([Figure 3-16](#)).



---

Figure 3-16. INTUITY CONVERSANT System Menu

3. Select



The system displays the Shut Down the Machine window ([Figure 3-17](#)).

```
3 Shut Down the Machine
Users currently logged on:
root console Jul 8 06:39
root pts000 Jul 8 08:48
```

Figure 3-17. Shut Down the Machine Window

4. Press **F3** (Continue).

The system displays the next Shut Down the Machine window ([Figure 3-18](#)).

```
4 Shut Down the Machine
Number of seconds before shutdown starts: 60
WARNING: Once started, this procedure CANNOT BE STOPPED!
Strike SAVE to proceed with shutdown and exit 0A&M.
```

Figure 3-18. Shut Down the Machine Window (continued)

5. Enter the number of seconds the machine should wait to clear all calls before shutting down. Valid values are between 0 and 9999.
6. Press **F3** (save).

If you selected "0," the shutdown starts immediately. In this case, all remote users (if any) are notified that a shutdown is starting immediately.

## Using the Command Line

To shut down the operating system using the command line, do the following:

1. Stop the voice system. See [“Stopping the Voice System”](#) above.
2. Enter **shutdown -i0 -y -g0**

## Rebooting the UNIX System

---

To reboot the UNIX system, do the following:

1. Stop the voice system. See [“Stopping the Voice System”](#) above for the procedure.
2. Enter **shutdown i6 -y -g0**

## Administering the Database System

---

Administering the database system consists of

- Starting the database system
- Stopping the database system

## Starting the Database System

---

To start the database system, do the following:

1. Enter **/oracle/bin/or w**

The system displays the following messages followed by the UNIX prompt.

```
ORACLE instance started.
Database mounted.
Database opened.
Total System Global Area877716 bytes
Fixed Size 24908 bytes
Variable Size410440 bytes
Database Buffers409600 bytes
Redo Buffers32768 bytes
SQL*DBA complete.
```

If the database start-up fails, the system may hang, forcing you to press **[DEL]**, or the system may provide error information and return the system prompt. If the system returns error information, enter:

**/oracle/bin/oerr ora error\_num**

where *error\_num* is the ORACLE error number in the reason field of the error message.

The output will contain a brief explanation of the error, the cause, and the action to take to correct it.

**⇒ NOTE:**

You can also refer to the *ORACLE Error Messages and Codes Manual* for the explanation. If the error is unique to the UNIX environment, you can also see the *ORACLE for UNIX Technical Reference Guide* for detailed information.

Follow the actions suggested to correct the problem.

## Stopping the Database System

To stop the database system, do the following:

1. If the voice system is still running, perform [“Stopping the Voice System”](#) above.
2. Enter **/oracle/bin/ior s**

The system displays the following messages followed by the UNIX prompt.

```
Database closed.
```

```
Database dismounted.
```

```
ORACLE instance shut down.
```

```
SQL*DBA complete.
```

If the database shutdown was not successful, complete Steps a and b.

- a. Press **(DEL)**.

The system displays the following message:

```
ORA-01013: user requested cancel of current
operation SQL*DBA complete.
```

- b. Enter **/oracle/bin/ior c**

The system displays the following message:

```
ORACLE instance shut down.
SQL*DBA complete.
```

## Dropping a Database Table

If the table resides in a remote system machine, perform the following procedure on that remote machine.

**⇒ NOTE:**

If the table resides in a non-system remote machine, contact the database administrator of the remote machine for assistance.

1. Enter **/oracle/bin/orastat** to verify that the database is running

The system displays either the number 1 or the number 0.

If "1" is displayed, the database is not running. Perform ["Starting the Database System"](#) above.

If "0" is displayed, the database is running. Continue with Step 2.

2. Enter **/oracle/bin/sqlplus sti/sti**

This will invoke the ORACLE SQL\*PLUS utility.

The system displays the following message:

```
SQL*Plus: Release 3.1.1.9.1>
```

3. Enter **drop table <"tblname">**

where <"tblname"> is the name of the table to be dropped enclosed in double quotes.

**NOTE:**

The table name is case sensitive. It must also be enclosed in double quotes appearing exactly as it appears in the system message.

If the table is dropped successfully, the system displays the following message:

```
Table dropped.
```

If the <reason> field is ORA: 00942 table or view does not exist, continue with Step 4.

If the table cannot be dropped, complete Steps a through d.

- a. Enter **quit**

This will exit the SQL\*PLUS utility.

- b. Perform ["Stopping the Database System"](#), above.

- c. Perform ["Starting the Database System"](#), above.

- d. Repeat Step 3 of this procedure.

4. Enter **quit**

This will exit the SQL\*PLUS utility.

## Recreating the System Traffic Tables

---

To recreate the system traffic tables, do the following:

### ⇒ NOTE:

All current system traffic data is lost after performing this procedure.

1. Stop the voice system. See [“Stopping the Voice System”](#) above for the procedure.
2. Enter `/oracle/bin/sqlplus \@ /oracle/dist/cdh.sql`  
This will drop and recreate all system traffic tables.
3. Start the voice system. See [“Starting the Voice System”](#) above for the procedure.

## Verifying the Date and Time

---

### Checking the UNIX Date and Time Window

---

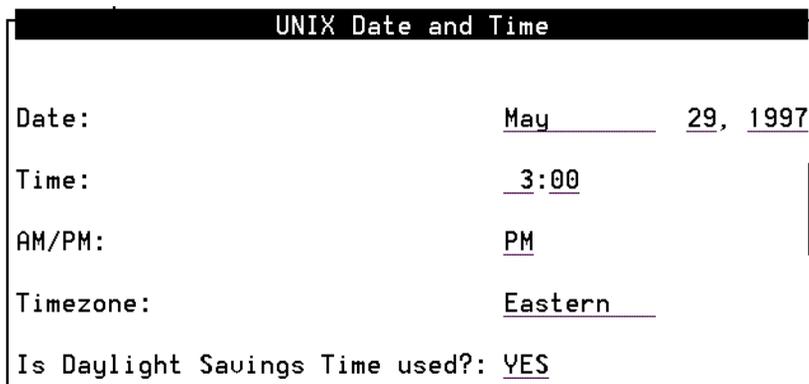
To check the UNIX Date and Time window, do the following:

1. Starting at the Voice System Administration Menu ([Figure 3-3](#)), select

```
> UNIX Management
> UNIX Date and Time
```

The system displays the UNIX Date and Time window ([Figure 3-19](#)).

---



```
UNIX Date and Time
Date: May 29, 1997
Time: 3:00
AM/PM: PM
Timezone: Eastern
Is Daylight Savings Time used?: YES
```

---

**Figure 3-19. UNIX Date and Time Window**

2. Check each of the fields under UNIX Date and Time.

If all of the fields are correct, press **CANCEL** (F6).

If a field contains incorrect information, continue with the next procedure, [“Changing the UNIX Date and Time Window”](#).

## Changing the UNIX Date and Time Window

The user can change any of the displayed fields. To change one field in the Date and Time window, the user must either change or acknowledge the information in each field.

### Changing the Date Field

The date field contains the month, day, and year.

#### Changing the Month

1. Place the cursor on the `Month` field in the UNIX Date and Time window.
2. If the month shown is not correct, complete Steps a through c:
  - a. Press **CHOICES** (F2) to display the months of the year ([Figure 3-20](#)).



Figure 3-20. UNIX Month Choices Menu

- b. Use **▲** or **▼** to move the cursor and highlight the correct month.
- c. Press **ENTER** to place the name of the correct month into the month field.

**⇒ NOTE:**

The user can also select the current month by entering the corresponding alphabetic abbreviation from this list: **Ja, F, Mar, Ap, May, Jun, Jul, Au, S, O, N, D.**

Continue with the next procedure [“Changing the Day”](#).

If the month shown is correct, press **ENTER** for no change and continue with the next procedure [“Changing the Day”](#).

## Changing the Day

If the day of the month shown is not correct, enter the correct day as a number from 1 to 31 and continue with the next procedure [“Changing the Year”](#).

If the day of the month shown is correct, press **ENTER** for no change and continue with the next procedure [“Changing the Year”](#).

## Changing the Year

If the year shown is not correct, enter the correct year as a number from 1996 to 2038 and continue with the next procedure [“Changing the Time Field”](#).

If the year shown is correct, press **ENTER** for no change and continue with the next procedure [“Changing the Time Field”](#).

## Changing the Time Field

If the time shown is not correct, enter the correct time in the form of *hours:minutes* and continue with the next procedure [“Changing the AM/PM Field”](#).



### NOTE:

Use a 12-hour a.m./p.m. standard. Do not use the 24-hour military standard.

If the time shown is correct, press **(ENTER)** for no change and continue with the next procedure [“Changing the AM/PM Field”](#).

## Changing the AM/PM Field

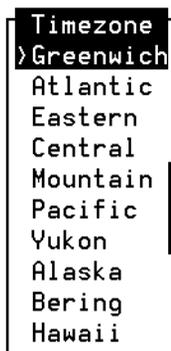
If AM/PM is not correct as shown, type **a** for a.m. or **p** for p.m. and continue with the next procedure [“Changing the Time Zone Field”](#).

If AM/PM is correct as shown, press **(ENTER)** for no change and continue with the next procedure [“Changing the Time Zone Field”](#).

## Changing the Time Zone Field

If the time zone shown is not correct, complete Steps 1 through 3 and continue with the next procedure [“Changing the Is Daylight Savings Time Used Field”](#).

1. Press **(CHOICES)** (F2) to display the list of time zones ([Figure 3-21](#)).



---

Figure 3-21. UNIX Time Zone Choices Menu

2. Use **▲** or **▼** to move the cursor and highlight the correct time zone.
3. Press **ENTER** to place the name of the correct time zone into the `Timezone` field.

If the time zone shown is correct, press **ENTER** for no change and continue with the next procedure [“Changing the Is Daylight Savings Time Used Field”](#).

## Changing the Is Daylight Savings Time Used Field

1. Type **y** for yes or **n** for no depending upon whether or not daylight savings time is used at any time during the year.
2. Press **SAVE** (F3) to save the changes and continue with the next procedure [“Acknowledging the Changes to the Date and Time Window”](#).

## Acknowledging the Changes to the Date and Time Window

After the changes have been made to the Date and Time window the user must ensure that the system recognizes the new information. To acknowledge the new information, do the following:

1. Reboot the INTUITY CONVERSANT system. See [“Rebooting the UNIX System”](#) above for the procedure.  
At this time the date and time changes will take affect.
2. Starting at the Voice System Administration Menu ([Figure 3-3](#)), select

```
> UNIX Management
```

```
> UNIX Date and Time
```

The system displays the UNIX Date and Time window ([Figure 3-19](#)).

3. Check each of the fields under `UNIX Date and Time` to ensure that the changes have been recorded.



# Alarms and Log Messages

# 4

---

## ADM Alarms and Log Messages

---

### ADM001

---

#### Alarm Level

Major.

#### Description

The Administration process encountered a system error while trying to access a file. The value of errno indicates the reason for the error.

#### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

4. Check the file or directory named in the error message; it may be corrupted or missing.
5. Ensure that the / and /usr file systems are not out of free space.
6. Possible damaged file system (use fchk when the system is at a single user level).
7. Possible disk or disk controller problems.

## ADM002

---

### Alarm Level

Major.

### Description

The Administration process encountered a problem while trying to send or receive an interprocess communication message. The value of errno indicates the reason for the error.

### Repair Procedure

Contact your service representative for assistance.

## ADM003

---

### Alarm Level

Minor.

### Description

The hardware configurator checker, hconchk, found a discrepancy between the configuration specified by the Hardware Resource Allocator (HRA) and the system device configuration. The error message describes the nature of the discrepancy. More detailed information about the discrepancy may be included in the output of hconchk. When the voice system is started, hconchk is executed and the output is written to /vs/data/hconchk.out. To resolve the discrepancy, use the HRA command, show\_config, to view the HRA device settings or the command, configure, to add or remove devices or to modify the device settings. If necessary, verify that the specified devices are installed in the system and that the hardware device settings are correct. Then execute the command hconchk to verify that the discrepancy has been eliminated.

### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. Execute the show\_config command. See the "System Configuration" appendix in your platform maintenance book for more information.

2. If necessary, execute the configure command. See the "System Configuration" appendix in your platform maintenance book for more information.

## ADM004

---

### Alarm Level

Minor.

### Description

The hardware configurator checker, hconchk, identified a configured system module that has not been configured by the Hardware Resource Allocator (HRA). This message does not necessarily indicate that there is an error, but it is a warning that there may be a device which has been installed in the system and has not been configured by the HRA. The HRA command, show\_config, can be used to view all devices configured by the HRA, and the command configure can be used to add a device. If a system module is not included in HRA device table, then it cannot be configured by the HRA.

### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. Execute the show\_config command. See the "System Configuration" appendix in your platform maintenance book for more information.
2. If necessary, execute the configure command. See the "System Configuration" appendix in your platform maintenance book for more information.

## **ALERT Alarms and Log Messages**

---

### **ALERT001**

---

#### **Alarm Level**

None.

#### **Description**

This messages indicates a threshold level change for the included message.

The action taken by the Alerter when a threshold change occurs is defined with the System Messages Administration window under "Configuration Management" in the Voice System Administration menu.

#### **Repair Procedure**

No corrective action is necessary.

### **ALERT002**

---

#### **Alarm Level**

None.

#### **Description**

The Alerter has received a command to reset its statistics.

#### **Repair Procedure**

No corrective action is necessary.

### **ALERT003**

---

#### **Alarm Level**

None.

## Description

The Alerter has received a command to print or reset an invalid threshold.

An invalid threshold was entered by a user at the Alerter command interface.

## Repair Procedure

No corrective action is necessary.

### ALERT004

#### Alarm Level

None.

## Description

The Alerter failed to convert the indicated threshold rules file to alerter thresholds for voice system messages. Thresholding for voice system messages will not function.

If no thresholds were specified, this message can be ignored.

## Repair Procedure

Restore the thresholds rules file indicated using a system backup.

If no valid backup exists, reinstall the INTUITY CONVERSANT Application Software Package.

### ALERT005

#### Alarm Level

None.

## Description

The Alerter created the indicated number of message thresholds from the thresholds rules file.

## Repair Procedure

No corrective action is necessary.

### ALERT006

#### Alarm Level

None.

#### Description

The Alerter updated message thresholds from the threshold rules file.

## Repair Procedure

No corrective action is necessary.

### ALERT007

#### Alarm Level

None.

#### Description

The Alerter updated messages thresholds from the threshold rules file.

## Repair Procedure

No corrective action is necessary.

## ASAI Alarms and Log Messages

---

### ASAI001

---

#### Alarm Level

Critical.

#### Description

The ASAI physical link has gone down. All ASAI-provided services will not function until the link has been re-established.

#### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. If message ASAI025 follows this message, no corrective action is necessary.
2. Check the ASAI link wiring between the INTUITY CONVERSANT System and the PBX for proper connection.
3. Diagnose the IPCI circuit card.

### ASAI002

---

#### Alarm Level

Critical.

#### Description

The ASAI physical link is up, but the link layer has gone down. All ASAI-provided services will not function until the link has been re-established.

#### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. If message ASAI025 follows this message, no corrective action is necessary.

2. Check your PBX administrator to ensure that the ASAI port on the PBX has been administered with Fixed TEI=y and TEI=3.
3. Diagnose the IPCI circuit card.

## ASAI003

---

### Alarm Level

Major.

### Description

The IPCI circuit card is being initialized. This should be a temporary state. All ASAI-provided services will not function until the link has been established.

### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. If message ASAI025 follows this message, no corrective action is necessary.
2. Take the IPCI circuit card offline. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
3. Initialize the IPCI circuit card. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

## ASAI004

---

### Alarm Level

Major.

### Description

The IPCI circuit card is attempting to go offline. This should be a temporary state. All ASAI-provided services will not function until the link has been established.

## Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. If message ASAI025 follows this message, no corrective action is necessary.
2. Take the IPCI circuit card offline. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
3. Initialize the IPCI circuit card. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

## ASAI005

---

### Alarm Level

Critical.

### Description

The IPCI circuit card is in an unknown state. It is either missing or malfunctioning. All ASAI-provided services will not function until the link has been established or re-established.

## Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. If message ASAI025 follows this message, no corrective action is necessary.
2. Take the IPCI circuit card offline. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
3. Initialize the IPCI circuit card. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
4. Diagnose the IPCI circuit card.
5. If the IPCI circuit card is not installed, install the IPCI circuit card. See the "Replacing or Installing Circuit Cards" chapter in your platform maintenance document.

## ASAI006

---

### Alarm Level

None.

### Description

The ASAI link should be up and running.

### Repair Procedure

No corrective action is necessary.

## ASAI007

---

### Alarm Level

None.

### Description

The ASAI link has been taken offline. All ASAI-provided services will be out of service until the link has been re-initialized.

### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

6. If message ASAI025 follows this message, no corrective action is necessary.
7. Take the IPCI circuit card offline. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
8. Initialize the IPCI circuit card. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

## ASAI008

---

### Alarm Level

Major.

### Description

The data only script running on the specified virtual channel has stopped abruptly.

This may indicate a problem with the service assigned to the domain.

All ASAI messages related to that domain are lost.

### Repair Procedure

No immediate action is necessary as the script will restart automatically. To make sure the script restarted, see Chapter 4, "Feature Packages" of INTUITY CONVERSANT System Version 7.0 Administration.

## ASAI009

---

### Alarm Level

Major.

### Description

The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The ACD domain corresponding to the INTUITY CONVERSANT system agent is not administered.

### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. If message ASAI028, for the same channel, follows this message, no corrective action is necessary.
2. Add a domain entry with type "ACD" and service "voice system." See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

3. Enable the domain. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

## ASAI010

---

### Alarm Level

Major.

### Description

The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The extension assigned to the channel on the INTUITY CONVERSANT system is incorrect.

### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. Correct the extension assigned to the specified channel. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
2. Consult your PBX administrator to verify that the channel extension is a member of the ACD split.

## ASAI011

---

### Alarm Level

Major.

### Description

The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The login request cannot be executed due to lack of switch resources.

## Repair Procedure

If message ASAI028 follows this message, no corrective action is necessary. Otherwise, consult your PBX administrator.

## ASAI012

---

### Alarm Level

Major.

### Description

The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The extension assigned to the specified channel on the INTUITY CONVERSANT system is not a member of the ACD split.

## Repair Procedure

Have the PBX administrator add the extension to the ACD split.

## ASAI013

---

### Alarm Level

Major.

### Description

The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The specified extension currently has an active call.

## Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. If message ASAI028 follows this message, no corrective action is necessary.

2. Log the channel out. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
3. Retry the login request. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

## ASAI014

---

### Alarm Level

Major.

### Description

The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

The ACD split is not administered correctly. A request has been denied by the switch to log in a member of the autoavailable split.

### Repair Procedure

If message ASAI028 follows this message, no corrective action is necessary. Otherwise, consult your PBX administrator.

## ASAI015

---

### Alarm Level

Critical.

### Description

The INTUITY CONVERSANT system agent on the specified channel could not be logged in. As a result, the ACD will not route calls to this channel.

Switching equipment congestion exists. The switch is not accepting the request at this time because of processor overload.

### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. If message ASAI028 follows this message, no corrective action is necessary.
2. Suggest that the adjunct or user retry the request later.
3. If the problem persists, consult your PBX administrator.

## ASAI016

---

### Alarm Level

Major.

### Description

The INTUITY CONVERSANT system agent on the specified channel could not be logged in due to an unknown error. As a result, the ACD will not route calls to this channel.

### Repair Procedure

If message ASAI028 follows this message, no corrective action is necessary.

## ASAI017

---

### Alarm Level

Critical.

### Description

The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

Either the virtual channels are unavailable or they are all busy.

### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. If message ASAI029 follows this message, no corrective action is necessary.
2. Stop the voice system.

3. Edit the file /vs/data/irAPI.rc
  - a. If a VCHANS=32 entry exists, change the number 32 to 40.
  - b. If a VCHANS entry does not exist, add the line VCHANS=32.
4. Start the voice system.

## ASAI018

---

### Alarm Level

Major.

### Description

The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

The domain is in an initialization state.

### Repair Procedure

Perform the following procedures to correct the alarm. Contact your service representative for assistance.

1. If message ASAI029 follows this message, no corrective action is necessary.
2. Verify that the correct service has been assigned to the specified domain by completing Steps a and b below.
  - a. Disable the domain. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
  - b. Enable the domain. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

## ASAI019

---

### Alarm Level:

Major.

**Description:**

The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

The extension corresponding to the specified ASAI domain is nonexistent on the PBX.

**Repair Procedure:**

Consult your PBX administrator to add the specified domain to the PBX.

**ASAI020****Alarm Level:**

Major.

**Description:**

The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

The switch limit for the maximum number of monitored domains has been exceeded.

**Repair Procedure:**

If message ASAI029 follows this message the for same domain, no corrective action is necessary. Otherwise, consult your PBX administrator.

**ASAI021****Alarm Level:**

Major.

**Description:**

The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

The specified ASAI domain is already monitored by another adjunct.

**Repair Procedure:**

If message ASAI029 follows this message for the same domain, no corrective action is necessary. Otherwise, the adjunct monitoring this domain has to disable the domain before the voice system can monitor it.

**ASAI022**

---

**Alarm Level:**

Major.

**Description:**

The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

The specified ASAI domain may be either an adjunct- or vector-controlled split.

**Repair Procedure:**

If message ASAI029 follows this message for the same domain, no corrective action is necessary. Otherwise, consult your PBX administrator to make sure that the domain extension is neither adjunct- nor vector-controlled split.

**ASAI023**

---

**Alarm Level:**

Critical.

**Description:**

The ASAI domain with the specified extension cannot be activated. Information about the call placed to this domain will not be reported to the service assigned to this domain.

Switching equipment congestion exists. The switch is not accepting the request at this time because of processor overload.

**Repair Procedure:**

If message ASAI029 follows this message for the same domain, no corrective action is necessary. Otherwise, consult your PBX administrator.

**ASAI024**

---

**Alarm Level:**

Major.

**Description:**

The ASAI domain with the specified extension cannot be activated due to an unknown error.

Information about the call placed to this domain will not be reported to the service assigned to this domain.

**Repair Procedure:**

If message ASAI029 follows this message for the same domain, no corrective action is necessary. Otherwise, see ASAI Trace.

**ASAI025**

---

**Alarm Level**

None.

**Description**

The ASAI link has been established. All ASAI-provided services will start to function now.

**Repair Procedure**

No corrective action is necessary.

## ASAI026

---

### Alarm Level:

Major.

### Description:

The service assigned to the voice system agent on the specified channel requested call information from the ASAI feature that was not available.

The call information about the call that is terminated to the specified channel has not arrived yet.

### Repair Procedure:

1. Verify that the ACD split with service "voice system" has been administered and is in service. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
2. Verify that the PBX extension-to-channel assignments have been correctly administered. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

## ASAI027

---

### Alarm Level:

Minor.

### Description:

ASAI protocol errors have been detected. An occasional report does not indicate a serious problem.

### Repair Procedure:

1. Check the integrity of the cabling of the ASAI BRI link. See Chapter 3, "Making Cable Connections," in your new system installation book for link wiring information.
2. Diagnose the IPCI card.

## ASAI028

### **Alarm Level:**

None.

### **Description:**

The voice system agent on the specified channel has been logged in. The ACD will start routing calls to this channel.

### **Repair Procedure:**

No corrective action is necessary.

## ASAI029

### **Alarm Level:**

None.

### **Description:**

The ASAI-administered domain with the specific extension is activated now. The events on this domain will now be reported to the service which is assigned to this domain.

### **Repair Procedure:**

No corrective action is necessary.

## ASAI030

### **Alarm Level:**

Major.

### **Description:**

Unexpected routing messages have been received over the ASAI link for which there is no administered RTE domain. If an administered domain were available, event messages would have been sent to the assigned service. Since no service

is available, the voice system discards the messages. The error message in the log indicates how many messages were discarded over a one minute period.

**Repair Procedure:**

1. Verify that the PBX has been correctly administered. Consult your PBX administrator.
2. Add an RTE domain with the specified extension. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
3. Enable the RTE domain. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

**ASAI031**

---

**Alarm Level:**

Minor.

**Description:**

Unknown messages are received over the ASAI link for which there is no administered CTL domain. If an administered domain were available, event messages would have been sent to the assigned service. Since no service is available, the voice system discards the messages. The error message in the log indicates how many messages were discarded over a one minute period. This does not indicate a serious problem.

**Repair Procedure:**

No corrective action is necessary.

To prevent these messages from appearing, add a CTL domain with the specified extension. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

**ASAI032**

---

**Alarm Level:**

Major.

**Description:**

The voice system has discarded messages that were received over the ASAI link for the specified domain. This is because the messages were not processed fast enough by the specified ASAI application. The ASAI application is not fully functional. Calls are not being processed.

**Repair Procedure:**

1. Verify that the correct service has been assigned to the specified domain. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
2. If correct domain administration does not eliminate the problem, there may be an error in the ASAI application specified in the message. Contact the ASAI application developer for further assistance.

**BRDG Alarms and Log Messages****BRDG001****Alarm Level:**

Major.

**Description:**

The Call Bridge feature failed to communicate with the voice system during call processing. The application is unable to bridge calls.

**Repair Procedure:**

Reboot the operating system.

**BRDG002****Alarm Level:**

Major.

**Description:**

The Call Bridge feature failed to communicate with the voice system during call processing. The application is unable to bridge calls.

**Repair Procedure:**

Reboot the operating system.

**BRDG003**

---

**Alarm Level:**

Major.

**Description:**

The Call Bridge feature failed to access a shared resource of the voice system during the initialization. The application is unable to bridge calls.

**Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the operating system.

**BRDG004**

---

**Alarm Level:**

Major.

**Description:**

The Call Bridge feature failed to access a shared resource of the voice system. The application is unable to bridge calls.

**Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the operating system.

## BRDG005

---

### Alarm Level:

Minor.

### Description:

The Call Bridge feature failed to find an available channel in the equipment group specified in the message. The application may not be able to complete the call bridge.

The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
*C THR004 The first threshold level for BRDG_NOCHAN
exceeded. 10 messages have been generated in the last 5
minutes.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

### Repair Procedure:

1. Verify that all Tip/Ring channels are assigned to the equipment group specified by the script bridge instruction.
2. Verify that all channels assigned to the equipment group specified are in service.
3. Check if all the channels assigned in the equipment group specified are not busy.

## **CGEN Alarms and Log Messages**

---

### **CGEN001**

---

**Alarm Level:**

Minor.

**Description:**

An internal voice system process received an unexpected message from the process identified in this message. The message has been ignored.

**Repair Procedure:**

1. Identify the source of the unexpected message.
  - a. If the source of the unexpected message is a customer application data interface process (DIP), contact the application developer.
  - b. Otherwise, perform the following steps:
    - Stop the voice system.
    - Start the voice system.
2. If the problem persists, confirm that all installed voice system software packages are compatible with the installed version of the INTUITY CONVERSANT application software package. See the "Installing Optional Feature Software," chapter in your platform maintenance book.
3. Remove any software package that is incompatible and install the proper version. See the "Installing Optional Feature Software," chapter in your platform maintenance book.

### **CGEN002**

---

**Alarm Level:**

Major.

**Description:**

The voice system system table named in the message is corrupted or cannot be accessed by the source of the message. System functionality is severely impaired.

**Repair Procedure:**

1. Check the system to make sure that the number of cards installed is a legal configuration, that is, there are not too many channels. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
2. If `<table_name>` is `DEVTBL` perform the following Steps a through c:

**CAUTION:**

*The following procedure will cause all system configuration information to be lost. This includes switch administration, service assignments, etc. When the voice system is restarted, the system configuration will use the default settings.*

- a. Stop the voice system.
  - b. Move the `devtbl` to another area. For example, enter  
`mv /gendb/shmem/devtbl /gendb/shmem/devtbl.old`
  - c. Start the voice system.
3. If `<table_name>` is any other, perform the following Steps a through c:
    - a. Stop the voice system.
    - b. Start the voice system.
    - c. If the problem persists, reboot the operating system.

**CGEN003**

---

**Alarm Level:**

Critical.

**Description:**

An internal voice system process cannot communicate with other internal voice system processes. System functionality is severely impaired.

**Repair Procedure:**

Reboot the operating system.

## CGEN004

---

### Alarm Level:

Critical.

### Description:

An internal voice system process cannot communicate with other internal voice system processes. System functionality is severely impaired.

### Repair Procedure:

Reboot the operating system.

## CGEN005

---

### Alarm Level:

Critical.

### Description:

The voice system cannot communicate with the specified process. System functionality is severely impaired.

#### NOTE:

If the reason given for this message is `EAGAIN`, an interprocess communication message queue capacity across all processes on the voice system is being exceeded. When this happens, all processes may have trouble communicating with one another. The process listed in the message may or may not be the process which caused the problem. This may affect only the receiving process listed in the message if the receiving process is not handling incoming messages often enough.

Note the receiving process is the process which failed to get the message. If the receiving process listed is a customer application DIP, consult with the programmer to determine why the process is getting behind in reading its message queue. If the receiving process is a voice system process (for example, VROP, MTC, TSM, etc.) then it is more likely that all processes are having trouble communicating, and call handling will be severely impaired until the repair procedure below is followed.

**Repair Procedure:**

1. To gather data about this problem for later analysis, complete the following Steps a through d:
  - a. Enter `cd /usr/install`
  - b. Enter `sar > sar.out`
  - c. Enter `ps -ef > ps.out`
  - d. Enter `ipcs -qop > ipcs.out`
2. Reboot the operating system.

If the reason for this message is `EAGAIN`, and you have recently added hardware to the system, diagnose the circuit card to ensure that the card recently added has a unique index.

For example, make sure that there are not two T1 circuit cards that have the same switch setting for T1-2.

3. If the problem persists, follow the trouble escalation procedure and inform personnel that you have collected the data listed in Step 1.

**CGEN006**

---

**Alarm Level:**

Critical.

**Description:**

The voice system failed to initialize properly. System functionality is severely impaired.

**Repair Procedure:****NOTE:**

If `<reason>` for this message is `Cannot remove initialization file <filename> <UNIX errno>`, the UNIX operating system was unable to perform a remove request on behalf of an internal voice system process. See `INTRO(2)` in the UNIX SVR4.2 Programmer's Reference Manual for more information on the operating system error.

**NOTE:**

If the `<reason>` for this message is `Failed to get telephony type of channel`, the systems `rmdb's NCHANNELS` turnable of 121 is exceeded. Increment the `NCHANNELS` and rebuild the kernel

1. Stop the voice system.

2. Start the voice system.
3. If the system message is printed again, remove the file by entering  
`rm -f <filename>`
4. If the file cannot be removed, consult the UNIX SVR4.2 Programmer's Reference Manual for more information on the operating system error.
5. If the problem persists, reboot the operating system.

## CGEN007

---

### Alarm Level:

Critical.

### Description:

The voice system failed to allocate memory internally for data. System functionality is severely impaired.

### Repair Procedure:

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the operating system.
  - If this message reports that space for a file `/vs/trans/script.D` could not be allocated, then the following may have occurred:
    - There may be a large number of `script.D` files in `/vs/trans`. Remove any `script.D` files that are no longer needed. Check that the `script.D` files that are needed have not been corrupted.
    - If the error message was reported by CDH, enter `/vs/bin/newscript`. This causes CDH to reread all the `/vs/trans/script.D` files.
    - If the error was reported by one of the reporting programs `cddrot` or `cdprt`, rerun the report.

If the error persists, your system may either require more memory to function normally or there may be a process memory leak that requires examination by field support.

## CGEN008

---

### Alarm Level:

Major.

### Description:

The voice system failed to open the Tip/Ring card driver. System Tip/Ring cards are unusable.

### Repair Procedure:

1. If this problem occurs because the Tip/Ring driver was purposely removed and you do not wish to reinstall it, renumber the voice channels. See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
2. If the problem persists or if Tip/Ring circuit cards are present in the system, reboot the operating system.
3. If the problem persists, reinstall the Tip/Ring circuit card driver. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

## CGEN009

---

### Alarm Level:

Major.

### Description:

The voice system failed to open or attach the SP card driver. System SP cards are unusable.

### Repair Procedure:

1. Reboot the operating system.
2. If the problem persists, reinstall the SP circuit card driver. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

## CGEN010

---

### Alarm Level:

Major.

### Description:

The voice system failed to open the T1 card driver. System T1 cards are unusable.

### Repair Procedure:

1. If this problem occurs because the T1 driver was purposely removed and you do not wish to reinstall it, renumber the voice channels. See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
2. If the problem persists or if T1 cards are present in the system, reboot the operating system.
3. If the problem persists, reinstall the T1 circuit card driver. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

## CGEN011

---

### Alarm Level:

Critical.

