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DMS-100 Family

North American DMS-100

Office Parameters Reference Manual Volume 1 of 3

OFCENG

LEC0015 and up Standard 14.02 May 2001

NORTEL NETWORKS™

How the world shares ideas.

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About this document

How to check the version and issue of this document

The version and issue of the document are indicated by numbers, for example, 01.01.

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release. For example, the first release of a document is 01.01. In the next software release cycle, the first release of the same document is 02.01.

The second two digits indicate the issue. The issue number increases each time the document is revised but rereleased in the same software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

To determine which version of this document applies to the software in your office and how documentation for your product is organized, check the release information in *Product Documentation Directory*, 297-8991-001.

This document is written for all DMS-100 Family offices. More than one version of this document may exist. To determine whether you have the latest version of this document and how documentation for your product is organized, check the release information in *Product Documentation Directory*, 297-8991-001.

References in this document

The following documents are referred to in this document:

- *Bellcore Format Automatic Message Accounting Reference Guide*, 297-1001-830
- *Customer Data Schema Reference Manual*, 297-8001-351
- *Feature Description Manual*
- *Log Report Reference Manual*
- *NORESTARTSWACT/MTCSWACT User's Guide*, 297-1001-546

- *One Night Process and Hybrid Software Delivery Procedures*, 297-1001-303
- *Operational Measurements Reference Manual*
- *Translations Guide*, 297-8001-350

As of NA0011 (LEC and LET) and EUR010 (EUR) releases, any references to the data schema section of the *Translations Guide* will be mapped to the *Customer Data Schema Reference Manual*.

What precautionary messages mean

The types of precautionary messages used in NT documents include attention boxes and danger, warning, and caution messages.

An attention box identifies information that is necessary for the proper performance of a procedure or task or the correct interpretation of information or data. Danger, warning, and caution messages indicate possible risks.

Examples of the precautionary messages follow.

ATTENTION - Information needed to perform a task

ATTENTION

If the unused DS-3 ports are not deprovisioned before a DS-1/VT Mapper is installed, the DS-1 traffic will not be carried through the DS-1/VT Mapper, even though the DS-1/VT Mapper is properly provisioned.

DANGER - Possibility of personal injury

DANGER

Risk of electrocution

Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed. The inverter contains high-voltage lines. Until the fuses are removed, the high-voltage lines are active, and you risk being electrocuted.

WARNING - Possibility of equipment damage

WARNING
Damage to the backplane connector pins
Align the card before seating it, to avoid bending the backplane connector pins. Use light thumb pressure to align the card with the connectors. Next, use the levers on the card to seat the card into the connectors.

CAUTION - Possibility of service interruption or degradation

CAUTION
Possible loss of service
Before continuing, confirm that you are removing the card from the inactive unit of the peripheral module. Subscriber service will be lost if you remove a card from the active unit.

How commands, parameters, and responses are represented

Commands, parameters, and responses in this document conform to the following conventions.

Input prompt (>)

An input prompt (>) indicates that the information that follows is a command:

```
>BSY
```

Commands and fixed parameters

Commands and fixed parameters that are entered at a MAP terminal are shown in uppercase letters:

```
>BSY CTRL
```

Variables

Variables are shown in lowercase letters:

```
>BSY  CTRL  ctrl_no
```

The letters or numbers that the variable represents must be entered. Each variable is explained in a list that follows the command string.

Responses

Responses correspond to the MAP display and are shown in a different type:

```
FP 3 Busy CTRL 0: Command request has been submitted.

FP 3 Busy CTRL 0: Command passed.
```

1 Office parameters overview

Office parameters are initially set by Northern Telecom (Nortel) to meet end-of-design criteria and switch configuration. This overview is intended to assist operating company personnel responsible for administering office parameters by providing guidelines to using the available tools.

Introduction

Office parameters examined in this document are located in table OFCENG (office engineering). These parameters allocate resources (memory) for switch activities such as call throughput and custom calling usage. These parameters are initially calculated using operating company input, high day/end-of-design criteria, and standard engineering formulas. The formulas are designed for standardization and simplified operating company and Nortel use. The formulas are constructed to cover a wide variety of applications and are considered set up for end-of-design for most applications.

An ongoing process should take place to determine if parameter settings are appropriate for each office's requirements. This process should include the monitoring of actual parameter usage compared to the parameter setting in the switch. Offices may have to adjust individual parameter settings to match the changing office requirements.

Offices not at the end-of-design could reclaim memory for a period of time by reducing office parameter settings. Caution should be used in lowering office parameters to prevent impact to switch operation during high-day operation. Some parameters are not recommended for value reduction. See the section “Office parameters that are not recommended to be modified."

Memory allocated for office parameters can be reclaimed during the software delivery by way of dump and restore if the decision is made to lower office parameters. However, office parameter changes should be safely and systematically implemented before a dump and restore.

What to collect

The following data should be collected to determine the usage of many of the office parameters in table OFCENG:

- operational measurement groups CP2, EXT, and FTRQ
- DMSMON report
- listing of table OFCENG

Operational measurements

The OMs and especially the high watermark OMs can be used as a bench mark of the levels of traffic-dependent activity in the switch during the current interval. The high watermark OMs display the highest level of simultaneous usage reached in critical office parameters for the collection period. Overflow OMs display the number of times that the parameter was required but no resources were available.

The following OM groups should be monitored:

- CP2
- EXT
- FTRQ

CP2 measures call processing software resources such as call processing letters, call condense blocks, and wakeup blocks. EXT measures extension block usage such as special billing records, data extensions for operator services, and custom calling features. FTRQ measures feature queuing resources for MDC features such as call hold, last number redial, and call waiting. Refer to the *Operational Measurements Reference Manual* for information on the registers and corresponding office parameters measured.

An OM accumulating class made up of CP2, EXT, and FTRQ should be defined with the same collection period as office parameter OMXFR in table OFCENG. When datafilling tables OMACC and OMPRT, field WHEN set to AUTO guarantees this. The collection period and transfer period should be the same to ensure that the high watermark registers present a valid picture of peak activities. With a 1-hour collection period and a 30-minute transfer period, the peak levels are summed.

The following is an example of setting up an OM class that contains OM groups EXT, CP2, and FTRQ. The symbol (>) represents commands to be entered.

The OM class to be defined is called REALTIM3. Double precision is used.

```
>OMCLASS  REALTIM3  DOUBLE
```

List table OMACC to see the tuple added.

```
>LIS  ALL
```

The table is listed. Position on the newly added tuple.

```
>POS  REALTIM3

CLASS    ENABLED    WHEN
REALTIM3 N           AUTO
```

Change the tuple.

```
>CHA

ENTER Y TO CONTINUE PROCESSING OR N TO QUIT.

>Y

ENABLED: N

>Y

REP: AUTO

TUPLE TO BE CHANGED:

REALTIM3   Y      AUTO

ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.

>Y

TUPLE CHANGED. WRITTEN TO JOURNAL FILE AS JF NUMBER 544

>QUIT

CI:
```

Add OM groups to the OM class.

```
>OMACCGRP  REALTIM3  ADD  GROUP  CP2

OK

>OMACCGRP  REALTIM3  ADD  GROUP  FTRQ

OK

>OMDUMP  CLASS  REALTIM3  COMMANDS
```

```
OMCLASS REALTIM3 DOUBLE
OMACCGRP REALTIM3 ADD GROUP CP2
OMACCGRP REALTIM3 ADD GROUP EXT
OMACCGRP REALTIM3 ADD GROUP FTRQ
```

>TABLE OMPRT

```
 TABLE: OMPRT
```

>LIS ALL

Table OMPRT is listed. Position on an unused position. Position 228 is chosen in this example.

>POS 228

Change the tuple.

>CHA

```
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
```

>Y

```
ACTIVE: N
```

>Y

```
SUPZERO: N
```

>

```
ID: ALL
```

>ALLCLASS

```
CLASS:
```

>REALTIM3

```
REP: MONTHLY
```

>AUTO

```
BUFFOUT: N
```

>

```
OUTDEV: SINK
```

>

```
TUPLE TO BE CHANGED:

228  Y  N      ALLCLASS REALTIM3
AUTO       N     SINK

ENTER Y TO CONFIRM. N TO REJECT OR E TO EDIT.

>Y

TUPLE CHANGED

WRITTEN TO JOURNAL FILE AS JF NUMBER 547

>QUIT

CI:

>LOGUTIL

LOGUTIL:

>ADDREP  TATSPRT  OMPR  228
```

Note: TATSPRT is a local printer defined for this example.

```
1 report(s) Added

>LISTROUTE  DEVICE  TATSPRT

Device TATSPRT      print classes:

ADD REPORTS:

OMPR 228 (OM REPORT)

DELETE REPORTS:

>STARTDEV  TATSPRT

Log device TATSPRT has been started.

Number of devices started : 1

>STOPDEV  TATSPRT

Log device TATSPRT has been stopped.

Number of devices stopped : 1
```

DMSMON

DMSMON is used to gather switch data as well as high watermark OMs. The switch data can be used in calculating office parameters in place of the engineering estimates used at initial load time.

DMSMON uses OM results as inputs for the DMSMON high watermark report. DMSMON itself keeps a running tab of a subset of parameter high watermarks over a 30-day period. For the parameters that are currently reported by DMSMON, this report is the easiest for the administrator to use. However, since all the high watermark OMs are not included in DMSMON, the OM groups mentioned previously should be collected. Also, parameter overflows are not reported in DMSMON output, only in the OM groups.

The following command produces the needed DMSMON information from the CI level of the MAP display:

```
>DMSMON

>HIGHPARMS
```

The following DMSMON example shows a subset of actual counts of switch data and high watermarks for office parameters:

```
Number of nodes:  379
Number of networks:  0
Number of TM8 PMs:  Insv: 3     Comm
: 0
Number of MTM PMs:          Insv: 53
Comm: 0
Number of LGC PMs:  Insv: 12    Comm
: 0
Number of LCM PMs:  Insv: 48    Comm
: 0
Number of DTC PMs:  Insv: 13    Comm
: 0
Number of DP_POTS lines: 3
Number of DGT_POTS lines: 15
Number of DP_IBN lines: 185
Number of DGT_IBN lines: 2835
Number of TOTAL_UNEQ lines: 15962
Number of TOTAL_OFFL lines: 5373
Number of PPHONE_STATION lines: 152

Number of DISPLAY_PPHONE_STATION
lines: 35
Number of M3009_STATION lines: 6705

Number of M5112_STATION lines: 618
Number of M5209_STATION lines: 144
Number of M5312_STATION lines: 37
Number of DNs on keysets: 35403
Number of IBN lines with CALL
WAITING FEATURE: 8
Number of IBN lines with CALL
FORWARDING FEATURES: 508
Number of IBN lines with SPEED CALL
FEATURE: 225
Number of KSET lines with CALL
WAITING FEATURE: 4
Number of KSET lines with CALL
FORWARDING FEATURE: 6613
Number of KSET lines with SPEED
CALL FEATURE: 6327
Number of trunks: 4704
Number of unequipped trunks: 10655
Number of offline trunks: 554
Number of trunk groups: 715
Number of IBNTI trunks: 893
Number of IBNTO trunks: 334
```

```
Number of IBNT2 trunks: 49
Number of OP trunks: 52
Number of RCVRMF receivers: 8
Number of RCVRDGT receivers: 4
(expected:8) *****

Number of RCVRATD receivers: 32
Number of CF3 ports: 70
Number of CF6 ports: 83
Number of LTUs: 6
Number of TTUs: 5
Number of VDUs: 39

Number of customer groups: 253
Number of consoleless customer
groups: 250
Number of customer subgroups: 2
Number of attendant consoles: 30
```

Tables of daily usage for critical office parameters

The following partial report shows 20 days of high watermark values with the most current one (yesterday) being printed first.

Table 1-1 (Sheet 1 of 2)

NUMPCLETTERS	NCCBS	NUMCALLPROCES	NUMOUTBUF	NMUTLTIBLK	S	NU	MCPWAKE
13	97	4	51	2	6		
12	105	4	51	3	3		
17	914	4	51	13	28		
18	908	4	51	16	32		
16	893	5	51	14	29		
14	761	5	51	11	27		
13	63	4	51	2	4		
12	70	4	51	3	7		
12	85	4	51	3	8		
12	457	4	51	7	19		
18	504	4	51	9	18		
11	435	4	51	8	19		

Table 1-1 (Sheet 2 of 2)

NUMPCLETTERS	NCCBS	NUMCALLPROCES	NUMOUTBUF	NMUTLTIBLK	S	NU	MCPWAKE
12	273	4	51	5	13		
12	63	4	51	3	4		
12	66	3	51	2	4		
12	80	4	51	3	8		
12	512	4	51	9	21		
14	796	5	51	12	31		
23	941	5	51	15	50		
16	874	5	51	13	31		

Table 1-2 (Sheet 1 of 2)

FTRQAGENTS	FTRQ0WAREAS	FTRQ2WAREAS	FTRQ4WAREAS	FTRQ8WAREAS	FTRQ16WAREAS
9435	0	3437	6230	0	0
9437	0	3511	6179	2	1
9451	0	3862	6120	12	3
9445	0	3865	6185	11	3
9459	0	3784	6330	14	2
9451	0	3587	6360	10	2
9435	0	3334	6361	0	0
9436	0	3345	6342	0	0
9435	0	3377	6337	0	0
9443	0	3469	6359	7	2
9441	0	3458	6390	7	2
9440	0	3456	6396	6	3
9437	0	3458	6327	8	3
9430	0	3451	6283	0	0

Table 1-2 (Sheet 2 of 2)

FTRQAGENTS	FTRQ0WAREAS	FTRQ2WAREAS	FTRQ4WAREAS	FTRQ8WAREAS	FTRQ16WAREAS
9430	0	3454	6271	0	0
9429	0	3450	6265	0	0
9439	0	3582	6261	4	2
9435	0	3796	6174	10	3
9438	0	3935	6090	14	3
9433	0	3923	6090	16	2

Table OFCENG

Table OFCENG lists the setting of parameter values. This table should be listed to provide the parameters to be considered and their current settings. The table can be listed with the following CI command:

```
>TABLE  OFCENG;LIST  ALL;QUIT
```

The following example shows a subset of table OFCENG:

Table 1-3 (Sheet 1 of 3)

PARMNAME	PARMVAL
ACD_MIB_OUT_EVENT_BUFFER_SIZE	110
ACD_TOLL_DELAYED_BILLING	N
ACT_MAX_DURATION	255
ALL_ACD_LOGIN_IDS_VALID	Y
ALT_TTT_USAGE_PERCENTAGE	50
ALT_TTT_USAGE_PERCENTAGE	50
AMA_FAILURE_FREE_CALL	Y
AMA_LONG_DUR_AUDIT_INTERVAL	24
ATTLOG	1000
AVG_NUM_TGS_PER_OHCBQCALL	4
BELL_ANI_ALARM_ID	9
BELL_ANI_INTERCEPT_ID	9

Table 1-3 (Sheet 2 of 3)

PARMNAME	PARMVAL
CABLE_LOCATE_TIMEOUT	180
CABLE_SHORT_TIMEOUT	180
CC_ENGLEVEL_WARNING_THRESHOLD	77
CFD_EXT_BLOCKS	3500
CFW_EXT_BLOCKS	350
COINDISPOSAL	IGNORE_COIN
COMMAND_SCREEN	Y
COPP_RELAY_OPEN_TIME	80
CPSTATUS_SWITCHABLE	Y
CBLINK_ALARM_THRESHOLDS	30 60
CUSTOMER_GROUP_IBNGRP_OM_COUNT	512
DATA_COS	0
DEBUG_HUNT_SWERRS	N
DEFAULT_CARRIER_OR_TREAT	C 288
DEFAULT_COMMANDCLASS	0
DEFAULTLANGUAGE	ENGLISH
DISC_TIME_BILLED	Y
DISCTO_TIMEOUT_VALUE	13
DM_PCM_ENCODING	DM_MU_LAW
DTER_AUTO_DEACTIVATION_ENABLE	Y
EA_CCIS6_TANDEM_BILL	N
EA_OCS_AND_DP_OVLP_NEEDED	N
EA_OCS_DIGCOL_METHOD	PXFALL
EA_OVERLAP_CARRIER_SELECTION	Y
EA_WITH_CD	N
EADAS24H_BUFFER_SIZE	7100

Table 1-3 (Sheet 3 of 3)

PARMNAME	PARMVAL
EADAS30M_BUFFER_SIZE	32000
EADAS60M_BUFFER_SIZE	7100
EBS_BUZZ_SPLASH_ON	Y
EBS_TO_TRUNK_TRD_TIME	50
ENHANCED_DEAD_SYSTEM_ALARM	Y
EXPIRED_PASSWORD_GRACE	3
FLOW_CONTROL_TIMEOUT	6
FTRQAGENTS	1500
FTRQAUDIT	10
FTRQOWAREAS	1
FTRQ2WAREAS	1500
FTRQ4WAREAS	693
FTRQ8WAREAS	704
FTRQ16WAREAS	20

How to interpret what is collected

The OMs provide an indication of overflows. If there are insufficient resources for a given office parameter, the OMs indicate this with an overflow peg. Parameter usage should be monitored in all offices, not only those interested in reducing office parameters for the purpose of memory reclamation.

When examining registers FTRQHI and FTRQSEIZ of OM group FTRQ and the FTRQ entities in DMSMON HIGHWATER, it should be noted that these parameters reflect the number of blocks simultaneously in use. The corresponding FTRQ office parameters reflect the number of blocks allocated in multiples of 10. For example, a setting of 300 for office parameter FTRQAGENTS allows for a FTRQAGENTS high watermark of 3000. This multiple of 10 factor applies only to FTRQ parameters (that is, FTRQAGENTS, FTRQAUDIT, FTRQ0WAREAS, FTRQ2WAREAS, FTRQ4WAREAS, FTRQ8WAREAS, FTRQ16AREAS, FTRQ32WAREAS, FTRQ0WPERMS, FTRQ2WPERMS, FTRQ4WPERMS, FTRQ8WPERMS, FTRQ16PERMS, and FTRQ32PERMS).

The following example shows that FTRQAGENTS is set to 1261 in table OFCENG. This setting allocates 12610 FTRQAGENT blocks as indicated in field FTRQOM_INFO in the OM group FTRQ. For the sample period, the high watermark, field FTRQHI, indicates a maximum of 6137 feature queue blocks in simultaneous use.

```
    CI:
    >TABLE OFCENG : POS FTRQAGENTS
     TABLE: OFCENG
         FTRQAGENTS
  1261
>LIS 10
PARMNAME
  PARMVAL
FTRQAGENTS
  1261
FTRQAUDIT
  10
FTRQOWAREAS
  1
FTRQ2WAREAS
  1575
FTRQ4WAREAS
  799
FTRQ8WAREAS
  800
FTRQ16WAREAS
  1
FXOGS_REMBSY_BITS
  A_OFF_B_OFF_HK
GLOBAL_CUTOFF_ON_DISCONNECT
  Y  80  N
GROUND_START_DELAY
  Y
```

>OMSHOW FTRQ HOLDING

```
FTRQ
CLASS: HOLDING
START:1990/01/12  14:00:00 FRI:
STOP : 1990/01/12 14:15:00
SLOWSAMPLES:           9 :
FASTSAMPLES:        90 :
KEY (FTRQOM_TUPLE_KEY)
    INFO (FTRQOM_INFO)
       FTRQSEIZ     FTRQOVFI
FTRQHI
0 FTRQAGENTS
        12610
          369       0
6137
1 FTRQOWAREAS
           10
            0       0              0

2 FTRQ3WAREAS
        15750
          509       0
3394
3 FTRQ4WAREAS
         7880
          238       0
2828
4 FTRQ8WAREAS
         8000
           72       0
30
5 FTRQ16WAREAS
           10
            0       0
 0
```

Referring to example 2, the high watermarks can be interpreted. The last 30 days of high watermarks are displayed. For FTRQ4WAREAS, 6396 is the highest value displayed. For this office, parameter FTRQ4WAREAS in table OFCENG is set to 693. Accounting for the factor of 10, this allows for 6930 blocks. Operating company personnel may decide to raise this parameter since the high water value is so close to the parameter setting.

For parameter NUMCPWAKE, 50 is the highest 30-day value. For this office, parameter NUMCPWAKE in table OFCENG is set to 425. Assuming the high day for this event is during the sample period, the operating company may decide to lower the parameter slightly to recover memory, or leave the parameter set as is.

As can be seen in the above two cases, if the value is increased or decreased, office memory is impacted. If a parameter value is increased and made active, more memory is allocated for that resource from spare or not in use pool of office memory. On the other hand, if a parameter value is reduced, made active, and taken through the dump and restore process, office memory is returned to the spare pool of memory. Complete memory reclamation cannot take place without a dump and restore.

How often to collect

It is imperative that the operating company monitor the actual usage regularly to account for high day busy hour for each of the critical office parameters and changing calling traffic patterns. Each of these factors should be taken into account to establish the time interval for examining OMs.

High day busy hour for each event must be considered. The high day busy hour for POTS features may be very different than that of MDC features. Based on this criterion, usage must be monitored based on the office parameters being analyzed. For example, CFW_EXT_BLOCKS allocate the number of simultaneous active call forwarded calls.

Traffic patterns can change dramatically over time, and therefore, the actual usage could fluctuate dramatically. Actual usage must be monitored on a regular basis to determine if trends are evolving. The decision to collect daily, weekly, or biweekly is the decision of the individual operating company.

How to make a decision

Criteria must be chosen to decide whether to lower or raise parameter values. An operating company engineer can choose criteria such as never reducing a given office parameter at all or never reducing an office parameter below three times (or more) the highest ever high watermark.

Lowering office parameter values should be carefully considered. In general, Nortel does not recommend lowering office parameter values unless office memory is in jeopardy.

Factors such as planned large office additions and office history play an important role in deciding how large a buffer to add to the office data. The operating company is responsible for determining how large to make the buffer above the high watermark OMs. It is strongly recommended that the office be monitored for many months before making a decision.

Most operating companies will probably decide never to reduce office parameter values, unless office memory is exhausted.

Office parameters that are not recommended to be modified

In general, the memory-allocating office parameter values in table OFCENG can be considered for lowering. However, Nortel does not recommend changes to the following parameters. Any changes are made at the operating company's discretion.

- NCCBS defines the number of call condense blocks (CCB) required that are held up through the life of a call. NCCBS is provisioned to provide for 100% use of network facilities. No change is recommended.
- NUMCALLPROCESSES defines the number of call processes (CP) required that are associated with a call during set up, take down, and feature processing. The current formula is sufficient to provide for high calling volumes. No change is recommended.
- NUMCPLETTERS defines the number of call processing letters required that are used to pass messages between call processes and the rest of the DMS switch. NUMCPLETTERS is set at 2000 to provide for overload protection during peak traffic periods. No change is recommended.
- NUMTLBS defines the number of terminal linkage blocks used in the input/output system. NUMTLBS is provisioned based on the number of hardware nodes present in the office. No change is recommended.
- PPMBUFFS defines the number of peripheral process message buffers used for sending messages to the peripheral modules. If PPMBUFFS is underprovisioned, switch degradations can occur. A margin of safety is built in to prevent degradation during high-traffic periods and unexpected high maintenance situations. No change is recommended.

Reducing office parameter values

The preferred method of implementing office parameter reductions is to gradually make changes in the existing office parameter tables, performing the necessary restarts as required during very low-traffic times. Changing two or so parameter values downward at a time, then verifying that the changes had no adverse effect is the safest way to implement reductions. Possible problem variables are kept to a minimum and a known safe fallback is available. If troubles do arise, reverting back to the old values can be done quickly. The OMs should be monitored closely to ensure proper engineering. All changes should be made at least three weeks prior to the dump and restore or One Night Process (ONP). At least three weeks is required to allow the software delivery process to capture the new values.

Memory is not reclaimed until the dump and restore is performed. At that time, the reduced values are copied from the existing load into the new office load.

If parameter reductions are required, the operating company should communicate their intentions and work with the Nortel regional software systems engineering manager.

Increasing office parameter values

Increasing parameter values is a safer process than reducing them. The major issue with increasing parameter values (other than timing related parameters) is the increased memory requirements. Unlike reducing parameter values, memory is utilized immediately upon activation (usually a cold restart). Often, parameters in table OFCENG require more memory when increased. The memory requirements for parameters are in the data store area for NT40 loads, but in total office memory for SuperNode loads, where there is no distinction between data and program store.

A basic outline of when values should be increased follows:

1. Determine actual spare memory available in the switch.
2. Determine the established memory requirements indicated by the required parameter value increases.
3. Analyze and determine if the amount of increased memory does not exceed the amount of memory spare and available for use. Keep in mind the Nortel and individual operating company requirements for spare memory overheads. Reference SEB 88-01-002 or contact a Nortel regional software systems engineering manager to aid in this task. After a determination has been made that the increased values will not exceed memory limitations including spare or overhead requirements, a safe implementation process can begin.
4. If only two or three parameter values are to be increased, all could be done at the same time, with the monitoring of parameters and memory after the change. If larger numbers of parameters values need to be increased, a staged increase should be implemented. Monitor two or three parameter changes and if all is well and memory usage is safe, move forward with others.

Notifying Nortel

To ensure propagation to future software releases of decreases made to office parameters, the operating company must contact their regional software systems engineering manager with a single point of contact at the operating company. The contact should be able to approve of any changes to the office parameters for a given office.

Nortel engineers office parameters based on operating company input and standard formulas. A wide variety of applications are covered by the standard formulas. These formulas yield a safe value in nearly every office. The operating company should monitor the office parameter usage on an ongoing

basis to determine if the parameter settings are appropriate for the office application.

Any changes made to the office parameters discussed in this document result in a change in the memory allocated in the switch. An increase in a setting requires more memory. A decrease in value decreases memory requirements. A decrease in a parameter value only yields an actual memory decrease if a rebuild (that is, a dump and restore) occurs.

NORESTARTSWACT utility

The no-restart-switch-of-activity (NORESTARTSWACT) utility enables the operating company to activate changes to the values of certain office parameters or to data in certain tables. The total system outage during a NORESTARTSWACT is less than 30 s.

The NORESTARTSWACT utility is available only in offices with BCS36 or higher software. It is not available for NT40 offices.

While using this utility, if an error occurs that cannot be corrected by local maintenance personnel, contact the next level of support.

Following a change to the value of an office parameter or to the modification of data in certain tables, one of the following messages may appear.

Figure 1-1 Change in office parameter value messages

```
WARNING:    A WARM RESTART MUST BE PERFORMED TO ACTIVATE
            CHANGES TO THE VALUE OF THIS PARAMETER.

WARNING:    A COLD RESTART MUST BE PERFORMED TO ACTIVATE
            CHANGES TO THE VALUE OF THIS PARAMETER.

WARNING:    A RELOAD RESTART MUST BE PERFORMED TO ACTIVATE
            CHANGES TO THE VALUE OF THIS PARAMETER.

WARNING:    ANY TYPE OF RESTART MUST BE PERFORMED TO
            ACTIVATE CHANGES TO THE VALUE OF THIS
            PARAMETER.

NOTE:       A RELOAD RESTART IS NECESSARY TO ACTIVATE
            A CHANGE OF FORMAT FOR THE AMA STREAM.
```

If one of these messages or a similar message appears, and you want to activate changes to office parameters or tables in the following three lists, the NORESTARTSWACT utility can be used instead of the restart specified in the message.

The NORESTARTSWACT utility can be used with the following office parameters that require a restart to increase or decrease their values:

- CCW_ACTIVE
- CONSOLE_SILO_CHARS
- CONSOLE_SILO_RECORDS
- CPSTACKSIZE
- CUSTOMER_GROUP_IBNGRP_OM_COUNT
- EADAS_24H_BUFFER_SIZE
- EADAS_30M_BUFFER_SIZE
- EADAS_60M_BUFFER_SIZE
- EADAS_SHORT_XFER_ALLOWED
- IBN_CFW
- MAX_ACDMIS_SESSIONS
- MAXNUCS
- MAXSTS
- OFFICETYPE
- OMHISTORYON
- PPMBUFFS

The NORESTARTSWACT utility can be used with the following office parameters that require a restart to decrease their values:

- FTRQAGENTS
- FTRQ0WAREAS
- FTRQ2WAREAS
- FTRQ4WAREAS
- FTRQ8WAREAS
- FTRQ16WAREAS
- FTRQ32WAREAS
- FTRQ0WPERMS
- FTRQ2WPERMS
- FTRQ4WPERMS
- FTRQ8WPERMS

- FTRQ16WPERMS
- FTRQ32WPERMS

The NORESTARTSWACT utility can be used with the following tables:

- CLLI
- CONF3PR
- CRSFMT
- CRSMAP
- DIRPSSYS
- NWMSC
- SCGRP
- SDGRP
- TCAPTRID
- TFANINT
- TRKGRP

Summary of NORESTARTSWACT procedure

The following table summarizes the procedure to modify a parameter or table data using NORESTARTSWACT and the approximate time, in minutes, needed to do each step. The times given for specific steps are elapsed times and not actual run times. Ranges are listed to accommodate different switch configurations, sizes, and problems that may be encountered during the execution of the step.

Table 1-4 Summary of NORESTARTSWACT procedure (Sheet 1 of 2)

Step	Description	Approximate time in minutes
1	Verify availability of the NORESTARTSWACT utility on the switch	(unspecified)
2	Make changes to parameter values or table data	(unspecified)
3	Drop sync on the computing module (CM)	2 to 3
4	Restart on the mate of the active switch to activate changes	3 to 5
5	Perform the LIMITED_PRESWACT procedure	15 to 60
6	Perform the NORESTARTSWACT procedure	(unspecified)
7	Perform the POSTSWACT procedure	15 to 60

Table 1-4 Summary of NORESTARTSWACT procedure (Sheet 2 of 2)

Step	Description	Approximate time in minutes
9	Sync the CM	3 to 5
	Total time range in minutes	38 to 133

NORESTARTSWACT procedure

Use this procedure to perform a NORESTARTSWACT.

Procedure 1-1 Using the NORESTARTSWACT utility

At the MAP display

1 Ensure that you are at the CI level of the MAP display by pressing the return key two times.

Example of a MAP response:

```
CI:
```

2 Verify the NORESTARTSWACT availability by typing

`>BCSUPDATE;SWACTCI;QUERYSWACT`

and pressing the Enter key.

Example of a MAP response:

```
NORESTARTSWACT is recommended for initiating a CC
Warm SWACT. Further checking will be done when SWACT
is invoked.
```

If the NORESTARTSWACT is	Do
supported	step 3
not supported	step 30

3 Make a parameter value change or table change.

Example of a MAP response:

```
WARNING: A RESTART MUST BE PERFORMED TO ACTIVATE THE
CHANGE MADE TO THIS PARAMETER.
```

Note: Any change that is made while the switch is INSYNC remains in effect on the inactive side even after the drop sync and restart are complete. It is not necessary to log in to the mate central processing unit (CPU) to verify the change.

4 Access the CM level of the MAP display by typing

`>MAPCI;MTC;CM`

and pressing the Enter key.

5 Determine if the inactive CPU is jammed.

Note: The word yes under the Jam header indicates that the CPU is jammed. The area appears blank if the CPU is not jammed.

If the inactive CPU is	Do
jammed	step 8
not jammed	step 6

At the CM reset terminal for the inactive CPU

6 Jam the inactive CPU by typing

>\JAM

and pressing the Enter key.

RTIF response:

```
Please confirm (YES/NO)
```

7 Confirm the command by typing

>YES

and pressing the Enter key.

RTIF response:

```
JAM DONE
```

At the MAP display

8 Determine if the CM is in sync.

Note: A dot or EccOn displayed under the Sync header indicates that the CM is in sync. The word no indicates that the CM is not in sync.

If the CM is	Do
in sync	step 9
not in sync	step 14

9 Drop synchronization by typing

>DPSYNC

and pressing the Enter key.

If the response is	Do

`About to drop sync with CPUn active the inactive CPU is jammed.`
`Do you want to continue?`
`Please confirm (“YES", “Y", “NO", “N"):`
	step 12

`Drop synchronization failed`	step 32

If the response is	Do
`Aborted. Active CPUn has a faulty processor clock.`	step 10

10 The DPSYNC command is disallowed because the active clock on the CPU is faulty. Refer to the procedure "Clearing a CM CLK major alarm" in *Alarm and Performance Monitoring Procedures*. When you have completed the procedure, return to this point.

11 Go to step 6.

12 Confirm the DPSYNC command by typing

>YES

and pressing the Enter key.

At the CM reset terminal for the inactive CPU

13 Wait until A1 flashes on the reset terminal for the inactive CPU.

Note: Allow about 5 min for A1 to start flashing.

If A1	Do
flashes	step 14
does not flash	step 32

14 Perform the required restart procedure by typing

>\RESTART <WARM/COLD/RELOAD>

and pressing the Enter key.

RTIF response:

```
Please confirm: (YES/NO)
```

15

CAUTION
Loss of service
Ensure that you perform the restart on the inactive CPU. The reset terminal for the inactive CPU is identified by the word Inactive on the top banner of its display.

Confirm the restart command by typing

>YES

and pressing the Enter key.

At the MAP display

16 Perform the LIMITED_PRESWACT procedure by typing

>BCSUPDATE;LIMITED_PRESWACT

and pressing the Enter key.

Example of a MAP response:

```
LIMITED_PRESWACT should not be used for BCSUPGRADE
SWACTs. Do you wish to confirm? (”YES”,”Y”,”NO”,”N”)
```

The LIMITED_PRESWACT command runs a series of steps that are required to prepare the switch for the NORESTARTSWACT. All these steps must complete successfully before the NORESTARTSWACT can be performed. If the LIMITED_PRESWACT command stops with an error message, the error must be corrected and the LIMITED_PRESWACT command must be entered again to complete the remaining steps. If necessary, the next level of support should be contacted to complete this procedure.

17 Confirm the LIMITED_PRESWACT command by typing

>YES

and pressing the Enter key.

If the LIMITED_PRESWACT	Do
was successful	step 18
failed	step 32

18 Refer to the *One Night Process and Hybrid Software Delivery Procedures*, 297-1001-303, section “PreSWACT DIRP and Billing" for the procedures to handle secondary billing devices over the NORESTARTSWACT. When you have completed this procedure, return to this point.

19 Verify that all essential services or high profile customers (police, hospital, emergency bureaus, radio stations) are not in emergency call processing mode by contacting the appropriate customer.

20 Disable any periodic testing.

21 Ensure no further activity is performed on the Distributed Processing Peripheral (DPP), including DPP polling or disk backup. Inform the downstream processing center.

22 Dump the Switch Performance Monitoring System (SPMS) register to a printer or other device according to operating company standards.

23 Disconnect any ISDN DTA monitors prior to the SWACT.

At the CM reset terminal for the inactive CPU

24 Release the jam on the inactive CPU by typing

>\RELEASE JAM

and pressing the Enter key.

RTIF response:

```
JAM RELEASE DONE
```

At the MAP display

25 Perform the SWACT by typing

>BCSUPDATE;SWACTCI;NORESTARTSWACT

and pressing the Enter key.

Note: After the CPUs switch activity, you are logged off the MAP terminal. A dollar sign ($) appears and the cursor moves one space to the right.

Go to step 26

26 Login to the MAP terminal by typing

<break>LOGIN

<username> <password>

and pressing the Enter key.

27 Perform the POSTSWACT procedure by typing

>BCSUPDATE;POSTSWACT

and pressing the Enter key.

28 Refer to the *One Night Process and Hybrid Software Delivery Procedures*, 297-1001-303, section “Recover billing" for the procedures to recover the secondary billing devices after the NORESTARTSWACT. When you have completed this procedure, return to this point.

29 Synchronize the CM by typing

>MAPCI;MTC;CM;SYNC

and pressing the Enter key.

Example of a MAP response:

```
Maintenance action submitted.
Synchronization successful.
```

If the SYNC command	Do
was successful	step 33
failed	step 32

30 Perform the necessary restart (cold, warm, or reload) to activate the table or parameter change. When you have completed the procedure, return to this point.

31 Go to step 33

32 For further assistance, contact the personnel responsible for the next level of support.

33 You have completed this procedure.

2 Parameter to table cross-reference

The following table is a comprehensive list of office parameter names cross-referenced to their corresponding parameter tables. Some of these parameters are not applicable to all customer sites.

Table 2-1 Parameter to table cross-reference (Sheet 1 of 43)

Parameter name	Table
ACD_BLOCKED_FOR_ACD_UCD	OFCENG
ACCS_CCV_QUERY_BLK	OFCVAR
ACCS_INTERDIGIT_TIMEOUT	OFCVAR
ACCS_MAX_REJECTS	OFCVAR
ACCS_NUM_RU	OFCENG
ACCS_OPER_SERV_ACCESS_CODE	OFCVAR
ACCS_SEQ_CALL_LIM	OFCVAR
ACCS_SEQ_QUERY	OFCVAR
ACCSDB_RESPONSE_DELAY	OFCENG
ACD_AGENTQ_AUDIT_INTERVAL	OFCSTD
ACD_CALL_QUEUE_AUDIT_INTERVAL	OFCSTD
ACD_LOAD_MGMT_RESTRICTIONS	OFCOPT
ACD_MIS_OUT_EVENT_BUFFER_SIZE	OFCENG
ACD_OVERFLOW_BLOCKS	OFCENG
ACD_TOLL_DELAYED_BILLING	OFCENG
ACMS_NOC_LOG_ON	OFCVAR
ACOU_DATAFILLED	OFCOPT

Table 2-1 Parameter to table cross-reference (Sheet 2 of 43)

Parameter name	Table
ACQS_AUDIT_ON	OFCVAR
ACTIVATE_USE_OF_DEFAULT_CLI	OFCENG
ACTIVE_DN_SYSTEM	OFCENG
ACT_MAX_DURATION	OFCENG
AC_AUDIT_INTERVAL	OFCSTD
AC_INTRUSION_2X59CA_DCD	OFCVAR
AC_MAX_NUM_ERRORS	OFCSTD
AC_MOREDIGIT_WAIT	OFCVAR
AC_TPB_BSY_RCV	OFCSTD
AC_TPB_BSY_SND	OFCSTD
ADSI_RAM_BASED_TONE	OFCOPT
AIN00_EXTEND_NAT_OF_NUM	OFCENG
AIN00_PCM_SSP_BILLING	OFCENG
AIN_ACTIVE	OFCENG
AIN_MAX_SERIAL_TRIGGERS	OFCENG
AIN_NUM_00_PARA_EXT_BLKS	OFCENG
AIN_NUM_01_00_EXT_BLKS	OFCENG
AIN_NUM_EXT_BLKS	OFCENG
AIN_NUM_PROCESSING_EXT_BLKS	OFCENG
AIN_NUM_TERM_NOTIF_EXT_BLKS	OFCENG
AIN_OFFICE_TRIGGRP	OFCVAR
AIN_T1_TIMER	OFCENG
ALLOC_UNIV_EXT_BLK	OFCENG
ALLOW_RINGING_ON_TIP_SIDE	OFCENG
ALL_ACD_LOGIN_IDS_VALID	OFCENG
ALIT_LOG_GEN_FREQ	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 3 of 43)

Parameter name	Table
ALT_LIT_RES_NUM_FAILS_TO_SET	OFCENG
ALT_LIT_RES_NUM_PASSES_TO_CLR	OFCENG
ALT_TTT_USAGE_PERCENTAGE	OFCENG
ALT_TTU_USAGE_PERCENTAGE	OFCENG
AMA_EBCDIC_CONVERT	OFCENG
AMA_EBCDIC_CONVERT_ENABLE	OFCOPT
AMA_EQUIPPED	OFCSTD
AMA_FAILURE_FREE_CALL	OFCENG
AMA_FAILURE_ROUTE_POSITION	OFCVAR
AMA_LONG_DUR_AUDIT_INTERVAL	OFCENG
AMREP_ACTIVE	OFCOPT
ANI_IN_SMDR	OFCVAR
APPLY_PATCHES_BY_SEQUENCE	OFCENG
APS_REPORT_ALL_CALLS	OFCVAR
AQ_CLD_NUM_ON_NC	OFCOPT
ARI_CDR_VALUE	OFCVAR
AR_BLOCK_PRIVATE_CTX	OFCENG
AR_BLOCK_PRIVATE_RES	OFCENG
AR_BLOCK_PRIVATE_TOLL_METHOD	OFCENG
AR_DDN_LINE_OR_OFFICE	OFCENG
ASCS_DISABLE_LEVEL	OFCVAR
ASCS_MONITOR_DELAY	OFCVAR
ASCS_NOALARM_THRESHOLD	OFCVAR
ASCS_NOSEND_THRESHOLD	OFCVAR
ASCS_ROUTE_INDEX	OFCVAR
ASCS_TRUNK_TIMEOUT	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 4 of 43)

Parameter name	Table
ASR_AUDIT_TIME	OFCVAR
ASR_CUSTGRP	OFCVAR
ATT_NOSTART_DIALS	OFCSTD
AUDHIGHFREQ	OFCSTD
AUDIT_INTERVAL	OFCSTD
AUDLOWFREQ	OFCSTD
AUDMEDFREQ	OFCSTD
AUTO_ASSIGN_DNH_GRPNUM	OFCVAR
AUTO_ASSIGN_DNH_RANGE	OFCVAR
AUTOSPID	ISDNVAR
AUTO_SA_TIMEOUT	OFCVAR
AUXCP_CPU_SHARE	OFCENG
AVG_NUM_TGS_PER_OHCBQCALL	OFCENG
B911_3WC_ALLOWED	OFCENG
BACKUP_METER_FREQUENCY_LINES	OFCENG
BACKUP_METER_FREQUENCY_TRUNKS	OFCENG
BCS_NUMBER	OFCSTD
BC_CHECKING_SCOPE	OFCENG
BELL_ANI_ALARM_ID	OFCENG
BELL_ANI_INTERCEPT_ID	OFCENG
BICRELAY_NUM_SIMUL_TESTS	OFCVAR
BICRELAY_XLCM_TEST_SCHEDULE	OFCVAR
BLOCK_0_INF_INW_CALLS	OFCVAR
BLOCK_555_DIGITS	OFCENG
BLOCK_D_E_DIGITS	OFCENG
BRI_CLIP_GENERALLY_AVAILABLE	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 5 of 43)

Parameter name	Table
BT_MCI_TIMER	OFCVAR
BTUP_EMERG_ANNC	OFCVAR
BTUP_INTL_DGT_PREFIX	OFCENG
BTUP_NETWK_ID	OFCENG
BTUP_PARTIAL_CLI	OFCENG
BTUP_VER_IND	OFCENG
BUFFER_THRESHOLDED_REPORTS	OFCVAR
C11_EXPANSION	OFCENG
C11_OUTG_EXPANSION	OFCENG
C12_EXPANSION	OFCENG
C12_OUTG_EXPANSION	OFCENG
C12_PLUS_OUTG_EXPANSION	OFCENG
C7GTT_DELTA_FIL_ACTIVITY_STATE	OFCENG
C7UP_RSC_LOG_THRESHOLD	OFCVAR
C7_CHGOVER_SLMPR_THRESHOLD	OFCVAR
C7_NACK_ERROR_SLMPR_THRESHOLD	OFCVAR
C7_SLMPR_ALARM_ON	OFCVAR
C7_SU_ERROR_SLMPR_THRESHOLD	OFCVAR
CABLE_LOCATE_TIMEOUT	OFCENG
CABLE_SHORT_TIMEOUT	OFCENG
CALL_CONTROL_DEFAULTS	OFCVAR
CALL_REPORT_FORMAT	OFCVAR
CALL_TRF	OFCOPT
CAMA_SUSP_CALL_ALLOWED	OFCVAR
CARD_X53	OFCSTD
CASUAL_FEATURES_OFF	OFCOPT

Table 2-1 Parameter to table cross-reference (Sheet 6 of 43)

Parameter name	Table
CCMTR_FAILURE_FREE_CALL	OFCENG
CCS7_H0H1_RCP	OFCOPT
CCTO_COMB_BILL	OFCOPT
CCW_ACTIVE	OFCOPT
CCW_AS_LINE_OPTION	OFCVAR
CCW_WITHOUT_CWT_ALLOWED	OFCVAR
CC_ENGLEVEL_WARNING_THRESHOLD	OFCENG
CC_REX_SCHEDULED_HR	OFCENG
CDC_RESTRICTION_ACTIVE	OFCENG
CDIV_EXT_BLOCKS	OFCENG
CDIV_SDN_XLA	OFCVAR
CDO_ROUTE	OFCVAR
CDR_100_BYTE_FORMAT	OFCENG
CDR_FORMAT	OFCENG
CDS_DN_CHECK	OFCVAR
CFD_EXT_BLOCKS	OFCENG
CFGDA_SEND_PILOT_DN_TO_SMDI_ISUP	OFCVAR
CFFP_CONTROL	OFCENG
CFW_EXT_BLOCKS	OFCENG
CFX_SEPARATE_KEYLIST_FEATURE	OFCENG
CFZ_EXT_BLOCKS	OFCENG
CHANNEL_UNIT_601_PRESENT	OFCSTD
CHARGE_UPDATE_FREQUENCY	OFCENG
CHECK_FIELD_NAME	OFCSTD
CHECK_FOR_TMEM	OFCVAR
CHG_NUM_OF_TGS_FOR_PKT_18_22	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 7 of 43)

Parameter name	Table
CIRCUIT_QUERY_AUDIT_START_TIME	OFCENG
CIRCUIT_TEST_NUMBER_MESSAGES	OFCVAR
CKT_LOC	OFCOPT
CLF_ACCESS_CODE	OFCVAR
CLI_NATIONAL_PREFIX	OFCENG
CMAJALARM	OFCVAR
CMC_REX_SCHEDULED_HR	OFCENG
CMD_MAP_ENABLED	OFCVAR
CMG_ENABLED	OFCVAR
CMG_HLD_RINGBACK	OFCVAR
CMINALARM	OFCVAR
CM_PROCESSOR_OPTION	OFCOPT
CND_ON_SMS_REQD	OFCOPT
CNDB_ON_POTS	OFCVAR
COINDISPOSAL	OFCENG
COIN_DTF_TOTALIZER_RESET	OFCVAR
COIN_OPERATOR_RELEASED_ON_OA	OFCVAR
COIN_RETAIN_ON_OA	OFCVAR
COMMAND_SCREEN	OFCENG
CONSOLE_SILO_CHARS	OFCSTD
CONSOLE_SILO_RECORDS	OFCSTD
CONTINUOUS_RETRY_TIMERS	OFCVAR
COPP_RELAY_OPEN_TIME	OFCENG
COT_ANNOUNCEMENT_TYPE	OFCENG
CPERRORTHRESHOLD	OFCENG
CPM_EXTENDED	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 8 of 43)

Parameter name	Table
CPSTACKSIZE	OFCSTD
CREATE_PARTIAL_800_AMA	OFCVAR
CRS_ALARM_CRITICAL	OFCENG
CRS_ALARM_MAJOR	OFCENG
CRS_PRU_POOL1_SIZE	OFCENG
CRS_PRU_POOL2_SIZE	OFCENG
CRS_PRU_POOL3_SIZE	OFCENG
CRS_SUBRU_POOL1_SIZE	OFCENG
CRS_SUBRU_POOL2_SIZE	OFCENG
CRS_SUBRU_POOL3_SIZE	OFCENG
CRS_SUBRU_POOL4_SIZE	OFCENG
CRS_SUBRU_POOL5_SIZE	OFCENG
CSLINK_ALARM_THRESHOLDS	OFCENG
CSMI_CUST_PROG_CFW	OFCENG
CSMI_INTERCEPT_3WC_CONNECTION	OFCENG
CSMI_PPU_SCREENING_TIMER	OFCENG
CSMI_SCREENING_TIMER	OFCENG
CTFP_INFO	OFCENG
CUG_REGION	OFCSTD
CUSTOMER_DATA_CHANGE_LOGS	OFCVAR
CUSTOMER_GROUP_IBNGRP_OM_COUNT	OFCENG
CUTOFF_ON_DISC_TIME	OFCVAR
CWT_TIMEOUT	OFCVAR
CWT_TONE_LENGTH	OFCVAR
DAILY_ISDN_L2L3_PEG_AUDIT_TIME	OPCVAR
DATA_CALL_SMDR	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 9 of 43)

Parameter name	Table
DATA_COS	OFCENG
DB_MAX_SIZE	OFCENG
DCA_GATEWAY	OFCENG
DCH_BD_STATMUX_RATIO	OFCENG
DCM_PARITY_FILTER	OFCSTD
DCND_TIMERS	OFCENG
DCT_MEM_LIMIT	OFCENG
DCT_TEST_CALL_SPILL	OFCVAR
DEBUG_HUNT_SWERRS	OFCENG
DEF_AMR5_CAT_CODE	OFCENG
DEFAULTLANGUAGE	OFCENG
DEFAULT_BEARER_CAPABILITY	OFCENG
DEFAULT_CARRIER_OR_TREAT	OFCENG
DEFAULT_COMMANDCLASS	OFCENG
DEFAULT_DCA_NETWORK	OFCENG
DEFAULT_LSPAO	OFCENG
DEFAULT_LSPSO	OFCENG
DEFAULT_OVERLOAD_MESSAGING_LIMIT	ISDNVAR
DIAGALARM	OFCVAR
DIALBACKPW_ENCRYPTED	OFCVAR
DIGIT_COL_OFFICE_CODE	OFCSTD
DIRPKILL_IN_EFFECT	OFCSTD
DIRP_PFILE_AUDIT	OFCENG
DISCTO_TIMEOUT_VALUE	OFCENG
DISC_TIME_BILLED	OFCENG
DISKLOGMEMORY	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 10 of 43)

Parameter name	Table
DIST_CWT_TONE	OFCVAR
DIS_LKD_CKT	OFCOPT
DMSBUS_POLL_FREQUENCY	OFCENG
DM_HIT_TIME	OFCENG
DM_PCM_ENCODING	OFCENG
DND_ROUTE	OFCVAR
DNLPIC_MAX_NUM_DN_TUPLES	OFCENG
DNPIC_MAX_NUM_DN_TUPLES	OFCENG
DPREC_INTER_DIGIT_TIMING	OFCSTD
DRAM_BARGE_IN	OFCENG
DSR_OFFICE	OFCOPT
DTSR_AUTO_DEACTIVATION_ENABLE	OFCENG
DTULDINFO	OFCVAR
DTUOHBTLD	OFCVAR
DUMP_RESTORE_IN_PROGRESS	OFCSTD
DYNAMIC_MEMORY_SIZE	OFCENG
E2ALINKEQP	OFCENG
E911_AUD_RING_FROM_PSAP	OFCENG
E911_CHECK_DEFAULT_ESN	OFCVAR
E911_LDT_PSAP_SW_STATUS	OFCENG
E911_LOCAL_ACCESS_ROH_TONE_TIME	OFCENG
E911_NPD_TO_NPA_CONV_IN_EFFECT	OFCENG
E911_NPD_TO_NPA_CONV_IN_EFFECT	OFCSTD
E911_NUMBER_OF_FDBS	OFCENG
E911_PSAPS_USING_1_INFO_DIGIT	OFCSTD
E911_PSAP_DISCONNECT_TIME	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 11 of 43)

Parameter name	Table
E911_PSAP_OFFHK_ALARM_TIME	OFCVAR
E911_PSAP_REC_PRE_WK_TIME	OFCSTD
EADAS_ENABLED	OFCVAR
EADAS_GENERIC_ID	OFCVAR
EADAS_MPC_AND_LINK	OFCVAR
EADAS_POPULATE_HUNT_SECTIONS	OFCVAR
EADAS_SHORT_XFER_ALLOWED	OFCOPT
EAEO_FOUR_DIGIT_CIC_STATUS	OFCENG
EAEO_OFFICE_TYPE	OFCENG
EAEO_REC_1ST_PRE_WK_TIME	OFCSTD
EAEO_REC_2ND_PRE_WK_TIME	OFCSTD
EA_CCIS6_TANDEM_BILL	OFCENG
EA_FGD_MFTOSS7_CIP	OFCVAR
EA_ISUP_INTERMEDIATE_TANDEM	OFCENG
EA_LATANAME_IN_SERVORD	OFCOPT
EA_MF_SS7_EXT_BLOCK_COUNT	OFCENG
EA_OCS_AND_DP_OVLP_NEEDED	OFCENG
EA_OCS_DIGCOL_METHOD	OFCENG
EA_OSS_HOLD_TIMEOUT_MINS	OFCENG
EA_OVERLAP_CARRIER_SELECTION	OFCENG
EA_REC_1ST_PRE_WK_TIME	OFCSTD
EA_REC_MAX_WK_TIME	OFCSTD
EA_REC_SUB_PRE_WK_TIME	OFCSTD
EA_TAB_CICSIZE4_OBSOLETE	OFCENG
EA_TEST_CALL_SPILL	OFCVAR
EA_WITH_CD	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 12 of 43)

Parameter name	Table
EBS_BUZZ_SPLASH_ON	OFCENG
EBS_TO_TRUNK_TRD_TIME	OFCENG
ECORE_FORMAT	OFCVAR
EDTULDFILE	OFCVAR
ENET_AVAILABLE	OFCOPT
ENET_MAX_CHANNEL_GROUP	OFCOPT
ENG640M1_SCAN_RATE	OFCVAR
ENHANCED_ATTENDANT_DISPLAY	OFCENG
ENHANCED_COMMAND_SCREENING	OFCOPT
ENHANCED_DEAD_SYSTEM_ALARM	OFCENG
ENHANCED_PASSWORD_CONTROL	OFCOPT
ENHANCED_TRUNK_PREROUTE_ABANDON	OFCVAR
ERL_SPT	OFCOPT
ESAENTRY	OFCENG
ESAEXIT	OFCENG
ESG_ALARM	OFCVAR
ESG_RERING_TIME	OFCVAR
EXPANDED_INBAND_PERMITTED	OFCOPT
EXPIRED_PASSWORD_GRACE	OFCENG
E-R2_AN_WAIT_FOR_IDLE	OFCENG
FACALARM	OFCVAR
FCR_NUM_EXT_BLKS	OFCENG
FEATURE_ADMIN_CHARGE	OFCENG
FGD_ANI_SMDR_REQD	OFCVAR
FGD_TEST_CALL_ACK_OFFHOOK	OFCVAR
FIVMIN_SNAPSHOT_ENABLED	OFCOPT

Table 2-1 Parameter to table cross-reference (Sheet 13 of 43)

Parameter name	Table
FIXED_CFBD_DEFAULT_STATE	OFCVAR
FLEXIBLE_DIGIT_ANALYSIS	OFCOPT
FLOW_CONTROL_TIMEOUT	OFCENG
FOT_DIGITS	OFCVAR
FRB_RINGING_TIME	OFCOPT
FREEZE_ON_REINIT	OFCSTD
FREE_NUMBER_DENIAL	OFCOPT
FRIU_BILLING_COUNT_FORMAT	OFCOPT
FRR_ROUTING_RULES_OVERRIDE	OFCENG
FTRQ0WAREAS	OFCENG
FTRQ0WPERMS	OFCENG
FTRQ16WAREAS	OFCENG
FTRQ16WPERMS	OFCENG
FTRQ2WAREAS	OFCENG
FTRQ2WPERMS	OFCENG
FTRQ32WAREAS	OFCENG
FTRQ32WPERMS	OFCENG
FTRQ4WAREAS	OFCENG
FTRQ4WPERMS	OFCENG
FTRQ8WAREAS	OFCENG
FTRQ8WPERMS	OFCENG
FTRQAGENTS	OFCENG
FTRQAUDIT	OFCENG
FXOGS_REMBSY_BITS	OFCENG
GATEWAY_CDR_RECORD_ID	OFCOPT
GENERATE_CALL_RECORDING_LOGS	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 14 of 43)

Parameter name	Table
GENERATE_ICAMA_LOG_ENTRY	OFCVAR
GENERATE_ITOPS_LOG_ENTRY	OFCVAR
GEN_CDR300_ISDN_LOGS	OFCVAR
GEN_CDR300_MIDNT_LOGS	OFCVAR
GEN_CDR300_SYNC_LOGS	OFCVAR
GLOBAL_CUTOFF_ON_DISCONNECT	OFCENG
GOS_NUM_RU	OFCENG
GROUND_START_DELAY	OFCENG
GRP_NUM_FEAT_CTRL	OFCOPT
GUARANTEED_TERMINAL_CPU_SHARE	OFCENG
HBS_SPOOLER_ACT	OFCSTD
HM_INTERPULSE_TIME	OFCSTD
HM_PULSE_TIME	OFCSTD
HNT_SO_SIMPLIFICATION	OFCOPT
HPC_IAM_PRIORITY	OFCENG
IAA_REQUESTED	OFCVAR
IAM_USE_NAME_CHARS	OFCENG
IBN_CFW	OFCOPT
IBN_DATA_LINE_SPLIT	OFCOPT
ICAMA_ANI_FAILURE_ACTION	OFCVAR
ICAMA_REQUESTED	OFCVAR
ICT_DN_CHECK	OFCVAR
IGNORE_REGION_THRESH	OFCVAR
INHIBIT_AUTO_CONGESTION_CNTL	OFCVAR
ILR_OPTIONS	OFCOPT
IMAJALARM	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 15 of 43)

Parameter name	Table
IMINALARM	OFCVAR
IMMEDIATE_RING_ENABLE	OFCENG
IMMED_PRE_DIAL_DELAY	OFCSTD
IMP_DELAY	OFCENG
INTERCOM	OFCOPT
INTL_GATEWAY_OFFICE	OFCENG
INTL_ICR_REQUESTED	OFCVAR
INTL_INTRASWITCHING	OFCOPT
INTL_LOCAL_OFFICE	OFCENG
INTL_RU_OVFL_ACTION	OFCVAR
INTL_SILENT_SWITCHMAN_TMO	OFCVAR
INTRALATA_DEFAULT_USE_TRKLATA	OFCENG
INWATS_CCIS_OSO_ENABLE	OFCENG
INWATS_LOCAL_TERMINATION	OFCENG
INWATS_ON_AMA	OFCENG
ISDD_OM_THRESHOLD	OFCSTD
ISDD_OM_THRESHOLD	OFCSTD
ISDNBRI_CNAMD_CND_ONE_AMA	OFCENG
ISDNBRI_PRIVACY_CHANGE_ALLOWED	OFCVAR
ISDN_DPN_PH_GENERIC	OFCENG
ISDN_INFO_EXT_REC	OFCOPT
ISDN_LOSS_OF_SIG_DGASP_ALARM	OFCVAR
ISDN_LOSS_OF_SIG_NO_DGASP_ALARM	OFCVAR
ISDN_LOSS_OF_SYNC_WORD_ALARM	OFCVAR
ISDN_MPLU_NODE_FAILURE_ALARM	OFCVAR
ISDN_NET_1A_INTERWORKING	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 16 of 43)

Parameter name	Table
ISDN_NT1_TEST_MODE_ALARM	OFCVAR
ISDN_PERFORMANCE_MON_ALARM	OFCVAR
ISDN_T_SYNC_LOST_ALARM	OFCVAR
ISGBDOM_BLKSIZE	OFCENG
ISUP_SUBGRP_GLARE_AVAILABLE	OFCOPT
ITOPS_ACCOUNT_CODES	OFCENG
ITOPS_CHG_DISPLAY_DECIMAL	OFCVAR
ITOPS_ENHANCED_ACD	OFCENG
ITOPS_HIGH_TRAFFIC_START_TIME	OFCENG
ITOPS_LOW_TRAFFIC_START_TIME	OFCENG
ITS_NUM_CONCURRENT_SESSIONS	OFCENG
ITS_TEST_SESSION_TIMEOUT	OFCVAR
JPNI_ACM_ALWAYS_EXPECTED	OFCVAR
KEYSET_SRT	OFCOPT
KSET_INTER_GRP_DISP	OFCENG
KSHUNT_EXT_BLOCKS	OFCENG
KT_SELECTION_OPTION	OFCVAR
L2_DM_FRAME_RCVD	ISDNVAR
L2_DM_FRAME_SENT	ISDNVAR
L2_FRAME_RCVD_CNTRL_UNDEF	ISDNVAR
L2_FRAME_RCVD_INVALID_INFO	ISDNVAR
L2_FRAME_RCVD_INVAL_SEQ_NUM	ISDNVAR
L2_FRAME_RCVD_UNEXPECTED	ISDNVAR
L2_FRMR_FRAME_RCVD	ISDNVAR
L2_INVALID_FRAME_RCVD	ISDNVAR
L2_PROPER_RESPONSE_NOT_RCVD	ISDNVAR

Table 2-1 Parameter to table cross-reference (Sheet 17 of 43)

Parameter name	Table
L2_FRAME_RCVD_EXCD_INFO	ISDNVAR
L3_CLEAR_REQ_TRANS	ISDNVAR
L3_CLEAR_REQ_RCVD	ISDNVAR
L3_DIAG_PKT_TRANS	ISDNVAR
L3_DIAG_PKT_RCVD	ISDNVAR
L3_DISCONNECT_MSG_RCVD	ISDNVAR
L3_DISCONNECT_MSG_TRANS	ISDNVAR
L3_MSG_RCV_BAD_LENGTH	ISDNVAR
L3_MSG_RCVD_INVALID_INFO	ISDNVAR
L3_MSG_RCVD_INVALID_CR_FLAG	ISDNVAR
L3_MSG_RCVD_INVALID_CR_VALUE	ISDNVAR
L3_PROGRESS_MSG_TRANS	ISDNVAR
L3_RELEASE_COMPL_MSG_RCVD	ISDNVAR
L3_RELEASE_COMPL_MSG_TRANS	ISDNVAR
L3_RELEASE_MSG_RCVD	ISDNVAR
L3_RELEASE_MSG_TRANS	ISDNVAR
L3_RESET_REQ_TRANS	ISDNVAR
L3_RESET_REQ_RCVD	ISDNVAR
L3_RESTART_REQ_TRANS	ISDNVAR
L3_RESTART_REQ_RCVD	ISDNVAR
L3_STATUS_MSG_RCVD	ISDNVAR
L3_STATUS_MSG_TRANS	ISDNVAR
LAMA_OFFICE	OFCOPT
LAPB_ABN_LOG	ISDNVAR
LAPD16_ABN_LOG	ISDNVAR
LAPD_ABN_LOG	ISDNVAR

Table 2-1 Parameter to table cross-reference (Sheet 18 of 43)

Parameter name	Table
LAYER2_CIRCUIT_ABN_PEGS_THLD	OFCVAR
LAYER2_PACKET_ABN_PEGS-THLD	OFCVAR
LAYER2_PEGS_THRESHOLD_LEVEL	OFCVAR
LAYER2_SERVICE_DSRPT_THLD	OFCVAR
LAYER3_CIRCUIT_ABN_PEGS_THLD	OFCVAR
LAYER3_PACKET_ABN_PEGS_THLD	OFCVAR
LAYER3_PACKET_SVC_THLD	OFCVAR
LCARDALARM	OFCVAR
LCDI_SYNC_BURST	OFCENG
LCDI_SYNC_DELAY	OFCENG
LCDREX_CONTROL	OFCVAR
LCDR_SEC_ANI_TEST	OFCENG
LCML_SYNC_BURST	OFCENG
LCML_SYNC_DELAY	OFCENG
LCM_PM_MSG_CNT	OFCOPT
LDS_ALERT_NO_CLID	OFCENG
LDS_AUTO_PROV_ENABLED	OFCENG
LDS_CWT_TIMEOUT	OFCENG
LDS_ENABLED	OFCENG
LDS_OM_ENABLED	OFCENG
LDS_PATTERN	OFCENG
LDS_RINGING_ENABLED	OFCENG
LEAS_FOUR_DIGIT_CIC_STATUS	OFCENG
LEAS_SS7_ACTIVE	OFCVAR
LEAS_SS7_CIC	OFCVAR
LINE_CARD_MONITOR	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 19 of 43)

Parameter name	Table
LINE_WITH_CWT_CAN_FLASH	OFCVAR
LN_LONG_PARTIAL_DIAL_TIME	OFCENG
LN_PERM_SIG_TIME	OFCENG
LN_SHORT_PARTIAL_DIAL_TIME	OFCENG
LOCAL_COIN_INIT_TIME	OFCVAR
LOCAL_COIN_OVERTIME_FEATURE	OFCOPT
LOCAL_COIN_OVER_TIME	OFCVAR
LOG_CENTRAL_BUFFER_SIZE	OFCVAR
LOG_DEVICE_BUFFER_SIZE	OFCVAR
LOG_OFFICE_ID	OFCVAR
LOG_PRIORITIZATION	OFCENG
LONG_CALL_CDR_START	OFCENG
LONG_TIMED_RELEASE_DISC_TIME	OFCENG
LOOP_AROUND_TIMEOUT_IN_MIN	OFCVAR
LOOP_BACK	OFCOPT
LOWSPR_ALARM_ON_CARD_SPR_BASIS	OFCENG
LSCM_SYNC_BURST	OFCENG
LSCM_SYNC_DELAY	OFCENG
LSETALARM	OFCVAR
MARKET_OF_OFFICE	OFCENG
MAXIMUM_ONHK_FLASH	OFCSTD
MAXNUCS	OFCENG
MAXSTS	OFCENG
MAX_ACDMIS_SESSIONS	OFCOPT
MAX_BCLID_DATA_LINKS	OFCOPT
MAX_BRA_LINES	OFCOPT

Table 2-1 Parameter to table cross-reference (Sheet 20 of 43)

Parameter name	Table
MAX_CCS7_LINKS	OFCOPT
MAX_CMAP_SESSIONS	OFCENG
MAX_COLDS	OFCSTD
MAX_DATA_LINES	OFCOPT
MAX_DTA_ON_SWITCH	OFCENG
MAX_EMERG_ICI	OFCSTD
MAX_FIRMWARE_LOAD_MAIN_TASKS	OFCOPT
MAX_IAM_HOPS	OFCVAR
MAX_LAPB_TERMINALS	OFCOPT
MAX_LAPD_TERMINALS	OFCOPT
MAX_LINES	OFCENG
MAX_MADN_MEMBERS_PER_LSG	OFCENG
MAX_MBG_LINES	OFCOPT
MAX_MFT_FILES	OFCENG
MAX_NO_OF_3_PORTS_IN_CHAIN	OFCENG
MAX_NO_OF_TRANS_ID	OFCENG
MAX_NPT_SESSIONS	OFCENG
MAX_NRL_SESSIONS	OFCENG
MAX_NUM_ACD_AGENTS_PER_SWITCH	OFCOPT
MAX_NUM_CTX_ASSOC	OFCOPT
MAX_NUM_ECM_ACDEVENT	OFCOPT
MAX_NUM_ECM_CALLINIT	OFCOPT
MAX_NUM_ECM_CTXEVENT	OFCOPT
MAX_NUM_ECM_DNQUERY	OFCOPT
MAX_NUM_ECM__ICCM	OFCOPT
MAX_NUM_ECM_LINE_MAKECALL	OFCOPT

Table 2-1 Parameter to table cross-reference (Sheet 21 of 43)

Parameter name	Table
MAX_NUM_ECM_LINE_SCAI3WC	OFCOPT
MAX_NUM_ECM_LINE_SCAICC	OFCOPT
MAX_NUM_ECM_LINE_SCAIMWT	OFCOPT
MAX_NUM_ECM_RESEVENT	OFCOPT
MAX_NUM_ECM_RESOURCE	OFCOPT
MAX_NUM_ECM_ROUTING	OFCOPT
MAX_NUM_ECM_SCAI3WC	OFCOPT
MAX_NUM_ECM_SCAICC	OFCOPT
MAX_NUM_ECM_SCAIMWTI	OFCOPT
MAX_NUM_ECM_SVC	OFCOPT
MAX_NUM_ECM_TPAC	OFCOPT
MAX_NUM_ECM_TPQC	OFCOPT
MAX_NUM_ECM_TPCC	OFCOPT
MAX_NUM_PCM_RCVR	OFCENG
MAX_NUM_RES_ASSOC	OFCOPT
MAX_NUM_WIDEBAND_CALLS	OFCENG
MAX_PDATA_LINES	OFCOPT
MAX_PRI_LINKS	OFCOPT
MAX_PROGRAMMERS	OFCENG
MAX_RCUS_PER_SMU	OFCOPT
MAX_RES_LINES	OFCOPT
MAX_RMAP_SESSIONS	OFCVAR
MAX_ROUTE_QUEUED_PER_TRKGRP	OFCENG
MAX_SANITY_TIMEOUTS	OFCSTD
MAX_SDPOOL_NO	OFCENG
MAX_SUBSCRIBERS_IN_VLR	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 22 of 43)

Parameter name	Table
MAX_TRKMEM_PER_SWITCH	OFCOPT
MAX_TRUNKS_IN_ACB_SCAN	OFCENG
MAX_TRUNK_METER_BLOCKS	OFCENG
MAX_WARMS	OFCSTD
MCARDALARM	OFCVAR
MCCS_SEQ_CALL_LIM	OFCVAR
MCCS_SEQ_QUERY	OFCVAR
MCL_TONE_BURST_DURATION	OFCVAR
MCTIMER	OFCVAR
MCT_TONE	OFCVAR
METER_AUDIT	OFCENG
METER_PULSE_MISMATCH_THRESHOLD	OFCVAR
METER_PULSE_MONETARY_RATE	OFCVAR
MF_LAST_DIGIT_DELAY	OFCENG
MINIMUM_CHARGE_DURATION	OFCENG
MINIMUM_CLI_LENGTH	OFCENG
MINIMUM_ONHK_FLASH	OFCSTD
MIN_NUMBER_OF_DIGS_RPTD_ON_OVLP	OFCENG
MIN_PASSWORD_LENGTH	OFCENG
MIN_REC_DP_PULSE_WD	OFCSTD
MK_BRK_DP_OUTPULSING	OFCSTD
MOBILE_DEFAULT_CARRIER_OR_TREAT	OFCENG
MODEM_DIALBACK_CONTROL	OFCOPT
MONITOR_TABLE_ACCESS	OFCOPT
MSETALARM	OFCVAR
MTA_RLM_TIME	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 23 of 43)

Parameter name	Table
MTA_RMM_TIME	OFCVAR
MTCBASE_EXTRAMSG	OFCSTD
MTCBASE_SCPD	OFCSTD
MTULDINFO	OFCVAR
N5_ANSWER_PROP_DELAY	OFCOPT
N5_CLB_TIMER	OFCENG
N5_USING_UTR	OFCENG
N6_CLB_TIMER	OFCENG
NACD_BRDCAST_INTERVAL	OFCENG
NACD_RI_DELTA_PARM	OFCENG
NATIONAL_COUNTRY_CODE	OFCENG
NA_TOLL_FREE_TYPE	OFCOPT
NCCBS	OFCENG
NDIAGALARM	OFCVAR
NEMHEARTBEAT	OFCVAR
NETFAB_DAILY_DURATION	OFCVAR
NETFAB_SCHEDULE_ENABLED	OFCVAR
NETFAB_SCHEDULE_TIME	OFCVAR
NETMINDER_MPC_AND_LINK	OFCVAR
NETWORK_ACTIVE	OFCOPT
NETWORK_ELEMENT_ID	OFCENG
NETWORK_ICM_ACTIVE	OFCOPT
NEW_CF6P_CCT	OFCSTD
NEW_PS_PIPE	OFCSTD
NFA_ANSWER_DETECT_TIME	OFCENG
NFA_IMPLCT_BYPASS_UTR	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 24 of 43)

Parameter name	Table
NFA_IMPL_DISCON_RECON_TIMER	OFCENG
NFA_INVERTED_WINK_DURATION	OFCENG
NFA_PRE_DIAL_DELAY_TIME	OFCENG
NMS_ACKNOWLEDGEMENT_TIMEOUT	OFCENG
NMULTIBLKS	OFCENG
NODE	OFCENG
NODEREXCONTROL	OFCVAR
NOISE_MEAS	OFCOPT
NON_DMS_NAME_LOOKUP	OFCVAR
NOP_DNA_DEFAULT_ACCESS	OFCENG
NOP_USERID_SECURITY_ACCESS	OFCENG
NORTEL_ID	OFCSTD
NORM_CALL_SS7_IAM_MSG_PRIORITY	OFCENG
NOS_QUANTITY_OF_SVCS	OFCENG
NO_ANS_CALLS_ONTAPE	OFCENG
NO_OF_CLONE_TIDS	OFCENG
NO_ESB_RINGBACK_CYCLES_IDENT	OFCSTD
NO_ESB_RINGBACK_CYCLES_NONIDENT	OFCSTD
NO_LOCAL_COIN_EXT_BLKS	OFCENG
NO_OCCTS_OM_REGISTERS	OFCENG
NO_OF_CRITICAL_FTR_DATA_BLKS	OFCENG
NO_OF_FTR_CONTROL_BLKS	OFCENG
NO_OF_FTR_XLA_BLKS	OFCENG
NO_OF_HIS_CONTROL_BLKS	OFCENG
NO_OF_HIS_DATA_BLKS	OFCENG
NO_OF_HUGE_EXT_BLKS	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 25 of 43)

Parameter name	Table
NO_OF_LARGE_EXT_BLKS	OFCENG
NO_OF_LARGE_FTR_DATA_BLKS	OFCENG
NO_OF_MEDIUM_EXT_BLKS	OFCENG
NO_OF_MEDIUM_FTR_DATA_BLKS	OFCENG
NO_OF_PVN_EXTBLK	OFCENG
NO_OF_PVN_TERM_EXTBLK	OFCENG
NO_OF_SC_EXT_BLKS	OFCENG
NO_OF_SMALL_EXT_BLKS	OFCENG
NO_OF_SMALL_FTR_DATA_BLKS	OFCENG
NO_OF_VCDR_REC_UNITS	OFCENG
NO_OF_XLARGE_EXT_BLKS	OFCENG
NO_RING_ON_TIP_FOR_LM	OFCENG
NO_TFAN_OM_REGISTERS	OFCENG
NPAC204_THROTTLE	OFCVAR
NRS_AUD_DELAY	OFCENG
NRS_MP	OFCOPT
NRTEST	OFCOPT
NSS_DBCP_TCN_BLOCK_CALL	OFCVAR
NSS_DBCP_TCN_RESP_TIMEOUT	OFCVAR
NSS_RDD_REPLDIGS_LENGTH_A	OFCENG
NSS_RDD_REPLDIGS_LENGTH_B	OFCENG
NT6X98AA_PAD_SETTING	OFCENG
NTC_CALL_DURATION_ADJ	OFCVAR
NTC_CONN_REATTEMPTS	OFCVAR
NTC_REATTEMPTS	OFCVAR
NTC_RNGBACK_TIME	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 26 of 43)

Parameter name	Table
NTC_TIME_BTW_CONN_REATTEMPTS	OFCVAR
NTC_TIME_BTW_REATTEMPTS	OFCVAR
NTC_XLATIONS	OFCVAR
NUMBER_OF_CDR_UNITS	OFCENG
NUMBER_OF_DIGITS_PER_DN	OFCENG
NUMCALLPROCESSES	OFCENG
NUMCPWAKE	OFCENG
NUMECCBS	OFCENG
NUMIBNCQEXTBLK	OFCENG
NUMLONGBUFFERS	OFCENG
NUMOHCBQTRANSBLKS	OFCENG
NUMOUTBUFFS	OFCSTD
NUMPERMEXT	OFCENG
NUMTLBS	OFCENG
NUM_CALLREC_STREAMS	OFCENG
NUM_DCR_EXT_BLKS	OFCENG
NUM_DCR_NP_ACCESS	OFCENG
NUM_ENGR_NWM_TRKGRP_CTRLS	OFCENG
NUM_IBN_IXLA_EXT_BLOCKS	OFCENG
NUM_ICAMA_RECORDING_UNITS	OFCENG
NUM_ICT_EXT_BLKS	OFCENG
NUM_INTL_RECORDING_UNITS	OFCENG
NUM_ISUP_EXT_BLKS	OFCENG
NUM_MTR_EXT_BLOCKS	OFCENG
NUM_OF_CCIS_INWATS_BLOCKS	OFCENG
NUM_OF_INWATS_EXT_BLOCKS	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 27 of 43)

Parameter name	Table
NUM_OF_NSC_EXT_BLK	OFCENG
NUM_OF_NT_RECORDING_UNITS	OFCENG
NUM_OF_RTEB_EXTBLKS	OFCENG
NUM_RC_EXT_BLKS	OFCENG
NWMTGBLU	OFCENG
NWM_STR_CTRL	OFCOPT
NX25_RR_EACH	OFCENG
OAM_HW_PRESENT	OFCENG
OCCTS_DEFAULT_REG_LOG	OFCVAR
OCCTS_ENHANCED_FEATURE	OFCENG
OFFICETYPE	OFCSTD
OFFICE_CLLI_NAME	OFCENG
OFFICE_DS_FUNCTION_NUMBER	OFCENG
OFFICE_DS_SQD_SAMPLING_RATE	OFCENG
OFFICE_ID_ON_AMA_TAPE	OFCENG
OFFICE_ID_ON_CDR_TAPE	OFCENG
OFFICE_LANGUAGE	OFCENG
OMHISTORYON	OFCOPT
OMINERLANGS	OFCOPT
OMPRTFORMAT	OFCENG
OM_SOURCE_IDENTIFICATION	OFCVAR
OMTAPESUPPRESSION	OFCENG
OMTELCOLABEL	OFCENG
OMXFR	OFCENG
OPM_CHARGE_DURATION	OFCSTD
OPM_CHARGE_START_TIME	OFCSTD

Table 2-1 Parameter to table cross-reference (Sheet 28 of 43)

Parameter name	Table
OPM_DISCHARGE_TIME	OFCSTD
OPM_MIN_CHG_VOLT	OFCSTD
OPM_VOLT_TST_CHG	OFCSTD
OPM_VOLT_TST_DIS	OFCSTD
OPM_VOLT_TST_LTU_ADJUSTMENT	OFCSTD
OPM_VOLT_TST_OCC	OFCSTD
OPTIONAL_SLU_FEATURE	OFCOPT
ORIGS_TO_BLEED	OFCENG
ORIGTHRES	OFCENG
ORIG_ARTER_FREQUENCY	OFCVAR
ORIG_ARTER_LEVEL	OFCVAR
ORIG_INCREASE_SPM	OFCVAR
OS_CALLS_WAITING_Q_SIZE	OFCENG
OS_CT_SEARCH_DEPTH	OFCENG
OS_NUM_CALL_QUEUES	OFCENG
OS_NUM_POSITIONS	OFCENG
PKT_ABN_LOG	ISDNVAR
PASSWORD_ENCRYPTED	OFCOPT
PASSWORD_LIFETIME	OFCENG
PATCH_BUNDLE	OFCENG
PERFORMANCE	OFCVAR
PER_CALL_GND_LOOP_TEST	OFCVAR
PER_OPC_LOGDEV_BUFFER_SIZE	OFCVAR
PHINFO_AUDIT_TIME	OFCENG
PI_CALL_TOPO	OFCOPT
PLUS48V_OVERTIME_COIN_TEST	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 29 of 43)

Parameter name	Table
PM180	OFCSTD
PMSTAT_OM_CONTROL	OFCVAR
PM_PCM_PROTOCOL_SELECTION	OFCENG
POTS_CFW	OFCOPT
POTS_SIMULATE_1A	OFCVAR
PPMBUFFS	OFCENG
PREEMPTABLE_CONF6_THRESHOLD	OFCENG
PRE_ANI_SPILL_DELAY	OFCSTD
PRE_ROUTE_ABANDON_TRK116_LOG	OFCVAR
PRE_SND_WK_DD_TIME	OFCSTD
PRINTOUT_OF_CALLS	OFCVAR
PRINT_NET102_LOGS	OFCENG
PRI_LINK_PRICING	OFCOPT
PROMPT_HUNT_MEM_LCC	OFCVAR
PSPDALARM	OFCVAR
PSTN_GT_SIZE	OFCENG
Q931_ABN_LOG	ISDNVAR
QCUST_CMD	OFCOPT
QDIAGALARM	OFCVAR
QMSFM_NUM_QUEUES	OFCENG
QMSFM_NUM_SERVICES	OFCENG
QMSFM_NUM_STUDY_REG	OFCENG
R2DIG_ABNRML_DURING_IDLE	OFCENG
R2DIG_ABNRML_DURING_OPLS	OFCENG
R2DIG_ANSWER_FLTR_TIME	OFCENG
R2DIG_BLK_FLTR_TIME	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 30 of 43)

Parameter name	Table
R2DIG_CD_BITS	OFCENG
R2DIG_CLR_BCK_FLTR_TIME	OFCENG
R2DIG_CLR_FWD_FLTR_TIME	OFCENG
R2DIG_HOLD_SZ_IN_GLARE	OFCENG
R2DIG_IDLE_AFTER_GLARE	OFCENG
R2DIG_IDLE_FLTR_TIME	OFCENG
R2DIG_OG_CSM_FLTR_TIME	OFCENG
R2DIG_RE_ANS_FLTR_TIME	OFCENG
R2DIG_SEIZE_ACK_FLTR_TIME	OFCENG
R2DIG_SEIZE_FAILURE_TIME	OFCENG
R2DIG_SEIZE_FLTR_TIME	OFCENG
R2DIG_WAIT_FOR_ANSWER	OFCENG
R2DIG_WAIT_FOR_SEIZE_ACK	OFCENG
R2SM_TIMEOUT	OFCENG
R2_TEST_CALL_ANI	OFCENG
R2T2_WAIT_FOR_ANSWER_SEMIAUTO	OFCENG
R2T3_WAIT_FOR_ANSWER_AUTO	OFCENG
R2_AN_ANSWER_FLTR_TIME	OFCENG
R2_AN_BLK_FLTR_TIME	OFCENG
R2_AN_CLR_BCK_FLTR_TIME	OFCENG
R2_AN_CLR_FWD_FLTR_TIME	OFCENG
R2_AN_IDLE_FLTR_TIME	OFCENG
R2_AN_OG_CSM_FLTR_TIME	OFCENG
R2_AN_RE_ANS_FLTR_TIME	OFCENG
R2_AN_RLS_ACK_FLTR_TIME	OFCENG
R2_AN_RTS_GUARD_TIME	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 31 of 43)

Parameter name	Table
R2_AN_SEIZE_FLTR_TIME	OFCENG
R2_AN_WAIT_BEFORE_CF	OFCENG
R2_AN_WAIT_FOR_ANSWER	OFCENG
R2_AN_WAIT_FOR_IDLE	OFCENG
R2_AN_WAIT_FOR_RLS_ACK	OFCENG
R2_ANI_DENY	OFCVAR
RAG_DIGIT_FOR_ACTIVATION	OFCENG
RAG_QUE_LEN	OFCVAR
RAG_RECALL_TIMEOUT	OFCVAR
RASL_PROTOCOL	OFCOPT
RATE_PERIOD_SPECIFIC_BILLING	OFCSTD
RATING_SMALLEST_COIN	OFCVAR
RDT_OPTION_ENABLED	OFCENG
RDT_SO_AUTOCREATE_LNINV	OFCENG
RECORD_CLG_NPA_NXX	OFCVAR
RECORD_UNANSWERED_CALLS	OFCVAR
RECOVERY_INTERVAL_AFTER_RELOAD	OFCENG
RECOVERY_INTERVAL_AFTER_WARMCOLD	OFCENG
REC_MAX_DD_TIME	OFCSTD
REC_MAX_WK_TIME	OFCSTD
REC_MIN_DD_TIME	OFCSTD
REC_MIN_WK_TIME	OFCSTD
REC_PRE_DD_TIME	OFCSTD
REC_PRE_WK_TIME	OFCSTD
REDUCE_DIGMAN_ANS_DETECTION_TIME	OFCVAR
REMTERMEQP	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 32 of 43)

Parameter name	Table
RES_CHK_OOS	OFCVAR
RES_CMSG_ACCESS_AND_ERROR_TMT	OFCVAR
RES_SO_SIMPLIFICATION	OFCVAR
REVERSE_DISPLAY_ALLOWED	OFCVAR
REVERSE_EC_EQUIP	OFCENG
REVRING	OFCENG
RING_NO_ANSWER_TMO	OFCENG
RINGCTRL_MIN_VALUE	OFCENG
RINGCTRL_ZERO_CAN_RING	OFCENG
RLCM_ESAENTRY_BADCSIDE	OFCENG
RLCM_ESAENTRY_BADLINK	OFCENG
RLCM_ESASDUPD_BOOL	OFCENG
RLCM_ESASDUPD_HOUR	OFCENG
RLCM_ESA_NOTIFY_TONE	OFCENG
RLCM_XPMESAEXIT	OFCENG
RLM_INTRA_OPT	OFCOPT
RMAN_REASGNAGT_CHGROUTE_IN_DUMP	OFCVAR
RMSG_MAJALARM	OFCVAR
RMSG_MINALARM	OFCVAR
RMSYNC_BURST	OFCENG
RMSYNC_DELAY	OFCENG
RNG_TMEOUT_NO_OF_SECS	OFCENG
RNG_TMEOUT_TKLN_SECS	OFCENG
RONIXFR	OFCSTD
ROTL_OUT_OF_SERVICE_LEVEL	OFCENG
ROTL_TIME_IN_20MIN	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 33 of 43)

Parameter name	Table
ROUTE_ON_FOT	OFCENG
RP_INTER_SELECTION_TIMER	OFCSTD
RP_INTRA_SELECTION_TIMER	OFCSTD
RP_OVERALL_TIMER	OFCSTD
RSC_ESAENTRY_BADCSIDE	OFCENG
RSC_ESASDUPD_BOOL	OFCENG
RSC_ESASDUPD_HOUR	OFCENG
RSC_ESA_NOTIFY_TONE	OFCENG
SAPARMS	OFCENG
SCAI_CONTINUITY_AUDIT_INTERVAL	OFCVAR
SCC2_LOGS	OFCOPT
SCREEN_AC_LOGIDS	OFCENG
SC_OP_ANI_REQ_TIME	OFCENG
SDB_QUERY_TIMEOUT	OFCENG
SDIAGALARM	OFCVAR
SDOC3_ENABLE	OFCOPT
SDS_ENABLED	OFCENG
SEAS_BUFFER_VOL	OFCENG
SEAS_LRF_GTT_OCC	OFCVAR
SEAS_LRF_GTT_PER	OFCVAR
SEAS_LRF_MTP_OCC	OFCVAR
SEAS_LRF_MTP_PER	OFCVAR
SEAS_MSG_BLK_NUM	OFCENG
SEAS_MSG_BLK_VOL	OFCENG
SEAS_SEG_SIZE	OFCENG
SEAS_TIME_ZONE	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 34 of 43)

Parameter name	Table
SEAS_UAL_RETRY_COUNT	OFCENG
SEAS_UAL_SEAC_NODE_NAME	OFCENG
SEAS_UAL_SITE_TO_SITE_TIMER	OFCENG
SEAS_UAL_STP_NODE_NAME	OFCENG
SEP_EQUIPPED	OFCENG
SET_TO_UNBALANCE	OFCENG
SHORT_TIMED_RELEASE_DISC_TIME	OFCSTD
SIG_TST	OFCVAR
SILENT_SWITCHMAN_TIMEOUT	OFCENG
SIMRING_CENTREX_CONTROL	OFCENG
SIMRING_RES_CONTROL	OFCENG
SLE_ITEMS_IN_SEGMENT	OFCENG
SLE_LANGUAGE	OFCVAR
SLE_MAX_PROGRAMMERS	OFCENG
SLE_MAX_SEGMENT_COUNT	OFCENG
SLE_TCAP_RESPONSE_TIME	OFCENG
SLE_TRANSACTION_THRESHOLD	OFCENG
SLE_VOICEBACK_PUBLIC_ICM	OFCVAR
SLE_WAKEUP_TIME	OFCENG
SLNETWORK_NAME	OFCVAR
SLU_7DIGIT_DN	OFCVAR
SLVP_RCHD_TIMER	OFCVAR
SMDR_LOG_RPT	OFCVAR
SMDR_OFFICE	OFCOPT
SND_DD_TIME	OFCSTD
SND_DP_WK_TIME	OFCSTD

Table 2-1 Parameter to table cross-reference (Sheet 35 of 43)

Parameter name	Table
SND_MF_WK_TIME	OFCSTD
SOUTHBOUND	OFCENG
SO_BULK_DMO	OFCOPT
SO_BULK_DMO_MOB	OFCOPT
SO_CICP_OFRT_ICP_ALLOWED	OFCVAR
SO_DID	OFCOPT
SO_ECHO	OFCOPT
SO_ECHO_MOB	OFCOPT
SO_PROMPT_FOR_CABLE_PAIR	OFCVAR
SO_PROMPT_FOR_LTG	OFCVAR
SO_RCF	OFCOPT
SPANISH_OUTGOING_RINGING_TIMEOUT	OFCENG
SPCCLITIMEOUT	OFCENG
SPCL_SECURITY_A_DR	OFCVAR
SPDD_DIGIT	OFCENG
SPECIAL_AMA_REPORT	OFCVAR
SPEED_CALL_ACCESS_DIGITS	OFCOPT
SPILL_ANI_9	OFCENG
SPILL_SPB_ON_ES_TRKS	OFCVAR
SPMS_START_OF_MONTH	OFCENG
SPP_MAX_PROGRAMMERS	OFCENG
SRA_BILLING	OFCENG
SRA_TIMERS	OFCENG
SRA_TREATMENT	OFCENG
SRCF_FILE_VOLNAME	OFCVAR
SRDBUPD_SWITCH_ID	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 36 of 43)

Parameter name	Table
SS7_CONGESTION_CONTROL_TIME	OFCENG
SSP_EA_ACKWINK_DELAY_TIME	OFCENG
SSP_NSC_CARRIER_ID	OFCENG
STINV_BLOCK_SIZE	OFCENG
ST_AUDIT_START_TIME	OFCENG
SUPPRESS_ANI_TO_CLID_DISPLAY	OFCENG
SUPPRESS_USERNAME	OFCOPT
SURV_AUTOCONFERENCE_LINEATTR	OFCVAR
SWCT_AMA_PREBILLING	OFCENG
SWHK_FLTR_TIME_400MS_ENABLED	OFCSTD
SWHK_FLTR_TIME_640MS_ENABLED	OFCSTD
SYSLOG_ACCESS	OFCVAR
T108ISDN_TIMEOUT_IN_MINUTES	OFCENG
TABLE_ACCESS_CONTROL	OFCVAR
TABLE_ADJNODE_INUSE	OFCENG
TALK_BATTERY_ALARM	OFCENG
TAPEXLATE	OFCENG
TASINTVL	OFCVAR
TBI_CONNECT_OPR_A	OFCVAR
TBI_FORCE_RELEASE	OFCVAR
TBI_OFFER	OFCVAR
TBI_OPR_TIMEOUT	OFCVAR
TCAPNM_BLK_QUERY_PRIV_DNS	OFCVAR
TCAPNM_INTERLATA_QUERY	OFCVAR
TCMALARM	OFCVAR
TCM_SYNC_LINES	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 37 of 43)

Parameter name	Table
TCM_SYNC_MONITOR_PERIOD	OFCENG
TCM_SYNC_THRESHOLD	OFCENG
TCW_Offered_ON_DSCWID	OFCENG
TEI_IIDENTITY_VERIFY_MSG	ISDNVAR
TEI_MULTPLE_RESPONSE	ISDNVAR
TEI_NO_RESPONSE	ISDNVAR
TEI_NOT_ASSIGNED	ISDNVAR
TEI_ROUTINE_TEST	ISDNVAR
TEI_SUBSCRIPTION_LIMITS_EXCD	ISDNVAR
TEI_UNSOLICITED_RESPONSE	ISDNVAR
TERM_ARTER_FREQUENCY	OFCVAR
TERM_ARTER_LEVEL	OFCVAR
TERM_REV_FREQ_ANN_TIME	OFCSTD
TEST_CALL_AMR_SPILL	OFCVAR
TEST_CALL_II_SPILL	OFCVAR
TEST_CALL_SPILL	OFCVAR
TEST_R2_ANI_DENY	OFCVAR
TFAN_DEFAULT_REG_LOG	OFCENG
TFAN_ENHANCED_FEATURE	OFCOPT
THRESHOLD_IS_SAMPLING	OFCVAR
TIME_MANAGEMENT_INTERVAL	ISDNVAR
TIE_ROUTE_INFO_EXT_REC	OFCOPT
TLINK_DELAY	OFCENG
TLINK_DET_TIMEOUT	OFCENG
TLINK_EST_TIMEOUT	OFCENG
TOLL_DIVERSION_SIGNAL	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 38 of 43)

Parameter name	Table
TOLL_OFFICE_DELAYED_BILLING	OFCENG
TOPS_0PLUS_LOCAL	OFCENG
TOPS_ACCS_ACG	OFCENG
TOPS_ACCS_ACG_SIZE	OFCENG
TOPS_ACCS_MANUAL_VALIDATION	OFCENG
TOPS_ACTS	OFCENG
TOPS_AGS	OFCVAR
TOPS_ASST_POS	OFCENG
TOPS_BRAND_DISPLAY	OFCENG
TOPS_BRAND_INWARDS	OFCENG
TOPS_BRAND_OFFICE	OFCENG
TOPS_CALLS_WAITING_Q_SIZE	OFCENG
TOPS_CALLS_WAITING_SEARCH_DEPTH	OFCVAR
TOPS_CLD_TIME_AND_CHG_NO_ACTS	OFCVAR
TOPS_CROSS_TEAM_ROUTING	OFCVAR
TOPS_DA_PARS_ENABLE	OFCOPT
TOPS_DISPLAY_AWT	OFCVAR
TOPS_DISPLAY_MON	OFCVAR
TOPS_DISPLAY_ST	OFCVAR
TOPS_DUMP_STUDY_REG	OFCVAR
TOPS_EA_DNPC_LOG_GENERATION	OFCVAR
TOPS_EA_INTERLATA_NONOPR_AMA	OFCENG
TOPS_EA_PROCESS_T_SEL	OFCVAR
TOPS_EQUAL_ACCESS_OFFICE	OFCENG
TOPS_EXPANDED_OPRNUM	OFCENG
TOPS_FGB_CC134	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 39 of 43)

Parameter name	Table
TOPS_FIXED_DURATION	OFCENG
TOPS_GEN_AMA_SET	OFCENG
TOPS_HOLD_LOCAL	OFCVAR
TOPS_INTRUSION_TONE	OFCOPT
TOPS_MANUAL_DATABASE_ORIG	OFCVAR
TOPS_MAN_DATABASE_ORIG_DISPLAY	OFCVAR
TOPS_MAX_OPERATOR_NUM	OFCENG
TOPS_MAX_ORIG_RATE_CENTER	OFCENG
TOPS_MAX_TERM_RATE_CENTER	OFCENG
TOPS_MCCS_BNS	OFCOPT
TOPS_MCCS_CCV	OFCOPT
TOPS_MFADS_OUTPUT_XFR_NUMBER	OFCVAR
TOPS_MFADS_PERIOD	OFCENG
TOPS_MFADS_POLLING_ID	OFCVAR
TOPS_NIGHT_ALARM_ON_POS_BUSY	OFCENG
TOPS_NUMBER_OF_MEMO_PADS	OFCENG
TOPS_NUM_CAMA_RU	OFCENG
TOPS_NUM_OC_EXT	OFCENG
TOPS_NUM_RU	OFCENG
TOPS_NUM_STUDY_REG	OFCENG
TOPS_NUM_TRAFFIC_OFFICES	OFCENG
TOPS_OCCUPANCY_CALC_METHOD	OFCENG
TOPS_OC_ENVIRONMENT	OFCENG
TOPS_OC_REMOTE_BVC	OFCENG
TOPS_OTC_CARRIER_NUMBER	OFCVAR
TOPS_PARS_TONE_LENGTH	OFCVAR

Table 2-1 Parameter to table cross-reference (Sheet 40 of 43)

Parameter name	Table
TOPS_PASSWORD_ENABLE	OFCENG
TOPS_PEG_MODE	OFCENG
TOPS_PO_PB_CHARS	OFCOPT
TOPS_QMS_MAX_ACTIVE_CALL_QUEUES	OFCENG
TOPS_SDB_CCV_QUERY_BLK	OFCENG
TOPS_SEL_XFR_OPR_TRK	OFCOPT
TOPS_START_OF_DAY	OFCVAR
TOPS_STATSPAC_PERIOD	OFCENG
TOPS_STATSPAC_POLLING_ID	OFCVAR
TOPS_SUPPRESS_CW	OFCOPT
TOPS_TAC_RECALL	OFCVAR
TOPS_TANDEMED_411_CC009	OFCVAR
TOPS_THIRD_BILL_ACC_REQD_SET	OFCVAR
TOPS_THRESHOLD	OFCENG
TOPS_TRANSFER_TYPES	OFCENG
TOPS_VERIFICATION_BARGE_IN	OFCVAR
TOPS_ZERO_FB_REG	OFCVAR
TOTAL_ROUTE_QUEUED_CALLS	OFCENG
TQMS_MIS_MPC_BUFFS	OFCENG
TRA125M1_SCAN_RATE	OFCVAR
TRA125M2_SCAN_RATE	OFCVAR
TRA250M1_SCAN_RATE	OFCVAR
TRAFFIC_INFO_EXT_REC	OFCOPT
TRAP_THRESHOLD	OFCSTD
TRBQ_EBS_LINE_AFTER_MISDIALS	OFCENG
TRIGDIG_NUM_DGLTR_POOLS	OFCENG

Table 2-1 Parameter to table cross-reference (Sheet 41 of 43)

Parameter name	Table
TRKLPBK_TIMEOUT_IN_MINUTES	OFCVAR
TRK_MEMSEL_AUDIT_TIME	OFCENG
TRK_OOS_CHK_ON	OFCVAR
TRUNK_QUERY_AUDIT_TIME	OFCVAR
TSO_FIRST_STAGE_TIMEOUT	OFCVAR
TSTLN_OP_DELAY	OFCVAR
TTR_SELECTION_OPTION	OFCVAR
TWO_WAY_FOR_AMR5	OFCOPT
TWO_WAY_FOR_OC	OFCOPT
TWO_WAY_FOR_OP	OFCOPT
TYPE_OF_ACCS	OFCENG
TYPE_OF_NETWORK	OFCENG
U3WC_ELAPSED_TIME	OFCENG
U3WC_FLASH_ONLY	OFCENG
U3WC_POTS_ENABLED	OFCENG
UCD_QSL_AUDIT_INTERVAL	OFCSTD
UCFW_STAYS_ON_LINE	OFCENG
UDIAGALARM	OFCVAR
UK_OP_DELAY	OFCENG
UNIQUE_BY_SITE_NUMBERING	OFCENG
UNIVERSAL_AMA_BILLING	OFCENG
USAID_CLID_BLK_SC	OFCVAR
USE_ZEROMPOS_FOR_CAMA	OFCENG
USINGSITE	OFCOPT
USP_ENABLED	OFCENG
US_CUG_ENABLED	OFCOPT

Table 2-1 Parameter to table cross-reference (Sheet 42 of 43)

Parameter name	Table
UT_MAX_AND_CURRENT_TRUNK_COUNT	OFCOPT
UVM_DEPOSIT_PRIV_DN_TMT	OFCVAR
VALIDATE_CCITT_LUHN_DIGIT	OFCENG
VARIABLE_STUTTER_DIALTONE_TIMING	OFCVAR
VCDR_OFFICE	OFCOPT
VCDR_OFFICE_FORMAT	OFCENG
VPN_PREFIX_DIGS	OFCENG
VSLE_PRESENT	OFCOPT
VSN_SIMULATOR_ON	OFCENG
WAKEUP_REREQUEST_DELAY	OFCENG
WAKEUP_RINGING_TMO	OFCENG
WHOS_CALLING_ENABLED	OFCVAR
WK_DD_PRE_DIAL_DELAY	OFCSTD
WLC_OV_REPORTING	OFCVAR
WLN_DEFAULT_TIMEOUT	OFCVAR
WML_ACCESS_CODE	OFCVAR
WUCR_RINGING_TIMEOUT	OFCENG
XBARCAB1	OFCVAR
XBARCAB2	OFCVAR
XBARSAT1	OFCVAR
XBARSAT2	OFCVAR
XBAR_OVERFLOW_ON	OFCVAR
XID_DESTINATION_ID	OFCVAR
XPMOCC_OM_CONTROL	OFCVAR
XPMOVLD_OM_CONTROL	OFCVAR
XPM_CSIDE_DMSX	OFCOPT

Table 2-1 Parameter to table cross-reference (Sheet 43 of 43)

Parameter name	Table
XPM_MATE_DIAGNOSTICS_AVAILABLE	OFCOPT
XPM_PARITY_THRESHOLD	OFCSTD
ZERO_MINUS_TO_CARRIER	OFCENG
ZERO_PLUS_FEATURE	OFCOPT
ZONE_OF_ORIGIN	OFCENG

3 OFCENG parameters

This chapter contains the office engineering (OFCENG) table parameter descriptions. For information on the OFCENG table parameter descriptions, refer to the Office parameters summary in Volume 1.

ACB_BLOCKED_FOR_ACD_UCD

Parameter name

Automatic Call Back Blocked for Automatic Call Distribution Uniform Call Distribution

Functional description

The user uses this parameter to enable or disable the following on an office wide basis:

- Automatic Call Back (ACB) activations toward Automatic Call Distribution (ACD)
- Uniform Call Distribution (UCD) terminals

Rules in Provisioning

N allows ACB activation to ACD or UCD terminals on an office-wide basis. If this is desired, leave the default value set to N.

