

411-2231-809

GSM / UMTS

**MSC**

MAP Commands

GSM18/UMTS04 Standard 14.05 May 2006

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GSM / UMTS

# MSC

## MAP Commands

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# Publication history

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This section contains a high level listing, in reverse chronological order, of updates and changes made to the GSM and UMTS product documentation.

## May 2006

GSM18, 14.05. Standard release. Added clarification that GEM18 includes SDM or CBM, and CEM. Updated Nortel logo on front and back covers.

## October 2005

GSM18, 14.04. Standard release.

## October 2005

GSM18, 14.03. Preliminary 2 release.

## March 2005

GSM18, 14.02. Preliminary 1 release.

- GBICTK (changed)
- GBICCCI (changed)
  - DISPCICSTATES (new)
  - DISPCICSTAT (new)
  - HELP (new)
  - QUIT (new)
- QGSMVLR (changed)
- PROGDIR
  - LOGPSTRACE (changed)
  - FINDOM (new)
- SOC (changed)
  - SCINFO (new)

— ASSIGN LIMIT (new)

This document also includes Nortel product branding changes.

## November 2004

GSM18, 14.01. This Draft publication contains the software feature changes and updates that pertain to GSM18/UMTS04. Impacted commands are as follows:

- GBICCCI (changed)
  - CICRGECHECK (new)
  - DISPRTDEST (new)
  - DISPMEMSIZE (new)
- SOC (changed)
  - ASSIGN (changed)
- PROGDIR (changed)
  - LOGPSTRACE (new)
  - PARMFIND (new)
- QGSMVLR (changed)
- MGWINFO (changed)
- TRAVER (changed)
- VLRAUDIT (changed)

## October 2004

GSM17/UMTS03, 13.10, Standard release 2.

## September 2004

GSM17/UMTS03, 13.09, Standard release.

## April 2004

GSM17/UMTS03, 13.08, Preliminary. This publication has been updated for the 17.1 maintenance release to contain BICC information, review comments and incorporated CRs.

## February 2004

GSM17/UMTS03, 13.07. This is the Standard release of this document.

**November 2003**

GSM17, 13.06. This Preliminary publication contains information about GBICCCI directory commands and details the DPTINFO tool. Other software feature changes and updates that pertain to GSM17/UMTS03 are also documented.

**October 2003**

GSM17, 13.05. This Preliminary publication contains information about BICC and BICN commands and details 2 new directories. Other software feature changes and updates that pertain to GSM17/UMTS03 are also documented.

**September 2003**

GSM17.0, 13.05. This Preliminary publication contains information about BICCCI and GTAS commands. GNAOCTCI is a new CI directory level that enables the operator to query the internal Tariff Change Over (TCO) database. Other software feature changes and updates that pertain to GSM17.0/UMTS03 are also documented.

**July 2003**

GSM17, 13.04. This Preliminary publication contains information about BICCCI and GTAS commands. A new CI directory level, GNAOCTCI, is introduced that enables the operator to query the internal Tariff Change Over (TCO) database. Other software feature changes and updates that pertain to GSM17/UMTS03 are also documented.

**June 2003**

GSM17, 13.03. This Preliminary publication contains information about a new sublevel of the MAPCI;MTC;TRKS level: GBICTK, which is used to perform maintenance on CICs. The MSCCAP command was replaced with the CAPACITY command. Other software feature changes and updates that pertain to GSM17/UMTS03 are also documented.

**April 2003**

GSM17, 13.01. This Draft publication contains the software feature changes and updates that pertain to GSM17/UMTS03.

**April 2003**

GSM16/UMTS0312.03This Standard publication contains the software feature changes and updates that pertain to GSM16/UMTS03, and provides new MS services information through the QGSMVLR command.

### **April 2003**

UMTS03, 12.03. This Standard publication contains the software feature changes and updates that pertain to GSM16/UMTS03, and provides new MS services information through the QGSMVLR command.

### **October 2002**

UMTS03, 12.02. This preliminary publication contains the software updates pertaining to UMTS03/GSM16.

### **July 2002**

UMTS03.12.01. This Draft release is created for Universal Mobile Telecommunications System (UMTS) to document Circuit Core Networks Call Server MAP Commands for Release GSM16/UMTS03.

### **July 2002**

GSM15, Revision 11.03. This standard publication documents the changes from DMS-MSC MAP Commands and Procedures revision 11.03.

### **April 2002**

UMTS02.11.02. This Preliminary release includes information on GSM15/UMTS02 MAP changes.

### **November 2001**

UMTS02.11.01. This Draft release includes early information on UMTS02 MAP changes, including:

Modified commands and directories:

- QGSMVLR
- GQUERYINT
- GQUERYLAC

New commands and directories:

- VLRMAP\_DIR
- VLRCON\_DIR
- VLRCONCI\_DIR
- GQUERYLACSAC
- SWACTDIR
- RESTARTSWACT

- NORESTARTSWACT
- MTCSWACT

**September 2001**

UMTS01.10.04. This Preliminary release added SELECTMMU, REMOVEMMU, and HALTMMU commands.

**June 2001**

UMTS01.10.03. This Preliminary release is created for Universal Mobile Telecommunications System (UMTS) to document Circuit Core Networks Call Server MAP Commands Reference Manual for Release UMTS01.

**May 2001**

UMTS01.10.02. This Preliminary release is created for Universal Mobile Telecommunications System (UMTS) to document Circuit Core Networks Call Server MAP Commands Reference Manual for Release UMTS01.

**April 2001**

UMTS01.10.01. This Draft release is created for Universal Mobile Telecommunications System (UMTS) to document Circuit Core Networks Call Server MAP Commands Reference Manual for Release UMTS01. The UMTS is a natural, next generation migration from GSM.

**March 2001**

GSM13. Revision 09.03. This preliminary publication updates CALEA SOC information.

**February 2001**

GSM13. Revision 09.02. This preliminary publication

- adds CAPACITY information to display capacity measurements for the XA-Core GSM MSC
- updates MMU QUARANTINE information

**October 2000**

GSM12. Revision 08.03. This standard publication documents the changes from DMS-MSC MAP Commands and Procedures revision 08.02.

**September 2000**

GSM13. Revision 09.01. This draft publication

- updates QGSMVLR information
- updates SELECTMMU and REMOVEMMU command information

## July 2000

GSM12. Revision 08.02. This preliminary publication

- updates GNOACTCI information
- updates MMU information and adds MMUSELECT tool

## April 2000

GSM12. Revision 08.01. This draft publication

- adds a new directory - GNOACTCI

## February 2000

GSM11. Revision 07.02. This preliminary publication

- changes CCS7 Server to C7SERVER
- updates MMU information

## October 1999

GSM11. Revision 07.01. This draft publication

- adds CCS7 Server information
- adds MMU information
- updates SOC information

## September 1999

GSM10. Revision 06.03. This standard publication

- changes the name of the book to DMS-MSC MAP Commands Reference Manual
- restructures the book so that all directory levels are grouped in a section and all miscellaneous commands are grouped in a section
- changes the description of the command QGSMVLR

*Note:* For more information on this change, refer to the section entitled, *Miscellaneous MAP commands*.

- removes the following appendices from the book:
  - Common datafill information
  - GSM datafill scenarios

The information from the two removed appendices is being rewritten. It will be released after year 2000, entitled, *DMS-MSC Translations Guide*.

## February 1999

GSM10. Revision 06.02. This preliminary release is created to document the changes from DMS-MSC\* MAP\* Commands and Procedures revision 05.02. Unrestricted Digital Information (UDI) appears in this release.

**December 1998**

GSM09. Revision 05.03. This standard release is created to document the changes from DMS-MSC MAP Commands and Procedures revision 05.02. UDI appears in this release.

**September 1998**

GSM10 version 06.01. This Draft release is created to document the DMS-MSC MAP Commands and Procedures for Release GSM10.

The additions that appear in this release include CCS7 Server, GSM Call Trace and, PNPROCI.

**August 1998**

GSM09. Revision 05.02. This Preliminary release is created to document the DMS-MSC MAP Commands and Procedures for Release GSM09.

The additions that appear in this release include, CATASTROPHE, CRDBCI, and GMASCRCI. The modifications in this release include GSMSCP QUERY, IWFTTP\_DIR, PROGDIR, QGSMVLR, SOC, and TRAVER.

**March 1998**

GSM09. Revision 05.01. This Draft release is created to document the GSM\* DMS-MSC MAP Commands and Procedures for Release GSM09.

The additions that appear in this release are CATASTROPHE and CRDBCI. The modifications that appear in this release are GSMSCP QUERY, SOC, and TRAVER.

**November 1997**

GSM08. Revision 04.03. This Standard release is created for document the GSM DMS-MSC MAP Commands and Procedures for Release GSM08.

The title is changed in this release to *DMS-MSC Maintenance Administration Position Commands and Procedures Reference Manual*.

The additions that appear in this release are SOC and C7TTP. The modifications that appear in this release are TRAVER and GSMSCP QUERY.

**August 1997**

GSM08. Revision 04.02. This Preliminary release is created for document the GSM DMS-MSC MAP Commands and Procedures for Release GSM08.

The title is changed in this release to *DMS-MSC Maintenance Administration Position Commands and Procedures Reference Manual*.

The additions that appear in this release are SOC and C7TTP. The modifications that appear in this release are TRAVER and GSMSCP QUERY.

### **January 1997**

GSM07. Revision 03.03. This standard release is created for document the GSM DMS-MSC MAP Commands and Procedures for Release GSM07.

The additions that appear in this release are GNWMCODEDIR, GTAS, and IWFTTP. The modification that appears in this release is QGSMVLR.

### **October 1996**

GSM07. Revision 03.02. This preliminary release is created for document the GSM DMS-MSC MAP Commands for Release GSM07.

### **June 1996**

GSM06. Revision 02.02. This standard release is created for document the GSM DMS-MSC MAP Commands for Release GSM06.

### **March 1996**

GSM06. Revision 02.01. This preliminary release is created for document the GSM DMS-MSC MAP Commands for Release GSM06.

The additions appear in this release are GSM\_SCP\_QUERY, MSCCAPCI, and RENAME\_IWFLKSET. The modifications that appear in this release are TRAVER and QGSMVLR.

GSM05. Revision 01.01. This Standard release is created for document the GSM DMS-MSC MAP Commands for Release GSM05. This version of the MAP Commands Reference Manual includes GSM04A standard information and GSM05 standard information.

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# About this document

---

This publication contains Maintenance and Administration Position (MAP) directory levels and commands specific to the GSM/UMTS MSC. (This documentation also applies to the Mobile-services Switching Center, MSC, of legacy GSM networks.) The directory levels and commands are used to access, maintain, and manipulate switch hardware and software.

**Note:** The UCC MSC switch uses many directory levels and commands. Not all of the directory levels and commands are specific to the MSC. Therefore, not *all* of the directory levels and commands are covered in this publication. This publication covers *only* those directory levels and commands that are specific to the UCC MSC or MSC/HLR.

## Intended audience for this document

This documentation is a command reference document for the Telco personnel who perform maintenance and service on the DMS-MSC/Call Server.

## Document organization

This documentation is divided into the following chapters:

- This section covers the audience for and organization of this document, and provides information on software release applicability, as well as related documentation.
- [Chapter 1, “Introduction”](#) provides an overview of the MAP directory levels and commands.
- [Chapter 2, “MAP directories”](#) describes the MAP directory levels that are specific to the MSC.
- [Chapter 3, “Miscellaneous MAP commands”](#) describes MAP commands (specific to the MSC) that do not belong to the directories discussed in [Chapter 2, “MAP directories”](#).

## Hypertext links

Hypertext links in this document are set in blue type. If you are viewing a PDF version of this document, click on the blue text to jump to the associated section, figure, or page.

## Trademark indications

The asterisk after a name denotes a trademarked item. The title page and back cover acknowledge all trademarked items.

## What precautionary messages mean

Precautionary messages indicate possible risks. The types of precautionary messages used in Nortel documentation include danger, warning, caution, and attention messages.

### Danger message

A danger message indicates the possibility of personal injury. Following is an example of a danger message.

	<p><b>DANGER</b> <b>Risk of electrocution</b> Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed. The inverter contains high-voltage lines that are active until the fuses have been removed.</p>
--	--

### Warning message

A warning message indicates the possibility of equipment damage. Following is an example of a warning message.

	<p><b>WARNING</b> <b>Damage to the backplane connector pins</b> 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.</p>
---	--

### Caution message

A caution message indicates the possibility of service interruption or degradation. Following is an example of a caution message.

	<p><b>CAUTION</b> <b>Possible SS7 node isolation</b> Do not attempt to update the LIU7 if one of its links cannot be inhibited. Do not busy the link if it cannot be inhibited. CCS7 node isolation may result.</p>
---	---

### Attention message

An attention message alerts the reader to a special condition. Following is an example of an attention message.

<p><b>ATTENTION</b> Office policy may require additional copies of the load.</p>
--

## Software release applicability

Nortel software releases for the Wireless product are developed and identified by the product lines. The GSM product line software is identified by the letters GSM and a 2-digit number, such as GSM18, signifying the current release in the GSM software stream.

This publication is applicable to the DMS-MSC Family offices that have the GSM NSS18/UMTS VCN04 software release. Unless this publication is revised, it also applies to offices that have software releases greater than GSM NSS18/UMTS VCN04.

Customers must be running on NSS16 or NSS17 before they can upgrade to NSS18. Since there is no GSM-R support on the MSC in NSS18, customers on GSM-R NSS17 will not upgrade to NSS18. Customers on NSS16/UMTS03 for the MSC, must upgrade to NSS18/UMTS04.

For more information about the new features contained in the GSM NSS18/UMTS VCN04 software release, refer to the *GSM / UMTS MSC Software Delta*, 411-2231-199, and the *GSM / UMTS HLR100/200 Software Delta*, 411-2831-199.

### GSM18/UMTS04 Product Computing Module Loads

The NSS18 software load consists of GSM18 (MSC & HLR), GEM18 (SDM or CBM, and CEM), and MG18 (Media Gateway) software.

Before GSM05, software loads were package-based loads. GSM05 was the first DMS-MSC Product Computing Module Load (PCL). PCLs are composed of layers of software, or Delivery Receivable Units (DRUs).

The following PCLs comprise the NSS18 software load:

- DMS CSP20 (BASE21, TL20, SHR20)
- XPM20
- CBM18
- USP10.0
- SN07
- Passport v3.7
- SP21 (North America market)
- SP17.2 (International market)
- Media Gateway (MG) PCR6.1
- GSM18/UMTS04 DRUs

## Related documents

Some publications for the DMS family contain information that may relate to the subjects in this publication. For a current listing of the DMS-100 NTPs, refer to NTP *DMS-10 and DMS-100 Product Documentation Directory*, 297-8991-001.

## Cancellation index

With the many changes occurring in product documentation due to the introduction of PCLs, refer to NTP *DMS-10 and DMS-100 Cancellation Cross-Reference Directory*, 297-8991-002, for a listing of cancelled NTPs and the appropriate replacement NTPs.

## Terminology

In this publication, the term UCC applies to the legacy GSM DMS-MSC/CS, unless otherwise noted. Also, the term “XA-Core” generically refers to the processing unit of the switch, whether it is an XA-Core-based processor, or a legacy unit.

## Notice of Design Intent and Enhancement

The design intent is reflected in the level of detail in the Nortel Technical Publications (NTP) regarding the following elements:

- **Logs**
- **Parameters**
- **Data Schema**

- **Tables**
- **OMs**

Starting at GSM13, enhanced attributes were developed to define and document these GSM elements. However, for those elements introduced prior to GSM13, the user will find a minimalist level of documentation to represent these elements. This level of documentation reflects the original design intent.



---

# Introduction

---

## MAP terminal

The Maintenance and Administration Position (MAP) terminal provides an interface between the MSC and the user. The MAP terminal enables operating company personnel to enter commands that manipulate system information, configuration, and operation.

## MAP directories

The MAP terminal has several levels of MAP displays. These display levels are also called directories. The first MAP directory level is the Command Interpreter (CI). The CI level is automatically accessed when a user logs on to a MAP terminal.

## MAP directory commands

Each directory level has a set of commands associated with it. For example, the GNWMCODEDIR directory level has a set of commands that enable operating company personnel to manipulate code controls.

Directory commands are listed in a box on the left side of the MAP display at each directory level. Directory commands allow a user to access other command directory levels.

## Command parameters

Commands often require one or more parameters. Parameters indicate the limits within which the command performs. The results of commands are altered by the absence or presence of parameters and their values. Use a blank space between parameters for proper operation.

### Required parameters

Required parameters are necessary for the command to function properly. The MAPCI prompts the user for required parameters.

### Optional parameters

Optional parameters are not required for the command to work. The MAPCI does not prompt for optional parameters unless they are optional as a group, and at least one optional parameter must be entered.

## Obtaining command information

The following commands provide information about the commands at the current level:

- HELP
- LIST
- PRINT
- Q

### **HELP**

HELP provides parameter and syntax information about a particular command. The HELP command is listed in the box of commands, if available at that level. To obtain information about the command you just entered, enter:

**HELP**

### **LIST**

LIST lists all the commands available at the current level. To obtain the list, enter:

**LIST**

### **PRINT**

PRINT lists all the commands available within a specified directory. To obtain this list, enter the PRINT command followed by a space and the name of the command directory.

**PRINT directory**

### **Q**

The query command displays information about a command. This information briefly states the task the command performs or indicates whether the command can access another directory. Enter Q followed by a space, and the command name to display information.

**Q command**

---

# MAP directories

---

This section describes various MAP directory levels that are specific to the MSC switch. Also, this section describes the commands for each directory level. The various directories are presented in alphabetical order.

For information on the basic MAPCI level (MTC, PM, TRKS, and so on), refer to *NTP DMS-100 Family Menu Commands Historical Reference Manual*, 297-1001-821, Volumes 1 through 10.

## C7SERVER

---

The C7SERVER MAPCI tool provides a way to monitor and maintain a single CCS7 server, or a group of CCS7 servers. The C7SERVER commands can be divided into two groups: commands available from the C7SERVER menu and commands that lead to other directories.

*Note:* Unless noted, the CCS7 server and Mobility Management Unit (MMU) are herein referred to as a C7SERVER.

### C7SERVER commands

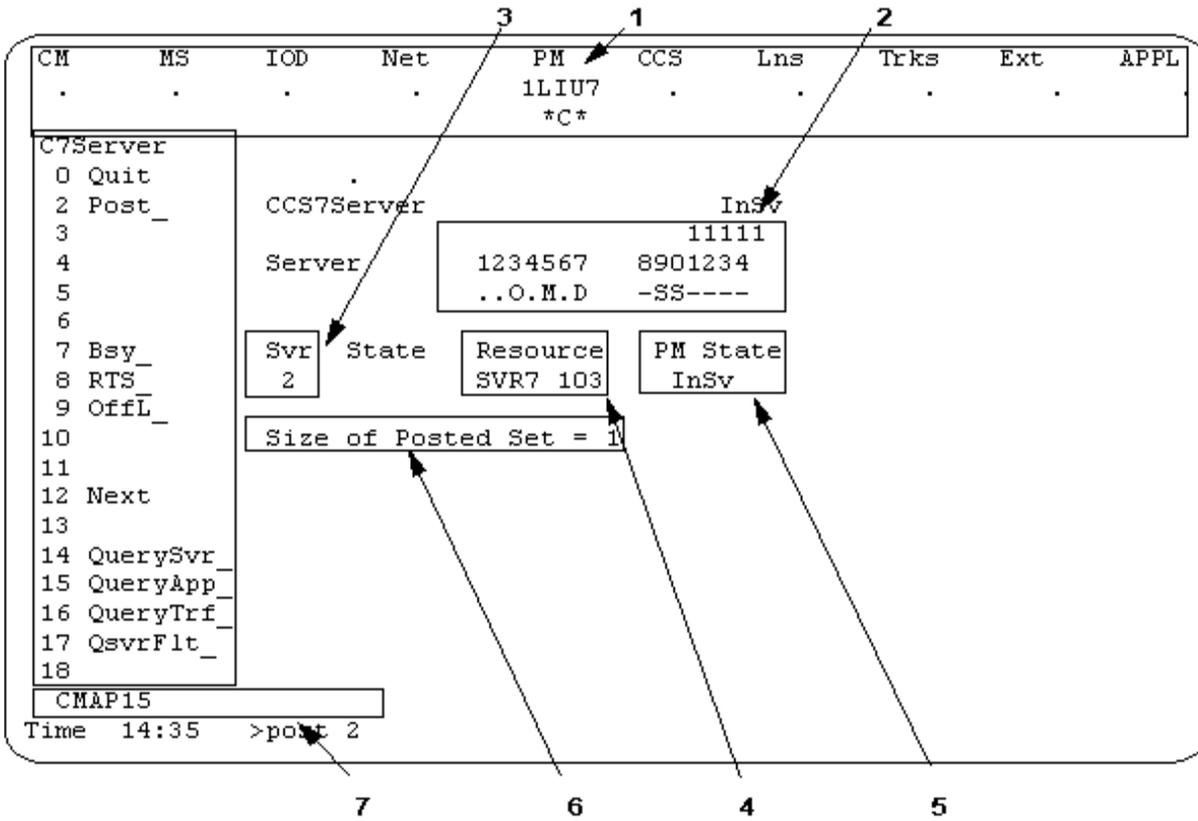
The C7SERVER MAPCI level displays the following information:

- The state of each C7SERVER.
- The peripheral module (PM) resource and the PM resource state of the C7SERVER in the posted set that is currently being displayed in the control position of the C7SERVER MAPCI.
- The size of the posted set.
- The C7SERVER alarms.

### Field descriptions

[Figure 2-1](#) shows the C7SERVER MAPCI fields.

**Figure 2-1**  
**C7SERVER MAPCI fields**



The C7SERVER MAPCI fields numbered in [Figure 2-1](#) are described in [Table 2-1](#).

**Table 2-1**  
**C7SERVER MAPCI field descriptions**

Field Number	Name	Description
1	CCS Alarm Banner	This is where the C7SERVER alarm is displayed if the CCS7 Server Alarm is the most severe alarm of the CCS alarms set. The number of unavailable C7SERVERS and the type of alarm are displayed. The alarm can be one of the following types: <ul style="list-style-type: none"> <li>• SVRC—C7Server Critical Alarm</li> <li>• SVRM—C7Server Major Alarm</li> </ul>

**Table 2-1**  
**C7SERVER MAPCI field descriptions (continued)**

<b>Field Number</b>	<b>Name</b>	<b>Description</b>
2	Individual C7SERVER State fields	Displays the state of the C7SERVERS 1 - 14. Each server's state is represented by a character. Characters and their definitions are: <ul style="list-style-type: none"><li>• U—unequipped</li><li>• O—offline</li><li>• M—manbusy</li><li>• D—deload</li><li>• S—system busy</li><li>• I—inservice</li></ul>
3	Control Position C7SERVER Number field	This is the C7SERVER number of the server being displayed in the control position.  Although a C7SERVER may belong in a posted set, there can be only one server displayed in the control position at a time.
4	ASU (or SVR7)	The resource for the C7SERVER in the control position.
5	SVR7 State (Resource State)	This is the state of the resource for the C7SERVER in the control position.
6	Posted Count field	Displays the number of C7SERVER that have been posted.
7	Command line	Enables C7SERVER commands to be entered.
—sheet 2 of 2—		

Table 2-2 lists the commands available from the C7SERVER MAPCI level.

**Table 2-2**  
**C7SERVER menu commands**

Command	Description
POST	Creates a posted set of servers.
NEXT	Displays the next server in the posted set on the control line.
BSY	Manually busies one or all servers in the posted set.
RTS	Returns to service one or all servers in the posted set.
OFFL	Places offline one or all servers in the posted set.
QUERYAPP (MMU only)	Enables users to display detailed information on the MMU.
QSvrFlt (MMU Only)	Displays the fault information for the MMU server.

**To access**

To access C7SERVER from the CI environment, enter:

**>MAPCI;MTC;CCS;CCS7;C7SERVER**

**To return to CI**

To exit C7SERVER and return to the CI level, enter:

**>QUIT ALL**

**POST command**

The POST command creates a posted set of servers that have previously been datafilled in table C7SERVER. (See NTP *GSM / UMTS MSC Office Parameters Reference Manual*, 411-2231-455, for information about table C7SERVER as it relates to the CCS7 Server. See NTP *GSM / UMTS MSC Customer Data Schema (2 Volumes)*, 411-2231-451P1 & P2, for information about table C7SERVER as it relates to the MMU.) Servers can be posted selectively by number, by state, or all servers datafilled in table C7SERVER can be posted. Only servers datafilled in Table C7SERVER can be in the posted set, and only servers in the posted set are affected by the MAP commands.

The first server in the posted set is the server with the lowest number. The first server in the posted set displays in the control position of the MAP terminal. Each of the other servers in the posted set can be displayed in the

control position one at a time using the NEXT command as described in the “NEXT command” section.

Exiting and re-entering the C7SERVER MAP level on a particular MAP terminal will refresh the display of the posted set.

*Note:* If the state of a server in a posted set changes, the server remains in the posted set.

### Syntax

The command syntax for POST is:

```
>POST <option { [<server number(s) {1-14}>],  
[<all servers> {ALL}],  
[<State {OFFL, MANB, INSV, SYSB, DELD}>],  
#>
```

### Parameters

Table 2-3 shows the parameters for the POST command.

**Table 2-3**  
**POST parameters**

Parameter	Value	Definition
option	server number(s)	post by server number(s)
	ALL	post all servers
	state	post all servers with specified state
state	OFFL	post offline servers
	MANB	post ManBusy servers
	INSV	post In Service servers
	SYSB	post SysBusy servers
	DELD	post Deload servers
server number	{1 to 14}	post up to 14 servers by server number
—end—		

### Example

Figure 2-2 shows a successful response to the following command to post by server number:

**post 2**

**Figure 2-2**  
**POST by server number**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Split    .      2 CkOS   .      3PDTC   .      ...      1 Maj   SDM
                                     M

C7Server      CCS7
0 Quit
2 Post_
3
4                                     11111
5                                     1234567  8901234
6 Server      ..-.-.-  -.-.-.-
7 Bsy_        Svr  State Resource  PM State
8 RTS_        2    InSv  SVR7 2    InSv
9 OffL_       Size of Posted Set = 1
10 post 2
11
12 Next
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18

DONITA
Time 10:39 >
    
```

Figure 2-3 shows a successful response to the following command to post by server state. Note the size of the posted set indicates a value of 2 because Servers 2 and 5 are currently in the INSV state.

**post insv**

**Figure 2-3**  
**POST by server state**

```
XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Split    .      2 CkOS    .      4PDTC    .      ...      1 Maj    SDM
                                     M

C7Server      CCS7
0 Quit
2 Post_
3
4
5      Server      ...----  -----
6
7 Bsy_      Svr  State  Resource  PM State
8 RTS_      1    InSv   SVR7 1    InSv
9 OffL_      Size of Posted Set = 2
10 post insv
11
12 Next
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18

DONITA
Time 10:40 >
```

Figure 2-4 shows a successful response to the following command to post all servers. Note the size of the posted set indicates a value of 3 because there are currently 3 servers in the posted set: Server 2 (INSV), Server 4 (INSV), and Server 6 (OFFL).

**post all**

**Figure 2-4**  
**POST all servers**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Split    .      2 CkOS   .      4PDTC   .      ...      1 Maj   SDM
                                     M

C7Server      CCS7
0 Quit
2 Post_
3
4              11111
4              1234567  8901234
5      Server  ...----  -----
6
7 Bsy_      Svr  State  Resource  PM State
8 RTS_      1    InSv   SVR7 1    InSv
9 OffL_     Size of Posted Set = 2
10          post all
11
12 Next
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18
DONITA
Time 10:41 >
    
```

## Messages

Table 2-4 shows the messages provided by the POST command.

**Table 2-4**  
**POST messages**

Message	Explanation
POST Server <Svr #> Failed. Svr not datafilled in Table C7Server	<p>This warning is issued when a server's table C7SERVER is not currently datafilled with specified post parameters.</p> <p><b>User action:</b> Datafill the server in table C7SERVER first, and then re-enter the POST command, or select an existing datafilled server in Table C7SERVER to post.</p>
POST Failed. Posted set is empty	<p>This warning is issued if the POST command is entered without any parameters.</p> <p><b>User action:</b> The POST command must be re-entered with valid datafilled servers.</p>
Error: Cannot Specify both ALL and server number(s)	<p>This warning is issued if the POST command is entered with server number(s) followed by the ALL parameter.</p> <p><b>Note:</b> The standard message, "EITHER incorrect optional parameters OR too many parameters." is displayed if the POST command is entered with the ALL parameter followed by server number(s).</p> <p><b>User action:</b> Repost a specific server number(s) or use the ALL option to post all the servers datafilled in table C7SERVER.</p>
—sheet 1 of 2—	

**Table 2-4**  
**POST messages (continued)**

Message	Explanation
Error: Cannot Specify both ALL and state	This warning is issued if the POST command is entered with the ALL parameter followed by the server state.  <b>Note:</b> The standard message, "EITHER incorrect optional parameters OR too many parameters." is displayed if the POST command is entered with server state followed by the ALL parameter.  <b>User action:</b> Repost the server(s) in a specific state or use the ALL option to post all the servers datafilled in table C7SERVER.
Error: Cannot Specify both server number(s) and state	This warning is issued if the POST command is entered with server number(s) followed by the server state.  <b>Note:</b> The standard message, "EITHER incorrect optional parameters OR too many parameters." is displayed if the POST command is entered with server state followed by the server number(s).  <b>User action:</b> Repost specific server number(s) or repost the server(s) in a specific state.
—sheet 2 of 2—	

**NEXT command**

The NEXT command displays the next server in the posted set on the control line. It scrolls through the servers in ascending order and stops at the last server in the server set. Only servers in the posted set are affected by the NEXT command.

**Syntax**

The command syntax for NEXT is:

>NEXT

**Parameters**

The NEXT command has no parameters.

### Example

Figure 2-5 shows a successful response to the NEXT command. This example assumes that there are two servers in the posted set and that the first server was posted prior to issuing the NEXT command.

next

**Figure 2-5**  
Displaying the next server in the posted set

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Split    .      2 CkOS  .      4PDTC  .      ...      1 Maj   SDM
                               M

C7Server      CCS7
0 Quit
2 Post_
3
4              11111
4              1234567  8901234
5      Server      .....
6
7 Bsy_      Svr  State  Resource  PM State
8 RTS_      1   InSv   SVR7 1   InSv
9 OffL_
10          Size of Posted Set = 2
11          post all
12 Next
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18
DONITA
Time 10:41 >
```

**Messages**

Table 2-5 shows the messages provided by the NEXT command.

**Table 2-5**  
**NEXT messages**

Message	Explanation
NEXT Failed. Posted Set is empty.	This warning is issued if the NEXT command is entered when the posted set is empty.  <b>User action:</b> The POST command must be entered with valid servers.
No More Servers in Posted Set.	This warning is issued if the NEXT command is entered but the last server in the posted set is already in the control position.
Warning: Server <Svr #> is Unequipped	This warning is issued if the NEXT command is entered but the next server in the posted set is no longer datafilled in the C7SERVER table.

**BSY command**

The BSY command is used to manually busy one or all servers in the posted set. If no parameters are specified, the server in the current control (posted) position will be busied.

<p><b>ATTENTION</b></p> <p>If the server is currently in the INSV state prior to using this command, the server’s state will actually transition to the deload state before moving to the ManBusy state.</p>
--

The reason for this preliminary transition is to allow the traffic on the current server to be gracefully handed off to the other available server(s) or the MSC (if no other servers are available).

*Note:* If the server is in the offline (OFFL) state, the BSY and BSY FORCE commands are essentially identical. That is, no deload state is entered because there was no traffic running on the offline server.

**Syntax**

The command syntax for BSY is:

>BSY {<option { [<server number {1-14}>], [<all servers> {ALL}], FORCE}>}

## Parameters

Table 2-6 shows the parameters for the BSY command.

**Table 2-6**  
**BSY parameters**

Parameter	Value	Definition
All	{All}	Busy all MGWs in the posted set
Force	{Force}	Force an MGW currently running calls out of service. This causes all calls to be released.
Nowait	{Nowait}	Do not wait for a response from MAPCI before returning the prompt.

## Example

Figure 2-6 shows a successful response to the following command to BSY by server number. Note the output example indicates Server 1 first enters a Deload (D) state. Once the traffic has deloaded from this Server, the state changes to Manual Busy (ManB).

**bsy 1**

**Figure 2-6**  
**BSY by server number**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Split    .      2 CkOS      .      4PDTC      .      ...      1 Maj      SDM
                                     M

C7Server      CCS7
0 Quit
2 Post_
3
4                                     11111
5 Server      1234567      8901234
6                                     .....
7 Bsy_      Svr  State Resource  PM State
8 RTS_      2   InSv  SVR7 2   InSv
9 OffL_      Size of Posted Set = 2
10          bsy 1
11          No subscriber present on this MMU.
12 Next     No calls currently active on this MMU.
13          Please confirm ("YES", "Y", "NO", or "N"):
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18

DONTA
Time 10:43 >

```

Figure 2-7 shows a successful response to the following command to BSY all servers (this example assumes there are currently four servers in the posted set).

```
bsy all
```

**Figure 2-7**  
**BSY all servers**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Split    .      2 CkOS    .      4PDTC   .      ...      1 Maj   SDM
                                     M

C7Server  CCS7
0 Quit
2 Post_
3
4
5 Server      1234567  8901234
6
7 Bsy_      Svr  State  Resource  PM State
8 RTS_      2    InSv   SVR7 2    InSv
9 OffL_
10          Size of Posted Set = 2
11          bsy all
12          No subscriber present on this MMU.
13          No calls currently active on this MMU.
14          Please confirm ("YES", "Y", "NO", or "N"):
15 QuerySvr
16 QueryApp
17 QSvrFlt_
18

DONTIA
Time 10:44 >
```

Figure 2-8 shows a successful response to the following command to BSY by server using the FORCE option.

```
bsy 1 force
```

**Figure 2-8**  
**BSY with FORCE option**

```
XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Split    .      2 CkOS    .      1SVR7  2 SVRM    ...      1 Maj    SDM
          *C*      M

C7Server  CCS7
0 Quit    2 SVRM
2 Post_
3
4
5 Server  1234567  8901234
6
7 Bsy_    Svr  State Resource  PM State
8 RTS_    1   ManB  SVR7 1   SysB
9 OffL_   Size of Posted Set = 1
10        bsy 1 force
11        Server 1: Bsy Force passed.
12 Next
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18

DONITA
Time 10:47 >
```

Figure 2-9 shows a successful response to the BSY ALL FORCE command. This example assumes that there are four servers in the posted set.

**bsy all force**

**Figure 2-9**  
**BSY with FORCE option**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Split    .      2 CkOS    .      4PDTC   2 SVRM   ...      1 Maj    SDM
                               M
C7Server  CCS7
0 Quit    2 SVRM
2 Post_
3
4
5          Server    1234567    8901234
6          MM-M---  -----
7 Bay_    Svr  State Resource  PM State
8 RTS     1   ManB  SVR7 1    InSv
9 OffL_   Size of Posted Set = 1
10        bay all force
11
12 Next
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18
DON'TA
Time 10:49 >
    
```

## Messages

Table 2-7 shows the messages provided by the BSY command.

**Table 2-7**  
**BSY messages**

Message	Explanation
INFO: MANB command issued on a Server currently carrying traffic. Server must first enter Deloading state prior to transitioning to ManB state.	This message is displayed if the FORCE option was not specified. This message is necessary so that the user is made aware that the server's status must first enter the deload state prior to transitioning to the MANB state.
BSY Server <Svr #> Failed. Svr not datafilled in Table C7Server	This warning is issued when a server that is not datafilled in Table C7SERVER is specified in the BSY parameters.  <b>User action:</b> Datafill the server in table C7SERVER then re-enter the BSY command, or select an existing datafilled server in table C7SERVER to busy.
BSY Failed. Posted set is empty	This warning is issued if the BSY command is entered without any valid datafilled servers. This occurs when an attempt is made to busy a server not yet posted.  <b>User action:</b> re-enter the BSY command with valid servers.
—sheet 1 of 2—	

**Table 2-7**  
**BSY messages (continued)**

Message	Explanation
Cannot Specify both ALL and server number(s)	This warning is issued if the BSY command is entered with server number(s) followed by the ALL parameter.  <b>Note:</b> The standard message, "EITHER incorrect optional parameters OR too many parameters." is displayed if the BSY command is entered with the ALL parameter followed by server number(s).  <b>User action:</b> Busy the specific server(s) according to the syntax given.
Server BSY. Command already done.	This warning is issued if the BSY command is entered on a posted C7SERVER which is already in the Manual BSY or Deload state.  <b>User action:</b> The BSY command must not be performed on a Server that is already in the Manual BSY or Deload state.
Time in Quarantine: 00 Hrs 14 Mins 23 Secs 15 calls currently active will be LOST? Continue? Please confirm ("YES", "Y", "NO", OR "N"):	This message displays if the FORCE option is not specified. If the MMU is put to Quarantine, by using the Quarantine CI tool, then the time elapsed in Quarantine mode for this server is displayed.
15 Calls currently active will be LOST. You can isolate MMU using Quarantine CI tool. Continue? Please confirm ("YES", "Y", "NO", "N"):	This message displays if the MMU is not put in Quarantine.
—sheet 2 of 2—	

**RTS command**

The RTS command is used to return to service one or all servers in the posted set. If no parameters are specified, the server in the current control (posted) position will be returned to service.

**Syntax**

The command syntax for RTS is:

**>RTS {<option { [<server number {1-14}>], [<all servers> {ALL}]}>}**

## Parameters

Table 2-8 shows the parameters for the RTS command.

**Table 2-8**  
RTS parameters

Parameter	Value	Definition
option	no parameter	Return to service the server in the control position of the posted set
	server number	Return to service by server number
	ALL	Return to service all servers

## Example

Figure 2-10 shows a successful response to the following command to RTS by server number. Note that in Figure 2-10 the CCS7 Server, in this case, Server 4, may be INSV despite the PM's ISTB state.

```
>rts 4
```

**Figure 2-10**  
RTS by server number

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Split    .      2 CkOS   .      2PDTC  3  RS      47C..    1 Maj    SDM
                               *C*      *C*      M

C7Server      CCS7
0 Quit        3  RSC
2 Post_
3
4              11111
5              1234567  8901234
6 Server      ..-.-.-  -.-.-.-
7 Bsy_        Svr  State Resource  PM State
8 RTS_        4   InSv  SVR7 4   ISTB
9 OffL_       Size of Posted Set = 1
10 RTS 4
11 Server 4: RTS passed.
12 Next
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18
DONTIA
Time 11:01 >

```

Figure 2-11 shows a system response to the successful execution of the command to RTS all servers. This example assumes that there are two servers in the posted set.

>rts all

Figure 2-11  
RTS all servers

```
XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
RExSch   .        .        .        1 FP    1 RSSC   ...      .        SDM +
          M        *C*

C7Server      CCS7
0 Quit        1 RSSC
2 Post_
3
4              11111
5              1234567  8901234
6 Server      .....
7 Svr  State  Resource  PM State
8 RTS_      1      InSv   SVR7 1    ISTb
9 OffL_     Size of Posted Set = 2
10 rts all
11 Server 1: RTS already done.
12 Next     Server 2: RTS already done.
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18
DONITA
Time 13:03 >
```

## Messages

Table 2-9 shows the messages that are generated by the RTS command.

**Table 2-9**  
**RTS messages**

Message	Explanation
RTS Server <Svr #> Failed. Svr not datafilled in Table C7Server	<p>This warning is issued when a server that is not datafilled in table C7SERVER is specified in the RTS parameters.</p> <p><b>User action:</b> Datafill the server in table C7SERVER then re-enter the RTS command, or select an existing datafilled server in table C7SERVER to RTS.</p>
RTS Failed. Posted set is empty	<p>This warning is issued if the RTS command is entered without any valid datafilled servers. This is possible if an attempt is made to RTS a server which has not yet been posted.</p> <p><b>User action:</b> The RTS command must be re-entered with valid servers.</p>
RTS Failed. Server is not in ManB state.	<p>This warning is issued if the RTS command is performed on a posted CCS7 Server which is in the state. The CCS7 Server must first be busied using the Bsy command prior to being returned to service using the RTS command.</p> <p><b>User action:</b> BSY the offline server first, and then use the RTS command to return the server to service.</p>
—sheet 1 of 2—	

**Table 2-9**  
**RTS messages (continued)**

Message	Explanation
Error: Cannot Specify both ALL and server number(s)	<p>This warning is issued if the RTS command is entered with server number(s) followed by the ALL parameter.</p> <p><b>Note:</b> The standard message, “EITHER incorrect optional parameters OR too many parameters.” is displayed if the RTS command is entered with the ALL parameter followed by server number(s).</p> <p><b>User action:</b> Return the specific server(s) to service according to the syntax given.</p>
SVR RTS. RTS already done.	<p>This warning is issued if the RTS command is entered on a posted CCS7 Server that is already in the In-Service (INSV) state.</p> <p><b>User action:</b> The RTS command must not be executed on a server that is already in the INSV state.</p>
—sheet 2 of 2—	

**OFFL command**

The OFFL command places one or all servers in the posted set offline. If no parameters are given, the server in the current control position is placed offline.

**Syntax**

The command syntax for OFFL is:

>OFFL {<option { [<server number {1-14}>], [<all servers> {ALL}]}>}

**Parameters**

Table 2-10 shows the parameters for the OFFL command.

**Table 2-10**  
**OFFL parameters**

Parameter	Value	Definition
option	no parameter	offline the server in the control position of the posted set
	server number	offline by server number

**Table 2-10**  
**OFFL parameters (continued)**

Parameter	Value	Definition
	ALL	offline all servers

**Example**

Figure 2-12 shows a successful response to the following command to OFFL by server number:

**offl 1**

**Figure 2-12**  
**OFFL by server number**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
RExSch   .      1MPCOS   .      1SVR7   1 RSSC   ...      .      SDM +
          *C*     *C*

C7Server  CCS7
0 Quit    1 RSSC
2 Post_
3
4          11111
5          1234567  8901234
6 Server  0.-.----  -----
7 Svr    State Resource  PM State
8 RTS_   1    OffL  SVR7 1    SysB
9 OffL_  Size of Posted Set = 2
10      offl 1
11      Server 1: OffL passed.
12 Next
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18

DONITA
Time 13:06 >

```

Figure 2-13 shows a successful response to the following command to place all servers offline. This example assumes that there are 2 servers in the posted set.

**>offl all**

**Figure 2-13**  
**OFFL all servers**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
RExSch   .      1MPCOS   .      1SVR7   1 RSSC   .         .         SDM +
          .         .         .         *C*     *C*
C7Server
0 Quit
2 Post_
3
4
5 Server      1234567   8901234
6
7 Bsy_       Svr  State Resource  PM State
8 RTS_       1   OffL  SVR7 1     SysB
9 OffL_      Size of Posted Set = 2
10 OffL all
11 Server 1: OffL already done.
12 Next      Server 2: OffL failed. Server is not in ManB state.
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18
DONITA
Time 13:07 >
    
```

## Messages

Table 2-11 shows the messages provided by the OFFL command.

**Table 2-11**  
**OFFL messages**

Message	Explanation
OFFL Server <Svr #> Failed. Svr not datafilled in Table C7Server	<p>This warning is issued when a server that is not datafilled in table C7SERVER is specified in the OFFL parameters.</p> <p><b>User action:</b> Datafill the server in table C7SERVER then re-enter the OFFL command, or select an existing datafilled server in table C7SERVER to place offline.</p>
OFFL Failed. Posted set is empty	<p>This warning is issued if the OFFL command is entered without any valid datafilled servers. This is possible if an attempt is made to OFFL a server that has not yet been posted.</p> <p><b>User action:</b> The OFFL command must be re-entered with valid servers.</p>
OFFL Failed. Server is not in ManB state.	<p>This warning is issued if the OFFL command is performed on a posted CCS7 server that is in an in-service state. The CCS7 server must first be busied using the Bsy command prior to being placed offline.</p> <p><b>User action:</b> BSY the INSV server first, and then use the OFFL command to place the server offline.</p>
—sheet 1 of 2—	

**Table 2-11**  
**OFFL messages (continued)**

Message	Explanation
Server OFFL. OFFL already done.	This warning is issued if the OFFL command is entered on a posted CCS7 server that is already in the OFFLined state.  <b>User action:</b> The OFFL command must not be performed on a Server that is already in the OFFLined state.
OFFL Failed. Server is not in MANB state.	This warning is issued if the OFFL command is performed on a posted CCS7 server that is in the SYSB state. The CCS7 server must first be busied using the Bsy command prior to being placed offline.  <b>User action:</b> BSY the SYSB Server first, and then use the OFFL command to place the server offline.
—sheet 2 of 2—	

**QUERYAPP command (MMU only)**

The QUERYAPP command enables the user to display detailed information on the MMU relating to VLR occupancy, number of active calls on the server, workload on the MMU, alarm status, and hypothetical MMU workload.

*Note:* Hypothetical workload occurs when the busiest MMU, in terms of workload, goes out of service, and this MMU workload is distributed among other MMUs in service.

**Syntax**

The command syntax for QUERYAPP is:

**>QUERYAPP <option [Server Number, {1-14}> >]>**  
**[<All Servers> {All}>]**

**Parameters**

Table 2-12 shows the parameters for the QUERYAPP command.

**Table 2-12**  
**QUERYAPP parameters**

Parameter	Value	Definition
server number	{1 to 14}	the Server number of the Server being queried - the Server must be in the posted set
option	server number	query by server number
	ALL	query all servers. All the servers must be in the posted set, else, only posted server will be queried.

**Example**

Figure 2-14 successful response to the QUERYAPP command This example assumes that server 1 is already in the posted set.

**queryapp**

**Figure 2-14**  
**QUERYAPP display**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
RExSch   .      1MPCOS   .      1 FP    1 RSSC   ...      .      SDM +
                               M      *C*

C7Server      CCS7
0 Quit      1 RSSC
2 Post_
3
4                               11111
5                               1234567  8901234
6      Server      0.-.----  -----
7 Bsy_      Svr  State  Resource  PM State
8 RTS_      1   OffL  SVR7 1   ISTb
9 OffL_      Size of Posted Set = 2
10 QueryApp 1
11 Actual Pool-Workload Alarm Status: None
12 Next      Hypothetical Pool-Workload Alarm Status: Crit
13 Virtual MMU VLR Occupancy: 6451
14 QuerySvr      Actual  Alarm  Hyp
15 QueryApp      MMU  VLROcc  CallCount  Workload  Status  Workload
16 QueryTrf      1   5429   567       54       none   68
17 QSvrFlt_
18

DONITA
Time 13:08 >

```

**Messages**

Table 2-13 shows the messages provided by the QUERYAPP command.