### Description:

The voice system failed to perform the indicated function on the Tip/Ring voice channel or card specified. System functionality is severely impaired.

### Repair Procedure:

1. Perform the following diagnostics for the failed Tip/Ring card:
  - a. Enter diagnose card *<card number>* where *<card number>* is the card number of the Tip/Ring card from the display card tr command output.
  - b. If the card passes diagnostics, place it back in service by entering restore card *<card number>* where *<card number>* is the card number of the Tip/Ring card you want to restore to service.

2. If the problem persists, check the circuit card.
3. If the problem still persists, reinstall the INTUITY CONVERSANT Application Software Package. See the "Installing the INTUITY CONVERSANT System Software" chapter in your platform maintenance book.

## CGEN012

---

### Alarm Level:

Major.

### Description:

The voice system failed to perform the indicated function on the Tip/Ring voice channel or card specified. Tip/Ring card functionality is impaired.

### Repair Procedure:

1. Perform the following diagnostics for the failed Tip/Ring card:
  - a. Enter diagnose card *<card number>*  
where *<card number>* is the card number of the Tip/Ring card from the display card tr command output.
  - b. If the card passes diagnostics, place it back in service by entering restore card *<card number>*  
where *<card number>* is the card number of the Tip/Ring card you want to restore to service.
2. If the problem persists, check the circuit card.
3. If the problem still persists, reinstall the INTUITY CONVERSANT Application Software Package. See the "Installing the INTUITY CONVERSANT System Software" chapter in your platform maintenance book.

## CGEN013

---

### Alarm Level:

Major.

### Description:

The voice system failed to perform the indicated function on the SP card specified. System functionality is severely impaired.

**Repair Procedure:**

1. If any packages (for example, ISDN PRI, Whole Word, Flex Word, CCA) have been removed from the system recently, verify that any related cards, functions, etc. have been unassigned from the application so that the affected card does not come up in the "Broken" state.
2. If the card remains in the "Broken" state, perform the Reducing Load procedure.
3. If the card remains in the "Broken" state, check the circuit card.
4. If the card remains in the "Broken" state, reinstall the SP circuit card driver. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

**CGEN014**

---

**Alarm Level:**

Major.

**Description:**

The voice system failed to perform the indicated function on the SP card specified. SP card functionality is impaired.

**Repair Procedure:**

1. Perform diagnostics for the failed SP card.
  - a. Enter diagnose card *<card number>* where *<card number>* is the card number of the SP card from the display card sp command output.
  - b. If the card passes diagnostics, place it back in service by entering restore card *<card number>* where *<card number>* is the card number of the SP card you want to restore to service.
2. If the problem persists, check the circuit card.
3. If the problem persists, reinstall the SP driver. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

## CGEN015

---

### Alarm Level:

Critical.

### Description:

The voice system failed to perform the indicated function on the T1 voice channel or card specified. System functionality is severely impaired.

### Repair Procedure:

1. Perform diagnostics for the failed T1 card.
  - a. Enter diagnose card <card number> where <card number> is the card number of the T1 card from the display card t1 command output.
  - b. If the card passes diagnostics, place it back in service by entering restore card <card number>
2. If the problem persists, check the circuit card.
3. If the problem still persists, reinstall the T1 driver. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

## CGEN016

---

### Alarm Level:

Major.

### Description:

The voice system failed to perform the indicated function on the T1 voice channel or card specified. T1 card functionality is impaired.

### Repair Procedure:

1. Perform diagnostics for the failed T1 card.
  - a. Enter diagnose card <card number> where <card number> is the card number of the T1 card from the display card t1 command output.
  - b. If the card passes diagnostics, place it back in service by entering restore card <card number>

2. If the problem persists, check the circuit card.
3. If the problem still persists, reinstall the T1 driver. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

## CGEN017

---

### Alarm Level:

Major.

### Description:

The system was unable to save configuration changes made by the user (for example, script assignments to a channel, or card remove/restores) on disk. Shared memory updates will be lost when system is rebooted. Call processing is not affected until then.

### Repair Procedure:

1. Reboot the operating system.
2. If the problem persists, restore the system from backup.

## CGEN018

---

### Alarm Level:

Major.

### Description:

A hardware failure has been detected on the Tip/Ring voice channel or circuit card specified. Tip/Ring circuit card functionality is impaired.

### Repair Procedure:

1. Perform diagnostics for the failed Tip/Ring circuit card.
  - a. Enter diagnose card *<card number>* where *<card number>* is the card number of the Tip/Ring circuit card from the display card tr command output.

- b. If the card passes diagnostics, place it back in service by entering  
restore card <card number>  
where <card number> is the card number of the Tip/Ring circuit  
card you want to restore to service.
2. If the problem persists, check the circuit card.
3. If the problem persists, reinstall the INTUITY CONVERSANT Application  
Software Package. See the "Installing the INTUITY CONVERSANT System  
Software" chapter in your platform maintenance book.

## CGEN019

---

### Alarm Level:

Critical.

### Description:

Cannot determine whether the INTUITY CONVERSANT voice system or Intro is installed.

### Repair Procedure:

Contact the your service representative for assistance.

## CGEN020

---

### Alarm Level:

Critical.

### Description:

An incoming call has not been processed because no service was assigned to the specified channel or the dialed number identification service (DNIS) and automatic number identification (ANI).

### Repair Procedure:

1. Determine how new calls on the channel number indicated by the message should be routed to services.

New calls can be routed based on channel number or based on DNIS and/or ANI.

2. If new calls on the channel number should be routed based on channel number, enter  
  
assign service <service> to chan <chan>  
  
where <service> is the name of the service to be assigned and <chan> is the channel number indicated by the message.
3. If new calls on the channel number should be routed based on DNIS and/or ANI, enter  
  
assign service <service> to dnis <phone list> [ani <phone list>]  
  
where <service> is the name of the service to be assigned and <dnis> is either the DNIS of the new call to be routed, or the word "any", and <ani> is either the ANI of the new call to be routed, or the word "any".
4. See the assign command in Appendix A "Summary of Commands," in INTUITY CONVERSANT System Version 7.0 Administration 585-313-501. for more information on assigning services.

## CGEN021

---

### Alarm Level:

Critical.

### Description:

An internal software error occurred when describing channel characteristics to the Resource Manager. The identified channel is unusable.

### Repair Procedure:

1. If the error is EINVAL, check the system to make sure that the number of cards installed is a legal configuration, that is, there are not too many channels. See the INTUITY CONVERSANT System Version 7.0 System Description 585-313-204, for channel maximums.
2. Renumber the voice channels. See Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
3. If the problem persists, or if the error is not EINVAL,
  - a. Stop the voice system.
  - b. Start the voice system.
  - c. If the problem then persists, reboot the operating system.

- d. If the problem still persists, consult the INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder 585-313-206, for more information about the specific error listed in the reason text.

## CGEN022

---

### Alarm Level:

Minor.

### Description:

The voice system failed to reset the restriction list for a channel. System functionality may be impaired if applications are assigning resource restrictions to channels (irRestrictResource(3irAPI)).

### Repair Procedure:

1. Make sure AD or the customized default owner is run as root.
2. If AD or the customized default owner is run as root, perform the following Steps a and b:
  - a. Stop the voice system.
  - b. Start the voice system.
3. If the problem persists, reboot the operating system.
4. If the problem persists, reinstall the INTUITY CONVERSANT Application Software Package. See the "Installing the INTUITY CONVERSANT System Software" chapter in your platform maintenance book.
5. If the problem persists, contact your service representative.

## CGEN023

---

### Alarm Level:

Major.

### Description:

A channel was returned to the default owner because of an abrupt exit of the prior channel owner. This message may indicate an IRAPI application failed to release (irDeinit(3irAPI)) prior to exit (2) or an IRAPI application core dump. Any

outstanding activities on the channel are cancelled and the channel is made available to take new calls.

If a transient IRAPI process does not wait for an IRE\_DEINIT\_DONE event before exiting, they will generate a CGEN023 alarm. The IRAPI process must call

```
(void) irSetEvent(cid, IRE_DEINIT_DONE, IRF_NOTIFY);
```

to the IRE\_DEINIT\_DONE event to be generated.

### Repair Procedure:

No corrective action is necessary.

### CGEN024

#### Alarm Level:

Critical.

#### Description:

The voice system service *<service>* provided by process *<process>* has failed to startup, therefore an incoming call has not been processed.

#### Repair Procedure:

1. If the messages indicate that the process is a PERMANENT process, go to Step 2, otherwise, complete Steps a through c.
  - a. Stop the voice system.
  - b. Start the voice system.
  - c. If the problem persists, check that the process is correctly entered in the */etc/inittab* file. See INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder 585-313-206, for more details.
2. Determine whether or not the PERMANENT process is running by typing *ps -ef*.
  - a. If the process is running, go to Step 3.
  - b. If the *<process>* is not running, make sure that it is correctly entered in the */etc/inittab* file. See INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder 585-313-206 for more details.

- c. The application developer should try to determine why the process failed before continuing to use the system.
3. Check that the process *<process>* exists and is executable by entering `ls -l <process>` where *<process>* is the process indicated in the message.
  - a. If the process is not executable, enter `chmod +rx <process>`.
  - b. If the process is executable, check to make sure the service assigned to the channel is a valid service by entering `display services`.

If the service is on the list, it is a valid service.

If the service is not on the list, reassign the service.

## CGEN025

---

### Alarm Level:

Critical.

### Description:

A voice system service registration file has a bad format or is the wrong version. The service corresponding to this registration file may be started incorrectly and, therefore, not function properly.

### Repair Procedure:

1. If the service indicated in the message (*<service>*) is a TSM service, using Script Builder, verify and install the service *<service>*.
2. If the service indicated in the message (*<service>*) is NOT a TSM service, the registration file should be rebuilt by entering `defService <service>` where *<service>* is the service specified in the message.

See the `defService` command in Appendix A, "Summary of Commands" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501 for more information.

## CGEN026

---

### Alarm Level:

None.

**Description:**

Timeout on attempt to idle channel.

**Repair Procedure:**

No corrective action is immediately necessary. Automatic recovery occurs within 60 seconds. If this event occurs frequently or if resources are underutilized, which will be reported by other messages, then do the following:

1. Stop the voice system.
2. Start the voice system.

**CGEN027**

---

**Alarm Level:**

None.

**Description:**

Could not open file.

**Repair Procedure:**

No corrective action is necessary.

**CGEN028**

---

**Alarm Level:**

Minor.

**Description:**

Call to third party API failed.

**Repair Procedure:**

No corrective action is necessary.

**CGEN029**

---

**Alarm Level:**

Minor.

**Description:**

In-service channels occupancy off high water mark.

**Repair Procedure:**

No corrective action is necessary.

**CGEN030**

---

**Alarm Level:**

None.

**Description:**

The voice system detected that the occupancy of the in-service channels is below the high water mark.

**Repair Procedure:**

No corrective action is necessary.

**CGEN031**

---

**Alarm Level:**

Major.

**Description:**

An internal software error occurred when describing an equipment group to the Resource Manager. Applications that use the equipment group identified in the message may not function correctly.

**Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the operating system.
4. If the problem persists, consult the INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder 585-313-206 for more information about the specific error listed in the reason text.

**CGEN032**

---

**Alarm Level:**

Critical.

**Description:**

A voice system system file is corrupted and cannot be accessed by the internal voice system process that describes channel and SP characteristics to the Resource Manager. SP resources cannot be accessed. Functions provided by SP cards, such as Speech Recognition and Text-to-Speech, are not available. Voice coding and playback are not available for systems that require an SP for these services.

**Repair Procedure:**

1. Remove any packages loaded on the system that are in the following list using the `pkgrm` command.

CONVERSANT System Version 7.0 Call Classification Analysis

CONVERSANT System Version 7.0 ISDN Primary Rate Interface Package

CONVERSANT System Version 7.0 Speech Recognition Package -  
Canadian French

CONVERSANT System Version 7.0 Speech Recognition Package - UK  
English

CONVERSANT System Version 7.0 Speech Recognition Package - US  
English

CONVERSANT System Version 7.0 Speech Recognition Package -  
Mexican Spanish

## CONVERSANT System Version 7.0 Text-to-Speech Package

## CONVERSANT System Version 7.0 FlexWordô Recognition Package

2. Remove the SP Driver Package using the pkgrm command.
3. Reinstall the INTUITY CONVERSANT Application Software Package. See the "Installing the INTUITY CONVERSANT System Software" chapter in your platform maintenance book.
4. If the problem persists, reinstall the SP driver. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.
5. Reinstall all of the other packages removed in Step 1. See the "Installing Optional Feature Software," chapter in your platform maintenance book for the procedure.

**CGEN033**

---

**Alarm Level:**

None.

**Description:**

Some unexpected information was found in a file containing resource characteristic information. This information will be ignored.

**Repair Procedure:**

No corrective action is necessary.

**CGEN034**

---

**Alarm Level:**

Major.

**Description:**

A voice system system file is corrupted or cannot be accessed by the internal voice system process that describes channel and SP characteristics to the Resource Manager. SP resources cannot be accessed. Functions provided by SP cards, such as Speech Recognition and Text-to-Speech, are not available. Voice coding and playback are not available for systems that require an SP card for these services.

**Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the operating system.

**CGEN035**

---

**Alarm Level:**

Major.

**Description:**

The internal UNIX kernel variable "1bolt" is approaching the maximum possible variable of 248 days since the last reboot. If the system is not rebooted, several problems could occur when "1bolt" reaches the maximum possible value. System timeouts could occur prematurely or fail to occur.

A reboot of the system should be scheduled to occur within the number of days specified or an automatic reboot will occur. By manually performing the reboot, it may be possible to reduce the impact service caused by the reboot.

**Repair Procedure:**

Reboot the system at a time of low system activity.

**CGEN036**

---

**Alarm Level:**

None.

**Description:**

The voice system detected the indicated Feature Licensing values for the function not specified.

**Repair Procedure:**

No corrective action is necessary.

## CGEN037

**Alarm Level:**

Major.

**Description:**

The voice system failed to enable Feature Licensing for some features. Functionality of some features may be impaired.

**Repair Procedure:**

Contact your service representative for assistance.

## CGEN038

**Alarm Level:**

Critical.

**Description:**

The voice system failed to enable Feature Licensing. Functionality of features is impaired.

**Repair Procedure:**

Contact your service representative for assistance.

## CGEN039

**Alarm Level:**

Critical.

**Description:**

The voice system failed to enable Feature Licensing. System functionality is impaired.

**Repair Procedure:**

Contact your service representative for assistance.

**CGEN040****Alarm Level:**

Critical.

**Description:**

The voice system detected an invalid configuration. System functionality is impaired.

**Repair Procedure:**

Reconfigure the system using the Hardware Resource Allocator. See the "System Configuration," appendix in your platform maintenance book for the procedure.

**CHRIN Alarms and Log Messages****CHRIN001****Alarm Level:**

Critical.

**Description:**

An internal software error occurred when describing channel and SP characteristics to the Resource Manager. System functionality is severely impaired.

**Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the operating system.

## CHRIN002

---

### Alarm Level:

Major.

### Description:

A voice system system file is corrupted or cannot be accessed by the internal voice system process that describes channel and SP characteristics to the Resource Manager. The ASAI channels cannot provide ASAI capabilities. ASAI functionality is severely impaired.

### Repair Procedure:

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the operating system.
4. If the problem still persists:
  - a. Record the ASAI Channel and Domain Administration information. For more information on the ASAI Channel and Domain Administration, See the ASAI Administration in Chapter 4, "Feature Package Administration" of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
  - b. Stop the voice system.
  - c. Remove the INTUITY CONVERSANT System Version 7.0 Adjunct/Switch Applications Interface package using the `pkgrm` command.
  - d. Install the INTUITY CONVERSANT System Version 7.0 Adjunct/Switch Applications Interface package using the `pkgadd` command.
  - e. Start the voice system.
  - f. Administer the ASAI Channel and Domain Administration information from the information recorded earlier.

## CIOX Alarms and Log Messages

---

### CIOX001

---

**Alarm Level:**

Major.

**Description:**

The indicated file can not be accessed for the reason specified in the message. Applications requiring playing from or recording to the file will be incomplete.

**Repair Procedure:**

1. Consult the application developer to verify the application. See the [For Application Developer](#) section.
2. If the application is correct, restore the speech file(s) from the backup. If the backup is not available, consult the application developer to recreate the speech file.
3. If the problem persists, reboot the operating system.

**CIOX001 for Application Developer:**

1. Verify that the application refers to the correct speech file.
2. Verify that the speech file is in existence with the correct access permission.

### CIOX002

---

**Alarm Level:**

Major.

**Description:**

The indicated file can not be reserved for the reason specified in the message. Applications requiring recording to the file will be incomplete.

**Repair Procedure:**

1. Verify that the file system in which the speech file is to be reserved has enough free space by entering `dfspace`.

2. Verify that the directory or directories in which the speech file is to be reserved has the correct access permission by entering `ls -l` in the directory.

## DB Alarms and Log Messages

### DB001

#### Alarm Level:

Major.

#### Description:

An attempt to write a traffic record into the specific database table has failed either during call processing or processing a call data maintenance job.

This message is usually caused by one of several reasons.

If the source is Call Data Handler (CDH), the traffic record is not recorded in the database. If the source is CCA\_Summary, the Call Classification (CCA) data report for the date the error was logged will not be correct. If the source is CDH\_Summary, the nonCCA traffic data reports for the date the error was logged will not be correct.

There is no impact on call processing.

#### Repair Procedure:

1. If the reason field of the error message is:

```
ORA00942:table or view does not exist
```

Recreate the system traffic tables.

2. If the reason field of the error message is:

```
ORA1000: Maximum open cursor exceeded
```

or

```
Can't connect cursor to ORACLE
```

Consult the application developer to reduce the number of database references to the database. This may be done by reducing the number of applications involving database access simultaneously running on the system. See "Database Access Limitations" in Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501, for information.

3. For other error reasons, do the following:
  - a. Stop the voice system.
  - b. Stop the database system.
  - c. Start the database system.
  - d. If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup. Restore the database from backup.
  - e. Start the voice system.
4. If the problem persists, recreate the system traffic tables.

## DB002

---

### Alarm Level:

Critical.

### Description:

An attempt to write a database record to an application table has failed during call processing. The record will be lost. Application functionality may be severely impaired.

This message is usually caused by one of several reasons.

### Repair Procedure:

1. If the reason field of the error message is:

```
ORA1031 Insufficient privileges
```

give the user sti the necessary permissions by completing the following Steps a and b:

- a. Login to SQL\*PLUS as the original table owner.
- b. Enter grant all on <table\_name> to sti



#### NOTE:

The original owner must already have the proper permissions for the table.

2. If the reason field of the error message is:

```
ORA00942:table or view does not exist
```

consult the application developer to verify the application. See the For Application Developer section.

3. If the reason field of the error message includes:

Can't find select descriptor for table <table name>

this indicates that the application erroneously tried to modify the table before reading it. See the [For Application Developer](#) section.

4. If the reason field of the error message is:

ORA1000: Maximum open cursor exceeded

or

Can't connect cursor to ORACLE

increase the cursor limit.

You may also consult the application developer to reduce the number of database references to the database. This may be done by reducing the number of applications involving database access simultaneously running on the system. See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501 for information.

5. For other error reasons, do the following:

- a. Stop the voice system.
- b. Stop the database system.
- c. Start the database system.
- d. If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup. Restore the database from backup.
- e. Start the voice system.

6. If the database system started successfully but the problem persists, do the following:

- a. Stop the voice system.
- b. Drop the database.
- c. Restore the application table from backup.

**NOTE:**

If the table resides on a remote machine, restore the table to the remote machine.

- d. Start the voice system.

**DB002 for Application Developer:**

1. Check the application and make sure that the application refers to the correct table name.
2. Make sure the table is read before an attempt is made to modify it.

3. If the application refers to a wrong table, change the application.
4. If the application is correct, restore the application table from the backup. If no backup is available, recreate the application table.

## DB003

---

### Alarm Level:

Major.

### Description:

An attempt to read a record from the specified system traffic table has failed. This error message is reported by one of the call data maintenance jobs (that is, CCA\_Summary, CCA\_Deletion, CDH\_Summary, or CDH\_Deletion) that are responsible for summarizing and cleaning up the traffic data.

If the source is CCA\_Summary or CCA\_Deletion, the Call Classification (CCA) data report for the date the error was logged will not be correct. If the source is CDH\_Summary or CDH\_Deletion, all nonCCA traffic data reports for the date the error was logged will not be correct.

There is no impact on call processing.

### Repair Procedure:

1. If the reason field of the error message is  
`ORA00942:table or view does not exist`  
recreate the system traffic tables.
2. For other error reasons, do the following:
  - a. Stop the voice system.
  - b. Stop the database system.
  - c. Start the database system.
  - d. If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup. Restore the database from backup.
  - e. Start the voice system.
  - f. If the problem persists, recreating the system traffic tables.

## DB004

---

### Alarm Level:

Critical.

### Description:

An attempt to read a record from the specified application table has failed during call processing. Application functionality may be severely impaired.

### Repair Procedure:

1. If the *<reason>* field of the error message is  
ORA00942:table or view does not exist  
or  
Can't find table descriptor for table *<table\_name>*  
See the [For Application Developer](#) section.
2. For other error reasons, do the following:
  - a. Stop the voice system.
  - b. Stop the database system.
  - c. Start the database system.
  - d. If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup.
  - e. Start the voice system.
3. If the database system started successfully but the problem persists, do the following:
  - a. Stop the voice system.
  - b. Drop the database table *<table\_name>*.
  - c. Restore the application table from backup.



#### NOTE:

If the table resides on a remote machine, restore the table to the remote machine.

- d. Start the voice system.

**DB004 for Application Developer:**

1. Check the application and make sure that it refers to the correct table name.
2. If the application refers to a wrong table, change the application.
3. If the application is correct, restore the application table from the backup. If no backup is available, recreate the application table.

**DB005**

---

**Alarm Level:**

Major.

**Description:**

An attempt to delete records from the specified system traffic table has failed. This error message is reported by one of the call data maintenance jobs, CCA\_Deletion or CDH\_Deletion, that are responsible for deleting the old traffic data.

If the source is CCA\_Deletion, the Call Classification (CCA) data report for the date the error was logged will not be correct. If the source is CDH\_Deletion, all nonCCA traffic data reports for the date the error was logged will not be correct.

There is no impact on call processing.

**Repair Procedure:**

1. If the reason field of the error message is:  

```
ORA00942:table or view does not exist
```

recreate the system traffic tables.
2. For the other error reasons, do the following:
  - a. Stop the voice system.
  - b. Stop the database system.
  - c. Start the database system.
  - d. If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup.
  - e. Start the voice system.
  - f. If the problem persists, recreate the system traffic tables.

## DB006

---

### Alarm Level:

Critical.

### Description:

An attempt to delete one or more records from the application table has failed during call processing. The records to be deleted will remain in the table. Application functionality may be severely impaired.

### Repair Procedure:

1. If the reason field of the error message is:  

```
ORA00942:table or view does not exist
```

consult the application developer to verify the application. See the [For Application Developer](#) section below.
2. For other problems, do the following:
  - a. Stop the voice system.
  - b. Stop the database system.
  - c. Start the database system.
  - d. If the database system failed to start because of database file corruption, the database files must be recovered from a mkimage backup.
  - e. Start the voice system.
3. If the database system started successfully but the problem persists, do the following:
  - a. Stop the voice system.
  - b. Drop the database table `<table_name>`.
  - c. Restore the application table from backup.  
  
 **NOTE:**  
If the table resides on a remote machine, restore the table to the remote machine.
  - d. Start the voice system.

### DB006 for Application Developer:

1. Check the application and make sure that it refers to the correct table name.

2. If the application refers to a wrong table, change the application.
3. If the application is correct, restore the application table from the backup. If no backup is available, recreate the application table.

## DB007

---

### Alarm Level:

Major.

### Description:

Either the database is out of space or the system traffic table reached the maximum allowable number of extents. The system traffic table specified (or the rollback segment) cannot grow further to accommodate more data. New traffic data added will be lost.

There is no impact on call processing.

### Repair Procedure:

1. Check the maximum number of extents. See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
2. If the maximum number of extents is reached, perform the "Redefining the Database Table Storage" procedure. See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
3. Perform the "Checking the Database Free Space" procedure.
4. If the database is running out of free space, do the following:
  - a. See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501, for information on verifying and reducing the rollback segment size.
  - b. If the rollback segment size is normal, add more space to the database. See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501, for information on increasing the database size.

## DB008

---

### Alarm Level:

Critical.

**Description:**

Either the database is out of space or the application table reached the maximum allowable number of extents during call processing. The table specified (or the rollback segment) cannot grow further to accommodate more data. The service running on the channel will not be able to add more database records. Application functionality may be severely impaired.

**Repair Procedure:**

1. Perform the "Checking the Maximum Number of Extents" procedure. See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
2. If the maximum number of extents is exceeded, perform the "Redefining the Database Table Storage" procedure. See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
3. Perform the "Checking the Database Free Space" procedure.
4. If database is running out of free space, do the following:
  - a. See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501, for information on verifying and reducing the rollback segment size.
  - b. If the rollback segment size is normal, add more space to the database. See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501, for information on increasing the database size.

**DB009**

---

**Alarm Level:**

Major.

**Description:**

The call data handling process or one of the call data maintenance jobs specified failed to initialize itself. If the source is Call Data Handler (CDH), no traffic data will be logged in the database (including call data events records).

If the source is CCA\_Summary or CCA\_Deletion, the Call Classification (CCA) data report for the date the error was logged will not be correct. If the source is CDH\_Summary or CDH\_Deletion, all nonCCA traffic data reports for the date the error was logged will not be correct.

There is no impact on call processing.

**Repair Procedure:**

1. Stop the voice system.
2. Stop the database system.
3. Start the database system.
4. If the database system cannot be started, reboot the system.
5. If the database failed to start after reboot, restore the database directory from the system backup.
6. Start the voice system.
7. If the database started successfully but the problem persists, do the following:
  - a. Stop the voice system.
  - b. Recreate the system traffic tables.

**DB010**

---

**Alarm Level:**

Critical.

**Description:**

The ORACLE database interface process (ORALDB) failed to initialize itself after the voice system was started. The process will continue to respawn as long as the voice system is running. Services assigned to channels will not be able to access the database being referenced by the SOURCE of this message. The database may be remote or local.

Application functionality may be severely impaired.

**Repair Procedure:**

1. Determine whether the database being accessed is a local or a remote database by checking the SOURCE field of the message.

If the database is remote, check the ORACLE network. If the problem persists, proceed to Step 2.

If the database is local, proceed to Step 2.
2. Stop the voice system.
3. Stop the database system.
4. Start the database system.

5. If the database system cannot be started (file corruption), restore the database directory from the system backup.
6. Start the voice system.
7. If the problem persists, reboot the system.

## DB011

---

### Alarm Level:

Major.

### Description:

This is a general database error that is reported by either the call data handling process or one of the call data maintenance jobs.

If the source is Call Data Handler (CDH), the traffic records (including call data events) will not be created. If the source is CCA\_Summary or CCA\_Deletion, the Call Classification (CCA) data report for the date the error was logged will not be correct. If the source is CDH\_Deletion or CDH\_Summary, all nonCCA traffic data reports for the date the error was logged will not be correct.

There is no impact on call processing.

### Repair Procedure:

1. Enter `/oracle/bin/oerr ora <error_num>`

where `<error_num>` is the ORACLE error number in the reason field of the error message.

The output will contain a brief explanation of the error, the cause of the error, and the action to take to correct the error.

#### NOTE:

You should also see the ORACLE Error Messages and Codes Manual for the explanation. Many times the online explanation will not be as complete as the manual explanation. If the error is unique to the UNIX environment, you can also see the ORACLE for UNIX Technical Reference Guide for detailed information.

2. Take the actions provided to correct the problem.
3. Reboot the system.
4. If the database system cannot be started (file corruption), restore the database directory from the system backup.

If no backup is available, remove and reinstall the "Base ORACLE DBMS 7.3.1" package.

**NOTE:**

All current database data will be lost after the package is reinstalled.

**DB012**

---

**Alarm Level:**

Critical.

**Description:**

This is a general database error that is reported by the database interface process (ORALDB) during call processing.

Depending on the error, application functionality may be impaired.

**Repair Procedure:**

1. If the reason field of error message is:

`ORA1000: Maximum open cursor exceeded`

consult the application developer to reduce the number of database references to the database. This may be done by reducing the number of applications involving database access simultaneously running on the system. See "Database Access Limitations" in Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

2. Perform the repair procedure for system message DB011.
3. If the problem persists and the database is remote, check the ORACLE network.

**DB013**

---

**Alarm Level:**

Major.

## Description:

The connection that this database process was logged onto has been dropped during call processing. The database could be a local or remote database. This may be a result of network congestion, the network going down, the remote machine going down, or other reasons. The negative number in the reason field is the ORACLE error code. See the ORACLE RDBMS Error Messages and Codes Manual for further information about this error. The process will try to respawn and reconnect to the database. However, if the problem is the network or remote machine, the process may not be able to reconnect without manual intervention.

The service running on the channel will not be able to make any database request until the problem is resolved.

Sometimes when the remote database connections are dropped, the dedicated server process on the remote machine may be orphaned. If too many such orphaned processes exist, the ORACLE server on the remote machine will become overloaded with defunct processes. At this point, the CONVERSANT machine may not be able to connect to the remote database successfully. If this is the case, you probably need to restart the remote database to remove the defunct server processes. Consult the Database Administrator of the remote database for assistance.

## Repair Procedure:

If the system stopped to generate this message, the database process has logged onto the database successfully since the error message was recorded. No action needs to be taken. If the error message continues to be generated, do the following:

1. Determine whether the database being accessed is a local or a remote database by checking the SOURCE field of the message.
  - If the database is remote, check the ORACLE network. If the problem persists, proceed to Step 2.
  - If the database is local, proceed to Step 2.
2. Stop the voice system.
3. Stop the database system.
4. Start the database system.
5. If the database system cannot be started (file corruption), restore the database directory from the system backup.
6. Start the voice system.
7. If the problem persists, reboot the system.

## DB014

---

### Alarm Level:

Critical.

### Description:

The database interface process (ORALDB) has timed out on a database request during call processing. The initial timeout has the default value 45 seconds (defined in `/vs/data/ldb dip.rc`). Any of the following reasons can cause this timeout to occur:

- The timeout value set is too small
- The application was searching a huge nonindexed table
- The network was congested
- The network went down
- The remote machine went down

ORALDB will continue to wait for the response from the database (local or remote) until the final timeout occurs (DB015). After the final timeout occurs (default 300 seconds), ORALDB will try to reconnect to the database (remote or local). Messages queued are deleted to prevent the message queue from overflowing.

Application functionality may be severely impaired.

### Repair Procedure:

1. Consult the application developer to verify the application. See the "For Application Developer" section.
2. Check the ORACLE network.
3. Reboot the system.

### DB014 and DB015 for Application Developer:

If the database is remote and the above actions did not resolve the problem, or if the database is local, do the following:

1. Determine if the application is searching a nonindexed table. (If the table was created through Script Builder, the table is not indexed.) If the application searches a table containing more than 1000 records, you should index the table. See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501 for information on creating the indexed table.

2. If the searched table is small or the table is indexed, check the TIMEOUT values in /vs/data/lbdbip.rc file. Make sure the *FIRST\_TMOUT* and *SECOND\_TMOUT* values are not too small (that is, less than 10 seconds). See Chapter 6, "Database Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501, for information on modifying the ORALDB timeout values if necessary.

## DB015

---

### Alarm Level:

Critical.

### Description:

This error usually follows a few occurrences of DB014 error messages. It indicates that the database interface process (ORALDB) times out on a database request after waiting for a specified interval (defined in /vs/data/lbdbip.rc). ORALDB will exit and respawn in order to reconnect to the database (remote or local). It will continue to do so until either the database connection is successfully established or the voice system is stopped.

If the reconnection attempt is not successful, no database requests will be processed. Application functionality is severely impaired.

### Repair Procedure:

1. Consult the application developer to verify the application. See the For Application Developer section.
2. Check the ORACLE network.
3. Reboot the system.

## DB016

---

### Alarm Level:

Major.

### Description:

The Call Data Handler (CDH) failed to communicate to the voice system. The traffic data may not be recorded correctly.

There is no impact on call processing.

**Repair Procedure:**

Reboot the system.

**DIP Alarms and Log Messages****DIP001**

There is one alarm message for the data interface process (DIP), as described below.

**Alarm Level:**

None.

**Description:**

Error in software.

**Repair Procedure:**

When this error is logged, the message log contains additional text indicating the nature of the problem. Examples include the following:

DCDIP: VS startup failed

DCDIP: Cannot attach shared memory

This alarm occurs when there is an internal software error. Contact your service representative for assistance.