Y disables ACB activation to ACD or UCD terminals on an office-wide basis. If this is desired, use table control to set value to Y.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not affect memory.

ACB_BLOCKED_FOR_ACD_UCD (end)

Dump and restore rules

If the FPB44 patch that implements the functionality is not active on the dump side, this office parameter is set to N.

If the FPB44 patch that implements the functionality is active on the dump side, this office parameter is set to Y.

Parameter history

NA007

This parameter was introduced in NA007.

ACCS_NUM_RU

Parameter name

Automated Calling Card Service Number of Recording Units

Functional description

This parameter specifies the number of Automated Calling Card Service (ACCS) recording units (RU) allocated for ACCS call processing.

Rules in provisioning

Set the value of this parameter equal to the maximum number of ACCS calls that can be in progress at the same time.

Range information

Minimum	Maximum	Default
0	32767	100

Activation

Increase - immediate

Decrease - cold restart

Dependencies

Does not apply

Consequences

Underprovisioning of this parameter results in not enough recording units allocated for ACCS call processing.

Overprovisioning of this parameter results in wasted memory.

Verification

Does not apply

Memory requirements

Each recording unit requires 91 words of memory.

Dump and restore rules

This parameter was introduced in BCS31.

Copy the current value of this parameter when you perform a dump and restore.

ACCSDB_RESPONSE_DELAY

Parameter name

Automated Calling Card Service Database Response Delay

Functional description

A Traffic Operator Position System (TOPS) switching unit with Automated Calling Card Service (ACCS) that has the Exchange Alternate Billing Services feature requires this parameter.

This feature applies to intra-LATA calls. This feature provides software capability to use transaction capability application part (TCAP) to query a line information database (LIDB). The TCAP can query a LIDB through the Signaling System 7 (SS7) network. The ACCS provides capabilities like calling card validation (CCV) queries and billed number screening (BNS) queries. These ACCS capabilities are like MCCS capabilities, but the ACCS provides additional line information.

When the query includes a personal identification number (PIN), the system sends a CCV query. If the query does not include the PIN, the system sends a BNS query.

A local application provides a database simulator.

Table ACCSDB is the database for the local application and contains simulated database responses from the LIDB.

Table QUERYTYP contains the databases for the billed digits.

This parameter specifies the delay, in 1 s intervals, for the simulation of access delay from the LIDB. The LIDB is table ACCSDB for the local application.

Rules in provisioning

Specifies the delay, in 1 s intervals, for the simulation of access delay from the LIDB.

Range information

Minimum	Maximum	Default
0	256	1

ACCSDB_RESPONSE_DELAY (end)

Activation

Immediate

Dependencies

The following parameters also associate with this feature:

- TOPS_MCCS_CCV in table OFCOPT
- TOPS_MCCS_BNS in table OFCOPT

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

This parameter was introduced in BCS24.

Copy the current value of this parameter when you perform a dump and restore.

ACD_MIS_OUT_EVENT_BUFFER_SIZE

Parameter name

Automatic Call Distribution Management Information System Outgoing Event Buffer Size

Functional description

This parameter determines the current outgoing event buffer size allocated for Automatic Call Distribution Management Information System (ACD MIS) sessions.

The ACD MIS Application provides protocols that enable a Down Stream Processor (DSP) to request and collect ACD information from the switch. This information provides real time statistics and previous reports.

The outgoing buffer stores DSP replies, like return error and return result. The buffer also stores ACD MIS invocations, like SWITCHENDSUBPOOLDATA and SWITCHENDOFINIT.

If this parameter is set to the maximum value of 200, the buffer can hold a maximum of 150 remaining replies and invocations.

The user uses field OUTEVENT in table ACDMISPL to engineer the size of the ACD MIS outqueue on a per session base.

This parameter provides the default value for field OUTEVENT in table ACDMISPL when the field has not been used. If a value is not entered in field OUTEVENT, the value specified by this parameter is used. Through the use of the value of this parameter, all of the ACD MIS pool values can be set to the value of ACD_MIS_OUT_EVENT_BUFFER_SIZE.

The system allocates memory on a per pool base as defined in field OUTEVENT in table ACDMISPL. Not on the value of this parameter.

Rules in provisioning

If the user requires a buffer size other than the default specify the size of the buffer. The default is 110.

ACD_MIS_OUT_EVENT_BUFFER_SIZE (continued)

Range information

Minimum	Maximum	Default
100	200	110

Activation

Do not change this parameter while a session is active. The new size for the buffer is allocated once a session is logged in.

Dependencies

The user uses field OUTEVENT to engineer the size of the ACD MIS outqueue on a per session base. Refer to table ACDMISPL for field OUTEVENT.

Consequences

If this parameter is underprovisioned, event messages discard if the user makes an attempt to enqueue the messages in a full queue.

If this parameter is overprovisioned, the system allocates additional data store.

Verification

Any nonzero value in field MISLOST of operational measurement (OM) group ACDMISPL indicates underprovisioning.

Refer to the *Operational Measurements Reference Manual* for a description of OM GROUP ACDMISPL.

Memory requirements

The system allocates data store on a per pool base as defined in field OUTEVENT in table ACDMISPL.

Dump and restore rules

This parameter was introduced in BCS25.

Copy the existing value of this parameter when a dump and restore is performed.

ACD_MIS_OUT_EVENT_BUFFER_SIZE (end)

Parameter history

CSP06

The parameter ACD_MIS_OUT_EVENT_BUFFER_SIZE is now hard-coded to its maximum recommended value (200) and is no longer accessible to the user.

ACD_OVERFLOW_BLOCKS

Parameter name

Automatic Call Distribution Overflow Blocks (ACD Overflow Blocks)

Functional description

A switching unit with the Automatic Call Distribution (ACD) feature requires the ACD Overflow Blocks parameter. This parameter determines the number of ACD extension blocks.

All queued and ringing ACD calls require these extension blocks. These blocks store additional data for base ACD. The value for this parameter determines the maximum number of simultaneous queued or ringing calls.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

Set the value of this parameter to the maximum number of simultaneous queued or ringing calls.

In the worst case, the number of ACD_OVERFLOW_BLOCKS required is the number of agent positions added to the total of the MAXCQSIZ fields of the ACD groups that appear in table ACDGRP.

The engineering group can determine the maximum number of simultaneous ringing or queued calls for a switch. If this number is smaller than the maximum number for the worst case, these values determine the value of this parameter.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

ACD_OVERFLOW_BLOCKS (continued)

Range information

Minimum	Maximum	Default
0	4094	30

Activation

Increase is immediate.

A cold restart decreases this parameter.

Dependencies

Does not apply

Consequences

The system routes incoming ACD calls that exceed the value that the parameter determines to treatment. This event occurs when the parameter is underprovisioned.

The value of the parameter can be overprovisioned. This event wastes data store.

Verification

To verify that enough recording units are allocated, use the CI command OMSHOW EXT ACTIVE and read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
77 ACD_OVFLINQ_EXTENSION
30
        0             0            0             0
        0
```

Any value that is not zero in EXTOVFL indicates that the parameter is underprovisioned.

Measurement EXTHI records the maximum number of extension blocks in use at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each unit requires 17 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

BCS27

BCS27 introduces this parameter.

ACD_TOLL_DELAYED_BILLING

Parameter name

Automatic Call Distribution Toll Delayed Billing (ACD_TOLL_DELAYED_BILLING)

Functional description

The office parameter ACD_TOLL_DELAYED_BILLING allows the toll office to control the point in the queue ACD at which calls are offhook. If the bool is set to N, billing starts when the caller enters the queue. If the bool is set to Y, billing does not start until an idle agent answers the caller. An attendant console can answer the call before the call is extended to the ACD position. In this event, an offhook condition is reported back to the toll office to start billing.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
N	Y	N

Activation

Immediate

Dependencies

Not applicable

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Each unit requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

ACT_MAX_DURATION

Parameter name

Activity MAP Level Maximum Duration

Functional description

The ACT MAX DURATION parameter specifies the maximum value that can pass to the commands START or STRTLOG in the ACTIVITY MAP level. If you enter a duration value greater than the value of this parameter, the system generates an error message.

The command STRTLOG has an optional parameter of time duration in minutes. If the user does not enter a value, the duration defaults to the value of this parameter. A STRTLOG FOREVER overrides the setting of this parameter.

The operating company can use the tool ACTIVITY at the MAP level, to confirm that a switch operates and handles calls correctly. The tool permits the operating company to monitor rates of traffic, occupancy, and grade of service that subscribers receive. The use of the tool reduces the performance of the call processing activity on the switch. As a result, when the tool reaches the value that this parameter specifies, the tool turns off.

Rules in provisioning

When the user enters ACTIVITY, the counter/timer is set to the value of this parameter in hours and minutes. The counter/timer appears in the top right corner of the MAP display. If the value of the parameter is 255, the timer is set to 4 h 15 min. This timer is a count-down timer that updates every 5 s. When the counter reaches 0, ACTIVITY turns off.

You can change this value when the logs for ACTIVITY run. Log reports that are not complete are lost when the time limit expires. The system normally generates log reports that are not complete every 15 to 17 min.

If the user requires a 3 h limit, 195 min is better than 180 min. If you take this action, the system can generate the last log report.

Range information

Minimum	Maximum	Default
0	510	225

ACT_MAX_DURATION (end)

Activation

Activation is immediate.

Dependencies

Not applicable

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

ACTIVE_DN_SYSTEM

Parameter name

Active Directory Number System

Functional description

Parameter ACTIVE_DN_SYSTEM describes the format of the directory numbers (DN) used in an office. The values available follow:

- NORTH_AMERICAN
- ENHANCED_NORTH_AMERICAN
- UNIVERSAL

The setting of this parameter determines the maximum size of table TOFCNAME. Refer to table TOFCNAME in the *Translations Guide, data schema section*.

Provisioning rules

The default value of the parameter is NORTH_AMERICAN. Switches in North America can use either of the values NORTH_AMERICAN or UNIVERSAL.

European applications use the value UNIVERSAL. APC applications use the value ENHANCED_NORTH_AMERICAN. Do not use the ENHANCED_NORTH_AMERICAN value for Local Number Portability (LNP) applications.

Set the parameter to UNIVERSAL or ENHANCED_NORTH_AMERICAN if offices have datafill in any of the tables that follow:

- directory number code (DNCODE)
- directory number head (DNHEAD)
- directory number route (DNRTE)

A manual change or the One-Night Process (ONP) sets the parameter value.

The NORTH_AMERICAN setting

- controls the 3-3-4 (NPA-NXX-DEFG) format in table DNINV
- supports up to 100 different area and office code combinations in table TOFCNAME

The ENHANCED_NORTH_AMERICAN setting

- controls the 3-3-4 (NPA-NXX-DEFG) format in table DNINV
- supports up to 8151 different area and office code combinations in table TOFCNAME

The UNIVERSAL setting

- allows DN lengths (AREA-OFC-STN format) between 2 and 15 digits in table DNINV

  Note: With the exception of custom development that provides limited support for variable DNs, do not use variable-length DNs. The DMS switch supports the 3-3-4 format only; the value UNIVERSAL in the DN system does not enforce this format. Operating companies can datafill variable-length DNs on the switch, but CallP software does not support this type of DN. Therefore, call processing errors can occur.

- supports up to 8151 different area and office code combinations in table TOFCNAME

Refer to tables TOFCNAME and DNINV in the *Translations Guide, data schema section*.

For LNP applications, if you require greater than 100 area-code office-code combinations in table TOFCNAME, set this parameter to UNIVERSAL.

Range information

Range of Values	Default
NORTH_AMERICAN, UNIVERSAL, ENHANCED_NORTH_AMERICAN	NORTH_AMERICAN

Activation

A manual change or the One-Night Process (ONP) activates the parameter value.

Activate changes to the parameter value

The state of the switch determines how to change the parameter value. The following paragraphs contain recommended procedures.

ACTIVE_DN_SYSTEM (continued)

To convert from NORTH_AMERICAN to UNIVERSAL or ENHANCED_NORTH_AMERICAN in offices with no DNs assigned, follow these steps:

1. Change the parameter from NORTH_AMERICAN to UNIVERSAL.
2. Perform a CM restart (warm, cold, or reload) to activate the new DN system.

In an office with a small number of DNs, perform the steps that follow:

1. Delete the DNs.
2. Change the parameter and perform a restart.
3. Add the DNs.

You can change the setting from NORTH_AMERICAN to UNIVERSAL or ENHANCED_NORTH_AMERICAN in offices with many DNs assigned. When you make this change, the ONP automatically converts from one DN system to another. The ONP transfers data from the active CPU to the inactive CPU with the least possible service impact.

Note: Change NORTH_AMERICAN to UNIVERSAL or ENHANCED_NORTH_AMERICAN on the inactive side before you transfer the DN tables.

During an ONP, to change the parameter value, perform the steps that follow:

1. Stop the ONP table transfer after table OFCENG.
2. Enter the parameter change.
3. Restart the ONP table transfer.

If you use the value ENHANCED_NORTH_AMERICAN, use the NORTH_AMERICAN DN format to datafill the switch.

CAUTION
Risk of losing directory numbers
Conversion from UNIVERSAL to NORTH_AMERICAN or to ENHANCED_NORTH_AMERICAN is unsupported and is not recommended. You may lose directory numbers if you perform this conversion.

Dependencies

You can change the parameter value to or from NORTH_AMERICAN if the tables that follow contain no datafill:

- DNINV
- DNROUTE
- SNPANAME
- TOFCNAME

Consequences

With a parameter value of NORTH_AMERICAN, the DNs in the office must support the North American numbering plan (3-3-4 format).

LNP applications cannot use the ENHANCED_NORTH_AMERICAN setting.

NPA-NXXs with many DNs

The change of the parameter value from NORTH_AMERICAN to UNIVERSAL hits memory store. Refer to the “Memory requirements" section, or to table DNINV in the *Translations Guide, data schema section* for more information on data store requirements and calculations.

Verification

Does not apply

Memory requirements

The value of this parameter changes the amount of storage used by table DNINV. Refer to table DNINV in the *Translations Guide, data schema section*.

Memory requirements for ENHANCED_NORTH_AMERICAN are identical to UNIVERSAL.

Note 1: Value NORTH_AMERICAN uses memory best when each NPA-NXX combination has greater than 38% of station code prefixes.

Note 2: Value ENHANCED_NORTH_AMERICAN uses memory best when each NPA-NXX combination has less than 38% of station code prefixes.

Dump and restore rules

Copy the current value of this parameter during a dump and restore.

ACTIVE_DN_SYSTEM (end)

Parameter history

NA011

Changed capacity of TOFCNAME to 8151. Added information about variable length DNs.

NA009/EUR008

Made provisioning rules easier to understand.

Added Caution to indicate that LNP does not support conversion from UNIVERSAL to the NORTH_AMERICAN or to ENHANCED_NORTH_AMERICAN DN system.

Added references to LNP.

APC008

Added range value ENHANCED_NORTH_AMERICAN.

NA007

Added

- TOFCNAME information
- NORTH_AMERICAN to UNIVERSAL conversion information

Corrected range information.

NA004

Corrected range information.

BCS33

Parameter introduced.

AIN_ACTIVE

Parameter name

Advanced Intelligent Network Active

> **ATTENTION**
> NA004, which contains CCM04 and CNA04, removes this parameter from table OFCENG. The AIN Essentials software option AIN00002 replaces this parameter.

Functional description

This parameter controls the activation of the Advanced Intelligent Network (AIN) software. During the switch provisioning process, deactivate AIN until the datafill has stability.

Rules in provisioning

Set the value of this parameter to Y (yes) to activate AIN software.

Set the value of this parameter to N (no) to deactivate AIN software.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate.

Dependencies

If the user sets the value of this parameter to N, the switch does not use datafill in table TRIGGRP.

Consequences

Does not apply

Verification

If a call originates from an AIN agent, an action that relates to the originated call takes place. Table TRIGGRP defines this action. This action can occur if

AIN_ACTIVE (end)

the call satisfies all criteria in table TRIGGRP. A query can be launched to a service control point (SCP). If this parameter is set to N, the AIN subscription is disregarded and the call is processed in the SSP.

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA004

The AIN ACTIVE parameter was removed from table OFCENG in NA004. The parameter AIN ACTIVE was replaced with the AIN Essentials software option, AIN00002 in NA004.

BCS36

The description of the AIN ACTION parameter was added to documentation in BCS36.

BCS35

This parameter was introduced in BCS35.

AIN_ALT_ROUTE_SEL

Parameter name

AIN_ALT_ROUTE_SEL

Functional description

This parameter controls the route advance capability when routing over trunk groups or carrier parameters that the Service Switching Point (SSP) receives in an Analyze_Route or Forward_Call response.

Office parameter AIN_ALT_ROUTE_SEL consists of two fields:

- Field TRKGRP controls route advance capability when routing over a trunk group parameter.
- Field CARRIER controls route advance capability when routing over a carrier parameter.

The SSP attempts to route to any subsequent route in the Analyze_Route or Forward_Call response when either of the following occur:

- the AIN_ALT_ROUTE_SEL TRKGRP field is set to Y, and the current route on which the remote network busy condition is encountered is a trunk group
- the AIN_ALT_ROUTE_SEL CARRIER field is set to Y, and the current route on which the remote network busy condition is encountered is a carrier

The SSP treats the call as though there are no more routes available when either of the following occur:

- the AIN_ALT_ROUTE_SEL TRKGRP field is set to N, and the current route on which the remote network busy condition occurs is a trunk group
- the AIN_ALT_ROUTE_SEL CARRIER field is set to N, and the current route on which the remote network busy condition occurs is a carrier

Provisioning rules

None

AIN_ALT_ROUTE_SEL (end)

Range information

The following table contains the range information for field TRKGRP.

Minimum	Maximum	Default
N	Y	Y

The following table contains the range information for field CARRIER.

Minimum	Maximum	Default
N	Y	Y

Activation

Immediate

Dependencies

SOC option AIN00231 must be set to ON.

Consequences

None

Verification

Verify the value of office parameter AIN_ALT_ROUTE_SEL by checking the value in office parameter table OFCENG.

Memory requirements

None

Dump and restore rules

Addition of the AIN_ALT_ROUTE_SEL office parameter does not require reformats.

Parameter history

NA010

Feature SR1013 introduced office parameter AIN_ALT_ROUTE_SEL.

AIN_MAX_SERIAL_TRIGGERS

Parameter name

Advanced Intelligent Network Maximum Number of Serial Triggers

Functional description

A trigger occurs when the SSP determines that the SSP must query the service control point or adjunct to continue call processing.

Parameter AIN_MAX_SERIAL_TRIGGERS determines the number of times that a call can trigger serially without routing out of an SSP. This number ranges from 1 to 8, with a default value of 6.

The parameter resets when a Forward_Call or Analyze_Route response redirects the call. The Analyze_Route response must contain a RedirectingPartyID value.

Rules in provisioning

The number of detection points (DP) and triggers that one agent can meet determines the value for this parameter. If one agent can hit more than six triggers in one call, increase the value of this parameter.

The Bellcore recommended value is the default of 6.

A Forward_Call or Analyze_Route response can start up to six redirections.

The serial trigger count resets when a call redirects because

- of an Analyze_Route response with a parameter of RedirectingPartyID
- the SCP receives a Forward_Call response. A new call leg initiates as the call redirects. The serial trigger count resets to zero.

Range information

Minimum	Maximum	Default
1	8	6

Activation

Activation is immediate.

AIN_MAX_SERIAL_TRIGGERS (continued)

Dependencies

Does not apply

Consequences

If operating company personnel underprovisions the value of this parameter, the system can route calls to treatment.

The system uses resources that are not necessary when:

- the value of this parameter is overprovisioned
- the SCP instructs the SSP to continue to process the call after the SSP responds to triggers

This parameter provides a limit to prevent overload conditions.

Verification

If the number of triggers exceeds the limit that the parameter indicates, check that the AIN call routes to treatment.

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA012

Changed maximum value of range information to 8. Added information about the serial trigger count.

NA006

Updated operating description and rules in provisioning with redirecting information.

CSP02

Corrected parameter name.

BCS36

Added parameter description.

AIN_MAX_SERIAL_TRIGGERS (end)

BCS35

Introduced this parameter.

AIN_NUM_00_PARA_EXT_BLKS

Parameter name

AIN Number 0.0 Parameter Extension Blocks

Functional description

This parameter defines the size of the pool of memory extension blocks available for AIN 0.0 calls that can encounter AIN 0.1 next. These extension blocks maintain call information that the AIN 0.0 SCP provides. An AIN 0.1 query that follows can require this information for population of the query.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Provisioning rules

To set the value of this parameter, perform the following calculation. Multiply the number of CCBs by the percentage of calls expected to encounter AIN 0.0 triggers. This value always must be less than the number of CCBs, NCCBS in table OFCENG.

Use one method, use the expected peak AIN 0.0 traffic multiplied by the average hold time of AIN 0.0 calls.

Use another method, use the value of NO_OF_PVN_EXTBLK and multiply this value by the average call holding time and percentage of calls answered. This value must be greater than NO_OF_PVN_EXTBLK. The system holds this extension block during call setup only for the time required to process the AIN 0.0 query and response. This process time is normally close to 3 s.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

AIN_NUM_00_PARA_EXT_BLKS (end)

Range information

Minimum	Maximum	Default
0	32767	300

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

If the parameter is overprovisioned, the system does not use all of the allocated data store. If the parameter is underprovisioned, the system routes some AIN 0.0 calls to no software resource treatment.

Verification

Use OMSHOW EXT ACTIVE (AIN_00_PARA_EXT_FC) to verify that allocation of the extension blocks occurred.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

One unit or 14 words per memory block. If the number of extension blocks is 1000, the system requires 14,000 words.

Dump and restore rules

Does not apply

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NA005

NA005 introduces this parameter.

AIN_NUM_01_00_EXT_BLKS

Parameter name

AIN Number 0.1 - 0.0 Extension Blocks

Functional description

This parameter defines the size of the pool of memory extension blocks available for calls that involve AIN 0.1 and AIN 0.0 triggers. The extension block tracks the AIN application that last altered common data for calls that involve AIN 0.1 and AIN 0.0 triggers.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

The value of this parameter must be equal or less than the value of AIN_NUM_00_PARA_EXT_BLKS. This extension only applies to calls that encounter triggers in AIN 0.0 and AIN 0.1.

Follow one of the following procedures:

- Multiply AIN_NUM_00_PARA_EXT_BLKS by the volume of calls that are expected to encounter AIN 0.1 triggers. This ratio can be difficult to determine.
- Set the value of AIN_NUM_01_00_EXT_BLKS to the lesser of AIN_NUM_00_PARA_EXT_BLKS and the value of NUMBER_OF_HIS_DATA_BLOCKS that corresponds to XLARGE_HIS_DATA_BLOCK_TYPE. This entry is the third entry in the tuple. You can use this formula because a call that requires an AIN_01_00_EXT_BLK also requires an AIN_00_PARA_EXT_BLK and an AIN_RESPONSE_HISTORY_DATA_BLOCK.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

AIN_NUM_01_00_EXT_BLKS (end)

Range information

Minimum	Maximum	Default
0	32767	150

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

If the parameter is overprovisioned, the system will not use all of the allocated data store. If the parameter is under provisioned, some AIN calls that encounter triggers in AIN 0.1 and AIN 0.0 will route to no software resource treatment.

Verification

Use OMSHOW EXT ACTIVE (AIN_00_PARA_EXT_FC) to verify allocation of the extension blocks.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

The parameter requires one unit or eight words for each memory block. For example, if the number of extension blocks is 1000, the parameter requires 8000 words.

Dump and restore rules

Does not apply

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NA005

NA005 introduces this parameter.

AIN_NUM_EXT_BLKS

Parameter name

Advanced Intelligent Network Number of Extension Blocks

Functional description

This parameter specifies the number of extension blocks available to the Advanced Intelligent Network (AIN) feature.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

If office parameter AIN_ACTIVE in table OFCENG is set to Y (yes), use the following formula to provision this parameter:

$$X = (ccb \times ain)$$

Where

X
is the number of AIN extension blocks

ccb
is the number of call condense blocks

ain
is the percentage of traffic that is AIN calls. AIN calls require communication with an SCP or adjunct.

An AIN call holds an extension block while the AIN call waits for a response from the SCP or adjunct processor. The AIN holds the block from the time an AIN trigger requirement is met until the call connects or the call is taken down.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the

AIN_NUM_EXT_BLKS (continued)

parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	32767	0

Activation

Increase - immediate

Decrease - cold restart

Dependencies

Set office parameter AIN_ACTIVE in table OFCENG to Y to allow the use of the blocks that this parameter provisions.

Consequences

If this parameter value is underprovisioned some calls that normally send a query to an SCP reroute to No Software Resources (NOSR) treatment.

Verification

Use the command interpreter (CI) command OMSHOW EXT ACTIVE 118 and verify the allocation of enough extension blocks. The external name of the extension block is AIN_EXT_BLK.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each unit requires 253 words of memory. For example, a value of 100 requires 25 600 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

AIN_NUM_EXT_BLKS (end)

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

BCS36

BCS36 adds this parameter description to the NTP.

BCS35

BCS35 introduces this parameter.

AIN_NUM_PROCESSING_EXT_BLKS

Parameter name

Advanced Intelligent Network Number of Processing Extension Blocks

Functional description

A switching unit with the Advanced Intelligent Network (AIN) requires this parameter. The parameter specifies the number of AIN processing extension blocks available to process a response after a service control point (SCP) query.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

Use the following calculation to specify the number of AIN processing extension blocks:

$ain = (sub \times traf)$

where

ain
is the number of AIN processing extension blocks

sub
is the total number of AIN subscribers (based on single subscribers, groups or offices)

traf
is the percentage of anticipated AIN traffic for the AIN subscribers

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

AIN_NUM_PROCESSING_EXT_BLKS (end)

Range information

Minimum	Maximum	Default
0	32767	0

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

If the value of this parameter is underprovisioned, some AIN calls route to no software resource (NOSR) treatment.

Memory use that is not necessary occurs if the value of this parameter is overprovisioned.

Verification

Use the command OMSHOW EXT ACTIVE 125 to verify the allocation of the extension blocks.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each extension block requires 253 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

BCS36

BCS36 introduces this parameter.

AIN_NUM_TERM_NOTIF_EXT_BLKS

Parameter name

AIN Termination Notification Message Extension Block

Functional description

This parameter determines the number of AIN termination notification extension blocks than can be present in the office. The processing of AIN responses that require a termination notification uses the extension blocks.

The AIN holds the extension block from the time call processing receives and decodes an AIN response until the call is taken down.

Provisioning rules

Use the following formula to calculate the value of this parameter:

```
Value   = (average # of simultaneous AIN calls)
    x (average # of send notification requests per AIN call)
```

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

AIN_NUM_TERM_NOTIF_EXT_BLKS (end)

Range information

Minimum	Maximum	Default
0	32767	200

Activation

Immediate

Dependencies

None

Consequences

If this parameter is over-provisioned, some data store is not used. If this parameter is under-provisioned and extension blocks are not available, AIN calls route to No Software Resource (NOSR) treatment.

Verification

To verify the allocation of extension blocks, use the CI command OMSHOW EXT ACTIVE 134.

See the *Operational Measurements Reference Manual* for a description of OM group EXT.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each extension block requires 15 words of memory.

Dump and restore rules

Does not apply

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NA005

NA005 introduces this parameter.

AIN_O_NO_ANSWER_EVENT_TIMER

Parameter name

AIN_O_NO_ANSWER_EVENT_TIMER

Functional description

The O_No_Answer timer activates when the Request_Report_BCM_Event message arms an event detection point-request (EDP-R). When the O_No_Answer_Timer parameter is not present in the Request_Report_BCM_Event message, the AIN_O_NO_ANSWER_EVENT_TIMER office parameter value determines when the timer expires. The value of the parameter specifies the number of seconds before expiry of the timer.

Rules in provisioning

Does not apply.

Range information

The minimum, maximum, and default values of the AIN_O_NO_ANSWER_EVENT_TIMER parameter are as follows:

Minimum	Maximum	Default
1	120	18

Activation

Changes to the AIN_O_NO_ANSWER_EVENT_TIMER office parameter are immediate.

Dependencies

Does not apply

Consequences

The SSP provides services based on AIN that indicate if the AIN_O_NO_ANSWER_EVENT_TIMER office parameter provisioning is correct or not correct. When services based on AIN that rely on the value of the AIN_O_NO_ANSWER_EVENT_TIMER parameter do not function correctly, the parameter is not provisioned correctly.

AIN_O_NO_ANSWER_EVENT_TIMER (end)

Verification

Perform the following to verify office parameter AIN_O_NO_ANSWER_EVENT_TIMER:

1. Make an AIN call.
2. Cause the SCP to arm an EDP-R trigger.
3. Wait to see if the O_No_Answer timer expires.
4. Determine if the correct message sends to the SCP. This condition is a result of the timer expiration.

Memory requirements

Does not apply

Dump and restore rules

Does not apply

Parameter history

NA007

Office parameter AIN_O_NO_ANSWER_TIMER is changed on 4/02/97, to AIN_O_NO_ANSWER_EVENT_TIMER as a result of PRS-BJ54077 in NA007.

Office parameter AIN_O_NO_ANSWER_TIMER is introduced in NA007.

AIN_O_NO_ANSWER_TRIGGER_TIMER

Parameter name

AIN_O_NO_ANSWER_TRIGGER_TIMER

Functional description

The AIN_O_NO_ANSWER_TRIGGER_TIMER specifies the office default for the duration in seconds that the T-ONoAnswer timer must run before the timer detects the O_NOA trigger. When the T-ONoAnswer timer detects the O_NOA, the T-O_No_Answer timer activates. The value of the AIN_O_NO_ANSWER_TRIGGER_TIMER office parameter determines when the timer expires. The parameter value specifies the seconds before the timer expires.

Rules in provisioning

Does not apply

Range information

The following table indicates in seconds, the maximum, minimum, and default values for office parameter AIN_O_NO_ANSWER_TRIGGER_TIMER.

Minimum	Maximum	Default
1	120	18

Activation

The AIN_O_NO_ANSWER_TRIGGER_TIMER office parameter changes are immediate.

Dependencies

Does not apply

Consequences

The service switching point (SSP) provides services based on AIN that indicate if AIN_O_NO_ANSWER_TRIGGER_TIMER office parameter provisioning is correct or not correct. When services based on AIN that rely on the parameter value of the AIN_O_NO_ANSWER_TRIGGER_TIMER office parameter do not function correctly, the parameter is not provisioned correctly.

AIN_O_NO_ANSWER_TRIGGER_TIMER (end)

Verification

To verify the AIN_O_NO_ANSWER_TRIGGER_TIMER office parameter, make an AIN call. This call detects the O_NOA trigger, and the T-O_No_Answer timer expires. The timer expiration sends an O_NOA trigger detection point-request to the service control point (SCP).

Memory requirements

Does not apply

Dump and restore rules

Does not apply

Parameter history

NA008

Feature AQ1576 introduces the AIN_O_NO_ANSWER_TRIGGER_TIMER office parameter.

AIN_T_NO_ANSWER_EVENT_TIMER

Parameter name

AIN_T_NO_ANSWER_EVENT_TIMER

Functional description

The AIN_T_NO_ANSWER_EVENT_TIMER parameter modifies AIN Service Enablers events. The parameter provides additions to the next event lists (NEL). The AIN_T_NO_ANSWER_EVENT_TIMER introduces the following Service Enablers events:

- Network_Busy
- T_Busy
- T_No_Answer

The Request_Report_ BCM_Event message with an Analyze_Route response to an originating trigger detection point-request (TDP-R) message arm the Event Network_Busy.

The Request_Report_ BCM_Event message with an Authorize_Termination response to a Termination_Attempt TDP-R message arm the Events T_Busy and T_No_Answer. The Request_Report_BCM_Event message and a Continue response to the T_Busy event detection point (EDP-R) message can also arm the Event T_No_Answer.

The two types of events are requests or notifications. Requests communicate events to the SCP or adjunct and allow the service control point (SCP) or adjunct to intervene in the call. Notifications communicate events to the (SCP) or adjunct, and do not intervene in the call. The SCP or adjunct does not send a response to a notification message.

Rules in provisioning

Improvements to Tables TRIGDIG and TRIGINFO to support the R02 message set made in NA007 are the same for NA008.

AIN_T_NO_ANSWER_EVENT_TIMER (continued)

Range information

The following table indicates in seconds the minimum, maximum, and default values for parameter AIN_T_NO_ANSWER_EVENT_TIMER.

Minimum	Maximum	Default
1	120	18
Note: Calls in progress with T_No_Answer_Event requested remain at the value set earlier until the transaction closes. T_No_Answer event processing logic uses Parameter AIN_T_NO_ANSWER_EVENT_TIMER when the Request_Report_BCM_Event message does not contain the T_No_Answer timer.		

Activation

Changes to the AIN_T_NO_ANSWER_EVENT_TIMER office parameter are immediate.

Dependencies

Does not apply

Consequences

The service switching point (SSP) provides AIN-based services that indicates if the AIN_T_NO_ANSWER_EVENT_TIMER office parameter provisioning is correct or not correct. The provisioning of AIN_T_NO_ANSWER_EVENT_TIMER office parameter is not correct when the AIN-based services that rely on the parameter value do not function correctly.

Verification

To verify the AIN_T_NO_ANSWER_EVENT_TIMER office parameter, start an AIN call. The call causes the detection of the termination attempt (TERMATT) trigger. The Authorize_Termination message arms the T_No_Answer event. The AIN_T_NO_ANSWER_EVENT_TIMER expiration causes a T_NO_ANSWER message to be sent to the service control point (SCP).

Memory requirements

Does not apply

Dump and restore rules

Does not apply

AIN_T_NO_ANSWER_EVENT_TIMER (end)

Parameter history

NA008

Feature AJ4505 introduced the AIN_T_NO_ANSWER_EVENT_TIMER office parameter. Assignment of the timer value occurs from Table OFCENG.

AIN_T1_TIMER

Parameter name

Advanced Intelligent Network T1 Timer

Functional description

This parameter specifies the length of time, in seconds, that a service switching point (SSP) waits for a response. The response is from the service control point (SCP) or adjunct and follows the launch of a query. If the SCP or adjunct do not respond before the timer expires, the call routes to treatment.

Rules in provisioning

The following information determines the value for this parameter:

- response time from the SCP or adjunct
- the congestion of the network that sends messages to an SSP from the SCP adjunct

The parameter must be set to a value greater than the expected response time from the SCP or adjunct.

Range information

Minimum	Maximum	Default
1	99	3

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

If the value of this parameter is underprovisioned, some calls route to treatment if the SCP or adjunct response time is slow.

Switch sources like extension blocks can be in use when use is not necessary, if the following apply:

- the value of this parameter is overprovisioned
- the SCP does not respond

Verification

If a response to a query takes longer than the amount of time that the parameter specifies, verify that the call is sent to treatment.

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS35

This parameter was introduced in BCS35.

BCS36

This parameter description was added to the NTP in BCS36.

AIN_TDISC_TIMER

Parameter name

AIN_TDISC_TIMER

Functional description

The service switching point (SSP) initiates the intelligent peripheral (IP) disconnect timer (TDISC). The SSP initiates TDISC after the SSP sends a facility message with a CancelIPResource operation that requests the IP to disconnect. When TDISC expires, the SSP clears the connection to the IP and notifies the service control point (SCP) or Adjunct.

Rules in provisioning

Enter parameter values in increments of one, where the value of one is equal to 1 s. This entry complies in part to requirement [237] of GR-1129, which requires 0.5 s intervals between values. A value of ten indicates that the timer is set to 10 s. A value of zero disables the timer.

Range information

The following table lists the minimum, maximum, and default values for the AIN_TDISC_TIMER parameter.

Minimum	Maximum	Default
1 (second)	10 (seconds)	4 (seconds)

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

The following list outlines the procedure to verify the AIN_TDISC_TIMER parameter:

1. Position the tuple in table OFCENG. List the tuple.
2. Make an AIN call with the SCP response set to send to resource (STR) with a destination (IP) address.

3. Cancel the STR while the STR-IP connection is active.

   Note: Do not disconnect the IP manually and wait for TDISC to time out. The time out of TDISC occurs when the IP connection is taken down and the SCP receives a resource clear message.

4. Determine the duration between the cancel resource event and the TDISC timeout. Determine if this duration is the same as the duration that the tuple lists.

Memory requirements

Does not apply

Dump and restore rules

The AIN_TDISC_TIMER is a new parameter for NA008 and does not require procedure to format the timer again. The default value is set to 4 seconds for the NA008 loadbuild.

The system copies the current value of this parameter to the restore side when you perform a dump and restore.

Parameter history

NA008

The AIN_TDISC_TIMER parameter was introduced by AIN STR/IP Phase 2 (AJ4595) in NA008.

AIN_TSTRC_TIMER

Parameter name

AIN_TSTRC_TIMER

Functional description

The service switching point (SSP) initiates the send-to-resource connection timer (TSTRC) for a send to resource (STR) connection. The TSTRC starts after the TSTRC receives a connect message from an intelligent peripheral (IP). The timer can expire before the SSP receives a disconnect or release complete message from the IP. In this event the SSP clears the connection to the IP and notifies the service control point (SCP) or Adjunct.

The TSTRC timer stops when the TSTRC receives a facility message from the IP. The timer starts again when the SCP sends a call info to resource (CITR) message to the IP. The timer stops when the SSP receives a disconnect or release complete message from the IP.

Rules in provisioning

A parameter value of 1 is equal to 1 min. Setting the value to 10 indicates that the timer is set to 10 min. A value of 0 disables the timer.

Range information

The following table lists the minimum, maximum, and default values for the AIN_TSTRC_TIMER parameter.

Minimum	Maximum	Default
0 (minutes)	60 (minutes)	6 (minutes)

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

The AIN_TSTRC_TIMER parameter must be set to the minimum that allows the longest expected STR-IP interaction to finish. When the value is set too small, the STR-IP interactions can be cut off. When the value is set too high, the resources are held too long and the IP cannot disconnect.

Verification

The following list outlines the procedure to verify the AIN_TSTRC_TIMER parameter.

1. Position the tuple in table OFCENG. List the tuple.
2. Make an AIN call with the SCP response set to STR with a destination (IP) address
3. Cancel the STR while the STR-IP connection is active.
4. Check that the duration between the cancel resource event and the TSTRC timeout equals the duration listed by the tuple.

Memory requirements

Does not apply

Dump and restore rules

The AIN_TSTRC_TIMER parameter is introduced in NA008. This is a new parameter that does not require a procedure to format again. The default value is set to 6 min when the NA008 load is first assembled.

Copy the current value of the parameter to the restore side when you perform a dump and restore.

Parameter history

NA008

The AIN STR/IP Phase 2 (AJ4595) introduced the AIN_TSTRC_TIMER parameter in NA008.

AIN00_EXTEND_NAT_OF_NUM

Parameter name

AIN Extend Nature of Number

Note: Remove this parameter with the NA006 software release. This description is for reference purposes only.

Functional description

The AIN00 EXTEND NAT OF NUMB parameter allows the operating company to distinguish between 1+ and 0+ calls in AIN 0.0. The nature of the number field of the service key parameter can now include the IEC_Operator value. The service key parameter is in the SSP-SCP initial query message. The SCP can respond with appropriate routing instructions.

This facility affects only operator-assisted calls that meet the Public Office Dialing Plan (PODP) trigger.

If the caller dials the prefix 0 before the PODP trigger, the nature of number field is set to IEC_Operator. If the caller dials the prefix 1 before the PODP trigger, the nature of the number field is set to National.

This parameter operates in the whole office. The 0+ calls are set up as operator-assisted call types in the standard pretranslator table STDPRT.

Rules in provisioning

Set the value of this parameter to Y to include the IEC_Operator value in the service key parameter in the first query message.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate.

AIN00_EXTEND_NAT_OF_NUM (end)

Dependencies

This parameter requires AIN 0.0. The AIN 0.0 PVNVER and PVNDBTST tools do not support the SSP-SCP TCAP interface improvements that this parameter provides.

Consequences

If this parameter is not set to Y, the nature of number field cannot include the IEC_Operator value in the first query message.

Verification

Perform an operator-assisted call with the AIN 0.0 PODP trigger. Monitor the first TCAP message sent to the SCP. If the parameter functions correctly, the nature of number field indicates IEC_Operator (05) for the service key parameter.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA006

This parameter was removed in NA006.

NA004

This parameter was introduced in NA004.

AIN00_PCM_SSP_BILLING

Parameter name

Advanced Intelligent Network Personal Call Manager Signaling Service Point Billing.

Functional description

This parameter indicates if the SSP switch on PLS calls controls PLS Automatic Message Accounting (AMA) record generation.

Rules in provisioning

If the SSP switch for PLS calls must control AMA record generation, set the value of this parameter to NO_AMA_FOR_LOCAL_CALLS. If the SSP switch for PLS calls does not control AMA record generation, set the value to AMA_FOR_ALL_CALLS if AMA.

This parameter defaults to AMA_FOR_ALL_CALLS. The parameter defaults to this value because the SSP switch normally does not control AMA record generation. This action minimizes the real-time impact on the SSP.

Range information

Minimum	Maximum	Default
	NO_AMA_FOR_LOCAL_CALLS	AMA_FOR_ALL_CALLS

Activation

Activation is immediate.

Dependencies

If the PLS SSP-based billing package is not present, this parameter does not appear.

Consequences

Does not apply

Verification

The PLS call can trigger at the AIN 0.0 directory number trigger and have a local termination. In this event, the system does not generate an AMA record for the second leg of the call. The second leg of the call goes from the PLS personal number home switch to the terminator.

AIN00_PCM_SSP_BILLING (end)

Memory requirements

This parameter requires one word of DSPROT store

Dump and restore rules

Does not apply

Parameter history

NA002

This parameter was introduced in NA002.

AIN00_PODP_ANI_CN_OUTPULSING

Parameter name

Advanced Intelligent Network 0.0 Public Office Dial Plan Automatic Number Identification Charge Number Outpulsing

Functional description

This parameter controls the Advanced Intelligent Network (AIN) 0.0 Automatic Number Identification (ANI)/Charge Number (CN) Outpulsing functionality for a separate office. This parameter permits the operating company to use either the standard or the alternate outpulsing algorithm.

Rules in provisioning

If the user sets this parameter to N, the operating company can use the standard outpulsing algorithm. The ANI/CN is populated with the public office dial plan (PODP) trigger number. The ANI/CN does not change when outpulsing algorithm modification occurs.

If the user sets this parameter to Y, the ANI/CN in the outpulsing is populated according to the alternate outpulsing algorithm. The AIN 0.0 ANI/Charge Number Outpulsing functionality introduces this algorithm.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Originate an AIN 0.0 PODP trigger call. Configure the service control point (SCP) to return a response message. The response message causes the call to terminate on an ISDN user part (ISUP) trunk. Monitor the first address

message sent over the trunk. The CN field of the message contains the billing number that the SCP provides. The SCP provides the billing number if the parameter is set to Y. The SCP provides the billing number if the parameter contains the PODP trigger number and is set to N.

Originate an AIN 0.0 PODP trigger call. Configure the service control point (SCP) to return a response message that causes the call to terminate on a multifrequency trunk. Monitor the ANI sent over the trunk. The ANI contains the billing number that the SCP provided if the parameter is set to Y. The ANI provides the billing number if the parameter contains the PODP trigger number and is set to N.

Memory requirements

This parameter requires 1 word of data store.

Dump and restore rules

The parameter value depends on the use of the alternate outpulsing algorithm from the previous load when you perform a dump and restore.

A patch deployed with the software load offers the operating company a choice. The operating company can use the standard outpulsing algorithm instead of the alternate outpulsing algorithm. The alternate oupulsing algorithm is the default in the loads.

If the AIN 0.0 ANI/CN Outpulsing functionality algorithm was not used in the previous load in the office, the parameter value is set to N. This algorithm is the alternate outpulsing algorithm.

If the user uses the functionality, the parameter value is set to Y to maintain agreement across the operation of the load.

Parameter history

CSP006

This parameter was introduced in CSP006.

ALL_ACD_LOGIN_IDS_VALID

Parameter name

All Automatic Call Distribution Login Identifications Valid

Functional description

A switching unit with the Automatic Call Distribution (ACD) Agent Login Enhancement feature requires this parameter.

This parameter determines if an ACD login ID is valid when table ACDLOGIN does not contain the ACD login ID.

Rules in provisioning

If this parameter value remains at the default value of Y (yes), the user can login with an ID that does not appear in table ACDLOGIN.

If the parameter value is N (no), the user can login with a login ID contained in table ACDLOGIN. The system ignores the parameter check and the user can login if the login ID meets all other requirements.

If the parameter value is N, the user cannot login unless table ACDLOGIN contains the login ID. If table ACDLOGIN does not contain the login ID, the user cannot login. The user receives the reorder tone.

Range information

Minimum	Maximum	Default
		Y

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

ALL_ACD_LOGIN_IDS_VALID (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter History

This parameter was introduced in BCS24.

ALLOC_UNIV_EXT_BLK

Parameter name

Allocate Universal Extension Blocks

Functional description

This parameter is used to allocate universal extension blocks allocated for Call Screening Applications for Australian ISDN User Part (ISUP) and R2 applications.

When a universal extension block is active on a call, it is held for the duration of the call. The memory allocated for the extension blocks is permanently allocated unless ALLOC_UNIV_EXT_BLK or NCCBS parameter values are altered.

Rules in provisioning

If this office parameter is set to a value of Y (yes), one universal extension block is allocated for each Call Condense Block (CCB) based on the value of NCCBS in table OFCENG.

If this parameter is set to a value of N (no), all store previously allocated for the universal extension block is deallocated.

Range information

Minimum	Maximum	Default
		N

Activation

The activation is immediate if the parameter value is changed from N to Y or if the value is set to Y and the value of NCCBS increases.

A cold restart is required if the parameter value is changed from Y to N, or if the value is set to Y and the value of NCCBS decreases.

Dependencies

The value of office parameter NCCBS has a direct impact on this parameter.

Consequences

If this parameter is set to N when it should be set to Y, error logs may be generated and call types requiring universal extension blocks fail.

Verification

To verify that space has been allocated for universal extension blocks, use the CI command “cpalloci 85".

Memory requirements

If this parameter is set to a value of Y, 47 bytes of memory are required by each block allocated by office parameter NCCBS in table OFCENG.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS35

This parameter was introduced.

ALLOW_RINGING_ON_TIP_SIDE

Parameter name

Allow Ringing On Tip Side

Functional description

This parameter allows the customer to choose to force distinctive ringing to the RING side of Line Concentrating Modules (LCM) lines. This parameter is used to end the propagation of patch TLA67.

Provisioning rules

A value of N (no) causes ringing on type A and message waiting line cards to be held to the RING side of the line only. A value of Y (yes) allows ringing on both the TIP and RING sides of the line.

This parameter must only have a value of N for offices with single party lines. It must have a value of Y if the office is equipped with LCMs with type A line cards supporting two-party lines.

Support of two-party lines in conjunction with this parameter must be provided by use of the type B line card that supports multi-party (including 2FR) lines.

Interaction with Table OFCENG parameter IMMEDIATE_RING_ENABLE

ALLOW_RINGING_ON_TIP_SIDE can override parameter IMMEDIATE_RING_ENABLE. If ALLOW_RINGING_ON_TIP_SIDE is set to Y, then lines with type A line cards and distinctive ringing will only ring normally. In other words, immediate ring will not be invoked.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

The feature is active by default. A change to this parameter should be done during the maintenance window as it is necessary to BUSY and RTS each unit of the LCM. Until the BUSY and RTS is completed, the NT6X19 line cards will fail to ring lines.

ALLOW_RINGING_ON_TIP_SIDE (end)

Dependencies

Not applicable

Consequences

The Ring Mux Reversal Relay, located in the bus interface card (BIC) has a static RMUX pattern table that is altered when this parameter is set to N.

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.

ALT_LIT_RES_NUM_FAILS_TO_SET

Parameter name

Automatic Line Testing Loop Insulation Test Resistance Number of Failures To Set

Functional description

This parameter specifies the threshold that determines when an automatic line test (ALT) facility reports a failure during a loop insulation test (LIT).

LIT resistance exceeding either a least critical (LCT) or most critical (MCT) resistance threshold, pegs the line as having a LIT resistance problem (not a failure). These problems are considered band 1 failed.

A failure is reported if the number of consecutive resistance problems (as defined by this parameter) exceeds or has reached the threshold and the most critical resistance threshold is exceeded. These problems are considered band 0 failed

If the threshold set by this parameter is reached or exceeded and the least critical resistance is also exceeded, but the most critical resistance is not exceeded, the line is considered band 1 failed.

Band 0 and band 1 failures can be posted in the LTP level of the MAP. Band 0 failures are reported by ALT and require operating company maintenance to improve the service. Band 1 failures are identified as possible problem lines and can require maintenance action.

Provisioning rules

This office parameter must be set by the operating company, based on the following information and the frequency at which lines are LIT tested in the office.

If the office is provisioned with one LTE (line test equipment) for each 5120 lines and based on an average time of 15 seconds per LIT test, the following formula applies:

5120 lines X 15 seconds = 76800 s = 21.33

Assume LIT is allowed to run 6 h per night.

It takes approximately 3.5 days of testing to perform another LIT test on the same line. Based on the above, the default setting of 4 for this parameter would take:

3.5 days X 4 = 14 days elapsed time to report a problem

> ***Note:*** This example assumes that all line drawers are fully equipped and datafilled. All lines are tested and none are considered not applicable or skipped.

By lowering this office parameter value, the elapsed time for problem recognition is shortened. However, more transient problem lines can be reported, as ALT LIT conducts fewer resistance tests.

If more ALT LIT resistance tests are performed, better filtering of transient problems is performed by ALT.

Range information

Minimum	Maximum	Default
1	4	4

Activation

Immediate

Any existing LIT resistance values are not changed and cannot be posted at the MAP until a LIT run is done.

Dependencies

Not applicable

Consequences

For large offices the elapsed time between tests can be too long if this parameter is set to the default value. As a result, subscribers may report problems before ALT identifies them.

Verification

Not applicable

Memory requirements

This parameter requires 1 word of memory.

ALT_LIT_RES_NUM_FAILS_TO_SET (end)

Dump and restore rules

This parameter was introduced in BCS28.

Copy the existing value of this parameter when doing a dump and restore.

ALT_LIT_RES_NUM_PASSES_TO_CLR

Parameter name

Automatic Line Testing Loop Insulation Test Resistance Number of Passes to Clear

Functional description

This parameter specifies the number of consecutive resistance test passes. An automatic line test (ALT) facility requires these test passes during a loop insulation test (LIT). The LIT test runs before a previous fail condition clears.

ALT removes the band 0 or band 1 fail condition from the line if the line passes the test. The line must pass the test a specified number of times. The parameter specifies this number. The line must not exceed the least critical (LCT) or most critical (MCT) resistance thresholds.

You can post band 0 and band 1 failures in the LTP level of the MAP. The ALT reports band 0 failures. Operating company maintenance personnel must perform maintenance action to improve the service. Band 1 failures are identified as possible problem lines and can require maintenance action.

The system can measure an additional band 0 or band 1 fail before the system reduces the value of this parameter. If this event occurs, the system clears accumulated passes to zero.

Rules in provisioning

Set this office parameter to:

the value of ALT_LIT_RES_NUM_FAILS_TO_SET + 2

Range information

Minimum	Maximum	Default
1	6	6

Activation

Activation is immediate

ALT_LIT_RES_NUM_PASSES_TO_CLR (end)

Dependencies

For additional information, refer to parameter ALT_LIT_RES_NUM_FAILS_TO_SET in table OFCENG.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter History

This parameter was introduced in BCS28.

ALT_TTT_USAGE_PERCENTAGE

Parameter name

Automatic Line Test Transmission Trunk Test Usage Percentage

Functional description

A local or SL100 switching unit requires this parameter. This parameter specifies the percentage of transmission trunk tests (TTT) that are available for automatic line test (ALT).

This percentage depends on the number of trunks installed in the system. These trunks require the use of the TTT equipment. The ALTSCHED calculates the value to allow the ALT and TTP to function together.

When ALTSCHED calculates the number of TTTs for ALT, the parameter rounds the number of TTTs down. If a switching unit has 3 TTTs and ALT can use 50% of these TTTs, ALT can run only on one TTT.

Rules in provisioning

If a number other than 50% of the TTTs is available, specify the percentage of TTTs that are available for ALT.

Range information

Minimum	Maximum	Default
0	100	50

Activation

Activation is immediate

The parameter must recalculate all test streams already defined in table ALTSCHED. The parameter must recalculate these streams to take advantage of the new value of this parameter. The parameter enters the ALT level of the MAP. The parameter stops and submits each defined ALTTSTID that table ALTSCHED contains.

Dependencies

Does not apply

ALT_TTT_USAGE_PERCENTAGE (end)

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS25.

ALT_TTU_USAGE_PERCENTAGE

Parameter name

Automatic Line Test Transmission Test Unit Usage Percentage

Functional description

A local or SL-100 switching unit requires this parameter. The parameter specifies the percentage of transmission test units (TTU) available for automatic line test (ALT).

The percentage depends on the number of trunks installed in the system These trunks also require the use of the TTU equipment. Calculation of a value must occur so that ALT and TTP can function efficiently.

When ALTSCHED calculates the number of TTU for ALT, the number of TTUs is rounded down. If a switching unit has three TTUs and ALT can use 50% of the TTUs, ALT is used on only one TTU.

Rules in provisioning

If other than 50%, specify the percentage of TTUs available for ALT.

Range information

Minimum	Maximum	Default
0	100	50

Activation

Activation is immediate

The user must calculate again all test streams defined in table ALTSCHED to take advantage of the new parameter value. To calculate test streams again, enter the ALT level of the MAP terminal. Stop and submit each defined ALTTSTID stored in the ALTSCHED table.

Dependencies

Does not apply

Consequences

Does not apply

ALT_TTU_USAGE_PERCENTAGE (end)

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

This parameter was introduced in BCS325.

Copy the current value of the parameter when you perform a dump and restore.

AMA_EBCDIC_CONVERT

Parameter name

Automatic Message Accounting Extended Binary Decimal Interchange Code Convert

Functional description

This parameter specifies if the system converts Northern Telecom (NT) format Automatic Message Accounting (AMA) messages to Extended Binary-Coded Decimal Interchange Code (EBCDIC).

This parameter applies only to offices using NT format AMA. The parameter does not affect the BellCore format AMA stream.

The NT format AMA includes Station Message Detail Recording (SMDR).

Rules in provisioning

Set the value of this parameter to Y (yes). This parameter converts NT format AMA messages to EBCDIC.

If this parameter is set to a value of N (no), NT format AMA messages use Binary Coded Decimal (BCD).

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate

Before changing the parameter to Y or N, demount all volumes in Device Independent Recording Package (DIRP) that are recording Station Message Detail Recording (SMDR) data.

Dependencies

Does not apply

Consequences

Does not apply

AMA_EBCDIC_CONVERT (end)

Verification

Does not apply

Memory requirements

Each unit requires one word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP03

Reference to office parameter AMA_EBCDIC_CONVERT_ENABLE was removed in CSP03 because the parameter is not in use. The restart activation changes to immediate.

BCS36

Specified that this parameter is for use only with Nortel AMA in BCS36.

AMA_FAILURE_FREE_CALL

Parameter name

Automatic Message Accounting Failure Free Call

Functional description

A switching unit with the Local (LAMA) or Centralized (CAMA) Automatic Message Accounting feature requires this parameter.

This parameter provides route options that can charge toll calls during AMA problems or failures.

The AMA failures occur when one of the following conditions is present:

- a lack of recording units
- files are not mounted against the AMA stream (device failure)
- the system dropped the AMAPROC recording process

If the above route option is not desired, calls can complete without charge.

Rules in provisioning

When this parameter is set to Y (yes), there is no charge for routed CAMA and LAMA toll calls. This condition occurs when the system has AMA problems or failures.

When this parameter is changed from Y to N the following warning message is printed.

```
THIS WILL BLOCK ORIGINATION OF MOST BILLABLE CALLS WHEN THE "NO
AMA" ALARM IS ON.TUPLE TO BE CHANGED:
AMA_FAILURE_FREE CALL NENTER Y TO CONFIRM, N TO REJECT, OR E TO
EDIT.
```

> ***Note:*** This warning mesage is for information only, it is not enforced by the system.

When the system has AMA problems and AMA_FAILURE_FREE_CALL is set to N (no), the system routes calls according to type. The system routes most calls to the position in table POSITION specified by AMA_FAILURE_ROUTE_POSITION in table OFCVAR. The system does not route CAMA calls on CAMA or SuperCAMA trunks to this position.

Any CAMA calls in CAMA or SUPERCAMA trunk groups complete.

AMA_FAILURE_FREE_CALL (end)

Range information

Minimum	Maximum	Default
		Y

Activation

Immediate

Dependencies

Use of this parameter requires field ALARMS in table CRSFMT to have a value of Y.

Consequences

Does not apply

Verification

See operational measurements group AMA for the operational measurements associated with this parameter.

Memory requirements

Does not apply

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

AMA_LONG_DUR_AUDIT_INTERVAL

Parameter name

Automatic Message Accounting Long Duration Audit Interval

Functional description

This parameter allows switching units with NT Centralized Automatic Message Accounting (CAMA) or Local Automatic Message Accounting (LAMA) to check for long duration calls. Long duration calls are calls of more than 24 h duration. This parameter specifies the time between audits in 1 h intervals, as selected by the operating company.

Production of NT AMA Format long duration logs (AMA112) occurs for AMA calls on CAMA trunks (Trunk Group Type SC). Production of these logs also occurs for LAMA calls from lines. The long duration call audit does not include the following calls:

- LCDR
- SMDR
- AMA calls on TOPS trunks

Rules in provisioning

Specify the time long duration audit interval in units of 1 h.

Range information

Minimum	Maximum	Default
1	24	24

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

AMA_LONG_DUR_AUDIT_INTERVAL (end)

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

This parameter was introduced in BCS315.

Copy the current value of the parameter when you perform a dump and restore.

APPLY_PATCHES_BY_SEQUENCE

Parameter name

Apply Patches By Sequence

Functional description

This parameter makes the Forced Sequence Application feature able. Northern Telecom assigns a sequence number to patches during the release of patches for general distribution. The APPLY_PATCHES_BY_SEQUENCE parameter forces the application of patches in sequence number order.

Rules in provisioning

Operating companies that use the CI command DLCHECK on all NTI patches must set this parameter to Y (yes). All other companies must set this parameter to N (no).

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Use of the FORCE option together with command APPLY applies patches that are not in sequence when the conditions that follow occur:

- the parameter is set to Y
- the CI patch command DLCHECK does not check all patches

If this parameter is set to N, the system continues to track the sequence numbers of patches DLCHECK applies and checks. The command INFORM MISSING allows a display of the results.

Verification

Does not apply

APPLY_PATCHES_BY_SEQUENCE (end)

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS32

This parameter was introduced in BCS32.

AR_BLOCK_PRIVATE_CTX

Parameter name

Automatic Recall Block for Private Centrex Lines

Functional description

The possible values of the office parameter AR_BLOCK_PRIVATE_CTX are as follows:

- ALL - Blocking of all AR-activated calls to private numbers.
- NOBLK - (default) There is no blocking of AR-activated calls to private numbers.
- CARSCRN - All Equal Access (EA) AR-activation attempts from MDC lines to private numbers complete, if the carrier for the call is one of the following:
  - — the Local Exchange Carrier (LEC)
  - — the Operating Telephone Company (OTC). The OTC can be the LEC
  - — an approved EA carrier, as specified in table OCCINFO

Table OFCENG contains the office parameter if the CABOP package is present in the software load. Value CARSCRN is only available when CMS AR Screening of Private Calls (CASOP) is present in the load.

The AR_BLOCK_PRIVATE_CTX office parameter controls the blocking of AR activation attempts to a private directory number (DN) for the following conditions:

- an Integrated Business Network (IBN) line
- MDC business set lines in an end office

The CABOP functionality allows the operating company to satisfy the rule that disallows the communication of a private DN. The CASOP enhances CABOP because the functionality allows some of the calls now blocked by CABOP to complete.

The CASOP allows AR-activated calls to private numbers to complete when the carrier is one of the following:

- the LEC
- the OTC, which can be the LEC
- an approved EA carrier

AR_BLOCK_PRIVATE_CTX (end)

The CASOP only blocks AR-activated calls to private numbers that have a set path through EA carriers that are not approved.

Rules in provisioning

Does not apply.

Range information

Minimum	Maximum	Default
	ALL CARSCRN NOBLK	NOBLK

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

NA002

Introduction of this parameter occurred in NA002.

NA007

The CASOP feature adds value CARSCRN in NA007.

AR_BLOCK_PRIVATE_RES

Parameter name

Automatic Recall Block for Private Residential Lines

Functional description

The AR_BLOCK_PRIVATE_RES office parameter controls blocking of AR activation attempts to a private directory number (DN) for Residential Enhanced Services (RES) lines in an end office. The possible values of this office parameter are as follows:

- ALL - Blocking of all AR-activated calls to private numbers.
- TOLL - Blocking of long distance AR-activated calls to private numbers.
- NOBLK - (default) AR-activated calls to private numbers are not blocked.
- CARSCRN - All Equal Access (EA) AR-activation attempts from MDC lines to private numbers complete, if the carrier for the call is one of the following:
  - — the local exchange carrier (LEC)
  - — the operating telephone company (OTC). The OTC can be the LEC.
  - — an approved EA carrier. Table OCCINFO specifies approved EA carriers.

Table OFCENG contains this office parameter if the CABOP package is present in the software load. Value CARSCRN is only available when CMS AR Screening of Private Calls (CASOP) occurs in the load.

The CABOP functionality allows the operating company to satisfy the rule that does not allow communication of private DNs. CASOP enhances CABOP because CASOP allows some of the calls now blocked by CABOP to complete.

The CASOP allows AR-activated calls to private numbers to complete when the carrier is one of the following:

- the LEC
- the OTC, which can be the LEC
- an approved EA carrier

CASOP only blocks AR-activated calls to private numbers that have a set path through EA carriers that are not approved.

AR_BLOCK_PRIVATE_RES (end)

Provisioning rules

As explained in the Functional description section.

Range information

Minimum	Maximum	Default
		NOBLK

Activation

Immediate

Requirements

None

Results

Does not apply

Testing

Does not apply

Memory requirements

None

Dump and restore rules

Does not apply

Parameter history

NA007

The value CARSCRN was added by the CASOP feature.

BCS36

This parameter was introduced.

AR_BLOCK_PRIVATE_TOLL_METHOD

Parameter name

Automatic Recall Blocking of Private Calls Toll Detection Method (AR_BLOCK_PRIVATE_TOLL_METHOD)

Functional description

The AR_BLOCK_PRIVATE_TOLL_METHOD office parameter allows an operating company to select a toll detection method for the Automatic Recall Blocking of Private Calls (CABOP) package. The possible values of this office parameter follow:

- LCASCR-local calling area screening
- REVXLA-(default) reverse translations

The office parameter is found in table OFCENG if the CABOP package is present in the software load.

The CABOP functionality allows the operating company to meet regulations that disallow the communication of private directory numbers (DN).

Provisioning rules

The value of this parameter can be set to LCASCR or REVXLA.

The following tables determine if an AR call from a Residential Enhanced Services (RES) line is a long-distance call. The parameter must be set to LCASCR:

- table LCASCRCN
- subtable LCASCRCN.LCASCR

If the value of this parameter is set to REVXLA, the following tables determine if an AR call from a RES line to a private DN is a long-distance call:

- DNREVXLA
- DNREGION

These values allow operating companies to block AR activated long-distance calls from RES lines in given markets. The public network dial plan does not use a prefixed DN, with a fixed format for all long-distance calls.

AR_BLOCK_PRIVATE_TOLL_METHOD (end)

Range information

Minimum	Maximum	Default
	LCASCR	REVXLA

Activation

Immediate

Requirements

Does not apply

Results

Does not apply

Testing

REVXLA is the default value for the toll detection method office parameter. Selection of REVXLA occurs during an AR activation to a private number when the toll detection method value is out of range.

Memory requirements

None

Dump and restore rules

Does not apply

Parameter history

NA004

This parameter was introduced.

AR_DDN_LINE_OR_OFFICE

Parameter name

Automatic Recall Dialable Directory Number Line Or Office

Functional description

This parameter specifies when the voice back of Dialable Directory Number (DDN) occurs for Automatic Recall (AR) two level activation. This feature allows the subscriber to dial an AR activation code. The subscriber can receive an announcement of the directory number of the last station that called the station of the subscriber. Instructions to complete the AR request (Dialing the number 1) follow the announcement. Refer to feature AG1228 for more details of two level activation.

Rules in provisioning

Set this parameter to the value LINE. The parameter value LINE allows ARDDN line option assignment to occur to each line before the line receives DDN voice back. Voice back is received as opposed to the ten digit Directory Number.

When the parameter value is set to OFFICE, AR option equipped office lines can receive DDN voice back on two level activation.

Range information

Minimum	Maximum	Default
		LINE

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

To check that this parameter works, make test calls on AR lines. Lines with the ARDDN line option assigned receive DDN voice back on AR activation if

AR_DDN_LINE_OR_OFFICE (end)

the parameter is set to LINE. The activation level in table RESOFC must be set to TWOLEVEL.

AR activation means AR-equipped office lines receive DDN voice back when the conditions that follow occur:

- the parameter value is OFFICE
- office installation allows two level activation

Memory requirements

Each unit requires 1 word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced with software release BCS33.

AUXCP_CPU_SHARE

Parameter name

AUXCP Central Processing Unit Share

Functional description

This parameter is required for a switching unit that has any of the following feature packages:

- Basic Simplified Message Desk Interface (SMDI) (NTX732)
- High-speed SMDI package (NTXN10AA)
- SCAI usage available through CompuCALL (NTXJ59 or NTXJ65)

This parameter is used to indicate what percentage of the CPU realtime is allocated to the AUXCP class. For example, if this parameter is set to 1, the AUXCP receives 1 percent of the CPU realtime.

AUXCP class is a scheduler class that is used for SMDI and SCAI.

Provisioning rules

This parameter is engineered in percentages of CPU occupancy. The value is the guaranteed percentage of the CPU for AUXCP class when the switch is under load. This value is determined by the amount of CPU that the operating company is willing to dedicate to SMDI and Switch Computer Applications Interface (SCAI) usage. The amount of SMDI traffic, the type of SCAI usage and the amount of CP traffic must be examined.

Note: After a reload or IPL, current allocations defined in the Scheduler Application template are re-initialized in parameter AUXCP_CPU_SHARE. For example, if the craftsperson sets the AUXCP_CPU_SHARE to a value of x, after a reload restart the value x is no longer used. The tuple is set to the current allocations defined in the Scheduler Application state template and the allocation can only be changed back through the Table Editor.

Contact Northern Telecom for assistance in engineering this parameter.

AUXCP_CPU_SHARE (continued)

Range information

Minimum	Maximum	Default
1	25	6 (if high-speed SMDI software is present)1 (if high-speed SMDI software is not present)

Activation

Immediate

Dependencies

Not applicable

Consequences

This office parameter affects the amount of time awarded to the class in which the incoming SMDI process runs. If underprovisioned, and there are bursts of incoming SMDI traffic or increased SCAI usage, there can be some delay in applying the appropriate messages to the terminals. This may occur when the switch is heavily loaded, since the AUXCP will not be able to get unused time from other classes to make up for the underprovisioning.

If the amount of time given to the AUXCP is more than that required by SMDI traffic and SCAI usage, the unused time is given to the CP if more time is required. If the CP traffic level normally uses a certain amount of the CPU, and the AUXCP is allocated some of this time through overprovisioning, delays on the CP origination queue could increase.

Verification

This parameter can be verified by entering table control and positioning on AUXCP_CPU_SHARE. The user can verify that the parameter is set at the intended value.

Memory requirements

This parameter requires one word of data store. 300 words of store are temporarily required while the value of this parameter is changed.

Dump and restore rules

This parameter was introduced in BCS30.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

CSP05

Note added concerning the re-initialization change due to a reload restart from the Scheduler Application state template .

AVG_NUM_TGS_PER_OHCBQCALL

Parameter name

Average Number of Trunk Groups Per Off-hook/Call Back Queuing Call

Functional description

Only an Integrated Business Network (IBN) switching unit that has one or more customer groups requires this parameter. The customer groups have the Call Back Queue (CBQ) or Off-hook Queuing (OHQ) feature.

This parameter specifies the average number of trunk groups involved in CBQ or OHQ.

Rules in provisioning

The recommended value is four.

If the system does not provide this feature, leave the value of this parameter at the default value of zero.

Range information

Minimum	Maximum	Default
0	32767 (reserved) 32 (programmed)	0

Activation

Increase - immediate

Decrease - cold restart

Dependencies

Does not apply

Consequences

See operational measurement (OM) groups OHQCBQCG and OHQCBQRT in the *Operational Measurements Reference Manual*. The OM groups apply to the OMs that underprovisioned parameters affect.

The system gives No Software Resource (NOSR) treatment when an CBQ or OHQ attempt occurs and there are no queuing resources available.

AVG_NUM_TGS_PER_OHCBQCALL (end)

Verification

Does not apply

Memory requirements

The following formula determines the number of words of memory required:

Number of words = parameter NUMOHCBQTRANSBLK
X parameter AVG_NUM_TGS_PER_OHCBQCALL
X 15 words

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP03

Restart activation was changed to immediate in CSP03.

B911_3WC_ALLOWED

Parameter name

B911 Three-way Calling Allowed

Functional description

This parameter only appears in switching units with both the Emergency Service Bureau (ESB) and Three-way Calling (3WC) features.

This parameter specifies if the establishment of a three-way call that involves a public safety answering point (PSAP) operator can occur. Some business customers provide a hot-line service. In an emergency, the hot-line attendant dials 911. This feature allows the originator and the hot-line attendant conference in with the PSAP operator. Without the feature, the system cannot make a three-way call that involves a PSAP.

A line with 3WC feature cannot dial a third party when establishment of a call with a PSAP operator is complete. This condition occurs regardless of the value of this parameter. The system ignores all flashes from the line in a common line to PSAP call.

Rules in provisioning

If this parameter remains at the default value of N (no), only the 3WC line and the PSAP operator can talk.

If this parameter value is Y (yes), the system allows the 3WC line to flash again and receive all three parties.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

B911_3WC_ALLOWED (end)

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

This parameter was introduced in BCS28.

Copy the current value of the parameter when you perform a dump and restore.

BACKUP_METER_FREQUENCY_LINES

Parameter name

Backup Meter Frequency Lines

Functional description

A switching unit with the world systems and the DMS-100 Metering System requires this parameter. This parameter specifies the starting time and the interval at which the line meter blocks are backed up.

Use the start time as the first time that the backup is done.

The value of this parameter is equal to:

- the starting time (0 to 23 h and 0 to 59 min)
- the frequency (1 to 24 h) of which to save the meter counts

An acceptable time interval is once every 2 h.

The default value is a starting time of midnight (0 0) and a frequency of once every 2 h.

Rules in provisioning

You can require a starting time other than midnight and a frequency of other than 2 h for saving line meter counts. If this condition occurs, specify the time and frequency that you require.

Range information

Minimum	Maximum	Default
		0 0 2 HRS

Activation

The system checks the value of the parameter at midnight. If the value changed in the last 24 h, the next backup of line meter blocks occurs at the indicated start time. The frequency of subsequent backups occur at the indicated frequency.

Dependencies

Does not apply

BACKUP_METER_FREQUENCY_LINES (end)

Consequences

If the frequency is too high, the previous backup is not completed.

A check in the system prints a log if the backup is not completed before the request of another one.

Another result of a high frequency is that the device that holds the backups fills too quickly. The device requires attention more often.

If the frequency is too low the backup line meter blocks. A lower meter count value than desired is available.

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

This parameter was introduced in BCS18.

Copy the current value of this parameter when you perform a dump and restore.

BACKUP_METER_FREQUENCY_TRUNKS

Parameter name

Backup Meter Frequency Trunks

Functional description

A switching unit with the world systems and the DMS-100 metering system requires this parameter. This parameter specifies the starting time and the interval at which the trunk meter blocks are backed up.

Use the start time as the first time that the backup is done.

This value of this parameter is equal to:

- the starting time (0 to 23 h and 0 to 59 min)
- the frequency (1 to 24 h) of which to save the meter counts

An acceptable time interval to use is once every 2 h.

The default value is a starting time of midnight (0 0) and a frequency of once every 2 h.

Rules in provisioning

You can require a starting time other than midnight or a frequency of 2 h for the saving of trunk meter counts. If this condition occurs, specify the time and frequency that you require.

Range information

Minimum	Maximum	Default
		0 0 2 HRS

Activation

The system checks the value of the parameter at midnight. If the value changes in 24 h, the next backup of trunk meter blocks occurs at the indicated start time. The frequency of subsequent backups occur at the indicated frequency.

Dependencies

Does not apply

BACKUP_METER_FREQUENCY_TRUNKS (end)

Consequences

If the frequency is too high, the previous backup cannot complete.

A check in the system prints a log if the backup is not complete before the request of another one.

Another result of a high frequency is that the device that holds the backups fills too quickly. The device requires attention more often.

If the frequency is too low, the backup trunk meter blocks. A lower meter count value than desired occurs.

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

This parameter was introduced in BCS28.

Copy the current value of the parameter when you perform a dump and restore.

BC_CHECKING_SCOPE

Parameter name

Bearer Capability Checking Scope

Functional description

A switching unit with the Integrated Services Digital Network (ISDN) feature requires this parameter. This parameter specifies if the system allows call screening between stations based on bearer capability (BC) and low layer compatibility (LLC). The parameter specifies if the system allows this type of call screening for both the Integrated Business Network (IBN) and ISDN environments. This includes members of multiple appearance directory number (MADN) groups, ISDN stimulus terminal short hunt groups and huntgroups.

This parameter provides for the assignment of BCs to IBN electronic business sets (EBS), data units (DU) or ISDN stimulus terminals. This parameter does not apply to 500/2500 sets, attendant consoles or trunks.

Rules in provisioning

If BC checking does not apply, leave the value of this parameter at the default of NONE.

You can apply BC compatibility screening to all calls that terminate on IBN and ISDN agents with bearer capabilities. To apply the BC compatibility screening for the previous condition, set the value of this parameter to IBN.

You can apply BC compatibility screening to calls that terminate on ISDN terminals. To apply the BC compatibility screening for the previous condition, set the value of this parameter to ISDN.

Range information

Minimum	Maximum	Default
		None

Activation

Activation is immediate

BC_CHECKING_SCOPE (end)

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

This parameter was introduced in BCS25.

Copy the current value of the parameter when you perform a dump and restore.

BELL_ANI_ALARM_ID

Parameter name

Bell Automatic Number Identification Alarm Identification

Functional description

This parameter specifies the automatic number identification (ANI) information digit (ID). The operating company assigns this ID. The ANI ID indicates an alarm condition.

Rules in provisioning

You can assign any digit from 0 to 9. The recommended digit is 8.

This parameter is present if the switching unit supports the ANI request. This is the only condition for which this parameter is present.

Range information

Minimum	Maximum	Default
0	9	8

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

This parameter was introduced in BCS15.

BELL_ANI_ALARM_ID (end)

Copy the current value of the parameter when you perform a dump and restore.

BELL_ANI_INTERCEPT_ID

Parameter name

Bell Automatic Number Identification Intercept Identification

Functional description

This parameter specifies the automatic number identification (ANI) information digit (ID) that the operating company assigns. The ANI ID indicates an intercept type call.

Provisioning rules

You can assign any digit from 0 to 9. The recommended digit is 9.

This parameter is present if the switching unit supports the ANI request.

Range information

Minimum	Maximum	Default
0	9	9

Activation

Activation is immediate

Dependencies

To activate this parameter, SPILL_ANI_9 in table OFCENG must be set to Y (yes).

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

BELL_ANI_INTERCEPT_ID (end)

Parameter history

BCS15

This parameter was introduced in BCS15.

NA002

Revised text under section “Dependencies" to remove restart requirement.

BLOCK_555_DIGITS

Parameter name

Block 555 Digits

Functional description

A DMS-300 switching unit requires this parameter. This parameter allows the switching unit to enable or disable the blocking of calls to NNX code 555.

In North America, the standard for long distance directory assistance is an NNX of 555. The system blocks customer dialed calls that terminate in the host country if the 4th through 6th digits are 555. A specified entry in table OVNTRNSL can allow the call to occur. The block is not valid for other countries that do not have the same structure in numbering plans as North America.

This parameter indicates if the system blocks subscriber dialed calls if the DEF digits are 555. This condition applies to calls that terminate in the country of the switch.

Rules in provisioning

The parameter can remain at the default value of Y (yes). For this value, the system blocks subscriber dialed calls that terminate in the country of the DMS-300. This condition occurs if the DEF digits are 555. A specified entry can appear in table OVNTRNSL which allows the code.

If this parameter is set to the value of N (no), checks do not occur for NNX code 555 blocking.

Range information

Minimum	Maximum	Default
		Y

Activation

Activation is immediate.

Dependencies

The parameter can remain at the default value of Y (yes). For this value, the system blocks subscriber dialed calls that terminate in the country of the

DMS-300. This condition occurs if the DEF digit are 555. A specified entry can appear in table OVNTRNSL which allows the code.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

This parameter was introduced in BCS21.

Copy the current value of this parameter when you perform a dump and restore.

BLOCK_D_E_DIGITS

Parameter name

D and E Digit Blocking

Functional description

A DMS-300 switching unit requires this parameter. This parameter allows the switching unit to enable or disable the D and E digit blocking feature.

In North America, there is a three digit numbering plan area (NPA). A three digit NNX office code follows the NPA. The N is a digit represents digit in the range 2 to 9. X is a digit from 0 to 9. The letters ABCDEF describe the position of the digit. In the digit string 613-726-2000, the D (4th) digit is 7 and the E digit is 2.

The structure of the NPA is always N0/1N. 613 and 212 are examples of this structure. In specified numbering plan areas, the system allows local office codes with a 0/1 as the second digit. These codes are not specified, and the number length determines the translations.

The A D digit of 0 or 1 indicates an operator or test call which normal subscribers cannot access. The D digit blocking prevents subscriber access to these codes.

The E digit blocking prevents toll fraud. The E digit blocking requires that an operator code and another valid NPA follow an NPA. This can allow access that is not valid to a code that is not allowed.

Current translations make sure customer dialed calls that terminate in the country do not have a 0/1 as the 4th or 5th digits. This condition does not occur if an entry appears in table OVNTRNSL that allows the calls. These calls have codes that are not specified. This blocking is invalid for other countries that do not have the same numbering plan structure as North America.

Rules in provisioning

You can leave this parameter at the default value of Y (yes). This setting blocks subscriber dialed calls that terminate in the country of the DMS-300. This condition occurs if the D or E digit is a 0 or 1. The system does not block the calls if a specified entry appears in table OVNTRNSL that allows the code.

If parameter is set to the value of N (no), checks for D or E digit blocking do not occur.

BLOCK_D_E_DIGITS (end)

Range information

Minimum	Maximum	Default
		Y

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

This parameter was introduced in BCS21.

Copy the current value of the parameter when you perform a dump and restore.

BTUP_INTL_DGT_PREFIX

Parameter name

BTUP International Digit Prefix

Functional description

This parameter signifies international numbers over BTUP lines. The system adds the specified value to outgoing BTUP calling line identification (CLI) digits to indicate international calls. The system removes the specified value from incoming (received) BTUP CLI digits before the digits pass to another signaling system.

Use this parameter in ISDN user part (ISUP)-to-BTUP and primary rate interface (PRI)-to-BTUP interworking. Field NADDR of the ISUP CLID history data block (HDB) can signify an international call. When this event occurs, the system adds the BTUP_INTL_DGT_PREFIX value to the start of the CLI digit string after the hex B characters.

The system examines the received CLI for any interworking where BTUP is the originator. If the international digit prefix is present, the system removes the prefix. The system sets field NADDR in the CLID HDB for the terminating agent to use.

This parameter contains the following two fields: prefix and count.

- The prefix field contains the prefix digit stored in character form. For prefixes of two digits or less, the system uses an underscore character (_) to pad the prefix. Valid values are 00-99 and 0_, 1_, 2_, 3_, 4_, 5_, 6_, 7_, 8_, and 9_. The default value is 10.
- The count field is a count of the prefix digits. The system uses the count field to determine if the system must use underscore characters. Valid values are 1 and 2. The default value is 2.

Rules in provisioning

Specify the value to be added to outgoing BTUP CLI digits to indicate international calls.

Range information

Minimum	Maximum	Default
00 2	99 2	10 2

BTUP_INTL_DGT_PREFIX (end)

Note: Values 0_ 1 (minimum) to 9_ 1 (maximum) are valid for this parameter.

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

The system generates an error message if this parameter is set to a value outside of the valid range.

Verification

Does not apply

Memory requirements

Each unit requires 3 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

UK002

Design activity AE1466, NCC-BTUP International Prefix Change, changes this parameter. This change allows the operating company to select a one- or two-digit prefix for international calls.

BCS34

This parameter was introduced by design activity AE1010, BTUP CLI Handling.

BTUP_NETWK_ID

Parameter name

BTUP Network Identifier

Functional description

A DMS-300 switch requires this office parameter. This parameter specifies the value of the Network Identifier. The BTUP includes the Network Identifier. This parameter also specifies the initial and final address message (IFAM) that the DMS generates.

Rules in provisioning

Set the value of this parameter according to the network identifier required. The network identifiers appear in the following table.

Network identifier values by user (Sheet 1 of 2)

Value	User
NI_NO_INFORMATION	information on originating / preceding network is not present.
NI_BRITISH_TELECOM	UK customer specific
NI_TEL_SECUR_CELLULAR_RAD	Telecom Securicor Cellular Radio
NI_MERCURY	UK customer specific
NI_RACAL_VODAPHONE	Racal/Vodaphone
NI_HULL	Hull
NI_ISLE_OF_MAN	Isle of Man
NI_JERSEY	Jersey
NI_GUERNSEY	Guernsey
NI_EIRE	Eire
NI_VPN	VPN
NI_BES	BES
NI_VPN_AND_BES	VPN and BES
NI_PAN_EUROPE_RACAL_VOD	Pan European (GSM) Racal / Vodaphone

Network identifier values by user (Sheet 2 of 2)

Value	User
NI_PAN_EUROPE_TEL_SEC_CELL_RAD	Pan European (GSM) Telecom Securicor Cellular Radio (TCSR)
NI_EXTENSION_IDENTIFIER	reserved for extension identifier (treat as 0)

Range information

Minimum	Maximum	Default
		NI_NO_INFORMATION

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

To verify that this parameter is operational, generate an enhanced BTUP IFAM. Verify that the network indicator value is equal to the value of the office parameter.

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced by software release BCS34.

BTUP_PARTIAL_CLI

Parameter name

BTUP Partial Calling Line Identification (CLI)

Functional description

Switching units with the BTUP call processing functionality require this parameter.

This parameter contains partial calling line identification (PCLI) data and consists of three fields. This parameter indicates a node within a network. This parameter indicates when a BTUP signaling call encounters another signaling system that cannot interwork a full CLI.

Rules in provisioning

If this parameter is set to a value other than 0 0 0, specify the PCLI required.

The fields for PCLI appear in the following table.

PCLI required

Field	Name	Value
1	TYPE OF UNIT	00 - 99
2	REGION and AREA	00 - 99
3	UNIT IDENTITY	0000 - 9999

Range information

Minimum	Maximum	Default
		0 0 0

Activation

Activation is immediate.

Dependencies

Does not apply

BTUP_PARTIAL_CLI (end)

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in software release BCS28.

BTUP_VER_IND

Parameter name

BTUP Version Indicator

Functional description

This parameter identifies the UK market standard of the BTUP version (V2 or V2+) signaling required on a nodal basis. This parameter determines the CCITT Common Channeling Signaling 7 (CCS7) BTUP version indicator on the initial address message-initial and final address message (IAM-IFAM). The system must generate the IAM-IFAM at originating, transit, and interworking nodes.

This parameter is read-only to the operating company. Only Northern Telecom can change this parameter.

Rules in provisioning

This office parameter can be set to a value of BTV2SNDE or BTV2PNDE.

The value BTV2SNDE indicates that the node is version 2.

The value BTV2PNDE indicates that the node is version 2+.

Range information

Minimum	Maximum	Default
		BTV2SNDE

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

This parameter is read-only to the operating company. To verify the parameter value, list the parameter at the MAP level.

BTUP_VER_IND (end)

Memory requirements

Each unit requires 3 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

UK002

This parameter was introduced in BCS35 by design activity AE1122, BTUP V2+ CLI, CPC.

C7GTT_DELTA_FILE_ACTIVITY_STATE

Parameter name

C7 Global Title Translation (C7GTT) Delta File Activity State

Functional description

This parameter controls the link interface unit (LIU7) data-synchronization process. The system maintains a list of updates made to tables C7GTT and C7GTTYPE in the computing module (CM). The system performs a data-synchronization and checks all data present in the LIU7 against the updates recorded in the CM. The system only extracts the updates that are not present, in the LIU7 version. The system extracts the updates from the CM update list and sends the updates to the LIU7.

Rules in provisioning

Operating company personnel cannot change this parameter.

Range information

Northern Telecom sets the value of this office parameter. Operating company personnel cannot change this parameter. The STPSOC automatically changes this office parameter based on the STPSOC state. If the SOC state is ON, C7GTT is set to ON. If the SOC state is IDLE, C7GTT is set to OFF.

Activation

Activation is immediate.

Dependencies

When the value of this parameter is ON, table C7GTTDF contains delta file information. This table is read-only and contains data that transfers to the peripheral module (PM) when an LIU7 returns to service.

Consequences

When the value of this parameter is ON and the delta file is up to date, the return to service (RTS) time of an LIU7 decreases. The data store increases by 240 kbytes. When the value of this parameter is OFF, the RTS of an LIU7 is normal. The data store in the LIU7 does not increase.

Verification

The parameter value is set when the load is installed. To see the setting of C7GTT_DELTA_FILE_ACTIVITY_STATE, list the contents of table OFCENG. Use the table editor.

C7GTT_DELTA_FILE_ACTIVITY_STATE (end)

Memory requirements

When the value of this parameter is ON or INACTIVE, the system requires 240 kbytes of memory.

When the value of this parameter is OFF, this parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore. The parameter aspect is called on the side that is inactive during the one-night-process.

Parameter history

CSP08

The STPSOC state requirement was introduced in CSP08.

CSP02

This parameter was introduced in CSP02.

C11_EXPANSION

Parameter name

C11_Expansion

Functional description

An International Switching Centre (ISC) requires this parameter. The system must convert operator codes from overseas of type C11 to a 1-to-12 digit code. This conversion allows the system to accept the codes nationally. The C11_EXPANSION parameter defines the 1-to-12 digit code.

Rules in provisioning

Specify the 1-to-12 digit code. The system must convert operator codes from overseas of type C11 to a 1-to-12 digit code. This conversion allows the system to accept the codes nationally.

Range information

Minimum	Maximum	Default
0	999999999999	121

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

C11_OUTG_EXPANSION

Parameter name

C11 Outgoing Expansion

Functional description

The system requires this parameter in a DMS-300 switching unit. This parameter specifies an operator code (field DIGITS) the single digit (field C11C12) that replaces the operator code on outgoing calls. The incoming trunk class (field INTRKCLS) of the trunk group (trunk group type GW) in table TRKGRP must be a 1. The incoming trunk must be 1 to allow the system to perform the conversion.

These 1 to 12 digits can follow an initial country code, discrimination digit or city code digits on outgoing calls. When this event occurs, the system replaces to the 1 to 12 digits with the digit in the C11C12 field.

The range of the DIGIT field is 1-to-12 digits (digits 0 to 9).

The range of the C11C12 field is 1 digit in the range 0 to 9, B, C, D, E, F.

Rules in provisioning

Specify an operator code (field DIGITS). Specify the single digit (field C11C12) that will replace the operator code on outgoing calls.

Range information

Minimum	Maximum	Default
		121 B

Activation

Activation is immediate.

Dependencies

The incoming trunk class (field INTRKCLS) of the trunk group (trunk group type GW) in table TRKGRP must be a 1. The incoming trunk class must be 1 to allow the system to perform the conversion.

Consequences

Does not apply

C11_OUTG_EXPANSION (end)

Verification

Does not apply

Memory requirements

Does not apply

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS21.

C12_EXPANSION

Parameter name

C12 Expansion

Functional description

The system requires this parameter for an International Switching Centre (ISC). The parameter defines the 1 to 12 digits (digits 0-9) that the system converts the operator codes of type C12 to. This conversion allows the system to accept the codes nationally.

Rules in provisioning

Specify the 1-to-12 digit code. The system must convert operator codes from overseas of type C12 to a 1 to 12 digit code. This conversion allows the system to accept the codes nationally when the system receives these digits from other countries.

Range information

Minimum	Maximum	Default
		131

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

C12_OUTG_EXPANSION

Parameter name

C12 Outgoing Expansion

Functional description

A DMS-300 switching unit requires this parameter. This parameter specifies an operator code (field DIGITS) and the single digit (field C11C12) that replace the operator code. The operator code and single digit replace the operator code on outgoing operator calls. The 1 to 12 digits can follow any initial country code, discrimination digit or city code digits on outgoing calls. When this condition occurs, the system replaces to the 1-to-12 digits with the digit in the C11C12 field.

The 1-to-18 digits can follow any initial country code and discrimintion digits on outgoing calls. When this event occurs, the system replaces the digits with the single digit C.

The range of the DIGIT field is 1 to 12 digits in the range 0 to 9.

The range of the C11C12 field is 1 digit in the range 0 to 9A, B, C, D, E, F.

Rules in provisioning

Specify an operator code (field DIGITS) and the single digit (field C11C12) that replace the operator code on outgoing calls.

Range information

Minimum	Maximum	Default
		131B

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

C12_OUTG_EXPANSION (end)

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS21.

C12_PLUS_OUTG_EXPANSION

Parameter name

C12 Plus Outgoing Expansion (C12_PLUS_OUTG_EXPANSION)

Functional description

The DMS-300 switching units require this parameter. This parameter specifies the operator code that converts to a C digit on outgoing international trunks (trunk group type GW in table TRKGRP). One to four digits must follow the operator code.

Rules in provisioning

This parameter can have a number value from 1 to 12 digits (digits 0 to 9). Normally the value is a 2-digit number.

When the switching unit is in North America, leave this parameter value at the default of 11.

Range information

Minimum	Maximum	Default
		11

Activation

Activation is immediate.

Dependencies

Refer to table TRKGRP in this document.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 4 words of memory.

C12_PLUS_OUTG_EXPANSION (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS21.

CABLE_LOCATE_TIMEOUT

Parameter name

Cable Locate Timeout

Functional description

The Dialable Line Circuit Identification feature requires this parameter.

The user dials an access code followed by a seven-digit directory number (DN) from any line circuit. The DMS-100 connects the desired tone on the tip and ring of the dialed DN. The cable locator tone remains on the line for the predetermined period of time specified by this office parameter.

Rules in provisioning

Specify the length of time, in seconds, that the cable locator tone remains on the line.

Range information

Minimum	Maximum	Default
0	600 (10 min)	180 (3 min)

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

CABLE_LOCATE_TIMEOUT (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS18.

CABLE_SHORT_TIMEOUT

Parameter name

Cable Short Timeout

Functional description

To diagnose a fault on a line, you must place a short across the tip and ring leads of the line. The Dialable Short Circuit feature allows operating company personnel to place a short circuit with a dialed access code. The operating company personnel dials the access code from either the defective line or other DMS-100 line.

This parameter defines the length of time that the system applies the short circuit across the tip and ring of a line. This parameter defines the length of time in 1 s intervals.

Rules in provisioning

The operating company sets the value of this parameter based on the required time to locate line faults.

The default value is set at 180 s (3 min).

Range information

Minimum	Maximum	Default
0	600	180

Activation

Activation is immediate.

Dependencies

Table common language location identifier (CLLI) must contain the pseudo CLLI, DSCKT.

The operating company personnel assign the access code for plain ordinary telephone service (POTS) lines and integrated business network (IBN) lines with the Direct Outward Dial (DOD) feature, in subtable STDPRT.

For IBN lines without the DOD feature, operating company personnel assign the access code in subtable STDPRT.

CABLE_SHORT_TIMEOUT (end)

This parameter requires one or more horizontal agents with selector S in table MTAHORIZ.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS20.

CALL_WAITING_CONFERENCE

Parameter name

Call Waiting Conference

Functional description

This parameter determines the availability of the call waiting conference functionality on an office-wide basis.

The operating company personnel enables or disables the call waiting conference functionality in field ENABLED.

The operating company personnel enables or disables the pay-per-use functionality of the Call Waiting Conference (CWTC) feature on an office-wide basis in field UCWTC. This functionality only has effect if the ENABLED field is set to Y.

The field CWTC_Detection_Timer determines the length of time the controller has to dial a digit and activate the feature. The value of the timer ranges from 10- to 80-tenths of a second, in 5-tenths of a second increments. If the value entered is not an increment of 5-tenths of a second then the following error message is displayed: “CWTC_Detection_Timer field must be a multiple of 5-tenths of a second."

Provisioning rules

Does not apply

Range information

Minimum	Maximum	Default
		N
		N
10-tenths of a second	80-tenths of a second	15-tenths of a second

Activation

Immediate

Dependencies

Does not apply

CALL_WAITING_CONFERENCE (end)

Consequences

Does not apply

Verification

The call waiting conference functionality is not made available to a line if the field ENABLED is set to N. The call waiting conference functionality is made available to a line if the field ENABLED is set to Y.

The pay-per-use call waiting conference functionality is not made available to a line if the field UCWTC is set to N. The pay-per-use call waiting conference functionality is made available to a line if the field UCWTC is set to Y.

The field CWTC_Detection_Timer is set to a value within the range of 10- to 80-tenths of a second, and the value is an increment of 5-tenths of a second.

Memory requirements

This parameter value requires 1 word of memory.

Dump and restore rules

Does not apply

Parameter history

NA011

This parameter was introduced.

CC_ENGLEVEL_WARNING_THRESHOLD

Parameter name

Call Processing Engineered Level Warning Threshold (CC_ENGLEVEL_WARNING_THRESHOLD)

Functional description

This parameter associates with the call processing status (CPSTATUS) tool. This parameter specifies the engineered level at which the switch runs. The CPSTATUS uses the value to determine if the switching unit runs above or below the engineered level. The command interpreter (CI) command CPSTAT also appears if the switch runs above or below the engineered level.

The CPSTATUS tool provides a measure of all central processing unit (CPU) occupancies including:

- call processing occupancy
- a measure of additional CPU time available for call processing work
- an indication of overload
- an indication of switch performance related to switch engineering.

In BCS34, this parameter is modified for Series 50 SuperNode applications and creates a linear image of call processing capacity. A call capacity percentage (CAPACITY) replaces the call processing occupancy (CPOCC) used in other DMS cores. The CAPACITY represents the current call processing, put through relative to a projected safe maximum. The default value for CAPACITY is 100. The 100% CAPACITY value represents the safe engineering level for all markets.

Rules in provisioning

The value of this parameter must be the percentage of CPOCC for which the switching unit is engineered.

The default value is 77%. Plain old telephone service (POTS) switching units are engineered at this value.

Set the value of this parameter to a value of 100 for a Series 50 SuperNode switch.

CC_ENGLEVEL_WARNING_THRESHOLD (continued)

Range information

Minimum	Maximum	Default
0	100 (Series 50 SuperNode)	100 (Series 50 SuperNode)
0	83 (all other cores)	77 (all other cores)

Activation

Activation is immediate.

Dependencies

The parameters CPSTATUS_ON in table OFCVAR and CPSTATUS_SWITCHABLE in table OFCENG associate with this feature.

Consequences

A parameter value that is high or low does not affect performance. The CPSTAT and CPSTATUS display ABOVE or BELOW. The display depends on the value of this parameter and the CPOCC for the last minute.

The following message can appear:

```
*ERROR* : VALUE OUTSIDE VALID RANGE (0 TO 83%)
```

This message appears when an attempt is made to change the value of the parameter. The change is outside the range of the parameter (0 to 83). The attempt occurs in a switch other than a Series SuperNode Switch.

Verification

Use the CPSTAT command to verify the value of this parameter.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Offices that upgrade to BRISC CPU must change the value of the parameter CC_ENGLEVEL_WARNING_THRESHOLD in table OFCENG to 100.

CC_ENGLEVEL_WARNING_THRESHOLD (end)

Parameter history

BCS36

Added dump and restore information for upgrades to BRISC CPU

BCS25

This parameter was introduced in BCS25.

CC_REX_SCHEDULED_HR

Parameter name

Central Control Routine Exercise Scheduled Hour (CC_REX_SCHEDULED_HR)

Functional description

This parameter specifies the hour that the Central Control (CC) REXTEST starts.

The software independently determines the time in the hour that the test starts.

The CC REXTEST drops sync and performs diagnostics on the side that is inactive. The system performs an image test on the side that is inactive.

This test runs for up to 1 h. The tests can run for 5 h when multiple store card faults are present. The software fixes the problems and finishes the test. Run the test during the five lowest traffic hours on the switch. The five lowest traffic hours normally start at 00:00 h.

Rules in provisioning

The recommended value for this parameter is zero.

Range information

Minimum	Maximum	Default
0	23	0

Activation

Activation is immediate.

Dependencies

Stagger the scheduling for office parameters CC_REX_SCHEDULED_HR and CMC_REX_SCHEDULED_HR. The recommended value for CC_REX_SCHEDULED_HR is zero. The recommended value for CMC_REX_SCHEDULED_HR is one.

Consequences

Does not apply

CC_REX_SCHEDULED_HR (end)

Verification

Does not apply

Memory requirements

Each unit requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

Parameter introduced in BCS17.

CCMTR_FAILURE_FREE_CALL

Parameter name

Central Control Metering Failure Free Call

Functional description

Central Control Metering Failure Free Call is a requirement in a local switching unit with universal translations. This parameter specifies if new calls can go through free of charge or route to treatment without available Central Control (CC) metering resources.

Rules in provisioning

If this parameter value remains at the default value of N (no), the system routes new calls to treatment without CC metering resources.

When this parameter setting is Y (yes), the system allows new calls through free of charge. This condition does not affect calls that are already up.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate.

Dependencies

See parameter NUM_CCMTR_EXT_BLKS in table OFCENG for the assignment of CC metering extension blocks.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

CCMTR_FAILURE_FREE_CALL (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Table history

BCS22

This parameter was introduced in BCS22.

CCW_ORIGINATION_CONFIRM_TONE

Parameter name

Cancel Call Waiting Origination Confirmation Tone

Functional description

The functionality to provide stutter dial tone for Cancel Call Waiting (CCW) on an office-wide basis is made optional with this parameter. If CCW_ORIGINATION_CONFIRM_TONE setting is Y (yes), the feature functionality is not available. The subscriber hears confirmation tone after activation of feature CCW. If CCW_ORIGINATION_CONFIRM_TONE setting is N (no) the subscriber hears stutter dial tone after activation of feature CCW. The default value for this parameter is Y.

The functionality for CCW activation upon origination is not available to integrated services digital network (ISDN) basic rate access functional set (BRAFS) agents.

Provisioning rules

Does not apply.

Range information

Minimum	Maximum	Default
		Y

Activation

The subscriber hears stutter dial tone after activation of CCW if the office parameter setting is N. The subscriber hears confirmation tone after activation of CCW if this office parameter setting is Y. The default value is Y.

Requirements

Does not apply.

Results

Does not apply.

Testing

Refer to the “Dump and restore rules" section in this parameter.

CCW_ORIGINATION_CONFIRM_TONE (continued)

Memory requirements

Does not apply.

Dump and restore rules

The check for the presence of patch JAJ45 on the previous load is made during ONP (one night process). The procedure PATCH_WAS_ACTIVE_ON_OLD_LOAD determines if patch JAJ45 is active. If the patch is not active on the old load, then the setting for CCW_ORIGINATION_CONFIRM_TONE is Y. CCW activation on origination receives confirmation tone when the setting is Y.

If the patch is active on the old load, then the setting for CCW_ORIGINATION_CONFIRM_TONE is N. The CCW activation on origination receives special dial tone when the setting is N.

The procedure CCW_ORIGINATION_CONFIRM_TONE_PREPOST of type PREPOST_DATA_MOVE_PROC is in section CCWFTR. This procedure is bound on all types of restarts by the BIND_PREPOST_DATA_MOVE_PROC procedure. The procedure CCW_ORIGINATION_CONFIRM_TONE_PREPOST is in the display as follows.

CCW_ORIGINATION_CONFIRM_TONE check for presence of patch JAJ45