**Table 2-13**  
**QUERYAPP messages**

Message	Explanation
QUERYAPP Failed: Posted Set is empty.	There must be a current posted set from which the Server to be queried is selected.  <b>User action:</b> Post the Server to be queried.
QUERYAPP Failed: Server <Svr #> not Posted	The queried Server must be part of the posted set.  <b>User action:</b> Post the Server to be queried.
QUERYAPP Server <Svr #> Failed. Svr not datafilled in Table C7Server.	This message occurs if the QUERYAPP command is entered with a server in the posted set but the server in the posted set is no longer datafilled in the C7SERVER table.  <b>User action:</b> The QUERYAPP command must be re-entered with valid servers.
QUERYAPP is supported for MMU servers only.	The QUERYAPP command applies only to MMU servers as datafilled in table C7SERVER. The server being queried must be datafilled as an MMU server.  <b>User action:</b> The QUERYAPP command must be re-entered with valid MMU servers.

**QSVRFLT command (MMU only)**

This command displays fault information for the MMU server. These faults are the alarm conditions that may exist on the MMU.

**Syntax**

The command syntax for QSVRFLT is:

**>qsvrflt <option [<server number {1-14}> ]>**

### Parameters

Table 2-14 shows the parameters for the QSvrFlt command.

**Table 2-14**  
QSvrFlt parameters

Parameter	Value	Definition
server number	{1 to 14}	the Server number of the Server being queried - the Server must be in the posted set
option	server number	query by server number

### Example

Figure 2-15 shows an example of the QSvrFlt display.

qsrvflt

**Figure 2-15**  
QSvrFlt display

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
RExSch   .      1MPCOS   .      1 FP    1 RSSC   ...      .      SDM +
                               M      *C*

C7Server      CCS7
0 Quit      1 RSSC
2 Post_
3
4                               11111
5                               1234567  8901234
6      Server      0.-.----  -----
7 Bsy_      Svr  State  Resource  PM State
8 RTS_      1    OffL  SVR7 1    ISTb
9 OffL_      Size of Posted Set = 2
10      QSvrFlt
11      Server : 1
12 Next      Maintenance state: OffL
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18

DONTA
Time 13:10 >

```

## Messages

Table 2-15 shows the messages provided by the QSvrFlt command.

**Table 2-15**  
**QSvrFlt messages**

Message	Explanation
QSvrFlt Failed: Posted Set is empty.	There must be a current posted set from which the Server to be queried is selected.  <b>User action:</b> Post the Server to be queried.
QSvrFlt Failed: Server <Svr #> not Posted	The queried Server must be part of the posted set.  <b>User action:</b> Post the Server to be queried.
QSvrFlt Server <Svr #> Failed. Svr not datafilled in Table C7Server.	This message occurs if the QSvrFlt command is entered with a server in the posted set but the server in the posted set is no longer datafilled in the C7SERVER table.  <b>User action:</b> The QSvrFltr command must be re-entered with valid servers.
QSvrFlt is supported for MMU servers only.	The QSvrFlt command applies only to MMU servers as datafilled in table C7SERVER. The server being queried must be datafilled as an MMU server.  <b>User action:</b> The QSvrFlt command must be re-entered with valid MMU servers.

---

# C7SVRACT

---

## C7SVRACT commands

C7SVRACT commands activate and deactivate the CCS7 Server, and display CCS7 Server mapping and status information.

These commands can only be accessed when the product layer defined SOC option is turned ON. A different message is displayed when the C7SVRACT command is invoked at the CI prompt, depending on the SOC state.

If the SOC option is not active, the message shown in [Figure 2-16](#) is displayed when the C7SVRACT command is invoked.

**Figure 2-16**  
**SOC not active**

```
C7SVRACT:
WARNING!
  This CI is SOC protected.
  SOC activation is required to use the commands in this
  CI.
>
```

If the SOC option is active, the message shown in [Figure 2-17](#) is displayed when the C7SVRACT command is invoked.

**Figure 2-17**  
**SOC active**

```
C7SVRACT:
  Commands issued under the C7SVRACT Command Interpreter
  tool
  may affect messages generated by subsystems on this
  node.
  Refer to documentation for correct activation sequence.

  WARNING ! ! ! WARNING ! ! ! WARNING ! ! !
  Improper use of this tool can result in discarded
  CCS7 messages ! ! !

  Type >HELP for a list of commands.
>
```

Table 2-16 lists the C7SVRACT commands.

**Table 2-16**  
**C7SVRACT commands**

Command	Description
ACTIVATE	Activates CCS7 servers.
DEACTIVATE	Deactivates CCS7 servers.
STATUS	Displays CCS7 server activation status.
DISPLAY	Displays CCS7 server mapping information.
HELP	Provides information about C7SVRACT commands.
QUIT	Leaves C7SVRACT and returns to the CI prompt.

#### To access

To access C7SVRACT from the CI environment, enter:

```
>C7SVRACT
```

#### To return to CI

To exit C7SVRACT and return to the CI environment, enter:

```
>QUIT
```

### ACTIVATE command

The ACTIVATE command activates CCS7 Servers on the switch. CCS7 Servers can be activated only if there is datafill in table C7SERVER.

#### Syntax

The command syntax for ACTIVATE is:

```
>ACTIVATE
```

#### Parameters

The ACTIVATE command has no parameters.

#### Example

The example in [Figure 2-18](#) shows the response to the ACTIVATE command when the CCS7 server functionality is already active.

**Figure 2-18**  
**ACTIVATE command issued while already active**

```
C7SVRACT:  
>activate  
The CCS7 Server functionality is active.  
>
```

**Messages**

Table 2-17 shows the messages provided by the ACTIVATE command.

**Table 2-17**  
**ACTIVATE messages**

Message	Explanation
Activation Failed: CCS7 Servers not datafilled	This response indicates that the CCS7 Server function could not be activated because the C7SERVER table has not been datafilled.  <b>User action:</b> Datafill table C7SERVER.
The CCS7 Server functionality is active.	This response indicates that the CCS7 Server function has been activated, or was already active.  <b>System action:</b> The system downloads the activation state to all inservice PMs.
Caution: CCS7 Server Activated, but not downloaded to PMs	This response indicates that the CCS7 Server function has been activated, but that the data could not be sent to the PMs. This response should not be seen as it indicates a problem on the switch.  <b>System action:</b> The system audits the data and detects the mismatch.  <b>User action:</b> Deactivate the CCS7 Server function and attempt to reactivate.

—sheet 1 of 2—

**Table 2-17**  
**ACTIVATE messages (continued)**

Message	Explanation
Activation Failed: Internal Activation Problem	This response indicates that the CCS7 Server function activation was not successful. This response should not be seen as it indicates a problem on the switch.  <b>User action:</b> Contact the next level of support.
Unknown Error The CCS7 Server functionality is active.  OR  Unknown Error The CCS7 Server functionality is not active.	This response indicates that the CCS7 Server function activation was not successful. This response should not be seen as it indicates a problem on the switch.  <b>User action:</b> Contact the next level of support.
—sheet 2 of 2—	

## DEACTIVATE command

The deactivate command deactivates CCS7 Servers on the switch. CCS7 Servers can only be deactivated if all the servers datafilled in table C7SERVER are in the offline state.

### Syntax

The command syntax for DEACTIVATE is:

```
>DEACTIVATE
```

### Parameters

The DEACTIVATE command has no parameters.

### Example

The example in [Figure 2-19](#) shows the response to the DEACTIVATE command when all servers are offline.

**Figure 2-19**  
**DEACTIVATE command issued while active**

```
C7SVRACT:
>deactivate
The CCS7 Server functionality is not active.
>
```

## Messages

Table 2-18 shows the messages provided by the DEACTIVATE command.

**Table 2-18**  
**DEACTIVATE messages**

Message	Explanation
The CCS7 Server functionality is not active.	This response indicates that the CCS7 Server functionality has been deactivated, or was already deactivated.  <b>System action:</b> The system downloads the activation state to all inservice PMs.
Deactivation Failed: CCS7 Servers must all be offline	This response indicates that the CCS7 Server functionality deactivation failed because at least one CCS7 Server is not in the offline state.  <b>User action:</b> Offline all CCS7 Servers from the appropriate MAP level.
Deactivation Failed: CCS7 Servers not datafilled	This response indicates that the CCS7 Server functionality deactivation failed because there were no CCS7 Servers datafilled. This response should not be seen as the CCS7 Server functionality should be deactivated prior to deleting the last tuple from table C7SERVER.
Deactivation Failed: Internal Activation Problem	This response indicates that the CCS7 Server function deactivation was not successful. This response should not be seen as it indicates a problem on the switch.  <b>User action:</b> Contact the next level of support.
Unknown Error The CCS7 Server functionality is active.  OR  Unknown Error The CCS7 Server functionality is not active.	This response indicates that the CCS7 Server function deactivation was not successful. This response should not be seen as it indicates a problem on the switch.  <b>User action:</b> Contact the next level of support.
—end—	

## STATUS command

The STATUS command displays the activation status of the CCS7 Server function.

**Syntax**

The command syntax for STATUS is:

**>STATUS**

**Parameters**

The STATUS command has no parameters.

**Example**

Figure 2-20 shows the response to the STATUS command when the CCS7 server functionality is active.

**Figure 2-20**  
**STATUS command response**

```
C7SVRACT:
>status
The CCS7 Server functionality is active.
>
```

**Messages**

Table 2-19 shows the messages provided by the STATUS command.

**Table 2-19**  
**STATUS messages**

Message	Explanation
The CCS7 Server functionality is active.	This response indicates that the CCS7 Server functionality is active.
The CCS7 Server functionality is not active.	This response indicates that the CCS7 Server functionality is not active.

**DISPLAY command**

The DISPLAY command displays the CCS7 server mapping information used for message routing.

**Syntax**

The command syntax for DISPLAY is:

**>DISPLAY <OPTION> {FULL, SERVER <SVRID> {1 TO 14}, SUBSYSTEM <SSNAME> STRING}**

## Parameters

Table 2-20 shows the parameters for the DISPLAY command.

**Table 2-20**  
**DISPLAY parameters**

Parameter	Value	Definition
FULL	n/a	Displays the full CCS7 Server mapping information.
SERVER	{ 1 to 14 }	Specifies the server number (from table C7SERVER). When the command is issued with this option, only the data for the specified server is displayed.
SUBSYSTEM	String	Specifies the subsystem from table C7LOCSSN. When the command is issued with this option, only the data for the specified subsystem is displayed.

## Example

Figure 2-21 shows an example of DISPLAY command output with the FULL option specified. This response provides the mapping information related to the CCS7 Server on this switch. This mapping shows the relationship between servers, subsystems, and the CCS7 function being used.

**Figure 2-21**  
**DISPLAY FULL example**

```

C7SVRACT:
>display full
Server  Resource  Function  Subsystem
-----
1      SVR7  100    SCCP      800P
1      SVR7  100    SCCP      E800TEST
1      SVR7  100    SCCP      NETRAG
1      SVR7  100    SCCP      CLASS
1      SVR7  100    SCCP      CMS
1      SVR7  100    SCCP      AIN01
2      SVR7  101    SCCP      800P
2      SVR7  101    SCCP      E800TEST
2      SVR7  101    SCCP      NETRA
2      SVR7  101    SCCP      CLASS
2      SVR7  101    SCCP      CMS
2      SVR7  101    SCCP      AIN01
>

```

Figure 2-22 shows an example DISPLAY command output with the SERVER option specified.

**Figure 2-22**  
**DISPLAY SERVER example**

```
C7SVRACT:
>display server 4

Server   Resource   Function   Subsystem|
-----|-----|-----|-----
4        SVR7 103    SCCP      800P
4        SVR7 103    SCCP      E800TEST
4        SVR7 103    SCCP      NETRAG
4        SVR7 103    SCCP      CLASS
4        SVR7 103    SCCP      CMS
4        SVR7 103    SCCP      AIN01
>
```

Figure 2-23 shows an example DISPLAY command output with the SUBSYSTEM option specified. This response provides the mapping information related to the CCS7 Server on this switch for a specific subsystem. This mapping displays the servers that are being used by the specified subsystem for the function indicated.

**Figure 2-23**  
**DISPLAY SUBSYSTEM example**

```
C7SVRACT:
>display subsystem ain01
CCS7 Server information for subsystem: AIN01

Server   Resource   Function
-----|-----|-----
1        SVR7 100    SCCP
2        SVR7 101    SCCP
3        SVR7 102    SCCP
4        SVR7 103    SCCP
5        SVR7 104    SCCP
6        SVR7 105    SCCP
>
```

## Messages

Table 2-21 shows the messages provided by the DISPLAY command.

**Table 2-21**  
**DISPLAY messages**

Message	Explanation
No Servers datafilled in TABLE C7SERVER. No data to display.	This response indicates that there are no servers datafilled in table C7SERVER, therefore, there is no data to display.
Subsystem <subsystem name> is not datafilled in table C7LOCSSN.	This response indicates that the specified subsystem is not datafilled in table C7LOCSSN.

---

## CAPACITY

---

This command is invoked from the MTC MAP level to display the system configuration parameters that affect call processing (on the GSM /UMTS MSC).

### CAPACITY commands

Table 2-22 shows the CAPACITY menu commands and their descriptions.

**Table 2-22**  
**CAPACITY menu commands**

Command	Description
<b>CAPACITY</b>	Displays the capacity measurements for the XA-Core GSM MSC.
<b>PARMS</b>	Displays capacity measurements affecting call processing. Provisioned in the CAPACITY, SCHEDMAP, and DETAIL MAP levels.
<b>SCHEDMAP</b>	Invoked from the CAPACITY MAP level to display the capacity usage of various scheduler classes
<b>DETAIL</b>	Invoked from the CAPACITY MAP level to display information regarding system status, traffic, occupancy and grade of service
<b>STRTLOG</b>	Invoked from CAPACITY MAP to instruct the log system to start generating a Capacity MAP information log.
<b>STOPLOG</b>	Invoked from CAPACITY MAP to instruct the log system to stop generating a Capacity MAP information log.

#### To access

To access CAPACITY from the CI environment, enter

```
>MAPCI;MTC;CAPACITY;
```

#### To return to CI

To exit CAPACITY and return to the CI environment, enter

```
>QUIT ALL
```

### CAPACITY command

This command is invoked from the MTC MAP level to display the capacity measurements for the UCC MSC.

#### Syntax

The syntax for the CAPACITY command is:

>CAPACITY

**Parameters**

None

**Example**

Figure 2-24 shows an example of the CAPACITY MAP display.

**Figure 2-24**  
**CAPACITY MAP display**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Low PE   Clock   .        .        PMLOAD  3C      SPM      8 CC    1 Min
*C*      M
CAPACITY
0 Quit
2 ParmS
3 SchedMap
4 Detail
5
6
7
8
9
10
11
12
13
14
15
16
17 StrtLog
18 StopLog
ADMIN
Time 12:33 >
CATMP/HR SMS/HR VLR UPD/HR CAP  ENGBHCA  OVRLD  PESCL
109260    60    786579    90    453765    OFF    NO

```

**Field descriptions**

Table 2-23 describes the CAPACITY MAP display fields.

**Table 2-23**  
**CAPACITY MAP field descriptions**

Field	Unit	Definition
CATMP/HR	Number	Call attempts per hour.
CAP	Percentage	Ratio of time currently used by payload to the predicted usage at capacity.
—sheet 1 of 3—		

**Table 2-23**  
**CAPACITY MAP field descriptions (continued)**

Field	Unit	Definition
ENGBHCA	Number	Projected engineered call attempts per hour.  Limitations: <ul style="list-style-type: none"> <li>• The accuracy of ENGBHCA prediction is +/- 10%.</li> <li>• When utilization (CAP field in Capacity MAP level) is below 30%, the accuracy of the ENGBHCA prediction is reduced and unreliable.</li> </ul>
OVRLD	Boolean (On/Off)	Central Overload Control indicator for previous minute.
PESC	Boolean (YES/NO)	PE state change indicator from previous minute.
SCHED	Percentage	Scheduling overhead relative to what it should be at capacity.
FORE	Percentage	Operating system overhead relative to what it should be at capacity.
MAINT	Percentage	Maintenance class utilization relative to what has been allocated.
DNC	Percentage	NOSFT class utilization relative to what has been allocated.
AUXCP	Percentage	AUXCP class utilization relative to the office parm AUXCP_CPU_SHARE.
OM	Percentage	Utilization of OM classes relative to what has been allocated.
GTERM	Percentage	GTERM class utilization relative to the office parm GUARANTEED_TERMINAL_CPU_SHARE.
BKG	Percentage	Utilization of background classes relative to what they have been allocated.
NETM	Percentage	Utilization of NETMTC class relative to what has been allocated.
SNIP	Percentage	Utilization of SNIP class relative to what has been allocated.
—sheet 2 of 3—		

**Table 2-23**  
**CAPACITY MAP field descriptions (continued)**

Field	Unit	Definition
Timer	hh:mm:ss	Time remaining until the data monitoring system automatically shuts off.
OAvgDel	ms	Originating Average Delay - weighted average waiting time on CCB origination queue.
95%OLim	ms	95% Origination Limit - the 95% high water mark for the CCB origination queue.
PAvgDel	ms	Progress Average Delay - weighted average waiting time on the CCB progress queue
95%PLim	ms	95% Progress Limit - the 95% high water mark for the CCB progress queue.
BAvgDel	ms	Background Average Delay - weighted average waiting time on the background priority queue.
95%BLim	ms	95% Background Limit - the 95% high water mark for the background priority queue
MAvgDel	ms	Maintenance Average Delay - weighted average waiting time on Maintenance ready queue.
95%MLim	ms	95% Maintenance Limit - the 95% high water mark for the maintenance ready queue
OrigDeny	Number	Number of origination attempts denied due to Origination queueing delay threshold exceeded.
InefDeny	Number	Number of ineffective origination attempts discarded.
LCMdtsr	Number	The percentage of calls delayed by more than three seconds on LCMs, over the total number of calls processed by LCMs.
LMdtsr	Number	The percentage ratio of the number of calls delayed by more than three seconds on LMs, over the total number of calls processed by LMs.

—sheet 3 of 3—

## PARMS command

The functionality of the PARMS command remains the same in all MAP Levels. In this feature, the PARMS command is accessible within the

CAPACITY, SCHEDMAP, and DETAIL MAP levels to display capacity measurements that affect call processing.

**Syntax**

The syntax for the PARMS command is:

>PARMS

**Parameters**

None.

**Example**

Figure 2-25 shows an example of a CAPACITY PARMS display.

**Figure 2-25**  
**CAPACITY PARMS display**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Low PE   Clock    .        .        PMLoad  3C      SPM      8 CC     1 Min
M        M
          *C*      *C*      *C*

PARMS
0 CAPACITY          CATMP/HR SMS/HR VLR UPD/HR CAP ENGBHCA OVRLD PESC
0 Quit             109260   60      786579  90    453765  OFF    YES
2 Parms
3 SchedMap
4 Detail
5
6
7
8
9 Parms
9 Guaranteed_terminal_CPU_Share = 2%
10 AUX CPU Share = 1%
11 CC_EngLevel_Warning_Threshold = 100%
12 NETM share setting = 0%
13 DNC share setting = 3%
14 SNIP share setting = 1%
15 1% CPU allocation = 2142 CATMP/HR
16
17 StrtLog
18 StopLog

ADMIN
Time 12:33 >

```

*Note:* In the previous display, the "1% CPU Allocation" measurement is no longer valid on XA-Core.

## SCHEDMAP command

This command is invoked from CAPACITY MAP level to display capacity usage of scheduler classes.

### Syntax

The command syntax for SCHEDMAP is:

>SCHEDMAP

### Parameters

No parameters

### Example of SCHEDMAP display

Figure 2-26 shows an example of a SCHEDMAP display.

Figure 2-26  
SCHEDMAP display

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
Low PE   Clock   .        .        PLOAD   3C      SPM      8 CC    1 Min
          M
          *C*   *C*   *C*
SCHEDMAP
0 Quit   CATMP/HR SMS/HR VLR UPD/HR CAP ENGBHCA OVRLD PESC
2 ParmS  109260   60      786579   90    453765  OFF    YES
3
4        SCHED FORE MAINT  DNC AUXCP OM GTERM  BKG NETM SNIP
5        85   75   80   66   100  95   50   300  0   20
6
7
8
9
10
11
12
13
14
15
16
17 StrtLog
18 StopLog
ADMIN
Time 12:33 >
```

## DETAIL command

The DETAIL command is invoked from CAPACITY MAP to display traffic and grade of service measurements.

**Syntax**

The command syntax for DETAIL is:

**>DETAIL**

**Parameters**

None

**DETAIL display example**

Figure 2-27 shows an example of a DETAIL display.

**Figure 2-27**  
**DETAIL MAP display**

```

XAC  MS  IOD  Net  PM  CCS      Trks  Ext  APPL
.   .   .   3PSLk 1 NIU  .   .   .   .   .

Detail
0 Quit  CATMP/HR SMS/HR VLR_UPD/HR CAP ENGBHCA OVRLD PESC
2 Pams  1    0    0 2  41 OFF NO
3
4   OAvGDel 95%OLim PAvgDel 95%PLim BAvGDel 95%BLim
5
6
7   MAvgDel 95%MLim OrigDeny InefDeny
8
9
10  DETAIL:
11
12  WARNING:
13  Please be advised that accessing this sub_level utilizes
14  additional CPU time.
15
16
17 StrtLog
18 StopLog

Time 12:24 >

```

**STRTLOG command**

The STRTLOG command is invoked from CAPACITY MAP. It instructs the log system to start generating a Capacity MAP information log.

**Syntax**

The command syntax for STRTLOG is:

**>STRTLOG**

### **Parameters**

Use the following parameters:

- all <number of minutes>
- brief <number of minutes>
- capacity <number of minutes>
- detail <number of minutes>
- schedmap forever

### **STOPLOG command**

The STOPLOG command is invoked from CAPACITY MAP. It instructs the log system to stop generating a Capacity MAP information log.

### **Syntax**

The command syntax for STOPLOG is:

**>STOPLOG**

### **Parameters**

The parameters for STOPLOG include:

- all
- capacity
- detail

## CCS7 Server alarm

### CCS7 Server alarm commands

The following commands are used to display alarm information for the CCS7 server or MMU:

- QUERYALM
- DISALM

#### Access

To access the QUERYALM command from the CI environment, enter

```
>mapci;mtc;ccs
```

To access the DISALM command from the CI environment, enter

```
>mapci;mtc;ccs;ccs7
```

#### Exit

To exit and return to the CI prompt, enter

```
>QUIT ALL
```

### QUERYALM command

The QUERYALM command displays the alarm order for a given MSC system.

#### Syntax

The command syntax for QUERYALM is:

```
>QUERYALM <CCS system > STRING
```

#### Parameters

[Table 2-24](#) shows the parameter for the QUERYALM command.

**Table 2-24**  
**QUERYALM parameter**

Parameter	Value	Definition
CCS system	STRING	A defined CCS System (for example, CCS7)

#### Example

The example in [Figure 2-28](#) shows CCS7 server alarms in the QUERYALM response.

**Figure 2-28**  
**QUERYALM example**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
RExSch   .      1MPCOS   .      1 FP    1 RSSC   ...      .      SDM +
          *C*    *C*

CCS
0 Quit
2
3 CCS7
4
5
6
7
8
9
10
11
12
13
14 QueryAlm
15
16
17
18

DONITA
Time 13:11 >

          CCS7
          1 RSSC
          QueryAlm ccs7
          CRITICAL
          -----
          SVR RTESET Default
          MAJOR
          -----
          SVR LKSET RTESET Default
    
```

**DISALM command**

The DISALM displays alarm status. For the CCS7 server, this information includes the state of the CCS7 Server and which servers are unavailable.

**Syntax**

The command syntax for DISALM is:

```

>DISALM <option [<Alarm string>],
      [<All alrms> {ALL}] >
    
```

**Parameters**

Table 2-25 shows the parameter for the DISALM command.

**Table 2-25**  
**DISALM parameter**

Parameter	Value	Definition
Alarm	STRING	For the CCS7 server, values include: <ul style="list-style-type: none"> <li>• SVRC—Server critical alarm</li> <li>• SVRM—Server major alarm</li> <li>• ALL—All alarms</li> </ul>

## Responses

If the DISALM command is issued with SVRC, SVRM, or ALL specified, and all datafilled servers are available or the CCS7 server is not activated in the office, a message indicating that there is no alarm of this type is displayed.

If the DISALM command is issued with SVRC, SVRM or ALL specified, and the CCS7 server is presently in that alarm state, the heading is displayed along with the information corresponding to the unavailable servers (see the example in [Figure 2-29](#)).

The first line indicates the Server alarm type. Note that this alarm is the overall state of routing and does not apply to individual servers. The next line is a header line. Headings include:

- C7Server—server number that is assigned in Table C7Server. The servers are displayed in the same order as they appear in table C7SERVER.
- Resource—hardware associated with the server.
- Stat—state of the resource.

[Figure 2-30](#) shows the alarm state of the alarm MMU Server and the workload status. The first line indicates the Server alarm type. The next line is a header line. The MMU column contains the server number that is assigned in table C7Server and the peripheral name and node number. The Workload column indicates the workload of the server. The Alarm field displays the severity of the alarm. The servers are displayed in the same order as they appear in table C7Server. This example also displays overloading of the MMU pool and hardware sparing violation alarms.

If this response occurs, check any MMU servers that are currently unavailable and return them to service. In the case of SVR7s, post the SVR7s using the PM level of the MAP and return the SVR7 to service.

**Note:** The response varies depending on the command parameters. All the CCS7 alarms can be displayed or the specific alarm (in this example, the CCS7 Server alarms) can be specified as follows:

>DiSalm

>DiSAlm All

>DisAlm SVRC

>DisAlm SVRM

The SVRC alarm is raised in the following overload conditions on the MMU:

- Workload (CP Occupancy) of the individual MMU server or the MMU server pool is in the range of 91-100.
- Workload of the MMU pool (average workload per MMU) is in the range of 91-100.

The SVRC alarm is not based on any timer. The workload is lowered under the following conditions:

- Workload of the individual MMU server or the MMU server pool is less than or equal to 90.
- Workload of the MMU pool is less than or equal to 90.

The SVRM alarm is raised in the following overload conditions on the MMU:

- Workload (CP Occupancy) of the individual MMU server or the MMU server pool is in the range of 71 - 90.
- Workload of the MMU pool (average workload per MMU) is in the range of 71-90.
- Minimum hardware sparing is violated for MMU servers (only one of the MMUs is InSv).

This alarm is not based on a timer. However, the alarm is lowered under the following conditions:

- Workload of the individual MMU server or the MMU server pool is less than or equal to 70.
- Workload of the MMU pool is less than or equal to 70.
- More than one MMU is InSv.

### **Example**

The example in [Figure 2-29](#) shows DISALM output for the CCS7 server SVRM alarm.

**Figure 2-29**  
**DISALM example**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
RExSch   .      1MPCOS   .      1 FP   1 RSSC   ...      .      SDM +
          *C*   *C*

CCS7
0 Quit          1 RSSC
2 DisAlm       DisAlm
3 C7RteSet    C7Routeset    Alm Stat
4 C7LkSet     C7Linkset     Alm Stat
5 SCCPRPC     C7Link        Alm Stat
6 SCCPLoc     No PCC alarms
7             No PC  alarms
8 C7Router    No LSSC alarms
9 C7Server    Subsystem     Alm Stat
10           MAP          MAPLIDBQ     RSSC INI
11           No LSSM alarms
12           No RTRC alarm
13           No RTRM alarm
14           No SVRC alarm
15
16 C7MSUVER   CCS7 Server Alarm: SVRM
17           Hardware Sparing Violation.
18

DONITA    MMU      Workload    Alarm
Time 13:12 >
    
```

The example in [Figure 2-30](#) shows DISALM output for the MMU server.

**Figure 2-30**  
**DISALM output for MMU server**

```
CM      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
CM Flt  RExByp .          .          1GSMP  10  RS          1  CC          .
M
CCS7
0 Quit          10  RSC
2 DisAlm
3 C7RteSet
4 C7LkSet
5 SCCPRPC
6 SCCPLoc
7
8 C7Router CCS7 Server Alarm:  SVRM
9 C7Server  MMU      Workload      Alarm
10          4 SVR 7      4          85          Major
11          6 SVR 7      6          72          Major
12          MMU Pool      82          Major
13
14          CCS7 Server Alarm:  SVRC
15          MMU      Workload      Alarm
16 C7MSUVER  3 SVR 7      3          91          Crit
17
18
CMAP11
Time 12:09 >
```

# CICTEST

The CICTEST tool is used to enable/disable the CIC Isolation tool and to isolate certain CICs on the A-interface that are reserved for test mobiles during network upgrades. The command in the tool can be used to test the packet fabric.

## CICTEST command

CICTEST

### Syntax

> cictest  
Type HELP to display all available commands  
CICTEST:

> help

The CICTEST CI tool is used to turn ON/OFF the CIC Isolation Tool. This tool is used to isolate A-interface CICs from the Voice pool for testing.

### Available CICTEST subcommands:

```

-----
ON                : Turns ON the CIC Isolation Tool
OFF               : Turns OFF the CIC Isolation tool
ADD <routeset><cic> : Isolates the given CIC
DELETE <routeset><cic> : Deletes the isolated CIC
DISPLAY           : Displays the test resources
HELP              : display this help
QUIT              : exits CICTEST

```

### Exit

To return to the MAPCI, enter:

QUIT ALL

### Parameters

Table 2-26 provides the CICTEST ADD subcommand parameter.

Table 2-26  
CITTEST ADD subcommand parameter

Parameter	Value	Definition
[<routeset> <cic>]	[STRING {0–16383}]	This parm isolates the given CIC from the Voice pool.

### Responses for ADD command

The following table provides the responses for the CICTEST ADD command:

**Table 2-27**  
**Responses to CICTEST ADD command**

Command	Response
cictest add bssp1cp 3	The given routeset and CIC have been successfully isolated from the Voice pool for test calls. The given routeset and CIC are already isolated. Given CIC is not IDLE. CIC could not be found in the voice pool. Either no GSM trunks are datafilled for this PC or no signaling link is available. No trunks have been datafilled for this point code. No resource available for the given routeset-CIC combination.

#### Explanation

Setting the parm to ADD isolates the specified routeset and CIC for test calls. Only 4 CICs can be isolated at a time for the testing. This tool only isolates A-interface based CICs. The following message is displayed when the operator attempts to isolate an Iu-interface CIC - “Attempting to isolate Iu Interface CICs. This tool only isolates A-interface CICs.”

#### Action

When the specified routeset-CIC combination cannot be isolated, the user must retry or datafill another CIC.

[Table 2-28](#) provides the CICTEST DELETE subcommand parameter.

**Table 2-28**  
**CITTEST DELETE subcommand parameter**

Parameter	Value	Definition
[<routeset> <cic>]	[STRING {0–16383}]	This parm returns the given CIC to the Voice pool.

### Responses to DELETE command

The following table provides the responses to the CICTEST DELETE command:

**Table 2-29**  
**Responses to the CICTEST DELETE command**

Command	Response
delete bssp1cp 3	The given routeset-CIC combination has not been isolated for test calls.  The given CIC has been returned to the Voice pool for non-test calls.  Unable to return the CIC to the Voice pool. CIC is not IDLE.
delete bs2scp 3	Routeset name is invalid!!!

**Explanation**

Setting the parm to DELETE deletes the specified routeset and CIC from the table. This command returns the CIC to the Voice pool, to be used for non-test calls. When the last set of isolated routeset-CIC combination is deleted, the CIC Isolation tool is turned OFF and the information is passed down to the MMUs. The warning message is displayed “The last set of isolated routeset-CIC combination is deleted. CIC Isolation tool is turned OFF”

**Action**

Not applicable.

**Response to DISPLAY command**

Table 2-30 provides the response to the CICTEST DISPLAY command:

**Table 2-30**  
**Response to the CICTEST DISPLAY command**

Command	Response
display	The test resources reserved for the CIC Isolation tool are displayed below.

**Explanation**

Setting the parm to DISPLAY gives a summary of all the test resources reserved for the CIC Isolation tool.

**Action**

Not applicable.

**Responses for ON command**

> cictest

Type **HELP** to display all available commands

CICTEST:

> on

**Table 2-31**  
**Responses to the CICTEST ON command**

Command	Response
ON	The CIC Isolation Tool is turned ON  CIC Isolation tool is already ON, no change is made.  The CIC Isolation tool is turned ON.  CIC Isolation tool status is not updated in the MMUs.  The CIC Isolation tool is turned ON.

**Explanation**

Setting the parm to ON turns ON the CIC Isolation tool. Whenever the CIC Isolation tool is turned ON, the information is passed down to the MMUs.

**System Action**

N/A

**User Action**

N/A

**Responses for OFF command**

>cictest

Type **HELP** to display all available commands

CICTEST:

>off

**Table 2-32**  
**Responses to the CICTEST OFF command**

Command	Response
OFF	The CIC Isolation tool is turned OFF  CIC Isolation tool is already OFF, no change is made.  The CIC Isolation tool is turned OFF.  CIC Isolation tool status is not updated in MMUs.  The CIC Isolation tool is turned OFF.

**Explanation**

Setting the parm to OFF turns OFF the CIC Isolation tool. Whenever the CIC Isolation is turned OFF, the information is passed down to the MMUs.

**System Action**

N/A

**User Action**

N/A

---

## CIMTC

---

Call Intercept Maintenance (CIMTC) is a tool on the MAP level on the GSM MSC that enables *authorized* switch users to check the status of the connection and the buffer system.

### CIMTC command

CIMTC

#### Accessing CIMTC

To access CIMTC from the CI prompt, the accessing directory is PROGDIR. Enter the following command:

```
CI> CIMTC
```

#### Exiting CIMTC

To exit CIMTC, enter the following command and press return:

```
CIMTC> QUIT
```

#### Commands

The following commands are available to all *authorized* users:

- ‘Status’ is available to display:
  - the status of the TCP/IP connection to the SuperNode Data Manager (SSDM), and
  - the status and results of the buffering system.
- ‘Buffer’ is available to ensure that all CNR traffic is buffered during scheduled maintenance. It immediately activates CNR buffering. This command should be executed on the MSC prior to starting the GEM upgrade procedure on the SDM. Buffering of CNRs will continue for up to 12 hours, or at least until the ‘Transmit’ command is executed.

**Note:** You can receive the following warning messages:

- *The CI background process will be unavailable for 12 hours, but can be manually reactivated (on 20 minute intervals) using the CIMTC TRANSMIT command. This means that no CNRs stored in the CIBuffer system will be transmitted to the SDM ....*
- *WARNING: The BUFFER command was run less than 12 hours prior*  
*WARNING: is issuing this BUFFER command. The CI background*  
*WARNING: process and the BUFFER command will not be available*  
*WARNING: until the 12 hours has expired.*

**\*\*\*WARNING\*\*\****The office parameter TABLE OFCVAR; POS CI\_*

*\*\*\*WARNING\*\*\*CNR\_BUFFERING is set to not buffer CNRs  
\*\*\*WARNING\*\*\*generated from call processing and datafill  
\*\*\*WARNING\*\*\*changes....*

Change the tuple to Y, and the warning does not appear. For example,  
**buffer command with tuple set to Y \$**

- ‘Transmit’ is available to begin transmission of CNRs (again) to the SDM. Once executed, the MSC can delay transmission for up to 20 minutes.
- ‘Test’ is available to test transmission of CNRs to the SDM, and finally the Call Center. This command can be used to verify that all network components are ‘ready’ to flush the buffered CNRs to the SDM.
- ‘Save’ is available to save the currently buffered CNRs to disk. The data saved is encrypted and not readable by common users.
- ‘Load’ is available to load CNRs from disk into the buffer system.
- ‘Compare’ is available to compare two DN’s (dialed numbers) using the connected party verification algorithm and datafill in table OFCVAR; post CI\_CONNECTED\_PARTY\_VERIFICATION.
- ‘Help’ provides help on that particular topic.
- ‘Quit’ is available to quit/leave the CIMTC directory.

## Syntax

The command syntaxes are:

- ‘Status’
- ‘Buffer’
- ‘Transmit’
- ‘Test <imsi\_keyid> <gcallint\_table\_idx>’
- ‘Save <volumename> <filename>’
- ‘Load <volumename> <filename>’
- ‘Compare <DN> <DN>’
- ‘Help’
- ‘Quit’

## Response

An example of the ‘Status’ command response follows:

```
2000/02/21 09:58 GSM09BK_7SAN_AB05
CIMTC:
>status
```

```
STORE ALLOCATED: Y MAX_B_IX: 95 MAX_E_IX: 32767  
W_B_IX: 0 W_E_IX: 25874 R_B_IX: 0 R_E_IX: 21446 BUFFERS: 6
```

```
SDM Call Intercept Connection Status:  
Connection Status = [DTA_ESTABLISHED_CONN]  
Sending Status    = [BUFFERING]
```

```
Retry Queue For Queued CNRs (Result = 0 is normal  
transmission):  
Result [0] = [0]  
Result [1] = [0]  
Result [2] = [0]  
Result [3] = [0]
```

**Note 1:** The ‘Buffers:’ field indicates how many buffers are stored in the system.

**Note 2:** The ‘Connection Status =’ field indicates the TCP/IP connection status (an indication of ‘DTA\_ESTABLISHED\_CONN’ indicates that the connection is established).

**Note 3:** The ‘Sending Status =’ field indicates the status of the buffer system (buffering/transmission).

**Note 4:** The ‘Result [x] =’ fields indicate the results of up to the last 20 attempts to send CNRs from the buffer system.

---

# CRDBC

---

## CRDBC directory

CRDBC is a MAPCI level that allows you to access and display information about the Call Reference Database Command Interface system.

The CRDBC MAPCI level has one set of overriding commands and two databases, each with its own set of commands. The two databases are the Call Reference Data Base (CRDB) and the Call Element Data Base (CEDB). CEDB actually is a sub-database of CRDB.

### Accessing CRDBC

To access the CRDBC MAP level from the CI prompt, type the following command and press return:

```
>crdbci  
CRDBC:
```

After entering the CRDBC directory, the CRDBC: directory prompt displays until the tool is exited by typing QUIT and pressing return.

### Commands

The following CRDBC commands enable operating company personnel to perform maintenance to the CEDB and CRDB:

- DISPLAY\_ALL
- HELP
- RESET
- RUN\_AUDIT
- QUIT

## DISPLAY\_ALL command

This command displays all call reference and call element information in the CRDB and the CEDB.

### Syntax

The command syntax for DISPLAY\_ALL is:

```
>display_all
```

### Example

[Figure 2-31](#) shows the DISPLAY\_ALL command being used to manually verify a call reference exists in the CRDB.

**Figure 2-31**  
**Example of the DISPLAY\_ALL command**

```
CRDBCI:
> display_all
  FPF object:
  =====
class: CALL_REFERENCE_DATABASE_CLASS
address: 065B0240 (CRDB)
CALL REFERENCE DATABASE (CRDB)
CRDB tuples: 2 out of 2 tuples in use

  FPF object:
  =====
class: CALL_ELEMENT_DATABASE_CLASS
address: 0198013C (CRDB)
CALL ELEMENT DATABASE (CEDB)
CEDB tuples: 2 out of 2 tuples in use

bucket[127]

Call reference: InUse(YES) Audited(NO)
  callid:   cptlbind=0123 seqno=001F, low=23 mid=01 high=DF
  point_code:member=1 cluster=103 network=69
>
  call element: InUse(YES) Audited(NO) Owner(87654321)
```

### **Error messages**

The following error messages may display when the DISPLAY\_ALL command is used:

```
Call Reference Database is not created.
Please datafill the CRDB_MAX_SIZE in table OFCVAR.
```

### **Help command**

There are two types of help available. The first type of help lists all the commands from the CRDBCI prompt. The syntax to list all the available CRDBCI commands is:

```
CRDBCI:  
>help crdbci
```

The second type of help provides assistance in performing a particular CRDBCI command. The syntax for help with a particular CRDBCI command is:

```
CRDBCI:  
>help <Command Name>
```

## RESET command

This command manually re-initializes all call reference and call element tuples in the CRDB and CEDB.

### Syntax

The command syntax for RESET is:

```
>reset
```

### Example

Figure 2-32 shows the RESET command being used to manually reset the CRDB and CEDB.

**Figure 2-32**  
Example of the RESET command

```
CRDBCI :  
> reset  
Initializing Call Reference Database  
& Call Element Database.  
>
```

### Error messages

The following error messages may display when the RESET command is used:

```
Call Reference Database is not created.  
Please datafill the CRDB_MAX_SIZE in table OFCVAR.
```

```
Call Element Database is not created.  
Please datafill the CEDB_MAX_SIZE in table OFCVAR.
```

## RUN\_AUDIT command

This command manually runs the audit procedures through the CRDB and the CEDB. When the CRDB and the CEDB are created, the audit process occurs automatically every three hours. However, when a manual audit is initiated, this procedure runs in addition to the automatic procedure.

### Syntax

The command syntax for RUN\_AUDIT is:

```
>run_audit
```

### Example

Figure 2-33 shows the RUN\_AUDIT command being used to manually run the audit procedure through the CRDB and CEDB.

**Figure 2-33**  
**Example of the RUN\_AUDIT command**

```
CRDBCI:  
> run_audit  
>
```

### **Error messages**

The following error messages may display when the RUN\_AUDIT command is used:

Call Reference is not found in CRDB.

Call Reference Database is not created.  
Please datafill the CRDB\_MAX\_SIZE in table OFCVAR

Call Element Database is not created.  
Please datafill the CEDB\_MAX\_SIZE in table OFCVAR

### **QUIT command**

This command quits the CRDBCI directory and returns to the CI prompt.

#### **Syntax**

The command syntax for QUIT is:

```
CRDBCI:  
>quit
```

### **CRDB commands**

The CRDB commands enable operating company personnel to display and manipulate data and tuples in the Call Reference DataBase. The CRDB commands include:

- DELETE\_CR—removes a tuple from the CRDB.
- DISP\_CR\_CHAIN—which displays a chain of call element tuples.
- DISP\_CR\_STORE—which displays all call elements in CRDB.
- DISP\_CR\_TUPLE—which displays a call reference tuple.
- INSERT\_CR—which inserts a tuple into the CRDB.
- RETRIEVE\_CR—which retrieves a tuple from the CRDB.

#### **Syntax**

The syntax for *all* CRDB commands is:

```
<CRDB Command Name>  
PARAM: <Call Identification> <Point Code>
```

**Parameters**

Two parameters are acceptable input for *all* CRDB commands. [Table 2-33](#) describes these parameters.

**Table 2-33**  
**CRDB command parameters**

Parameter	Value	Definition
<Call Identification>	000000 to FFFFFFFF	Identifies the call.
<Point Code>	00000000 to FFFFFFFF	Indicates the point code.

**Example**

[Figure 2-34](#) shows a CRDB command being used to manually verify that a call reference exists in the CRDB.

**Figure 2-34**  
**Example of a CRDB command**

```

CRDBCI:
>retrieve_cr 01AD47 0123FE67
>
    
```

**Error messages**

[Table 2-34](#) lists CRDB commands and their possible error messages.

**Table 2-34**  
**CRDB commands and error messages**

Error message	Command					
	INSERT_CR	RETRIEVE_CR	DELETE_CR	DISP_CR_TUPLE	DISP_CR_CHAIN	DISP_CR_STORE
Call Reference database is full - No Insert.	X					
Call Reference is not found in CRDB.		X	X	X	X	
—sheet 1 of 2—						

**Table 2-34**  
**CRDB commands and error messages (continued)**

Error message	Command					
	INSERT_CR	RETRIEVE_CR	DELETE_CR	DISP_CR_TUPLE	DISP_CR_CHAIN	DISP_CR_STORE
Call Reference Database is not created. Please datafill the CRDB_MAX_SIZE in table OFCVAR.	X	X	X	X	X	X
—sheet 2 of 2—						

### **CEDB commands**

The CEDB commands enable operating company personnel to display and manipulate data and tuples in the call element database. The CEDB commands include:

- DELETE\_CE, which removes a tuple from the CEDB.
- DISP\_CE\_CHAIN, which displays a chain of call element tuples.
- DISP\_CE\_STORE, which displays all call elements in the CEDB.
- DISP\_CE\_TUPLE, which displays a call element tuple.
- INSERT\_CE, which inserts a tuple in the CEDB.
- RETRIEVE\_CE, which retrieves a tuple from the CEDB.

### **Syntax**

The syntax for *all* CEDB commands is:

**<CEDB Command Name>**  
**parm: <Call Identification> <Point Code> <Call Element>**

**Parameters**

Three parameters are acceptable input for *all* CEDB commands. [Table 2-35](#) lists and defines these parameters.

**Table 2-35**  
**CEDB command parameters**

Parameter	Value	Definition
<Call Identification>	000000 to FFFFFFFF	Identifies the call.
<Point Code>	00000000 to FFFFFFFF	Indicates the point code.
<Call Element>	00000000 to FFFFFFFF	Indicates the FPF_RTS pointer.

**Example**

[Figure 2-35](#) shows a CEDB command being used to manually insert a call element into the CRDB.

**Figure 2-35**  
**Example of a CEDB command**

```

CRDBCI :
>insert_ce 33AD47 0123FE68 87654321
>
    
```

**Error messages**

[Table 2-36](#) lists CEDB commands and their possible error messages.