## **DSKMG Alarms and Log Messages**

---

### **DSKMG001**

---

#### **Alarm Level:**

Major.

#### **Description:**

The indicated file cannot be accessed for the reason specified in the message. Applications requiring reserving speech files may fail.

#### **Repair Procedure:**

1. If the reason field indicates that the file or directory cannot be created, check to see if the speech file system is out of space:
  - a. Enter vdf at the system prompt and note the resulting message.
  - b. If the percent free is less than three percent, increase the file system that speech resides on using the Volume Management selection from the UnixWare System Administration menu or remove the unused speech files. See the VERITAS Volume Manager System Administrator's Guide, 585-350-907, for information about using Volume Manager to grow a file system.
2. If the reason field indicated a failure on a library call, make sure the irAPI libraries libirAPI.so and libirEXT.so are in existence in the /usr/lib directory.
3. If the reason field indicates a system call failure, reboot the system.

### **DSKMG002**

---

#### **Alarm Level:**

Major.

#### **Description:**

The indicated file cannot be reserved for the reason specified in the message. Applications requiring recording to the file will be incomplete.

**Repair Procedure:**

1. If the reason field indicates that the file or directory cannot be created, check to see if the speech file system is out of space. Enter `vdv` at the system prompt and note the resulting message.
  - If the percent free is less than three percent, increase the file system that speech resides on using the Volume Management selection from the UnixWare System Administration menu or remove the unused speech files. See the VERITAS Volume Manager System Administrator's Guide, 585-350-907, for information about using Volume Manager to grow a file system.
  - If the `vdv` command shows there is space on the device, the problem may be that there are no inodes left on the system. Remove files to free up the inodes.
2. If the reason field indicated a failure on a library call, make sure the `irAPI` libraries `libirAPI.so` and `libirEXT.so` are in existence in the `/usr/lib` directory.
3. If the reason field indicates a system call failure, reboot the system.

**DWIP Alarms and Log Messages**

---

**DWIP001**

---

There is one message for the DWIP process, as listed below:

**Alarm Level:**

Critical.

**Description:**

The DWIP process is unable to read PRI messages from the E1 or T1 cards. PRI calls can not be processed on any E1 or T1 cards that have the D-channel on an AYC21 card.

**Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. Reboot the system.
4. Reinstall the T1/E1 driver circuit card. See the "Replacing or Installing Circuit Cards" chapter in your platform maintenance book.

## ET Alarms and Log Messages

---

### ET001

---

**Alarm Level:**

None.

**Description:**

Only unconverted code from pre-voice system 3.1 systems uses this message. The priority and destinations of these messages are always set to be that specified by the `/vs/data/etStub.rules` file.

The meaning of messages logged via this mechanism depends upon the source and content of the message.

**Repair Procedure:**

No corrective action is necessary.

### ET002

---

**Alarm Level:**

None.

**Description:**

The `etStub` process has read or reread the rules files. This happens any time the `etStub` process spawns and whenever it is requested to reread the rules file by command.

**Repair Procedure:**

No corrective action is necessary.

### ET003

---

**Alarm Level:**

Minor.

## Description:

The etStub process has detected a bad rule in the /vs/data/etStub.rules file. The rules file should be examined to determine the extent of the damage.

## Repair Procedure:

### 1. Enter `/vs/bin/vrs/etStub c`

This lists all errors detected in the rules file. Each line which is not a comment should be in the form:

```
NNN F PP DST {format.....}
```

where:

*NNN* is the message number.

*F* is a flag, and

*O* indicates the message should be tagged as obsolete.

- indicates the message is not obsolete.

*PP* is the alarm level, and

- indicates there is no priority; informational message only.

\* indicates a minor alarm.

\*\* indicates a major alarm.

\**C* indicates a critical alarm.

*DST* is the destination for the message, and

*LOG* means to just log the message.

*PRT* means to log the message and direct it to v/console.

{*format*} is the message text in the remainder of the line.

### 2. Correct any damaged lines or replace the file from backup sources.

## ET004

---

### Alarm Level:

Minor.

### Description:

A message was received for which there was no rule in the /vs/data/etStub.rules file.

**Repair Procedure:**

1. Examine the `/vs/data/etStub.rules` file and determine why there is not a rule for the error message specified. A rule has the following form:

```
NNN F PP DST {format.....}
```

where:

*NNN* is the message number.

*F* is a flag, and

*O* indicates the message should be tagged as obsolete.

*-* indicates the message is not obsolete.

*PP* is the alarm level, and

*-* indicates there is no priority; informational message only.

*\** indicates a minor alarm.

*\*\** indicates a major alarm.

*\*C* indicates a critical alarm.

*DST* is the destination for the message, and

*LOG* means to just log the message.

*PRT* means to log the message and direct it to `v/console`.

`{format}` is the message text in the remainder of the line.

2. Add a rule if necessary.

**ET005**

---

**Alarm Level:**

Minor.

**Description:**

The channel number specified by a message sent to the `etStub` process is invalid based on the system configuration.

**Repair Procedure:**

This message indicates an internal coding error occurred while accessing `etStub` to log messages. Consult the application developer to correct the code.

## ET006

---

### Alarm Level:

Minor.

### Description:

The card number specified by a message sent to the etStub process is invalid based on the system configuration.

### Repair Procedure:

This message indicates an internal coding error occurred while accessing etStub to log messages. Consult the application developer to correct the code.

## EXTA Alarms and Log Messages

---

### EXTA001

---

### Alarm Level:

None.

### Description:

This message is generated from a user request to test an external alarm contact set.

This message should result in the alarm contact set specified being either set or closed.

### Repair Procedure:

No corrective action is necessary.

### EXTA002

---

### Alarm Level:

None.

**Description:**

This message is generated from a user request to retire an external alarm contact set.

This message should result in the external alarm contact set specified being either reset or opened.

**Repair Procedure:**

No corrective action is necessary.

**EXTA003**

---

**Alarm Level:**

None.

**Description:**

This message is generated from a user request to enable an external alarm contact set.

This message should result in the alarm contact set specified being enabled.

**Repair Procedure:**

No corrective action is necessary.

**EXTA004**

---

**Alarm Level:**

None.

**Description:**

This message is generated from a user request to disable an external alarm contact set.

This message should result in the alarm contact set specified being disabled.

**Repair Procedure:**

No corrective action is necessary.

**EXTA005**

---

**Alarm Level:**

None.

**Description:**

This message is generated from a user request for status of an external alarm contact set.

This message should result in the status of the external alarm contact set specified being sent to the requesting process.

**Repair Procedure:**

No corrective action is necessary.

**EXTA006**

---

**Alarm Level:**

Major.

**Description:**

This message is generated when the external alarm card cannot be accessed by the alerter process.

The External Alarm feature is completely inoperable.

**Repair Procedure:**

1. If the external alarm card cannot be opened, either it cannot be found or its protections are wrong. Remove the External Alarms package using the procedure in the "Installing Optional Feature Software," chapter of your platform maintenance book.

**NOTE:**

Removing the External Alarms feature package also removes all message ID alarm contact set mappings.

2. Reinstall the package using the procedure Chapter 2, "UNIX Administration" of INTUITY CONVERSANT System Version 7.0 Administration. Be sure to allow the system to reboot after installation.

## EXTA007

---

### Alarm Level:

Major.

### Description:

This message is generated whenever a configuration file for an alarm contact set cannot be read either because it does not exist or it has incorrect permissions.

The External Alarm feature is completely inoperable.

### Repair Procedure:

1. If the configuration file that cannot be read is either `/vs/data/alarms/alarm1`, `/vs/data/alarms/alarm2`, `/vs/data/alarms/alarm3`, or `/vs/data/alarms/alarm4`, continue with Step 2. Otherwise, go to Step 3.
2. Verify that the protections on the specified file (for example, `/vs/data/alarms/alarm1`) is `"-rw-r--r--"` by entering `ls l /vs/data/alarms/alarm1`

The output for the file in question should be similar to the following:

```
-rw-r--r-- 1 root other 72 Jun 25 17:25
/vs/data/alarms/alarm1
```

3. Perform one of the following procedures, depending on the output from the `ls l` command:
  - a. If the file is not readable as indicated by the `"-rw-r--r--"` string, enter  

```
chmod 644 /vs/data/alarms/alarm1
```
  - b. If the file owner is not root, enter  

```
chown root /vs/data/alarms/alarm1
```
  - c. If the file does not exist, create a new file using your favorite editor following the guidelines specified in Chapter 7, "Data Network Connectivity Alarms," of INTUITY CONVERSANT System Version 7.0 Communication Development, 585-313-202.

4. If the file specified is called `/vs/data/alarms/masks`, verify the file protections and permissions as described in Step 2. The file protections should be `"-rw-r--r--"` and the owner should be `"root."` If the file does not exist, either the file was removed from the system or the file system has been corrupted. In either case, the file must be retrieved.

Either restore the file by performing the "Restoring the Single File From Root File System Backup" procedure or remove and reinstall the External Alarm feature package as defined in the "Installing Optional Feature Software," chapter of your platform maintenance book.

## **EXTA008**

---

### **Alarm Level:**

Major.

### **Description:**

This message occurs when the External Alarm feature process attempts to read a configuration file that contains an error.

The External Alarm feature is completely inoperable.

### **Repair Procedure:**

1. If the configuration file that contains the error is not either `/vs/data/alarms/alarm1`, `/vs/data/alarms/alarm2`, `/vs/data/alarms/alarm3`, or `/vs/data/alarms/alarm4`, go to Step 3.
2. Verify that the line indicated in the message text matches the guidelines in Chapter 7, "Data Network Connectivity Alarms," of *INTUITY CONVERSANT System Version 7.0 Communication Development, 585-313-202*.
3. If the file is called `/vs/data/alarms/masks`, the file was corrupted and must be restored. Either restore the file by performing the "Restoring a Single File From Root File System Backup" procedure or remove and reinstall the External Alarm feature package as defined in the "Installing Optional Feature Software," chapter of your platform maintenance book.

## **EXTA009**

---

### **Alarm Level:**

Major.

**Description:**

This message indicates corruption in the /vs/data/alarms/masks file.

The External Alarm feature is completely inoperable.

**Repair Procedure:**

The file called /vs/data/alarms/masks was corrupted and must be restored. Either restore the file by performing the "Restoring a Single File From Root File System Backup" procedure or remove and reinstall the External Alarm feature package as defined in the "Installing Optional Feature Software," chapter of your platform maintenance book.

**EXTA010**

---

**Alarm Level:**

Minor.

**Description:**

This message indicates that the external alarm process cannot set or reset an alarm contact set or alarm timer.

The External Alarm feature may be inoperable.

**Repair Procedure:**

This error indicates a problem with the external alarm card driver. The only recourse is to remove and reinstall the External Alarm software package as defined in the "Installing Optional Feature Software," chapter of your platform maintenance book.

**EXTA011**

---

**Alarm Level:**

None.

**Description:**

This message is generated from a user request to reinitialize the external alarm system.

This message should result in the reinitialization of the External Alarm feature which resets and enables all alarm contact sets.

### Repair Procedure:

No corrective action is necessary.

## FFE Alarms and Log Messages

### FFE001

#### Alarm Level:

Major.

#### Description:

The Form Filler Plus feature cannot successfully initialize. Applications using the Form Filler Plus feature will fail.

#### Repair Procedure:

1. Stop the voice system.
2. Start the voice system.
3. Reboot the system.
4. If the problem persists and a Form Filler Plus backup is available, restore the backup.



#### NOTE:

The Form Filler Plus database speech must be restored before the Form Filler Plus database files.

5. If the problem persists or a Form Filler Plus backup is not available, remove and reinstall the Form Filler Plus package. See the "Installing Optional Feature Packages" chapter in your platform maintenance book.



#### NOTE:

All current Form Filler Plus data will be lost as the result of reinstalling this package.

**FFE002**

---

**Alarm Level:**

None.

**Description:**

There are no Tip/Ring or T1 channels in the system during Form Filler Plus initialization. The initialization will continue but the Form Filler Plus feature will not be available.

**Repair Procedure:**

No corrective action is necessary.

**FFE003**

---

**Alarm Level:**

Major.

**Description:**

An internal error has occurred in the Form Filer Plus feature during call processing. Applications using the Form Filler Plus feature will fail.

**Repair Procedure:**

1. Enter **rm /vs/data/ff/delete.ph**
2. Stop the voice system.
3. Start the voice system.
4. If the problem persists, reboot the system.

**FFE004**

---

**Alarm Level:**

Major.

**Description:**

The Form Filler Plus feature failed to access the database during call processing. It is possible that the Form Filler Plus database is corrupted. Applications using the Form Filler Plus feature will fail.

**Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. Reboot the system.
4. If the problem persists and a Form Filler Plus backup is available, restore the backup.

**NOTE:**

The Form Filler Plus database speech must be restored before the Form Filler Plus database files.

5. If the problem persists or a Form Filler Plus backup is not available, remove and reinstall the Form Filler Plus package. See the "Installing Optional Feature Packages" chapter in your platform maintenance book.

**NOTE:**

All current Form Filler Plus data will be lost as the result of reinstalling this package.

**FFE005**

---

**Alarm Level:**

Major.

**Description:**

An application has made an invalid Form Filler Plus request. This is due to a script programming error. The indicated script will fail.

**Repair Procedure:**

1. Consult the application developer to verify the application.
2. Reboot the system.
3. If the problem persists and a Form Filler Plus backup is available, restore the backup.

**NOTE:**

The Form Filler Plus database speech must be restored before the Form Filler Plus database files.

4. If the problem persists or a Form Filler Plus backup is not available, remove and reinstall the Form Filler Plus package. See the "Installing Optional Feature Packages" chapter in your platform maintenance book.

**NOTE:**

All current Form Filler Plus data will be lost as the result of reinstalling this package.

**FFE006**

---

**Alarm Level:**

Major.

**Description:**

The Form Filler Plus feature failed to communicate with the voice system during call processing. Applications using the Form Filler Plus feature will fail.

**Repair Procedure:**

Reboot the system.

**FFE007**

---

**Alarm Level:**

Major.

**Description:**

The Form Filler Plus feature failed to access a shared resource of the voice system. Applications using the Form Filler Plus feature will fail.

**Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. Reboot the system.

**FFE008**

---

**Alarm Level:**

Major.

**Description:**

The Form Filler Plus feature failed to access a shared resource of the voice system. Applications using the Form Filler Plus feature will fail.

**Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. Reboot the system.

**FFE009**

---

**Alarm Level:**

Major.

**Description:**

The Form Filler Plus feature failed to communicate with the voice system during call processing. Applications using the Form Filler Plus feature will fail.

**Repair Procedure:**

Reboot the system.

## FTS Alarms and Log Messages

---

### FTS001

---

#### Alarm Level:

Critical.

#### Description:

The File Transfer System cannot find any session that is in the "File Transfer" state. The File Transfer System cannot transfer the files between the host and the voice system.

#### Repair Procedure:

1. Enter **hstatus**
2. Find a free session number N on host card 0 (a session within 0-127 and a state of either "free" or "unassign").
3. Enter **hassign <application\_name> to <N> FTSCRT**  
where <application\_name> is the application service name and <N> is the free session number.

### FTS002

---

#### Alarm Level:

Major.

#### Description:

The File Transfer System cannot send the file to the host because there is no response from the host within timeout period. The file transfer may fail again.

#### Repair Procedure:

1. This message may indicate a line problem.
2. Enter **sb\_te <session numbers>**  
where <session numbers> is one or more session numbers.

The system displays the following message:

Check the terminal emulator's status line indicator at the bottom of the display. If X SYSTEMS or X appear, the host is working slowly. Try to send the file again later.

## **FTS003**

---

### **Alarm Level:**

Major.

### **Description:**

The File Transfer System cannot send the file to the host because the options in the send command are not correct. The file transfer may fail again unless the options have been corrected.

### **Repair Procedure:**

Edit PARAM1, PARAM2, or PARAM3 in the /vs/data/fts\_config file. See INTUITY CONVERSANT System Version 7.0 Communication Development, 585-313-202, for more information.

Each parameter must be one of the available options for the send command.

## **FTS004**

---

### **Alarm Level:**

Major.

### **Description:**

If there is any host error message (HOST) in the log, the system may fail to transfer any file. If there are not host error messages in the log, then the mainframe session is actively performing another file transfer, and nothing is wrong in the system.

### **Repair Procedure:**

If this message occurs in conjunction with any other host (HOST) error message, See that message for the appropriate repair procedure. Otherwise, change the permissions on the indicated file by entering

```
chmod 744 <filename>
```

where *<filename>* is the file name in the error message.

## FTS005

---

### Alarm Level:

Major.

### Description:

The File Transfer System cannot send the file to the host because the system cannot open the key mapping file *zancomm.key*. The system will not be able to send any file to the host. This happens when the "DataTalker 3270 UX, CLEO Communication" package is improperly installed or the file *zancomm.key* has improper permissions or is corrupted.

Consult the INTUITY CONVERSANT voice system Maintenance book for repair procedures.

The above description should state "cleo\_3270, Feature Level 1" package instead of "DataTalker 3270 U-X, CLEO Communication" package.

### Repair Procedure:

1. Remove the *linkix\_3270*, Feature Level 1 package, and if you have any of the following packages, remove them also using the instructions below:
  - *cleo\_sib*, link level
  - *cleo\_proc*, link level
  - *cleo\_tkrn*, link level package
    - a. Log in as root as the system prompt.
    - b. Enter `pkgrm`
    - c. Follow the instructions provided on the screen.
2. Reinstall the *cleo\_3270* software. See the "Installing Optional Feature Software," chapter in your platform maintenance book.

## FTS006

---

### Alarm Level:

Major.

**Description:**

The File Transfer System cannot receive the file from the host because there is no response from the host within timeout period. The file transfer may fail again.

**Repair Procedure:**

See the repair procedure for system message HOST001.

**FTS007**

---

**Alarm Level:**

Major.

**Description:**

The File Transfer System cannot receive the file from the host because the options in the receive command are not correct. The file transfer may fail again unless the options have been corrected.

**Repair Procedure:**

Edit PARAM1, PARAM2, or PARAM3 in the /vs/data/fts\_config file. See INTUITY CONVERSANT System Version 7.0 Communication Development, 585-313-202, for more information.

Each parameter must be one of the available options for the send command.

**FTS008**

---

**Alarm Level:**

Major.

**Description:**

If there is any host error message (HOST) in the log, the system may fail to transfer any file. If there are no host error messages in the log, then the mainframe session is actively performing another file transfer, and nothing is wrong in the system.

**Repair Procedure:**

- If this message occurs in conjunction with any other host (HOST) error message, see that message for the appropriate repair procedure.
- Otherwise, change the permissions on the indicated file by entering  
`chmod 744 <filename>`  
where <filename> is the file name in the error message.

**FTS009**

---

**Alarm Level:**

Major.

**Description:**

The File Transfer System cannot receive the file from the host because the system cannot open the key mapping file `zancomm.key`. The system will not be able to send any file to the host. This happens when the DataTalker 3270 UX, CLEO Communication" package is improperly installed or the file `zancomm.key` has improper permissions or is corrupted. Consult the INTUITY CONVERSANT voice system Maintenance book for repair procedures.

**⇒ NOTE:**

The above description should state "cleo\_3270, Feature Level 1" package instead of "DataTalker 3270 U-X, CLEO Communication" package.

**Repair Procedure:**

1. Remove the `cleo_3270, Feature Level 1` package, and if you have any of the following packages, remove them also using the instructions below:
  - `cleo_sib`, link level 2
  - `cleo_proc`, link level2
  - `cleo_tkrn`, link level package:
    - a. Log in as root at the system prompt.
    - b. Enter `pkgrm`
    - c. Follow the instructions provided on the screen.
2. Reinstall the `cleo_3270` software. See the "Installing Optional Feature Software," chapter in your platform maintenance book.

## FTS010

---

### Alarm Level:

Major.

### Description:

The File Transfer System cannot receive the file from the host because the file name in the receive command does not exist in the host. The file transfer may fail again unless the file name has been changed or the file has been added in the host.

### Repair Procedure:

Correct the ORIGINATION file name in `/vs/data/fts_config` or add the file into the host.

## FTS011

---

### Alarm Level:

Major.

### Description:

The File Transfer System cannot send the file to the host because of an error encountered by the `comsend` command. The `TRANSxxx` mnemonic in the error message identifies the reason the file transfer failed. Consult the CLEO 3270 User's Guide for a further explanation and repair procedure for the `TRANSxxx` error message.

### Repair Procedure:

1. This message may indicate a line problem.
2. Enter **sb\_te <session numbers>**

where *<session numbers>* is one or more session numbers.

The system displays the following message:

Check the terminal emulator's status line indicator at the bottom of the display. If X SYSTEMS or X appear, the host is working slowly. Try to send the file again later.

## **FTS012**

---

### **Alarm Level:**

Major.

### **Description:**

The File Transfer System cannot send the file to the host because of an error encountered by the comreceive command. The TRANSxxx mnemonic in the error message identifies the reason the file transfer failed.

Consult the CLEO 3270 User's Guide for a further explanation and repair procedures for the TRANSxxx error message. Consult the INTUITY CONVERSANT voice system Maintenance book for repair procedures.

### **Repair Procedure:**

Edit PARAM1, PARAM2, or PARAM3 in the /vs/data/fts\_config file. See INTUITY CONVERSANT System Version 7.0 Communication Development, 585-313-202, for more information.

Each parameter must be one of the available options for the send command.

## **FXAUD Alarms and Log Messages**

---

### **FXAUD001**

---

### **Alarm Level:**

None.

### **Description:**

The fax job database audit has been started.

### **Repair Procedure:**

No corrective action is necessary.

**FXAUD002**

---

**Alarm Level:**

None.

**Description:**

An error occurred initializing the softFax process. The reason is identified in the message.

The fax operation will not operate.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXAUD003**

---

**Alarm Level:**

None.

**Description:**

The fax audit could not establish communication with softFAX.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXAUD004**

---

**Alarm Level:**

None.

**Description:**

The fax audit could not cancel job.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD005****Alarm Level:**

None.

**Description:**

The fax audit cancelled the job successfully.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD006****Alarm Level:**

None.

**Description:**

The number of jobs that were cancelled successfully.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD007****Alarm Level:**

None.

**Description:**

The fax job database audit has been completed.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD008****Alarm Level:**

None.

**Description:**

The spool file has been successfully removed.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD009****Alarm Level:**

None.

**Description:**

The spool file was not successfully removed..

**Repair Procedure:**

No corrective action is necessary.

**FXAUD010****Alarm Level:**

None.

**Description:**

The fax audit could not find the job to cancel.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD011****Alarm Level:**

None.

**Description:**

The fax audit could not find the log for the job to cancel.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD012****Alarm Level:**

None.

**Description:**

The fax audit successfully deleted the log for the job.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD013****Alarm Level:**

None.

**Description:**

The number of log jobs completed successfully.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD014****Alarm Level:**

None.

**Description:**

The spool area cleanup has been started.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD015****Alarm Level:**

None.

**Description:**

The number of spool files successfully removed.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD016****Alarm Level:**

None.

**Description:**

The spool area cleanup has been completed.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD017****Alarm Level:**

Minor.

**Description:**

The voxem file system is low on space..

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXAUD018****Alarm Level:**

None.

**Description:**

The log dump directory not found.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD019****Alarm Level:**

None.

**Description:**

The fax log dump audit has been started.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD020****Alarm Level:**

None.

**Description:**

The log dump files removed.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD021****Alarm Level:**

None.

**Description:**

The number of log dump files successfully removed.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD022****Alarm Level:**

None.

**Description:**

The fax log dump audit completed.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD023**

---

**Alarm Level:**

None.

**Description:**

The system could not truncate the sferror file.

**Repair Procedure:**

No corrective action is necessary.

**FXAUD024**

---

**Alarm Level:**

None.

**Description:**

The new sferror file size.

**Repair Procedure:**

No corrective action is necessary.

## **FXMON Alarms and Log Messages**

---

### **FXMON001**

---

**Alarm Level:**

None.

**Description:**

The fax maintenance process started.

**Repair Procedure:**

No corrective action is necessary.

### **FXMON002**

---

**Alarm Level:**

Minor.

**Description:**

The fax maintenance process cannot write to a file.

The fax subsystem will not log events and future transmission problems may be difficult to diagnose.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

### **FXMON003**

---

**Alarm Level:**

None.

**Description:**

No voice channels have been purchased and no fax channels have been enabled.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON004****Alarm Level:**

None.

**Description:**

The fax maintenance process could not initialize softFAX.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON005****Alarm Level:**

None.

**Description:**

The fax maintenance process could not start the softFAX daemon.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON006****Alarm Level:**

None.

**Description:**

The fax platform daemon has been started.

**Repair Procedure:**

There is no corrective action necessary.

**FXMON007**

---

**Alarm Level:**

None.

**Description:**

The fax maintenance process could not establish communication with softFAX.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON008**

---

**Alarm Level:**

None.

**Description:**

The fax maintenance process could not add a softFAX user vexvm.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON009**

---

**Alarm Level:**

None.

**Description:**

There is no product ID administered. The system is using the default NSF.

**Repair Procedure:**

No corrective action is necessary.

**FXMON010**

---

**Alarm Level:**

Major.

**Description:**

The fax maintenance process could not add a softFAX channel.

The channels indicated will not be capable of performing fax operations. This error may be caused by either:

- An attempt to enable more channels than licensed
- A corruption of the softFAX database

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON011**

---

**Alarm Level:**

Minor.

**Description:**

The fax maintenance process cannot open a file.

The fax subsystem will not be able to log FAX events properly. The ability to transmit FAX data should be unaffected.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON012****Alarm Level:**

Major.

**Description:**

The fax maintenance process could not enable a softFAX channel.

The channels indicated will not be capable of performing FAX operations.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON013****Alarm Level:**

Minor.

**Description:**

The fax maintenance process is continuing to wait for the MTC process to complete.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON014****Alarm Level:**

Major.

**Description:**

The fax maintenance process could not disable a softFAX channel.

The error indicates a possible corruption of the softFAX line database.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON015****Alarm Level:**

None.

**Description:**

The fax maintenance process successfully disabled a softFAX channel.

**Repair Procedure:**

No corrective action is necessary.

**FXMON016****Alarm Level:**

Major.

**Description:**

The fax maintenance process could not disable a softFAX channel.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON017**

---

**Alarm Level:**

None.

**Description:**

The fax maintenance process successfully deleted the softFAX channels from the database.

**Repair Procedure:**

No corrective action is necessary.

**FXMON018**

---

**Alarm Level:**

None.

**Description:**

The fax maintenance process could not select events to monitor.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON019**

---

**Alarm Level:**

None.

**Description:**

The fax maintenance process received a softFAX event error.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

## **FXMON020**

---

### **Alarm Level:**

Major.

### **Description:**

The fax maintenance process could not hard reset a channel.

This alarm indicates that one or more channels are inoperable for FAX transmission.

### **Repair Procedure:**

Contact your remote maintenance service center for assistance.

## **FXMON021**

---

### **Alarm Level:**

None.

### **Description:**

The fax maintenance process received a softFAX disable event.

### **Repair Procedure:**

No corrective action is necessary.

## **FXMON022**

---

### **Alarm Level:**

None.

### **Description:**

The event monitor received an unexpected event.

**Repair Procedure:**

No corrective action is necessary.

**FXMON023****Alarm Level:**

None.

**Description:**

The fax maintenance process could not shutdown the softFAX daemon.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON024****Alarm Level:**

None.

**Description:**

The fax maintenance process received a softFAX line malfunction event.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON025****Alarm Level:**

None.

**Description:**

The fax maintenance process could not start DEVICE TABLE.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON026****Alarm Level:**

None.

**Description:**

The fax maintenance process could not open DEVICE TABLE.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON027****Alarm Level:**

None.

**Description:**

The fax maintenance process could not read DEVICE TABLE.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON028****Alarm Level:**

None.

**Description:**

The fax maintenance process could not read BDTBL TABLE.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON029****Alarm Level:**

None.

**Description:**

The fax maintenance process could not read NITBL TABLE.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON030****Alarm Level:**

None.

**Description:**

The fax platform daemon shutdown..

**Repair Procedure:**

If the reason is "unexpected death," reboot the system.

If the reason is not "unexpected death," no corrective action is necessary.

**FXMON031****Alarm Level:**

None.

**Description:**

The fax maintenance process could not halt line.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON032****Alarm Level:**

None.

**Description:**

The fax maintenance process could not find job.

**Repair Procedure:**

No corrective action is necessary.

**FXMON033****Alarm Level:**

None.

**Description:**

The fax maintenance process job failed.

**Repair Procedure:**

No corrective action is necessary.

**FXMON034****Alarm Level:**

None.

**Description:**

The system was unable to initialize a channel for the reason specified in the message.

**Repair Procedure:**

No corrective action is necessary.

**FXMON035****Alarm Level:**

None.

**Description:**

The system was unable to place a call in a given group for the reason specified in the message.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON036****Alarm Level:**

None.

**Description:**

The system was unable to handle an incoming fax for the reason specified in the message.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON037**

---

**Alarm Level:**

None.

**Description:**

The system was unable to get information on a given fax group for the reason specified in the message.

**Repair Procedure:**

No corrective action is necessary.

**FXMON038**

---

**Alarm Level:**

None.

**Description:**

The fax failed because the given fax group contains a non-fax capable channel.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON039**

---

**Alarm Level:**

None.

**Description:**

The fax right-to-use resources are gone or nearly gone.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXMON040**

---

**Alarm Level:**

None.

**Description:**

The system operation is being jeopardized by requests for too much rasterization of text messages for FAXing.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXNSF Alarms and Log Messages**

---

**FXNSF001**

---

**Alarm Level:**

Major.

**Description:**

NSF update: Could not initialize softFAX.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXNSF002**

---

**Alarm Level:**

Major.

**Description:**

NSF update: Could not start softFAX daemon.

This alarm indicates that an attempt to update the NSF identifier failed.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXNSF003**

---

**Alarm Level:**

Major.

**Description:**

NSF update: Could not establish communication with softFAX.

This alarm indicates that an attempt to update the NSF identifier failed.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXNSF004**

---

**Alarm Level:**

Major.

**Description:**

NSF update: Update of softFAX channel failed.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**FXNSF005**

---

**Alarm Level:**

None.

**Description:**

NSF update of softFAX channel passed

**Repair Procedure:**

No corrective action is necessary.

**GEN Alarms and Log Messages****GEN001****Alarm Level:**

None.

**Description:**

An internal voice system process has encountered a general error described in the message text. System functionality is impaired.

**Repair Procedure:**

No corrective action is necessary.

**GEN002****Alarm Level:**

None.

**Description:**

An internal voice system process has logged general status information with this message.

**Repair Procedure:**

No corrective action is necessary.

## **GEN020**

---

### **Alarm Level:**

None.

### **Description:**

An internal voice system process has received a command with the incorrect number of arguments. The source of the message is ALERTER, which indicates that a user command was issued with incorrect arguments. The command has been ignored.

### **Repair Procedure:**

No corrective action is necessary.

## **GEN022**

---

### **Alarm Level:**

None.

### **Description:**

An internal voice system process has received a command which it does not recognize.

If the source of the command is ALERTER, the message indicates that a user command was badly formed or unrecognized by the Alerter. The command has been ignored.

### **Repair Procedure:**

No corrective action is necessary.

## **GEN024**

---

### **Alarm Level:**

None.

**Description:**

An internal voice system process has attempted to open the specified file and failed.

**Repair Procedure:**

No corrective action is necessary.

**GEN050**

---

**Alarm Level:**

None.

**Description:**

An internal voice system process has received a command to change one of its internal parameters. The name of the parameter and its old and new values are printed in the message.

**Repair Procedure:**

No corrective action is necessary.

**HOST Alarms and Log Messages**

---

**HOST001**

---

**Alarm Level:**

Major.

**Description:**

The application cannot access the host to get data for the call. Either a mismatch exists between the voice system and host configurations, the host has not responded within the Initial Timeout specified in the application for a Send Host Screen action, or the host connection is down.

**Repair Procedure:**

1. Ensure that the host connection is made and the voice system host configuration agrees with the host configuration.  
Specifically, check the Constant Carrier parameter with the DUPLEX parameter from the host.
2. Also, a noisy connection may cause the host to retransmit screens excessively, resulting in slow response times from the host.

**HOST002**

---

**Alarm Level:**

None.

**Description:**

The applications cannot get correct data for the call. The host has sent an unexpected screen within the Unrecognized Screen Timeout specified in the application for a Get Host Screen action.

For some applications, unexpected screens are part of the normal flow of the application and can be ignored. However, for other applications, this might show that either the application is not recognizing the screen sent by the host or the host is taking too long to respond with the expected screen.