```
Module: CCWFTR

DCL CCW_ORIGINATION_CONFIRM_TONE_PREPOST
PREPOST_DATA_MOVE_PROC

IS
BLOCK
      IF PREPOST = POST
      THEN
        IF PATCH_WAS_ACTIVE_ON_OLD_LOAD (JAJ45)
         THEN
           UNPROTECTDS ();
            N > CCW_ORIGINATION_CONFIRM_TONE;
             PROTECTDS ();
         ENDIF;
       ENDIF;
       RETURN TRUE;
ENDBLOCK CCW_ORIGINATION_CONFIRM_TONE_PREPOST;
```

CCW_ORIGINATION_CONFIRM_TONE (end)

Parameter history

NA012

This parameter is available in NA012. The parameter allows the functionality of patch JAJ45 with optionality.

CDC_RESTRICTION_ACTIVE

Parameter name

Customer Data Change Restriction Active (CDC_RESTRICTION_ACTIVE)

Functional description

This parameter IS associateD with the Customer Data Change (CDC) Service Order (SERVORD) enhancements feature.

This parameter allows a CDC user to perform the following:

- Use the NEW and OUT command for Primary Directory Numbers (PDNs).
- Add or delete the MDN feature to PDNs.
- Add, delete, or establish MLH, DLH, DNH, or MPH hunt groups on PDNs.
- Use the SWAP with intercept option.
- Use the called number (CDN) command for PDNs.

Rules in provisioning

Set the value of this parameter to Y (yes) to restrict access to SERVORD commands for PDNs for CDC users.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate.

Dependencies

Table CDCLOGON indicates the parameters of these commands, that a CDC user can change.

Consequences

Does not apply

CDC_RESTRICTION_ACTIVE (end)

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS30.

CDIV_EXT_BLOCKS

Parameter name

Call Diversion Extension Blocks

Functional description

A local switching unit (international) with common translations and the international Call Diversion Operator (CDO) feature requires this parameter. This parameter specifies the number of call diversion extension blocks required.

This parameter is a part of the Absent Subscriber Intercept (ASI) feature. The ASI feature allows for call diversion to an ASI operator while the subscriber is away.

Rules in provisioning

Each active call diversion in the switching unit requires one call diversion block.

The parameter must be equal to the maximum number of active call diversions at any one point in time.

When you do not require this feature, set the value to 0.

Range information

Minimum	Maximum	Default
0	32767	2

Activation

Increase - immediate

Decrease - cold restart

Dependencies

Each subscriber with the CDO feature must be assigned the option CDO in table LENFEAT.

Consequences

When no extension blocks are available, a call diversion fails.

Verification

To verify the allocation of enough recording units, use the CI command OMSHOW EXT ACTIVE 37 and read the following entry:

```
        EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
        EXTHI2
37 DIV_EXTENSION
        2
         0              0             0             0
         0
```

Any value that is not zero in EXTOVFL indicates the allocation of recording units is not enough.

Measurement EXTHI AND EXTHI2 records the maximum number of extension blocks in use at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Memory requirements

Each unit requires 14 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS20.

CDR_100_BYTE_FORMAT

Parameter name

Call Detail Recording 100 Byte Format

Functional description

This parameter allows the reduction of the UK standard Call Detail Record (CDR). The CDR reduces from a size of 180 bytes to 100 bytes in a DMS-100 or DMS-250 switch.

Rules in provisioning

Set the value of this parameter to Y (yes) to produce the new 100-byte CDR.

Leave the value of this parameter at the default of N (no) to produce the current 180-byte CDR.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

CDR_100_BYTE_FORMAT (end)

Parameter history

BCS31

This parameter was introduced with software release BCS31.

CSP03

Warm restart activation requirement was removed in CSP03.

CDR_FORMAT

Parameter name

Call Detail Recording Format

Functional description

This parameter specifies the Call Detail Recording (CDR) billing format for the DMS-100 switch.

Provisioning rules

Set the parameter to one of the following:

- CDR_180_FORMAT (180-byte format)
- CDR_100_FORMAT (100-byte format)
- CDR_46_FORMAT (46-byte format)
- CDR_NIL_FORMAT

If the parameter is set to CDR_180_FORMAT, CDR_100_FORMAT, or CDR_46_FORMAT, also set office parameter NO_OF_CDR_REC_UNITS.

Use the CDR_NIL_FORMAT setting on switches that do not use CDR. If CDR_NIL_FORMAT is selected, use the default setting for office parameter NO_OF_CDR_REC_UNITS.

Range information

Minimum	Maximum	Default
		CDR_NIL_FORMAT

Activation

Activation occurs on a billing file rotation for CDRs (DIRP subsystem OCC). Activation also occurs after a warm restart.

Dependencies

If the parameter is changed to CDR_46_FORMAT, table CUSTENG is scanned, and a warning is issued if there are duplicate customer group IDs. The number in field GROUPID of table CUSTENG is used to record the originating or terminating customer groups in the 46-byte CDR, instead of the full customer group name. The customer group name is obtained from the customer group ID using mapping records generated at the begining of the

billing file. Customer group IDs are meaningful only if they are unique. Mapping records are generated only if field DATADUMP in table CRSFMT is set to Y. The 46-byte CDR format cannot be used if field DATADUMP is set to N.

The 46-byte CDR format can be used on switches only if the Stage 4 CDR Enhancements feature is present.

Consequences

Does not apply

Verification

To verify that this parameter is functioning, perform the following procedure:

1. Set this parameter to a value of CDR_180_FORMAT.
2. Perform a billing file rotation.
3. Make sure the CDRs are in 180-byte format.
4. Change the office parameter value to CDR_100_FORMAT.
5. Perform a billing file rotation.
6. Make sure the CDRs are in 100-byte format.
7. Set this parameter to a value of CDR_46_FORMAT.
8. Perform a billing file rotation.
9. Make sure the CDRs are in 46-byte format.

Memory requirements

Each unit requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CCM08

Clarified parameter settings.

BCS34

Parameter introduced.

CFD_EXT_BLOCKS

Parameter name

Call Forward Extension Blocks

Functional description

This parameter specifies the number of Call Forwarding Busy and Don't Answer extension blocks required for Meridian Digital Centrex (MDC) and Residential Enhanced Services (RES) stations.

The Call Forward Extension Blocks are in addition to the extension blocks specified under parameter CFW_EXT_BLOCKS in table OFCENG.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

The following formula determines the value of Call Forward Extension Blocks:

```
Value = NS X 0.7
```

where

NS
is the total number of stations with one or more types of MDC

or RES Call Forwarding.

If this event occurs add all types of MDC and RES Call Forwarding. Do not just include stations with Call Forwarding Busy and Don't Answer.

When this feature is not required, leave the value at the default of 1000.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each

parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	32767	1000

Activation

Increase - immediate

Decrease - cold restart

Dependencies

Does not apply

Consequences

The MDC and RES Call Forwarding can cease to function when the specified blocks are not enough.

Verification

To verify the allocation of enough recording units, use the CI command OMSHOW EXT ACTIVE and read the following entry:

```
        EXTSEIZ     EXTOVFL     EXTHI     EXTSEL
        EXTHI2
19 CFD_EXTENSION
1000
        0        0        0        0       0
        0
```

CFD_EXT_BLOCKS (end)

Any value that is not zero in EXTOVFL indicates that the allocation of recording units is not enough .

Measurement EXTHI records the maximum number of extension blocks in use at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each unit requires 22 words of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

BCS20

BCS20 introduces this parameter.

CFFP_CONTROL

Parameter name

Call Forward Fraud Prevention Control

Functional description

Office parameter CFFP_CONTROL in table OFCENG specifies the office-wide default limit on the number of call forward programming attempts. The parameter specifies the time in which the number of programming attempts must not exceed the correct limit. This parameter specifies if the system must generate log reports CFFP600 and CFFP601.

The description of office parameter CFFP_CONTROL contains four fields, as follows.

- the DEFAULT_LIMIT field specifies the office-wide default limit. This default limit is the number of times a forward-to DN can change in the time period. Field TIME_PERIOD specifies the time period. A forward-to DN has a restricted dial plan overridden through line option CFFPOVR. The default value is 0. The default value indicates that the forward-to DN changes an number of times without a limit.
- the TIME_PERIOD field specifies the time when the changes of a forward-to DN cannot exceed the limit value. The system specifies the limit value for the line. The system overides the restricted dial plan of forward-to DN through line option CFFPOVR. The system specifies the time period in minutes. The default value is 60 min.
- the DENIED_LOG field specifies if the system generates log report CFFP600. The system generates CFFP600 when the system denies an attempt to program a forward-to DN. A dial plan restriction causes the system to deny the attempt. The default value is Y. The value of Y indicates that the system generates log report CFFP600.
- the EXCEEDED_LOG field specifies if the system generates log report CFFP601. The system generates CFFP601 when the end user exceeds the limit for programming a forward-to DN. The forward-to DN has a restricted dial plan overridden through line option CFFPOVR. The default value is Y. The default value indicates that the system generates log report CFFP601.

Rules in provisioning

Does not apply

CFFP_CONTROL (end)

Range information

Minimum	Maximum	Default
0	30	0 (DEFAULT_LIMIT)
30	240	60 (TIME_PERIOD)
Y	N	Y (DENIED_LOG)
Y	N	Y (EXCEEDED_LOG)

Activation

Activaion is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Does not apply

Dump and restore rules

Does not apply

Parameter history

NA008

Office parameter CFFP_CONTROL was created for the Call Forward Fraud Prevention (CFFP) feature.

CFW_EXT_BLOCKS

Parameter name

Call Forwarding Extension Blocks

Functional description

All switching units that have the Call Forwarding (CFW) feature require this parameter.

A call forwarding extension block, must be present on an active line when any of the following call forwarding features are involved in the call:

- plain ordinary telephone service (POTS)
- Meridian Digital Centrex (MDC)
- Residential Enhanced Services (RES)

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

Use the following formula to calculate the value of this parameter. Use this formula when you switching units that do not have software package NTX806:

```
Value   = 0.05 x  (# of POTS lines with CFW excluding Remote
             Forwarding (RCF) lines)
        + 0.01 x ((# of IBN lines with CFW excluding RCF)
        +       (# of RES lines with CFW excluding RCF))
        +       (# of lines equipped with RCF)
```

Use the following formula to calculate the value of this parameter when the switching unit has software package NTX806.

CFW_EXT_BLOCKS (continued)

```
Value   = 0.05 x ((# of POTS lines with CFW excluding RCF)
    +       (# of POTS lines with Call Forward Busy)
    +   (# of POTS lines with Call Forward Don't Answer)
    +       (# of hunt groups with CFGDA))
    + 0.1  x ((# of IBN lines with CFW excluding RCF)
   +        (# of RES lines with CFW excluding RCF)
    +   (the maximum # of simultaneous calls that can be
        forwarded from all lines with the Multiple
        Simultaneous Call Forwarding Feature))
    +       (# of lines equipped with RCF)
```

There is a maximum expected use of Multiple Simultaneous Call Forwarding required for the engineering interval on lines with that feature. The maximum number of calls must reflect this maximum expected use. The operating company determines the maximum expected number.

The number of MDC + RES CFW, RCF, POTS CFW, CFBL and CFDA must be the maximum quantity required for the engineering interval.

Field NUMCALLS of table CFW defines the number of simultaneous calls that it is possible to forward. The quantity in the formula must be the maximum required for the engineering interval.

The formula for MSL-100 offices is 1000 or 0.10 x total wired size line capacity.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

CFW_EXT_BLOCKS (continued)

Range information

Minimum	Maximum	Default
0	32767	10

Activation

Increase - immediate

Decrease - cold restart

Dependencies

This parameter must increase when the number of MDC, RES, RCF or POTS lines, with any variation of call forwarding, increases. This value increase occurs for the engineering period, or for the addition of software package NTX806.

Consequences

Not enough blocks causes the system to route a line with the CFW feature. This line routes to No Software Resource treatment (NOSR) in the Line Treatment table. This action occurs when attempts to activate CFW occur and no extension blocks are available.

Verification

Verify the allocation of enough recording units, with the CI command OMSHOW EXT ACTIVE and read the following entry:

```
            EXTSEIZ     EXTOVFL     EXTHI     EXTSEIZ2
            EXTHI2
    19 CFW_EXTENSION
    15
            0        0        0        0
            0
```

Any value that is not zero in EXTOVFL indicates that there is not enough provisioning.

Measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

CFW_EXT_BLOCKS (end)

See the *Operational Measurements Reference Manual* for a description of OM group EXT.

The operational measurement group GROUP CALLFWD is provided for the Integrated Business Network (IBN) feature in a switching unit.

The OM group GROUP CFWPOTS is provided for the POTS feature in a switching unit.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each call forwarding extension block requires 14 words of memory.

Dump and restore rules

Copy the existing value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

CFX_SEPARATE_KEYLIST_FEATURE

Parameter name

Call Forwarding Separate Keylist Feature.

Functional description

A Meridian Digital Centrex (MDC) switching unit requires this parameter. The parameter specifies if the Call Forwarding Separate Keylist feature is active.

The Call Forwarding Separate Keylist feature allows separate keylists in table KSETFEAT for the following procedures:

- Call Forwarding Universal (CFU).
- Call Forwarding Intragroup (CFI).
- Call Forwarding Fixed (CFF).
- Call Forwarding Busy (CFB).
- Call Forwarding Don't Answer (CFD).

For example, when the Electronic Business Set (EBS) has four directory number (DN) keys, the following assignments can occur:

- CFB DEFAULT can assign to DN key 1.
- CFD FIXED can assign to DN key 1.
- CFU can assign to DN keys 2 and 4.

In the above example:

- DN 1 has CFB DEFAULT and CFD FIXED.
- DN 2 has CFU.
- DN 3 does not have call forwarding.
- DN 4 has CFU.

Rules in provisioning

Set the value of this parameter to Y (yes) to activate the Call Forwarding Separate Keylist feature.

Leave the value of this parameter at the default of N (no) if the Call Forwarding Separate Keylist feature is not required.

CFX_SEPARATE_KEYLIST_FEATURE (end)

Range information

Minimum	Maximum	Default
		N

Activation

ATTENTION

When the the system activates the Call Forwarding Separate Keylist feature, the system moves all current CFB and CFD options on EBS to key 1. Any more SERVORD actions that add CFB or CFD are allowed only when CFB and CFD build against key 1.

Activation is immediate.

Dependencies

Do not change this parameter to N when the parameter is set to Y. If you change this parameter to N, the wrong description of CFX tuples can appear in table KSETFEAT.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS27.

CFZ_EXT_BLOCKS

Parameter name

Call Forwarding Extension Blocks

Functional description

A switching unit that has the plain ordinary telephone service (POTS) Call Forwarding feature package NTX806 requires this parameter. The parameter indicates the maximum number of call forwarding extension (CFZ) blocks that the engineering period requires.

One extension block (CFZ) extends the call condense block (CCB) of all calls that terminate on a station. The station must have any form of POTS Call Forwarding active. Possible types of POTS Call Forwarding include the following:

- Call Forward (CFW)
- Call Forwarding Busy (CFBL)
- Call Forwarding Don't Answer (CFDA)

If the call does not forward correctly, the block releases. Calls that forward correctly release the block on exit.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

If the switching unit has software package NTX806, use the following formula to calculate the value of this parameter:

Value	=	(12% of the number of POTS CFW lines
	x	the simultaneous calls that can be forwarded)
	+	(number of POTS CFBL lines
	x	the simultaneous calls that can be forwarded)
	+	(number of POTS CFDA lines
	x	the simultaneous calls that can be forwarded)

The number of POTS CFW, CFBL and CFDA lines must be the maximum required for the engineering interval.

CFZ_EXT_BLOCKS (continued)

Field NUMCALLS of table CFW defines the number of calls that can forward at the same time. The quantity in the formula must be the maximum required for the engineering interval.

The CFDA calls do not receive any treatment. The ringing station continues to ring.

For a switch that does not have software package NTX806, set the value of this parameter to 0.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	32767	15

Activation

Increase - immediate

Decrease - cold restart

Dependencies

The number of POTS lines, with any type of call forwarding, can increase for the engineering period. When this condition occurs, the value of this parameter must increase.

CFZ_EXT_BLOCKS (continued)

Changes to the value of this parameter affect the value of the following parameters:

- CFW_EXT_BLKS in table OFCENG
- NUMCPWAKES in table OFCENG

Consequences

Calls that stop on POTS lines with feature CFW, CFBL or CFDA do not forward when not enough blocks are present.

The originator receives a No Software Resource (NOSR) treatment if an overflow on CFW or CFBL calls occur. If the call starts from a line, the system generates a LINE138 log. The system generates TRK138 log if the originator is a trunk.

Verification

To check that enough extension blocks are allocated, use CI command OMSHOW EXT ACTIVE 49 and read the following entry:

```
        EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
        EXTHI2
49 CFZ_EXTENSION
        15
          0              0            0             0
          0
```

Any value that is not zero in EXTOVFL indicates underprovisioning.

Measurement EXTHI and EXTHI2 record the maximum number of extension blocks that work at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of operational measurements (OM) group EXT.

Refer to the OM group CFWPOTS for the OMs associated with this feature.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each call forwarding extension (CFZ) block requires 18 words of memory.

CFZ_EXT_BLOCKS (end)

Dump and restore rules

Copy the current value of this parameter when you perform dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

BCS23

BCS23 introduces this parameter.

CHARGE_UPDATE_FREQUENCY

Parameter name

Charge Update Frequency

Functional description

This parameter allows the timing of the Charge Update Process (CUP) and the Table History Queue Clean-up ready to receive data entries.

The CUP updates the meter charges for all active metered calls that are active for more than two hours. These CUPped calls become CC metered calls. The CC metered calls are also long duration calls. The CUP also performs the appropriate calculations to determine when the CUP operates again.

Table History Queues contain the history of each tariff change for each network that meters. An entry is added to the Table History queues when a change of cost occurs. A change of cost includes a metering change, an entry change in the metering table, or a SETTIME. Clean the Table History queues often to make sure that the queues do not overflow.

The parameter contains the frequency for the CUP and THQ Clean-up to operate. The start time is used as a base time to calculate the running times.

Before BCS30, the CUP and the THQ Clean-up operated daily at 03:15. This parameter is flexible. The parameter allows entry of the time and frequency of operation. This office parameter also determines if the system generates MTR143 log when the CUP encounters a long duration call.

Rules in provisioning

Specify the parameter values as described in the following table:

Datafill for CHARGE_UPDATE_FREQUENCY

Field	Datafill
Start time (HH MM)	HH is from 0 to 23; MM is from 0 to 59.
Frequency	Value is from 2 HRS to 24 HRS.
Generate_log	Y or N.

Examples of rules in provisioning follow.

CHARGE_UPDATE_FREQUENCY (continued)

If the user sets this parameter to a value of 2 00 12 HRS Y, the following occurs:

- the start time is 02:00.
- the frequency is 12 HRS.
- the times of operation are 02:00 and 14:00.
- the system generates MTR143 logs.

If the user sets this parameter to a value of 3 30 7 HRS N, the following occurs:

- the start time is 03:30.
- the frequency is 7 HRS.
- the times of operation are 03:30, 10:30, 17:30, and 00:30.
- the system does not generate MTR143 logs.

Note: The pattern continues to the next day, and starts again at the start time. For the above values, the CUP operates at 00:30, 03:30, 10:30 and 17:30 each day.

Range information

Minimum	Maximum	Default
0 0 2 HRS	23 59 24 HRS	03 15 24 HRS N

Activation

Changes to this office parameter does not directly change the timing of the CUP. The timing of the CUP changes when the actions that follow occur:

- the next restart
- the next operation of the CUP

When the CUP operates, the CUP uses the current values of this parameter to calculate the time of the next operation.

The system directly generates the log the next time the CUP operates.

Dependencies

Does not apply

CHARGE_UPDATE_FREQUENCY (end)

Consequences

Maintain a low frequency to make sure that the THQs do not overflow. The maximum frequency that does not overflow THQs is 24.

Use caution when you choose the times of operation of the CUP and THQ Clean-up. Do not operate the CUP and THQ Clean-up at a busy switch time. The CUP process searches through all active calls for calls that are active for more than two hours. The CUP operates slowly during a busy switch time because more active calls are present.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS30.

CIRCUIT_QUERY_AUDIT_START_TIME

Parameter name

Circuit Query Audit Start Time

Functional description

A switch with the Common Channel Signaling 7 (CCS7) and the Trunk Test Position (TTP) improvements for trunks that use CCS7 signaling (ISUP) requires this parameter.

As part of this feature, an audit performs one time each day. The audit performs the trunk query procedure on all ISUP trunks. The trunk query procedure corrects any state mismatches if the last item office can accept the procedure. Refer to table ADJNODE.

This parameter specifies the time when the circuit query audit runs. The time specified must be during off-peak hours because the audit can generate many CCS7 messages.

Rules in provisioning

Indicate the time for the circuit query audit to operate. The time of operation can has a value of hours (0 to 23) and minutes (00 to 59). The default value is 02:00.

Range information

Minimum	Maximum	Default
		2 00

Activation

The value changes when the audit operates one time with the old value.

Dependencies

Refer to field OPTION in table ADJNODE for more information about Circuit Query Messages. With the entry of option NOCQT circuit query messages cannot be sent to the far end office. Option NOCQT disables the circuit query test.

Consequences

Does not apply

CIRCUIT_QUERY_AUDIT_START_TIME (end)

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS22.

CLI_NATIONAL_PREFIX

Parameter name

Calling Line Identification National Prefix

Functional description

This parameter allows the insertion of a variable number before the calling line identification (CLI) received from the international network. The CLI from the international network must be presented to the national network. The variable number indicates the digits that the receiver of this CLI normally dials. This procedure occurs to gain access to the international gateway when an international call occurs. The trunk access digit(s) are not part of this attempt to gain access to the international gateway.

Rules in provisioning

This parameter has two fields. The first field has a value of Y (Yes) or N (No). The second field is a number that carries a maximum of four digits. The correct range for a digit is a number from 0 (zero) to 15 to allow the use of hexadecimal numbers. This field carries the correct prefix digits for the prefix to the CLI. The CLI is from the international network and is for presentation to the national network.

The user can set the first field of the parameter to N. The only value that the user can enter in the second field is $ (dollar sign). The $ indicates the second field is null. If the parameter is active, the user must enter the second field with a correct value other than $ (dollar sign).

Range information

Minimum	Maximum	Default
N $	Y FFFF	N $

Note: This default makes sure that digits are not added to the CLI, unless the user indicated the use of the CLI. The user enters data in the parameter at the MAP terminal to indicate the use of the CLI. This procedure prevents prefix digits that are not intended to collect in the parameter.

Activation

Activation is immediate.

CLI_NATIONAL_PREFIX (end)

Dependencies

Does not apply

Consequences

The following error or warning message appears when a setting that is not correct occurs in this parameter:

```
CLI_NATIONAL_PREFIX NOT ACTIVATED:
```

This message indicates the user must enter a prefix digit value of $. The dollar sign indicates digits are not present. The user must enter the prefix value of $ to deactivate the parameter. The first field of the parameter is set to N.

```
CLI_NATIONAL_PREFIX VALUE ILLEGAL – 0 LENGTH:
```

This message indicates that the the user must supply the parameter with prefix digits if the parameter is active. The parameter is active when the user sets the first field to Y. The value Y $ (dollar sign) is not allowed.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS31.

CMC_REX_SCHEDULED_HR

Parameter name

Central Message Controller Routine Excercise Scheduled Hour

Functional description

This parameter specifies the hour during which the Central Message Controller (CMC) PERIODIC tests start.

The software determines the time, in the hours, that the test starts.

Rules in provisioning

The recommended value for this parameter is 1.

This parameter operates the CMC periodic tests. The CMC periodic tests check the two CMCs. The CMC periodic tests busies one CMC and tests the same CMC. This process occurs before the tests perform the same procedure to the other CMC.

Do not plan this test during a period of high transmission..

Range information

Minimum	Maximum	Default
0	23	0

Activation

Activation is immediate.

Dependencies

Stagger the office parameters CMC_REX_SCHEDULED_HR and CC_REX_SCHEDULED_HR. The recommended value for CMC_REX_SCHEDULED_HR is 1 and the recommended value for CC_REX_SCHEDULED_HR is 0 (zero).

Consequences

Does not apply

Verification

Does not apply

CMC_REX_SCHEDULED_HR (end)

Memory requirements

Each unit requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS17.

COINDISPOSAL

Parameter name

Coin Disposal

Functional description

Local and grouped local/toll switching units require this parameter.

The value of this parameter determines what happens to coins left in the coin chute. This condition occurs at the end of a line to operator call.

Rules in provisioning

The user can set the value of this parameter to one of the values the following table describes:

Provisioning parameter COINDISPOSAL

Value	Action
BLIND_COLLECT	Always collect coins.
BLIND_RETURN	Always return coins.
IGNORE_COIN	Do not take special action.

Range information

Minimum	Maximum	Default
		IGNORE-COIN

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

COMMAND_SCREEN

Parameter name

Command Screening

Functional description

This option specifies if the command screening feature can operate at the Line Test Position (LTP).

The introduction of data lines requires a method to screen operators from performing operations on certain types of terminals.

A person only authorized to perform tests on data lines cannot perform tests on voice lines (POTS and IBN Business Sets).

Two special commands establish Command screening: VOICE_SCREEN and DATA_SCREEN. The operating company sets the PRIVCLAS of these commands. The operating company permits users to have the command class of the type of lines that the operating company authorizes them to operate.

For example, when what follows occurs:

- when the operating company sets the PRIVCLAS of DATA_SCREEN to 7, and
- when the operating company sets the PRIVCLAS of VOICE_SCREEN to 8

The user who has the command class of 7, but not 8 can only access data lines. If the user attempts to busy, diagnose, or LCO a voice line, the attempt does not work.

The system screens users from using commands that affect the state of the line, for example, BUSY and LCO. Users can continue to POST, CKTLOC, and ALMSTAT.

Rules in provisioning

Set the value of this parameter to Y (yes) if you require command screening.

Leave the value of this parameter at the default value of N (no) if you do not require command screening.

COMMAND_SCREEN (end)

Range information

Minimum	Maximum	Default
		N

Activation

Activates after a cold restart

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

CONNECTION_HOLD_TIMER

Parameter name

CONNECTION_HOLD_TIMER_IN_MINS

Functional description

The time value in this parameter controls how long a call in Connection Hold remains in service after the originating caller has gone onhook.

Provisioning rules

Use the default value of 2 minutes.

Range information

The range information is as follows:

Minimum	Maximum	Default
1	4	2

Activation

Activation of this parameter is immediate.

Requirements

This parameter has no requirements.

Results

Results are not applicable for this parameter.

Testing

Testing is not applicable for this parameter.

Memory requirements

This parameter has no memory requirements.

Dump and restore rules

This parameter has no dump and restore rules.

Parameter history

NA013

Release NA013 introduces parameter CONNECTION_HOLD_TIMER_IN_MINS

COPP_RELAY_OPEN_TIME

Parameter name

Cutoff on Permanent Signal and Partial Time Relay Open Time

Functional description

This parameter specifies the time required before Cutoff on Permanent Signal and Partial Time (COPP).

Rules in provisioning

Specify the time, in intervals of 10 ms, required before (COPP).

Range information

Minimum	Maximum	Default
50 (500 ms)	1000 (10 s)	80

Activation

Activation is immediate.

Dependencies

This parameter is for the routing list element, COPP, that controls the duration of the open battery signal. The open battery signal applies to subscriber line equipment that enters permanent signal or partial dial conditions. This condition occurs when the user correctly enters data in the PDIL and PSIG treatments.

The open battery signal informs correct subscriber line equipment that the line entered a permanent signal or partial dial state.

The operating company can introduce a new routing list element. The operating company introduces this new routing element, COPP, into the routing list for the line treatments PSIG and PDIL. The COPP allows the operating company to supply an open battery signal on each standard line in a DMS-100F office. This procedure is the first operation in processing permanent signal and partial dial subscriber line conditions.

The COPP routing list element does not impact on IBN Business Sets, Data Units or display phones.

COPP_RELAY_OPEN_TIME (continued)

The following tables describe one example of an entry for the PSIG and PDIL treatments. If the entry is similar to this example, an open battery signal applies. This condition is the first operation in processing permanent signal and partial dial subscriber line conditions.

TMTCNTL

Treat ment	Log	FSRTE
PSIG	N	T OFRT 51
PDIL	N	T OFRT 51

OFRT

Rout e	RTELIST	Contmark
51	S D COPP	+
	S D PSPD	+
	S D ROH	+
	S D OFLO	+
	S D LKOUT	$

Note the routing element COPP must not operate in any other line treatments. The routing element COPP must appear as the first element in the routing list for the PSIG and PDIL line treatments. The routing element COPP can be present in the routing list related to the PSIG and PDIL line treatment. When this condition occurs, the LKOUT routing list element must follow COPP in the routing list.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

COPP_RELAY_OPEN_TIME (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS18.

COT_ANNOUNCEMENT_TYPE

Parameter name

Customer Originated Trace Announcement Type

Functional description

This parameter specifies the type of Customer Originated Trace (COT) announcements used in an operating office. The possible values are CUSTOM and STANDARD.

Rules in provisioning

The value depends if the office has the correct cards for standard and custom announcements. The customized announcements in English must have the following items:

- a Digital Recorded Announcement Machine (DRAM) with a 1X75BA controller card.
- a 1X76AJ programmable read only memory (PROM) card.

If the operating office requires French announcements, the operating company needs a 1X76BJ card.

Set the value of this parameter to CUSTOM. This condition allows access to current PROM recordings through datafill in table DRMUSERS.

Set the value of this parameter to STANDARD. This condition allows use of the random access memory (RAM) recordings and separate announcements in table DRAMTRK.

Range information

Minimum	Maximum	Default
		STANDARD

Activation

Activation is immediate.

COT_ANNOUNCEMENT_TYPE (end)

Dependencies

Set this parameter before you enter data in table RESOFC. To enter the standard COT announcements, enter the following tables in order:

1. CLLI
2. ANNS
3. ANNHEMS
4. DRAMS
5. DRAMTRK
6. RESOFC

To enter the customer COT announcements, enter the following tables in order:

1. CLLI
2. ANNS
3. ANNMEMS
4. DRMUSERS
5. RESOFC

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter value requires 1 word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS33.

CPERRORTHRESHOLD

Parameter name

Call Processing Error Threshold

Functional description

This parameter specifies the maximum number of call processing errors. The most important call processing errors are call suicides and traps. The parameter specifies the number of call processing errors allowed in a one minute period for a call processing terminal. System action starts after one minute. Lines and trunks are examples of a call processing terminal.

The system removes a terminal from service that exceeds the maximum number of call processing errors. System maintenance tests the terminal. If the test does not identify a problem, the terminal returns to service.

A terminal can continue to cause call processing errors. If this event occurs the system removes the terminal from service. At this point recovery requires manual action.

The system removes a terminal from service when any of the error frequency conditions described in the following table occur. In the table, X is the value of this parameter:

Error count	Time (consecutive minutes)
X	1
1.5X	2
2.0X	3

Note: To calculate a value for error count, round all results down to the next integer.

Rules in provisioning

Specify the number of call processing errors per terminal that can occur in a 1-min period.

CPERRORTHRESHOLD (end)

Range information

Minimum	Maximum	Default
5	10	5

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

The higher the value of this parameter the greater the effect of call processing errors on system real time performance before activation.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS29

This parameter was introduced in BCS29.

CPM EXTENDED

Parameter name

Central Processor and Memory Extended

Functional description

This parameter indicates extension of the memory capacity of a CPM shelf (peripheral equipment code (PEC) NT3X41DA) with an NT3X94 controller. NT4X80AA or NT3X93xx memory cards perform this extension.

The value of this parameter can be NOT_EXTENDED, EXTENDED_4X80AA, or EXTENDED_3Xzz.

Rules in provisioning

Set the value of this parameter to EXTENDED_4X80AA if NT4X80AA memory cards have extended the memory capacity of the CPM shelf with PEC NT3X41DA and the NT3X94 controller.

Set the value of this parameter to EXTENDED_4X80AA if NT3X93zz NT3X memory cards have extended the memory capacity of the CPM shelf NT3X41DA and NT3X94.

Set the value of this parameter to NOT_EXTENDED if the switching unit does not have the CPM shelf extension feature.

Range information

Minimum	Maximum	Default
		NOT_EXTENDED

Activation

Only Northern Telecom can change the value of this parameter.

Dependencies

Does not apply

Consequences

Does not apply

CPM EXTENDED (end)

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

At extension time, change the value of this parameter to EXTENDED_4X80AA or EXTENDED_3X99ZZ. This condition occurs when you modify the switching unit with the CPM shelf extension feature.

CRS_ALARM_CRITICAL_THRESHOLD

Parameter name

CRS_ALARM_CRITICAL_THRESHOLD

Functional description

The CRS_ALARM_CRITICAL_THRESHOLD office parameter sets the alarm threshold level for warning the customer of diminishing storage in the call recording stream (CRS) pools. Diminishing storage is the result of extremely high levels of recording unit storage use. The default value is 90, which activates the alarm when a pool reaches 90% utilization.

The CRS_ALARM_CRITICAL_THRESHOLD office parameter is stored with other CRS subpool data. Use a CI command to display the CRS_ALARM_CRITICAL_THRESHOLD office parameter.

You can select the CRS_ALARM_CRITICAL_THRESHOLD parameter for system autoprovisioning by activating its tuple in table OFCAUT.

Provisioning rules

There is no direct calculation of this value. Customers should set this percentage to allow sufficient time to respond to a pending out-of-store condition for a CRS subpool.

The value of the CRS_ALARM_CRITICAL_THRESHOLD parameter must be greater than the value of the CRS_ALARM_MAJOR_THRESHOLD parameter.

If autoprovisioning is active for the parameter, set its value to 97. Setting the parameter to 97 prevents unnecessary EXT alarms from occurring.

Range information

Minimum	Maximum	Default
0	100	90

Activation

Activation is immediate.

CRS_ALARM_CRITICAL_THRESHOLD (end)

Dependencies

Not applicable

Consequences

If the value is set too low, the related CRS alarm is always on. If the value is set too high, the alarm is essentially turned off.

Verification

Perform verification through range checking and comparison with the CRS major alarm threshold.

Memory requirements

Not applicable

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

NA009

Added the CRS_ALARM_CRITICAL_THRESHOLD office parameter.

CRS_ALARM_MAJOR_THRESHOLD

Parameter name

CRS_ALARM_MAJOR_THRESHOLD

Functional description

The CRS_ALARM_MAJOR_THRESHOLD office parameter sets the alarm threshold level for warning the customer of diminishing storage in the call recording stream (CRS) pools. Diminishing storage is the result of high levels of recording unit storage use. The default value is 70, which activates the alarm when a pool reaches 70% utilization.

The CRS_ALARM_MAJOR_THRESHOLD office parameter is stored with other CRS subpool data. Use a CI command to display the CRS_ALARM_MAJOR_THRESHOLD office parameter.

You can select the CRS_ALARM_MAJOR_THRESHOLD parameter for system autoprovisioning by activating its tuple in table OFCAUT.

Provisioning rules

There is no direct calculation of this value. Customers should set this percentage to allow sufficient time to respond to a pending out-of-store condition for a CRS subpool.

If autoprovisioning is active for the parameter, set its value to 95. Setting the parameter to 95 prevents unnecessary EXT alarms from occurring.

Range information

Minimum	Maximum	Default
0	100	70

Activation

Activation is immediate.

Dependencies

Not applicable

CRS_ALARM_MAJOR_THRESHOLD (end)

Consequences

If the value is set too low, the related CRS alarm is always on. If the value is set too high, the alarm is essentially turned off.

Verification

Perform verification through range checking and comparison with the CRS critical alarm threshold.

Memory requirements

Not applicable

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

NA009

Added the CRS_ALARM_MAJOR_THRESHOLD office parameter.

CRS_PRU_POOL1_SIZE

Parameter name

Call Recording Stream Primary Recording Unit Pool1 Size

Functional description

The CRS PRU Pool1 Size parameter controls the provision for the CRS_PRU_POOL1 extension block pool in operational measurements (OM) group EXT. The parameter can be manually provisioned by table OFCENG, or autoprovisioned by setting the ACTIVE field in table OFCAUT to Y.

This parameter is defined for offices that contain a user for the Call Recording Stream Platform. If this parameter appears in the software load, the user must provision this parameter.

The default value for this parameter is 1. This value is too small for larger offices.

Rules in provisioning

The following pages provide descriptions for each application that requires an extension block from the pool that this parameter controls. The following pages describe conditions that determine the use of the application in a specified office. Each application can include a recommended provisioning calculation and a worst case maximum value. The engineered percentages required for most of the recommended calculations help the user to determine a reasonable number for a specified application. If an operating company does not have the value of certain percentages, the operating company must use a value of 100%. Use the recommended calculation and not the maximum calculation. If certain percentages are not available, use the recommended calculation. The maximum value is provided for operating companies that cannot provide the information for the recommended calculation. If the operating company uses the maximum value, overprovisioning of the parameter can occur. In some events, the maximum value is not appropriate and is not provided.

The system holds the extension block for a short time. A short hold time can result in the operating company multiplying a value of 5% into the provisioning formulas. The extension block can be allocated before the Automatic Message Accounting (AMA) record is released to the formatter.

If the conditions for an application are met, determine the use of the application according to the formula. The sum of these formulas determines the value of this parameter. Use the default value of this parameter if the default value is greater than the value that the sum of the formulas determines. Never provision this parameter at a value less than the default of 1.

AMA critical times

The AMA critical times can place an additional load on CRS pool resources. Take the following steps to confirm the provisioning of all pools to absorb the impact of critical times:

1. Monitor the EXT OMs during peak traffic hours to determine the maximum number of extension blocks seized (EXTSZD). Monitor the EXT OMs to determine the maximum high-water mark (EXTHI) for each extension block pool. Note that these actions can not occur in the same OM reporting period.
2. Calculate the pool size with the maximum figures (of the previous description) with the following formula:

   + ((critical time duration in minutes)
   x (number of extension blocks seized during busiest sampling period)
   / (Duration of OM sampling period in minutes))

   This formula produces an extension block pool size. The extension block pool size compensates for an AMA critical time during peak traffic. An overflow of the pool does not occur. Use a minimum 3 min critical time duration for this calculation.
3. The calculation can produce a result that is higher than the current pool size in table OFCENG. Verify that enough store is available. Increase the pool size according to the amount of store available. If the result of the calculation is lower than the current pool size, there is no action required.

Traffic patterns can change over time. Monitor the application of CRS pool resources. Increase the resources as required.

ISDN Service Order AMA

The Austrian ISDN base package uses this recording unit pool to provide billing data for administrative actions on ISDN lines. The system generates an AMA record to hold ISDN-specific data. The operating company personnel enters this data through Service Order transactions. The D4 record with the heading ISDN Service Order AMA Record requires a unit from this pool. The system warns the operator if the system cannot generate an AMA record. This problem occurs when the system does not have enough recording units. The system prompts the operator to stop or to continue the transaction.

Conditions:

If the Austrian ISDN base package is present, the following calculation occurs:

CRS_PRU_POOL1_SIZE (continued)

Recommended:

(number of MAP interfaces)
x (percentage of SO transactions that are ISDN)
x (percentage of ISDN SO transactions that require a record)

Maximum:

(number of MAP interfaces)

DataSPAN Frame Relay Service (FRS)

DataSPAN FRS applies to DMS-250 switches that are InterExchange Carriers. DataSPAN FRS is a connection-oriented packet data service. An FRS subscriber connects to a frame relay switch through an access channel on which multiple logical link connections to other subscribers can be present. The FRS permits subscribers to communicate on one or more logical links at the same time. The FRS subscribers are billed by use. The system tabulates counts of the actual data that pass through the Frame Relay Interface Unit (FRIU). The FRS Billing Controller collects the counts and stores the counts in FRS billing internal storage. During the aggregation phase, the system retrieves counts and performs table lookups to obtain billing information required for the billing record. The billing record divides into two parts: a base recording unit and a customer-specific subrecording unit. The frame relay Call Detail Record (CDR) consists of these two parts.

The base recording unit requires an extension block from this pool. The parameter claims the extension block during the aggregation phase. Each Permanent Logical Link Connection (PLLC) requires one recording unit from this pool. Calculate the number of PLLCs. This number is equal to the number of tuples in subfield CONNECT and the number of trunk-to-trunk connections in table RRSTRKKN. Table PVDNCUST contains subfield CONNECT.

Conditions:

If package NTXQ34AA (Frame Relay Billing Base Package) is present, the following recommended and maximum conditions apply.

Recommended:

(number of PLLCs)

Maximum:

A maximum calculation does not apply in this event.

CRS_PRU_POOL1_SIZE (continued)

Range information

Minimum	Maximum	Default
0	1 times the value of the provisioned NCCBS	100

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Activation

Increase—immediate

Decrease—cold restart

Dependencies

This parameter controls the CRS_PRU_POOL1 extension block.

Consequences

This parameter controls a PRU pool. If this parameter fails to claim a block in this pool, the system cannot record calls for the active call.

Verification

This parameter controls the extension block with an external identifier name of CRS_PRU_POOL1. This extension block has an index of 100 for Operational Measurement (OM) group EXT. Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Memory requirements

Each extension block requires 35 words of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

CRS_PRU_POOL1_SIZE (end)

Parameter history

TL10

Parameter Autoprovisioning was added in TL10.

NA08

Changed maximum provisioning value to from 4294967295 to 131072.

TL02

Information on AMA critical times was added in TL02.

BCS32

This parameter was introduced in BCS32.

CRS_PRU_POOL2_SIZE

Parameter name

Call Recording Stream Primary Recording Unit Pool2 Size

Functional description

The CRS PRU POOL2 SIZE parameter controls the provisioning for the CRS_PRU_POOL2 extension block pool. The parameter can be manually provisioned by table OFCENG, or autoprovisioned by setting the ACTIVE field in table OFCAUT to Y.

This parameter is defined for offices that contain a recording subsystem that uses the Call Recording Stream Platform. If this parameter appears in the software load, the user must provision the parameter.

The default value for this parameter is 100.

Provisioning rules

This office parameter applies to Bellcore Automatic Message Accounting (AMA) offices. In table CRSFMT, use a BCFMT to enter the tuple with key field AMA.

The base AMA packages are NTX098AA (Bellcore CAMA Format) and NTX159AA (Bellcore LAMA Format). Package NTX098 provides central AMA recording in a DMS switch. This package supports the BellCore CAMA format. Package NTX159 provides AMA recording in a local DMS switch and supports the Bellcore LAMA format. The following list displays call agents as CAMA or LAMA billing. As of BASE04, these packages were included under functional group BAS00003.

CAMA office

The CAMA calls have the following characteristics:

- CAMA or SuperCAMA (SC) trunks
- incoming access tandem trunks
- TOPS/CAMATOPS trunks
- cellular mobile carrier
- Enhanced 800 Service (E800)
- 800 Plus Service (800+)
- E008
- private virtual network (PVN) (trunk originated)
- advanced intelligent network (AIN) (trunk originated)

CRS_PRU_POOL2_SIZE (continued)

- Trunk Group Member Usage (TGMU) trunks
- trunks with Connecting Network Access Record option (CNAR)

LAMA office

The LAMA calls have the following characteristics:

- incoming access tandem trunks
- PX/P2 trunks
- Meridian Digital Centrex (MDC) trunk originations
- MDC trunk terminations
- POTS line originations
- MDC line originations
- Residential Enhanced Services (RES) line originations
- direct inward system access (DISA) organizations
- attendant console originations
- virtual facility group (VFG) originations
- PVN line originations
- AIN line originations
- POTS line terminations
- MDC line terminations
- RES line terminations
- VFG terminations
- generic call codes 800 through 999
- operating company selected service-feature-codes (table AMAPRT)
- MDRRAO
- ONA/ESP
- wide area telephone service (WATS)
- Screening List Editing (SLE) feature screening list access
- custom local area signaling service (CLASS) subscriber usage-sensitive pricing (SUSP)

Bellcore billing methods

Bellcore format billing methods divide into the following categories:

- translations indicators
- line and trunk options
- database query determinations
- known billing applications (for example, TOPS)

Refer to *Bellcore Format Automatic Message Accounting Reference Guide*, 297-1001-830 for details of possible billing methods.

Correct provisioning of this pool requires a knowledge of all billing methods that a switch uses. Correct provisioning also requires knowledge of the expected frequency of billing use.

Recording unit use

Bellcore format AMA uses an instance of a primary recording unit (PRU) in three methods: long term, short term, and fast-write. Each production of a Bellcore AMA record requires one of these methods.

To hold the billing information, the system takes a long-term PRU from this pool. The system attaches the PRU to a call for the duration of the call. The provisioning cost of this action is high. The cost is high because a PRU from this pool can only serve one call for a long period of time.

For CAMA, the following list contains the applications that require long-term PRU use:

- cellular mobile carrier (CMC) calls
- number services code (NSC) calls that require a database query
- calls that use a generic call code from AMA pretranslations
- calls that use a generic service feature from AMA pretranslations
- calls that require ISDN circuit-mode billing
- TGMU billing
- CNAR billing

For LAMA, the following list contains the applications that force long-term PRU use:

- billable MDC originating calls that use a NET selector
- billable MDC calls that use the AMACUST option in table CUSTSMDR

CRS_PRU_POOL2_SIZE (continued)

- MDC calls directed through a VFG that use a WATS route selector
- CDAR calls
- calls assigned a generic call code from AMA pretranslations
- calls assigned a generic service feature from AMA pretranslations
- calls directed through a VFG with special billing assigned through option VFGAMA
- AMA test calls that involve the AMATEST option
- terminating and originating FGA calls (FGA line option)
- calls that terminate on an MDC trunk with FACTYPE assigned
- all terminating billing records
- billable originating trunk calls with TRKINFO option assigned
- equal access calls to an operator (OP) trunk
- terminating access records that involve local termination
- billing records that the system generates as the result of the first leg of a call with multiple legs
- most calls that involve an attendant console
- NSC calls that require database query
- calls that originate from a RES line
- calls that terminate to a hunt group
- calls that involve call waiting
- all conference calls
- all universal AMA billing records
- all calls that require ISDN circuit-mode billing
- calls that involve MBG
- calls that involve NFA
- all calls that involve class of service recording
- all calls that require MDR recording (MDRRAO)
- billable telemetry calls that originate from a utility telemetry (UT) trunk
- originating OA calls with the OABILL option assigned

The system uses a short-term PRU when the call condense block (CCB) holds the call billing data. The CCB associates with a call while the call is in progress. At the end of the call or billing period, the system retrieves a

short-term PRU from this pool. The system fills the short-term PRU with the billing data of the call from the CCB. After the system copies the billing data and any necessary changes are complete, the sytem queues the PRU against the AMA process. The PRU is formatted into a record and placed back in the pool of available PRUs. The quality of provisioning improves. The quality improves because a PRU from this pool associates with a call for a short period of time. This short-term association allows the possibility of one block to service many calls.

For CAMA, the following list contains the conditions that force short-term PRU use:

- TOPS/Overseas Operating Center (OOC) calls
- all CAMA calls that normally use the fast-write mechanism but cannot

For LAMA, the following list contains the conditions that force short-term PRU use:

- SUSP aggregate billing records that audits produce
- all LAMA calls that normally use the fast-write mechanism but cannot

In the calculation description that follows, a recommended 5% multiplier is included against billing capacity of the applications that use short-term PRUs (TOPS).

The fast-write PRU is a single PRU that is not part of this pool. The CCB holds the call billing data during the call. At the end of the call, the system copies the billing information from the CCB into the fast-write PRU. The call process formats the fast-write PRU directly, and does not queue fast-write PRU against the AMA process . Call processes cannot have interruptions. This single PRU can service all the call processes that attempt to use the fast-write mechanism.

Applications that use the fast-write mechanism do not affect the provisioning of this pool. This condition occurs because a PRU from this pool is not used. Many causes determine if a call uses or does not use the fast-write mechanism.

In the calculation statements that follow, a percentage of calls unable to use fast-write factor appears. This cause is included against the values that have the potential to use fast-write. This cause must be estimated according to the percentage of a category of calls. These calls include calls that do not fall into the list of applications in long-term and short-term PRU use. Use a value of no less than 1%.

CRS_PRU_POOL2_SIZE (continued)

Controls for Bellcore billing

In addition, several AMA recording options are entered in table AMAOPTS. These options allow operating companies to control the recording of call data for some types of calls.

Provisioning rules

The beginning of the formula for the provisioning of this parameter provides the first conditions for the formula. In some events, additional conditions for specified applications appear. For example, an office cannot have a package that involves a specified application. If the formula requires conditions for specified applications, the conditions are included. The use of this pool for each application is determined and the sum of these calculations determines the value of CRS_PRU_POOL2_SIZE. Use the parameter default value if the value is greater than the value that the sum of the formulas determines.

Note: Do not provision this parameter at a value less than the value of the default.

Functionality group BAS00003 is always present. Add the values derived from the following application formulas to obtain the value for CRS_PRU_POOL2_POOL.

ISDNBBGBILL

Option ISDNBBGBILL applies to ISDN basic rate interface (BRI) basic business group (BBG) calls only. This option produces AMA records for calls that originate from or terminate to an ISDN BRI BBG (BBG-I) facility. These AMA records provide detailed information about the use of BBG-I facilities and services.

Activate or deactivate this option in table AMAOPTS. If option ISDNBBGBILL is ON and option BBGI is active for the customer group, use of PRUs increases. The increase depends on the number of billable BBG-I calls.

For each agent of the call that is a member of a monitored BBG, option ISDNBBGBILL creates a 60-word PRU. For each agent of the call that is a member of a monitored BBG, option ISDNBBGBILL also creates a 16-word extension. The switch holds the 60-word PRU and the 16-word extension for the duration of the call.

To accommodate option ISDNBBGBILL, feature AF7503 increases the use of PRUs controlled by the CRS_PRU_POOL2_SIZE office parameter. If an office does not activate option ISDNBBGBILL, no change occurs in the CRS_PRU_POOL2_SIZE parameter.

Conditions

Option ISDNBBGBILL in table AMAOPTS is ON. Option BBGI is present in table CUSTHEAD or option BBGI Y is present in table KSETFEAT.

Formula

Store requirements increase by 76 words for each BBG-I subscribed agent involved in each call. This increase remains for the duration of the call.

The following assumptions lead to the formula for the increase in PRUs:

- The site has enough CCBs for the peak traffic period and holding time for the switch.
- All originating and terminating ISDN BBG agents are billed, and terminating billing may require multiple PRUs. Outgoing trunks and many types of incoming trunks are not billed; they are exceptions to this rule.
- The site does not carry large amounts of Internet traffic so that call hold times are approximately three minutes. Hold times are longer for switches with large amounts of Internet traffic.
- During a DIRP outage, the switch holds two PRUs and two SUBRUs in the queue for each billable call. The site should be able to hold a number of PRUs in the queue equivalent to the average call hold time. For example, the switch should be able to retain billing data in recording units for three minutes during peak traffic without losing any records.

PRU requirements are as follows:

- Component1 = num_CCBs * 1
  - This formula suggests that each originating agent requires one PRU. The actual factor is less.
- Component2 = num_CCBs * 1
  - This formula suggests that the terminating agent requires one PRU. The actual factor can be greater if the site is processing a large number of AIN, LNP, or feature-rich calls.
- Component3 = num_CCBs * 2
  - The number of CCBs represents the maximum number of currently held calls. This formula suggests a requirement for twice as many PRUs in an emergency such as a DIRP outage. The CCBs are not held during a recording outage.

Total = Component1 + Component2 + Component3 = num_CCBs * 4

Estimated ISDN BBG saturation = 5%

CRS_PRU_POOL2_SIZE (continued)

Net resource increase = 4 * 0.05 = num_CCBs * 0.2

OABILL

Conditions

Operator-assisted (OA) call billing (OABILL) is in use.

Formula

(number of any additional CRS_PRU_POOL2 extension blocks)
= (number of simultaneous OA calls over trunks assigned the OABILL option)

OR

if the number of simultaneous OA calls is unknown,

= (number of OP trunks with the OABILL option assigned)

CAMA or SuperCAMA trunks

(number of SC trunk group members)
x (engineered percentage of simultaneous trunk off-hooks)
x (percentage of calls originating from SuperCAMA trunks that are billable)
x (percentage of billable calls originating from SuperCAMA trunks unable to use fast write)

Equal Access (% including CMC)

FGA

(number of FGA lines)
x (engineered percentage of simultaneous FGA line off-hooks)

FGB

(number of FGB trunks)
x (engineered percentage of simultaneous FGB trunk off-hooks)
x (percentage of FGB calls that are billable due to controls in table AMAOPTS)
x (percentage of FGB billable calls unable to use fast write)

FGC, FGD

(number of FGC and FGD trunks)
x (engineered percentage of simultaneous FGC and FGD trunk off-hooks)
x (percentage of FGC and FGD calls billable due to controls in table AMAOPTS)
x (percentage of FGC and FGD billable calls unable to use fast write)

TOPS and CAMA/TOPS trunks

10% · (TOPS_NUM_RU in table OFCENG)
+ (OOC_NUM_RU in table OFCENG)
+ (GOS_NUM_RU in table OFCENG)
+ (OOC_NUM_RU in table OFCENG)

CMC

Conditions

Functional group EQA00003 (Cellular Interconnect-End Office) is present.

Formula

(number of PX trunk group members with LOCALCMC set to Y in table TRKGRP)
x (engineered percentage of simultaneous trunk off-hooks)
x (percentage billable due to controls in table AMAOPTS)

Conditions

Functional group EQA00004 (Cellular Interconnect) is present.

CRS_PRU_POOL2_SIZE (continued)

Formula

(number of CELL trunk group members)
x (engineered percentage of simultaneous trunk off-hooks)
x (percentage billable due to controls in table AMAOPTS)

CNAR

All incoming calls through a trunk group with the CNAR option require one recording unit. The existing office parameter CRS_PRU_POOL2_SIZE controls the number of CRS_PRU_POOL2 recording units in the office. This parameter is updated to handle the traffic mix.

Conditions

LNP is active.

Formula

Incoming/Two-way Trunk (CNAR and No LCNAR) – 1 Recording Unit for every incoming call.

Incoming/Two-way Trunk (CNAR and LCNAR) – 1 Recording Unit for every LNP query performed for the incoming call.

Increase CRS_PRU_POOL2_SIZE by:

(Number of trunks with CNAR option and LCNAR set to No
x Engineered percentage of simultaneous trunk off-hooks)
+ (Number of trunks with CNAR option and LCNAR set to Yes
x Percentage of calls which result in an LNP query
x Engineered percentage of simultaneous trunk off-hooks)

Note 1: One recording unit requires 55 words.

Note 2: Under-provisioning recording units results in the loss of an AMA record or in the call being routed to the operator.

CRS_PRU_POOL2_SIZE (continued)

E800

Conditions

Functional group NTS00005 CCS7-E800/SSP is present.

Formula

(estimate of the number of simultaneous 800 calls
that the office is engineered to handle)

OR

([number of TOPS trunks] · [percentage of trunks used for E800 traffic])
+ ([number of IT trunks] · [percentage of trunks used for E800 traffic])
+ ([number of SC trunks] · [percentage of trunks used for E800 traffic])
+ ([number of lines] · [estimate of E800 usage])

E800+

Conditions

Functional group NTJ00006 (800 Plus) is present.

Formula

(estimate of the number of simultaneous 800 PLUS calls
that the office is engineered to handle)

OR

([number of TOPS trunks] · [percentage of trunks used for 800+traffic])
+ ([number of IT trunks] · [percentage of trunks used for 800+traffic])
+ ([number of SC trunks] · [percentage of trunks used for 800+traffic])
+ ([number of lines] · [estimate of 800+ usage])

E008

Conditions

Package NTXH84AA (Enhanced 008 for Australia) is present.

CRS_PRU_POOL2_SIZE (continued)

Formula

(estimate of the number of simultaneous E008 calls
that the office is engineered to handle)

OR

([number of ATUP trunks] · [percentage of trunks used for E008 traffic])
+ ([number of AISUP trunks] · [percentage of trunks used for E008 traffic])
+ ([number of MDC lines] · [estimate of E008 usage])

PVN

Conditions

Functional group MDC00011 (Intelligent Network Billing Attributes) is present.

Formula

([estimate of the number of simultaneous PVN calls
that the office is engineered to handle]
x [percentage of PVN calls that are billable])
+ (percentage of nonbillable PVN calls
that provide termination notification to the SCP)

OR

(number of SC trunk group members signaling FGD)
+ (number of IT trunk group members signaling FGD)
+ (number of MDC trunk group members)
+ (number of MDC business group stations)
+ (number of MDC attendant consoles)
+ (number of MDC stations)
+ (number of remote access lines or trunks)

Advanced intelligent network (AIN)

Blocks from this pool record calls that are billable because these calls are AIN calls. For example, a POTS line to POTS line call does not produce an AMA record. If the same call becomes an AIN call, the call produces an AMA record.

Conditions

Functional groups MDC00011 and AIN00001 are present.

Formula

Trunks: For each of the trunk types (MDC, PRI, PX/P2) perform the addition:

```
  ([estimate of the number of simultaneous AIN calls
  that the office is engineered to handle]
x [percentage of AIN calls that are billable])
+ (number of non-billable AIN calls
  that provide termination notification to the SCP)
+ (number of previously non-billable calls
  that became billable if they are AIN calls)
```

OR

```
  (number of POTS and RES lines)
+ (number of SC trunk group members signaling FGD)
+ (number of IT trunk group members signaling FGD)
+ (number of MDC trunk group members)
+ (number of MDC business group stations)
+ (number of MDC attendant consoles)
+ (number of MDC stations)
+ (number of remote access lines or trunks)
```

Note: The number of AIN calls includes billable AIN calls and AIN calls that the called party does not answer. The system records these calls because of entries in tables AMAOPTS and BCCODES.

Lines: For each of the line classes (POTS, MDC, RES, ISDN, WATS, Coin, Hunt groups), perform the addition:

CRS_PRU_POOL2_SIZE (continued)

(number of <insert line class> lines)
x (engineered percentage of simultaneous <insert line class> off-hooks)
x (percentage of <insert line class> calls that are billable)
x (percentage of <insert line class> billable calls unable to use fast-write)

Multiple leg calls: For each of the multiple leg call types (active call forwarding options, attendant consoles, DISA numbers), perform the addition:

(number of <insert multiple leg call type>)
x (average number of simultaneous calls established through <insert multiple leg call type>)
x (percentage of calls established through <insert multiple leg call type> that are billable)
x (percentage of billable calls established through <insert multiple leg call type> unable to use fast write)

Permanent logical link connections

Conditions

Functional group NI000002 (Permanent Relay LEC Billing) is present.

Formula

(number of PLLCs)

Trunks: For each of the trunk types (MDC, PRI, PX/P2) perform the addition:

(number of <insert trunk type> trunks)
x (engineered percentage of simultaneous <insert trunk type> off-hooks)
x (percentage of <insert trunk type> calls that are billable)
x (percentage of <insert trunk type> billable calls unable to use fast write)

TGMU trunks

(number of TGMU trunk group members)
x (engineered percentage of simultaneous trunk off-hooks)

VFGs: For each VFG defined, perform the following addition:

(size of VFG)
x (percentage of VFGs simultaneously in use)
x (percentage of VFG calls that are billable)
x (percentage of VFG billable calls unable to use fast write)

SUSP audit options

Conditions

Functional group RES00006 (CLASS Screening List Editing) or software package NTXE82AA (DMS-300 International 800 Service) are present.

Formula

1000 x (number of lines with BCLID option or CLASS display features)

DMS packet handler

Conditions

Functional group NI000010 (DMS Packet Handler) is present.

Formula

1000 x (number of XLIUs)

Call Forwarding Conditional (CFC)

The Call Forwarding Conditional (CFC) feature gives subscribers to the German Intelligent Network (GIN) services the ability to forward incoming calls at the trunk level. A recording unit from this pool records call data for the duration of a CFC call. The system generates a forwarding record if the system must forward a call. The system forwards a call because a called number is busy (CFC-BY) or called number does not answer (CFC-DA) condition.

Conditions

The CFC feature is present.

Formula

(estimated maximum number of simultaneous CFC forwards)

CRS_PRU_POOL2_SIZE (continued)

Maximum

(estimated maximum number of simultaneous E008 calls)

LNP Call Code 721

The LNP AMA call code 721 feature provides billing records on local number portability (LNP) calls. Bellcore requirement document GR2936, Issue 2, 1996 specifies the content of billing records with this call code. The AMA system uses this call code for LNP calls that do not normally generate AMA billing records. Call code 721 is used for originating line calls or private trunks that cause an LNP query on the originating switch, but generate no other AMA records.

Conditions

Option LNP_721 in table AMAOPTS is set to ON.

Formula

```
  ([{Number of Line side connection
x Engineered percentage of simultaneous line side off-hooks}
+ { number of private trunk groups
x engineered percentage of simultaneous private trunk groups off-hooks}]
x percentage of calls that do not generate any billing records
x percentage of calls that triggers LNP )
```

Conditions

Option LNP_721 in table AMAOPTS is set to ON and option LNP_721_PortedDNOnly is set to on.

Formula

```
  ([{number of line side connections
x engineered percentage of simultaneous line side off-hooks}
+ { number of private trunk groups
x engineered percentage of simultaneous private trunk groups off-hooks}]
x percentage of calls that do not generate any billing records
x percentage of calls that triggers LNP
x percentage of LNP Query that results in dialed number being ported )
```

LNP Call Code 722

The system generates Call code 722, Last Resort AMA for LNP. This generation occurs when last resort routing to a recipient switch occurs at a donor switch and an AMA record did not generate at the donor switch. This record applies to public trunk originating calls to a number ported from the donor switch. An office wide AMA option controls the recording of this AMA.

Conditions

Option LNP_722 in table AMAOPTS is set to ON.

Formula

{number of public trunk groups datafilled in the switch
x engineered percentage of simultaneous public trunk off-hooks
x percentage of calls that are received to DNs ported from the switch
x percentage of trunk groups that are not provisioned to generate any AMA}

Telemetry Application

The Telemetry Application feature gives utility companies or other service providers the ability to connect to subscriber lines through the telephone network. The operating companies or other service providers make this connection to collect telemetry data. The telephone of the subscriber does not ring when a the utility company or other service provider makes a connection. A disruption to the normal activities of the subscriber does not occur. The operating company or service provider makes the connection when the line of the subscriber is idle.

Conditions

The UT trunks configured in the office and future telemetry calls can affect the provisioning of this parameter. Field BILLING in table TRKGRP for UT trunks determines if telemetry calls are billable. Billable telemetry calls generate a Bellcore format AMA record. The calls generate this record through the acquisition of a long-term PRU from the CRS_PRU_POOL2 extension block pool. This event occurs for each billable telemetry call.

If UT trunks are configured in the central office, the following application formula determines the number of PRUs required for telemetry calls.

Formula

CRS_PRU_POOL2_SIZE (continued)

(number of UT trunk members)
x (engineered percentage of simultaneous UT trunk off-hooks)
x (percentage of billable telemetry calls)

U3WC

Conditions

Functional group RES00012 is present.

Formula

Use formula for multiple leg calls.

RECORD_LSPI option

Any office with local service providers (LSP) is affected by activating the RECORD_LPSI option. Turn this option on or off in table AMAOPTS. The option must be turned on in table AMAOPTS to operate billing control in table LSPINFO. If the RECORD_LSPI option is on, there might be a substantial increase in extension block usage. The increase depends on the number of billable LSPI calls.

For each agent of the call subscribed to an LSP, a 60-word PRU is created. For each agent of the call subscribed to an LSP, a 16-word extension is created. The 60-word PRU and the 16-word extension are held for the duration of the call.

To accommodate the RECORD_LSPI option, Features AF7311 and AF7251 increase the extension block usage for the CRS_PRU_POOL2_SIZE office parameter. If the RECORD_LSPI option is not activated, the CRS_PRU_POOL2_SIZE office parameter is not impacted.

Conditions

Functional group LOC00012 must be present.

Formula

Store requirements increase by 76 words for each subscribed agent involved in each call. This store is held for the duration of the call.

The formula is characterized by the following assumptions:

1. The site is engineered with sufficient CCBs to accommodate the peak traffic period and holding time for the switch.
2. Every originating and terminating agent will be billed. This may require multiple PRUs for terminating billing. Exceptions are outgoing trunks and many types of incoming trunks.

3. Call hold times are much longer for switches with a large amount of Internet traffic. It is assumed that the site does not carry a significant amount of Internet traffic.
4. Two PRUs and two SUBRUs are held in queue for each billable call. The site should be able to hold a number of PRUs in the queue equivalent to the average call hold time. For example, the switch should be able to retain billing data in recording units for three minutes during peak traffic without losing any records.

PRU requirements are as follows:

- Component1 = num_CCBs * 1
  - This formula suggests that one PRU is required for each originating agent. The actual factor is less.
- Component2 = num_CCBs * 1
  - This formula suggests that one PRU is required for the terminating agent. The actual factor can be greater if the site is processing a large number of AIN, LNP, or feature rich calls.
- Component3 = num_CCBs * 2
  - The number of CCBs represents the maximum number of currently held calls. This formula suggests that twice as many PRUs are needed in an emergency scenario such as a DIRP outage. However, the CCBs are not held during a recording outage.

Total = Component1 + Component2 + Component3 = num_CCBs * 4

AMA critical times

The AMA critical times can place an additional load on CRS pool resources. Take the following steps to confirm that the system correctly provisioned all pools to absorb the impact of critical times:

1. Monitor the EXT OMs during peak traffic hours to determine the maximum number of extension blocks seized (EXTSZD). Monitor the EXT OMS to the maximum high-water mark (EXTHI) for each extension block pool. Note that these actions do not always occur during the same OM reporting period.
2. Calculate the pool size with the maximum figures (obtained in the previous condition) with the following formula:

CRS_PRU_POOL2_SIZE (continued)

+ ([critical time duration in minutes]
x [number of extension blocks seized during busiest sampling period])
/ (Duration of OM sampling period in minutes)

This formula produces an extension block pool size which compensates for an AMA critical time during peak traffic. An overflow of the pool does not occur. Use a minimum 3 min critical time duration in this calculation.

3. Perform the following actions if the result of the above calculation is higher than the current pool size in table OFCENG. Verify that sufficient store is available. Increase the pool size according to the result. If the result of the calculation is lower than the current pool size, there is no action required.

Traffic patterns can change over time. Monitor the application of CRS pool resources. Increase the resources as required.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	3 times the value of the provisioned NCCBS	100

Activation

Increase - immediate

Decrease - cold restart

CRS_PRU_POOL2_SIZE (continued)

Dependencies

This parameter controls the CRS_PRU_POOL2 extension block pool.

Consequences

This office parameter provisions a recording unit pool. If this parameter fails to obtain enough of these units, loss of call recording data can occur. This office parameter also controls a PRU pool. If this parameter fails to claim a block in this pool, the system cannot record calls for the active call.

Under-provisioning of CRS_PRU_POOL2 extension blocks can lead to loss of billing records.

Over-provisioning of CRS_PRU_POOL2 extension blocks wastes memory and requires a cold restart to decrease the number of extension blocks allocated.

Verification

This parameter controls the extension block with an external identifier name of CRS_PRU_POOL2 and an index of 101 for OM group EXT.

Enter the command OMSHOW EXT ACTIVE 97 to verify the number of allocated extension blocks for the CRS_PRU_POOL2 office parameter.

Memory requirements

Each unit requires 60 words of memory.

Dump and restore rules

Parameter CRS_PRU_POOL2_SIZE replaces NUM_OF_BC_LAMA_UNITS and NUM_OF_BC_AMA_UNITS, deleted in BCS32.

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

NA010

Added provisioning rules for option ISDNBBGBILL.

TL10

Parameter Autoprovisioning was added in CSP10.

NA009

Added call code 721 and call code 722 for billing records for local number portability calls.

CRS_PRU_POOL2_SIZE (end)

Increased the usage of extension blocks controlled by CRS_PRU_POOL2_SIZE.

Changed maximum provisioning value to from 131072 to 393216.

NA008

Provisioning rules to increase OP trunks for offices, in which option OABILL is enabled, were added in NA008.

NA007

Provisioning rules for LNP were added in NA007.

NA004

Provisioning rules for U3WC were added in NA004.

NA002

Provisioning rules for Telemetry Application were added in NA002.

BCS36

Provision rules are as follows:

- Provisioning rules for CMC and AIN were added in BCS36.
- Provisioning rules for SUSP audit were modified in BCS36.
- Provisioning rules for TOPS offices were modified in BCS36.

CRS_PRU_POOL3_SIZE

Parameter name

Call Recording Stream Primary Recording Unit Pool3 Size

Functional description

This parameter specifies the number of extension blocks available for use by the Station Message Detail Recording (SMDR) system. The parameter can be manually provisioned by table OFCENG, or autoprovisioned by setting the ACTIVE field in table OFCAUT to Y.

This parameter replaces office parameter NO_OF_SMDR_REC_UNITS in table OFCENG.

Provisioning rules

For a switch in the United States market, other than a Meridian Digital Centrex (MDC) stand-alone, leave the value of this parameter at the default of 100.

For an MDC stand-alone set the value of this parameter to 600. An MDC stand-alone office consists of 90% MDC or KSET lines.

In either case, the value must not be lower than the previous value of NO_OF_SMDR_REC_UNITS.

For offices in non-US markets, provision the parameter as follows.

If the switch has North American translations with the SMDR feature and each Integrated Business network (IBN) line is assigned the SMDR option, the recommended value is determined by the following formula:

0.8 X (value of OFCENG parameter NCCBS)

If the switch has North American translations with the SMDR feature and the SMDR line option is not assigned to all or any of the IBN lines, the recommended value is determined by the following formula:

0.3X	(number of IBN lines in customer groups without the MDRRAO feature)
+	(number of simultaneous calls for all customer groups with the MDRRAO feature that involve a direct inward system access (DISA) number or the account code feature)

CRS_PRU_POOL3_SIZE (continued)

Meridian SuperNode (MSL-100) offices

In MSL-100 offices that use Station Message Detail Recording (SMDR) Per Use Billing for Features, the office parameter CSR_PRU_POOL3_SIZE, as well as CSR_SUBRU_POOL3_SIZE must be provisioned as follows to avoid losing data.

Office parameter CSR_PRU_POOL3_SIZE controls the number of extension blocks available to the SMDR system. Any D1, D2, D3, or D4 record in the process of being generated uses one of these blocks.

Office parameter CSR_SUBRU_POOL3_SIZE controls the number of extension blocks available to the DF09 extension record. Any DF09 extension record in the process of being generated uses one of these blocks, as well as block from CSR_PRU_POOL3_SIZE since all DF09 extension records have a D1 record that precedes them.

Each time one of the SMDR per-use billing records is produced, a block from both CSR_SUBRU_POOL3_SIZE and CSR_PRU_POOL is used in addition to any blocks in use for normal billing. However, this does not require a drastic increase in the pool size because the DF09 records are held for less than 10 miliseconds by the record generator for per-use billing.

Due to the way per-use billing generates records and because of the short time-to-live of a DF09 extension record, the CSR_PRU_POOL3_SIZE should be increased by 5 to 10 percent from an office that elects to use SMDR per-use billing. A 10 percent increase is extremely liberal and is likely to result in store waste. However, store waste is preferable to losing billing records.

Since a block from both pools is needed to produce a single DF09 extension record, CSR_SUBRU_POOL3_SIZE must be increased by the same absolute amount (not percentage) as the CSR_PRU_POOL3_SIZE.

For example, an MSL-100 office that is not using SMDR per-use billing has the following values for these parameters:

CSR_PRU_POOL3_SIZE	40000
CSR_SUBRU_POOL3_SIZE	1000

CRS_PRU_POOL3_SIZE (continued)

When that MSL-100 office elects to use SMDR per-use billing, the parameters would be change as follows:

CSR_PRU_POOL3_SIZE	40000
Old value	+5% : 2000
New value	42000
CSR_SUBRU_POOL3_SIZE	1000
Old value +same increase above	2000
New value	3000

No other parameters for MSL-100 offices should be changed as a result of the feature SMDR Per Use Billing for Features.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	1 times the value of the provisioned NCCBS	100

Activation

Increase - immediate

Decrease - cold restart

CRS_PRU_POOL3_SIZE (end)

Dependencies

This parameter controls the provisioning of the CRS_PRU_POOL3 extension block.

Consequences

If this parameter is underprovisioned, the collection of data for call recording will be incomplete.

If this parameter is overprovisioned, data store is wasted.

Verification

This parameter controls the extension block with an external identifier name of CRS_PRU_POOL3 and an EXT OM index of 115.

Memory requirements

Each unit requires 45 words of memory.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

TL10

Parameter Autoprovisioning was added in TL10.

NA08

Changed maximum provisioning value to from 4294967295 to 131072.

BCS35

This parameter was introduced.

CRS_SUBRU_POOL1_SIZE

Parameter name

Call Recording Stream Sub-Recording Unit Pool1 Sizeactive

Functional description

The current definition for this parameter is for offices that contain a user for the Call Recording Stream Platform. If this parameter appears in the software load, the parameter must be provisioned. The parameter can be manually provisioned by table OFCENG, or autoprovisioned by setting the ACTIVE field in table OFCAUT to Y.

The default value for this parameter is 100. This value is too small for larger offices.

Rules in provisioning

The following pages provide a description of:

- each application that requires an extension block, from the pool that this parameter controls
- the conditions that determine the use of the application in an exact office.

Each application often includes a recommended provisioning calculation and a worst-case maximum value. To determine an acceptable number for an application, use the engineered percentages for most recommended calculations. If the operating company does not know the value of the percentage, use a value of 100%. When the information that the operating company requires for the recommended calculation is not available, the maximum value is provided. If you use the maximum value, overprovisioning of the parameter can occur.

Some formulas include a percentage of the billable activities that involve the specified application. The name billable includes all activities that generate a record.

A value of 5% can be multiplied into the provisioning formulas. This 5% value takes account of the fact that the system held the extension block for a short time. The extension block for some applications is allocated just before the system releases the Automatic Message Accounting (AMA) record for formatting.

If the system meets the conditions for an application, the formula of the application determines use. Add the total of the formulas to determine the value of the parameter. If the default value for this parameter is greater than

CRS_SUBRU_POOL1_SIZE (continued)

the value of the formulas, use the default value. Do not provision this parameter at a value less than the value of the default.

TOPS OSSAIN

For each OSSAIN call to produce the AMA module code 185 the system appends an AMA module code 185 to record the Network Service ID of the call. The system requires an extension block from this pool for each OSSAIN call to produce the AMA module code 185.

Conditions

If TOPS OSSAIN SOC option ENSV0014 is on, follow these recommendations.

Recommended

$1 \times$ (number of OSSAIN calls)

GOS Enhancements

The functionality of GOS Enhancements, ordering code GOS00001 uses this parameter.

The AMA module code 093 uses this parameter.

Conditions

Module code 093 records the notify recall information. The system records Module code 093 when the system meets the following requirements:

- Table TOPAMAOP parameter RECORD_NOTIFY_RECALL = Y
- Notify minutes are entered.
- Table TOPSPARM parameter NUMBERING_PLAN = OPEN_NUMBERING. The call is a GOS call.

Recommended

The AMA module code 093 uses this parameter. When RECORD_NOTIFY_RECALL is Yes, the system uses CRS_SUBRU_POOL1_SIZE.

The formula to calculate the store increase and a sample calculation follows. The sample calculation uses 2000 for the TOPS peak busy hour calls.

Number of words x [(100%)(TOPS peak busy hour calls)]
8 e [(1)(2000)] = 16 000 words

With the sample calculation, the CRS_SUBRU_POOL1_SIZE must increase by [(1)(2000)] = 2000.

MDRRAO AMA

Package NTXA88AA (MDR through AMA Stream) includes Message Detail Recording Revenue Accounting Office (MDRRAO) features. The MDRRAO is a Meridian Digital Centrex (MDC) line option entered in table CUSTSMDR with business group identifier (ID). These features are entered against customer group IDs. Use Module code 100 to capture the business group ID for which MDRRAO is an option. Module code 100 requires a block from this pool. The system holds the block for the length of the call.

Conditions

If software package NTXA88AA is present, use the following recommendations.

Recommended

(number of MDC lines with custgrp that has MDRRAO option)
x (percentage of MDC off-hooks that the office is engineered to handle)
x (percentage of MDC off-hooks that are billable)

Maximum

(number of MDC lines with custgrp that have the MDRRAO option)

Centrex group ID

A call can originate on an MDC line with a customer group that has the AMACUST option entered in table CUSTSMDR. If this condition occurs the system appends the module code 120 to the AMA record. The system uses the AMA to record the customer group ID. Module code 120 requires a block from this pool. The system holds the block for the length of the call. Package NTX851AA (SMDR Derived from BCR AMA) includes the AMACUST option.

CRS_SUBRU_POOL1_SIZE (continued)

Conditions

If software package NTX851AA is present, use the following recommendations.

Recommended

(number of MDC lines with custgrp that has AMACUST option)
x (percentage MDC off-hooks that the office is engineered to handle)
x (percentage MDC off-hooks that are billable)

Maximum

(number of MDC lines with custgrp that have the AMACUST option)

Trunk information (TRKINFO) in table AMAKOPT

The AMA packages NTX098AA (Bellcore CAMA format) and NTX159AA (Bellcore LAMA Format) includes the TRKINFO option in table AMATKOPT. The system generates Module code 104 for each termination to a member of a trunk group. Assign the trunk group as TRKINFO. Module code 104 requires a block from this pool. The system holds the block for a short time because the block is allocated before the release of the AMA record to format.

Conditions

If software package NTX098AA or NTX159AA is present, use the following recommendations.

Recommended

5% x (number of trunk group members with the TRKINFO option)

Maximum

A maximum calculation does not apply in this event. The above formula does not require any type of estimate.

Custom Local Area Signaling Service (CLASS) display AMA

Software package NTXA82 (Class Line Office Data) includes the CLASS display features. The system attaches Module code 111 to the AMA record. This event occurs for calls that originate from lines data entered with two or more CLASS display features. Module code 111 requires a block from this

pool. The system holds the block for a short time because the allocation of this block occurs before the system sends the AMA record. The system sends the AMA record to the formatter.

Conditions

If software package NTXA82AA is present, use the following recommendations.

Recommended

5% x (number of lines with two or more CLASS features)

Maximum

A maximum calculation does not apply in this event. The above formula does not require any type of estimate.

TOPS Equal Access (EA) service time

The TOPS EA service time requires a block from this pool if parameter EA_SERV_PROCESSING_TIME in table TOPAMAOP is enabled. The office uses TOPS Enhanced BellCore AMA Format (EBAF) Phase 1 or 2. An operating company for a carrier renders the operating services. In this condition, the system attaches Module code 059 to the AMA record. The system holds an extension block from this pool for a short time. The allocation of the pool occurs before the release of the AMA record to the formatter. Packages NTXE20AA (TOPS Extended Bellcore AMA Format) and NTX714AA (TOPS InterLATA Carrier Service) provide this capability

Conditions

If packages NTXE20AA and NTX714AA are present, TOPS EBAF Phase 1 or 2 is in use, and EA_SERV_PROCESSING_TIME = Y, then follow the recommendations.

Recommended

5% x (estimate of the maximum number of simultaneous TOPS calls at the same time
that the operating company handles for all carriers)

CRS_SUBRU_POOL1_SIZE (continued)

Maximum

5% x (TOPS_NUM_RU in table OFCENG)

TOPS Guest Name and Room Number

TOPS Guest Name and Room Number requires a block from this pool if parameter RECORD_GUEST_NAME_AND_ROOM_NUM in table TOPAMAOP is enabled. The office uses TOPS EBAF Phase 2, to receive the guest name or room number. The system appends Module code 312 to the AMA record in this condition. The system holds an extension block from this pool for a short time. The allocation of the pool occurs before the release of the AMA record to the formatter. Package NTXE18AA (TOPS AMA Improvements) provides this capability.

Conditions

If package NTXE18AA is present and TOPS EBAF Phase 2 is in use and RECORD_GUEST_NAME_AND_ROOM_NUM = Y, follow these recommendations.

Recommended

5% x (estimate of the maximum number of TOPS calls at the same time in which the guest name or room number is received)

Maximum

5% x ((TOPS_NUM_RU in table OFCENG)
+ (OOC_NUM_RU in table OFCENG))

TOPS listing services

If a TOPS Listing Services, the system requires a block from this pool if the office:

- Uses TOPSGBAF Phase 1
- Records directory assistance (DA) or

CRS_SUBRU_POOL1_SIZE (continued)

A TOPS EBAF Phase 2 office can require a block from this pool. The office requires a block if the system appends Module code 055 to the AMA record in both occurrences. Module code 055 requires an extension block from this pool. The system holds the extension block for a short time. The allocation of the extension block occurs before the release of the AMA record to the formatter. Package NTXA62AA (TOPS MP—DA Audio Response Call Handling) provides this capability.

Conditions for TOPS EBAF Phase 1

If package NTXA62AA is present and TOPS EBAF Phase 1 is in use and the office records DA/INT service, follow these recommendations.

Recommended

5% x (estimate of the maximum number of TOPS calls at the same time in which DA or INT service is involved)

Maximum

5% x (TOPS_NUM_RU in table OFCENG)

Conditions for TOPS EBAF Phase 2

See the recommendations if the following occurs:

- package NTXA62AA is present
- TOPS EBAF Phase 2 is in use
- the office records DA service for non-INT calls

Recommended

5% x (estimate of the maximum number of TOPS calls at the same time in which DA service is involved)

Maximum

CRS_SUBRU_POOL1_SIZE (continued)

5% x (TOPS_NUM_RU in table OFCENG)

SSP 800 billing requirements

Package NTXQ39AA (SSP 800 Billing Enhancements) appends module code 031 to all AMA records for 800 PLUS calls. For each 800 PLUS call the module requires a block from this pool. The system holds the block for the duration of the call.

Conditions

If package NTXQ39AA is present, follow these recommendations.

Recommended

Estimate of the maximum number of 800 PLUS calls at the same time.

Maximum

You do not require a maximum calculation in this event. Each office with package NTXQ39AA can handle a fixed number of 800 PLUS calls. A formula that applies to all offices does not occur because each office is engineered differently.

TOPS account code billing

The user can enter an account code in TOPS EBAF Phase 2 environment where parameter ACCOUNT_CODE_BILLING_ENABLE in table TOPSPARM is enabled. When this event occurs, the system appends module code 301 to the AMA record. When the system receives the account code, the system holds the block until the AMA record format is complete. Package NTXJ73AA (TOPS Account Code Billing) provides this functionality.

Conditions

If TOPS EBAF Phase 2 is in use, package NTXJ73AA is present and ACCOUNT_CODE_BILLING_ENABLE = Y, follow these recommendations.

Recommended

Estimate of the maximum number of active calls that involve the Account Code feature.

Maximum

A maximum calculation for the TOPS Account Code billing is not available. Any TOPS facility can use this feature. If you cannot determine the recommended calculation, use the value of TOPS_NUM_RU in table OFCENG. This value can cause overprovisioning.

CRS_SUBRU_POOL1_SIZE (continued)

Wideband circuit usage

Package NTXR49AA is the Dialable Wideband Service PRI. If NTXR49AA is present in the office, the system appends Module Code 913 to the Trunk Group Member Usage (TGMU) AMA record for all wideband calls. Wideband trunks are entered in table TRKGRP with the selection order (SELSEQ) field set to WIDEBAND. Entry of the TGMU option occurred for the trunks in table AMATKOPT. For this application, the system holds the block for the length of the call.

Conditions

If package NTXR49AA is present, follow these recommendations.

Recommended

(engineering percentage of simultaneous trunk off-hooks)
x (number of TGMU trunk group members with field SELSEQ set to WIDEBAND in table TRKGRP)

Maximum

Number of TGMU trunk group members with field SELSEQ set to WIDEBAND in table TRKGRP.

Multilocation Business Group (MBG) - business group information

Package NTXN01AB (Multilocation Business Groups) improves basic MBG to support networked customer groups that use a private numbering plan. Entry of the customer group of the originator occurs in table BGDATA. If this event occurs the system appends Module Code 911 to the AMA record for MBG billable calls. Entry of the data occurs against a Business Group Identifier (BGID) with the BGMDR option. Module code 911 records the Business Group Information based on the business group parameter in the integrated services digital network (ISDN) user part (ISUP) signaling protocol.

Conditions

If package NTXN01AB is present and tuples are in table BGDATA with the CUSTGRP and BGMDR option, follow these recommendations.

CRS_SUBRU_POOL1_SIZE (continued)

Recommended

Use the smaller value derived from formula 1 or 2:

1. (number of MDC lines in customer groups associated with the BGMDR option in table BGDATA)

   x (percentage of MDC line off-hooks at the same time that an office can handle)
   x (percentage of MBG subscriber off-hooks that are MBG calls)
   x (percentage of MBG calls that are billable)

2. (Number of POTS ISUP trunks that can be involved in MBG calls)

   x (percentage of expected trunk utilization in the office)
   x (percentage of MBG calls of these POTS ISUP trunks)
   x (percentage of MBG involved calls that are billable)

Note: The possible number of MBG calls at the same time for any one customer group can vary. The total number of customer group members in the other offices determines the number of MBG calls at the same time. The office with the highest concentration of subscribers for an MBG can be provisioned. If this event occurs, the total number of subscribers to add to the first term in formula 1 above is the following:

```
(Number of MDC lines in customer groups associated with the
BGMDR option in Table BGDATA)
```

This number is the lesser of the total number of subscribers in this MBG. This number is outside of this office and the number in this office.

Maximum

Use the lesser value derived from formula 1 or 2:

1. (number of MDC lines in customer groups associated with the BGMDR option in table BGDATA)
2. (number of POTS ISUP trunks: trunk group types IT, TO, TI and T2)

Number Service Code (NSC) carrier code

Package NTXQ39AA (SSP 800 Billing Enhancements) appends Module Code 044 to all AMA records for 800 PLUS SOUTHBOUND calls. For each successful 800 PLUS SOUTHBOUND call, the system requires a block from this pool. The system holds this block for the length of the call.

CRS_SUBRU_POOL1_SIZE (continued)

Conditions

If package NTXQ39AA is present, follow these recommendations.

Recommended

(number of 800 PLUS calls at the same time that the office can handle)
x (percentage of 800 PLUS calls that are Southbound)

Note: This description includes TOPS-assisted 800 PLUS calls. The system appends Module code 044 to TOPS call code 192 for a TOPS EBAF Phase 2 office.

Maximum

A maximum calculation is not required in this event.

ISDN Service Order AMA

The Austrian ISDN base package uses this pool to provide billing data for administrative actions on ISDN lines. The system generates an AMA record to hold ISDN-specific data that the operating company personnel enters through Service Orders (SO). Make sure to submit this AMA record. The following AMA structures use this pool and follow the AMA header record, D4:

- D2 - Double Establish AMA Record for ISDN SO
- D9 - Single Establish AMA Record for ISDN SO
- D3 - Permission AMA Record for ISDN SO
- D5 - Activation AMA Record for ISDN SO

You can assign 20 features to a subscriber through the SO command Add Option (ADO). You can allocate a block from this pool for each feature assigned to the subscriber. If not enough subrecording units are present and the system cannot generate an AMA record, the system warns the operator. The system prompts the operator to stop the transaction.

Conditions

If the Austrian ISDN base package is included, follow these recommendations.

Recommended

CRS_SUBRU_POOL1_SIZE (continued)

(number of MAP interfaces)
x (percentage of SO transactions that are ISDN)
x (maximum number of billable features manipulated for each ISDN SO command)

Maximum

20 x (number of MAP interfaces)

Metering for the Spanish market (MTR)

Package NTX102AA (IBN—Station Message Detail Recording) includes, the MTR feature. The feature allows the recording of metered pulse counts in the Spanish market on IBNTO trunk types. Entry of these trunks occurs in table TRKGRP with the MTR field set to a value of Y (yes). Office parameter MARKET_OF_OFFICE in table OFCENG must have a value of SPAIN. The D7 record captures the required information.

Conditions

If package NTX102AA is included and office parameter MARKET_OF_OFFICE is set to SPAIN, follow these recommendations.

Recommended

(engineered percentage of simultaneous trunk off-hooks)
x (number of IBNTO trunks with the MTR field set to Y)

Maximum

(number of IBNTO trunks with the MTR field set to Y)

Personal Identification Number / Travel Card Number

Package NTX102AA includes the PIN/TCN feature. The PIN/TCN feature allows the recording of a PIN or a TCN on an incoming IBNTI or IBNT2 trunk. Enter table CUSTSMDR with the business group ID and the PIN option. When an incoming call dials a PIN/TCN, the DC extension record captures this information.

Conditions

If package NTX102AA is present, follow these recommendations.

Recommended

(number IBNTI and IBNT2 trunks where the custgrp has the PIN option)
x (engineered percentage of simultaneous trunk off-hooks)

Maximum

(number IBNTI and IBNT2 trunks where the custgrp has the PIN option)

Network Services Software (NSS) bearer capability

Package NTXE75AB (Offnet Access Services) includes the NSS feature. NSS is a feature that allows the recording of bearer capability information on wideband calls. Make sure to enter table CUSTSMDR with the business group ID and the BC option. The DD extension record captures this information.

The trunks that can have option BC assigned are IBNT2, IBNTI and IBNTO.

Conditions

If package NTXE75AB is present, follow these recommendations.

Recommended

(number of IBN trunks and lines where the custgrp has the BC option)
x (percentage of MDC off-hooks that the office is engineered to handle)

Maximum

(number of IBN trunks and lines where the custgrp has the BC option)

Inbound Toll Call (ITC)

Package NTX103AA (IBN—SMDR Enhanced) includes the ITC feature. This feature produces an SMDR record for each party involved in a call on an incoming IBNTI or IBNT2 trunk type. These trunks appear in table TRKGRP with the SMDRITC option set to Y. The system uses DF extension record with format code 1 to capture this information.

Conditions

If package NTX103 is present, follow these recommendations.

CRS_SUBRU_POOL1_SIZE (continued)

Recommended

(engineered percentage of simultaneous trunk off-hooks)
x (number of IBNTI and IBNT2 trunks with the SMDRITC field set to Y)

Maximum

(number of IBNTI and IBNT2 trunks with the SMDRITC field set to Y)

Call forwarding conditional (CFC)

The CFC feature allows subscribers to the German Intelligent Network (GIN) services to forward incoming calls at the trunk level. A recording unit from this pool must be present. The recording unit stores the feature type indication (FTI) flags in module 031 when the CFC feature is present. This block is present for the duration of the call. The system generates a forwarding record when a call is forwarded as a result of the following conditions:

- The called number is busy (CFC-BY).
- The called number does not answer (CFC-DA).

Conditions

If package NTX103 is present, follow these recommendations.

Recommended

(estimated maximum number of simultaneous CFC calls)
+ (estimated maximum number of simultaneous CFC forwards)

Maximum

(estimated maximum number of simultaneous E008 calls)

Advance intelligent network (AIN)

The blocks this pool provisions store data returned from the Service Control Point (SCP) during call processing. The following list illustrates the optional parameters that require an extension block. The response message must include these parameters. The number in brackets indicates the maximum number of extension blocks that the system can record for a single call.

- Billing indicator parameters (2) - There are four billing indicator parameters. The system uses one of the four parameters. The route that

the call take determines which parameter the system uses. The parameter used contains information that requires two extension blocks.

- AMA service logic program identification module 039 (AMAslpID) (5). Another extension block pool records the first AMAslpID parameter. The five parameters that remain use this extension block pool.

Conditions

If the switching unit has the AIN feature, follow these recommendations.

Recommended

```
  2 x (number of AIN calls with a billing indicator parameter used)
+ 1 x (number of AIN calls with 2 AMAslpID parameters)
+ 2 x (number of AIN calls with 3 AMAslpID parameters)
+ 3 x (number of AIN calls with 4 AMAslpID parameters)
+ 4 x (number of AIN calls with 5 AMAslpID parameters)
+ 5 x (number of AIN calls with 6 AMAslpID parameters)
+ (number of calls using MBI)
```

The total number of AIN calls that the system records includes:

- billable AIN calls
- AIN calls not answered

Datafill in tables AMAOPTS and BCCODES causes the system to record these calls.

Maximum

A maximum value does not apply in this event.

TOPS Auto Country Direct

The functional group ordering code ENSV0010 includes Auto Country Direct. Auto Country Direct permits an end user in a foreign country to dial an access code. The access code allows the end user to reach an operator in the country in which the call is to be billed.

Auto Country Direct appends module code 122 to the AMA record for Auto Country Direct calls. AMA module code 122 uses parameter CRS_SUBRU_POOL1_SIZE in table OFCENG.

CRS_SUBRU_POOL1_SIZE (continued)

Parameter CRS_SUBRU_POOL1_SIZE must increase only if the operating company intends to use the TOPS Auto Country Direct feature.

The system holds the modular recording units (MRU) that this feature requires during AMA formatting.

Conditions

If the switching unit uses the TOPS Auto Country Direct feature, follow these recommendations.

Recommended

number of words x [(% of Auto Country Direct calls in an hour) (number of calls in a peak busy hour)]

An example of this formula follows.

There are eight words in an RU from CRS_SUBRU_POOL1. If 15% of the calls in an office are Auto Country Direct and the office receives 25 000 calls in a peak busy hour, the store calculation is as follows:

8 words x [(15%) (25 000)]
8 words x [(.15) (25 000)]
8 words x 3750
30 000 x words

Parameter CRS_SUBRU_POOL1_SIZE in table OFCENG is increased by 30 000 words.

CRS_SUBRU_POOL1_SIZE (continued)

AMA critical times

AMA critical times can place an additional load on CRS pool resources. Take the following steps to confirm that the provisioning for all pools can absorb the impact of critical times:

1. Monitor the EXT OMs during peak traffic hours. Determine the maximum number of extension blocks seized (EXTSZD) and the high water mark (EXTH1) for each extension block.

   The EXTSZD and EXTHI cannot occur during the same OM reporting period.

2. Use the maximum figures obtained above and the following formula to calculate the pool size:

   + ((critical time duration in minutes)
   x (number of extension blocks seized during busiest sampling period)
   / (Duration of OM sampling period in minutes))

   This formula produces an extension block pool size that compensates for an AMA critical time during peak traffic. This adjustment occurs without an overflow of the pool. Use a critical time duration of at least three minutes in this calculation.

3. If the result of the preceding calculation is higher than the current pool size in table OFCENG, the size must increase. Increase the pool size according to the available store space. If the result of the calculation is lower than the current pool size, there is no action required.

You must monitor the use of CRS pool resources often because traffic patterns can change over time. Increase the level of monitoring if required.

Interadministration Accounting for International Carriers

Interadministration Accounting (IAA) for International Carriers uses the station message detailed recording (SMDR) extension record DF07. This office parameter controls the data blocks that store DF07 records.

Conditions

IAA must be present for International Carriers software.

Recommended

AUT x NI x IS

CRS_SUBRU_POOL1_SIZE (continued)

where

AUT
is the average number of additional user type information

parameters passed per NCCIv2 call

NI
is the number of concurrent NCCIv2 calls with IAA parameters

IS
is the percentage of calls that require an IAA SMDR record

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
	3 times the value of the provisioned NCCBS	100

Activation

Increase is immediate

Decrease occurs through cold restart

Dependencies

This parameter controls the CRS_SUBRU_POOL1 extension block.

Consequences

This parameter provisions a sub-recording unit pool. Failure to obtain enough of these units results in the loss of call recording data. This pool is critical to

the system that generates the AMA data outlined in the description of this parameter.

Verification

This parameter controls the extension block with an external identifier name of CRS_SUBRU_POOL1. This parameter has an index of 96 for operational measurement (OM) group EXT.

Memory requirements

Each unit requires 8 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA009

Changed maximum provisioning value to from 256144 to 393216.

APC008.1

Added IAA provisioning rules

NA008

Changed maximum provisioning value to from 4294967295 to 256144.

NA006

Added OSSAIN provisioning rules

TL05

Added information on AMA critical times

NA005

Added Auto Country Direct provisioning rules

BCS36

Added AIN and CFC provisioning rules

BCS32

This parameter was introduced in BCS32.

CRS_SUBRU_POOL2_SIZE

Parameter name

Call Recording Stream (CRS) Sub-recording Unit Pool2 Size

Functional description

The CRS_SUBRU_POOL2_SIZE parameter is defined for offices that contain a user for the CRS Platform. The increased flexibility of the Automatic Message Accounting (AMA) Software Platform feature creates the CRS Platform.

The default value for this parameter is 100. This value is too low for larger offices.

Provisioning rules

The CRS_SUBRU_POOL2_SIZE parameter applies to Bellcore AMA offices.

The following pages provide a description of each application. Each application requires an extension block from the pool that the parameter controls. The conditions that determine the use of the application in an office appear in the following pages.

Each application includes a recommended provisioning calculation and a worst case maximum value.

> ***Note:*** The engineered percentages required for most of the recommended calculations help the operating company personnel determine a reasonable number for an application. If an operating company does not know the value of certain percentages, the operating company personnel must use a value of 100%. Use the recommended calculation and not the maximum calculation.

The maximum value is available for those operating companies that cannot provide the information for the recommended calculation. An overprovisioned parameter can occur if the operating company personnel use the maximum value. In some events, the maximum value is not appropriate and not provided.

CRS_SUBRU_POOL2_SIZE (continued)

Some formulas include a measured percentage of the billable calls that involve the application. Note that the term billable includes all calls that generate one of the following records:

- AMA
- Station Message Detail Recording (SMDR) in the following conditions:
  - — Message Detail Recording Revenue Accounting Office (MDRRAO) is a customer group option in table CUSTSMDR.
  - — SMDR is turned on for the office.

A value of 5% is multiplied into the provisioning formulas. This accounts for the fact that the extension block is held for a short time. For some applications, the extension block is allocated just before the AMA record is released to be formatted.

If an application satisfies the conditions, use the formula to determine the use of the application. The total of the formulas determines the value of this parameter. If the default value for this parameter is greater than the value that the total determines, use the default value. Never provision this parameter at a value less than the default value.

TOPS OSSAIN

For each OSSAIN Service Node involved in an OSSAIN call, an AMA module code 184 appends to the AMA record. Module code 184 appends to the AMA module to record the information for the service node. Each service node involved in the call requires an extension block from this pool to produce the AMA module code 184. The MAX_ALLOWED_TRANSITION parameter, in table OAINPARM, determines the maximum number of service nodes for a call.

The OSSAIN uses an extension block from this pool to record billing data less than or equal to 20 bytes. The service node or OPP compatible position sends the data. Each AMA request to append custom requires an extension block from this pool to produce AMA module code 186.

Conditions

If TOPS OSSAIN SOC option ENSV0014 is on, follow these recommendations.

Recommended

CRS_SUBRU_POOL2_SIZE (continued)

1 x (number of OSSAIN calls that involve 1 service node)
+ 2 x (number of OSSAIN calls that involve 2 service nodes)

+ MAX_ALLOWED_TRANSITIONS x (number of OSSAIN calls involving MAX_ALLOWED_TRANSITIONS service nodes)

+ (MAX_ALLOWED_TRANSITIONS + 1) x (number of OSSAIN calls involving [MAX_ALLOWED_TRANSITIONS + 1] service nodes)

+ 1 x (number of TOPS OSSAIN Append AMA Module requests with AMA data less or equal to 20 bytes)

GOS Enhancements

The functionality of GOS Enhancements, ordering code GOS00001, uses this parameter.

The AMA module code 095 uses this parameter.

Conditions

Module code 095 records the ticket number. Module code 095 is recorded when the module meets the following requirements:

- Table TOPAMAOP parameter TICKET_NUMBER = Y.
- Entry of ticket number occurs.
- Table TOPSPARM parameter NUMBERING_PLAN = OPEN_NUMBERING. Therefore, the call must be a GOS call.

Recommended

The AMA module code 095 uses this parameter when RECORD_TICKET_NUMBER is Yes.

The formula used to calculate the store increase and a sample calculation follows. The sample calculation uses 2000 for the TOPS peak busy hour calls.

Number of words * [(65%)(TOPS peak busy hour calls)]
16 x [(.65)(2000)] = 20,800 words

Use the sample calculation, and increase CRS_SUBRU_POOL2_SIZE by [(.65)(2000)] = 1300.

CRS_SUBRU_POOL2_SIZE (continued)

Revenue Allocation (REVALL)

The system generates an AMA record with call code 136 for calls that originate by operator (OP) or AMR5 (A5) trunks. These trunks must be data entries in table AMATKOPT with the REVALL option. This application requires an extension block from this pool. This extension block is held for the length of the call. Feature package NTX089 (Enhanced Coin Services) provides this capability.

Conditions

This parameter requires package NTX089AA.

Recommended

(engineered percentage of simultaneous trunk off-hooks)
x (number of OP and AMR5 trunk group members with the REVALL option)

Maximum

(number of OP and AMR5 trunk group members with the REVALL option)

Account and Authorization Code

When a Meridian Digital Centrex (MDC) line keys an account code during a call, the system appends field Customer Dialed Account Recording (CDAR) to the AMA record. The system appends field CDAR to the AMA record in the following conditions:

- Package NTX165AA (Bellcore IBN/ESN Detail Recording) is present in the office.
- The system allows the MDC line customer group to use the Account Code feature in table IBNXLA.

When an MDC line keys an authorization code during a call, the system appends module code 102 to the AMA record. The system appends the module if the MDC line customer group has the following:

- ability to use the Authorization Code feature according to table IBNXLA
- the MDRRAO option entered in table CUSTSMDR

Note: If the operating company uses the account code or authorization code during a call, an extension block is a requirement from this pool.

CRS_SUBRU_POOL2_SIZE (continued)

Conditions

Package NTX165 is present with one of packages NTXP09 or NTX103.

Recommended

(engineered percentage of MDC off-hooks that occur at the same time)
x [(number of MDC lines with a custgrp that has access to the Account Code feature)
x (percentage of MDC off-hooks that are billable)]
+ (number of MDC lines with a custgrp that has the MDRRAO option and access to the Authorization Code feature))

Maximum

(number of MDC lines with a custgrp that has access to the Account Code feature)
+ (number of MDC lines with a custgrp that has the MDRRAO option and access to the Authorization Code feature)

OR

Conditions

Package NTXP09 or NTX103 is present.

Recommended

(engineered percentage of MDC off-hooks that occur at the same time)
x (number of MDC lines with a custgrp with the MDRRAO option and access to the Authorization Code feature)

Maximum

(number of MDC lines with a custgrp with MDRRAO option and access to the Authorization Code feature)

CRS_SUBRU_POOL2_SIZE (continued)

TOPS E800 Service

Module code 309 appends to the AMA record. Module code 309 appends when an office has TOPS Extended Bellcore AMA Format (EBAF) Phase 2. Also, the office must have parameter RECORD_800_SERVICE_INFORMATION enabled in table TOPAMAOP. The call must be an 800 PLUS call. The extension block is held for a short time. The extension block is allocated before the AMA record is released to be formatted. Package NTXE18AA (TOPS AMA Enhancements) provides this feature.

Conditions

Package NTXE18AA is present and the system uses TOPS EBAF Phase 2, with parameter RECORD_800_SERVICE_INFORMATION set to Y.

Recommended

5% x (estimate of the maximum number of simultaneous 800 PLUS calls)

Maximum

5% x (TOPS_NUM_RU in table OFCENG)

TOPS overwritten number data

Module code 314 or 315 appends to the record. The module appends to the record when an office has TOPS EBAF Phase 2 with parameter RECORD_OVERWRITTEN_NUM in table TOPAMAOP enabled. The operator must overwrite the billing number or the forward number. The TOPS operator can overwrite the billing number or the forward number a maximum of nine times. A maximum of nine module codes can append to the record. The extension block for this application is held from the time the extension block encounters an overwritten number until the call end. Package NTXE18AA provides this functionality.

Conditions

Package NTXE18AA is present and the system uses TOPS EBAF Phase 2 with parameter RECORD_OVERWRITTEN_NUM set to Y.

CRS_SUBRU_POOL2_SIZE (continued)

Recommended

(estimate of the maximum number of simultaneous TOPS/OOC calls that occur at the same time in which the operator overwrites the billing number or the
forward number)
x (average number of overwrites for each call)

Maximum

9 x (TOPS_NUM_RU in table OFCENG
+ OOC_NUM_RU in table OFCENG)

Note: This maximum formula results in an overprovisioned parameter. The multiplier (nine) implies that every TOPS call overwrites the billing or forward number nine times.

Blue box fraud

Package NTXP82AA (AMA MOD [CAMA] Modules) allows an operating company to detect blue box fraud. Module code 065 appends to the AMA record when the following conditions occur:

- package NTXP2AA is present
- the BLUEBOX Command Interface (CI) indicates that blue box supervision is active
- the system detects a short supervisory transition (SST)

The system can detect more than one SST during a call. The module can append the module to the AMA record a maximum of 16 times. Operating companies can expect a low occurrence of blue box fraud.

Conditions

Package NTXP82AA is present and BLUEBOX is active.

Recommended

16 x (estimate of the number of fraudulent calls that occur at the same time)

Maximum

16 x 1% x (number of SuperCAMA trunks)

Note: 1% indicates a low expectancy of blue box fraud.

Calling line identification

Base AMA packages NTX098AA (Bellcore CAMA Format) and NTX159AA (Bellcore LAMA Format) support the AMA Calling Line Identification (CLI) feature. This feature allows the CLI to append in AMA records. These records result from a call with an originating port that is an ISUP trunk with the AMACLID option. In table AMATKOPT, the data for option AMACLID can be entered for an incoming or two-way ISUP trunk with a BILLDN. The CLI appends to the AMA record with module code 046.

Conditions

Package NTX098AA or NTX159AA is present.

Recommended

(engineered percentage of trunk off-hooks that occur at the same time)
x (number of incoming or two-way ISUP trunks with the AMACLID option and BILLDN)

Maximum

(number of incoming or two-way ISUP trunks with AMACLID option and BILLDN)

Point-of-entry identification

Package NTXK40 supports AMA point-of-entry identification. This function allows the network entry point for billable calls from a network to append to the AMA record. Tables VIRTGRPS and DNROUTE provide the option ENTRYID. The ENTRYID option defines both virtual facility groups (VFG)

CRS_SUBRU_POOL2_SIZE (continued)

and direct inward system access (DISA) as points of transit. The DISA and VFG require the point-of-entry identification to append to the AMA record. The point-of-entry identification appends to the AMA record with module code 046.

Conditions

Package NTXK40 is present.

Recommended

(size of VFGs with ENTRYID option)
+ [(engineered percentage of DISA terminations that occur at the same time)
x (number of DISA numbers with the ENTRYID option)]

Maximum

(size of VFGs with ENTRYID option)
+ (number of DISA numbers with ENTRYID option)

Long duration calls

A long duration call requires a subrecording unit from this pool when office parameter UNIVERSAL_AMA_BILLING is enabled in table OFCENG. The subrecording unit (SUBRU) is held for the length of the call. A long duration call connects for the interval entered in table AMAOPTS for tuple BCLONGCALL. The SUBRU and primary recording unit (PRU) are copied for a short period of time. The units are copied so that the system can generate a long duration AMA record. The system generates the AMA record during a BCLONGCALL audit. Base AMA packages NTX098 and MTX159 contain this feature.

Conditions

Package NTX098 or NTX159 is present and office parameter UNIVERSAL_AMA_BILLING in table OFCENG is set to Y (yes).

Recommended

(estimate of the maximum number of billable long duration calls that occur at the same time)

CRS_SUBRU_POOL2_SIZE (continued)

Maximum

A maximum calculation for long duration calls is not provided because all facilities in the office can use this application. When the system provides the recommended value, the number of long duration calls is low. The system uses the subrecording unit during low traffic periods when the BCLONGCALL audit runs.

Multi-switch Business Group - Private Called Number Information

Package NTXR43AA (Multi-switch Business Group [MBG] Generic Address Parameter) enhances basic MBG to support customer groups in a network that use a private numbering plan. Module code 912 appends to the AMA record for MBG billable calls. Module code 912 appends to the AMA record when the customer group of the originator is an entry in table BGDATA. The data for the customer group are entered for a business group identifier (BGID) with the BGMDR option. Module code 912 records the private called number information. The module records the information according to the contents of the generic address parameter (GAP) in the initial address message (IAM). The IAM transports the private number.

Condition

Package NTXR43AA is present. The CUSTGRP and BGMDR options are in tuples in table BGDATA.

Recommended

Use the lower value from formula 1 or 2.

1. (number of MDC lines in customer groups for the BGMDR option in table BGDATA)

   x (percentage of MDC line off-hooks that occur at the same time, that the office can handle)
   x (percentage of MBG subscriber off-hooks that are MBG calls)
   x (percentage of MBG calls that are billable)

2. (number of POTS ISUP trunks that MBG calls can involve)

   x (percentage of expected trunk use in the office)
   x (percentage of MBG calls on the above POTS ISUP trunks)
   x (percentage of MBG calls that are billable)

Note: The number of MBG calls that occur at the same time in an office for one customer group varies. The number of calls for one customer group can

CRS_SUBRU_POOL2_SIZE (continued)

depend on the number of customer group members in other offices. When the office with the highest concentration of subscribers for an MBG is provisioned, the formula changes. Add the number of subscribers for this MBG to the first term of formula 1.