**Table 2-36**  
**CEDB commands and error messages**

Error message	Command					
	INSERT_CE	RETRIEVE_CE	DELETE_CE	DISP_CE_TUPLE	DISP_CE_CHAIN	DISP_CE_STORE
Call Element database is full - No Insert.	X					
Call Element is not found in CEDB		X	X	X	X	
Call Reference is not found in CRDB.	X	X	X	X	X	
—sheet 1 of 2—						

**Table 2-36**  
**CEDB commands and error messages (continued)**

Error message	Command					
	INSERT_CE	RETRIEVE_CE	DELETE_CE	DISP_CE_TUPLE	DISP_CE_CHAIN	DISP_CE_STORE
Call Reference Database is not created. Please datafill the CRDB_MAX_SIZE in table OFCVAR.	X	X	X	X	X	X
Call Element Database is not created. Please datafill the CEDB_MAX_SIZE in table OFCVAR.	X	X	X	X	X	X
—sheet 2 of 2—						

# GBICCCI

The GBICCCI directory is an existing Succession Command Interface (CI) tool that is based upon the ISUPCI tool. The GBICCCI tool is a collection of BICC signaling/DPT trunk debug tools or commands. These commands are packaged in both resident (available in general customer release loads) and non-resident loads (available only to TAS and internal labs).

## GBICCCI commands

The GBICCCI directory commands include:

- CICRGECHECK
- DISPMEMSIZE
- DISPSTAT
- DISPRTDEST
- DISPMTC
- DISPTIDINFO
- DISPTRKGRP
- DISPCICRNG
- DISPCICSTATES
- DISPCICSTAT
- HELP
- QUIT

### Commands

[Table 2-37](#) lists the GBICCCI level commands.

**Table 2-37**  
**GBICCCI menu commands**

Command	Description
CICRGECHECK	Displays conflicting CIC ranges/trunks with given CIC range, if any.
—end—	

**Table 2-37**  
**GBICCCI menu commands (continued)**

DISPMEMSIZE	Displays the total amount of memory used for storing GBCIC tuple data and the associated CIC maintenance loads.
DISPSTAT	Displays information for several or only one BICC routesets.
DISPRTDEST	Displays routeset and destination status for all or only one BICC routeset.
DISPMTC	Displays the CIC maintenance state.
DISPIDINFO	Displays CIC and LTID information.
DISPTRKGRP	Displays the Trunk Group for the routeset and CIC.
DISPCICRNG	Displays the CIC ranges for one or all routesets.
DISPCICSTATES	Displays the CIC states for a BICC Trunk Group.
DISPCICSTAT	Displays the CIC state stats for a routeset.
HELP	Displays the help.
QUIT	Quits to the CI level.
—end—	

**To access**

To access GBICCCI from the CI environment, enter:

**>MAPCI;MTC;GBICCCI**

**To return to CI**

To exit GBICCCI and return to the CI level, enter:

**>QUIT ALL**

**CICRGECHECK command**

The CICRGECHECK command displays conflicting CICranges/trunks with given CIC range, if any.

**Syntax**

**CICRGECHECK ROUTESET FIRST\_CIC\_LAST\_CIC**

## Parameters

The parameters for the **CICRGECHECK** command is described in [Table 2-38](#).

**Table 2-38**  
**CICRGECHECK parameter**

Parameter	Value	Description
ROUTESET	String	Routeset from table C7RTESET Mandatory parameter
FIRST_CIC	Unsigned Double INT => {0 to 4,294,967,295}	First CIC value within the range to be checked. Mandatory parameter
LAST_CIC	Unsigned Double INT => {0 to 4,294,967,295}	Last CIC value within the range to be checked. Mandatory parameter

## Responses

1. The proposed range is invalid: FIRST\_CIC > LAST\_CIC

```
>CICRGECHECK P7LINKP 6 5
** ERROR:    first cic > last cic **
** Please enter valid cic values. **
```

2. The proposed range is invalid: Illegal CIC values:

```
>CICRGECHECK P7LINKP f f
Wrong type: <FIRST CIC> {0 TO 4294967295}
Enter: <FIRST CIC> <LAST CIC>
```

3. None of the CICs in the proposed range are used elsewhere:

```
>CICRGECHECK mgwisup 30000 34000
GBCIC  trk          FIRST CIC    LAST CIC
-----
ALL GBCIC CICS ARE AVAILABLE

C7TRKMEM trk          CIC
-----
ALL C7TRKMEM CICS ARE AVAILABLE
DONE
```

4. Some CICs in the proposed range are used by other trunks:

```
CICRGECHECK RTESET1 10 900
GBCIC  trk          FIRST CIC    LAST CIC
-----
ANSIOUT                10          23
BSS1AP                  50          70
BSS2AP                  75          75
BICCTK1                 100         200

C7TRKMEM trk          CIC
-----
BICCTK2                  1
BICCTK2                  2
BICCTK2                  3
BICCTK2                  4
BICCTK2                  5
BICCTK2                  6
DONE
```

## Explanation

The command `CICRGECHECK` verifies that its last two arguments verify the relation `FIRST_CIC ≤ LAST_CIC`. If not, a message displays to that effect. Similarly, a check is made on the routeset to ensure that it exists. If not, an invalid routeset message is relayed to the user.

When given a valid routeset and a valid pair of CIC values, the command scans tables `GBCIC` and `C7TRKMEM` in their entirety and produces one display line per conflicting CIC sequence.

---

The information displayed is defined as follows:

- TRUNK - CLI name of a conflicting trunk
- TYPE - Trunk type: {BICC, ISUP}. If the type is BICC, the trunk can be found in table GBCIC, otherwise it is defined in C7TRKMEM.
- CICS - Conflicting CIC sequence within TRUNK: CIC1 TO CIC2, where  $CIC1, CIC2 \leq 4,294,967,295$

**System action**

None

**User action**

None

### Examples

The following is an output example of the CICRGECHECK command.

1. *The proposed routeset is invalid:*

Duplicate precisely the format viewed by the user at the MAP.

```
>CICRGECHECK INVRSET 40 50
** INVALID ROUTESET **
```

2. *The proposed range is invalid: [RST\_CIC >LAST\_CIC :*

```
>CICRGECHECK RTESET1 70 50
** ERROR: first cic > last cic **
** Please enter valid cic values. **
```

3. *The proposed range is invalid: Illegal CIC values:*

```
>CICRGECHECK P7LINKP f f
Wrong type: <FIRST CIC> {0 TO 4294967295}
Enter: <FIRST CIC> <LAST CIC>
```

4. *None of the CICs in the proposed range are used elsewhere:*

```
>CICRGECHECK mgwisup 30000 34000
GBCIC trk      FIRST CIC  LAST CIC
-----
DONE
ALL CICS ARE AVAILABLE.
```

```
>CICRGECHECK P7LINKP 9000 9009
C7TRKMEM trk      CIC
-----
DONE
ALL CICS ARE AVAILABLE
```

```
>CICRGECHECK map 4 49
DONE
ALL CICS ARE AVAILABLE
```

5. *Some CICs in the proposed range are used by other trunks:*

```
>CICRGECHECK RTESET1 10 900
GBCIC trk      FIRST CIC LAST CIC
ANSIOUT          10         23
BSSP1AP          50         70
BSSP2AP          75         75
BICCTK1         100        200
```

<u>C7TRKMEM</u> trk	<u>CIC</u>
BICCTK2	1
BICCTK2	2
BICCTK2	3
BICCTK2	4
BICCTK2	5
BICCTK2	6

DONE

## DISPMEMSIZE command

Displays the total amount of memory used for storing GBCIC tuple data and the associated CIC maintenance information.

### Parameters

None

### Responses

>DISPMEMSIZE  
N Byte

>DISPMEMSIZE  
N KByte

>DISPMEMSIZE  
N MByte

The command DISPMEMSIZE examines all the GBCIC related data structures and computes the total amount of memory consumed by these structures. The result is displayed in bytes, Kbyte, or Mbytes.

*Note:* 1 Kbyte =  $2^{10}$  bytes = 1024 bytes, 1 Mbyte = 1024 Kbytes

Below is an example of DISPMEMSIZE output.

```
>DISPMEMSIZE
1011 Kbyte
```

```
>DISPMEMSIZE
21 Mbyte
```

## DISPSTAT command

Enter the DISPSTAT command with a BICC routeset name to display the information corresponding to that particular routeset. If no such BICC routeset exists, then an error message displays.

The information displayed is defined as follows:

- BICC ROUTESET NAME—String
- SIGNAL STATUS—Signaling Available Status: {AVAIL, UNAVAIL}

- INIT STATUS—Initialization Status: {UNINIT, INIT, INITNG}
- CONGEST—Congestion level: {0 to 3}
- CHANGE REQUEST—Outstanding Change Request: {Y, N}
- LAST CIC PROCESSED—Last CIC processed on this routeset: 0 to 4,294,967,295}

**Note:** A routeset must have at least one corresponding trunk group datafilled in table GBCIC in order for it to be considered a BICC routeset.

Entering the DISPSTAT command without a BICC routeset name displays information for all the BICC routesets. In the event that no BICC routesets exist, only the headers are displayed.

### Parameters

The parameter for the DISPSTAT command is described in [Table 2-39](#).

**Table 2-39**  
**DISPSTAT parameter**

Parameter	Value	Description
BICC Routeset Name	String	Name of the BICC routeset for which information is to be displayed. A routeset must have at least one corresponding trunk group datafilled in table GBCIC in order for it to be considered a BICC routeset.  Optional parameter.

### Example

The following output example shows a successful response to the DISPSTAT command using the BICC routeset name parameter:

```
>DISPSTAT
  BICC          SIGNAL  INIT          CHANGE  LAST CIC
  ROUTESET NAME STATUS  STATUS  CONGEST  REQUEST  PROCESSED
  BICCRTST1    AVAIL  INIT      0         N        11257
  BICCRTST2    AVAIL  INIT      0         N        455
```

### DISPRTDEST command

Enter the DISPRTDEST command without a BICC routeset name to display information for all the BICC routesets. In the event that no BICC routesets exist, then only the headers are displayed.

Enter the DISPRTDEST command with a BICC routeset name displays the information corresponding to that particular routeset. If no such BICC routeset exists, then an error message displays.

The information displayed is defined as follows:

- BICC ROUTESET NAME—String
- RTESET SIGNAL—Signaling Available Status for the Routeset: {AVAIL, UNAVAIL}
- RTESET CONG—Congestion level for the Routeset: {0 to 3}
- DEST SIGNAL—Signaling Available Status for the Destination: {AVAIL, UNAVAIL}
- DEST CONG—Congestion level for the Destination: {0 to 3}
- CHANGE REQUEST—Outstanding Change Request: {Y, N}

*Note:* A routeset must have at least one corresponding trunk group datafilled in table GBCIC for it to be considered a BICC routeset.

**Syntax**

**DISPRTDEST <BICC Routeset Name>**

**Parameters**

The parameter for the DISPRTDEST command is described in [Table 2-40](#).

**Table 2-40**  
**DISPRTDEST parameter**

Parameter	Value	Description
BICC Routeset Name	String	Name of the BICC routeset for which information is to be displayed. A routeset must have at least one corresponding trunk group datafilled in table GBCIC in order for it to be considered a BICC routeset.  Optional parameter.

**Example**

The following example shows the DISPRTDEST command output.

```
>DISPRTDEST
BICC          RTESET      RTESET      DEST      DEST      CHANGE
ROUTESET NAME SIGNAL      CONG      SIGNAL    CONG      REQUEST
BICCRTST1    AVAIL        0         AVAIL     0         N
BICCRTST2    AVAIL        0         AVAIL     0         N
```

## DISPMTC command

This command displays the Near End (NE) and Far End (FE) CIC maintenance states for a given trunk group and CIC.

The response for this command provides the Near End (NE) and Far End (FE) maintenance states for the CIC.

If the trunk CLLI is invalid, the trunk CLLI is not associated with routeset (not datafilled in table ISUPDEST) or the trunk group and/or CIC is invalid (not datafilled in table GBCIC), an error message will be displayed (see examples below).

The possible NE and FE CIC maintenance states outputs include:

```
CIC NE MTC STATE: { IDLE, OFFLINE, BLK_P_ACK, BLK,  
                   UBLK_P_ACK, CPB_P_BLK, UNEQ_P_ACK }  
CIC FE MTC STATE: { IDLE, UNEQ, BLK }
```

### Syntax

**DISPMTC <Trunk Group> <4 Byte CIC>**

### Parameters

The parameters for the DISPMTC command are described in [Table 2-41](#).

**Table 2-41**  
**DISPMTC parameters**

Parameter	Value	Description
Trunk Group	String	BICC trunk group CLLI from table TRKGRP. A BICC trunk group is defined as a trunk group that is datafilled with a CIC range in table GBCIC.  Mandatory parameter.
4 Byte CIC	Unsigned Double INT => {0 to 4,294,967,295}	CIC value within the trunk group.  Mandatory parameter.

### Example

The following examples show the DISPMTC command output.

```
>DISPMTC BICCTK5 100  
CIC NE MTC STATE: IDLE  
CIC FE MTC STATE: IDLE
```

*If the trunk CLLI is invalid:*

```
>DISPMTTC NONAME 100
** INVALID TRUNK GROUP **
```

*If the trunk CLLI is not datafilled against a routeset in table ISUPDEST:*

```
>DISPMTTC NONISUP 100
** COULD NOT OBTAIN ROUTESET FOR TRUNK GROUP **
```

*If the trunk group and corresponding CIC are invalid (not datafilled in table GBCIC):*

```
>DISPMTTC SOMETRK 20054
** INVALID BICC TRUNK GROUP OR CIC **
```

## DISPTIDINFO command

This command displays the trunk state, DPT trunk group, CIC, DPT TID state, DPT call released and DPT TID released values for a given trunk group and CIC.

The response for this command provides the CIC state, LTID node number, LTID terminal number and LTID state.

If the trunk CLLI is invalid, the trunk CLLI does not have an associated routeset (not datafilled in table ISUPDEST), the trunk group or CIC is invalid (not datafilled in table GBCIC), the scratch area for the LTID cannot be obtained or there is no LTID associated with the CIC, an error message will be displayed (see examples below).

The possible values for each of the displayed fields include:

```
CIC State:           {INB, MB, LO, RMB, NEQ, INI, IDL, OFFL}
LTID Node Num:      {0 to 4095}
LTID Terminal Num: {0 to 4095}
LTID State:         {NULL, LINKED, UNDEFINED}
```

### Syntax

**DISPTIDINFO <Trunk Group> <4 Byte CIC>**

## Parameters

The parameters for the DISPTIDINFO command are described in [Table 2-42](#)

**Table 2-42**  
**DISPTIDINFO parameters**

Parameter	Value	Description
Trunk Group	String	BICC trunk group CLLI from table TRKGRP. A BICC trunk group is defined as a trunk group that is datafilled with a CIC range in table GBCIC.  Mandatory parameter.
4 Byte CIC	Unsigned Double INT => {0 to 4,294,967,295}	CIC value within the trunk group.  Mandatory parameter.

## Example

The following examples show the DISPMTC command output.

```
>DISPTIDINFO BICCTK5 100
  CIC State:          IDL
  LTID Node Num:     12
  LTID Terminal Num: 5
  LTID State:        LINKED
```

*If the trunk CLLI is invalid:*

```
>DISPTIDINFO BICCTK5 100
  ** INVALID TRUNK GROUP **
```

*If the trunk CLLI does not have an associated routeset (not datafilled in table ISUPDEST):*

```
>DISPTIDINFO NONISUP 100
  ** COULD NOT OBTAIN ROUTESET FOR TRUNK GROUP **
```

*If the BICC trunk group or CIC is invalid (not datafilled in table GBCIC):*

```
>DISPTIDINFO SOMETRK 20054
  ** INVALID BICC TRUNK GROUP OR CIC **
```

*If the system cannot obtain LTID scratch data:*

```
>DISPTIDINFO BICCTK5 154
  ** COULD NOT ACCESS SCRATCH DATA FOR LTID STATE **
```

*If no LTID is associated with the CIC (CIC not involved in a call):*

```
>DISPTIDINFO BICCTK5 145
** NO LTID CURRENTLY ASSOCIATED WITH THIS CIC **
```

## DISPTRKGRP command

This command displays the trunk group that corresponds to a particular routeset and CIC.

If the routeset is invalid (that is, if the routeset and CIC do not have a corresponding entry in table GBCIC or the trunk CLLI returned from the GBCIC database is invalid), an error message is displayed (see the following examples).

The trunk group returned is the string value that corresponds to the CLLI. For example, Trunk Group: string.

### Syntax

**DISPTRKGRP <BICC Routeset Name> <4 Byte CIC>**

### Parameters

The parameters for the DISPTRKGRP command are described in [Table 2-43](#).

**Table 2-43**  
**DISPTRKGRP parameters**

Parameter	Value	Description
BICC Routeset Name	String	BICC routeset from table C7RTESET. A BICC routeset is defined as a routeset that has at least one corresponding trunk group and CIC range datafilled in table GBCIC.  Mandatory parameter.
4 Byte CIC	Unsigned Double INT => {0 to 4,294,967,295}	CIC value within the trunk group.  Mandatory parameter.

### Example

The following examples show the DISPTRKGRP command output.

```
>DISPTRKGRP BICCRTST1 100
TRUNK GROUP: BICCTK1
```

*If the routeset is invalid (does not exist in table C7RTESET):*

```
>DISPTRKGRP BOGUSRTST 100
** INVALID BICC ROUTESET **
```

*If the routeset and CIC do not have a corresponding entry in table GBCIC:*

```
>DISPTRKGRP BICCRTST5 20576
** INVALID BICC ROUTESET OR CIC **
```

*If the trunk group CLLI stored in table GBCIC is corrupt or invalid:*

```
>DISPTRKGRP BICCRTST2 2076
** BAD CLLI NAME STORED IN GBCIC **
```

## DISPCICRNG command

This command displays the trunk group(s) and CIC range(s) corresponding to particular routeset in table GBCIC. If no routeset is provided, then the command will display all the trunk group(s) and CIC range(s) that are provisioned in table GBCIC.

The response for this command provides the BICC trunk group(s) and CIC range(s) corresponding to the specified BICC routeset. If no routeset is provided, then the command will display all the trunk group(s) and CIC range(s) that are provisioned in table GBCIC and their corresponding routesets.

If the routeset is invalid (that is, the routeset does not exist in table C7RTESET or does not have any corresponding trunk group and CIC range datafilled in table GBCIC), an error message will be displayed (see the following examples).

The possible values for each of the displayed fields are shown in the following example include:

```
BICC Routeset Name: string
Trunk Group:       string
First CIC:         {0 to 4,294,967,295}
Last CIC:          {0 to 4,294,967,295}
```

### Syntax

**DISPCICRNG <BICC Routeset Name>**

**Parameters**

The parameter for the DISPCICRNG command is described in [Table 2-44](#)

**Table 2-44**  
**DISPCICRNG parameter**

Parameter	Value	Description
BICC Routeset Name	String	BICC routeset from table C7RTESET. A BICC routeset is defined as a routeset that has at least one corresponding trunk group and CIC range datafilled in table GBCIC.  Optional parameter.

**DISPCICSTATES command**

Displays each of the the CICs within a specified BICC Trunk Group along with their corresponding CIC state.

**Syntax**

**DISPCICSTATES <BICC Routeset Name>**

**Parameters**

The parameters for the DISPCICSTATES command are described in [Table 2-45](#).

**Table 2-45**  
**DISPCICSTATES parameters**

Parameter	Value	Description
Trunk Group	String	BICC trunk group CLLI from table TRKGRP. A BICC trunk group is defined as a trunk group that is datafilled with a CIC range in table GBCIC.  Mandatory parameter.

**Responses**

Below are responses for the DISPCICSTATES command.

```
>DISPCICSTATES BICCTK1
BICC
  TRUNK_GROUP  CIC      CIC_STATE  LTID(NN TN)
BICCTK1      100    IDLE
BICCTK1      101    IDLE
BICCTK1      102    IDLE
BICCTK1      103    CP_BUSY   45    12
BICCTK1      104    CP_BUSY   120   15
BICCTK1      105    CP_BUSY   67    5
BICCTK1      106    IDLE
BICCTK1      107    IDLE
BICCTK1      108    IDLE
```

BICCTK1	109	IDLE		
BICCTK1	110	IDLE		
BICCTK1	111	CP_BUSY	52	7
BICCTK1	112	CP_BUSY		
BICCTK1	113	IDLE		
BICCTK1	114	IDLE		
BICCTK1	115	CP_BUSY	120	3
BICCTK1	116	IDLE		
BICCTK1	117	IDLE		
BICCTK1	118	CP_BUSY	32	10
BICCTK1	119	CP_BUSY	44	2
BICCTK1	120	IDLE		
BICCTK1	121	IDLE		
BICCTK1	122	IDLE		
BICCTK1	123	CP_BUSY	44	12
BICCTK1	124	IDLE		
BICCTK1	125	IDLE		

### Explanation

The response for this command provides a restatement of the trunk group along with each CIC and the associated CIC state. The command allows one to see the state of each individual CIC within a defined BICC trunk group. If the CIC is involved in a call (i.e. CIC State = CP\_BUSY), then the associated LTID (node number and terminal number) is provided as well.

If there are errors in the trunk group provided, obtaining the CIC or associated routeset, then an appropriate error message will be displayed. Please refer to the examples section below.

The possible values for each of the displayed fields is provided below:

Trunk Group: string  
 CIC: {0 to 4,294,967,295}  
 CIC State: {OFFLINE, MANBUSY, LOCKOUT, REMOTE\_BUSY, NOT\_EQUIPPED, IDLE, CP\_BUSY, CP\_BUSY\_DELOAD}  
 LTID (NN TN): {{0 to 4095} {0 to 4095}}

### System action

None

### User action

None

### Example

Below is an example of the DISPCICSTATES command.

```
>DISPCICSTATES BICCTK1
BICC
TRUNK GROUP   CIC      CIC STATE   LTID(NN TN)
BICCTK1       100     IDLE
BICCTK1       101     IDLE
BICCTK1       102     IDLE
```

BICCTK1	103	CP_BUSY	45	12
BICCTK1	104	CP_BUSY	120	15
BICCTK1	105	CP_BUSY	67	5
BICCTK1	106	IDLE		
BICCTK1	107	IDLE		
BICCTK1	108	IDLE		
BICCTK1	109	IDLE		
BICCTK1	110	IDLE		
BICCTK1	111	CP_BUSY	52	7
BICCTK1	112	CP_BUSY		
BICCTK1	113	IDLE		
BICCTK1	114	IDLE		
BICCTK1	115	CP_BUSY	120	3
BICCTK1	116	IDLE		
BICCTK1	117	IDLE		
BICCTK1	118	CP_BUSY	32	10
BICCTK1	119	CP_BUSY	44	2
BICCTK1	120	IDLE		
BICCTK1	121	IDLE		
BICCTK1	122	IDLE		
BICCTK1	123	CP_BUSY	44	12
BICCTK1	124	IDLE		
BICCTK1	125	IDLE		

*Provided the trunk group does not exist:*

Duplicate precisely the format viewed by the user at the MAP.

```
>DISPCICSTATS BOGUSTRK
** INVALID TRUNK GROUP **
```

*If the first CIC for the trunk group cannot be obtained:*

Duplicate precisely the format viewed by the user at the MAP.

```
>DISPCICSTATS BICCTK12
** COULD NOT OBTAIN FIRST CIC FOR TRUNK GROUP **
```

*If a corresponding routeset for the trunk group cannot be obtained:*

Duplicate precisely the format viewed by the user at the MAP.

```
>DISPCICSTATS BICCTK12
** COULD NOT OBTAIN ROUTESET FOR TRUNK GROUP **
```

## DISPCICSTAT command

Displays each BICC trunk group for a given routeset along with the total number of CICs within each trunk group and a numerical breakdown of these CICs by CIC state. This command provides a good summary of CIC states for each BICC trunk group for a given routeset.

### Syntax

```
DISPCICSTAT <BICC Routeset Name>
```

## Parameters

The parameters for the DISPCICSTAT command are described in [Table 2-46](#).

**Table 2-46**  
**DISPCICSTAT parameters**

Parameter	Value	Description
BICC Routeset Name	String	BICC routeset from table C7RTESET. A BICC routeset is defined as a routeset that has at least one corresponding trunk group and CIC range datafilled in table GBCIC.  Mandatory parameter.

## Responses

Below are responses for the DISPCICSTAT command.

```
>DISPCICSTAT BICCRTST2
          TOTAL MAN  LOCK  REM      CP      CPBSY NOT
          TRUNK GROUP  CICS  BUSY  OUT  BUSY  IDLE  BUSY  DLD  EQUIP
BICCTK5      400      0      0      0    175    225      0      0
BICCTK6      350     105      0      0      0      0     245      0
BICCTK7      500      0      0     500      0      0      0      0
```

## Explanation

The response for this command provides each BICC trunk group for a given routeset along with the total number of CICs within each trunk group and a numerical breakdown of these CICs by CIC state. This command provides a good summary of CIC states for each BICC trunk group for a given routeset.

If the routeset is invalid, for example, the routeset does not exist in table C7RTESET or does not have any corresponding trunk group and cic range is datafilled in table GBCIC, an error message will be displayed.

The definitions of the values under the column headers are as follows. The TRUNK GROUP column contains each of the trunk groups that correspond to the routeset and have CIC ranges defined in table GBCIC. The total CICs column displays the total number of CICs defined for each of the trunk groups in table GBCIC. Each of the remaining columns indicate the number of CICs for each trunk group that are in the corresponding CIC state.

### System action

None

### User action

None

**Example**

Below is an example of the DISPCICSTAT command.

```
>DISPCICSTAT BICCRTST2
      TOTAL MAN  LOCK REM      CP      CPBSY NOT
      TRUNK_GROUP  CICS  BUSY  OUT  BUSY  IDLE  BUSY  DLD  EQUIP
BICCTK5          400    0    0    0    175   225    0    0
BICCTK6          350   105    0    0    0     0   245    0
BICCTK7          500    0    0   500    0     0    0    0
```

*If the routeset is invalid (does not exist in table C7RTESET or does not have any corresponding trunk group and cic range datafilled in table GBCIC): Duplicate precisely the format viewed by the user at the MAP.*

```
>DISPCICSTAT BOGUSRTST
** INVALID BICC ROUTESET **
```

**Help command**

TheHELPcommanddisplaysallthepossiblecommandsthatmaybeexecutedfrom within the GBICCCI tool along with a brief description of each of them.

**Syntax**

HELP

**Parameters**

None

**Responses**

Below are responses for the HELP command.

```
BICC MTCE TEST COMMANDS -- SUBCOMMANDS ARE :

DISPSTAT      -- DISPLAY THE STATUS OF ONE/ALL ROUTESET(S)
DISPRTDEST    -- DISPLAY ROUTESET AND DEST STATUS OF
                ONE/ALL ROUTESET(S)
DISPMTC       -- DISPLAY CIC MAINTENANCE STATE
DISPTIDINFO   -- DISPLAY CIC AND LTID INFO
DISPTRKGRP    -- DISPLAY TRKGRP FOR ROUTESET AND CIC
DISPCICRNG    -- DISPLAY CIC RANGES OF ONE/ALL ROUTESET(S)
DISPCICSTATS  -- DISPLAY CIC STATES FOR A BICC TRUNK GROUP
DISPCICSTAT   -- DISPLAY CIC STATE STATS FOR A ROUTESET
QUIT          -- EXIT FROM THIS CI INCREMENT
HELP          -- TO DISPLAY ALL AVAILABLE COMMANDS
```

**System action**

None

**User Action**

None

**Quit command**

The QUIT command exits the GBICCCI tool.

**Syntax**

>QUIT

**Parameters**

None

**Responses**

None

**System Action**

None

**User Action**

None

**Example**

QUIT

---

## GBICTK

---

The GBICTK commands performs maintenance of CICs at the MAPCI;MTC;TRKS level. The new CI level is very functionally similar to the existing TTP level.

### GBICTK commands

The GBICTK directory commands include:

- POST
- BSY
- RTS
- FRLS
- PREV
- NEXT
- Qrysig
- Routeset
- OP
- TRKQRY
- QUIT

### POST command

The POST command posts a GSM BICC CIC at the GBICTK level.

#### Syntax

```
POST-- POST a BICC trunk CIC
Parms: <SET TYPE> {G <CLLI> STRING
        [<CIC> {1 TO 4294967295}],
        A <STATE> {INB,
                   MB,
                   RMB,
                   LO,
                   CPB,
                   CPD,
                   IDL}}
```

## Parameters

Table 2-47 lists the parameters, values, and definitions for the POST command.

**Table 2-47**  
**POST command**

Parameter	Value	Description
SET TYPE	G/A	The set type of G indicates posting by CLLI; the set type of A indicates posting by CIC state.
CLLI	CLLI as datafilled in table GBCIC	Posts the first CIC in the given CLLI. This determines from which CLLI CICs will be posted.
CIC	1 TO 4294967295	This is the CIC as datafilled in table GBCIC. This is an optional parameter which determines a specific CIC in a CLLI to post.
STATE	INB, MB, RMB, LO, CPB, CPD, IDL	Posts the first CIC in the given state, starting at the first BICC routeset datafilled in C7RTESTE, CIC 0.
—end—		

## Responses

### Response 1 (Success)

OK, CIC <CIC Number> POSTED.

### Explanation

The POST command displays the first CIC of a posted set.

If the POST command is by CLLI, the posted set is the CICs datafilled against that CLLI in table GBCIC. The posted CIC (CIC displayed at the GBICTK level) is the first CIC in the range datafilled in table GBCIC.

If the POST command is by CLLI/CIC, the posted set is still the CICs datafilled against the CLLI in table GBCIC. The posted CIC (CIC displayed at the GBICTK level) is the CIC specified in the POST command.

If the POST command is by state, the posted set is all CICs datafilled on the MSC in the state specified in the POST command. The posted CIC (CIC displayed at the GBICTK level) is the first CIC (starting at the first BICC routeset datafilled in C7RETSET, CIC 0) in the state specified in the POST command.

**System action**

None

**User action**

None

**Examples**

Posting by CLLI (with CICs 1-10 datafilled in GBCIC):

&gt;Post g CLLI1

**Figure 2-36**  
**Post by CLLI (response 1)**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI          IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK, CIC 1 POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

Posting by CLLI/CIC (with CICs 1-10 datafilled in GBCIC):

&gt;Post g CLLI1 2

**Figure 2-37**  
**Post by CLLI/CIC (response 1)**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1         IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK, CIC 2 POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

Posting by State:  
>Post a IDL

**Figure 2-38**  
**Post by State (response 1)**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1        IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK, CIC 1 POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 2**

```
INVALID CLLI NAME, NO SHORT CLLI NAME
INVALID SHORT CLLI NAME
```

**Explanation**

The CLLI in the POST command is not datafilled in table CLLI.

**System action**

None

**User action**

Provision the CLLI if it should be part of GSM BICC datafill. If the user mistyped the CLLI, retype the POST command with the correct CLLI.

**Examples**

```
Posting by undatafilled CLLI, CLLI1:
>Post g CLLI1
```

**Figure 2-39**  
**Post by CLLI (response 2)**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG  STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      INVALID CLLI NAME, NO SHORT CLLI NAME
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 3**

CLLI NOT DATAFILLED IN TABLE TRKGRP

**Explanation**

The CLLI in the POST command is not datafilled in table TRKGRP.

**System action**

None

**User action**

Provision the BICC CLLI if this CLLI is to be used for BICC. If the user mistyped the CLLI, retype the POST command with the correct CLLI.

**Examples**

Posting by undatafilled CLLI in table TRKGRP, CLLI1:  
>Post g CLLI1

**Figure 2-40**  
**Post by CLLI (response 3)**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      CLLI NOT DATAFILLED IN TABLE TRKGRP
15
16 QrySig
17 RouteSet
18
MAPUSER

```

**Response 4**

NO CIC, SET IS EMPTY

**Explanation**

There are no CICs available in the posted set.

If the POST command is by state, then there are no CICs in the specified state. If the POST command is by CLLI, then there are no CICs datafill in table GBCIC for the specified CLLI. If the POST command is by CLLI/CIC, then the specified CIC is not provisioned in table GBCIC for the specified CLLI.

**System action**

None

**User action**

Provision the BICC CLLI if this CLLI is to be used for BICC. If the user mistyped the CLLI/CIC/STATE, retype the POST command with the correct CLLI.

**Examples**

Posting by undatafilled CLLI in table GBCIC, CLLI1:

>Post g CLLI1

**Figure 2-41**

**Post by CLLI (response 4)**

```
GBICTK
0 Quit
2 Post_   CIC      CKT TYPE  COM LANG   STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      NO CIC, SET IS EMPTY
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 5**

TIMEOUT OCCURRED.

**Explanation**

The post command timed out.

**System action**

None

**User action**

Try the POST command again. If the POST command times out again, create a new login session, enter the GBICTK level again, and re-try the command.

**Examples**

Normal post command

>Post g CLLI1

**Figure 2-42**  
**Post by CLLI (response 5)**

```

GBICTK
0 Quit
2 Post_   CIC       CKT TYPE  COM LANG   STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      TIMEOUT OCCURRED.
15
16 QrySig
17 RouteSet
18
MAPUSER

```

**Response 6**

ABORTED: PROBLEM SENDING MESSAGE TO SERVER.  
COULD NOT GET GBICTK MAP OWNER

**Explanation**

An internal error has occurred.

**System action**

None

**User action**

Try the POST command again. If the message appears again, create a new login session, enter the GBICTK level again, and re-try the command.

**Examples**

Normal post command  
>Post g CLLI1

**Figure 2-43**  
**Post by CLLI (response 6)**

```
GBICTK
0 Quit
2 Post_   CIC      CKT TYPE  COM LANG   STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      ABORTED: PROBLEM SENDING MESSAGE TO SERVER
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**NEXT command**

The NEXT command displays the next CIC in the posted set.

**Syntax**

NEXT--POST THE NEXT BICC CIC

**Parameters**

None

**Responses**

**Response 1 (Success)**

OK, CIC <CIC Number> POSTED

**Explanation**

The NEXT command displays the next CIC of a posted set.

If the original POST command was by CLLI, the displayed CIC is the next CIC (with respect to the current posted CIC) datafilled in table GBCIC. If the NEXT command is issued on the last CIC datafilled in GBCIC, the display is cleared, and no CIC is posted.

If the original POST command was by state, the displayed CIC is the next CIC (with respect to the current posted CIC) datafilled in the MSC with the same state as the original posted CIC. If the NEXT command is issued on the last CIC datafilled on the MSC in same state as the original posted CIC (moving in increasing order of routesets datafilled in C7RTESET and increasing CIC number per routeset), the display is cleared, and no CIC is posted.

**System action**

None

**User action**

None

**Examples**

Posting by CLLI (with CICs 1-10 datafilled in GBCIC):

>Post g CLLI1

>Next

**Figure 2-44**  
**Post by CLLI, Followed by Next**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1          IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK, CIC 2 POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

Posting by CLLI/CIC (with CICs 1-10 datafilled in GBCIC):  
>Post g CLLI 2  
>Next

**Figure 2-45**  
**Post by CLLI/CIC, Followed by Next**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      3      2W BICC  CLLI1        IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK, CIC 3 POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

Posting by State:  
>Post a IDL  
>Next

**Figure 2-46**  
**Post by State, Followed by Next**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1        IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK, CIC 2 POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 2**  
FAILED, NO CIC POSTED

**Explanation**  
A CIC must be posted before the NEXT command can be issued.

**System action**  
None

**User action**  
Post a BICC CIC before issuing the NEXT command.

**Examples**  
Use the NEXT command with no CIC posted  
>Next

**Figure 2-47**  
**Use the NEXT command with no CIC posted**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, NO CIC POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 3**  
FAILED, CIC IS UNEQUIPPED

**Explanation**  
The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the NEXT command can be issued.

**System action**  
None

**User action**  
Post a datafilled BICC CIC before issuing the NEXT command.

**Examples**  
Use the NEXT command on a posted CIC that has been deleted from table GBCIC:  
>Next

**Figure 2-48**  
**NEXT command on a posted CIC that has been deleted**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1        NEQ
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, CIC IS UNEQUIPPED
15
16 QrySig
17 RouteSet
18
MAPUSER

```

**Response 4**  
NO CIC, SET IS EMPTY

**Explanation:**  
The next CIC is not datafilled. The end of the posted set has been reached.

**System action**  
None

**User action**  
None. If the user wants to get to a previous CIC in the previous posted set, the user must use the POST command.

**Examples**  
Use the NEXT command on the last CIC of a posted set:  
>Post g CLLI1 10  
>Next

**Figure 2-49**  
**NEXT command on the last CIC of a posted set**

```
GBICTK
0 Quit
2 Post_   CIC       CKT TYPE  COM LANG   STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      NO CIC, SET IS EMPTY
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 5**  
TIMEOUT OCCURRED.

**Explanation**  
The next command timed out.

**System action**  
None

**User action**  
Try the NEXT command again. If the NEXT command times out again, try reposting the current displayed CIC.

**Examples**  
Normal next command  
>Post g CLLI1  
>Next

**Figure 2-50**  
**Timeout on Normal NEXT command**

```

GBICTK
0 Quit
2 Post_   CIC      CKT TYPE  COM LANG  STATE
3       2      2W BICC  CLLI1     IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      TIMEOUT OCCURRED.
15
16 QrySig
17 RouteSet
18
MAPUSER

```

**Response 6**

ABORTED: PROBLEM SENDING MESSAGE TO SERVER.  
COULD NOT GET GBICTK MAP OWNER

**Explanation**

An internal error has occurred.

**System action**

None

**User action**

Try the NEXT command again. If the NEXT command times out again, try reposting the current displayed CIC.

**Examples**

Normal next command  
>Post g CLLI1  
>Next

**Figure 2-51**  
**Internal Error on Normal Next Command**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1         IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      ABORTED: PROBLEM SENDING MESSAGE TO SERVER
15
16 QrySig
17 RouteSet
18
MAPUSER
```

## PREV command

The PREV command displays the previous CIC in the posted set.

### Syntax

PREV--POST THE PREVIOUS BICC CIC

### Parameters

None

### Responses

#### Response 1 (Success)

OK, CIC <CIC Number> POSTED

#### Explanation

The PREV command displays the previous CIC of a posted set.

If the original POST command was by CLLI, the displayed CIC is the previous CIC (with respect to the current posted CIC) datafilled in table GBCIC. If the PREV command is issued on the first CIC datafilled in GBCIC, the display is cleared, and no CIC is posted.

If the original POST command was by state, the displayed CIC is the previous CIC (with respect to the current posted CIC) datafilled in the MSC with the same state as the original posted CIC. If the PREV command is issued on the first CIC datafilled on the MSC in same state as the original posted CIC (moving in decreasing order of routesets datafilled in C7RTESET and decreasing CIC number per routeset), the display is cleared, and no CIC is posted.

### System action

None

### User action

None

### Examples

Posting by CLLI (with CICs 1-10 datafilled in GBCIC):

```
>Post g CLLI 2
```

```
>Prev
```

**Figure 2-52**  
**Post by CLLI, Followed by Prev**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1         IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK, CIC 1 POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER

```

Posting by State:  
>Post a IDL  
>Next  
>Prev

**Figure 2-53**  
**Post by State, Followed by Next and Prev**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1      IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK, CIC 1 POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 2**  
FAILED, NO CIC POSTED

**Explanation**  
A CIC must be posted before the PREV command can be issued.

**System action**  
None

**User action**  
Post a BICC CIC before issuing the PREV command.

**Examples**  
Use the PREV command with no CIC posted  
>Prev

**Figure 2-54**  
Use the PREV command with no CIC posted

```
GBICTK
0 Quit
2 Post_   CIC       CKT TYPE  COM LANG   STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, NO CIC POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

### Response 3

FAILED, CIC IS UNEQUIPPED

### Explanation

The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the PREV command can be issued.

### System action

None

### User action

Post a datafilled BICC CIC before issuing the PREV command.

### Examples

Use the PREV command on a posted CIC that has been deleted from table GBCIC:  
>Prev

**Figure 2-55**  
**PREV command on a posted CIC that has been deleted**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1          NEQ
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, CIC IS UNEQUIPPED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 4**  
NO CIC, SET IS EMPTY

**Explanation**  
The previous CIC is not datafilled. The start of the posted set has been passed.

**System action**  
None

**User action**  
None. If the user wants to get to a CIC in the somewhere else in the posted set, the user must use the POST command.

**Examples**  
Use the PREV command on the first CIC of a posted set:  
>Post g CLLI1  
>Prev

**Figure 2-56**  
**PREV command on the first CIC of a posted set**

```
GBICTK
0 Quit
2 Post_   CIC       CKT TYPE  COM LANG  STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      NO CIC, SET IS EMPTY
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 5**  
TIMEOUT OCCURRED.

**Explanation**  
The PREV command timed out.

**System action**  
None

**User action**  
Try the PREV command again. If the PREV command times out again, try reposting the current displayed CIC.

**Examples**  
Normal next command  
>Post g CLLI1 2  
>Prev

**Figure 2-57**  
**Timeout on Normal PREV command**

```
GBICTK
0 Quit
2 Post_   CIC      CKT TYPE  COM LANG  STATE
3       2      2W BICC  CLLI1     IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      TIMEOUT OCCURRED.
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 6**  
ABORTED: PROBLEM SENDING MESSAGE TO SERVER.  
COULD NOT GET GBICTK MAP OWNER

**Explanation**  
An internal error has occurred.

**System action**  
None

**User action**  
Try the PREV command again. If the PREV command times out again, try reposting the current displayed CIC.

**Examples**  
Normal next command  
>Post g CLLI1 2  
>Prev



## Parameters

Table 2-48 lists the parameters, values, and definitions for the BSY command.

**Table 2-48**  
**BSY command**

Parameter	Value	Description
BSY_PARMS	INB, ALL, RNG	The INB parm places one CIC in the INB state. The ALL parm places all CICs in the posted set in the MB/CPD state. The RNG parm places all CICs from the posted CIC to the specified end CIC in the MB/CPD state.
INB_PARMS	ALL, RNG	The ALL parm places all CICs in the posted set in the MB/CPD state. The RNG parm places all CICs from the posted CIC to the specified end CIC in the INB state.
—end—		

## Responses

### Response 1 (Success)

OK

### Explanation

The BSY command places a posted CIC in the MB/CPD state. If the CIC was CPB, the BSY command places the CIC in a CPD state. If the CIC was not CPD, the BSY command places the CIC in a MB state. The BSY command also results in blocking being asserted at the far end.

The BSY INB command places a posted CIC in the INB state. The CIC state has to be MB before issuing this command; otherwise, the state change will fail at the non-MB CIC.

The BSY ALL/BSY RNG places a group of CICs in the MB/CPD state. The ALL parameter refers to the posted set. The RNG parameter refers to a set of CICs starting at the posted CIC and ending at the specified CIC.

The BSY INB ALL/BSY INB RNG places a group of CICs in the INB state. The ALL parameter refers to the posted set. The RNG parameter refers to a set of CICs starting at the posted CIC and ending at the specified CIC.

### System action

None

**User action**

None

**Examples**

BSYing a CIC from a posted CLLI (with CICs 1-10 datafilled in GBCIC):

&gt;Post g CLLI1

&gt;BSY

**Figure 2-59****Post by CLLI, Followed by BSY**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1         MB
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK
15
16 QrySig
17 RouteSet
18
MAPUSER
```

BSY INBing a CIC from a posted CLLI (with CICs 1-10 datafilled in GBCIC):

&gt;Post g CLLI1

&gt;BSY INB

**Figure 2-60**  
**Post by CLLI, Followed by BSY INB**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG  STATE
3      1      2W BICC  CLLI1     INB
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 2**  
FAILED, NO CIC POSTED

**Explanation**  
A CIC must be posted before the BSY command can be issued.

**System action**  
None

**User action**  
Post a BICC CIC before issuing the BSY command.

**Examples**  
Use the BSY command with no CIC posted  
>Bsy

**Figure 2-61**  
Use the BSY command with no CIC posted

```

GBICTK
0 Quit
2 Post_   CIC       CKT TYPE  COM LANG   STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, NO CIC POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER

```

### Response 3

FAILED, CIC IS UNEQUIPPED

### Explanation

The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the BSY command can be issued.

### System action

None

### User action

Post a datafilled BICC CIC before issuing the BSY command.

### Examples

Use the BSY command on a posted CIC that has been deleted from table

GBCIC:

```
>Bsy
```

**Figure 2-62**  
**BSY command on a posted CIC that has been deleted**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1          NEQ
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, CIC IS UNEQUIPPED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 4**

FAILED, END\_CIC IN RNG < POSTED CIC

**Explanation**

When using the RNG parameter, the specified CIC is less than the posted CIC.

**System action**

None

**User action**

When using the RNG parameter in the BSY command, ensure the specified CIC is greater than the posted CIC.

**Examples**

Use an invalid BSY RNG command on the first CIC of a posted set:

```
>Post g CLLI1 2
>BSY RNG 1
```

**Figure 2-63**  
Invalid BSY RNG command on the first CIC of a posted set

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1         IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, END_CIC IN RNG < POSTED CIC
15
16 QrySig
17 RouteSet
18
MAPUSER

```

### Response 5

FAILED, OUTBOUND MESSAGE RESOURCE ALLOCATION ERROR  
PROCESSING STOPPED AT CLLI: CIC:

### Explanation

An internal resourced reservation error occurred.

### System action

None

### User action

There is currently a high volume of outgoing MTCE messaging on the MSC.  
Wait for outgoing MTCE message traffic to recede and issue the command again, starting at the CIC where the error occurred.

### Examples

Use the BSY command during high MTCE traffic:

```
>Post g CLLI1
>BSY
```

**Figure 2-64**  
**BSY Command During High MTCE Traffic**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1          IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, OUTBOUND MESSAGE RESOURCE ALLOCATION ERROR
15      PROCESSING STOPED AT CLLI: CLLI1 CIC: 1
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 6**

FAILED, INVALID STATE FOR COMMAND ISSUED  
PROCESSING STOPED AT CLLI: CIC:

**Explanation**

A BSY INB was performed on a CIC that was not in the MB state.