**Repair Procedure:**

For many applications no corrective action is necessary. If the message persists, check the application logic.

**HOST003**

---

**Alarm Level:**

Critical.

**Description:**

The applications cannot access the host to get data for calls. Either the host is down, the application running on the host (for example, CICS or TSO) is down, a mismatch exists between the voice system and host configurations, or a logic problem exists in the voice system application.

## Repair Procedure:

1. Re-establish the connection with the host if resetting the card has disconnected the link. For dialup lines, this involves having the modem dial to or from the host.
2. Free a session of the card by entering **hfree <session number>**  
where <session number> is the number of the session you want to free.  
A message is displayed confirming the success or failure of the hfree command.
3. Start the 3270 Terminal Emulation software by entering

### **sb\_te <session numbers>**

The Terminal Emulator (TE) displays the current screen of the LU. The 3270 status line appears at the bottom of the screen to inform you whether or not the host is active. Refer to Appendix B, "Status Line Information," of the *3270 User's Guide* for information about the indicators shown in the 3270 status line and what those values mean.

## HOST004

---

### Alarm Level:

Major.

### Description:

The application cannot access the host to get data for the call. The host card failed to do the specified action. Either the keyboard is locked, the host link is down, the session is owned by someone else, or the problem is with the card or configuration.

### Repair Procedure:

1. If the keyboard is locked or you could not write to the card complete the following Steps a through c:
  - a. Free a session of the card by entering **hfree <session number>**  
where <session number> is the number of the session you want to free.  
A message is displayed confirming the success or failure of the hfree command.
  - b. Enter **sb\_te <session numbers>**  
where <session numbers> is one or more session numbers.

You are asked to press to display the screen currently displayed by the sessions.

- c. Press the key configured as the 3270 reset key to unlock the keyboard. It is likely that the application assigned to that session at one point sent a screen at an inappropriate time, causing the host to lock the keyboard. See the repair procedure for HOST013 system message to debug the host application section below.
2. If you could not write to the card, ensure that connection between the host and the voice system is not broken as described in the repair procedure for HOST006.
3. If the session is owned by someone else, enter **ps ef**  
  
This will check if another program, like the terminal emulator or file transfer, is using the session.  
  
If so, terminate those programs and reassign the application to the session by entering `hassign <session number>`  
  
where `<session number>` is the number of the session to which you want to assign application.
4. If the card is not responding, it may be broken, complete the following Steps a through d:
  - a. Reset the card through the Host Link screen.
  - b. Stop the voice system.
  - c. Start the voice system.
5. If the session has not been configured, add the session through the Host Link screen. Ensure the configuration file on the host also has the session configured.

## HOST005

---

### Alarm Level:

Major.

### Description:

The application cannot access the host on the specified session to get data for the call. The host has stopped polling or checking the voice system. Either the host is down, a mismatch exists between the voice and host configurations, or the host link is disconnected.

## Repair Procedure:

1. If a HOST017 message is not in the message log, enter hstatus to determine if the sessions are recovering or logging in.
2. If the sessions are recovering or logging in, wait until this process is complete. No additional Steps are necessary.
3. If the sessions are not recovering or logging in, wait until a HOST017 message appears in the message log then reset the host card through Host Link screen by completing the following Steps a through e:
  - a. Stop the voice system.
  - b. Start the voice system.
  - c. If the problem persists, free the specified session of the card by entering **hfree <session number>**  
  
where <session number> is the number of the session you want to free.  
  
A message appears, confirming the success or failure of the hfree command.
  - d. Enter **sb\_te <session numbers>**  
  
where <session numbers> is one or more session numbers.  
  
The Terminal Emulator (TE) displays the current screen of the LU. The 3270 status line appears at the bottom of the screen to inform you whether or not the host is active. See Appendix B, "Status Line Information," of the *3270 User's Guide* for information about the indicators shown in the 3270 status line and what those values mean.
  - e. If the problem persists, See the repair procedure for system message HOST006 for how to bring up the host link.

## HOST006

### Alarm Level:

Critical.

### Description:

The applications cannot access the host to get data for calls. There is no cable, dialup, or session connection to the host.

## Repair Procedure:

1. Ensure that the connection between the host and the voice system is not broken.
2. If you are using a modem for a dialup link to the host, ensure that the voice visual indicator lights on the modem are flashing. This shows that modems are talking to one another.

If the visual indicator lights are not flashing, attempt to redial the host through the modem. Once the link is reestablished, the sessions will start logging in.

3. If the problem persists, ensure that the voice system host configuration is set to agree with the host's configuration.

Specifically, check the Poll Address parameter with the PU\_ADDR parameter from the host. See INTUITY CONVERSANT System Version 7.0 Communication Development, 585-313-202, for further information.

## HOST007

---

### Alarm Level:

Major.

### Description:

The application cannot send a screen of data to the host to get data for the call. The application either tried to send the wrong screen or to write onto a protected field on the screen.

### Repair Procedure:

1. Display the screen currently displayed by the session. Enter  
**hspy <session number>**  
where <session number> is the session number you want to display.  
You are asked to press **(ENTER)**. The application may have tried to send a different screen or to write into a protected field.
2. Redefine the logic of your host application to either send the correct screen or not write to the protected field, and reverify and reinstall the host application.
3. Free the specified session. Enter **hfree <session number>**  
where <session number> is the number of the session you want to free.  
A message appears, confirming the success or failure of the hfree command.

4. To move from the current screen back to the login base screen using the proper screens and keys, enter **sb\_te <session numbers>**  
where *<session numbers>* is one or more session numbers.  
You are asked to press **ENTER** to display the screen currently displayed by the sessions.
5. If the session does not respond to your input, check the terminal emulator's status line indicator at the bottom of the display.  
The Terminal Emulator (TE) displays the current screen of the LU. The 3270 status line appears at the bottom of the screen to inform you whether or not the host is active. See Appendix B, "Status Line Information," of the *3270 User's Guide* for information about the indicators shown in the 3270 status line and what those values mean.
6. Reassign the application back to the session. Enter  
**hassign <application name> to <session number>**  
where *<application name>* is the name of the application and *<session number>* is the number of the session to which you want to assign the application.  
A message appears, confirming the success or failure of the hassign command.
7. If the problem persists, use the sb\_trace command as described in the "For Application Developer" section of the HOST013 message.

## HOST008

---

### Alarm Level:

Major.

### Description:

The application cannot access the host to get data for the call. The application wants to send a screen when the host has not yet responded to a previous send of another screen.

### Repair Procedure:

Check the logic of the application. See Chapter 12, "Using Advanced Features," of INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder for information.

## **HOST009**

---

### **Alarm Level:**

Major.

### **Description:**

The application cannot access the host to get data for the call. The application failed to log in. The specified session could not attempt to log in to the host because all the application's login IDs/passwords are being used by other sessions.

### **Repair Procedure:**

Either add more login IDs/passwords to the application or do not use any more sessions than login IDs/passwords. See Chapter 12, "Using Advanced Features," of INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder for information.

## **HOST010**

---

### **Alarm Level:**

Critical.

### **Description:**

The application will not run because it is incomplete or improperly defined.

### **Repair Procedure:**

Check the logic of the application. See Chapter 12, "Using Advanced Features," of INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder for information.

## **HOST011**

---

### **Alarm Level:**

Major.

**Description:**

The application cannot access the host to get data for the call. The application depends on the HELPER DIP to identify fields on the screens.

**Repair Procedure:**

1. Stop the voice system.
2. Stop the voice system.
3. If the problem persists, check the logic of the application. See Chapter 12, "Using Advanced Features," of INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder for information.

**HOST012**

---

**Alarm Level:**

Major.

**Description:**

The application cannot access the host to get data for the call. Either not enough sessions have been assigned to the application or some sessions assigned to the application are not logged in to take calls.

**Repair Procedure:**

1. Verify that there are as many sessions defined as there are voice channels assigned to the application. Enter

**hstatus <application name> or <session number, range, or all>**

where <application name> is the host application name and <session number, range, or all> is the number, range, or all of the sessions for which you want to display status.

If the LUs are in the "not available" state, See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration to configure the LUs.

2. Verify that the application has enough sessions logged in ready to handle calls. Enter

**hstatus <application name> or <session number, range, or all>**

where <application name> is the host application name and <session number, range, or all> is the number, range, or all of the sessions for which you want to display status.

- a. If the application is not assigned to this LU, assign as many sessions as needed by entering  
**hassign <application name> to <session number>**  
where <application name> is the name of the application and <session number> is the number of the session to which you want to assign the application.  
A message appears, confirming the success or failure of the hassign command.
- b. If a LU is assigned to application but in the "logged out" state, enter

**hlogin <session number>**

to log in logged out sessions.

3. Determine if some sessions are in the recovery state. This could be caused by faulty logic in the application. Enter

**hstatus <application name> or <session number, range, or all>**

where <application name> is the host application name and <session number, range, or all> is the number, range, or all of the sessions for which you want to display status.

4. If some sessions are in recovery, check the logic of the application. See the repair procedure for system message HOST013 to debug the host application.

## HOST013

---

### Alarm Level:

Major.

### Description:

The application cannot access the host to get data for the call. Either the host is down, the application running on the host (for example, CICS or TSO) is down, or a logic problem exists in the application.

This message can also be caused by stopping the voice system before all session were logged out.

### Repair Procedure:

1. Free a session of the card. Enter **hfree <session number>**  
where <session number> is the number of the session you want to free.

A message appears, confirming the success or failure of the hfree command.

2. Enter **sb\_te <session numbers>**

where <session numbers> is one or more session numbers.

Check the terminal emulator's status line indicator at the bottom of the display. The Terminal Emulator (TE) displays the current screen of the LU. The 3270 status line appears at the bottom of the screen to inform you whether or not the host is active. See Appendix B, "Status Line Information," of the *3270 User's Guide* for information about the indicators shown in the 3270 status line and what those values mean.

3. If this message occurred because a stop\_vs was performed before all sessions logged out, use the following procedure:
  - a. Free all sessions assigned to the application or the card by entering **hfree <application> or <session number, range or all>**  
where <application> is the name of the host application and <session number, range, or all> is the number of the session(s) you want to free.  
  
A message appears, confirming the success or failure of the hfree command.
  - b. Use the terminal emulator on all of the recovering sessions to manually move the sessions to the login base screen using the screens and keys. Enter **sb\_te <session numbers>**  
where <session numbers> is one or more session numbers.  
  
The current screen on the sessions is displayed.
  - c. Use the hassign command to reassign the application to all the sessions and verify that all sessions become logged in.

**NOTE:**

The next time a **stop\_vs** is executed, use the **hlogout** command prior to **stop\_vs** to log out the sessions before stopping the voice system.

4. See the For Application Developer Section.

## HOST013 for Application Developer

1. Determine if some sessions are in the recovery state. This could be caused by faulty logic in the application. Enter **hstatus <application name> or <session number, range, or all>** where <application name> is the host application name and <session number, range, or all> is the number, range, or all of the sessions for which you want to display status.

2. Display the screen currently displayed by the session. The application may not recognize or expect the screen sent by the host. Enter **hspy <session number>** where <session number> is the session number you want to display.

You are asked to press **ENTER**.

3. If the screen is new, changed, or improperly identified in the application, recapture and identify this screen through the Script Builder Define Host Screens menu.
4. Assure that the screen is received and sent in the proper places in the application.
5. Verify and reinstall the application if changes were made to the application and/or screens.
6. If the problem persists, repeat Steps 1-5 until all screens are properly defined.
7. If all the screens are properly defined and accounted for in the application, free all sessions assigned to the application or the card, if necessary. Enter **hfree <application> or <session number, range, or all>** where <application> is the name of the host application and <session number, range, or all> is the number of the session(s) you want to free.

A message appears, confirming the success or failure of the **hfree** command.

8. Use the terminal emulator on one of the recovering sessions to determine what current screen the host is displaying. This could help locate the trouble area in the application.
9. To move from the current screen back to the login base screen using the proper screens and keys, enter **sb\_te <session numbers>** where <session numbers> is one or more session numbers. The current screen on the sessions is displayed.
10. If the session does not respond to your input, check the terminal emulator's status line indicator at the bottom of the display.

The Terminal Emulator (TE) displays the current screen of the LU. The 3270 status line appears at the bottom of the screen to inform you whether or not the host is active. See Appendix B, "Status Line Information," of the *3270 User's Guide* for information about the indicators shown in the 3270 status line and what those values mean.

11. Save all screens sent and received from/to that session. This might show extra screens not accounted for in the application. Enter **sb\_trace <session number>** where <session number> is the number of the session you want to trace.

A message appears, confirming the success or failure of the `sb_trace` command.

12. Reassign the application back to that session. Enter **`hassign <application name> to <session number(s)>`** where *<application name>* is the name of the host application name and *<session number(s)>* is the number of the session(s) you want to assign to the specified application.

A message appears, confirming the success or failure of the `hassign` command.

13. Place a call into the application if necessary to make the session go into recovery.
14. Verify that the session is recovering. Enter **`hstatus <application name> or <session number, range, or all>`** where *<application name>* is the host application name and *<session number, range, or all>* is the number, range, or all of the sessions for which you want to display status.
15. Once recovering, use the `hfree` command to free the session and look through the screens saved by `sb_trace` to identify the point where the wrong screen is being sent or received.
16. Use the terminal emulator as described in Step 9 to bring this session and all others back to the login base screen.
17. Capture or redefine the appropriate screens and fix the logic of the application to reflect the sequence of screens sent and received. See Chapters 4, 5, 10, and Appendix A in *INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder* for more help in defining the application.
18. Reverify and reinstall the host application.
19. Reassign the application on one session by entering **`hassign <application name> to <session number(s)>`** where *<application name>* is the name of the host application and *<session number(s)>* is the number of the session(s) you want to assign to the specified application.

A message appears, confirming the success or failure of the `hassign` command.

20. Verify that the application logs in and returns to `loggedin` after a call is finished.
21. If it does not return to `loggedin`, repeat the debugging Steps above.
22. Use the `hassign` command to reassign the application to the rest of the sessions and verify that all sessions become logged in.

## HOST014

---

### Alarm Level:

None.

### Description:

At least one session has recovered and is now logged in for the application to take a call.

### Repair Procedure:

No corrective action is necessary.

## HOST015

---

### Alarm Level:

Critical.

### Description:

The applications cannot access the host to get data for calls. The HOST DIP has stopped handling calls. This is normal when the voice system is stopped, and in this case the message can be ignored. If the voice system is still running, the message might indicate internal problems in the HOST DIP.

### Repair Procedure:

1. If the voice system is running, determine if the HOST DIP is running. Enter **hstatus all**
2. If all sessions are shown "not available," the HOST DIP is not running. Complete the following Steps a and b:
  - a. Stop the voice system.
  - b. Start the voice system.

## HOST016

---

### Alarm Level:

Critical.

**Description:**

The system cannot communicate with the host. This shows that the HOST DIP cannot open the host card. This problem occurs when the host card is stuck in an inactive state. It is typically caused by an error between the voice system and the host (a dropped host link, power hit on the voice system, etc).

**Repair Procedure:**

1. Shut down the operating system.
2. Reboot the operating system.

**HOST017**

---

**Alarm Level:**

Major.

**Description:**

The session assigned to the application is not available to handle calls. It will continue to retry the login and/or recover sequences specified in the application. Either the host is down, the application running on the host (for example, CICS or TSO) is down, or a logic problem exists in the application.

**Repair Procedure:**

See the repair procedure for system message HOST013.

**HOST018**

---

**Alarm Level:**

None.

**Description:**

The session assigned to the application is now available to handle calls.

**Repair Procedure:**

No corrective action is necessary.

## ICK Alarms and Log Messages

---

### ICK001

---

#### Alarm Level:

Minor.

#### Description:

The integrity checking process has received an invalid request. The request has been ignored.

#### Repair Procedure:

1. Verify that commands being sent to the integrity checking process are using **iCkCmd**. See INTUITY CONVERSANT System Version 7.0 Administration for further information on usage.
2. Verify that the files **/vs/bin/vrs/iCk** and **/vs/bin/util/iCkCmd** have the same date.

### ICK002

---

#### Alarm Level:

Minor.

#### Description:

The integrity checking process has encountered an internal error.

#### Repair Procedure:

1. If the *<description>* is similar to:

Activity index *<NN>* is out of range: *<MMM>* Current limits: 0 to *<NN>*

the integrity checking process will automatically correct the problem.

2. If the <description> is similar to:

Time computation failed <XXX>

edit the **/vs/etc/ick.rules** file and correct the time description "XXX."

## ICK003

---

### Alarm Level:

None.

### Description:

The integrity checking process has received a command request.

### Repair Procedure:

No corrective action is necessary.

## ICK004

---

### Alarm Level:

None.

### Description:

The integrity checking process has just completed reading its rules file.

### Repair Procedure:

No corrective action is necessary.

## ICK005

---

### Alarm Level:

None.

**Description:**

The integrity checking process has changed the state of the UNIX kernel auto-reboot flag to state identified.

**Repair Procedure:**

No corrective action is necessary.

**ICK006**

---

**Alarm Level:**

None.

**Description:**

The identified action has been taken by the integrity checking process.

**Repair Procedure:**

No corrective action is necessary.

**ICK007**

---

**Alarm Level:**

Major.

**Description:**

The directory in which the integrity checking process rules file appears is accessible by nonauthorized users. The rules file is insecure and is vulnerable to corruption which may impact system functionality.

**Repair Procedure:**

1. Verify that the directory in which the rules file appears is owned by root and is not writable by any other user. Enter **ls ld /vs/etc**

The output should be similar to:

```
drwxrxxrx 3 root bin 64 Dec 30 12:11 /vs/etc
```

2. If the mode is incorrect (that is, not `drwxr-xr-x`), enter **`chmod 755 /vs/etc`**
3. If the owner is incorrect (that is, not `root`), enter **`chown root /vs/etc`**
4. If the group is incorrect (that is, not `bin`), enter **`chgrp bin /vs/etc`**

## ICK008

---

### Alarm Level:

Major.

### Description:

The rules file used by the integrity checking process is accessible by nonauthorized users. The rules file is insecure and is vulnerable to corruption which may impact system functionality.

### Repair Procedure:

1. Verify that the rules file is owned by `root` and is not writable by any other user. Enter **`ls -ls /vs/etc/iCk.rules`**

The output should be similar to:

```
-r--r--r-- 1 root other 6815 Dec 30 12:11
/vs/etc/iCk.rules
```

2. If the mode is incorrect (that is, not `-r--r--r--`), enter **`chmod 444 /vs/etc/iCk.rules`**
3. If the owner is incorrect (that is, not `root`), enter **`chown root /vs/etc/iCk.rules`**

## ICK009

---

### Alarm Level:

None.

### Description:

The integrity checking process has found the specified file to be larger than allowed by a rule which has been executed, or to not be regular. The specified reduction procedure has been performed.

**Repair Procedure:**

No corrective action is necessary.

**ICK010**

---

**Alarm Level:**

Minor.

**Description:**

The integrity checking process has found a file specified by a rule that does not comply with the requirements of the rule. Depending upon the rule, the integrity checking process may attempt to correct the problem or just report it.

**Repair Procedure:**

If the message does not indicate that the problem has been automatically corrected, determine why the specified file is failing the rule test and correct it using one of the following:

1. If the message indicates an error with the mode, Use the chmod UNIX command to change the mode.
2. If the message indicates an error with the group, Use the chgrp UNIX command to change the group.
3. If the message indicates an error with the owner, Use the chown UNIX command to change the owner.
4. If the message indicates that the file does not exist, create the file. If the file is a UNIX file, see a UNIX reference manual for additional information. If the file is specific to your application, consult your application developer.

**ICK011**

---

**Alarm Level:**

None.

**Description:**

The integrity checking process is changing to the specified run level. A change in run level affects which rules are in force.

**Repair Procedure:**

No corrective action is required.

**INIT Alarms and Log Messages****INIT001****Alarm Level:**

Critical.

**Description:**

The system configuration from the previous operation of the voice system is completely lost. All administered values are set to their default states. Administrative action is required to assign services to channels and put channels in the INSERTV state. Card functionality must be specified in order for the system to operate under any configuration other than the default settings.

No calls can be processed until the system has been readministered.

**Repair Procedure:**

This alarm requires remote maintenance center intervention.

**INIT002****Alarm Level:**

Major.

**Description:**

The identified card, previously recognized to be present in the system, cannot be located. Call processing may be impaired.

**Repair Procedure:**

1. Remove the card from the system, permanently. See the "Replacing and Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

2. Renumber the voice channels. See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.
3. If the problem persists, check the circuit card.

## **INIT003**

---

### **Alarm Level:**

None.

### **Description:**

The identified card has been added to the system. The card is initialized with default values and requires administration before it is operational.

### **Repair Procedure:**

No corrective action is necessary.

## **INIT004**

---

### **Alarm Level:**

None.

### **Description:**

Channels have been renumbered at the request of a system administrator.

### **Repair Procedure:**

No corrective action is necessary.

## **INIT005**

---

### **Alarm Level:**

Major.

**Description:**

Cannot save system configuration data to hard disk.

**⚠ CAUTION:**

*If the voice system is stopped and started, some or all of the voice system administered values may be lost.*

**Repair Procedure:**

This alarm requires remote maintenance center intervention.

**INIT006**

---

**Alarm Level:**

Critical.

**Description:**

Cannot determine type of Signal Processor card.

An error occurred when trying to determine the AYC number for the voice system card. The card is not operational. The resources on the card are not available. Call processing may be impaired.

**Repair Procedure:**

1. Check the circuit card.
2. If the CPU has recently been replaced, verify that the card is set up correctly. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book.

**INIT007**

---

**Alarm Level:**

Major.

**Description:**

The unassigned protocol has been assigned to the card. The identified card has been re-assigned to the unassigned protocol. The reason for the reassignment is

indicated in the reason field of the message. The card should be re-administered.

## Repair Procedure:

- If the reason is:

Packfile <packfile name> does not exist

either the protocol that provides this packfile is no longer installed on the system, or the rate of the card has been changed and no such protocol exists for this card. Do the following:

1. Log in as `root`.
2. Determine the protocol assigned to the indicated card and the card rate by entering **display card <card number>**

where <card number> is the number indicated in the message.

The rate is indicated as either E1 or T1 at the top of the listing in the CLASS field. The FUNCTION field indicates the protocol.

3. Determine if the package that provides that protocol is installed on the system by entering **pgkinfo**

The packages and the protocols provided and card rates supported are [shown here](#).

4. If the package is not installed, it must be installed to use the protocol. See the "Installing the Optional Feature Software," chapter in your platform maintenance book. Check that the desired protocol is supported for that card rate.

- If the reason is:

Boards in D-channel group <group number> are not contiguous

the cards in the PRI D-channel group must be made contiguous. See Chapter 6, "Switch Interfaces," of INTUITY CONVERSANT System Version 7.0 Administration 585-313-501.

**Table 4-1. E1/T1 Protocol Rates**

| Package | Protocol | Rate |
|---------|----------|------|
| tlem    | E&M      | T1   |
| lse1d   | LSE1D    | E1   |
| lst1d   | LST1D    | T1   |
| lst1g   | LST1G    | T1   |

*Continued on next page*

**Table 4-1. E1/T1 Protocol Rates — Continued**

| Package | Protocol | Rate  |
|---------|----------|-------|
| p2aus   | CAS      | E1    |
| pri     | PRI      | T1/E1 |
| r2mex   | CAS      | E1    |

## **INIT008**

---

### **Alarm Level:**

None.

### **Description:**

IChannels have been renumbered as a result of a change in hardware.

### **Repair Procedure:**



#### **NOTE:**

This alarm occurs when a card in the system has been replaced by another card of the same class, but of a different name or running at a different rate. Therefore an automatic renumber of the cards has occurred and the new card has default settings. (For example, a card in the class Analog at osindex 0 with name AYC28 has been replaced by another card as osindex 0, with name AYC30.)

The new circuit card may need to be re-administered if the default settings, protocols, or functions are not appropriate. See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.

## **INIT009**

---

### **Alarm Level:**

Minor.

**Description:**

A change in configuration was detected. An automatic renumbering has not occurred because the manual renumber option is set. A renumbering of channels should be done as soon as possible.

Note that this alarm will only appear if your remote maintenance center activates it.

**Repair Procedure:**

Renumber the voice channels. See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration.

**INIT010**

---

**Alarm Level:**

None.

**Description:**

Unable to update the T1 configuration file. T1/E1 cards with the unassigned protocol should be re-administered.

**Repair Procedure:**

Re-administer all cards that currently have the unassigned protocol assigned to them. See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration.

## **LOG Alarms and Log Messages**

---

### **LOG001**

---

**Alarm Level:**

None.

**Description:**

The voice system logger has started a new message log file.

**Repair Procedure:**

No corrective action is necessary.

### **LOG002**

---

**Alarm Level:**

None.

**Description:**

The voice system logger has closed one message log file and is starting a new message log file.

**Repair Procedure:**

No corrective action is necessary.

### **LOG006**

---

**Alarm Level:**

Message priority based on the priority of the message ID passed to the Logger.

**Description:**

The voice system logger has been asked to log a message type which is invalid and which it cannot expand into a readable form for the message log.

**Repair Procedure:**

1. Identify the source of the unexpected message. The name of the source should be part of the compressed message format of the invalid message.
2. If the source of the unexpected message is a customer application data interface process (DIP), consult your application developer.

Otherwise, confirm that all installed voice system software packages are compatible with the installed version of the INTUITY CONVERSANT Application Software package. Remove any software package that is incompatible and install the proper version.

**LOG007**

---

This message can have up to seven different values for the *<string 1>* and *<string 2>* fields. The description and effect statement and the corresponding repair procedure differs for each of the values. Use the list of messages below to determine the proper description and effect statement and repair procedure for the LOG007 message you have encountered.

- logDaemon: msgrc=1, errno NOT EINTR:
- log Daemon: Cannot create <file>.:
- logDaemon: PID <pid> <msg>.:
- logDaemon: REINITIALIZED.:
- logDaemon: Exiting upon request.:
- logDaemon: Unable to open: <command>.:

**LOG007 logDaemon: Exiting upon request.:****Alarm Level:**

None.

**Description:**

The voice system message Logger has received a command to exit.

**Repair Procedure:**

No corrective action is necessary.

**LOG007 logDaemon: msgrc=1, errno NOT EINTR:****Alarm Level:**

Critical.

**Description:**

The voice system message Logger cannot communicate with other internal voice system processes. Logger functionality is severely impaired.

**Repair Procedure:**

Reboot the system.

**LOG007 logDaemon: PID <pid> <msg>.::****Alarm Level:**

None.

**Description:**

The voice system message Logger has been started or reinitialized. This message will appear in each log file maintained by the Logger.

**Repair Procedure:**

No corrective action is necessary.

**LOG007 logDaemon: REINITIALIZED.:****Alarm Level:**

None.

**Description:**

The voice system message Logger has received a command to reinitialize.

**Repair Procedure:**

No corrective action is necessary.

**LOG007 logDaemon: Unable to open:  
<command>.::****Alarm Level:**

Critical.

**Description:**

The voice system message Logger is unable to execute the UNIX command indicated by the message. Logger functionality is impaired.

**Repair Procedure:**

1. Make sure the UNIX command file being executed by the Logger exists and is executable.
2. If necessary, restore the missing or corrupted UNIX command file indicated in the message from a system backup.
3. If no valid backup copy exists reinstall the INTUITY CONVERSANT application software package. See the "Installing the INTUITY CONVERSANT System Software," chapter in your platform maintenance book for the procedure.

## **MTC Alarms and Log Messages**

### **MTC001**

**Alarm Level:**

Major.

**Description:**

The card identified in the message is unable to provide TDM clock to the system. This may indicate a possible hardware problem with the card. The card state has been changed to BROKEN. Applications dependent on this card will not function.

**Repair Procedure:**

1. Diagnose the card by entering  
**diagnose card <card number>**  
where <card number> is the number of the affected card.

2. After the diagnose command has completed, display the state of the card by entering  
**display card <card number>**  
where <card number> is the number of the affected card.
3. If the card state has changed to MANOOS, restore the card into service by entering  
**restore card <card number>**  
where card number is the number of the affected card.
4. If the card state remains BROKEN, check the circuit card.

## MTC002

---

### Alarm Level:

None.

### Description:

The identified card has had a state transition. The card state has been changed to **BROKEN**. Applications dependent on this card will not function.

If the identified card is the only SP card on the system that was providing speech playback functionality for the Tip/Ring cards, the equipment option of the Tip/Ring cards must be manually changed from "tdm" to "talk". See INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501. This option is shown under "OPTS" heading when the "display card" command is invoked.

Changing this option enables the Tip/Ring cards to perform speech playback on their own, in the absence of an SP card, thus maintaining overall system functionality. However, note that this configuration does not support bargein functionality. Once the SP card is restored to service, the Tip/Ring card options need to be manually changed to "tdm".

### Repair Procedure:

1. Check for any loose companion cables.
2. If the identified card is the only SP card on the system that was providing speech playback functionality for Tip/Ring cards. See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.

3. If any packages have been removed from the system recently, verify that any related cards, functions, etc, have been unassigned from the application so that the affected card does not come up in the "Broken" state. See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.
4. If the state transition was not initiated by a diagnose command, diagnose the card. Enter **diagnose card <card number>** where <card number> is the number of the affected card.
5. After the diagnose command has completed, display the state of the card by entering **display card <card number>** where <card number> is the number of the affected card.
6. If the card is in the MANOOS state, complete the following Steps a through d:
  - a. Diagnose the TDM bus by entering diagnose bus 1
  - b. Display the state of the card by entering  
**display card <card number>**  
where <card number> is the number of the affected card.
  - c. If the card is in the BROKEN state, check the circuit card.
  - d. If the card is in the MANOOS state, restore the card into service by entering **restore card <card number>**  
where <card number> is the number of the affected card.
7. If the card is in the BROKEN state, check the circuit card.

## MTC003

---

### Alarm Level:

Major.

### Description:

The identified card has had a state transition. The card state has been changed to BROKEN. Applications dependent on this card will not function.

If the identified card is the only SP card on the system that was providing speech playback functionality for the Tip/Ring cards, the equipment option of the Tip/Ring cards must be manually changed from "tdm" to "talk". See INTUITY CONVERSANT System Version 7.0 Administration. This option is shown under "OPTS" heading when the display card command is invoked. Changing this option enables the Tip/Ring cards to perform speech playback on their own, in the absence of an SP card, thus maintaining overall system functionality. However, note that this configuration does not support bargain functionality.

Once the SP card is restored to service, the Tip/Ring card options need to be manually changed to "tdm."

## Repair Procedure:

1. Check for any loose companion cables.
2. If the identified card is the only SP card on the system that was providing speech playback functionality for Tip/Ring circuit cards. See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.
3. If any packages have been removed from the system recently, verify that any related cards, functions, etc, have been unassigned from the application so that the affected card does not come up in the "Broken" state. See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.
4. If the state transition was not initiated by a diagnose command, diagnose the card. Enter **diagnose card <card number>**

where <card number> is the number of the affected card.

5. After the diagnose command has completed, display the state of the card by entering **display card <card number>**

where <card number> is the number of the affected card.

6. If the card is in the MANOOS state, complete the following Steps a through d:
  - a. Diagnose the TDM bus by entering diagnose bus 1
  - b. Display the state of the card by entering

**display card <card number>**

where <card number> is the number of the affected card.

- c. If the card is in the BROKEN state, check the circuit card.
- d. If the card is in the MANOOS state, restore the card into service by entering **restore card <card number>**

where <card number> is the number of the affected card.

7. If the card is in the BROKEN state, check the circuit card.

## MTC004

---

### Alarm Level:

None.

**Description:**

Diagnostic tests have been started on the identified card.

**Repair Procedure:**

No corrective action is necessary.

**MTC005**

---

**Alarm Level:**

None.

**Description:**

The identified card has successfully passed all diagnostic tests performed.

**Repair Procedure:**

No corrective action is necessary.

**MTC006**

---

**Alarm Level:**

Major.

**Description:**

The identified card has failed one or more diagnostic tests. The card state has been changed to **BROKEN**. Applications dependent on this card will not function.

**Repair Procedure:**

Check the circuit card.

**MTC007**

---

**Alarm Level:**

Critical.

**Description:**

An internal software error occurred when requesting a resource from, or releasing a resource to the Resource Manager. The request could not be processed. The identified card or channel is not available.

**Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the system.

**NOTE:**

If the reason is `User requested abort`, an abort of a remove or restore request for a card or channel was initiated while the request was still being processed. The state of the card or channel may not be accurate. Check the circuit card.

**MTC008**

---

**Alarm Level:**

None.

**Description:**

The clock has been restored on the card identified in the message.

**Repair Procedure:**

No corrective action is necessary.

**MTC009**

---

**Alarm Level:**

Major.