```
(Number of MDC lines in customer groups for the BGMDR option in
Table BGDATA)
```

This number is the lower of the number of subscribers in this MBG outside the office or the number in the office.

Maximum

Use the lower value from formula 1 or 2.

1. (number of MDC lines in custgrps for BGMDR option in table BGDATA)
2. (number of POTS ISUP trunks: TRKGRP types IT, TO, TI and T2)

Network Facility Access (NFA)

Package NTXR25AA (Network Facility Access) provides MDC and Residential Enhanced Services (RES) subscribers with a direct connection to an intelligent processor (IP). This package also provides subscribers with services that the IP supports. The subscribers can gain implicit or explicit access to the IP. To connect to the IP through implicit access, the subscriber goes off hook. To connect to the IP through explicit access, the subscriber must dial an NFA access code. When the explicit connection is complete, the system generates a record with call code 174. Module code 047 appends to the AMA record and requires an extension block from this pool. When the IP dials a call that receives a response, module code 047 appends to the AMA record. If the system does not generate an AMA record, the system generates a record with call code 175. Module code 047 appends to the record with call code 175.

Translations affect the generation of AMA records. Add the NFA feature to a line in table IBNFEAT. The booleans IMPLCT_ACC and EXPLCT_ACC indicate the type of access to the IP that is available to the subscriber. If AMA_EXPLCT is N (no), the system does not generate the AMA record with call code 174 after an explicit IP connection. If AMA_IPDIAL is set to N, the system does not generate the AMA record with call code 175. If the system generates another AMA record, module code 047 appends to that record. When the IP dials explicit access to the IP, two extension blocks are required from this pool. Use the NFA option to enter trunk group data to provide the subscriber with access to the IP.

Conditions

Package NTXR25 is present.

CRS_SUBRU_POOL2_SIZE (continued)

Recommended

Use the lower value from formula 1 or 2:

1. (engineered percentage of MDC and RES off-hooks that occur at the same time)

   x [(number of NFA lines with AMA_EXPLCT = N)
   + 2 x (number of NFA lines with AMA_EXPLCT = Y)]

2. (engineered percentage of MDC and RES off-hooks that occur at the same time)

   x [(number of NFA lines with AMA_EXPLCT = N)
   + 2 x (number of NFA trkgrp members)]

Maximum

Use the lower value from formula 1 or 2:

1. (number of NFA lines with AMA_EXPLCT = N)

   + 2 x (number of NFA lines with AMA_EXPLCT = Y)

2. (number of NFA lines with AMA_EXPLCT = N)

   + 2 x (number of NFA trkgrp members))

Bellcore Frame Relay Service (FRS)

DataSPAN Bellcore Frame Relay Service (FRS) is a connection-oriented packet data service. This service allows an FRS subscriber to connect to a frame relay switch through an access channel. The access channel can have multiple logical link connections to other subscribers. The FRS permits subscribers to communicate on one or more logical links at the same time. The operating company bills FRS subscribers by usage. The system tabulates the data that passes through the frame relay interface unit (FRIU). The FRS billing controller collects the counts and stores the counts in the FRS billing internal storage.

To obtain billing information for the billing record, operating company personnel retrieve counts and perform table look-ups during the aggregation phase. The system uses call code 089 and appends new modules with module code 069 to achieve Bellcore frame relay recording.

CRS_SUBRU_POOL2_SIZE (continued)

Each permanent logical link connection (PLLC) requires one extension block to provision CRS_SUBRU_POOL2_SIZE. Add the number of tuples in subfield CONNECT of table PVDNCUST to the number of trunk-to-trunk connections in table FRSTRKCN. This calculation determines the number of PLLCs. Package NTXQ35AA (Frame Relay LEC Billing) contains this capability.

Conditions

Package NTXQ35 is present.

Recommended

(number of PLLCs)

Maximum

A maximum calculation does not apply.

Record Digits as Outpulsed (RAO)

The NTX102AA (IBN—Station Message Detail Recording) package includes the Record Digits as Outpulsed (RAO) feature. This feature allows the system to record the digits outpulsed on a trunk. The data for the RAO option are entered in table CUSTSMDR for a business group identifier. All calls in this business group, that terminate to a trunk, produce a D5 extension record.

Conditions

Package NTX102 is present.

Recommended

(number of MDC lines in which the business group ID has the RAO option)
x (percentage of MDC off-hooks that the office can handle)

Maximum

(number of MDC lines in which the business group ID has the RAO option)

Account Code and Authorization Code

Package NTX103 includes the Account and Authorization Code features. The Account Code feature allows the system to record customer-dialed account codes. The Authorization Code feature allows the system to record customer-dialed authorization codes. In table IBNXLA, enter the customer group data with a TRSEL of FEAT and the FEATURE set to ACCT (AUTH).

CRS_SUBRU_POOL2_SIZE (continued)

In table CUSTHEAD, enter the customer group data with the ACCT (AUTH) option. The system records Account Code and Authorization Code information in a D6 record.

Conditions

Package NTX103 is present.

Recommended

(engineered percentage of MDC off-hooks that occur at the same time)

x (number of MDC lines in which the customer group has access to the Account Code or Authorization Code features)

Maximum

(number of MDC lines in which the customer group has access to the Account or Authorization Code feature)

RECORD_LSPI option

Any office with local service providers (LSP) is affected by activating the RECORD_LPSI option. Turn this option on or off in table AMAOPTS. You must turn on the option in table AMAOPTS to operate billing control in table LSPINFO. If you turn the RECORD_LSPI option on, there might be a substantial increase in extension block use. The increase depends on the number of billable LSPI calls.

For each agent of the call subscribed to an LSP, this command creates a 60-word primary recording unit (PRU). For each agent of the call subscribed to an LSP, a 16-word extension is created. The 60-word PRU and the 16-word extension are held for the duration of the call.

To accommodate the RECORD_LSPI option, features AF7311 and AF7251 increase the extension block use for the CRS_PRU_POOL2_SIZE office parameter. If you turn on the RECORD_LSPI option, the option does not impact the CRS_PRU_POOL2_SIZE office parameter.

Conditions

Functional group LOC00012 must be present.

Formula

Store requirements increase by 76 words for each subscribed agent involved in each call. This store holds for the duration of the call.

CRS_SUBRU_POOL2_SIZE (continued)

You must have one pool2 SUBRU for each PRU for LSP.

Total = num_CCBs * 4

Advanced Intelligent Network (AIN)

The blocks that this pool provisions store data that the Service Control Point (SCP) returns during call processing. The following list illustrates the optional parameters that require an extension block. An extension block is a requirement when a response message includes the parameters. The number in brackets indicates the maximum number of extension blocks that the system can record for one call.

- AMA service logic program identification module 039 (AMAslpID) (1) The system records the first AMAslpID parameter in this extension block pool. The extension block records the following parameters:
  - AMABusinessCustomerID
  - AMAAlternateBillingNumber
- AMALineNumber (2)
- AMADigitsDialedWC (6)

Conditions

The AIN feature is present.

Recommended

(number of billable AIN calls)
+ (number of AIN calls with 1 Outpulse Number parameter)
+ (number of AIN calls with 1 AMALineNumber parameter)
+ 2 · (number of AIN calls with 2 AMALineNumber parameters)
+ (number of AIN calls with 1 AMADigitsDialedWC parameter)
+ 2 · (number of AIN calls with 2 AMADigitsDialedWC parameters)
+ 3 · (number of AIN calls with 3 AMADigitsDialedWC parameters)
+ 4 · (number of AIN calls with 4 AMADigitsDialedWC parameters)
+ 5 · (number of AIN calls with 5 AMADigitsDialedWC parameters)
+ 6 · (number of AIN calls with 6 AMADigitsDialedWC parameters)

Note: The number of AIN calls includes calls that are billable. The number also includes calls not answered that the system records because of entries in tables AMAOPTS and BCCODES.

Maximum

A maximum value does not apply.

Local Number Portability

Local Number Portability (LNP) uses the blocks that CRS_SUBRU_POOL2_SIZE provides to store portability information of the originator or the terminator during call processing. The provisioning of this parameter changes to support all LNP call designs at the same time. The rules for LAMA office and CAMA office are as follows.

Conditions

Local Number Portability (LNP) is active.

Formula

Calculation for LAMA office

To calculate the impact of LNP, begin with the current values, and add the percentage of calls in each category, as follows:

% billable calls that originate from a ported directory number (DN) +

% billable calls that terminate to a ported DN +

CRS_SUBRU_POOL2_SIZE (continued)

% billable calls that trigger LNP and query the database

Calculation for CAMA office

To calculate the impact of LNP, begin with the current values, and add the percentage of calls in each category, as follows:

% billable calls that from a ported DN +

% billable calls that terminate to a ported DN +

% billable calls that trigger LNP and query the database +

% billable calls that originate from an ISUP trunk with Jurisdiction Information Parameter (JIP) in the Initial Address Message (IAM) +

% billable calls that originate from incoming/two-way trunks provisioned with an LNP (LRN) option in table TRKGRP.

AMA critical times

The AMA critical times can place an additional load on CRS pool resources. Take the following steps to confirm that all pools are provisioned to absorb the impact of critical times.

1. Monitor the EXT OMs during peak traffic hours to determine the following:
   - the maximum number of extension blocks seized (EXTSZD)
   - the maximum high-water mark (EXTHI) for each extension block pool
   - Note that the maximum numbers can occur in different OM reporting periods.
2. To calculate the pool size, use the maximum figures obtained and the following formula:

   + [(critical time duration in minutes)
   x (number of extension blocks seized during busiest sampling period)
   / (Duration of OM sampling period in minutes)]

   This formula provides the size for an extension block pool that compensates for an AMA critical time during peak traffic. The size

compensates for the AMA critical time without an overflow of the pool. Use a critical time duration of at least 3 min in this calculation.

3. If the result of the calculation is higher than the current pool in table OFCENG, verify that adequate store is available. Increase the pool size. If the result of the calculation is lower than the current pool size, action is not a requirement.

Traffic patterns can change over time. Monitor the usage of CRS pool resources. If necessary, increase the resources.

Interadministration accounting for International Carriers

Interadministration accounting (IAA) for International Carriers, uses the station message detailed recording (SMDR) extension records DF05 and DF06. This office parameter controls data blocks that store the DF05 and DF06 records.

Conditions

The IAA for International Carriers software must be present.

Recommended

$$(CCAIP + CRIP) \times NI \times IS$$

in which

CCAIP
is the average number of carrier charge area information

parameters that pass for each NCCIv2 call.

CRIP
is the average number of charge rate information parameters

pass.

NI
is the number of concurrent NCCIv2 calls with IAA parameters.

IS
is the percentage of calls that require an IAA SMDR record.

ISDNBBGBILL

Option ISDNBBGBILL applies to ISDN Basic Rate Interface (BRI) basic business group (BBG) calls only. This option produces AMA records for calls

CRS_SUBRU_POOL2_SIZE (continued)

that originate from or terminate to an ISDN BRI BBG (BBG-I) facility. These AMA records provide detailed information about the use of BBG-I facilities and services.

Activate or deactivate this option in table AMAOPTS. If option ISDNBBGBILL is ON and option BBGI is active for the customer group, use of primary recording units (PRUs) increases. The increase depends on the number of billable BBG-I calls.

For each agent of the call that is a member of a monitored BBG, option ISDNBBGBILL creates a 60-word PRU. For each agent of the call that is a member of a monitored BBG, option ISDNBBGBILL also creates a 16-word extension. The switch holds the 60-word PRU and the 16-word extension for the duration of the call.

To accommodate option ISDNBBGBILL, feature AF7503 increases the use of PRUs controlled by the CRS_SUBRU_POOL2_SIZE office parameter. If an office does not activate option ISDNBBGBILL, no change occurs in the CRS_SUBRU_POOL2_SIZE parameter.

Conditions

Option ISDNBBGBILL in table AMAOPTS is ON. Option BBGI is present in table CUSTHEAD or option BBGI Y is present in table KSETFEAT.

Formula

Store requirements increase by 76 words for each BBG-I subscribed agent involved in each call. This increase remains for the duration of the call.

Subrecording unit (SUBRU) requirements are as follows:

- You must have one POOL2 SUBRU for each PRU for option ISDNBBGBILL.
- Total = num_CCBs * 4
- Estimated ISDN BBG saturation = 5%
- Net resource increase = 4 * 0.05 = num_CCBs * 0.2

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning

CRS_SUBRU_POOL2_SIZE (continued)

for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	2147483647	100

Activation

Increase - immediate

Decrease - cold restart

Dependencies

This parameter controls the CRS_SUBRU_POOL2 extension block.

Consequences

This parameter provides a subrecording unit pool. Failure to obtain enough of these units results in the loss of call recording data. This pool is critical for the generation of the AMA data that this parameter describes.

Verification

This parameter controls the extension block with an external identifier name of CRS_SUBPRU_POOL2 and an index of 97 for OM group EXT.

Memory requirements

Each unit requires 16 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA010

Added option ISDNBBGBILL provisioning rules.

Changed maximum provisioning value to 2147483647. This increase occurs when billing is done for originating CCNREC calls.

CRS_SUBRU_POOL2_SIZE (end)

NA009

Increased the use of extension blocks that CRS_PRU_POOL_SIZE controls.

Changed maximum provisioning value from 256144 to 393216.

ACP008.1

The IAA provisioning rules were added in ACP008.1.

NA007

The LNP provisioning rules were added in NA007.

NA006

The OSSAIN provisioning rules were added in NA006.

TL05

Information on AMA critical times were added in TL05.

BCS36

The AIN provisioning rules were added in BCS36.

BCS32

The parameter was introduced in BCS32.

This parameter replaces REVALL_NUMBER_OF_EXTENSION_BLOCKS and NUM_OF_MDR_EXT_BLOCKS, which the system deleted in BCS32.

CRS_SUBRU_POOL3_SIZE

Parameter name

Call Recording Stream Sub-recording Unit Pool3 Size

Functional description

This parameter controls the provisioning for the CRS_SUBRU_POOL3 extension block pool. The parameter can be manually provisioned by table OFCENG, or autoprovisioned by setting the ACTIVE field in table OFCAUT to Y.

This parameter is currently defined only for offices that contain an actual user for the Call Recording Stream Platform created by Feature AF2755 (Increased Flexibility of AMA Software Platform). If this parameter appears in the software load, it must be provisioned.

The default value for this parameter is 100. This value is too small for larger offices.

Provisioning rules

This parameter applies only to Bellcore Automatic Message Accounting (AMA) offices.

A description of each application that requires an extension block from the pool controlled by this parameter is provided below as well as the conditions that determine the application's usage in a particular office. In most cases, each application includes a recommended provisioning calculation along with a worst case maximum value. The “engineered percentages" that are required for most of the recommended calculations are meant to aid in determining a failry reasonable number for a particular application. If an operating company does not know the value of certain percentages, it is recommended that a value of 100% be used. It is a much better idea to use the recommended calculation than to use the maximum sum calculation even if certain percentages are not exactly known. The maximum value is provided for all those operating companies that are unable to provide the information that is required for the recommended calculation. If the maximum value is used, overprovisioning of the parameter may occur. In some cases, the maximum value is not appropriate and is not provided.

CRS_SUBRU_POOL3_SIZE (continued)

Some of these formulas include an estimated percentage of the billable calls involving the respective application. Note that the term “billable" includes all calls that generate a record. This includes the following types:

- AMA
- Station Message Detail Recording (SMDR) when Message Detail Recording Revenue Accounting Office (MDRRAO) is a customer group option in Table CUSTSMDR and SMDR is turned on for the office.

In some cases, a value of 5% is multiplied into the provisioning formulas. This takes into account the fact that the extension block is only held for a short time. For some applications the extension block is allocated just before the AMA record is released for formatting.

If the conditions for a particular application are met, the application's usage must be determined based on the formula. The sum of these formulas is then used to determine the value of this parameter. If the default value for this parameter is greater than the value determined by the sum of the formulas, the default value should always be used. Never provision this parameter at a value less than that of the default.

GOS Enhancements

This parameter is used by the functionality of GOS Enhancements, ordering code GOS00001.

AMA module code 194 uses this parameter.

Conditions

Module code 194 records the calling/called names and the memo and is recorded when the following requirements are met:

- Table TOPAMAOP parameterRECORD_PARTY_NAME_EXPANDED = Y
- At least one character is entered for either the A party, B party, or memo.
- Table TOPSPARM parameter NUMBERING_PLAN = OPEN_NUMBERING. Therefore, the call must be a GOS call.

Recommended

AMA module code 194 uses this parameter. When table TOPAMAOP parameters RECORD_PARTY_NAME_EXPANDED and RECORD_MEMO are Yes for either or both, parameter CRS_SUBRU_POOL3_SIZE is used.

CRS_SUBRU_POOL3_SIZE (continued)

Party Name: For the party name only parameter, the formula for calculating the store increase and a sample calculation follows. The sample calculation uses 2000 for the TOPS peak busy hour calls.

Number of words * [(100%)(TOPS peak busy hour calls)]
Number of words * [(100%)(calling name + called name)]
26 x [(1)(2000 + 2000)] = 104 000 words

Then, using the sample calculation, CRS_SUBRU_POOL3_SIZE should be increased by [(1)(2000 + 2000)] = 4 000.

At release of this feature in TOPS03, memo is not supported for OPP positions. But it is supported for TOPS with AOSS protocol positions.

Memo: For the memo only parameter, the formula for calculating the store increase and a sample calculation follows. Because memo is so large, it uses two sub-memos. Therefore, it must be double in the calculation. The sample calculation uses 2000 for the TOPS peak busy hour calls.

Number of words * [(100%)(TOPS peak busy hour calls)]
Number of words * [(100%)(memo1 + memo2)]
26 x [(1)(2000 + 2000)] = 104 000 words

Then, using the sample calculation, CRS_SUBRU_POOL3_SIZE should be increased by [(1)(2000 + 2000)] = 4 000.

Party Name and Memo: For the party name and memo parameters, the formula for calculating the store increase and a sample calculation follows. The sample calculation uses 2000 for the TOPS peak busy hour calls.

Number of words * [(100%)(TOPS peak busy hour calls)]
Number of words * [(100%)(calling name + called name +
memo1 + memo2)]
26 x [(1)(2000 + 2000 + 2000 + 2000)] = 208 000 words

Then, using the sample calculation, CRS_SUBRU_POOL3_SIZE should be increased by [(1)(2000 + 2000 + 2000 + 2000)] = 8 000.

CRS_SUBRU_POOL3_SIZE (continued)

Overseas operating center (OOC): AMA modernization

If parameter RECORD_PARTY_NAME is enabled in table TOPAMAOP and the calling name and/or the called name are available to be recorded, module code 038 is appended to the AMA record. Module code 038 requires an extension block from this pool. The subrecording unit is held for a short time because it is allocated just before the AMA record is released to the formatter. If the calling name and called name are both available, moduled code 038 is attached to the AMA record twice. This functionality is packaged in either NTX631AB (OOC Call Processing) or NTXH38AA (Global TOPS-Basic).

Conditions

If package NTX631AB or NTXH38AA is present and RECORD_PARTY_NAME is set to Y in table TOPAMAOP, then

Recommended

5% x (estimate of the maximum number of simultaneous TOPS/OOC calls where the calling/called name is available)

Maximum

5% x (incoming TOPS/OOC capacity of the office based on engineering specifications)

Centrex AMA ISDN billing

The ISDN module codes 070, 071, and 073 use an extension block from this pool. Module codes 070 and 071 are known as the ISDN core modules. One of these is appended to every billable ISDN-originated call. If a service is used, module code 070 records the use of the service on the originating ISDN set. Module code 071 is the same as module code 070, but it does not record the usage of ISDN services. Module code 073 records billable services delivered to an ISDN functional set upon termination. These features are packaged differently for toll and local offices. For toll offices, package NTX098AA (Bellcore Cama Format) provides this functionality. For local offices, packages NTX753AB (ISDN Functional Mode Basic Rate Services) and NTX159AA (Bellcore LAMA format) provide these features. Module code 073 is never generated in a toll office, but all three module codes can be generated in a local office.

Conditions

If package NTX098AA is included in a toll office, then

Recommended

(engineered percentage of simultaneous trunk off hooks)
x (engineered percentage of ISDN traffic)
x (percentage of calls that are billable)
x (number of ISUP trunk group members)

Maximum

(number of ISUP trunk group members)

OR

Conditions

If packages NTX159AA and NTX753AB are included in a local office, then

Recommended

(engineered percentage of ISDN functional sets that can be off-hook simultaneously)
x (percentage of calls that are billable)
x (percentage of non-billable calls that use a billable service)
x (number of ISDN functional sets that the office services)

Maximum

(number of ISDN functional sets that the office services)

Centrex AMA TDMTT special billing

This functionality is packaged in NTX165AA (Bellcore—IBN/ESN Detail Recording) along with Common Control Switching Arrangement (CCSA). The CCSA package must be present in order to apply option TDMTT to a line, trunk or Virtual Facility Group (VFG). A trunk can have a facility type (FACTYPE) of ETS, CCSA, FX, or TDMTT. If a call terminates to a trunk with a facility type of TDMTT, module code 101 is appended to the AMA record. Module code 101 requires an extension block from this pool. The extension block is held for the duration of the call. In addition, if a call

CRS_SUBRU_POOL3_SIZE (continued)

terminates to a VFG with option TDMTT, module code 101 is appended to the AMA record.

Conditions

Package NTX165AA is present.

Recommended

((engineered percentage of simultaneous trunk off hooks)
X (number of MDC trunk group members with the option TDMTT))
+ (number of VFGs with the option TDMTT)

Maximum

(number of MDC trunk group members with the option TDMTT)
+ (number of VFGs with the option TDMTT)

CLASS billing

The subscriber usage-sensitive pricing (SUSP) option in table AMAOPTS controls all Custom Local Area Signaling Service (CLASS) SUSP billing. It must be active in order to bill CLASS display and Screening List Editing (SLE) features on a per usage basis. SLE features are packaged in NTXE56. CLASS display features are packaged in NTXA82AA (CLASS Line Office Data).

Residential enhanced services (RES) and MDC lines can be datafilled in table RESFEAT for CLASS display features. Each time the subscriber uses a SUSP display service, the service is pegged in order to keep track of the number of times it was delivered to the subscriber. The audit for these features is scheduled by the AMA option CIDSUSPAUD in table AMAOPTS. When the audit is run, the subscribers are billed for the services that they used. These AMA records require an extension block from this subrecording unit pool. The hold time for this block is short.

RES and MDC lines can be datafilled in table RESFEAT for SLE features. Each time a subscriber alters one of their screening lists associated with with a SUSP SLE feature, a record capturing this event is generated. These records require a subrecording unit from this pool. The hold time for this block is short.

An extension block is required from this pool when the AMA field in table RESFEAT is changed from AMA to NOAMA for CLASS SUSP display. The use of the pool for this purpose is negligible.

Conditions

Package NTXA82AA or NTXE56AA (CLASS Screening List Editing) is present.

Recommended

(number of lines with CLASS SUSP Display and/or SLE SUSP features)

Maximum

A maximum value is not applicable in this case.

Call forwarding conditional (CFC)

The CFC feature gives subscribers to the German Intelligent Network (GIN) services the ability to forward incoming calls at the trunk level. A recording unit from this pool is required to hold information for a forwarding record. This block is required for the duration of the call.

Conditions

The CFC feature is present.

Recommended

(estimated maximum number of simultaneous CFC forwards)

Maximum

(estimated maximum number of simultaneous E008 calls)

Private virtual network (PVN)

PVN service uses the public and private switched networks to provide private network features and capabilities. It provides connections for customers within a LATA and, by way of interLATA carriers (IC), provides connections to other LATAs. PVN service is implemented by the operating company database located at the SCP. A query is made on all PVN calls to this database by the SSP by means of SS7 common channel signaling protocol. The database provides routing information for the call as well as other call handling instructions.

PVN is packaged in NTX983AB (Service Switching Point Private Vitual Networking). It can be applied to an AT or to an EAEO. It supports access to PVN call translation from SC trunk groups signaling feature group D (FGD), IT trunk groups signaling FGD, MDC trunks, MDC Business, Group Stations, MDC attendant consoles, dedicated MDC stations and Remote access lines or trunks.

CRS_SUBRU_POOL3_SIZE (continued)

An AMA record is generated on all originating PVN calls if the billing indicators information is included in the response message from the SCP. The following call codes have been assigned for PVN services:

- 160—ON-NET PVN call
- 161—ON-NET PVN overflow call
- 162—OFF-NET PVN call
- 163—OFF-NET PVN overflow call
- 164—PVN call using FGA
- 165—PVN call using FX
- 166—PVN call using OUTWATS
- 167—PVN call using TIE trunks

Billable PVN calls require a subrecording unit from this pool. The extension block is held for the length of the call.

Conditions

Package NTX983AB is present.

Recommended

(estimate of the number of simultaneous PVN calls that the office is engineered to handle)
X (percentage of PVN calls that are billable)

Maximum

(number of SC trunk group members signaling FGD)
+ (number of IT trunk group members signaling FGD)
+ (number of MDC trunk group members)
+ (number of MDC Business Group Stations)
+ (number of MDC Attendant Consoles)
+ (number of MDC stations)
+ (number of Remote Access lines or trunks)

Advanced intelligent network (AIN)

In release 0.0 of AIN, it is defined as a network architecture that allows an operating company to design its own features and provide these features across the public and private network. Calls that require these features must trigger a query to the SCP, which is a centralized database in the Common Channel Signaling 7 (CCS7) network. Once a query is received from the SSP, the SCP returns information to the SSP that is necessary to process the call.

Access to the network is gained through the network access point (NAP) or the SSP. Triggers that are set up in the translations alert the SSP that the call is an AIN call that requires a query to the SCP. The following call types can access the AIN network:

- POTS and RES lines
- SC trunk groups
- signaling Feature Group D (FGD) IT trunk groups
- signaling FGD MDC trunks
- MDC business group stations
- MDC attendant consoles
- Dedicated MDC stations
- Remote access lines or trunks

The SSP generates AMA records and appends AMA modules based on the billing elements received from the SCP and/or AMA data gathered at the SSP. An AMA record is generated whenever the SCP response message includes billing information in the routing instructions.

AIN consists of feature packages NTX983AB (Service Switching Point Virtual Networking) and NTXN28AA (Intelligent Network Billing Attributes).

Conditions

Packages NTX983AB and NTXN28AA are present.

Recommended

(estimate of the number of simultaneous AIN calls that the office engineered to handle)

X (percentage of AIN calls that are billable)

CRS_SUBRU_POOL3_SIZE (continued)

Maximum

(number of POTS and RES lines)
+ (number of SC trunk group members signaling FGD)
+ (number of IT trunk group members signaling FGD)
+ (number of MDC trunk group members)
+ (number of MDC business group stations)
+ (number of MDC attendant consoles)
+ (number of MDC stations)
+ (number of remote access lines or trunks)

Meridian SuperNode (MSN)

The MSN feature is included in package NTXE75AB (Offnet Access Services). This feature allows the recording of various call information from a Meridian SuperNode switch. The MSN option is datafilled in table CUSTSMDR against a business group identifier. All calls in this business group produce a DB extension record.

Conditions

Package NTXE75AB is present.

Recommended

(number of MDC lines where the custgrp has the MSN option)
x (percentage of MDC offhks that the office is engineered to handle)

Maximum

(number of MDC lines where the custgrp has the MSN option)

AMA critical times

AMA critical times can place an additional burden on CRS pool resources, the following steps should be taken to confirm that all pools are adequately provisioned to absorb the impact of critical times:

1. Monitor the EXT OM's during peak traffic hours to determine the maximum number of extension blocks seized (EXTSZD) and the

maximum high-water mark (EXTHI) for each extension block pool. Note that they may not occur during the same OM reporting period.

2. Calculate the pool size using the maximum figures obtained above using the following formula:

   + ((critical time duration in minutes)
   x (number of extension blocks seized during busiest sampling period)
   / (Duration of OM sampling period in minutes))

   This formula produces an extension block pool size which compensates for an AMA critical time during peak traffic without an overflow of the pool. It is suggested that a critical time duration of at least three minutes be used in this calculation.

3. If the result of the above calculation is higher than the current pool size in table OFCENG, verify that sufficient store is available and increase the pool size accordingly. If the result of the calculation is lower than the current pool size, no action is required.

Since traffic patterns can change over time, the utilization of CRS pool resources should be monitored on a regular basis and increased if required.

Meridian SuperNode (MSL-100) offices

In MSL-100 offices that use Station Message Detail Recording (SMDR) Per Use Billing for Features, the office parameter CSR_PRU_POOL3_SIZE, as well as CSR_SUBRU_POOL3_SIZE must be provisioned as follows to avoid losing data.

Office parameter CSR_PRU_POOL3_SIZE controls the number of extension blocks available to the SMDR system. Any D1, D2, D3, or D4 record in the process of being generated uses one of these blocks.

Office parameter CSR_SUBRU_POOL3_SIZE controls the number of extension blocks available to the DF09 extension record. Any DF09 extension record in the process of being generated uses one of these blocks, as well as block from CSR_PRU_POOL3_SIZE since all DF09 extension records have a D1 record that precedes them.

Each time one of the SMDR per-use billing records is produced, a block from both CSR_SUBRU_POOL3_SIZE and CSR_PRU_POOL is used in addition to any blocks in use for normal billing. However, this does not require a drastic increase in the pool size because the DF09 records are held for less than 10 miliseconds by the record generator for per-use billing.

CRS_SUBRU_POOL3_SIZE (continued)

Due to the way per-use billing generates records and because of the short time-to-live of a DF09 extension record, the CSR_PRU_POOL3_SIZE should be increased by 5 to 10 percent from an office that elects to use SMDR per-use billing. A 10 percent increase is extremely liberal and is likely to result in store waste. However, store waste is preferable to losing billing records.

Since a block from both pools is needed to produce a single DF09 extension record, CSR_SUBRU_POOL3_SIZE must be increased by the same absolute amount (not percentage) as the CSR_PRU_POOL3_SIZE.

For example, an MSL-100 office that is not using SMDR per-use billing has the following values for these parameters:

CSR_PRU_POOL3_SIZE	40000
CSR_SUBRU_POOL3_SIZE	1000

When that MSL-100 office elects to use SMDR per-use billing, the parameters would be change as follows:

CSR_PRU_POOL3_SIZE	40000
Old value	+5% : 2000
New value	42000

CSR_SUBRU_POOL3_SIZE	1000
Old value +same increase above	2000
New value	3000

No other parameters for MSL-100 offices should be changed as a result of the feature SMDR Per Use Billing for Features.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field

CRS_SUBRU_POOL3_SIZE (continued)

for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	1 times the value of the provisioned NCCBS	100

Activation

Increase—immediate

Decrease—cold restart

Dependencies

The CRS_SUBRU_POOL3 extension block is controlled by this office parameter.

Consequences

This parameter provisions a subrecording unit pool. Failure to obtain a sufficient number of these units results in the incomplete collection of recording data. This pool is critical in generating the AMA data outlined in the description of this parameter.

Verification

This parameter controls the extension block with an external identifier name of CRS_SUBRU_POOL3 and an index of 98 for operational measurement (OM) group EXT.

Memory requirements

Each unit requires 26 words of memory.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

CRS_SUBRU_POOL3_SIZE (end)

Parameter history

TL10

Parameter Autoprovisioning was added in TL10.

NA08

Changed maximum provisioning value to from 4294967295 to 256144.

TL02

Added information on AMA critical times.

BCS36

Provisioning rules for CFC added and CLASS provisioning rules modified.

BCS32

This parameter was introduced.

CRS_SUBRU_POOL4_SIZE

Parameter name

Call Recording Stream Sub-recording Unit Pool4 Size

Functional description

This parameter applies only to offices that contain a valid user for the Call Recording Stream Platform. If this parameter appears in the software load, the parameter must be provisioned. The parameter can be manually provisioned by table OFCENG, or autoprovisioned by setting the ACTIVE field in table OFCAUT to Y.

The default value for this parameter is 100. This value is too small for larger offices.

Provisioning rules

The following pages describe each application that requires an extension block from the pool that this parameter controls. The following pages describe the conditions that determine the use of the application in an office. Most applications include a recommended provisioning calculation and a worst case maximum value. The engineered percentages that most of the calculations require help to determine an acceptable number for an application.

If a percentage value is not known, use a value of 100%. Use the recommended calculation instead of the maximum calculation if exact percentages are not known. Operating companies that are not able to provide the information that the recommended calculation requires receive the maximum value. If the operating company uses the maximum value, overprovisioning of the parameter may occur. If the maximum value does not correspond to the situation the maximum value is not available.

Some of these formulas include an estimated percentage of the billable calls that involve the application. Note that billable includes all calls that generate a record like the following types:

- automatic message accounting (AMA)
- Station Message Detail Recording (SMDR) when Message Detail Recording Revenue Accounting Office (MDRRAO) is a customer group option in table CUSTSMDR. SMDR is set to ON for the office.

One calculation requires the multiplication of a value of 7% into the provisioning formulas. This calculation takes into consideration that the system holds the extension block for a short time. For some applications the system allocates the extension block just before the release of the AMA record to formatting.

CRS_SUBRU_POOL4_SIZE (continued)

If the conditions for an application are correct, use the formula to determine the use of the application. The total value of these formulas determines the value of the parameter. If the default value for this parameter is greater than the total value of the formulas, use the default value. Never provision this parameter at a value less than that of the default.

The system stores the data for module code 021 in parameter NSC_AMA_SUBRU to avoid conflict with Canadian equal access. To accommodate the new data in parameter NSC_AMA_SUBRU, change the subru from CRS_SUBRU_POOL3_SIZE to CRS_SUBRU_POOL4_SIZE.

TOPS OSSAIN

The OSSAIN uses the extension block from this pool to record custom billing data between 21 and 70 bytes. This data comes from the service node or OPP compatible position. The system produces an AMA module code 187 for each append custom AMA request with AMA data between 21 and 70 bytes. Each append custom AMA request to produce AMA module code 187 requires an extension block from this pool.

Conditions

If TOPS OSSAIN SOC option ENSV0014 is ON, follow these recommendations.

Recommended

1 x (number of TOPS OSSAIN Append AMA Module requests with AMA data between 21 and 70 bytes)

Bellcore frame relay service (FRS)

DataSPAN FRS is a connection-oriented packet data service. For DataSPAN FRS an FRS subscriber connects to a frame relay switch through an access channel. Multiple logical link connections to other subscribers can be present on the access channel. The FRS permits subscribers to communicate on one or more logical links at the same time. The FRS subscribers are billed based on use. The FRS tabulates counts of the actual data that travels through the frame relay interface unit (FRIU). The FRS billing controller collects the counts and stores them in the FRS billing internal storage. During the aggregation phase, the billing controller retrieves the counts and performs table lookups to obtain billing information for the billing record.

The use of a call code (089) and the addition of new modules with module code 069 allows Bellcore frame relay recording. The provisioning of

CRS_SUBRU_POOL4_SIZE (continued)

CRS_SUBRU_POOL4_SIZE must allow for one extension block for each permanent logical link connection (PLLC). The number of PLLCs equals the number of tuples in subfield CONNECT plus the number of trunk-to-trunk connections in table FRSTRKCN. Subfield CONNECT appears in table PUDNCUST. This capability appears in feature package NTXQ35AA of Frame Relay LEC Billing.

Conditions

Feature package NTXQ35AA is present.

Recommended

(number of PLLCs)

Maximum

A maximum calculation does not apply.

DMS Packet Handler (DMS PH)

DMS PH is a packet handler for the DMS-100 product family. The DMS PH provides a full range of X.25 packet services for ISDN B and D channels. Packet handler provides detailed AMA records for the following call types:

- Intranetwork switched virtual circuit (SVC)
- Intranetwork SVC, long duration
- Internetwork SVC
- Internetwork SVC, long duration
- Intranetwork permanent virtual circuit (PVC)
- Internetwork PVC

Chargeable use for packet-mode calls is different from chargeable use for circuit-mode calls. Circuit-mode call recording is based on elapsed time between connect and disconnect. Packet-mode recording is based on elapsed time and a count of packet segments that a chargeable interface sends and receives. The operating company assigns four rate periods through datafill. The packet AMA records contain four-packet segment counts, one for each rate period. Note that there is no elapsed time for PVCs because a PVC is a permanent nailed-up connection.

A virtual call attempt is chargeable unless the network blocks the call or the system removes the X.25/X.75 link interface unit (XLIU) from service. The XLIU is part of the DMS PH architecture that determines and reports the elapsed time to call processing. The XLIU reports the four rate period segment counts for recording. The XLIU can handle a maximum of 1000 virtual calls at one time.

CRS_SUBRU_POOL4_SIZE (continued)

The DMS PH resides in feature package NTXP47AA (DMS Packet Handler Base).

Conditions

Package NTXP47AA is present.

Recommended

1000 X (number of XLIUs)

Maximum

A maximum calculation does not apply.

Independent Common Carrier (ICC)

Package NTXH85AA (CCITT#7 and NCCI#7 for DMS-100) includes the ICC feature. This feature captures billing information for New Common Carrier Interface #7 protocol signaling. The ICCSMDR option appears in table CUSTSMDR against a business group identifier. All calls in this business group produce a DE extension record.

Conditions

If package NTXH85AA is present, then use the following recommendations.

Recommended

(number of MDC lines where the custgrp has the ICCSMDR option)
X (percentage of MDC offhks that the office is engineered to handle)

Maximum

(number of MDC lines where the custgrp has the ICCSMDR option)

Number Service Code (NSC)—Enhanced 800 (E800)

Package NTX554AA (CCS7—E800/SSP) on a service switching point (SSP) provides E800 service. The E800 uses Signaling System 7 (SS7) to communicate to operating company databases. The database query obtains

routing information and other call handling instructions. The following types of lines and trunks support the E800 service:

- DMS equal access end office (EAEO)—EAEO/SSP supports E800 calls that originate from single or party POTS lines.
- DMS access tandem (AT)—AT/SSP supports E800 calls that originate from intertoll (IT) and Super CAMA (SC) trunks that use dial pulse (DP), multi-frequency (MF), or equal access (EA) signaling.
- DMS TOPS—AT/SSP supports E800 calls that originate from IT and SC trunks that use DP, MF, or EA signaling.

Two types of AMA records can generate for an E800 Service call. The first type of AMA record has a call code of 141. The record generates when the call does not use equal access. The second type of AMA record has a call code of 142. Inter-local Access and Transport Area (interLATA) calls use the record when the call uses an equal access carrier. The E800 Service call requires an extension block from this subrecording unit pool. The extension block is held for the duration of the call.

Conditions

Package NTX554AA is present.

Recommended

(estimate of the number of simultaneous 800 calls that the office is engineered to handle)

OR

((number of TOPS trunks) X (percentage of trunks used for E800 traffic))
+ ((number of IT trunks) X (percentage trunks used for E800 traffic))
+ ((number of SC trunks) X (percentage of trunks used for E800 traffic))
+ ((number of lines) X (estimate of E800 usage))

Maximum

The percentage in the second recommended calculation is 100 because the maximum formula must assume that all traffic is E800 traffic. The use of the maximum calculation can overprovision this office parameter.

CRS_SUBRU_POOL4_SIZE (continued)

Number service code (NSC)—800 PLUS

Package NTX555AB (800 PLUS) provides 800 service for SSP communication with operating company databases at service control points (SCP). The 800 Plus feature is like E800 Service, but supports the following additional services:

- Single Number Service—allows a subscriber to have one 800 telephone number serve two or more 800 line groups in several areas.
- Variable Call Routing—allows Single Number Service subscribers to specify terminating points for 800 Plus calls. The subscriber specifies these terminating points based on the time of day and the day of week.
- Out-of-Zone Calling—with basic 800 service, the system intercepts out-of-zone calls occurs and the call cannot complete. For Out-of-Zone Calling, calls that originate out of the subscribed area are complete and the system charges at operator assisted rates.

The following lines and trunks support 800 Plus:

- DMS-200 SSP supports 800 Plus calls that originate from single or party POTS lines.
- DMS-200 SSP supports 800 Plus calls that originate from IT and SC trunks that use DP or MF signaling.
- TOPS Toll SSP supports 800 plus calls that originate from IT, SC, and TOPS trunks that use DP or MF signaling.

Two types of AMA records can generate for an 800 Plus call. The call code of the first AMA record type is 141. This AMA generates when the call does not use equal access. The call code of the second type of AMA record is 142. This AMA is for interLATA calls that use an equal access carrier. The 800 Plus service requires an extension block from this subrecording unit pool. This block is held for the duration of the call.

Conditions

Package NTX555AB is present.

Recommended

(estimate of the number of 800 Plus calls that the office can handle at the same time)

OR

((number of TOPS trunks) X (percentage of trunks used for 800 PLUS traffic))
+ ((number of IT trunks) X (percentage of trunks used for 800 PLUS traffic))
+ ((number of SC trunks) X (percentage of trunks used for 800 PLUS traffic))
+ ((number of lines) X (estimate of 800 Plus usage))

Maximum

The percentage in the second recommended calculation is 100 because the maximum formula must assume that all traffic is 800 Plus traffic. Use of the maximum calculation can overprovision this parameter.

NSC—enhanced 008 (E008)

The E008 is an inward call management feature that is part of NTXH84AA (Enhanced 008 for Australia). The system uses E008 when office parameter UNIVERSAL_AMA_BILLING is enabled in table OFCENG. The E008 service uses a SSP and a SCP to obtain call handling instructions from query of the operating company database. The system changes the call to the directory number that the SCP returns as the routing number. An AMA record with call code 142 generates for all E008 calls.

Conditions

Package NTXH84AA is present.

Recommended

estimate of the number of simultaneous E800 calls that the office can handle

OR

((number of ATUP trunks) X (percentage of trunks used for E008 traffic))
+ ((number of AISUP trunks) X (percentage of trunks used for E008 traffic))
+ ((number of MDC lines) X (estimate of E008 usage))

Maximum

The percentage in the second recommended calculation must be 100 because the maximum formula must assume that all traffic is E008 traffic. Use of the maximum calculation can overprovision this parameter.

CRS_SUBRU_POOL4_SIZE (continued)

AMA critical times

The AMA critical times can place an additional load on CRS pool resources. Take the following steps to confirm that all pools are adequately provisioned to absorb the impact of critical times:

1. Monitor the EXT OMs during peak traffic hours to determine the maximum number of extension blocks seized (EXTSZD) and the maximum high-water mark (EXTHI) for each extension block pool. Note that the EXTSZD and EXTHI do not always occur during the same OM reporting period.
2. Use the maximum figures obtained in the preceding formulas in the following formula to calculate the pool size:

   + ((critical time duration in minutes)
   x (number of extension blocks seized during busiest sampling period)
   / (Duration of OM sampling period in minutes))

   This formula produces an extension block pool size that compensates for an AMA critical time during peak traffic. The formula produces the extension block pool size without an overflow of the pool. Use a critical time duration of at least three minutes in this calculation.
3. If the calculation result is higher than the current pool size in table OFCENG, verify that sufficient store is available. Increase the pool size if necessary. If the result of the calculation is lower than the current pool size, there is no action required.

Traffic patterns can change over time. Monitor the use of CRS pool resources and increase necessary.

AJ3809 AMA Record of VPN Dialled Digits

Feature AJ3809 records the dialled digits at the point where the user establishes a call as a virtual private network (VPN) call. The AJ3809 feature performs this function for the European market. The VPN selector is chosen in translations. Module 26 presents this information. The AMA billing record contains the information module 26.

Each simultaneous VPN call on the DMS switch requires one subrecording unit when the AJ3809 feature is active. This parameter sets the number of subrecording units available to the operating company.

Use traffic statistics for this call type or from the CRS_SUBRU_POOL4_SIZE operational measurement in the EXT OM class to provision this office parameter.

CRS_SUBRU_POOL4_SIZE (continued)

If this parameter is underprovisioned, then the AMA record does not include the information in module 26. Important billing information is lost.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	1 times the value of the provisioned NCCBS	100

Activation

Increase - immediate

Decrease - cold restart

Dependencies

This parameter controls the CRS_SUBRU_POOL4 extension block.

Consequences

This parameter controls a subrecording unit pool. Failure to obtain enough resources for this pool results in the loss of billing information for applications. The Rules in provisioning section outlines these applications.

Verification

This parameter controls the extension block with an external identifier name of CRS_SUBRU_POOL4 and an index of 99 for Operational Measurement (OM) group EXT. For more information on OMs, refer to the *Operational Measurements Reference Manual*.

CRS_SUBRU_POOL4_SIZE (end)

Memory requirements

Each unit requires 40 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

TL10

Parameter Autoprovisioning was added in TL10.

NA008

Changed maximum provisioning value to from 4294967295 to 256144.

NA006

Rules in provisioning for OSSAIN were introduced in NA006.

TL05

Information on AMA critical times was introduced in TL05.

BCS32

This parameter was introduced in BCS32.

CRS_SUBRU_POOL5_SIZE

Parameter name

Call Recording Stream Sub-Recording Unit Pool5 Size

Functional description

This parameter allows the operating company to provision the new SUBRU pool. Parameter CRS_SUBRU_POOL5 allocates extension blocks of 61 words. The extension blocks are memory blocks that store AMA information.

The use of CRS_SUBRU_POOL5 for TOPS calls that begin in TOP05 allows the reduction of the value of CRS_SUBRU_POOL4 in table OFCENG in TOPS offices. The CRS_SUBRU_POOL5 substitutes for the CRS_SUBRU_POOL4 for AMA. A limit that is already present requires a cold restart to reduce the value of CRS_SUBRU_POOL4.

The default value for this parameter is 100. A cold restart must occur to lower this value.

Rules in provisioning

Rules in provisioning are different for each application. For TOPS offices, use the following:

CRS_SUBRU_POOL5_SIZE = TOPS_NUM_RU or GOS_NUM_RU x 10%

Calculation

Before TOP05, TOPS used a 41 word SUBRU to store AMA information. TOP05 and greater TOPS uses a 61 word SUBRU. A summary of the engineering impact that uses the recommended provisioning rules follows:

Increase in AMA store: CRS_SUBRU_POOL5_SIZE x 10%

Memory requirements

Each unit requires 61 words of memory.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

CRS_SUBRU_POOL5_SIZE (continued)

Range information

Minimum	Maximum	Default
0	1 times the value of the provisioned NCCBS	100

Activation

Increase is immediate.

Decrease requires a cold restart.

Dependencies

The percentage that TOPS uses can reduce the value of the CRS_SUBRU_POOL4_SIZE .

Consequences

This parameter controls the CRS_SUBRU_POOL5 pool. Failure to obtain enough resources for this pool results in the loss of billing for the application that uses the pool.

Verification

This parameter controls the extension block with an external name of CRS_SUBRU_POOL5 and an index of 161 in OM EXT.

Memory requirements

Each unit requires 61 words of memory.

Dump and restore rules

For TOP05 and greater, copy the current value of this parameter when you perform a dump and restore.

For offices that go to TOP05, use a procedure to format the value of the CRS_SUBRU_POOL5_SIZE parameter again. Use the following guidelines for the One Night Process (ONP):

- If ten percent of parameter TOPS_NUM_RU or GOS_NUM_RU is less than the default value of 100, use the default value.
- If ten percent of the value of TOPS_NUM_RU or GOS_NUM_RU is greater than the default value and greater than the

CRS_SUBRU_POOL4_SIZE parameter, copy the value of the CRS_SUBRU_POOL4_SIZE parameter over to the CRS_SUBRU_POOL5_SIZE.

- If ten percent of the value of TOPS_NUM_RU or GOS_NUM_RU is greater than the default value and less than the CRS_SUBRU_POOL4_SIZE parameter, use the ten percent figure.

Parameter history

TL10

Parameter Autoprovisioning was added in TL10.

NA008

Changed maximum provisioning value to from 4294967295 to 256144.

CSP05

This parameter was introduced in CSP05.

CSLINK_ALARM_THRESHOLDS

Parameter name

C-side Link Alarm Thresholds

Functional description

A local or SL-100 switch requires this parameter. The parameter specifies the threshold percentages for major and critical alarms for CSIDE failures on the peripheral module types that follow:

- line concentrating module (LCM)
- international line concentrating module (ILCM)
- ISDN line concentrating module (LCMI)
- line group controller (LGC)
- digital trunk controller (DTC)
- message switch and buffer 6 (MSB6)
- line trunk controller (LTC)
- subscriber carrier module-100 rural (SMR)
- subscriber carrier module (SMS)
- subscriber carrier module-100 urban (SMU)
- message switch and buffer 7 (MSB7)
- remote cluster controller (RCC)
- austrian digital trunk controller (ADTC)
- PCM-30 digital trunk controller (PDTC)
- international line group controller (ILGC)
- international digital trunk controller (IDTC)
- international line trunk controller (ILTC)
- ISDN access controller (IAC)

After the detection of a link failure, activation and how important the alarm is depends on the threshold percentage that the parameter specifies. The alarm occurs if the percentage of lost C-side links is greater than or equal to the threshold percentage. The calculation of the percent of link failures rounds to the next integer value. For example, if the major threshold is 34% and three out of nine CSIDE links are lost, the alarm activates.

CSLINK_ALARM_THRESHOLDS (continued)

Rules in provisioning

A major claim can occur to any percentage. The critical threshold must be greater than or equal to the major threshold.

The set of thresholds applies to all parts of the switch.

This parameter has two fields, the major and the critical threshold percentages, each with a value range of 1 to 100.

A value of 100% turns off the feature for that alarm level.

The default thresholds are 30% for a major alarm and 60% for a critical alarm.

Range information

Minimum	Maximum	Default
		3060

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

CSLINK_ALARM_THRESHOLDS (end)

Parameter history

BCS23

This parameter was introduced in BCS23.

CSMI_CUST_PROG_CFW

Parameter name

Call Screening, Monitoring, and Intercept Customer Programmable Call Forwarding

Functional description

This office parameter specifies if Customer Programmable Call Forwarding can use CSMI. Customer Programmable Call Forwarding can use CSMI by default. The parameter is initialized to Y and maintains the same value through all restarts.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
		Y

Activation

The CSMI_CUST_PRG_CFW activates when you add this parameter to table OFCENG or change its value.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Check table OFCENG to verify the value of this parameter.

Memory requirements

This parameter requires one byte of memory.

Dump and restore rules

Does not apply

CSMI_CUST_PROG_CFW (end)

Parameter history

NA005

This parameter was introduced in NA005.

CSMI_DELETE_STUB_VM

Parameter name

CSMI_DELETE_STUB_VM

Functional description

This parameter has two values. The first value enables activation of feature 59013873, Call Screening, Monitoring and Intercept (CSMI) Enhancement—Stub Message Deletion. When this value is “N” (default), it indicates stub messages are not deleted from the Network Based Answering System (NBAS) when a subscriber intercepts a call. When this value is “Y”, the system deletes the stub messages.

The second value contains a series of delete tones. The default for this value is “$”. The telephone company can datafill this value with the series of delete tones needed by the specific NBAS connected to the DMS that uses the CSMI.

Provisioning rules

When the first value is “N”, the second value is “$” automatically. When the first value is “Y”, the second value must be the series of delete tones needed by the specific NBAS connected to the DMS that uses the Stub Message Deletion feature.

Range information

The range information for the first and second values are as follows:

Minimum	Maximum	Default
N	Y	N
1 alphanumeric between the value of 1 and c.	5 alphanumerics. Each alphanumeric can have a value between 1 and c.	$

Activation

The activation is immediate for this parameter.

Requirements

There are no requirements for this parameter.

Results

There are no results for this parameter.

CSMI_DELETE_STUB_VM (end)

Testing

You can check Table OFCENG for the value of this office parameter. To test CSMI Enhancement—Stub Message Deletion when the first value of this parameter is “Y”, you must do the following:

- set up CSMI on the phone
- make a call to the phone with CSMI
- allow the call to be forwarded to NBAS
- intercept the call
- check NBAS for stub messages

Memory requirements

There are no memory requirements for this parameter.

Dump and restore rules

There are no dump and restore rules for this parameter.

Parameter history

NA013

This release introduces office parameter CSMI_DELETE_STUB_VM.

CSMI_INTERCEPT_3WC_CONNECTION

Parameter name

Call Screening, Monitoring, and Intercept Three Way Calling Connection

Functional description

This office parameter determines the way UCSMI users intercept forwarded calls. When set to YES, the establishment of a 3-way call between the UCSMI user, the calling party, and the NBAS performs interception. When set to NO, the establishment of a 2-way call between the UCSMI user and the calling party performs interception. This parameter is initialized to N (NO) and maintains the same value through all restarts.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
		N

Activation

The CSMI_INTERCEPT_3WC_CONNECTION activates when you add the parameter to table OFCENG or change the value.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Check table OFCENG to verify the value of this office parameter.

Memory requirements

This parameter requires 1 byte of memory.

Dump and restore rules

Does not apply

CSMI_INTERCEPT_3WC_CONNECTION (end)

Parameter history

NA005

This parameter was introduced in NA005.

CSMI_PPU_SCREENING_TIMER

Parameter name

Call Screening, Monitoring, and Intercept Pay Per Usage Screening Timer

Functional description

This office parameter specifies the length of time, in seconds, of the screening period for USCMI and CSMIPPU users. The call screening period is the time interval when the SCMI subscriber can start to monitor the forwarded call. This parameter applies to CSMIPPU users if the SCRACTIVE field is set to N. A value of 0 indicates that the screening period lasts as long as the forwarded call. The parameter is initialized to 20 and maintains the same value through all restarts.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
0 seconds	120 seconds	20 seconds

Activation

The CSMI_PPU_SCREENING_TIMER activates when you add the timer to table OFCENG or change the value.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Check table OFCENG to verify the value of this office parameter.

Memory requirements

This parameter requires 1 byte of memory.

CSMI_PPU_SCREENING_TIMER (end)

Dump and restore rules

Does not apply

Parameter history

NA005

This parameter was introduced in NA005.

CSMI_SCREENING_TIMER

Parameter name

Call Screening, Monitoring, and Intercept Timer

Functional description

This parameter specifies the length, in seconds, of the screening period that the SCSMI and Centrex CSMI subscriber uses. The screening period is the time interval during which the CSMI subscriber can start to monitor the forwarded call. A value of 0 indicates that the screening period lasts as long as the forwarded call. The parameter is initialized to 20 and maintains the same value for all restarts.

Rules in provisioning

There are no rules in provisioning.

Range information

Minimum	Maximum	Default
0 seconds	120 seconds	20 seconds

Note: A value of 0 seconds indicates that there is no maximum time limit for the end user to begin to monitor a call. As long as the caller is connected to the answering service, the end user can go off-hook and monitor the call.

Activation

The CSMI_SCREENING_TIMER activates when you add the timer to table OFCENG or change the value.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Check table OFCENG to verify the value of this office parameter.

Memory requirements

This parameter requires 1 byte of memory.

CSMI_SCREENING_TIMER (end)

Dump and restore rules

Does not apply

Parameter history

NA005

This parameter was introduced in NA005.

CUSTOMER_GROUP_IBNGRP_OM_COUNT

Parameter name

Customer Group Integrated Business Network Group Operational Measurement Count

Functional description

This parameter allocates data store for the Integrated Business Network Group (IBNGRP) operational measurement group.

The value specified for this parameter must be a multiple of 32. This limit prevents repeated changes of the parameter. Repeated changes in the value of this parameter can lead to fragmentation of data store.

The value specified places an upper limit on the number of IBN customer groups that you can enter. When the number of new customer groups entered reaches the upper limit, you cannot add these groups to table CUSTENG.

Rules in provisioning

Table control assigns customer group numbers to consoleless customer groups. The group numbers start at 256 because table control reserves 0 to 255 for customer groups that can have attendant consoles. Only a parameter value greater than 256 allows the creation of consoleless customer groups. Because the values are multiples of 32, the minimum parameter value that allows the use of consoleless customer groups is 288 (256 + 32 = 288).

RWOK on command can be used to increase the size of the office parameter CUSTOMER_GROUP_IBNGRP_OM_COUNT.

Range information

Minimum	Maximum	Default
0	4095	32

Activation

Activation is immediate.

Dependencies

Does not apply

CUSTOMER_GROUP_IBNGRP_OM_COUNT (end)

Consequences

The number of new customer groups can increase to the limit that the parameter set. When the number of groups reach this limit, you cannot add new customer groups to table CUSTENG.

Verification

Does not apply

Memory requirements

Each block of 32 will consume 32 x 6K bytes of data storage memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CDN04

RWOK on activation added. Patch KAMA.29 eliminated the requirements to reload/restart.

CSP02

The Cold restart requirement was removed in CSP02.

BCS36

NORESTARTSWACT activation was introduced in BCS36.

BCS14

This parameter was introduced in BCS14.

CWT_ON_POTS_IBN_3WC_CONTROLLER

Parameter name

Call Waiting on Plain Old Telephone Service Integrated Business Network Three-way Calling Controller
(CWT_ON_POTS_IBN_3WC_CONTROLLER)

Functional description

This parameter provides an option for the Call Waiting for 3-Way Calling feature.

This parameter determines if the station included in a three way call (3WC) as the controller of that 3WC is allowed to have call waiting (CWT). The office parameter only applies for plain old telephone service (POTS) and integrated business network (IBN) lines. If the parameter is set to Y, CWT is allowed on the controlling party. If the parameter is set to N, CWT is not allowed on the controlling party.

The parameter value does not change CWT on non-controllers. CWT is allowed on non-controllers in both conditions.

Provisioning rules

None

Range information

Minimum	Maximum	Default
n/a	n/a	N

Activation

The Call Waiting for 3-Way Calling feature does not require end user activation.

Dependencies

Not Applicable

Consequences

Not Applicable

CWT_ON_POTS_IBN_3WC_CONTROLLER (end)

Verification

Not Applicable

Memory requirements

Protected data store (DSPROT) requires one word.

Dump and restore rules

Not Applicable

DAL_PXFX_ON_SAME_SPM

Parameter name

DAL_PXFX_ON_SAME_SPM

Functional description

DAL_PXFX_ON_SAME_SPM controls the activation of the DMS-500 specific feature 59014406. The office parameter activated portion of this feature allows support of both DAL and PXFX trunks on the same SPM in the DMS-500 office. Feature 59014406 creates the new term type ABSPX in table MNNODE that is datafilled and used by the PXFX trunks. The original AB250 termtype is datafilled and used to reference only DAL trunks. Additional information about feature 59014406 can be found in the SP15 Feature Description

Provisioning rules

While DAL_PXFX_ON_SAME_SPM is set to ‘N’, the functionality provided by feature 59014406 is not active.

CAUTION
Possible loss of service
A loss of service may occur in live switches if you activate DAL_PXFX_ON_SAME_SPM and have not followed the upgrade procedure found in the activation section of this document.

Range information

The range information is as follows: ‘Y’ or ‘N’

Minimum	Maximum	Default
N/A	N/A	N (DEACTIVATED)

Activation

In order to activate DAL_PXFX_ON_SAME_SPM you must first follow a special upgrade procedure to prevent loss of service in an active switch.

DAL_PXFX_ON_SAME_SPM (continued)

Upgrade procedure to activate feature 59014406.

1 Per standard procedure, all SPMs and corresponding RMs, ENET,etc. on the switch must be upgraded to the SP15 load.

2 Execute a standard ONP, including the table transfer from active side to the inactive side CM, and the SWACT over.

Note: The DAL_PXFX_ON_SAME_SPM should not be activated at this time.

3 After the ONP is complete, access table MNNODE and add the pairing ABSPX PXSPMS to each tuple in the EXECTAB optional field for each tuple in which the feature functionality is desired.

4 BSY/RT all SPMs on the switch affected by the MNNODE changes in step 3 to allow the new termtype and its corresponding execs to be downloaded to the SPMs.

Note: To BSY/RT an SPM as mentioned, follow these steps:

- BSY the inactive CEM.
- RTS the inactive CEM.
- Perform a SPM SWACT
- BSY the newly inactive CEM
- RTS the newly inactive CEM

5 You may now activate DAL_PXFX_ON_SAME_SPM by setting it to ‘Y’.

Note: In order for the PXFX trunks to be recognized as the new termtype, you must again BSY/RT all SPMs on the switch affected by the MNNODE changes in step 3. To BSY/RT the SPM follow step 4.

Requirements

Not applicable

Results

If DAL_PXFX_ON_SAME_SPM is activated without following the upgrade procedure, loss of service may occur in live switches.

Testing

After you perform the upgrade procedure and set DAL_PXFX_ON_SAME_SPM to ‘Y’, you may provision both DAL and PXFX trunks on the same SPM in the DMS-500 office. Both DAL and PXFX trunks type my then be tested to ensure functionality.

Memory requirements

DAL_PXFX_ON_SAME_SPM uses one word of memory.

DAL_PXFX_ON_SAME_SPM (end)

Dump and restore rules

During sof ware upgrades, DAL_PXFX_ON_SAME_SPM will have the same value on the restore side that it had on the dump side.

Parameter history

SP15

DAL_PXFX_ON_SAME_SPM was introduced by Feature 59014406.

DATA_COS

Parameter name

Data Class of Service

Functional description

All switching units with the Integrated Business Network (IBN) and the Datapath or Electronic Switched Network (ESN) feature require this parameter.

Rules in provisioning

If the switching unit connects to an ESN switching unit, set the value of this parameter equal to the terminating network class of service (NCOS) number. The NCOS number indicates that the call is a digital data call.

In an environment that is not an ESN, set the value of this parameter equal to the NCOS value for all incoming digital calls.

Range information

Minimum	Maximum	Default
0	7	0

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP02

The cold restart activation requirement was removed in CSP02.

DB_MAX_SIZE

Parameter name

Booked Call Data Base Maximum Size

Functional description

The parameter determines the size of the booked call database.

This parameter associates with the international traffic operator position system (ITOPS) booked call database size increase feature. This feature increases the maximum number of calls stored at one time in the booked call database from 1280 to 5120.

Rules in provisioning

Set the value of this parameter to the number of calls that must be in the Booked Call Database at one time.

The parameter will enforce the following values:

1280, 1408, 1536, 1664, 1792, 1920, 2048, 2176, 2304, 2432, 2560, 2688, 2816, 2944, 3072, 3200, 3328, 3456, 3584, 3712, 3840, 3968, 4096, 4224, 4352, 4480, 4608, 4736, 4864, 4992, 5120

Range information

Minimum	Maximum	Default
1280	5120	1280

Activation

Acitvation is immediate

Dependencies

Does not apply

Consequences

This parameter uses a large amount of data store.

Verification

Does not apply

Memory requirements

Each unit requires 153 words of memory.

Dump and restore rules

This parameter was introduced in BCS30.

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP02

The cold restart activation requirement was removed in CSP02.

DCA_GATEWAY

Parameter name

Dynamically Controlled Access (DCA) Gateway

Functional description

The DCA system uses this boolean parameter to determine if the switch is a gateway node. If you assign the parameter the value FALSE (N), the node is a simple, non-gateway switch in the DCA network. The system automatically considers all trunk groups for the switch to belong to the default DCA network. The DEFAULT_DCA_NETWORK parameter identifies the default DCA network.

If you set the parameter to TRUE (Y), the node is a gateway switch in the DCA network.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate

Dependencies

This parameter affects entries in table TKTONODE. If the value of this parameter is FALSE, entries in table TKTONODE that relate to DCA-specific information do not apply. The system disregards these entries. If the parameter value is TRUE, the system uses the DCA-specific entries in TKTONODE.

Consequences

Does not apply

Verification

To verify this parameter, change the value to TRUE and then back to FALSE.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Does not apply

Parameter history

NA004

This parameter was introduced in NA004.

DCH_BD_STATMUX_RATIO

Parameter name

D-channel handler Bd Statistically Multiplexed Ratio

Functional description

Switching units with the Integrated-Services Digital Network (ISDN) feature require this parameter. This parameter controls the maximum number of logical terminals that can multiplex on one Bd channel. The logical terminals on one Bd channel route the packet data to the Data Packet Network (DPN). This parameter allows the maximum ratio in a specified switching unit to be set.

This parameter controls the maximum number of Logical Terminal Identifiers (LTID) that can be mapped on the same Bd channel in table LTMAP. The logical terminal identifiers can be type BD or D.

Default mapping algorithms use this value as a maximum number.

The Packet Handler can be upgraded to handle values greater than 32. Do not set the value of this parameter higher than 32 unless the Packet Handler is upgraded.

The value of this parameter indirectly controls the number of packet data LTIDs that can have data entered for each DCH.

The number of packet data LTIDs equals the number of BD channels multiplied by the value of this parameter.

An example of how to estimate the number of packet data LTID for each DCH follows:

```
Number of packet data LTIDs required
                            =(number of packet data
                            LTIDS expected per loop)
                            x (number of    BRA TDM
                            DCH channels) x 4
```

The level of traffic expected, and the type of terminal used, determine the number of packet data LTIDs. The operational measurement (OM) group DCHBC indicates the level of traffic for an in-service DCH. Access the OM group DCHBD at the channels level of the MAP terminal

DCH_BD_STATMUX_RATIO (continued)

If the maximum number of LTIDs for each Bd channel exceeds the value of this parameter, the following message appears:

```
CAPACITY OF Bd CHANNEL Y ON DCH X EXCEEDED
```

Rules in provisioning

Specify the maximum number of logical terminals to multiplex on one Bd channel for routing the packet data to the DPN.

Range information

Minimum	Maximum	Default
0	64	64

Activation

Immediate

Dependencies

The type of packet data terminals in use determines the value of this parameter. The number of packet data terminals for each loop also determines the value of this parameter.

Consequences

A parameter that is high causes a slow response on packet data terminals.

A parameter that is low causes each D-channel handler (DCH) to require a large number of Bd channels.

An example that describes a parameter that is low follows:

If 27 Basic Rate Access (BRA) TDM channels are present on a DCH, four loops connect to each of the 27 TDM channels. One hundred loops are present.

Enter QDCH DCH x to display the loops.

DCH_BD_STATMUX_RATIO (end)

If each loop has two logical terminals for packet data:

- Each DCH requires 4 Bd channels if the parameter value is 50.
- Each DCH requires 6 Bd channels if the parameter value is 32.
- Each DCH requires 8 Bd channels if the parameter value is 16.

Verification

Set the value of this parameter. Attempt to ATTACH a number of packet data LTIDs to loops that connect to the same DCH. Attempt to attach a number of LTIDs that is higher than the parameter value. Use the same value as the DCHCHNL option.

See OM GROUP DCHBD for the operational measurements associated with this parameter.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS26.

DCND_TIMERS

Parameter name

Dual Tone Multi Frequency Calling Number Delivery Timers

Functional description

A switching unit with Japan ISDN User Part (ISUP) trunks requires this parameter. This parameter specifies timeout values for the Dual Tone Multi Frequency Calling Number Delivery (DCND) timers.

The DCND parameter provides a way to deliver the calling line identifier (CLID) to the customer premise equipment (CPE) of the called party. The DCND parameters provides this delivery method through DTMF transmission.

Rules in provisioning

The following table outlines the function and range of values for this parameter. Note that all values are in increments of 10 ms. For example, a value of 8 specifies a time interval of 80 ms.

Functions and ranges

Parameter field	Function	Range of values
DCND_ON	Duration of each digit during DCND transmission (excluding the first DTMF A).	1 to 10
DCND_OFF	Interdigit time for the DCND transmission.	1 to 10
DCND_A	Duration of initial DTMF A.	50 to 100
DCND_T2	Duration of silent period that follows the DTMF A and comes before the DCND transmission.	1 to 10
DCND_T3	Minimum length of the silent period between the last digit the system transmitted and the start of ringing.	1 to 10

DCND_TIMERS (end)

Range information

Minimum	Maximum	Default
		538566

Activation

Activation is immediate

The system updates new data in all affected peripheral modules.

Dependencies

Does not apply

Consequences

Do not modify this parameter unless the CPE cannot detect the DCND transmission with the default timing values.

Verification

To verify that this parameter is set and works, call a DCND customer and measure the transmission.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS36

This parameter was introduced in BCS36.

DCT_MEM_LIMIT

Parameter name

Data Call Tester Memory Limit

Functional description

A DMS-100 or DMS-200 switch with the Data Call Tester (DTC) feature requires this parameter. This parameter specifies the amount of memory, in kbytes, that can store DCT results.

The recommended value is 1024 which specifies 1 Mbyte of memory.

Rules in provisioning

The maximum amount of memory needed for DCT test results depends on the following:

- the number of days the results are kept
- the number of integrated bit error ratio tests (IBERT) that run at the same time

The table below shows the memory use for DCT test results that an IBERT generates for each day. This memory use is for a summary size of 90 bytes and a bin size of 18 bytes.

DCT test results memory usage table

Duration	Number of tests	Maximum number of bins/test	Storage required
15 s	5760	1	607 kbytes
15 min	96	3	13 kbytes
15 min	48	6	9 kbytes
1 h	24	12	7 kbytes
2 h	1`2	20	5 kbytes

The amount of memory required decreases as duration increases. Tests that last 15 s require a large amount of memory. These tests are normally not repeated. You should consider short tests (less than 15 min) separately.

The following formula estimates the maximum storage requirement:

DCT_MEM_LIMIT (continued)

```
M = (13 x days x ibert)
```

where

M
is the amount of memory the system requires for DCT information storage in kbyte

days
is the number of days results that are kept

ibert
is the number of IBERTs that run DCT

Range information

Minimum	Maximum	Default
0	4096	1024

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

As the value of this parameter increases, the system can store more DTC test results.

Verification

The system displays the following messages when this office parameter changes.

```
Test results data restructure is re-initialized
```

This message indicates that the system deallocated the whole data structure and re-initialized in the occurrence where the limit decreases.

```
New limit is set to <limit> KBytes
```

This message confirms the new limit. This message shows if the limit increased or decreased.

```
There are tests in progress***
```

The user cannot change the value of this parameter while tests run or are about to run. If the user attempts to change the value in this occurrence, the system displays this message. The system rejects a change to the value of this parameter.

```
***There are active DCT MAP sessions***
```

The user cannot decrease this parameter value while active MAP sessions use DCT (that is, selected a testbook ID). If the user attempts to decrease the value in this occurrence, the system displays this message. The system rejects a change to the value of this parameter.

```
***Resources shortage***
```

The user cannot decrease the value of this parameter if the system cannot allocate some resources during the re-initialization of test results. If the user attempts to decrease the value and the system cannot allocate some resources, the system displays this message. The system rejects a change to the value of this parameter.

```
***Command is rejected***
```

The system displays this message with other error messages. This message confirms that the system aborted the command to change the value of this parameter.

Memory requirements

This parameter does not impact memory.

DCT_MEM_LIMIT (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS36

The parameter description was added in BCS36.

DEBUG_HUNT_SWERRS

Parameter name

Debug Huntgroup Audit Software Errors

Functional description

Switching units with one or more hunt groups require this parameter.

Hunt audits can generate software errors (SWERR). These SWERRs are hard to trace.

The SWERR identifies the terminating agent. The SWERR does not identify the originating agent.

If you set the value of this parameter to Y (yes), system displays a SWERR. The SWERR contains information about the saved originating agent. The SWERR displays at the same time as the SWERR from the hunt audit. The text of the first SWERR displays the originating agent that assists in the debugging of SWERRs from the hunt audit.

The system does not debug hunt members added after you set the parameter to Y. Reset the office parameter to debug new hunt members. Reset the parameter to the default value N (no), then reset the office parameter to Y.

Rules in provisioning

Northern Telecom (NT) technical assistance (TAS) personnel must administer the activation of this office parameter.

Set the parameter to Y only if SWERRs from the hunt audit require debugging.

Set the parameter to N when debugging is complete so that the required memory can be deallocated.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate

DEBUG_HUNT_SWERRS (end)

Dependencies

Does not apply

Consequences

Does not apply

Verification

If you set the value of the parameter to Y, a second SWERR accompanies the first SWERR from the hunt audit. The second SWERR contains text that indicates the originating agent.

Memory requirements

The system allocates the following memory when you set the value of the parameter to Y (yes):

```
99 words + 3 X (highest numbered huntgroup) + 2 X (sum
of groupsize of every datafilled huntgroup)
```

Dump and restore rules

Leave the parameter at the default value when you perform the dump and restore.

Parameter history

This parameter was introduced in BCS26.

DEF_AMR5_CAT_CODE

Parameter name

Default AMR5 Category Code

Functional description

Toll and combined local/toll switching units with AMR5 signaling require this parameter.

The default category code is used when an automatic number identification (ANI) must regenerate. The default category code is also used when the incoming category code defines the call type as ANIFAIL.

Rules in provisioning

Set the value of this parameter to the two-or three-digit default category code.

The default category code must be one of the category codes in table AMRCAT.

When the route in the AMRCAT table for the default category code equals NIL. All ANIFAIL calls route to the CAMA position. The CAMA position is in the Position table.

Range information

Minimum	Maximum	Default
000	999	000

Activation

Activation is immediate

Dependencies

The default category code must be one of the category codes table AMRCAT lists.

Consequences

Does not apply

Verification

Does not apply

DEF_AMR5_CAT_CODE (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

DEFAULT_BEARER_CAPABILITY

Parameter name

Default Bearer Capability

Functional description

This parameter defines the bearer capability (BC) to which the office defaults. If the originator cannot supply a BC, this office parameter determines the BC of the call.

If termination checking uses BC, this parameter can determine the BC for some terminating agents. This parameter determines the BC for terminating agents that do not have a defined BC entered against the agent.

Rules in provisioning

For current network applications, keep this parameter at the default value of SPEECH.

Range information

Minimum	Maximum	Default
		SPEECH (This value is the same as the fixed default before BCS31)

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

If you change this parameter to a value of 3_1KHZ, this change can affect call completion.

If you change this parameter from SPEECH to 3_1KHZ, you must consider the translations for ISDN bearer capability routing. Investigate Table RTECHAR for any entries with a BC of SPEECH. Entries with a BC of SPEECH can cause all POTS traffic on the switch to route through ISDN Bearer Capability

DEFAULT_BEARER_CAPABILITY (continued)

translations. If parameter NUM_RC_EXT_BLKS in table OFCENG cannot accept the POTS traffic load, the system will block calls.

The public network and several types of ISDN telephones cannot accept calls with a Bearer Capability of 3.1KHz. This condition can present a problem.

Use a value of 3_1KHZ in a controlled environment only.

> ***Note:*** Keep the default value at SPEECH. If the default BC changes, the new default is applied to trunk groups entered after the change. Trunk groups entered before the change keep the previous default BC value. These trunks become non-default BC trunk groups and require RC extension blocks. If NUM_RC_EXT_BLKS is set too low to accommodate these additional trunk groups, the system can drop calls. To correct the problem, enter the non-default BC trunk groups again.

Verification

If ISDN User PArt (ISUP) is in the office, the user can verify the value of this parameter. To verify the value of this parameter, the user makes an ISUP call from a POTS line or IBN line. The information transfer capability field in the outgoing IAM message must correspond to the DEFAULT_BEARER_CAPABILITY entry.

If Integrated Services Digital Network (ISDN) is in the office, the user can verify the value of this parameter. To verify the value of this parameter, the user makes a Primary Rate Access (PRA) call from a POTS line or IBN line. The BC field in the Q.931 setup message must correspond to the DEFAULT_BEARER_CAPABILITY entry.

The user can make a call from a line to a Basic Rate Access (BRA) set. The BRA set has a firmware releases greater than BCS29 and a PVC issue other than 0 in table LTDEF. The BRA set must not have the NOVBD option in table LTDEF. The BC in the Q.931 setup message that goes to the BRA functional set must correspond to the DEFAULT_BEARER_CAPABILITY entry.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

DEFAULT_BEARER_CAPABILITY (end)

Parameter history

NA002

Added note to section Consequences, according to PRS EV40112, explains the reason default value SPEECH is recommended entry.

BCS31

This parameter was introduced in BCS31.

DEFAULT_CARRIER_OR_TREAT

Parameter name

Default Carrier or Treatment

Functional description

An Equal Access End Office (EAEO) requires this parameter. This parameter specifies the carrier name or treatment used when a subscriber dials:

- a toll call without a Primary InterLATA Carrier (PIC)
- a 10XXX prefix

Rules in provisioning

To route a call to a carrier, enter C and the carrier name to which the call must route. Separate the C and the carrier name with a blank space.

To route a call to a treatment, enter T and the treatment name to which the call must route. Separate the T and the treatment name with a blank space.

Do not enter the reserved name USE_PREVIOUS as the carrier or treatment name. The name USE_PREVIOUS indicates the Generic Reserve Pretranslator provides the carrier or treatment through the Software Optionality Control (SOC).

The default value is T DACD. The default value routes calls that do not have a PIC or 10XXX to the treatment dial access code (DACD). The default value routes calls to the DACD in the correct treatment table.

Range information

Minimum	Maximum	Default
		T DACD

Activation

Activation is immediate.

Dependencies

Does not apply

DEFAULT_CARRIER_OR_TREAT (end)

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS15

This parameter was introduced in BCS15.

DEFAULT_COMMANDCLASS

Parameter name

Default Command Class

Functional description

This parameter appears if you set the parameter Enhanced_Command_Screening in table OFCOPT to Y (yes). The switching unit must have functionality group NTX292AB (Enhanced Security - with Password Encryption).

Rules in provisioning

Specify the command class to which the system defaults all commands captured in the table CMDS.

Range information

Minimum	Maximum	Default
0	30	0

Activation

Activation is immediate

If this parameter changes, the default value of some commands changes to the new default command class. Commands that calls to ADDCOMMAND or ADDCIBINCOM place in the CMDS table, have the new command class. The parameter does not affect other entries in the CMDS table.

Dependencies

This parameter appears if you set the parameter Enhanced_Command_Screening in table OFCOPT to Y. The switching unit must have functionality group NTX292AB (Enhanced Security - wit9h Password Encryption).

Consequences

Does not apply

Verification

Does not apply

DEFAULT_COMMANDCLASS (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

DEFAULT_DCA_NETWORK

Parameter name

Default Dynamically Controlled Access (DCA) Network

Functional description

This parameter identifies the default DCA network for the switch. You can set the value of this parameter to the following:

- the known FOREIGN network
- any one of the user-defined DCA networks table DCANETID defines

The operating company uses the FOREIGN DCA network to indicate information about an exact trunk group in table TKTONODE. The information indicates the trunk group originates from a network other than one to which the node belongs. When the user creates the parameter during a one night process (ONP), the user sets the parameter value to FOREIGN.

The following two sets of trunk groups always belong to the default DCA network:

- all trunk groups where the user entered DCA information in table TKTONODE
- all trunk groups where the user entered DCA information in table TKTONODE with field DCANET set to DEFAULT.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
		FOREIGN

Activation

Activation is immediate

Dependencies

This parameter affects entries in table TKTONODE. The DCANET field in TKTONODE can take the value DEFAULT. In this instance, the field value equals the office parameter value.

DEFAULT_DCA_NETWORK (end)

Consequences

Does not apply

Verification

To verify this parameter, change the parameter value to another valid DCA network name.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Does not apply

Parameter history

NA004

This parameter was introduced in NA004.

DEFAULT_LANGUAGE

Parameter name

Default Language

Functional description

Switches with the Bilingual Man-Machine Interface feature require this parameter.

Rules in provisioning

Use this parameter to specify the language of the user interface. Use this parameter when you do not specify the languages as input through the Permit Users command.

The value of this parameter can be ENGLISH, FRENCH, GERMAN, or SPANISH.

Range information

Minimum	Maximum	Default
		ENGLISH

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

DEFAULT_LANGUAGE (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

DEFAULT_LSPAO

Parameter name

Default Local Service Provider

Functional description

The DEFAULT_LSPAO office parameter uses the default local service provider (LSP) account owner if none is specified. The system assumes the default for the account owner when the precedence order check fails to find the LSPAO option. The option would be provisioned on the line, trunk, or customer group.

The default LSP account owner is set in table LSPINFO. The parameter is initially turned off (the selector is set to N). By default the parameter is set to N which means there is no default LSP.

Turning the parameter on is optional. Enter Y <provider_name><context_id> to turn on the parameter. The <provider_name> entry is the name of a provider provisioned in table LSPINFO. The <context_id> is either N for Native, U for unbundled, or R for resold.

Provisioning rules

A default LSP does not need to be specified in order for the LSP feature to work. The parameter is only necessary if the operating company wants to specify a default LSP.

Appropriate parameter values include NILLSP or a specific LSPNAME from table LSPINFO.

Range information

Minimum	Maximum	Default
1 KB	262 KB	

Activation

Not applicable

Dependencies

Not applicable

DEFAULT_LSPAO (end)

Consequences

CM data store increases with the addition of LSPAO option and the resulting datafill in table LSPINFO. CM program store increases with the addition of new checks for LSPAO during provisioning.

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Not applicable

Parameter history

NA009

Adds the DEFAULT_LSPAO parameter.

DEFAULT_LSPSO

Parameter name

Default Local Service Provider Switch Owner

Functional description

This parameter is the switch-wide default local service provider switch owner (LSPSO). DEFAULT_LSPSO indicates the switch owner when you do not provision a switch owner (LSPSO) on a line, trunk, or customer group service. Supported public interswitch trunks also use this parameter if you have not provisioned an FE (switch owner on the far end) on the trunk.

The default switch owner can be any provider in the LSPINFO table. The parameter is initially turned off (the selector is set to N). Turning the parameter on is optional.

For a switch serving one jurisdiction, this parameter can represent the LSPSO of all supported subscribers.

Provisioning rules

If you require a default local service provider switch owner, provision this parameter as Y and enter a provider name from table LSPINFO. Note the provider name must be in table LSPINFO before.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate activation. No restart required.

Dependencies

Any DEFAULT_LSPSO that you specify must be in table LSPINFO.

Consequences

Does not apply.

Verification

Does not apply (handled by data dictionary).

DEFAULT_LSPSO (end)

Memory requirements

This parameter requires two words of memory.

Dump and restore rules

Does not apply (no reformat required).

Parameter history

NA010

Software release NA010 introduced this parameter.

DELAY_FSPAIS_ALARMS

Parameter name

Delay frame supervisory panel aisle alarm

Functional description

The office parameter DELAY_FSPAIS_ALARMS allows operating company personnel to turn on or off the delayed reporting of frame supervisory aisle (FSPAIS) alarms.

Provisioning rules

The DELAY_FSPAIS_ALARMS office parameter is datafilled in table OFCENG. The parameter default is no (N) for all offices. To turn off this parameter, enter N. To turn this parameter on and report only FSPAIS alarms that are present and remain constant for more than 10 seconds, enter yes (Y).

Range information

The range information is as follows:

Minimum	Maximum	Default
Y/N	Y/N	N

Activation

Activation is immediate

Requirements

There are no requirements.

Results

When the parameter is set to Y, the results are as follows:

- If the FSPAIS scan point indicates a FSPAIS alarm is present for less than 10 seconds, the system does not report the FSPAIS alarm.
- If the FSPAIS scan point indicates a FSPAIS alarm is present for at least 10 seconds, the system reports the FSPAIS alarm.
- The system reports the FSPAIS alarm immediately when the FSPAIS scan point has more than 100 activations in one hour.

Testing

Does not apply.

DELAY_FSPAIS_ALARMS (end)

Memory requirements

There are no memory requirements.

Dump and restore rules

For releases after TL13.

Parameter history

TL13

The parameter DELAY_FSPAIS_ALARMS is introduced in TL13.

DIAGHIST_M_LTF_COUNT

Parameter name

Diagnostic History Data Monthly Long-term Failure Count

Functional description

This parameter determines when the system marks an XMS-based peripheral module (XPM) unit as in-service trouble. When you set this parameter to five, and the counter registers five times, the unit sets to in-service trouble.

Rules in provisioning

The default value of this parameter is five. When you set the parameter DIAGHIST_M_LTF_DETECTION to Y and the DIAGHIST system receives five counts for one card, the system marks the card. The mark means the hardware card meets the requirements for setting the XPM unit to in-service trouble. This condition does not mean you must replace a hardware card, but you must warn the operating company personnel.

If the XPM unit is in-service, the parameter DIAGHIST_M_LTF_DETECTION is set to Y. If:

- a hardware card has counts and parameter DIAGHIST_M_LTF_COUNT increases, the system registers counts until the system reaches the most recent maximum value.
- a hardware card has counts and parameter DIAGHIST_M_LTF_COUNT decreases, the system registers counts until the system reaches the most recent maximum value.

If the XPM unit is in the in-service trouble state, the parameter DIAGHIST_M_LTF_DETECTION is set to Y, and

- the value of DIAGHIST_M_LTF_COUNT increases, the status of the XPM does not change.
- the value of DIAGHIST_M_LTF_COUNT decreases, the status of the XPM does not change.

Range information

Minimum	Maximum	Default
1	32767	5

DIAGHIST_M_LTF_COUNT (end)

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of data store.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP006

This parameter was introduced in CSP006.

DIAGHIST_M_LTF_DETECTION

Parameter name

Diagnostic History Data Monthly Long-term Failure Detection

Functional description

This parameter determines if the functionality is ON or OFF. Set this parameter to Y. If the DIAGHIST system receives a count for a hardware card from an XMS-based peripheral module (XPM) unit, the system checks the count. The system checks the count for that hardware card to determine if the counts exceed the value of the parameter DIAGHIST_M_LTF_COUNT.

If the hardware card counts are equal to or greater than the DIAGHIST_M_LTF_COUNT, the system sets the XPM unit to in-service trouble. This action alerts the operating company personnel.

If the hardware card counts are less than the DIAGHIST_M_LTF_COUNT, the system adds to the count for that hardware card.

Rules in provisioning

When you set this parameter to Y, registers for the monthly LTFs count on the next diagnostic failure for an XPM unit. Counts for the long-term failure (LTF) or short-term failure have no impact on this action.

When you set this parameter to N, the counting stops. When you return the value to Y, the register continues to count.

If the count for a card exceeds parameter DIAGHIST_M_LTF_COUNT before you set this parameter to N, the XPM unit is in-service trouble. The XPM remains in the in-service trouble state. To clear all XPMs from the in-service trouble state, execute a QUERY DIAGHIST RESET command before you set this parameter to N.

To reset the counts for an XPM unit, execute a QUERYPM DIAGHIST RESET command in the MAPCI PM level for the posted XPM. This action clears the hardware card counts. This action also clears the XPMs from the in-service trouble state.

To display hardware card counts, execute a QUERYPM DIAGHIST command with the XPM at the PM level of the MAP display. Warnings that the counts for a hardware card exceeds the value of the parameter DIAGHIST_M_LTF_COUNT display at the MAP terminal. The warning (LTF FAULTS) displays at the right of the count for the hardware card.

DIAGHIST_M_LTF_DETECTION (end)

To display the faults against the XPM unit, execute a QUERYPM FLT command at the PM level of the MAP display.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

After this parameter is set to Y, an XPM unit can be put into the in-service trouble state. You must clear all errors when you set this parameter to N. To clear all errors, post an XPM in the PM level of the MAP display and execute a QUERYPM DIAGHIST RESET command.

Verification

Does not apply

Memory requirements

This parameter requires 1 word of data store.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP006

This parameter was introduced in CSP006.

DIRP_PFILE_AUDIT

Parameter name

Device Independent Recording Package Processed File Audit

Functional description

This parameter specifies the time that the Device Independent Recording Package (DIRP) PFILE reclamation process begins.

The user deletes processed DIRP disk files through datafill for tuples RETPD and CRETPD in table DIRPSSYS. The letter P precedes a processed DIRP disk file. For more information, refer to the description of table DIRPSSYS in *Translations Guide*.

Rules in provisioning

The PFILE reclamation uses system resources. You should set the DIRP_PFILE_AUDIT to run at a time of low switch activity.

This parameter has three separate ranges of values as outlined in the following table:

Provisioning

Field	Range
ONOFF	Y or N
HOUR	0 to 23
MINUTE	0 to 59

The default value is N 3 30. This value indicates the on/off flag is set to N (off) and the default time is set for 03:00 h. In order for this audit to start running at this time, set the on/off flag to Y (on).

If you prefer a different time for the start of the PFILE audit, set the on/off flag to Y. You must then change the hour and minute fields.

If user does not want this audit, leave the on/off flag set to N.

DIRP_PFILE_AUDIT (end)

Range information

Minimum	Maximum	Default
		N 3 30

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS33

This parameter was introduced in BCS33.

DISC_TIME_BILLED

Parameter name

Disc Time Billed

Functional description

The operating company requires this parameter for all switching units with Automatic Message Accounting (AMA) tape units. The parameter indicates if you should correct the conversation time on the AMA records for called party disconnect timing.

Rules in provisioning

If the user sets this parameter to N, the value of parameter Long_Timed_Release_DISC_Time or Short_Timed_Release_DISC_Time in table OFCENG is subtracted from the conversation time on the AMA record.

If the user sets this parameter to Y, the time on the AMA record includes the disconnect timing.

The downstream processor for the AMA tapes determines the value of this flag.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

See office parameters Long_Timed_Release_DISC_Time and Short_Timed_Release_DISC_Time in table OFCENG.

Consequences

Does not apply

Verification

Does not apply

DISC_TIME_BILLED (end)

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

DISCTO_TIMEOUT_VALUE

Parameter name

Disconnect Timeout Value

Functional description

An Integrated Business Network (IBN) Private Branch Exchange (PBX) (SL-100) requires this parameter. A Plain Ordinary Telephone Service (POTS)/CENTREX (local) switching unit that has the DATAPATH feature also requires this parameter.

DATAPATH provides switched data service to a customer with Data Units (DU). The user can interface DUs to terminals, mainframes, printers, front-end communications processors, and other devices.

Some devices take a large amount amount of time to clear a call in their software. For example, the end between the application task and a communication port is not done after call takedown. A call that immediately follows to the port can gain direct access to the application task. The call gains direct access because of this delay. The application task is still associated with that port. This problem is a security threat because the caller bypasses all password checks. The caller gains access to the application without authorization.

The operating company requires the disconnect timeout (DISCTO) feature to hold a DU line in a not-available state. The line is not available for a datafillable time after call takedown. The operating company requires the feature for security reasons. This feature is optional, and assigned on a per line base.

The following types of DUs use this feature:

- LS (low speed)
- HS (high speed)
- CCU (control coax unit)
- AILC (asynch interface line card)
- DAVLC (data above voice line card)
- OPEN (any class)

This parameter specifies the disconnect timeout value, in 1-s intervals. All of the above DUs with the DISCTO feature have the same timeout value.

The operating company cannot apply the feature to DPX, CPI and DTI DUs. The feature does work with LIU-DTU loop extension.

DISCTO_TIMEOUT_VALUE (end)

Rules in provisioning

Specify the disconnect timeout value in 1 s intervals.

Range information

Minimum	Maximum	Default
0	600	1 5

Activation

Immediate

Dependencies

The operating company must assign a DU that requires this feature line option DISCTO in table KSETLINE.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS20

This parameter was introduced in BCS20.

DM_HIT_TIME

Parameter name

Digital Modem Hit Time

Functional description

Operating company personnel use this parameter during the initialization sequence of the digital modem card (NT3X02). The digital modem card connects to one the following operator positions in a DMS-200 TOPS office:

- Traffic Operator Position System (TOPS)
- Auxiliary Operator Services System (AOSS)
- Overseas Operating Center (OOC)

The parameter specifies the length of time the modem carrier can remain without detection by the modem card. After this time, the system requires the modem to report the carrier loss to the DMS central control (CC). This parameter is expressed in units of 10 ms, so that a parameter value of 20 causes a modem to ignore a carrier outage of less than 200 ms.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
1	255	40

Activation

Immediate

Dependencies

Other parameters do not affect this parameter. This parameter affects:

- the number of available test circuits
- the amount of system time doing diagnostic maintenance
- held incoming circuits waiting in queue for operators that are out of service
- available modems for connection to operator positions when carrier outages occur

Consequences

When the parameter has a low parameter value, operator positions are taken out of service for carrier conditions that do not affect service.

When the parameter has a high parameter value, operator positions remain in service for carrier conditions that affect service.

Verification

The user can verify the value of this parameter by causing a carrier outage in the demodem signal path. The outage must occur for a period greater than what the parameter represents. This action causes the system to take the connected position out of service. The system generates a TOPS, AOSS, or OOC log, indicating the lost carrier, in the system maintenance logs.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

This parameter replaces TOPS_DM_HIT_TIME, OOC_DM_HIT_TIME, and AOSS_DM_HIT_TIME as of BCS 31.

The user can perform a dump and restore from BCS30 or lower to BCS31 or higher. If the user requires this action, set the parameter to the value of AOSS/OOC/TOPS_DM_HIT_TIME from the old load.

Copy the current value of this parameter when you perform a dump and restore from BCS31 to BCS31 or higher.

Parameter history

BCS31

This parameter was introduced in BCS31.

DM_PCM_ENCODING

Parameter name

Digital Modem Pulse Code Modulation Encoding

Functional description

The operating company requires this parameter for switching units with NT3X02CA digital modems (DM). The parameter specifies the type of pulse code modulation (PCM) encoding scheme required.

The DM handles communications between the DMS Central Control (CC) and:

- Traffic Operator Position System (TOPS) positions and devices
- Auxiliary Operator Services System (AOSS) positions and devices
- the attendant consoles

The NT3X02/3X03 DM provides Bell 108 and 202 communication protocols. The NT3X02CA DM provides the Bell 212 communication protocol.

Rules in provisioning

If the switching unit is in Europe and one or more NT3X02CA DMs are provided, set the value to DM_A_LAW.

If the switching unit is in North America, leave the value of this parameter at the default of DM_MU_LAW.

Range information

Minimum	Maximum	Default
		DM_MU_LAW

Activation

Immediate

Dependencies

Field CARDCODE in table DMODEM specifies the code of the DMs.

DM_PCM_ENCODING (end)

Tables AOSSDEV, AOSSPOS, TOPSDEV and field PROTOCOL in table TOPSPOS specify the communication protocol for each of the AOSS and TOPS positions.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS22

This parameter was introduced in BCS22.

DMSBUS_POLL_FREQUENCY

Parameter name

DMS-bus Poll Frequency

Functional description

This parameter specifies the frequency at which the DMS-core polls the DMS-bus. The operating company uses this poll as an audit to determine the sanity of each DMS-bus.

A sanity poll query is sent to each DMS-bus. The sanity poll query is sent after the number of seconds the value of this office parameter specifies.

Rules in provisioning

Set the value of this parameter to 1.

Range information

Minimum	Maximum	Default
1	10	1

Activation

Immediate

The new polling value applies when the last poll completes.

Dependencies

Does not apply

Consequences

A parameter that is set too low, impacts realtime use. If the user sets the parameter too high, an inordinate delay in the detection of a DMS-bus failure can occur.

The appearance of network-wide routing loops can result from not enough polling frequency. The loops appear for the following reasons:

- The user cannot update the routing tables in the affected DMS-bus.
- The condition of the defective node is not known.

DMSBUS_POLL_FREQUENCY (end)

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS29

This parameter was introduced in BCS29.

DNLPIC_MAX_NUM_DN_TUPLES

Parameter name

Table DNLPIC Maximum Number of Directory Number Tuples

Functional description

This parameter specifies the number of tuples, in multiples of 10 000, the user can enter in table DNLPIC.

Rules in provisioning

Specify the maximum number of tuples to enter in table DNLPIC in multiples of 10 000.

Range information

Minimum	Maximum	Default
5	200	5

Activation

Immediate

Dependencies

Table DNLPIC holds the directory numbers of subscribers choosing to select a Primary IntraLATA carrier.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

DNLPIC_MAX_NUM_DN_TUPLES (end)

Parameter history

BCS29

This parameter was introduced in BCS29.

DNPIC_MAX_NUM_DN_TUPLES

Parameter name

Table DNPIC Maximum Number of Directory Number Tuples

Functional description

A Bell Operating Company (BOC) switch with the Traffic Operator Position System (TOPS) feature requires this switch.

This parameter specifies the maximum number of entries the user can enter in table Directory Number Primary Interlata Carrier (DNPIC).

Rules in provisioning

Specify the maximum number of tuples the user can enter in table DNPIC. The parameter value is in 10 000 line units with a maximum of two million directory numbers. For example, a value of 5 allows a maximum of 50 000 entries in table DNPIC.

Range information

Minimum	Maximum	Default
0	200	5

Activation

Immediate

Dependencies

Table DNPIC contains information that:

- associates a directory number with a primary Interlata Carrier (IC)
- provides a greater flexibility to TOPS Interlata Carrier Service (TICS)
- allows InterLATA calls to have the ability to obtain the IC based on the directory number of the calling party (instead of the incoming trunk group data)

Consequences

Does not apply

DNPIC_MAX_NUM_DN_TUPLES (end)

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP02

Reload restart activation requirement is removed.

BCS21

This parameter was introduced in BCS21.

DRAM_BARGE_IN

Parameter name

Digital Recorded Announcement Machine Barge In

Functional description

This parameter allows the immediate connection to the broadcasting of Digital Recorded Announcement Machine (DRAM) announcements. This parameter is correct for both Automatic Call Distribution (ACD) lines and Inter-Exchange Trunk (IET) trunks.

Rules in provisioning

The user can set this parameter to OFFRING. Each call that connects to a broadcast announcement receives audible ringing until the announcement begins a cycle.

The user can set this parameter to OFFSILENT. Each call that connects to a broadcast announcement remains silent until the announcement begins a cycle.

The user can set this parameter to ONRING. The first call that connects to a broadcast announcement receives a very short burst of audible ringing while the DRAM is connected. All following calls are immediately connected.

The user can set this parameter to ONSILENT. The first call that connects to a broadcast announcement remains silent until the announcement is ready. All following calls are immediately connected.

Range information

Minimum	Maximum	Default
		ONSILENT

Activation

Immediate

Modify the parameter on first office datafill. Additional changes to the parameter are reflected without requiring a restart.

Dependencies

Does not apply

DRAM_BARGE_IN (end)

Consequences

Does not apply

Verification

To verify that DRAM_BARGE_IN is correctly set and working, perform the following:

1. Select a broadcast DRAM announcement. Make sure that the announcement is operational.
2. Choose a first terminal and connect it to the announcement. The announcement then works as specified for the first terminal.
3. While the first terminal is connected, connect a second terminal to the announcement. The announcement then works as specified for the second terminal.

Memory requirements

Each unit requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS32

This parameter was introduced in BCS32.

DTSR_AUTO_DEACTIVATION_ENABLE

Parameter name

Dial Tone Speed Recording Automatic Deactivation Enable

Functional description

This parameter controls the ability of Dial Tone Speed Recording (DTSR) to deactivate when system resources are not enough.

Rules in provisioning

If the user sets this parameter to Y, DTSR deactivates when there is not enough system resources. In BCS19, digitone receivers are the only system resource monitored. If an RCVRQ overflow occurs, DTSR deactivates. The DTSR reactivates 15 m later if system resources are available again. If there is still not enough system resources, DTSR continues to try to reactivate until successful. The system generates a log when DTSR deactivates (DTSR100) or reactivates (DTSR101).

If the value of this parameter is set to N, the DTSR does not deactivate when digitone receivers are not enough.

Range information

Minimum	Maximum	Default
		Y

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

DTSR_AUTO_DEACTIVATION_ENABLE (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS19

This parameter was introduced in BCS19.

DYNAMIC_MEMORY_SIZE

Parameter name

DYNAMIC_MEMORY_SIZE

Functional description

The operating company uses this parameter to provision the amount of memory available for the pools of memory resources. The call processing tool manager (CPPOOLMGR) controls the memory resources.

Rules in provisioning

In the CSP05 software release, the value for this parameter is zero. When you upgrade to CSP06, use the calculations specified in the Dump and Restore Rules of this section.

Range information

Minimum	Maximum	Default
0	2048 Mbyte	0

Activation

Immediate

Dependencies

Does not apply

Consequences

If memory is a low parameter value, critical memory resources can be exhausted. This action results in alarm conditions for pools that require resources.

Verification

Enter the following commands in this order:

- CPPOOLMGR
- DMEMINFO

Memory requirements

This parameter requires increases in megabytes (1024 kbyte).

Dump and restore rules

Copy this parameter from the dump-side to the restore-side software.

Changes to an office, like line or trunk additions, affect the calculated size of DYNAMIC_MEMORY_SIZE. This office parameter has immediate change activation, so that the parameter can be re-sized at any time.

When upgrading to a CSP06 software load, the one-night process (ONP) automatically sets DYNAMIC_MEMORY_SIZE. The formula for setting DYNAMIC_MEMORY_SIZE is based on the size of the earlier feature queue (FTRQ) parameters in table OFCENG.

The calculation for each FTRQ parameter is as follows:

- (FTRQAGENTSx10 + 4680)/4681
- (FTRQ0AREASx10 + 8191)/8192
- (FTRQ2AREASx10 + 5460)/5461
- (FTRQ4AREASx10 + 4095)/4096
- (FTRQ8AREASx10 + 2729)/2730
- (FTRQ16AREASx10 + 1637)/1638
- (FTRQ32AREASx10 + 909)/910
- (FTRQ0WPERMSx10 + 5460)/5461
- (FTRQ2WPERMSx10 + 4095)/4096
- (FTRQ4WPERMSx10 + 3275)/3276
- (FTRQ8WPERMSx10 + 2339)/2340
- (FTRQ16WPERMSx10 + 1488)/1489
- (FTRQ32WPERMSx10 + 861)/862

The above calculations use integer arithmetic without rounding, decimals, or fractions. If the calculated value for any of the above is one (1), add 1 to the value. The total of the 13 calculations above is the number of large areas required for DYNAMIC_MEMORY_SIZE. To convert to the requirement for DYNAMIC_MEMORY_SIZE in Mbytes, add 15/16 to the total.

DYNAMIC_MEMORY_SIZE (end)

For first provisioning of new offices, use the following formulas:

- DMS-100 low: 1 Mbyte + 1 Mbyte per 10 300 lines (rounded to the nearest whole number)
- DMS-100 high: 1.5 Mbyte + 1.5 Mbyte per 5000 lines (rounded to the nearest whole number)

Note: The term high indicates that more than 30 percent of the lines are MDC (Meridian Digital Centrex).

Parameter history

BASE07

Office parameter DYNAMIC_MEMORY_SIZE receives control of the following pools:

- FTRQAGENTS
- FTRQ0WAREAS
- FTRQ2WAREAS
- FTRQ4WAREAS
- FTRQ8WAREAS
- FTRQ16WAREAS
- FTRQ32WAREAS
- FTRQ0WPERMS
- FTRQ2WPERMS
- FTRQ4WPERMS
- FTRQ8WPERMS
- FTRQ16WPERMS
- FTRQ32WPERMS

The above pools correspond to office parameters in table OFCENG that are deleted in BASE07.

BASE06

Office parameters in table received OFCENG.DYNAMIC_MEMORY_SIZE.

E2ALINKEQP

Parameter name

E2A Link Equipped

Functional description

This parameter specifies if a DMS SuperNode switch is equipped with E2A telemetry links. Activation of the computing module (CM) maintenance software that monitors the E2A link status requires this parameter.

Rules in provisioning

Set this parameter to Y (yes) to enable:

- an audit process to monitor the E2A link status
- the CM MAP level command interpreter (CI) command E2ALINK

Set this parameter to N (no) to disable:

- the monitoring of the E2A link status
- the E2ALINK command

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Operating company personnel can add or delete E2A telemetry equipment to or from the reset system of the DMS SuperNode switch. If operating company personnel add or delete E2A telemetry equipment, you must change parameter E2ALINKEQP.

Consequences

Provisioning of this parameter that is not correct results in the following:

- the generation of logs and alarms that are not correct for E2A link status
- the loss of the E2A link status monitoring facilities

E2ALINKEQP (end)

Verification

To verify that this parameter is correctly set, issue the CI commands TABLE OFCENG and POS E2ALINKEQP.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS33

This parameter was introduced in BCS33.

E911_AUD_RING_FROM_PSAP

Parameter name

E911 Audible Ringing From Public Safety Answering Point

Functional description

This parameter associates with E911. The E911 parameter provides a central emergency service through a DMS-100 or 100/200 switch that functions as an E911 tandem.

This parameter allows for the choice of audible ring back from DMS or Public Safety Answering Point (PSAP) equipment.

Rules in provisioning

A parameter value of N (no) allows audible ringing to originate from the DMS.

A parameter value of Y (yes) allows the audible ringing to originate from the PSAP equipment.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

To verify the functionality of this parameter, remove the audible ringing card from the customer equipment. The audible ringing no longer exists unless the DMS equipment generates the ringing.

Memory requirements

This parameter value requires 1 word of memory.

E911_AUD_RING_FROM_PSAP (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS32

This parameter was introduced in BCS32.

E911_LDT_PSAP_SW_STATUS

Parameter name

E911 Line Appearance On A Digital Trunk Public Safety Answering Point Software Status

Functional description

This parameter associates with E911. The E911 parameter provides a central emergency service through a DMS-100 or 100/200 switch that functions as an E911 tandem. With this parameter, the system can forward a tone or on-hook signal to a line appearance on a digital trunk (LDT) public safety answering point (PSAP). The system performs this action when the calling party goes on-hook.

Rules in provisioning

The parameter can take one of two values:

- ONHK_TO_LDT_PSAP
- TONE_TO_LDT_PSAP

When the user sets the parameter value to ONHK_TO_LDT_PSAP, the system forwards an ONHK to the LDT PSAP.

If the parameter value is TONE_TO_LDT_PSAP, the system presents a tone to the PSAP attendant when the calling party goes on-hook. The tone remains audible to the PSAP attendant until one of the following events occurs:

- a conference is invoked
- ringback is invoked
- the calling party returns off-hook

The system can present the tone at any time. When the tone occurs:

- there is no speech path between an agent and an E911 caller
- the RINGBACK feature is not active

Range information

Minimum	Maximum	Default
		ONHK_TO_LDT_PSAP

E911_LDT_PSAP_SW_STATUS (end)

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Each unit requires 8 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS32

This parameter was introduced in BCS32.

E911_LOCAL_ACCESS_ROH_TONE_TIME

Parameter name

E911 Local Access Receiver Offhook Tone Time

Functional description

A switch that acts as an E911 tandem and contains software packages NTXP58 and NTXN59 requires this parameter. The parameter specifies the time that receiver offhook (ROH) tone lasts during any local access 911 call. Local access 911 calls are on a line to E911 Virtual Facility Group to Public Safety Answering Point if the PSAP agent invokes ROH.

Rules in provisioning

The recommended value for this parameter is 500 (5 s). The E911 call scenarios that rely on a DMS to DMS environment use this value. A DMS to DMS environment is where the call is outgoing from the end office on an OP trunk.

Range information

Minimum	Maximum	Default
1	1000	500

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

To verify that this parameter is operational, make an E911 local access call. Have the PSAP apply ROH to the line of the caller. The duration of ROH tone (in seconds) multiplied by 100 equals the value of this parameter.

Memory requirements

Each unit requires 1 word of memory.

E911_LOCAL_ACCESS_ROH_TONE_TIME (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS34

This parameter was introduced in BCS34.

EA_CCIS6_TANDEM_BILL

Parameter name

Equal Access Common Channel Interoffice Signaling No.6 Tandem Billing

Functional description

This parameter is required in a DMS-100 equal access end office or a DMS-200 office access tandem switch.

This parameter specifies whether 119 terminating access billing records are produced for calls originating on Common Channel Interoffice Signaling No.6 (CCIS6) trunks.

Switching units that use CCIS6 trunks to interconnect with the inter-LATA carriers (IC) or International Carriers (INC), and require a 119 terminating access record to be produced for calls incoming from the IC or INC, must use this parameter.

119 Terminating Access Record billing is only supported for calls originating on CCIS6 trunks and terminating to the following:

- CCIS6
- intertoll (IT)
- SuperCAMA (SC) (2-way)
- Traffic Operator Position System (TOPS) (2-way) trunks and lines

Provisioning rules

Enter Y (yes) followed by a carrier name (for example CARR1) to activate the 119 terminating access record billing.

Leave the value of this parameter at the default of N (no) if 119 terminating access record billing is not required.

If an attempt is made to datafill NILC for the carrier name, the following error message is displayed:

```
NILC NOT PERMITTED FOR CARRIER
```

All calls originating on CCIS6 trunks are subject to billing.

EA_CCIS6_TANDEM_BILL (continued)

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

This parameter has no effect on CCIS6 billing unless feature package NTX204AA02 (CCIS Banded Signaling) is present.

The carrier name must be datafilled in table OCCNAME.

In order to define the contents of the IC/INC prefix field in the billing record, and also to control the format of the billing record produced (that is, short or long format), table OCCINFO must be datafilled.

If table OCCINFO is not datafilled with the carrier name specified, a default prefix code of 000 is placed into the IC/INC prefix field of the billing record. Also, the long format 119 Terminating access records are produced by default.

Consequences

Not applicable

Verification

With this parameter set to Y (yes) followed by a carrier name, a 119 terminating access record should be produced for CCIS6 trunk origination calls.

With this parameter set to N (no), no 119 Terminating Access Record should be produced for CCIS6 trunk origination calls.

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

EA_CCIS6_TANDEM_BILL (end)

Parameter history

BCS26

This parameter was introduced.

EA_ISUP_INTERMEDIATE_TANDEM

Parameter name

Equal Access ISDN User Part Intermediate Tandem

Functional description

Parameter EA_ISUP_INTERMEDIATE_TANDEM allows an access tandem (AT) switch to perform as an intermediate tandem (IMT) for the purpose of routing traffic. Feature ISUP Intermediate Tandem (AF7127) provides the capability for DMS-200 AT switches to interconnect to another AT. Before the NA009 release, Equal Access (EA) calls originating over an ISUP intertoll trunk (IT) to a DMS-100/200 or DMS-200 AT using GR-394 core signaling would only connect to access to carrier (ATC) type trunks. This restriction applied to local access and transport area (LATA) equal access system (LEAS) calls, E800 calls, and Cellular (CELL) 2A calls that originated at an AT. Feature ISUP Intermediate Tandem removes this restriction by allowing these calls to terminate on an IT trunk.

Provisioning rules

Datafill OFCENG parameter EA_ISUP_INTERMEDIATE_TANDEM as (Y) yes or (N) no.

- If (Y) yes, the transit network selector (TNS) will be sent on the outgoing ISUP intertoll trunk for intermediate tandem applications.
- If (N) no, the TNS will not be sent.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

No restart required if parameter value is changed. The default value of parameter EA_ISUP_INTERMEDIATE_TANDEM is set when the feature is not activated.

Dependencies

Feature ISUP Intermediate Tandem (AF7127)

EA_ISUP_INTERMEDIATE_TANDEM (end)

Consequences

Parameter EA_ISUP_INTERMEDIATE_TANDEM must be set to (Y) yes for all IMT applications. If (Y) yes, TNS will be sent on the outgoing ISUP IT for IMT applications.

Verification

Verify if this parameter is on or off by checking the value of EA_ISUP_INTERMEDIATE_TANDEM in tABLE OFCENG.

Memory requirements

Not applicable

Dump and restore rules

Copy the existing value of the parameter when doing a dump and restore.

Parameter history

NA009

Parameter EA_ISUP_INTERMEDIATE_TANDEM is created by feature ISUP Intermediate Tandem (AF7127).

EA_MF_SS7_EXT_BLOCK_COUNT

Parameter name

Equal Access Multifrequency to Signaling System 7 Extension Block Count

Functional description

Office parameter EA_MF_SS7_EXT_BLOCK_COUNT in table OFCENG specifies the number of extension blocks available to store digit stream information for equal access (EA) feature group D (FGD) multifrequency (MF) to signaling system 7 (SS7) calls. This parameter is present in all North American DMS-100/200 switch loads and can be set to a value from 0 to 800. The default value of this parameter is 0.

Office parameter EA_MF_SS7_EXT_BLOCK_COUNT must be non-zero in offices that require the carrier identification parameter (CIP) on EA FGD MF to SS7 interworking calls.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Provisioning rules

This parameter can be provisioned using the following formula:

(4 s) × (percentage of office calls that are EA FGD MF to SS7 calls) × (processor call rate)

> ***Note:*** The value 4 s in the above formula represents the longest EA FGD MF to SS7 access tandem (AT) trunk call setup time for an international or national call on a non-loaded switch.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

EA_MF_SS7_EXT_BLOCK_COUNT (continued)

Range information

Minimum	Maximum	Default
0	800	0

Activation

An increase in the value of this parameter results in an immediate increase in the number of extension blocks allocated for EA FGD MF to SS7 calls.

A reduction in the value of this parameter does not take effect until a cold restart is performed.

Dependencies

Not applicable

Consequences

Overprovisioning of extension blocks for EA FGD MF to SS7 calls results in unnecessary use of data-store memory.

Underprovisioning of extension blocks for EA FGD MF to SS7 calls results in generation of datafill log EQAC100 and routing of such calls to treatment.

Verification

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each unit requires 11 words of memory. For example, if office parameter EA_MF_SS7_EXT_BLOCK_COUNT is set to 50, 550 words of memory are required.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

EA_MF_SS7_EXT_BLOCK_COUNT (end)

NA004

NA004 introduces this parameter.

- Maximum range was changed from 200 to 800.

EA_OCS_AND_DP_OVLP_NEEDED

Parameter name

Equal Access Overlap Carrier Selection And Dial Pulse Overlap Needed

Functional description

This parameter is required for a switching unit with the Equal Access feature. It specifies whether the features Overlap Carrier Selection (OCS) and Dial Pulse (DP) trunk overlap outpulsing can both exist in the same switching unit.

If only OCS is needed in a switching unit, the real-time impact can be greatly reduced on non-OCS calls.

Provisioning rules

If this parameter is set to a value of Y (yes), both the OCS and DP features can exist in the same switch.

If the value of this parameter is set to N (no) and office parameter EA_OVERLAP_CARRIER_SELECTION in table OFCENG is set to Y (yes), line to DP trunk overlap outpulsing is not available.

Range information

Minimum	Maximum	Default
		Y

Activation

To activate a change to the value of this parameter, BSY the individual peripheral modules (PM), reload the static data, and then RETURN TO SERVICE (RTS) the PM.

Dependencies

Not applicable

Consequences

If the parameter is left at the default value of Y (yes), both forms work, but there is no real-time savings.

Verification

Not applicable

EA_OCS_AND_DP_OVLP_NEEDED (end)

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS18

This parameter was introduced in BCS18.

EA_OCS_DIGCOL_METHOD

Parameter name

Equal Access Overlap Carrier Selection Digit Collection Method

Functional description

This parameter is required in an equal access end office (EAEO) with the Overlap Carrier Selection (OCS) feature. It determines the method of digit collection for the OCS feature.

Provisioning rules

This office parameter determines the sequence of opcodes for digit collection that is sent to the line module (LM) when returning the LM to service. Depending on the value of this parameter, the digit collection follows one of the algorithms listed below. For the sake of simplicity, when digits reported to the central control (CC) are mentioned, the prefix digits are excluded. The prefix digits are always reported in the first digits message.

There are four different methods of digit collection for the OCS feature. Set this parameter to a value of NOAMBI, PFXALL, PFXAMB, or TIMING, as described below.

No ambiguous codes (NOAMBI)

This value is required if the switch does not have any ambiguous codes.

Since there are no ambiguous codes in the switch, any N0/1X three-digit combination is treated as a numbering plan area (NPA).

If the first three digits collected represent an NPA, three more digits can be collected (representing an NNX) and these six digits can be reported to the CC so that OCS can be started, if necessary.

If the first three digits collected represent an NNX, this implies a seven-digit code. If OCS applies to this three-digit code, (determined by a lookup in table LMOVCODE), these three digits are reported to the CC.

The second digits message contains the last four digits. If OCS does not apply to these three digits, four more digits are collected. All seven digits are reported in one digits message.

Ambiguous codes (PFXALL)

This value is required if the switch has ambiguous codes and all ten-digit numbers must be dialed with a prefix and all seven-digit numbers must not be dialed with a prefix, regardless of whether the call is ambiguous.

EA_OCS_DIGCOL_METHOD (continued)

The switch contains ambiguous codes, but this is not a problem because all ten-digit calls have the prefix 0 (zero) or 1, and seven-digit calls do not. If a prefix is dialed, the first digits message contains six digits and the second contains the last four digits in case OCS is required. If no prefix is dialed, this is a seven-digit call and, depending on whether OCS applies, either seven digits are reported in one message, or three digits are reported in the first message followed by four in the second message.

Ambiguous codes (PFXAMB)

This value is required if the switching unit has ambiguous codes and the prefix method is used for resolving ambiguities. It does not imply that non-ambiguous ten-digit calls must be dialed with a prefix nor that seven-digit non-ambiguous calls must be dialed without a prefix.

Since the switch has ambiguous codes and a prefix cannot be used to determine whether three digits dialed represent an NPA or an NXX if it is of the form N0/1X, all ten-digit calls require four digits messages to the CC and all ambiguous seven-digit calls that require OCS need three digits messages to the CC. This is because the first message reports the first three digits. It is necessary in case it is a seven-digit call that requires OCS.

The next message contains the next three digits in case it is a ten-digit call that requires OCS.

The next digits message contains the seventh digit, since it may be a seventh-digit call. It is not desirable to apply a timeout after the seventh digit.

The fourth digits message for ten-digit calls consists of the remaining three digits.

For the codes that are not in the form N0/1X, only one digits message is required if OCS does not apply. Two digits messages are necessary if OCS does apply (that is, one message for reporting the first three digits and the second message for reporting the last four digits).

Timing

This method is required if the switch has ambiguous codes and the timing method is used to resolve ambiguities. OCS will not apply to ambiguous calls using this method.

The switch uses the timing method to resolve ambiguities. A prefix cannot be relied upon to give any information.

For codes in the form N0/1X, three digits messages are required.

The first reports six digits in case it is a non-ambiguous NPA that requires OCS.

The next message reports the seventh digit if this is an ambiguous seventh digit call. The CC must impose the short timing at this time, since the LM is still in long timing mode.

The next message contains the last three digits for ten-digit calls, or a timeout with a last digits message for seventh-digit ambiguous calls. It is not required to report after the first three digits, because OCS is not compatible with the timing method of resolving ambiguities.

If the first three digits collected are not of the form N0/1X, this is a non-ambiguous seven-digit call. If OCS applies to these three digits, two digits messages are needed. If OCS does not apply, only one digits message is needed.

Summary

In order to achieve the least number of redundant digits messages, the ideal situation is either a switch that has no ambiguous codes or a switch that has ambiguous codes and forces all users to dial a prefix on ten-digit calls and does not allow the prefix on seven-digit calls.

The most inefficient mode of digit collection exists in those switches that have ambiguous codes that are resolved by the prefix method, but do not force a prefix on non-ambiguous ten-digit calls and do not force the absence of a prefix on seven-digit non-ambiguous calls. In other words, it is inefficient in those switching units that do not impose a uniform method of dialing. Interchangeable numbering plan area (INPA) numbers will add an additional digits message to select dialing plans. The details of this additional digits message are shown in the following table.

EA_OCS_DIGCOL_METHOD (continued)

The following table shows a summary of the digits messages required for each of the different cases mentioned above. The numbers in brackets indicate the digit after which a digits message is reported to the CC.

Digit message summary

OCS/non-OCS	Number of digits	NOAMBI	PFXALL	PFXAMB	TIMING
OCS	7	2 messages (3,7)	2 messages (3,7)	3 messages if N0/1X code (3,6,7)	3 messages if N0/1X code (6,7,timeout)
				2 messages if NNX code (3,7)	2 messages if NNX code (3,7)
OCS	10	2 messages (6,10)	2 messages (6,10)	4 messages (3,6,7,10)	3 messages (6,7,10)
non-OCS	7	1 message (7)	1 message (7)	3 messages if N0/1X code (3,6,7)	3 messages if N0/1X code (6,7,timeout)
				1 message if NNX code (7)	1 message if NNX code (7)
non-OCS	10	2 messages (6,10)	2 messages (6,10)	4 messages (3,6,7,10)	3 messages (6,7,10)
OCS with INPA/AMBI office code	7	invalid	2 messages (3, 7)	3 messages if NO/1X code (3, 6, 7) 1 message if NNX code (7)	3 messages if NO/1X code (6, 7,timeout). 1 message if NNX code (7).
OCS with INPA	10	invalid	2 messages (6, 10)	5 messages (3, 7, 8, 9, 10)	5 messages (3, 7, 8, 9, 10)
Non-OCS with INPA	10	invalid	2 messages (6, 10)	5 messages (3, 7, 8, 9, 10)	5 messages (3, 7, 8, 9, 10)

EA_OCS_DIGCOL_METHOD (continued)

Range information

Minimum	Maximum	Default
		NOAMBI

Activation

Use the following procedure to activate a change in this parameter.

Activation of EA_OCS_DIGCOL_METHOD

At the MAP

1 Ensure that you are at the PM level of the MAP display, and issue the POST command by typing

```
POST <XPM_type> <XPM_number>
```

and pressing the Enter key.

2 Verify that no faults exist by typing

```
QUERYPM FLT
```

and pressing the Enter key.

3 Busy the inactive unit by typing

```
BSY <inactive_unit> FORCE
```

and pressing the Enter key.

4 Load the static data from the CC by typing

```
LOADPM <inactive_unit> CC DATA
```

and pressing the Enter key.

5 Return to service the inactive unit by typing

```
RTS <inactive_unit> FORCE
```

and pressing the Enter key.

6 With both units in service, wait for the ISTB to clear and perform a WARM SWACT.

7 Verify that the prompt is a WARM SWACT prompt, then type

```
YES
```

and press the Enter key.

8 Busy the newly inactive unit by typing

```
BSY <inactive_unit> FORCE
```

and pressing the Enter key.

EA_OCS_DIGCOL_METHOD (end)

9 Load the static data from the CC by typing

```
LOADPM <inactive_unit> CC DATA
```

and pressing the Enter key.

10 Return to service the inactive unit by typing

```
RTS <inactive_unit> FORCE
```

and pressing the Enter key.

11 Verify that no faults exist by typing

```
QUERYPM FLT
```

and pressing the Enter key.

Note 1: Using the FORCE option allows you to bypass the ROM memory diagnostics and save time.

Note 2: Use the broadcast loading feature to activate five to ten XPM office parameters at the same time.

Note 3: For each LM/RLM PM, busy the LM/RLM, load the static data from the CC, and return the unit to service.

Dependencies

Parameter EA_Overlap_Carrier_Selection in table OFCENG must be set to a value of Y (yes).

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS17

This parameter was introduced.

EA_OSS_HOLD_TIMEOUT_MINS

Parameter name

Equal Access Operator Services System Hold Timeout In Minutes

Functional description

This parameter is required for the following:

- a local equal access end office (EAEO)
- software package NTX186AA
- the optional exchange access operator services signaling (EAOSS) feature, software package NTX888AA

The EAOSS provides the operator services system (OSS) with all the information to process calls that arrive on a single combined trunk group. The trunk group can contain calls that require one or more of the following:

- operating company (OC)
- interexchange carriers (IEC)
- toll and assistance (TA)
- OC directory assistance (DA)
- OC intercept
- OC new services
- IEC new services
- OC direct distance dialing (DDD)
- IEC direct distance dialing (DDD)

Rules in provisioning

This parameter specifies the EAOSS hold timeout in 1 min intervals.

This parameter prevents a trouble condition on a call that requires the hold function. With this parameter, the call cannot hold a line out of service for a long time. When a line goes onhook and the IEC is offhook the system begins to time the hold. If the line remains onhook the IEC must send an onhook signal or an expanded inband signal. The IEC must send a signal in the timeout interval or the system releases the connection and generates log report TRK121.

If the IEC sends an expanded inband signal, the timeout interval starts again.

EA_OSS_HOLD_TIMEOUT_MINS (end)

Range information

Minimum	Maximum	Default
1	4	2

Activation

Immediate

Dependencies

Does not apply

Consequences

If the system generates log report TRK121, the line can be out of service. This report can indicate that the value specified for this parameter is too low.

If the system generates the report and the line is good, increase the value of this parameter.

This parameter applies to calls that originate from the EAEO and use EAOSS signaling to route over a trunk group. The trunk group is type OP.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS24

Release BCS24 introduced this parameter.

EA_OVERLAP_CARRIER_SELECTION

Parameter name

Equal Access Overlap Carrier Selection

Functional description

This parameter is required in an equal access end office (EAEO) with the Overlap Carrier Selection (OCS) feature. It determines the type of digit collection performed by the line module (LM) or line concentrating module (LCM).

Provisioning rules

If the value of this parameter is set to N (no), normal digit collection is performed.

If the value of this parameter is set to Y (yes), the LM/LCM performs digit collection for equal access overlap carrier selection.

Range information

Minimum	Maximum	Default
		N

Activation

To activate a change in the value of this parameter for LMs, BSY the individual LM, reload the static data, and then return to service (RTS) the LM.

To activate a change in the value of this parameter for LTC/LGC units, BSY the inactive LTC/LGC unit, reload the static data, and then perform a WARMSWACT to that LTC/LGC unit.

Dependencies

A call uses OCS only if the entry in subtable STDPRT of table STDPRTCT for the digits dialed has the EA selector and fields RTEPRSNT and OCS set to Y (yes) and the data in table OCCINFO for the carrier has field OVERLAP set to Y (yes).

Feature OCS allows outpulsing of digits before the subscriber completes dialing. Domestic calls begin OCS when there are four digits left to be dialed. International calls begin OCS after the country code has been dialed.

EA_OVERLAP_CARRIER_SELECTION (end)

The office parameter for the DP overlap outpulsing feature MIN_NUMBER_OF_DIGS_RPTD_ON_OVERLAP is not applicable to OCS.

See parameter EA_OCS_AND_DP_OVLP_NEEDED in table OFCENG for assigning both OCS and DP overlap outpulsing.

Table LMOVCODE contains the codes to which OCS is not applicable.

Setting this parameter to Y (yes) affects almost all calls in an EAEO (equal access and non-equal access). The impact is that of an additional digits message it would not get if the parameter was set to N (no). Calls using OCS save between 2 and 4 seconds of post dial delay per call.

The parameter EA_OCS_DIGCOL_Method in table OFCENG specifies the method of digit collection for the OCS feature.

Consequences

This parameter must never be set to Y (yes) in a non-EAEO switching unit. If it is set to Y, many digit sequences supported by the line module digit collection scheme will be invalid or handled incorrectly.

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS17

This parameter was introduced.

EA_TAB_CICSIZE4_OBSOLETE

Parameter name

Equal Access Table CICSIZE4 Obsolete

Functional description

The system uses this parameter in a DMS-100 or DMS-200 switch. This parameter specifies if the system requires table CICSIZE4 to specify the trunk groups that use four-digit carrier identification codes (CIC).

Rules in provisioning

Set this parameter to Y (yes) if the office uses only three-digit CICs. This specifies that table CICSIZE4 is not necessary. When this parameter is 4, table CICSIZE4 is blank.

Set this parameter to N (no) if the office uses three-digit and four-digit CICs. When this parameter is N, table CICSIZE4 contains a list of all trunk groups that use four-digit CICs. All other trunk groups use three-digit CICs.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

When this parameter is set to Y (yes), do not enter data is table CICSIZE4.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Each unit requires 1 word of memory.

EA_TAB_CICSIZE4_OBSOLETE (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA002

The NA002 release revised under section “Dependencies." The revised text states that when this parameter is Y, do not enter data in table CICSIZE4. This text is not consistent with the information in section “Rules in provisioning."

BCS34

This parameter was introduced in BCS34.

EA_WITH_CD

Parameter name

Equal Access With Circle Digit

Functional description

This parameter specifies whether the switching unit has the Circle Digit (CD) and the Equal Access (EA) feature.

Provisioning rules

If the value of this parameter is set to Y (yes), the following rules apply:

- Circle digit 0 (CD0) cannot be used as an option on eight or ten-party lines.
- Service orders system (SERVORD) prohibits the addition of the CD0 option in table LENLINES to ten-party lines. This limits ten-party lines to only having nine members on the line.
- If the user tries to add CD0 to a line, the message “CD0 incompatible with EA_WITH_CD" appears and disallows a change to the line.
- Lines with a circle digit can make 10XXX calls to go through InterLATA Carriers (IC).
- Lines with a circle digit can have primary interLATA carriers (PIC).
- Parameter SPDD_DIGIT in table OFCENG cannot be set to 10.
- A circle digit can be used for these types of equal access calls:
  - 1 + CD + 7 or 10 digits
  - 0 + CD + 7 or 10 digits
  - 10XXX + 1 + CD + 7 or 10 digits
  - 10XXX + 0 + CD + 7 or 10 digits
  - 10XXX + 0 + CD
  - 10XXX + 0 + CD + #
- International call types or operator call types that are blocked from completing the following call types are not supported:
  - 10XXX+00
  - 00

EA_WITH_CD (end)

If the value of this parameter is set to N (no), the following rules apply:

- Option CD0 (circle digit zero) can be assigned to eight and ten-party lines in table LENLINES.
- Lines with a circle digit cannot make 10XXX calls. They are routed to vacant code treatment (VACT).
- Lines with a circle digit can have PICs.
- The office parameter SPDD_DIGIT in table OFCENG can be set to a value from 0 to 10.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

BCS20

This parameter was introduced.

EADAS_CIC_STATUS

Parameter name

EADAS_CIC_STATUS

Functional description

Office parameter EADAS_CIC_STATUS determines if the switch uses a 3- or 4-digit carrier indentification code (CIC).

Provisioning rules

Not Applicable.

Range information

Minimum	Maximum	Default
THREEDIG	FOURDIG	THREEDIG

Activation

Immediate

Requirements

None

Results

All incoming and outgoing EADAS/NM messages are prefixed with the CIC XXX when the switch uses 3-digit CICs. All incoming and outgoing EADAS/NM messages are prefixed with the CIC XXXX when the switch uses 4-digit CICs.

Testing

Not applicable.

Memory requirements

None

Dump and restore rules

None

EADAS_CIC_STATUS (end)

Parameter history

NA012

Development activity 59007680 (4-Digit CIC OM Support on EADAS) introduces this office parameter to table OFCENG.

EADAS24H_BUFFER_SIZE

Parameter name

Engineering and Administrative Data Acquisition System 24-hour Buffer Size

Functional description

A switch with the Engineering and Administrative Data Acquisition System (EADAS) interface feature requires this parameter. This parameter specifies the number of words that the system allocates for the buffer. The buffer collects the 24 h data for EADAS.

Rules in provisioning

If the office does not use EADAS, set the value of this parameter to 0.

The minimum buffer size is 18 words. The buffer size does not depend on the EADAS feature.

You must enter this parameter with a value between 18 and 256 000 for a switch that has the EADAS feature.

Before changing EADAS buffer parameters, disable the CLASS in table OMACC by changing the ENABLED field from Y to N.

The following two items are only applicable to SOC OAM0007.

- Before setting parameter EADAS_GENERIC_ID to a Semi TR compliant header, verify that the downstream EADAS data collector can handle
  - — the new header, and
  - — an office CLLI that is not in the NON-TR compliant header
- Set office parameter EADAS_GENERIC_ID to a Semi TR compliant header by setting the first field of the parameter to 74.

To set the parameter to a value greater than 32 000, turn on SOC option OAM00007.

The system displays the following message if you specify a value that is less than 18 or greater than 256 000:

```
BUFFER SIZE MUST BE MINIMUM 18 AND MAXIMUM 256000
```

EADAS24H_BUFFER_SIZE (continued)

Range information

Minimum	Maximum	Default
18	256000	0

Activation

The first time the office is configured for EADAS, you require a RESTART RELOAD to implement the feature.

If you change this parameter from a 0 to a value that is not 0, perform a RESTART RELOAD. Offices configured earlier for EADAS are not required to be started again when EADAS/DC buffer sizes are changed.

If you change this parameter from a value that is not 0 to another value that is not 0, the activation is IMMEDIATE.

Dependencies

Enter this parameter before you enter the operational measurements (OM) or EADAS class.

If the office uses EADAS, enter the first five tuples in table OMACC before RESTART/RELOAD. Enter the first five tuples as follows:

CLASS	ENABLED	PRECSN	WHEN
EADAS30M	Y	SPRECISION	HALFHOURLY C00
EADAS60M	Y	SPRECISION	HOURLY C00
EADAS24H	Y	SPRECISION	DAILY 0 C00 0 C00
EADAS60M	N	SPRECISION	AUTO
EADAS60M	N	SPRECISION	AUTO

Consequences

The EADAS buffers are blocks of store in segments and can be a maximum of 256K words in size.

EADAS24H_BUFFER_SIZE (end)

If the parameter is not large enough, the downstream EADAS data collector will not receive all the data. The system will generate an EAD109 log to notify you of this condition.

Verification

Verify that you have set this parameter correctly and that the parameter functions. Check that the downstream EADAS data collector receives data correctly. The system must not generate EAD109 logs.

Memory requirements

This feature allows EADAS buffer memory increase to a maximum of 256 000 words. The system allocates the memory in blocks of 4096 words.

If you set office parameter EADAS_SHORT_XFER_ALLOWED in table OFCOPT to Y (yes), then the buffer requires twice the memory.

Dump and restore rules

This feature formats again to make sure that the minimum value of the office parameter is satisfied over an ONP. For example, the original side can have a value of 12. The procedure to format again changes the new side value to 18.

Parameter history

NA008

The upper bound of buffer size range was increased to 256 000 words. The need for a new start when EADAS/DC buffer sizes are changed was eliminated. Clarification for SOC option OAM00007 was added.

CSP02

Reload restart and NORESTARTSWACT activation requirements were removed in CSP02.

BCS36

The NORESTARTSWACT activation was added in BCS36.

BCS19

This parameter was introduced in BCS 19.

EADAS30M_BUFFER_SIZE

Parameter name

Engineering and Administrative Data Acquisition System 30-minute Buffer Size

Functional description

A switch with the Engineering and Administrative Data Acquisition System (EADAS) interface feature requires this parameter. This parameter specifies the number of words of data store in the buffer that collects the 30 min data for EADAS.

Rules in provisioning

If the office does not use EADAS, set the value of this parameter to 0.

The minimum buffer size is 18 words. The buffer size does not depend on the EADAS feature.

You must enter this parameter with a value between 18 and 256 000 for a switch that has the EADAS feature.

Before changing EADAS buffer parameters, disable the CLASS in table OMACC by changing the ENABLED field from Y to N.

The following two items are only applicable to SOC OAM0007.

- Before setting parameter EADAS_GENERIC_ID to a Semi TR compliant header, verify that the downstream EADAS data collector can handle
  - — the new header, and
  - — an office CLLI that is not in the NON-TR compliant header
- Set office parameter EADAS_GENERIC_ID to a Semi TR compliant header by setting the first field of the parameter to 74.

To set the parameter to a value greater than 32 000, turn on SOC option OAM00007.

The system displays the following message if you specify a value that is less than 18 or greater than 256 000:

```
BUFFER SIZE MUST BE MINIMUM 18 AND MAXIMUM 256000
```

EADAS30M_BUFFER_SIZE (continued)

Range information

Minimum	Maximum	Default
18	256000	0

Activation

The first time the office is configured for EADAS, you require a RESTART RELOAD to implement the feature.

If you change this parameter from 0 to a value that is not 0, perform a RESTART/RELOAD. Offices configured earlier for EADAS are not required to be started again when EADAS/DC buffer sizes are changed.

If you change this parameter from a value that is not 0 to another value that is not 0, the activation is IMMEDIATE.

Dependencies

Enter this parameter before you enter the operational measurements (OM) or EADAS class.

If the office uses EDAS, enter the first five tuples in table OMACC before RESTART/RELOAD. Enter the first five tuples as follows:

CLASS	ENABLED	PRECSN	WHEN
EADAS30M	Y	SPRECISION	HALFHOURLY C00
EADAS60M	Y	SPRECISION	HOURLY C00
EADAS24H	Y	SPRECISION	DAILY 0 C00 0 C00
EADAS60M	N	SPRECISION	AUTO
EADAS60M	N	SPRECISION	AUTO

Consequences

The EADAS buffers are blocks of store in segments and can be a maximum of 256 000 words.

EADAS30M_BUFFER_SIZE (end)

If the parameter is not large enough, the downstream EADAS data collector will not receive all the data. The system will generate an EAD109 log to notify you of this condition.

Verification

Verify that you have set this parameter correctly and that the parameter functions. Check that the downstream EADAS data collector receives data correctly. The system must not generate EAD109 logs.

Memory requirements

This feature allows EADAS buffer memory to increase to a maximum of 256 000 words. The system allocates the memory in blocks of 4096 words.

If you set the office parameter EADAS_SHORT_XFER_ALLOWED in table OFCOPT to Y (yes), then the buffer requires twice the memory.

Dump and restore rules

This feature formats again to make sure that the minimum value of the office parameter is satisfied over an ONP. For example, the original side can have a value of 12. The procedure to format again changes the new side value to 18.

Parameter history

NA008

The upper bound of buffer size range was increased to 256 000 words. The need for a new start when EADAS/DC buffer sizes are changed was eliminated. Clarification for SOC option OAM00007 was added.

CSP02

The reload restart and NORESTARTSWACT activation requirements were removed in CSP02.

BCS36

The NORESTARTSWACT activation was added in BCS36.

BCS19

This parameter was introduced in BCS 19.

EADAS60M_BUFFER_SIZE

Parameter name

Engineering and Administrative Data Acquisition System 60-minute Buffer Size

Functional description

A switch with the Engineering and Administrative Data Acquisition System (EADAS) interface feature requires this parameter. This parameter specifies the number of words that the system allocates for the buffer. The buffer collects the 60 min data for EADAS.

Rules in provisioning

If the office does not use EADAS, set the value of this parameter to 0.

The minimum buffer size is 18 words. The buffer size does not depend on the EADAS feature.

You must enter this parameter with a value between 18 and 256 000 for a switch that has the EADAS feature.

Before changing EADAS buffer parameters, disable the CLASS in table OMACC by changing the ENABLED field from Y to N.

The following two items are only applicable to SOC OAM0007.

- Before setting parameter EADAS_GENERIC_ID to a Semi TR compliant header, verify that the downstream EADAS data collector can handle
  - — the new header, and
  - — an office CLLI that is not in the NON-TR compliant header
- Set office parameter EADAS_GENERIC_ID to a Semi TR compliant header by setting the first field of the parameter to 74.

To set the parameter to a value greater than 32 000, turn on SOC option OAM00007.

The system displays the following message if you specify a value that is less than 18 or greater than 256 000:

```
BUFFER SIZE MUST BE MINIMUM 18 AND MAXIMUM 256000
```

EADAS60M_BUFFER_SIZE (continued)

Range information

Minimum	Maximum	Default
18	256000	0

Activation

The first time the office is configured for EADAS, you require a RESTART RELOAD to implement the feature.

If you change this parameter from a 0 to a value that is not 0, a RESTART/RELOAD is required. Offices configured earlier for EADAS are not required to be started again when EADAS/DC buffer sizes are changed.

If you change this parameter from a value that is not 0 to another value that is not 0, the activation is IMMEDIATE.

Dependencies

Enter this parameter before you enter the operational measurements (OM) or EADAS class.

If the office uses EDAS, enter the first five tuples in table OMACC before RESTART/RELOAD. Enter the first five tuples as follows:

CLASS	ENABLED	PRECSN	WHEN
EADAS30M	Y	SPRECISION	HALFHOURLY C00
EADAS60M	Y	SPRECISION	HOURLY C00
EADAS24H	Y	SPRECISION	DAILY 0 C00 0 C00
EADAS60M	N	SPRECISION	AUTO
EADAS60M	N	SPRECISION	AUTO

Consequences

The EADAS buffers are blocks of store in segments and can be a maximum of 256 000 words.

EADAS60M_BUFFER_SIZE (end)

If the parameter is not large enough, the downstream EADAS data collector will not receive all the data. The system will generate an EAD109 log to notify you of this condition.

Verification

Verify that you have set this parameter correctly and that the parameter functions. Check that the downstream EADAS data collector receives data correctly. The system must not generate EAD109 logs.

Memory requirements

This feature allows EADAS buffer memory to increase to a maximum of 256 000 words. The system allocates the memory in blocks of 4096 words.

If you set office parameter EADAS_SHORT_XFER_ALLOWED in table OFCOPT to Y (yes), the buffer requires twice the memory.

Dump and restore rules

This feature formats again to make sure that the minimum value of the office parameter is satisfied over an ONP. For example, the original side can have a value of 12. The procedure to format again changes the new side value to 18.

Parameter history

NA008

The upper bound of buffer size range was increased to 256 000. The need for a new start when EADAS/DC buffer sizes are changed was eliminated. Clarification for SOC option OAM00007 was added.

CSP02

Reload restart and NORESTARTSWACT activation requirements were removed in CSP02.

BCS36

The NORESTARTSWACT activation was added in BCS36.

BCS19

This parameter was introduced in BCS 19.

EAEO_FOUR_DIGIT_CIC_STATUS

Parameter name

Equal Access End Office Four-Digit Carrier Identification Code Status

Functional description

This parameter is used in a DMS-100 switch. It is required to support the implementation of feature group D (FGD) carrier identification code (CIC) expansion for multifrequency (MF) and Signaling System 7 (SS7) at end offices (EO) and access tandems (AT).

The CIC expansion feature is implemented in phases. This parameter controls line module (LM) digit collection in the transition phases through the three available values. The final phase of this transition is a full expansion to four-digit CICs in the series 5XXX and 6XXX and seven-digit carrier access codes (CAC) in the form 101XXXX.

Provisioning rules

Leave the value of this parameter at the default value of THREEDIG to allow three-digit CICs and five-digit CACs (10XXX).

Set the value of this parameter to PERMISSIVE to allow five-digit CACs (10XXX) and seven-digit CACs (1010XXX, 1015XXX, and 1016XXX) during the permissive dialing period.

Set the value of this parameter to FOURDIG so that only four-digit CICs and seven-digit CACs (101XXXX) are valid.

Range information

Minimum	Maximum	Default
		THREEDIG

Activation

Use the following procedure to activate a change in this parameter.

EAEO_FOUR_DIGIT_CIC_STATUS (continued)

Activation of EAEO_FOUR_DIGIT_CIC_STATUS

At the MAP

1 Ensure that you are at the PM level of the MAP display, and issue the POST command by typing

```
POST <XPM_type> <XPM_number>
```

and pressing the Enter key.

2 Verify that no faults exist by typing

```
QUERYPM FLT
```

and pressing the Enter key.

3 Busy the inactive unit by typing

```
BSY <inactive_unit> FORCE
```

and pressing the Enter key.

4 Load the static data from the CC by typing

```
LOADPM <inactive_unit> CC DATA
```

and pressing the Enter key.

5 Return to service the inactive unit by typing

```
RTS <inactive_unit> FORCE
```

and pressing the Enter key.

6 With both units in service, wait for the ISTB to clear and perform a WARM SWACT.

7 Verify that the prompt is a WARM SWACT prompt, then type

```
YES
```

and press the Enter key.

8 Busy the newly inactive unit by typing

```
BSY <inactive_unit> FORCE
```

and pressing the Enter key.

9 Load the static data from the CC by typing

```
LOADPM <inactive_unit> CC DATA
```

and pressing the Enter key.

10 Return to service the inactive unit by typing

```
RTS <inactive_unit> FORCE
```

and pressing the Enter key.

11 Verify that no faults exist by typing

```
QUERYPM FLT
```

and pressing the Enter key.

Note 1: Using the FORCE option allows you to bypass the ROM memory diagnostics and save time.

EAEO_FOUR_DIGIT_CIC_STATUS (end)

Note 2: Use the broadcast loading feature to activate five to ten XPM office parameters at the same time.

Note 3: For each LM/RLM PM, busy the LM/RLM, load the static data from the CC, and return the unit to service.

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

NA004

Clarified the activation section by adding steps.

BCS34

This parameter was introduced in BCS34.

EAEO_OFFICE_TYPE

Parameter name

Equal Access End Office Office Type

Functional description

The office parameter EAEO_OFFICE_TYPE allows software “EQA Equal Acc End Office" and “LEA EQA NCEO/LEAS I/F" to coexist in end offices.

Three levels of Equal Access End Office (EAEO) support exist. These levels include the following:

- An Equal Access Conforming End Office has functionality EQA Equal Acc End Office and fully supports Equal Access as defined in Bellcore FSD 20-24-0000.
- The system uses a Non-Conforming End Office with functionality LEA EQA NCEO/LEAS I/F (DMS-100 Non-Conforming End Office) when a DMS-200 LATA Equal Access System (LEAS) office provides Equal Access. The DMS-100 has Centralized Automatic Message Accounting (CAMA) trunks linked to the LEAS office and must outpulse what the customer dials.
- A Non-Equal Access End Office does not require functionality LEA EQA NCEO/LEAS I/F. The system uses the Non-Equal Access End Office when the end office does not support Equal Access.

Rules in provisioning

This office parameter defaults to CONFORMING to indicate an Equal Access Conforming End Office.

In the event the office is not an Equal Access Conforming End Office, you must set the office parameter to reflect one of the following true office types:

- Set this parameter to NON_CONFORMING to identify the office type as a Non-Conforming End Office *with* “LEA EQA NCEO/LEAS I/F" interfacing with a DMS-200 LEAS Office.
- Set this parameter to NON_EQUAL_ACCESS to identify the office type as a Non-Equal Access Office *without* “LEA EQA NCEO/LEAS I/F."

EAEO_OFFICE_TYPE (end)

Range information

Minimum	Maximum	Default
		CONFORMING

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of data store.

Dump and restore rules

The value of this parameter defaults to CONFORMING. If the default is not the true office type, the operating company must reset the parameter value to reflect the true office type.

Parameter history

EUR003

Design activity AR1605, Europe Work for CCM SLCF Program, deleted this parameter for the European software release.

NA002

Design activity BR41127, NTX12AA and NTX186AB Unable to Coexist on Same Load, introduced this parameter in NA002.

EBS_BUZZ_SPLASH_ON

Parameter name

Electronic Business Sets Buzz Splash On

Functional description

The system requires this parameter for a switching unit with Electronic Business Sets (EBS). This parameter indicates if an EBS that has call forwarding active (and ring splash on) receives a short buzzer tone. This parameter also indicates when an EBC has the make set busy feature active.

Rules in provisioning

If the user requires the buzzer tone on an EBS, leave value of this parameter at the default value of Y (yes).

If the user does not require the buzzer tone on an EBS, set the value of this parameter to N (no).

Range information

Minimum	Maximum	Default
		Y

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

EBS_BUZZ_SPLASH_ON (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS25.

EBS_TO_TRUNK_TRD_TIME

Parameter name

Electronic Business Sets To Trunk Timed Release Disconnect Time

Functional description

The system requires this parameter for a switching unit with electronic business sets (EBS). This parameter allows the operating company to modify the duration of timed release disconnect (TRD) timing performed on EBS-to-trunk calls.

The operating company can use this parameter to eliminate call cutoffs on EBS-to-trunk calls because of trunk on-hook transients.

Rules in provisioning

The default value of TRD timing on EBS-to-trunk calls is 500 ms. If the TRD timing is greater than 500 ms intervals, specify the TRD timing in 10 ms intervals.

Range information

Minimum	Maximum	Default
16	32 767	50
16 (with Meridian OffNet Access)	32 767 (with Meridian OffNet Access)	

Activation

To change the value of this office parameter, load the LM/LTC execs again.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Place an EBS-to-trunk call to check that this parameter works. Check that the TRD timing is the timing the parameter indicates.

EBS_TO_TRUNK_TRD_TIME (end)

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA008

The range of EBS_TO_TRUNK_TRD_TIME is 16 to 32 767.

BCS25

This parameter was introduced in BCS25.

ENHANCED_DEAD_SYSTEM_ALARM

Parameter name

Enhanced Dead System Alarm

Functional description

This parameter specifies the type of dead system alarm (DSA) the switching unit requires.

The two types of DSAs are the normal DSA and the enhanced DSA. The enhanced DSA detects when call processing does not occur or when call processing has important problems. The enhanced DSA causes the same audible and visual alarms as the DSA and also causes a software alarm.

Rules in provisioning

If the user leaves this office parameter at the default of N (no), the system uses the normal DSA. In signaling transfer point (STP) offices, this parameter must be N.

If the user set this office parameter to Y (yes), the system uses the enhanced DSA.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

ENHANCED_DEAD_SYSTEM_ALARM (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS20

This parameter was introduced in BCS20.

ESAENTRY

Parameter name

Emergency Stand Alone Entry

Functional description

This parameter is required for all switching units with remote operation and feature package NTX025AA (Emergency Stand Alone Operation).

The value of this parameter represents the delay between link failure and the remote line module (RLM) dropping into Emergency Stand Alone (ESA) mode.

The time is defined in 10-s intervals. For example, the default value of 6 indicates a delay of 60 s.

Provisioning rules

Specify the delay between link failure and the (RLM) dropping into ESA mode in 10-s intervals.

Range information

Minimum	Maximum	Default
3	100	6

Activation

Done at the time of the ESA load

Dependencies

Not applicable

Consequences

Not applicable

Verification

Not applicable

Memory requirements

This parameter has no memory impact.

ESAENTRY (end)

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

ESAEXIT

Parameter name

Emergency Stand Alone Exit

Functional description

The system requires this parameter for all switching units with remote operation and feature package NTX025AA (Emergency Stand Alone Operation).

The value of this office parameter represents a delay between when the system restores links and when the remote line module (RLM) leaves emergency stand alone (ESA) mode.

Rules in provisioning

Specify the delay between when the system restores the links and the RLM comes out of ESA mode.

The parameter defines the value in 10 s intervals. For example, the default value of 2 indicates a delay of 20 s.

A value of 0 (zero) indicates that you must perform a manual RTS (return to service).

Range information

Minimum	Maximum	Default
0	100	0

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

ESAEXIT (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

EXPIRED_PASSWORD_GRACE

Parameter name

Expired Password Grace

Functional description

The Expired_Password _Grace parameter appears if ENHANCED_PASSWORD_CONTROL in table OFCOPT is set to Y (yes).

This parameter specifies the number of logons for which a password is valid. The password must be older than the value of the PASSWORD_LIFETIME parameter.

If this feature is not required, set this parameter to the maximum value of 32767 logons.

Rules in provisioning

Does not apply.

Range information

Minimum	Maximum	Default
1	3 2767	3

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

The Expired_Password_Grace parameter does not impact memory.

EXPIRED_PASSWORD_GRACE (end)

Dump and restore rules

Copy the current value of this parameter if the following conditions apply:

- the parameter is not an extension
- the operating company did not request a change to the value of this parameter

FEATURE_ADMIN_CHARGE

Parameter name

Feature Administration Charge

Functional description

A local or toll switching unit with international translations requires the Feature_Admin_Charge parameter. This parameter specifies if administration activities (table control) require feature charges.

The software automatically attempts to charge for feature or option assignment. This process occurs for table control operations, if features or options are added to a line. The software cannot distinguish a dump and restore that performs the same table control operations.

The office company examines the value of this office parameter before the office company attempts this charge.

Rules for Provisioning

If the value of this parameter to N (no), the operating company does not charge for operations.

If the value of the parameter is Y (yes), the operating company charges for operations.

The operating company must set the value to N during operations for which the operating company charges the subscriber. For example, the operating company can issue service orders again and not apply the journal file. The software can distinguish application of the journal file. If the operating company does not set the value to N, the operating company charges the subscriber two times for feature assignment.

The operating company must reset the value of this parameter to Y when these operations finish. If the operating company does not reset the parameter, charges for assignment do not take place for new service orders.

Range information

Minimum	Maximum	Default
		Y

FEATURE_ADMIN_CHARGE (end)

Activation

Immediate

Dependencies

Table TEATCHG stores features to which the operating company applies charges.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

When you perform a dump and restore, leave the parameter value at the default.

Parameter history

BCS21

This parameter was introduced in BCS21.

FLOW_CONTROL_TIMEOUT

Parameter name

Flow Control Timeout

Functional description

All switching units require the Flow_Control_Timeout parameter. This parameter specifies the timeout or reset value of the one-at-a-time trunk module (TM) or digital carrier module (DCM) trunk attempt threshold. This parameter specifies timeouts and reset values in 160-ms intervals.

The system blocks new traffic that the central control (CC) cannot handle in heavy periods until the one-at-a-time flag is reset. Each attempt starts this process in the TM or DCM that is reset when the CC accepts the origination message. If the interval that this parameter specifies does not contain an acknowledgment of this message, the flag is reset. This flow control does not apply to immediate start (IM) trunks.

Rules in provisioning

Specify the interval for acknowledgment of the origination message before the one-at-a-time flag is reset. The value of this parameter appears in 160-ms units. For example, the default value of 6 represents an interval of 960 ms.

Range information

Minimum	Maximum	Default
0	255	6

Activation

If the peripheral module (PM) does not connect to a line trunk controller (LTC), issue a busy (BSY) and return to service (RTS) on the PM. This action activates a change to this parameter.

If the PM connects to an LTC, put the LTC through an RTS sequence to activate a change to this parameter. Either BSY and RTS both sides of the peripheral or perform a double warm SWACT to update both the active and non-active sides.

Dependencies

Does not apply

FLOW_CONTROL_TIMEOUT (end)

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

FRR_ROUTING_RULES_OVERRIDE

Parameter name

Flexible Reroute Routing Rules Override

Functional description

The FRR Routing Rules Override parameter allows the network manager to select if the Network Management (NWM) Flexible Reroute (FRR) controls must follow FRR routing rules. The NWM FRR controls use the FRR routing rules when the NWM FRR controls reroute a call over A VIA route.

Before BCS30, the call type of the rerouted call determined the routing rules that the NWMFRR controls used. For information on the routing rules, refer to the *Feature Description Manual*.

Rules in provisioning

Set the parameter to Y (yes) to override the routing rules that the FRR employs to reroute calls over VIA routes. This parameter allows you to override the routing rules for the whole office.

When the parameter is set to N (no), this parameter does not affect the FRR controls.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

When the override is in effect, calls use the in-chain routing rule over VIA routes. The FGD calls do not use in-chain routing. When the FRR reroutes the FGD calls from an intertoll trunk group to an ATC trunk group, the FGD calls must use standard routing. The use of in-chain routing can violate the FGD signaling.

FRR_ROUTING_RULES_OVERRIDE (end)

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS30

This parameter was introduced in BCS30.

FTRQ2WPERMS

Parameter name

Feature Queue 2 Word Permanent Blocks

Functional description

This parameter is required in a switching unit with North American translations and the Meridian Digital Centrex (MDC) or Residential Enhanced Services (RES) features, or a DMS-100 world switch with universal translations.

The parameter specifies, in multiples of 10, the number of FTRQ2WPERMS blocks allocated in data store. For example, the default value of 1 represents an allocation of 10 FTRQ2WPERMS.

Message waiting

FTRQ2WPERMS blocks are associated with message waiting features.

Station message waiting, (MWT) also known as call request (CAR), provides a system where the originating party of a call can leave a message indication for the terminating party of a call if the terminating party is absent or busy.

The message waiting is indicated by the lighting of a lamp (on an electronic business set), the lighting of a LINK lamp (on a LINK set), or by providing stuttered dial tone (on a 2500 set). The party that receives the message indication can then retrieve the message.

MWT maintains the queued messages against the stations during cold restarts.

For this parameter, MWT refers to all features that can leave messages on a user station, including Attendant Message Waiting, Station Message Waiting, and Electronic Business Set as a Message Center.

The FTRQ2WPERM block is designed for long term information holding. This block is held for up to 60 days.

Busy lamp field and set-based busy lamp field

FTRQ2WPERMS blocks are associated with busy lamp field features.

Busy lamp field (BLF) monitors the busy or idle status of a specific directory number (DN) station.

Set-based busy lamp field (SBLF) monitors the busy or idle status of a specific Meridian Business Set (MBS) station.

FTRQ2WPERMS (continued)

Keys with associated lamps on the monitoring Meridian Digital Centrex (MDC) set are assigned the BLF and SBLF features. The busy status is indicated by the monitoring set key lamp being lit. The idle status is indicated by the monitoring set key lamp being turned off.

BLF and SBLF maintain the busy or idle status against the stations during restarts.

Provisioning rules

The value for the parameter can be determined based on the following equation:

$$value = ((A \cdot B) + 9) / 10$$

where

A
is the total number of IBN lines (2500 and MBS) and RES lines with MWT assigned

B
is the average number of messages

The recommended value for B is 0.7

Range information

Minimum	Maximum	Default
0	3277 (NT40) 6553 (SuperNode)	1

Activation

Increase - immediate

Decrease - cold restart or NORESTARTSWACT (Refer to the procedure in the *NORESTARTSWACT/MTCSWACT User's Guide*, 297-1001-546.)

FTRQ2WPERMS (end)

Dependencies

Not applicable

Consequences

Not applicable

Verification

To verify that sufficient software resources provided by this parameter have been allocated, see the following entry in OM group FTRQ by using the CI command OMSHOW FTRQ ACTIVE 8:

```
FTRQFTRQSEIZFTRQOVFLFTRQHI FTRQ2WPERMS000
```

Measurement FTRQHI records the maximum number of feature queue blocks in simultaneous use during the current transfer period.

See the *Operational Measurements Reference Manual* for a description of OM group FTRQ.

Memory requirements

Each block requires 8 words of memory. Each increment of the parameter value requires 80 words.

Dump and restore rules

This parameter was introduced in BCS29.

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

TL06

Added BLF and SBLF to functional description.

BCS36

Activation requirements changed.

FTRQ8WPERMS

Parameter name

Feature Queue 8 Word Permanent Blocks (FTRQ8WPERMS)

Functional description

Executive Message Waiting (EMW) features use this parameter in the following environments:

- DMS-100
- DMS-200 with featured ISDN user part (ISUP)
- centralized private branch exchange (PBX)
- SL-100
- plain old telephone service (POTS)

Associated features for FTRQ8WPERMS include the following:

- Leave Messaging (LVM)
- Message List Editing (MLE)
- Call Covering (CCV)
- Executive Message Waiting (EMW)
- Message Waiting (MWT)
- Call Request (CAR)
- Uniform Call Distribution (UCD)

The LVM feature allows a party to leave a message against a base station to return a call. The base station can then use the MWT retrieval capability to return the call to the party that activates the feature.

The CCV feature allows a third party to answer a redirected call and activate CCV to leave a message. The CCV leaves a message for the base station that originates from the calling party.

The MLE feature provides the capability to inspect, delete, or return selected messages.

The UCD feature on Meridian 500/2500 stations is a feature that can adapt to operate in Integrated Business Networks (IBN). The UCD option is provided to each customer.

The Call Logging feature also uses the blocks that this parameter provides. The FTRQ8WPERM blocks store nodal entries in the incoming callers list

(ICL) of a subscriber. Each nodal entry in the ICL of the subscriber requires one ICL.

A Call Logging subscriber can have a maximum of 32 recorded numbers at a given time. Each subscriber can require 32 FTRQWPERMS. The rules in provisioning include this worst-case maximum.

The parameter specifies, in multiples of ten, the number of FTRQ8WPERM blocks in the data store. The FTRQ8WPERM blocks store long term information. These blocks hold information for a maximum of 60 days.

Rules in provisioning

Use the following calculation to determine the value of this parameter:

- # FTRQ8WPERM blocks ={[(# of lines with EMW) X (Avg num of msg for each line)] + 9} + (32 X the number of lines with Call Logging) / 10 + (sum of agents in service for each group) / 10

where

# of lines with EM
= number of IBN lines (2500 and MBS) with EMW assigned

Avg num of msg per line
= average number of messages queued for each line

agents in service per group
= sum of the MAXPOS field in table UCDGRP for each UCD group

Each display set with EMW can hold 31 FTRQ8WPERM blocks. The set can hold the blocks for a maximum of 60 days.

Each set has an average of two queued messages.

The 1000 display sets require 28 000 words of store.

FTRQ8WPERMS (continued)

Range information

Minimum	Maximum	Default
0	3277 (NT40) 6553 (SuperNode)	1

Activation

Increase is immediate.

Decrease is cold restart or NORESTARTSWACT. Refer to the procedure in the *NORESTARTSWACT/MTCSWACT User's Guide*, 297-1001-546.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Check if enough parameter software resources are available. Refer to the following entry in OM Group FTRQ.

```
     FTRQ        FTRQSEIZ     FTRQOVFL     FTRQHI
 FTRQ8WPERMS           0            0           0
```

Measurement FTRQHI records the maximum number of feature queue blocks in use at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group FTRQ.

Memory requirements

Each increase of this parameter value requires 120 words of memory. For example, a value of 20 requires 2400 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

FTRQ8WPERMS (end)

Parameter history

BCS29

This parameter was introduced in BCS29.

TL05

The UCD was added to functional description in TL05. Added to calculation in provisioning rules: total # of agents in service for each group / 10.

BCS36

Activation requirements changed in BCS36.

FTRQ16WAREAS

Parameter name

Feature Queue 16 Word Areas

Functional description

A Meridian Digital Centrex (MDC) switching unit requires this parameter.

The following features require these blocks:

- Ring Again (RAG) or Network Ring Again
- Query Busy Set (QBS)
- Digital Private Network Call Back When Free
- Stored Program Control Call Management Service (SPC-CMS)
- Automatic Call Distribution (ACD)
- ACD Extended Call Management (CompuCALL)

Each simultaneous or Network RAG request requires one block. The system holds the block from the time a request queues until one of the following actions deletes the request:

- RAG recall answer
- timeout
- cancellation
- error

Integrated Business Network (IBN) lines with the network RAG feature can use the Last Number Redial (LNR) feature. The LNR feature increases the provisioning requirement for FTRQ8WAREAS. The number of IBN lines with Network RAG that do not have the LNR feature determines the increase. This action occurs when the system can allocate an LNR FTRQ block against an IBN line with the Network RAG feature. When the system allocates a block, removal of the Network RAG feature does not cause deallocation of the LNR FTRQ block. Only a restart can deallocate the LNR FTRQ block.

Digital Private Network Signaling System (DPNSS) is a United Kingdom (UK) form of Common Channel Signaling (CCS). Call Back When Free (CBWF) is a service that allows the system to complete a call across the DPNSS network. The system completes the call if the original attempt receives a busy signal. The system must provide enough 16-word FTR blocks for the CBWF to function correctly. The CBWF request, originating or terminating, requires one area.

FTRQ16WAREAS (continued)

This parameter associates with the SPC-CMS feature that allows the Call Management Service (CMS) network to include Stored Program Control (SPC) switches. The SPC switches provide One-Way CMS. One-Way CMS provides the following CMS features:

- Calling Number Delivery (CND)
- Automatic Call Setup (ACS)
- Call Screening to the DMS subscribers

One-way CMS does not provide these features to SPC subscribers.

Each agent position requires one block to become active in an ACD group and receive ACD calls. The value of this parameter must be greater than the maximum number of ACD agent positions that are present.

Some agents cannot become active in an ACD group if not enough blocks are available. It is possible that all agent positions in the switching unit can become active at the same time. To prevent this problem, make the following checks when service orders or table control enters new INCALLS keys in table KSETLINE.

The total number of INCALLS keys in the switching unit can exceed 75% of the value of this parameter. If the number of keys exceed 75%, the system adds the tuple and generates the following warning:

```
WARNING--POTENTIAL FTRQ 16WAREA PROBLEM--
MORE THAN 75% USED BY ACD.
```

If the system generates this message, the user must increase the value of this parameter.

The total number of INCALLS keys in the switching unit can equal the value of this parameter. If the number of keys equals the value of the parameter, the system does not add the tuple. The system generates the following warning:

```
ERROR--NO FTRQ 16WAREAs AVAILABLE
```

If the system generates this message, the user must increase the user can enter more INCALLS keys.

Every ACD agent in an ACD group that associates with a host computer through CompuCall requires one block.

FTRQ16WAREAS (continued)

Rules in provisioning

This parameter represents the number of FTRQ16WAREA blocks in groups of 10. For example, a value of 60 represents 600 FTRQ16WAREA blocks.

Use the following formula to determine the number of required FTRQ16WAREA blocks:

number of FTRQ16WAREA blocks
= ((no. of simultaneous monitored LENs with QBS active + 9)
+ (2 X the number of busy hour ACB and AR feature attempts)
+ (number of simultaneous CBWF attempts)
+ (maximum number of ACD agents)
+ ((no. of entries in table SPCTRKS / average holding time in seconds of a call in busy hour) X SPCCLITIMEOUT value))

To determine the value of this parameter, divide the number you derive from the above formula by 10.

Refer to table KSETFEAT for feature QBS. Refer to table IBNLINES for options ACB or AR. Refer to tables IBNFEAT and KSETLINE for ACD agents. Refer to parameter SPCCLITIMEOUT in table OFCENG. Leave the parameter at the default value for the following:

- MDC switching units that do not have the QSB or ACD feature
- RES switching units that do not have the ACB and AR feature
- a switching unit in the United Kingdom that do not have the DPNSS feature

Range information

Minimum	Maximum	Default
0	3277 (NT40) 6553 (SuperNode)	1
Note: 6553 range is for Canada only.		

Activation

Increase is immediate.

Decrease occurs through a cold restart or NORESTARTSWACT.

Refer to the procedure in the *NORESTARTSWACT/MTCSWACT User's Guide*, 297-1001-546.

Dependencies

If the number of IBN or RES lines with the above features changes, the value of this parameter must change. The value of the parameter must change at extension time. The value of the parameter also changes if the number of ACD agents changes.

Consequences

A lack of blocks can cause an overflow condition on this software resource. If an overflow condition is present, the system routes calls to No Software Resource (NOSR) treatment in the appropriate treatment table. The system routes calls that request a FTRQ16WAREA block.

The overprovisioning of the value of this parameter wastes memory.

Verification

Make sure that enough software resources are available. This parameter provides the software resources. Refer to the following entry in OM group FTRQ:

```
     FTRQ         FTRQSEIZ    FTRQOVFL    FTRQHI
 FTRQ16WAREAS         0             0           0
```

Measurement FTRQHI records the maximum number of feature queue blocks in use at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group FTRQ.

Any value that is not 0 in FTRQOVFL indicates that not enough provisioning occurred.

Memory requirements

Each block requires 20 words of memory. The system provisions the blocks in groups of 10. The total memory that this parameter uses is the value multiplied by 200.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

FTRQ16WAREAS (end)

Parameter history

BCS36

Activation requirements changed in BCS36.

BCS21

This parameter was introduced in BCS21.

FTRQAGENTS

Parameter name

Feature Queue Agents (FTRQAGENTS)

Functional description

The following requires the FTRQAGENTS:

- a switching unit with North American translations and one of the following features:
  - — the Integrated Business Network (IBN) feature
  - — the Residential Enhanced Services (RES) feature
- a local (international) switching unit with universal translations

The implementation of Multiple Position Hunt with Queuing requires additional FTRQAGENTS.

This parameter associates with the SPC-CMS feature.

The value of this parameter is in units of 10 FTRQAGENT areas. For example, the default value 1 represents 10 FTRQAGENT areas.

The FTRQAGENTS parameter specifies the number of agents that can have the following features waiting or active:

- Automatic Call Back or Recall
- Automatic Call Distribution
- Call Back Queuing
- Call Forward Busy
- Call Forward Don't Answer
- Call Forward Validation Terminating
- Call Hold
- Call Park
- Camp on
- Last Number Redial
- Message Waiting/Call Request
- Query Busy Station
- Ring Again
- Station Message Desk Interface

FTRQAGENTS (continued)

- Uniform Call Distribution
- SPC-CMS
- Multiple Position Hunt with Queue

If the switching unit has the Automatic Call Distribution (ACD) feature, each agent position needs an FTRQ agent area. The FTRQ agent area allows the agent position to become active in an ACD group and receive ACD calls.

There must be one FTRQAGENT area for each potential ACD agent position.

Each secondary directory number (DN) assigned to an ACD agent position requires one FTRQAGENT. Each answer agent key requires one FTRQAGENT when the ACD/Management Information System (MIS) software is present. This requirement does not depend on the assignment of MIS to the ACD groups.

Some agents cannot become active in an ACD group if FTRQ agent areas are not available. The worst case occurs when all agent positions in the switching unit require activation at the same time. The system makes the following checks to make sure the worst case does not occur. The checks occur when service orders or table control cause data entry of new INCALLS keys in table KSETLINE:

- the total number of INCALLS keys in the switching unit can exceed 75% of the number of FTRQ agent areas allocated. The tuple is added but the following warning appears:

  ```
  WARNING--POTENTIAL FTRQ AGENT AREA PROBLEM--MORE THAN 75%
  USED BY ACD
  ```

  Note: If the system generates this message, the operating company must increase the value of this parameter.

- the number of INCALLS keys in the switching unit already can equal 100% of the number of FTRQ agent areas allocated. The tuple is not added and the following error message appears:

  ```
  ERROR--NO FTRQ AGENT AREAS AVAILABLE
  ```

  Note: If the system generates this message, the operating company must increase the value of this parameter before the addition of any tuple.

FTRQAGENTS (continued)

This parameter also associates with the SPC-CMS feature. The SPC-CMS feature includes SPC (Stored Program Control) switches in the Call Management Service (CMS) Network. The inclusion of SPC switches provides one-way CMS. One-way CMS provides CMS features like Calling Number Delivery (CND), Automatic Call Setup (ACS), and Call Screening to the DMS subscribers. One-way CMS does not provide CMS features to the SPC subscribers.

The SP-1/2W and #1ESS are SPC switches that cannot transmit calling line information through the standard per trunk signaling (PTS) trunking.

Each calling line information (CLI) message for SPC-CMS requires 1 FTRQAGENTS block.

FTRQAGENTS (continued)

Rules in provisioning

The recommended value for this parameter is equal to the lowest value of the following:

- 3277 for an NT40-based switching unit
- 6553 for a SuperNode switching unit
- the following calculation

```
# FTRQAGENT areas of ten =  (number of lines with ACD
                            +   number of lines with UCD
                            +   number of lines with LNR) / 10)
                            +   0.03 X (lines with Call Back Queuing
                            +   lines with CFB
                            +   lines with CFDA
                            +   lines with Call Forward Validation
                                Terminating
                            +   lines with Call Hold
                            +   lines with Call Park
                            +   lines with Camp On
                            +   lines with Message Waiting/Call
                                Request
                            +   lines with SMDI
                            +   KSET Ring Again Keys
                            +   Query Busy Station Keys)
                            +   (2 X the number of busy hour
                                Automatic Call Back and Automatic
                                Ringback feature attempts / 10)
                            +   (((No. of entries in table SPCTRKS /
                                average holding time in sec of a call
                                in busy hour) x SPCCLITIMEOUT
                                value) / 10)
                            +   (lines on a non-data link console
                                when a Multiple Position Hunt
                                arrangement is employed)
                            +   (number of SDN keys assigned to
                                ACD agent positions / 10)
                            +   (number of AAK when ACD MIS
                                software is present / 10)
```

A new switching unit (except Bell Canada) with North American translations that does not have traffic figures available requires this parameter. The

FTRQAGENTS (continued)

recommended value for this parameter is equal to the lowest value of the following:

- 3277 for an NT40-based switching unit
- 6553 for a SuperNode switching unit
- the following calculation

```
# FTRQAGENT areas of ten   =   (maximum number of RES lines
                               +  maximum number of IBN lines
                               +  maximum number of KSET lines
                               +  maximum number of ACD lines
                               +  maximum number of RAG
                                  requests) / 10
                               +  (((No. of entries in table SPCTRKS /
                                  average holding time in sec of a call
                                  in busy hour) x SPCCLITIMEOUT
                                  value) / 10)
                               +  lines on a non-data link console when
                                  a Multiple Position Hunt arrangement
                                  is employed
```

For a Bell Canada switching unit, the value for this parameter is equal to the lowest value of the following:

- 3277 for an NT40-based switching unit
- 6553 for a SuperNode switching unit
- the following calculation

```
# FTRQAGENT areas of ten =  (maximum number of RES lines
                            +  maximum number of IBN lines
                            +  maximum number of KSET
                               lines) / 10
                            +  (((No. of entries in table SPCTRKS /
                               average holding time in sec of a call
                               in busy hour) X SPCCLITIMEOUT
                               value) / 10)
                            +  lines on a non-data link console when
                               a Multiple Position Hunt arrangement
                               is employed
```

FTRQAGENTS (continued)

For a local switching unit (international) with universal translations, the value for this parameter is equal to the lowest value of the following:

- 3277 for an NT40-based switching unit
- 6553 for a SuperNode switching unit
- the maximum number of simultaneous Ring Again requests / 10

The maximum number is the maximum number that the engineering interval requires.

Range information

Minimum	Maximum	Default
0	32767 (NT40) 6553 (SuperNode)	1
Note: 32767 is for Canada only.		

Activation

Increase is immediate.

Decrease is cold restart or NORESTARTSWACT.Refer to the procedure in the *NORESTARTSWACT/MTCSWACT User's Guide*, 297-1001-546.

Dependencies

At extension time, change the value of this parameter if the number of IBN, RES, or KSET lines, or SPC trunks increases.

Consequences

Underprovisioning of this parameter keeps calls queued and prevents termination of calls on a non-data link console.

Verification

Check if enough parameter software resources are available. Use the CI command OMSHOW FTRQ ACTIVE 0 and read the following entry:

```
       FTRQSEIZ        FTRQOVFL       FTRQHI
 0 FTRQAGENTS 10
          0              0              0
```

Any value in FTRQOVFL that is not zero indicates underprovisioning.

Measurement FTRQHI records the maximum number of feature queue areas in use at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group FTRQ.

Memory requirements

Each increase of this parameter value requires 70 words of memory. To determine the amount of memory that this office parameter requires, use the following formula:

FTRQAGENTS value X 70

Dump and restore rules

When you perform a dump and restore from software releases BCS29 to BCS29 or higher, increase the parameter value as follows:

increase in the number of FTRQAGENT areas of ten
= (average holding time in sec of a call in busy hour
X SPCCLITIMEOUT value) / 10

Parameter history

BCS36

Activation requirements changed in BCS36.

FTRQAUDIT

Parameter name

Feature Queue Audit (FTRQAUDIT)

Functional description

The following switching units require the FTRQAUDIT:

- a switching unit with North American translations and one of the following features:
  - — the Integrated Business Network (IBN)
  - — the Residential Enhanced Services (RES)
- a switching unit (international) with universal translations

This parameter specifies the audit pause time in 1 min intervals for the feature queuing software resources (FTRQ) audit.

Rules in provisioning

Leave this parameter at default value 10.

Range information

Minimum	Maximum	Default
0	32767	1 0

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

FTRQAUDIT (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS14

This parameter was introduced in BSC14.

FXOGS_REMBSY_BITS

Parameter name

Foreign Exchange Remote Make Busy Bits

Functional description

A switching unit that has foreign exchange (FX) trunks requires the FXOGS_REMSBY_BITS parameter. This parameter specifies the type of supervision required to busy FX trunks with the remote make busy (REMBSY) option. Supervision maintains a constant seizure. When the line connects again, the far end recognizes the seizure of the line.

This parameter allows the operating company to specify the type of supervision the operating company requires to busy FX trunks with REMBSY = Y.

Rules in provisioning

The values for this parameter are A_OFF_B_OFF_HK, and A_ON_B_OFF_HK.

If this parameter is set to A_ON_B_OFF_HK the supervision is loop closed, ring ground.

Loop open, ring ground is a type of supervision. Leave the value of this parameter at the default value A_OFF_B_OFF_HK if loop open, ring ground is the type of supervision required. You can use loop open, ring ground supervision to busy out FX trunks with option REMBSY set to Y (yes).

Loop closed, ring ground is a type of supervision. Set the value of this parameter to A_ON_B_OFF_HK if loop closed, ring ground is the type of supervision required. You can use loop closed, ring ground supervision to busy out FX trunks with option REMBSY set to Y.

Range information

Minimum	Maximum	Default
		A_OFF_B_OFF_HK

Activation

Immediate

FXOGS_REMBSY_BITS (end)

Dependencies

Table TRKSGRP contains option REMBSY.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS19

This parameter was introduced in BCS19.

GLOBAL_CUTOFF_ON_DISCONNECT

Parameter name

Global Cutoff on Disconnect

Functional description

This parameter provides the operating company with the ability to supply an open battery signal at the call disconnect. The open battery signal applies to the agent that remains off-hook, either the originating or terminating agent. The ability to supply this signal applies to every call with a standard line in a DMS-100 switching unit. The length of the open battery signal can vary from 500 ms to 10 s. Standard lines include all lines in the DMS except EBS, ISDN, and multi-party lines.

This parameter indicates when the system used the disconnect cutoff relay for the call party disconnect. When long or short disconnect timing expires, the system registers an open battery signal, and routes the call to disconnect treatment.

Rules in provisioning

This parameter contains the following three fields:

- The field GC_PRESENCE_BOOL activates or deactivates the GLOBAL_CUTOFF_ON_DISCONNECT feature. The line side equipment detects open intervals. Open intervals indicate a disconnection, and the line side equipment should release the call. This field indicates when the system an open battery signal at disconnect. The agent in the call remains off-hook when the system releases the network connection for the call.
  - — If this field is set to Y (yes), the system sends an open battery signal.
  - — If this field is set to N (no), the system does not send an open battery signal.
- Field GC_RELAY_OPEN_TIME specifies the length of the open battery signal if field GC_PRESENCE_BOOL is set to Y (yes). The normal entry is 80 and provides an 800 ms open interval. The LSSGR states that this value must be equal to or greater than 800 ms. The value must be equal to or less than 1 s.
  - — Specify the length of the open battery signal in 10-ms units. For example, the default value of 80 specifies an open battery signal of 800 ms. The signal length can be from 500 ms to 10 s (values 50 to 1000).
  - — If field GC_PRESENCE_BOOL is set to N (no), leave the value of this field at the default.

GLOBAL_CUTOFF_ON_DISCONNECT (continued)

- Field GC_DELAY_RELAY_OPEN specifies the time of the cutoff relay. The cutoff relay can occur before or after the calling party disconnects and the system initiates the disconnect timing. When the called party disconnects, this field does not affect the parameter.
  - — If the value of this field is set to Y (yes), the cutoff relay operates after normal disconnect.
  - — If the value of this field is set to N (no), the cutoff relay is operational. Disconnect timing follows the cutoff relay.
  - — If this feature is not required, leave the value at the default of N 80 N.
  - — Explanation of the setting for GC_DELAY_RELAY_OPEN is necessary in relation to TRD (Timed Release Disconnect). This field cannot allow operation of the relay before TRD timing. Operation of the relay before TRD timing occurs and kills the connection. If the relay opens during TRD timing, the system maintains the connection. The TRD timing is STRD or LTRD. The TRD timing occurs before the application of the open interval. Performance of TRD timing after application of the interval prevents connection if the party goes off-hook before the TRD expires.
  - — This field applies to normal disconnect timing when TRD is not in effect. This field indicates if the parameter must open the relay before or after normal disconnect timing. Disconnect timing is not available for a called party disconnect when the field is set to Y. The following warning appears after activation of the office parameter in the switch:

    ```
    AFFECTED PERIPHERALS MUST HAVE THEIR EXECS RESENT TO
    ACTIVATE GLOBAL COD. *WARNING* NON STANDARD EXIT TIMING
    WILL BE USED
    ```
  - — The recommended default value of this parameter is N. The value of this parameter does not affect GC_RELAY_OPEN_TIME.

Settings to use for ETSI V5.2 lines

To provide end of call signaling (EOC) for ETSI V5.2 lines, set the GC_PRESENCE_BOOL to Y. Also set the EOC field in table V5SIG to Y.

GLOBAL_CUTOFF_ON_DISCONNECT (continued)

Range information

Minimum	Maximum	Default
		N 80 N

Activation

To activate a change in this parameter, all line peripherals must have the EXECS sent again. For line modules (LM) and remote line modules (RLM), busy (BSY), load (LOADPM), and return to service (RTS) the peripheral.

For XPM-based peripherals such as LTC or LGC, perform the following steps:

- busy the inactive unit (BSY INACTIVE)
- reload static data to the inactive unit (LOADPM INACTIVE CC DATA)
- return to service the inactive unit (RTS INACTIVE)
- perform a warm swact (SWACT)
- busy and return to service (BSY, RTS) each LCM unit

Dependencies

Refer to parameter COPP_RELAY_OPEN_TIME in table OFCENG for the time for the permanent signal and partial dial open battery.

The parameter does not affect the actions that the line option Cutoff On Disconnect (COD) performs. If an active parameter has a line option COD, the line actions take priority over the actions of the parameter. The line is IDLED when the system assigns the COD option. In some call scenarios, the cutoff relay operation can occur twice. The *SERVORD Reference Manual* describes the COD line option.

If line option COD is not active, the system routes the call to the disconnect treatment specified in table TMTCNTL, subtable TREAT.

Consequences

Set the value of this parameter to N 80 N when the switching unit is in the cut state. Use the LMCUT software program to set the parameter value.

Problems occur with the load box if the value is Y (yes) and the switching unit is in the cut state.

GLOBAL_CUTOFF_ON_DISCONNECT (end)

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

GOS_NUM_RU

Parameter name

Global Operator Services Number Of Recording Units

Functional description

This parameter defines the number of recording units that the Traffic Operator Position System (TOPS) calls can use in an open numbering plan environment.

Rules in provisioning

Use the following formula for a stand-alone TOPS or a TOPS host operator centralization switching unit. Do not use the formula for a Bell Canada switching unit.

```
Quantity    =   (( % of MCCS calls
        +   % of ACTS calls
        +   % of CAMA calls
        +   % of 0+ and 0– calls)
        X   (number of TOPS trunk group members)
        +   (number of TOPS Positions
        +   TOPS waiting Q size)
```

Use the following formula for a TOPS remote operator centralization switching unit. Do not use the formula for a Bell Canada switching unit.

```
Quantity    =   (number of incoming calls
        +   % of ACTS calls
        +   % of CAMA calls
        +   % of 0+ and 0– calls)
        X   (number of TOPS trunk group members)
        +   (3 X number of Voice Links)
```

Use the following formula for a Bell Canada switching unit.

```
Quantity    =   (number of TOPS incoming trunks X 0.75)
        +   (number of TOPS positions X 2)
        +   (number of voice links X 3)
```

The value must not exceed the number of TOPS trunk group units.

Range information

Minimum	Maximum	Default
0	32767	0

Activation

Increase is activation is immediate.

Decrease is occurs after a cold restart.

Dependencies

Global Operator Services (GOS) recording units are used when the value of field NUMBERING_PLAN in table TOPSPARM is set to the value of OPEN_NUMBERING.

Consequences

The overprovisioning of this parameter results in wasted memory.

If this parameter does not have enough provisions, calls intended for the operator service can be routed to treatment.

Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 56 and read the following entry:

```
      EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
      EXTHI2
56 GOSSRU
       100
          0             0            0             0
          0
```

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See the *Operational Measurements Reference Manual* for a description of OM group EXT.

Any nonzero value in EXTOVFL indicates underprovisioning.

GOS_NUM_RU (end)

Memory requirements

For SuperNode switches, each GOS recording unit requires 387 words of memory.

For NT40 switches, each GOS recording unit requires 194 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS34

Feature AF4170 introduces this parameter.

GROUND_START_DELAY

Parameter name

Ground Start Delay

Functional description

A switching unit with ground start lines requires this parameter. This parameter specifies the length of delay before the system activates the tip relay on the line card. Then the system can begin digit collection. This feature applies to Digitone receivers and universal tone receivers (UTR).

The value of this parameter appears in 10 ms intervals. For example, a value of 4 represents 40 ms.

The default value of 4 is enough of a delay for most switching units.

Switching units can require greater delays because of hardware configurations. You must alter the value of this parameter for the switching units that require a greater delay.

Rules in provisioning

If the ground start delay is greater than 40 ms, set the value of the parameter to the required ground start delay.

Range information

Minimum	Maximum	Default
4	50	4 (40 ms)

Activation

Immediate

Dependencies

Does not apply

Consequences

If this value is not set correctly, calls from ground start lines do not complete.

Verification

Does not apply

GROUND_START_DELAY (end)

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

NA002

A sentence from the section Functional description states that the Ground Start Delay feature performs only with Digitone receivers. This feature can perform with the Digitone and universal tone receivers.

BCS24

This parameter was introduced in BCS24.

GUARANTEED_TERMINAL_CPU_SHARE

Parameter name

Guaranteed Terminal Central Processing Unit Share

Functional description

All switching units require this parameter to set the percentage of real time for central processing units (CPU) available to guaranteed terminals. Changes to this parameter affect the percentage of real time for call processing.

All switching units require this parameter to set the central processing units (CPU) percentage of real time available to guaranteed terminals. Changes to this parameter affect the percentage of real time for call processing.

Rules in provisioning

The CPU reserves 9% of processing time for overhead activities. The CPU reserves 8% of processing time for background activities like low priority audits, MAP terminals, and log devices. The 83% of the CPU time that remains is available for engineered events. The 83% can be used for call processing. This value represents the call processing capacity of the CPU.

This parameter specifies the fraction of the 83% of CPU that remains in percentage form available to guaranteed terminals. The recommended values are 2 to 16 in increments of 1.

A signal transfer point (STP) office does not contain call processing software. The recommended value for this parameter in an STP office is the maximum of 16.

Note: After a reload restart or initial program load (IPL), the system initializes current allocations in parameter GUARANTEED_TERMINAL_CPU_SHARE. The Scheduler Application template defines the current allocations. Operating company personnel can set the GUARANTEED_TERMINAL_CPU_SHARE to a value of x. After a reload restart, the system does not use value x. The tuple is set to the current allocations defined in the Scheduler Application state template. Use the Table Editor to change this allocation.

GUARANTEED_TERMINAL_CPU_SHARE (continued)

Range information

Minimum	Maximum	Default
2	16	2 10 (STP offices only)

Activation

Immediate

Dependencies

Does not apply

Consequences

A value of more than 2% for this parameter means that the call processing capacity is less than 83%.

Use the following formula to determine the new call processing capacity:

% call processing = 85 - GUARANTEED_TERMINAL_CPU_SHARE

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP05

Note added. The note describes the re-initialization change, the result from a reload restart from the Scheduler Application state template in CSP05.

BCS36

A new STP default value and recommended value was added in BCS36.

GUARANTEED_TERMINAL_CPU_SHARE (end)

BCS21

This parameter was introduced in BCS21.

HPC_IAM_Priority

Parameter name

HPC IAM Message Priority

Note: The use of HPC Network Capabilities is restricted in the United States and U.S. Territories (Puerto Rico and U.S. Virgin Islands) to National Security/Emergency Preparedness (NS/EP) users authorized by the Office of he Manager, National Communication System (OMNCS). Telco deployment of these HPC Network Capabilities must be coordinated with the OMNCS at the following address:Office of the ManagerNational Communications SystemAttn: GETS Program Office701 South Courthouse Rd.Arlington, VA 22204-2198email: gets@ncs.gov

Functional description

Office parameter HPC_IAM_PRIORITY in table OFCENG allows the central office administrator to provision the IAM message priority value for HPC calls to 1, or the value of the received IAM when equal to or greater than 1.

Provisioning rules

The value provided for HPC_IAM_PRIORITY is at the discretion of the operating company.

Range information

Minimum	Maximum	Default
	ALWAYS _ONE ONE_OR_HIGHER_ BASED_ON_IAM_ RCVD	ALWAYS_ONE

Activation

The method of change activation is immediate.

Dependencies

None

Consequences

None

HPC_IAM_Priority (end)

Verification

The value of this parameter can be verified using the DISPLAY command (DISPLAY HPC_IAM_PRIORITY).

Memory requirements

None

Dump and restore rules

None

Parameter history

NA009

Office parameter HPC_IAM_PRIORITY was introduced for the GETS HPC feature.

IAM_USE_NAME_CHARS

Parameter name

Initial Address Message Use Name Characters

Functional description

This parameter is required to deliver the new functionality of primary rate interface (PRI) calling name delivery originating call, over an ISDN user part (ISUP) trunk, using SS7 signaling. This functionality is required when the initial address message (IAM) information element contains the generic name (GN) parameter. This office parameter indicates if it is okey to use the name from the GN parameter. This enhancement to Calling Name Delivery is currently only supported within ISDN PRI NA009.

Provisioning rules

If the new office parameter IAM_USE_NAME_CHARS is set to Y, an attempt is made to obtain the calling name from the GN parameter. If set to N the GN parameter is not used to obtain the calling party name. The default data for this parameter is N.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Not applicable

Consequences

If the office parameter is set to N, the calling name within the IAM is ignored and either a TCAP query is made to a centralized database or a local name lookup in table DNATTRS occurs.

Verification

Not applicable

IAM_USE_NAME_CHARS (end)

Memory requirements

This parameter has no memory impact.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

NA009

This parameter was introduced in NA009.

IMMEDIATE_RING_ENABLE

Parameter name

Immediate Ring Enable

Functional description

A local switching unit with North American translations or a local international switching unit with universal translations requires this parameter.

This parameter specifies if the switching unit has immediate ringing.

Immediate ring causes the line of the subscriber to ring at any point in the ringing cycle. The system applies a short burst of ringing to the line at the time of connection. The system can apply the short burst during the silent period of the ringing cycle.

Immediate ring is not available for four, eight and ten party lines that have a coded or superimposed ringing.

Rules in provisioning

Set the value of this parameter to Y (yes), to activate the immediate ring.

Leave the value of this parameter at the default of N (no) if the immediate ring is not required.

The following table indicates the recommended values for a local international switching unit with universal translations.

Universal translation values by country

Country	Value
Caribbean Expansion Program (CEP)	Y
China	N
Turkey	Y

Set the value to Y if a switching unit in Morocco requires immediate ringing.

Set the value to Y if a switching unit in Portugal requires immediate ringing.

Interaction with Table OFCENG parameter ALLOW_RINGING_ON_TIP_SIDE

The ALLOW_RINGING_ON_TIP_SIDE parameter can override parameter IMMEDIATE_RING_ENABLE. If the value of

IMMEDIATE_RING_ENABLE (end)

ALLOW_RINGING_ON_TIP_SIDE is Y, lines with type A line cards and distinctive ringing ring normally. A value of Y does not cause immediate ringing.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

IMP_DELAY

Parameter name

Inbound Modem Pooling Delay

Functional description

This parameter starts a timer in the Inbound Modem Pooling (IMP) feature on Data Unit (DU) terminations. This timer starts after the DU answers. The system uses the timer while the IMP waits for an inband_sync message from the DU.

Rules in provisioning

The T-Link handshaking must start before the system achieves Inband sync. The office parameter TLINK_DELAY in table OFCENG delays the start of the T-Link Handshaking. The delay in the IMP feature must increase by the length of the parameter TLINK_DELAY. The software makes this change. The length of the timer that the IMP feature uses is the total of two parameters. These parameters are IMP_DELAY and TLINK_DELAY.

Range information

Minimum	Maximum	Default
0	5	2

Activation

Immediate

Dependencies

Refer to office parameter TLINK_DELAY in table OFCENG.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS15.

INTL_GATEWAY_OFFICE

Parameter name

International Gateway Office

Functional description

This parameter is visible to the administration in an international switching unit with the INTLGTSB subsystem. The parameter specifies if the switching unit has international translations with gateway attributes.

Rules in provisioning

Set the parameter value to Y if the switching unit has feature package NTX496AA03 (Gateway Access) and requires the following gateway attribute:

Determination of KP1 and KP2 Signals:

The KP (start-of-pulse) forward signal indicates that transmission of the address signals is ready to start. In international conditions, KP signals have the following indications:

- KP1 = terminating
- KP2 = transit call

If this parameter is not required, leave the value at default N.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

INTL_GATEWAY_OFFICE (end)

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS21.

INTL_LOCAL_OFFICE

Parameter name

International Local Office

Functional description

This parameter appears only in a local switching unit with standard translations. The parameter specifies that the switching unit is an international local switching unit. The switching unit uses software and hardware for international use.

Rules in provisioning

Leave the value of this parameter at default value Y.

Range information

Minimum	Maximum	Default
		Y

Activation

Activation occurs for a cold restart.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

INTL_LOCAL_OFFICE (end)

Parameter history

This parameter was introduced in BCS19.

INTRALATA_DEFAULT_USE_TRKLATA

Parameter name

Intra-LATA Default Use TRKLATA

Functional description

This parameter determines if default routing through table TRKLATA occurs when table DNLPIC does not have an entry for a subscriber.

Rules in provisioning

Set the value of this parameter to Y (yes). This condition allows default routing to occur when table DNLPIC does not have an entry for a subscriber.

Set the value of this parameter to N (no) if this function is not required.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

See the data schema section of the *Translations Guide* for a description of table DNLPIC.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Each unit requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

INTRALATA_DEFAULT_USE_TRKLATA (end)

Parameter history

This parameter was introduced in BCS32.

INWATS_CCIS_OSO_ENABLE

Parameter name

Inward-Wide Area Telephone Service (INWATS) Common Channel Interoffice Signaling (CCIS) Originating Serving Office (OSO) Enable

Functional description

Switching units with the enhanced INWATS OSO function (feature package NTX157AA) require this parameter. The switching units with INWATS OSO function use the direct signaling ability of CCIS.

Rules in provisioning

To activate this feature, set the value of the parameter to Y.

If this feature is not required, leave the value of this parameter at the default value of N.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

If this parameter is set to Y, enter data in table INWSNPA. See the data design section of the *Translations Guide* for a description of table INWSNPA.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Copy the current value of this parameter when you perform a dump and restore.

INWATS_CCIS_OSO_ENABLE (end)

Parameter history

This parameter was introduced in BCS14.

INWATS_LOCAL_TERMINATION

Parameter name

Inward-Wide Area Telephone Service Local Termination

Functional description

This parameter allows INWATS calls to complete from the local source.

Rules in provisioning

If this parameter is set to N (no), the system allows only the following INWATS calls to complete:

- Incoming INWATS calls through incoming toll trunk group. These calls can terminate on an INWATS line.
- Incoming INWATS calls if the non-local option is assigned to the Extended Area Service (EAS) trunk group. Field ORIGSOURCE equal to NLCL in table IBNXLA indicates the non-local condition.
- Calls through incoming test trunk (trunk group type TD) to INWATS line for line test.
- The INWATS calls for the test desk if the non-local option is assigned to the trunk group. The trunk group is type TD. Field ORIGSCRE equal to NLCL indicates the non-local condition.
- Calls from co-located lines to INWATS line. A loop around outgoing trunk and incoming trunk arrangement allows test calls to the INWATS lines. The outgoing trunk is type TO. The incoming trunk is type TI. The non-local option is assigned to the incoming trunk group. Field ORIGSOURCE equal to NLCL in table IBNXLA indicates the non-local condition.

If this parameter is set to Y, the following INWATS calls can complete:

- Calls originated in the same switching unit. This condition removes the use of loop around arrangement for test calls to the INWATS lines.
- The INWATS calls through incoming trunks with local option as the source. Field ORIGSOURCE equal to LCL in table IBNXLA indicates the local condition.

INWATS_LOCAL_TERMINATION (end)

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

If this parameter is set to N, the system blocks the following calls:

- the INWATS calls that originate in the same switching unit
- calls through incoming trunks to the INWATS line with the local option as the source. Field ORIGSOURCE equal to LCL in table IBNXLA indicates the local condition.

The corresponding treatment table routes the above calls to Unauthorized INWATS Call (UNIN) treatment.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS19

This parameter was introduced in BCS19.

INWATS_ON_AMA

Parameter name

Inward Wide Area Telephone Service On Automatic Message Accounting Tape

Functional description

All switching units with Automatic Message Accounting (AMA) tape units require this parameter. The parameter specifies if inward wide area telephone service (INWATS) calls record on AMA tape.

Rules in provisioning

A value of Y (yes) for this parameter allows INWATS calls to record on AMA tape.

Leave the value of this parameter at default N (no) if a record of INWATS calls on AMA tape is not required.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

If this parameter is set to Y, make sure that the INWATS tuple in table AMAOPTS is set to ON.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

ISDN_DPN_PH_GENERIC

Parameter name

Integrated Services Digital Network Data Packet Network Packet Handler Generic

Functional description

This office parameter allows more than one logical terminal identifier (LTID) group on one Bd channel.

If the value of this parameter is 27 or greater, more than one LTID group can be on one Bd channel. In any other condition, all LTIDs on a Bd channel must be from the same LTID group.

Rules in provisioning

Set the value of this parameter to match the SW generic of the packet handler in the Data Packet Network (DPN).

Range information

Minimum	Maximum	Default
20	100	25

Activation

Immediate

Dependencies

Does not apply

Consequences

When the value of this parameter is 27 or greater, logical terminals can map to a Bd channel in LTMAP. Logical terminals from more than one group can map to a Bd channel in LTMAP.

ISDN_DPN_PH_GENERIC (end)

Verification

Use the following procedure to check this parameter for only one group:

1. Set ISDN_DPN_PH_GENERIC to 26.
2. Add LTIDs from the same group to a Bd channel.
3. Add LTIDs from a different group to a Bd channel.

In this condition, the LTIDs from different groups are not allowed.

Use the following procedure to check this parameter for more than one group:

1. Set ISDN_DPN_PH_GENERIC to a value of 27 or greater.
2. Add LTIDs from different groups to a BD channel.

In this condition, the LTIDs from different groups are not allowed.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS30.

ISDN_NET_1A_INTERWORKING

Parameter name

Integrated-Services Digital Network (ISDN) 1A Interworking

Functional description

This parameter configures the Integrated-Services Digital Network (ISDN) basic rate interface (BRI) and ISDN user part (ISUP) interworking software for connections to a 1A switch. The parameter operates with the AG2001 (TR444 Comprehensive Compliance) feature and configures the software as TR compliant or TR not compliant.

All switching units equipped with feature AG2001 require this parameter to interwork with 1A switches not TR compliant.

Rules in provisioning

If the switch supports BRI terminals and connects to a 1A switch with ISUP trunks, activate non-TR compliance. To activate non-TR compliance, set this parameter to WORKAROUND_1A.

To maintain TR compliance with feature AG2001, set this parameter to TR_COMPLIANT.

Range information

Minimum	Maximum	Default
		TR_COMPLIANT

Activation

Immediate

Dependencies

Does not apply

Consequences

If the value of this parameter is WORKAROUND_1A, the BRA-ISUP interworking software is not TR compliant.

The system drops a call that is not answered before the terminals T310 timer expires in the following conditions:

- the value of this parameter is TR_COMPLIANT
- a BRI functional set on the switch terminates a call to a IA “Freecall" number (over ISUP trunks).

Verification

The parameter value is visible through table control procedures acting on table OFCENG. The position on ISDN_NET_1A_INTERWORKING displays the current value.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS32

This parameter was introduced in BCS32.

ISDNBRI_CNAMD_CND_ONE_AMA

Parameter name

Integrated Services Digital Network (ISDN) Basic Rate Interface (BRI) Calling Name Delivery (CNAMD) and Calling Number Delivery (CND) one Automatic Message Accounting (AMA)

Functional description

This office parameter allows the operating company to specify if the system produces one or two AMA records. The operating company can make this specification when both ISDN CND and CNAMD features are:

- assigned with Subscription Usage-Sensitive Pricing (SUSP)
- active

A value of Y allows the system to produce one AMA record. A value of N allows the system to produce two separate records.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

The system produces one AMA record when this parameter is set to Y. The system produces two AMA records when this parameter is set to N.

Verification

When this parameter is set to Y, check that the system produces one AMA record. When this parameter is set to N, check that the system produces two AMA records.

ISDNBRI_CNAMD_CND_ONE_AMA (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Does not apply

Parameter history

This parameter was introduced in NA008.

ISGBDOM_BLKSIZE

Parameter name

Integrated Services Digital Network (ISDN) Service Group Operational Measurement (OM) Block Size

Functional description

This parameter is for the ISDN service group (ISGBD) operational measurement. The ISGBD operational measurement monitors the Bd channel performance on D-Channel Handlers (DCH). The term ISG refers to the 32 channels for a DCH.

This parameter controls the size of the block where the system allocates and deallocates ISGBD OM store. The parameter allows small offices that are not equipped with many DCHs to increase store ability.

Rules in provisioning

Set the value of this office parameter to the expected number of Bd channels.

If the parameter is set to 10 and 11 Bd channels are in the office, data allocates for 20 channels. This condition results in store for nine additional channels.

For quick response during datafill, set the value of the parameter in the range of 16 to 31. This procedure decreases the time required to allocate and remove channels. The value of the parameter can decrease after the first datafill to increase the store requirements that are not used.

Range information

Minimum	Maximum	Default
0	31	16

Activation

Immediate

Dependencies

Does not apply

Consequences

If the value of this parameter is underprovisioned, the process that adds Bd channels is slow. The process is slow because the code attempts to find a free index in the tables. A free index is an index that was allocated and then deleted. If the code cannot find a free index, the code allocates more store if available.

When the user enters more than Bd parameter value, the code performs long routines to change the size of the parameter. The process that deletes Bd channels is slow. The process can maintain only the store that the condition needs.

If the value of this office parameter is overprovisioned, the process that adds Bds is fast. A large block is allocated. Any Bd datafill that follow find a free index in the tables. The system does not perform routines to change the size of the parameter often. Overprovisioned parameters waste data store.

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP06

The ISGBDOM_BLKSIZE office parameter (OFCENG) is removed from the CSP06 load.

BCS29

This parameter was introduced in BCS29.

ITS_NUM_CONCURRENT_SESSIONS

Parameter name

Integrated Testing System (ITS) Number of Concurrent Sessions

Functional description

This parameter defines the resources that a DMS-100 must allocate. A DMS-100 must allocate resources to support the integrated testing system (ITS) translations language 1 (TL1) interface and test requirements.

The ITS TL1 system uses an X.25 data link to perform line tests. A DMS-100 must allocate a number of resources to perform tests. These resources are buffers, parameter and result storage, and control storage to perform the tests.

The ITS operations system (OS) controls the ITS TL1 system. The ITS OS also requires storage resources to handle tests.

The resources that the ITS OS determines support ITS TL1 on the DMS-100.

Rules in provisioning

Set the value of this parameter to the number of test sessions that can run at the same time. The operating company test facilities determines how many test sessions can run supported at the same time.

The default value is 10. This value indicates resource allocation for the first requirements of ITS TL1. The system only supports ISDN TL1 at this time.

Range information

Minimum	Maximum	Default
10	60	10

Activation

Immediate

Dependencies

Does not apply

Consequences

An overprovisioned parameter causes resource allocation that is not required.

ITS_NUM_CONCURRENT_SESSIONS (end)

When this parameter is underprovisioned, the system rejects ITS TL1 commands. This condition continues to occur if the ITS OS has a larger provisioned ability.

Verification

This parameter indicates the number of test sessions that can run at the same time. The system rejects ITS TL1 commands that request more than the allowed number.

Memory requirements

This parameter uses 5000 bytes overhead in addition to 1893 bytes for each unit.

For the default setting of 10 the memory calculation is the following:

```
5000 + (10 X 1893) = 23930 bytes
```

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS33

This parameter was introduced in BCS33.

KSET_INTER_GRP_DISP

Parameter name

Business Set Inter-Group Display

Functional description

This parameter determines if calls that arrive from outside the customer group display information on the display set of the terminator.

Rules in provisioning

If this parameter is set to Y (yes), calls from outside the customer group display information on the display set of the terminator.

This parameter is set to Y if a customer has display sets in more than one customer group.

If the value of this parameter is the default value N (no), inter-group calls do not display.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

The display indicates the short CLLI code on the display business set. This condition occurs if the call is from an incoming IBN trunk and the system flags the call as intragroup. This condition requires the INTRAGROUP field set to Y in the trunk group data.

The display indicates “******" if any of the following conditions occur:

- the intragroup field in the trunk data is set to N
- the translator selector in table IBNXLA that translates the digits received from the trunk has the intragroup field set to N
- if the terminating business set belongs to a private customer group or family

KSET_INTER_GRP_DISP (end)

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

If the value of this parameter is Y, copy the current value of the parameter when you perform a dump and restore.

Change the value of this parameter to Y if both of the following conditions occur:

- the value of this parameter is N
- the operating company adds this feature

If the feature is not added, copy the current value of the parameter.

Parameter history

This parameter was introduced in BCS15.

KSHUNT_EXT_BLOCKS

Parameter name

Business Set Key Short Hunt Extension Blocks

Functional description

This parameter determines the number of extension blocks the system allocates for the Business Set Key Short Hunt feature.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

Each call that terminates on a short hunt group requires one of these extension blocks.

For the assignment of the Business Set Key Short Hunt feature to business stations, refer to table KSETFEAT.

Set the parameter to a constant value of 300, to switch units in the United States market.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	32767	1000

KSHUNT_EXT_BLOCKS (continued)

Activation

Increase is immediate.

Decrease is cold restart.

Dependencies

At extension time, the value of this parameter must change if the number of calls to short hunt groups increases or decreases.

Consequences

An overprovisioned parameter wastes memory.

Verification

To verify that the system allocates enough extension blocks, use CI command OMSHOW EXT ACTIVE 34 and read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
34 KEY_SHORT_HUNT_EXT
 1000
       0             0            0             0
       0
```

Any value other than zero in EXTOVFL indicates an underprovisioned parameter.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in use at the same time during the current transfer period.