**System action**

None

**User action**

To continue with the rest of the CICs. Post the CIC in the invalid state and change it to INB. If the CIC is in CPD, you will either have to wait for the current call to come down or FRLS the CIC to MB. Once the CIC is MB, continue with the INB operation on the rest of the CICs starting at the posted CIC.

**Examples**

Use the BSY INB on an invalid state CIC:  
>Post g CLLI1  
>BSY INB (on a CIC that is not MB)

**Figure 2-65**  
**BSY INB on an Invalid State CIC**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1          IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, INVALID STATE FOR COMMAND ISSUED
15      PROCESSING STOPED AT CLLI: CLLI1 CIC: 1
16 QrySig
17 RouteSet
18
MAPUSER

```

**Response 7**  
TIMEOUT OCCURRED.

**Explanation**  
The BSY command timed out.

**System action**  
None

**User action**  
Try the BSY command again. If the BSY command times out again, try the BSY command on a smaller set of CICs. It could be that the system is under heavy load.

Otherwise, if the BSY command times out again, try reposting the current displayed CIC.

**Examples**  
BSY ALL command  
>Post g CLLI1 2  
>BSY ALL

**Figure 2-66**  
**Timeout on BSY ALL command**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1        IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      TIMEOUT OCCURRED.
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 8**

ABORTED: PROBLEM SENDING MESSAGE TO SERVER.  
COULD NOT GET GBICTK MAP OWNER

**Explanation**

An internal error has occurred.

**System action**

None

**User action**

Try the BSY command again. If the BSY command times out again, try reposting the current displayed CIC.

**Examples**

Normal BSY command  
>Post g CLLI1 2  
>BSY

**Figure 2-67**  
**Internal Error on Normal BSY Command**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1         IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      ABORTED: PROBLEM SENDING MESSAGE TO SERVER
15
16 QrySig
17 RouteSet
18
MAPUSER

```

**Response 9**

FAILED, INVALID STATE FOR COMMAND ISSUED PROCESSING  
STOPPED AT CLLI: CIC:

**Explanation**

A BSY is performed on a CIC that was in the INB state.

**System action**

None

**User action**

User command RTS INB.

**Examples**

Use the BSY on an INB CIC.

>Post g CLLI1

>BSY (on a CIC that is INB)

**Figure 2-68**  
**BSY on an INB State CIC**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1        IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, INVALID STATE FOR COMMAND ISSUED
15      PROCESSING STOPPED AT CLLI: CLLI1 CIC: 1
16 QrySig
17 RouteSet
18
MAPUSER
```

## RTS command

The RTS command changes a posted CIC's state from MB/CPD to any state but INB. The RTS INB command transitions the CIC out of the INB state.

### Syntax

```
[<RTS_PARM> {INB, [<INB_PARAMS>{ALL,  
RNG <END_CIC:> {1 TO 4294967295}}}],
```

```
ALL,  
RNG <END_CIC:>{1 TO 4294967295}}]
```

**Parameters**

Table 2-49 lists the parameters, values, and definitions for the RTS command.

**Table 2-49**  
**RTS command**

Parameter	Value	Description
RTS_PARM	INB, ALL, RNG	The INB parm transitions the posted CIC out of the INB state.  The ALL parm places all CICs in the posted set from MB/CPD to any state but INB. The RNG parm places all CICs from the posted CIC to the specified end CIC from MB/CPD to any state but INB.
INB_PARMS	ALL, RNG	The ALL parm transitions all CICs in the posted set out of the INB state. The RNG parm transitions all CICs from the posted CIC to the specified end CIC out of the INB state.
—end—		

**Responses**

**Response 1 (Success)**

OK

**Explanation**

The RTS command changes a posted CIC’s state from MB/CPD to any state but INB. If the CIC was CPD, the RTS command places the CIC in a CPB state. If the CIC was not CPD, the RTS command places the CIC in any state other than CPD, CPB, or INB (depending on current conditions at the NE/FE). The RTS command also results in unblocking being asserted at the far end.

The RTS ALL/RTS RNG places a group of CICs’ state from MB/CPD to any state but INB. The ALL parameter refers to the posted set. The RNG parameter refers to a set of CICs starting at the posted CIC and ending at the specified CIC.

**System action**

None

**User action**

None

### Examples

RTSing a CIC from a posted CLLI (with CICs 1-10 datafilled in GBCIC):

```
>Post g CLLI1  
>RTS
```

**Figure 2-69**  
**Post by CLLI, Followed by RTS**

```
GBICTK  
0 Quit  
2 Post_   CIC      CKT TYPE  COM LANG   STATE  
3      1      2W BICC  CLLI      LO  
4  
5 BSY_  
6 RTS_  
7  
8 FRLS_  
9  
10  
11 PREV  
12 NEXT  
13      GBICTK:  
14      OK  
15  
16 QrySig  
17 RouteSet  
18  
MAPUSER
```

### Response 2

FAILED, NO CIC POSTED

### Explanation

A CIC must be posted before the RTS command can be issued.

### System action

None

### User action

Post a BICC CIC before issuing the RTS command.

### Examples

Use the RTS command with no CIC posted

```
>RTS
```

**Figure 2-70**  
Use the RTS command with no CIC posted

```

GBICTK
0 Quit
2 Post_   CIC       CKT TYPE  COM LANG   STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, NO CIC POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER

```

**Response 3**

FAILED, CIC IS UNEQUIPPED

**Explanation**

The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the RTS command can be issued.

**System action**

None

**User action**

Post a datafilled BICC CIC before issuing the RTS command.

**Examples**

Use the RTS command on a posted CIC that has been deleted from table GBCIC:

```
>Rts
```

**Figure 2-71**  
**RTS command on a posted CIC that has been deleted**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1          NEQ
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, CIC IS UNEQUIPPED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 4**  
FAILED, END\_CIC IN RNG < POSTED CIC

**Explanation**  
When using the RNG parameter, the specified CIC is less than the posted CIC.

**System action**  
None

**User action**  
When using the RNG parameter in the RTS command, ensure the specified CIC is greater than the posted CIC.

**Examples**  
Use an invalid RTS RNG command on the first CIC of a posted set:  
>Post g CLLI1 2  
>RTS RNG 1

**Figure 2-72**  
Invalid RTS RNG command on the first CIC of a posted set

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1         MB
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, END_CIC IN RNG < POSTED CIC
15
16 QrySig
17 RouteSet
18
MAPUSER

```

### Response 5

FAILED, OUTBOUND MESSAGE RESOURCE ALLOCATION ERROR  
PROCESSING STOPPED AT CLLI: CIC:

### Explanation

An internal resourced reservation error occurred.

### System action

None

### User action

There is currently a high volume of outgoing MTCE messaging on the MSC.  
Wait for outgoing MTCE message traffic to recede and issue the command again, starting at the CIC where the error occurred.

### Examples

Use the RTS command during high MTCE traffic:

```
>Post g CLLI1
>Rts
```

**Figure 2-73**  
**RTS Command During High MTCE Traffic**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1         MB
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, OUTBOUND MESSAGE RESOURCE ALLOCATION ERROR
15      PROCESSING STOPED AT CLLI: CLLI1 CIC: 1
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 6**

FAILED, INVALID STATE FOR COMMAND ISSUED  
PROCESSING STOPED AT CLLI: CIC:

**Explanation**

A RTS was performed on a CIC that was in the INB state.

**System action**

None

**User action**

To continue with the rest of the CICs. Post the CIC in the invalid state and change it to MB. Once the CIC is MB, continue with the RTS operation on the rest of the CICs starting at the posted CIC.

**Examples**

Use the RTS on an invalid state CIC:

- >Post g CLLI1
- >RTS (on a CIC that is INB)

**Figure 2-74**  
**RTS on an Invalid State CIC**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1          INB
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, INVALID STATE FOR COMMAND ISSUED
15      PROCESSING STOPED AT CLLI: CLLI1 CIC: 1
16 QrySig
17 RouteSet
18
MAPUSER

```

**Response 7**  
TIMEOUT OCCURRED.

**Explanation**  
The RTS command timed out.

**System action**  
None

**User action**  
Try the RTS command again. If the RTS command times out again, try the RTS command on a smaller set of CICs. It could be that the system is under heavy load.

Otherwise, if the RTS command times out again, try reposting the current displayed CIC.

**Examples**  
RTS ALL command  
>Post g CLLI1 2  
>RTS ALL

**Figure 2-75**  
**Timeout on RTS ALL command**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1        MB
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      TIMEOUT OCCURRED.
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 8**

ABORTED: PROBLEM SENDING MESSAGE TO SERVER.  
COULD NOT GET GBICTK MAP OWNER

**Explanation**

An internal error has occurred.

**System action**

None

**User action**

Try the RTS command again. If the RTS command times out again, try reposting the current displayed CIC.

**Examples**

Normal RTS command  
>Post g CLLI1 2  
>RTS

**Figure 2-76**  
**Internal Error on Normal RTS Command**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1         MB
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      ABORTED: PROBLEM SENDING MESSAGE TO SERVER
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**FRLS command**

The FRLS command works in the same manner as the BSY command (in that it is responsible for transitioning the CIC state to MB/CPD).

The FRLS command changes a posted CIC’s state to MB. If the CIC was CPD/CPB, the FRLS command immediately releases the call and changes the CIC state to MB. The FRLS command can also result in blocking the far end.

The FRLS ALL/FRLS RNG places a group of CICs’ state to MB. The ALL parameter refers to the posted set. The RNG parameter refers to a set of CICs starting at the posted CIC and ending at the specified CIC.

**Syntax**

```
[<PARAM> {ALL,  
RNG <END_CIC:> {1 TO 4294967295}}]
```

## Parameters

Table 2-50 lists the parameters, values, and definitions for the FRLS command.

**Table 2-50**  
**FRLS command**

Parameter	Value	Description
PARM	ALL, RNG	The ALL parm places all CICs in the posted set from MB/CPD to any state but INB. The RNG parm places all CICs from the posted CIC to the specified end CIC from MB/CPD to any state but INB.
—end—		

## Responses

### Response 1 (Success)

OK

### Explanation

The FRLS command changes a posted CIC's state to MB. If the CIC was CPD/CPB, the FRLS command immediately releases the call and changes the CIC state to MB. The FRLS command can also result in blocking being asserted at the far end.

The FRLS ALL/FRLS RNG places a group of CICs' state to MB. The ALL parameter refers to the posted set. The RNG parameter refers to a set of CICs starting at the posted CIC and ending at the specified CIC.

### System action

None

### User action

None

### Examples

FRLS a CIC from a posted CLLI (with CICs 1-10 datafilled in GBCIC):  
>Post g CLLI1  
>FRLS

**Figure 2-77**  
**Post by CLLI, Followed by FRLS**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1         MB
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      OK
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 2**

FAILED, NO CIC POSTED

**Explanation**

A CIC must be posted before the FRLS command can be issued.

**System action**

None

**User action**

Post a BICC CIC before issuing the FRLS command.

**Example**

Use the FRLS command with no CIC posted

>Frls

**Figure 2-78**  
**Use the FRLS command with no CIC posted**

```
GBICTK
0 Quit
2 Post_   CIC       CKT TYPE  COM LANG   STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, NO CIC POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 3**  
FAILED, CIC IS UNEQUIPPED

**Explanation**  
The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the FRLS command can be issued.

**System action**  
None

**User action**  
Post a datafilled BICC CIC before issuing the FRLS command.

**Examples**  
Use the FRLS command on a posted CIC that has been deleted from table GBCIC:  
>Frls

**Figure 2-79**  
**FRLS command on a posted CIC that has been deleted**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1         NEQ
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, CIC IS UNEQUIPPED
15
16 QrySig
17 RouteSet
18
MAPUSER

```

**Response 4**

FAILED, END\_CIC IN RNG < POSTED CIC

**Explanation**

When using the RNG parameter, the specified CIC is less than the posted CIC.

**System action**

None

**User action**

When using the RNG parameter in the FRLS command, ensure the specified CIC is greater than the posted CIC.

**Examples**

Use an invalid FRLS RNG command on the first CIC of a posted set:

```

>Post g CLLI1 2
>FRLS RNG 1

```

**Figure 2-80**  
**Invalid FRLS RNG command on the first CIC of a posted set**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1         IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, END_CIC IN RNG < POSTED CIC
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 5**

FAILED, OUTBOUND MESSAGE RESOURCE ALLOCATION ERROR  
PROCESSING STOPPED AT CLLI: CIC:

**Explanation**

An internal resourced reservation error occurred.

**System action**

None

**User action**

There is currently a high volume of outgoing MTCE messaging on the MSC.  
Wait for outgoing MTCE message traffic to recede and issue the command  
again, starting at the CIC where the error occurred.

**Examples**

Use the FRLS command during high MTCE traffic:  
>Post g CLLI1  
>Frls

**Figure 2-81**  
**FRLS Command During High MTCE Traffic**

```
GBICTK
0 Quit
2 Post_   CIC      CKT TYPE  COM LANG      STATE
3       1      2W BICC  CLLI1         IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, OUTBOUND MESSAGE RESOURCE ALLOCATION ERROR
15      PROCESSING STOPED AT CLLI: CLLI1 CIC: 1
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 6**  
TIMEOUT OCCURRED.

**Explanation**  
The FRLS command timed out.

**System action**  
None

**User action**  
Try the FRLS command again. If the FRLS command times out again, try the FRLS command on a smaller set of CICs. It could be that the system is under heavy load.

Otherwise, if the FRLS command times out again, try reposting the current displayed CIC.

**Examples**  
FRLS ALL command  
>Post g CLLI1 2  
>FRLS ALL

**Figure 2-82**  
**Timeout on FRLS ALL command**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG  STATE
3      2      2W BICC  CLLI1     IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      TIMEOUT OCCURRED.
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 7**

ABORTED: PROBLEM SENDING MESSAGE TO SERVER.  
COULD NOT GET GBICTK MAP OWNER

**Explanation**

An internal error has occurred.

**System action**

None

**User action**

Try the FRLS command again. If the FRLS command times out again, try reposting the current displayed CIC.

**Examples**

Normal FRLS command  
>Post g CLLI1 2  
>Frls

**Figure 2-83**  
**Internal Error on Normal FRLS Command**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI         IDL
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      ABORTED: PROBLEM SENDING MESSAGE TO SERVER
15
16 QrySig
17 RouteSet
18
MAPUSER

```

## QRYSIG command

The QRYSIG command returns signaling availability for a posted CIC.

### Syntax

```
<QRYSIG>
```

### Parameters

None

### Responses

#### Response 1 (Success)

```
SIGNALLING AVAILABLE
SIGNALLING NOT AVAILABLE
```

#### Explanation

The QRYSIG command returns signaling availability for a posted CIC.

The QRYSIG command is especially helpful when the CIC state is LO. The CIC state can be LO due to a number of reasons:

- The CIC is not equipped at the FE.
- The CIC is pending an ACK and is in a transient state. This is true for RSC, GRS, REL, and CGU messages pending ACK.
- The routeset is unavailable.
- External routing is not available.

**System action**

None

**User action**

None

**Examples**

QRYSIG on a CIC from a posted CLLI indicating signalling availability:

```
>Post g CLLI1  
>QRYSIG
```

**Figure 2-84**  
**QRYSIG Indicating Signalling is Available**

```
GBICTK  
0 Quit  
2 Post_   CIC      CKT TYPE  COM LANG   STATE  
3      2      2W BICC  CLLI1      IDL  
4  
5 BSY_  
6 RTS_  
7  
8 FRLS_  
9  
10  
11 PREV  
12 NEXT  
13      GBICTK:  
14      Signalling Available  
15  
16 QrySig  
17 RouteSet  
18  
MAPUSER
```

QRYSIG on a CIC from a posted CLLI indicating signalling unavailability:

```
>Post g CLLI1  
>QRYSIG
```

**Figure 2-85**  
**QRYSIG Indicating Signalling is Not Available**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI         LO
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      Signalling NOT Available
15
16 QrySig
17 RouteSet
18
MAPUSER

```

### Response 2 (Additional Success Responses)

The following problems exist for this CIC:

- Routeset is BLOCKED
- No External Routers are INSV
- Reset not sent yet
- No ack-for-reset received yet
- Circuit is awaiting CGUA message
- Circuit is UNEQUIPPED at the REMOTE office
- Mismatch with MTP routeset data
- Mismatch with MTP External Routing state

### Explanation

[Table 2-51](#) provides an explanation for response.

**Table 2-51**  
**QRYSIG Explanation**

Text	Meaning
- Routeset is BLOCKED	The routeset on which this routeset resides is not INSV.
- No External Routers are INSV	The external routers for which the MSC use to route MTP traffic are out of service.
- Reset not sent yet	Over cold+ restarts, CIC states suffer a memory mutilation, and GRS messages must be sent when BICC routesets first come into service. This is an indication that a GRS message has not yet been sent for the CIC.
- No ack-for-reset received yet	This is an indication that the CIC is pending either a GRA or RLC.
- Circuit is awaiting CGUA message	This is an indication that the CIC is pending a CGUA message.
- Circuit is UNEQUIPPED at the REMOTE office	This is an indication that the CIC is UNEQ at the far end.
- Mismatch with MTP routeset data	The BICC application's routeset state data mismatches with that of MTP. The MSC audits the BICC application's routeset state data against that of MTP. The audit corrects state information every 10 minutes. The next audit cycle will clear up this state mismatch.
- Mismatch with MTP External Routing state	The BICC application's external routing data mismatches with that of MTP. The MSC audits the BICC application's external routing data against that of MTP. The audit corrects state information every 10 minutes. The next audit cycle will clear up this state mismatch.

**System action**

None

**User action**

[Table 2-52](#) provides a list of user actions.

**Table 2-52**  
**User actions**

Text	Customer Action
- Routeset is BLOCKED	Bring the routeset back into service.
- No External Routers are INSV	Bring at least one external router into service.
- Reset not sent yet	Either:  1) Wait for a GRS message to be sent after a cold+ restart.  2) Invoke manual intervention on this CIC by bringing it into INB, then bring it back into service.
- No ack-for-reset received yet	Either:  1) Wait for the far end to respond with a RLC/GRA.  2) Invoke manual intervention on this CIC by bringing it into INB, then bring it back into service.
- Circuit is awaiting CGUA message	None. The CIC will not come into service as long as the far end does not respond to a CGUA.
- Circuit is UNEQUIPPED at the REMOTE office	Equip the CIC at the far end. Then, bring this CIC into service.
- Mismatch with MTP routeset data	None.
- Mismatch with MTP External Routing state	None.

**Response 3**  
FAILED, NO CIC POSTED**Explanation**

A CIC must be posted before the QRYSIG command can be issued.

**System action**

None

**User action**

Post a BICC CIC before issuing the QRYSIG command.

**Examples**

Use the QRYSIG command with no CIC posted  
>QRYSIG

**Figure 2-86**  
Use the QRYSIG command with no CIC posted

```
GBICTK
0 Quit
2 Post_   CIC       CKT TYPE  COM LANG   STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, NO CIC POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 4**  
FAILED, CIC IS UNEQUIPPED

**Explanation**  
The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the QRYSIG command can be issued.

**System action**  
None

**User action**  
Post a datafilled BICC CIC before issuing the QRYSIG command.

**Examples**

Use the QRYSIG command on a posted CIC that has been deleted from table GBCIC:  
>Qrysig

**Figure 2-87**  
**QRYSIG command on a posted CIC that has been deleted**

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1        NEQ
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, CIC IS UNEQUIPPED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 5**

COULD NOT GET GBICTK MAP OWNER

**Explanation**

An internal error has occurred.

**System action**

None

**User action**

Try the QRYSIG command again. If the QRYSIG command fails again, try reposting the current displayed CIC.

### Examples

Normal QRYSIG command

>Post g CLLI1 2

>QRYSIG

Figure 2-88

#### Internal Error on Normal QRYSIG Command

```
GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      2      2W BICC  CLLI1      LO
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      COULD NOT GET GBICTK MAP OWNER
15
16 QrySig
17 RouteSet
18
MAPUSER
```

### ROUTESET command

The ROUTESET command returns the routeset that corresponds to the posted CIC.

#### Syntax

ROUTESET: <ROUTESET Name>

#### Parameters

None

#### Responses

##### Response 1 (Success)

ROUTESET: <ROUTESET NAME>

**Explanation**

The ROUTESET command returns the routeset associated with the posted CIC.

**System action**

None

**User action**

None

**Examples**

ROUTESET on a CIC from a posted CLI:

>Post g CLLI1

>Routeset

**Figure 2-89**  
**Successful ROUTEST command**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1      LO
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      ROUTESET: ROUTESET1
15
16 QrySig
17 RouteSet
18
MAPUSER

```

**Response 2**

FAILED, NO CIC POSTED

**Explanation**

A CIC must be posted before the ROUTESET command can be issued.

**System action**

None

**User action**

Post a BICC CIC before issuing the ROUTESET command.

**Examples**

Use the ROUTSET command with no CIC posted

>Routeset

**Figure 2-90**

**Use the ROUTESET command with no CIC posted**

```
GBICTK
0 Quit
2 Post_   CIC       CKT TYPE  COM LANG   STATE
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICK:
14      FAILED, NO CIC POSTED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 3**

FAILED, CIC IS UNEQUIPPED

**Explanation**

The posted CIC has been deleted from GBCIC. A datafilled CIC must be posted before the ROUTSET command can be issued.

**System action**

None

**User action**

Post a datafilled BICC CIC before issuing the ROUTSET command.

**Examples**

Use the ROUTSET command on a posted CIC that has been deleted from table GBCIC:

>Routeset

**Figure 2-91**

**ROUTESET command on a posted CIC that has been deleted**

```
GBICTK
0 Quit
2 Post_   CIC      CKT TYPE  COM LANG   STATE
3      2      2W BICC  CLLI1      NEQ
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      FAILED, CIC IS UNEQUIPPED
15
16 QrySig
17 RouteSet
18
MAPUSER
```

**Response 4**

COULD NOT GET GBICTK MAP OWNER

**Explanation**

An internal error has occurred.

**System action**

None

**User action**

Try the ROUTESET command again. If the ROUTESET command fails again, try reposting the current displayed CIC.

### Examples

Normal ROUTSET command

```
>Post g CLLI1 2  
>ROUTESET
```

Figure 2-92

#### Internal Error on Normal ROUTESET Command

```
GBICTK  
0 Quit  
2 Post_   CIC      CKT TYPE  COM LANG   STATE  
3      2      2W BICC  CLLI1      LO  
4  
5 BSY_  
6 RTS_  
7  
8 FRLS_  
9  
10  
11 PREV  
12 NEXT  
13      GBICTK:  
14      COULD NOT GET GBICTK MAP OWNER  
15  
16 QrySig  
17 RouteSet  
18  
MAPUSER
```

#### Response 5

ERROR RETRIEVING ROUTESET NAME

#### Explanation

An serious internal error has occurred.

#### System action

None

#### User action

There is a serious problem with the switch. Contact Nortel Personnel.

#### Examples

Normal ROUTSET command

```
>Post g CLLI1 2  
>ROUTESET
```

**Figure 2-93**  
**Serious Internal Error on Normal ROUTESET Command**

```

GBICTK
0 Quit
2 Post_  CIC      CKT TYPE  COM LANG      STATE
3      1      2W BICC  CLLI1        LO
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV
12 NEXT
13      GBICTK:
14      ERROR RETRIEVING ROUTESET NAME
15
16 QrySig
17 RouteSet
18
MAPUSER
    
```

**OP command**

The OP command generates an IAM containing the provided digits using the posted CLLI/CIC. A valid BICC CLLI/CIC must be posted.

**Syntax**

**OP-- Generate an IAM with provided digits**  
**Parms: <1 to 18 DIGITS**

**Parameters**

[Table 2-53](#) lists the parameters, values, and definitions for the OP command.

**Table 2-53**  
**OP command**

Parameter	Value	Description
DIGITS	1 to 18 dialed digits	These digits are used for building the IAM.
—end—		

## Responses

### Response Success

Outpulsing Ok.

### Explanation

The IAM was successfully built, sent, and a replying ACM or ANM was received.

### System action

None

### User action

None

### Examples

```
>Post g ANSIBICCP  
>OP 7347220346
```

**Figure 2-94**  
**OP Success (ACM or ANM)**

```
XAC  MS  IOD  Net  PM  CCS      Trks  Ext  APPL  
ETHR 01SBPT AMA B . 1SysB 1 RS    71CC. 1Crit .  
M      *C*      M  *C*      *C*  *C*  
GBICTK  
0 Quit  CIC      CKT TYPE COM LANG      STATE  
2 Post_ 1      2W BICC ANSIBICCP      IDL  
3  
4  
5 BSY_  
6 RTS_  
7  
8 FRLS_  
9  
10  
11 PREV  OP 7347220346  
12 NEXT  Outpulsing in progress  
13      Outpulsing Ok.  
14 OP  
15 TrkQry  
16 QrySig  
17 RouteSet  
18  
MAPUSER  
Time 17:52 >
```

### Response Success

Outpulsing Ok.

**Explanation**

The IAM was successfully built, sent, a CFN message was received , followed by a replying ACM or ANM.

The CFN message just tandemed through, thus is consumed and does not affect the result of the OP command.

**System action**

None

**User action**

None

**Examples**

>Post g ANSIBICCP  
>OP 7347220346

**Figure 2-95**  
**OP Success (CFN)**

```

XAC  MS  IOD  Net  PM  CCS      Trks  Ext  APPL
ETHR 01SBPT AMA B . 1SysB 1 RS    71CC. 1Crit .
M      *C*      M  *C*      *C*  *C*
GBICTK
0 Quit  CIC      CKT TYPE COM LANG      STATE
2 Post_ 1      2W BICC ANSIBICCP      IDL
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV  OP 7347220346
12 NEXT  Outpulsing in progress
13      Outpulsing Ok.
14 OP
15 TrkQry
16 QrySig
17 RouteSet
18
MAPUSER
Time 17:52 >

```

**Response Unsuccessful**

Outpulsing TBL, invalid reply.

### Explanation

The IAM was built and dispatched, received LPA, expecting either ACM or ANM message. OP command failed.

LPA message is not supported by ANSI BICC, thus OP command is unsuccessful.

### System action

None

### User action

None

### Examples

```
>Post g ANSIBICCP  
>OP 9726903317
```

**Figure 2-96**  
**OP failure**

```
XAC MS IOD Net PM CCS Trks Ext APPL  
ETHR 01SBPT AMA B . 1SysB 1 RS 71CC. 1Crit .  
M *C* M *C* *C* *C*  
GBICTK  
0 Quit CIC CKT TYPE COM LANG STATE  
2 Post_ 1 2W BICC ANSIBICCP IDL  
3  
4  
5 BSY_  
6 RTS_  
7  
8 FRLS_  
9  
10  
11 PREV OP 9726903317  
12 NEXT Outpulsing in progress.  
13 Outpulsing TBL, invalid reply  
14 OP  
15 TrkQry  
16 QrySig  
17 RouteSet  
18  
MAPUSER  
Time 17:52 >
```

### Response Unsuccessful (timeout)

Outpulsing TBL, NO response from distant office.

**Explanation**

The IAM was successfully built and dispatched, but no message was received in reply.

**System action**

None

**User action**

Use QrySig to verify signaling links are up. Otherwise, resolve issue with Far-End switch.

**Examples**

```
>Post g ANSIBICCP
>OP 7346244422
```

**Figure 2-97**  
**OP failure (timeout)**

```
XAC  MS  IOD  Net  PM  CCS      Trks  Ext  APPL
ETHR 01SBPT AMA B . 1SysB 1 RS      71CC. 1Crit .
M      *C*      M  *C*      *C*  *C*
GBICTK
0 Quit  CIC      CKT TYPE COM LANG      STATE
2 Post_ 1      2W BICC ANSIBICCP      IDL
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV  OP 7346244422
12 NEXT  Outputing in progress
13      Outputing TBL, NO response from distant office.
14 OP
15 TrkQry
16 QrySig
17 RouteSet
18
MAPUSER
Time 17:52 >
```

**Response Unsuccessful**

Outputing TBL, NO response from distant office.

**Explanation**

The IAM was built and dispatched, received FAC message , waiting for replying ACM or ANM.

The FAC message is consumed, it does not affect the success/failure of the OP command. In this scenario, no ACM or ANM message received within the timeout period, thus OP command is unsuccessful.

### System action

None

### User action

Use QrySig to verify signaling links are up. Otherwise, resolve issue with Far-End switch.

### Examples

```
>Post g ANSIBICCP
>
OP 9726903317
```

**Figure 2-98**  
**OP failure (no response)**

```
XAC MS IOD Net PM CCS Trks Ext APPL
ETHR 01SBPT AMA B . 1SysB 1 RS 71CC. 1Crit .
M *C* M *C* *C* *C*
GBICTK
0 Quit CIC CKT TYPE COM LANG STATE
2 Post_ 1 2W BICC ANSIBICCP IDL
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV OP 9726903317
12 NEXT Outpulsing in progress.
13 Outpulsing TBL, no response from distant office
14 OP
15 TrkQry
16 QrySig
17 RouteSet
18
MAPUSER
Time 17:52 >
```

**Response Unsuccessful.**  
Outpulsing TBL, timeout occurred.

**Explanation**  
The IAM was not dispatched.

For some reason the IAM message was not built and not dispatched. Possible reasons: MGWs are congested, H.248 errors.

The OP command failed, “Outpulsing TBL, timeout occurred” is displayed after 60 secs.

**System action**

None

**User action**

Use QrySig to verify signaling links are up.

**Examples**

```
>Post g ANSIBICCP
>
OP 9726903317
```

**Figure 2-99**  
**OP failure (IAM not dispatched)**

```
XAC MS IOD Net PM CCS Trks Ext APPL
ETHR 01SBPT AMA B . 1SysB 1 RS 71CC. 1Crit .
M *C* M *C* *C* *C*
GBICTK
0 Quit CIC CKT TYPE COM LANG STATE
2 Post_ 1 2W BICC ANSIBICCP IDL
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV OP 9726903317
12 NEXT Outpulsing in progress.
13 Outpulsing TBL, timeout occurred
14 OP
15 TrkQry
16 QrySig
17 RouteSet
18
MAPUSER
Time 17:52 >
```

**Additional error responses:**

Additional error responses for the OP command when the posted circuit is not IDL:

- When the corresponding RTESET is not INSV: "Outpulsing failed - Routeset unavailable"
- When the posted circuit is INB: "Outpulsing failed - Circuit is offline"
- When the posted circuit is undergoing or has not undergone reset: "Outpulsing failed - CIC turn\_up is not completed".
- When the posted circuit is already involved in a call: "Outpulsing failed-CIC is involved in an active call".
- When the posted circuit is unequipped: "Outpulsing failed-Circuit is UNEQUIPPED at the REMOTE office".

*Note:* Issuing the OP command for a posted circuit that is MB will release the MB state, and execute the OP command.

**TRKQRY command**

The TRKQRY command acts on the posted CLLI/CIC and causes the display of local or remote CIC state, or to check for state mismatch between the two and, optionally, take action to make them compatible.

**Syntax**

**TRKQRy--Display local or remote state of trunk or check for state mismatch.**

**Parameters**

Figure 2-100 shows parameters for the TRKQRY command.

**Figure 2-100**  
**TRKQRY parameters**

Parameter	Value	Description
TRKQRY	LOCAL, REMOTE	Displays local or remote state of trunk.
—end—		

**Responses**

**Response 1**

TRKQRY LOCAL

**Explanation**

The local view of the CIC state is displayed.

**System action**

None

**User action**

None

**Examples**

TRKQRY on a CIC from a posted CLI:

>Post g CLLI1

>TRKQRY LOCAL

**Figure 2-101**

**TRKQRY LOCAL Command**

```

XAC  MS  IOD  Net  PM  CCS      Trks  Ext  APPL
ETHR 01SBPT AMA B . 1SysB 1 RS      71CC. 1Crit .
M      *C*      M  *C*      *C*  *C*
GBICTK
0 Quit  CIC      CKT TYPE COM LANG      STATE
2 Post_ 1      2W BICC ANSIBICCP      IDL
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV  trkqry local
12 NEXT  Local Trunk State: IDLE
13
14 OP
15 TrkQry
16 QrySig
17 RouteSet
18
MAPUSER
Time 17:52 >

```

**Response 2**

TRKQRY REMOTE

**Explanation**

The remote view of the CIC state is displayed.

**System action**

None

**User action**

None

### Examples

```
TRKQRY on a CIC from a posted CLI:  
>Post g CLLI1  
>TRKQRY REMOTE
```

**Figure 2-102**  
**TRKQRY REMOTE Command**

```
XAC MS IOD Net PM CCS Trks Ext APPL  
ETHR 01SBPT AMA B . 1SysB 1 RS 71CC. 1Crit .  
M *C* M *C* *C* *C*  
GBICTK  
0 Quit CIC CKT TYPE COM LANG STATE  
2 Post_ 1 2W BICC ANSIBICCP IDL  
3  
4  
5 BSY_  
6 RTS_  
7  
8 FRLS_  
9  
10  
11 PREV trkqry remote  
12 NEXT Remote Trunk State: IDLE  
13  
14 OP  
15 TrkQry  
16 QrySig  
17 RouteSet  
18  
MAPUSER  
Time 17:52 >
```

### Response 3 (Both, Compatible States)

TRKQRY

### Explanation

The local and remote views of the CIC state are displayed.

### System action

None

### User action

None

### Examples

```
TRKQRY on a CIC from a posted CLI:  
>Post g CLLI1  
>TRKQRY
```

**Figure 2-103**  
**TRKQRY Command, Both (implied)**

```

XAC  MS  IOD  Net  PM  CCS      Trks  Ext  APPL
ETHR 01SBPT AMA B .  1SysB 1 RS      71CC. 1Crit .
M      *C*      M  *C*      *C*  *C*
GBICTK
0 Quit  CIC      CKT TYPE COM LANG      STATE
2 Post_ 1      2W BICC ANSIBICCP      IDL
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV  trkqry
12 NEXT  Local Trunk State: IDLE
13      Remote Trunk State: IDLE
14 OP    States are compatible - No (protocol) action required.
15 TrkQry
16 QrySig
17 RouteSet
18
MAPUSER
Time 17:52 >

```

In this example, the local and remote states are compatible and no action is necessary.

#### **Response 4 (Both, Incompatible States)**

TRKQRY

#### **Explanation**

The local and remote views of the CIC state are displayed.

#### **System action**

None

#### **User action**

None

#### **Examples**

TRKQRY on a CIC from a posted CLI:

```
>Post g CLLI1
```

```
>TRKQRY
```

**Figure 2-104**  
**TRKQRY Command, Both (implied) - Mismatch**

```
XAC  MS  IOD  Net  PM  CCS      Trks  Ext  APPL
ETHR 01SBPT AMA B .  1SysB 1 RS      71CC. 1Crit .
M      *C*      M  *C*      *C*  *C*
GBICTK
0 Quit  CIC      CKT TYPE COM LANG      STATE
2 Post_ 1      2W BICC ANSIBICCP      IDL
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV  trkqry
12 NEXT  Local Trunk State: IDLE
13      Remote Trunk State: INCOMING CIRCUIT BUSY, ACTIVE
14 OP    Action(s) required:
15 TrkQry  Send RLS
16 QrySig  Do you want to take these action(s)?
17 RouteSet Yes
18      ACTION TAKEN
MAPUSER
Time 17:52 >
```

**Response 5 (Timeout)**  
TRKQRY REMOTE or TRKQRY

**Explanation**  
Either the remote or the local and remote views of the CIC state are displayed (depending on which of the above two commands are entered).

**System action**  
None

**User action**  
Use QrySig to verify signaling links are up. Otherwise, resolve issue with Far-End switch.

**Examples**  
TRKQRY on a CIC from a posted CLI:  
>Post g CLLI1  
>TRKQRY

**Figure 2-105**  
**TRKQRY Command, CQM Timeout**

```
XAC MS IOD Net PM CCS Trks Ext APPL
ETHR 01SBPT AMA B . 1SysB 1 RS 71CC. 1Crit .
M *C* M *C* *C* *C*
GBICTK
0 Quit CIC CKT TYPE COM LANG STATE
2 Post_ 1 2W BICC ANSIBICCP IDL
3
4
5 BSY_
6 RTS_
7
8 FRLS_
9
10
11 PREV trkqry remote
12 NEXT LTimeout Error -- No response received for CQM message.
13
14 OP
15 TrkQry
16 QrySig
17 RouteSet
18
MAPUSER
Time 17:52 >
```

---

# GMASCRCI

---

## GMASCRCI directory

GMASCRCI is a MAPCI level directory. The GMASCRCI commands maintain table MAP (Mobile Application Part) for the MSC.

### Accessing GMASCRCI

To access the GMASCRCI MAP level, type the following command at the CI prompt and press return:

```
>gmasrci  
GMASCRCI:>
```

### Commands

The following commands are available at the GMASCRCI command level:

- DELETE
- COUNT
- QUIT
- VIEW

## DELETE command

DELETE is a non-menu, resident command. This command deletes the specified network node IDs from the dynamic table. When this command is used, the delete count is incremented and the dynamic table entry count is decremented.

### Syntax

The command syntax for DELETE is:

```
>DELETE <networknodeid>
```

### Parameters

[Table 2-54](#) lists and describes the optional parameter that can be used with the DELETE command.

**Table 2-54**  
**DELETE parameters**

Parameter	Value	Definition
networknodeid	string	This value is converted to BCD to identify the network node id in the MAP Screen table.

## COUNT command

COUNT displays the current number of tuples in the dynamic table.

### Syntax

The command syntax for COUNT is:

```
>COUNT
```

## QUIT command

QUIT exits the GMASCRCI directory.

### Syntax

The command syntax for QUIT is:

```
>QUIT
```

## VIEW command

VIEW is a non-menu, resident command that shows the network node IDs, the entry date for the entire dynamic table, and the dynamic table entry count.

The network node ID can be entered as an optional parameter. If a network node ID is specified, the following information is printed:

- the node's ID
- all dialogues for the particular node
- application contexts for the particular node
- version numbers for the particular node
- entry date

### Syntax

The syntax for the VIEW command is

```
>VIEW <networknodeid>
```

### Parameters

[Table 2-55](#) lists and describes the optional parameter that can be used with the VIEW command.

**Table 2-55**  
**VIEW parameters**

Parameter	Value	Definition
networknodeid	string	This value is converted to BCD to identify the network node id in table MAP Screen.

---

# GNWMCODEDIR

---

## GNWMCODEDIR directory

GNWMCODEDIR is a MAP level directory that provides code controls that

- affect the progress of calls or
- count the number of calls

Code controls can affect call progress either directly or indirectly by interacting with another control. Code controls that affect call progress are protective controls.

Code controls count calls based on one or more digits of the destination code and the entry point into Universal Translations. The entry point is specified in terms of the translation system (XLASYS) and the translation name (XLANAME).

In all cases, code control is applied to a range of destination codes. The range of codes are relative to a specific translations name within a particular translation system. The start and end of the range can be the same.

## Accessing GNWMCODEDIR

To access the GNWMCODEDIR directory from the CI prompt, enter the following command at the CI prompt and press return:

```
CI:  
>MAPCI;NWM;CODECTRL
```

After entering the GNWMCODEDIR directory, the GNWMCODEDIR prompt displays. This prompt displays until the tool is exited by entering QUIT ALL.

## Commands

GNWMCODEDIR provides the following code control commands:

- APPLY
- CODECTRL
- LIST
- PAGE
- REMOVE
- QUIT

## APPLY command

APPLY command activates a specified control for the XLASYS, XLANAME, and digit range.

### Syntax

The command syntax for the APPLY command is:

```

APPLY <CTRL> {CBK <BLOCKTYPE> {PCT <XLASYS> {AC,
PX,
CT,
FA,
OFC,
DN,
AM}
<XLANAME> STRING
<FROM-CODE> STRING
<TO-CODE> STRING
<LEVEL> {1 TO 100},

```

```

GAP<XLASYS> {AC,
PX,
CT,
FA,
OFC,
DN,
AM}
<XLANAME> STRING
<From-Code> STRING
<To-Code> STRING
<GAP> STRING}

```

```

<ANN>{NCA,
EA1,
EA2},

```

```

PRP<XLASYS> {AC,
PX,
CT,
FA,
OFC,
DN,
AM}
<XLANAME> STRING
<FROM-CODE> STRING
<TO-CODE> STRING,

```

```

HTRF <XLASYS> {AC,
PX,
CT,
FA,
OFC,
DN,
AM}

```

<XLANAME> STRING  
<FROM-CODE> STRING  
<TO-CODE> STRING}

### Example

Figure 2-106 is an example of the APPLY command.

**Figure 2-106**  
Example of the APPLY command

```
CI>APPLY CBK GAP AC NORMAL '0181567' '0181840' 100.0 NCA  
>
```

### Parameters

Table 2-56 lists and defines the parameters applicable to the APPLY command.

**Table 2-56**  
APPLY command parameters

Parameter	Value	Definition
CTRL	CBK, PRP, HTRF	Specifies the control type being applied.
BLOCKTYPE	PCT, GAP	Specifies the control blocking type when CTRL is CBK.
XLASYS	AC, PX, CT, FA, OFC, DN, AM	Specifies the translation system from which the control is to be applied.
XLANAME		Specifies the translation name for the specified XLASYS from which the control is to be applied.
From-Code	18 digits	Specifies the start of the code range to which the control is being applied.
To-Code	18 digits	Specifies the end of the code range to which the control is being applied.
LEVEL	1 - 100	Specifies the percentage blocking level for CBK control or PCT.
GAP	0.0 - 600.0	Specifies the gapping period (in seconds) for a CBK control of GAP. Specified as a string of digits with a single decimal place.

### CODECTRL command

CODECTRL accesses the code control (CodeCtrl) menu level of the MAP. The CodeCtrl menu level displays information for the code controls that are currently active.

**Syntax**

The command syntax for CODECTRL is:

**>CODECTRL**

**Example**

Figure 2-107 is an example of the output of the CODECTRL command.

**Figure 2-107**  
**Example of CODECTRL command**

```
CI>CodeCtrl
CBk  PRPHTRF
0 0 0
>
```

**LIST command**

The LIST command lists code controls that are currently applied. If the XLANAME is omitted, *all* controls of the specified type for the given XLASYS are listed. If the XLANAME is specified and the ALL code is specified, *all* controls of the specified type for the given XLASYS and XLANAME are listed. If the code is specified, any control of the specified type applied to that XLASYS/XLANAME and code is listed.

**Syntax**

The command syntax for LIST is:

```
LIST<CTRL> {CBK <BLOCKTYPE> {PCT,  
GAP},  
PRP,  
HTRF}  
<XLASYS>{AC,  
PX,  
CT,  
FA,  
OFC,  
DN,  
AM}  
[<XLANAME> STRING]  
[<CODE|ALL> STRING]
```

### Parameters

Table 2-57 lists and describes the parameters that apply to the LIST command.

**Table 2-57**  
**LIST command parameters**

Parameter	Value	Definition
CTRL	CBK, PRP, HTRF	Specifies the control type being listed.
BLOCKTYPE	PCT, GAP	Specifies the control blocking type when CTRL is CBK.
XLASYS	AC, PX, CT, FA, OFC, DN, AM	Specifies the translation system from which the control is to be listed.
XLANAME		Specifies the translation name for the specified XLASYS from which the control is to be listed.
CODEALL	18 digits	Specifies that the control should be listed for all codes for XLASYS and XLANAME.

### Example

Figure 2-108 is an example of the LIST command.

**Figure 2-108**  
**Example of the LIST command**

```

CI>LIST
XLAFromToLevelAnn
Count Pass
AC NORMALXX99999999999999999999 99999999999999999999 50 NC
A
12345 12345
>

```

### PAGE command

When more than one page of code control data is generated by the LIST command, PAGE displays the next page of code control data.

#### Syntax

The command syntax for PAGE is:

**>PAGE**

### REMOVE command

The REMOVE command removes a code control of the specified type from the given XLASYS, XLANAME, and digit range. If no XLANAME is

specified, all controls of the given type is removed from all digit ranges. If ALL digits are specified, all controls of the specified type is removed from the given XLASYS/XLANAME.

**Syntax**

The command syntax for REMOVE is:

```
REMOVE<CTRL> {CBK <BLOCKTYPE> {PCT,
GAP},
PRP,
HTRF}
<XLASYS> {AC,
PX,
CT,
FA,
OFC,
DN,
AM}
<XLANAME> STRING
<From-Code|ALL> STRING}
[<To-Code> STRING]
```

**Example**

Figure 2-109 shows an example of the output of the REMOVE command.

**Figure 2-109**  
**Example of REMOVE command output**

```
CI> REMOVE CBK PCT AC NORMAL '0181567' '0181567'
>
```

**Parameters**

Table 2-58 lists and defines the parameters that apply to the REMOVE command:

**Table 2-58**  
**REMOVE command parameters**

Parameter	Value	Definition
CTRL	CBK, PRP, HTRF	Specifies the control type being removed.
BLOCKTYPE	PCT, GAP	Specifies the control blocking type when CTRL is CBK.
XLASYS	AC, PX, CT, FA, OFC, DN, AM	Specifies the translation system from which the control is to be removed.

**Table 2-58**  
**REMOVE command parameters (continued)**

Parameter	Value	Definition
XLANAME		Specifies the translation name for the specified XLASYS from which the control is to be removed.
From-Code/ALL	18 digits	Specifies the start of the code range. ALL specifies that the control should be removed from all code ranges for the specified XLASYS and XLANAME.
To-Code	18 digits	Specifies the end of the code range from which the control is to be removed.

—sheet 2 of 2—

## QUIT command

QUIT exits the GNWMCODEDIR MAP level and returns the user to the CI MAP level.

### Syntax

The command syntax for QUIT is:

**GNWMCODEDIR:**  
**>quit**

---

## GSMCLTRC

---

Operating company personnel can trace or record an individual's mobile subscriber activity in the Public Land Mobile Network (PLMN). The traced information is used to determine network problems and track subscriber activity in the PLMN.

Subscribers are traced based on their international mobile subscriber identity (IMSI) or international mobile equipment identity (IMEI). Trace records are produced at both the MSC and the base station subsystem (BSS).

GSMCLTRC is a MAPCI level that enables operating company personnel to display or delete an IMSI or IMEI that is currently provisioned for Call Trace.

### Accessing GSMCLTRC

To access GSMCLTRC from the CI prompt, enter the following command and press return:

```
CI:>GSMCLTRC
```

### Exiting GSMCLTRC

To exit GSMCLTRC and return to the CI level, enter

```
GSMCLTRC:>QUIT
```

### Commands

The following commands are available from the GSMCLTRC directory:

- COUNT
- DELETE
- DISPLAY
- DISPLAY ALL
- HELP
- QUIT

### COUNT command

COUNT examines all entries in the subscriber table that are activated for call trace and outputs a total count. This information is useful if personnel is considering using the "DISPLAY ALL" command because COUNT enumerates the number of entries that would be displayed.

### Syntax

The command syntax for COUNT is:

>Count

### System response

The system responds with the following information when the COUNT command is used:

```
nnn subscribers provisioned for Call Trace
```

## DELETE command

Based on an IMSI or IMEI, DELETE removes the trace data for the target subscriber. The tuple (representing the subscriber) is removed from the internal table, terminating call trace for that subscriber. If a call trace is in progress when the tuple is deleted, the trace continues until the completion of the current call.

### Syntax

The command syntax for DELETE is:

```
>Delete IMSI <imsi>  
- or -  
>Delete IMEI <imei>
```

### Parameters

The DELETE command requires either one of two parameters. Enter either the IMSI or the IMEI of the call trace subscriber. The IMSI or IMEI is a sequence of up to 15 digits identifying the traced subscriber or equipment.

### System response

When DELETE is used, the system provides the following response:

IMSI	OMC Id	Trace Reference	Trace Type
15 digits	20 alphanumerics	30 alphanumerics	{Invoking Event, MSC/ BSS Record Type, Priority}

```
Delete this tuple? (y or n):
```

### Error messages

An error message displays if an invalid IMSI or IMEI is input. If the IMSI or IMEI is not activated for call trace, the following message is output:

```
Subscriber not activated for Call Trace
```

### User action

Input 'y' or 'n' to confirm or terminate action.

## DISPLAY command

This command displays the following information for a call trace subscriber that is activated:

- the mobile identity (IMSI or IMEI)
- the operations and maintenance center (OMC) ID
- the trace reference
- the trace type

### Syntax

The command syntax for DISPLAY is:

```
>Display IMSI <imsi>
- or -
>Display IMEI <imei>
```

### Parameters

The DISPLAY command requires either one of two parameters. Enter either the IMSI or the IMEI of the call trace subscriber. The IMSI or IMEI is a sequence of up to 15 digits that identifies the traced subscriber or equipment.

### System response

When DISPLAY is used, the system provides the following response:

IMSI	OMC Id	Trace Reference	Trace Type
15 digits	20 alphanumerics	30 alphanumerics	{Invoking Event, MSC/ BSS Record Type, Priority}

### Error messages

An error message displays if an invalid IMSI or IMEI is input. If the IMSI or IMEI is not activated to be traced, the following message is output:

```
Subscriber not activated for Call Trace
```

## DISPLAY ALL command

The DISPLAY ALL command displays the trace data for *all* subscribers who have activated call trace. The trace data displayed for each subscriber is:

- the mobile identity (IMSI or IMEI)
- the OMC Id
- the trace reference
- the trace type

The information is displayed in groups of 50 entries. After each subset of entries, the user is queried to continue or quit.

### **Syntax**

The command syntax for DISPLAY ALL is:

**>Display ALL**

### **System response**

When DISPLAY ALL is used, the system provides the following response:

```
IMSI OMC Id Trace Reference Trace Type
15 digits20 alphanumerics30 alphanumerics{Invoking
Event, MSC/
BSS Record
Type, Priority}
```

NN subscribers are activated for Call Trace. Continue Display All? (y or n):

### **User action**

Input 'y' or 'n' to confirm or terminate action.

## **HELP command**

HELP displays the list of GSMCLTRC commands.

### **Syntax**

The command syntax for HELP is:

**>help GSMCLTRC**

## **QUIT command**

QUIT exits the GSMCLTRC tool.

---

## IWFTTP

---

### IWFTTP commands

IWFTTP is a MAP level that enables operating company personnel to test and maintain IWF trunks. The TTP level of the MAP is checked on an individual trunk member so diagnostics can be run. Additional functions for IWF trunk types are provided at the IWFTTP sublevel.

#### Accessing IWFTTP

To access the IWFTTP level is accessed from the CI prompt, enter the following command at the CI prompt and press return:

```
>MAPCI;MTC;TRKS;TTP;Level IWFTTP  
- or -  
>MAPCI;MTC;TRKS;TTP;IWFTTP
```

After entering the IWFTTP level, the IWFTTP level prompt displays. This prompt is displayed until the tool is exited.

#### Exiting IWFTTP

To exit IWFTTP and return to the TTP level, enter the following command and press return:

```
QUIT
```

To exit IWFTTP and return to the CI prompt, enter the following command and press return:

```
QUIT ALL
```

#### Example

[Figure 2-110](#) shows the IWFTTP MAP display. The IWFTTP commands are contained in the box on the left side of the display.

**Figure 2-110**  
**IWFTTP level**

```

XAC      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
RExSch   .       .       .       2SVR7  1 RSSC   ...       .       SDM +
          *C*

IWFTTP
0 Quit          POST      DELQ      BSYQ      DIG
2 Post_        TTP 27-0328
3             CKT TYPE   PM NO.    COM LANG   STA S R   DOT TE   RESULT
4
5 BSY
6 RTS
7 LinkTest
8 FnctTest
9
10
11 Hold
12 NEXT        IWFTTP:
13
14 Setup
15 Activate
16 Release
17 INFO
18
DONITA
Time 13:27 >

```

This section discusses the following commands:

- ACTIVATE
- FNCTTEST
- HELP
- INFO
- LINKTEST
- RELEASE
- SETUP

### **ACTIVATE command**

The ACTIVATE command sends an IWF-Activate-Request message to the IWF connected to the IWF trunk member in the control position. This command is disabled if the posted IWF truck type is a UIT.

#### **Syntax**

The syntax for the ACTIVATE command is:

**Activate** [<Options>... {r <RCR> {Half,Full}}]

**Parameters**

Table 2-59 lists and defines the parameters applicable to the ACTIVATE command:

**Table 2-59**  
**ACTIVATE command parameter**

Parameter	Value	Definition
RCR	Half, Full	The radio channel requirement sent to IWF. Default = FULL.

**Example**

Figure 2-111 shows an example of the ACTIVATE command.

**Figure 2-111**  
**Example of the ACTIVATE command**

```
> ACTIVATE
>
```

**Error message**

The following error message displays if the IWF trunk type is UIT. The requested command is not executed.