**Description:**

An error occurred loading the card in the message. Applications dependent on this card may not function. Call processing may be impaired.

 NOTE:

This alarm can also be generated if an SP card is assigned a function which requires a CMP when no CMP is connected to the SP card.

**Repair Procedure:**

1. Check to see if an INIT006 message has been logged for this card. If there is, follow the repair procedure for INIT006 first.

This message occurs until the problem causing the INIT006 message is cleared. See Chapter 3, "Voice System Administration," in INTUITY CONVERSANT System Version 7.0 Administration for information on the log report.

2. If the card is an SP card without any CMP cards, verify that the function(s) assigned to the card do not require CMP hardware. For example, WholeWord and FlexWord Speech Recognition and Echo Cancellation all require a CMP card when assigned to an SP card.
3. Verify that all functions assigned to the card are still installed on the system. (For example, if text2speech is assigned to the card, verify that the package that provides Text To Speech is installed on the system by entering pgkinfo.)

If any function is assigned to the card but not installed on the system, either install the software package, or change the assignment of the card to remove the function. See Chapter 11, "Installing the Optional Feature Software," in your platform maintenance book for information on installing software. See Chapter 3, "Voice System Administration" in INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501 for information on card assignments.

 NOTE:

If FlexWord is assigned to the card, a wordlist must be administered. See Chapter 4, "Recognizing FlexWord Speech Input, in INTUITY CONVERSANT System Speech Development, Processing, and Recognition, 585-310-762.

4. Change the assignment of the card to the defaults of play +code. See Chapter 3, "Voice System Administration" in INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501, for information on assigning functions to SP/SSP card.
5. Diagnose the SP card by completing the following Steps a through c:
  - a. Enter **diagnose card <card number>**  
where <card number> is the card number of the SP card.
  - b. If the card passes diagnostics, re-administer the original functions on the card. See Chapter 3, "Voice System Administration," in INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.

- c. Try to place it into service by entering restore card <card number> where <card number> is the card number of the SP card you want to restore to service.

## MTC010

---

### Alarm Level:

Major.

### Description:

The identified TDM bus has failed one or more diagnostics tests. One or more cards have been changed to `BROKEN`. Applications dependent on these cards will not function.

### Repair Procedure:

1. Check the TDM bus connections.

There should be only two cards terminating the bus, one at each end of the bus.

#### NOTE:

For cards that have terminating resistors, make sure the resistors are properly oriented. Some of the newer cards have DIP switches for this.

2. Ensure that the TDM cable is secure on each of the cards.
3. If the problem persists, try a new cable.
4. If the problem still occurs, a card on the bus is likely causing the problem. Remove cards from the bus, one at a time, until the problem is eliminated. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book.

## MTC011

---

### Alarm Level:

None.

### Description:

The identified TDM bus has successfully passed all diagnostics tests performed.

**Repair Procedure:**

No corrective action is necessary.

**MTC012**

---

**Alarm Level:**

None.

**Description:**

Diagnostics tests have been started on the identified TDM bus.

**Repair Procedure:**

No corrective action is necessary.

**MTC013**

---

**Alarm Level:**

Major.

**Description:**

The identified card is not receiving clock. The card may not be on the TDM bus. In order to use this card, it must be connected to the TDM bus. The state of this card has been changed to **BROKEN**. Applications dependent on this card will not function.

**Repair Procedure:**

1. Check the TDM Bus connections.

There should be only two cards terminating the bus, one at each end of the bus.

**NOTE:**

For cards that have terminating resistors, make sure the resistors are properly oriented. Some of the newer cards have DIP switches for this.

2. Ensure that the TDM cable is secure on each of the cards.
3. If the problem persists, try a new cable.

## PRI Alarms and Log Messages

---

### PRI001

---

#### Alarm Level:

Major.

#### Description:

The ISDN D-channel has gone out-of-service and no calls can be placed or received by the associated primary rate interface (PRI) channels. Active calls are unaffected, but customers will not be able to place calls to or from the voice system

This message does not typically indicate a problem with the INTUITY CONVERSANT PRI software; instead it points to either a T1/E1 problem or a problem with the external equipment that terminates the D-channel (another switch). Repeated or frequent failures followed by subsequent recoveries of a specific voice system D-channel indicate faulty equipment, along the D-channel connection, that should be replaced.

#### Repair Procedure:

1. Display the status of the D-channel and the status of the specific SP card indicated by the *<equip #>* by entering **display channel all | grep PRID**

The D-channel number appears in the first column, the associated T1/E1 card in the first field of the second column, and the D-channel state in the third column.

If multiple D-channels are configured, it is important to make sure that the line you check is the one that has a card number (in the first field of the second column) that matches the *<equip #>* value in the alarm message, or that has the same D-channel group ID as the SP or AYC21 card that reports the alarm.

The D-channel state can be Inserv (in-service), Foos (far-end out-of-service), Netoos (network out-of-service), or Hwoos (hardware out-of-service).

2. Continue as follows according to the state of the D channel:
  - If the D channel state is Inserv, the failure was temporary and the D channel has recovered (PRI002 message has been logged).
  - If the D channel state is Foos, a T1/E1 failure has occurred.  
Complete this procedure.

- If the D channel is Netoos, the voice system cannot correctly establish the D-channel with the terminating switch. Complete this procedure.
- If the D-channel is Hwoos, the associated SP card (identified by *<equip #>* is not in-service. Complete this procedure.
  - a. Look for any TWIP messages in the system message log that indicate a T1/E1 failure for associated T1/E1 card (T1/E1 card number was obtained above in Step 1).
  - b. Follow the recommendations for any of these messages in order to restore the T1/E1 to service.
  - c. Check the status of the SP card by entering **display card <equip#>**  
The card can be either Manoos (Manual out-of-service) or Broken.
  - d. If the SP card is Manoos, it has been removed from service. Do the following:
    - Examine the system message log to determine why the SP card was removed.
    - Resolve any problems that led to the SP card being removed.
    - When the problems are resolved or if you are unable to determine why the card was removed, then restore the card by entering **restore card <equip #>**
  - e. If the SP card is Broken, there has been a communication problem between the SP card and the voice system. Do the following:
    - Block all calls (at the terminating switch) from coming into the voice system.
    - Diagnose the SP card.
    - If the SP card passes diagnostics, stop and then start the voice system.
    - Start again at Step 1 above to ensure that the D-channel restores correctly, and restore traffic from the terminating switch to the voice system once the D-channel has returned to service.  
  
If diagnostics fail, the check the circuit card.
  - f. The D-channel status should be checked at the terminating switch and any associated switch problems should be resolved.
  - g. If you are not able to determine or resolve any switch problems, do the following:
    - Block all calls (at the terminating switch) from coming into the voice system.
    - Stop the voice system.

- Start the voice system.
- Start again at Step 1 above to ensure that the D-channel restores correctly, and restore traffic from the terminating switch to the voice system once the D-channel has returned to service.

## PRI002

---

### Alarm Level:

None.

### Description:

The ISDN D-channel has come in-service.

### Repair Procedure:

No corrective action is necessary.

## PRI003

---

### Alarm Level:

Major.

### Description:

The INTUITY CONVERSANT system primary rate interface (PRI) software has rejected an incoming call because the B-channel was either out-of-service, already active or unavailable due to an application problem. This could be a single channel, T1/E1 interface, or system wide problem. If this alarm occurs frequently or repeatedly, then it is a T1/E1 interface or system wide problem.

This message indicates that one or more calls has failed. The impact is likely to be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
*C THR004 -- -- --- The first threshold for the PRI_
CALLBLK exceeded. 5 messages have been generated in the
last 5 minutes.
```

This threshold message could indicate a serious problem which will cause numerous calls to fail in a very short interval.

**Repair Procedure:**

1. Determine the status of the identified channel by entering  
**display channel <chan #>**  
or, if it appears to be a system-wide problem, by entering  
display channel all
2. The channel(s) can be either Manoos (Manual out-of-service) or not Manoos. If the channel(s) are Manoos, do the following:
  - a. Immediately block all calls (at the terminating switch) from coming into the voice system.
  - b. Once all calls have been cleared, stop and then start the voice system.
  - c. Restore traffic from the terminating switch to the voice system.

**PRI004**

---

**Alarm Level:**

None.

**Description:**

The ISDN D channel has been removed from service because of administrative action. No calls can be placed or received by associated Primary Rate Interface (PRI) channels.

**Repair Procedure:**

No corrective action is necessary.

**PRI005**

---

**Alarm Level:**

Major.

**Description:**

A bad dialed number string was passed to the system. An attempt will be made to use the service assigned to the dialed number "ANY" to handle the call. If this attempt fails, the TSM001 message will be logged.

**Repair Procedure:**

This message indicates an ISDN protocol error. It is not likely to be a problem originating within the INTUITY CONVERSANT system. Contact your network service provider to help resolve this problem.

**PRI007**

---

**Alarm Level:**

Major.

**Description:**

A network protocol error, or other internal error, of the type indicated by the message has occurred on the PRI channel specified by this message. The call being handled by that channel has been disconnected as a result. If no specific channel could be identified, the channel is displayed as -1.

**⇒ NOTE:**

This message can result from a timeout from the network or a provisioning type error.

**Repair Procedure:**

This message indicates an ISDN protocol error or an internal PRI error. Contact your network service provider if help is needed to resolve this problem. The table below lists possible error types that should help you identify the specific cause.

The `PRIERR_STATE` and `PRIERR_BADCRV` errors can occur if there are delays in starting the assigned application and the original caller has hung up before the application answers the incoming call. These alarms can generally be ignored unless they occur frequently or other load-related problems are observed.

**Table 4-2. Error Meanings**

| Error Type | Error Value | Meaning                              |
|------------|-------------|--------------------------------------|
| CV_NULL    | 0           | No cause value present               |
| CV_UN      | 1           | Unassigned number                    |
| CV_NRTSTN  | 2           | No route to specific transit network |
| CV_CHUN    | 6           | Channel unacceptable                 |

*Continued on next page*

**Table 4-2. Error Meanings — Continued**

| <b>Error Type</b> | <b>Error Value</b> | <b>Meaning</b>                              |
|-------------------|--------------------|---------------------------------------------|
| CV_NCC            | 16                 | Normal call clearing                        |
| CV_UB             | 17                 | User busy                                   |
| CV_NUR            | 18                 | No user responding                          |
| CV_CR             | 21                 | Call rejected                               |
| CV_NC             | 22                 | Number changed                              |
| CV_INF            | 28                 | Invalid number format                       |
| CV_FR             | 29                 | Facility rejected                           |
| CV_RTSE           | 30                 | Response to status enquiry                  |
| CV_NU             | 31                 | Normal; unspecified                         |
| CV_NCOCA          | 34                 | No circuit or channel available             |
| CV_NETFAIL        | 38                 | Network out of order                        |
| CV_TFAIL          | 41                 | Temporary failure                           |
| CV_SEC            | 42                 | Switching equipment congestion              |
| CV_UID            | 43                 | User information discarded                  |
| CV_RCCNA          | 44                 | Requested circuit/channel not available     |
| CV_PREEMPT        | 45                 | Call preempted                              |
| CV_RFNS           | 50                 | Requested facility not subscribed           |
| CV_OCB            | 52                 | Outgoing calls barred                       |
| CV_ICB            | 54                 | Incoming calls barred                       |
| CV_BCNPA          | 58                 | Bearer capability not presently available   |
| CV_SONA           | 63                 | Service/option not available                |
| CV_BCNI           | 65                 | Bearer capability not implemented           |
| CV_CTNI           | 66                 | Channel type not implemented                |
| CV_RFNI           | 69                 | Requested facility not implemented          |
| CV_ICR            | 81                 | Invalid call reference                      |
| CV_ICDNE          | 82                 | Identified channel does not exist           |
| CV_ID             | 88                 | Incompatible destination                    |
| CV_MIEIM          | 96                 | Mandatory IE missing                        |
| CV_MTNEONI        | 97                 | Message type nonexistent or not implemented |
| CV_MNCWTCS        | 98                 | Message incompatible with call state        |

*Continued on next page*

**Table 4-2. Error Meanings — Continued**

| <b>Error Type</b> | <b>Error Value</b> | <b>Meaning</b>                      |
|-------------------|--------------------|-------------------------------------|
| CV_IIEC           | 100                | Invalid IE contents                 |
| CV_ROTTE          | 102                | Recovery on timer expiry            |
| CV_IOCU           | 127                | Interworking; or cause unknown      |
| PRIERR_NETWORK    | 256                | Network didn't respond as expected  |
| PRIERR_STATE      | 257                | Request was received in wrong state |
| PRIERR_OOSVC      | 258                | B-channel is out of service         |
| PRIERR_INMTC      | 259                | B-channel is in maintenance state   |
| PRIERR_GLARE      | 260                | Out going call failed due to glare  |
| PRIERR_BADCMD     | 261                | Bad command, not understood         |
| PRIERR_BADDCHAN   | 262                | Bad D-channel                       |
| PRIERR_BADBCHAN   | 263                | Bad B-channel                       |
| PRIERR_DCHANDEAD  | 264                | D-channel is dead                   |
| PRIERR_DCHANOFF   | 265                | D- channel is turned off            |
| PRIERR_DCHANCONF  | 266                | D-channel configuration error       |
| PRIERR_BUSY       | 267                | B-channel was already busy          |
| PRIERR_OVERFLOW   | 268                | Q931 window resource problems       |
| PRIERR_IEMISS     | 269                | Missing information element         |
| PRIERR_MSGFAIL    | 270                | Unable to send PRI message          |
| PRIERR_ACTAPPL    | 271                | Application already active          |
| PRIERR_NUMBCH     | 272                | Invalid number of B-channels        |
| PRIERR-WINDOW     | 273                | Q931 window resource problems       |
| PRIERR_NOTAPPL    | 274                | Application does not own channel    |
| PRIERR_DOCHANACT  | 275                | D-channel is active (UP)            |
| PRIERR_CRECMAX    | 276                | Unable to allocate call record      |

*Continued on next page*

**Table 4-2. Error Meanings — Continued**

| <b>Error Type</b>  | <b>Error Value</b> | <b>Meaning</b>                     |
|--------------------|--------------------|------------------------------------|
| PRIERR_BADCRV      | 277                | CRV does not match CRV for channel |
| PRIERR_<br>COMPAND | 278                | Companding error on SETUP          |
| PRIERR_CHTYPE      | 279                | Invalid channel type on SETUP      |

## **RECOG Alarms and Log Messages**

### **RECOG001**

#### **Alarm Level:**

Major.

#### **Description:**

The Speech Recognition (SR) feature failed to communicate with the voice system during call processing. Applications using the SR feature will fail.

#### **Repair Procedure:**

Reboot the system.

### **RECOG002**

#### **Alarm Level:**

Major.

#### **Description:**

The Speech Recognition (SR) feature received an invalid response from the SP/CMP cards or experienced a timeout in communicating with the SP/CMP cards during call processing. Applications using the SR feature will be incomplete.

**Repair Procedure:**

1. Diagnose the SP card by completing the following Steps a and b:
  - a. Enter **diagnose card <card number>**  
where <card number> is the card number of the SP card. This command also diagnoses the CMP card.
  - b. If the card passes diagnostics, place it back in service by entering **restore card <card number>**  
where <card number> is the card number of the SP card you want to restore to service.
2. Check the circuit card.
3. If the problem persists, complete the following Steps a and b:
  - a. Stop the voice system.
  - b. Start the voice system.

**RECOG003**

---

**Alarm Level:**

Major.

**Description:**

The Speech Recognition (SR) feature failed to communicate with the voice system during call processing. Applications using the SR feature will fail.

**Repair Procedure:**

Reboot the system.

**RECOG004**

---

**Alarm Level:**

Minor.

**Description:**

An invalid wholeword grammar or subword wordlist number was used by a Prompt and Collect action or by the getdig script instruction. Recognition failed.

**Repair Procedure:**

1. Verify the application to ensure that the Prompt and Collect action is using a valid wholeword grammar or subword wordlist number.
2. If the problem persists, reinstall the speech recognition languages or the subword vocabulary.

**NOTE:**

Developers using native script language instead of Script Builder should check the fields used with the `getdig()` instruction for an invalid grammar or wordlist number.

## **SBIRFAX Alarms and Log Messages**

### **SBIRFAX001**

**Alarm Level:**

Major.

**Description:**

The file I/O failed.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

### **SBFAX002**

**Alarm Level:**

Major.

**Description:**

The fax queue action failed.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**SBIRFAX003**

---

**Alarm Level:**

Major.

**Description:**

The Fax\_Send process failed for the reason specified in the message.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**SBIRFAX004**

---

**Alarm Level:**

Major.

**Description:**

The fax recorder (FAX\_Get) failed for the reason specified in the message.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

## **SP Alarms and Log Messages**

---

### **SP001**

---

**Alarm Level:**

None.

**Description:**

Pack files running on SP cards can "print" information by having it logged. Such "print" requests appear in the log files as SP001 (LGSP\_PRINTF) event messages.

**Repair Procedure:**

No corrective action is necessary.

### **SP002**

---

**Alarm Level:**

None.

**Description:**

A pack file running on an SP card has made an illegal "remote procedure call" (RPC) request. Incidents should be escalated to your support organization.

**Repair Procedure:**

No corrective action is necessary.

### **SP003**

---

**Alarm Level:**

None.

**Description:**

A pack file running on an SP card has encountered an error and wishes to log certain information which may help the support personnel in diagnosing the problem.

In addition, an alarm will be logged if manual intervention is required.

**Repair Procedure:**

No corrective action is necessary.

**SP004**

---

**Alarm Level:**

None.

**Description:**

A pack file running on an SP card has encountered an error from which it cannot recover. It is logging some information that may help the support organization in diagnosing the problem.

In addition, an alarm will be logged if manual intervention is required.

**Repair Procedure:**

No corrective action is necessary.

**SP005**

---

**Alarm Level:**

None.

**Description:**

A pack file running on an SP card is logging certain information about the termination of an activity running on the SP card. These messages will not appear unless the pack file is specifically requested to generate them. They are used by the support organization.

**Repair Procedure:**

No corrective action is necessary.

**SP006**

---

**Alarm Level:**

None.

**Description:**

A pack file running on an SP card is logging certain information about the termination of a process running on the SP card. These messages will not appear unless the pack file is specifically requested to generate them. They are used by the support organization.

**Repair Procedure:**

No corrective action is necessary.

**SP007**

---

**Alarm Level:**

None.

**Description:**

A pack file running on an SP card is logging certain information about the condition of a process stack on the SP card. These messages will not appear unless the pack file is specifically requested to generate them. They are used by the support organization.

**Repair Procedure:**

No corrective action is necessary.

## SPIP Alarms and Log Messages

---

### SPIP001

---

#### Alarm Level:

None.

#### Description:

A speech break has been detected during a coding or voice playback session involving an SP card. The coded voice is incomplete, or inappropriate silence was inserted into the playback session. This condition may be attributed to excessive load either on the system or the SP card, or the SP card may be broken. The Cause Code field of the message may be used to further isolate the cause. If the Cause Code field is negative, the problem is caused by the companion card(s).

The impact of this error is not severe and no action is warranted if the message is reported less frequently than the threshold limit.

The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003 -- -- -- The first threshold level for SPIP_
SBRK exceeded. 50 messages have been generated in the
last 3 minutes.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

#### Repair Procedure:



##### NOTE:

Perform the following procedure if the thresholded message is reported for SPIP001.

1. If the Cause Code in the message is 0, 1, 8, or 9, the problem may be caused either by a broken SP or an overloaded card.

A negative 1, 8, or 9 means a problem may exist with the companion (CMP) card(s) attached to the SP card.

Do the following:

- a. Check the circuit card.
- b. If the problem persists, reduce the load.

**NOTE:**

Perform the following procedure if you have more than one SP card and see SPIP001 repeatedly for the same SP card.

2. Diagnose the card by entering **diagnose card <card number>**  
where <card number> is the card number of the SP card.
3. If the problem persists, replace the SP card and/or the CMP card attached to the SP. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

**SPIP002**

---

**Alarm Level:**

Minor.

**Description:**

The output signal level on an SP timeslot approached the level deemed too loud for a telephone network by the FCC. The output signal was thus interrupted until the signal level dropped below the threshold of noncompliance. The caller will hear inappropriate silence or chopped speech during the speech playback session.

**Repair Procedure:**

1. Consult the application developer and check the speech phrases of the application. The speech may have been recorded at too high a volume level. Rerecord the speech following the procedures documented in Chapter 8, "Producing Speech," of INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder 585-313-206.
2. Reduce the current analog or digital OVOL value depending on the channel type if it exceeds the default. See Chapter 6, "Switch Interface Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501, for information on checking the outgoing speech volume (OVOL). The default OVOL is 1000 for analog and 707 for digital.
3. If the problem persists, replace the SP card. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

## SPIP003

---

### Alarm Level:

None.

### Description:

Unexpected SR behavior occurred on the SP/CMP card set. The SP/CMP has automatically recovered. The impact of this error is not severe and no action is warranted if the message is reported less frequently than the threshold limit.

The impact of this error is not severe and no action is warranted if the message is reported less frequently than the threshold limit.

The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003 The first threshold level for SPIP_SBRK
exceeded. 50 messages have been generated in the last 3
minutes.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

### Repair Procedure:

#### NOTE:

Perform the following procedure if the thresholded message is reported for SPIP003.

1. Enter **diagnose card <card number>**  
where <card number> is the card number of the SP card.
2. If the card passes diagnostics, place it back in service by entering **restore card <card number>**  
where <card number> is the card number of the SP card you want to restore to service.
3. Check the circuit card.

**SPIP004**

---

**Alarm Level:**

Critical.

**Description:**

An error occurred on the SP/CMP card set. The SP/CMP card set was not able to recover from this error. Applications using the SR feature may fail.

**Repair Procedure:**

Check the circuit card.

**SPIP005**

---

**Alarm Level:**

Critical.

**Description:**

An internal UNIX System error has occurred. Application functionality may be severely impaired.

**Repair Procedure:**

Reboot the system.

**SPIP009**

---

**Alarm Level:**

None.

**Description:**

VROP is not delivering speech fast enough to the SP card. A possible effect of this problem is a gap in speech. This condition may be attributed to excessive load either on the system or the SP card.

The impact of this error is not severe and no action is warranted if the message is reported less frequently than the threshold limit.

The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
**THR003 -- -- --- The first threshold level for SPIP_
VSLOW exceeded.
```

50 messages have been generated in the last 3 minutes.

### Repair Procedure:

No corrective action is necessary.

## SYS Alarms and Log Messages

### SYS001

#### Explanation:

These alarms are for UNIX operating system errors. The description below applies to them all.

#### Description:

An internal voice system process has requested that the UNIX operating system perform a function on its behalf. That function has failed. The number of the error corresponds to the UNIX errno (See *INTRO(2)* of the *UNIX System V/386 Release 3.2 Programmer's Reference Manual*). The impact and severity of this error on the voice system depends on the context of the error and the process which has encountered the error.

## THR Alarms and Log Messages

---

### THR001

---

#### Alarm Level:

None.

#### Description:

This is a threshold message. Typically, threshold messages indicate that too many messages of a particular type are being generated. Threshold messages may indicate an escalation of priority.

To find out which message was thresholded, examine the threshold message text. The text will contain the message mnemonic. For example, a typical threshold message may look like:

```
THR001 -- -- -- The first threshold level for LG_
MSGNAME exceeded. 100 messages have been generated in
the last 1 hour.
```

The message mnemonic in this example is `LG_MSGNAME`. The message text gives the currently set threshold limits for the thresholded message.

#### Repair Procedure:

1. Enter explain mnemonic
2. Note the message id that appears in the header of the explain output.

### THR002

---

#### Alarm Level:

Minor.

#### Description:

This is a threshold message. Typically, threshold messages indicate that too many messages of a particular type are being generated. Threshold messages may indicate an escalation of priority.

To find out which message was thresholded, examine the threshold message text. The text will contain the message mnemonic. For example, a typical threshold message may look like:

```
* THR002 -- -- -- The first threshold level for LG_
MSGNAME exceeded. 100 messages have been generated in
the last 1 hour.
```

The message mnemonic in this example is LG\_MSGNAME. The message text gives the currently set threshold limits for the thresholded message.

### Repair Procedure:

1. Enter explain mnemonic
2. Note the message id that appears in the header of the explain output.

### THR003

#### Alarm Level:

Major.

#### Description:

This is a threshold message. Typically, threshold messages indicate that too many messages of a particular type are being generated. Threshold messages may indicate an escalation of priority.

To find out which message was thresholded, examine the threshold message text. The text will contain the message mnemonic. For example, a typical threshold message may look like:

```
** THR003 -- -- -- The first threshold level for LG_
MSGNAME exceeded. 100 messages have been generated in
the last 1 hour.
```

The message mnemonic in this example is LG\_MSGNAME. The message text gives the currently set threshold limits for the thresholded message.

### Repair Procedure:

1. Enter explain mnemonic
2. Note the message id that appears in the header of the explain output.

## THR004

---

### Alarm Level:

Major.

### Description:

This is a threshold message. Typically, threshold messages indicate that too many messages of a particular type are being generated. Threshold messages may indicate an escalation of priority.

To find out which message was thresholded, examine the threshold message text. The text will contain the message mnemonic. For example, a typical threshold message may look like:

```
*C THR004 -- -- -- The first threshold level for LG_
MSGNAME exceeded. 100 messages have been generated in
the last 1 hour.
```

The message mnemonic in this example is LG\_MSGNAME. The message text gives the currently set threshold limits for the thresholded message.

### Repair Procedure:

1. Enter explain mnemonic
2. Note the message ID that appears in the header of the explain output.

## TR001

---

### Alarm Level:

Minor.

### Description:

The voice system has detected that more than 25 percent of the channels are out of service.

### Repair Procedure:

No corrective action is necessary.

**TR002**

---

**Alarm Level:**

None.

**Description:**

The specified channel has been busied out by removing the channel from service.

**Repair Procedure:**

No corrective action is necessary.

**TRIP001**

---

**Alarm Level:**

Critical.

**Description:**

A failure has been detected in the UNIX system. The voice system is unable to process calls on Tip/Ring channels.

**Repair Procedure:**

Reboot the system.

**TRIP002**

---

**Alarm Level:**

None.

**Description:**

A parity error has been detected on the indicated timeslot. The voice system may experience an anomaly in speech functionality.

**Repair Procedure:**

No corrective action is necessary.

**TRIP003**

---

**Alarm Level:**

Critical.

**Description:**

The voice system received too many simultaneous signals from the network. The voice system is unable to process calls on Tip/Ring cards.

**Repair Procedure:**

1. Stop the voice system.

The network/PBX administration may be the source of these messages to the voice system Tip/Ring channels. Some network/PBX parameters may need to be tuned differently. For example, some PBXs generate a "howler tone" if a channel is off hook for a certain amount of time without any activity. A howler tone could be made up of a series of touch tones, "\*\*", and "#." Each touch tone results in a separate event in the Tip/Ring channels. The rate at which these events are generated may be beyond what the voice system can handle.

Consult your network/PBX administrator.

2. Check your application for network/PBX interactions. They may cause the network/PBX to respond in a certain way resulting in this error condition.

Consult your network/PBX administrator.

3. Start the voice system.

**TRIP004**

---

**Alarm Level:**

Minor.

**Description:**

A speech break was detected during a voice coding or playback session. The impact of this error is not severe and no action is warranted if the message is reported less frequently than the threshold limit.

The impact may be significant if this message occurs more than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003 The first threshold level for TRIP_SBRK
 exceeded. 50 messages have been generated in the last 3
 minutes.
```

The threshold limits and threshold Alarm Level: shown above reflect the default values for this thresholded message.

## Repair Procedure:



### NOTE:

Perform the following procedure if the thresholded message is reported for TRIP004.

1. Make sure that the system is not configured with channels more than the maximum recommended number of your application. See Chapter 6, "Capacity and Performance Considerations," of INTUITY CONVERSANT System Version 7.0 System Description for information. Reduce the number of channels in the system if necessary.
2. Check the amount of memory on your system. Enter `/sbin/memsize`  
The system displays the following message:

```
12189696
```

```
You must have at least 16 Mbyte of memory.
```

3. Check the application. This condition may arise due to playback of very short phrases; that is, phrases shorter than 0.5 seconds. The larger the number of short phrases, the greater the likelihood of the problem's occurrence.
4. Determine if the number of speech buffers configured in the system is sufficient to handle the current load. To determine the number of speech buffers currently configured in the system, enter `cat /vs/data/spchconfig`
5. The system displays a message similar to the following message:

```
nbufs 240
max_phrases 32000
```

The `nbufs` parameter should be 3 times the number of channels available in the system. If your application needs more speech buffers than indicated by the number `nbufs`, increase the speech buffers. Edit the file `/vs/data/spchconfig` and change the parameters `nbufs` to the number desired. Stop and Start the voice system.

6. Analyze your application. Record frequently grouped phrases as one single phrase to increase efficiency.

## TRIP005

---

### Alarm Level:

Minor.

### Description:

The channel indicated in the message has lost loop current. If the loop current is lost during an active transaction on this channel, the transaction will be terminated and the channel will be automatically taken out of service. The channel will be automatically returned to service when loop current returns.

### Repair Procedure:

1. Make sure the line is plugged in the channel indicated and appropriate network/switch connections are made. See Chapter 1, "Getting Started," of your platform installation book for information.
2. Examine the line cord for damages. Replace the cord if it is damaged.
3. Plug in the line in a telephone and make sure it works by completing the following Steps a through e:
  - a. Pick up the handset. Most switches provide dialtone.
  - b. Dial the number from another telephone.
  - c. Make sure it rings and the connection is established.
  - d. Dial another number from this line.
  - e. Make sure the connection is established.
4. If these tests do not pass, consult your network/switch administrator for help.
5. If these tests pass, plug in a known working line into the channel indicated. The channel should come up in service automatically.

## TRIP006

---

### Alarm Level:

None.

### Description:

Loop current has been restored for the channel indicated. The channel is automatically restored to service.

**Repair Procedure:**

No corrective action is necessary.

**TSM001**

---

**Alarm Level:**

Critical.

**Description:**

An incoming call has not been processed because no service was assigned to the specified channel or dialed number identification service (DNIS).

**Repair Procedure:**

Examine the logged message to determine if it contains the string:

DNIS: <dnis>

where <dnis> is a dialed number string, and do one of the following:

1. If there is no dialed number (DNIS) indicated by the message, enter

**assign service <script> to chan <chan>**

where <script> is the name of the service to be assigned and <chan> is the channel number indicated by the message.

2. If there is a dialed number (DNIS) indicated by the message, enter

**assign service <script> to dnis <dnis>**

where <script> is the name of the service to be assigned and <dnis> is the DNIS indicated by the message, or enter

assign service script to dnis any

to assign the service to "any" DNIS.

**⇒ NOTE:**

The service assigned to "any" DNIS is used if a DNIS provided by a new call has no service specifically assigned to it.

**TSM002**

---

**Alarm Level:**

Critical.

**Description:**

The voice system has tried to load a script program file that is missing or corrupted.

If this message contains a channel number of 1, any incoming calls using this script will not be processed. Attempts by a DIP to run the script with a "soft seizure" request will also fail.

If this message contains a channel number greater than 1, an attempt to process a call or "soft seizure" with this script has failed on the channel indicated.

**Repair Procedure:**

1. Verify that the script named in the system message is a valid script name.
2. If the script name is not valid, then determine if another application is attempting to execute the invalid script using the script exec instruction, or an IRAPI application is attempting to use irExecp ( ) to execute an invalid script name.

**TSM003**

---

**Alarm Level:**

Minor.

**Description:**

The service running on the indicated channel was unable to perform the specified function because the SP card was overloaded. This is a temporary condition due to the dynamic nature of SP resource allocation on the system. This condition will be relieved when the system's demand on SP resources decreases or the system's SP capacity increases. Call processing on the channel has been degraded.

The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003 -- -- -- The first threshold level for TSM_
SPBUSY exceeded. 10 messages have been generated in the
last 1 minute.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

## Repair Procedure:

1. Some SP cards assigned to the indicated function may be out of service, thus putting too much load on the SP cards that remain in service.

Determine if any SP cards and associated CMP card(s) assigned the indicated function are out of service by entering display card sp

- a. If any SP cards with the indicated function are in the Manoos state, enter

**restore card <card number>**

where <card number> is the card number obtained from the previous display command output to restore the card to service.

- b. If any SP cards are in a state other than Manoos, check the circuit card.
- c. If the CMP show Not diag, enter

**diagnose card <card number>**

where <card number> is the number of the SP card that has the CMP(s) that are not Not diagnose associated with it. This places the CMP(s) into service.

2. If all SP cards with the indicated function are in service and the problem persists, determine if the system load is exceeding the total rated capacity for all SP cards assigned this function. See Chapter 6, "Performance Information," of INTUITY CONVERSANT System Version 7.0 System Description for information on SP capacity.

If this message is being reported under system load conditions that do not exceed the total rated capacity of the SP card for the indicated function, check the circuit card.

Otherwise, reduce the load.

## TSM004

### Alarm Level:

Critical.

### Description:

The service running on the indicated channel was unable to perform the specified function. There is not a sufficient number of SP cards in service that perform this function. Call processing has been degraded or inhibited completely on all channels needing this SP function.

 NOTE:

A TTS error may be logged even if TTS is not installed. If TTS is not installed, the TTS portion of the message can be ignored.

**Repair Procedure:**

There may be no SP cards assigned to the indicated function, or all SP cards that are assigned to that function may be out of service.

1. Determine if any SP cards assigned the indicated function are out of service by entering **display card sp**
2. If any SP cards with the indicated function are in the Manoos state, enter **restore card <card number>**

where <card number> is the card number obtained from the previous display command output, to restore the card to service.

3. If any SP cards are in a state other than Manoos, enter **diagnose card <card number>**

where <card number> is the number of the card you want to diagnose.

- a. If the card passes diagnostics, enter **restore card <card number>**  
where <card number> is the number of the card you want to restore to service.
- b. If the card does not pass diagnostics, check the circuit card.
4. If there are no SP cards assigned to the indicated function, you can assign the function to an SP card by completing the following Steps a through d:
  - a. If the SP card is in the Inserv state, remove it from service by entering **remove card <card number>**  
where <card number> is the card number of the SP obtained from the display card sp command output.
  - b. Assign the appropriate function to the SP card(s). See Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501 for additional information.
  - c. Enter **diagnose card <card number>**  
where <card number> is the number of the SP card on which you want to run diagnostics.
  - d. Enter **restore card <card number>**  
where <card number> is the number of the SP card that you want to restore to service with the appropriate function.

## TSM006

---

### Alarm Level:

Minor.

### Description:

The application script indicated by this message has tried to speak back a field that has a space, asterisk (\*), pound sign (#), or some other unrecorded or nonstandard phrase. No speech corresponding to the indicated character is heard by the caller. For example, if the script tried to play the string "123\*abc," the caller would hear "123abc" and this message would be logged for the "\*" character.

### Repair Procedure:

The application script indicated by this message has tried to speak back a field that has a space, an asterisk (\*), a pound sign (#), or some other unrecorded or nonstandard phrase. For example, the script asks for a 3-4 digit PIN and then speaks it back to the caller for verification.

This revised program has a checklist that requires the input to be all digits. If the event log message is being issued because of speaking back a field that was returned from a host or database lookup, the field to be spoken back must first be stripped of any spaces.

In the case of speaking caller input, or fields from a host or database lookup, this event log message is not a Major message. Rather, it is an informational message telling you that part of the field being spoken back contains some unexpected characters that can not be spoken back; that is, a space, an asterisk, or a pound sign.

#### NOTE:

Developers using native script language instead of Script Builder, should check fields used with the tchars() instruction for invalid characters.

start:

Answer Phone

Prompt & Collect

Prompt

Speak With Interrupt

Phrase: "Please enter your 3 or 4 digit PIN"

Input

Min Number Of Digits: 03

Max Number Of Digits: 04

Checklist

Case: "Input Ok"

Continue

Case: "Initial Timeout"

Reprompt

Case: "Too Few Digits"

Reprompt

Case: "No More Tries"

Quit

End Prompt & Collect

Set Field Value

Field: pin\_num = \$CI\_VALUE

Announce

Speak With Interrupt

Phrase: "The PIN you entered was"

Field: pin\_num As Cmmf

Quit

The checklist used in the Prompt and Collect statement allows for any touchtone including the pound sign or an asterisk. If the caller enters "123\*," the Announce statement in Step 4 tries to speak back the field "123\*." The caller hears only the "123," but a message similar to following TSM message appears in the event log:

\* TSM006 TR CH 001 Script <app1>: No phrase for íí character

This appears because the routine that speaks out fields is trying to map the asterisk (\*) to a standard phase in the talkfile. This can also occur when speaking a field from a host or database lookup and the field contains one or more leading or trailing spaces.

To help prevent this event log message from being printed, make sure to check all of your Prompt and Collect statements and change the checklist as appropriate. For this example, the checklist should be changed to allow the digits 0-9 as follows:

start:

Answer Phone

Prompt & Collect

Prompt  
    Speak With Interrupt  
        Phrase: "Please enter your 3 or 4 digit PIN"

Input  
    Min Number Of Digits: 03  
    Max Number Of Digits: 04

Checklist  
    Case: "nnn"  
        Continue  
    Case: "nnnn"  
        Continue  
    Case: "Not On List"  
        Reprompt  
    Case: "Initial Timeout"  
        Reprompt  
    Case: "Too Few Digits"  
        Reprompt  
    Case: "No More Tries"  
        Quit

End Prompt & Collect

Set Field Value

Field: pin\_num = \$CI\_VALUE

Announce

Speak With Interrupt  
    Phrase: "The PIN you entered was"  
    Field: pin\_num As Cmmf

Quit

## TSM008

### Alarm Level:

Minor.

### Description:

The service running on the indicated channel was unable to perform the specified function because a Feature License was overloaded. This is a temporary condition resulting from the dynamic nature of license allocation on

the system. This condition will be relieved when the system's demand for this Feature License decreases.

It may be useful to purchase a Feature License for a larger number of simultaneous users of this feature to avoid degraded service.

The impact may be significant is the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003 The first threshold level for TSM_SPBUSY
exceeded. 10 messages have been generated in the last 1
minute.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

### Repair Procedure:

Contact your service representative to purchase more feature licenses.

### TSM009

#### Alarm Level:

Major.

#### Description:

The service running on the indicated channel was unable to perform the specified function because no Feature License has been purchased for an optional feature.

It will be necessary to purchase a Feature License for the optional feature in order for this service to perform as designed.

### Repair Procedure:

Contact your service representative to purchase more feature licenses.

### TTS001

#### Alarm Level:

Major.

**Description:**

The Text-To-Speech feature has encountered a system failure during calling processing. Applications using the Text-To-Speech feature to read from a text file will fail.

**Repair Procedure:**

Reboot the system.

**TTS002**

---

**Alarm Level:**

Major.

**Description:**

The Text-To-Speech feature failed to access the text file indicated during call processing. Applications requiring access to this file will be incomplete.

**Repair Procedure:**

1. Verify that the application refers to the correct text file name.
2. Verify that the text file is in existence in the correct directory. Note that if text file is not located in the `/vs/data/tts_files` directory, the text file name must be a full path name.
3. If the application is correct, restore the text file(s) from the backup. If the backup is not available, consult the application developer to recreate the text file.
4. If the problem persists, reboot the system.

**TTS003**

---

**Alarm Level:**

Major.

**Description:**

The Text-To-Speech feature failed to access a shared resource of the voice system during initialization. Applications using the Text-To-Speech feature to read from a text file will fail.

## Repair Procedure:



### WARNING:

*The following procedure causes all system configuration information to be lost. This includes switch administration, service assignments. When the voice system is restarted, the system configuration uses the default settings.*

1. Stop the voice system.
2. Move the devtbl to another area. For example, enter  
**mv /gendb/shmem/devtbl /gendb/shmem/devtbl.old**
3. Start the voice system.

## TTS004

---

### Alarm Level:

Major.

### Description:

The Text-To-Speech feature failed to access a shared resource of the voice system during initialization. Applications using the Text-To-Speech feature to read from a text file will fail.

## Repair Procedure:

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the system.

## TTS005

---

### Alarm Level:

Major.

### Description:

The Text-To-Speech feature failed to communicate with the voice system during call processing. Applications using the Text-To-Speech feature to read from a text file will fail.

**Repair Procedure:**

Reboot the system.

**TTS006**

---

**Alarm Level:**

Major.

**Description:**

The Text-To-Speech feature failed to communicate with the voice system during call processing. Applications using the Text-To-Speech feature to read from a text file will fail.

**Repair Procedure:**

Reboot the system.

**TWIP001**

---

**Alarm Level:**

Major.

**Description:**

An attempt to place a call on the identified T1 channel failed as a result of the network's failure to return a wink. The voice system is expecting the wink once the T1 channel has been taken offhook. This acknowledgment enables the voice system to know when to begin dialing.

**Repair Procedure:**

1. The identified T1 trunk is using robbedbit, winkstart, E&M protocol. Contact the network switch administrator to verify that the switch is administered with compatible options.
2. If this T1 interface is intended to use ISDN PRI protocol, administer the card for ISDN PRI Layer 1 Protocol as described in Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.

3. If the switch and the voice system interfaces have both been verified as correct and the message occurs infrequently, the problem can be caused by lack of DTMF tone receivers on the switch. If the number of failures is unsatisfactory, reduce the call rate from the voice system to the switch or check with the network switch administrator to increase the number of available DTMF tone receivers. See the [For Application Developer](#) section for additional information.
4. If this message is occurring frequently (that is, not a result of the situation described in Step 3 above) and another T1 card exists in the voice system and is functioning properly, complete the following Steps a through e to determine if the problem can be attributed to an external factor rather than the card.
  - a. Remove the functioning T1 card from service by entering **remove card <card number>** where <card number> is the number of the functioning T1 card.
  - b. Swap the cables to both T1 cards.
  - c. Restore the previously functioning T1 card to service by entering **restore card <card number>** where <card number> is the number of the functioning T1 card.
  - d. Observe the two T1 cards to see if the problem migrates with the cable.
  - e. Return the cables to their original cards.
5. If, as a result of Step 4, the problem is observed to migrate with the cable, or if a second T1 card is not available to perform Step 3, check the cable between the 15-pin connector on the back of the T1 card that connects to the switch.
  - a. Check cable continuity on pins 1, 3, 9, and 11.
  - b. Look for broken wires or a dislodged connector.
6. If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See Chapter 4, "Connecting Peripherals and Powering Up," of your platform installation book.

### For Application Developer:

If you determine this message is occurring due to occasional lack of DTMF tone receivers on the switch and the number of failures is infrequent enough to not warrant adding switch resources or reducing call rates, you should add error checking in the application script to detect this type of failure during call origination (tic or Make Call) and reattempt the call.

## TWIP002

---

### Alarm Level:

Major.

### Description:

An attempt to place a call on the identified T1 channel failed as a result of unexpected network behavior.

### Repair Procedure:

This problem is usually due to the use of a T1 configuration option not normally used by the voice system.

This alarm is logged as a result of the indicated T1 channel having encountered an excessively long wink. Typically, this is due to the presence of incoming calls on trunks that have been administered for outbound calls only (glare).

1. Verify that this trunk has been administered, via the `/vs/data/t1_config` file, with the desired configuration.
2. If the desired configuration is not for outbound calls only, edit the file `/vs/data/t1_config` for twoway calling.

#### NOTE:

This is not a standard booked procedure. Information in the file provides a guide to making this change. The card numbering in this file corresponds to the osindex number (dip switch setting) of the T1 card. To determine the osindex for the card, enter display card t1

The osindex displayed is that for the T1 card on which the identified channel resides.

3. If the desired configuration is for outbound calls only, contact the network switch administrator to verify that the switch is administered to prevent calls from the switch to the voice system.
4. Contact the network switch administrator to verify that the length of the wink being returned by the switch to the voice system is always between 150 and 350 msec.

## TWIP003

---

### Alarm Level:

None.

### Description:

The network failed to go on-hook within 25 seconds after completion of the previous call on this channel. The T1 card was able to automatically recover from this error.

### Repair Procedure:

No corrective action is necessary.

## TWIP004

---

### Alarm Level:

Minor.

### Description:

The identified T1 channel, which has been configured for outbound calls only, has received an unexpected inbound call. This call has been ignored by the voice system.

### Repair Procedure:

This problem is usually due to the use of a T1 configuration option not normally used by the voice system.

This alarm is logged as a result of the indicated T1 channel, configured for outbound calls only, having detected an incoming call.

1. Verify that this trunk has been administered, via the `/vs/data/t1_config` file, with the desired configuration.
2. If the desired configuration should allow incoming calls, edit the file `/vs/data/t1_config` to enable incoming calls on the desired channels.

#### NOTE:

This is not a standard booked procedure. Information in the file provides a guide to making this change. The card numbering in this file corresponds to the osindex number (dip switch setting) of the T1

card. To determine the osindex for the card, enter **display card t1**

The osindex displayed is that for the T1 card on which the identified channel resides.

3. If the desired configuration is for outbound calls only, contact the network switch administrator to verify that the switch is administered to prevent calls from the switch to the voice system.

## **TWIP005**

---

### **Alarm Level:**

Major.

### **Description:**

An outbound call has not completed because the network answered before all digits were dialed.

### **Repair Procedure:**

This problem is usually due to a configuration or application error.

A script is attempting to outdial on the designated channel using a dialed number which is longer than the network is expecting.

1. Determine which script is attempting to outdial on the indicated channel.
2. If the dial string is incorrect, correct it and re-attempt.
3. If the problem persists and dial string is correct, contact the network switch administrator to verify that the switch is administered to accept the same number of digits as the application is attempting to dial.

## **TWIP006**

---

### **Alarm Level:**

Major.

### **Description:**

The identified T1 channel is configured for inbound calls only. Calls cannot originate on this channel.

## Repair Procedure:

This problem is usually due to the use of a T1 configuration option not normally used by the voice system.

This alarm is logged as a result of the indicated T1 channel, configured for inbound calls only, having received a request from the system to originate an outbound call.

4. Verify that this trunk has been administered, via the `/vs/data/t1_config` file, with the desired configuration.
5. If the desired configuration is should allow outbound calls, edit the file `/vs/data/t1_config` to enable outbound calls on the desired channels.

### ⇒ NOTE:

This is not a standard booked procedure. Information in the file provides a guide to making this change. The card numbering in this file corresponds to the osindex number (dip switch setting) of the T1 card. To determine the osindex for the card, enter `display card t1`

The osindex displayed is that for the T1 card on which the identified channel resides.

6. If the desired configuration is for inbound calls only, verify that the switch is administered to allow calls from the voice system to the switch.

## TWIP007

---

### Alarm Level:

Major.

### Description:

The identified T1 channel has been administered with an unrecognized or illegal channel option. Calls on this channel may not be processed correctly.

## Repair Procedure:

This alarm is logged as a result of the indicated T1 channel having been configured with an invalid option. The channel resorts to its default behavior for the affected option.

1. Remove the card from service. Enter **remove card <card number>** where `<card number>` is the number of the affected card.

2. Administer the card as described in Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.
3. Restore the card to service. Enter **restore card <card number>** where <card number> is the number of the affected card.
4. If the problem persists, then a channel parameter not normally used by the voice system is incorrect. It must be changed by editing the file **/vs/data/t1\_config**.

 **NOTE:**

This is not a standard booked procedure. Information in the file provides a guide to making this change. The card numbering in this file corresponds to the osindex number (dip switch setting) of the T1 card. To determine the osindex for the card, enter **display card t1**

The osindex displayed is that for the T1 card on which the identified channel resides.

## **TWIP008**

---

### **Alarm Level:**

Critical.

### **Description:**

The voice system is unable to communicate with the T1 cards in the system. Calls cannot be processed on any T1 card.

### **Repair Procedure:**

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the system.
4. If the problem persists, reinstall the T1 driver. See the "Replacing, or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

## TWIP009

---

### Alarm Level:

Major.

### Description:

The identified T1 card has been administered with an unrecognized or illegal card option. Calls on this card may not be processed correctly.

### Repair Procedure:

This alarm is logged as a result of the indicated T1 card having been configured with an invalid option. The card resorts to its default behavior for the affected option.

1. Remove the card from service. Enter **remove card <card number>** where <card number> is the number of the affected card.
2. Administer the card as described in Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.
3. Restore the card to service. Enter **restore card <card number>** where <card number> is the number of the affected card.
4. If the problem persists, then a card (board) parameter not normally used by the voice system is incorrect. It must be changed by editing the file **/vs/data/t1\_config**.

#### NOTE:

This is not a standard documented procedure. Information in the file provides a guide to making this change. The card numbering in this file corresponds to the osindex number (dip switch setting) of the T1 card. To determine the osindex for the card, enter display card t1

The osindex displayed is that for the T1 card on which the identified channel resides.

## TWIP010

---

### Alarm Level:

Critical.

## Description:

All communication between this and all other cards over the TDM bus has been disrupted, resulting in a loss of all bridging and SP card functionalities.

If a TWIP011 message for this card has been logged following this message, the problem has corrected itself and no further action is necessary.

## Repair Procedure:

If a TWIP011 message has not been logged for this card indicating the clock has returned, perform the following Steps until the problem is corrected.



### NOTE:

TWIP011 is logged as an event and does not appear in the log if you are displaying only alarms.

1. Diagnose the card by entering **diagnose card <card number>** where <card number> is the number of the affected card.
2. If the problem persists, check the TDM Bus.
3. If the problem persists, check the circuit card.

## TWIP011

### Alarm Level:

None.

### Description:

The TDM communication previously reported by a TWIP010 message to be disrupted has been restored. All bridging and SP functionality previously lost has been restored.

### Repair Procedure:

No corrective action is necessary.

## TWIP012

### Alarm Level:

Critical.

## Description:

The identified T1 channel is experiencing overload. The voice system is unable to process calls on this channel.

## Repair Procedure:

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the system.
4. If the problem persists, make certain that the problem is not attributed to other parts of the system. (This may be observable as a result of other load related alarms having been logged.)

## TWIP013

### Alarm Level:

Major.

## Description:

The identified T1 card is not receiving a valid signal from the network. The voice system is unable to process calls on this card.

## Repair Procedure:

1. Check the cable between the 15-pin connector on the back of the T1 card which connects to the switch and/or CSU.
  - Check cable continuity on pins 1, 3, 9, and 11.
  - Look for broken wires or a dislodged connector.
  - If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See Chapter 4, "Connecting Peripherals and Powering Up," of your platform installation book.
2. If the cabling/connections appear to be correct and if another T1 card exists in the voice system and is functioning properly complete the following Steps a through e:
  - a. Remove the functioning T1 card from service by entering **remove card <card number>** where <card number> is the number of the functioning T1 card.
  - b. Swap the cables to both T1 cards.

- c. Restore the previously functioning T1 card to service by entering **restore card <card number>** where <card number> is the number of the functioning T1 card.
    - d. Observe the two T1 cards to see if the problem migrates with the cable.
    - e. Return cables to their original cards.
3. If the problem is observed to migrate with the cable complete the following Steps a and b:
  - a. Contact the network switch administrator to verify that service is turned on at the switch.
  - b. If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.
4. If the problem is observed to migrate to the card, check the circuit card.

## TWIP014

---

### Alarm Level:

Major.

### Description:

The identified T1 card is experiencing an extreme number of bipolar violations in the DS1 signal. The voice system is unable to process calls on this card.

### Repair Procedure:

1. Check and administer the framing/line coding option of the card as described in Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration.
2. Contact the network switch administrator to verify that the switch is administered with compatible options.
3. If another T1 card exists in the voice system and is functioning properly, complete the following Steps a through e to determine if the problem can be attributed to an external factor rather than the card.
  - a. Remove the functioning T1 card from service by entering **remove card <card number>** where <card number> is the number of the functioning T1 card.
  - b. Swap the cables to both T1 cards.

- c. Restore the previously functioning T1 card to service by entering **restore card <card number>** where <card number> is the number of the functioning T1 card.
  - d. Observe the two T1 cards to see if the problem migrates with the cable.
  - e. Return cables to their original cards.
4. If, as a result of Step 3, the problem is observed to migrate with the cable, or if a second T1 card is not available to perform Step 3, check the cable between the 15-pin connector on the back of the T1 card which connects to the switch and/or CSU.
  - Check cable continuity on pins 1, 3, 9, and 11.
  - Look for broken wires or a dislodged connector.
5. If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See Chapter 4, "Connecting Peripherals and Powering Up," of the installation book for your platform.
6. If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.
7. Check that the cable is shielded and that the shield is properly grounded at the switch.

## TWIP015

---

### Alarm Level:

Major.

### Description:

The identified T1 card is detecting excessive cyclic redundancy check (CRC) errors in the DS1 signal. The voice system is unable to process calls on this card.

### Repair Procedure:

1. Check and administer the framing/line coding option of the card for ESF framing and B8ZS zero suppression, as described in Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.
2. Contact the network switch administrator to verify that the switch is administered with compatible options.
3. If another T1 card exists in the voice system and is functioning properly, check if the problem can be attributed to an external factor and not the card.

- a. Remove the functioning T1 card from service by entering **remove card <card number>** where *<card number>* is the number of the functioning T1 card.
  - b. Swap the cables to both T1 cards.
  - c. Restore the previously functioning T1 card to service by entering **restore card <card number>** where *<card number>* is the number of the functioning T1 card.
  - d. Observe the two T1 cards to see if the problem migrates with the cable.
  - e. Return cables to their original cards.
4. If, as a result of Step 3, the problem is observed to migrate with the cable, or if a second T1 card is not available to perform Step 3, check the cable between the 15-pin connector on the back of the T1 card which connects to the switch and/or CSU.
    - Check cable continuity on pins 1, 3, 9, and 11.
    - Look for broken wires or a dislodged connector.
  5. If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See Chapter 4, "Connecting Peripherals and Powering Up," of the installation book for your platform.
  6. If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.
  7. Check that the cable is shielded and that the shield is properly grounded at the switch.

## TWIP016

---

### Alarm Level:

Major.

### Description:

The identified T1 card is not detecting any signal from the network. The voice system is unable to process calls on this card.

### Repair Procedure:

1. If another T1 card exists in the voice system and is functioning properly, check if the problem can be attributed to an external factor and not the card.

- a. Remove the functioning T1 card from service by entering **remove card <card number>** where *<card number>* is the number of the functioning T1 card.
  - b. Swap the cables to both T1 cards.
  - c. Restore the previously functioning T1 card to service by entering **restore card <card number>** where *<card number>* is the number of the functioning T1 card.
  - d. Observe the two T1 cards to see if the problem migrates with the cable.
  - e. Return cables to their original cards.
2. If, as a result of Step 3, the problem is observed to migrate with the cable, or if a second T1 card is not available to perform Step 3, check the cable between the 15-pin connector on the back of the T1 card which connects to the switch and/or CSU.
    - Check cable continuity on pins 1, 3, 9, and 11.
    - Look for broken wires or a dislodged connector.
  3. If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See Chapter 4, "Connecting Peripherals and Powering Up," of the installation book for your platform.
  4. If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.
  5. Check that the cable is shielded and that the shield is properly grounded at the switch.

## TWIP017

---

### Alarm Level:

Major.

### Description:

The identified T1 card is detecting an allones (AIS) condition from the network. This alarm usually indicates that the network is out of service. The voice system is unable to process calls on this card.

### Repair Procedure:

1. Contact the network switch administrator to verify that service is turned on at the switch.

2. If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned. Typically, a CSU sends an allones (AIS) signal to the voice system if it is not receiving a signal from the switch.
3. Check and administer the framing/line coding option of the card as described in Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.
4. Contact the network switch administrator to verify that the switch is administered with compatible options.
5. If a CSU is being used, verify that it supports the framing type.

## **TWIP018**

---

### **Alarm Level:**

Major.

### **Description:**

The identified T1 card is detecting a remote frame alarm (yellow alarm). The network is experiencing problems receiving the DS1 signal sent by the T1 card. The voice system is unable to process calls on this card.

### **Repair Procedure:**

1. Contact the network switch administrator to determine what problem is being noted by the switch.

If the switch is not receiving a signal from the voice system, check the cable between the 15-pin connector on the back of the T1 card which connects to the switch and/or CSU.

- Check cable continuity on pins 1, 3, 9, and 11.
  - Look for broken wires or a dislodged connector.
2. If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See Chapter 4, "Connecting Peripherals and Powering Up," of the installation book for your platform.
  3. If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.
  4. Verify that the voice system, switch, and CSU (if being used) are configured with the same options.
    - Check and administer the framing/line coding option of the card as described in Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.

- Contact the network switch administrator to verify that the switch is administered with compatible options.
- If a CSU is being used, verify that it supports the framing type.

## TWIP019

---

### Alarm Level:

None.

### Description:

The T1 facility previously reported as being out of service has been automatically restored to service.

### Repair Procedure:

No corrective action is necessary.

## TWIP020

---

### Alarm Level:

Critical.

### Description:

A possible problem has been detected in the identified circuit of the T1 card. The voice system is unable to process calls on this card.

### Repair Procedure:

Occasionally, a poor or miswired T1 cable, switch, or CSU can cause this failure. The following procedure determines if the cause is external or within the card.

1. Disconnect the T1 cable from the back of the T1 circuit card.
2. Diagnose the card by entering  
**diagnose card <card number>**  
where <card number> is the card number specified in the message text.



#### NOTE:

Additional instructions are provided by the diagnose command.

3. With the T1 cable disconnected, if the "T1 link test" indicates `No signal from the switch`, a problem could exist with one or more of the following:
  - The T1 cable is poorly or improperly wired. See Chapter 3, "Connecting Peripherals and Powering Up," of your platform installation book for proper T1 cable wiring instructions.
  - The T1 card may not be properly administered. If the T1 card is being used for PRI, see Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501. for information on how to administer the T1 card.

If the card is not being used for PRI, see *Chapter 3, "Voice System Administration,"* of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501. for information on how to administer the card.
  - The switch may not be properly administered (provisioned) to work with the voice system T1 card. If the T1 card is being used for PRI, see Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501. for information on provisioning the switch.

If the card is not being used for PRI, see Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501. for information on provisioning the switch.
  - If there is a CSU installed between the voice system T1 card and the switch, verify this is properly wired and administered and is functioning properly.
4. If the diagnose command's T1 link test continues to indicate `T1 Framing Circuit Failure`, or `T1 Transceiver Failure` while the T1 card is disconnected, the card is faulty. Replace the circuit card. See the "Replacing or Installing Circuit Cards," chapter in your platform maintenance book for the procedure.

## TWIP021

---

### Alarm Level:

Minor.

### Description:

The identified T1 card detected the shown number of bipolar violations in the DS1 within the previous minute. The T1 card was able to recover automatically from this error.

## Repair Procedure:

1. Check and administer the framing/line coding option of the card as described in Chapter 3, "Voice System Administration," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501.
2. Contact the network switch administrator to verify that the switch is administered with compatible options.
3. If another T1 card exists in the voice system and is functioning properly, complete the following Steps a through e to determine if the problem can be attributed to an external factor rather than the card.
  - a. Remove the functioning T1 card from service by entering **remove card <card number>** where <card number> is the number of the functioning T1 card.
  - b. Swap the cables to both T1 cards.
  - c. Restore the previously functioning T1 card to service by entering **restore card <card number>** where <card number> is the number of the functioning T1 card.
  - d. Observe the two T1 cards to see if the problem migrates with the cable.
  - e. Return cables to their original cards.
4. If, as a result of Step 3, the problem is observed to migrate with the cable, or if a second T1 card is not available to perform Step 3, check the cable between the 15-pin connector on the back of the T1 card which connects to the switch and/or CSU.
  - Check cable continuity on pins 1, 3, 9, and 11.
  - Look for broken wires or a dislodged connector.
5. If this is a new installation, verify that the transmit and receive wire pairs are not reversed. See Chapter 3, "Connecting Peripherals and Powering Up," of the installation book for your platform.
6. If a CSU is being used, verify that it is operating correctly. If this is a new installation, verify that the CSU has been properly wired and optioned.
7. Check that the cable is shielded and that the shield is properly grounded at the switch.

## TWIP022

---

### Alarm Level:

Critical.

## Description:

The identified T1 card has stopped operating. The voice system is unable to process calls on this card.

## Repair Procedure:



### NOTE:

This message may result when the `smc_setup` command is used. When `smc_setup` is used, T1 cards with OS Index 1 and 4 may be reset, and other T1 cards may also experience problems. This results in the TWIP022 message which reports that the card is inoperable. The card is usually diagnosed and returned to service in approximately 5 minutes. The `smc_setup` command should not be used when the voice system is active.

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the system.

## TWIP023

---

### Alarm Level:

Major.

## Description:

An attempt to place a call on the identified LST1 or LSE1 channel failed as a result of the failure to detect dialtone. The voice system is expecting the dialtone once the channel has been taken off-hook. This acknowledgement enables the voice system to know when to begin dialing.

## Repair Procedure:

- If the problem occurs infrequently, and primarily when there is high call activity on the DEFINITY<sup>®</sup> ECS, the DEFINITY ECS may have insufficient dial tone registers for the expected call volume.

Consult your DEFINITY administrator.

- If all outbound calls are failing, there may be incompatible options in the INTUITY CONVERSANT system or DEFINITY ECS administration for LST1/LSE1.

Consult your DEFINITY administrator and check for consistent administration of options.

## UNIX Alarms and Log Messages

---

### UNIX001

---

**Alarm Level:**

None.

**Description:**

The UNIX system kernel has detected an error which has been logged on the system console. The voice system message Logger has put a copy of this message in the message log to keep a more durable record of it. The impact of this error on voice system functionality depends on the content of the specific UNIX message and the severity of the problem. In general, the severity corresponds to the priority of the logged message.

NOTICE (UNIX001) messages generally indicate problems of a less severe nature than WARNING (UNIX002) messages.

**Repair Procedure:**

No corrective action is necessary.

### UNIX002

---

**Alarm Level:**

Minor.

**Description:**

The UNIX system kernel has detected an error which has been logged on the system console. The voice system message Logger has put a copy of this message in the message log to keep a more durable record of it. The impact of this error on voice system functionality depends on the content of the specific UNIX message and the severity of the problem. In general, the severity corresponds to the priority of the logged message.

WARNING (UNIX002) messages may not cause a system halt (PANIC) but usually indicate that system functionality is severely impaired.

**Repair Procedure:**

Repair of UNIX system problems require a significant level of expertise on UNIX operating system administration. Some problems (for example, timeout, inode or file table overflows) may be fixed by changing tunable system parameters. Chapter 5 of the *UNIX System V/386 System Administrator's Guide* gives instructions on changing tunable parameters.

**UNIX003**

---

**Alarm Level:**

Major.

**Description:**

The UNIX system kernel has detected an error which has been logged on the system console. The voice system message Logger has put a copy of this message in the message log to keep a more durable record of it. The impact of this error on voice system functionality depends on the content of the specific UNIX message and the severity of the problem. In general, the severity corresponds to the priority of the logged message.

**Repair Procedure:**

Repair of UNIX system problems require a significant level of expertise on UNIX operating system administration. Some problems (for example, timeout, inode or file table overflows) may be fixed by changing tunable system parameters. Chapter 5 of the *UNIX System V/386 System Administrator's Guide* gives instructions on changing tunable parameters.

**UNIX004**

---

**Alarm Level:**

Critical.

**Description:**

The UNIX system kernel has detected an error which has been logged on the system console. The voice system message Logger has put a copy of this message in the message log to keep a more durable record of it. The impact of this error on voice system functionality depends on the content of the specific UNIX message and the severity of the problem. In general, the severity corresponds to the priority of the logged message.

Major (UNIX004) messages correspond to UNIX "PANIC" messages. The system halts when they are issued.

### Repair Procedure:

Repair of UNIX system problems require a significant level of expertise on UNIX operating system administration. Some problems (for example, timeout, inode or file table overflows) may be fixed by changing tunable system parameters. Chapter 5 of the *UNIX System V/386 System Administrator's Guide* gives instructions on changing tunable parameters.

## VROP Alarms and Log Messages

### VROP001

#### Alarm Level:

Minor.

#### Description:

The user's attempt to run an administrative command (for example, list phrases, add a phrase to the speech file system, copy a phrase from a speech file system to a UNIX file, or erase a phrase) has failed. Call processing is not affected.

#### Repair Procedure:

At a convenient time, do the following:

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists, reboot the system.

### VROP002

#### Alarm Level:

Major.

## Description:

An attempt to record or add a phrase to the system has failed because all of the speech file systems are configured as "read only." All further attempts will continue to fail, but the system will continue to play existing phrases properly.

## Repair Procedure:

1. Enter **vdf**

The system displays a message similar to the following message:

```
speechFS </home2/vts/talkfiles>
10107 free blocks of 19073 available (52% free)
READWRITE (blocksize=16384)
```

where </home2/vfs/talkfiles> is the name of one of the speech file systems.

2. For each of the speech file systems noted above, enter  
**ls -ld <speech file system name>**

The system displays a message similar to the following message:  
drwxr-xr-xrootsys409Feb516:57/home2/vfs/talkfiles

3. If the mode is not drwsrwxr-x, enter  
**chmod 775 |<speech file system name>**

## VROP003

---

### Alarm Level:

Minor.

### Description:

An SP card was unable to perform a voice coding or playback request made by the system. The code or play request failed. This normally happens when the system is overloaded; that is, the total amount of coding or playback being attempted for all channels on the system is more than the available SP cards can handle. In this case, most requests will be completed and only those for which a message is generated will fail. Each time a failure occurs, one message is generated.

The impact may be significant if the message occurs more frequently than the currently set threshold limit. In that case, you will see a threshold message similar to the following:

```
** THR003 -- -- -- The first threshold level for VROP_
NOSPBUF exceeded. 20 messages have been generated in
the last 1 minute.
```

The threshold limits and threshold message priority shown above reflect the default values for this thresholded message.

### Repair Procedure:

1. Display the state of the cards by entering display card
2. Verify that all SP cards assigned for VOICE function are in INSERTV state.
3. If all SP cards assigned for VOICE function are INSERTV state, reduce the load.
4. If a card is in the BROKEN state, diagnose the card by entering **diagnose card <card number>** where <card number> is the number of the affected card.

If the card is in the MANOOS state, restore the card into service by entering **restore card <card number>** where <card number> is the number of the affected card.

5. Display the state of the card by entering **display card <card number>** where <card number> is the number of the affected card.
6. If the card is in the BROKEN state, check the circuit card.

If the card is in the MANOOS state, restore the card into service by entering **restore card <card number>** where <card number> is the number of the affected card.

## VROP004

### Alarm Level:

Major.

### Description:

A voice function may have failed. The request has been canceled. The transaction may be hung (that is, the caller will hear nothing and nothing else will happen for the call until the call is terminated by the caller). Each time a failure occurs, one message is generated.

## Repair Procedure:

Determine the severity level of the message. The default severity level is MAJOR, yet the message may be a MINOR alarm in some cases in the software. If the severity level of the message is:

- MINOR, no corrective action is necessary.
- MAJOR, do the following:
  1. Stop the voice system.
  2. Start the voice system.

## VROP005

---

### Alarm Level:

Critical.

### Description:

Erroneous speech playback or coding may have occurred. The speech that was heard or recorded may have been terminated prematurely or replaced with other speech. Subsequent speech coding or playback may also be affected until the system is restarted.

## Repair Procedure:

1. Stop the voice system.
2. Start the voice system.

## VROP006

---

### Alarm Level:

Major.

### Description:

The speech configuration file, /vs/data/spchconfig, is unreadable or has an invalid, duplicate, or missing entry. The system will use default values for missing or invalid entries for the numbers of speech buffers and/or maximum allowable phrases until this is corrected. For duplicate entries, the first value is used. The default numbers may be unsatisfactory for this system and could cause load problems, inability to access some phrases, or other performance problems.

## Repair Procedure:

1. Determine if the number of speech buffers configured in the system is sufficient to handle the current load. Enter **display chan all**

The system displays a channel state table.

2. To determine the number of speech buffers currently configured in the system, enter **cat /vs/data/spchconfig**

The system displays an nbufs and max\_phrases table.

3. Increase the nbufs parameter listed in the nbufs and max\_phrases table by completing the following Steps a through c:
  - a. Edit the file **/vs/data/spchconfig** and change the parameter nbufs to the number desired.
  - b. Stop the voice system.
  - c. Start the voice system.

## VROP007

### Alarm Level:

Major.

### Description:

An attempt to add a new phrase to the speech file system failed. This could have impacted administrative commands or the coding of speech spoken by a caller. Additional similar attempts will also fail.

### Repair Procedure:

1. Determine the amount of space available in the speech file system by entering **vdf**
2. Write down the free blocks available.
3. Stop the voice system.
4. Start the voice system.
5. Determine the space available in the speech file system by entering **vdf**
6. If this does not result in more space, the speech file system must be increased in size, a new speech file system must be added, or existing phrases must be removed from the system.

The system administrator should determine this.

7. See the For Application Developer section.

## VROP007 For Application Developer:

A common cause of running out of space in the speech file system is that applications that dynamically code speech from callers may not remove this speech when it is no longer needed. If Form Filler Plus is in use, make sure users are deleting messages after reviewing them. If other applications on the system code the speech of callers, make sure the application is deleting speech when no longer needed for that application. Removing phrases safely requires some understanding of the applications that are installed on the system. Some guidelines are as follows:

1. Determine which applications are loaded on the machine and consider removing any applications not currently in use. These can be backed up to disk before removing them. The Script Builder Applications menu item in the `cvis_menu` shows all Script Builder applications. The UNIX directory **/speech/talk** contains list files for each application and may contain entries for applications not developed with Script Builder.
2. The command `list phrase all in talkfile all` shows all the phrases and talkfiles on the system. Any phrase that has no "PHRASE\_NAME" listed may not be currently used for prompts for applications currently loaded on the system. However, phrases may have been coded from customer input, and should not be removed until it is verified that the phrases are not of this type (see below).
  - Talkfiles numbered less than 200 may be used for customer recorded speech by application packages such as AUDIX Voice Power, Form Filler Plus, or others and generally should not be removed.
  - If any applications developed with Script Builder use the Voice Coding statement to record customer speech, and a talkfile is being used, the developer of that application must be consulted in order for these phrases to be removed.

## VROP009

### Alarm Level:

Major.

### Description:

An application attempted to play a phrase that has not been recorded or does not currently exist on the system. The system skips that phrase and continues with the rest of the application. The message typically occurs when new applications are being developed or tested on the system. It could happen at a

later time if a phrase was never recorded, or if a phrase has been removed inadvertently or corrupted and cleared by an audit. The message can also be caused by an error in the application that causes it to perform a "play" script instruction (or a Script Builder Announce action using the NX format) with garbage input. (Note that an invalid argument to a tchar instruction does not cause this message; a TSM message is generated instead.)

This error may cause the caller to miss important information, but be unaware of this fact. For example, if the unrecorded phrase was a number such as "thousand," then "5025" will be spoken as "fivetwentyfive" instead of "five thousand twenty five". This can be extremely serious for some applications.

## Repair Procedure:

1. List the phrase by entering  
**list phrase <phrase num> in talkfile <talkfile num>**  
where <phrase num> and <talkfile num> are the phrase and talkfile number from the error message. This should report `No such phrase exists.`
2. Determine which applications or scripts use the phrase.

Each talkfile that was created using Script Builder has an associated phrase list file, a UNIX system file, stored in the directory `/speech/talk` and uses the naming convention of application name.pl. The phrase list file contains the talkfile number and the phrase numbers and tags for every phrase tag used in a Script Builder application.

Applications not created with Script Builder may have a list file with different naming conventions, such as `list.application name` (for example, `list.cabnt`). These files must be searched to locate the application that uses the missing phrase. See Chapter 3, "Speech Data," of INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder, 585-313-206, for more information on the content of these speech files.

3. If the phrase has been recorded, restore the phrase from a backup. See "Restore" in Appendix A, "Summary of Commands," of INTUITY CONVERSANT System Version 7.0 Administration, 585-313-501 for additional information.

If the phrase has not been recorded, record the phrase. See Chapter 8, "Producing Speech," of INTUITY CONVERSANT System Version 7.0 Application Development with Script Builder, 585-313-206, for additional information.

## VROP010

---

### Alarm Level:

Major.

### Description:

A failure occurred while performing the indicated action on a phrase. The action was aborted. This is caused by excessive voice activity load on the system.

### Repair Procedure:

1. Stop the voice system.
2. Start the voice system.
3. If the problem persists and there is heavy load on the system, reduce the load.

## VROP011

---

### Alarm Level:

Major.

### Description:

Insufficient speech buffers are allocated to service the number of channels in the system. Each time the message occurs, an action has failed.

### Repair Procedure:

1. Determine if the number of speech buffers configured in the system is sufficient to handle the current load by entering  
**cat /vs/data/spchconfig**
  - The system displays an nbufs and max\_phrases table.
  - The nbufs parameter should be 3 times the number of channels available in the system.
2. If your application needs more speech buffers than indicated by the number shown for nbufs, increase the nbufs parameter listed above by completing the following Steps a through c:
  - a. Edit the file **/vs/data/spchconfig** and change the parameter inbufs<sub>i</sub> to the number desired.

- b. Stop the voice system.
- c. Start the voice system.

## **VROP012**

---

### **Alarm Level:**

Major.

### **Description:**

An attempt to add a new phrase to the speech file system failed. This could have impacted administrative commands or the coding of speech spoken by a caller. Other attempts will also fail.

### **Repair Procedure:**

Either increase the (COmax\_phrases limit in the speech configuration file /vs/data/spchconfig by performing repair procedure for system message VROP006 or eliminate unused phrases on the voice system by performing repair procedure for system message VROP007.

## **VROP013**

---

### **Alarm Level:**

None.

### **Description:**

The system is not able to service speech playback or coding requests fast enough to guarantee that no speech gaps occur. Gaps may occur between phrases or within a phrase.

### **Repair Procedure:**

Reduce the load.

## VROP014

---

### Alarm Level:

Critical.

### Description:

VROP/CIOX failed to access the speech file indicated during processing. Applications requiring access to this file will be incomplete.

### Repair Procedure:

1. Consult the application developer to verify the application. See the For Application Developer section below.
2. If the application is correct, restore the speech file(s) from the backup. If the backup is not available, consult the application developer to recreate the speech file.
3. If the problem persists, reboot the system.

### VROP014 for Application Developer:

1. Verify that the application refers to the correct speech file name.
2. Verify that the speech file is in existence with the correct access permission.

## VROP015

---

### Alarm Level:

Major.

### Description:

A phrase is being added to the speech file system or copied from the speech file system to a UNIX file (typically during speech backups or restores), and the UNIX file cannot be accessed.

### Repair Procedure:

If the error message indicates "No space left on device," remove unnecessary files from the UNIX file system, especially in directory /tmp.

Any other error message indicates a problem with the UNIX operating system.

Reboot the system.

## VROP016

---

### Alarm Level:

Major.

### Description:

A phrase in the speech file system has been corrupted. The phrase cannot be played or removed until the problem has been corrected. Call processing for other phrases is not affected.

### Repair Procedure:

1. List the phrase by entering  
**list phrase <phrase num> in talkfile <talkfile num>**  
where <phrase num> and <talkfile num> are the phrase and talkfile number from the error message.

The system displays a talkfile table.

2. If the Coding Type is Unknown, restore the phrase from backup.
3. If the phrase is still in error, divide the Size In Bytes by four.

If there is a remainder, the phrase has been corrupted. Rerecord the phrase.

## VROP017

---

### Alarm Level:

None.

### Description:

An unexpected event occurred during an action. This action corresponds to a script instruction or administrative request (play a phrase, code a phrase, remove a phrase, fetch, create, or update). The system detected some type of anomaly while performing the action specified. The voice response action may not have completed successfully. The root cause could be either excessive system load or a problem with an SP or Tip/Ring circuit card reported with another message.

**Repair Procedure:**

1. If the *<message>* field is Bad tag, probably time expired or Nonoutstanding tag, probably time expired, check the log for a VROP019 message and perform the repair procedure for that message.
2. If any other information appears in the *<message>* field, this could be due to an error in the system software.

**VROP018**

---

**Alarm Level:**

Critical.

**Description:**

The system has failed to play or code a phrase. This is likely to recur until the problem has been resolved.

**Repair Procedure:**

Reboot the system.

**VROP019**

---

**Alarm Level:**

Major.

**Description:**

A timeout failure occurred while performing the indicated action on a phrase. The action was aborted. This could be due to excessive load on the system. The cause could also be a problem with the Tip/Ring or SP card.

**Repair Procedure:**

1. Determine the value for the *<event>* field.
2. If the *<event>* is:
  - BKLAVAIL, BUFVALID, NEW\_PHRASE\_NUM, READ\_DONE, RELSEBK, REMOVE\_DONE, RENAME\_DONE, SPWINAVAIL, UPDATE\_DONE, or WRITE\_DONE complete the following Steps a through c:

- a. Reduce the load.
  - b. Stop the voice system.
  - c. Start the voice system.
- SPSTAT\_COMP, SP\_VCBUF, TR\_VCODE, or TR\_VPLAY complete the following Steps a through c:
    - a. Diagnose the card by entering  
**diagnose card <card number>**  
where <card number> is the number of the affected card.
    - b. Display the state of the card by entering display card  
  
The card should be in Inserv state.
    - c. If the card is in the BROKEN state, check the circuit card.  
  
If the card is in the MANOOS state, restore the card into service by entering  
**restore card <card number>**  
where <card number> is the number of the affected card.

## VROP020

---

### Alarm Level:

Major.

### Description:

Erroneous speech processing occurred in the application script. Subsequent speech processing may also be affected until the application script is corrected.

### Repair Procedure:

1. Determine which application is causing the error by entering  
**display chan <channel number>**  
where <channel number> is the channel number from the error message.  
  
The system displays a channel table.
2. Correct the error in the application.

## VROP020, #2

---

### Alarm Level:

Major.

**Description:**

The indicated file can not be reserved for the reason specified in the message. Applications requiring recording to the file will be incomplete.

**Repair Procedure:**

1. Verify that the file is a speech file.
2. Record the speech again using one of the coding algorithms supported by the INTUITY CONVERSANT system.

**VROP021**

---

**Alarm Level:**

None.

**Description:**

The maximum number of Customer Input/Output processes has been reached. The speech playback or coding might be delayed. This condition may be attributed to excessive load on the system. The impact of this event is not severe and no action warranted.

**Repair Procedure:**

No corrective action is necessary.

**VROP022**

---

**Alarm Level:**

Major.

**Description:**

The indicated file can not be reserved for the reason specified in the message. Applications requiring recording to the file will be incomplete.

**Repair Procedure:**

1. Verify that the file is a speech file.

- Record the speech again using one of the coding algorithms supported by the INTUITY CONVERSANT system.

## **VROP023**

---

### **Alarm Level:**

None.

### **Description:**

A speech stutter was detected during a speech playback session.

### **Repair Procedure:**

No corrective action is necessary.

## **VXMDI Alarms and Log Messages**

---

### **VXMDI001**

---

### **Alarm Level:**

None

### **Description:**

The the startup of the DI is complete.

### **Repair Procedure:**

No corrective action is necessary.

### **VXMDI002**

---

### **Alarm Level:**

Major.

**Description:**

A FAX process is exiting because of an unrecoverable error, such as an operating system problem, or a phone line problem.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**VXMDI003****Alarm Level:**

Major.

**Description:**

There has been an illegal transition.

The fax transmission occurring at the time that the error was reported failed.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

**VXMDI004****Alarm Level:**

Major.

**Description:**

There has been an internal assertion failure.

The fax transmission occurring at the time that the error was reported failed.

**Repair Procedure:**

Contact your remote maintenance service center for assistance.

## **VXMDI005**

---

### **Alarm Level:**

Major.

### **Description:**

The driver called failed.

The fax transmission occurring at the time that the error was reported failed.

### **Repair Procedure:**

Contact your remote maintenance service center for assistance.

# Glossary

---

## Numerics

### 23B+D

23 bearer (communication) and 1 data (signaling) channel on a T1 PRI circuit card.

### 30B+D

30 bearer (communication) and 1 data (signaling) channel (plus framing channel 0) on an E1 PRI circuit card.

### 3270 interface

A link between one or more INTUITY™ CONVERSANT® machines and a host mainframe. In INTUITY CONVERSANT system documentation, the 3270 interface specifically means the link between one or more system machines and an IBM host mainframe.

### 47B+D

47 bearer (communication) and 1 data (signaling) channel on two T1 PRI circuit cards.

### 4ESS®

A large Lucent central office switch used to route calls through the telephone network.

---

## A

### AC

alternating current

### ACD

[automatic call distributor](#)

### AD

application dispatch

### AD-API

application dispatch application programming interface

### adaptive differential pulse code modulation

A means of encoding analog voice signals into digital signals by adaptively predicting future encoded voice signals. This adaptive modulation method reduces the number of bits required to encode voice. See also "[pulse code modulation](#)."

### adjunct products

Products (for example, the Adjunct/Switch Application Interface) that the INTUITY system administers via cut-through access to the inherent management capabilities of the product itself; this is in opposition to the ability of the INTUITY CONVERSANT system to administer the switch directly.

### Adjunct/Switch Application Interface

An optional feature package that provides an Integrated Services Digital Network-based interface between Lucent Technologies PBXs and adjunct processors.

**ADPCM**

[adaptive differential pulse code modulation](#)

**ADU**

[asynchronous data unit](#)

**advanced speech recognition**

A speech recognition ability that allows the system to understand WholeWord and FlexWord™ inputs from callers.

**affiliate**

A business organization that Lucent controls or with which Lucent is in partnership.

**AGL**

application generation language

**alarm relay unit**

A unit used in central office telecommunication arrangements that transmits warning indicators from telephone communications equipment (such as an INTUITY CONVERSANT system) to audio.

**ALERT**

System alerter process

**alerter**

A system process that responds to patterns of events logged by the “logdaemon” process.

**American Standard Code for Information Interchange**

A standard code for data representation that represents alphanumeric characters as binary numbers. The code includes 128 upper- and lowercase letters, numerals, and special characters. Each alphanumeric and special character has an ASCII code (binary) equivalent that is 1 byte long.

**analog**

An analog signal, such as voice or music, that varies in a continuous manner. An analog signal may be contrasted with a digital signal, which represents only discrete states.

**ANI**

[automatic number identification](#)

**announcement**

A message the system plays to the caller to provide information. The caller is not asked to give a response. Compare to “[prompt](#).”

**API**

Application programming interface

**application**

The automated transaction (interactions) among the caller, the voice response system, and any databases or host computers required for your business. See also “[application script](#).”

**application administration**

The component of the INTUITY CONVERSANT system that provides access to the applications currently available on your system and helps you to manage and administer them.

**application installation**

A two-step process in which the INTUITY CONVERSANT system invokes the TSM script assembler for the specific application name and moves files to the appropriate directories.

**application script**

The computer program that controls the application (the transaction between the caller and the system). The INTUITY CONVERSANT system provides several methods for creating application scripts, including Voice@Work, Script Builder, Transaction Assembler Script (TAS) language, and the Intuity Response Application Programming Interface (IRAPI).

**application verification**

A process in which the INTUITY CONVERSANT system verifies that all the components needed by an application are complete.

**ASCII**

[American Standard Code for Information Interchange](#)

**ASI**

analog switch integration

**ASR**

[advanced speech recognition](#)

**asynchronous communication**

A method of data transmission in which bits or characters are sent at irregular intervals and spaced by start and stop bits rather than by time. Compare to "[synchronous communication](#)."

**asynchronous data unit**

An electronic communications device that allows computer systems to communicate over asynchronous lines more than 50 feet (15 m) in length.

**automatic call distributor**

That part of a telephone system that recognizes and answers incoming calls and completes these calls based on a set of instructions contained in a database. The ACD can send the call to an operator or group of operators as soon as the operator has completed a previous call or after the system has played a message to the caller.

**automatic number identification**

A method of identifying the calling party by automatically receiving a string of digits that identifies the calling station of a particular customer.

**AYC5B**

The IVP6 Tip/Ring (analog) circuit card.

**AYC10**

The IVC6 Tip/Ring (analog) circuit card.

**AYC21**

The E1/T1 (digital) circuit card.

**AYC30**

The [NGTR](#) (analog) circuit card.

**AYC43**

The speech and signal processor (SSP) circuit card.

---

## B

### back up

The preservation of the information in a file in a different location, so that the data is not lost in the event of hardware or system failure.

### backing up an application

Using a utility that makes an archive copy of a completed application or an interim copy of an application in progress. The back-up copy can be restored to the system if the on-line version is damaged, or if you make revisions and want to go back to the previous version.

### barge-in

A capability provided by WholeWord speech recognition and Dial Pulse Recognition (DPR) that allows callers to speak or enter their responses during the prompt and have those responses recognized (similar to the Speak with Interrupt capability). See also "[echo cancellation](#)."

### batch file

A file containing one or more lines, each of which is a command executable by the UNIX shell.

### BB

bulletin board

### binary synchronous communications

A character-oriented synchronous link protocol.

### blind transfer protocol

A protocol in which a call is completed as soon as the extension is dialed, without having to wait to see if the telephone is busy or if the caller answered.

### bps

bits per second

### BRDG

call bridging process

### bridging

The process of connecting one telephone network connection to another over the INTUITY CONVERSANT system TDM bus. Bridging decreases the processing load on the system since an active bridge does not require speech processing, database access, host activity, etc., for the transaction.

### BSC

[binary synchronous communications](#)

### bundle

In the context of the Enhanced File Transfer package, this term is used to denote a single file, a group of files (package), or a combination of both.

### byte

A unit of storage in the computer. On many systems, a byte is 8 bits (binary digits), which is the equivalent of one character of text.

---

## C

**call classification analysis**

A process that enables application designers to use information available within the system to classify the disposition of originated and transferred calls. Intelligent CCA is provided with the system. Full CCA is an optional feature package.

**call data event**

A parameter that specifies a list of variables that are appended to a call data record at the end of each call.

**call data handler process**

A software process that accumulates generic call statistics and application events.

**called party number**

The number dialed by the person making a telephone call. Telephone switching equipment can use this number to selectively route an incoming call to a particular department or agent.

**caller**

The party who calls for a service, gets connected to the INTUITY CONVERSANT system, and interacts with it. As the INTUITY CONVERSANT system can also make outbound calls for service, the caller can also be the person who responds to those outbound calls.

**call flow**

See "[transaction](#)."

**call progress tones**

Standard telephony sounds that indicate the status of the call. These sounds include busy, fast busy, ringback, reorder, etc.

**card cage**

An area within a INTUITY CONVERSANT system platform that contains and secures all of the standard and optional circuit cards used in the system.

**cartridge tape drive**

A high-capacity data storage/retrieval device that can be used to transfer large amounts of information onto high-density magnetic cartridge tape based on a predetermined format. This tape can be removed from the system and stored as a backup, or used on another system.

**CAS**

channel associated signalling

**caution**

An admonishment or advisory statement used in INTUITY CONVERSANT system documentation to alert the user to the possibility of a service interruption or a loss of data.

**CCA**

[call classification analysis](#)

**CDH**

[call data handler process](#)

**CELP**

[code excited linear prediction](#)

**central office**

An office or location in which large telecommunication devices such as telephone switches and network access facilities are maintained. These locations follow strict installation and operation requirements.

**central processing unit**

See "[processor.](#)"

**CGEN**

Voice system general message class

**channel**

See "[port.](#)"

**channel associated signaling**

A type of signaling that can be used on E1 circuit cards. It occurs on channel 16.

**CICS**

[Customer Information Control System](#)

**circuit card upgrade**

A new circuit card that replaces an existing card in the platform. Usually the replacement is an updated version of the original circuit card to replace technology made obsolete by industry trends or a new system release.

**cluster controller**

A bisynchronous interface that provides a means of handling remote communication processing.

**CMS**

Call Management System

**CO**

[central office](#)

**code excited linear prediction**

A means of encoding analog voice signals into digital signals that provides excellent quality with use of minimum disk space.

**command**

An instruction or request the user issues to the system software to make the system perform a particular function. An entire command consists of the command name and options.

**configuration**

The arrangement of the software and hardware of a computer system or network. The INTUITY CONVERSANT system configuration includes either a standard or custom processor, peripheral equipment (for example, printers and modems), and software applications. Configuration also refers to the way the switch network is set up; that is, the types of products that are in the network and how those products communicate.

**configuration management**

The component of the system that allows you to manage the current configuration of voice channels, host sessions, and database connections, assign scripts to run on specific voice channels or host sessions, assign functionality to SSP and E1/T1 circuit cards, and perform various maintenance functions.

**connect and disconnect (C and D) tones**

DTMF tones that inform the system when the attendant has been connected (C) and when the caller has been disconnected (D).

**connected digits**

A sequence of digits that the system can process as a group, rather than requiring the caller to enter the digits one at a time.

**Converse Data Return (conv\_data)**

A Script Builder action that supports the DEFINITY® call vectoring (routing) feature by enabling the switch to retain control of vector processing in the system environment. It supports the DEFINITY “converse” vector command to establish a two-way routing mechanism between the switch and the system to facilitate data passing and return.

**controller circuit card**

A circuit card used on a computer system that controls its basic functionality and makes the system operational. These circuit cards are used to control magnetic peripherals, video monitors, and basic system communications.

**copying an application**

A utility in which information from a source application is directed into the destination application.

**coresidency**

The ability of two products or services to operate and interact with each other on a single hardware platform. An example of this is the use of an INTUITY CONVERSANT system along with a package from a different vendor on the same system platform.

**CPE**

customer provided equipment or customer premise equipment

**CPN**

[called party number](#)

**CPT**

[call progress tones](#)

**CPU**

[central processing unit](#)

**crash**

An interactive utility for examining the operating system core and for determining if system parameters are being exceeded.

**CSU**

channel service unit

**custom speech**

Unique words or phrases to be used in INTUITY CONVERSANT system voice prompts that Lucent Technologies custom records on a per-customer basis.

**custom vocabulary**

A specialized package of unique words or phrases created on a per-customer basis and used by WholeWord or FlexWord speech recognition.

**Customer Information Control System**

Part of the operating system that manages resources for running applications (for example, IND\$FILE). Note that [TSO](#) and CMS provide analogous functionality in other host environments.

**CVS**

converse vector step

---

## D

**danger**

An admonishment or advisory statement used in INTUITY CONVERSANT system documentation to alert the user to the possibility of personal injury or death.

**data interface process**

A software process that communicates with Script Builder applications.

**database**

A structured set of files, records, or tables.

**database field**

A field used to extract values from a local database and form the structure upon which a database is built.

**database record**

The information in a database for a person, product, event, etc. The database record is made up of individual fields for each information item.

**database table**

A structure, made up of columns and rows, that holds information in a database. Database tables provide a means of storing information that changes too often to "hard-code," or store permanently, in the transaction outline.

**dB**

decibel

**DB**

database

**DBC**

database checking process

**DBMS**

database management system

**DC**

direct current

**DCE**

data communications equipment

**DCP**

digital communications protocol

**debug**

The process of locating and correcting errors in computer programs; also referred to as "[troubleshooting](#)."

**default**

The way a computer performs a task in the absence of other instructions.

**default owner**

The owner of a channel when no process takes ownership of that channel. The default owner holds all idle, in-service channels. In terms of the IRAPI, this is typically the Application Dispatch process.

**diagnose**

The process of performing diagnostics on a bus or on Tip/Ring, E1/T1, or SSP circuit cards.

**dial ahead**

The ability to collect and process touch-tone inputs in sequence, even when they are received before the prompts.

**dial pulse recognition**

A method of recognizing caller pulse inputs from a rotary telephone.

**dialed number identification service**

A service that allows incoming calls to contain information about the telephone number for which it is destined.

**dial through**

A capability provided by touch-tone and dial pulse recognition that allows callers to enter their responses during the prompt and have those responses recognized (similar to the Speak with Interrupt capability). See also "[barge-in](#)" and "[echo cancellation](#)".

**dictionary**

A reference book containing an alphabetical list of words, with information given for each word including meaning, pronunciation, and etymology.

**DIMM**

dual in-line memory module

**DIO**

disk input and output process

**DIP**

[data interface process](#)

**directory**

A type of file used to group and organize other files or directories.

**display errdata**

A command that displays system errors sent to the logger.

**DMA**

direct memory address

**DNIS**

[dialed number identification service](#)

**DPR**

[dial pulse recognition](#)

**DSP**

digital signal processor

**DTE**

data terminal equipment

**DTMF**

[dual tone multi-frequency](#)

**DTR**

data terminal ready

**dual 3270 links**

A feature that provides an additional physical unit (PU) for a cost-effective means of connecting to two host computers. The customer can connect a system to two separate FEPs or to a single FEP shared by one or more host computers. Each link supports a maximum of 32 LUs.

**dual tone multi-frequency**

A touch-tone sound that is an audio signal including two different frequencies. *DTMF feedback* is the process of the “switch” providing this information to the system. *DTMF muting* is the process of ignoring these tones (which might be simulated by human speech) when they are not needed for the application.

**dump space**

An area of the disk that is fixed in size and should equal the amount of RAM on the system. The operating system “dumps” an image of core memory when the system crashes. The dump can be fetched after rebooting to help in analyzing the cause of the crash.

---

**E****E&M**

[Ear and Mouth](#)

**E1 / T1**

Digital telephony interfaces, commonly called *trunks*. E1 is an international standard at 2.048 Mbps. T1 is a North American standard at 1.544 Mbps.

**Ear and Mouth**

A common T1 trunking protocol for connection between two “switches.”

**EBCDIC**

Extended Binary Coded Decimal Interexchange Code

**echo cancellation**

The process of making the channel quiet enough so that the system can hear and recognize WholeWord and dial pulse inputs during the prompt. See also “[barge-in](#).”

**ECS**

[Enterprise Communications Server](#)

**editor system**

A system that allows speech phrases to be displayed and edited by a user. See “[Graphical Speech Editor](#).”

**EFT**

[Enhanced File Transfer](#)

**EIA**

Electronic Industries Association

**EISA**

Extended Industry Standard Architecture

**EMI**

electromagnetic interference

**Enhanced Basic Speech**

Pre-recorded speech available from Lucent Technologies in several languages. Sometimes called "[standard speech](#)."

**Enhanced File Transfer**

A feature that allows the transferring of files automatically between the INTUITY CONVERSANT system and a synchronous host processor on a designated logical unit.

**Enhanced Serial Data Interface**

A software- and hardware-controlled method used to store data on magnetic peripherals.

**Enterprise Communications Server**

The telephony equipment that connects your business to the telephone network. Sometimes called a "switch."

**error message**

A message on the screen indicating that something is wrong with a possible suggestion of how to correct it.

**ESD**

electrostatic discharge

**ESDI**

[Enhanced Serial Data Interface](#)

**ESS**

electronic switching system

**EST**

Enhanced Software Technologies, Inc.

**ET**

error tracker

**Ethernet**

A name for a local area network that uses 10BASE5 or 10BASE2 coaxial cable and InterLAN signaling techniques.

**event**

The notification given to an application when some condition occurs that is generally not encountered in normal operation.

**EXTA**

external alarms feature message class

**external actions**

Specific predefined system tasks that Script Builder can call or *invoke* to interact with other products or services. When an external action is invoked, the systems displays a form that provides choices in each field for the application developer to select. Examples are Call\_Bridge, Make\_Call, SP\_Allocate, SR\_Prompt, etc. In Voice@Work, external actions are treated as "[external functions](#)."

**external functions**

Specific predefined (or customer-created) system tasks that Voice@Work or Script Builder can call or *invoke* to interact with other products or services. The function allows the application developer to enter the argument(s) for the function to act on. Examples are concat, getarg, length, substring, etc. See also "[external actions](#)."

---

## F

### FAX Actions

An optional feature package that allows the system to send fax messages.

### FCC

Federal Communications Commission

### FDD

floppy disk drive

### feature

A function or capability of a product or an application within the INTUITY CONVERSANT system.

### feature package

An optional package that may contain both hardware and software resources to provide additional functionality to a standard system.

### feature\_tst script package

A standard INTUITY CONVERSANT system software program that allows a user to perform self-tests of critical hardware and software functionality.

### FEP

front end processor

### FFE

Form Filler Plus feature message class

### field

See "[database field.](#)"

### FIFO

first-in-first-out processing order

### file

A collection of data treated as a basic unit of storage.

### file transfer

An option that allows you to transfer files interactively or directly to and from UNIX using the file transfer system (FTS).

### filename

Alphabetic characters used to identify a particular file.

### FlexWord™ speech recognition

A type of speech recognition based on subword technology that recognizes phonemes or parts of words in a specific language. See also "[subword technology.](#)"

### foos

facility out-of-service state

### Form Filler Plus

An optional feature package that provides the capability for application scripts to record a caller's responses to prompts for later transcription and review.

### FTS

file transfer process message class