For operational measurements associated with this parameter, refer to OM group KSHUNT.

Refer to the *Operational Measurements Reference Manual* for a description of OM groups EXT and KSHUNT.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each unit requires 6 words of memory.

KSHUNT_EXT_BLOCKS (end)

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

LCDI_SYNC_BURST

Parameter name

Integrated-Services Digital Network (ISDN) Line Concentrating Device Synchronization Burst

Functional description

A switching unit with the Integrated Service Digital Network (ISDN) requires this parameter.

A 500/2500 line interface that use the integrated service line module (ISLM) requires this parameter. Layer 1 Basic Line Monitoring (BLM) feature also requires this parameter for enhanced-ISDN line concentrating module (LCME) supported two binary - one quaternary (2B1Q) loops.

This parameter specifies the number of lines under audit on each synchronization cycle. The audit occurs before the hold for the delay period that the office parameter LCDI_SYNC_DELAY specifies.

Rules in provisioning

Set the value of this parameter as you require to control synchronization audits. The synchronization audits occur for ISDN loops that are not LCME and Layer 1 BLM audits of LCME 2B1Q loops. If you do not require the audits, set the value of this parameter to 0 (zero).

Range information

Minimum	Maximum	Default
0	10	1

Activation

Immediate.

Dependencies

Refer to parameter LCDI_SYNC_DELAY in table OFCENG for the delay, in 1 s intervals, between each synchronization cycle.

LCDI_SYNC_BURST (end)

Consequences

If this parameter is set to 0, the following occurs:

- The audit does not run.
- The system does not detect synchronization mismatches in ISDN loops that are not LCME.

The system does not detect Layer 1 BLM mismatches between the central control (CC) and LCME-based 2B1Q loops.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS30

This parameter was introduced in BCS30. Before BCS30, LCDI_SYNC_BURST was called ISLML_SYNC_BURST.

LCDI_SYNC_DELAY

Parameter name

Integrated-Services Digital Network (ISDN) Line Concentrating Device Synchronization Delay

Functional description

A switching unit with the integrated service digital network (ISDN) requires this parameter.

A 500/2500 line interface with the integrated service line module (ISLM) requires this parameter. The Layer 1 Basic Line Monitoring (BLM) audit also requires this parameter for enhanced-ISDN line concentrating module (LCME) supported two binary - one quaternary (2B1Q) loops.

This parameter specifies the delay between each synchronization cycle in 1 s intervals.

Rules in provisioning

Set the value of this parameter as you require to control the synchronization audits for ISDN loops that are not LCME ISDN. Set the parameter value for Layer 1 BLM audits for LCME 2B1Q loops.

If this audit is not required, set the parameter value to 300.

Range information

Minimum	Maximum	Default
60	6000	60

Activation

Immediate

Dependencies

Refer to parameter LCDI_SYNC_BURST in table OFCENG for the number of lines that the system can audit during each synchronization cycle.

Set the values of parameters LCDI_SYNC_DELAY and LCDI_SYNC_BURST to make sure ISDN loops audits occur in an acceptable period of time.

LCDI_SYNC_DELAY (end)

Consequences

If the value of this parameter is underprovisioned, the synchronization audit wastes the available audit class CC CPU time.

If the parameter is overprovisioned, the system requires a great amount of time to audit all ISDN loops.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

LCDR_SEC_ANI_TEST

Parameter name

Local Call Detail Recording (LCDR) Second automatic number identification (ANI) Test

Functional description

This parameter specifies if the system performs a second automatic number identification (ANI) test on local calls. The local calls are from a two- or four-party line with the Local Call Detail Recording feature.

The system always performs the second ANI test on toll calls.

Rules in provisioning

If the value of this parameter is Y (yes), the system performs a second ANI test performs on local calls.

If the value of this parameter is N (no), the system does not perform a second ANI test on local calls.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

LCDR_SEC_ANI_TEST (end)

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP02

Restart activation requirement was removed in CSP02.

LCML_SYNC_BURST

Parameter name

Line Concentrating Module Synchronization Burst

Functional description

The 500/2500 line interface that use the Line Trunk Controller (LTC) peripheral module (PM) requires this parameter. This parameter specifies the number of lines audited on each synchronization cycle.

Rules in provisioning

Specifies the number of lines under audit on each synchronization cycle.

Range information

Minimum	Maximum	Default
0	10	1

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

LCML_SYNC_DELAY

Parameter name

Line Concentrating Module Synchronization Delay

Functional description

The 500/2500 line interface that uses the Line Trunk Controller (LTC) peripheral module (PM) requires this parameter. This parameter specifies the delay between each synchronization cycle in seconds.

Rules in provisioning

Specify the delay between each synchronization cycle in seconds.

Range information

Minimum	Maximum	Default
5	6000	15

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

LDS_ALERT_NO_CLID

Parameter name

Long Distance Signal Alert No Calling Line Identification

Functional description

This parameter allows the operating company to specify if the system provides a distinct alert to the terminating line. The system alerts the terminating line when the incoming call does not include the Calling Line Identification (CLID).

Rules in provisioning

Set the value of this parameter to Y to provide an alert if the CLID is not available. This parameter does not apply to the PBX (P2, PX, and PRA) trunks. To provide an alert on PBX trunks, access table TOLLTRKS.

Set the value of this parameter to N to continue to check table TOLLTRKS for an alert indication.

Note: If LDS_ALERT_NO_CLID is set to N, Long Distance Alerting (LDA) does not provide a distinct alert for calls that originate on cellular phones.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

To verify the value of the parameter, check table OFCENG.

LDS_ALERT_NO_CLID (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Does not apply

Parameter history

NA006

This parameter was introduced in NA006.

LDS_AUTO_PROV_ENABLED

Parameter name

Long Distance Signal Automatic Provisioning Enabled

Functional description

When LDS_AUTO_PROV_ENABLED set to Y (yes), the system provisions options LDSO and LDSA when option LDSV in table LINEATTR (Line Attribute Index) is added. The system deprovisions options LDSO and LDSA when option LDSV in table LIVGATTR is removed. If this parameter is set to N (no), the operating company must complete a manual provision of line options LDSA and LDSO. Use the Service Order System (SERVORD), to provision line options LDSA and LDSO.

The system provides LDS_AUTO_PROV_ENABLED to allow the operating company to offer the Long Distance Signal (LDS) functionality universally with automatic provisioning. The operating company can offer LDS to a subscription with manual provisioning.

The system automatically adds or removes line options LDSO and LDSA after addition or deletion of the corresponding LDSV line attribute option. The addition or removal of line options LDSO and LDSA for a line does not occur immediately. One of the following actions must occur after the addition or deletion of option LDSV:

- An incoming call terminates on the line (local or toll)
- The subscriber originates the LDSA feature activation code (*49) on the line

Rules in provisioning

Option LDSV in table LINEATTR must be active on the line attribute of the lines where provisioning of LDS is to occur.

Set the parameter to N to allow the operating company to provision and deprovision line options LDSO and LDSA manually.

The following rules apply to this parameter:

- If LDS_AUTO_PROV_ENABLED is Y and option LDSV is active for an index in table LINEATTR, the following occurs. The system adds options LDSO and LDSA to lines associated with this line attribute index. The system adds these options when the first call terminates on these lines or the first *49 originates from these lines.
- If LDS_AUTO_PROV_ENABLED is Y and option LDSV is removed from an index in table LINEATTR, the following occurs. The system

LDS_AUTO_PROV_ENABLED (continued)

removes options LDSO and LDSA from these lines. The system removes these lines when the first call terminates on these lines or the first *49 originates from these lines. Automatic provisioning or manual provisioning does not affect the Y condition.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

The parameter allows the system to provision options LDSO and LDSA to lines of a line attribute index. Option LDSV must be active on the line attribute index that corresponds in table LINEATTR. The system deprovisions options LDSO and LDSA after removal of option LDSV from table LINEATTR.

Consequences

If the value of this parameter is set to N, you must provision and deprovision options LDSA and LDSO manually.

Verification

To provision options LDSO and LDSA manually, this parameter must be set to N to provision option LDSV in table LINEATTR.

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

The LDS appears in the network as patches for application to BCS35 and BCS36 and as a feature in NA002. The following dump and restore rules apply:

- From BCS35/36 with the LDS network patches applied and FPA56 active to BCS35/36 with the LDS functionality required. Perform the One Night Process (ONP), then activate the FPA56 LDS patch on the restore side.
- From BCS35/36 with the LDS network patches inactive to BCS35/36 with the LDS functionality required. Perform the ONP, then activate the FPA56 LDS patch on the restore side.
- From BCS35/36 with the LDS network patches applied and FPA56 active to BCS35/36 with the LDS functionality not required. Deactivate the FPA56 LDS patch on the dump side, then perform the ONP.
- From BCS35/36 with the LDS network patches inactive to BCS35/36 with the LDS functionality not required. Perform the ONP. Do not activate the FPA56 LDS patch on the dump or the restore side.
- From BCS35/36 with or without the LDS network patches applied and FPA56 active to NA002. Do not deactivate the LDS patch on the dump side if active. Do not activate the LDS on the dump side if inactive. Perform the ONP only.

Parameter history

BCS35/36

This parameter was introduced in BCS35/36.

LDS_CWT_TIMEOUT

Parameter name

Long Distance Signal Call Waiting Timeout

Functional description

This parameter allows the operating company to select the duration of the Long Distance Alerting (LDA) call waiting timeout. Parameter LDS_CWT_TIMEOUT controls the time frame during which the LDA subscriber can flash the switchhook. The subscriber flashes the switchhook to accept a long distance call that waits.

Rules in provisioning

If the parameter is set to a value between 10-316 s, LDA applies the call waiting tones. The LDA waits for the specified duration for the called party to answer the call. If the called party does not answer in the specified timeout period, the calling party routes to No Terminal ReSponding (NTRS) treatment.

The definition of the timeout period in which the called party must respond to connect to the calling party is

```
(IT x (N - 1) + ST)
```

where

IT
is the inter-tone period defined to be 10 s between applications of call waiting tones.

N
is the number of applications of the call waiting tone. For POTS and RES lines, the defined number of applications of the tone is two.

ST
is the specified timeout period, defined as 10-316 s, after the application of the final tone.

Note: When the parameter is set to 0, the system does not use a timeout. This condition corresponds to the behavior of the CWT feature. If you enter a timeout range of 1-9 s, the following message appears:

LDS_CWT_TIMEOUT (continued)

```
Warning:  A timeout in the range of 1–9s defaults to a
minimum internal timeout of 10s.
```

The following table summarizes the impact of possible entries for LDS_CWT_TIMEOUT for the user.

Effect of LDS_CWT_TIMEOUT for the user

LDS_CWT_TIMEOUT	Result
0	The system did not use a timeout. This condition corresponds to the behavior of the CWT feature. This value is the default value of the parameter on Initial Program Load (IPL).
10-316	The system sends the waiting call to the NTRS treatment when the timeout expires.

Range information

Minimum	Maximum	Default
0	316	0

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

To verify the value of the parameter, check table OFCENG.

Memory requirements

This parameter does not impact memory.

LDS_CWT_TIMEOUT (end)

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

NA006

This parameter was introduced in NA006.

LDS_ENABLED

Parameter name

Long Distance Signal Enabled

Functional description

This parameter allows the operating company to control the activation and deactivation of the Long Distance Signal (LDS) functionality. The operating company controls this feature a switch-wide area.

Rules in provisioning

Set the value of this parameter to Y to activate LDS functionality.

Set the value of this parameter to N to deactivate LDS functionality.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

When LDS_ENABLED is N, toll calls that terminate in this switch do not receive different LDS call waiting tones or ringing. Attempt to terminate toll calls on a line in the office set up to receive LDS. Other office parameters, datafill or both are not always present. Make sure to verify all office parameters or datafill.

Memory requirements

This parameter requires 1 word of memory.

LDS_ENABLED (end)

Dump and restore rules

LDS appears in the network as patches for application to BCS35 and BCS36, and as a feature in NA002. The following dump and restore rules apply:

- From BCS35/36 with the LDS network patches applied and active to BCS35/36 with the LDS functionality required. Activate the FPA56 LDS patch on the restore side before the One Night Process (ONP).
- From BCS35/36 with the LDS network patches inactive to BCS35/36 with the LDS functionality required. Perform the ONP, then activate the FPA56 LDS patch on the restore side.
- From BCS35/36 with the LDS network patches applied and active to BCS35/36 with the LDS functionality not required. Deactivate the LDS FPA56 patch on the dump side before the ONP.
- From BCS35/36 with the LDS network patch inactive to BCS35/36 with the LDS functionality not required. Perform the ONP. Do not activate the LDS FPA56 patch on the dump or the restore side.
- From BCS35/36 with or without the LDS network patch activated to NA002. Do not deactivate the FPA56 LDS patch on the dump side if active. Do not activate the FPA56 LDS on the dump side if inactive. Perform the ONP only.

Parameter history

BCS35/36

This parameter was introduced in BCS35/36.

LDS_OM_ENABLED

Parameter name

Long Distance Signal Operational Measurements Enabled

Functional description

This parameter allows the operating company to activate and deactivate Long Distance Signal (LDS) operational measurement (OM) increases.

Rules in provisioning

Set the value of this parameter to Y to allow the increase of OMs in group LDS.

Set the value of this parameter to N to disable the increase of OMs in group LDS.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Setting Y for this parameter allows increases for OM group LDS. The contents of each associated register can be polled.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

The system preserves the previous value of LDS_OM_ENABLED during a dump and restore operation.

LDS_OM_ENABLED (end)

Parameter history

NA004

This parameter was introduced in NA004.

LDS_PATTERN

Parameter name

Long Distance Signal Pattern

Functional description

This parameter allows the operating company to select a distinctive alert pattern for the Long Distance Signal (LDS) functionality. The operating company chooses from the following distinctive ring patterns, where one equals ringing and zero equals silence.

Distinctive ring patterns

Name	Pattern
LONG	111100000000
LONG_LONG	011101110000
LONG_SHORT	011101000000
LONG_SHORT_SHORT	011101010000
LONG_SHORT_MEDIUM	011101011000
MEDIUM_MEDIUM	011011000000
SHORT_SHORT_MEDIUM	010101100000
SHORT_MEDIUM_SHORT	010110100000

Note: Each 0 or 1 represents 0.5 s. The total ring cycle time is 6 s.

Rules in provisioning

The recommended Bellcore ring pattern for LDS is SHORT_MEDIUM_SHORT. The default ring pattern for LDS is LONG_SHORT_SHORT. The system automatically assigns the default value when the feature is available.

Range information

Minimum	Maximum	Default
		LONG_SHORT_SHORT

LDS_PATTERN (continued)

Activation

Immediate

Dependencies

Peripheral modules (PM) must support coded ringing.

A PM generates ring pattern SHORT_SHORT when the PM has ring type frequency selected (F). The LDS ring pattern datafill does not affect the ring pattern.

A PM generates ring pattern MEDIUM_SHORT when the PM has ring type superimposed ringing (S). The PM generates this ring pattern when the LDS ring pattern datafill is one of the following:

- LONG, MEDIUM_MEDIUM
- SHORT_SHORT_MEDIUM
- SHORT_MEDIUM_SHORT

Consequences

Does not apply

Verification

Place a toll call to an LDS qualified line to verify the correct ring and call waiting tone patterns. Change the value and repeat.

Memory requirements

The LDS_PATTERN parameter requires 1 word of memory.

Dump and restore rules

The LDS appear in the network as patches for application to BCS35 and BCS36 and as a feature in NA002. The following dump and restore rules apply:

- From BCS35/36 with the LDS network patch active to BCS35/36 with the LDS functionality required. Activate the LDS patch on the restore side before the One Night Process (ONP).
- From BCS35/36 with the LDS network patch inactive to BCS35/36 with the LDS functionality required. Perform the ONP, and activate the LDS patch on the restore side.
- From BCS35/36 with the LDS network patch active to BCS35/36 with the LDS functionality not required. Deactivate the LDS patch on the dump side before the ONP.

- From BCS35/36 with the LDS network patch inactive to BCS35/36 with the LDS functionality not required. Perform the ONP. Do not activate the LDS patch on the dump or the restore side.
- From BCS35/36 with or without the LDS network patch active to NA002. Do not deactivate the LDS patch on the dump side if active. Do not activate the LDS patch on the dump side if inactive. Perform the ONP only.

Parameter history

BCS35/36

This parameter was introduced in BCS35/36.

LDS_RINGING_ENABLED

Parameter name

Long Distance Signal Ringing Enabled

Functional description

This parameter allows the operating company to activate and deactivate Long Distance Signal (LDS) distinctive ringing for a switch-wide area.

Rules in provisioning

To provide LDS distinctive ringing to qualified idle lines, set the value of this parameter to Y (yes).

To provide normal ringing to qualified idle lines, set the value of this parameter to N (no).

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

The user does not have to download, busy or restore the peripheral modules (PM). Dependencies do not apply. The PMs must support coded ringing.

Consequences

If LDS_RINGING_ENABLED is set to N, LDS distinctive ringing is not available to subscribers.

Verification

Attempt to terminate on an idle line qualified for LDS with LDS_RINGING_ENABLED set to Y. The user hears distinctive ringing.
Attempt to terminate on an idle line qualified for LDS with LDS_RINGING_ENABLED set to N. The user hears normal ringing.

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

LDS appears in the network as patches for application to BCS35 and BCS36 and as a feature in NA002. The following dump and restore rules apply:

- From BCS35/36 with the LDS network patches applied and active to BCS35/36 with the LDS functionality required. Activate the FPA56 LDS patch on the restore side before the One Night Process (ONP).
- From BCS35/36 with the LDS network patches inactive to BCS35/36 with the LDS functionality required. Perform the ONP, and activate the FPA56 LDS patch on the restore side.
- From BCS35/36 with the LDS network patches applied and active to BCS35/36 with the LDS functionality not required. Deactivate the FPA56 LDS patch on the dump side before the ONP.
- From BCS35/36 with the LDS network patch inactive to BCS35/36 with the LDS functionality not required. Perform the ONP. Do not activate the FPA56 LDS patch on the dump or the restore side.
- From BCS35/36 with or without the LDS network patches applied and activated to NA002. Do not deactivate the FPA56 LDS patch on the dump side if active. Do not activate the FPA56 LDS patch on the dump side if inactive. Perform the ONP only.

Parameter history

BCS35/36

This parameter was introduced in BCS35/36.

LEAS_FOUR_DIGIT_CIC_STATUS

Parameter name

LATA-Equal Access System (LEAS) Four Digit Carrier Identification Code (CIC) Status

Functional description

The operating company uses this parameter only in LATA-Equal Access System (LEAS) access tandem switches. The operating company requires the parameter to support the implementation of feature group D (FGD) carrier identification code (CIC) expansion for LEAS calls. The LEAS calls use both multifrequency (MF) and signaling system 7 (SS7) signaling.

The user refers to this parameter for primary InterLATA carrier (PIC) calls. The parameter helps the user determine which carrier access code (CAC) (10XXX or 101XXXX) to use to prefix the call.

Rules in provisioning

Leave the value of this parameter at the default value THREEDIG to allow 3-digit CICs and 5-digit CACs (10XXX).

Set the value of this parameter to PERMISSIVE to allow 3- and 4-digit CICs and 5- or 7-digit CACs. Check the first digit of the CIC to determine the CAC prefixed to the PIC call. If the first digit of the CIC is zero, a 5-digit CAC (10XXX) prefixes the call. If the first digit of the CIC is not zero, a 7-digit CAC (101XXXX) prefixes the call.

Set the value of this parameter to FOURDIG to allow only 4-digit CICs and 7-digit CACs (101XXXX).

Range information

Minimum	Maximum	Default
		THREEDIG

Activation

Immediate

Dependencies

Does not apply

LEAS_FOUR_DIGIT_CIC_STATUS (end)

Consequences

Does not apply

Verification

Set the value of this parameter to THREEDIG for LEAS PIC calls to function as LEAS PIC calls functioned earlier. Set this parameter to PERMISSIVE for LEAS PIC calls to use 4-digit CICs in the range 0XXX, 5XXX, and 6XXX. Set this parameter to FOURDIG for LEAS PIC calls to use 4-digit CICs.

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA002

This parameter was introduced in release NA002.

LEAS_SS7_CIC

Parameter name

LATA-Equal Access System (LEAS) Signaling System 7 (SS7) Carrier Identification Code (CIC)

Functional description

This parameter is for LATA-equal access system (LEAS) access tandem switches that require Signaling System 7 (SS7) interworking. The parameter establishes if the system requires LEAS translations to determine which inter-exchange carrier (IXC) to use.

Rules in Provisioning

Set this parameter to a 4-digit value to identify a correct carrier digit.

Calls arrive in the LEAS access tandem switch on intertoll (IT GRPTYP in table TRKGRP) SS7 trunks. If the carrier identification code (CIC) in the transit network selector (TNS) parameter of the initial address message (IAM) equals the parameter value, LEAS determines which IXC to use.

Range information

Minimum	Maximum	Default
0000	9999	0000

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Set the value of this parameter to a valid Carrier_Digit value. Verify that originating calls over an ISUP IT trunk have the CIC of the TNS equal to the value of this parameter. Verify that the value of parameter LEAS_SS7_ACTIVE is equal to Y(yes). The translation verification utility (TRAVER) also can verify this parameter.

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP02

This parameter was introduced in CSP02.

This parameter was introduced in accordance with feature AN0342.

LN_LONG_PARTIAL_DIAL_TIME

Parameter name

Line Module Long Partial Dial Time (LN_LONG_PARTIAL_DIAL_TIME)

Functional description

A local switching unit requires this parameter. The parameter specifies the time, in 160-ms intervals, that the line module (LM) waits after a digit is dialed. After this time period, the parameter reports an end of dialing condition, when no more digits are dialed. The LM must be instructed to perform long timing. The system stops digit collection and performs translation and routing with the digits the LM collects. This action can result in call completion or partial dial treatment.

For information on partial dial treatment (PDIL), refer to table TMTCNTL in this document.

The system uses long timing in the following conditions:

- When the switching unit has 0+ and 0- dialing, the LM uses long timing after the second to seventh, and ninth to tenth digits.
- The line module times the 1+ calls with long timing after the first to seventh, and ninth to tenth digits.
- For ambiguous code calls, the LM uses long timing after the first to sixth, and eighth to ninth digits.
- International calling (01 or 011+) uses long timing after the first to fifth digits after the access code of 01 or 011.
- The LM can use long timing after the first to seventh digit dialed. The module uses this timing when field DGCOLSEL in table DIGCOL has the value of COL. Field TMODE must have the value of L for the first digit dialed.

Note: You must set this parameter at least two units greater than the value for OFCENG parameter LN_SHORT_PARTIAL_DIAL_TIME.

The dialing of an octothorpe (#) indicates end of dialing and the LM immediately reports to the central control (CC) for translation.

In the U.K., an SL100 can use this parameter to reduce the post dial delay (PDD). The parameter reduces the PDD for an incoming Digital Private Network Signaling System (DPNSS) call on a DMS PBX.

Note: For a call from an Attendant Console, a ten second post dial delay (PDD) can occur. This delay occurs when the number of digits dialed is less

LN_LONG_PARTIAL_DIAL_TIME (continued)

than the max field in Translations. Digit collection timers that reduce PDD do not apply to the Attendant Console and cannot affect the default ten second timeout.

Rules in provisioning

Specify the time, in 160-ms intervals, that the LM waits after a digit is dialed. After this time, the module reports an end of dialing condition if no more digits are dialed. The LM must be instructed to perform long timing.

Range information

Minimum	Maximum	Default
7	255	100 (16 seconds)

Activation

The peripheral modules (PM) that support line concentrating devices (LCD) require a busy (BSY) and a return to service (RTS). A BSY and RTS are not required for PMs connected to an extended multiprocessor system (XMS)-based PM (XPM). The line concentrating module (LCM) and the enhanced line concentrating module (LCME) require a BSY and RTS on one of the units of each LCM/LCME. The BSY and RTS activate the changes to this value.

Dependencies

The following information determines the long and short timing data downloaded into the LM:

- the value of parameter DIGIT_COL_OFFICE_CODE in table OFCSTD
- the data stored in table DIGCOL.

The system uses the value of this parameter as a long digit time-out before the system receives minimum digits.

The datafill for a correct route in the IBN translation tables specifies the minimum number of digits.

This only applies to valid routes that specify minimum digits in the datafill.

Consequences

Does not apply

LN_LONG_PARTIAL_DIAL_TIME (end)

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP04

Activation information was updated.

CSP02

Activation information was clarified.

BCS36

Activation information was corrected.

BCS34

A note was added to set this parameter at least two units greater than the setting for OFCENG parameter LN_SHORT_PARTIAL_DIAL_TIME.

LN_PERM_SIG_TIME

Parameter name

Line Permanent Signal Time (LN_PERM_SIG_TIME)

Functional description

A local or combined local and toll switching unit requires this parameter. The parameter specifies the time that the switch waits to receive the first digit when a line goes off-hook. The parameter specifies the time in 160-ms intervals.

Rules in provisioning

This parameter specifies the time period the switch waits to receive digits. When the switch does not receive digits, the system routes the line to permanent signal treatment (PSIG).

For information on treatments, see table TMTCNTL.

Range information

Minimum	Maximum	Default
7	255	125 (20 seconds)

Activation

The peripheral modules (PM) that support line concentrating devices (LCD) require a busy (BSY) and return to service (RTS). The PMs that are connected to an extended multiprocessor system (XMS)-based PM (XPM) do not require a BSY and RTS. The line concentrating module (LCM) and the enhanced line concentrating module (LCME) require a BSY and RTS on one of the units of each LCM/LCME. The LCM/LCME require the BSY and RTS to activate changes to this value.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

LN_PERM_SIG_TIME (end)

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP04

Activation information was updated.

BCS36

Activation information corrected.

LN_SHORT_PARTIAL_DIAL_TIME

Parameter name

Line Module Short Partial Dial Time (LN_SHORT_PARTIAL_DIAL_TIME)

Functional description

A local switching unit requires this parameter. The parameter specifies the time, in 160-ms intervals, that the line module (LM) waits after a digit is dialed. After this time, the module reports an end-of-dialing condition when no more digits are dialed. The LM must be instructed to perform short timing.

The system stops digit collection and performs translation and routing with the digits collected. This action can result in call completion or partial dial treatment (PDIL).

For information on PDIL, refer to table TMTCNTL.

The value of parameter DIGIT_COL_OFFICE_CODE and the data in Table DIGCOL determine the long and short timing data downloaded into the LM. Table OFCSTD contains this parameter.

The LM uses short timing in the following conditions:

- When switching unit has 0+ and 0- dialing, the system uses short timing after the first and eighth digit. The system uses short dialing when the first digit dialed is a zero.
- The LM times, 1+ calls with short timing after the eighth digit.
- For ambiguous code calls, the system uses short timing after the seventh digit.
- When the system sets up a Speed Call number, the LM uses short timing. The LM uses short timing for the digits that follow the two-digit access code.
- For International calling (01 or 011+) the LM uses short timing after the sixth to fifteenth digits, after the access code 01 or 011.
- The dialing of an octothorpe (#) indicates end-of-dialing and the LM immediately reports to the central control (CC) for translation.
- Field DGCOLSEL in table DIGCOL can be equal to RES for the first digit dialed. When this event occurs, the LM uses short timing after the first and second digit dialed.
- The LM uses short timing when field DGCOLSEL in table DIGCOL is equal to COL. Field TMODE must have the value of S for the first digit dialed.

LN_SHORT_PARTIAL_DIAL_TIME (continued)

In the U.K., an SL100 uses this parameter to reduce the post dial delay (PDD). The parameter reduces the PDD for an incoming Digital Private Network Signaling System (DPNSS) call on a DMS PBX.

Rules in provisioning

Specify the time, in 160-ms intervals, that the LM waits after a digit is dialed. After this time, the LM reports an end-of-dialing condition if no more digits are dialed. The LM must be instructed to perform short timing.

Range information

Minimum	Maximum	Default
7	255	25 (4 seconds)

Activation

The peripheral modules (PM) that support line concentrating devices (LCD) require a busy (BSY) and return to service (RTS). The PMs connected to an extended multiprocessor system (XMS)-based PM (XPM) do not require a BSY and RTS. The line concentrating module (LCM) and the enhanced line concentrating module (LCME) require a BSY and RTS on one of the units of each LCM/LCME. The LCM/LCME require a BSY and RTS to activate the changes to this value.

Dependencies

The LM uses the value of this parameter as a short digit time-out after the LM receives minimum digits. The LM uses the value of this parameter as a short digit time-out before the LM receives the maximum digits.

The datafill for a correct route in the IBN translation tables specifies the minimum and maximum number of digits.

This only applies to valid routes that specify minimum and maximum digits in the datafill.

Consequences

Does not apply

Verification

Does not apply

LN_SHORT_PARTIAL_DIAL_TIME (end)

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP04

Activation information was updated.

International calling (01 or 011+) now uses short timing after the sixth to FIFTEENTH digits, after the access code 01 or 011. Before this release, international calling used short timing after the sixth to TWELFTH digits.

BCS36

Corrected activation information.

LOCAL_LD_SPRI_ON_SAME_SPM

Parameter name

LOCAL_LD_SPRI_ON_SAME_SPM

Functional description

LOCAL_LD_SPRI_ON_SAME_SPM controls the activation of the DMS-500 specific feature 59025428. Feature 59025428 allows for support of both PRI 100 and PRI 250 trunks on the same SPM in the DMS-500 office. Feature 59025428 creates the new termtype SPM500_PRA250_B_CH in table MNNODE that is datafilled and used to reference PRI 250 trunks. The original termtype PRAB is used to reference only PRI100 trunks. Additional information about feature 59025428 can be found in the SP15 Feature Description.

Provisioning rules

While LOCAL_LD_SPRI_ON_SAME_SPM is set to ‘N’, the functionality provided by feature 59025428 is not active.

CAUTION
Possible loss of service
A loss of service may occur in live switches if you activate LOCAL_LD_SPRI_ON_SAME_SPM and have not followed the upgrade procedure found in the activation section of this document

Range information

The range information is as follows: ‘Y’ or ‘N’

Minimum	Maximum	Default
N/A	N/A	N (DEACTIVATED)

Activation

In order to activate LOCAL_LD_SPRI_ON_SAME_SPM you must first follow a special upgrade procedure to prevent loss of service in an active switch.

LOCAL_LD_SPRI_ON_SAME_SPM (continued)

Upgrade procedure to activate feature 59025428.

1 Per standard procedure, all SPMs and corresponding RMs, ENET, etc. on the switch must be upgraded to the SP15 load.

2 Execute a standard ONP, including the table transfer from the active side to the inactive side CM, and the swact over.

Note: LOCAL_LD_SPRI_ON_SAME_SPM should not be activated at this time.

3 After the ONP is complete, Activate LOCAL_LD_SPRI_ON_SAME_SPM by setting it to 'Y'. This allows all PRI trunks to be recognized as the new termtype.

4 Access table MNNODE and changes each tuple as follows:

- Add the pairing PRAB500 SPM250 to each tuple in the EXECTAB optional field.
- Change any occurrence of termtype/exec pairing PRAB SPM250 to PRAB SPMEX. Do not change any pairing of PRAB SPMEX.

5 BSY/RT all SPMs on the switch affected by the MNONDE changes in step 3 to allow the new termtype and its corresponding execs to be downloaded to the SPMs.

Note: To BSY/RT an SPM as mentioned follow these steps:

- BSY the inactive CEM.
- RTS the inactive CEM.
- Perform a SPM SWACT
- BSY the newly inactive CEM
- RTS the newly inactive CEM

6 Trunk provisioning may now add or modify both PRI100 and PRI250 trunks on the same SPM. PRI trunks now use termtype PRAB and PRI250 trunks are now recognized as PRAB500.

Requirements

Not applicable

Results

If LOCAL_LD_SPRI_ON_SAME_SPM is activated without following the upgrade procedure, loss of service may occur in live switches.

Testing

After you perform the upgrade procedure, both PRI100 and PRI250 trunks may then be tested to ensure functionality.

Memory requirements

LOCAL_LD_SPRI_ON_SAME_SPM requires one word of memory.

LOCAL_LD_SPRI_ON_SAME_SPM (end)

Dump and restore rules

During software upgrades, LOCAL_LD_SPRI_ON_SAME_SPM will have the same value on the restore side that it had on the dump side.

Parameter history

SP15

Parameter LOCAL_LD_SPRI_ON_SAME_SPM was introduced by Feature 59025428.

LOG_PRIORITIZATION

Parameter name

Log Prioritization

Functional description

This option enables or disables the critical message prioritization feature.

Rules in provisioning

If this parameter is set to a value of Y (yes), the system enables the feature. Devices in table LOGDEV that have field PRIORITY set to Y, print the critical messages before messages of lower priority. The system prioritizes the logs that start from the time of initialization of a device. Logs that the system generated before the initialization time do not print.

Range information

Minimum	Maximum	Default
		N

Activation

The activation of this parameter is immediate.

Activation is not allowed while log devices are started.

To activate this parameter, take the following steps:

1. Stop all log devices.
2. Change value of parameter.
3. Change the PRIORITY field in table LOGDEV correctly for each log device. Set this field to Y, for devices that require prioritization.
4. Start required log devices.

Dependencies

Does not apply

Consequences

Does not apply

LOG_PRIORITIZATION (end)

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS15.

LONG_TIMED_RELEASE_DISC_TIME

Parameter name

Long Timed Release Disconnect Time

Functional description

This parameter specifies the time, in 10-ms intervals, that the system times a called party on-hook. After this time, the system releases the connection to the calling party.

Timed release disconnect (TRD) is a form of disconnect timing where the system disconnects the calling line. The system disconnects if the calling party fails to go on-hook when the called party has gone on-hook. The system waits a specified time before the system disconnects.

The system can detect a terminating line disconnect signal before an originating line disconnect signal. When this event occurs, the system does not perform TRD timing on line-originated calls that terminate on residential (RES) lines.

The system can detect an RES line disconnect signal before an originating line disconnect signal for a line-to-RES line call. The system releases the network connection between the two lines, and places the originating line in exit off-hook timing.

The system can detect an RES line disconnect signal before a clear forward signal during a trunk-to-RES line call. When this event occurs, the system releases the network connection between the trunk and the line. The system places the originating trunk in guard timing.

The system performs TRD on RES line-originated calls that terminate on other POTS lines. The system also performs TRD on trunks that support TRD timing. This event occurs when the system detects a terminating line or trunk disconnect signal before an originating line disconnect signal.

The system uses disconnect timing for the following types of calls:

- Line or TOPS-to-trunk (trunk group types TO, TOPS, IT, and SC)
- Trunk-to-line (trunk group types SC, TI and IBN)
- Trunk (trunk group type TI) to trunk (trunk group type TO)
- Trunk (trunk group type SC) to trunk (trunk group types TO, TOPS, IT, OC, OP, A5, P2, and PX)
- Trunk (ISDN PRA)-to-trunk (ISDN PRA)

LONG_TIMED_RELEASE_DISC_TIME (continued)

These calls can have a high setup cost.

The system does not perform disconnect timing for joint hold and called party hold calls of some trunk group types. These trunk group types consist of trunk group type SC to trunk group type PX and P2.

NOTE: TRD timing does not apply to PRA trunks because PRA uses the IBN platform.

Rules in provisioning

The recommended value is 1600 (16 s). This higher value gives subscribers more flexibility for calls with a high setup cost.

Operating company personnel can use this parameter to control the SUSpend timeout of ISDN User Part (ISUP) trunks. The ISUP SUSpend timer is hard code limited to 25 seconds. For example, if a value of 26 seconds is datafilled in the parameter LONG_TIMED_RELEASE_DISC_TIME, the result is a value of a 1 second, (26-25), release time. If a value of 32 seconds is datafilled, the result is a 7 second, (32-25), release time.

When the value of this parameter is changed, central control (CC) uses the new value immediately in the billing adjustment procedures. The peripheral module (PM) continues to uses the previous values to calculate the call duration times. The PM stops using the previous values when the static data is reloaded.

Reload the PMs immediately to avoid billing discrepancies. The values for this parameter are different in the CC and PM.

The system issues the following message when this parameter is changed.

```
WARNING: A RELOAD OF THE LM/LTC STATIC DATA MUST BE
PERFORMED TO ACTIVATE CHANGES TO THE VALUE OF THIS PARAMETER
```

Range information

Minimum	Maximum	Default
16	32 767 32 767 (with Meridian OffNet Access)	1600 (16 s)

LONG_TIMED_RELEASE_DISC_TIME (end)

Activation

To activate a change to this parameter, all line peripherals must have the EXECS present. For line modules (LM) and remote line modules (RLM), busy (BSY), load (LOADPM) and return to service (RTS) the peripheral. For XPM-based peripherals (like LTC and LGC), perform the following actions. Busy the inactive unit (BSY INACTIVE), reload static data to the inactive unit (LOADPM INACTIVE CC DATA), return to service the inactive unit (RTS INACTIVE). Perform a warm swact (SWACT). After completion, BSY/RTS each unit of each LCM.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS15.

NA008

The range of LONG_TIMED_RELEASE_DISC_TIME is 16 to 32 767.

CSP04

Activation information was updated.

Provisioning rules updated to include ISUP SUSpend timeout information.

CSP02

TRD limits for RES lines added to the operating description.

BCS36

Corrected activation information.

LOWSPR_ALARM_ON_CARD_SPR_BASIS

Parameter name

Lowspare Alarm On Card Spare Basis

Functional description

This parameter controls the activation of the memory-low spare minor (LowSpr) and memory-low spare major (LOWSpr) alarms. This parameter also controls the logs associated with these alarms.

Rules in provisioning

When this parameter is set to the value of Y (yes), the system activates the low spare alarms. The low spare alarms activate if the following condition occurs. The number of square blocks is too low to spare out a complete card of each size of memory card. For example, when the memory goes below 24 Mbyte for NT9X14 cards, the system activates a low spare alarm.

The system activates the low spare alarms when the parameter is set to N. This action occurs for each size of memory card module. For example, the system activates the low spare alarm when allocation of the last 8 Mbyte is to NT9X14 cards.

Use the default value of Y for offices that are not SuperNode SE offices. An audit can determine that too low a number of memory blocks are present to spare out a complete card. When this event occurs, the system generates the logs and activates the low spare alarms.

On SuperNode SE, this parameter must be set to N. SuperNode SE does not always have enough memory cards equipped for sparing for each card.

Range information

Minimum	Maximum	Default
		Y

Activation

The activation of this parameter is immediate.

Dependencies

Does not apply

LOWSPR_ALARM_ON_CARD_SPR_BASIS (end)

Consequences

When this parameter is set to N, the system only generates low spare alarms in the following condition. No spare blocks remain for each size of memory module equipped on the switch. Memory faults that affect more than one module or a complete memory card can be in the following condition. Memory blocks did not spare out the complete memory card.

Verification

When this parameter is set to Y, the system activates the low spare alarm in the following condition. The switch does not have enough spare memory blocks. The system also generates the log that corresponds to the alarm.

When this parameter is set to N, the system activates the alarms and generates logs in the following condition. No spare memory blocks remain for each size of memory module that is equipped on the switch.

Memory requirements

Each unit requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS33

This parameter was introduced in BCS33.

LSCM_SYNC_BURST

Parameter name

LSCM Synchronization Burst (LSCM_SYNC_BURST)

Functional description

The LSCM_SYNC_BURST parameter associates with the Custom Local Area Signaling Services (CLASS) Message Waiting Indicator (CMWI) feature. This feature allows a Message Waiting (MWT) subscriber to know if messages are queued. The MWT subscriber must have a CLASS set with a MWT lamp and/or a display device. Messages can be queued in the switch or at a message center.

Lamp audits are associated with this feature. These audits run periodically to keep all lamps in sync with the state the central control (CC) expects. For sets with a MWT lamp, the lamp audit process verifies if at minimum of one message waits for the station. When a message waits for the station, the MWT lamp is turned on. An attempt to update the lamp does not occur when messages do not wait for the station.

Rules in provisioning

Specify the number of lines from each Subscriber Module SLC-96 (SMS) and Subscriber Carrier Module DMS-100 Urban (SMU) in the office for which a lamp audit occurs as parameter LSCM_SYNC_DELAY specifies.

This office parameter helps to achieve an acceptable distribution of messaging traffic to the peripheral modules (PM). Refer to parameter LSCM_SYNC_DELAY in table OFCENG.

The new lamp audit uses these parameters for lines from the SMS and the SMU.

The LSCM_SYNC_BURST parameter indicates the number of lines from each PM for which an audit must occur in one audit cycle.

LSCM_SYNC_BURST (continued)

Range information

Minimum	Maximum	Default
0	10	1 One line from each SMS and SMU in the office for which a lamp audit occurs every n seconds (where n is the value of LSCM_SYNC_DELAY).

Activation

Immediate

Dependencies

Does not apply

Consequences

If the burst value is too large or delay value is too small, a delay does not occur between cycles.

Verification

To verify that the lamp audit is operational, remove power from a set that has the MWT indicator on. This action causes the indicator to be turned off. If the message is not retrieved, the audit must turn the indicator on X s where X is:

possible # of lines on PM / (LSCM_SYNC_BURST/LSCM_SYNC_DELAY)

For example, if 640 lines are present on the PM, LSCM_SYNC_BURST is set to 3 lines, and LSCM_SYNC_DELAY is set to 15 s:

X = 640/3/15 = 3200 s (approximately 53 minutes)

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of this parameter you perform a dump and restore.

LSCM_SYNC_BURST (end)

Parameter history

BCS31

This parameter was introduced in BCS31.

LSCM_SYNC_DELAY

Parameter name

LSCM Synchronization Delay

Functional description

This parameter associates with the CLASS-Message-Waiting-Indicator (CMWI) feature. The CMWI feature allows a Message Waiting (MWT) subscriber to know if the system queues messages. The MWT subscriber must be equipped with a CLASS set with a message waiting lamp and/or a display device. The system can queue messages in the switch or at a message center.

Lamp audits associated with this feature can run on a periodic base. These audits run on a periodic base to keep all lamps in sync with the state that the CC expects. For sets with a message waiting lamp, the lamp audit process makes sure at least one message waits for the station. The message waiting lamp turns on if at least one message is waiting for the station. The system only updates the lamp when one or more messages are waiting.

Rules in provisioning

Specify the time between lamp audits for lines off of each SMS and SMU in the office.

The use of this office parameter is to achieve an acceptable distribution of messaging traffic to the peripherals. (See also parameter LSCM_SYNC_BURST in table OFCENG)

The new lamp audit uses these parameters for lines off Subscriber Module SLC-96 (SMS) and Subscriber Carrier Module DMS-100 Urban (SMU).

LSCM_SYNC_DELAY specifies the time, in seconds, between the start of each audit cycle.

LSCM_SYNC_DELAY (continued)

Range information

Minimum	Maximum	Default
5	6000	15 n lines off of each SMS and SMU in the office have a lamp audited every 15 seconds. The value of parameter LSCM_SYNC_BURST must be n.

Activation

Immediate

Dependencies

Does not apply

Consequences

If the burst value is too large or the delay value is too small, there is no delay between cycles.

Verification

To make sure that the lamp audit works, remove power from a set with the message waiting indicator on. The indicator must turn off. If the message is not retrieved, the audit must turn the indicator on in X seconds, where X is:

possible # of lines on PM / (LSCM_SYNC_BURST /LSCM_SYNC_DELAY)

For example, if 640 lines are on the PM, set LSCM_SYNC_BURST to three lines, and set LSCM_SYNC_DELAY to 15 s:

X = 640/3/15 = 3200 s (approximately 53 min)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS31.

LSPI_FORWARD

Parameter name

Local Service Provider Identifier Forward

Functional description

Office parameter LSPI_FORWARD lets the switch signal local service provider (LSP) information forward as an optional parameter of the outgoing Initial Address Message (IAM). When you set this parameter to N, the LSPI-compliant originating stored program control switch (SPCS) does not include any LSP information in the outgoing IAM. You must set this parameter to Y to include LSP information in the outgoing IAM. Incoming IAMs that include LSP data pass this information through non-compliant offices into the outgoing IAM.

If you set office paramter LSPI_FORWARD to N at an intermediate office, the switch does not get any LSP information from data in table TRKOPTS (Trunk Options). The outgoing IAM includes only the incoming LSP information.

This parameter defaults to no (N).

Provisioning rules

Set the LSPI_FORWARD parameter to yes (Y) only when the switch is LSPI-compliant.

Range information

Minimum	Maximum	Default
		N

Activation

Enter appropriate values for option LSPFE and set field SIGNAL_CONTROL to Y in table TRKOPTS if this feature is applicable for your network. The Y instructs the switch to signal forward the LSPFE as LSPSO where LSPSO information is not available. LSPFE must represent the switch owner of the originating subscriber.

Requirements

Not applicable.

LSPI_FORWARD (end)

Results

If you set the LSPI_FORWARD parameter to Y, you turn on the signaling aspect of the SS7 local service provider feature.

Testing

Not applicable.

Memory requirements

This parameter value requires one word of memory.

Dump and restore rules

Not applicable.

Parameter history

NA011

The NA011 version of the software introduced this parameter.

MARKET_OF_OFFICE

Parameter name

Market of Office

Functional description

All types of switches require this parameter. This parameter determines the load configuration and the tone set used in a market or application.

As part of the static data when the peripheral module (PM) returns to service, the system downloads the tone value to the following:

- peripheral modules (PM),
- digital trunk controller (DTC)
- international DTC (IDTC)
- international line group controller (ILGC)
- line group controller (LCG)
- PCM-30 digital trunk controller (PDTC)

Programmable read-only memory (PROM) chips provide service tones. The PROM chips are located on the message interface card or the tone generator card. The two versions of the message interface card are NT6X43 and NT6X69. Each version of the card has a number of variants. Each variant provides the tones required for one or more markets. The card NT6X69AA requires the tone generator card NT6X79 to provide the tones.

The PM product engineering code (PEC) is in field EQPEC in table LTCINV. The PM PEC identifies the card complement of the PM for a market or application. For an EQPEC, the message interface card can be any of the card variants for that market.

Table 1 lists markets, the associated parameter values, PM PEC and message interface cards.

MARKET_OF_OFFICE values (Sheet 1 of 2)

Market	Value	EQPEC	Message Interface Card
Australia	AUSTRALIA	6X02P2 6X02P3	RAM6X69 RAM6X69
Austria	AUSTRIA	6102SA	6143B, 6169BA
Brazil	BRAZIL		

MARKET_OF_OFFICE (continued)

MARKET_OF_OFFICE values (Sheet 2 of 2)

Market	Value	EQPEC	Message Interface Card
Caribbean	CEP	6X02GA 6X02HA	6X43FA, 6X69FA 6X43FA, 6X69FA
Chile	CHILE	6X02P3	RAM6X69
China	CHINA	6X02KA 6X02KB	6X69KA
Commonwealth of Independent States	CIS		
Eire	EIRE	6X02P2	RAM6X69
France	FRANCE		
Guyana	GUYANA	6X02KA 6X02KB	6X69KA
Germany	GERMANY		
Haiti	HAITI		
Hong Kong	HONG KONG		
Hungary	HUNGARY	6102UA 6102UB	6169UA
Japan	JAPAN	6X02P2	RAM6X69
Mexico	MEXICO	6X02P3	RAM6X69
Morocco	MOROCCO	6X02P3	RAM6X69
North America	NORTHAM	6X02AA 6X02AC 6X02AD 6X02AF 6X02AH	6X43AA, 6X69AA, 6X69AB
Peru	PERU	6X02P3	RAM6X69
Poland	POLAND		
Spain (LCG)	UK	6X02BC	6X43CA, 6X69DA
Spain (PDTC)	SPAIN	6X02BE	6X43EA, 6X69EA
Turkey	TURKEY	6X02BA	6X43BA, 6X69AA, 6X69BB
United Kingdom	UK300 UK PABX UK CENTREX	6X02BC	6X43CA, 6X69DA

MARKET_OF_OFFICE (continued)

British service tones and Spanish service tones on the LGC are the same with one exception. The exception is the different cadence in the audible ring.

The optional cards 6X69 and 6X79 must be entered in field OPTCARD in table LTCINV. You can distinguish which card is in the shelf from the data entry. For example, if the EQPEC is 6X02AA (North American LGC), the message interface card could be any one of 6X43AA, 6X69AA or 6X69AB. If the entry is 6X69, the message interface card is 6X69AA. If 6X69 is not entered, the message interface card is 6X43AA. Otherwise, the card is 6X69AB. Apply the same analysis to each shelf PEC to determine the card or card variant used as the message interface card.

Card difference or difference in tone cadences requires the support of different PM loads.

Rules in provisioning

The value of this parameter depends on the software package provided for the switching unit and the tone requirements described above.

Set the value of this parameter to UK CENTREX for a switching unit with DMS-100 Centrex International software.

Set the value of this parameter to UK PABX for a switching unit with UK Business Features software.

Set the value of this parameter to JAPAN to activate Japan special number checking. When this parameter is set to JAPAN, Japanese directory number unpadding for signaling and SMDR billing is activated by module JPUNPADG.

Range information

Minimum	Maximum	Default
		NORTHAM

Activation

This parameter activates after a cold restart.

Dependencies

Does not apply

Consequences

Care should be taken with changing this parameter, because it affects various switch operations related to the country of the switch.

Verification

Does not apply

Memory requirements

This parameter value requires 1 word of memory.

Dump and restore rules

This parameter supercedes the parameter TONE_SET. To perform a dump and restore from a software release before BCS31 to software release BCS31 or higher, the following conditions apply. If the value of this parameter is NORTHAM, reset the value of the parameter based on the value of the parameter TONE_SET as follows:

- If the value of TONE_SET is AUSTRIA, CEP, CHINA, HUNGARY, NORTHAM, SPAIN, or TURKEY, use the same value.
- If the value of TONE_SET is MCL, use the value UK CENTREX.
- If the value of TONE_SET is UK, use the value UK PABX.

Parameter history

EUR009

The value FRANCE is added to the range.

BCS36

Parameter introduced. This parameter supercedes the parameter TONE_SET.

The Commonwealth of Independent States (CIS) value was added in BCS36.

MAX_CMAP_SESSIONS

Parameter name

Maximum Number Of Centralized MAP Sessions

Functional description

Switching units with the Centralized Map (CMAP) feature require this parameter. This parameter specifies the maximum number of CMAP sessions that can run on the switching unit at the same time.

Rules in provisioning

The value of this parameter must be in the range of 2 to 20. When you modify the value, a parm_aspct procedure makes sure the new value is acceptable. If the value is outside the range (that is, 0, 1, or greater than 20), the system displays an error message. The system ignores the request. If the value is in the range, the system stores the new value. The system puts the value into effect during the next restart.

The system issues a warning to notify that the value of the parameter does not change immediately.

Range information

Minimum	Maximum	Default
2	20	2

Activation

Immediate

Dependencies

The value of this parameter affects parameter NOS_QUANTITY_OF_SVCS in table OFCENG. The value affects parameter NOS_QUANTITY_OF_SVCS if the switching unit switches virtual circuits (SVC).

Consequences

The data store allocation (3K of private data for a process and other store resources) and process creation depends on this parameter. Large values for this parameter can waste data store and processor time.

MAX_CMAP_SESSIONS (end)

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP06

This parameter is hardcoded to value 20 and is no longer visible.

CSP04

The restart requirement was removed in CSP04.

BCS23

This parameter was introduced in BCS23.

MAX_DTA_ON_SWITCH

Parameter name

Maximum Digital Test Access On Switch

Functional description

This parameter specifies the maximum number of Digital Test Access (DTA) connections permitted on the switch.

Rules in provisioning

Specify the maximum number of DTA connections allowed on the switch.

Range information

Minimum	Maximum	Default
5	20	10

Activation

Immediate

Dependencies

Do not apply

Consequences

An underprovisioned parameter value can prevent technicians from establishing the number of DTA monitoring connections required to maintain Integrated-Services Digital Network (ISDN) lines. An overprovisioned parameter value wastes data store.

Verification

Does not apply

Memory requirements

The maximum memory usage associated with this parameter is 7168 words. The maximum memory usage applies when you set the parameter to the maximum value of 20.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

MAX_DTA_ON_SWITCH (end)

Parameter history

This parameter was introduced in BCS31.

MAX_HPC_CALLS_QUEUED

Parameter name

Maximum High Probability Completion Calls Queued

> ***Note:*** The Office of the Manager, National Communication System (OMNCS) authorizes use of HPC Network Capabilities to National Security/Emergency Preparedness (NS/EP). NS/EP use of HPC Network Capabilities is restricted in the United States and U.S. Territories. The U.S. Territories are Puerto Rico and U.S. Virgin Islands. The operating company must coordinate the release of these HPC Network Capabilities with the OMNCS at the following address:

Office of the ManagerNational Communications SystemAttention: GETS Program Office 701 South Courthouse Rd.Arlington, VA 22204-2198email: gets@ncs.gov

Functional description

Office parameter MAX_HPC_CALLS_QUEUED in Table OFCENG controls the maximum number of calls held at the same time. The system holds the calls at the same time in a trunk group queue on an office-wide basis.

Rules in provisioning

The operating company provides the value for MAX_HPC_CALLS_QUEUED.

Range information

Minimum	Maximum	Default
0	1024	256

Activation

The method of change activation is immediate. The system holds calls on queue when the number of calls on queue during the change exceeds the new parameter value. The system does not accept more calls until the number of calls in the queue is less than the new value.

Dependencies

Does not apply

MAX_HPC_CALLS_QUEUED (end)

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Does not apply

Parameter history

NA008

Office parameter MAX_HPC_CALLS_QUEUED was introduced for the GETS HPC feature.

MAX_LINES

Parameter name

Maximum Number of Lines

Functional description

A local switching unit (international) with universal translations requires this parameter. This parameter specifies the maximum number of lines you can enter in the switching unit.

If you cannot add agents with meters because unused meter blocks (MTRBLKS) are not available, increase the value of this parameter.

After increasing the value of this parameter, perform an immediate meter backup.

You cannot decrease the value of this parameter.

Rules in provisioning

Set the value of this parameter to the maximum quantity of lines required before the next extension.

Range information

Minimum	Maximum	Default
0	65535	0

Activation

Immediate

Dependencies

At extension time, if the number of lines increase, the value of this parameter must increase.

Consequences

Does not apply

Verification

Does not apply

MAX_LINES (end)

Memory requirements

Each line requires 11 words of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS24.

MAX_MADN_MEMBERS_PER_LSG

Parameter name

Maximum Multiple Appearance Directory Number Members Per Line Subgroup

Functional description

This parameter appears only in a local or SL100 switching unit with the Multiple-Appearance Directory Number (MADN) feature. This parameter specifies the maximum quantity of MADN units allowed on one line subgroup.

Rules in provisioning

The recommended value is 4 for all switching units, excluding IBN and RES switching units in the United States.

For IBN and RES switching units in the United States, the recommended value is 1. Set the value to 1 during the process for initial offices.

Range information

Minimum	Maximum	Default
1	4	4

Activation

Immediate

Dependencies

Does not apply

Consequences

The maximum quantity of MADN units assigned to a line subgroup can exceed the value of this parameter. If the maximum quantity exceeds the value of this parameter, the VERIFY and VERIFYALL commands produce an error message.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

MAX_MADN_MEMBERS_PER_LSG (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

MAX_MFT_FILES

Parameter name

Maximum Number of Manual File Transfer Files

Functional description

An international switching unit in the Japanese market requires this parameter. This parameter specifies the maximum number of entries maintained in the internal directory for manual file transfer (MFT). The DSTATUS command at the DCOPYUT command level can allow the system to display these entries.

Rules in provisioning

Calculate the value of this parameter with the following equation:

$$F = M \times D$$

where

F
is the maximum number of MFT files

M
is the number of MFT files produced for each day

D
is the number of days the files must be kept

Range information

Minimum	Maximum	Default
0	150	50

Activation

Immediate

Dependencies

Set office parameter RASL_PROTOCOL in Table OFCOPT to a value of DMSITL. Use this parameter only with the international (ITL) protocol. Customers that are not ITL must set the value of this parameter to 0 (zero).

Consequences

The value of this parameter must not be higher than 0. The ITL customers cannot use the MFT internal directory.

Verification

Does not apply

Memory requirements

The following calculation determines the amount of memory reserved for MFT entries.

$$m = v \times 16$$

where

m
is the amount of memory in words

v
is the value of this parameter

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP04

The restart requirement was removed in CSP04.

CSP02

The parameter description was added in CSP02.

BCS30

This parameter was introduced in BCS30.

MAX_NO_OF_3_PORTS_IN_CHAIN

Parameter name

Maximum Number of Three-way Ports in a Three-way Calling Chain

Functional description

A Local or SL100 switching unit requires this parameter. This parameter specifies the maximum number of three-way conference circuits the user can use in a Three Way Calling (3WC) chain.

The 3WC-chain feature allows a party that does not control a current three-way call to add another party to the line.

A party that does not control a call can attempt to add a three-port to a current chain beyond the engineered limit. When this event occurs, the party receives five s of reorder tone.

Rules in provisioning

The maximum number of persons in the 3WC chain is equal to the value of this parameter + 2.

For example, when the value of this parameter is 3, the maximum number of conferees is 5.

Enter the maximum number of three-port conference circuits associated with a three-port conference chain.

Range information

Minimum	Maximum	Default
2	20	3

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

MAX_NO_OF_3_PORTS_IN_CHAIN (end)

Verification

Does not apply

Memory requirements

Does not apply

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

MAX_NO_OF_ALT_TEST_PROCS

Parameter name

Maximum Number of Automatic Line Test Processes

Functional description

An SL100 or Local switching unit requires this parameter for the Automatic Line Test (ALT). This parameter allows test processes from different ALT command interpreter (CI) users to run at the same time. This action accelerates the ALT.

Rules in provisioning

The value must be equal to the number of processes required for the ALT tester to run at the same time.

Range information

Minimum	Maximum	Default
15	200	15

Activation

Activation of this parameter requires that the system does not have any active ALT tests, either manual or scheduled. When the user changes the value, the system allocates new store and deallocates old store. The system requires this store so that active tests can run.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Each unit requires 133 words of memory.

MAX_NO_OF_ALT_TEST_PROCS (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP06

The parameter MAX_NO_OF_ALT_TEST_PROCS is now hard-coded to maximum recommended value (200). The user is now not able to access this parameter.

MAX_NO_OF_TRANS_ID

Parameter name

Maximum Number of Transaction Identifiers

Functional description

Feature 59014752 (TCAPTRID Removal) obsoletes office parameter MAX_NO_OF_ TRANS_ID. The parameter continues to be visible but the system no longer uses it.

Rules in provisioning

Does not apply.

Range information

Minimum	Maximum	Default
0	16000	4096

Activation

Does not apply.

Dependencies

Does not apply.

Consequences

Does not apply.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Does not apply.

MAX_NPT_SESSIONS

Parameter name

Maximum Number of Passthru Sessions

Functional description

This parameter indicates the maximum number of passthru sessions available on the EIOC node. For the CP Core Node, this value must be zero.

If enough system resources are available, users can create a number of passthru sessions as set in the parameter table.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
0	60	5

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Does not apply

Dump and restore rules

Copy current value or consult NT Customer Engineering.

MAX_NPT_SESSIONS (end)

Parameter history

CSP04

The restart requirement was removed in CSP04.

MAX_NRL_SESSIONS

Parameter name

Maximum Number of Remote Login Sessions

Functional description

This parameter indicates the maximum number of remote login sessions available on the CP Core Node. This parameter must be zero for the EIOC node.

If enough system resources are available, a number of remote login sessions are available to talk to the passthru session. The parameter table indicates the number of remote login sessions.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
0	60	5

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Does not apply

Dump and restore rules

Copy current value or consult NT Customer Engineering.

MAX_NRL_SESSIONS (end)

Parameter history

CSP04

The restart requirement was removed in CSP04.

MAX_NUM_PCM_RCVR

Parameter name

Maximum Number of Personal Call Manager Receivers

Functional description

This parameter specifies the maximum number of receivers available for PLS use.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
0	4095	0

Activation

Immediate

Dependencies

This parameter does not appear if the PLS software package is not available.

Consequences

Does not apply

Verification

The number of receivers can exceed the maximum number of receivers available for PLS use. When this occurs, the operational measurement (OM) PCMRFAIL increases. The OM PCMRFAIL belongs to the OM group PCM.

Memory requirements

Program store: 14 kbytes

Data store: 3 kbytes

Dump and restore rules

Does not apply

MAX_NUM_PCM_RCVR (end)

Parameter history

NA002

This parameter was introduced in NA002.

MAX_NUM_PRI_MWIC_CONTROL

Parameter name

Maximum Number of PRI Message Waiting Indicator Control

Functional description

This office parameter limits the number of outstanding message waiting indicator (MWI) transactions in the DMS switch. Change the value of this office parameter through table control.

Provisioning rules

During provisioning, resources are allocated to hold the MWI control transactions.

Range information

Minimum	Maximum	Default
8	4500	200

Activation

The change of this office parameter activates immediately.

Dependencies

This office parameter must be datafilled before the MWI Control option can be provisioned on each primary rate interface (PRI) in table LTDATA.

Consequences

Not applicable

Verification

When a new value is entered, the new value is verified against the sum of the maximum number of outstanding MWI control requests (MWIMAX) provisioned on the PRI interfaces. If the new value is less than the sum of MWIMAX provisioned on the PRI interfaces, an error message generates. The new value must be greater than the sum of all MWIMAX provisioned in table LTDATA for the change to complete. The DMS switch prevents the office parameter from changing to a value less than the sum of the MWIMAX provisioned on the PRI interface.

MAX_NUM_PRI_MWIC_CONTROL (end)

Memory requirements

Units per memory block	1
Words per memory block	70 words per Element MQP Pool
Minimum memory requirements	560 words
Maximum memory requirements	280000 words

Dump and restore rules

Not applicable

Parameter history

NA011

This office parameter was added in NA011.

MAX_NUM_WIDEBAND_CALLS

Parameter name

Maximum Number of Wideband Calls

Functional description

This parameter specifies the number of wideband extension blocks engineered for a switch. The number of extension blocks chosen indicates the maximum number of active wideband calls allowed on a switch at one time. These extension blocks store information for wideband calls. The system holds the extension blocks that this parameter provisions for the duration of the call.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

Set this parameter to a value equal to the number of simultaneous incoming and outgoing wideband calls expected on the switch.

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

MAX_NUM_WIDEBAND_CALLS (end)

Range information

Minimum	Maximum	Default
0	4096	0

Activation

Increase - If the parameter increases, activation is immediate.

Decrease - If the parameter decreases, activation occurs after a cold restart.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each extension block requires 200 words of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

BCS34

BCS34 introduces this parameter. This parameter was NUM_WIDEBAND_EXT_BLOCKS in BCS33.

MAX_PROGRAMMERS

Parameter name

Maximum Number of Programmers

Functional description

A switching unit with the Call-Forwarding Remote-Access (CFRA) feature requires this parameter. This parameter specifies the maximum number of users that can perform a remote programming action of CFRA at the same time.

If CFRA lines are on old peripherals, additional digitone (DGT) receivers are required. The system requires these additional DGT receivers to make sure the use of this feature does not impact standard call processing.

This feature does not use DGT receivers for switching units where all line and trunk peripherals are XMS-based peripheral modules (XPM) with Universal Tone Detectors (UTR).

The value of this parameter must not exceed the number of receivers or UTRs in the switching unit.

Rules in provisioning

Set the value of this parameter equal to the number of CFRA announcement members in table ANNMEMS.

Range information

Minimum	Maximum	Default
0	127	0

Activation

Immediate

Dependencies

Does not apply

Consequences

When this parameter value is overprovisioned, too many users receive NOSC or NOSR treatments. Too many NOSC or NOSR treatments indicates that the

MAX_PROGRAMMERS (end)

system does not have enough resources available. Examples of system resources are DGT receivers, UTRs, or announcement circuits.

When this parameter value is underprovisioned, too many users receive NOSR treatment.

Verification

Make sure the number of users specified can access CFRA at the same time.

Refer to OMGROUP CFRA for the operational measurements associated with this feature.

Memory requirements

Does not apply

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS27

This parameter was introduced in BCS27.

MAX_ROUTE_QUEUED_PER_TRKGRP

Parameter name

Maximum Number of Route Queued Calls per Trunk Group

Functional description

A switch with the World Systems and International Traffic Operator Position System (ITOPS) features requires this parameter. This parameter specifies the maximum number of calls the system can queue on a given outgoing route. The system allows each trunk group a maximum number of calls to queue against the trunk group. This condition limits the length of time that the system holds a trunk to process route queue calls. Too many route queue calls can indicate that a trunk is not available to perform normal two-port call processing.

Rules in provisioning

The number of trunks chosen for use by route queueing determines the value of this parameter. Choose the number that allows the trunk to process all trunk-held calls. This allows the trunk to perform normal two-port call processing.

Note that the number of calls allowed in the booked call database ranges from 1280 to 5120. Office parameter DB_MAX_SIZE specifies this range. The system maximum of 5120 occurs when the system queues all database calls against one trunk group. Choose a value for the parameter that spreads out the queueing requests.

Leave the value at default to deactivate this feature.

This parameter must have a value that is not zero to activate this feature.

Range information

Minimum	Maximum	Default
0	100	0

Activation

Immediate

MAX_ROUTE_QUEUED_PER_TRKGRP (continued)

Dependencies

This parameter functions in conjunction with parameter TOTAL_ROUTE_QUEUED_CALLS in table OFCENG.

The value of parameter TOTAL_ROUTE_QUEUED_CALLS can be smaller than the value of MAX_ROUTE_QUEUED_PER_TRKGRP. When this occurs, a queue on a trunk never reaches the maximum length. The maximum length is never reached because the system does not have enough queue elements allocated.

If the user decreases MAX_ROUTE_QUEUED_PER_TRKGRP or TOTAL_ROUTE_QUEUED_CALLS in table OFCENG, the state of the calls changes as follows:

- The system cannot put the call in a call queue.
- The call remains in the database as untimed.
- The call is not route queued.

For example, route Z can have 22 calls queued and the user can decrease the value of this parameter to 20. When this occurs, the system cannot recall two of the calls to an operator. The user must retrieve the two calls manually.

Consequences

When the parameter is overprovisioned, the trunk processes route queued calls all of the time and not normal two-port calls. The trunk is selective because the call queue against it is very long.

When the parameter is underprovisioned, route queue can fail because the system has already queued the maximum against the trunk group. When this event occurs, the header STORE flashes.

Verification

Make test calls to verify that this parameter works. Each test call queues on one exact outgoing route. When the number of calls reaches the maximum, an attempt to store a route queued call against this route fails. The header STORE flashes in this event.

Memory requirements

The system requires 509 words for the protected head segment to reserve trunks.

The system requires 8 words for each entry in table TRKGR. The system requires 2 bits for each trunk member that meets the restrictions of this feature.

MAX_ROUTE_QUEUED_PER_TRKGRP (end)

These trunk members have a signaling type of SIGSYS and a selection sequence of most idle and least idle.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS28

This parameter was introduced in BCS28.

BCS36

For this software release, activation was changed to immediate.

MAX_SDPOOL_NO

Parameter name

Maximum Number Of Store Data Pools

Functional description

This parameter specifies the number of SD pools assigned to store data for features and options assigned to lines in the tables:

- IBNFEAT
- IBNLINES
- KSETFEAT
- KSETLINES
- LENFEAT
- LENLINES

Rules in provisioning

The following formula is for a switching unit that does not have the basic Integrated Business Network (IBN) software. Use this formula to calculate the number of features lines can have assigned to them:

```
number of features = (MAX_SDPOOL_NO – 1) x
31742
```

The recommended value for a switching unit with the basic IBN software is 15.

All available pools can be within 510 items of being full. If this event occurs new lines with features cannot be added until you update this parameter.

The default value for a switching unit that does not have the basic IBN software is 3. For a switching unit that does not have the basic IBN software, check this value at the time of an extension. Perform this check to verify that the number of SDPOOLS allocated can accommodate the maximum number of line options. Perform this check to verify that the number of SDPOOLS allocated can accommodate the features for the engineering period.

Range information

Minimum	Maximum	Default
3	15	3 or 15

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Each unit of this parameter allocates 262 269 words for an NT40.

Each unit allocates 262 332 words for a SuperNode switching unit.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS14.

MAX_SUBSCRIBERS_IN_VLR

Parameter name

Maximum Number of Subscribers In Visitor Location Register

Functional description

This parameter specifies the maximum number of mobile stations that the DMS mobile switching center (MSC) supports.

The value for this parameter is in increments of 1K (1024). The visitor location register data access procedures (VLR-DAP) uses this value to compute the amount of memory allocated for the VLR database.

Rules in provisioning

There are no special calculations required to determine the value of this parameter. You require a knowledge of the number of mobile stations (MS) that require registration.

The default value is 1. Choose this default value because each MS tuple is approximately 300 bytes. The minimum MS tuple data size requirement is:

```
300 x 1024 = 300 Kbyte
```

Range information

Minimum	Maximum	Default
0	160	1

Activation

Immediate

Dependencies

Does not apply

Consequences

If you underprovision this parameter, some mobile stations cannot register in the VLR.

MAX_SUBSCRIBERS_IN_VLR (end)

If you overprovision this parameter, excess memory is allocated for the VLR database.

Verification

Does not apply

Memory requirements

Each unit requires 400 bytes of VLR memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS34

This parameter was introduced with software release BCS34.

CSP02

Restart activation is corrected in CSP02.

MAX_TRUNK_METER_BLOCKS

Parameter name

Maximum Number of Trunk Meter Blocks

Functional description

A switching unit with the World Systems and the DMS-100 metering system requires this parameter. This parameter specifies the number of trunk meter blocks the system requires.

The number must be equal to or greater than both of the following:

- the number of trunk groups with trunk group type MTR
- field METERIC equal to Y (yes) in table TRKGRP

Increase the value of this parameter as the number of metered trunk groups increases. Never decrease the value.

A 0 (zero) value indicates that no trunks are metered. A zero value also signifies that trunk metering must not be active. When active, trunk metering cannot be deactivated.

Rules in provisioning

Specify the maximum number of metered trunk groups the system requires for the engineering interval.

Range information

Minimum	Maximum	Default
0	2047	0

Activation

An increase of the value from zero to a value greater or less than zero activates trunk metering. Activation is immediate in the central control (CC). A cold switch activity (SWACT) or busy (BSY) and return to service (RTS) in the IDTCs starts trunk metering. All increases that follow are immediate in the CC. Because metering is already active, a cold swact or BSY and RTS in the IDTCs is not required.

MAX_TRUNK_METER_BLOCKS (end)

Dependencies

Increase the value of this parameter to the maximum number of metered trunk groups required for the engineering interval. This increase is required if the maximum number of metered trunk groups can increase.

Consequences

Metered trunk groups cannot be added to table TRKGRP if there are not enough trunk meter blocks.

When this parameter is overprovisioned, wasted memory.

Verification

Does not apply

Memory requirements

Each trunk meter block uses 10 words of memory. The special meter block 0 (zero) always uses 10 words of memory.

```
Memory required = 10 + (10 X number of trunk
meter blocks)
```

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS28.

MAX_TRUNKS_IN_ACB_SCAN

Parameter name

Maximum Number Of Trunks In ACB Scan

Functional description

This parameter is part of the Real Time Route Status Data feature. The parameter specifies the number of trunk groups involved in the scanning process. The scanning process examines each trunk group, assesses the percentage of busy trunks, and determines if the state changed. If the state changed, this process determines if the change for the trunk group must be produced. The scanning process divides the number of scanned trunk groups into three separate scans in blocks of 1024.

Rules in provisioning

Set this parameter to a value of 1024 to specify that one scan scans a maximum of 1024 trunk groups.

Set this parameter to a value of 2048 to specify that two separate scans scan a maximum of 2048 trunk groups.

Set this parameter to a value of 3072 to specify that three separate scans scan a maximum of 3072 trunk groups.

Range information

Minimum	Maximum	Default
1024	3072	1024

Activation

To activate a change to the value of this parameter, perform the following:

1. Change the value of MAX_TRUNKS_IN_ACB_SCAN.
2. Use the CI command ACBCTRL STOP.
3. Use the CI command ACBCTRL START.
4. You have activated the change.

Dependencies

See table ACBTAB for more information on the ACB scan.

MAX_TRUNKS_IN_ACB_SCAN (end)

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS33.

MAXNUCS

Parameter name

Maximum Number of Nailed-up Connections

Functional description

This parameter defines the maximum number of nailed-up connections the switch requires in an office equipped with the junctored network (JNET).

This parameter is not required in an office equipped with the enhanced network (ENET). The parameter is not required because the system allocates space for nailed-up connections as needed. The ENET places no restrictions on the maximum number of nailed-up connections.

This parameter allocates the store for all nailed connections. This parameter allocates the maximum number of 801 nailed-up connections assigned in table NLUPCLLI. In addition to the nailed-up connections in table NLUPCLLI, network nailed-up connections are necessary for the following:

- common channel interoffice signaling (CCIS)
- interperipheral message links (IPM)
- integrated business network (IBN) attendant consoles (AC)

Rules in provisioning

The recommended value is the maximum number of nailed-up connections required for tables NLUPCLLI, STINV, and IPMLINV + 3 for each IBN attendant console + 10%.

For switches with the CCIS feature, the minimum quantity is 4.

When the number of nailed-up connections active on the switch equals or is less than the parameter value, the parameter changes.

Set this parameter to 0 for offices equipped with ENE. Enter datafill in tables DATASIZE, IPMLINV, STINV, and NLUPCLLI as required.

Set this parameter value to 0 when this feature is not provided .

Range information

Minimum	Maximum	Default
0	9126	0

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

The size of the table appears in the following table.

Number of nailed-up connections	Number of words
1 to 1024	5000
1025 to 2048	10000
2049 to 3072	15000
3073 to 4096	20000
4097 to 5120	25000
5121 to 6144	30000
6145 to 7168	35000
7169 to 8192	40000
8193 to 9216	45000

MAXNUCS (end)

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

The activation changed to immediate in CSP02.

The NORESTARTSWACT activation was added in BCS36.

This parameter was introduced in BCS20.

MAXSTS

Parameter name

Maximum Number of Serving Translation System

Functional description

This parameter specifies the maximum number of terminating partitions required for the serving translation system.

Rules in provisioning

If an Integrated Business Network (IBN) load requires partitioned foreign numbering plan areas (FNPA), the recommended value for this parameter is 32. This value is for switching units with less than 33 true serving translation systems. Switching units with more than 32 true serving translation systems must use higher multiples.

The system generates the following warning message if the office parameter MAXSTS decreases to a value less than the number of tuples in any of the FNPASTS subtables:

```
TUPLE(S) IN THE FNPASTS SUBTABLE EXCEED THE TARGET SIZE OF THE
FNPASTS SUBTABLE.  AS A RESULT, TUPLES WILL BE LOST UPON THE
RESTART.

** RESTART AT YOUR OWN RISK **
```

Range information

Minimum	Maximum	Default
0	999	0

Activation

Immediate

Dependencies

See subtable FNPACODE.FNPASTS for the description of serving translation system.

MAXSTS (end)

Consequences

Tuples located at positions greater than the new MAXSTS value can be lost. This loss can occur if the value for MAXSTS becomes less than the number of tuples in any FNPASTS subtable.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

Activation changed to immediate in CSP03.

Activation NORESTARTSWACT was added in BCS36.

METER_AUDIT

Parameter name

Meter Audit

Functional description

A switching unit with international translations and the DMS-100 metering system requires this parameter. This parameter specifies the meter table audit start time and the frequency of the audit.

Rules in provisioning

Set the value of this parameter to the starting time and the frequency the meter audit is to run at. The starting time can be from 0 to 23 h and 0 to 59 min. The frequency can from 1 to 24 h.

Set the starting time to a time when call processing activity is low.

The operating company can change the value of the starting and the frequency time. The new value becomes effective at midnight.

A suggested starting time is before 12:00. A suggested frequency is one time every day.

The default value specifies a starting time of 3:15 a.m. The default value specifies a frequency of once every 24 h.

Range information

Minimum	Maximum	Default
		3 15 24

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

METER_AUDIT (end)

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS18.

MF_LAST_DIGIT_DELAY

Parameter name

Multifrequency Last Digit Delay

Functional description

This parameter allows the operating company to modify the additional delay added to the inter-digital timing. This additional delay occurs between the second last and last digits of MF outpulsing.

The system requires this delay to detect stop dials the system does not expect.

Rules in provisioning

Specify, in increments of 10 ms, the delay between the last and next-to-last outpulsed digits.

Range information

Minimum	Maximum	Default
0	10	7

Activation

You must busy (BSY) and return to service (RTS) the affected peripherals. When a change occurs for this parameter, the following message appears:

```
WARNING: A RELOAD OF THE PM/XPM EXECS MUST BE PERFORMED TO
ACTIVATE CHANGES TO THE VALUE OF THIS PARAMETER.
```

Dependencies

Does not apply

Consequences

The inter-digital timing between the next-to-last and last digits are in LSSGR specifications when this parameter is set to 0 (zero). Stop dials that are not planned can occur when this parameter is set to 0.

Verification

Does not apply

MF_LAST_DIGIT_DELAY (end)

Memory requirements

This parameter does not affect memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

MIN_NUMBER_OF_DIGS_RPTD_ON_OVLP

Parameter name

Minimum Number Of Digits Reported On Overlap

Functional description

A local switch with line-to-trunk overlap outpulsing requires this parameter.

Rules in provisioning

This parameter specifies the number of digits collected before overlap outpulsing starts for calls with overlapped outpulsing.

For example, if the value of this parameter is 5, the system collects five digits. The remaining digits are overlapped for all codes specified in table LMOVCODE.

Range information

Minimum	Maximum		Default
3	32767 (reserved) (programmed)	15	5

Activation

To activate a change to the value of this parameter:

- BUSY (BSY) the separate affected peripheral modules (PM)
- reload the static data
- RETURN TO SERVICE (RTS) the PM

Dependencies

See table LMOVCODE (Line to Trunk Overlap Outpulse) for information on overlap outpulsing.

Consequences

Does not apply

Verification

Does not apply

MIN_NUMBER_OF_DIGS_RPTD_ON_OVLP (end)

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

MIN_PASSWORD_LENGTH

Parameter name

Minimum Password Length

Functional description

This parameter specifies the minimum number of characters the system allows for logon passwords.

Rules in provisioning

Specify the minimum number of characters allowed for logon passwords.

Range information

Minimum	Maximum	Default
1	16	6

Activation

The activation of this parameter is immediate.

Dependencies

This parameter appears if the switching unit has parameter ENHANCED_PASSWORD_CONTROL, in table OFCOPT, set to Y (yes) and the software package NTX000AA.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter, unless the operating company requests a change to this parameter.

MINIMUM_CHARGE_DURATION

Parameter name

Minimum Charge Duration

Functional description

This parameter specifies the time, the called party must be off-hook before the system considers a call answered. All DMS switches use this parameter. This time is in 10 ms intervals.

Rules in provisioning

For operating companies that do not charge for calls less than 2.0 s, the recommended parameter value is 208 .

The value must be a multiple of 16 (that is, 16, 32, 48....).

Range information

Minimum	Maximum	Default
16	4080	208

Activation

All PMs that support line concentrating devices (LCD) require a BSY and RTS. The exception to this requirement are PMs that connect to an extended multiprocessor system (XMS)-based PM (XPM). For LCM/LCME, activation of changes to this value requires BSY and RTS on one unit of each LCM/LCME.

Dependencies

Does not apply

Consequences

If you change the value of this parameter, the central control (CC) or computing module (CM) uses the new value in the billing adjustment procedures. The PM uses the old values to calculate the call duration times until the static data is loaded again.

Reload the PMs immediately or billing errors can occur. If you do not reload the PMs immediately, the values for this parameter are different in the CC and PM.

The following messages appear when changes to this parameter occur:

```
WARNING: For LMs a BSY,RTS of each peripheral is required. For
LGC/LTC a BSY PM, RTS PM of one LCM per XPM is required to
activate changes to this value.WARNING: TRUNK PERIPHERALS MUST
HAVE THEIR EXECS RESENT
```

Verification

Does not apply

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP04

Activation information was updated in CSP04.

BCS36

Activation information was corrected in BCS36.

BCS15

This parameter was introduced in BCS15.

MINIMUM_CLI_LENGTH

Parameter name

Minimum Calling Line Identification Length

Functional description

A switching unit with the SSP-based Virtual Private Network (VPN) feature requires this parameter.

There must be a minimum length of Calling Line Identification (CLI) provided in the IAI message for VPN standard access calls. This CLI provide is checked against this office parameter. The system assumes the call has a full CLI if the conditions that follow apply. If CLI has the same number of digits, or more, than the number entered in this office parameter, call routing continues. A customer group and an NCOS in table CGNSCRN must be identifiable with the CLI. If the CLI length is less than the number entered, the system assumes the call contains a partial CLI. The system routes the call to treatment.

Rules in provisioning

Set this parameter to the minimum acceptable CLI length.

Range information

Minimum	Maximum	Default
0	11	6

Activation

Immediate

Dependencies

Does not apply

Consequences

If the value of this parameter is too high, the system sends a large number of VPN standard access calls to treatment.

Verification

Set the value to a CLI length longer than the normal CLI length to verify that this parameter operates. Verify that the system routes all standard VPN calls to treatment.

Memory requirements

This parameter requires 1 word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS31

This parameter is new with software release BCS31.

BCS36

Maximum value is increased in BCS36.

N5_CLB_TIMER

Parameter name

N5 Clear-back Timer

Functional description

This parameter is a requirement for DMS-300 Gateway switches with incoming #5 trunks. This parameter specifies the timeout period before the national part of the connection releases. This specification occurs if the system sends a clear-back signal and does not receive a clear-forward signal in reply.

Rules in provisioning

Specify one of the following timeout values:

- T2 = 2-minute timeout
- T3 = 3-minute timeout
- T4 = 4-minute timeout
- T30 = 30-minute timeout

Range information

Minimum	Maximum	Default
T2 (2 minutes)	T30 (30 minutes)	T3 (3 minutes)

Activation

Reload the affected peripheral module to activate a change to this parameter.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS29

This parameter was introduced in BCS29.

N5_USING_UTR

Parameter name

N5 Using Universal Tone Receivers

Functional description

This parameter controls the type of receivers the system uses for N5 signaling in a DMS-300 office. This parameter determines if the N5 signaling system can use universal tone receivers (UTR) for digit collection. The UTR is provisioned on the peripheral module (PM). This occurs on PCM30 digital trunk controller (PDTC) peripherals.

Rules in provisioning

If the value of this parameter is set to Y (yes), the UTR receivers perform digit reception. The system must provision the UTR receivers on the PM that provides trunk interface.

If the value of this parameter is set at the default of N (no), MF300 receivers perform digit reception. The MF300 receivers must be equipped on a maintenance trunk module (MTM) peripheral for the N value.

If this parameter is set to N, the system uses MF300 receivers during register signaling. If it is set to Y, the system uses UTR receivers.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

The setting of this parameter affects the engineering of the office. The correct number and type of receivers must be provisioned.

Verification

Does not apply

Memory requirements

Each unit requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS34.

N6_CLB_TIMER

Parameter name

N6 Clear-back Timer

Functional description

The DMS-300 Gateway switches with incoming #6 trunks require this parameter. This parameter specifies the timeout period after which the system releases the national part of the connection. The system releases the connection when the system sends a clear-back signal and does not receive a clear-forward signal.

Rules in provisioning

Specify one of the following timeout values:

- T2 = 2-minute timeout
- T3 = 3-minute timeout
- T4 = 4-minute timeout
- T30 = 30-minute timeout

Range information

Minimum	Maximum	Default
T2 (2 minutes)	T30 (30 minutes)	T3 (3 minutes)

Activation

Busy (BSY) and return to service (RTS) the #6 trunks to activate a change to this office parameter. Activation does not require a restart.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS29

This parameter was introduced in BCS29.

NACD_BRDCAST_INTERVAL

Parameter name

Networked Automatic Call Distribution Broadcast Interval

Functional description

The switching units with the Networked Automatic Call Distribution (NACD) feature require this parameter.

When NACD groups are able to exchange load status information, the NACD provides automatic load balancing for Networked ACD. The load status information can determine the best overflow target group.

At regular intervals, all NACD group broadcasts network load status information to each group to which the calls can route. When each group receives network load information from other groups, the system saves the information. The system uses the information to determine which NACD group receives the overflow of calls. The system continuously monitors the current load traffic of the each group. This action allows automatic load balancing.

The automatic load balancing that this feature provides can reduce the amount of time required to respond to the overflow of calls. The system routes the calls to the group that is best able to answer the overflow of calls.

Rules in provisioning

This parameter specifies the time, in 1 s intervals, between the broadcast of load status information. The broadcast of load status information occurs between each NACD group and other groups in the network.

Set this parameter to a multiple of ten in order to define a true interval. If the parameter is not an interval of ten, broadcasts occur at the next highest multiple of ten. For example, a 28 s interval occurs every 30 s.

If the interval is not 60 s, this parameter specifies the time in 1 s intervals, between broadcasts of load status information. The broadcast of load status information occurs between each NACD group and other groups in the network.

Range information

Minimum	Maximum	Default
0	1800	60

Activation

Immediate

Dependencies

Does not apply

Consequences

If this parameter is set to zero, NACD groups do not perform the periodic broadcast of load status information.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS28

This parameter was introduced in BCS28.

NACD_RI_DELTA_PARM

Parameter name

Network Automatic Call Distribution Resource Index Delta Parameter

Functional description

This parameter associates with the Network Automated Call Distribution feature (NACD).

The NACD provides the capability for each ACD group to broadcast status information about the load traffic of the ACD group. The NACD allows the ACD group to store load status information about the rest of the network.

The system uses the load status information to determine the best group. To determine the best group, the system uses the combined value of the preference weighing factor (PWF) and the resource index (RI). The PWF is a customer defined value that the user entered in table NACDGRP. The PWF allows the system preference to a particular NACD group. The system calculates the RI for each group, and indicates the load traffic for that group.

Introduce the RI algorithm based on the following:

- the number of idle agents
- wait time of oldest call
- wait time of most idle agent
- queue size

This parameter specifies the delta value to use when you determine if the NACD RI value changes enough for an update. The system computes the difference between the current RI and the previous RI. The system compares the difference against the value of this parameter. When the difference is greater than the parameter value or equal to the parameter value, the RI is broadcast. The RI is broadcast to update the network.

Rules in provisioning

When the parameter value is high, the amount of RI broadcasts are low.

NACD_RI_DELTA_PARM (end)

Range information

Minimum	Maximum	Default
0	32 676	5

Activation

Immediate

Dependencies

Does not apply

Consequences

If this parameter is set to zero, the system sends the RI for each broadcast attempt. Refer to office parameter NACD_BRDCAST_INTERVAL in table OFCENG.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

BCS29

This parameter was introduced in BCS29.

Copy the current value of this parameter when you perform a dump and restore.

NATIONAL_COUNTRY_CODE

Parameter name

National Country Code

Functional description

This parameter is a requirement in a DMS-100 or a DMS-300 switch. This parameter specifies the country code appropriate to the switch location.

For the DMS-300 switch to recognize a country code, the system must have data for the country code in the DMS-300 table OVNTRNSL.

A subscriber can use a country code for which no data exists in table OVNTRNSL. An update does not occur to the internal country code index into table OVNTRNSL for calls that terminate. The internal country code remains at the previous value. A check occurs for changes on cold and reload restarts.

This parameter supports datafill for one country code only.

Provisioning rules

The value of this parameter must be numeric. The parameter value must equal the country code of the country of the switch location.

If the switch location is in North America, leave the value of this parameter at the default of 1.

Range information

The range information is as follows:

Minimum	Maximum	Default
0	9999	1

Activation

The activation of this parameter is immediate.

If a change occurs and table OVNTRNSL contains data for the new country code, the change process is immediate.

If the country code does not exist in table OVNTRNSL, the system displays a warning. The user must add the country code to table OVNTRNSL. The parameter activates on the next restart. This only applies during the first user entry.

NATIONAL_COUNTRY_CODE (end)

Requirements

Enter data for this country code in table OVNTRNSL.

Results

Does not apply

Testing

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

EUR008

The activity formerly provided by parameter COUNTRY_CODE is now provided by this parameter, NATIONAL_COUNTRY_CODE.

CSP02

After the first user entry, cold restart activation requirement removed.

BCS21

This parameter was introduced in BCS21.

NCCBS

Parameter name

Number of Call Condense Blocks

Functional description

All switching units require this parameter. This parameter specifies the number of call condense blocks (CCB) the switching unit requires. A CCB is a software register for a call over the call duration. A CCB contains information. An example of this information is the identity of the calling and called appearances.

The parameter value determines the maximum number of simultaneous calls.

After BCS34, the DMS packet handler uses this parameter to set up packet calls. Each packet call requires one CCB.

The expected number of calls that are active at the same time on an XLIU is 1000. An engineering the number of call condense blocks (NCCBS) value does not restrict the number of calls for each XLIU to 1000. When the number of calls for an XLIU exceeds 1000, the system uses resources provisioned for voice calls.

The recommended minimum value for this parameter is 2000.

Rules in provisioning

For Junctored Network (JNET) offices, calculate the value of this parameter with the following equation:

NCCBS = N x 64 x 15 x number of provisioned network modules

For Enhanced Network (ENET) offices, calculate the value of this parameter with the following equation:

NCCBS = N x 64 x 15 x 15 x number of ENET shelves per plane

For DMS packet handler (JNET offices), calculate the value of this parameter with the following equation:

NCCBS = (N x 64 x 15 x number of provisioned network modules)
+ (1000 x number of XLIUs provisioned for the office)

For DMS packet handler (ENET offices), calculate the value of this parameter with the following equation:

NCCBS = (N x 64 x 15 x 15 x number of ENET shelves per plane)
+ (1000 x number of XLIUs provisioned for the office)

where N = 0.8 for a Bell Canada switching unit, excluding standalone signal transfer point (STP).

or,

N = 0.9 for all switching units, excluding a switching unit in the United States or a standalone signal transfer point (STP).

or,

N = 1.0 for all switching units in the United States, excluding a standalone signal transfer point (STP).

DMS-100G offices that use cross-threaded software and generic services framework (GSF) software require 3000 CCBs for the GSF software. Use the applicable cross-threaded formula (ENET or JNET) to calculate the additional CCBs required for the cross-threaded software. Multiply the value from the cross-threaded formula by the percentage of cross-threaded lines or trunks installed on the switch. Use the following equation to calculate the NCCBs for the DMS-100G switch:

NCCBS = 3000 + cross-threaded NCCBS x (percentage of cross-threaded lines or trunks)

For a standalone STP, use the default value of this parameter.

NCCBS (continued)

Range information

Minimum	Maximum	Default
0	32 767 (NT40) 65 535 (SuperNode) 262 143 (XA-Core)	80 4000 (DMS-100G)

Activation

When the value of this parameter increases, the activation is immediate.

When the value of this parameter decreases more than 10% the activation occurs after a cold restart.

Dependencies

For all switching units, except a stand-alone STP, you must increase the parameter value if the number of networks increases.

> ***Note:*** The system updates CCBS in CPSYS at the MAPCI level with the new NCCBS after a Startsc command.

A change in the value of this parameter in an Integrated Business Network (IBN) switching unit can affect the value of parameters NO_OF_SMDR_REC_UNITS and NUMOHCBQTRANSBLKS in table OFCENG.

A change in the value of this parameter in a switching unit with the Common Channel Signaling 7 (CCS7) feature affects the value of parameter NUM_ISUP_EXT_BLKS in table OFCENG.

A change the value of this parameter in a local switching unit (international) with common translation design affects the value of parameter NUM_CCMTR_EXT_BLKS in table OFCENG.

Consequences

If there are no CCBs available, the system routes calls to network blockage normal traffic (NBLN) treatment in treatment tables.

Verification

To verify the allocation of enough call condense blocks, use command interpreter (CI) command `OMSHOW CP ACTIVE` and read the measurement CCBOVFL.

Any value that is not zero in CCBOVFL indicates that there are not enough provisions.

Use CI command `OMSHOW CP2 ACTIVE` and read measurement CCBHI.