```
ERROR: The command does not support this IWF trunk type.
Posted trunk is an UIT.
```

**FNCTTEST command**

FNCTTEST runs a functional test on MIT trunk group member(s). The IWF element in the command position is connected through the network to the IWF element supplied with the command. Each IWF is issued an IWF-Setup-Request message, an IWF-Activate-Request message, and an IWF-Release-Request message. If the IWF responds affirmatively to each command, the test passes. Otherwise, the test fails. A response that indicates the reason for failure is sent to operating company personnel.

*Note 1:* While this test is in progress, both IWF elements are set to the ‘SEIZED’ state so they cannot be selected for call processing.

*Note 2:* The FNCTTEST command is disabled if the posted trunk type is a Universal IWF Trunk (UIT). UIT trunks are used to connect to the GPP IWF.

**Syntax**

The syntax for the FNCTTEST command is:

**FncTest <MIT> STRING <TRUNK NUM> {0 TO 255}**

### Parameters

Table 2-60 lists and describes parameters applicable to the FNCTTEST command.

**Table 2-60**  
**FNCTTEST command parameters**

Parameter	Value	Definition
MIT	Valid MIT CLLI name	Specifies the trunk group datafilled in table IWFMEM.
TRUNK NUM	Any valid MIT member	Specifies the member of the MIT trunk group datafilled in table IWFMEM.

### Example

Figure 2-112 shows an example of the FNCTTEST command.

**Figure 2-112**  
**Example of the FNCTTEST command**

```
> Fncctest T1MIT 2  
>
```

### Error messages

The following error message displays if the IWF trunk type is UIT. The requested command is not performed.

```
ERROR:The command does not support this IWF trunk type.  
Posted trunk is an UIT.
```

### HELP command

The HELP command provides information regarding the IWFTTP level commands.

### Syntax

The syntax for the HELP command is:

```
>HELP
```

### INFO command

The INFO command displays information on the IWF trunk member in the control position.

**Syntax**

The is no syntax for the INFO command.

**Parameters**

There are no parameters for the INFO command.

**Example**

Figure 2-113 shows an example of the INFO command.

**Figure 2-113**  
**Example of the INFO command**

```

> INFO
>
```

**LINKTEST command**

The LINKTEST command tests the Ethernet signaling channel of the IWF host for the IWF trunk member in the control position. If a valid signaling channel name from table IWFLKSET is provided, the specified signaling channel is tested instead of the signaling channel associated with the trunk member in the control position. This command sends a PING to the remote node. The PING checks the node’s serviceability.

**Syntax**

The syntax for the LINKTEST command is:

```
Linktest[<Options>...
{l <IWF Link> STRING
p <Number of packets: Valid values 1 to 10> {1 TO 10},
d <Display Statistics: Valid values ON or OFF> {ON,
OFF}}]
```

**Parameters**

Table 2-61 lists and defines the parameters applicable to the LINKTEST command. All the parameters in the following table are optional parameters.

**Table 2-61**  
**LINKTEST command parameters**

Parameter	Value	Definition
IWFLINK	Any valid IWF link name	Specifies the IWFLINK datafilled in table IWFLKSET. This parameter can be specified either with the command or by using the defaults to the IWFLINK associated with the posted IWF trunk.

**Table 2-61**  
**LINKTEST command parameters**

Parameter	Value	Definition
NUMBER OF PACKETS	1 - 10	Defines the number of packets that need to be sent while running the link test.
DISPLAY STATISTICS	ON, OFF	Defines whether statistics on the test should display.

### Example

[Figure 2-114](#) is an example of the LINKTEST command.

**Figure 2-114**  
**Example of the LINKTEST command**

```
> Linktest 1 ifwlink
>
```

## RELEASE command

RELEASE sends a IWF-Release-Request message to the IWF trunk member in the control position. The command is disabled if the posted trunk type is a UIT.

### Syntax

The syntax for the RELEASE command is:

**Release[<Options>...{d <Flush Direction>  
{Immed\_Rel, To\_MS, To\_Net}}]**

### Parameters

[Table 2-62](#) lists and defines the parameters applicable to the RELEASE command.

**Table 2-62**  
**RELEASE command parameters**

Parameter	Value	Definition
FLUSH DIRECTION	Immed_rel, To_MS, To_Net	Specifies the direction in which the IWF buffer should be flushed. Default = Immed_rel

### Example

[Figure 2-115](#) shows an example of the RELEASE command.

**Figure 2-115**  
**Example of the RELEASE command**

```
> Released Immed_Rel
>
```

### Error messages

The following error message displays if the IWF trunk type is UIT. The requested command is not performed.

```
ERROR: The command does not support this IWF trunk type.
Posted trunk is a UIT.
```

## SETUP command

The SETUP command sends an IWF-Setup-Request message to the IWF trunk member in the control position. This command gives the flexibility to specify certain barrier channel (BC) parameters in the setup message. The BC parameters are optional. If BC parameters are not specified, a default BC is sent to the IWF host.

*Note:* The SETUP command is disabled if the posted trunk type is a Universal IWF Trunk (UIT).

### Syntax

The syntax for the SETUP command is:

```
Setup [{d<DEFAULT> {31KHZ, FAX, UDI}
r <RCR> {HALF,FULL}
i <ITC> {31KHZ, FAX, UDI}
ra <RATE ADAPTION> {NONE, V110, X31}
s <SYNC> {SYNC, ASYNC}
u <USER RATE> {300, 1200, 2400, 4800, 9600,
12_75}
in <INTERMEDIATE> {NONE, 8KBPS, 16KBPS}
ce <CONNECTION ELEMENT> {TRANS, NONTRANS}
m <MODEM TYPE> {NONE, V21, V22, V22bis, V23,
V26, V32, UNDEF, AUTO}}]
```

## Parameters

Table 2-63 lists and defines the parameters applicable to the SETUP command.

**Table 2-63**  
**SETUP command parameters**

Parameter	Value	Definition
Default	31KHZ, FAX, UDI	This optional parameter sends predefined BCs in the Setup messages.
RCR	Half, Full	This optional parameter is the radio channel requirement (RCR) part of the third octet of the BC information.
ITC	31KHZ, FAX, UDI	This optional parameter is the information transfer capability part of the third octet of the BC information.
RATE	None, V110, X31	This optional parameter is the rate adaptation part of the fifth octet of the BC information.
SYNC	SYNC, ASYNC	This optional parameter is the synchronous/asynchronous bit of the sixth octet of the BC information.
BAUD	300, 1200, 2400, 4800, 9600, 12_75	This optional parameter is the user rate part of the 6a octet of the BC information.
INTER	None, 8KBPS, 16KBPS	This optional parameter is the intermediate rate part of the 6b octet of the BC information.
CE	Trans, Non_Trans	This optional parameter is the connection element (CE) part of the 6c octet of the BC information.
MODEM	None, Y21, Y22, Y22bis, Y23, V26ter, V32, Undef, Auto	This optional parameter is the modem type part of the 6c octet of the BC information.
—end—		

## Example

Figure 2-116 is an example of the SETUP command.

**Figure 2-116**  
**SETUP command**

```
> SETUP d fax u 1200  
>
```

**Error message**

The following error message displays if the IWF trunk type is UIT. The requested command is not performed.

ERROR: The command does not support this IWF trunk type.  
 Posted trunk is a UIT.

**IWFTTP error messages**

Table 2-64 lists and describes the error messages produced by the IWFTTP command level.

**Table 2-64**  
**IWFTTP error messages**

Error	Descriptions
No Ckt posted	No circuit is at the control position. Post a valid MIT at the control position or specify an IP address.
Link Test failed.	The IWF host for the IWF trunk in the control position failed to perform the link test.
Link Test Partially failed.	The number of packets sent do not equal the number of packets received. Also, the number of packets received is not equal to zero.
Error: Unable to invoke new process. Exiting...  - OR -  Error: Unable to allocate table for packet data field. Exiting...  - OR -  Error: Mailbox resources not available.  Exiting...	The resources on the MSC are not available.
Error: Cannot pin point the error.  Exiting anyway.....	Unknown error caused the link test to fail.
ERROR: Test cannot be performed without posting a MIT at control position.	No MIT is posted at the control position.
—sheet 1 of 2—	

**Table 2-64**  
**IWFTTP error messages (continued)**

<b>Error</b>	<b>Descriptions</b>
ERROR: CLLI is not datafilled in table CLLI.	The specified CLLI name does not exist.
ERROR: Specified MIT is not datafilled.	The MIT specified is not datafilled in table IWFMEM.
Invalid symbol: <DEFAULT> {31KHZ, FAX, UDI}	The default BC specified is not one of the allowed options.
Invalid symbol: <RCR> {HALF, FULL}	The wrong RCR value was entered.
Invalid symbol: <ITC> {31KHZ, UDI, FAX}	The wrong ITC value was entered.
Invalid symbol: <RATE ADAPTION> {NONE, V110, X31}	The wrong RATE value was entered.
Invalid symbol: <SYNC> {SYNC, ASYNC}	The wrong SYNC value was entered.
Invalid symbol: <USER RATE> {300, 1200, 2400, 4800, 9600, 12_75}	The wrong USER_RATE value was entered.
Invalid symbol: <INTERMEDIATE> {NONE, 8KBPS, 16KBPS}	The wrong INTER value was entered.
Invalid symbol: <CONNECTION ELEMENT> {TRANS, NONTRANS}	The wrong connection element value was entered.
Invalid symbol: <MODEM TYPE> {NONE, V21, V22, V22bis, V23, V26ter, V32, UNDEF, AUTO}	The wrong MODEM value was entered.
Invalid symbol: <Flush Direction> {Immed_Rel, To_MS, To_Net}	The flush direction field should indicate only one of the options shown.
—sheet 2 of 2—	

# MGWDIR

## MGWDIR commands

The Media GateWay (MGWDIR) directory is used to create a new MGW map level under PM. It is also used to access the MGW manual maintenance commands. You can access the MAPCI MGW level from the MAPCI PM level.

### Accessing

Enter the following command syntax to access the MGWDIR.

```
>MAPCI;mtc;pm;post mgw
```

### Example

Figure 2-117 shows an example of an MGWDIR display.

Figure 2-117  
MGWDIR display

CM	MS	IOD	Net	PM	CCS	Ins	Trks	Ext	APPL	
<b>MGW</b>					SYSB	MANB	OffL	CBsy	ISTb	InSv
0	Quit		PM		0	0	0	0	0	10
2	Post_		MGW		0	0	0	0	0	2
3	ListSet									
4										
5		<b>MGW</b>	0	Insv						
6										
7	Bsy									
8	RTS									
9	Offl									
10										
11	Disp_									
12	Next									
13										
14	QueryPM									
15										
16										
17										
18										
<b>USERID</b>										
Time 17:03 >										

### Commands

Table 2-65 lists the commands supported by the MGW, along with their descriptions.

**Table 2-65**  
**MAPCI MGW commands**

Command	Description
BSY	Busy the posted MGW. Bsy Force is supported.
RTS	Return a Manb MGW to service.
OFFL	Offline the posted MGW.
QUERYPM	Returns information about the posted MGW. This information includes the H.248 version used to communicate with the MGW, the IP Address of the MGW and whether the MGW is registered.
DISP	Display MGWs by state.
LISTSET	List the currently posted set.
QUIT	Quit the MGW MAPCI level.
POST	Post displays information about the selected MGW. Matches the “post” command for any other PM.
NEXT	Display the next entry in the posted set. Matched the “next” command for any other PM.

## BSY command

### Description

This command attempts to transition the posted MGW to a MANB state.

### Syntax

```
>help bsy
Bsy: Busy the specified MGW
Parms: [<All> {All}]
        [<Force> {Force}]
        [<Nowait> {Nowait}]
```

### Parameters

[Table 2-66](#) lists and defines the parameters for the BSY command.

**Table 2-66**  
**BSY command parameters**

Parameter	Value	Definition
All	{All}	Busy all MGWs in the posted set.
Force	{Force}	Force a MGW currently running calls out of service. This will cause all calls to be released.
—sheet 1 of 2—		

**Table 2-66**  
**BSY command parameters (continued)**

Parameter	Value	Definition
Nowait	{Nowait}	Do not wait for a response from MAPCI before returning the prompt.
—sheet 2 of 2—		

**Example**

Figure 2-118 shows a BSY command display example.

**Figure 2-118**  
**BSY command display**

```

CM      MS      IOD      Net      PM      CCS      Lns      Trks      Ext      APPL
.      .      .      .      .      .      .      .      .      .

MGW
0 Quit          PM          0      3      0      0      0      10
2 Post_        MGW         0      1      0      0      0      2
3 ListSet
4
5      MGW  34  ManB
6      bsy
7 Bsy          MGW 34    Bsy Passed
8 RTS
9 Offl
10
11 Disp_
12 Next
13
14 QueryPM
15
16
17
18
USERID
Time 17:03 >
    
```

**RTS command**

**Description**

This command attempts to transition the posted MGW to an INSV state.

**Syntax**

```

>help rts
Rts: Return the specified MGW to service
Parms: [<All> {All}]
        [<Nowait> {Nowait}]
    
```

## Parameters

Table 2-67 lists and defines the parameters for the RTS command.

**Table 2-67**  
**RTS command parameters**

Parameter	Value	Definition
All	{All}	RTS all MGWs in the posted set.
Nowait	{Nowait}	Do not wait for a response from MAPCI before returning the prompt.

## Example

Figure 2-119 shows an RTS command display example.

**Figure 2-119**  
**RTS command display**

CM	MS	IOD	Net	PM	CCS	LnS	Trks	Ext	APPL
.	.	.	.	.	.	.	.	.	.
<b>MGW</b>				<b>SYSB</b>	<b>MANB</b>	<b>Of fL</b>	<b>CBsy</b>	<b>ISTb</b>	<b>InSv</b>
0	Quit	PM		0	3	0	0	0	10
2	Post_	MGW		0	1	0	<b>0</b>	<b>0</b>	<b>2</b>
3	ListSet								
4									
5		<b>MGW</b>	<b>34</b>	<b>InSv</b>					
6		<b>rts</b>							
7	Bsy	<b>MGW 34</b>	<b>Rts</b>	<b>Passed</b>					
8	RTS								
9	Offl								
10									
11	Disp_								
12	Next								
13									
14	QueryPM								
15									
16									
17									
18									
	<b>USERID</b>								
	Time 17:03								
	>								

## Offl command

This command attempts to transition the posted MGW to an OFFL state.

### Syntax

```
>help offl
>Offl: Set specified MGW offline
Parms: [<All> {All}]
[<Nowait> {Nowait}]
```

**Parameters**

Table 2-68 lists and defines the parameters for the Offl command.

**Table 2-68**  
**Offl command parameters**

Parameter	Value	Definition
All	{All}	RTS all MGWs in the posted set.
Nowait	{Nowait}	Do not wait for a response from MAPCI before returning the prompt.

**Example**

Figure 2-120 shows an Offl command display example.

**Figure 2-120**  
**Offl command display**

```

CM      MS      IOD      Net      PM      CCS      Lns      Trks      Ext      APPL
.       .       .       .       .       .       .       .       .       .

MGW
0 Quit          PM          SYSB  MANB  OffL  CBSy  ISTb  InSv
2 Post_        MGW          0     3     1     0     0     10
3 ListSet      0     1     1     0     0     2
4
5             MGW  34  Offl
6             offl
7 Bsy         MGW 34  Offl Passed
8 RTS
9 Offl
10
11 Disp_
12 Next
13
14 QueryPM
15
16
17
18
USERID
Time 17:03 >
    
```

**QueryPM command**

This command displays information about the posted PM.

**Syntax**

>help querypm  
 QueryPM: Query miscellaneous information about the specified MGW

**Parameters**

The QueryPM command has no parameters.

**Example**

Figure 2-121 shows a QueryPM command display example.

**Figure 2-121**  
**QueryPM command display**

```

CM      MS      IOD      Net      PM      CCS      Lns      Trks      Ext      APPL
.      .      .      .      .      .      .      .      .      .

MGW
0 Quit          PM          SYSB  MANB  OffL  CBsy  ISTb  InSv
2 Post_        MGW          0      1      0      0      0      10
3 ListSet
4
5             MGW   34  InSv
6
7 Bsy          QueryPM
8 RTS          MID: ABCDE
9 Offl         Registered: Yes
10            H.248 protocol Version: 1
11 Disp_       IP Address: 47.207.215.153
12 Next        Port: 9857
13            Congestion Level: 0
14 QueryPM     Heartbeat Failure Count: 0
15            Deloading: Yes
16
17
18
USERID
Time 17:03 >

```

**Disp command**

This command displays a list of posted PMs that are in a specified maintenance state.

**Syntax**

>help disp  
**Disp: Display all PMs in specified PM state.**  
**Parms: <Option> {STATE <state> {SysB, ManB, OffL, CBsy, ISTb,InSv}}**

**Parameters**

Table 2-69 lists and defines the parameters for the Disp command.

**Table 2-69**  
**Disp command parameters**

Parameter	Value	Definition
State	SysB, ManB, OffL, CBsy, ISTb,InS	Display all PMs in specified PM state.

**Example**

Figure 2-122 shows a Disp command display example.

**Figure 2-122**  
**Disp command display**

CM	MS	IOD	Net	PM	CCS	LnS	Trks	Ext	APPL
.	.	.	.	.	.	.	.	.	.
<b>MGW</b>				SYSB	MANB	OffL	CBsy	ISTb	InSv
0	Quit	PM		0	1	0	0	0	10
2	Post_	MGW		0	1	0	0	0	2
3	ListSet								
4									
5		MGW	34	InSv					
6		disp	state	insv					
7	Bsy								
8	RTS	Insv	MGW	: 34					
9	Offl								
10									
11	Disp_								
12	Next								
13									
14	QueryPM								
15									
16									
17									
18									
USERID									
Time 17:03 >									

**ListSet command**

This command displays a list of PMs in the currently posted set.

**Syntax**

```
>help ListSet
List the contents of the post set
no parm - the current pm type on the screen
a pm type (i.e., MGW)
ALL - The entire post set
Parms: [<PARMS> {TM2, TM4,ATM, TM8,MTM,DCM,OAU,STM,T8A,TMA,
MMA,TAN,DES,LGC,DTC,LTC,SMR,
SMS,SMU,MSB7,RMM,IDTC,ILGC,ILTC,
PTM,ADTC,PDTC,TDTC,TLGC,TLTC, ALGC,LIM, LIU7, PLGC, SPM,
TMS, FP,AP,HSI2,DTCI, EIU,ICP,EXND,HSLR,ELIU,DTM,
DFI,HLIU,GSMP,NIU, CTM, SMA2, GPP, AIM,SVR7, MLIU, MGW, ALL}]
```

**Example**

Figure 2-123 shows a ListSet command display example.

**Figure 2-123**  
**ListSet command display**

CM	MS	IOD	Net	PM	CCS	Lns	Trks	Ext	APPL	
.	.	.	.	.	.	.	.	.	.	
MGW										
0 Quit		PM			SYSB	MANB	OffL	CBsy	ISTb	InSv
2 Post_		MGW			0	1	0	0	0	10
3 ListSet					0	1	0	0	0	2
4										
5		MGW	34	InSv						
6		ListSet								
7 Bsy		MGW	30, 40, 55.							
8 RTS										
9 Offl										
10										
11 Disp_										
12 Next										
13										
14 QueryPM										
15										
16										
17										
18										
USERID										
Time 17:03										>

## POST command

This command displays information about the selected MGW (or all).

### Syntax

>help Post

## NEXT command

This command displays the next entry in the posted set.

### Syntax

>help Next

## QUIT command

The Quit all command quits the MGW directory and returns the user to the CI level. To exit MGWDIR and return to the CI prompt, enter the following command and press return:

>quit all

---

## PNPROCI

---

PNPROCI is a MAPCI level that enables operating company personnel to access and change information regarding the Local Number Portability (LNP) feature.

The LNP feature implements number portability on the MSC for service providers. Local Number Portability enables a subscriber to retain their number when they change networks. The LNP feature supports the following:

- Service Number Portability (LNP for non-geographic numbers such as a free phone)
- administrative query of ported numbers
- facilitated provisioning for ported -in,-out, or -across service numbers

*Note:* The term ‘ported number’ is a general term used for directory number (DN) or service number.

### PNPROCI

To access PNPROCI from the CI prompt, enter the following command and press return:

```
> PNPROCI
```

### QUIT

To exit the PNPROCI level and return to CI, enter the following command and press return:

```
> QUIT
```

### Commands

The PNPROCI provides the following commands to operating company personnel:

- QPORT—lists the ported numbers
- ADDPORT—adds or modifies the ported numbers
- DELPORT—deletes ported numbers
- ADDNIC—adds or modifies the NIC routing info
- DELNIC—deletes the NIC routing info
- SHOWXLA—displays the available XLASYS and XLANAME
- OVE—OVerrides the check for DELPORT/DELNIC commands
- QUIT—quits out of the Number Portability Provisioning

## QPORT command

This command lists all ported numbers in a network (at the point of interconnect node) or in a switch (at a local node) based on the specified port type.

### Syntax

The syntax for the QPORT command is:

```
>qport[<query type> {PORTEDIN,  
PORTEDOUT,  
PORTEDACR,  
SERVICENO,  
NIC <Dxxx, x is 0 to 9> STRING,  
NUMBER <ported number / enter  
"$" for wildcard search> STRING,  
ALL}  
[<Display mode {BRIEF}> {BRIEF}]
```

### Parameters

Table 2-70 lists and describes the parameters applicable to the QPort command.

**Table 2-70**  
**QPORT command parameters**

Parameter	Definition
PORTEDIN	Indicates the numbers ported into the network.
PORTEDOUT	Indicates the numbers ported out of the network.
PORTEDACR	Indicates the numbers from other networks (not your own network).
SERVICENO	Indicates the numbers of a service provider
NIC	Indicates the network identification code (NIC)
NUMBER	Indicates a directory number.
ALL	Indicates all the ported types in the system including: PORTEDIN, PORTEDOUT, PORTEDACR, and SERVICENO.
Display mode	Indicates that the DN is displayed on the report.

### Example

An example of the command follows.

```
>qport portedin  
      PORTED NUMBER:  PORTEDTYPE  NIC  XLASYS  XLANAME  
      -----
```

```

122  PORTEDIN  D001  PX  RUAINTL
132  PORTEDIN  D001  PX  RUAINTL
133  PORTEDIN  D001  PX  RUAINTL
134  PORTEDIN  D001  PX  RUAINTL
135  PORTEDIN  D001  PX  RUAINTL

```

End of PNSCRN table reached

**Note:** The display may vary slightly depending on the parameter used with the QPORT command.

## System responses

Table 2-71 provides the system responses sent regarding the QPort command.

**Table 2-71**  
**System responses regarding the QPORT command**

Response	Explanation	Action
WARNING: Table PNSCRN is empty	Table PNSCRN has no tuple.	Add a tuple to table PNSCRN.
ERROR: NIC is a 4-digit of format Dxxx First digit for NIC must be a 'D'	The first digit entered for the NIC must be a hex digit 'D'.	Re-enter a NIC with format 'Dxxx' where x is a digit from 0 to 9.
ERROR: NIC is a 4-digit of format Dxxx	The NIC length must be 4.	Re-enter a NIC with format 'Dxxx' where x is a digit from 0 to 9.
ERROR: maximum length of the ported DN is 30.	The number entered is longer than 30 digits.	Re-enter the number less than or equal to 30 digits.
Invalid ported DN digits entered Vector of up to 30 {0,1,2,3,4,5,6,7,8,9}'s	The number entered is not a valid digit from 0 to 9.	Re-enter valid digits for the number.
Ported Number xxx is not found in table PNSCRN	The number entered is not a ported number.	Re-enter a number which has been ported.

## ADDPOR command

ADDPOR adds *or modifies* a single ported number, or a range of ported numbers, to the attribute PRTINFO of table PNSCRN. A range of ported numbers is specified by the parameters fromD and toD. The directory numbers in the fromD and toD parameters must be the same length. For each DN in the range, a tuple is created and assigned the routing information.

ADDPOR writes the result in the journal file. A warning is prompted upon entering the ADDPOR command if the journal file is not available.

## Syntax

The syntax for the ADDPORT command is:

**>addport**

**Parms: <fromD> STRING  
<toD> STRING  
<prtinfo> {PORTEDIN <nic> STRING,  
PORTEDOUT <nic> STRING,  
PORTEDACR <nic> STRING,  
SERVICENO <spic> STRING}  
[<writemode{NOREPLACE/REPLACE}> {NOREPLACE,  
REPLACE}]**

## Parameters

Table 2-72 lists and defines the parameters applicable to the ADDPort command.

**Table 2-72  
ADDPORT command parameters**

Parameter	Value	Definition
fromD	STRING	A string of 1 to 30 digits representing the lower limit of the range. The length of the parameter fromD must be less than or equal to toD parameter.
toD	STRING	A string of 1 to 30 digits representing the upper limit of the range. The length of the parameter toD parameter must be greater than or equal to fromD parameter.
ported type	PORTEDIN	Indicates numbers that are ported into the network.
	PORTEDOUT	Indicates numbers that are ported out of the network.
	PORTEDACR	Indicates numbers that are ported from other networks (not your own network).
	SERVICENO	Indicates numbers of a service provider.
NIC	D000 to D999	Indicates a network identification code.
writemode	NOREPLACE, REPLACE	Default is NOREPLACE. If REPLACE is specified, all tuples within the “from D to D” range that already exist are replaced with the specified attribute options. Operating company personnel are prompted to verify if REPLACE is defined.
—end—		

## Example

One example of the command follows.

```
>addport 5690 5695 portedin D008
```

```
ADDPOR Summary
```

```
-----
Ported numbers added                6
Ported numbers replaced              0

Last ported number datafilled       5695
Total number of tuples written to Journal file 6
```

**Note:** The display may vary slightly depending on the parameter used with the ADDPORT command.

### System responses

Table 2-73 lists and defines the system responses sent regarding the ADDPort command.

**Table 2-73**  
**System responses to the ADDPORT command**

Response	Explanation	Action
Ported number xxxx is not found in table PNSCRN	The number entered is not a ported number. The xxxx is the number in question.	Re-enter a number that has been ported.
ERROR: maximum length of <FieldName> is 30.	The number entered for the field is longer than 30 digits.	Re-enter a number less than 30 digits.
Invalid <FieldName> digits entered Vector of up to 30 {0,1,2,3,4,5,6,7,8,9}'	The number entered in the field is not a digit from 0 to 9.	Re-enter a valid digit.
ERROR: fromD and toD digit strings must have the same digit length	The numbers entered for the fromD and toD field do not have the same length.	Re-enter a number with same digit length for both fromD and toD fields.
ERROR: fromD must be less than or equal to toD	The number entered for the fromD is greater than the toD field.	Re-enter a number for fromD that is less than or equal to the toD field.
ERROR: NIC is a 4-digit of format Dxxx. First digit for NIC must be a 'D'	The first digit entered for the NIC must be a hex digit 'D'.	Re-enter a NIC with format 'Dxxx' where x is a digit from 0 to 9.
ERROR: NIC is a 4-digit of format Dxxx	The NIC length must be 4.	Re-enter a NIC with format 'Dxxx' where x is a digit from 0 to 9.

## DELPORT command

DELPORT deletes a single ported number or a range of ported numbers from the attribute PRTINFO of table PNSCRN. A range of ported numbers is specified by the parameters fromD and toD. The directory numbers in the fromD and toD parameters must be the same length.

DELPORT writes the result in the journal file. A warning is prompted upon entering the DELPORT command if the journal file is not available.

### Syntax

The syntax for the DELPORT command is

```
>delport[<fromD> STRING  
<toD> STRING]
```

### Parameters

Table 2-74 lists and defines the parameters applicable to the DELPort command.

**Table 2-74**  
**DELPORT command parameters**

Parameter	Value	Definition
fromD	STRIN G	A string of 1 to 30 digits representing the lower limit of the range. The length of the parameter fromD must be less than or equal to toD parameter.
toD	STRIN G	A string of 1 to 30 digits representing the upper limit of the range. The length of the parameter toD parameter must be greater than or equal to fromD parameter.
—end—		

### Example

One example of the command follows.

```
>DELPORT 123 123  
  
ENTER Y TO CONFIRM DELPORT OR N TO QUIT  
  
Please confirm ("YES", "Y", "NO", or "N"):  
>y  
  
DELPORT Summary  
-----  
Ported numbers deleted                1  
Number of tuples not updated          0  
Last DN deleted                       123
```

Total number of tuples written to Journal file 1

*Note:* The display may vary slightly depending on the parameter used with the ADDPORT command.

**System responses**

Table 2-75 lists and defines the system responses sent regarding the DELPort command.

**Table 2-75**  
**System responses to the DELPORT command**

Response	Explanation	Action
<i>ERROR: maximum length of &lt;FieldName&gt; is 30.</i>	The number entered for the field is longer than 30 digits.	Re-enter a number less than 30 digits.
<i>Invalid &lt;FieldName&gt; digits entered Vector of up to 30 {0,1,2,3,4,5,6,7,8,9}'</i>	The number entered in the field is not a digit from 0 to 9.	Re-enter a valid digit.
<i>ERROR: fromD and toD digit strings must have the same digit length</i>	The numbers entered for the fromD and toD field do not have the same length.	Re-enter a number with same digit length for both fromD and toD fields.
<i>ERROR: fromD must be less than or equal to toD</i>	The number entered for the fromD is greater than the toD field.	Re-enter a number for fromD, which is less than or equal to the toD field.
<i>ENTER Y TO CONFIRM DELPORT OR N TO QUIT</i>	Warning message displayed for the command.	Enter Y/yes to proceed or N/no to cancel the command.

**ADDNIC command**

This command adds or modifies the routing information associated with a Network Interface Card (NIC) in table PNINFO.

**Syntax**

The syntax for the ADDNIC command is:

```
>addnic<NIC> STRING
<xlasys> {AC,
PX,
CT,
FA,
OFC,
DN,
AM,
```

FT,  
CC,  
NCS,  
CTY,  
NN,  
VPN}  
<xlname> STRING  
<pfbilling> {NO,  
YES}  
[<writemode{NOREPLACE/REPLACE}> {NOREPLACE,  
REPLACE}]

### Parameters

Table 2-76 lists and defines the parameters for the ADDNIC command.

**Table 2-76**  
**ADDNIC command parameters**

Parameter	Value	Definition
NIC	D000 to D999	Indicates the network identification code
XLASYS	Valid xlasys	Indicates the translation system
XLANAME	Valid xlname	Indicates the translation name
PFBILLING	Yes/No	Indicates the billing record is prefixed with the NIC indication
WRITEMODE	noreplace/replace	Specifies the option to override the existing tuple

### Example

```
>addnic d005 px ruaintl yes  
  
TUPLE ADDED TO TABLE PNINFO SUCCESSFULLY
```

## DELNIC command

This command removes the routing information associated with a NIC in table PNINFO. A warning message is printed since the NIC might be referenced by a tuple in table PNSCRN.

### Syntax

The syntax for the DELNIC command is

```
>delnic  
Parms: <NIC> STRING
```

### Parameters

Table 2-77 lists and defines the DELNIC parameters.

**Table 2-77**  
**DELNIC parameter definition**

Parameter	Value	Definition
NIC	D000 to D999	Network identification code

### Example

```
>delnic d005
WARNING: TUPLE COULD BE REFERRED TO BY TABLE PNSCRN
TUPLE DELETED FROM TABLE PNINFO SUCCESSFULLY
```

### SHOWXLA command

The command SHOWXLA displays the available translation systems (XLASYS) and translation names (XLANAME) in the switch. If the option 'ALL' is entered, the available XLASYS's and their XLANAME's are displayed.

### Syntax

The syntax for the SHOWXLA command is:

```
>showxla<xlasys/all> {AC,
PX,
CT,
FA,
OFC,
DN,
AM,
FT,
CC,
NSC,
CTY,
NN,
VPN,
all}
```

### Parameters

Table 2-78 lists and describes the parameters for the SHOWXLA command.

**Table 2-78**  
**SHOWXLA parameter definitions**

Parameter	Value	Definition
xlasys	STRING	Indicates the translation system that all translation names belong to.

**Table 2-78**  
**SHOWXLA parameter definitions**

Parameter	Value	Definition
all	STRING	Indicates the system should show <i>all</i> xlasys in the node.

### Example

```
>showxla fa

XLASYS: FA

XLANAME: RUAXLFA CRESXLFA STEPXLFA RUASPEC

>showxla all

XLASYS: AC

XLANAME: PTLOCAC REMPOTS

XLASYS: CT

XLANAME: STEPXLCT RUAXLCT CRESXLCT

XLASYS: FA

XLANAME: RUAXLFA CRESXLFA STEPXLFA RUASPEC

XLASYS: OFC

XLANAME: STEPXOFC RUAXOFC CRESXOFC ODPXLOF1 ODPXLOF2ODPXLOF4
ODPXLOF5

XLASYS: AM

XLANAME: FFWCAXLA

XLASYS: FT

XLANAME: LNPXLFT

XLASYS: NSC

XLANAME:
```

### OVE command

This command is used to override the checking of the DELPORT command.

### Syntax

The syntax for the OVE command is:

---

**>ove**

### **Parameters**

This command has no parameters.

### **Example**

**>ove**

OVERRIDE mode ON. No confirmation prompt for the DELPORT/  
DELNIC commands.

## **QUIT command**

This command is used to quit out of the Number Portability Provisioning.

### **Syntax**

The syntax for the QUIT command is:

**> PNPROCI**  
**quit**

# SOC

Software Optionality Control (commonly known as SOC) provides one method of controlling software optionality in the MSC family of switches.

A major benefit of using SOC is that you control option functionality and resource usage on the MSC without changing software loads. Customers can choose specifically what functionality they require, allowing them to customize their switches to best suit their operations and subscriber requirements. Customers are provided with an expeditious delivery method of activating options that are built into their current Product Computing module Loads (PCL) at any time, without having to wait for a complete software reload, or even a switch restart.

SOC allows options to be purchased and activated for use. Options are enabled using a purchased password or key code. Nortel generates key codes on demand using a key code generator. Key codes are unique for each option on each switch. A set of SOC key codes can be applied to a switch, allowing the set of options corresponding to those key codes to be activated or used.

Two states are supported by the SOC Option, ON and IDLE as shown in Figure 1. The state of an option (IDLE or ON) may be changed directly by the customer, on site, causing the option's component functionality to change state.

**Note:** Key codes are different for each option on each switch.

The Software Optionality Control (SOC) tool

- provides access to options that are not part of the standard base load, and
- enables the purchase and activation of different options

On the MSC, the SOC tool operates in the same manner as it does on other switches. The only difference is the MSC SOC tool accepts the GSM entries listed in [Table 2-79](#).

**Table 2-79**  
**GSM SOC entries**

GSM option	Option order code	Option name on switch
Data Change Capture	BASE0011	CO Data Chg Capture
Local Number Portability Database Query	GMB00180	GSB LNP DB Query
Calling Name Delivery	GMB00480	GMB CallingNameDelivery

—sheet 1 of 3—

**Table 2-79**  
**GSM SOC entries**

<b>GSM option</b>	<b>Option order code</b>	<b>Option name on switch</b>
Extension Services	GMSP0408	Extension Services
INAP DP3	GSM00068	IN DP3
INAP DP12	GSM00080	IN DP12 and T-BCSM I/W
INAP DP2	GSM00088	IN DP2
INAP DP2 T	GSM00098	IN DP2T
Accelerate Call Forwarding No Reply (CFNRY) Call Termination	GSM00101	CF NO RCT GSM10
Explicit Call Transfer (ECT) Fraud Control	GSM00102	EXPLICIT CALL -GSM10
Mobile Unstructured Supplementary Service Date (USSD) Billing Zone Query (BZQ)	GSM00110	Mobile USSD Billing Zone
Anonymous Call Rejection (ACRJ)	GSM00111	Anonymous Call Reject
GSM Support of Optimal routing	GSM00112	Optimal Routing
iDEN Plus Dialing, Endeavor mobile sets	GSM00113	iDEN Plus Dialing
MMU Capability	GSM00114	Support for MMU
FG IN DP-CF	GSM00115	FG IN DP-CF
Network AOC	GSM00116	Network AOC
SSF enhance for MO SMS	GSM00117	SSF enhance for MO SMS
CALEA subject-initiated signaling	GSM00137	Subject initiated dialing
CALEA network signaling	GSM00138	In/out band signaling
Multiple MCC/MNC	GSMM0001	Multiple MNC
SSP Location Trigger	GSMM0003	SSP Location Trigger
DMS-MSC Ericsson	GSMM0004	DMS-MSC/Ericsson
V.42 bits Data Compression	GSMM0005	V42 bits Data Compr
14.4 Kbps Data Rate	GSMM0006	144kbps Data Rate
MIP V3 UIT (Universal IWF Trunk) Trunk	GSMM0007	MIPV3 UIT Trunk

—sheet 2 of 3—

**Table 2-79**  
**GSM SOC entries**

GSM option	Option order code	Option name on switch
Parallel CFU Limit	GSMM0008	Parallel CFU Limit
ISP7 Hop Counter	ISP70002	ISP7 Hop Counter
GSM Off-board IN Provisioning	OBIN0001	OffBoard IN Routing
STP Integration	STPE0300	STP Integration
Supercharger	SUPR0001	Supercharger
CCS7 Channelized Access	TEL00002	C7 Channelized Access
CCS7 Routeset Increment	TEL00004	C7 Routeset Increment
CCS7 Link Fault Locator	TEL00007	C7 Link Flt. Locator
CCS7 Network Integrity	TEL00009	C7 Network Integrity items
—sheet 3 of 3—		

*Note:* For more information on how to use the SOC tool, refer to NTP *Software Optionality Control Users Manual*, 297-8991-901.

## Accessing SOC

To access the SOC directory and commands, type the SOC command at the CI prompt and press return. The SOC command prompt displays:

```
>SOC  
SOC:
```

### Commands

The SOC command uses the following subcommands:

- ASSIGN
- DBAUDIT
- QUIT
- REMOVE
- SELECT
- SOCDEBUG
- VALIDATE
- SCINFO
- ASSIGN LIMIT

*Note:* For a complete list of SOC commands, refer to *NTP Software Optionality Control Users Manual, 297-8991-901*.

## ASSIGN command

This command enables the user to assign a new state or a right-to-use to a named option.

### Syntax

The syntax for the ASSIGN command is:

```
>ASSIGN <Action> {STATE <State> {IDLE, ON}
<To> {TO} <Option> STRING,
RTU <KeyCode> STRING
<To> {TO} <Option> STRING,
KEYS <From> {FROM}
<filename> {FILE, (otherwise) [<Device> STRING]},
LIMIT <Limit> STRING
<KeyCode> STRING
<To> {TO} <Option> STRING,
THRESHOLD <Threshold> {-2147483648 TO 2147483647}
[<ThreshType> {ABSOLUTE, PERCENT}]
<To> {TO} <Option> STRING}
```

### Parameters

Table 2-80 shows the parameters for the ASSIGN command.

**Table 2-80**  
**ASSIGN parameters**

Parameter	Value	Definition
STATE	N/A	A value of "STATE" indicates that this is a request to change the state of an option.
<state>	IDLE	Indicates the feature is OFF.
	ON	Indicates this feature is activated.
<option order code>	CNAM0001	Identifies the Nortel-defined order code, used to identify options.
—end—		

### Example

```
>assign state on to GSMR0151
Done
```

(No action required; option was already ON)

```
>assign state on to GSMR0152  
Right to use not granted
```

Set the RTU to ON before changing the State to ON.

Using the ASSIGN STATE command the operator can change the state of SOC Parallel CFVLR Limit.