**Full CCA**

A feature package that augments the types of call dispositions that Intelligent CCA can provide.

**function key**

A key, labeled F1 through F8, on your keyboard to which the INTUITY CONVERSANT system software gives special properties for manipulating the user interface.

---

**G****GEN**

PRISM logger and alerter general message class

**grammar**

The inputs that a recognizer can match (identify) from a caller.

**Graphical Speech Editor**

A window-driven, X Windows/Motif based, graphical user interface (GUI) that can be accessed to perform different functions associated with the creation and editing of speech files for applications. The editing is done on the INTUITY CONVERSANT system.

**GSE**

[Graphical Speech Editor](#)

**GUI**

graphical user interface

---

**H****hard disk drive**

A high-capacity data storage/retrieval device that is located inside a computer platform. A hard disk drive stores data on nonremovable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.

**hardware**

The physical components of a computer system. The central processing unit, disks, tape, and floppy drives, etc., are all hardware.

**Hardware Resource Allocator**

A software program that resolves or blocks the allocation of CPU and memory resources for controlling and optional circuit cards.

**hardware upgrade**

Replacement of one or more fundamental platform hardware components (for example, the CPU or hard disk drive), while the existing platform and other existing optional circuit cards remain.

**HDD**

[hard disk drive](#)

**High Level Language Applications Programming Interface**

An application programming interface that allows a user to write custom applications that can communicate with a host computer via an API.

**HLLAPI**

[High Level Language Applications Programming Interface](#)

**HOST**

host interface process message class

**host computer**

A computer linked to a network to provide a range of services, such as database access and computation. The host computer operates in a time-sharing manner with other computers linked to it via the network.

**hwoos**

hardware out-of-service state

**Hz**

Hertz

---

**I****IBM**

International Business Machines

**iCk or ICK**

The system integrity checking process.

**ID**

identification

**IDE**

integrated disk electronics

**idle channel**

A channel that either has no owner or is owned by its default owner and is onhook.

**IE**

information element

**IND\$FILE**

The standard SNA file transfer utility that runs as an application under CICS, TSO, and CMS. IND\$FILE is independent of link-level protocols such as BISYNC and SDLC.

**independent software vendor**

A company that has an agreement with Lucent Technologies to develop software to work with the INTUITY CONVERSANT system to provide additional features required by customers.

**indexed table**

A table that, unlike a nonindexed table, can be searched via a field name that has been indexed.

**industry standard architecture**

A PC bus standard that allows processors and other circuit cards to communicate with each other.

**INIT**

voice system initialization message class

**initialize**

To start up the system for the first time.

**inserv**

in-service state

**Integrated Services Digital Network**

A network that provides end-to-end digital connectivity to support a wide range of voice and data services.

**Integrated Voice Processing (IVP) circuit card**

The IVP6 circuit card that provides Tip/Ring connections. The NGTR (AYC30) card also provides the same functions.

**intelligent CCA**

Monitoring the line after dialing is complete to determine whether a busy, reorder (fast busy), or other failure has been encountered. It also recognizes when the extension is answered or if the extension is not answered after a specified number of rings. The monitoring capabilities are dependent on the network interface circuit card and protocol used

**interface**

The access point of a system. With respect to the INTUITY CONVERSANT system, the interface is designed to provide you with easy access to the software capabilities.

**interrupt**

The termination of voice and/or telephony functions when some condition occurs.

**INTUITY Response Application Programming Interface**

A library of commands that provide a standard development interface for voice-telephony applications.

**IPC**

interprocess communication

**IPC**

intelligent ports card (IPC-900)

**IPCI**

integrated personal computer interface

**IRAPI**

[Intuity Response Application Programming Interface](#)

**IRQ**

interrupt request

**ISA**

[industry standard architecture](#)

**ISDN**

[Integrated Services Digital Network](#)

**ISV**

[independent software vendor](#)

**ITAC**

International Technical Assistance Center

**IVC6 circuit card (AYC10)**

A Tip/Ring (analog) circuit card with six channels.

**IVP6 circuit card (AYC5B)**

A Tip/Ring (analog) card with six channels.

---

## K

**Kbps**

kilobytes per second

**Kbyte**

kilobyte

**keyboard mapping**

In emulation mode, this feature enables the keyboard to send 3270 keyboard codes to the host according to a configuration table set up during installation.

**keyword spotting**

A capability provided by WholeWord speech recognition that allows the system to recognize a single word in the middle of an entire phrase spoken by a caller in response to a prompt.

---

## L

**LAN**

[local area network](#)

**LDB**

[local database](#)

**LED**

light-emitting diode

**library states**

The state information about channel activities maintained by the IRAPI.

**LIFO**

last-in-first-out processing order

**line side E1**

A digital method of interfacing an INTUITY CONVERSANT system to a PBX or "switch" using E1-related hardware and software.

**line side T1**

A digital method of interfacing an INTUITY CONVERSANT system to a PBX or "switch" using T1-related hardware and software.

**listfile**

An ASCII catalog that lists the contents of one or more talkfiles. Each application script is typically associated with a separate listfile. The listfile maps speech phrase strings used by application scripts into speech phrase numbers.

**local area network**

A data communications network in a limited geographical area. The LAN provides communications between computers and peripherals.

**local database**

A database residing on the INTUITY CONVERSANT system.

**LOG**

INTUITY CONVERSANT system logger process message class

**logical unit**

A type of SNA Network Addressable Unit.

**logdaemon**

A UNIX system information and error logging process.

**logger**

See "[logdaemon](#)."

**logging on/off**

Entering or exiting the INTUITY CONVERSANT system software.

**LSE1**

[line side E1](#)

**LST1**

[line side T1](#)

**LU**

[logical unit](#)

---

**M****magnetic peripherals**

Data storage devices that use magnetic media to store information. Such devices include hard disk drives, floppy disk drives, and cartridge tape drives.

**main screen**

The INTUITY CONVERSANT system screen from which you are able to enter either the System Administration or Voice System Administration menu.

**maintenance process**

A software process that runs temporary diagnostics and maintains the state of circuit cards and channels.

**manoos**

manually out-of-service state

**MAP/100P**

multi application platform 100P

**MAP/100C**

multi application platform 100C

**MAP/40P**

multi application platform 40P

**MAP/5P**

multi application platform 5P

**masked event**

An event that an application can ignore (that is, the application can request not to be informed of the event).

**master**

A circuit card that provides clock information to the TDM bus.

**Mbps**

megabits per second

**MByte**

[megabyte](#)

**megabyte**

A unit of memory equal to 1,048,576 bytes (1024 x 1024). It is often rounded to one million.

**menu**

Options presented to a user on a computer screen or with voice prompts.

**MF**

[multifrequency](#)

**MHz**

megahertz

**Microsoft**

A manufacturer of software products, primarily for IBM-compatible computers.

**mirroring**

A method of data backup that allows all of the data transactions to the primary hard disk drive to be copied and maintained on a second identical drive in near real time. If the primary disk drive crashes or becomes disabled, all of the data stored on it (up to 1.2 billion bytes of information) is accessible on the second mirrored disk drive.

**ms**

millisecond

**msec**

millisecond

**MS-DOS**

A personal computer disk operating system developed by the Microsoft Corporation.

**MTC**

[maintenance process](#)

**multifrequency**

Dual tone digit signalling (similar to DTMF), used for trunk addressing between network switches or by network operators.

**multithreaded application**

A single process/application that controls several channels. Each thread of the application is managed explicitly. Typically this means state information for each thread is maintained and the state of the application on each channel is tracked.

---

**N****NCP**

Network Control Program

**NEBS**

Network Equipment Building Standards

**NEMA**

National Electrical Manufacturers Association

**netoos**

network out-of-service state

**NetView**

An optional feature package that transmits high-priority (major or critical) messages to the host as operator-generated alerts (OGAs) over the 3270 host link. The NetView Alarm feature package does not require a dedicated LU.

**next generation Tip/Ring (AYC30) circuit card**

An analog circuit card with six channels.

**NFAS**

non-facility associated signalling

**NFS**

network file sharing

**NGTR**

[next generation Tip/Ring \(AYC30\) circuit card](#)

**NM-API**

Network Management - Application Programming Interface

**NMVT**

network management vector transport

**nonex**

nonexistent state

**nonindexed table**

A table that can be searched only in a sequential manner and not via a field name.

**nonmasked event**

An event that must be sent to the application. Generally, an event is nonmaskable if the application would likely encounter state transition errors by trying to it.

**NRZ**

non return to zero

**NRZI**

non return to zero inverted

**null value**

An entry containing no value. A field containing a null value is normally displayed as blank and is different from a field containing a value of zero.

---

**O****obsolete hardware**

Hardware that is no longer supported on the INTUITY CONVERSANT system.

**OEM**

original equipment manufacturer

**OGA**

[operator-generated alert](#)

**on-line help**

Messages or information that appear on the user's screen when a "function key" (F1 through F8) is pressed.

**operator-generated alert**

A system-monitoring message that is transmitted from the INTUITY CONVERSANT system or other computer system to an IBM host computer and is classified as critical or major.

**option**

An argument used in a command line to modify program output by modifying the execution of a command. When you do not specify any options, the command executes according to its default options.

**ORACLE**

A company that produces relational database management software. It is also used as a generic term that identifies a database residing on a local or remote system that is created and maintained using an ORACLE RDBMS product.

---

**P****P&C**

Prompt and Collect Script Builder action step

**PBX**

[private branch exchange](#)

**PC**

personal computer

**PCB**

printed circuit board

**PCI**

[peripheral component interconnect](#)

**PCM**

[pulse code modulation](#)

**PEC**

price element code

**peripheral (device)**

Equipment such as printers or terminals that is in addition to the basic processor.

**peripheral component interconnect**

A newer, higher speed PC bus that is gradually displacing ISA for many components.

**permanent process**

A process that starts and initializes itself before it is needed by a caller.

**phoneme**

A single basic sound of a particular spoken language. For example, the English language contains 40 phonemes that represent all basic sounds used with the language. The English word "one" can be represented with three phonemes, "w" - "uh" - "n." Phonemes vary between languages because of guttural and nasal inflections and syllable constructs.

**phrase filtering (screening)**

The rejection of unrecognized speech. The WholeWord and FlexWord speech recognition packages can be programmed to reprompt the caller if the INTUITY CONVERSANT system does not recognize a spoken response.

**phrase tag**

A string of up to 50 characters that identifies the contents of a speech phrase used by an application script.

**platform migration**

See "[platform upgrade.](#)"

**platform upgrade**

The process of replacing the existing platform with a new platform.

**pluggable**

A term usually used with speech technologies, in particular standard speech, to indicate that a basic algorithmic technique has been implemented to accept one or more sets of parameters that tailors the algorithm to perform in one or more languages.

**poll**

A message sent from a central controller to an individual station on a multipoint network inviting that station to send if it has any traffic.

**polling**

A network arrangement whereby a central computer asks each remote location whether it wants to send information. This arrangement enables each user or remote data terminal to transmit and receive information on shared facilities.

**port**

A connection or link between two devices that allows information to travel to a desired location. See "[telephone network connection.](#)"

**PRI**

[Primary Rate Interface](#)

**Primary Rate Interface**

An ISDN term for connections over E1 or T1 facilities that are usually treated as trunks.

**private branch exchange**

A private switching system, either manual or automatic, usually serving an organization, such as a business or government agency, and usually located on the customer's premises.

**processor**

In INTUITY CONVERSANT system documentation, the computer on which UnixWare and INTUITY CONVERSANT system software runs. In general, the part of the computer system that processes the data. Also known as the "[central processing unit.](#)"

**prompt**

A message played to a caller that gives the caller a choice of selections in a menu and asks for a response. Compare to "[announcement.](#)"

**prompt and collect (P and C)**

A message played to a caller that gives the caller a choice of selections in a menu and asks for a response. The responses is collected and the script progresses based on the caller's response.

**pseudo driver**

A driver that does not control any hardware.

**PS&BM**

power supply and battery module

**PSTN**

public switch telephone network

**pulse code modulation**

A digital modulation method of encoding voice signals into digital signals. See also "[adaptive differential pulse code modulation](#)."

---

**R****RAID**

redundant array of independent disks

**RAID Array**

An assembly of disk drives configured to provide some level of RAID functionality

**RAM**

random access memory

**RDMBS**

ORACLE relational database management system

**RECOG**

speech recognition feature message class

**recognition type**

The type of input the recognizer can understand. Available types include touch-tone, dial pulse, and Advanced Speech Recognition (ASR), which includes WholeWord and FlexWord speech recognition.

**recognizer**

The part of the system that compares caller input to a grammar in order to correctly match (identify) the caller input.

**record**

See "[database record](#)."

**recovery**

The process of using copies of the INTUITY CONVERSANT system software to reconstruct files that have been lost or damaged. See also "[restore](#)."

**remote database**

Information stored on a system other than the INTUITY CONVERSANT system that can be accessed by the INTUITY CONVERSANT system.

**remote maintenance circuit card**

An INTUITY CONVERSANT system circuit card, available with a built-in modem, that allows remote personnel (for example, field support) to access all INTUITY CONVERSANT system machines. This card is standard equipment on all new MAP/100, MAP/40, and MAP/5P purchases.

**REN**

ringer equivalence number

**reports administration**

The component of INTUITY CONVERSANT system that provides access to system reports, including call classification, call data detail, call data summary, message log, and traffic reports.

**restore**

The process of recovering lost or damaged files by retrieving them from available back-up tapes or from another disk device. See also "recovery."

**restore application**

A utility that replaces a damaged application or restores an older version of an application.

**reuse**

The concept of using a component from a source system in a target system after a software upgrade or platform migration.

**RFS**

remote file sharing

**RM**

resource manager

**RMB**

[remote maintenance circuit card](#)

**roll back**

To cancel changes to a database since the point at which changes were last committed.

**rollback segment**

A portion of the database that records actions that should be undone under certain circumstances. Rollback segments are used to provide transaction rollback, read consistency, and recovery.

**RTS**

request to send

---

**S****SBC**

sub-band coding

**screen pop**

A method of delivering a screen of information to a telephone operator at the same time a telephone call is delivered. This is accomplished by a complex chain of tasks that include identifying the calling party number, using that information to access a local or remote ORACLE database, and pulling a "form" full of information from the database using an ORACLE database utility package.

**script**

The set of instructions for the INTUITY CONVERSANT system to follow during a transaction.

**Script Builder**

An optional software package that provides a menu-oriented interface designed to assist in the development of custom voice response applications on the INTUITY CONVERSANT system (see also "[Voice@Work](#)").

**SCSI**

[small computer system interface](#)

**SDLC**

synchronous data link control

**SDN**

software defined network

**shared database table**

A database table that is used in more than one application.

**shared speech**

Speech that is a part of more than one application.

**shared speech pools**

A parameter that allows the user of a voice application to share speech components with other applications.

**SID**

station identification

**signal processor circuit card (AYC2, AYC2B, AYC2C, or AYC9d)**

A speech processing circuit card that is an older, lower-capacity version of the speech and signal processor (SSP) circuit card (AYC43).

**SIMMs**

[single inline memory modules](#)

**single inline memory modules**

A method of containing random access memory (RAM) chips on narrow circuit card strips that attach directly to sockets on the CPU circuit card. Multiple SIMMs are sometimes installed on a single CPU circuit card.

**single-threaded application**

An application that runs on a single voice channel.

**slave**

A circuit card that depends on the TDM bus for clock information.

**SLIP**

serial line interface protocol

**small computer system interface**

A disk drive control technology in which a single SCSI adapter circuit card plugged into a PC slot is capable of controlling as many as seven different hard disks, optical disks, tape drives, etc.

**SNA**

systems network architecture

**SNMP**

simple network management protocol

**software**

The set or sets of programs that instruct the computer hardware to perform a task or series of tasks — for example, UnixWare software and the INTUITY CONVERSANT system software.

**software upgrade**

The installation of a new version of software in which the existing platform and circuit cards are retained.

**source system**

The system from which you are upgrading (that is, your system as it exists *before* you upgrade).

**speech and signal processor circuit card (AYC43)**

The high-performance signal processing circuit card introduced in V6.0 capable of simultaneous support for various speech technologies.

**speech energy**

The amount of energy in an audio signal. Literally translated, it is the output level of the sound in every phonetic utterance.

**speech envelope**

The linear representation of voltage on a line. It reflects the sound wave amplitude at different intervals of time. This envelope can be plotted on a graph to represent the oscillation of an audio signal between the positive and negative extremes.

**speech file**

A file containing an encoded speech phrase.

**speech filesystem**

A collection of several talkfiles. The filesystem is organized into 16-Kbyte blocks for efficient management and retrieval of talkfiles.

**speech modeling**

The process of creating WholeWord speech recognition algorithms by collecting thousands of different speech samples of a single word and comparing them all to obtain a statistical average of the word. This average is then used by a WholeWord speech recognition program to recognize a single spoken word.

**speech space**

An area that contains all digitized speech used for playback in the applications loaded on the system.

**speech phrase**

A continuous speech segment encoded into a digital string.

**speech recognition**

The ability of the system to understand input from callers.

**SPIP**

signal processor interface process

**SPPLIB**

speech processing library

**SQL**

[structured query language](#)

**SR**

[speech recognition](#)

**SSP**

[speech and signal processor circuit card \(AYC43\)](#)

**standard speech**

The speech package available in several languages containing simple words and phrases produced by Lucent Technologies for use with the INTUITY CONVERSANT system. This package includes digits, numbers, days of the week, and months, each spoken with initial, medial, and falling inflection. The speech is in digitized files stored on the hard disk to be used in voice prompts and messages to the caller. This feature is also called Enhanced Basic Speech.

**standard vocabulary**

A standard package of simple word speech models provided by Lucent Technologies and used for WholeWord speech recognition. These phrases include the digits "zero" through "nine," "yes," "no," and "oh," or the equivalent words in a specific local language.

**string**

A contiguous sequence of characters treated as a unit. Strings are normally bounded by white spaces, tabs, or a character designated as a separator. A string value is a specified group of characters symbolized by a variable.

**structured query language**

A standard data programming language used with data storage and data query applications.

**subword technology**

A method of speech recognition used in FlexWord recognition that recognizes phonemes or parts of words. Compare to "[WholeWord speech recognition](#)."

**switch**

A software and hardware device that controls and directs voice and data traffic. A customer-based switch is known as a "[private branch exchange](#)."

**switch hook**

The device at the top of most telephones that is depressed when the handset is resting in the cradle (in other words, is *on hook*). The device is raised when the handset is picked up (in other words, when the telephone is *off hook*).

**switch hook flash**

A signaling technique in which the signal is originated by momentarily depressing the "switch hook."

**switch interface administration**

The component of the INTUITY CONVERSANT system that enables you to define the interaction between the INTUITY CONVERSANT system and switches by allowing you to establish and modify switch interface parameters and protocol options for both analog and digital interfaces.

**switch network**

Two or more interconnected telephone switching systems.

**synchronous communication**

A method of data transmission in which bits or characters are sent at regular time intervals, rather than being spaced by start and stop bits. Compare to "[asynchronous communication](#)."

**SYS**

UNIX system calls message class

**sysgen**

system generation

**System 75**

An advanced digital switch supporting up to 800 lines that provides voice and data communications for its users.

**System 85**

An advanced digital switch supporting up to 3000 lines that provides voice and data communications for its users.

**system administrator**

The person assigned the responsibility of monitoring all INTUITY CONVERSANT system software processing, performing daily system operations and preventive maintenance, and troubleshooting errors as required.

**system architecture**

The manner in which the INTUITY CONVERSANT system software is structured.

**system message**

An event or alarm generated by either the INTUITY CONVERSANT system or end-user process.

**system monitor**

A component of the INTUITY CONVERSANT system that tests to verify that each incoming telephone line and its associated Tip/Ring or T1 circuit card is functional. Through the "System Monitor" component, you are able to see displays of the Voice Channel and Host Session Monitors.

---

**T****T1**

A digital transmission link with a capacity of 1.544 Mbps.

**table**

See "[database table](#)."

**talkfile**

An ASCII file that contains the speech phrase tags and phrase tag numbers for all the phrases of a specific application. The speech phrases are organized and stored in groups. Each talkfile can contain up to 65,535 phrases, and the speech filesystem can contain multiple talkfiles.

**talkoff**

The process of a caller interrupting a prompt, so the prompt message stops playing.

**target system**

The system to which you are upgrading (that is, your system as you expect it to exist *after* you upgrade).

**TAS**

[transaction assembler script](#)

**TCC**

Technology Control Center

**TCP/IP**

transmission control protocol/internet protocol

**TDM**

time division multiplexing

**TE**

[terminal emulator](#)

**telephone network connection**

The point at which a telephone network connection terminates on an INTUITY CONVERSANT system. Supported telephone connections are Tip/Ring, T1, and E1.

**terminal emulator**

Software that allows a PC or UNIX process to look like a specific type of terminal. In particular, it allows the INTUITY CONVERSANT system to temporarily transform itself into a "look alike" of an IBM 3270 terminal. In addition to providing full 3270 functionality, the terminal emulator enables you to transfer files to and from UNIX.

**Text-to-Speech**

An optional feature that allows an application to play US English speech directly from ASCII text by converting that text to synthesized speech. The text can be used for prompts or for text retrieved from a database or host, and can be spoken in an application with prerecorded speech.

Text-to-Speech application development is supported through Voice@Work and Script Builder.

**ThickNet**

A 10-mm (10BASE5) coaxial cable used to provide interLAN communications.

**ThinNet**

A 5-mm (10BASE2) coaxial cable used to provide interLAN communications.

**time-division multiplex**

A method of serving a number of simultaneous channels over a common transmission path by assigning the transmission path sequentially to the channels, with each assignment being for a discrete time interval.

**Tip/Ring**

Analog telecommunications using four-wire media.

**token ring**

A ring type of local area network that allows any station in the network to communicate with any other station.

**trace**

A command that can be used to monitor the execution of a script.

**traffic**

The flow of information or messages through a communications network for voice, data, or audio services.

**transaction**

The interactions (exchanges) between the caller and the voice response system. A transaction can involve one or more telephone network connections and voice responses from the INTUITY CONVERSANT system. It can also involve one or more of the system optional features, such as speech recognition, 3270 host interface, FAX Actions, etc.

**transaction assembler script**

The computer program code that controls the application operating on the voice response system. The code can be produced from Voice@Work, Script Builder, or by writing directly in TAS code.

**transaction state machine process**

A multi-channel IRAPI application that runs applications controlled by TAS script code.

**transient process**

A process that is created dynamically only when needed.

**TRIP**

Tip/Ring interface process

**troubleshooting**

The process of locating and correcting errors in computer programs. This process is also referred to as debugging.

**TSO**

Technical Services Organization

**TSO**

time share operation

**TSM**

[transaction state machine process](#)

**TTS**

[Text-to-Speech](#)

**TWIP**

T1 interface process

---

**U****UK**

United Kingdom

**US**

United States of America

**UNIX Operating System**

A multiuser, multitasking computer operating system originally developed by Lucent Technologies.

**UNIX shell**

The command language that provides a user interface to the UNIX operating system.

**upgrade scenario**

The particular combination of current hardware, software, application and target hardware, software, applications, etc.

**usability**

A measurement of how easy an application is for callers to use. The measurement is made by making observations and by asking questions. An application should have high usability to be successful.

**USOC**

universal service ordering code

**UVL**

unified voice library

---

## V

### VDC

video display controller

### vi editor

A screen editor used to create and change electronic files.

### virtual channel

A channel that is not associated with an interface to the telephone network (Tip/Ring, T1, LSE1/LST1, or PRI). Virtual channels are intended to run “data-only” applications which do not interact with callers but may interact with DIPs. Voice or network functions (for example, coding or playing speech, call answer, origination, or transfer) will not work on a virtual channel. Virtual channel applications can be initiated only by a “virtual seizure” request to TSM from a DIP.

### vocabulary

A collection of words that the INTUITY CONVERSANT system is able to recognize using either WholeWord or FlexWord speech recognition.

### vocabulary activation

The set of active vocabularies that define the words and wordlists known to the FlexWord recognizer.

### vocabulary loading

The process of copying the vocabulary from the system where it was developed and adding it to the target system.

### Voice@Work

An optional software package that provides a graphical interface to assist in development of voice response applications on the INTUITY CONVERSANT system (see also “[Script Builder](#)”).

### voice channel

A channel that is associated with an interface to the telephone network (Tip/Ring, T1, E1, LSE1/LST1, or PRI). Any INTUITY CONVERSANT system application can run on a voice channel. Voice channel applications can be initiated by being assigned to particular voice channels or dialed numbers to handle incoming calls or by a “soft seizure” request to TSM from a DIP or the **soft\_szr** command.

### voice processing co-marketer

A company licensed to purchase voice processing equipment, such as the INTUITY CONVERSANT system, to market and sell based on their own marketing strategies.

### voice response output process

A software process that transfers digitized speech between system hardware (for example, Tip/Ring and SSP circuit cards) and data storage devices (for example, hard disk, etc.)

### voice response unit

A computer connected to a telephone network that can play messages to callers, recognize caller inputs, access and update a databases, and transfer and monitor calls.

### voice system administration

The means by which you are able to administer both voice- and nonvoice-related aspects of the system.

### VPC

[voice processing co-marketer](#)

**VROP**

voice response output process

**VRU**

[voice response unit](#)

---

**W****warning**

An admonishment or advisory statement used in INTUITY CONVERSANT system documentation to alert the user to the possibility of equipment damage.

**WholeWord speech recognition**

An optional feature, available in several languages, based on whole-word technology that can recognize the numbers one through zero, “yes”, and “no” (the key words). This feature is reliable, regardless of the individual speaker. This feature can identify the key words when spoken in phrases with other words. A string of key words, called *connected digits*, can be recognized. During the prompt announcement, the caller can speak or use touch tones (or dial pulses, if available). See also “[whole-word technology](#).”

**whole-word technology**

The ability to recognize an entire word, rather than just the phoneme or a part of a word. Compare to “subword technology.”

**wink signal**

An interruption of current to a busy lamp indicating that there is a line on hold.

**word**

A unique utterance understood by the recognizer.

**wordlist**

A set of words available for FlexWord recognition by an application during a Prompt & Collect action step.

**word spotting**

The ability to search through extraneous speech during a recognition.



# Index

---

## A

- A\_Callinfo
    - trace, [72](#)
  - A\_Event
    - trace, [73](#)
  - A\_RouteSel
    - trace, [73](#)
  - A\_Tran
    - trace, [74](#)
  - Adjunct/Switch Application Interface (ASAI)
    - messages, [75](#)
    - trace
      - A\_Callinfo, [72](#)
      - A\_Event, [73](#)
      - A\_RouteSel, [73](#)
      - A\_Tran, [74](#)
      - high setting, [75](#)
      - low setting, [71](#)
      - normal setting, [72](#)
      - utility, [71](#)
  - administration, agents (SNMP), [84](#)
  - administrative troubles, repairing, [14](#)
  - agent administration, SNMP, [84](#)
  - application
    - related trouble, repairing, [7](#)
  - arp, [78](#)
- 

## B

- backing up
  - using mkimage
    - performing
      - other backups, [123](#)
      - root file system backup, [119](#)
      - speech files backup, [121](#)
    - verifying, [122](#)
  - using the BRU
    - performing
      - differential backup, [112](#)
      - full backup, [111](#)
      - root backup, [107](#)
    - scheduling, [113](#)
    - types, [106](#)
    - verifying, [115](#)
    - when to perform, [106](#)
- Backup/Restore Utility, see BRU
- boot-up troubles, repairing, [3](#)

**BRU**

- backing up
    - performing
      - differential backup, [112](#)
      - full backup, [111](#)
      - root backup, [107](#)
    - scheduling, [113](#)
    - types, [106](#)
    - verifying, [115](#)
    - when to perform, [106](#)
  - restoring
    - differential restoration, [131](#)
    - full restoration, [130](#)
    - root restoration, [128](#)
- 

**C**

- cables, checking, [38](#)
  - cartridge tapes
    - inserting, [100](#)
    - removing, [102](#)
  - channel
    - login/logout, [77](#)
  - channel state trouble, repairing, [22](#)
  - checking
    - backplane slot, [40](#)
    - memory resources, [27](#)
    - other circuit cards, [42](#)
    - switch settings, [41](#)
    - terminating resistors, [39](#)
  - circuit cards
    - checking, [38](#)
    - diagnostics, [38](#)
  - CPU
    - checking resources, [25](#)
    - reducing usage, [33](#)
- 

**D**

- data interface process (DIP), reducing load, [31](#)
- database
  - checking free space, [61](#)
  - diagnostics, [61](#)
  - directory, restoring, [134](#)
  - ORACLE, storage, [62](#)
  - reducing load, [30](#)
  - system
    - starting, [144](#)
    - stopping, [145](#)
  - table, dropping, [145](#)
  - verifying connection, [64](#)

## date

- acknowledging changes, [151](#)

- changing, [148](#)

- checking, [147](#)

diagnostics, [37](#)

- circuit card, [38](#), [42](#)

- database, [61](#)

- extents, [62](#)

- multi-port asynchronous circuit card

  - board status, [52](#)

  - driver status, [51](#)

  - port status, [53](#)

  - register dump, [55](#)

  - serial port tests

    - external loopback, [56](#)

    - internal loopback, [56](#)

  - termio, [55](#)

- ORACLE network, [63](#)

- TDM bus, [65](#)

disable domains, [76](#)

## diskettes

- inserting, [104](#)

- removing, [104](#)

- types, [104](#)

domains, enable/disable requests, [76](#)

## drives

- cartridge tape, [100](#)

- hard disk

  - checking resources, [26](#)

  - reducing usage, [34](#)

---

**E**enterprise-specific MIBs, [83](#)

## event

- 3P CALLEND, [75](#)

- ALERTING, [75](#)

- CALLEND, [75](#)

- CONFERENCED, [75](#)

- CONNECTED, [75](#)

- CUT THROUGH, [75](#)

- DENIAL, [75](#)

- DROP, [75](#)

- OFFERED, [75](#)

- QUEUED, [75](#)

- routing, [76](#)

- TRANSFERRED, [76](#)

- TRUNK SEIZED, [76](#)

## extents

- diagnostics, [62](#)

- number allowed, [62](#)

---

## F

### FAX Actions

- troubles, repairing, [12](#)

### feature

- licensing troubles, repairing, [16](#)

- floppy disks, see diskettes

---

## H

### hard disk drives

- checking resources, [26](#)

- reducing usage, [34](#)

- heartbeat messages, [77](#)

### host

- reducing load, [30](#)

---

## L

- LAN trace utilities, [78](#)

### load

- culprits, identifying, [24](#)

- reducing, [23](#)

### Lucent Intuity system

#### date

- acknowledging changes, [151](#)

- changing, [148](#)

- checking, [147](#)

#### time

- acknowledging changes, [151](#)

- changing, [150](#)

- checking, [147](#)

---

## M

- master/slave configuration, confirmation, [65](#)

### memory

- resources, checking, [27](#)

- usage, reducing, [35](#)

### MIBs

- available in SNMP feature, [83](#)

- MIB-II compliance, [83](#)

- private, [83](#)

#### variables

- private, [83](#)

multi-port asynchronous circuit card

diagnostics

board status, [52](#)

driver status, [51](#)

port status, [53](#)

register dump, [55](#)

serial port tests

external loopback, [56](#)

internal loopback, [56](#)

termio, [55](#)

---

## N

netstat, [79](#)

---

## O

operating system

rebooting, [144](#)

shutting down, [142](#)

operational troubles, repairing, [15](#)

ORACLE

database connection, verifying, [64](#)

database storage, [62](#)

internet connections, [63](#)

maxextents, [62](#)

minextents, [62](#)

network diagnostics, [63](#)

storage clause, [62](#)

---

## P

performance

problem indications, [23](#)

troubles repairing, [20](#)

ping, [80](#)

poll interval, setting (on SNMP managers), [86](#)

power up troubles, isolating, [2](#)

private MIBs, [83](#)

---

## R

reducing load, [23](#)

report troubles, repairing, [21](#)

resources, memory, checking, [27](#)

- restoring
    - using mkimage
      - databases, [134](#)
      - system, [132](#)
    - using the BRU
      - differential restoration, [131](#)
      - full restoration, [130](#)
      - root restoration, [128](#)
  - riser card
    - slot diagnosis, [40](#)
- 

## S

- Script Builder
    - FAX Actions
      - troubles, repairing, [12](#)
    - troubles, repairing, [10](#)
  - signal processor (SP) circuit card
    - diagnostics, [39](#)
  - SNMP
    - agent administration, [84](#)
    - guidelines, [86](#)
      - poll interval, [86](#)
      - setting poll intervals, [86](#)
    - MIB-II compliance, [83](#)
    - MIBs
      - private, [83](#)
    - MIBs available, [83](#)
    - private MIB, [83](#)
  - SQL\*
    - PLUS, [64](#)
  - system
    - date
      - acknowledging changes, [151](#)
      - changing, [148](#)
      - checking, [147](#)
    - time
      - acknowledging changes, [151](#)
      - changing, [150](#)
      - checking, [147](#)
    - traffic tables, recreating, [147](#)
- 

## T

- tapes
  - inserting, [100](#)
  - removing, [102](#)
- tcpdump, [81](#)
- TDM bus
  - checking, [65](#)
  - master/slave configuration, [65](#)
- terminating resistors, checking, [39](#)

## tests

- multi-port asynchronous circuit card
  - serial port external loopback, [56](#)
  - serial port internal loopback, [56](#)

## time

- acknowledging changes, [151](#)
- changing, [150](#)
- checking, [147](#)

touch-tone troubles, repairing, [21](#)

traceroute, [80](#)

traffic tables, recreating, [147](#)

---

**V**

## voice

code, [33](#)

play, [31](#)

## system

shutting down, [141](#)

starting, [137](#)

stopping, [139](#)

troubles, repairing, [16](#)