Measurement CCBHI records the maximum number of CCBs used at the same time during the current transfer period.

See operational measurements CCBSZ and CCBOVFL in OM group CP and CCBHI in OM group CP2 for the OMs for this parameter.

See the *Operational Measurements Reference Manual* for a description of OM groups CP and CP2.

Memory requirements

NT40: A CCB requires 125 words of memory.

SuperNode: A CCB requires 132 words of memory.

XA-Core: A CCB requires 256 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP14

Feature 59019409 provides NCCBS range information for XA-Core, and the number of words of memory required for each CCB in XA-Core.

GL03.0

This feature includes the added default value and calculation formula for the DMS-100G switch.

NETWORK_ELEMENT_ID

Parameter name

Network Element Identifier

Functional description

This parameter appears in a switching unit that contains software module EOCPPSUB. This parameter specifies the network element identifier. The FiberWorld protocol stack uses the network element identifier.

The operating company must provision this network element identifier during the connection of an AccessNode to a DMS in a multihosting environment. The network element identifier must be different for each DMS.

The communication stack uses this parameter. You must reset the stack if the value of this parameter changes.

Rules in provisioning

Specify a different network element identifier for each DMS switching unit that connects to an AccessNode in a multihosting environment.

Range information

Minimum	Maximum	Default
0	32 767	0

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS36

This parameter was introduced in BCS36.

Includes the added Network element id.

NFA_ANSWER_DETECT_TIME

Parameter name

Network Facility Access Answer Detect Time

Functional description

A switching unit with feature package NTXR25AA (Network Facility Access) requires this parameter. This parameter specifies the filter time in 10 ms intervals. The filter time is the time required to detect answer on a Network Facility Access (NFA) trunk.

Rules in provisioning

The filter time value for hook changes can be set at a value from 7 (70 ms) to 9 (90 ms). The recommended value for this parameter is 9. The switch can use an intelligent peripheral (IP) and a transmission medium that supports shorter timing values. When this event occurs, you can decrease the value from the default of 9.

The system displays the following message when the value of this parameter decreases from the default value:

```
WARNING: DECREASING THIS OFFICE PARAMETER FROM THE
DEFAULT OF 9 CAN IMPACT THE GRADE OF SERVICE FOR NFA
SUBSCRIBERS.
```

Range information

Minimum	Maximum	Default
7	9	9

Activation

Immediate

Dependencies

Does not apply

NFA_ANSWER_DETECT_TIME (end)

Consequences

Decreases in the value of this parameter can affect the grade of service for NFA subscribers. The level of service is affected when the switch is not equipped with the following:

- an intelligent peripheral (IP)
- transmission medium that supports shorter timing values

Verification

To check a change to the value of this parameter, assign NFA access to a line. Connect a trunk signaling device to the NFA trunk. Seize the NFA trunk and program the trunk signaling device to return a wink. If the duration of the wink is less than the filter time, the DMS does not recognize the wink. If the duration of the wink is more than the filter time, the DMS recognizes the wink as a response. A disconnect follows.

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

EUR003

This parameter was deleted from the European software release by design activity AR1605, the Europe Work for CCM SLCF Program.

BCS36

This parameter was introduced in BCS36.

NFA_IMPL_CONNECT_TIMER

Parameter name

Network Facility Access (NFA) Implicit Connect Timer

Functional description

Use SAID implicit connect timer to disallow SAID implicit access. The SAID implicit connect timer disallows access when:

- the originator of a call to a SAID implicit access line goes on-hook while the SAID implicit access line rings
- the ring cycle completes and the SAID implicit access line goes off-hook

This function supports an event in which the answering machine of the subscriber to SAID access answers a call after the last ring cycle completes. The originating party hangs up during the last ring cycle. This event occurs to avoid triggering SAID access while the answering machine is in use.

Rules in provisioning

Does not apply

Range information

Minimum	Maximum	Default
0	15	0

Activation

Immediate. A restart is not required to activate this parameter.

Dependencies

Does not apply

Consequences

Set the timer (NFA_IMPL_CONNECT_TIMER) to a value that corresponds to the duration of a call. This duration is timed from the time the originator hangs up to the time the answering machine answers the call. If the timer is set too low, the SAID Implicit Access can activate again before receiving the call originating message from the XPM. If the timer is set too high, after the originator hangs up the SAID subscriber must hang up and pick up the

NFA_IMPL_CONNECT_TIMER (end)

telephone again to have SAID Implicit Access. The timer starts when the originating party goes on-hook.

Verification

A parameter value greater than 0 activates the functionality that this solution provides.

Memory requirements

One word

Dump and restore rules

Patches to previous loads include this office parameter. A conversion method is not required.

Parameter history

NA009

Parameter created.

NFA_IMPL_DISCON_RECON_TIMER

Parameter name

Network Facility Access Implicit Disconnect Reconnect Timer

Functional description

The system uses this parameter to enable or disable a block of subscriber access to Speech-Activated Intelligent Dialing (SAID) for each office. The value of this parameter represents the value of a timer. The timer determines when the SAID Implicit Access occurs.

When the value of the timer is set to 0, the system initiates the SAID Implicit Access feature.

When the value of the timer is greater than zero, the system blocks the SAID Implicit Access feature. The system blocks SAID features for the amount of time specified in the timer when both of the following conditions occur:

- the called party of the previous call was the SAID Implicit Access subscriber.
- SAID Implicit Access subscriber received a disconnect (DISC) treatment as a result of the calling party that was on-hook first.

If the value of the timer is set to greater than zero, the system blocks the SAID Implicit Access feature. The block occurs for the number of seconds set for the timer. The system blocks the SAID Implicit Access feature for the next call that the SAID Implicit Access subscriber originates.

The following are limits for SAID Implicit Access.

- When the user entry of DISC treatment is an announcement or a tone followed by IDLE, the system denies SAID Implicit Access. The system denies SAID Implicit Access for the length of time set in the timer value. The SAID implicit subscriber must go on-hook during the announcement or tone.
- Some features manipulate parties in a call. These features can be conference calls, Call Transfer (CRX) and Call Pickup (CPU). A terminating party can become an originating party and the originating party can become a terminating party because the features manipulate parties. The NFA_IMPL_DISCON_RECON_TIMER only applies to the result of terminating party that results.
- Other features can remove a party from a call. A feature can be Call Screening Monitoring and Intercept (CSMI). When a feature removes a terminating party, the system modifies the call structure. The Processing Environment (FPE) does not recognize the difference between the

NFA_IMPL_DISCON_RECON_TIMER (continued)

originating and terminating parties. As a result, the timer in this parameter does not apply to this type of call.

Rules in provisioning

If you do not want to block access to SAID for each office, set this parameter to the default value of 0.

If you do want to block access to SAID for each office, set the value of this parameter from 1 to 7 seconds. Use table control to set the value of this parameter.

The timer value can be set too low. When the value is too low, the timer expires before the system returns the dial tone to the subscriber. When this event occurs, the system initiates the SAID Implicit Access feature.

Range information

This office parameter has a range of values of 0 to 7 seconds.

Minimum	Maximum	Default
0	7	0

Activation

The activation of this parameter is immediate.

Dependencies

Does not apply

Consequences

The value of parameter NFA_IMPL_DISCON_RECON_TIMER must be set for the following events to occur in the time set in this parameter:

- a loaded extended peripheral module (XPM) can handle a message that the CM sends
- The XPM sends a message back to the CM

When the timer value is set too low SAID Implicit Access can become available before the CM receives the call origination message form the XPM. The timer starts when the DISC treatment process ends.

NFA_IMPL_DISCON_RECON_TIMER (end)

Verification

Set the value of this parameter to a value greater than 0. Make sure the system denies SAID subscribers the SAID Implicit Access feature for the specified amount of the time. The parameter value indicates the amount of time specified.

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

Does not apply

Parameter history

NA007

This parameter was introduced.

NFA_IMPLCT_BYPASS_UTR

Parameter name

Network Facility Access Implicit Bypass Universal Tone Receivers

Functional description

This parameter is present in switches equipped with the Network Facility Access feature. This parameter specifies if the system bypass of universal tone receivers (UTR) occurs when the system performs a digit collection. The system performs a digit collection on lines that have the NFA implicit access feature.

Rules in provisioning

Set the value of this parameter to Y (yes) for the system to use network dual tone multifrequency (DTMF) receivers for digit collection. The system performs a digit collection on lines with the NFA Implicit Access feature activated.

When the parameter value changes from N (no) to Y (yes), the following message appears:

```
WARNING:2X48 DTMF RECEIVERS WILL BE USED ON ALL NFA
IMPLICIT CONNECTIONS.  VERIFY IMMEDIATELY THAT THE OFFICE
IS ENGINEERED WITH ENOUGH DTMF RECEIVERS TO HANDLE ALL
NFA IMPLICIT TRAFFIC.  IF THIS IS NOT THE CASE, THE VALUE
OF THIS PARAMETER SHOULD BE CHANGED BACK TO N.
```

Set the value of this parameter to N (no) for the system to use UTR for digit collection when the line peripheral module is engineered with UTR.

When the parameter value changes from Y to N, the following message appears:

```
UTRS WILL BE USED ON NFA IMPLICIT CONNECTIONS IF THEY ARE
AVAILABLE.
```

NFA_IMPLCT_BYPASS_UTR (continued)

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

The value of this parameter is set to Y when the office design has enough network DTMF receivers to handle digit collection. The digit collection is for all the originations from lines with an activated NFA implicit access feature. If there are not enough DTMF receivers, there may be delays in dial tone and aborted calls.

Verification

To check changes for this parameter, post a line from a peripheral engineered with UTRs at the LTP level of the MAP. Assign NFA implicit access to the line. Go off hook from the line and dial one digit. When the parameter value is set to N, the system displays the UTR next to the line at the LTP level. When the value of this parameter is set to Y, the system displays the following at the LTP level:

- common language location identifier (CLLI)
- receiver number associated with the DTMF receiver in use

Memory requirements

Each unit requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NFA_IMPLCT_BYPASS_UTR (end)

Parameter history

EUR003

This parameter was deleted from the European software release by design activity AR1605, the Europe Work for CCM SLCF Program.

BCS36

This parameter description moved from table OFCVAR to table OFCENG.

BCS35

This parameter was introduced in BCS35.

NFA_INVERTED_WINK_DURATION

Parameter name

Network Facility Access Inverted Wink Duration

Functional description

A switching unit with feature package NTXR25AA (Network Facility Access) requires this parameter. This parameter specifies the maximum duration of the inverted wink that a DMS switch propagates. The DMS propagates the inverted wink on a Network Facility Access (NFA) trunk when the system establishes of the speech path. The system establishes the speech path between the subscriber and the NFA trunk.

Rules in provisioning

The duration of the inverted wink can be a value from 6 and 10 (between 50-60ms and 90 -100 ms). The recommended value for this parameter is 10. The switch can use an intelligent peripheral (IP) and transmission medium that can support a shorter timing value. When this condition occurs, you can decrease the value of this parameter from the default of 10.

The system displays the following message when the value of this parameter decreases from the default value:

```
DECREASING THIS OFFICE PARAMETER FROM THE DEFAULT OF 10
CAN IMPACT THE GRADE OF SERVICE FOR NFA SUBSCRIBERS.
```

Range information

Minimum	Maximum	Default
6	10	10

Activation

Immediate

Dependencies

Does not apply

NFA_INVERTED_WINK_DURATION (end)

Consequences

A decrease in the value of this parameter can impact the grade of service for NFA subscribers. This condition occurs when the switch is not equipped with an intelligent peripheral (IP) and transmission medium that supports a shorter timing value.

Verification

To check a change to the value of this parameter, assign NFA access to a line. Establish an NFA trunk connection and measure the duration of the inverted wink.

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

EUR003

This parameter was deleted from the European software release by design activity AR1605 the Europe Work for CCM SLCF Program.

BCS36

This parameter was introduced in BCS36.

NFA_PRE_DIAL_DELAY_TIME

Parameter name

Network Facility Access Predial Delay Time

Functional description

A switching unit with feature package NTXR25AA (Network Facility Access) requires this parameter. This parameter specifies the amount ofpredial delay in 10 ms intervals. The delay occurs between seizing a Network Facility Access (NFA) trunk and outpulsing the first digit.

Rules in provisioning

The delay time can be set to a value from 0 (0 ms) to 15 (150 ms). The recommended value for this parameter is the default of 15. The switch can use an intelligent peripheral (IP) and transmission medium that can support a shorter timing value. When this condition occurs, you can decrease the value from the default.

The system displays the following message when the value of this parameter decreases from the default value:

```
WARNING: DECREASING THIS OFFICE PARAMETER FROM THE
DEFAULT OF 15 CAN IMPACT THE GRADE OF SERVICE FOR NFA
SUBSCRIBERS.
```

Range information

Minimum	Maximum	Default
0	15	15

Activation

The activation of this parameter is immediate.

Dependencies

Does not apply.

Consequences

A decrease in the value of this parameter can impact the grade of service for NFA subscribers. This condition occurs when the switch is not equipped with

an intelligent peripheral (IP) and transmission medium that supports shorter timing values.

Verification

To check a change to the value of this parameter, assign NFA access to a line. Go off-hook from the line and measure the predial delay time. The total call timing decreases.

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

EUR003

This parameter was deleted from the European software release by design activity AR1605, the Europe Work for CCM SLCF Program.

BCS36

The parameter was introduced in BCS36.

NMS_ACKNOWLEDGEMENT_TIMEOUT

Parameter name

Network Message Waiting Acknowledgement Timeout

Functional description

This parameter associates with the Network Message Waiting Indicator (NMWI) feature.

An NMWI allows a Message Service on one node to activate, deactivates the message waiting indicator of a subscriber on a different node. The two nodes must support transaction-capability application part (TCAP) communication between the nodes.

The signaling-connection control part (SCCP) of the CCS7 network provides the TCAP and the connectionless class 0 (basic) service that an NMWI uses.

This parameter specifies the maximum amount of time, in seconds, that an NMS TCAP request can wait for an acknowledgement. After this time limit, the system considers the NMS request timed out.

Rules in provisioning

Use the default value of 3 in most conditions for this office parameter. When underprovisioning or overprovisioning causes problems, raise or lower the value of this parameter by one.

It is not recommended that you set this parameter to 0 (zero). A zero value implies that the system does not require acknowledgements, positive or negative.

Range information

Minimum	Maximum	Default
0	32767	3

Activation

The activation of this parameter is immediate.

Dependencies

Does not apply

NMS_ACKNOWLEDGEMENT_TIMEOUT (end)

Consequences

Underprovisioning causes too many NMS TCAP requests to time out. If you set this parameter to 0 (zero), it causes the system to not perform timing.

Overprovisioning causes transaction ID to exist for longer periods. The use of transaction IDs occurs more quickly.

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

This parameter was introduced in BCS30.

Copy the current value of this parameter when you perform a dump and restore.

NMULTIBLKS

Parameter name

Number of Multiblocks

Functional description

All switching units require this parameter. This parameter specifies the number of multiblocks the engineering period requires.

The system uses multiblocks to associate call condense blocks (CCB), when more than one call associates with the same line or trunk. A three-way call is an example of when the system would associate a multiblock to a CCB.

Multiblocks are a requirement for the following features:

- Three-Way Calling
- Call Waiting
- Traffic Operator Position System (TOPS)

Rules in provisioning

The following formula determines the recommended value for this parameter:

```
2  x  the number of 3-port conference circuits
   +    0.3 x value of parameter NO_OF_FTR_CONTROL_BLKS
   +    0.8 x number of TOPS positions
```

See table CONF3PR for the number of 3-port conference circuits.

For all switching units to which the above formula applies, leave this parameter at the default value of 10.

The system routes the call to No Software Resource (NOSR) treatment in the appropriate treatment table when these blocks are not available.

Range information

Minimum	Maximum	Default
0	32767 (reserved) 4095 (programmed)	10

NMULTIBLKS (end)

Activation

The activation of this parameter is immediate.

Dependencies

At the time of the extension, recalculate the value of the parameter when items in the provisioning rules change.

Consequences

Does not apply

Verification

Refer to operational measurements (OM) MULTSZ and MULTOVFL in OM group CP and MULTHI in OM group CP2 for the OMs for this parameter.

To check that the system allocates enough multiblocks, use CI command OMSHOW CP ACTIVE. Read the measurement MULTOVFL in OM group CP.

Any value that is not zero in measurement MULTOVFL indicates that there are not enough provisions.

Measurement MULTHI records the maximum number of multiblocks in use at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM groups CP and CP2.

Memory requirements

A multiblock requires three words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP03

Changed activation to immediate. The restart requirement was removed in CSP03.

NO_ANS_CALLS_ONTAPE

Parameter name

No Answer Calls On Tape

Functional description

This parameter specifies if the system records calls that do not receive an answer on the automatic message accounting (AMA) tape. The following types of software use this parameter:

- Northern Telecom format AMA software
- market-specific United Kingdom Traffic Operator Position System (TOPS) software
- Overseas Operator Center (OOC) TOPS software

Rules in provisioning

If the value of this parameter is Y (yes), the system records calls that do not receive an answer on the AMA tape.

You can leave the value of this parameter at the default value of N (no). When this condition occurs, the system does not record calls that do not receive an answer on the AMA tape.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

NO_ANS_CALLS_ONTAPE (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NO_LOCAL_COIN_EXT_BLKS

Parameter name

Number Of Local Coin Extension Blocks

Functional description

This parameter appears only in switching units with the Local Coin Overtime Charging feature. The parameter specifies the number of local coin extension blocks required for the switch.

To connect local coin calls to coin overtime treatment requires local coin extension blocks.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

The recommended number of extension blocks is equal to the maximum number of connections to the tone or announcement. These connections must be simultaneous. The first element in the route list (Table OFRT) specifies the tone or announcement. This first element is assigned to the coin overtime treatment CNOT. The coin overtime treatment CNOT appears in subtable LNT of Table TMTCNTL.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

NO_LOCAL_COIN_EXT_BLKS (continued)

Range information

Minimum	Maximum	Default
0	32767 (reserved) 32000 (programmed)	15

Activation

When the value of this parameter increases, the activation is immediate.

When the value of this parameter decreases, the activation occurs after a cold restart.

Dependencies

At extension time, this parameter value must increase. If the number of connections increases, the connections must be simultaneous. The rules in provisioning specify the connections.

Consequences

Does not apply

Verification

To verify that the system allocates enough recording units, use command interpreter (CI) command `OMSHOW EXT ACTIVE 27`. Read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
27 LCO_EXTENSION_BLOCK
15
       0             0             0             0
       0
```

Operational measurements EXTHI and EXTHI2 record the maximum number of extension blocks that operate at the same time. The extension blocks operate during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

NO_LOCAL_COIN_EXT_BLKS (end)

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each extension block requires 12 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NO_OCCTS_OM_REGISTERS

Parameter name

Number of Other Common Carrier Traffic Separation Operational Measurement Registers

Functional description

A switch with the Equal Access Traffic Separation Measurement System and Other Common Carrier Traffic Separation (OCCTS) requires this parameter.

This parameter specifies that the user can assign the maximum number of operational measurement registers in Table OCCTSINT.

Rules in provisioning

A switch without software package NTX085AA (Traffic Separation Peg Count) can have parameter OCCTS_ENHANCED_FEATURE in Table OFCENG set to N (no). When this condition occurs, leave the parameter at the default value of 225.

The switch with software package NTX085AA can have parameter OCCTS_ENHANCED_FEATURE in Table OFCENG set to Y (yes). When this condition occurs, the recommended value is 1000.

Range information

Minimum	Maximum	Default
0	2047	225

Activation

Immediate

Dependencies

Refer to parameter OCCTS_ENHANCED_FEATURE in Table OFCENG for other parameters and tables for the OCCTS feature.

Consequences

The user cannot decrease the value after the parameter is set. This procedure avoids traps that can occur in table control and call processing if OCCTS registers that were removed are used.

NO_OCCTS_OM_REGISTERS (end)

Verification

Does not apply

Memory requirements

To allocate memory, refer to parameter OCCTS_IN_MAX_NUMBER in Table OFCENG.

Dump and restore rules

For switches with software package NTX085AA, copy the current value of this parameter when you perform a dump and restore.

For switches without software package NTX085AA, leave this parameter at the default value of 225.

Parameter history

CSP02

Cold restart activation requirement removed.

NO_OF_CLONE_TIDS

Parameter name

Number of Clone Virtual Identifiers

Functional description

Office parameter NO_OF_CLONE_TIDS in table OFCENG defines the number of clone virtual identifiers (CVID) available in the office.

The Broadcast feature uses this parameter to indicate the number of CVIDs engineered for the office. This parameter indicates the total of the maximum number of output ports active at the same time. The output ports active at the same time occur in all broadcast calls supported in the office at one time.

The RES Simultaneous Ringing (SimRing) feature uses CVIDs for simultaneous notification of multiple terminating agents. Office parameter NO_OF_CLONE_TIDS identifies the maximum number of SimRing group non-pilot member directory numbers (NPMDN) that can receive simultaneous notification in the office.

Rules in provisioning

Broadcast feature

The Broadcast feature requires a maximum of 8000 CVIDs if both of the following conditions occur:

- each output port requires one CVID
- a maximum of 1000 trunks are supported with an average of eight destinations each

The system allocates additional CVIDS for other uses because CVIDs are not broadcast specified.

SimRing feature

The operating company must provision office parameter NO_OF_CLONE_TIDS so that enough CVIDs are available when a SimRing call is initiated. The CVIDs are used to initiate SimRing group pilot directory number (PDN)-to-NPMDN calls. They remain active from call initialization until the call is answered or released.

The operating company can provision the total number of CVIDs in an office using the following formula:

$$NO_OF_CLONE_TIDS = (N \times T \times P)$$

NO_OF_CLONE_TIDS (continued)

where:

- N = average number of NPMDNs in SimRing group (the recommended value is 4)
- T = average SimRing call answer time in seconds (approximately 10 s)
- P = percentage of feature penetration

Note: Since other features can use the NO_OF_CLONE_TIDS parameter, the operating company should add the value obtained with the formula to the existing parameter value.

Example

For the NA010 release, the maximum number of SimRing group NPMDNs is four; therefore, N = 4.

For an average answer time (T) value of 10 s and a feature penetration (P) value of 10%, the calculated NO_OF_CLONE_TIDS value is as follows:

NO_OF_CLONE_TIDS = $4 \times 10 \times 10 = 400$

Range information

Minimum	Maximum	Default
0	32 000	0

Activation

Activation is immediate when the value of this parameter increases.

When the value of this parameter decreases, a cold restart is required for the decrease to take effect. The following message displays:

```
WARNING: A COLD RESTART MUST BE PERFORMED TO ACTIVATE
CHANGES TO THE VALUE OF THIS PARAMETER
```

If the office configuration supports the NORESTARTSWACT utility, the following message displays in addition to the previous message:

```
Use MTCSWACT.Consult NORESTARTSWACT/MTCSWACT Users
Guide NTP.
```

NO_OF_CLONE_TIDS (continued)

Dependencies

Does not apply

Consequences

Underprovisioning the NO_OF_CLONE_TIDS value can cause SimRing PDN-to-NPMDN calls to fail.

Verification

The office parameter works correctly if there are no logs reporting a shortage of CVIDs during setup of PDN-to-NPMDN calls.

Memory requirements

Each unit requires one word of memory.

SimRing feature

CVIDs are allocated in blocks of 4096. Each CVID requires 16 bytes. A maximum of 32 000 CVIDs can be allocated. Therefore, a maximum of 8 blocks are needed.

The following table lists memory requirements for blocks of CVIDs.

Memory requirements for blocks of CVIDs

Number of CVIDs required	Number of CVIDs allocated	Memory required (bytes)
1 to 4096	4096	65536
4097 to 8192	8192	131072
8193 to 12288	12288	196608
12289 to 16384	16384	262144
16385 to 20480	20480	327680
20481 to 24576	24576	393216
24577 to 28672	28672	458752
28673 to 32000	32000	524288

Since the allocation is done by blocks, decreasing the NO_OF_CLONE_TIDS value can require removing blocks of CVIDs. Removing a block that contains CVIDs that are currently in use in PDN-to-NPMDN calls causes these calls to

NO_OF_CLONE_TIDS (end)

fail. Therefore, any decrease of the NO_OF_CLONE_TIDS value should occur at a time when there are no active SimRing calls.

Dump and restore rules

Does not apply

Parameter history

NA010

The RES Simultaneous Ringing feature uses office parameter NO_OF_CLONE_TIDS.

BCS32

Office parameter NO_OF_CLONE_TIDS was introduced in BCS32.

NO_OF_CRITICAL_FTR_DATA_BLKS

Parameter name

Number of Critical Feature Data Blocks

Functional description

This parameter specifies the number of feature data blocks (FDB) reserved in a pool for critical features. The critical features must have access to an available FDB at all times. This parameter operates with the office parameter E911_NUMBER_OF_FDBS in table OFCENG to reserve a pool of FDBs for critical calls.

The use of a critical FDB starts when a call terminates. The call terminates to a public safety answering point (PSAP) or Automatic Call Distribution (ACD) queue. The call continues until all parties in the call go onhook.

A DMS switch uses this parameter if:

- the DMS switch acts as an Enhanced 911 Emergency Service (E911) tandem
- the DMS switch contains software packages NTX447AA (E911 - Tandem) and NTXF61AA (DMS Integrated E911 PSAP Function)

Provisioning rules

The total of all features that use critical FDBs determines if the parameter is provisioned. Only the E911 feature uses critical FDBs. The rules in provisioning for this parameter are the same as the rules in provisioning for E911_NUMBER_OF_FDBS:

[(# ACD/line/LDT PSAP agents) + (# slots in ACD PSAP queue)] x 2

where

The ACD is Automatic Call Distribution.

The LDT is line appearance on a digital trunk.

The PSAP is public safety answering point.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes

NO_OF_CRITICAL_FTR_DATA_BLKS (continued)

the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	50 (if E911 software is not present) 400 (if NTX447 or NTX451 is present)

Activation

Increase - immediate. When the value of their parameter increases the activation is immediate.

Decrease - cold restart. When the value of this parameter decreases, the activation occurs after a cold restart.

Dependencies

The value of this office parameter must not be less than the value of E911_NUMBER_OF_FDBS in table OFCENG.

Consequences

When you over provision this parameter, the memory resources that are available for other activities decrease.

When you underprovision this parameter, there is a risk that other features do not operate. The following features are at risk:

- orighold
- switchhook state tone
- E911212 logs
- disconnect timing
- remote call event records (RCER)
- automatic number identification (ANI)
- automatic link intelligence (ALI)

- ringback
- selective transfer

Verification

To check that enough data blocks are allocated, use CI command OMSHOW EXT ACTIVE 86. Read the following:

```
     EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
 86 CRITICAL_FEATURE_DATA
     400
        0             0            0             0
        0
```

An entry that is not zero in EXTOVFL indicates the parameter is underprovisioned.

Measurements EXTHI and EXTHI2 record the maximum number of data blocks in use at the same time during the current transfer period.

Memory requirements

Each data block requires 44 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS34.

TL10

Parameter Autoprovisioning was added.

NO_OF_FTR_CONTROL_BLKS

Parameter name

Number of Feature Control Blocks

Functional description

This parameter specifies the number of feature control blocks (FCBs) required.

Rules in provisioning

Set the value of this parameter to a minimum of 2000 or the value of field MAXCQSIZ in table ACDGRP.

To define an Automatic Call Distribution (ACD) group, enter a tuple for the group in table ACDGRP. Field MAXCQSIZ in the tuple defines the maximum number of calls that can queue in the incoming call queue of the group at one time.

Each call that queues in the incoming call queue requires one control block. Each call that does not have an answer requires one control block.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	50

Activation

Increase - immediate. When the value of this parameter increases the activation is immediate.

Decrease - cold restart. When the value of this parameter decreases, the activation occurs after a cold restart.

Dependencies

Each Automatic Call Distribution (ACD) call in queue uses one FBC. Field MAXCQSIZ in table ACDGRP specifies the maximum number calls in queue for each ACDGRP. The software checks if there are enough FDBs to allow each ACD call queue to be full. The calls in queue specified by the total of all ACD group can exceed 75% of the value of this parameter. When this condition occurs, the following warning message appears when a new ACDGRP is added:

```
WARNING -- POTENTIALLY NOT ENOUGH FCBS ALLOCATED
```

Note that if the MAXCQSIZ field of table ACDGRP is set too high, this warning message outputs.

The system does not generate the above warnings when the conditions that follow occur:

- the size of this parameter increases.
- the value of the total MAXCQSIZ decreases. To decrease the value of the total MAXCQSIZ, decrease field MAXCQSIZ of one or more ACD groups in table ACDGRP. Perform this procedure so field MAXCQSIZ does not exceed 75% of the value of this parameter.
- if one or more ACD groups is deleted, decrease the value of the total MAXCQSIZ. The value of the total MAXCQSIZ must not exceed 75% of the value of this parameter.

Feature U3WC increases the use of large feature data blocks. Increase the size of this parameter by three times the number of new conference circuits added for U3WC operation.

Consequences

The system loses calls if not enough blocks are allocated for the number of calls that can be queued. The calls that can be queued occur in all ACD groups in the switching unit. When all of the allocated blocks can are in use, calls that arrive cannot be queued because resources are not available. The system cannot deflect the calls the MAXCQSIZ top bound is not reached. Field THROUTE of table ACDGRP specifies this procedure. The system loses the calls that arrive.

A check warns the customer of this software resource problem. The user can enter an ACD group in table ACDGRP. When this event occurs, the system

NO_OF_FTR_CONTROL_BLKS (continued)

compares the total of the MAXCQSIZ fields with 75% of the value of this office parameter. The MAXCQSIZ total can exceed 75% of the value of this office parameter. When this condition occurs, the system adds the group but the following warning appears on the MAP display:

```
WARNING -- POTENTIALLY NOT ENOUGH FCBS ALLOCATED
```

Verification

To check that enough FCBs are allocated, use CI command OMSHOW EXT ACTIVE 22. Read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
 22 FEATURE_CONTROL_BLOCK
 50
       0             0            0             0
       0
```

Any value that is not zero in EXTOVFL indicates the parameter is underprovisioned.

Operational measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Memory requirements

Each FTR control block requires 323 words of memory for CS 2000 for SNH01 only.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS14

SNH01

The overall size of the feature_control_block is increased to 323 words for CS 2000 only.

TL10

Parameter Autoprovisioning was added in TL10.

NO_OF_FTR_CONTROL_BLKS (end)

NA004

The U3WC use was added in NA004.

NO_OF_FTR_XLA_BLKS

Parameter name

Number of Feature Translation Blocks

Functional description

This parameter specifies the number of feature translation data extension blocks required.

The system uses one feature translation data extension block each time the user flashes to access features. These features include Three-way Calling (TWC) and Three-way Calling Usage Sensitive (U3WC). When the user finishes dialing, the system releases the extension block.

A Station Origination Restrictions (SOR) feature requires one feature translation data extension block when the SOR feature activates.

In switching units with Advanced Intelligent Network (AIN), the system attaches a feature translation extension block attaches to the start of digit collection. The system releases the feature translation extension block when the system collects and analyzes enough digits.

Rules in provisioning

For a local or SL-100 switching unit, set the parameter value to 600.

For a local switching unit in the United States, set the parameter value to 200.

For a local switching unit with the World Systems feature, set the parameter value equal to the value of parameter NO_OF_FTR_CONTROL_BLKS in table OFCENG.

When U3WC feature adds, increase this parameter by the number of conference circuits added.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767 (reserved) 32000 (programmed)	50

Activation

When this parameter increases, the activation is immediate.

When this parameter decreases, the activation occurs after a cold restart.

Dependencies

Does not apply

Consequences

If the system does not provide enough extension blocks, the user cannot flash or activate the SOR feature. The AIN feature cannot collect additional digits when the conditions that follow occur:

- an AIN send_to_resource response message requests the digits during normal digit collection.
- additional normal digit collection is required when the system encounters the AIN Customized Dial Plan Vertical Service Code trigger in table IBNXLA or XLANAME.

Verification

To check that enough recording units are allocated, use command interpreter (CI) command OMSHOW EXT ACTIVE 47. Read the following entry:

```
EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2 EXTHI2
47 FEATURE_XLA_DATA
            50
             0
             0         0             0             0
```

Any value that is not zero in EXTOVFL indicates the parameter is underprovisioned.

Operational measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period.

NO_OF_FTR_XLA_BLKS (end)

Refer to the *Operational Measurements Reference Guide* for a description of OM group EXT.

Memory requirements

Each extension block requires 75 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA004

TL10

PArameter Autoprovisioning was added in TL10.

U3WC use added

BCS36

AIN feature translation extension block use added

BCS22

This parameter was introduced in BCS22.

NO_OF_HIS_CONTROL_BLKS

Parameter name

Number of History Control Blocks

Functional description

A switching unit with Common Channel Signaling 7 (CCS7) and primary rate access (PRA) trunks requires this parameter.

This parameter is associated with the SPC-CMS feature. The SPC-CMS feature allows the Call Management Service (CMS) network to include SPC Stored Program Control (SPC) switches. The SPC switches in the CMS network provide one-way CMS. One-way CMS provides CMS features that include the following:

- Calling Number Delivery (CND)
- Automatic Call Setup (ACS)
- Call Screening

One-way CMS provides these CMS features to DMS subscribers. One-way CMS does not provide these CMS features to SPC subscribers.

The SPC switches are Stored Program Control switches. The SPC switches are SP-1/2W and 1ESS switches. The SPC switches cannot transmit calling line information through the standard Per Trunk Signaling (PTS) trunking.

The following call types requires this parameter:

- TUP and ATUP calls on the DMS-300
- ATUP calls on the DMS-100
- TUP+ calls on the DMS-100
- Australia ISUP
- Flexible Signaling Trunk (FST) R2 calls on the DMS-100.
- all CCS7-based signaling (BTUP, IBN7, and all ETSI ISUP variants)

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Provisioning rules

The following formulas calculate the value of this parameter:

NO_OF_HIS_CONTROL_BLKS (continued)

For an originating or terminating end office, the value is equal to:

```
[2 X (number of CCS7 trunks +  number of PRA trunks)]
   + (number of SPC trunks datafilled in table SPCTRKS)
   + (number of incoming FST R2 trunks)
   + (number of two-way FST R2 trunks)
```

Note: The CCS7 refers to the number of user (voice) trunks, not signaling trunks.

For a tandem switching unit, the value is equal to:

```
(number of CCS7 trunks) + (number of PRA trunks)
   + (number of SPC trunks datafilled in table SPCTRKS)
   + (number of incoming FST R2 trunks)
   + (number of two-way FST R2 trunks)
```

This parameter must be provisioned on the following switches:

- the switch that operates the CND or SPC features
- any other switch like, Tandem in the network

For a switching unit with the advanced intelligent network (AIN), the value is equal to:

```
1 X (the value of office parameter NCCBS in table OFCENG)
```

Release NA010 (North America) for TOPS offices

Provision one HCB for each incoming and two-way IT and ATC ISUP trunk circuit carrying TOPS calls. This calculation may also be represented as follows:

```
number of HCBs = 1 X (number of incoming and two-way ISUP
trunks carrying TOPS calls.)
```

Since TOPS ISUP trunks may not carry specific call types but rather a mix, the EXT OM group should be monitored to ensure that the correct number of HCBs are provisioned. Refer to the verification section.

Release GTOP010 (Global) for TOPS offices

Provision one HCB for each incoming, outgoing and two-way GOSS7 ANSI and ETSI trunk circuit. This calculation may also be represented as follows:

```
number of HCBs = 1 X (number of incoming, outgoing and
two-way GOSS7 ANSI and ETSI trunks)
```

These HCBs need to be provisioned in the Global TOPS office regardless of the TOPS GOSS7 ANSI (GOS00004) or ETSI (GOS00005) SOC state, ON or IDLE.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	262144	50

Activation

When this parameter increases the activation is immediate.

When this parameter decreases the activation occurs after a cold restart.

Dependencies

The parameter must increase if the maximum number of signaling system #7 (SS7), PRA, or SPC trunks required for the engineering interval increases. This parameter increase occurs at extension time.

NO_OF_HIS_CONTROL_BLKS (continued)

Consequences

If not enough units are specified, network call completion can fail. The activation of network services can fail after the system establishes a call.

When underprovisioning occurs for SPC trunks, the system cannot deliver calling line information to the terminating agents. The system completes the call normally.

Verification

To check that enough recording units have been allocated, use CI command OMSHOW EXT ACTIVE 55. Read the values under EXTOVFL and EXTHI and EXTH2.

```
     EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
     EXTHI2
 55 HISTORY_CONTROL_DATA
        250
           0          0            0             0
           0
```

Any value that is not zero under register EXTOVFL indicates underprovisioning.

Registers EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous during the current transfer period, which is 15 minutes.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each extension block requires 34 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NA010 and GTOP010

Feature AF7464 adds additional provisioning for releases NA010 and GTOP010.

NO_OF_HIS_CONTROL_BLKS (end)

BCS36

BCS36 changes the rules in provisioning to allow for FST two-way R2 trunks and the advanced intelligent network.

BCS24

BCS25 introduces this parameter.

NO_OF_HIS_DATA_BLKS

Parameter name

Number of History Data Blocks

Functional description

This parameter is a requirement for a switching unit with Common Channel Signaling 7 (CCS7), or primary rate access (PRA) trunks or PCM30 channel associated signaling (CAS) flexible signaling trunk (FST) R2 trunks.

This parameter is also associated with the SPC-CMS feature that enables stored program control (SPC) switches to be included in the Call Management Service (CMS) network to provide one-way CMS. One-way CMS provides CMS features such as Calling Number Delivery (CND), Automatic Call Setup (ACS), and Call Screening to DMS subscribers, but not to the SPC subscribers.

SPCs are stored program control switches, specifically SP-1/2W and 1ESS, that cannot transmit calling line information through the standard per trunk signaling (PTS) trunk.

With the enhancement of the call history facility (CHF) in BCS33, this parameter is modified to include the number of regular, large, and extra-large history data blocks (HDB).

In EUR008 and NA009, a fourth field was added to provision huge HDBs.

As of BCS35, extra large HDBs are used to store unrecognized Initial Address Messages (IAM). Before BCS35, large HDBs performed this function.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Provisioning rules

The HDBs are used for all ISDN user part (ISUP), primary rate interface (PRI), and telephone user part (TUP) calls. HDBs keep call setup information for basic calls or feature specific information for feature calls. The number of HDBs and the sizes used for each call depends on the call type and features.

> ***Note:*** Although NA009 introduces huge HDBs, none will be used in the NA009 time frame. Therefore, the provisioning value for huge HDBs is zero.

NO_OF_HIS_DATA_BLKS (continued)

Use the following calculation an office with an average mix of features and traffic:

# of HDB = # of CCS7 HDB + # of PRI HDB + # of SPC HDB
+ # of FST R2 HDB

where

# of CCS7 HDB
= 2.25 regular HDB + 1.13 large HDB + 0.15 extra-large HDB for each ISUP/TUP trunk (and their variants)

# of PRI HDB
= 0 regular HDB + 3 large HDB + 0 extra-large HDB for each PRI trunk

# of SPC HDB
= 3 regular HDB + 0 large HDB + 0 extra-large HDB per SPC trunk

# of FST R2 HDB
= 1 regular HDB + 1 large HDB per incoming FST R2 trunk + 1 regular HDB + 1 large HDB per two-way FST R2 trunk

Note: The CCS7 refers to the number of user (voice) trunks, not signaling trunks.

In other words:

NO_OF_HIS_DATA_BLKS= X1, X2, X3

X1 = number of regular HDB = (2.25 x isuptrk)
+ (3 x spctrk) + (1 x infst) + (1 x twfst)

where

isuptrk
is the number of ISUP trunks

spctrk
is the number of SPC trunks

infst
is the number of incoming FST R2 trunks

twfst
is the number of two-way FST R2 trunks

NO_OF_HIS_DATA_BLKS (continued)

X2 = number of large HDB = (1.13 x isuxtrk) + (3 x pritrk) + (1 x infst) + (1 x twfst)

where

isuptrk
is the number of ISUP trunks

pritrk
is the number of PRI trunks

infst
is the number of incoming FST R2 trunks

twfst
is the number of two-way FST R2 trunks

X3 = number of extra-large HDB = 0.15 x number of ISUP trunks

Note: Round up any decimal values to a whole number.

The first field is the number of regular HDBs. The second field is the number of large HDBs. The third field is the number of extra-large HDBs.

International market

The provisioning rules for a DMS-300 switching unit are as follows:

X1 = (1 x tuptrk) + (4 x isuptrk)

where

tuptrk
is the number of TUP variant trunks

isuptrk
is the number of ISUP variant trunks

X2 = (1 x tuptrk) + (0.5 x tupptrk) + (1 x isuptrk)

where

tuptrk
is the number of TUP variant trunks

tupptrk
is the number of TUP+ trunks

isuptrk
is the number of ISUP variant trunks

X3 = 0.5 x (number of AISUP trunks) + (number of ISUP92 IC and 2W trunks)

TUP variant trunks consist of ATUP trunks. ISUP variant trunks consist of ANSI, ISUP and AISUP trunks.

European market

The following provisioning rules are recommended for this parameter on switches in the European market.

The value of NO_OF_HIS_DATA_BLKS = X1, X2, X3

X1 = (2.25 * btup_trk) + (2.25 * dpnss_trk) + (3 * bri_lines) + (2.25 * isuptrk)

X2 = (0.13 * btup_trk) + (3 * pri_trk) + (1 * dpnss_dft_trk) + (0.5 * bri_lines) + (1.13 * isuptrk)

X3 = (0.15 * isuptrk) + (0.02 * dpnss_trk)

where

btup_trk
is the number of BTUP trunks

pri_trk
is the number of PRI trunks

dpnss_trk
is the number of DPNSS trunks

dpnss_dft trk
is the number of DPNSS DFT trunks

NO_OF_HIS_DATA_BLKS (continued)

bri_lines
is the number of BRI lines

isuptrk
is the total number of ISUP variant trunks

ISUP variant trunks consist of ANSI, and ETSI ISUP trunks, and all country specific variants such as BTUP, and FTUP trunks.

United States market

The following provisioning rule is recommended for switching units in the United States. A single call can use more than one HDB depending on the features involved.

The value of NO_OF_HIS_DATA_BLKS = X1, X2, X3

X1
If feature package SS700001 (SS7 Trunk Signaling) is present, then

X1 = 2.1 x maximum number of SS7 trunks required

If feature package MDC00008 (MDC MBS Standard: Calling Name Display) is present, then

+ (0.2 x number of business set lines)

X2
If feature package SS700001 is present with EQA00006 (CCS7 ISDN User Part InterLATA Connection for EAEO) or EQA00012 (CCS7 ISDN User Part InterLATA Connection for Access Tandem), then

X2 = 1.3 x maximum number of SS7 trunks required

If ACD00009 (ACD Network ACD on SS7) or NI000007 (NI0 ISDN Base) is present and EQA00006 or EQA00012 are not, then

X2 = 0.05 x maximum number of SS7 trunks required

If feature package NI000022 (NI0 ISDN: Primary Rate Interface Base) is present, then

+ (1.2 x maximum number of PRA trunks required)

If feature package AIN00002 (Advanced Intelligent Network Essentials) is present add the following value:

1 x total number of AIN subscribers

Note: If this number is less than 10 (default), use the value of 10.

X3

X3 = 0.15 x the number of ISUP trunks

If feature package AIN00002 (AIN Essentials) is present, add the following value:

ainsbscr x aintrfc

where

ainsbscr
is the total number of AIN subscribers

aintrfc
is the percentage of AIN traffic for those subscribers

The following table shows the ISUP and ISDN features with the size and quantity of HDBs that they use for each call.

Optional features that use the basic ISUP or ISDN features use those blocks plus any additional blocks listed by the optional package. For example, an equal access end office ISUP call uses two regular HDBs plus one large HDB.

NO_OF_HIS_DATA_BLKS (continued)

The base packages are indicated with brace brackets {}, followed by the optional feature packages that may require extra HDBs.

HDB use by feature package (Sheet 1 of 2)

Order code	Feature package name	HDBs required per call
{SS700001}	SS7 Trunk Signaling Base	2 regular
EQA00006	EQA CCS7 ISDN User Part InterLATA Connection for EAEO	+ 1 large
EQA00012	EQA CCS7 ISDN User Part InterLATA Connection for Access Tandem	+ 1 large ***Note:*** If both EQA00006 and EQA00012 are present, only one additional HDB is required for Equal Access use.
MDC00003	MDC-MDC Standard (IBN Trunk with ISUP Signaling)	no extra HDBs
SS700001	SS7 Trunk Signaling (CCS7 Mass Trunk Conversion)	no extra HDBs
{SS700001 and TEL00008}	SS7 Trunk Signaling and TEL CCS7 Base (TCAP)	2 regular
ACD00009	ACD Network ACD on SS7	+ 1 regular+ 1 large ***Note:*** Network automatic call distribution (NACD) on CCS7 does not hold the HDB for the duration of the call.
MDC00006	MDC MBG Standard (Network Message Service)	no extra HDBs
{SS700001 and MDC00003}		2 regular
MDC00006	MDC MBG Standard (Meridian Network Attendant Service)	no extra HDBs
MDC00006	MDC MBG Standard (Meridian Network Number Display)	no extra HDBs

NO_OF_HIS_DATA_BLKS (continued)

HDB use by feature package (Sheet 2 of 2)

Order code	Feature package name	HDBs required per call
MDC00005	MDC MBG Min (Multilocation Business Group)	+ 1 regular
MDC00006	MDC MBG Standard (Network Attendant Services)	no extra HDBs
MDC00006	MDC MBG Standard (Network Name Display)	+ 1 regular
MDC00005	MDC MBG Min (IBN ISUP Netinfo Translations)	no extra HDBs
{NI000022}	NI0 ISDN PRI Base (ISDN PRA)	1 regular
NI000013	NI0 NI-1 PRI Networking (ISDN PRA: Network Ring Again)	+ 1 regular
ACD00010	ACD Network ACD on PRI	no extra HDBs
{SS700001 and NI000022}		3 regular
NI000011	NI0 NI-1 PRI (PRA CCS7 Interworking)	no extra HDBs
{NI000022 and MDC00008}	NI0 ISDN PRI Base and MDC MBS Standard	3 regular
NI000013	NI0 NI-1 PRI Networking (ISDN PRA: Network Name Display)	no extra HDBs
{MDC00008}	MDC MBS Standard (EBS Call Name Display)	1 regular
{ACD00004}	ACD Networking	no extra HDBs
{NI000007}	NI0 ISDN Base (ISDN Functional Mode Basic Rate Services)	1 regular (for compatibility)1 large (for subaddress)

Access to Messaging

Use the following formula to calculate the regular history data blocks required for SDS service:

NO_OF_HIS_DATA_BLKS (continued)

$$N = \frac{A \times B \times C \times D \times E \times F}{100}$$

where

N
is the Access to Messaging regular history data block busy hour CCS.

Determine the value of A, where A is the maximum number of calls (BHCA).

Determine the value of B, where B is the proportion of originating calls.

Determine the value of C, where C is the proportion of Access to Messaging invocations on originating calls.

Determine the value of D, where D is the proportion of Access to Messaging calls that pass the screening stage.

Determine the value of E, where E is the length of time (in seconds) that the SDS regular history data block is used on each call.

Determine the value of F, where F is the proportion of Access to Messaging calls where the caller accepts the Access to Messaging offer of service.

Use the Erlang B table to convert the value with a probability of blockage or delay of 01.01.

Note: Parameter C holds different values. The values depend on whether Access to Messaging is in subcription mode or universal mode. The proportion of Access to Messaging invocations can increase when Access to Messaging is in universal mode.

FTS

Use the following formula to calculate the regular history data blocks required for FTS service:

$$N = \frac{A \times B \times C \times D \times E \times F}{100}$$

where

N
is the FTS regular history data block busy hour CCS.

Determine the value of A, where A is the maximum number of calls (BHCA).

Determine the value of B, where B is the proportion of originating calls.

Determine the value of C, where C is the proportion of originating calls that are FAX.

Determine the value of D, where D is the proportion of FTS invocations on FAX calls.

Determine the value of E, where E is the proportion of FTS FAX calls that pass the screening stage.

Determine the value of F, where F is the length of time (in seconds) that the FTS regular history data block is used on each call.

Use the Erlang B table to convert the value with a probability of blockage or delay of 01.01.

Interadministration Accounting for International Carriers

Feature Interadministration Accounting for International Carriers increases the value of parameter NO_OF_HIS_DATA_BLKS. The system stores interadministration accounting (IAA) parameters in extra-large HDBs. The system requires one extra-large HDB for each concurrent New Common Carrier Interface 7 version 2 (NCCI7v2) ISDN user part (ISUP) call that contains IAA parameters.

Release NA010 (North America) for TOPS offices

Provision the following:

- Two large sized HDBs for each incoming and two-way IT and ATC ISUP trunk circuit carrying TOPS calls.
- One additional large sized HDB for each incoming and two-way IT and ATC ISUP trunk circuit carrying TOPS local number portability (LNP) calls.

The above calculation can also be represented as follows:

number of large HDBs = 2 X (number of incoming and two-way ISUP trunks carring TOPS calls) + 1 X (number of incoming and two-way ISUP trunks carrying TOPS LNP calls)

Since TOPS ISUP trunks may not carry specific call types but rather a mix, the EXT OM group should be monitored to ensure that the correct number of HCBs are provisioned. Refer to the verification section.

NO_OF_HIS_DATA_BLKS (continued)

Release GTOP010 (Global) for TOPS offices

TOPS GOSS7 ANSI trunk circuits

- Provision one regular sized HDB for each incoming and two-way TOPS GOSS7 ANSI trunk circuit. This calculation can also be represented as follows:
- Provision two large sized HDBs for each incoming and two-way TOPS GOSS7 ANSI trunk circuit and one large sized HDB for each outgoing TOPS GOSS7 ANSI trunk circuit. This calculation can also be represented as follows:

number of large HDBs = 2 X (number of incoming and two-way GOSS7 ANSI trunk circuits) + 1 X (number of outgoing GOSS7 ANSI trunk circuits)

TOPS GOSS7 ETSI trunks

- Provision three regular sized HDBs for each incoming and two-way TOPS GOSS7 ETSI trunk circuit and one regular sized HDB for each outgoing GOSS7 ETSI trunk circuit. This calculation can also be represented as follows:

number of regular HDBs = 3 X (number of incoming and two-way GOSS7 ETSI trunks) + 1 X (number of outgoing GOSS7 ETSI trunk circuit)

- Provision two large sized HDBs for each incoming and two-way TOPS GOSS7 ETSI trunk circuit and one large sized HDB for each outgoing TOPS GOSS7 ETSI trunk circuit. This calculation can also be represented as follows:

number of large HDBs = 2 X (number of incoming and two-way GOSS7 ETSI trunks) + 1 X (number of outgoing GOSS7 ETSI trunks)

These HDBs need to be provisioned in the Global TOPS office regardless of the TOPS GOSS7 ANSI (GOS00004) or ETSI (GOS00005) SOC state, ON or IDLE.

Autoprovisioning

Operating company personnel can set the NO_OF_HIS_DATA_BLKS parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low

resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the NO_OF_HIS_DATA_BLKS parameter in the OFCAUT table to Y. When the ACTIVE field has the value Y, the system performs three steps:

- it removes the NO_OF_HIS_DATA_BLKS parameter from the OFCENG table
- it adds the following tuples to the OFCAUT table
  - LARGE_HISTORY_DATA
  - EXTRA_LARGE_HISTORY_DATA
  - HUGE_HISTORY_DATA
- it activates autoprovisioning for the NO_OF_HIS_DATA_BLKS tuple and the three added tuples

To set the parameter back to manual provisioning, set the ACTIVE field for the NO_OF_DATA_BLKS parameter in the OFCAUT table to N.

The addition or removal of the above-mentioned tuples from the OFCAUT table only occurs when the operating company personnel activates or deactivates the NO_OF_HIS_DATA_BLKS parameter. Operating company personnel cannot turn off this group of tuples separately. The system prints a message explaining this condition when the operating company personnel activates or deactivates the NO_OF_HIS_DATA_BLKS parameter.

Range information

Minimum	Maximum	Default
0 0 0	655 360	50

Activation

Increase - immediate

Decrease - cold restart

NO_OF_HIS_DATA_BLKS (continued)

Dependencies

At extension time, the value of the parameter must be increased if the maximum number of CCS7, PRA or SPC trunks required for the engineering interval increases, the Network Name Display feature is added, or the Calling Name Display feature is added to SPC trunks.

Consequences

If an insufficient quantity of units is specified, calls are completed, but additional features such as Network Number and Name Display are lost.

For SPC, under-provisioning causes calls to lose calling line information that is delivered to the terminating agents, but the call completes normally.

Over-provisioning of parameter NO_OF_HIS_DATA_BLKS wastes the data store. Under-provisioning of parameter NO_OF_HIS_DATA_BLKS can cause call features that use HDBs to perform unexpectedly, because some call history cannot be stored.

Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 109 111 and read the following entries:

```
KEY (EXT_FORMAT_CODE)
INFO (EXTINFO)
EXTSEIZ      EXTOVFL     EXTHI     EXTSEIZ2 EXTHI2
109 REGULAR_HISTORY_DATA
        50
        0         0           0           0       0
110 LARGE_HISTORY_DATA
        10
        0         0           0           0       0
111 EXTRA_LARGE_HISTORY_DA
        5          0           0           0       0
        0
182 HUGE_HISTORY_DATA
        50          0           0           0       0
        0
```

Any non-zero value in EXTOVFL indicates under-provisioning.

Operational measurement EXTHI records the maximum number of extension blocks in simultaneous use during the current transfer period, which is 15 minutes.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each regular HDB requires 24 words of memory. Each large HDB requires 80 words of memory. Each extra-large HDB requires 160 words of memory. Each huge HDB requires 256 words of memory.

Dump and restore rules

The following algorithm is used to reformat office parameter NO_OF_HIS_DATA_BLKS from BCS30, BCS31 or BCS32 to BCS33:

```
Old value: X

If X > 50 (default):

X1 = X
X2 = .67 * X
X3 = 100

If X < or = 50 leave X1, X2, and X3 at default.
No reformat is required.
```

Use the following algorithm to reformat the office parameter NO_OF_HIS_DATA_BLKS from BCS41, BCS42, and BCS43, to BCS44.

```
Current value: X1, X2, X3
New value: X1', X2', X3', X4' where
 X1 = number of regular HDBs
 X2 = number of large HDBs
 X3 = number of extra large HDBs
 X1' = X1, X2' = X2, X3' = X3, and X4' = 0
```

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NA010 and GTOP010

Feature AF7434 adds additional provisioning for releases NA010 and GTOP010.

EUR008

EUR008 introduces the use of large HDBs by ISUP trunks for set-up messages rather than regular HDBs.

NO_OF_HIS_DATA_BLKS (end)

NA009

NA009 adds a fourth field for the provisioning of HUGE history data blocks.

APC008.1

APC0008.1 adds IAA provisioning rules.

EUR006

EUR006 updates provisioning rules with specific references for the European market.

NA006

NA006 adds provisioning rules for FTS service.

NA004

NA004 adds provisioning rules for SDS service.

BCS36

BCS36 changes provisioning rules to allow for FST two-way R2 trunks:

- adds DMS-300 provisioning rules
- adds AIN provisioning rules

BCS25

BCS25 introduces this parameter.

NO_OF_HUGE_EXT_BLKS

Parameter name

Number of huge extension blocks

Functional description

Parameter NO_OF_HUGE_EXT_BLKS defines the size of the pool of HUGE extension blocks that are available for AIN calls with messages that are larger than 256 bytes. Parameter NO_OF_HUGE_EXT_BLKS accommodates a supported message size of 610 bytes.

Provisioning rules

Not applicable

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically add resources to to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	16

Activation

Office parameter NO_OF_HUGE_EXT_BLKS functions in the same manner as the SMALL, MEDIUM, LARGE, and XLARGE extension blocks. When the value of the parameter is increased, the change occurs immediately. When the value of the parameter is decreased a cold restart is required.

Dependencies

Not applicable

NO_OF_HUGE_EXT_BLKS (end)

Consequences

When over provisioned, some of the allocated data store is not used. When under provisioned, AIN calls requiring the extended unit data (XUDT) messages are handled based on current functionality. Actions taken as a result of under allocation of switch resources, such as extension blocks, remain unchanged by this feature.

Verification

Operating companies use the command: OMSHOW EXT Active BASCPS_HUGE_EXT_BLKS, to verify that the allocation of extension blocks. As an alternative, to verify the number of blocks allocated, access table OFCENG and position on NO_OF_HUGE_EXT_BLKS.

Memory requirements

When parameter NO_OF_HUGE_EXT_BLKS is set to a value of 1, the memory usage is 800 bytes. Allocate an additional 800 bytes for each extra block (allocated to the free HUGE blocks pool) by increasing parameter NO_OF_HUGE_EXT_BLKS by one. The initial setting for parameter NO_OF_HUGE_EXT_BLKS is 16 blocks and this setting requires 12.5 K of memory.

Dump and restore rules

Not applicable

Parameter history

NA009

AIN Adaptation for SCCP Segmentation (AU2648) introdeuces office parameter NO_OF_HUGE_EXT_BLKS.

CSP10

Parameter Autoprovisioning was added in CSP10.

NO_OF_LARGE_EXT_BLKS

Parameter name

Number Of Large Extension Blocks

Functional description

A switching unit with North American translations and the Integrated Business Network (IBN) Network Ring Again (RAG) feature requires this parameter. The parameter specifies the number of large extension blocks some transaction capability application part (TCAP) applications use to encode and decode. The Network Automatic Call Distribution (NACD) uses the extension blocks from this parameter.

The NRAG extends the range of the nodal Ring Again feature. The range of the nodal Ring Again feature allows a user to use the RAG feature on a station. A different switching unit in the network serves the station. To use the RAG feature on this station, the original call to the busy user must be set on an ISDN user part (ISUP) trunk.

The NACD uses large extension blocks for the load status indicator (LSI) update process and time delay overflow calls.

The LSI update process allows each NACD group on the switch to send a measure of the capacity to accept calls. The NACD groups send this message to each remote counterpart of the NACD. This procedure is part of the NACD load balancing algorithm. The procedure allows each group to know the ability of each group to accept ACD calls. The NACD groups send LSI values through signaling system #7 SS7 or primary rate interface (PRI) TCAP messages. Each time an LSI value is received, a large extension block is used.

The NACD time delay overflow feature allows ACD calls queued on an NACD group for a long time to be rerouted. The ACD calls route to the group that can handle the call. This group has the highest LSI value. When the timer expires, a TCAP message is sent to the remote group and requests the status of the remote group. The TCAP message can ask if the remote group has a free agent. The remote group responds with another TCAP message. If the remote group does not have a free agent, the first available group takes the call. The time delay overflow option uses one large extension block when a remote switch receives a TCAP message. The TCAP message is for a time delay overflow call. The originating switch uses one large extension block when the switch processes responses from the remote switch. The number of time delay overflow calls on the switch determines the number of large extension blocks time delay overflow requires.

NO_OF_LARGE_EXT_BLKS (continued)

Rules in provisioning

If the switch has the RAG feature only, leave the value of this parameter at the default of 16.

Enter one additional extension block for each NACD group on the switch that is in a network with a remote switch. To determine this number, count the number of tuples and use REM selectors in table NACDGRP.

Enter one additional extension block for each of the maximum number of simultaneous time delay overflow calls. To determine this number, see field MAXCQSIZ in table ACDGRP. Determine the number of tuples that have option TMDELOFL and are NACD groups.

If the switch does not have the RAG or NACD features, set the value to 0 zero.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	16

Activation

Increase - immediate. When this parameter increases the activation is immediate.

Decrease - cold restart. When this parameter decreases, the activation occurs after a cold restart.

Dependencies

The value of this parameter affects the value of parameter NUMPERMEXT in table OFCENG.

NO_OF_LARGE_EXT_BLKS (end)

Consequences

If this parameter is underprovisioned, some TCAP applications do not function.

If this parameter is overprovisioned, the parameter uses memory that is not necessary.

Verification

To check that enough extension blocks have been allocated, use command interpreter (CI) command OMSHOW EXT ACTIVE 62. Read the following entry:

```
EXTSEIZ      EXTOVFL      EXTHI      EXTSEIZ2    EXTH12

62 TC_AP_LARGE_EXT_BLKS
16
0                 0          0            0           0
```

Any value that is not zero in EXTOVFL indicates the parameter is underprovisioned.

Operational measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements

Each extension block requires 104 words of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS25.

TL10

Parameter Autoprovisioning was added in TL10.

NO_OF_LARGE_FTR_DATA_BLKS

Parameter name

Number Of Large Feature Data Blocks

Functional description

This parameter specifies the number of large feature data blocks (FDB) required.

Rules in provisioning

Set this parameter to 1200. When Northern Telecom does not specify another value.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	50

Activation

When this parameter increases, the activation is immediate.

When this parameter decreases, the activation occurs after a cold restart.

Dependencies

Each Automatic Call Distribution (ACD) queued call uses one large FDB. Field MAXCQSIZ in table ACDGRP specifies the maximum number of calls in a queue for each ACDGRP. The software checks to determine if enough FDBs are available for all ACD call queues to be full. The number of queued calls the total of all ACD groups specifies can exceed 75% of the value of this

parameter. When this condition occurs, the following warning message appears when a new ACDGRP is added:

```
WARNING - - POTENTIALLY NOT ENOUGH LARGE FDBS ALLOCATED
```

If the MAXCQSIZ field of table ACDGRP is set too high, this warning message can appear.

The system does not generate the above warning in the following conditions:

- the size of this parameter increases
- the value of the total MAXCQSIZ decreases. To decrease the value of the total MAXCQSIZ, decrease field MAXCQSIZ a minimum of one ACD group in table ACDGRP. The value of the total MAXCQSIZ does not exceed 75% of the value of this parameter.
- a minimum of one ACD groups is deleted. To delete an ACD group, decrease the value of the total MAXCQSIZ. The value of the total MAXCQSIZ must not exceed 75% of the value of this parameter.

Feature U3WC increases the use of large feature data blocks. Increase the size of this parameter by three times the number of new conference circuits added for U3WC operation.

Consequences

The blocks can be underprovisioned. When this condition occurs, the feature routes the features that require one of these blocks to No Software Resource (NOSR) treatment in the correct treatment table.

In a POTS switch, the following OMs report failures that occur because of an overflow on NOSR:

- OM group CALLWAIT
- OM group CF3P

In an MDC switching unit, the following OMs report any failures that occur because of an overflow on these software resources:

- OM group CALLFWD
- OM group CALLWAIT
- OM group MWTCAR
- OM group CALLHOLD

NO_OF_LARGE_FTR_DATA_BLKS (end)

Verification

To check that enough large FDBs have been allocated, use CI command OMSHOW EXT ACTIVE 83. Read the following entry:

```
EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2 EXTHI2
83 LARGE_FEATURE_DATA
    50
     0             0            0             0   0
```

Any value that is not zero in EXTOVFL indicates the parameter is underprovisioned.

Operational measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements

Each unit requires 41 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

TL10

PArameter Autoprovisioning was added in TL10.

NA004

The U3WC use was added.

This parameter was introduced in BCS29.

NO_OF_MEDIUM_EXT_BLKS

Parameter name

Number of Medium Extension Blocks

Functional description

A switching unit with North American translations and the residential and private virtual network (PVN) services requires this parameter. The parameter specifies the number of extension blocks transaction capability application part (TCAP) applications use to decode and encode.

As of BCS34, this parameter provisions inside resources to allow home location register (HLR) queries to be performed. Each HLR response or timeout causes the use of one medium extension block.

Rules in provisioning

The default value of this parameter is 16.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	16

Activation

When this parameter increases, activation is immediate.

When this parameter decreases, activation occurs after a cold restart.

Dependencies

Does not apply

NO_OF_MEDIUM_EXT_BLKS (end)

Consequences

If this parameter is underprovisioned, some TCAP applications do not function.

If this parameter is overprovisioned, this parameter uses memory that is not necessary.

Verification

To check that enough extension blocks are allocated, use the OMSHOW EXT ACTIVE NO_OF_MEDIUM_EXT_BLKS or OMSHOW EXT ACTIVE 67 command at the CI level of the MAP display. Read the following entry:

```
EXTSEIZ   EXTOVFL   EXTHI   EXTSEIZ2   EXTHI2
67 TC_AP_MEDIUM_EXT_BLOCKS
   16
    0        0       0         0       0
```

Any value that is not zero in EXTOVFL indicates the parameter is underprovisioned.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks that occur at the same time. This condition occurs during the current transfer period.

Memory requirements

Each extension block requires 54 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS26.

TL10

Parameter Autoprovisioning was added in TL10.

TL13

Removed references to table TCAPTRID (feature 59014752).

NO_OF_MEDIUM_FTR_DATA_BLKS

Parameter name

Number Of Medium Feature Data Blocks

Functional description

This parameter specifies the number of medium feature data blocks required.

Rules in provisioning

Set this parameter to a value of 500 when Northern Telecom does not specify another value.

The BCS33 feature Three Port Flexible Call Chaining allows the addition of the three-port conference circuits. This parameter increases by three times the number of three-port conference circuits that are added. For example, the addition of 6 three-port conference circuits requires 18 additional medium FDBs. The present value must increase by 18.

This parameter also associates with Residential Enhanced Services (RES) feature Automatic Call Back and Automatic Ring-Again (ACB/AR).

Access to Messaging/Enhanced Busy Call Return (EBCR)

Use the following formula to calculate the medium feature data blocks required for SDS service

$$N = \frac{A \times B \times C \times D \times E \times F}{100}$$

where N is the Access to Messaging/EBCR call type medium feature data block busy hour CCS.

Determine the value of A. The value of A is the maximum number of calls (BHCA).

Determine the value of B. The value of B is the size of originating calls.

Determine the value of C. The value of C is the size of Access to Messaging/EBCR calls on originating calls.

Determine the value of D. The value of D is the size of Access to Messaging/EBCR calls that pass the screening stage.

Determine the value of E. The value of E is the length of time (in seconds) that the medium feature data block uses on each call.

NO_OF_MEDIUM_FTR_DATA_BLKS (continued)

Use the Erlang B table to convert the value with a probability of blockage or delay of 01.01.

Note 1: The mode of Access to Messaging/EBCR determines the value of Parameter C. The mode of Access to Messaging/EBCR can be subscription mode or common mode. The amplitude of Access to Messaging/EBCR invocations can increase when Access to Messaging/EBCR in standard mode.

Note 2: The use of help and repeat keys determines the value of Parameter C.

FTS

Use the following formula to calculate the medium feature data blocks required for FTS service:.

$$N = \frac{A \times B \times C \times D \times E \times F}{100}$$

where N is the FTS call type medium feature data block busy hour CCS

Determine the value of A. The value of A is the maximum number of calls (BHCA).

Determine the value of B. The value of B is the size of originating calls.

Determine the value of C. The value of C is the size of originating calls that are FAX.

Determine the value of D. The value of D is the size of FTS calls on FAX calls.

Determine the value of E. The value of E is the size of FTS calls that pass the screening stage.

Determine the value of F. The value F is the length of time (in seconds) that the medium feature data block uses on each call.

Use the Erlang B table to convert the value with a possible block or delay of 01.01.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the

parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	50

Activation

When this parameter increases, the activation is immediate.

When this parameter decreases, the activation occurs after a cold restart.

Dependencies

Each Automatic Call Distribution (ACD) queued call uses one medium FDB. Field MAXCQSIZ in table ACDGRP specifies the maximum number of calls in a queue. The software checks to determine if enough FDBs provisioned for all ACD call queues to be full. If the number queued calls specified by the total of all ACD group exceeds 75% of the value of this parameter, a warning message appears. The following warning message appears when a new ACDGRP is added:

Note: If the MAXCQSIZ field of table ACDGRP is set too high, this warning message can appear.

```
WARNING - - POTENTIALLY NOT ENOUGH MEDIUM HDBS ALLOCATED
```

Consequences

Underprovisioning of these blocks can occur. When this condition occurs, the system routes the features that require one of these blocks to No Software Resource (NOSR) treatment in the correct treatment table.

Underprovisioning this parameter prevents calls from terminating on non-data link consoles in an MPH arrangement.

NO_OF_MEDIUM_FTR_DATA_BLKS (end)

In an Integrated Business Network (IBN) switching unit, the following operational measurements (OM) report failures that occur because of an overflow on these software resources:

- OM group CALLFWD
- OM group CALLWAIT
- OM group MWTCAR
- OM group CALLHOLD

Verification

To check that enough FDBs have been allocated, use command interpreter (CI) command OMSHOW EXT ACTIVE 82. Read the following entry:

```
EXTSEIZ   EXTOVFL   EXTHI   EXTSEIZ2   EXTHI2
82 MEDIUM_FEATURE_DATA
   50
   0           0        0        0         0
```

Any value that is not zero in EXTOVFL indicates underprovisioning.

The OMs EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements

Each data block requires 23 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter History

Parameter Autoprovisioning was added in TL10.

The NA006 rules in provisioning for FTS service were added.

The NA004 rules in provisioning for SDS service were added.

This parameter was introduced in BCS29.

NO_OF_ORIG_INFO_EXT_BLKS

Parameter name

Number of Originating Information Extension Blocks

Functional description

This parameter controls the number of existing AIN_ORIG_INFO extension blocks allocated for the ISA, SDS and FTS features on the switch. Prior to NA010, there was no control over the number of AIN_ORIG_INFO extension blocks because the pool size was set to the default value of 50. AIN_ORIG_INFO extension blocks are used to store the charge number and calling number information to preserve AIN 0.1 calling and charge information for redirected calls.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Provisioning rules

ISA, ACM and FTS

1 Use the following formula to calculate the number of originating information extension blocks required for SDS and FTS service:

$$N = \frac{A \times B \times C}{100}$$

where

N
is the AIN_ORIG_INFO extension block maximum busy hour CCS.

2 Determine the value of A, where A is the number of calls that pass SDS/FTS screening during the busy hour (BHCA).

3 Determine the value of B, where B is the time in seconds the AIN_ORIG_INFO extension block is used for each call.

4 Determine the value of C, where C is the proportion of calls that are redirected by AIN/LNP with a returned ANALYZE_ROUTE message that includes the calling party, charge party station, and charge number.

5 Use an Erlang B table to convert the value N with a probability of blockage or delay of 0.01.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each

NO_OF_ORIG_INFO_EXT_BLKS (continued)

parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	32 767	0

Activation

Increase - immediateDecrease - cold restart

Dependencies

None

Consequences

If over provisioned, data store allocated is not used.

If under provisioned, a swerr is generated for each call that did not receive an extension block.

Verification

To verify that sufficient blocks have been provided, use the command interpreter (CI) command OMSHOW EXT ACTIVE 172 and read the following entries:

```
CLASS: ACTIVE  START:1998/04/11 11:30:00 MON; STOP: 1998/04/11 11:38:33
SLOWSAMPLES:         3 ; FASTSAMPLES:         29 ;
    EXTSEIZ      EXTOVFL       EXTHI     EXTSEIZ2
     EXTHI2
109 REGULAR_HISTORY_DATA

182 HUGE_HISTORY_DATA
         50          0           0          0
          0
```

Any non-zero value in EXTOVFL indicates underprovisioning.

OM EXTHI records the maximum number of extension blocks of type AIN_ORIG_INFO in simultaneous use during the preceding OM transfer period. EXTHI2 is an extension register for EXTHI.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each extension block is 32 words. If the parameter is set to 200, 6400 words are required.

Dump and restore rules

Copy the existing value of this parameter when performing a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NA010

NA010 introduces this parameter.

NO_OF_PVN_EXTBLK

Parameter name

Number of Private Virtual Network Extension Blocks

Functional description

This parameter appears in a switching unit that has the service switching point (SSP) and private virtual network (PVN) features.

The system can provide the SSP features in equal access end offices (EAEO) and access tandems (AT) that have or do not have equal access (EA).

The PVN uses the public and private switched network to provide private network features and abilities. The PVN provides connections for customers in a local access and transport area (LATA). The PVN provides connections to other LATAs through inter-LATA carriers (IC).

The operating company provides databases located at the service control points (SCP). These databases allow the implementation of PVN service. A query occurs on all PVN calls to one of these databases from a switch equipped with SSP and PVN services. Queries and responses between the SSP or PVN and the SCP use the SS7 common channel signaling protocol. The response message from the SCP indicates the following:

- if the call must complete
- how the call must route
- what information must be in the Automatic Message Accounting (AMA) record for the call.

The response can instruct the SSP or PVN to obtain additional input from the caller. This input can be an authorization code.

This parameter specifies the maximum number of PVN extension blocks required for the engineering interval.

A PVN_EXT_BLOCK stores the PVN call information and is attached to a PVN call during the translation stage.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

The recommended formula is as follows:

NO_OF_PVN_EXTBLK (continued)

(N X (number of PVN calls/s X nominal SCP response time) +
(Y X (number of PVN calls/s X average class of service override time) +
(Z X (number of PVN calls/s X average remote access call access time)

where N = % of PVN calls that do not require an authorization code or remote access .

Y = % of PVN calls that require class of service override (authorization code collection required).

Z = % of PVN calls dialed as remote access calls (PVN-DISA).

The recommended time for the SCP response is 3 s.

The average class of service override time (in seconds) includes the following items:

- the small response time
- the average authorization code collection time. The collection time includes retry attempts.

The average remote access call access time (in seconds) includes the following items:

- the small response time
- the length of time required to enter the Personal Identification Number (PIN) and called number

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

NO_OF_PVN_EXTBLK (continued)

Range information

Minimum	Maximum	Default
0	32767	150

Activation

When the parameter increases, the activation is immediate.

When the parameter decreases, the activation occurs after a cold restart.

Dependencies

At extension time the value must change if one or more of the formula values changes.

Consequences

The system sends PVN calls that do not receive a PVN extension block to No Software Resource (NOSR) treatment. This event occurs when not enough PVN extension blocks are assigned in an SSP.

Verification

To check that enough recording units have been allocated, use command interpreter (CI) command OMSHOW EXT ACTIVE 57. Read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
57 PVN_EXT_BLK
    150
       0             0            0             0
       0
```

Any value that is not zero in EXTOVFL indicates the parameter does not have enough provisioned.

Operational measurements (OM) EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

NO_OF_PVN_EXTBLK (end)

Memory requirements

Each unit requires 86 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

BCS26

BCS26 introduces this parameter.

NO_OF_PVN_TERM_EXTBLK

Parameter name

Number of Private Virtual Network Term Extension Blocks

Functional description

This parameter appears in a switching unit equipped with the Service Switching Point (SSP) and Private Virtual Network (PVN) features.

The system can provide SSP features in equal access end offices (EAEO) and access tandems (AT) that have or do not have equal access (EA).

The PVN is a feature that uses the public and private switched network to provide private network features and capabilities. The PVN provides connections for customers in a local access and transport area (LATA). The PVN also provides connections to other LATAs through inter-LATA carriers (IC).

The operating company provides databases located at the service control points (SCP). A query occurs on all PVN calls to one of these databases. This procedure occurs from a switch equipped with the SSP and PVN features. Queries and responses between the SSP/PVN and the SCP use the SS7 common channel signaling protocol. The response message from the SCP indicates the following:

- if the call must complete
- how the call must route
- what information must be in the Automatic Message Accounting (AMA) record for the call.

The response may also instruct the SSP/PVN to obtain additional input from the caller. This input can be an authorization code.

This parameter specifies the maximum number of PVN term extension blocks required for the engineering interval.

A PVN_TERM_EXT_BLOCK stores the PVN call information and is attached to a PVN call during the translation stage.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

NO_OF_PVN_TERM_EXTBLK (continued)

Rules in provisioning

The recommended formula is as follows:

(number of PVN calls that require termination info/second)
x (average PVN call holding time in seconds)

Set the value to 0 (zero), if the feature is not required.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	32767	150

Activation

When this parameter increases the activation is immediate.

When this parameter decreases, the activation occurs after a cold restart.

Dependencies

At extension time the value must change, a minimum of one item in the formula changes value.

Consequences

If not enough PVN_TERM_EXT_BLKs are assign in an SSP, PVN calls required to send termination information to the SCP cannot perform the procedure.

NO_OF_PVN_TERM_EXTBLK (end)

Verification

To check that enough extension blocks are allocated, use CI command OMSHOW EXT ACTIVE 68. Read the following entry:

```
   EXTSEIZ      EXTOVFL     EXTHI           EXTSEIZ2
   EXTSEIZ2
68 PVN_TERM_EXT_BLK
   150
   0            0           0               0
   0
```

Any value that is not zero in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each unit requires 39 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

BCS26

BCS26 introduces this parameter.

NO_OF_SC_EXT_BLKS

Parameter name

Number of Speed Call Extension Blocks

Functional description

All switching units with the Meridian Digital Centrex (MDC) or Residential Enhanced Services (RES) speed calling feature require this parameter.

Each active speed call (SC) that stores 12 or more digits requires one extension block.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

The recommended formula for this parameter is one percent of the number of MDC, RES, and KSET lines with speed calling.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	32767	10

Activation

Increase - immediate

NO_OF_SC_EXT_BLKS (continued)

Decrease - cold restart

Dependencies

Calculate the value of this parameter again if the number of MDC, RES, or KSET lines with speed calling changes.

A change in the value of this parameter affects the value of parameter NUMPERMEXT in Table OFCENG.

Consequences

Does not apply

Verification

To check that enough extension blocks are available, use command interpreter (CI) command OMSHOW EXT ACTIVE 12. Read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
12 CUSTOM_CALLING_DATA
    10
      0             0            0             0
      0
```

A nonzero value in EXTOVFL indicates the parameter value is too low.

Operational measurements (OMs) EXTHI and EXTHI2 record the maximum number of extension blocks in use at the same time. This condition occurs during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each extension block requires 12 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NO_OF_SC_EXT_BLKS (end)

Parameter history

CSP11 introduces autoprovisioning for this office parameter.

NO_OF_SMALL_EXT_BLKS

Parameter name

Number of Small Extension Blocks

Functional description

A switching unit with one of the following features:

- North American translations and the Integrated Business Network (IBN) Network Ring Again (NRAG) feature
- the Network Message Waiting Indicator (NMWI) feature
- the Network Automatic Call Distribution (NACD) feature

The NRAG extends the range of the nodal Ring Again (RAG) feature. This extended feature allows the user to RAG on a station a different switching unit in the network serves. For the user to RAG on a station, the system must set up the original call to the busy user over an ISDN user part (ISUP) trunk.

The NMWI feature allows a message service on one node to activate and deactivate the message waiting indicator (MWI) of a subscriber. This subscriber is on a different node. The message service can activate and deactivate the MWI if the following conditions apply. The two nodes support transaction capability application (TCAP) communication between the nodes. The two nodes have ISUP or primary rate access (PRA) connections between the nodes. These connections give the directory number of the subscriber and the name of the subscriber to the message service.

The NACD feature uses small extension blocks for the load status indicator (LSI) update process and time delay overflow calls. The LSI update process allows each NACD group on the switch to send a measure of the capacity of the NACD group. The measure of the capacity of the group indicates the capacity to accept calls. The NACD group sends this measure to each remote counterpart of the NACD group. This measure is part of the NACD load balancing algorithm. This procedure allows each group to know the ability of the other groups to accept ACD calls. The NACD feature signaling system #7 (SS7) or primary rate interface (PRI) TCAP messages to send LSI values. The NACD feature uses a small extension block each time the feature sends an LSI value.

The NACD time delay overflow feature allows the system to route ACD calls in a queue on an NACD group again. These ACD calls are in the queue for a long period of time. The system routes calls to the group with the highest LSI value. When the timer expires, the system sends a TCAP message to the remote group to request the remote group status. The TCAP message determines if the remote group has a free agent. The remote group responds

with another TCAP message. If the remote group does not have a free agent, the first available group takes the call.

Time delay overflow uses small extension blocks if the protocol errors occur in time delay overflow call descriptions.

Rules in provisioning

If the switch has the NRAG feature only, leave the value of this parameter at the default of 16.

If the switch has the NMWI feature, add the value of OFCENG office parameter NO_OF_XLARGE_EXT_BLKS divided by 10.

Enter one additional extension block for each NACD group on the switch that is in a network with a remote switch. To determine this number, count the number of tuples that use REM selectors in Table NACDGRP.

Enter additional extension blocks equal to the number that come from five percent of the tuples in field MAXCQSIZ in Table ACDGRP. The tuples must have option TMDELOFL assigned. The tuples are also NACD groups.

For a switching unit without NRAG, NMWI, or NACD, set the parameter value to zero.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	16

NO_OF_SMALL_EXT_BLKS (continued)

Activation

Increase - immediate

Decrease - cold restart

Dependencies

A change in the value of this parameter affects the value of parameter NUMPERMEXT in Table OFCENG.

Consequences

If the value of this parameter is too low, NRAG, NMWI, and NACD features do not operate correctly.

If the value of this parameter is too high, data store is wasted.

Verification

To check that enough extension blocks are available, use CI command OMSHOW EXT ACTIVE. Read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
60 TC_AP_SMALL_EXT_BLKS
    16
      0             0            0             0
      0
```

Any nonzero value in EXTOVFL indicates the value of the parameter is set too low.

Operational measurements (OMs) EXTHI and EXTHI2 record the maximum number of extension blocks in use at the same time during the current transfer period.

Memory requirements

Each extension block requires 14 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Dump and restore rules

BCS25

This parameter was introduced.

NO_OF_SMALL_EXT_BLKS (end)

TL10

Parameter Autoprovisioning was added in TL10.

NO_OF_SMALL_FTR_DATA_BLKS

Parameter name

Number Of Small Feature Data Blocks

Functional description

Software release BCS29 introduced three sizes of feature data blocks (FDB) for data store performance. This parameter specifies the number of small FDBs required.

Rules in provisioning

The recommended value of this parameter for a switching unit in the United States with BCS34 release or greater software is 900.

Other offices must set this parameter to a fixed value of 300 if Northern Telecom does not specify another value.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	50

Activation

Increase - immediate

Decrease - cold restart

Dependencies

Does not apply

NO_OF_SMALL_FTR_DATA_BLKS (continued)

Consequences

If the value of this parameter is underprovisioned, the system routes features that require an FDB to No Software Resource (NOSR) treatment. The system routes the feature to a NOSR treatment in the appropriate treatment table.

In an Integrated Business Network (IBN) switching unit, the following operational measurements (OM) report any failures that an overflow on these software resources causes:

- OM group CALLFWD
- OM group CALLWAIT
- OM group MWTCAR
- OM group CALLHOLD

Verification

Use the command interpreter (CI) command OMSHOW EXT ACTIVE 81 to check that enough small FDBs are available. Read the entry that follows:

```
     EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
     EXTHI2
 81 SMALL_FEATURE_DATA
      50
        0             0            0             0
        0
```

Any value other that zero in EXTOVFL indicates the parameter value is too low.

The OMs EXTHI and EXTHI2 record the maximum number of extension blocks that the current transfer period uses at the same time.

Memory requirements

Each data block requires 15 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS36

A new recommended value for the U.S. market was added in BCS36.

NO_OF_SMALL_FTR_DATA_BLKS (end)

BCS29

This parameter was introduced in BCS29.

TL10

Prameter Autoprovisioning was added in TL10.

NO_OF_X_LARGE_FTR_DATA_BLKS

Parameter name

NO_OF_X_LARGE_FTR_DATA_BLKS

Functional description

This office parameter determines the number of FTR_DATA_X_LARGE extension blocks allowed on the DMS-100 switch for the Service Switching Point (SSP) capability. This extension block stores the Feature Data Block (FDB) data used by the DMS-100 switch for Intelligent Network (IN) applications.

Provisioning rules

The default value of this parameter is 0. The value to be datafilled is based on the possible number of active IN calls on the switch at any time. A formula like to the one below can be applied:

Total number of IN subscribers (individual, group or office basis) x percentage of expected IN traffic for those subscribers.

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	0

Activation

Immediate

Dependencies

None

NO_OF_X_LARGE_FTR_DATA_BLKS (end)

Consequences

If this parameter is over-provisioned, allocated data store is not used. If under-provisioned, IN calls are routed to “no software resource" treatment.

Verification

The **ONSHOW EXT ACTIVE** command can be issued to check the extension blocks have been allocated.

Memory requirements

128 words of memory are allocated for each unit entered in the parameter. For example, if NO_OF_X_LARGE_FTR_DATA_BLKS contains the value 10, a total of 1280 words are allocated (10 x 128).

Dump and restore rules

The reformat procedure copies the value of the office parameter on the n side to the n+1 side. This can create over-provisioning on the n+1 side. After the TABXFER, and before the Pre-Switch of Activity (PRESWACT), the value of the office parameter can be reduced on the n+1 side.

> ***Note:*** Reducing the value of the office parameter requires a restart. A restart is performed as a result of the subsequent PRESWACT procedures.

Parameter history

EUR008.

The NO_OF_X_LARGE_FTR_DATA_BLKS office parameter was added in the EUR008 software release.

NO_OF_XLARGE_EXT_BLKS

Parameter name

Number of Extra Large Extension Blocks

Functional description

A switching unit with one of the following features requires this parameter:

- North American translations and the Integrated Business Network (IBN) Network Ring Again (NRAG) feature
- the Network Message Waiting Indicator (NMWI) feature
- the Residential Enhanced Services Feature Automatic Call Back and Automatic Ring-Again (ACB/AR)

The NRAG feature extends the range of the nodal ring-again feature. The NRAG feature allows a user to use the RAG feature on a station served by a different switching unit. The switching unit is in the network that serves the station.

A user can use the RAG feature on a station served by a different switching unit. For this event to occur the original call to the busy user must be over an ISDN user part (ISUP) trunk.

The NMWI feature affects the provisioning of this parameter.

The NMWI feature allows a message service on one node to activate and deactivate the message waiting indicator (MWI) of a subscriber. This subscriber is on a different node. The message service can activate and deactivate the MWI if the conditions that follow apply:

- The two nodes support transaction capability application part (TCAP) communication between them.
- The two nodes have ISUP or primary rate access (PRA) connections between them.

These connections give the directory number (DN) of the subscriber and the name of the subscriber to the message service.

A simplified message desk interface (SMDI) provides a central answering service. To provide a central answering service, the SMDI groups the following features:

- Call Forwarding (CFW)
- Uniform Call Distribution (UCD)
- Message Waiting (MWT)

NO_OF_XLARGE_EXT_BLKS (continued)

An SMDI is a group of UCD agents that receive information on incoming calls through a dedicated datalink interface. The incoming information includes the calling party number, the forwarding from station number, and the type of call forwarding involved.

If the SMDI uses the text messaging system (TMS), an SMDI agent takes the message from the calling party. If the SMDI uses the voice messaging system (VMS), the calling party can record a message through dedicated voice ports. The VMS automatically answers incoming calls. Both systems use the datalink connection to activate and deactivate the MWT indicator of the SMDI user.

An SMDI can support a maximum of 64 datalinks to transfer information. Each datalink can support a maximum of 63 message desks.

Rules in provisioning

The value of this office parameter includes the number of extra large extension blocks NMWI uses. The NMWI uses one block for each NMWI activation or deactivation. The block is held for the time determined by office parameter NMS_ACKNOWLEDGEMENT_TIMEOUT in Table OFCENG.

Calculate the parameter value as follows:

(# of requests/s x NMS_ACKNOWLEDGEMENT_TIMEOUT)
+ (16, if the switch has the NRAG feature)
+ (16, if the switch has the ACB/AR feature)
+ (.02 · # of RES lines - up to 100)

where

# of requests/second
is the total of # of requests/second for each

SMDI in office

For example, an office can have with 5 SMDIs. Each SMDI can handle 4 requests every second. This office can have NMS_ACKNOWLEDGEMENT_TIMEOUT set to the default value (3). Under these conditions, the office requires an additional (5 x 4) x 3 = 60 extra large extension blocks.

NO_OF_XLARGE_EXT_BLKS (continued)

The number of requests for each second that an SMDI can handle depends on one of the following items:

- the number of agents available. The SMDI must use TMS for this condition to occur.
- the number of voice ports available. The SMDI must use VMS for this condition to occur.

For example, an office with two SMDIs. The first SMDI uses TMS with 10 agents. Each agent of this TMS can handle 1 request every 5 s. The second SMDI uses VMS with 20 voice ports. Each voice port of this VMS can handle a request every 4 s. The following calculation indicates the number of requests each second this office can handle:

(10 x 1 request/5 s) + (20 x 1 request/4 s)

The office can handle seven requests for each second.

For a switching unit without network RAG or network MWI features, set the value of this parameter to 0 (zero).

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	16

Activation

Increase - immediate

Decrease - cold restart

NO_OF_XLARGE_EXT_BLKS (end)

Dependencies

A change in the value of this parameter affects the value of parameter NUMPERMEXT in Table OFCENG.

Consequences

If the value of this parameter is underprovisioned, NMWI and NRAG do not function correctly.

If the value of this parameter is overprovisioned, data store is wasted.

Verification

To verify that enough extension blocks are available, use CI command OMSHOW EXT ACTIVE 63. Read the following entry:

```
     EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
     EXTHI2
 63 TC_AP_XLARGE_EXT_BLKS
     30
       0             0            0             0
       0
```

Any value that is not zero value in EXTOVFL indicates the parameter is too low.

Operation measurements (OMs) EXTHI and EXTHI2 record the maximum number of extension blocks in use at the same time. OMs EXTHI and EXTHI2 record this value during the current transfer period.

Memory requirements

Each extension block requires 204 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS25

This parameter was introduced in BCS25.

TL10

Parameter Autoprovisioning was added in TL10.

NO_RING_ON_TIP_FOR_LM

Parameter name

No Ring On Tip For Line Modules

Functional description

This parameter indicates if the distinct ringing current is forced to the ring side for line modules (LM).

Rules in provisioning

Set this parameter to Y (yes) to apply all distinctive ringing current to the ring side.

Range information

Minimum	Maximum	Default
		N

Activation

Use the BSY and RTS commands on the affected LMs at the PM level of the MAP display.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Each unit requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NO_RING_ON_TIP_FOR_LM (end)

Parameter history

BCS34

This parameter was introduced in BCS34.

NO_TFAN_OM_REGISTERS

Parameter name

Number of Traffic Separation Measurement System Operational Measurement Registers

Functional description

Switches with the traffic separation measurement system (TFAN) require this parameter.

This parameter specifies the maximum number of operational measurement (OM) registers available for the Traffic Separation Intersection table.

Refer to parameter TFAN_ENHANCED_FEATURE in Table OFCOPT for other parameters and tables associated with the TFAN feature.

Rules in provisioning

For switches that do not have software package NTX085AA or NTX470AA, leave the default value of 225.

The value of this parameter cannot change unless the conditions that follow occur:

- package NTX085AA or NTX470AA is present
- parameter TFAN_ENHANCED_FEATURE in Table OFCOPT is Y (yes).

The package NTX470AA is the same as NTX085AA. International switches with standard translations use NTX470AA but do not use NTX085AA.

For switches in the United States with software package NTX085AA, the recommended value is 1000.

Range information

Minimum	Maximum	Default
0 (zero)	2047	225

Activation

Immediate

NO_TFAN_OM_REGISTERS (end)

The value of this parameter cannot decrease when the parameter is set. This function avoids traps that can occur if table control and call processing use TFAN registers that were not available.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Query OM group TFCANA from the CI level of the MAP terminal.

Memory requirements

For memory allocation, refer to parameter TFAN_ENHANCED_FEATURE in Table OFCOPT.

Dump and restore rules

For switches with software package NTX085AA or NTX470AA, copy the current value of this parameter when you perform a dump and restore.

For switches without software package NTX085AA or NTX470AA, leave the default value of 225.

Parameter history

CSP02

The activation changed to immediate in CSP02.

NODE

Parameter name

Node

Functional description

This parameter defines the node type for the link.

Rules in provisioning

This parameter was introduced to the DMS-300 in BCS32. Set this parameter to a value of CP_CORE 0 for switches equipped with software feature AJ1271 or AJ1472.

The node consists of two parts: the node type and the node instance.

The following values are correct for the node type:

- EIOC_MP (NT40 component of the EIOC)
- EIOC_FP (DVS component of the EIOC)
- CP_CORE, CM (call processing system)
- CFP (customer programmable component of the DVS)
- FOREIGN (node that lies outside the normal switch configuration)

The correct range for the node instance is 00 - 1F.

Range information

Minimum	Maximum	Default
		FOREIGN 0

Activation

The activation of this parameter is immediate.

Dependencies

Does not apply

Consequences

Does not apply

NODE (end)

Verification

Does not apply

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS32

This parameter was introduced.

NOP_DNA_DEFAULT_ACCESS

Parameter name

Network Operations Protocol X.25 Data Network Access Default Access

Functional description

A switching unit with Network Operations Protocol (NOP) remote operation (RO) Service requires this parameter.

This parameter provides additional control over access to the switching unit with of applications that use NOP. The system uses this parameter to enable or disable access to the Pass-Thru MAP application from any calling X.25 data network address (DNA). The NOPCTRL enable command does not enable the DNA.

Rules in provisioning

If the value of this parameter is set to ACCESS_ENABLED, access to the switch is subject to controls. The NOP logon user identification (ID) and password, and the tables NOPADDR, NOPAPPLN, and NOPUSERS provide these controls.

If the value of this parameter is set to ACCESS_DISABLED, access to the switch is also subject to controls. The NOP logon user identification (ID) and password, and the tables NOPADDR, NOPAPPLN, and NOPUSERS provide these controls. The system blocks access to the switch unless use of the NOPCTRL enable command grants permission to the calling X.25 DNA.

The actions of this parameter blocks the NOP logon attempts and cause an increase in the value of ROAPPL ROFLOGA (failed login attempts).

Range information

Minimum	Maximum	Default
		ACCESS_ENABLED This value represents the access screening that is present before the implementation of this parameter.

NOP_DNA_DEFAULT_ACCESS (end)

Activation

The activation of this parameter is immediate.

Dependencies

The function of this parameter supplements controls implemented in table NOPADDR, NOPAPPLN, and NOPUSERS.

Consequences

Does not apply

Verification

If this parameter is set to ACCESS_ENABLED, check that the system can establish a Pass-Thru MAP session for a calling DNA. Make sure the DNA entry in table NOPADDR is correct. Make sure the DNA entry is set to the PTAE_APPL or ALL values in table NOPAPPLN.

If this parameter is set to ACCESS_DISABLED, check that the system cannot establish a Pass-Thru MAP session for a calling DNA. Make sure the DNA entry in table NOPADOR is correct. Make sure the DNA entry is set to the PTAE_APPL or ALL values in table NOPAPPLN. To make sure that the system can establish a session after the calling DNA has been enabled use the NOPCTRL command.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS36

This parameter was introduced.

NOP_USERID_SECURITY_ACCESS

Parameter name

NOPUSERS Identification Security Access

Functional description

This parameter allows the operating company to restrict access to a DMS switch by user identification.

Rules in provisioning

Set the value of this parameter to Y (yes) to restrict access. Use the Y value if Table NOPUSERS or Table USERINF does not define the remote user identification. The Y value of this parameter restricts access to the application that a user identification can access. Table NOPUSERS defines the authorized applications of the user identification.

If NOP_USERID_SECURITY_ACCESS is N (no), a restriction is not present for the user identification.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Set the value of this parameter to Y. Do not define a remote user identification in Table NOPUSERS. Attempt an receive only (RO) call with one of the applications (PADN, PTAE, etc.). Switch access is not available. Set the parameter to N and access to the switch is available.

NOP_USERID_SECURITY_ACCESS (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS30

This parameter was introduced.

NORM_CALL_SS7_IAM_MSG_PRIORITY

Parameter name

Normal Call SS7 IAM Message Priority

Note: The use of HPC Network Capabilities is restricted in the United States and U.S. Territories (Puerto Rico and U.S. Virgin Islands) to National Security/Emergency Preparedness (NS/EP) users authorized by the Office of he Manager, National Communication System (OMNCS). Telco deployment of these HPC Network Capabilities must be coordinated with the OMNCS at the following address:

Office of the Manager
National Communications System
Attn: GETS Program Office
701 South Courthouse Rd.
Arlington, VA 22204-2198
email: gets@ncs.gov

Functional description

Office parameter NORM_CALL_SS7_IAM_MSG_PRIORITY in table OFCENG allows the central office administrator to provision the default SS7 message priority on an office-wide basis for all non-HPC, or normal calls.

Provisioning rules

The value provided for NORM_CALL_SS7_IAM_MSG_PRIORITY is at the discretion of the operating company.

Range information

Minimum	Maximum	Default
	ALWAYS_ZERO	ALWAYS_ONE
	ALWAYS_ONE	
	PASS_OR_ZERO	
	PASS_OR_ONE	

Activation

The method of change activation is immediate.

NORM_CALL_SS7_IAM_MSG_PRIORITY (end)

Dependencies

None

Consequences

Setting the value of NORM_CALL_SS7_IAM_MSG_PRIORITY to any value other than ALWAYS_ONE alters the way the message priority for POTS IAMs is sent out to the network for releases prior to NA009.

Verification

The value of this parameter can be verified using the DISPLAY command (DISPLAY NORM_CALL_SS7_IAM_MSG_PRIORITY).

Memory requirements

None

Dump and restore rules

None

Parameter history

NA009

Office parameter NORM_CALL_SS7_IAM_MSG_PRIORITY was introduced as part of the GETS HPC feature package.

NOS_QUANTITY_OF_SVCS

Parameter name

Network Operating System Quantity of Switched Virtual Circuits

Functional description

This parameter specifies the number of switched virtual circuits (SVC) the operating company requires. This parameter directly affects the number of processes that run on the system. This parameter affects the process because the number of incoming and outgoing tasks is equal to the number of SVCs.

Rules in provisioning

To determine the quantity of SVCs the operating company requires, examine the applications that need SVCs. The application follows:

Data collection that uses NOS FT

Requires 6 SVCs (the number of FT data types + 1).

Central MAP

The CMAP can have from 2 to 10 SVCs. The number of SVCs for CMAP must be equal to the value of parameter MAX_CMAP_SESSIONS in Table OFCENG.

Central alarms

Central alarms require two SVCs.

The range of this parameter increases in BCS30 by the Network Operation Protocol (NOP) outgoing call capability. The NOP allows applications that use NOP Remote Operations (RO) services on the DMS to initiate outgoing calls.

The NOP Outgoing call capability is not an application that uses the RO service. The NOP is an enhancement to the RO service. The NOP does not directly use any SVSs.

This parameter impacts the automatic call distribution management information system (ACD MIS).

Both NT-40 and SuperNode support a maximum of 60 simultaneous RO sessions.

The maximum number of ACD MIS sessions the system allows on a switch is equal to parameter MAX_ACDMIS_SESSIONS. The maximum can also be equal to the value of this parameter. The maximum number of sessions is equal to the lower parameter value.

NOS_QUANTITY_OF_SVCS (end)

The two parameters do not depend on each other. MAX_ACDMIS_SESSIONS can be greater than NOS_QUANTITY_OF_SVCS. This condition can occur even if the maximum number of ACD MIS sessions cannot be greater than NOS_QUANTITY_OF_SVCS.

Range information

Minimum	Maximum	Default
1	60	5

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS18

This parameter was introduced.

NRS_AUD_DELAY

Parameter name

Network Resource System Audit Delay

Functional description

The NRS AUD_DELAY parameter specifies the delay in minutes between network resource system (NRS) audit cycles for the Datapath modem pooling feature.

Rules in provisioning

Specify the delay between NRS audit cycles.

A value of 0 (zero) disables the audits.

Range information

Minimum	Maximum	Default
0	60	10

Activation

A new value takes effect at the beginning of an audit cycle.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NRS_AUD_DELAY (end)

Parameter history

BCS15

This parameter was introduced in BCS15.

NSS_RDD_REPLDIGS_LENGTH_A

Parameter name

Network Services Software REPLDIGS Template Length A

Functional description

Templates of the REPLDIGS response message are built when the REPLDIGS subsystem returns to service. This procedure minimizes the real-time that the network services software (NSS) database control point (DBCP) requires to send a transaction capabilities application part (TCAP) response message. The DBCP sends the message to the NSS service switching part (SSP). The REPLDIGS templates are a fixed length. A return result response message can be 1 to 18 digits in length. The REPLDIGS field in Table REPLDATA at the DBCP specifies the length of the return result response message.

The office parameters NSS_RDD_REPLDIGS_LENGTH_A and NSS_RDD_REPLDIGS_LENGTH_B allow the operating company to choose the two most common templates for the return result message length. The operating company must choose these two templates. If the operating company personnel does not create the templates ahead of time, the DBCP must perform this task when the subsystem processes a query. This procedure uses a large amount of real-time.

A template sends the response when these two following conditions occur:

- the DBCP completes a query process
- office parameters NSS_RSS_REPLDIGS_LENGTH_A or NSS_RSS_REPLDIGS_LENGTH_B specify the same number of digits that are in the return message.

In all other conditions, the operating company personnel do not use a template to assemble the response TCAP message. This procedure uses a large amount of real-time.

Rules in provisioning

Refer to the value in Table REPLDATA and the network dialing plan to supply this office parameter. For example, if field REPLDIGS specifies four digits for most of the tuples in Table REPLDATA, set NSS_RDD_REPLDIGS_LENGTH_A to 4. Enter the next most common value in office parameter NSS_RDD_REPLDIGS_LENGTH_B.

NSS_RDD_REPLDIGS_LENGTH_A (end)

Range information

Minimum	Maximum	Default
1	18	7

Activation

Busy (BSY) and return to service (RTS) the REPLDIGS subsystem in the SCCPLOC level of MAPCI. To access this MAP display level, enter the following:

```
>MAPCI;MTC;CCS;CCS7;SCCPLOC
```

Dependencies

Does not apply

Consequences

If this parameter is set too low, most TCAP messages are not built, do not have a template, and consume real-time.

Verification

Check the entries in Table REPLDATA to confirm that this office parameter is set correctly.

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS33

This parameter was introduced in BCS33.

NSS_RDD_REPLDIGS_LENGTH_B

Parameter name

Network Services Software REPLDIGS Template Length B

Functional description

Templates of the REPLDIGS response message are built when the REPLDIGS subsystem returns to service. This procedure minimizes the real-time that the network services software (NSS) database control point (DBCP) requires to send a transaction capabilities application part (TCAP) response message. The DSCP sends the message to the NSS service switching point (SSP). The REPLDIGS templates are a fixed length. A return result response message can be 1 to 18 digits in length. The REPLDIGS field in Table REPLDATA at the DBCP specifies the length of the return result response message.

The office parameters NSS_RDD_REPLDIGS_LENGTH_A and NSS_RDD_REPLDIGS_LENGTH_B allow the operating company to choose the two most common templates for the return result message length. The operating company must choose these two templates. If operating company personnel cannot create the templates ahead of time, the DBCP must perform this task when the subsystem processes a query. This procedure uses a large amount of real-time.

A template sends the response message when these two following conditions occur:

- the DBCP completes a query
- office parameters NSS_RSS_REPLDIGS_LENGTH_A or NSS_RSS_REPLDIGS_LENGTH_B specify the same number of digits that are in the return message.

In all other conditions, the response TCAP message does not need a template to assemble the response TCAP message. This procedure uses a large amount of real-time.

Rules in provisioning

Refer to the values in Table REPLDATA and the network dialing plan to supply this office parameter. For example, if field REPLDIGS specifies four digits for most of the tuples in Table REPLDATA, set NSS_RDD_REPLDIGS_LENGTH_A to 4. Enter the next most common value in office parameter NSS_RDD_REPLDIGS_LENGTH_B.

NSS_RDD_REPLDIGS_LENGTH_B (end)

Range information

Minimum	Maximum	Default
1	18	10

Activation

Busy (BSY) and return to service (RTS) the REPLDIGS subsystem in the SCCPLOC level of MAPCI. To access this MAP display level, enter the following:

```
>MAP CI;MTC;CCS;CCS7;SCCPLOC
```

Dependencies

Does not apply

Consequences

If this parameter is set too low, most TCAP messages are not built, do not have a template, and consume real-time.

Verification

Check the entries in Table REPLDATA to confirm that this office parameter is set correctly.

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS33

This parameter was introduced in BCS33.

NTC_RNGBACK_TIME

Parameter name

Notification of Time and Charge Ringback Time

Functional description

The NTC_RNGBACK_TIME is required in a DMS-100 switching unit in the Japan market. This switching unit must have the Integrated Business Network (IBN) ISDN User Part (ISUP) trunks and the Notification of Time and Charge (NTC) feature.

The parameter specifies the time period in which a subscriber can answer an NTC call back in the ring back stage of NTC. This time is calculated in seconds.

Rules in provisioning

Specify the time period the system applies ringing to a subscriber line before the system releases or attempts an NTC call back.

Range information

Minimum	Maximum	Default
1	99	30

Activation

Immediate

Dependencies

Office parameter NTC_REATTEMPTS in Table OFCVAR determines the number of NTC call back attempts.

Consequences

Overprovisioning of this parameter can result in the reservation of time for hardware resources. These resources notify the originating subscriber of an NTC call back.

Underprovisioning of this parameter provide enough time for a subscriber to answer an NTC call back.

NTC_RNGBACK_TIME (end)

Verification

To verify the operation of this parameter, originate and complete an NTC feature activation call. Wait for the NTC call back. Verify that the ringback time is equal to the value of this parameter.

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS36

This parameter was introduced in BCS36.

NUM_CALLREC_STREAMS

Parameter name

Number of Call Recording Streams

Functional description

The Number of Call Recording Streams parameter specifies the number of streams that can be entered in table CRSFMT.

The following call recording platforms use the Number of Call Recording Streams parameter:

- Central Automatic Message Accounting
- CNS Standard Base Package
- MDC - Station Message Detail Recording
- ISC - Call Detail Recording
- Local Automatic Message Accounting
- TOPS Call Processing

Rules in provisioning

Specify the number of streams that can be entered in table CRSFMT.

Range information

Minimum	Maximum	Default
0	32767	1

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

NUM_CALLREC_STREAMS (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NUM_DCR_EXT_BLKS

Parameter name

Number of Dynamically Controlled Routing Extension Blocks

Functional description

This parameter appears in a toll switch that has the Dynamically Controlled Routing (DCR) feature.

This parameter allocates a pool of extension blocks for the DCR feature. The parameter allocates one DCR extension block for each DCR call that uses the route list when the system routes the call. This route list has field RTESEL equal to T (T route list) from field DIRRTE of table DESTNODE. The DCR call requires the DCR extension block for the duration of the call. This requirement is not present if the T-route list overflows. The overflow of the T-route list results in the use and removal of allocation of the extension block.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

A possible overload condition determines the estimate of the value of this parameter. The estimation does not use all call attempts. The estimation only counts calls that the system routes. To determine the value for this parameter, use the following formula:

$$E(\text{erlang}) = \frac{T \times M}{3600\text{suh}}$$

Where T = the largest number of calls each hour that the system can route with the use of a T selector of table DESTNODE. M = the mean call holding time.

Use E to provision the number of extension blocks required for this use from erlang B tables at the desired grade of service.

Use the default value of zero in a switching unit that does not use T selectors in table DESTNODE for DCR destinations. The T selectors appear in fields DIRSEL and EXCSEL of table DESTNODE. If the DCR use does not occur, this parameter must be set to 0.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each

NUM_DCR_EXT_BLKS (continued)

parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	65534	0

Activation

When the parameter increases, activation is immediate.

When the parameter decreases, activation occurs after a cold restart.

Dependencies

Does not apply

Consequences

If the allocation of provisions for this parameter is too low, the request for a DCR extension block can overflow. The overflow causes the system to set No Software Resources (NOSR) treatment for the call.

Verification

To verify the allocation of enough extension blocks, use CI command OMSHOW EXT ACTIVE 40. Read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
40 DCR_EXTENSION
    0
     0             0            0             0
     0
```

A value that is not zero in EXTOVFL indicates that allocation of provisions is too low.