```
SOC:  
>ASSIGN STATE ON TO GSM01814
```

When the SOC is in the ON state, CFVLR fraud control is fully activated and the operator can change the value of office parameter Max\_Parallel\_CFVLR\_Calls.

Operator can deactivate the CFVLR fraud control feature by changing the state of SOC to IDLE state.

```
>ASSIGN STATE IDLE TO GSM01814
```

When the SOC is in the IDLE state, any attempt to change the office parameter Max\_Parallel\_CFVLR\_Calls results in the following warning message on the switch,

```
***** WARNING *****  
the attempt to change the office parm is not allowed
```

## **DBAUDIT command**

This command performs an audit of SOC data and reports any inconsistencies.

### **Syntax**

The syntax for the DBAUDIT command is:

```
>dbaudit
```

## **QUIT command**

This command quits the SOC utility.

### **Syntax**

The syntax for the QUIT command is:

```
>quit
```

## REMOVE command

This command removes the right-to-use from a state-controlled option.

### Syntax

The syntax for the REMOVE command is:

```
>remove<Action> {RTU}
<KeyCode> STRING
<From> {FROM}
<Option> STRING
```

## SELECT command

This command displays information about a SOC option.

### Syntax

The syntax for the SELECT command is:

```
>select <SelType> {ALL [<RptType> {BRIEF, VERBOSE, PACK}],
OPTION <OrderCode> STRING
[<RptType> {BRIEF, VERBOSE}],
NAME <OptName> STRING
[<RptType> {BRIEF, VERBOSE}],
STATE <State> {IDLE, ON, ERR, ALL}
[<RptType> {BRIEF, VERBOSE}],
RTU <RTU status> {YES, NO, Y, N}
[<RptType> {BRIEF, VERBOSE}],
USAGE <Usage> {ALL, ZERO, NONZERO, OVER_THRESHOLD}
[<RptType> {BRIEF, VERBOSE}],
GROUP <Group> STRING
[<RptType> {BRIEF, VERBOSE}]}
```

## SOCDEBUG command

This command enters SOC debug utility.

*Note:* This command is intended for NT Field Support use only.

### Syntax

The syntax for the SOCDEBUG command is:

```
>socdebug
```

## VALIDATE command

This command tests whether the specified state transition will succeed.

### Syntax

The syntax for the VALIDATE command is:

```
>validate<Option> STRING  
<State> {IDLE, ON}
```

### SCINFO command

The SCINFO command aids the Craftsperson with managing the Combined MSC/HLR Subscriber Capacity feature. The command is only available in Combined MSC/HLR loads (to which the Subscriber Capacity feature is applicable). The command displays information relating to the Subscriber Capacity feature.

### Syntax

The syntax for the SCINFO command is:

```
>SCINFO
```

### Response

The following information is displayed when SCINFO is entered at the command prompt:

```
SOC option GSM01802 usage limit:          <value>}  
SOC option GSM01802 usage:                <value>  
Number of HLR subscribers:                <value>  
Value of GHLR_MAX_THOU_SUBSCRIBERS:      <value>  
HLR hard subscriber limit (in 1000s):     <value>  
Number of VLR subscribers:                <value>  
Value of MAX_SUBSCRIBERS_IN_VLR:         <value>  
VLR hard subscriber limit (in 1024s):     <value>
```

### Explanation

Line 1     Displays the usage limit for SOC option GSM01802.

When referring to HLR subscribers the usage limit is in units of 1000.

When referring to VLR subscribers the usage limit is in units of 1024.

Line 2     Displays the current usage for SOC option GSM01802. The usage is calculated as follows: 1) Divide the total number of HLR subscribers by 1000; 2) Divide the total number of VLR subscribers by 1024; 3) Take the larger of the two results and the usage is the whole part of the number.

- Line 3 Displays the number of HLR subscribers in the HLR database.
- Line 4 Displays the value of the office parameter GHLR\_MAX\_THOU\_SUBSCRIBERS.
- Line 5 Displays the value of the HLR hard subscriber limit in units of 1000.
- Line 6 Displays the number of VLR subscribers currently supported by the VLR.
- Line 7 Displays the value of the office parameter MAX\_SUBSCRIBERS\_IN\_VLR.
- Line 8 Displays the value of the VLR hard subscriber limit in units of 1024.

**System action**

None

**User action**

If the SOC usage is greater than the SOC usage limit, an inconsistency has occurred. The SOC usage limit has been decreased but there were more subscribers than the new usage limit. To avoid SOC audit logs reporting that the usage exceeds the usage limit, change the usage limit back to its original value. This will be the same value as the HLR and VLR hard subscriber limit values (the hard subscriber limits are not changed if the SOC usage limit is decreased and an inconsistency occurs).

**Notes**

The command is only available in Combined MSC/HLR loads. It is not recognized in non-combined MSC/HLR loads.

**Example**

Following is an example of entering SCINFO at a CI prompt:

SOC option GSM01802 usage limit:	50
SOC option GSM01802 usage:	41
Number of HLR subscribers:	41345
Value of GHLR_MAX_THOU_SUBSCRIBERS:	46
HLR hard subscriber limit (in 1000s):	50
Number of VLR subscribers:	22784

---

Value of MAX_SUBSCRIBERS_IN_VLR:	48
VLR hard subscriber limit (in 1024s):	50

### **ASSIGN LIMIT command**

The ASSIGN LIMIT command is an existing Software Optionality Control (SOC) command. When the command is used in conjunction with SOC option GSM01802, additional information to the normal SOC responses is provided to the user.

#### **Syntax**

>ASSIGN LIMIT

#### **Parameters**

None

#### **Response**

When using the ASSIGN LIMIT command with SOC option GSM01802 one of the following responses is provided depending on the setting of the SOC usage limit (in addition to normal SOC responses):

SOC usage limit = 20 and the number of HLR/VLR subscribers does not exceed the usage limit:

The HLR/VLR Subscriber Capacity has been changed to 20K subscribers. Type SCINFO to view Subscriber Capacity information.

SOC usage limit = 50 and the number of HLR/VLR subscribers does not exceed the usage limit:

The HLR/VLR Subscriber Capacity has been changed to 50K subscribers. Type SCINFO to view Subscriber Capacity information.

SOC usage limit = 100 and the number of HLR/VLR subscribers does not exceed the usage limit:

The HLR/VLR Subscriber Capacity has been changed to 100K subscribers. Type SCINFO to view Subscriber Capacity information.

SOC usage limit =200:

The HLR/VLR Subscriber Capacity has been changed to the maximum number of subscribers. Type SCINFO to view Subscriber Capacity information.

SOC usage limit decreased but the number of HLR/VLR subscribers exceeds the usage limit.

**WARNING:** The new usage limit is less than the number of HLR/VLR subscribers. The HLR/VLR subscriber capacity has NOT been changed to use the new usage limit. PLEASE RESTORE THE OLD USAGE LIMIT.

SOC usage limit is not 20, 50, 100 or 200:

**WARNING:** Invalid usage limit for SOC option GSM01802. Valid usage limit values are 20, 50, 100, 200. The HLR/VLR subscriber capacity has NOT been changed to use the new usage limit. PLEASE RESTORE THE OLD USAGE LIMIT.

### **Explanation**

The first four responses confirm the setting of the subscriber limit via SOC option GSM01802 under normal circumstances.

The fifth and sixth responses highlight a problem with the new usage limit.

### **System action**

None

### **User action**

For the first four responses no action is required - response is for information purposes only.

For the fifth and sixth responses, the old usage limit should be restored as instructed.

### **Example**

Setting the SOC usage limit to 50 and the number of HLR/VLR subscribers does not exceed the usage limit:

```
>soc
```

```
SOC:
```

```
>assign limit 50 A65HKE3E4JL25C5DGH9W to GSM01802
```

Done.

The HLR/VLR Subscriber Capacity has been changed to 50K subscribers.  
Type SCINFO to view Subscriber Capacity information.

Setting the SOC usage limit to 200:

>soc

SOC:

>assign limit 200 R85HKM3E4JL43C58GH1A to GSM01802

Done.

The HLR/VLR Subscriber Capacity has been changed to the maximum number of subscribers. Type SCINFO to view Subscriber Capacity information.

Setting the SOC usage limit to 50 but there are greater than 50000 HLR subscribers:

>soc

SOC:

>assign limit 50 A65HKE3E4JL25C5DGH9W to GSM01802

Done.

**WARNING:** The new usage limit is less than the number of HLR/VLR subscribers. The HLR/VLR subscriber capacity has NOT been changed to use the new usage limit. PLEASE RESTORE THE OLD USAGE LIMIT.

Setting the SOC usage limit to 41 (unexpected usage limit):

>soc

SOC:

>assign limit 41 G27HKH9E4JP45C5FDH1T to GSM01802

Done.

**WARNING:** Invalid usage limit for SOC option GSM01802. Valid usage limit values are 20, 50, 100, 200. The HLR/VLR subscriber capacity has NOT been changed to use the new usage limit. PLEASE RESTORE THE OLD USAGE LIMIT.

---

## MUV\_AUDIT

---

The MUV\_AUDIT directory includes the MCSI parameter in the subcommand START.

### START command

This feature modifies the START command to kick start the audit process for MCSI.

#### Syntax

The syntax for the START command is:

```
>start <mmuquota>, <mcsi>
```

#### Parameters

[Table 2-81](#) lists and describes the parameters for the START command.

**Table 2-81**  
**START parameter definitions**

Parameter	Value	Definition
MMUQUOTA	258	MSGTYPE
MCSI	14	TUPLE_TYPE

---

# PROGDIR

---

PROGDIR tool accommodates the LOGPSTRACE, MAKEGCDR, PARMFIND, FINDOM, and QGSMVLR commands.

## LOGPSTRACE command

LOGPSTRACE is a PROGDIR command. LOGPSTRACE manages the Logging Enhancements display data. It controls the Logging Enhancements functionality and also sets the level of procedure traceback.

### Accessing LOGPSTRACE

To access LOGPSTRACE, enter the following command:

```
CI:  
>LOGPSTRACE
```

### Exiting LOGPSTRACE

To exit the LOGPSTRACE tool and return to the CI level, enter the following command and press Return:

```
>QUIT
```

### Syntax

The syntax for the LOGPSTRACE command is:

```
LOGPSTRACE ON  
LOGPSTRACE OFF  
LOGPSTRACE SETLEVEL <LEVEL_COUNT>  
LOGPSTRACE STATUS
```

### Parameters

[Table 2-82](#) lists and describes the parameters applicable to LOGPSTRACE.

**Table 2-82**  
**LOGPSTRACE parameters**

Parameter	VALUE	DEFINITION
ON/OFF	NONE	Switch the Log PS Traceback functionality on/off.
STATUS	NONE	Display status of the Log PS Traceback functionality.
SETLEVEL	INTEGER 0<=x,=4	Set the display procedure name as the number of levels above the original procedure where the error actually occurred.

## Responses

### LOGPSTRACE ON

The Log PS Traceback functionality is switched ON. GMSC system failure logs generated after this command is executed have the origination point information associated with it.

When LOGPSTRACE is already off:

```
PS Capturing enabled for INFO logs
```

When LOGPSTRACE is on:

```
No change in status. Functionality already on.
```

### LOGPSTRACE OFF

The Log PS Traceback functionality is switched OFF. No origination point information of the log will be there with GSMC system failure logs which are generated after this command is executed. Display of earlier generated GMSC system failure logs (which were generated with Log PS Traceback functionality on) have the origination point information associated with it.

When LOGPSTRACE is on:

```
PS Capturing disabled for INFO logs
```

When LOGPSTRACE is off:

```
No change in status. Functionality already OFF.
```

### LOGPSTRACE SETLEVEL <LEVEL\_COUNT>

The display level count is set to the user given value. In GMSC system failure logs generated after this command is executed, the displayed procedure address is not the exact place where the error occurred, but <level\_count> procedures above it in a traceback. The level command is valued only for RC=0.

When tool is on and current set level\_count not equal to the parameter value:

```
Display level set to <level_count>
```

When tool is off:

```
Display level set to <level_count>  
***PS Capturing is disabled for INFO logs. Level count change  
has no effect until the tool is switched ON.***
```

```
No change in status. Functionality already OFF.
```

## LOGSTRACE STATUS

The current status of the tool is displayed.

PS Capturing for INFO logs - Enabled/Disabled  
Level Count - <level\_count>

## MAKEGCDR command

MAKEGCDR is a PROGDIR command. MAKEGCDR is used to generate GSM billing without any calls being made. The records generated by MAKEGCDR are processed and written to the active file for the GSM data stream along with all other call processing generated call records. To distinguish records produced by the MAKEGCDR from other records, the MAKEGCDR-generated records are marked as TEST CALL.

The MAKEGCDR command is used to generate GSM billing records without using any physical facility. The billing records are processed and written to the active file for the GSM data stream with all other GSM records. The records produced by the CI command can be distinguished from other GSM records by examining the study indicator field.



### CAUTION

Perform this task during low traffic periods.  
The MAKEGCDR command should be issued during low traffic periods to avoid unnecessary real-time impact.

## Accessing MAKEGCDR

To access MAKEGCDR, enter the following command:

```
CI:  
>PROGDIR:  
>MAKEGCDR
```

## Exiting MAKEGCDR

To exit the MAKEGCDR tool and return to the CI level, enter the following command and press Return:

```
>QUIT
```

## Syntax

To generate a billing record without making a call, enter a MAKEGCDR command at the CI prompt and press Return. The syntax for the MAKEGCDR command is:

```
MAKEGCDR<call_code> {1 to 6, 15}  
[<quantity> {1 to 100}]
```

SC{1 to 6}  
MC{1 to 6}  
<mc\_quantity> {1 to 100}

**ATTENTION**

Perform this task during low traffic periods. Issue the MAKEGCDR command during low traffic periods to avoid unnecessary real-time impact.

**Example**

An example of the switch output follows:

```
CI:
>imagename
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using
pgmscstpcl7bn
PRODUCT: GMSO.170
LOAD: GMSO.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>MAKEGCDR
Next par is: <CALL CODE> {1 TO 17}
Enter: <CALL CODE> [<QUANTITY>] [<STREAM>] [<STRUCTURE
CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>]
 [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE
CODE>] [<MODULE CODE>]
```

## Parameters

Table 2-83 lists and describes the parameters applicable to MAKEGCDR.

**Table 2-83**  
**MAKEGCDR parameters**

Parameter	Requirement	Description
call_code	Mandatory	<p>Determines the call code output in the GSM billing record. Enter a value from 1 to 6, or 15, where:</p> <ul style="list-style-type: none"> <li>1 means mobile originated call</li> <li>2 means mobile terminated call</li> <li>3 means location updating</li> <li>4 means supplementary services</li> <li>5 means SMS mobile origination</li> <li>6 means SMS mobile termination</li> <li>15 means common equipment usage records</li> </ul> <p><b>Note:</b> At this time, SMS mobile originations and terminations are not supported.</p>
quantity	Optional	<p>Allows the operating company personnel to specify how many records are to be produced. Values from 1 to 100 can be entered. Default value is 1.</p> <p><b>Note:</b> If the user enters more than 100, a default value of 1 is given.</p>
stream	Optional	<p>Defines the stream for the GSM billing record.</p>
structure code	Optional	<p>Allows the operating company personnel to specify the structure code to be produced. Default value depends on the call code. Enter a value from 1 to 6, or 19, where:</p> <ul style="list-style-type: none"> <li>1 means location updating</li> <li>2 means mobile originated</li> <li>3 means mobile terminated</li> <li>4 means SMS mobile origination</li> <li>5 means SMS mobile termination</li> <li>6 means supplementary services</li> <li>19 means common equipment usage records</li> </ul> <p><b>Note:</b> At this time, SMS mobile originations and terminations are not supported.</p>
—sheet 1 of 2—		



### Example commands

The following MAKEGCDR command produces 10 GSM records for call code 003 (location updating).

**>MAKEGCDR 3 10**

The next command produces 15 GSM records for call code 2 (a mobile terminated call) with structure code of 3 (location updating).

**>MAKEGCDR 2 15 SC 3**

The next command produces 5 GSM records for call code 2 (a mobile terminated call) with structure code of 3 (mobile terminated), and a module code of 2 (bearer services information).

**>MAKEGCDR 2 5 SC 3 MC 2**

The last command produces 20 GSM records for call code 15 with structure code of 19 (common equipment usage records). The module code 6 (teleservice information) is appended to these records.

**>MAKEGCDR 15 20 SC 19 MC 6**

### Error messages

[Table 2-84](#) lists and describes the error messages produced by the MAKEGCDR command.

**Table 2-84**  
**MAKEGCDR error messages**

Error	Description
Invalid call code Out of range: <CALL CODE> {1 to 6, 15} Enter: <CALL CODE> [QUANTITY] [<STRUCTURE CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>] 6}	An invalid call code was supplied. Enter a valid call code from 1 to 6 or 15.
Call code n is not supported yet.	A non-supported call code (5 or 6) was entered. Re-enter the command with a valid call code from 1 to 6 or 15.
Invalid structure code specified.	An invalid structure code was supplied. Enter a valid structure code from 1 to 6.

—sheet 1 of 2—

**Table 2-84**  
**MAKEGCDR error messages (continued)**

Error	Description
Module code out of range Out of range: <MODULE CODE> {1 to 6} Enter: <MODULE CODE> [MC_QUANTITY>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>]	An invalid module code was supplied. Enter a valid module code from 1 to 6.
Structure code m is incompatible with call code n.	An invalid structure code was supplied for the provided call code. Re-enter the command with a valid structure code.
Module code m is incompatible with call code n.	An invalid module code was supplied for the provided structure code. Re-enter the command with a valid structure code.
An invalid quantity number has been supplied.	For informational purposes only. The default quantity number 1 is used to generate the record.
Command abort. Module code m only allowed n record(s).	The module code specified exceeds the maximum limit. Re-enter the command with a valid quantity of module code.
A GSM billing PRU block is required to produce the requested record, but there is none available. n billing records generated.	An attempt was made to generate a billing record and there was no PRU available at the time. Try again at a later time.
A GSM billing M(X)RU is required to produce the requested record, but there is none available.	An attempt was made to generate a billing record and there was no PRU available at the time. Try again at a later time.
Requested module codes exceeded 1K buffer limit. Exceeded portion not appended.	For informational purposes only.
Command aborted. Mandatory parameter error.	An attempt was made to enter the command and the user aborted at the quantity field.

—sheet 2 of 2—

**Switch output**

The following example shows the switch output:



## Switch output

The following example shows the switch output:

```
>MAKEGCDR 0 0 sc 0 mc 6
Out of range: <CALL CODE> {1 TO 17}
Enter: <CALL CODE> [<QUANTITY>] [<STREAM>] [<STRUCTURE
CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>]
 [<MODULE CODE>] [<MODULE CODE>] [<MODULE CODE>] [<MODULE
CODE>] [<MODULE CODE>]
```

## PARMFIND command

The PARMFIND command provides an interface to search through office tables to locate office parameters. The search displays all the office parameters of which the searched string is a part. The tool uses a search logic to locate the tuples in the following office tables.

- OFCVAR (common to MSC and HLR)
- OFCENG (common to MSC and HLR)
- OFCSTD (common to MSC and HLR)
- OFCAUT (common to MSC and HLR)
- OFCOPT (common to MSC and HLR)
- GMMUENG (specific to MSC)
- GSMVAR (specific to MSC)
- GHLRPARM (specific to HLR)
- GHLRDFLT (specific to HLR)

### Syntax

To access this command use the following syntax:

```
>PARMFIND <string_to_be_searched>
```

### Help section for PARMFIND

Typing PARMFIND <any\_string> at the CI prompt gives a brief description on the tool. [Figure 2-124](#) provides an example output for the help command.

**Figure 2-124**  
**PARMFIND help example**

```
>help PARMFIND

Usage:
  PARMFIND <string_to_be_searched>
Description:
  This tool searches for <string_to_be_searched> in
  the following office tables.
  OFCVAR  OFCENG (common to MSC and HLR)
  OFCSTD  OFCOPT (common to MSC and HLR)
  OFCAUT          (common to MSC and HLR)
  GMMUENG GSMVAR (specific to MSC)
  GHLRPARAM GHLRDFLT (specific to HLR)

The output comes in the following format
TABLE          PARAMETER_NAME      VALUE
-----
where VALUE will be the PARAMETER Value in TABLE.
```

**Parameters**

Table 2-85 provides PARMFIND parameters and their descriptions.

**Table 2-85**  
**PARMFIND parameters**

Parameter	Value	Definition
STRING	any string	string to be searched in the office tables

**Example**

Figure 2-125 provides an example of PARMFIND output. Figure 2-126 provides an example of PARMFIND output when no results are returned.

**Figure 2-125**  
**PARMFIN output**

```
>parmfind audit
TABLE_NAME          TUPLE
-----
OFCVAR      ATTACHED_MOBILE_AUDIT 52
OFCVAR      DETACHED_MOBILE_AUDIT 0
OFCVAR      ESRK_POOL_AUDIT_INTERVAL 300
OFCVAR      GPP_AUDIT_INTERVAL 0 0
OFCVAR      GSM_LIDBQ_ACG_AUDIT_TIME 30
OFCVAR      GSM_LNP_ACG_AUDIT_TIME 30
OFCVAR      GSM_TF_ACG_AUDIT_TIME 30
OFCVAR      IWF_AUDIT_PERIOD 0
OFCVAR      SCREEN_AUDIT_PERIOD 0
OFCVAR      VLR_MOBILE_AUDIT_PERIOD 24
OFCENG      CIRCUIT_QUERY_AUDIT_START_TIME 2 0
OFCENG      DIRP_PFILE_AUDIT N 3 30
OFCENG      FTRQAUDIT 10
OFCENG      MAPSCRN_AUDIT -1
OFCENG      ST_AUDIT_START_TIME 2 30
OFCENG      TRK_MEMSEL_AUDIT_TIME 0
Do you want to see more entries?
Please confirm ("YES", "Y", "NO", or "N"):
>y
TABLE_NAME          TUPLE
-----
OFCSTD      AUDIT_INTERVAL 15
```

**Figure 2-126**  
**PARMFIN output - no results**

```
>PARMFIN
Next par is: <Search String> STRING
Enter: <Search String>
>asdf
No entries found matching "ASDF"
```

**Responses**

**Do you want to see more entries?**  
**Please confirm ("YES", "Y", "NO", or "N"):**

**Explanation**

Whenever the number of tuples found for the given string is more than 15, a response asks if there are more tuples to be seen. If the answer is yes, then the next 15 tuples are displayed. This continues until either all the tuples are completed or the display process is stopped.

**System action**

If y is entered then the next 15 tuples display. If n is entered, then the tool quits.

**User action**

Enter y to see more tuples or n to quit.

**\*\*No entries found\*\***

**Explanation**

No entries found matching the string in any of the office tables searched.

**System action**

Quits the tool.

**User action:**

Search with another option.

**FINDOM command**

The FINDOM command locates, lists, and prints all the registers and OM group names which contain the string to be searched. The search displays all the OM groups and the registers in MSC, HLR and trinode configuration.

**Syntax**

To access this command use the following syntax:

**>FINDOM <string\_to\_be\_searched>**

**Help section for FINDOM**

Typing FINDOM <any\_string> at the CI prompt gives a brief description on the tool. [Figure 2-127](#) provides an example output for the help command.

**Figure 2-127**  
**FINDOM Help example**

```
>help findom

FINDOM command
-----
Finds all OMs which contain the specific set of characters.

The parameter is:
  <OM NAME> part of an OM name or the whole OM name.

Parms: <om name> STRING
```

## Parameters

[Table 2-86](#) provides FINDOM parameters and their descriptions

**Table 2-86**  
**FINDOM parameters**

Parameter	Value	Definition
STRING	any string	string to be searched in the OM group_names table and in register names.

## Example

[Figure 2-128](#) provides an example of FINDOM output. [Figure 2-129](#) provides an example of FINDOM output when no results are returned.

**Figure 2-128**  
**FINDOM output**

```
>findom ssc

      OMGROUP              OMFIELD
      -----              -
OMGRP: TRK2NET2  THIS OMGROUP IS NOT DEFINED/ACTIVATED
OMGRP: TRK2NET1  THIS OMGROUP IS NOT DEFINED/ACTIVATED
OMGRP: LMD       THIS OMGROUP IS NOT DEFINED/ACTIVATED
OMGRP: LMSCPUST  OMREG: LMSSCHED
OMGRP: CPUSTAT   OMREG: CPSSCHED
OMGRP: XASTAT    OMREG: XASSCHED
OMGRP: C7SCCP    OMREG: C7RTFSSC
OMGRP: G7SCCP    OMREG: G7RTFSSC
OMGRP: GHLRSSCF
OMGRP: GHLRSSCB
OMGRP: GHLRSSCW
OMGRP: HLCAML2   OMREG:   SSCSI
OMGRP: HLCAML2   OMREG:   SSCSI2
OMGRP: HLCAML2   OMREG: SSCSIACT
OMGRP: HLCAML2   OMREG: SSCSIAC2
OMGRP: HLCAML2   OMREG: SSCSIINA
OMGRP: HLCAML2   OMREG: SSCSIIN2
OMGRP: GINAP     OMREG: GIAUCSSC
OMGRP: GINAP     OMREG: GIASOSSC
OMGRP: GSBARMMU  OMREG: GSSCRMU
OMGRP: GSBARMMU  OMREG: GSSCRMU2

Your search string was: SSC
OMGRPs Matched: 3 out of 600 OMREGs Matched: 15 out of 7486

NilKey:42 NotDef:3 NilFld:0
```

**Figure 2-129**  
**FINDOM output no results**

```
>findom
Next par is: <om name> STRING
Enter: <om name>
>hfhg
No matching entries found "HFHG"
```

**Responses**

**\*\*No entries found\*\***

**Explanation**

No entries matching the string in any of the OM group names searched.

**System action**

Quits the tool.

**User action**

Search with another option.

**QGSMVLR command**

This tool is used to query the Visitor Location Register (VLR) database for Mobile Subscriber (MS) and VLR status information.

**Syntax**

```
CI |
| QGSMVLR | {<key type>, <key value>;} |
|         | {pause} |
```

Where there can be up to five (5)

```
{<key type>, <key value>;}
```

combinations and:

```
<key> ::= < IMSI/MSRN/MSISDN/TMSI > <value> ::= < 4...15
decimal for IMSI/MSRN/MSISDN > ::= < 1...8 hex or 1...10
decimal for TMSI>
```

```
pause ::= 'pause' search for each MS located
```

NOTE: When 'pause' is specified, each time a MS is located, the search will pause until the user presses "<enter>" to resume the search. If 'pause' is not specified, each MS searched on is outputted to the DMS MAP as soon as it is located.

**Responses**

**\*\*\* QGSMVLR ERROR \*\*\***

**The maximum number keys (n) have already been specified.  
Additional keys are ignored.**

**Explanation**

The maximum number(5)keys allowed to be searched on in one invocation of 'QGSMVLR' was exceeded. All keys exceeding (n) have been ignored and will not be searched on.

**System action**

The first (n) keys specified are searched on.

**User action**

None

**The <key> <value> is not in the VLR Database.**

**Where:**

**<key> ::= { TMSI }**

**<value> ::= { 1..8 hex or 1..10 decimal }**

### **Explanation**

The <key> specified for 'QGSMVLR' to search on was not located in the VLR Database.

### **System action**

Inform user.

### **User action**

Search for a <key> that is in the VLR Database.

**\*\*\* search paused : press <enter> to continue**

### **Explanation**

The user specified the 'pause' option on the command line. The MS was located and displayed on the MSC MAP. The search is 'paused' until the user presses <enter>.

### **System action**

Inform user that search has been paused, and wait until <enter> has been pressed before continuing the search.

### **User action**

Press <enter> when ready for the search to continue.

*Note:* - To query in hex, please use '#' in front of the hex value.- It will ask to re-enter a number when the input TMSI key value exceeds the maximal digits(4294967295). For example,

```
>qgsmvlr tmsi #432526356
Too many digits: <key value> {0 TO 4294967295}
Enter: <key value>
[<parm>]...
```

**NEW OSB information: A list of applied new OSB categories (TYPE5, TYPE6 and TYPE7) is displayed if the Subscriber Status is OPERATOR BARRED.**

### **Explanation**

Only the OSBs that are registered are displayed. Response is visible on all processors.

### **System Action**

None

**User Action**

None

**VLR MS Information**

Enter the following command to retrieve MS information within the VLR:

**qgsmvlr <key type> and <key value>**

Table 2-87 provides the possible key types:

**Table 2-87**  
**Key types**

Key type	Description
IMSI	IMSI of the MS being searched on
MSRN	MSRN of the MS being searched on
MSISDN	MSISDN of the MS being searched on
TMSI	TMSI of the MS being searched on
—end—	

The possible key values for IMSI/MSRN/MSISDN are *a string of digits between 4 and 15 digits.*

The possible key values for TMSI are:

- a string of digits between 1 and 10 decimal digits.
- a string of digits between 1 and 8 hex digits.

For more information on MSISDN searches and the optional ‘np’ parameter, see **NOTES** later in this section.

**VLR Status Information**

To display the current status of the VLR, specify the parm ‘status.’

**VLR Tuple Deletion**

The Tuple specified by either IMSI or MSISDN is removed when ‘delete’ is specified.

**Notes**

- A linear search of the VLR is required when searching on MSISDNs. The search time may be extensive depending on:
  - Current call processing load on the switch
  - Position of the MS within the VLR database

— Current VLR population

- The 'np' <no prompt> parm only affects MSISDN searches. The prompt that asks for user confirmation for a VLR linear search is overridden, and the search begins immediately.
- The 'pause' option pauses the search after each key is located. The user must press **Enter** before the search resumes.
- A maximum of five keys can be searched on at a time.

### Examples

- qgsmvlr status
- qgsmvlr imsi 12345 msisdn 54321 msisdn 5551212 np
- qgsmvlr tmsi #12345678
- qgsmvlr tmsi 12345678
- qgsmvlr msrn123456789012345 imsi 443322 pause status
- qgsmvlr delete IMSI 12345
- qgsmvlr delete MSISDN 54321
- qgsmvlr delete TMSI #12345678
- qgsmvlr delete TMSI 123456789

**Parms:** [<parm>...{<IMSI<KEY VALUE> STRING,  
MSRN <key value> STRING,  
MSISDN <key value> STRING,  
TMSI <key value> {0 TO 4294967295}  
STATUS,  
NP,  
PAUSE,  
DELETE <parm? {IMSI <key value> STRING,  
MSISDN <key value> STRING,  
TMSI <key value> {0 TO 4294967295}}}]

### LCS subscription data

The following descriptions are for the LCS subscription data displayed by the QGSMVLR tool.

- Displays up to 40 External LCS Clients for both Call-related and Call-unrelated privacy class.
- Displays the new notification type LocationNotAllowed.
- Displays the positioning data stored in the VLR along with the location estimate. The positioning data has a list of methods tried for positioning the mobile and the corresponding usage information about each method. The method field of the positioning data can have the following values.
  - timing\_advance (00000)
  - mobile\_assisted\_eotd (00011)

- mobile\_based\_eotd (00100)
- mobile\_assisted\_gps (00101)
- mobile\_based\_gps (00110)
- conventional\_gps (00111)
- u\_tdoa (01000)
- reserved

Table 2-88 shows possible values of usage field and its description.

**Table 2-88**  
**Usage field values**

Usage	Value	Description
unsuccessful	000	The positioning method was attempted unsuccessfully due to failure or interruption
success_not_used	001	The positioning by this method was successful but the results were not used to generate location information
success_verify	010	The positioning by this method was successful and the results were used to verify the positioning results of another method
success	011	Positioning was successful and the results were used to generate location information
success_method_unknown	100	The positioning by this method was successful but the MS supports multiple mobile based positioning methods and the actual method used by the mobile is unknown.

**Accessing QGSMVLR**

To access QGSMVLR, enter the following commands:

```

CI:
>PROGDIR:
>QGSMVLR

```

**Exiting QGSMVLR**

The QGSMVLR tool automatically quits and returns to the CI level when the requested operation completes.

**Example 1**

```
>qgsmvlr imsi 505024101216023
```

-----  
MOBILE SUBSCRIBER

IMSI : 505024101216023 IS ATTACHED TMSI : 16777899  
 IMEI NUMBER: 100000000000070  
 IMEI STATUS: White  
 LOC DONE : FALSE  
  
 MSISDN : 1 1 1 12141215070  
 MSRN : <not allocated>  
 TIMESTAMP : 107 VLR TIMESTAMP : 115 AGEOFLOC: 38  
 HLR NUMBER : 12146030000 LAC : 401 LOCATION ID: 9  
**LAC or services LAC : 401 Mobility LAC : 401**  
 CATEGORY : #0A MSG WAITING : NO AN: BSS  
 HLRCONF : Confirmed RADCONF : Confirmed  
 AUXMISDN : 11112141915070 DATMISDN : \$  
 RRDTUF : NO LAC REGIONALLY RESTRICTED : NO  
 Age Indicator : 06 12 34 56 78 90 00  
 LMU INDICATOR : NO  
 Multiband\_Restrict : NO  
 PIC LIST : <not provisioned>  
 Gs-State: Gs-Null SGSN Number:  
 Gs-Association: Normal, unspecified

TELESERVICES

TELEPHONY, AUXTELEPHONY, SMSMT, SMSMO, FAX3ALTSPCH  
 BEARER SERVICES  
 cda300, cda1200, cda2400, cda4800, cda9600, cds1200, cds2400,  
 cds4800, cds9600, altspchdata, spchfbdata  
 OPERATOR DETERMINED BARRING:  
 SERVICE GRANTED

ORIGINATING CAMEL SUBSCRIPTION INFO

CCH:Phase 3  
 Detection Point Service Key SCP Address Default Call  
 Handling  
 DP2 0 19726030002 ReleaseCall

MOBILITY CAMEL SUBSCRIPTION INFO

Mobility Triggers	Service Key	SCP Address
Location Update in same VLR	0	614181030003

SPEECH SS DATA IN VLR

CFU d e o, CFBr a 123456789 2 3, CFNRY e d o, CFNRC e d o,  
HOLD a r o

AUX SPCH SS DATA IN VLR

CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o  
CDA SS

CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o  
CDS SS

CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o  
FAX SS

CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o  
SMS\_MO SS

\*\*\* NO SS PROVISIONED \*\*\*

VGS SS

\*\*\* NOT PROVISIONED \*\*\*

VGCS SUBSCRIPTION

```

*** NOT PROVISIONED ***
                                VBS SUBSCRIPTION
*** NOT PROVISIONED ***
                                LCS SUBSCRIPTION DATA
*** NOT PROVISIONED ***
                                REGIONAL SUBSCRIPTION
*** NOT PROVISIONED ***
The subscriber is in MMU 1.
-----

```

### Example 2

```

>qgsmvlr status
-----
VLR:
Total
-----
Population   : 3 MS
CM Only
-----
Capacity     : 48K Subscribers
Usage        : 0%
Regional Subscription:
Capacity     : 3K Subscribers
Usage        : 0%
Closed User Group:
Capacity     : 3K Subscribers
Usage        : 0%
Malicious Call Trace:
Capacity     : 50K Subscribers
Usage        : 0%
CAMEL OCSI-DP2, SS-CSI, TIF-CSI:
Capacity     : 3K Subscribers
Usage        : 0%
...

Auxiliary Speech:
Capacity     : 3K Subscribers
Usage        : 0%
UMTS Subs:
Capacity     : 3K Subscribers
Usage        : 0%
Location Services:
Capacity     : 3K Subscribers
Usage        : 0%
CAMEL Dialed Service CSI:
Capacity     : 3K Subscribers
Usage        : 0%
CAMEL Mobile Originated Short Message Service CSI:
Capacity     : 3K Subscribers
Usage        : 0%
CAMEL Mobility Service CSI:
Capacity     : 3K Subscribers
Usage        : 0%
                                Population   : 0 MS
                                AutoPro      : ON

```

```
MSRN:
Allocated   : 300                               In Use       : 0
Usage       : 0%
Total UMTS Subs:
Population  : 24 MS
```

---

### Response

The state of the new flag LOCCONF (Y/N) is displayed.

### Explanation

The state of the new flag LOCCONF (Y/N) is displayed.

### System action

None

### User action

None

### Example

The following is an example of QGSMVLR for displaying MS information.

```
>qgsmvlr imsi 505024101205000
-----
MOBILE SUBSCRIBER
IMSI       : 505024101205000 IS ATTACHED   TMSI:17461263
IMEI NUMBER: 0100000000000000
IMEI STATUS: White
LOC DONE   : FALSE
IMSISDN    : 1 1 1 61411205000
MSRN       : <not allocated>
TIMESTAMP  : 26                               VLR TIMESTAMP: 26
AGEOFLOC   : 0
HLR NUMBER : 614161200000                     LAC           : 404
LOCATION ID  : 1
CATEGORY   : #0A                             MSG WAITING   : NO
AN: BSS
DATCONF   : Confirmed                       RADCONF       : Confirmed

LOCCONF    : Confirmed
AUXMISDN   : $ DATMISDN      : 1 1 1 61411205000
RRDTUF     : NO                LAC REGIONALLY RESTRICTED : NO
LMU INDICATOR : NO
Multiband_Restrict : NO
PIC LIST    : <not provisioned>
Gs-State: Gs-Null                               SGSN Number: Gs-
Association: Normal, unspecified

TELESERVICES
TELEPHONY, SMSMT, SMSMO, AUTOFAX3, VGCS
```

BEARER SERVICES  
cda300, cda1200, cda12\_75, cda2400, cda4800, cda9600, cds1200,  
cds2400, cds4800, cds9600

OPERATOR DETERMINED BARRING:  
Operator Barring HPLMN type1, HPLMN type 4, HPLMN type6,  
HLPLMN type7

SPEECH SS DATA IN VLR  
CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o

AUX SPCH SS DATA IN VLR  
\*\*\* NOT PROVISIONED \*\*\*

CDA SS  
CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o CDS  
SS  
CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o

FAX SS  
CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, HOLD a r o  
SMS\_MO SS  
\*\*\* NO SS PROVISIONED \*\*\*

VGS SS  
\*\*\* NO SS PROVISIONED \*\*\*

VGCS SUBSCRIPTION  
Group IDs

-----  
180

VBS SUBSCRIPTION  
\*\*\* NOT PROVISIONED \*\*\*  
LCS SUBSCRIPTION DATA  
\*\*\* NOT PROVISIONED \*\*\*  
REGIONAL SUBSCRIPTION  
\*\*\* NOT PROVISIONED \*\*\*

The subscriber is in CM.

**VLR Corruption Alarm**

This Alarm is raised when VLR data corruption is detected in an MMU ,  
during any VLR data access operation using IMSI or MSISDN key.

If the Alarm is raised, then the craft person has to be told about the VLR data  
corruption. This alarm is removed by a manual BSY/RTS of MMU.

Figure 2-130 is an example of a VLR Corruption Alarm

**Figure 2-130**  
**VLR corruption alarm**

```

CM      MS      IOD      Net      PM      CCS      Trks      Ext      APPL
CM Flt  .      AMA B    .      1PDTC  2  RS    59C..  1Crit  HLRScn
M      *C*
C7Server      CCS7
0 Quit      2  RSC
2 Post_
3
4
5      Server      .S-----  -----
6
7 Bsy_      Svr  State  Resource  PM State
8 RTS_      2  IsTb  SVR7 2    InSv
9 OffL_      Size of Posted Set = 1
10
11      QSvrFlt
12 Next      Server : 2
13      ISTB conditions:
14      VLR Corruption Alarm: Critical
15 QuerySvr
16 QueryApp
17 QueryTrf
18 QSvrFlt_
18
PKUMAR
Time 14:23 >      QSvrFlt      ----- <Command line>

```

The alarms in the MMU server display by the command QSvrFlt in CCS/C7SERVER level. The command information is as shown below.

```

Enter the MAPCI C7SERVER level by typing ,
> mapci, mtc, ccs,ccs7,c7server
and post the MMU server 2 by,
> post 2

```

Figure 2-131 is an example of the MAP level C7SERVER MAPCI fields information.

**Figure 2-131**  
**Map Level C7SERVER MAPCI fields**

```

CM      MS      IOD      Net      PM      CCS      Trks
Ext      APPL
M Flt  .      AMA B    .      1PDTC  2  RS    59C..
1Crit  HLRScn
M      *C*
C7Server      CCS7
0 Quit      2  RSC
2 Post_

```

```

3                               11111
4                               1234567  8901234
5           Server              .S-----  -----
6
7 Bsy_      Svr   State  Resource  PM State
8 RTS_      2     InSv   SVR7 2    InSv
9 OffL_     Size of Posted Set = 1
10          post 2
11
12 Next
13
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18
PKUMAR
Time 14:23 >          post 2  ----- < Command line

```

If data corruption is detected in an MMU during IMSI or MSISDN operation, then a VLR corruption alarm generates and displays using the command QSvrFlt as show in [Figure 2-132](#), Displaying VLR Corruption Alarm using QSvrFlt command.

**Figure 2-132**  
**VLR corruption Alarm using QSvrFlt command**

```

CM      MS      IOD      Net      PM      CCS      Trks
Ext     APPL
CM Flt  .      AMA B      .      1PDTC  2  RS      59C..
lCrit  HLRScn
M              *C*              M      *C*              *C*      *C*
C7Server      CCS7
0 Quit      2  RSC
2 Post_
3
4                               11111
4                               1234567  8901234
5           Server              .S-----  -----
6
7 Bsy_      Svr   State  Resource  PM State
8 RTS_      2     IsTb   SVR7 2    InSv
9 OffL_     Size of Posted Set = 1
10          QSvrFlt
11          Server : 2
12 Next          ISTB conditions:
13                  VLR Corruption Alarm: Critical
14 QuerySvr
15 QueryApp
16 QueryTrf
17 QSvrFlt_
18
PKUMAR
Time 14:23 >          QSvrFlt  ----- <Command
line>

```

---

# SWACTDIR

---

## About SWACTCIDIR

In GSM15/UMTS02, the MSC has the ability to use the NORESTARTSWACT and MTCSWACT commands through the SWACTCIDIR directory.

## RESTARTSWACT command

The RESTARTSWACT command is the CC Warm SWACT command which executes a cold restart on the newly active side to recover the system during a CC Warm SWACT. Using the RESTARTSWACT command results in a call processing outage of approximately 2 to 10 minutes, depending on the switch configuration. Prior to GSM15, the MSC used RestartSwact to perform the CC Warm SWACT of the ONP.

### Syntax

**RESTARTSWACT <CHKTYPE> {NOMATCH}**

### Parameters

No parameters are changed.

### Response

NORESTARTSWACT should be used instead of RESTARTSWACT.  
Do you wish to continue with RESTARTSWACT?  
Please confirm ("YES", "Y", "NO", or "N"):

### Explanation

Informs the user that NORESTARTSWACT is supported for this office. The user can continue with RestartSwact or stop and perform a NORESTARTSWACT.

### System action

The system has the following possible actions:

- If the user replies "YES", RESTARTSWACT command continues.
- If the user replies "NO", RESTARTSWACT command is cancelled.

### User action

User responds to the question with a YES/NO answer.

- If user answers NO to the question, then the RESTARTSWACT command is aborted.
- If user answers YES to the question, then the RESTARTSWACT command continues.

### Example

The following steps are required to invoke a RESTARTSWACT:

```
CI :  
  
> BCSUPDATE  
  
BCSUPDATE>>  
  
> SWACTCI  
  
SWACTCI :  
  
> RESTARTSWACT
```

NORESTARTSWACT should be used instead of RESTARTSWACT.  
Do you wish to continue with RESTARTSWACT?  
Please confirm ("YES", "Y", "NO", or "N"):

## NORESTARTSWACT

The NORESTARTSWACT command allows the MSC product to perform a CC Warm SWACT without causing a cold restart on the newly active side. The call processing outage is less than 30 seconds. The response to this command is changed since NRS is supported on the MSC.

The NORESTARTSWACT command is not supported on a Standalone HLR/Trinode.

### Syntax

**NORESTARTSWACT<CHKTYPE>(NOMATCH)**

### Parameters

No parameters are changed. For details, refer to *NTP Nonmenu Commands Reference Manual, 297-1001-8203, Volume 4 of 4*.

### Responses

The command responses associated with the NORESTARTSWACT command are not affected by this feature. This feature is enabling all responses related to the NORESTARTSWACT command for the MSC product.

The NORESTARTSWACT command is not supported for the Standalone HLR Trinode.

For further information on the list of responses generated by the NORESTARTSWACT command, see the MM section of feature AR0172, CC WARM SWACT OUTAGE REDUCTION HIGH-LEVEL DESIGN.

### Response on MSC

```
> NORESTARTSWACT  
Beginning SWACT checks:  
All the SWACT checks have finished successfully.
```

```
ACTIVE DEFAULT SETTINGS:  
NOMATCH set OFF  
Do you wish to continue?  
Please confirm ("YES", "Y", "NO", or "N"):
```

### **Explanation**

- Checks that the NORESTARTSWACT application information is correct.
- CC Warm SWACT settings are displayed to the user.
- The question is prompting the user if the NORESTARTSWACT should continue. This is the final opportunity for the user to abort the NORESTARTSWACT.

### **System action**

The system has the following possible actions:

- If the user replies "YES", NORESTARTSWACT command continues. See section 6.2.3.8 for the next system response.
- If the user replies "NO", NORESTARTSWACT command is cancelled.

### **User action**

The NORESTARTSWACT user has the following possible actions:

- Enter "YES" to continue the NORESTARTSWACT processing.
- Enter "NO" to stop the NORESTARTSWACT processing.

### **Response**

If user responds YES to the question in 6.2.3.8, then:

```
All Pre-SWACT checks completed. Starting Warm SWACT now.  
***** The cursor will not be returned *****  
***** unless a critical failure occurs *****  
***** Now monitoring Warm SWACT messages *****
```

### **Explanation**

Indicates to the user that a NORESTARTSWACT is about to be executed. After the switch of activity, the user must log into the newly active side.

### **System action**

Performs the switch of activity and recover the switch. After the switch of activity, the user is logged off the MAP terminal.

### **User action**

User needs to login after the switch of activity. After logging in, the user can proceed with the ONP by performing the POSTSWACT step.

### **Example**

The following are the steps required to invoke a NORESTARTSWACT:

```

CI:
> BCSUPDATE
BCSUPDATE>>
>SWACTCI
SWACTCI:
> NORESTARTSWACT

Beginning SWACT checks:
ACTIVE DEFAULT SETTINGS:
NOMATCH set OFF
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):

> YES

```

```

All Pre-SWACT checks completed. Starting Warm SWACT now.
***** The cursor will not be returned *****
***** unless a critical failure occurs *****
***** Now monitoring Warm SWACT messages *****

```

### Response on Standalone HLR/Trinode

```

> NORESTARTSWACT

Beginning SWACT checks:
The following software does not support the NORESTARTSWACT
command:
Standalone HLR/Trinode
RESTARTSWACT must be used.
The SWACT checks have failed. Please follow instruction above.

```

## MTCSWACT

This command forces a split mode, performs specified restarts on the inactive side and switches activity.

MTCSWACT is used instead of restart commands. The MTCSWACT command, by invoking a restart on the inactive side, eliminates call processing outage caused by ordinary restart commands.

Since MTCSWACT uses the NORESTARTSWACT utility, the system outage is reduced to less than 30 seconds. The responses to this command are changed since MTCSWACT is being supported on the MSC.

This feature does not support the MTCSWACT on a Standalone HLR.

### Syntax

```
MTCSWACT <restart type> [PAUSE]
```

### Parameters

No parameters are changed. For details, refer to *NTP Non-Menu Commands Reference Manual*, 297-1001-8203, P4 of 4.

## Responses

The command responses associated with the MTCSWACT command are not affected by this feature. This feature is enabling the MTCSWACT command for the MSC.

For further information on the list of responses generated by the MTCSWACT command, see the MM section of feature AR0912, MTCSWACT.

### Response

```
CI :
>MTCSWACTCI
MTCSWACTCI> MTCSWACT <Restart type> [PAUSE]
. . . . .
. . . . .
```

### Explanation

The system outputs dots to the MTCSWACT user’s terminal to indicate that MTCSWACT is progressing.

### System action

The dots indicate that the system is processing the MTCSWACT command. It is performing the execution of MTCSWACT applications. A dot and a space are displayed in 5 second intervals. For every 30 dots output, a carriage return character is displayed to advance to the next line.

If there is any message to be output to the user, the dot outputting is stopped. The message is displayed on a new line. If MTCSWACT processing continues, the dot outputting is resumed on a new line on the MTCSWACT user’s terminal.

### User action

There is no user action required for this response. The dots are for informational purposes only.

**Note:** The MTCSWACT functionality is supported and available in all BRISC and POWERPC offices where NORESTARTSWACT is supported and available.

### Example

```
MTCSWACTCI> MTCSWACT COLD
. . . . .
. . . . .
Response
```

```
The switch is about to drop sync.
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):
```

**Explanation**

The system is requesting a response from the user. The user can continue the MTCSWACT command by letting the system drop the unsplit mode or the user can stop and quit the MTCSWACT command at this point.

**System action**

The system has the following possible actions:

- If the user replies “YES”, the MTCSWACT command continues and the switch splits and performs the requested restart.
- If the user replies “NO”, the MTCSWACT command is cancelled.

**User action**

The MTCSWACT user has the following possible actions:

- Enter “YES” to resume the MTCSWACT processing.
- Enter “NO” to stop the MTCSWACT processing.

**Example**

The following output provides examples of possible scenarios.

The user wants to continue the MTCSWACT command:

```

MTCSWACTCI> MTCSWACT COLD
.....
The switch is about to drop sync.
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):
>YES
Splitting system.
...
Running in simplex mode with active CPU 0.
...
Restart cold on inactive CPU is complete.

```

**Response**

```

Performing restart <restart type> on the inactive CPU.
.....
Restart <restart type> on inactive CPU is completed.

```

**Explanation**

Indicates to the user the requested restart is being executed on the inactive side.

**System action**

Perform the restart on the inactive side.

*Note:* The MTCSWACT functionality is supported and available in all BRISC and POWERPC offices where NORESTARTSWACT is supported/available.

If a WARM restart is requested when the user invokes the MTCSWACT command, then MTCSWACT initiates a WARM restart followed by a COLD restart on the inactive side. The cold restart is performed to properly clean up the call processing data on the inactive side.

**Example**

```
Performing restart COLD on the inactive CPU.  
.....  
Restart COLD on inactive CPU is completed.  
Response  
A switch of activity is about to occur.  
Do you wish to continue?  
Please confirm ("YES", "Y", "NO", or "N"):
```

**Explanation**

After splitting, the MTCSWACT command is ready to switch activity. Before the switch of activity, the user is prompted to continue with the MTCSWACT or the user can cancel the MTCSWACT at this point. If the user selects to cancel the MTCSWACT at this point, the switch remains in simplex mode (split mode).

**System action**

The system has the following possible actions:

- If the user types “YES”, the system continues with the MTCSWACT and performs a switch of activity. The user is automatically logged in on the newly active side of the switch after the NORESTARTSWACT.
- If the user types “NO”, the system stops the MTCSWACT. The system aborts all the application steps to clean up after itself, displays a message to notify the MTCSWACT user, and quits the MTCSWACTCI.

**User action**

The MTCSWACT user has the following possible actions:

- Type “YES” to proceed with the MTCSWACT processing. Upon successful completion of the switch of activity, the MTCSWACT user is logged in on a MTCSWACTCI session immediately on the newly active side. There is no action required from the MTCSWACT user to log on.
- Type “NO” to stop the MTCSWACT processing. The switch is left running in simplex mode. The user has to manually unsplit the switch if required.

**Response**

```
$  
<Login Id> Login on <date> at <time>.
```

**Explanation**

The system performs a NORESTARTSWACT as part of the MTCSWACT processing. The system displays a “\$” on all currently logged in users’ terminal as the result of the NORESTARTSWACT.

After the NORESTARTSWACT, the MTCSWACT user (the one who invokes the MTCSWACT command) is automatically logged into the switch by the system. If the system is successful, a message stating the MTCSWACT user name, date and time are displayed on the MTCSWACT user’s terminal.

Other users who were logged into the switch at the time the NORESTARTSWACT occurred will be prompted to login after the NORESTARTSWACT by the system with a “Please Login.” message.

**System action**

The system performs a switch of activity using the NORESTARTSWACT procedure.

The system displays the login message on the MTCSWACT user’s terminal and then continues to process the MTCSWACT command.

For other users who were logged on at the time of the NORESTARTSWACT, the system displays a message “Please Login.” to invite them to log in.

**User action**

Some users will have to login.

**Example**

After the NORESTARTSWACT has completed:

The MTCSWACT user is automatically logged in on the newly active side after the NORESTARTSWACT is over.

```
>MTCSWACT COLD
...
$
TEAM1 Login on 1994/05/31 at 23:30:31.
```

- Other users are invited to log in with the message “Please Login.” on the newly active side after the NORESTARTSWACT is over.

```
>MTCSWACT COLD
...
$ Please Login.
```

### Response

```
The switch is about to sync
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):
```

### Explanation

After the successful completion of the SWACT, the system is ready to sync up the switch.

### System action

The system has the following possible actions:

- Upon receiving a positive response from the MTCSWACT user at this time, the system starts to unsplit the switch. Upon completing the unsplit operation, both CM RTIF windows shows “Sync” on the header line. On any MAP window under the CM level, the system displays that the switch has been unsplit.
- Upon receiving a negative response from the MTCSWACT user at this time, the system stops the MTCSWACT processing, displays a message to notify the user and quits the MTCSWACTCL.

### User action

The MTCSWACT user has the following possible actions. In any case, the MTCSWACT command finishes.

- Type “YES” to put the switch in unsplit mode.
- Type “NO” to leave the switch in split mode.

### Example

The following gives the examples of all possible outcome.

The MTCSWACT user wants MTCSWACT to unsplit the switch. After the switch of activity the user is prompted with the following message:

```
...
The switch is about to sync.
Do you wish to continue?
Please confirm ("YES", "Y", "NO", or "N"):
>YES
```

### Response

```
Starting sync
.....
Synchronization successful.
MTCSWACT completes
```

### Explanation

Indicates to user that the MTCSWACT is done.

**System action**

Perform the unsplit.

**User action**

NONE

**Response on Standalone HLR/Trinode**

```
MTCSWACTCI :
> MTCSWACT
Next par is:<Restart type>{WARM, COLD, RELOAD}
Enter: <Restart type>[<Pause option>]
>COLD pause
WARNING: MTCSWACT runs with the switch out of sync.
The pause option will prolong this state.
Problem: The following software does not support the
MTCSWACT command:
Standalone HLR/Trinode
>
```

**Note:** The system response varies according to MAP terminal type. For example, the MTCSWACT system dot display mentioned in this section is only applicable to the ASYNC MAPs and the dots will be displayed as one dot per line for the X25 MAPs.

---

# TACC

---

## About TACC

The Tariff Administration Change Control (TACC) directory level

- implements the TACC functionality
- enables personnel to check table bands, above and beyond the New Table Control (NTC) verify procedures
- enables personnel to schedule tariff changeovers for a specified date and time

## Accessing TACC

To access the TACC directory and commands, enter the following command at the CI prompt and press return. The TACC command prompt displays:

```
CI:  
>TACC
```

## Commands

The following commands are accessed from the TACC directory level:

- TACOPY
- TACHECK
- TAVIEWCO
- TASUBMITCO
- TAUNFREEZE
- TACANCELCO
- TAROLLBACKCO
- HELP
- QUIT

## TACOPY command

This TACOPY command copies tariff system tables from the active tariff to the inactive tariff. An entire tariff system can be copied by supplying the 'ALL' option or an individual table can be copied by supplying the 'TABLE' option and the generic table name of a valid tariff system table. If a table name that is not part of the tariff system is provided as a parameter to the TACOPY command, the command will output the names of all tariff system tables.

### Syntax

The syntax for the TACOPY command is:

```
TACC>>
> TACOPY TABLE <generic table name>
> TACOPY ALL
```

**Parameters**

Table 2-89 lists and describes the parameters for the TACOPY command.

**Table 2-89**  
**TACOPY parameters**

Parameter	Value	Definition
TABLE <table name>	TSDAY TSTIME TSDATE TARAOC TARDET	Describes the table name of an active tariff table. The TACOPY command must be provided with a parameter, but the specific parameter choice is selectable.
ALL		Identifies all the active tariff tables.

**TACHECK command**

The TACHECK command checks the changes to inactive tables. An entire tariff system can be checked by supplying the ‘ALL’ option or an individual table can be checked by supplying the ‘TABLE’ option and the generic table name. Only the TACHECK command with the ‘ALL’ option can trigger a transition to the checked state. The TACHECK command with a table name as an option generates only a status message. The TACHECK command must be provided with a parameter, but the specific parameter choice is selectable.

**Syntax**

The syntax for the TACHECK command is:

```
TACC>>
> TACHECK TABLE <generic table name>
> TACHECK ALL
```

**Parameters**

Table 2-90 lists and describes the parameters for the TACHECK command.

**Table 2-90**  
**TACHECK parameters**

Parameter	Value	Definition
TABLE <table name>	TSDAY TSTIME TSDATE TARAOC TARDET	The table name of an active tariff table.

**Table 2-90**  
**TACHECK parameters**

Parameter	Value	Definition
ALL	N/A	Identifies all the active tariff tables.

## **TAVIEWCO command**

The TAVIEWCO command displays the pending changeover request, if any. Alternatively, the status of the changeover and of the tariff system can be checked by viewing the read-only table, TARSYS.

### **Syntax**

The syntax for the TAVIEWCO command is:

```
TACC>>  
> TAVIEWCO
```

## **TASUBMITCO command**

The system administrator uses the TASUBMITCO command to submit a changeover request. A changeover request can be:

- instantly invoked by selecting IMMEDIATE option or
- scheduled for a specific date and time by selecting the SCHEDULED option

When using the SCHEDULED option, provide the date and time (in the YYMMDD and HHMM format) when the changeover is to be submitted.

The TASUBMITCO command also backs up the copy of the old tariff data. The backup copy is preserved in standby mode until subsequent changes are made to the inactive tables. Once changes are made to the inactive tables, the backup tariff data is lost.

The TASUBMITCO command must be provided with a parameter, but the specific parameter choice is selectable.

### **Syntax**

The syntax for the TASUBMITCO command is:

```
TACC>>  
> TASUBMITCO IMMEDIATE  
> TASUBMITCO SCHEDULED <yymmdd> <hhmm>
```

**Parameters**

Table 2-91 lists and describes the parameters for the TASUBMITCO command.

**Table 2-91  
TASUBMITCO parameters**

Parameter	Value	Definition
IMMEDIATE	N/A	Specifies that a changeover request is to happen immediately without delay.
SCHEDULED <date> <time>	N/A	Specifies that a changeover request is to happen on a schedule.

**TAUNFREEZE command**

The TAUNFREEZE command

- enables the inactive tables to be edited after they have been checked or scheduled for changeover and
- cancels a changeover request if a scheduled changeover request is in the standby state

An entire tariff system is unfrozen when this command is issued. This command also is valid from the available/backup state. Administrator access is required for this command, except while in the checked state.

**Syntax**

The syntax for the TAUNFREEZE command is:

```
TACC>>
> TAUNFREEZE
```

**TACANCELCO command**

The TACANCELCO command cancels the changeover request in the standby state and returns the system to the checked state. Administrator access is required for this command.

**Syntax**

The syntax for the TACANCELCO command is:

```
TACC>>
> TACANCELCO
```

## TAROLLBACKCO command

The TAROLLBACKCO command rolls back the active tariff system with the standby (backup) tariff system. TAROLLBACKCO may be used to “undo” a TASUBMITCO that has been identified as problematic.

TAROLLBACKCO command is valid until any one of the inactive tables is accessed through the NTC “table” command. Administrator access is required for this command.

### Syntax

The syntax for the TAROLLBACKCO command is:

```
TACC>>  
> TAROLLBACKCO
```

## HELP command

The HELP command displays a list of commands and their definitions and syntax. Invoking this command without parameters displays the list of commands.

### Syntax

The syntax for the HELP command is:

```
TACC>>  
> HELP
```

### Example

An example of the switch output follows:

```
TACC>>  
>imagename  
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using  
pgmscstpcl7bn  
PRODUCT: GMSO.170  
LOAD: GMSO0.170  
LAYER: BAS.20.0.BO  
LAYER: TL.19.0.BO  
LAYER: SHR.19.0.AA  
LAYER: GSM.17.0.BN  
>help  
TARIFF ADMINISTRATION CHANGE CONTROL (TACC) - SUBCOMMANDS ARE:  
TACOPY  
TACHECK  
TAVIEWCO  
TASUBMITCO  
TAUNFREEZE  
TACANCELCO  
TAROLLBACKCO  
>HELP  
QUIT
```

## **QUIT command**

This command exits the TACC directory level.

### **Syntax**

The syntax for the QUIT command is:

**>quit**

---

# VLR

---

## About VLR

Occasionally, after a Reload Restart and during the recovery period, the messaging link between the Visitor Location Register (VLR) and the Home Location Register (HLR) becomes congested. This MAP level displays VLR specific alarms. It contains the VLRCON alarm. The WhatIs VLRCON command displays the information that the alarm is related to; for example, the VLRCONCI tool throttling messages between the VLR and HLR.

## Accessing VLR

This directory is used to create a new VLR MAP level under APPL. On the MAP enter:

```
mapci;mtc;appl;vlr
```

To exit the VLR MAP level, quit. On the MAP enter:

```
quit all
```

## WHATIS command

WhatIs provides a description of the alarms that appear under the VLR MAPCI level. Currently only the WhatIs VLRCON is supported.

### Syntax

```
>help whatis  
WhatIs - display help text for specified application.  
Parms: <appl_name> STRING
```

### Parameters

[Table 2-92](#) describes the WhatIs parameters

**Table 2-92**  
**WHATIS Parameters**

PARAMETER	VALUE	DEFINITION
appl_name	STRING	Currently only VLRCON is supported.

### Response

```
whatis vlrcon
```

```
VLRCON : GSM VLR Message Congestion Tool Alarm
```

**Example**

**Figure 2-133**  
**MSC VLRCON MAP Level Display**

```

      CM      MS      IOD      Net      PM      CCS      Lns      Trks      Ext      APPL
      .      .      .      .      .      .      .      .      .      VLRCON
                                         OAMAP  SDM      SWMTC      SDBMIL      HLR      VLR
                                         .      .      .      .      .      VLRCON
                                         .      .      .      .      .      M
VLRCON
0 Quit
2
3 STATUS
4
5
6      whatis vlrcon
7      VLRCON : GSM VLR Message Congestion Tool Alarm
8
9
10
11
12
13
14
15
16
17
18
      USERID
Time 17:03 >
    
```

---

# VLRCON

---

## About VLRCON

VLRCON displays VLRCON alarm information. It supports the subcommand STATUS. This command will state whether message throttling is active, the percentage of the ULs and PRNs throttled, whether Authentication has been disabled, and the default MSISDN associated with the VLRCONCI VLR default data.

## Accessing VLRCON

This directory is used to create a new VLRCON MAP level under VLR. On the MAP enter:

```
mapci;mtc;appl;vlr;vlrcon
```

To exit the VLRCON MAP level, quit. On the MAPCI enter:

```
quit all
```

## STATUS command

The Status command prints the current state of VLRCONCI. This command output states whether message throttling is active, the percentage of the ULs and PRNs throttled, whether Authentication has been disabled, and the default MSISDN associated with the VLRCONCI VLR default data.

## Syntax

```
>help status  
STATUS -- Display the current VLRCONCI status
```

## Parameters

No parameters.

## Response

```
Status  
VLR Message Throttling is disabled  
Percent UL Throttled: 10  
Percent PRN Throttled: 10  
NoAuth: None  
MSISDN: Digits: 1234567  
NOA: International  
NPI: ISDN
```

## Explanation

Displays whether the tool has been Started, then prints the current status of NoAuth and Percent.

**System action**

No system action required.

**User action**

There is no user action required.

**Example**

**Figure 2-134**  
**MSC VLRCON MAP Level Display**

```

CM      MS      IOD      Net      PM      CCS      Lns      Trks      Ext      APPL
.       .       .       .       .       .       .       .       .       VLRCON
                                OAMAP  SDM      SWMTC      SDMBIL      HLR      VLR
0 Quit      .       .       .       .       .       .       .       .       VLRCON
2                                     .       .       .       .       .       M
3 STATUS                                         VLR
4                                                     VLRCON
5                                                     M
6                                                     M
7 VLR Message Throttling is enabled.
8 Percent UL: 50
9 Percent PRN: 60
10 NoAuth: All
11 MSISDN: Digits: 1234567
12      NOA: International
13      NPI: ISDN
14
15
16
17
18
USERID
Time 17:03 >
    
```

---

# VLRCONCI

---

## About VLRCONCI

The purpose of VLRCONCI is to give the crafts person a method of throttling the number of messages the VLR will send to the HLR when there is a congestion alarm on the VLR to HLR messaging link.

## Accessing VLRCONCI

Access to this tool is allowed only when the OFCVAR ENABLE\_VLRCONCI\_TOOL is set to Y. On the MAP enter:

```
> vlrconci  
VLRCONCI>
```

To return to CI

To exit VLRCONCI, quit. On the MAP enter:

```
quit
```

## START command

Start enables message throttling, and, if the NoAuth option was selected, disables the sending of Authentication. This will only occur for IMSIs associated with invalid or no VLR data.

## Warning

You will be warned that the tool may become destructive and you will be prompted as to whether to start message throttling.

## Syntax

```
>Help start  
START -- Starts VLR throttling
```

## Parameters

None.

## Response

```
>start
```

```
WARNING: VLRCONCI is destructive to Call Processing.  
Please confirm ("YES", "Y", "NO", or "N"):
```

```
>Y
```

```
Warning: Every time a field is modified after START  
data will be downloaded to the MMU. To prevent this  
enter STOP before changing the data  
Throttling enabled
```

**Explanation**

Enables the throttling of Update Location and Provide Roaming number messages, and, if the NoAuth option was selected, disable Authentication.

**System action**

Start throttling ULs and PRNs, and, if the NoAuth option was selected, disable Authentication.

**User action**

There is no user action required.

**Example**

```
> start
```

```
WARNING: VLRCONCI is destructive to Call Processing.  
Please confirm ("YES", "Y", "NO", or "N"):  
>Y
```

```
Warning: Every time a field is modified after START  
data will be downloaded to the MMU. To prevent this enter STOP  
before changing the data  
Throttling enabled
```

```
> start  
WARNING: VLRCONCI is destructive to Call Processing.  
Please confirm ("YES", "Y", "NO", or "N"):  
>N  
Command terminated due to request.
```

**STOP command**

Stop command disables the UL and PRN throttling.

**Warning**

Not applicable.

**Syntax**

The command syntax for STOP is:

```
>help stop  
STOP -- Stops VLR throttling
```

**Parameters**

None.

**Response**

```
stop  
Throttling disabled
```

**Explanation**

Stops the throttling of ULs and PRNs. Authentication proceeds normally.

**System action**

Stops the throttling of ULs and PRNs. Authentication proceed normally.

**User action**

None.

**Example**

```
> stop  
Throttling disabled
```

**NoAuth**

NoAuth command causes Authentication to be disabled for all calls associated with an IMSI which has invalid VLR data when message throttling is enabled.

**Warning**

Not applicable.

**Syntax**

The command syntax for NoAuth is:

```
>help noauth  
NOAUTH -- Disables Authentication  
Parms: <NoAuth option> {None,  
All,  
Range <IMSI From> STRING <IMSI To> STRING,  
Range2 <IMSI From> STRING <IMSI To> STRING,  
Range3 <IMSI From> STRING <IMSI To> STRING,  
Range4 <IMSI From> STRING <IMSI To> STRING,  
Range5 <IMSI From> STRING <IMSI To> STRING,  
InterPLMN}
```

**Parameters**

Table 2-93 lists the parameter definitions for the VLRCONCI command.

**Table 2-93**  
**VLRCONCI NoAuth Definitions**

PARAMETER	VALUE	DEFINITION
<IMSI>	{NONE, ALL, RANGE <Range> string string, RANGE2 <Range> string string, RANGE3 <Range> string string, RANGE4 <Range> string string, RANGE5 <Range> string string, INTERPLMN}	If NONE is selected, authentication will proceed normally. If ALL is selected authentication will not occur, if RANGE is selected authentication will be prevented for the specified range of IMSIs, if INTERPLMN is selected authentication will be prevented for roamers from a different PLMN. NoAuth impacts only IMSI associated with invalid or no VLR data.

### Response

noauth all

Authentication disabled for all IMSIs with invalid or no VLR data when tool is STARTed

noauth range 555 666

Authentication disabled for all IMSIs with invalid or no VLR data that are included within the specified range when tool is STARTed

noauth interplmn

Authentication disabled for all Inter PLMN IMSIs with invalid or no VLR data when tool is STARTed

noauth none

Authentication will proceed normally.

### Explanation

Setting NoAuth to All, a Range of IMSIs, or interplmn causes Authentication to be disabled for the specified IMSIs if the VLR data associated with the IMSI is invalid or not present. This command only takes affect when the tool is Started.

### System action

Setting NoAuth anything other than None causes Authentication to be disabled for the specified IMSIs if the HLR would need to be queried for data.

### User action

There is no user action required.

### Example

```
>noauth all
Authentication disabled when tool is STARTed
>noauth range 555 666
Authentication disabled when tool is STARTed
>noauth interplmn
Authentication disabled when tool is STARTed
>noauth none
Authentication enabled
```

## STATUS command

Status prints the current state of VLRCONCI.

### Warning

Not applicable.

## Syntax

The command syntax for NoAuth is:

```
>help status  
STATUS -- Display the current tool settings  
Parms: <MMU> {MMU}
```

## Parameters

If MMU is entered, the status of VLRCONCI on each MMU is shown onscreen or printed. [Table 2-94](#) shows the parameters for the VLRCONCI command.

**Table 2-94**  
**VLRCONCI parameters**

PARAMETER	VALUE	DEFINITION
<MMU>	{MMU}	If no parameter is entered, the status of the tool on the CM is printed, if MMU is entered, the status of VLRCONCI on each MMU will be printed.

## Response

```
Status  
VLR Message Throttling is enabled  
Percent UL throttled: 10  
Percent PRN throttled: 20  
NoAuth: None  
Status for MMU 1  
MMU 1  
VLR Message Throttling is enabled  
Percent UL throttled: 10  
Percent PRN throttled: 20  
NoAuth: None  
MSISDN: Digits: 1234567  
NOA: International  
NPI: ISDN  
Category: 10  
HOLD: Y  
MPTY6PORT: Y  
MPTY3PORT: Y  
ECT: Y  
CM Status  
VLR Message Throttling is enabled  
Percent UL throttled: 10  
Percent PRN throttled: 20  
NoAuth Range: None
```

## Explanation

Displays whether the tool has been Started, then prints the current status of NoAuth and Percent.

**System action**

No system action required.

**User action**

If the CM and the MMU data do not match, STOP and START the tool to cause the data to be downloaded again.

**Example**

```
>Status
CM Status
VLR Message Throttling is enabled.
Percent UL throttled: 100
Percent PRN throttled: 0
NoAuth Range: 1 to 1
NoAuth Range 2: 3 to 3
NoAuth Range 3: 8 to 8
NoAuth Range 4: 5 to 5

NoAuth Range 5: 1 to 1

>Status MMU
VLR Message Throttling is enabled.
Percent PRN throttled: 0
NoAuth Range: 1 to 1
NoAuth Range 2: 3 to 3
NoAuth Range 3: 8 to 8
NoAuth Range 4: 5 to 5
NoAuth Range 5: 1 to 1
MSISDN: Digits: 1234567

NOA: International

NPI: ISDN

Category: 10
HOLD: Y
MPTY6PORT: Y
MPTY3PORT: Y
ECT: Y

CM Status
VLR Message Throttling is enabled
Percent UL throttled: 100
Percent PRN throttled: 0
NoAuth Range: 1 to 1
NoAuth Range 2: 3 to 3
NoAuth Range 3: 8 to 8
NoAuth Range 4: 5 to 5
NoAuth Range 5: 1 to 1
```

**PERCENT command**

Percent allows the percentage of message throttled to be altered.

**Warning**

Not applicable.

**Syntax**

The command syntax for VLRCONCI is:

> help percent

**PERCENT -- Percentage of messages to throttle**

**Parms: <UL or PRN> UL {0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100}**

**PRN {0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100}**

**Parameters**

[Table 2-95](#) shows the percent parameters for VLRCONCI.

**Table 2-95**  
**VLRCONCI Percent Parameters**

PARAMETER	VALUE	DEFINITION
UL or PRN	UL {0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100} PRN {0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100}	Provide the percent of Update Location or Provide Roaming Numbers to be throttled.

**Response**

percent UL 10

1 in 10 messages will be throttled when VLRCONCI is STARTed.

**Explanation**

Sets the percentage of messages to be throttled.

**System action**

When VLRCONCI is STARTed, the selected percentage of messages will be throttled.

**User action**

None.

**Example**

>percent PRN 70  
Percent updated

## VLRDATA command

This command allows the VLR default data fields to be printed, modified or reset to their initial value. The VLRDATA fields are MSISDN, Category, Hold, Mpty6port, Mpty3port, and ECT. A definition of each field is contained in the following table. [Table 2-96](#) shows the parameters for the VLRDATA command.

**Table 2-96**  
**VLRDATA parameters**

Command	Parameter	Description
MSISDN	4 to 15 digits	The MSISDN allows a default MSISDN to be entered. It takes one parameter, a digit string. This digit string can be between 4 and 15 digits and does not have to be a valid DN, although if the MSISDN is not valid any features requiring the translation of the originators DN will fail.
CATEGORY	0 to 255	The Category command allows the category in the default data to be altered.
HOLD	y or n	The Hold command allows or denies call hold. Y implies hold is Registered and Operative. N implies that the service is not available.
MPTY6PORT	y or n	The MPTY6PORT command allows or denies Multi-party 6 port conference. Y implies the service is Registered and Operative. N implies that the service is not available.
MPTY3PORT	y or n	The MPTY3PORT command allows or denies Multi-party 3 port conference. Y implies the service is Registered and Operative. N implies that the service is not available.
ECT	y or n	The ECT command allows or denies Explicit Call Transfer. Y implies the service is Registered and Operative. N implies that the service is not available.
—end—		

### Syntax

The command syntax for VLRDATA is:

**>help vlrdata**

**VLRDATA -- Print, Edit, or Reset VLR default data**

**Parms:** <PRINT, EDIT, or RESET> {PRINT <FIELD> {MSISDN, CATEGORY, HOLD, MPTY6PORT, MPTY3PORT, ECT}, EDIT <FIELD> {MSISDN <MSISDN> STRING,<npi> {unknown, ISDN, national, private}<noa> {unknown,national,international, network}}

**CATEGORY** <CATEGORY> {0 TO 255}, **HOLD** <N or Y> {N,Y},

**MPTY6PORT** <N or Y> {N,Y},**MPTY3PORT** <N or Y> {N,Y},

**ECT** <N or Y> {N,Y}},

**RESET** <FIELD> {MSISDN,CATEGORY,HOLD,MPTY6PORT,MPTY3PORT,ECT}}

**Parameters**

Table 2-97 show the parameter definitions for the VLRCONCI and VLRDATA commands.

**Table 2-97**  
**VLRCONCI VLRDATA parameters**

PARAMETER	VALUE	DEFINITION
PRINT	{msisdn, category, hold, mpty6port, mpty3port, ect, all}	Determines which field to print.
RESET	{msisdn, category, hold, mpty6port, mpty3port, ect, all}	Determines which field to reset.
EDIT	msisdn <msisdn> string, <npi> {unknown, ISDN, national, private}, <noa> {unknown, , national, international, network}  category <category> {0 to 255}, hold <n or y> {n, y},  mpty6port <n or y> {n, y}, mpty3port <n or y> {n, y}, ect <n or y> {n, y}}	Determines which field to modify.
—end—		

**Response**

VLRDATA PRINT allows either an individual VLRDATA field to be displayed or all VLRDATA fields to be displayed.

**Explanation**

Displays the current value of MSISDN, Category, Hold, Mpty6port, Mpty3port or ECT if the field name is entered after VLRDATA PRINT or displays every VLRDATA field if VLRDATA PRINT ALL is entered.

**System action**

Print the appropriate VLRDATA fields.

**User action**

There is no user action required.

**VLRDATA EDIT command**

VLRDATA EDIT allows an individual VLRDATA field to be modified.

VLRDATA EDIT MSISDN allows a default MSISDN to be entered. It takes one parameter, a digit string. This non-zero digit string can be between 4 and 15 digits and does not have to be a valid DN, although if the MSISDN is not valid any features requiring the translation of the originators DN will fail.

VLRDATA EDIT CATEGORY allows the category in the default data to be altered.

VLRDATA EDIT HOLD allows or denies call hold. Y implies hold is Registered and Operative. N implies that the service is not available.

VLRDATA EDIT MPTY6PORT allows or denies Multi-party 6 port conference. Y implies the service is Registered and Operative. N implies that the service is not available.

VLRDATA EDIT MPTY3PORT allows or denies Multi-party 3 port conference. Y implies the service is Registered and Operative. N implies that the service is not available.

VLRDATA EDIT ECT allows or denies Explicit Call Transfer. Y implies the service is Registered and Operative. N implies that the service is not available.

**Explanation**

Modifies the current value of MSISDN, Category, Hold, Mpty6port, Mpty3port or ECT if the field name is entered after VLRDATA EDIT.

**System action**

Modify the appropriate VLRDATA fields.

**User action**

None

## VLRDATA RESET command

VLRDATA RESET allows either an individual VLRDATA field or all VLRDATA fields to be reset to their initial values. These values are contained in [Table 2-98](#), which also lists the VLRDATA RESET parameters.

**Table 2-98**  
**VLRDATA RESET parameters**

Field	Default	Description
msisdn	1234567	Mobile Station International ISDN Number. The MSISDN is permanent subscriber data.
category	10	Default the Category to Ordinary Subscriber
hold	y	Hold is Registered and Operative.
mpty6port	y	Multi-party 6 port conference is Registered and Operative.
mpty3port	y	Multi-party 3 port conference is Registered and Operative.
ect	y	Explicit Call Transfer is Registered and Operative.

### Explanation

Reset the value of MSISDN, Category, Hold, Mpty6port, Mpty3port or ECT if the field name is entered after VLRDATA RESET or resets every VLRDATA field if VLRDATA RESET ALL is entered.

### System action

Reset the appropriate VLRDATA fields.

### User action

There is no user action required.

### Example

```
>vlrdata print all
MSISDN: 1234567
NOA: International

      NPI: ISDN

Category: 10
HOLD: Y
MPTY6PORT: Y
MPTY3PORT: Y
ECT: Y
```

---

```
>vlrdata print msisdn

MSISDN: Digits: 7777777

      NOA: International

      NPI: ISDN

>vlrdata reset msisdn
VLR Default Data Reset
>vlrdata print msisdn
MSISDN: Digits: 1234567

      NOA: International

      NPI: ISDN

>vlrdata edit msisdn digits 55555
MSISDN updated
MSISDN: Digits: 55555

      NOA: International

      NPI: ISDN

>vlrdata edit msisdn digits 55
Too few digits specified for MISDN. 4 to 15 digits expected.
>vlrdata edit msisdn digits 00000
MISDN must contain digits other than 0

>vlrdata print category
Category: 10
>vlrdata edit category 11
Category Updated.
>vlrdata reset category
VLR Default Data Reset

>vlrdata print category
Category: 10
>vlrdata print Hold
Hold: y
>vlrdata edit Hold n
Default VLR Hold is Service Denied
>vlrdata print Hold
Hold: n
>vlrdata reset Hold
VLR Default Data Reset
>vlrdata print Hold
Hold: y

>vlrdata print Mpty6Port
Mpty6Port: y
>vlrdata edit Mpty6Port n
```

---



---

## Miscellaneous MAP commands

---

This section describes various MAP commands specific to the MSC that are not discussed in [“MAP directories”](#).

Most of the commands discussed in this chapter are CI level commands. The commands are presented in alphabetical order.

---

# AMADUMP

---

## About AMADUMP

The MSC switch produces Automatic Message Accounting (AMA) files. These files are used for billing purposes.

AMADUMP is a command that:

- formats records from a DIRP file
- provides a display or hard-copy printout of the contents of Automatic Message Accounting (AMA) files

AMADUMP uses the following output formats:

- A *block-by-block hexadecimal dump* that contains the contents of a file. The file's range of blocks can be optionally specified by the operating company personnel.
- A *record-by-record dump* that contains AMA call entries, data entries, or header entries within an AMA file. The screening used on the file can be optionally specified by the operating company personnel.

## Implementing AMADUMP

Before the AMADUMP utility can be used, complete the steps identified in [Procedure 3-1](#).

*Note:* This procedure is performed *only the first time* AMADUMP is used..

### Procedure 3-1 AMADUMP setup

Step	Action
1	Datafill table CRSFMT to define the call data streams and formats. Change NUM_CALLREC_STREAMS in Table OFCENG.
2	Datafill table CRSMAP to associate call data streams with various call types.
3	Perform a warm restart.
4	Datafill table DIRPPOOL to define physical characteristics of a data stream.
5	Datafill table DIRPSSYS to define the DIRP device for the target stream.
6	Datafill table DIRPSSYS to define the DIRP device for the target stream.

—sheet 1 of 2—

**Procedure 3-1  
 AMADUMP setup (continued)**

Step	Action
7	Enter <code>MAPCI;MTC;IOD;DIRP</code> at the MAP display to mount a volume for the target stream.
8	Enter <code>ROTATEGCDR</code> at the MAP display to activate the disk.
9	Datafill <code>OPARM GSM_BILLING_REPORT</code> in table <code>OFCVAR</code> by entering <code>y</code> to allow display of GSM billing log <code>GCDR600</code> .
10	Enter the <code>MAKEGCDR</code> command to generate test calls.
11	Verify that the buffer to which the internal call record was sent was cleared.
12	Enter the <code>AMADUMP</code> command to verify that the AMA call entries generated by the test calls exist.

—sheet 2 of 2—

To exit the AMADUMP utility, enter `QUIT`.

**AMADUMP>QUIT**

**Syntax**

The syntax for the AMADUMP command is:

```
AMADUMP>>
DUMP <CALL [DETAILS startblk numblks]>
<DATA>
<HDR>
<HEX>
FILTER<ADD [rc]> |[ALL]
<DELETE> rc |[ALL]
<DISPLAY> rc|[ALL]
<ENABLE>
<DISABLE>
```

**Parameters**

[Table 3-1](#) lists and describes the parameters used with the AMADUMP DUMP command.

**Table 3-1  
 AMADUMP DUMP parameter descriptions**

Parameter	Description
CALL	Dumps header entries, control entries, and call entries in the C1C1 call record block in ASCII (including associated call extension entries, if present).

**Table 3-1**  
**AMADUMP DUMP parameter descriptions**

Parameter	Description
DETAILS	Optional parameter. Dumps records in detailed format. With each dump, the field name of each field is output. When DETAILS is not specified, the records display in simple format. Each field within the record is separated by a space. Additional information is appended to the end of each record. The additional information indicates if the call was direct dialing overseas (DDO) and if the call was answered.
startblk	Defines the starting block count from the beginning of the file and not the block count as shown in the C1C1 header. The default is the first block. The range for this field is 1 to 32000.
numblks	Defines the number of blocks to be dumped. Default is all blocks. The range for this field is 1 to 32000.
DATA	Dumps header entries, control entries, and data entries in the C2C2 data blocks.
HDR	Dumps block header entries and control entries.
HEX	Dumps an unformatted hexadecimal of block data. This is applicable to all tape formats.

Table 3-2 describes the parameters used with the AMADUMP FILTER command.

**Table 3-2**  
**AMADUMP FILTER parameter descriptions**

Parameter	Description
ADD	Adds the data that the user wants to search for to the filter table. The user specifies the call record code to be screened. The FILTER command prompts the user to enter screening values for each field associated with that call record code. The user can enter a BCD value to be screened for, an asterisk (*), a combination of BCD values and asterisks, or a carriage return. All characters following the asterisk are ignored. When all fields have values, type ALL (in capital letters) following the next prompt. All remaining field values are filled with asterisks and ignored in the screening process. Up to ten filter entries can be added to the filter table.
DELETE	Removes the specified record code from the filter table.
DISPLAY	Displays the contents of the record code specified in the filter table. DISPLAY can be used as a means of verification.
rc	Represents the call record code. One or more record codes can be entered, but each record code must be separated by a space.
—sheet 1 of 2—	

**Table 3-2**  
**AMADUMP FILTER parameter descriptions (continued)**

Parameter	Description
ALL	<p><i>When used with ADD:</i> Do not use ALL as a call record code parameter in the FILTER ADD command. ALL is a valid entry for field prompts other than the call record code. ALL is used when all remaining fields in the call record code are to be ignored and filled with asterisks.</p> <p><i>When used with DELETE:</i> ALL deletes all entries in the filter tables.</p> <p><i>When used with DISPLAY:</i> ALL displays all entries in the filter table. This command also is used to denote all record codes.</p>
ENABLE	Activates filter screening.
DISABLE	Disables filter screening. However, any rc added to the filter table is retained and may be enabled again.
—sheet 2 of 2—	

**Performing a call summary dump**

Before beginning an AMADUMP call summary dump, access DISKUT (disk utilities) and list the files on the volume. List the desired file by entering LF before the filename. In the following example, S00DGCDR is the filename.

```
CI>DISKUT
DISKUT>LF S00DGCDR
```

Execute an AMADUMP on the file by entering AMADUMP GSM and the name of the file to be dumped. In the following example, the name of the file to be dumped is U921115214501GCDR.

```
CI>AMADUMP GSM U921115214501GCDR
AMADUMP>
```

**Examples**

[Figure 3-1](#) provides an example of the information given after the AMADUMP DUMP command is executed.

**Figure 3-1**  
**AMADUMP DUMP command example**

```
CI>AMADUMP GSM U21115214501GCDR
AMADUMP>>>
>dump call summary
>>>GSM AMA FILE U9211115214501GCDR IS BEING PROCESSED

>>>BLOCK NUMBER    1 CONTAINS    2 RECORDS
>>>BLOCK NUMBER    2 CONTAINS   11 RECORDS
>>>BLOCK NUMBER    3 CONTAINS   11 RECORDS
>>>BLOCK NUMBER    4 CONTAINS   12 RECORDS

>>>36 RECORDS WERE FOUND IN 4 BLOCKS

>>>END OF FILE: U9211115214501GCDR

>

dump call details <start block> <stop block>
dump hex <start block> <stop block>
```

Figure 3-2 shows the steps completed to add call record code F1 to the filter table.

**Figure 3-2**  
**Example of call record code being added to filter table**

```
AMADUMP>>>
>FILTER ADD f1

>>>CALL RECORD CODE: F1
ENTRY CODE:
>97
INFO DIGS:
>2*
>
CLG NO:
>ALL
>>>FUNCTION COMPLETED
>
```

Figure 3-3 shows the response to the FILTER DISPLAY command.

**Figure 3-3**  
**Example response to FILTER DISPLAY command**

```
AMADUMP>>
>FILTER DISPLAY f1

>>>CALL RECORD CODE: F1
*REC CODE:F1 ENTRY CODE:97 INFO DIGS:2* SFEAT CODE:**
CLG NO:
***** CLD NO: ***** CLD NO: *****
EVENT INFO:
* TIME: DAY = *** HR=** MIN=** SEC=***
ELAPSED TIME=***** TOPS:
OP NO=**** TEAM NO=** ID=****
ORIG TYPE=***
>
```

---

## CFIWFCI

---

This tool is used to display the mapped members of the CFIWF trunk groups and their states. For example, a CFIWF trunk group pair datafilled in a tuple of CFIWFMAP. A CFIWF trunk group CLI is entered, and if datafilled in CFIWFMAP, the other trunk group mapped to is printed along with the mapped members and their states. The states are only a snapshot of the trunk member states when the command was issued. If more current state information for the members is desired, use the existing TTP level of MAPCI and post the chosen CFIWF trunk group.

The CFIWFCI command can highlight state mismatched between members of a paired CFIWF trunk group, except in the following instances:

- when either the MIWF or CIWF member is in state IDL and the peer member is in state INI.
- when either the MIWF or CIWF member is in state PMB and the peer member is in state CFL.

### Commands

The subcommands for CFIWFCI include:

- QUIT
- TRKMAP

### Syntax

```
>CFIWFCI  
>help
```

### Example

See [Figure 3-4](#) for the output example.

**Figure 3-4**  
**CFIWF trunk group mapping**

```

CFIWF Trunk Group Mapping Display
=====
This command is used to display mapped trunk groups and
their trunk members in table CFIWFMAP. The timeslot
and external trunk name of each mapped member pair should
match in number. If not, a warning is output.