Measurement EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Refer to the *Operational Measurements Reference Guide* for a description of OM group EXT.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each unit requires five words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

BCS20

BCS20 introduces this parameter.

NUM_DCR_NP_ACCESS

Parameter name

Number of Dynamically Controlled Routing Network Processors With Access

Functional description

This parameter is a requirement in a SuperNode switch with the Multiple Network Access (MNA) feature. This parameter limits the number of networks that can access a DMS switch.

When this parameter value setting is 1, the switch can support one dynamically controlled routing (DCR) network processor (NP). When this parameter value is greater than 1, multiple NPs can access the switch.

Rules in provisioning

The DCR network configuration determines the number of network accesses for the switch.

Range information

Minimum	Maximum	Default
1	6	1

Activation

Immediate

Dependencies

The number of entries in table DCRNETID must not exceed the value of this parameter.

Consequences

Does not apply

Verification

Add a number of DCR network identifications in table DCRNETID equal to the value of this parameter. Verify network access for each DCR network identification.

Memory requirements

Each network access requires 14 600 bytes of memory.

NUM_DCR_NP_ACCESS (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS36.

NUM_ENGR_NWM_TRKGRP_CTRLS

Parameter name

Number of Engineerable Network Management Trunk Group Controls

Functional description

The Network Management System uses this parameter. The parameter defines the maximum number of trunk groups that controls of the trunk group can control at the same time.

Rules in provisioning

The parameter value must equal the maximum number of trunk groups with flexible reroute (FRR) controls that can be controlled at the same time.

Range information

Minimum	Maximum	Default
0	225	0

Activation

Activation occurs with a cold restart.

Use the MTCSWACT utility to avoid the E1 outage.

Dependencies

The value of the parameter must increase if one of the following conditions occurs:

- an increase of the number of trunk groups with FRR controls that trunk group controls can control at the same time
- the addition of the FRR feature

Refer to parameter NUM_OF_RTEB_EXTBLKS in table OFCENG for a description of the FRR feature.

Consequences

Does not apply

Verification

Does not apply

NUM_ENGR_NWM_TRKGRP_CTRLS (end)

Memory requirements

The following formula determines the number of words that this parameter requires:

(parameter value x 10) + 10

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS21

This parameter was introduced in BCS21.

CSP06

The parameter NUM_ENGR_NWM_TRKGRP_CTRLS is now hard-coded to the maximum recommended value of the parameter (225). The parameter is not accessible to the user.

NA004

The MTCSWACT utility was introduced in NA004. The use of MTCSWACT enables avoidance the E1 outage.

NUM_IBN_IXLA_EXT_BLOCKS

Parameter name

Number of Integrated Business Network International Translation Extension Blocks

Functional description

A Meridian Digital Centrex (MDC) switch with International-Direct Distance Dialing (IDDD) through the Automatic Route Selection (ARS) feature requires this parameter. The parameter specifies the maximum number of MDC world system (international) translation extension blocks that the engineering interval requires.

The parameter value dictates the maximum number of calls that can route at the same time to universal translations from MDC.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

Use the following formula to set the value of this parameter:

(the maximum number of outgoing MDC (trunk group type IBNTO) trunks that carry IDDD through ARS traffic that can be reached when translating through table PXHEAD)
+ (the number of two-way FST R2 trunks)

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

NUM_IBN_IXLA_EXT_BLOCKS (continued)

Range information

Minimum	Maximum	Default
0	32767 (reserved) 32000 (programmed)	0

Activation

If this parameter increases, activation is immediate.

If this parameter decreases, activation occurs after a cold restart.

Dependencies

Does not apply

Consequences

The parameter sets the maximum number of MDC calls that can route through table PXHEAD at the same time. Calls receive no software resources (NOSR) treatment if the following two conditions occur. The number of blocks provided is too low and the number of MDC calls reaches the maximum parameter value.

Verification

To verify the allocation of enough extension blocks, use the CI command OMSHOW EXT ACTIVE 15. Read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
15 IBN_INTL_XLA_EXT_BLOCK
        0
        0            0            0             0
        0
```

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each unit requires 26.5 words of memory.

NUM_IBN_IXLA_EXT_BLOCKS (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

N002

Instruction on activation of change to the value of the parameter deleted as in PRS AS40120.

BCS36

The rules in provisioning changed to allow for FST two-way R2 trunks.

BCS28

This parameter was introduced in software release BCS28.

NUM_ICAMA_RECORDING_UNITS

Parameter name

Number of International Centralized Automatic Message Accounting Recording Units

Functional description

A toll switch (international) with universal translations and the International-Centralized Automatic Message Accounting (ICAMA) and/or the International Administration Accounting (IAA) feature requires this parameter.

This parameter specifies the maximum number of ICAMA recording units required before the next extension.

Rules in provisioning

Set the value of this parameter equal to the number of one or both of the following:

- simultaneous toll calls originating on trunks with trunk group type ANI that have the correct call class
- simultaneous toll calls originating on trunks with trunk group type MTR that have field IAA equal to Y (yes) in table TRKGRP

Refer to table TRKGRP for trunk group types ANI and MTR.

Range information

Minimum	Maximum	Default
0	32767	100

Activation

When the parameter increases, activation is immediate.

When the parameter decreases, activation occurs after a cold start.

Dependencies

Refer to parameters ICAMA_REQUESTED and IAA_REQUESTED in table OFCVAR for other parameters and tables associated with this feature.

NUM_ICAMA_RECORDING_UNITS (end)

To activate the previous features, parameters ICAMA_REQUESTED and/or IAA_REQUESTED in table OFCVAR must be set to Y.

Consequences

If the allocation of provisions for this parameter is too low, some toll calls cannot obtain an ICAMA recording unit.

If the allocation of provisions for this parameter is too high, the system wastes data store.

Verification

To verify the allocation of enough recording units, use the CI command OMSHOW EXT ACTIVE 48. Read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
48 ICAMA_RECORDING_UNIT
    100
    0              0             0           0
    0
```

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in use at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

A value that is not zero in EXTOVFL indicates that allocation of provisions is too low.

Memory requirements

Each unit requires 22 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS23

This parameter was introduced in BCS23.

NUM_ICT_EXT_BLKS

Parameter name

Number of International Call Transfer Extension Blocks

Functional description

An international switching unit with universal translations and the International Call Transfer (ICT) feature requires this parameter. The parameter specifies the number of call transfer extension blocks.

A call that that the system transfers a minimum of one time requires one block. This block remains linked to the call condense block (CCB) for the duration of the transferred call.

Rules in provisioning

Enter the maximum number of simultaneous active call transfers or call transfer attempts.

Range information

Minimum	Maximum	Default
0	32767	20

Activation

When the parameter increases, activation is immediate.

When the parameter decreases, activation occurs after a cold restart.

Dependencies

Does not apply

Consequences

Does not apply

Verification

To verify allocation of enough extension blocks, use the CI command OMSHOW EXT ACTIVE 65. Read the following entry:

NUM_ICT_EXT_BLKS (end)

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
65 ICT_INFO_BLOCK
     20
      0             0            0             0
      0
```

Any value that is not zero in EXTOVFL indicates that allocation of provisions is too low.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Memory requirements

Each extension block requires 16 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS26

This parameter was introduced in BCS26.

NUM_INDA_EXT_BLKS

Parameter name

Number of indirect Access Extension Blocks— NUM_INDA_EXT_BLKS

Functional description

This parameter specifies the number of extension blocks used to store indirect access information.

Provisioning rules

This parameter can be set automatically by the autoprovisioning function described below.

Autoprovisioning

With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	327680	0

Activation

Immediate

Requirements

Not applicable

Results

If this parameter is underprovisioned, indirect access calls are rejected with NOSR treatment (No Software Resource).

NUM_INDA_EXT_BLKS (end)

Testing

To check that extension blocks are allocated, from the CI level of the MAP display, issue the command:

```
OMSHOW EXT ACTIVE 209
```

209 is the extension format code for INDA_EXT_FC.

Memory requirements

Words required = (((x-1)/16)+1)*1024
Units per memory block = 16
Words per memory block = 1024
Parameter value = x

The AUTOPROVISIONING system extends the number of extension blocks by 1000 every time the number falls below 500.

Dump and restore rules

Not applicable

Parameter history

MMP 12

This parameter was introduced by design activity 59008819, UK ISUP - Indirect Access Support.

NUM_INTL_RECORDING_UNITS

Parameter name

Number of International Recording Units

Functional description

A local switching unit, international, with universal translations and the International Call Recording (ICR) feature requires this parameter. The parameter specifies the number of recording units allocated for the ICR feature.

For a short description of ICR, refer to parameter INTL_ICR_REQUESTED in table OFCVAR.

The system generates a log message after each toll call that occurs when extension blocks are not available. The call continues and the system does not activate alarms.

Rules in provisioning

Set the value of this parameter equal to the maximum number of toll calls that can be in progress at that same time. The toll calls originate from the lines.

Range information

Minimum	Maximum	Default
0	3 2767	0

Activation

When the parameter increases, activation is immediate.

When the parameter decreases, activation occurs after a cold restart.

Dependencies

At extension time, the value of this parameter must increase if the number of call types increases. The rules in provisioning define the call types.

Consequences

Does not apply

NUM_INTL_RECORDING_UNITS (end)

Verification

To verify the allocation of enough recording units, use CI command OMSHOW EXT ACTIVE 38. Read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
37 INTL_RECORD_UNIT
     0
     0             0            0             0
     0
```

A value that is not zero in EXTOVFL indicates that allocation of provisions is too low.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Memory requirements

Each unit requires 28 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NUM_ISUP_EXT_BLKS

Parameter name

Number of ISDN User Part Extension Blocks

Functional description

Only DMS-250 switches require this parameter. In all other events, the office parameters NO_OF_HIS_CONTROL_BLKS and NO_OF_HIS_DATA_BLKS in table OFCENG replace the parameter.

Rules in provisioning

Set the value to 0 for all non-DMS-250 switches.

Range information

Minimum	Maximum	Default
0	3 2767	0

Activation

Increase - immediate

Decrease - cold restart

Dependencies

Does not apply

Consequences

Does not apply

Verification

For all non-DMS-250 switches, verify that the value of this parameter is 0.

Memory requirements

Each unit requires 31 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NUM_MTR_EXT_BLOCKS

Parameter name

Number of Metering Extension Blocks

Each of the following sections is split into three subsections. The first subsection describes the Asia Pacific and CALA (APC) applicability of this parameter. The second subsection describes the North American applicability of this parameter. The third subsection describes the European applicability of this parameter.

Functional description

APC and North America

A local switching unit with the universal translation scheme requires this parameter. This parameter specifies the number of central control (CC) metering extension blocks available for CC metering.

The number of extension blocks must equal the number of CC metered calls in progress at a fixed time.

The CC metered calls that require extension blocks consist of the following two types:

- custom calling featured calls that require multiple legs
- long duration calls

Europe

This parameter defines the number of metering extension blocks available for the temporary storage of advice of charge (AOC) metering information. The metering extension blocks are in the memory of the computing module. The system made the metering extension block available during translations. The system hooks the metering extension block to the call condense block (CCB). When the system downloads the AOC-subscribed call information from the computing module (CM) to the extended peripheral module (XPM), the metering extension block releases. When released, the metering extension block becomes available for another AOC-subscribed call.

Rules in provisioning

The value of this parameter depends on the size of the DMS-100 switch and the volume of calls that the switch must handle. Calculations for this value appear below.

APC

The following calculation determines the number of blocks:

Number of blocks = (N) (Value of table OFCENG, parameter NCCBS)

where

N
is the percentage of calls with metering assigned

North America

The following calculation of parameter values from table OFCENG determines the number of blocks:

Number of blocks = NO_OF_FTR_CONTROL_BLKS + 0.1(NCCBS)

Europe

The number of extension blocks must equal the number of primary rate interface (PRI) and/or basic rate interface (BRI) originating calls that can be at the call setup phase at any time. Each call requires one metering block during call setup. The calculation of this parameter value (each call can have a setup phase of 30 s) is as follows:

$$\frac{\text{YBCH} * \text{NPRIBRI}}{120 * \text{NTRLN}} = \text{NUM MTR BLOCKS}$$

In this example, YCBH is the number of call attempts during the hour that is most busy. The NPRIBRI is the number of PRI/BRI circuits (B-channels) in the office. The NTRLN is the total (not only ETSI ISDN) number of trunk members and lines in the office (B-channels).

Range information

(Sheet 1 of 2)

Applicability	Minimum	Maximum	Default
APC	0	32 767	300

NUM_MTR_EXT_BLOCKS (continued)

(Sheet 2 of 2)

Applicability	Minimum	Maximum	Default
North America	0	32 767	100
Europe ETSI ISDN	0	32 767	300

Activation

Increase-immediate

Decrease-cold restart

Dependencies

APC

See table MTRSYSPM, tuple MFP (meter fail parameter) for the routing of new calls when the software resources supplied by this parameter are not available.

North America

Refer to parameter CCMTR_FAILURE_FREE_CALL in table OFCENG for the system routes of new calls. The system routes new calls when the software resources that this parameter supplies are not available.

Europe

There are no European dependencies.

Consequences

APC

If you specify insufficient extension blocks, the system generates log MTR125. The call may or may not proceed based on table MTFSYSPM, tuple MFP.

North America

If the system specifies that not enough extension blocks are available, a current call continues to rely on XMS-based peripheral modules (XPM) metering.

Europe

If this parameter defines insufficient metering memory blocks and AOCREL is Y, the following occurs:

- the system releases calls made by AOC subscriber calls that are without a metering block
- the system generates computing module (CM) metering log MTR125

If the call is for an emergency, the system does not release the call despite the AOCREL setting.

Verification

APC and North America

To check that the system made enough extension blocks available, use CI command OMSHOW EXT ACTIVE 45. For North America, read the following entry:

```
    EXTSEIZ    EXTOVFL    EXTHI     EXTSEIZ2    EXTHI2
45 INTL_CCMTR_EXT_BLOCK
     25
      0          0          0          0           0
```

Any value that is not zero in EXTOVFL indicates that not enough extension blocks are available.

Operational measurements (OMs) EXTHI and EXTHI2 record the maximum number of extension blocks in use at the same time. These measurements record during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Memory requirements

Each unit requires 13 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NUM_MTR_EXT_BLOCKS (end)

Parameter history

APC009.1

Feature AU3119 (IBN Metered Lines) provides support for this parameter in the APC market.

EUR006

The applicability of parameter NUM_MTR_EXT_BLOCKS was expanded to include the European markets in EUR006. The default value was increased to 300.

BCS32

The name of this parameter changed from NUM_CCMTR_EXT_BLOCKS to NUM_MTR_EXT_BLOCKS in BCS32.

NUM_OF_CCIS_INWATS_BLOCKS

Parameter name

Number of Common Channel Inter-office Signaling Inward Wide Area Telephone Service Extension Blocks

Functional description

Common channel inter-office signaling (CCIS) inward wide area telephone service (INWATS) originating screening (OS) switching units require this parameter. This parameter specifies the number of required CCIS INWATS extension blocks.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

The recommended value is three blocks for each 1000 simultaneous CCIS INWATS calls on all Automatic Number Identification (ANI) trunks.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	3 2767	3 0

Activation

Increase - immediate

NUM_OF_CCIS_INWATS_BLOCKS (continued)

Decrease - cold restart

Dependencies

At extension time, if the number of simultaneous CCIS calls on ANI trunks increases, the value of this parameter must also increase.

Consequences

Does not apply

Verification

To check that the system has enough extension blocks units available, use command interpreter (CI) command OMSHOW EXT ACTIVE 4 and read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
4 CCIS_INWATS_BLOCK
     30
      0             0            0             0
      0
```

Operational measurements (OMs) EXTHI and EXTHI2 record the maximum number of simultaneous extension blocks in use during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Any value that is not zero in EXTOVFL indicates that not enough extension blocks are available.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each block requires 17 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NUM_OF_INWATS_EXT_BLOCKS

Parameter name

Number of Inward Wide Area Telephone Service Extension Blocks

Functional description

This parameter specifies the number of inward wide area telephone service (INWATS) allocated in a combined originating serving office (OSO) and terminating serving office (TSO).

The system uses INWATS extension blocks in a combined OSO/TSO call. If the office is an OSO only or a TSO only, set the office parameter to 0.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

Specify the maximum number of simultaneous combined OSO/TSO calls in the office. If the office does not function as a combined OSO/TSO, the parameter value must be 0 (zero).

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	3 2767	3 00

NUM_OF_INWATS_EXT_BLOCKS (continued)

Activation

Increase - immediate

Decrease - cold restart

Dependencies

The default value is 300. This value was chosen based on the default value for the NUM_OF_CCIS_INWATS_BLOCKS. This default value performs the same function for CCS INWATS OSO offices.

Consequences

An office parameter that is too high wastes data store.

An office parameter that is too low results in the blockage of combined OSO/TSO calls.

Verification

To check that the system has enough available extension blocks, use command interpreter (CI) command OMSHOW EXT ACTIVE 79. Read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
79 INWATS OSO/TSO EXT BLK
     30
      0             0            0             0
      0
```

Any value that is not zero in EXTOVFL indicates that not enough extension blocks are available.

Operational measurements (OMs) EXTHI and EXTHI2 record the maximum number of simultaneous extension blocks in use at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

NUM_OF_INWATS_EXT_BLOCKS (end)

Memory requirements

Each extension block requires four words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NUM_OF_NSC_EXT_BLK

Parameter name

Number of Number Services Call Extension Blocks

Functional description

This parameter appears in a local or toll switching unit with the service switching point (SSP) software package. This parameter specifies the quantity of number services call (NSC) extension blocks that E800 or 800+ type calls require.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

This parameter is provisioned according to the following formula:

```
# NSC extension blocks required = (Y x (# of 800 calls/s) x
(avg 800 call delay before answer)) + (Z x (# of 800 calls/s) x
(avg 800 call holding time))
```

where

Y =
% of 800 calls for which the service control point (SCP) does not request a termination information message

Z =
% of 800 calls where the SCP requests a termination information message

For example, 800+ and E008 services do not use termination information messages. The number of extension blocks required for these services is determined as follows, if you assume:

NUM_OF_NSC_EXT_BLK (continued)

Twenty 800 calls/s
Y = 100%
Z = 0% Average 800 call delay before answer = 30 s

The Calculation would be:

(1 x 20 x 30) = 600

In the preceding example, the number of NSC extension blocks depends on the delay time. The delay time is between when the system sends the SCP query message and when the system receives the answer message. The called party sends the answer message.

If the SCP does not request a termination information message, the system attaches the NSC_EXT Block to the 800 call. The system attaches the NSC_EXT block to the 800 call for the duration of the SCP database query.

The following is an example of this parameter for E800 service. The E800 service can use termination messages. Assume:

Twenty 800 calls/s
X = 80%
Y = 20%
Average 800 call delay before answer = 30 s
Average 800 call holding time = 180 s

The Calculation would be:

(0.8 x 20 x 30) + (0.2 x 20 x 180) = 480 + 720 = 1200

In this case, the number of NSC extension blocks varies as the percentage of calls that require a termination information message changes. No additional padding is necessary if the average call duration is known.

If the SCP requests a termination information message, the NSC_EXT block attaches to the 800 call. The NSC_Block attaches to the 800 call for the duration of the call.

Note: The previous examples do not define limits. You must calculate all figures with the use of engineering information from the operating company.

NUM_OF_NSC_EXT_BLK (continued)

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	3 2767	1 50

Activation

Increase - immediate.

Decrease - cold restart.

Dependencies

Does not apply

Consequences

Insufficient blocks cause the system to route calls that do not obtain a block to No Software Resources (NOSR) treatment.

Verification

To verify that enough extension blocks are present, use Command Interpreter (CI) command OMSHOW EXT ACTIVE 35 and read the following entry:

NUM_OF_NSC_EXT_BLK (end)

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
35 NSC_EXT_BLK
    150
       0             0            0             0
       0
```

Any value that is not zero in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in use at the same time during the current transfer period.

For a description of OM group EXT, refer to the *Operational Measurements Reference Manual*.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each unit requires 46 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore from software release BCS25 to software release BCS25 and higher.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NUM_OF_NT_RECORDING_UNITS

Parameter name

Number of NT Recording Units

Functional description

Switching units with the Automatic Message Accounting (AMA) option, Centralized Automatic Message Accounting (CAMA), or Local AMA (LAMA) and field KEY in table CRSFMT set to NTFMT require this parameter.

This parameter specifies the number of NT recording units required to collect the call data while the AMA buffers are full.

Switching units with LAMA or local/toll switching units with CAMA with the Call Forwarding feature require these units.

Switching units with the Number Services Call (NSC) feature require these units.

The system holds the charge unit for the call duration for the CFW or NSC.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

The recommended formula for a switching unit is as follows:

```
Units =   50
          + (0.1 of the number of POTS lines with CFW including all
               remote lines)
          + (0.1 of the number of IBN lines with CFW including all
               remote lines)
          + (0.1 of the number of lines with Remote CFW) + (number of
               INWATS lines X 36) / 100) X 4)
          + (0.2 of the number of IBN lines)
          + (50 X number of Super CAMA trunk group members, SC
               trunk group type / 1000)
          + (value of parameter NUM_NSC_EXT_BLK in table
               OFCENG)
```

Note: Always round up to the next increment of 50.

NUM_OF_NT_RECORDING_UNITS (continued)

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
1	32767 (reserved) 14500 (programmed)	1 00

Activation

Increase - immediate.

Decreases - cold restart.

Dependencies

At extension time, the value of this parameter must increase if one or more items in the rules in provisioning increase.

Consequences

A lack of recording units causes the system to route a line or trunk that requires a recording unit. The system routes the line or trunk according to the AMA_FAILURE_FREE_CALL parameter in table OFCENG.

Verification

To verify that the system allocates enough recording units, use Command Interpreter (CI) command OMSHOW EXT ACTIVE 5 and read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
5 NT_RECORDING_UNITS
    100
      0              0            0             0
      0
```

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in use at the same time during the current transfer period.

Any value that is not zero in EXTOVFL indicates underprovisioning.

For a description of OM group EXT, refer to the *Operational Measurements Reference Manual*.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each recording unit requires 35 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NUM_OF_RTEB_EXTBLKS

Parameter name

Number of Flexible Reroute Extension Blocks

Functional description

Local, toll, combined local/toll or traffic operator position system (TOPS) switching units require this parameter. This parameter specifies the number of extension blocks that the flexible reroute (FRR) feature requires.

The FRR control is an extended network management trunk group control. The FRR allows the system to reroute calls from an in-chain route to a VIA. This action occurs when the in-chain route overloads or fails.

An FRR control involves two trunk groups. The system applies the FRR control to the first trunk group. The first trunk group is the in-chain route. Another name for this trunk group is the controlled trunk group. The system offers calls that the system cannot carry over this trunk group to the second trunk group. The second trunk group is the VIA route. Another name for a call offered to the VIA route is the rerouted call.

The system uses an extension block to reroute a call. The extension block remains attached to a rerouted call while the call moves through the routing phase of call processing.

The user can activate the FRR controls manually from the MAP (maintenance and administration position), and through table PREPLANS.

The FRR Control feature requires the Basic Network Management software package to function.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

Each rerouted call requires two extension blocks. These extension blocks remain attached to the call until the system takes the call down.

The following calculation determines the number of extension blocks required:

2 x (the total number of rerouted calls in the setup state) + (those calls in the talking state)

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	5000	0

Activation

Increase - immediate

Decrease - cold restart

Dependencies

Refer to parameter NUM_ENGR_NWM_TRKGRP_CTRLS in table OFCENG. This paramater indicates the maximum number of trunk groups with the FRR feature that the user can control at the same time.

Consequences

If an extension block is not available for a call the system will route again, the call advances through the in-chain route list. The system routes the call advances through this in-chain list instead of the VIA route list.

Verification

To verify that enough extension blocks are allocated, use Command Interpreter (CI) command OMSHOW EXT ACTIVE 52 and read the following entry:

NUM_OF_RTEB_EXTBLKS (end)

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
52 RTEB_EXTENSION
     0
      0              0             0              0
      0
```

Measurement EXTHI records the maximum number of extension blocks in use at the same time during the current transfer period.

Any value in EXTOVFL that is not zero indicates underprovisioning.

For more operational measurements that associate with this parameter, refer to OM groups NWMFRRCT and NWMFRRTG.

For a description of OM groups EXT, NWMFRRCT, and NWMFRRTG, refer to the *Operational Measurements Reference Manual*.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each extension block requires 44 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

BCS23

BCS23 introduces this parameter.

NUM_RC_EXT_BLKS

Parameter name

Number of Routing Characteristic Extension Blocks

Functional description

This parameter specifies the number of routing characteristic (RC) extension blocks required. It is required in all switching units where calls are translated and routed based on several routing characteristics in conjunction with the called digits. It is also required where calls are routed using called number parameter routing.

Advanced intelligent network (AIN) calls receiving analyze_route or forward_call responses use routing characteristics to translate and route the response. You must ensure that sufficient extension blocks are provisioned for this additional use.

The Who's Calling (WC) feature uses this parameter to translate and route calls to the service node (SN). An operating company must provision enough extension blocks for the RCs associated with the WC feature. Change this parameter only for end offices with provisioned RCs.

Operating company personnel can provision this parameter in two ways:

- provision manually through table OFCENG
- autoprovision by setting the ACTIVE field in table OFCAUT to Y

Provisioning rules

For applications other than the WC feature, the recommended value for this parameter is determined by the following calculation:

$$A = ccb \times trc$$

where

A
is the number of RC extension blocks

ccb
is the number of call condense blocks

trc
is the percentage of traffic using routing characteristics

NUM_RC_EXT_BLKS (continued)

Who's calling

To calculate this parameter for the WC feature, first calculate the hundred call seconds (CCS) as follows:

CCS = (A ¥ B ¥ C ¥ D) / 100

where:

- A = number of terminating calls in an hour for the office
- B = percentage of blocked and unavailable calls that terminate in the office
- C = percentage of lines that subscribe to the WC feature
- D = average holding time of the WC and SN connection in seconds

When compared against a standard Erlang B trunk capacity table, the calculated CCS indicates the required increase to NUM_RC_EXT_BLKS.

Example

An office that supports the WC feature determines the following:

- 50,000 calls terminate in the office each hour
- 1% of office calls are blocked or unavailable
- 15% of the lines subscribe to the WC feature
- 25 seconds is the average holding time for the WC and SN connection

This information produces the following results:

CCS = [(50,000 ¥ 0.01 ¥ 0.15 ¥ 25) / 100] = 18.75

According to an Erlang B table, 18.75 CCS represents five additional resources required to establish the SN connections with a 1 % blocking probability. Based on this result, that office must increase the current NUM_RC_EXT_BLKS by five to support the WC feature. A WHC600 log generates for an office that did not provision enough NUM_RC_EXT_BLKS. The WHC600 log indicates the office did not reach the SN.

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

NUM_RC_EXT_BLKS (continued)

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	32766	0

Activation

Increase - immediate

Decrease - cold restart

Dependencies

Not applicable

Consequences

If this parameter is underprovisioned, calls using routing characteristics or called number parameter routing are given treatment.

Verification

To verify that sufficient recording units have been allocated, use CI command OMSHOW EXT ACTIVE 91 and read the following entry:

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
91 NUM_RC_EXT_BLKS
     0
      0             0            0             0
      0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

NUM_RC_EXT_BLKS (end)

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each unit requires 5 words of memory.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

EUR010

Removed provisioning calculation for calls that use called number parameter translations. Such calls now use office parameter NUM_XLAS_EXT_BLKS in table OFCAUT.

CSP11

Autoprovisioning introduced for this office parameter.

EUR008

Provisioning calculation amended for called number parameter routing.

BCS36

AIN impact added.

NUM_SME_CONTROL_BLOCKS

Parameter name

Number of Signaling Management Environment Control Blocks

Functional description

An integrated services digital network (ISDN) switching unit with feature Signaling Management Environment (SME) requires this parameter.

This parameter specifies the maximum number of SME control blocks required for the engineering interval.

The Signaling Management architecture (SMA) agents, whose calls SME supports, use the SME control block.

The system can generate an SME100 log during a restart. The system generates this log if an attempt to allocate the data store required for these control blocks fails.

The system generates an SME102 log under the following conditions:

- The number of control blocks is greater than 0 and less than the value of this parameter before a restart.
- An attempt to allocate the data store for the new and old number of control blocks fails during a restart.

The system generates an SME104 log under the following conditions:

- The number of control blocks is greater than 0 and less than the value of this parameter before a restart.
- An attempt to allocate the data store required for the new value for the number of control blocks fails during a restart.
- An attempt to allocate the data store required for the old value for the number of control blocks succeeds during a restart.

The system generates an SME106 log if an attempt to get a control block that is not used, fails. The SME106 log indicates that the value of this parameter must increase.

The system generates an SME108 log if an attached control block is cleaned up and the control block dumped.

An SME108 log is an error condition that should not occur. Record this LOG and generate a Customer Service Report (CSR).

NUM_SME_CONTROL_BLOCKS (continued)

Rules in provisioning

Offices that have ISDN functional basic rate access (BRA) require SME control blocks. To calculate the number of SME control blocks required, use the following formula:

$$A = b \times c \quad d$$

where

A
is the NUM_SME_CONTROL_BLOCKS to engineer

b
is the number of call processes in the office (value of parameter NUMCALLPROCESSES)

c
is the number of ISDN BRA terminals

d
is the total number of lines in the office

If the NUM_SME_CONTROL_BLOCKS to engineer is greater than 0 but less than 50, set the number of SME control blocks to 50.

Range information

Minimum	Maximum	Default
0	32767 (theoretical) 110 (recommended)	50

Activation

Activation is immediate.

Dependencies

Does not apply

NUM_SME_CONTROL_BLOCKS (end)

Consequences

Overprovisioning of SME control blocks affects the SMA or calls. This action wastes data store.

Underprovisioning of SME control blocks causes failure to some calls that go to the SMA.

Verification

If the system does not generate an SME106 log after the restart, the SME control blocks are allocated correctly.

Memory requirements

Each unit requires 12 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA004

Warm restart requirement was removed in NA004.

BCS36

The corrected formula for the calculation of the number of SME control blocks was corrected in BCS36.

NUM_SME_DATA_BLOCKS

Parameter name

Number of Signaling Management Environment Data Blocks

Functional description

An integrated services digital network (ISDN) switching unit with the Signaling Management Environment (SME) feature requires this parameter. This parameter specifies the maximum number of SME data blocks required for the engineering interval.

The signaling management architecture (SMA) agents use the SME data block with calls that the SME supports.

The system generates an SME101 log during a restart if an attempt to allocate the data store required for these control blocks fails.

The system generates an SME103 log under the following conditions:

- The number of control blocks is greater than 0 and less than the current value of this parameter before a restart.
- The attempt to allocate the data store for the new and old number of control blocks fails during a restart.

The system generates an SME105 log under the following conditions:

- The number of control blocks is greater than 0 and less than the value of this parameter before a restart.
- The attempt to allocate the data store for the new value for the number of control blocks fails during a restart.
- The attempt to allocate the data store for the old value for the number of control blocks succeeds during a restart.

The system generates an SME107 log if an attempt to obtain a control block that is not used fails. This log indicates that the value of this parameter must increase.

The system generates an SME109 log if the user cleans a call with an attached control block and dumps the control block. An SME109 log is an error condition that must not occur. This log must be recorded, and a customer service report (CSR) must be generated.

Rules in provisioning

The following formula determines the number of SME blocks that an office requires:

NUM_SME_DATA_BLOCKS (end)

NUM_SME_DATA_BLOCKS = NUM_SME_CONTROL_BLOCKS X 2

Range information

Minimum	Maximum	Default
0	32767 (theoretical) 220 (recommended)	100

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

If you overprovision the number of SME data blocks, you do not affect the SMA or calls. This action wastes data store.

If you underprovision the number of SME data blocks, some calls that go to the SMA fail.

Verification

If the system does not generate an SME107 log after the restart, the SME data blocks are allocated.

Memory requirements

Each unit requires 36 words of data store.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

NA004

Warm restart requirement was removed in NA004.

NUMBER_OF_CDR_UNITS

Parameter name

Number of Call Detail Recording Units

Functional description

The NUMBER_OF_CDR_UNITS parameter is required by DMS-300 switches. This parameter specifies the number of call detail recording (CDR) entries that can accumulate for calls in progress.

Rules in provisioning

This number must be 10% more than the number of calls that occur at the same time.

Range information

Minimum	Maximum	Default
0	131072	5000

Activation

Increase - immediate

Decrease - cold restart

Dependencies

Does not apply

Consequences

Does not apply

Verification

To verify that enough recording units are allocated, use CI command OMSHOW EXT ACTIVE 30. Read the following entry.

```
    EXTSEIZ       EXTOVFL       EXTHI       EXTSEIZ2
    EXTHI2
30 CDR300_RECORDING_UNIT
    100
       0             0            0             0
       0
```

Any nonzero value in EXTOVFL indicates underprovisioning.

Operational measurements (OMs) EXTHI and EXTHI2 record the maximum number of extension blocks in use at the same time during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Memory requirements

Each recording unit requires 21 words of memory. For example, if this parameter is at the default value, the parameter uses 105 000 words of memory (5000 x 21 words).

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NUMBER_OF_DIGITS_PER_DN

Parameter name

Number of Digits Per Directory Number

Functional description

The NUMBER_OF_DIGITS_PER_DN parameter is required for a local switching unit. The parameter specifies the number of digits the line module collects for a directory number (DN) before the line module reports.

The number of digits dialed for a DN can be less than the value of this parameter. The system routes the calling party to permanent signal/partial dial (PSPD) treatment in the appropriate treatment table.

The number of digits dialed for a DN can be more than the value of this parameter. The system routes the calling party to blank directory number (BLDN) or vacant code (VACT) treatment in the appropriate treatment table.

Rules in provisioning

For all local switching units, specify the number of digits in a local DN. Do not specify the number of digits for switching units in the United Kingdom.

A switching unit in the UK must have this parameter value equal the minimum number of digits for a local DN.

Range information

Minimum	Maximum	Default
5	15	7

Activation

Immediate

Dependencies

Refer to DIGIT_COL_OFFICE_CODE in Table OFCST for additional digit collection data.

Consequences

Does not apply

NUMBER_OF_DIGITS_PER_DN (end)

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA004

The CC restart requirement was removed in NA004.

NA002

The CC restart requirement was added to section “Activation", to comply with PRS BX22652 in NA002.

NUMBER_OF_DITM_EXTENSION_BLOCKS

Parameter name

Number of Data Interface and Topology Mapping (DITM) Extension Blocks

Functional description

This parameter controls the number of DITM extension blocks that are allocated on the switch.

DITM extension blocks are, on average, held the entire call duration when allocated to a call.

Provisioning rules

The value of this parameter is increased when new features are added. If the parameter is active in table OFCAUT, its value is autoprovisioned by the switch.

If the parameter is not autoprovisioned, you calculate the number of allocated DITM extension blocks as a percentage (Y) of the current value of office parameter NCCBS. The value of Y increases for each new feature that uses DITM extension blocks. The number of DITM extension blocks to be allocated on the switch is given by the formula:

Value = (0.Y) x value of NCCBS in table OFCENG

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	65 534	300

NUMBER_OF_DITM_EXTENSION_BLOCKS (continued)

Due to switch limitations, the maximum value for this office parameter is actually 32 000.

Activation

Increase-immediate

Decrease-cold restart

Dependencies

None

Consequences

There are no adverse consequences if this office parameter is overprovisioned.

If this office parameter is underprovisioned, some features and services may not operate as expected.

The ToME602 log is generated when the number of simultaneously active DITM extension blocks nears the number of DITM extension blocks provisioned by this office parameter. The ToME602 log recommends increasing the value of this office parameter to accommodate the load.

Verification

To verify that enough extension blocks are allocated, use CI command OMSHOW EXT ACTIVE 198 and read the following entry:

```
>omshow ext active 198

EXT

CLASS:   ACTIVE
START:1996/11/16 14:30:00 WED; STOP: 1996/11/16 14:53:13 WED;
SLOWSAMPLES:         1 ; FASTSAMPLES:          3 ;
       KEY (EXT_FORMAT_CODE)
       INFO (EXTINFO)
          EXTSEIZ    EXTOVFL      EXTHI   EXTSEIZ2
            EXTHI2
  198 DITM_AGENT_EXT_BLOCKS
                300
                0         0          0          0
                0
```

Any non-zero value in EXTOVFL indicates underprovisioning.

NUMBER_OF_DITM_EXTENSION_BLOCKS (end)

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

See *Operational Measurements Reference Manual* for a description of OM group EXT.

Memory requirements

Units per memory block = 1
Words per memory block = 38
If the parameter value equals 500, words required = (500/1) x 38 = 19 000

Dump and restore rules

The default NUMBER_OF_DITM_EXTENSION_BLOCKS uses the following formula:
number of CCBS x 1.1 = default NUMBER_OF_EXTENSION_BLOCKS

Parameter history

TL012

Autoprovisioning added for this parameter

TL010

Parameter introduced

NUMCALLPROCESSES

Parameter name

Number of Call Processes

Functional description

This parameter specifies the number of call processes (CP) that the switching unit requires.

A CP is a software entity associated with a call when the call requires active processing. The call processing requirement can occur during set up, take down and feature processing. The CP contains the current location in call processing software, and other memory that holds data during a limited time. When a call releases a call process, the system loses this temporary data or stores the data in an extension block.

All call types have the CP released with call condense active. Call types that do not have the CP released with call condense active are:

- Auxiliary Operator Services System (AOSS)
- centralized-automatic message accounting (CAMA)
- Overseas Operator Center (OOC)
- Traffic-Operator Position System (TOPS) positions
- Voice Links

The CPs relate directly to call volumes and holding time of the CP.

Rules in provisioning

The following equation calculates the value of this parameter:

Number of call processes = (a x b x c) + d + 20

where

a
= is the peak calls per second

b
= is (0.1) expected CP waits per call

c
= is (5 s) average wait

NUMCALLPROCESSES (continued)

d
= is 2 × (CAMA + AOSS + TOPS + OOC positions + VL members)

Use the following value for all switching units:

Num = 70 + 2 x (CAMA + TOPS + OOC + AOSS positions, including administration positions + VL members)

For DMS-100G offices that use cross-threaded software and generic services framework (GSF) software, the minimum value is the default value of 70. If calculations for the cross-threaded software indicate that the software requires a value of more than 70, use that value.

Range information

Minimum	Maximum	Default
1	2072	70

Activation

When this parameter increases, the activation is immediate.

When this parameter decreases, the action occurs after a warm restart.

Dependencies

At extension time, the value of this parameter must change if the quantity of the previous type of positions changes.

If the switching unit has the CAMA feature, refer to table CPOS for the number of CAMA positions.

If the switching unit has the TOPS feature, refer to table TOPSPOS for the number of TOPS positions.

If the switching unit has the OOC feature, refer to table TOPSPOS for the number of OOC positions.

If the switching unit has the AOSS feature, refer to table AOSSPOS for the number of AOSS positions.

If the switching unit has the Operator Centralization (OC) feature, refer to table VLMEM for the number of VL members.

Consequences

Does not apply.

Verification

See the following measurements for the operational measurements (OM) that associate with this parameter:

- CPSZ, CPSZ2, ORIGDENY and WAITDENY in OM group CP
- CPHI in OM group CP2

Measurement CPHI records the maximum number of simultaneous call processes during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM groups CP and CP2.

Memory requirements

Each call process requires 130 words of memory plus the value of parameter CPSTACKSIZE in table OFCSTD.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

GL03.0

Rules in provisioning for the DMS-100G switch were added in GL03.0.

NUMCPWAKE

Parameter name

Number of Call Processing Wakeups

Functional description

All switching units require this parameter. The parameter specifies the maximum number of call process wake-ups in the system.

The system uses wake-ups when call processing must wait a specified time for other functions to occur. The process that requests a wake-up defines the wait time and the instructions or message to send with the wake-up.

The system places wake-ups in time queues until the wake-up times out. When the wake-up times out, the system sends a message to the associated call.

The following call types require the wake-up for the maximum number of simultaneous calls:

- Trunk to Tone
- Trunk to Announcement

A switch equipped with lines requires additional wake-ups when a line connects to one of the following call types:

- Alarm Sending and Checking
- Announcements
- Call Waiting Disconnect
- Call Waiting Initialization
- Centralized-Automatic Message Accounting (CAMA) Recall
- Coin Biller for Local Coin Overtime
- Direct Dial Overseas
- Emergency Service Bureau
- Emergency Service Bureau Ringback
- Hotel/Motel Message Register Pulsing
- Local Coin Overtime Charging
- Local Coin Overtime Treatment
- POTS Call Forward Don't Answer (CFDA)
- Silent Switchman
- Test Desk

- Tones (all tones in tables TONES and STN)
- Trunk Recall
- Trunk to CAMA Call

If the switch has the Meridian Digital Centrex (MDC) or the Residential Enhanced Services (RES) feature, each attendant console requires five additional wake-ups.

The following call types also require additional wake-ups:

- Call Back Queuing
- Call Forward Don't Answer
- Call Hold
- Call Park
- Calls Queuing for Attendant Console
- Camp-on
- Camp-on Time out
- Cut-thru Dialing
- Expensive Route Warning Tone
- Off-hook Queuing
- Permanent Hold
- Ring Again
- Transfer Feature
- Three-way Call Public Announcement

If the switch is toll, the following call types require additional wake-ups:

- CAMA Recall
- SuperCAMA (trunk group type SC) and Outgoing to Traffic-Operator Position System (TOPS) or Traffic Service Position System TSPS (trunk group type OP)
- Tandem Direct Dial Overseas

If the switch has the TOPS feature, the following require additional wake-ups:

- Remote-Operator Number Identification (RONI)
- TOPS Administration TTYs
- TOPS Coin Functions

NUMCPWAKE (continued)

- TOPS Position (one for each position)
- TOPS Trunk Check for CAMA Suspension

If call processing wake-ups are not available, the system generates a SWERR message. A warning message states that the allocation of CPWAKES is too low.

Rules in provisioning

Set the value of this parameter to 2000 (minimum) for XA Core offices or 80 for existing SN88K offices unless Nortel can suggest the use of a different value.

The provisioning conditions for the Access to Messaging and FTS applications are as follows:

Access to Messaging

Use the following formula to calculate the number of wake-ups that the Access to Messaging service requires:

$$N = \frac{A \times B \times C \times D \times E \times F}{100}$$

where N is the maximum number of call process wakeups in busy hour traffic for Access to Messaging CCS.

Determine the value of A, where A is the maximum number of calls (BHCA).

Determine the value of B, where B is the proportion of originating calls.

Determine the value of C, where C is the proportion of Access to Messaging invocations on originating calls.

Determine the value of D, where D is the proportion of Access to Messaging calls that pass the screening stage.

Determine the value of E. The E value is the weighted proportion of Access to Messaging calls that are for ringing/no-answer calls.

Determine the value of F, where F is the length of time that each call uses the Access to Messaging timer. This time measurement is in seconds.

Use the Erlang B table to convert the value with a possibility of blockage or delay of 0.01.

FTS

Use the following formula to calculate the number of call process wake-ups that the FTS service requires:

$$N = \frac{A \times B \times C \times D \times E \times F \times G}{100}$$

where N is the maximum number of call process wakeups in busy hour traffic for FTS CCS.

Determine the value of A, where A is the maximum number of calls (BHCA).

Determine the value of B, where B is the proportion of originating calls.

Determine the value of C, where C is the proportion of originating calls that are FAX.

Determine the value of D, where D is the proportion of FTS invocations on FAX calls.

Determine the value of E, where E is the proportion of FTS calls that pass screening.

Determine the value of F, where F is the proportion of FTS calls that are ringing/no-answer calls.

Determine the value of G, where G is the period of time that each call uses the FTS timer. This time measurement is in seconds.

Use the Erlang B table to convert the value with a possibility of blockage or delay of 0.01.

Range information

Minimum	Maximum	Default
0	32767 (reserved) 20000 (programmed)	80 (SN88K offices) 2000 (XA -Core offices)

Activation

Increase - immediate

NUMCPWAKE (continued)

Decrease - cold restart

Dependencies

At extension time the value of this parameter must change if the quantity of an item in the provisioning rules changes.

Consequences

If the values of this and other call processing software parameters are set too low, the following condition occurs. The operational measurement (OM) overflow register WAKEOVFL increases.

A condition can occur where allocation of provisions for this parameter is too low. This condition affects the timing that the system moves a call along in call processing. This timing causes a call to terminate. This effect occurs when call processing parameters are in range. The OM overflow register WAKEOVFL does not increase.

Verification

Refer to measurements WAKESZ and WAKEOVFL in OM Group CP and WAKEHI in OM Group CP2. These measurements indicate the OMs associated with this parameter.

To verify the allocation of enough call processing wake-ups, use the CI command OMSHOW CP ACTIVE. Read the measurement WAKEOVFL in OM group CP.

A value that is not zero in measurement WAKEOVFL indicates that allocation of provisions is too low.

Measurement WAKEHI records the maximum number of call processing wake-ups in use at the same time during the current transfer period. Measurement WAKEHI is in OM group CP2.

In a switching unit with the MDC or RES feature, refer to OM groups CALLFWD, CALLWAIT, and CALLHOLD. These OM groups indicate the OMs associated with this parameter.

Refer to the *Operational Measurements Reference Manual* for a description of OM groups CP and CP2.

Memory requirements

Each NUMCPWAKE block requires 33 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

NA006

Added provisioning rules for FTS service.

NUMECCBS

Parameter name

Number of Extended Call Control Blocks

Functional description

All switching units require this parameter. The parameter specifies the number of extended call control blocks (ECCB) provided.

This parameter is a read-only parameter. You cannot change the value of the parameter. The parameter can indicate the number of ECCBs provided.

The value of other parameters in the switching unit automatically determine the value of NUMECCBS.

Rules in provisioning

There are no rules in provisioning.

Range information

Minimum	Maximum	Default
1	Value of parameter NCCBS in table OFCENG	65

Activation

Does not apply

Dependencies

Does not apply

Consequences

Does not apply

Verification

The following operational measurements are assigned to this parameter:

```
PEG:        CP2_ECCBSZ
USAGE:      CP2_ECCBTRU
OVERFLOW:   CP2_ECCBOVFL
```

When blocks are not available, the system routes lines to Network Blockage Normal Traffic (BNLN) treatment in the treatment tables.

A value that is not zero in CP2_ECCBOVFL indicates that the allocation of provisions is too low.

Memory requirements

Each of the blocks requires 13 words of memory.

Dump and restore rules

The system calculates the value of this parameter automatically. This automatic calculation also applies over performance of dump and restore.

Parameter history

BCS15

This parameter was introduced in BCS15.

NUMIBNCQEXTBLK

Parameter name

Number of Integrated Business Network Console Queuing Extension Blocks

Functional description

This parameter controls the number of calls associated with IBN attendant consoles at any time. These calls can be in a queue, on hold or active. This parameter indicates the number of queuing extension blocks that the switch requires.

Operating company personnel can provision this parameter in two ways:

- manual provision through the OFCENG table
- autoprovision by setting the ACTIVE field in the OFCAUT table to Y

Rules in provisioning

The following equation gives the value of this parameter:

Extension blocks = number of attendant consoles x 15

Autoprovisioning

Operating company personnel can set this parameter for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system automatically adds resources to increase the parameter to a safe level.

To activate autoprovisioning, set the ACTIVE field for the parameter in the OFCAUT table to Y. This action removes the parameter from the OFCENG table, adds it to the OFCAUT table, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in the OFCAUT table to N.

Range information

Minimum	Maximum	Default
0	32767 (reserved) 3825 (programmed)	50

NUMIBNCQEXTBLK (continued)

Activation

When the parameter increases, activation is immediate.

When the parameter decreases, activation occurs after a cold restart.

Dependencies

At extension time, the value of this parameter must increase if the quantity of attendant consoles increases.

Consequences

Does not apply

Verification

To verify the allocation of enough extension blocks, use the CI command OMSHOW EXT ACTIVE 14 and read the following entry:

```
     EXTSEIZ        EXTOVFL      EXTHI      EXTSEIZ2
     EXTHI2
14 IBNCQEXT
     50
       0              0            0             0
       0
```

Any value that is not zero in EXTOVFL indicates that allocation of provisions is too low.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM group EXT.

Read the OFCAUT table or AUTO logs to check allocation for autoprovisioned parameters.

Memory requirements

Each extension block requires 16 words of memory.

NUMIBNCQEXTBLK (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

CSP11

CSP11 introduces autoprovisioning for this office parameter.

NUMLONGBUFFERS

Parameter name

Number of Long Buffers

Functional description

Switching units with the integrated-services digital network user part (ISUP) require this parameter. The parameter specifies the number of long incoming buffers provisioned for ISUP traffic. These buffers for ISUP traffic handle ISUP messages that exceed the 49-byte limit of the standard message.

Rules in provisioning

SuperNode applications no longer have this parameter. The number of long buffers that the switching unit requires is set internally to 2000.

For NT40 switches that do not have ISUP trunks, set the value to 0 (zero).

For NT40 switches that have ISUP trunks and do not have featured calls, the default value is acceptable.

For NT40 switches that have ISUP trunks and featured calls, use the following equation:

$$\text{Number of long buffers} = 300 + (f \times n)$$

where

f
= number of ISUP featured calls / total number of ISUP calls

n
= number of ISUP trunks

The percentage of featured ISUP calls is equal to the number of featured ISUP calls that:

- originate from the switching unit
- terminate on the switching unit
- connect in tandem through the switching unit

A featured ISUP call is an ISUP call that carries feature information. Network name display is an example of feature information.

NUMLONGBUFFERS (continued)

The system must provision this parameter on the switch running ISUP and all other switches that receive a long message.

Range information

Minimum	Maximum	Default
0 (feature deactivated) 300 (values 1 to 299 are invalid)	2 000	356 (NT40 loads from North America with ISUP trunks) 650 (NT40 international loads with ISUP trunks) 0 (NT40 - no ISUP trunks)

Activation

When the parameter increases, activation is immediate.

When the parameter decreases, activation occurs after a cold restart.

Dependencies

Does not apply

Consequences

If the allocation of provisions for this parameter is too high, store waste occurs. The value of this parameter is set too high if a specified OM field is less than this parameter value. The specified OM field is the OM field INLBHI group CP2.

If the allocation of provisions for this parameter is too low, the following results occur. The system loses messages, hangs calls, and degrades. The value of this parameter is too low when the OM field INLBOVFL in group CP contains a large number.

Verification

The sixth information field in the OM group CP indicates the accurate number of long buffers provisioned. Use the CI command OMSHOW CP ACTIVE to view the number of long buffers.

Refer to the following measurements for the OMs associated with the parameter:

- INLBSZ, INLBSZ2 and INLBOVFL in OM group CP
- INLBHI in OM group CP2

Measurement INLBHI records the maximum number of long buffers in simultaneous use during the current transfer period.

Refer to the *Operational Measurements Reference Manual* for a description of OM groups CP and CP2.

Memory requirements

Each unit requires 180 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS27.

NUMOHCBQTRANSBLKS

Parameter name

Number of Off-hook and Call Back Queuing Transaction Blocks

Functional description

This parameter specifies the number of Transaction Blocks that the Off-hook Queuing (OHQ) and Call Back Queuing (CBQ) feature requires.

The value of this parameter must equal the maximum number of calls that OHQ or CBQ can involve.

Rules in provisioning

The switching unit can be a class five with the Meridian Digital Centrex (MDC) feature. In this condition, the maximum number that can be assigned is equal the lowest number of the following two values: 10% of the value of parameter NCCBS or 1169.

The switching unit can be an MDC that stands alone. In this condition, the maximum number that can be assigned is equal to the lowest number of the following two values: 40% of the value of parameter NCCBS or 1169.

Range information

Minimum	Maximum	Default
0	1169	0

Activation

When the parameter increases, activation is immediate.

When the parameter decreases, activation occurs after a cold restart.

Dependencies

Refer to operational measurements groups OHQCBQCG and OHQCBQRT in the *Operational Measurements Reference Manual*. This manual contains the OMs that this parameter can affect when the allocation of provisions for the parameter is too low.

Consequences

Does not apply

NUMOHCBQTRANSBLKS (end)

Verification

Does not apply

Memory requirements

Each transaction block requires 10 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

NUMPERMEXT

Parameter name

Number of Permanent Extension Blocks

Functional description

This parameter is required for all switching units that have one or more of the elements found in the provisioning formula listed below.

Provisioning rules

For all switching units, the recommended number is given by the formula:

```
Value   =   (NO_OF_FTR_CONTROL_BLKS in table OFCENG)
        +   (1.5 X NO_OF_SC_EXT_BLKS in table OFCENG)
        +   (0.2 X NO_OF_DITM_EXTENSION_BLOCKS in table OFCENG)
        +   (NO_LOCAL_COIN_EXT_BLKS in table OFCENG)
        +   (40 X number of Automatic Call Distribution and Uniform
             Call Distribution groups)
```

Autoprovisioning

This parameter can be set for autoprovisioning. With autoprovisioning active, the system continuously monitors each parameter for low resources. On detecting a low resource, the system will automatically add resources to the parameter to increase it to a safe level. To activate autoprovisioning, set the ACTIVE field for the parameter in table OFCAUT to Y. This action removes the parameter from table OFCENG, adds it to table OFCAUT, and activates autoprovisioning for the parameter. To set the parameter back to manual provisioning, set the ACTIVE field for the parameter in table OFCAUT to N.

Range information

Minimum	Maximum	Default
0	32767	1

Activation

Increase - immediate

Decrease - cold restart

Dependencies

At the time of an extension, recalculate the value of this parameter if the value of one or more of the formula elements changes.

Consequences

Not applicable

Verification

To verify that sufficient extension blocks have been allocated, use CI command OMSHOW EXT ACTIVE 3 and read the following entry:

```
      EXTSEIZ  EXTOVFL   EXTHI    EXTSEIZ2
      EXTHI2
 3 PERM
      75
        0        0         0          0
        0
```

Any non-zero value in EXTOVFL indicates underprovisioning.

Measurements EXTHI and EXTHI2 record the maximum number of extension blocks in simultaneous use during the current transfer period.

In an Integrated Business Network (IBN) switching unit, see OM group CALLWAIT for operational measurements (OM) associated with this parameter.

See the *Operational Measurements Reference Manual* for a description of OM group EXT.

Memory requirements

Each permanent extension block requires 32 words of memory.

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

NUMTLBS

Parameter name

Number of Terminal Linkage Blocks

Functional description

This parameter controls the number of terminal linkage blocks used in the input and output systems. This input and output does not relate to call processing.

Note: This parameter is not visible in software loads Base 06 or later.

Rules in provisioning

For all switching units, this parameter value must be equal to 20 plus the number of nodes in the switching unit. This condition does not apply to Bell Canada switching units.

Table NNASST defines the number of nodes. The number of nodes must be equal to the total of the following:

- number of digital carrier modules
- number of digital trunk controllers
- number of input output controllers
- number of line concentrating modules
- number of line group controllers
- number of line trunk controllers
- number of maintenance trunk modules
- number of message switch and buffers
- number of network modules
- number of outside plant modules
- number of remote line concentrating modules
- number of remote line modules
- number of subscriber carrier modules
- number of trunk modules

Set the value of this parameter to 512 for Bell Canada switching units.

Range information

Minimum	Maximum	Default
20	4096	20

If the value entry is greater than 4096, the system uses the default value of 20.

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Each block requires five words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

Base 06

This parameter is hard coded to value 4096 and is not visible.

CSP03

Changed activation to immediate. The restart requirement was removed in CSP03.

CSP02

Note added that states the results of entering a value that is greater than the allowed maximum.

NUMTLBS (end)

BCS36

Maximum value corrected.

NWMTGBLU

Parameter name

Network Management Busy Lamp Update Time

Functional description

A switch with software package NTX060AB (Network Management) requires this parameter. This parameter indicates the network management trunk group busy lamp update time.

A busy trunk group does not have any idle trunks.

Rules in provisioning

Specify the network management trunk group busy lamp update time. This time is the frequency at which the system updates lamps in 10 s increments.

Range information

Minimum	Maximum	Default
0	32767	12

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

NX25_RR_EACH

Parameter name

NX25 Receive Ready for Each

Functional description

A switch with NX25 software requires this parameter.

Provisioning rules

If the value of this parameter is set to Y, the system sends a receive ready message. The system sends this message for each data packet the system receives.

If the value of this parameter is set to N (No), the system sends receive ready messages. The system sends this message for each data packet the system receives. Data frames are not ready to transmit for this condition to occur. Packets are not available or the transmit window is full.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS23

This parameter was introduced in BCS23.

OAM_HW_PRESENT

Parameter name

Operation Administration and Maintenance Hardware Present

Functional description

Software Packages NTXF93AA (ISDN Provisioning) and NTXF92AA (ISDN [OAM] Base) enable the DMS to perform integrated service provisioning. These packages require the entries of packet handler (PH) parameters on the DMS and hardware to process and provision the PH.

This parameter allows DMS software to detect this hardware. This feature changes the package restrictions. This action allows enhanced SERVORD functionalities like automatic DS1 channel selection and SPECCONN table entries to function without OAM hardware.

This parameter affects the Data Packet Network (DPN) packet handler provisioning. This parameter does not provide any function for the DMS packet handler.

Rules in provisioning

If you install package NTXF93AA, set this parameter to N when the OAM processor hardware is not installed and in service,.

When you install the hardware and the hardware is in service, set the parameter to Y.

Range information

Minimum	Maximum	Default
		N

The default value of N (no OAM hardware present) is chosen. A customer normally receives a software load before installation and activation of associated OAM hardware.

Activation

Activation is immediate.

Dependencies

Does not apply

OAM_HW_PRESENT (end)

Consequences

Does not apply

Verification

To verify that this parameter is operating, set the parameter to Y. Try to attach a LAPB or LAPD Logical Terminal Identifier (LTID) to an Integrated Services Digital Network (ISDN) line. For the LTID for this test, there must not be any tuples in table PHINFO. The SLT ATT command fails and warns you to add a data network address (DNA) to the LTID in table PHINFO. Attach the LTID with the OAM_HW_PRESENT parameter set to N. If the command does not fail as described with the parameter set to Y, the parameter is not functioning. The parameter is not functioning if you can attach the LTID with the OAM_HW_PRESENT parameter set to N, and the command does not fail.

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OCCTS_ENHANCED_FEATURE

Parameter name

OCCTS Enhanced Feature

Functional description

A switch with the Equal Access End Office feature requires this parameter. This parameter specifies if the operating company requires more registers, source, and destination numbers for the Equal Access Traffic Measurement Separation System.

Rules in provisioning

Do not change the value of this parameter to Y unless the switch has software package NTX085AA.

For a switch without software package NTX085AA, leave the value of this parameter at the default of N.

If this parameter is set to Y the following conditions occur:

- The number of OCCTS OM registers increases from 256 to 2048.
- If more than 256 registers are necessary, enter parameter NO_OCCTS_OM_REGISTERS in table OFCENG to specify the quantity.
- The number of source and destination numbers increase from 15 to 127.
- If more than 15 source numbers are necessary, enter field IN_MAX in table OCCTSINT to specify the quantity.
- If more than 15 destination numbers are required, enter field OUT_MAX in table OCCTSINT to specify the quantity.

If this parameter is set to N, the number of OCCTS OM registers is 256. The number of source and destination numbers are 15.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate.

OCCTS_ENHANCED_FEATURE (end)

Dependencies

The OCCTS OM register numbers and OCCTS source and destination numbers are assigned in tables OCCTSINT and OCCINFO.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

CSP03

Reference to parameters OCCTS_IN_MAX_NUMBERS and OCCTS_OUT_MAX_NUMBERS is removed because the ranges to fields IN_MAX and OUT_MAX increase to 127 in CSP03.

OCCTS_IN_MAX_NUMBER

Parameter name

Other Common Carrier Traffic Separation Incoming Maximum Number

Functional description

This parameter is required for switches with the Equal Access Traffic Separation Measurement System, Other Common Carrier Traffic Separation (OCCTS) feature.

This parameter specifies the maximum number of source traffic separation numbers (NSTS) that can be assigned to other common carriers in table OCCINFO to separate equal access traffic.

Provisioning rules

The following values can be assigned to this parameter:

- SIZE_15
- SIZE_31
- SIZE_63
- SIZE_127

These values provide a quantity of NSTSs as outlined in the following table:

Quantity of NSTS

Value	Number of DTSNs	NSTS numberin g
SIZE_15	16	0 to 15
SIZE_31	32	0 to 31
SIZE_63	64	0 to 63
SIZE_127	127	0 to 127

Changing the value of this parameter is not allowed unless package NTX085AA is present and parameter OCCTS_ENHANCED_FEATURE in table OFCENG is set to Y (yes).

For switches without software package NTX085AA and the value of parameter OCCTS_ENHANCED_FEATURE in table OFCENG set to N (no), leave the value of this parameter at the default of SIZE_15.

OCCTS_IN_MAX_NUMBER (continued)

If the switch has software package NTX085AA and the value of parameter OCCTS_ENHANCED_FEATURE in table OFCENG is set to Y, the recommended value is SIZE_127.

Range information

Minimum	Maximum	Default
		SIZE 15

Activation

Cold restart

Once this parameter is set and a cold restart is performed, its value can not be decreased. This avoids traps that may occur in table control and call processing if OCCTS registers that were deallocated are used.

Dependencies

See parameter OCCTS_ENHANCED_FEATURE in table OFCENG for other parameters and tables that are associated with the OCCTS feature.

Consequences

Not applicable

Verification

Not applicable

Memory requirements

The amount of memory used by this parameter is calculated with the following equation:

$$mem = 3 \times nsts \times ndts + 2 \times u \times nstr + 6 \times nac \times nstr$$

where

mem
is the amount of memory in words

OCCTS_IN_MAX_NUMBER (end)

nsts
is the number of source TS numbers

ndts
is the number of destination TS numbers

u
is 2 with usage only, 6 with pegs and usage

nstr
is the number of assignable OM registers

nac
is the number of operational measurement accumulating classes defined

For example, a switch has chosen to allocate 64 source TS numbers, 128 destination TS numbers and 256 assignable OM registers. The usage option is equipped. Data is to be accumulated for hourly and daily intervals (2 accumulation classes).

mem = 3 x 64 x 128 + 2 x 2 x 256 + 6 x 2 x 256 = 28672 words

Dump and restore rules

Copy the existing value of this parameter when doing a dump and restore.

Parameter history

CSP03

Office parameter OCCTS_IN_MAX_NUMBER becomes obsolete for CSP03 software because the range of field CARRIN in table OCCTSINT is increased to 127.

OCCTS_OUT_MAX_NUMBER

Parameter name

Other Common Carrier Traffic Separation Outgoing Maximum Number

Functional description

Switches with the Equal Access Traffic Separation Measurement System, Other Common Carrier Traffic Separation (OCCTS) require this parameter. This parameter specifies the maximum number of destination traffic separation numbers (NDTS) that can be assigned to the following:

- outgoing and two-way trunk groups in table TRKGRP
- announcements in table ANNS
- tones in table TONES
- special tones in table STN

The NDTS are assigned to these trunk groups, announcements, and tones to separate equal access traffic.

Rules in provisioning

The user can assign the following values to this parameter:

- SIZE_15
- SIZE_31
- SIZE_63
- SIZE_127

These values provide a quantity of NSTSs, as the following table outlines:

Quantity of NSTS

Value	Number of DTSNs	NSTS numberin g
SIZE_15	1 6	0 to 15
SIZE_31	3 2	0 to 31
SIZE_63	6 4	0 to 63
SIZE_127	1 27	0 to 127

OCCTS_OUT_MAX_NUMBER (continued)

The user cannot change the value of this parameter without package NTX085AA. The value of parameter OCCTS_ENHANCED_FEATURE in table OFCENG must be Y.

The value of this parameter must remain at the default of SIZE_15 for switches without software package NTX085AA. The value of this parameter must remain at the default of SIZE_15 if the value of parameter OCCTS_ENHANCED_FEATURE in table OFCENG is N.

If the switch has software package NTX085AA and parameter OCCTS_ENHANCED_FEATURE in table OFCENG is set to Y, the recommended value is SIZE_127.

Range information

Minimum	Maximum	Default
		SIZE_15

Activation

Activation is immediate.

Dependencies

See parameter OCCTS_ENHANCED_FEATURE in table OFCENG for other parameters and tables that associate with the OCCTS feature.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Refer to parameter OCCTS_IN_MAX_NUMBER in table OFCENG for memory requirements.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OCCTS_OUT_MAX_NUMBER (end)

Parameter history

CSP03

Office parameter OCCTS_OUT_MAX_NUMBER becomes obsolete for CSP03 software because the range of field TRNKOUT in table OCCTSINT increases to 127 in CSP03.

OFFICE_CLLI_NAME

Parameter name

Office Common Language Location Identifier Name

Functional description

Switching units with common channel interoffice switching requires this parameter. This parameter specifies the switching unit common language location identifier (CLLI) code.

The system requires the code when test translations occur on a trunk and the system receives the circuit identification name of the test. An automatic or manual comparison check can verify that the test passed.

The user must enter this parameter in all switching units. The Technical Assistance Service (TAS) for listing of the TAS non-res tape requires this entry.

Rules in provisioning

Specify the switching unit CLLI code.

Range information

Minimum	Maximum	Default
		$ (a null vector)

Activation

Activation is immediate.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact on memory.

OFFICE_CLLI_NAME (end)

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OFFICE_DS_FUNCTION_NUMBER

Parameter name

Office Direct Signaling Function Number

Functional description

Switching units with the common channel interoffice signaling (CCIS) direct signaling capability require this parameter. The CCIS direct signaling capability is software package NTX197AA.

The CCIS network administration center (CNAC) assigns a function number to every node or separate identifiable function in a node in the network.

This parameter specifies the function number that identifies the destination of direct signaling messages. These messages go to the node.

Rules in provisioning

Specify the function number that identifies the destination of direct signaling messages. These messages go to the node.

Range information

Minimum	Maximum	Default
0	3 2767	0

Activation

Activation occurs after a cold restart

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

OFFICE_DS_FUNCTION_NUMBER (end)

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OFFICE_DS_SQD_SAMPLING_RATE

Parameter name

Office Direct Signaling Supplementary Query Data Sampling Rate

Functional description

Switching units with the CCIS direct signaling capability (software package NTX197AA) require this parameter. This parameter specifies the office direct signaling supplementary query data (SQD) sampling rate. The rate uses the mechanized calling card signaling (MCCS) direct signaling application.

Rules in provisioning

Specify the office direct signaling SQD sampling rate used with the MCCS direct signaling application.

The switching unit selects every nth query (where n is the value of this parameter). The switching unit transmits an additional message. This message contains information to perform the division of revenue studies for MCCS.

Range information

Minimum	Maximum	Default
0	127	0

Activation

Activation occurs after a cold restart

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

OFFICE_DS_SQD_SAMPLING_RATE (end)

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OFFICE_ID_ON_AMA_TAPE

Parameter name

Office Identification on Automatic Message Accounting Tape

Functional description

This parameter specifies the office identifier that must be recorded in the Automatic Message Accounting (AMA) Service Observing tape header record.

The operating company defines this parameter.

Rules in provisioning

Specify the office identifier that must be recorded in the AMA Service Observing tape header record.

Range information

Minimum	Maximum	Default
		000000

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OFFICE_ID_ON_CDR_TAPE

Parameter name

Office Identifier On Call Detail Recording Tape

Functional description

A DMS-300 switch requires this parameter. This parameter specifies the office identification code on each Call Detail Recording (CDR) block header. The user can store the CDR on tape or disk.

Rules in provisioning

Leave this parameter at the default value unless Northern Telecom instructs you to change the parameter value.

Range information

Minimum	Maximum	Default
		DS1MTL

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OFFICE_LANGUAGE

Parameter name

Office Language

Functional description

A switching unit with the following features requires this parameter:

- Call Forwarding Remote Access (CFRA)
- Automatic Recall (AR)
- Automatic Callback (ACB)
- Calling Number Delivery (CND)

This parameter controls the language in which subscribers receive announcements for the above features.

This parameter consists of the following two fields:

- PRIMARY
- SECONDARY

The value of these fields can be one of the following:

- LANG1 (language 1)
- LANG2 (language 2)
- BILING (bilingual)
- NIL (no language)

The value of the PRIMARY field cannot be NIL.

The values of these fields indicate the language in which subscribers receive announcements for the above features.

The system provides most announcements in the language that the PRIMARY field specifies. Subscribers with the SL line option receive announcements in the language the SECONDARY field specifies.

Rules in provisioning

The following recommended values are for unilingual areas:

- PRIMARY: LANG1
- SECONDARY: NIL

OFFICE_LANGUAGE (continued)

The following recommended values are for bilingual areas:

- PRIMARY: LANG1
- SECONDARY: LANG2

The following configurations are also possible:

- The primary language can be set to BILING with the secondary language set to LANG1 or LANG2.
- The primary language can be set to LANG1 or LANG2 with the secondary language set to BILING.

Range information

Minimum	Maximum	Default
		LANG1 LANG2

Activation

Activation is immediate

Dependencies

Table DRMUSERS determines the language, English or French, associated with LANG1 or LANG2.

Consequences

Does not apply

Verification

Place a call that causes an announcement. If the user does not have the SL line option, the system presents the announcement in the language the PRIMARY field specifies.

If the user has the SL line option, the system presents the announcement in the language the SECONDARY field specifies.

Memory requirements

This parameter does not impact memory.

OFFICE_LANGUAGE (end)

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OMPRTFORMAT

Parameter name

Operational Measurement Print Format

Functional description

This parameter defines the number of registers that can have the register contents printed on one line of output. The operational measurement printer prints the register contents on one line of output.

The contents of one register occupies the space of 11 characters.

Rules in provisioning

Specify the number of registers that can have the register contents printed on one line of output. The operational measurement printer prints the register contents on one line of output.

Range information

Minimum	Maximum	Default
1	10	6

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OMTAPESUPPRESSION

Parameter name

Operational Measurement Tape Suppression

Functional description

This parameter can allow the system to suppress zero data from the operational measurement tape.

Rules in provisioning

If the value is Y, the system does not transfer to tape the members of D records that are not equipped.

If the value is N, the system transfers to tape the members of D records that are not equipped.

Range information

Minimum	Maximum	Default
		N

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OMTELCOLABEL

Parameter name

Operational Measurement Operating Company Label

Functional description

This parameter specifies the label for operational measurement (OM) tapes. The operating company defines this label.

Rules in provisioning

Specify the OM tape label.

Range information

Minimum	Maximum	Default
		$ (a nil vector)

Activation

The parameter value takes effect when the operating company personnel mount the next OM tape.

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OMXFR

Parameter name

Operational Measurement Transfer

Functional description

This parameter specifies the time interval in which the system copies the active operational measurement (OM) registers to the holding registers.

Rules in provisioning

This parameter can have a value of 15 min (X15), or 30 min (X30).

This value is often 30 min, but the operating company can change this value to 15 min.

A switching unit can have the engineering administration data acquisition system (EADAS) and option EADAS_SHORT_XFER_ALLOWED in Table OFCOPT set to N (no). If the switch has EADAS and the option is N, this parameter must have the value of X30.

A switching unit can have the engineering administration data acquisition system (EADAS) and option EADAS_SHORT_XFER_ALLOWED in Table OFCOPT set to Y (yes). If the switch has EADAS and the option is Y, this parameter can have the value of X15 or X30.

If office parameter OMHISTORYON is Y, this parameter is disabled in Table OFCENG. The OM transfer period is 5 min in length.

Range information

Minimum	Maximum	Default
		X30

Activation

Activation occurs after a cold restart.

Dependencies

Does not apply

OMXFR (end)

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

ORIGS_TO_BLEED

Parameter name

Originations to Bleed

Functional description

An access tandem (AT) switching unit requires this parameter. This parameter controls the amount of origination bleeding that occurs during batching.

Activation of this parameter does not have a good effect on call processing when occupancy is low in AT switching units. When this parameter is activated, the parameter is set to a nonzero value. The results of this parameter appear above 50 percent call processing (CP) occupancy.

Bleeding improves performance in an AT switching unit that is batching. Performance improves in select switching units. If a switching unit is not batching, bleeding can have a negative effect on system performance.

The batching syndrome can appear in an AT environment. When a high number of ORIGDENYs appear, a switching unit receives this syndrome. This event occurs even if the switching unit is not at capacity. The ORIGDENYs indicate that many origination delays occur before the service begins. The loss of origination message appears.

The batching syndrome occurs because of the following reasons:

- the small number of call types
- not enough variety is available on the timing of the calls (for example, all trunks with the same signaling format - MF wink)
- the above priority scheme

The calls tend to synchronize in batches of progress and origination work.

Origination bleeding allows some amount of origination work into the system during the long periods of progress work. The value of this parameter specifies the amount the origination work varies.

With bleeding, batching is present to a certain extent. Batching is present in all switches. At high load, the number of ORIGDENYs almost disappears and the number of INEFDENYs reduces. Capacity savings occur at this time.

ORIGS_TO_BLEED (continued)

Rules in provisioning

Set the parameter to one of the following values to start the origination bleeding feature. The value of this parameter has the following approximate results:

Value	Function
1	Bleed 10% of offered originations at capacity
2	Bleed 20% of offered originations at capacity
3	Bleed 30% of offered originations at capacity

This parameter must remain at the default of 0 to stop the origination bleeding feature.

The following message appears if an attempt is made to change this parameter from a value that is not zero to 3:

```
VALUE MUST BE IN (0 - 3) RANGE
```

Range information

Minimum	Maximum	Default
0	3 (programmed) 32767 (reserved)	0

Activation

Immediate

The following warning appears each time the user changes this parameter value:

```
** WARNING **  -  DO NOT CHANGE THIS PARAMETER TO A NON ZERO
VALUE. THIS PARAMETER SHOULD ONLY BE CHANGED IN ACCESS TANDEM
OFFICES. CHANGES TO THIS OFFICE PARAMETER ARE PERFORMANCE
AFFECTING AND MAY DEGRADE OFFICE CAPACITY.
```

Dependencies

Does not apply

ORIGS_TO_BLEED (end)

Consequences

Do not change this parameter to a value that is not zerooutside the access tandem environment. If activated, this office parameter affects all call processing and can affect performance.

If this parameter is not started right, or a switching unit is not batching, and capacity was not reached, the parameter can reach the following results:

- extreme progress queue delays. The higher this parameter is set, the longer the progress delays are in a switching unit that is not batching.
- large numbers of CPLOOVFLs
- a reduction in calls for each hour at capacity.

Verification

Refer to OM GROUP CP to define INEFDENY and ORIGDENY.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

ORIGTHRES

Parameter name

Origination Threshold

Functional description

All switching units require this parameter. This parameter specifies the number of CPLETTERS reserved for system progress messages during high load. During this interval, the system buffers origination work that waits in the CPLETTERS. To protect calls in progress, origination threshold (ORIGTHRES) limits the number of originations that wait.

Software calculates this parameter. Do not reset this parameter. The available number of CP letters determines if this parameter thresholds call originations. When the switch takes a long time to recover under severe degradation, the TAS feature can turn off call processing originations.

Do not change this parameter except in the above condition. The system automatically updates this parameter if software parameter NUMCPLETTERS changes and a cold restart occurs.

Rules in provisioning

For a World Switch the value is 500. This value represents the value of software parameter NUMCPLETTERS minus 1500. The value of the parameter is 500 with the fixed value of 2000 for software parameter NUMCPLETTERS.

For an NT-40 switching unit the value is 1744. This value represents the value of software parameter NUMCPLETTERS minus 256. For an NT-40 switching unit with the fixed value of 2000 for software parameter NUMCPLETTERS, the value of the parameter is 1744.

For a SuperNode switching unit, the value is 1550. This value represents the value of software parameter NUMCPLETTERS minus 450. For a SuperNode switching unit with the fixed value of 2000 for software parameter NUMCPLETTERS, the value of the parameter is 1550.

ORIGTHRES (continued)

Range information

Minimum	Maximum	Default
0	500 (World switch) 1744 (NT-40) 1550 (SuperNode)	1550

Note: For offices with functionality group NTX470AA International common basic, the value of this parameter is set to 1000. For DMS-100G switches, use the default value of 1550.

Activation

If software parameter NUMCPLETTERS is changed and a cold restart occurs, this parameter activates.

Dependencies

Does not apply

Consequences

Does not apply

Verification

The following operational measurements (OMs) track this threshold value:

- OM group CP
- Fields CPLOSZ, CPLOVLF, and CPLLOW

A value that is not zero in CPLOVFL indicates a lack of CPLETTERS or a severe overload condition. Values that are not zero in the ORIGDENY OM can check the overload condition.

Refer to the *Operational Measurements Reference Manual* for a description of OM group CM.

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Software calculates the value of this parameter. Do not reset this parameter.

Parameter history

GLO3.0

Range information for the DMS-100G switch was added.

OS_CALLS_WAITING_Q_SIZE

Parameter name

Operator Services Calls Waiting Queue Size

Functional description

This parameter specifies the maximum number of queued calls allowed at one time in the operator services automatic call deflection (ACD) system.

Rules in provisioning

Set this parameter equal to the maximum number of queued calls allowed at one time in the operator services ACD system.

Range information

Minimum	Maximum	Default
0	32767	0

Activation

Activation occurs after a cold restart.

Dependencies

Does not apply

Consequences

Not enough queued calls causes overflows in the queues during peak times. Too many queued calls wastes data store.

Verification

Does not apply

Memory requirements

Each unit requires one word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OS_CT_SEARCH_DEPTH

Parameter name

Operator Services Controlled Traffic Search Depth

Functional description

This parameter specifies the number of positions that search for an operator in the controlled traffic position queue. This operator must handle the incoming call under the operator services Automatic Call Distribution (ACD) system.

Rules in provisioning

Set the parameter to the number of positions that search for an operator in the controlled traffic position queue. This operator must handle the incoming call under the operator services ACD system. This parameter is based on the number of operators available for this function.

Range information

Minimum	Maximum	Default
0	10	0

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OS_CT_SEARCH_DEPTH (end)

Parameter history

BCS31

This parameter was introduced.

OS_NUM_CALL_QUEUES

Parameter name

Operator Services Number of Call Queues

Functional description

This parameter specifies the number of call queues available in the operator services Automatic Call Distribution (ACD) system. The system can queue calls on these call queues.

Rules in provisioning

Set this parameter equal to the number of call queues available for calls to be queue on in the operator services ACD system.

Range information

Minimum	Maximum	Default
0	64	0

Activation

Activation occurs after a cold restart

Dependencies

Does not apply

Consequences

A parameter value that is too low causes queues to become too general. A parameter value that is too high can increase the time taken for a call to find the correct queue. The specialties of separate operators are not used.

Verification

Does not apply

Memory requirements

Each unit requires three words of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OS_NUM_CALL_QUEUES (end)

Parameter history

BCS31

This parameter was introduced in BCS31.

OS_NUM_POSITIONS

Parameter name

Operator Systems Number of Positions

Functional description

This parameter specifies the maximum number of positions in the office for operator services Automatic Call Distribution (ACD) that are simultaneously active.

Rules in provisioning

Set this parameter equal to the maximum number of operator services ACD positions in the office that can be simultaneously active.

Range information

Minimum	Maximum	Default
0	1024	0

Activation

Cold restart

Dependencies

Does not apply

Consequences

If a parameter value is too low, the queue system cannot handle all of the current positions. If a parameter value is too high, the queue system results in an increase in real-time use.

Verification

Does not apply

Memory requirements

Each unit requires 7 words of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

OS_NUM_POSITIONS (end)

Parameter history

BCS31

This parameter was introduced.

PASSWORD_LIFETIME

Parameter name

Password Lifetime

Functional description

This parameter determines the duration, in days, that a user can use a password.

Rules in provisioning

The duration is from the date of the last password change for the user identification that corresponds.

If this feature is not required, set the parameter to the maximum value 32767 days.

Range information

Minimum	Maximum	Default
1	32767	30

Activation

Immediate

A change of this parameter value does not allow the use of expired passwords.

Dependencies

This parameter appears if ENHANCED_PASSWORD_CONTROL in Table OFCOPT is Y.

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

PASSWORD_LIFETIME (end)

Dump and restore rules

Copy the current value of the parameter, unless the parameter is an extension and the operating company requests a change.

PATCH_BUNDLE

Parameter name

Patch Bundle

Functional description

This parameter enables or disables patch bundle hiding. Before the system implements this parameter, all patches in the patch package appear in the PATCHER INFORM list. The PATCH_BUNDLE parameter allows the system to hide all patches inside the package except the last patch. All patches remain on the switch and are applied.

Some previous software release documentation list this parameter as SHOW_BUNDLE_GUTS.

Rules in provisioning

The PATCH_BUNDLE parameter has the following two settings:

- SHOW
- HIDE

Set the value of this parameter to HIDE to allow patch bundle hiding. Set the value of this parameter to SHOW to leave all patches in the package visible.

Range information

Minimum	Maximum	Default
		SHOW. Most operating companies do not bundle patches. The patches are not changed, even when this parameter is set to HIDE.

Activation

Activation is immediate

Dependencies

Does not apply

PATCH_BUNDLE (end)

Consequences

Does not apply

Verification

Does not apply

Memory requirements

Each unit requires one word of memory.

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS32

This parameter was introduced in BCS32 in BCS31.

PHINFO_AUDIT_TIME

Parameter name

Packet Service Data Audit Time

Functional description

This parameter applies to Integrated Services Digital Network (ISDN) switching units. This parameter specifies the start time of the packet service data audit that runs every 24 h. The audit checks for data that does not match between the DMS switch and the packet handler.

This parameter affects the Data Packet Network (DPN) packet handler only. This parameter does not affect the function of the DMS packet handler.

Rules in provisioning

The parameter input has an hour field and a minute field. Set the hour field at a value within the range of 0 to 23. Set the minute field at a value within the range of 0 to 59. Specify the audit start time as 24 h.

Range information

Minimum	Maximum	Default
00 00	2359	2 0 (2:00 a.m.)

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

This parameter does not impact memory.

Memory requirements

Does not apply

PHINFO_AUDIT_TIME (end)

Dump and restore rules

This parameter was introduced in BCS29.

Copy the current value of this parameter when you perform a dump and restore.

PLUS48V_OVERTIME_COIN_TEST

Parameter name

Plus 48 Volts Overtime Coin Test

Functional description

This parameter appears only in switching units with the Local Coin Overtime Charging feature in feature package NTX090AA. This parameter specifies the voltage for the overtime coin present test.

Rules in provisioning

To perform overtime coin present tests, apply -48V or +48V to the tip side.

If this parameter is set to a value of Y, the system uses +48V to perform the overtime coin present test.

When the value of this parameter is set to N, the system uses -48V to perform the overtime coin present test.

Range information

Minimum	Maximum	Default
		N

Activation

Activation is immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

Does not apply

Memory requirements

This parameter does not impact memory.

PLUS48V_OVERTIME_COIN_TEST (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

PM_PCM_PROTOCOL_SELECTION

Parameter name

Peripheral Module Pulse Code Modulation Protocol Selection

Functional description

A digital trunk module (DTM), for enhanced digital recorded announcement machine (DRAM), and a conference trunk module (CTM) require this parameter. The DTM and CTM require this parameter to specify the pulse code modulation (PCM) protocol.

Field TONESET is added to this parameter in BCS35. Field TONESET derives a second global data byte to be sent to a CTM when the user loads the CTM again. Fields LAW, INVERSION, CEP, and RANGE derive the first global data byte that is sent to the CTM or DTM. This event occurs when the user loads the CTM or DTM again.

Field TONESET is used only for the CTM.

Rules in provisioning

This parameter consists of the following five fields as outlined in the following table.

Provisioning parameter PM_PCM _PROTOCOL_SELECTION (Sheet 1 of 2)

Field name	Range of values	Description	Default value
LAW	MU or A	PCM laws	MU
INVERSION	NONE, EVEN, ODD, or BOTH	bit inversion schema	NONE
CEP	Y or N	with or without CEP (tone mode selector)	N
RANGE	K 48 or K32	PM SRAM ranges	K 48

PM_PCM_PROTOCOL_SELECTION (continued)

Provisioning parameter PM_PCM _PROTOCOL_SELECTION (Sheet 2 of 2)

Field name	Range of values	Description	Default value
TONESET	NT2X59AA, NT2X59AB, NT2X59AC, NT2X59BA, NT2X59CA, NT2X59CB, NT2X59DA, or NT2X59EA, or	tone set selected by corresponding Group Code PEC	NT2X59AA
	JPNTONES	tone set for Japanese market	

In the preceding table, the term SRAM refers to Static Random Access Memory.

The following table illustrates some market-specific combinations for the values of fields LAW, CEP, and TONESET.

Market-specific combinations

Application	Law (1st field)	CEP(3rd field)	TONESET(5th field)
Domestic (North America)	Mu	N	NT2X59AA
Teleglobe	Mu	N	NT2X59AB
CTS-MTM	Mu	N	NT2X59AC
Japan	Mu	N	JPNTONES
Turkey	A	Y	NT2X59BA
A-Law with CEP tones	A	Y	NT2X59DA

PM_PCM_PROTOCOL_SELECTION (end)

Range information

Minimum	Maximum	Default
		MU NONE N K48 NT2X59AA

Activation

The user must reload all CTMs and DTMs in the switch.

Dependencies

Does not apply

Consequences

If the user does not enter this parameter correctly, CTM operations fail.

Verification

Change the values of this parameter and load the CTM. Test the CTM at both the peripheral module (PM) and trunk test position (TTP) levels of the MAP terminal. Set up a conference call and obtain a confirmation for each conference member that you add.

Memory requirements

This parameter requires 10 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

TL06

Information associated with the introduction of the NT1X81BA card was added in TL06.

BCS36

A table of correct LAW, CEP, and TONESET fields was added in BCS36.

BCS34

This parameter was introduced in BCS34.

POLL_SCHEDULER

Parameter name

POLL_SCHEDULER

Functional description

The POLL_SCHEDULER parameter is used to preserve the user defined scheduler settings. The settings determine when to run the automatic pollings.

Office parameter POLL_SCHEDULER consists of six fields:

- Field HOUR is the hour to run the weekly poll. The range of values is 0 to 23.
- Field MINUTE is the minute to run the weekly poll. The range of values is 0 to 59.
- Field SCHEDULE DAY is the day to run the weekly poll. The range of values is MON, TUE, WED, THU, FRI, SAT and SUN.
- Field TYPE is the type of poll to run. The range of values is LONG, SHORT, USAGE, AND MEMCALC.
- Field COMPRESSION OPTION is the compression option. The range of values is Y or N. If the value is set to Y, the poll file will be compressed. If the value is set to N, the poll file will not be compressed.
- Field DEVICE NAME is the device on which to create the poll file. The range of values includes all the valid DMS file storage devices.

Provisioning rules

None

Range information

Minimum	Maximum	Default
N/A	N/A	N/A

Activation

Immediate

Requirements

None

POLL_SCHEDULER (end)

Results

An example of table OFCENG is as follows:

```
KEY                                                    DATA

-------------------------------------------------------------

POLL_SCHEDULER          12   1    WED  MEMCALC  N NTDEV
```

Testing

Verify the value of office parameter POLL_SCHEDULER by checking the value in office parameter table OFCENG.

Memory requirements

None

Dump and restore rules

Addition of the POLL_SCHEDULER office parameter does not require reformats.

Parameter history

CSP12

Feature 59007577 introduced office parameter POLL_SCHEDULER.

PPMBUFFS

Parameter name

Peripheral Processor Message Buffers

Functional description

All switching units require this parameter. This parameter specifies the number of peripheral processor (PP) message buffers the system requires for sending messages to peripheral modules (PM).

If 90% of the PP message buffers are used, the system generates a PM139 log. An audit process invokes the log. The audit audit process runs every 3 min.

Note: This parameter is not visible in software loads Base 06 or later.

Rules in provisioning

The recommended value is the result of the following formula or 244, whichever is less.

$$A = 24 + [(0.3 \times b) + c + (d \quad 10) + (e \quad 20) + (f \quad 2000) + g]$$

where

A
is the number of PP message buffers required

b
is the number of CPOS

c
is the number of devices

d
is the number of DGT and MF receivers

e
is the size of the largest trunk group

f
is the total number of lines

g
is the total number of peripheral modules

For a SuperNode office, the recommended value is 244.

In the provisioning formula for NT40, devices are any input/output (I/O) device where a line test position (LTP) or trunk test position (TTP) can be run.

PPMBUFFS (continued)

PMs include all peripherals (hosts, tributaries, and remotes) like:

- LGCs
- LTCs
- DTCs
- DCMs
- LCMs
- OPMs
- SCMs
- RSCs
- RMMs
- RSMs
- DRCCs
- SMU-RCUs
- SMR-RCTs
- SMS-RCSs
- TMs
- MTMs
- LMs
- other than listed here

Universal tone receiver (UTR) requirements are included under total number of PMs.

Range information

Minimum	Maximum	Default
40	244	80

Activation

Immediate.

PPMBUFFS (end)

Dependencies

Use the above formula to re-engineer the value of this parameter.

Consequences

If the user sets the value of this parameter too low, the low value can cause switch degradations. The use of PPMBUFFS is dynamic. The system requires more PPMBUFFS than normal during high traffic conditions or high maintenance conditions. Severe facility failures, like subscriber cable cuts, that are not planned, can cause a high maintenance condition. The given formula incorporates a safety margin to handle high use occurrences.

Verification

Does not apply

Memory requirements

Each buffer requires 140 words of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

Base 06

This parameter is hardcoded to value 244 and is not visible.

CSP03

Parameter CSP03 changed activation to immediate for increases. Parameter CSP03 changed the reference of NORESTARTSWACT.

BCS36

Parameter BCS36 updated provisioning rules and added NORESTARTSWACT activation in BCS36.

PREEMPTABLE_CONF6_THRESHOLD

Parameter name

Preemptable Six-port Conference Threshold

This office parameter can appear in your PCL software. This parameter relates to a custom functionality that is not available to this release.

Parameter history

BCS31

This parameter was renamed in BCS31.

PRINT_NET102_LOGS

Parameter name

Print NET102 Logs

Functional description

This parameter specifies if the system generates NET102 logs.

The system sends the NET102 logs to the integrity level buffer, regardless of the value of this parameter.

Rules in provisioning

If the user leaves the value of this parameter at the default of Y, the system generates NET102 logs.

When the user sets the value to N, the system does not send NET102 logs to the log system. A message appears that indicates the system did not send NET102 logs. The system displays this message when the user enters the INTEG level of the map.

Range information

Minimum	Maximum	Default
		Y

Activation

Immediate

Dependencies

Does not apply

Consequences

Does not apply

Verification

To determine if the parameter is set correctly look in table OFCENG. If the value is Y, the system generates NET102 logs. If the value is N, the system does not generate NET102 logs.

PRINT_NET102_LOGS (end)

Memory requirements

This parameter does not impact memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS26

This parameter was introduced in BCS26.

PSTN_GT_SIZE

Parameter name

PSTN Global Title Translations Size

Functional description

This parameter allows Custom Local Area Signaling Service (CLASS) global title translations (GTT) to be varied from 6 to 10 digits.

This parameter allows an office to change the CLASS GTT size for table C7GTT. Adjoining offices that have NPA NXX combinations that are not clear can extend the GTT size up to 10 to establish uniqueness.

Rules in provisioning

Set the parameter to the desired maximum CLASS GTT size.

For Local Number Portability

Local Number Portability (LNP) ports numbers from one switch to another. This indicates that 6-digit Global Translations are not in use any longer. Set PSTN_GT_SIZE to 10.

Range information

Minimum	Maximum	Default
6	10	6

Activation

Immediate

Dependencies

Parameter PSTN_GT_SIZE depends on table C7GTTYPE. There must be an entry in table C7GTTYPE with a GTTID of PSTNGT before the user can modify parameter PSTN_GT_SIZE.

Consequences

If the user sets this parameter too low, GTTs that are not clear can be present.

An attempt to modify parameter PSTN_GT_SIZE without an entry in table C7GTTYPE results in the system response below.

```
Could not find max GT size. No change made.
```

Verification

Does not apply

Memory requirements

This parameter requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

BCS31

This parameter was introduced in BCS31.

QMSFM_NUM_QUEUES

Parameter name

Queue Management System Force Management Number of Queues

Functional description

This parameter specifies the total number of Traffic Operator Position System (TOPS) queue management system (QMS) call queues. This parameter specifies the total number of TOPS QMS call queues that force management reports on.

Rules in provisioning

The TOPS QMS force management reports on all TOPS QMS call queues within a range. The range is 0 (QMSFM_NUM_QUEUES -1) up to a maximum value of 256.

Range information

Minimum	Maximum	Default
0	256	9

Activation

Immediate

Dependencies

Does not apply

Consequences

Not enough provisioning of this parameter results in queue information that is not complete.

Too much provisioning of this parameter results in wasted system store.

Verification

Check QMFADS, QFADS, and QTADS reports to ensure that the system includes information for queues 0 to (QMSFM_NUM_QUEUES -1).

Memory requirements

Each unit requires one word of memory.

QMSFM_NUM_QUEUES (end)

Dump and restore rules

Copy the current value of the parameter when you perform a dump and restore.

Parameter history

BCS34

This parameter was introduced in BCS34.

QMSFM_NUM_SERVICES

Parameter name

Queue Management System Force Management Number of Services

Functional description

This parameter specifies the total number of Traffic Operator Position System (TOPS) queue management system (QMS) services that force management reports on.

Rules in provisioning

The TOPS QMS force management reports on all TOPS QMS services in the range of 1 up to a maximum value of 16.

Range information

Minimum	Maximum	Default
1	16	3

Activation

Immediate

Dependencies

Does not apply.

Consequences

A parameter value that is low results in service information that is not complete.

A parameter value that is high results in wasted system store.

Verification

Check QMFADS, QFADS, and QTADS reports to make sure that the reports include information for services 1 to 16.

Memory requirements

This parameter requires one word of memory.

QMSFM_NUM_SERVICES (end)

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

Parameter history

This parameter was introduced in BCS34.

QMSFM_NUM_STUDY_REG

Parameter name

Queue Management System Force Management Number of Study Registers

Functional description

This parameter specifies the total number of allocated Traffic Operator Position System (TOPS) queue management system (QMS) study registers.

Rules in provisioning

Specify the total number of TOPS QMS study registers allocated.

Range information

Minimum	Maximum	Default
1	450	100

Activation

Immediate

Dependencies

Does not apply

Consequences

A parameter value that is low results in not enough study registers for administrators.

A parameter value that is high results in wasted system store.

Verification

Use the command RQ at a QFADS TTY for the number of allocated study registers.

Memory requirements

Each unit requires one word of memory.

Dump and restore rules

Copy the current value of this parameter when you perform a dump and restore.

QMSFM_NUM_STUDY_REG (end)

Parameter history

This parameter was introduced in BCS34.

DMS-100 Family

North American DMS-100

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OFCENG

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