Available CFIWFCCI subcommands:
-----
TRKMAP <CLLI>: display mapped members for a CFIWF
                trunk group.
HELP          : display this help
QUIT         : exits CFIWFCCI
>_

```

**Parameters**

Table 3-3 lists the CFIWFCCI command parameters, values, and definitions.

**Table 3-3**  
**CFIWFCCI parameters, values, and definitions**

Parameter	Value	Definition
<CLLI>	Vector of up to 16 characters	CFIWF trunk group name datafilled in table CLLI, TRKGRP, TRKSGRP, TRKMEM, and CFIWFMAP, to display the mapped trunk group and its members.

**Invalid trunk CLLI error response**

```

>CFIWFCCI
>TRKMAP
Next par is: <CLLI> {STRING1, STRING2, ... STRINGN}
Enter: <CLLI>
>CFIWFTRKGRP1
ERROR: Unknown trunk group. Please enter a CLLI
in tables CLLI, TRKGRP, TRKSGRP, TRKMEM, and CFIWFMAP.

```

**Explanation**

An unknown trunk group CLLI was entered for subcommand TRKMAP. The CLLI entered was not datafilled in one or all of the following tables: CLLI, TRKGRP, TRKSGRP, TRKMEM, CFIWFMAP.

**User action**

Re-enter the command with a CLI datafilled in tables CLI, TRKGRP, TRKSGRP, TRKMEM and CFIWFMAP.

**Examples**

Figure 3-5 shows an example of the CFIWFTRKMAP display.

**Figure 3-5**  
**CFIWFTRKMAP display**

```
>CFIWFTRKMAP
>TRKMAP CFIWFTRKGRP2

MIWF Trunk Group   MAPPED TO   CIWF Trunk Group
=====
CFIWFTRKGRP2           CFIWFTRKGRP4

EXTNM  PM  NO  CKT  TS  STATE  EXTNM  PM  NO  CKT  TS  STATE
=====
    101  MGW  1   1   1  INB     101  DTC  2   1   1  INB
    102  MGW  1   1   2  CPB     102  DTC  2   1   2  CPB
    103  MGW  1   1   3  IDL     103  DTC  2   1   3  IDL
    104  MGW  1   1   4  IDL     104  DTC  2   1   4  IDL
    105  MGW  1   1   5  IDL     105  DTC  2   1   5  IDL

Total # of members: 5           Total # of members: 5
>
```

**Warnings**

This command generates a warning for trunk mappings in table CFIWFMAP in which both trunk groups have no members. Tuples in CFIWFMAP should have at least 1 member present for each trunk group mapped. However, the command only displays current datafill available in tables CFIWFMAP and TRKMEM. To correct this, members should be datafilled for the trunk groups in TRKMEM, or the mapping should be deleted from CFIWFMAP.

The no members warning reads:

**WARNING:** No trunk members are present for the trunk groups shown mapped in CFIWFMAP. These trunk groups cannot be used for CFIWF service until some trunk members are added for each trunk group.

This command also generates a warning about the number of trunk mismatches for a CFIWF trunk group pair datafilled in CFIWFMAP. However, the command only displays current datafill available in tables CFIWFMAP and TRKMEM. To correct the mismatch, make datafill changes to these tables.

The mismatch in trunk members warning reads:

**WARNING:** Unmatched members were detected in CFIWF trunk group pair. Loss of service may result if this CFIWF trunk group pair is selected. Please correct datafill in tables CFIWFMAP and TRKMEM.

This command also generates a warning for mismatches in timeslot number and external trunk name for a CFIWF trunk group pair datafilled in CFIWFMAP. See [Figure 3-6](#) for an example. However, the command only displays current datafill available in tables CFIWFMAP and TRKMEM. To correct the mismatch, datafill changes are required to these tables.

**Figure 3-6**  
**Unmatched trunk members**

```

>CFIWF CI
>MGWHWGRP1

MIWF Trunk Group  MAPPED TO  CFIWF Trunk Group
=====
MGWHWGRP1                DTCHWGRP1

EXTNM PM NO CKT TS STATE  EXTNM PM NO CKT TS STATE
=====
    135 MGW 8   0  1  IDL                                     *** unmatched member
    136 MGW 8   0  2  IDL                                     *** unmatched member
    137 MGW 8   0  3  IDL                                     *** unmatched member
                145 DTC 15   5  4  IDL                       *** unmatched member
                146 DTC 15   5  5  IDL                       *** unmatched member
                147 DTC 15   5  6  IDL                       *** unmatched member

Total # of members: 3                Total # of members: 3

WARNING: Unmatched members were detected in CFIWF
trunk group pair. Loss of service may result if
CFIWF trunk group pair is selected. Please correct
datafill in tables CFIWFMAP and TRKMEM.

```

Note that the TRKMAP subcommand initially tries to match up members in a CFIWF trunk group pair based on external trunk name or member number. If a member cannot be found in the peer trunk group with matching external trunk name, the subcommand tries to find a member in the peer CFIWF trunk group with matching timeslot. Otherwise, a mismatch is declared for the MIWF trunk group member and nothing is displayed. Then, no attempt is made to initially match up timeslots in the display even though this is a requirement for CFIWF bridge connectivity. Ideally, when provisioning both MIWF and CIWF trunk group members in a CFIWFI trunk group pair, both their external trunk names and timeslots should match up.

The mismatch in timeslot number or external trunk name warning reads:

**WARNING:** Mismatch detected in timeslot number or external trunk name for CFIWF trunk group pair. Loss of service may result if this CFIWF trunk group pair is selected. Please correct datafill in tables CFIWFMAP and TRKMEM.

**Errors**

This command generates the following errors:

ERROR: Cannot map trunk group in table CFIWFMAP.

ERROR: Node information could not be determined for this member.

---

# CATASTROPHE

---

## About CATASTROPHE

CATASTROPHE is a CI command used to:

- change the switch's catastrophe state from ON to OFF
- change the switch's catastrophe state from OFF to ON
- query the switch's state by entering CATASTROPHE QUERY

If the switch is set to CATASTROPHE ON, all *non-priority* calls are sent to treatment.

## Accessing CATASTROPHE

CATASTROPHE is a CI command. Therefore, it is accessed at the CI level by entering CATASTRPOHE and its appropriate parameters.

CI:

>CATASTROPHE <parameter>

## Parameters

Table 3-4 identifies the possible parameters and acceptable input for the CATASTROPHE command.

**Table 3-4**  
**CATASTROPHE command parameters**

Parameter	Value	Definition
ON	N/A	Sets the catastrophe mode to 'ON' which causes all non-priority calls to be sent to treatment.
OFF	N/A	Sets the catastrophe mode to 'OFF.'
QUERY	N/A	Displays the current catastrophe state.

## Examples

The examples in Figure 3-7 apply if the MSC is set to CATASTROPHE OFF when the command is entered.

**Figure 3-7**  
**Examples of the CATASTROPHE ON command**

```
>CATASTROPHE ON
NOW SET TO CATASTROPHE ON

- or -
>CATASTROPHE OFF
ALREADY SET TO CATASTROPHE OFF

- or -
>CATASTROPHE QUERY

CURRENT STATE: CATASTROPHE OFF
```

The examples in [Figure 3-8](#) apply if the MSC is set to CATASTROPHE ON when the command is entered.

**Figure 3-8**  
**Examples of the CATASTROPHE OFF command**

```
>CATASTROPHE ON
ALREADY SET TO CATASTROPHE ON

- or -
>CATASTROPHE OFF
NOW SET TO CATASTROPHE OFF

- or -
>CATASTROPHE QUERY

CURRENT STATE: CATASTROPHE ON
```

---

# GNAOCTCI

---

## GNAOCTCI commands

GNAOCTCI is a CI directory level that enables the operator to query the internal Tariff Change Over (TCO) database for tariff information. The following information is displayed:

- General information for the specified Carrier/Reseller
  - Next TCO Index
  - Next TCO time (in Greenwich MeanTime)
- Zone specific information:
  - Current TCO Index
  - If there is a TCO within the next hour for this zone

## Accessing GNAOCTCI

To access the GNAOCTCI\_DIR level commands, type the following command at the CI prompt and press return:

```
>GNAOCTCI:>
```

## Commands

The following commands are available at the GNAOCTCI command level:

- QUIT
- HELP
- DISPLAY
- MDISPLAY
- CNTI
- CTIME
- CWAKE
- CCTI
- CPERIOD
- WPQ

## QUIT command

QUIT is a menu command. This command quits the CI tool and returns to the MAP.

### Syntax

The command syntax for QUIT is:

**>quit**

## HELP command

This command provides information regarding the commands available in the GNAOCTCI\_DIR.

### Syntax

The syntax for the HELP command is

**>HELP**

## DISPLAY command

DISPLAY queries the internal Tariff Change Over (TCO) database for the following information for a specified carrier/reseller and zone combination.

General information for a carrier/reseller:

- next TCO index
- next TCO in Greenwich Mean Time

Zone specific information:

- current TCO index
- any TCOs within the next hour for this zone

*Note:* The next TCO index and its Greenwich Mean Time are only displayed if it occurs within the next 59 minutes. Otherwise, the index will show the value 31 and the time 64 (...).

### Syntax

The command syntax for DISPLAY is:

**>DISPLAY<carres> <zone>**  
**PARM 1: <carres>**  
**PARM 2: <zone>**

## Parameters

Table 3-5 lists and describes the optional parameters that can be used with the DISPLAY command.

**Table 3-5**  
**DISPLAY parameters**

Parameter	Value	Definition
carres	vector of up to 8 characters	NAOC_CARRIER_NAME
zone	0-127	ZONE

## MDISPLAY command

MDISPLAY command queries the internal Tariff Change Over (TCO) database for the following information for a specified carrier/reseller and a range of zones.

General information for a carrier/reseller:

- next TCO index
- next TCO in Greenwich Mean Time

Zone specific information (multiple zones):

- current TCO index
- any TCOs within the next hour for this zone

*Note:* The next TCO index and its Greenwich Mean Time are only displayed if it occurs within the next 59 minutes. Otherwise, the index will show the value 31 and the time 64 (...).

## Syntax

The command syntax for MDISPLAY is:

**>MDISPLAY<carres> <x> <y>**

**PARAM 1: <carres>**

**PARAM 2/3: <zone x> <zone y>>**

## Parameters

Table 3-6 lists and describes the optional parameter that can be used with the MDISPLAY command.

**Table 3-6**  
**MDISPLAY parameters**

Parameter	Value	Definition
carres	vector of up to 8 characters	NAOC_CARRIER_NAME
zone x	0-127	ZONE
zone y	0-127	ZONE

## CNTI command

CNTI command changes the value of the field NTI.

### Syntax

The command syntax for CNTI is:

**>CNTI<carrier/reseller> <next TCO index>**

**PARAM 1: <carrier/reseller> STRING**

**PARAM 2: <next TCO index> {0 to 15}**

## CTIME command

CTIME command is used to manipulate the tco\_time\_in\_gmt field of naoc\_tcoindex\_map.

### Syntax

The command syntax for CTIME is:

**>CTIME<carrier/reseller> <changeover hour>**

**PARAM 1: <carrier/reseller> STRING**

**PARAM 2: <changeover hour> {-1 to 23}**

## CWAKE command

CWAKE command is used to manipulate the pre\_wakeup\_on\_time field of naoc\_tco\_index\_map.

### Syntax

The syntax for the CWAKE command is:

**>CWAKE<carrier/reseller> <prewakeup on time>**

**PARAM 1: <carrier/reseller> STRING**

**PARAM 2: <prewakeup on time> {YES or NO}**

## **CCTI command**

CCTI command is used to manipulate the cti field of naoc\_tco\_index\_map.

### **Syntax**

The command syntax for CCTI is:

**>CCTI<carrier/reseller> <zone number> <current TCO index>**

**PARAM 1: <carrier/reseller> STRING**

**PARAM 2: <zone number> {0 to 127}**

**PARAM 3: <current TCO index> {0 to 15}**

## **CPERIOD command**

CPERIOD command is used to manipulate the within\_tco\_period of naoc\_tco\_index\_map field.

### **Syntax**

The command syntax for CPERIOD is:

**>CNTI<carrier/reseller> <zone number> <in TCO period>**

**PARAM 1: <carrier/reseller> STRING**

**PARAM 2: <zone number> {0 to 127}**

**PARAM 2: <in TCO period> {YES or NO}**

## **WPQ command**

The WPQ command is used to print entries in the system wakeup queue.

### **Syntax**

The command syntax for WPQ is:

**>WPQ <process>**

**PARAM 1: <process> STRING**

**GNAOCTCI responses**

Table 3-7 lists and describes the responses produced by the GNAOCTCI command level.

**Table 3-7**  
**GNAOCTCI responses**

Response	Description
Invalid Carrier/Reseller (see tables CARNAME or RESNAME).	The requested Carrier/Reseller is not valid (wrong or too many characters). Tables CARNAME or RESNAME lists all available carriers.  <b>System Action:</b> None  <b>User Action:</b> Look up the correct name and try again.
Invalid Zone. The range is between 0 - 127.	The zone entered is out of range.  <b>System Action:</b> None  <b>User Action:</b> Choose a valid zone and try again.
Invalid range. Zone x has to be <=Zone Y.	The range entered is invalid.  <b>System Action:</b> None  <b>User Action:</b> Choose a valid range and try again.
<pre>GNOACTCI: &gt;mdisplay CAR11 1 4 Carrier/Reseller: CAR11   Next TCO Index:      3   TCO Time (GMT):     12:00 (11:00)  Zone      1    2    3    4 CTI:      2    2    5    1 use NTI:  Y    N    Y    N</pre>	The next TCO Index for CAR11 is 3 and the time the next TCO occurs is 12:00 (11:00 in GMT).  In zone 1, the CTI is 2 and the TCO applies for this zone.  In zone 2, the CTI is 2 and the TCO does not apply for this zone.
<pre>GNOACTCI: &gt;display CAR11 1 Carrier/Reseller: CAR11   Next TCO Index:      3   TCO Time (GMT):     12:00 (11:00)  Zone 1   Current TCO Index:  2   Next TCO Index applicable: Yes</pre>	The next TCO Index for CAR11 is 3 and the time the next TCO occurs is 12:00 (11:00 in GMT).  In zone 1, the CTI is 2 and the TCO applies for this zone.
—end—	

---

# GTAS

---

## GTAS commands

GSM Traffic Analysis System (GTAS) is a MAPCI directory level that is part of the GSM UCC Traffic Analysis feature.

### Accessing GTAS

To access the GTAS directory from the CI, enter the following command at the CI prompt and press return:

```
CI:>gtas
GTAS:
```

After entering the GTAS directory, an GTAS directory prompt displays. This prompt displays until you exit the tool by entering QUIT.

### Commands

The GTAS directory contains the following commands:

- GQUERYCLLI
- GQUERYINT
- GQUERYLAC
- GQUERYREG
- GQUERYRTS
- HELP
- QUIT

## GQUERYCLLI command

The GQUERYCLLI command displays the associated trunk group.

### Syntax

The syntax for the GQUERYCLLI command is:

```
GQUERYCLLI [<CLLI>]
[<ALL>]
```

### Parameters

Table 3-8 lists and describes the parameters applicable to the GQUERYCLLI command.

**Table 3-8**  
**GQUERYCLLI command parameters**

Parameter	Value	Definition
CLLI	Any Common Language Name	Specifies the CLLI of the trunk group for which traffic separation numbers are displayed.
ALL		Displays all trunk CLLIs and associated traffic separation numbers.

### Example

Figure 3-9 shows an example of the GQUERYCLLI command.

**Figure 3-9**  
**Example of the GQUERYCLLI command**

```
GTAS :  
>GQUERYCLLI  
>
```

### GQUERYINT command

The GQUERYINT command displays sources and destinations for one or more intersections. If the source or destination is found in the LACSAC table, the corresponding LACSAC related information is also displayed.

### Syntax

The syntax for the GQUERYINT command is:

```
GQUERYINT[<STSN> <DTSN>]  
[<ALL>]
```

### Example

Figure 3-10 shows an example of the GQUERYINT command.

**Figure 3-10**  
**Example of the GQUERYINT command**

```
GTAS :  
>GQUERYINT  
>
```

## Parameters

Table 3-9 lists and describes the parameters applicable to the GQUERYINT command.

**Table 3-9**  
**GQUERYINT command parameters**

Parameter	Value	Definition
STSN	0 - 127	Specifies the source traffic separation number of the intersection.
DTSN	0 - 127	Specifies the destination traffic separation number of the intersection.
ALL		Displays sources and destinations assigned to all intersections starting at the specified intersection and continuing to the last intersection.

## GQUERYLAC command

The GQUERYLAC command displays the traffic separations for one or more LAC and cellid.

### Syntax

The syntax for the GQUERYLAC command is:

```
GQUERYLAC [<LACKEY>]  
[<ALL>]
```

### Parameters

Table 3-10 lists and describes the parameters applicable to the GQUERYLAC command.

**Table 3-10**  
**GQUERYLAC command parameters**

Parameter	Value	Definition
LACKEY	LAC_KEY_TYPE	Specifies the LAC and cellid for which traffic separation numbers display.
ALL		Displays all LAC and cellids and the associated traffic separation number for all LAC and cellids following the specified LAC and cellid.

### Example

Figure 3-11 shows an example of the GQUERYLAC command.

**Figure 3-11**  
**Example of the GQUERYLAC command**

```
GTAS :  
>GQUERYLAC  
>
```

### GQUERYLACSAC command

GQUERYLACSAC command displays the traffic separation number for a particular LAC and SACID or for all LAC and SACIDs starting at a specified LAC and SACID and continuing to the last LAC and SACID.

#### Syntax

The syntax for the GQUERYLACSAC command is:

**GQUERYLACSAC <lac> <sacid> [<ALL>]**

#### Parameters

[Table 3-11](#) lists and describes the parameters applicable to the GQUERYLACSAC command.

**Table 3-11**  
**GQUERYLACSAC command parameters**

Parameter	Value	Definition
lac	0 - 32767	This variable specifies the LAC for which traffic separation numbers display.
sacid	0 - 65535	This variable specifies the SACID for which traffic separation numbers display.
ALL		This parameter is optional. If it is entered, it displays all LAC and sacids and the associated traffic separation numbers for all LAC and sacids following the specified LAC and sacid.

#### Example

[Figure 3-12](#) shows an example of the GQUERYLACSAC command.

**Figure 3-12**  
**Example of the GQUERYLACSAC command**

```
GTAS :  
>GQUERYLACSAC 84 1  
>
```

## GQUERYREG command

The GQUERYREG command displays the intersections assigned to one or more OM registers.

### Syntax

The syntax for the GQUERYREG command is:

```
GQUERYREG[<OM_REG_NO> {0-2048}]
[<ALL>]
```

### Parameters

Table 3-12 lists the parameters applicable to the GQUERYREG command.

**Table 3-12**  
**GQUERYREG command parameters**

Parameter	Value	Definition
OM_REG_NO	0 - 2048	Specifies the OM register number for which intersections display.
ALL		Displays intersections for all OM registers following the specified OM register number.

### Example

Figure 3-13 shows an example of the GQUERYREG command.

**Figure 3-13**  
**Example of the GQUERYREG command**

```
GTAS :
>GQUERYREG
>
```

## GQUERYRTS command

The GQUERYRTS command displays the sources and destinations for one or more traffic separations. If the traffic separation number is found in the LACSAC table, the related LACSAC data is displayed.

### Syntax

The syntax for the GQUERYRTS command is:

```
GQUERYRTS [<TRAFSNO> {0-127}]
[<ALL>]
```

### Parameters

Table 3-13 lists and describes the parameters applicable to the GQUERYRTS command.

**Table 3-13**  
**GQUERYRTS command parameters**

Parameter	Value	Definition
TRAFSNO	0-127	Specifies the traffic separation number for which sources and destinations display.
ALL		Displays information for all traffic separation numbers starting with the specified traffic separation number.

### Example

Figure 3-14 shows an example of the GQUERYRTS command. No returned display data for the GQUERYRTS command.

**Figure 3-14**  
**Example of the GQUERYRTS command**

```
GTAS :  
>GQUERYRTS  
<ALL>  
>
```

### HELP command

The HELP command enables the operating company personnel to display on-line help documentation for the GTAS directory.

### Syntax

The command syntax for HELP is:

**HELP [<command\_name>]**

### Parameters

Table 3-14 lists and describes the parameters applicable to the HELP command.

**Table 3-14**  
**HELP command parameters**

Parameter	Value	Definition
<b>COMMAND NAME</b>	Any valid command name.	Provides online documentation for the specified command.

**Table 3-14**  
**HELP command parameters**

<b>Parameter</b>	<b>Value</b>	<b>Definition</b>
<b>GTAS</b>		Produces summary documentation for the commands in the GTAS directory.

## **QUIT command**

The QUIT command exits the GTAS directory and returns to the CI MAP level.

### **Syntax**

The syntax for the QUIT command is:

**GTAS:**  
**>QUIT**

---

## GSM\_SCP\_QUERY

---

### About GSM\_SCP\_QUERY

GSM\_SCP\_QUERY is a CI utility that allows operating company personnel to query the service control point (SCP) database over the maintenance I/O channel. The following call-related information must be provided for Intelligent Networks 1 toll free (INITF) queries:

- either a 10-digit number services address (for example, an 800 number) or a number services address not constrained to 10-digits
- calling station's local access and transport area (LATA)
- calling station's ANI
- originating station type (ANI II information)

Operating company personnel must provide the following call-related information for line information database (LIDB) queries:

- LIDB query type
- calling station's ANI
- a value for the SCP query response timeout (optional)

### Accessing GSM\_SCP\_QUERY

To access the GSM\_SCP\_QUERY utility, enter the following command at the CI prompt:

```
CI:  
>GSM_SCP_QUERY
```

After entering the command, the system prompts for valid parameters. You may answer all prompts one at a time or enter the responses on one line.

### Exiting GSM\_SCP\_QUERY

To exit the GSM\_SCP\_QUERY utility, enter QUIT at the GSM\_SCP\_QUERY prompt.

```
>QUIT
```

### Examples

[Figure 3-15](#) shows an example of a GSM\_SCP\_QUERY command used in an INITF query.

**Figure 3-15**  
**GSM\_SCP\_QUERY IN1TF example**

```
CI:GSM_SCP_QUERY>IN1TF

CI:GSM_SCP_QUERY> Next parameter is <Query based on North American
Numbering Plan?(Yes/No)>
Enter <Query based on North American Numbering Plan?(Yes/No)>
<CalledNumber> <LATA> <ANI> <ANI II>

CI:GSM_SCP_QUERY> Yes 8005841234 099 2146841000 64
...Please wait while SCP is queried...

The SCP returned the following information:
Network Routing Number = 2145551234
Carrier = 0222
**ACG: Called Party Number = 2145551234/8005841234
Indicated Cause - Database Overload
Duration time length ACG would be applied - 4 sec(s)
Call Gap Interval between applying ACG control - 3 sec(s)
!ACG requested but will not be applied towards SCP queries!

CI:GSM_SCP_QUERY>QUIT
```

[Figure 3-16](#) shows an example of the GSM\_SCP\_QUERY command used in an LIDBQ query.

**Figure 3-16**  
**GSM\_SCP\_QUERY LIDBQ example**

```
GSM_SCP_QUERY:
> LIDBQ GN 2146845555 4

The SCP returned the following information:

The Response From The Database Took 1 Seconds, 617 Milliseconds

The SCP returned the following information:
  Generic Name Information:
    Generic Name Presentation: Name Allowed
    Generic Name Availability: Name Available
    Generic Name Type:        Calling Name
    Generic Name:             GEORGE BURNS
  Automatic Code Gap Information:
    ACG Digits:               214555
    Indicated Cause:         Database Overload
    Duration Time:           13 level
    Call Gap Interval:       15 level
```

**Command prompts**

[Table 3-15](#) provides a description of the prompts displayed by the GSM\_SCP\_QUERY utility.

**Table 3-15**  
**GSM\_SCP\_QUERY prompts**

Prompt	Value	Definition
Next parameter is <Service>	Mandatory: IN1TF or LIDB	Enter the service for which the SCP is being queried.
<Query based on North American Numbering Plan? (Yes/No)>	Yes or No	Enter Yes to base the query on the North American Numbering Plan.  Used with 1N1TF query.

—sheet 1 of 3—

**Table 3-15**  
**GSM\_SCP\_QUERY prompts (continued)**

Prompt	Value	Definition
<Called Number>	Mandatory: SAC+NXX+XXXX; each digit within the range of 0-9: <ul style="list-style-type: none"> <li>• For the NANP: 10 digits</li> <li>• For non-NANPs: digit length not checked</li> </ul>	Enter the called party number.  Used with a 1N1TF query.
<LATA>	Mandatory: 3 Digits; each digit within the range 0- 9	Enter one of the Local Access and Transport (LATA) codes as described in the Local Exchange Routing Guide.  Used with an 1N1TF query.
<ANI>	Optional: 3, 6 or 10 Digits; each digit within the range 0-9	Enter either the NPA, NPA+NXX, or NPA+NXX+XXXX.  Used with an 1N1TF query.
<ANI II Digits>	Mandatory: 2 digits, for example 62	This is the binary representation of the ANI II digits specified in the LERG. This information identifies the characteristics of the calling station.  Used with an 1N1TF query.
<Query Type>	Mandatory: GN	Enter the type of LIDB query the user wants to perform. Only generic name (GN) queries are supported at this time.  Used with a LIDB query.
—sheet 2 of 3—		

**Table 3-15**  
**GSM\_SCP\_QUERY prompts (continued)**

Prompt	Value	Definition
<Calling Directory Number>	Mandatory: Calling Directory Number digits within the range of 0-9: <ul style="list-style-type: none"><li>• For the NANP: 10 digits</li><li>• For non-NANPs: digit length not checked</li></ul>	Enter the calling directory number digits.  Used with a LIDB query.
<SCP Query Response Timeout>	Optional: 1 to 6	Enter the time in seconds the MSC should wait for a response to the query. If no value is entered, the value from the CNAM_SCP_TIMEOUT office parameter is used.
—sheet 3 of 3—		

**Displayed information**

The GSM\_SCP\_QUERY utility formats the query and sends it to the SCP upon receipt of the RESPONSE from the SCP. [Table 3-16](#) identifies the information displayed at the MAP terminal.

**Table 3-16**  
**GSM\_SCP\_QUERY displayed information**

Item	Description
Network Routing Number	Identifies the SCP-provided directory number used in subsequent call routing.
Carrier	Identifies the Carrier Identification Code of the carrier that is to transport the call to its intended destination.
—sheet 1 of 2—	

**Table 3-16**  
**GSM\_SCP\_QUERY displayed information (continued)**

Item	Description
+++ACG:	Provides ACG information (optional): <ul style="list-style-type: none"> <li>• Called Party</li> <li>• ACG Cause Indicator: reason why ACG is being applied {Vacant Code, Database Overload, Destination Mass Calling, or Service Management System (SMS) initiated}</li> <li>• ACG Duration: length of time in seconds that ACG controls are to be applied</li> <li>• ACG Call Gap Interval: the interval of time in seconds between applications the ACG control for the Service</li> </ul>
+++SNT:	Provides SNT information (optional)  If the SCP has requested termination information, the GSM_SCP_QUERY utility displays the following message:  NOTIFICATION TERMINATION WAS REQUESTED BY THE SCP.
Generic Name Information	Provides the following generic name information: <ul style="list-style-type: none"> <li>• Presentation: generic name allowed</li> <li>• Availability: generic name available</li> <li>• Type: calling name</li> <li>• Name: generic name</li> </ul>
—sheet 2 of 2—	

---

# INTRIDCI

---

## INTRIDCI commands

The new INTRIDCI\_DIR is created to add CI commands for INTRIDCI tool for the Customized Application for Mobile Enhanced Logic (CAMEL) application. This tool allows you to:

- view the status and information of CAP/INAP Transaction IDs (TRIDs)
- run an audit on specified CAP/INAP Transaction ID
- release CAP/INAP Transaction IDs

### Accessing INTRIDCI

To access the INTRIDCI directory from the CI, enter the following command at the CI prompt and press return:

```
CI:>intridci  
INTRIDCI:
```

### Commands

The INTRIDCI directory contains the following commands:

- REPORT
- INUSE
- HUNG
- DETAILS
- RELEASE
- RELEASEALL
- AUDIT
- HELP
- QUIT

### REPORT command

The REPORT command displays the status of TRIDs allocated for CAMEL Application (CAP) and INAP. It gives the following CAP/INAP TRID counts:

- TRIDs allocated
- TRIDS IN-USE
- TRIDS linked with CALL
- HUNG TRIDS

**Syntax**

The syntax for the REPORT command is:

**> REPORT <APPLICATION>  
[<ALL>]**

**Parameters**

Table 3-17 lists and defines the parameters that apply to the REPORT command.

**Table 3-17  
REPORT command parameters**

PARAMETER	VALUE	DEFINITION
APPLICATION	CAP INAP	IN application name for INTRIDCI Tool.

**Example**

Figure 3-17 shows an example of the REPORT command.

**Figure 3-17  
Example of the REPORT command**

```

>REPORT CAP
*****
* CAP TRID REPORT *
*****

TRIDs Allocated : 1000
TRIDS IN-USE   : 5
LINKED TRIDS   : 1
HUNG TRIDS     : 4
>

```

**INUSE command**

The INUSE command displays all the TRID numbers, which are currently used by CAP/INAP, that are linked to the call.

**Syntax**

The syntax for the INUSE command is:

**> INUSE <APPLICATION>  
[<ALL>]**

### Parameters

Table 3-18 lists and defines the parameters that apply to the INUSE command.

**Table 3-18**  
**INUSE command parameters**

PARAMETER	VALUE	DEFINITION
APPLICATION	CAP INAP	IN application name for INTRIDCI Tool

### Example

Figure 3-18 shows an example of the INUSE command.

**Figure 3-18**  
**Example of the INUSE command**

```
>INUSE CAP
*****
* CAP TRID IN USE *
*****

TRID No.
-----
7897
```

### HUNG command

The HUNG command displays all the TRID numbers that are currently used by CAP/INAP and are in hung state.

#### Syntax

The syntax for the HUNG command is:

```
> HUNG <APPLICATION>
[<ALL>]
```

**Parameters**

Table 3-19 lists and defines the parameters that apply to the HUNG command.

**Table 3-19**  
**HUNG command parameters**

PARAMETER	VALUE	DEFINITION
APPLICATION	CAP INAP	IN application name for INTRIDCI Tool

**Example**

Figure 3-19 shows an example of the HUNG command.

**Figure 3-19**  
**Example of the HUNG command**

```
>HUNG CAP
*****
* CAP HUNG TRID *
*****

TRID No.
-----
7897
7925
8422
15510
16741
>
```

## DETAILS command

The DETAILS command gives the following information:

- CAP/INAP TRID: to help the user know the details about the TRID
- Associated components: to help the user know the components associated with the Trid, and the details
- The application/user information: includes the IMSI, Service Key, first 10 Operation history

### Syntax

The syntax for the DETAILS command is:

```
> DETAILS <APPLICATION> <TRANSACTION ID>  
[<ALL>]
```

### Parameters

Table 3-20 lists and defines the parameters that apply to the DETAILS command.

**Table 3-20**  
**DETAILS command parameters**

PARAMETER	VALUE	DEFINITION
APPLICATION	CAP INAP	IN application name for INTRIDCI Tool
Transaction Id	0–65535	CAP/INAP Transaction ID number

### Example

Figure 3-20 shows an example of the DETAILS command.

**Figure 3-20**  
**Example of the DETAILS command**

```
>details CAP 8598
TC ID 8598 is: VALID
TRID AREA INFO:
=====
ASE TYPE      :INITIALDP_ASE
ASE FUNCTION  :ASE_REQUESTOR
ASE STATE     :2
ASE EVENT     :5
AE TYPE       :CAPSSP
AC HANDLE     :7
DP STATE      :2
AC MODE       :Y
PDU STATE     :2
PDU EVENT     :5
XFER INFO    :
              XFER Mechanism : GSM_MAP_SENDIOMSG
              Node No       : 16
              Terminal No MSN: 6
              Terminal No LSB: 124
ASE TRID      :8598
ASE DEST TRID :4B02 0000 4C09
ASE LINKED TRID :65021
SLS FIELD     :23
```

## RELEASE command

The RELEASE command is used to release the specified hung CAP/INAP TRID. This command has another parameter 'GMSC912 LOG' that controls

the GMSC912 Log generation for the specified TRID. This Log captures the TRID Number, IMSI, Service Key and Operation history for the released TRID. For more information, refer to NTP *GSM / UMTS MSC Log Reference Manual*, 411-2231-510.

### Syntax

The syntax for the RELEASE command is:

```
> RELEASE <APPLICATION> <TRANSACTION ID> <GMSC912 LOG>  
[<ALL>]
```

### Parameters

Table 3-21 lists and defines the parameters that apply to the RELEASE command.

**Table 3-21**  
**RELEASE command parameters**

PARAMETER	VALUE	DEFINITION
APPLICATION	CAP INAP	IN application name for INTRIDCI Tool
Transaction Id	0–65535	CAP/INAP Transaction ID number
GMSC912 LOG	ENABLELOG DISABLELOG	The LOG option is used to control the generation of 'GMSC912 Expert Log'

### Example

Figure 3-21 shows an example of the RELEASE command.

**Figure 3-21**  
**Example of the RELEASE command**

```

>hung cap

*****
* CAP HUNG TRIDS *
*****

TRID No.
-----
7897
7925
>
releaseall cap DISABLE LOG
Releasing all CAP HUNG Trids.
>

```

**RELEASEALL command**

The RELEASEALL command releases all the HUNG CAP/INAP TRIDs. This command has another parameter ‘GMSC912 LOG’ that controls the GMSC912 Log. This Log captures the TRID, IMSI, Service Key and Operation history for the released TRIDs.

**Syntax**

The syntax for the RELEASEALL command is:

```

> RELEASEALL <APPLICATION> <GMSC912_LOG>
[<ALL>]

```

**Parameters**

Table 3-22 lists and defines the parameters that apply to the RELEASEALL command.

**Table 3-22**  
**DETAILS command parameters**

PARAMETER	VALUE	DEFINITION
APPLICATION	CAP INAP	IN application name for INTRIDCI Tool
GMSC912_LOG	ENABLELOG DISABLELOG	The LOG option is used to control the generation of ‘GMSC912 Expert Log’.

### Example

Figure 3-22 shows an example of the RELEASEALL command.

**Figure 3-22**  
**Example of the RELEASEALL command**

```
>intridci
INTRIDCI
>hung cap

*****
* CAP HUNG TRIDS *
*****

TRID No.
-----
7897
>
>audit cap
Audit for CAP is invoked.
This process will release all CAP Hung trids
>open idpl
Done.
IMSCD IDPL900 JUN03 13:47:54 7900 INFO Identifier
Audit Expired
                Identifier type: CAP_GSM_TRID_CLASS
                Identifier value:      7897
                Pool type:
>
>
releaseall cap DISABLE LOG
Releasing all CAP HUNG Trids.
>
```

### AUDIT command

The AUDIT command is used to run audits on the hung CAP/INAP TRID. It releases all the hung TRIDs. Log IDPL900 is generated for each released TRID. This log gives information about the TRID and the application.

#### Syntax

The syntax for the AUDIT command is:

```
> AUDIT <APPLICATION>
[<ALL>]
```

**Parameters**

Table 3-23 lists and defines the parameters that apply to the AUDIT command.

**Table 3-23**  
**AUDIT command parameters**

PARAMETER	VALUE	DEFINITION
APPLICATION	CAP INAP	IN application name for INTRIDCI Tool

**Example**

Figure 3-23 shows an example of the AUDIT command.

**Figure 3-23**  
**Example of the AUDIT command**

```
>INTRIDCI
INTRIDCI:
>HUNG CAP
*****
* CAP HUNG TRID *
*****

TRID No.
-----
8422

>AUDIT CAP
>open IDPL 900

Audit for CAP hung TRIDs started.

MSCA IDPL900 OCT06 15:20:18 7101 INFO Identifier Audit Expired
```

## HELP command

The HELP command provides all the available commands in the INTRIDCI directory with a brief explanation of each. It is also used with the command names (for example, HELP AUDIT) to display detailed descriptions and examples.

### Syntax

The syntax for the HELP command is:

**> HELP <COMMAND-NAME>**

## Parameters

Table 3-24 lists and defines the parameters that apply to the HELP command.

**Table 3-24**  
**HELP command parameters**

PARAMETER	VALUE	DEFINITION
HELP	REPORT INUSE HUNG DETAILS RELEASE RELEASEALL AUDIT HELP QUIT	INTRIDC tool commands.

## Example

Figure 3-24 shows an example of the HELP command.

**Figure 3-24**  
**Example of the HELP command**

```
INTRIDCI:
>help HELP
Command to display HELP for INTRIDCI tool
Parms: [<COMMAND-NAME> {REPORT,
        INUSE,
        HUNG,
        DETAILS,
        RELEASE,
        RELEASEALL,
        AUDIT,
        HELP,
        QUIT}]
>help
Command to display HELP for INTRIDCI tool
Parms: [<COMMAND-NAME> {REPORT,
        INUSE,
        HUNG,
        DETAILS,
        RELEASE,
        RELEASEALL,
        AUDIT,
        HELP,
        QUIT}]
>
```

## **QUIT command**

The QUIT/LEAVE command is used to quit from the INTRIDCI tool.

### **Syntax**

The syntax for the QUIT command is:

**>QUIT/LEAVE**

### **Parameters**

None

---

# MGWINFO

---

## About MGWINFO

The primary purpose of MGWINFO CI tool is to display all the information for the conference capable MGWs. In addition, the tool is also used to:

- display information for all MGWs
- display information for a particular MGWID MGW
- display information for a particular MID MGW
- display field MGWOUTKI in table GWINV
- display whether a MGW supports TDM interface (A i/f or PSTN) when displaying information for MGWs.

## Accessing

Access the MGWINFO tool from the MAPCI.

## Syntax

The following examples show the syntax for the MGWINFO tool:

```
>MGWINFO
MGW_SELECT

      *****Type HELP for available commands *****
>HELP
MGW selection tool
=====
Available MGWINFO commands:
QUIT: leave MGWINFO
ALL: list information for all MGWs
GWID: list information for a particular MGWID MGW
MID: list information for a particular MID MGW
```

## Switch output

The following example shows the switch output:

```
>mgwinfo

MGW_Select:

      *****Type HELP for available commands *****

>GWID 1

GWID MID      Protocol InAct IPADDR      PORT H248VER

Trans CongLv1% TDMITF PKTIF ShrRes BBF EMGS

=====
```

```
MGW 1 PP429_15K_12 H248 UDP 10 47.104.244.170 2945 1 0
A i/f 9Iu,Nb) Y (IP,ATM_AAL2) (Li,Conf)
```

**Exiting MGWINFO**

To exit the MGWINFO tool and return to the CI level, enter the following command and press Return:

```
>QUIT
```

**Parameter**

Table 3-25 provides the parameter supported by the MGWINFO command:

**Table 3-25  
MGWINFO parameters**

Parameter	Value	Definition
GWID	0 to 255	Lists a given GWID MGW's info (same as pos and list in Table GWINV).
MID	STRING	Media GW identify string.

**Switch output**

The following example shows the switch output for an erroneous command, gwidno:

```
MGW_Select:
>q gwidno
NO COMMAND IN LINE
>gwidno
Undefined command "GWIDNO".
```

## MSCCAP

---

The MSCCAP command has been removed from the MAPCI as of GSM16/UMTS03. When you attempt to access MSCCAP from the CI level, and enter the following command:

**CI:**  
**>MSCCAP parms**

The following message displays:

Use CAPACITY to view the MSC Capacity measurements.

---

## MMUSELECT

---

### About MMUSELECT

This command provides information on the status of MMUs, the capacity of individual MMUs, and the total number of calls being handled by an individual MMU.

### Syntax

The command syntax for MMUSELECT is:

**mmuselect**  
**Forced MMU selection tool**

### Parameters

[Table 3-26](#) lists and defines the command parameters used with the MMUSELECT command.

**Table 3-26**  
**MMUSELECT command parameters**

Parameter	Definition
POOL	Display the status of the MMU pool.
QIMSI	Display which MMU owns this IMSI.
QUIT	Exit the MMUSELECT tool.
STATUS	Display the tool's status.
ON	Turns force selection ON.
OFF	Turns force selection OFF.
REMOVE	Remove force selection of an MMU.
ADDMAP	Add mapping for a specific mobile subscriber to a particular MMU for new service request.
DELMAP	Delete the mapping for a mobile subscriber to a particular MMU for new service request.
DELALL	Delete all subscriber mapping.

### Switch output

A switch output example follows:

```
>imagenam
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using
pgmscstpcl7bn
```

```
PRODUCT: GMSO.170
LOAD: GMSO0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>mmuselect
MMUSELECT:
Type MMUSELECT for available commands.
>MMUSELECT
```

Forced MMU selection tool.

```
-----

Available commands:
POOL:      Display the status of MMU Pool
QIMSI:     Display which MMU owns this IMSI
QUIT:      Exit select MMU tool
STATUS:    Display tool status
ON:        Turns force selection ON
OFF:       Turns force selection OFF
REMOVE:    Remove force selection of a MMU
ADDMAP:    Add mapping for a particular mobile subscriber to a
           particular MMU for new service request.
DELMAP:    Deletes the mapping for a mobile subscriber to a
           particular MMU for new service request.
DELALL:    Deletes all subscriber mapping
```

For help on a specific command, enter Q <subcommand> at the MAP.

---

## QGSMVLR

---

### About QGSMVLR

QGSMVLR is a CI command that queries the visitor location register (VLR) database for:

- VLR status information, including the CCH field
  - HLRCONF - Indicates that contact with the HLR has been confirmed or not confirmed.
  - LOCCONF - Indicates the location information has been confirmed in the HLR.
- mobile subscriber (MS) status information based on the IMSI, MSRN, or MSISDN, including SAC, ageOfLocation, and Supplementary Service CAMEL Subscription Information. The “STATUS” option displays information related to CAMEL data at the VLR
  - Pool number, Pool name, Number of MSRNs allocated and Usage.
  - If the Multiple MSRN pool allocation feature is enabled (this feature is considered to be activated if the table DNROUTE has at least one tuple with valid LATAPool entry), then the output of the QGSMVLR status command shows status of all the pools that are in use separately. If the feature is not activated, then this tool displays information about the MSRN usage in one single entry even though if there are more than 2 NILLATA entries in table DNROUTE.
- the provisioning status of Malicious Call Trace (MCT), Closed User Group (CUG), and Data Circuit Duplex Asynchronous (CDA), Data Circuit Duplex Synchronous (CDS), FAX, and Auxiliary Speech (AUX SPCH) at the VLR
- the provisioning status of UMTS subscribers and GSM subscribers at the VLR
- LCS-related data including geographical location, age of location in minutes, LCS GMLC List, LCS Privacy Subscription, LCS MO-LR subscription

**Note 1:** The QGSMVLR command is enhanced so that the information for MCT, CUG, CDA, CDS, FAX, and AX SPCH can be displayed on a per subscriber basis.

**Note 2:** In NSS16/UMTS03, the QGSMVLR tool was enhanced to display D-CSI and SMS-CSI data when it exists in the VLR.

**Note 3:** This feature stores the NoA and NPI values only and is not involved with the call processing of the data.

### Accessing QGSMVLR

The QGSMVLR command is accessed from the CI prompt. To perform a query on the VLR database, enter the following command and press Return:

```
CI:>QGSMVLR
```

### Exiting QGSMVLR

To return to the CI level, enter the following command and press Return:

```
>QUIT
```

### Syntax

The syntax for the QGSMVLR command is:

```
QGSMVLR [{IMSI<key value> STRING,  
MSRN <key value> STRING,  
MSISDN <key value> STRING,
```

### Example

An example of switch output follows:

```
CI:  
>IMAGENAME  
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using  
pgmscstpc17bn  
PRODUCT: GMSO.170  
LOAD: GMSO0.170  
LAYER: BAS.20.0.BO  
LAYER: TL.19.0.BO  
LAYER: SHR.19.0.AA  
LAYER: GSM.17.0.BN  
>QGSMVLR  
  
NAME  
qgsmvlr  
  
DESCRIPTION  
This tool is used to query the Visitor Location Register  
(VLR) database for Mobile Subscriber (MS) and VLR status  
information.  
  
VLR MS INFORMATION  
MS information within the VLR is retrieved by specifying a  
'qgsmvlr' <key type> and <key value>.  
  
Possible <key types> are:  
- IMSI the IMSI of the MS being searched on  
- MSRN the MSRN of the MS being searched on  
- MSISDN the MSISDN of the MS being searched on  
  
Possible <key values> are a string of digits between (4)  
and (15) digits.
```

Refer to NOTES below for information on MSISDN searches and the optional 'np' parm.

#### VLR STATUS INFORMATION

The current status of the VLR is displayed when the parm 'status' is specified.

#### VLR TUPLE DELETION

The tuple specified by either IMSI or MSISDN is removed when 'delete' is specified.

#### NOTES

- \* A linear search of the VLR is required when searching on MSISDNs. The search time may be extensive dependent upon
  - the current call processing load on the switch
  - the position of the MS within the VLR database
  - the current VLR population
- \* The 'np' <no prompt> parm only affects MSISDN searches. The prompt asking for user confirmation for a VLR linear search is overridden and the search begins immediately.
- \* The 'pause' option will pause the search after each key is located. User must press <enter> before the search will resume.
- \* A maximum of (5) keys can be searched on at one time.

#### EXAMPLES

- \* qgsmvlr status
- \* qgsmvlr imsi 12345 msisdn 54321 msisdn 5551212 np
- \* qgsmvlr msrn 123456789012345 imsi 443322 pause status
- \* qgsmvlr delete IMSI 12345
- \* qgsmvlr delete MSISDN 54321

Parms: [<parm>... {IMSI <key value> STRING,  
MSRN <key value> STRING,  
MSISDN <key value> STRING,  
STATUS,  
NP,  
TMSI, <1..8 hex>, <1..10 dec>  
PAUSE,  
DELETE <parm> {IMSI <key value> STRING,  
MSISDN <key value> STRING}}

## Parameters

Table 3-27 lists and defines the parameters supported by the QGSMVLR command.

**Table 3-27**  
**QGSMVLR command parameters**

Parameter	Definition
IMSI, MSRN, MSISDN	Identify a particular mobile subscriber. Enter the appropriate 4- to 15-digit number.
STATUS	Display the provisioning status of the M-CSI.
NP	No prompt.
TMSI	Search for TMSI.
PAUSE	Pause search for each located mobile station.
DELETE	Delete the IMSI.
MSISDN	Display the MSISDN of the mobile station.

## MSRN translation

To perform a VLR query on a specific key type (IMSI, MSRN, or MSISDN) enter the QGSMVLR command followed by a key and its value. The command format for a QGSMVLR query is:

**CI:**  
**> QGSMVLR <IMSI, MSRN, MSISDN> <4-15 digits> <np> <pause>**

*Note:* When searching for a mobile subscriber, based on the MSIDN, control is not returned to the MAP user until QGSMVLR completes the search or the operator presses the BREAK key and “hx” to stop program execution.

After entering the QGSMVLR command for IMSIs and MSRNs, the system automatically displays the mobile subscriber query report. If the subscriber is not checked out to a real MMU, then the system displays:

The subscriber is in CM.

If the subscriber is checked out to a real MMU, then the system displays:

The subscriber is in MMU mmu\_index where mmu\_index is an integer between 1 and 14.

**Note 1:** When all searched subscribers are in MMU, There will be no pause prompt between searched keys.

**Note 2:** When all searched subscribers are in CM, There will be a pause prompt between searched keys.

**Note 3:** When some of the searched subscribers are in MMU and others are in CM, All CM subscribers will be processed and displayed first with a pause prompt between them no matter what order in the list. And then all MMU subscribers will be displayed without pause prompt after all CM searches are done

### Example

An output example of a mobile subscriber query report follows:

```
-----
MOBILE SUBSCRIBER
IMSI : 505024101215075 IS ATTACHED TMSI : 18316312
IMEI NUMBER: 100000000000075
IMEI STATUS: White
LOC DONE : FALSE
MSISDN : 1 1 1 61411215075
MSRN : <not allocated>
TIMESTAMP : 1452 VLR TIMESTAMP: 1451
AGEOFLOCATION : 6
HLR NUMBER : 614160200000 LAC : 401
LAC or services LAC : 401 Mobility LAC : 401
Location_id : 23
AN : RNS
CATEGORY : #0A MSG WAITING : NO
HLRCONF : Not Confirmed RADCONF : Confirmed
AUXMISDN : $ DATMISDN : $
RRDTUF : NO LAC REGIONALLY RESTRICTED : NO
Age Indicator: 06 12 34 56 78 90 00
LMU INDICATOR : NO
Multiband_Restrict : NO
PIC LIST : <not provisioned>
Gs-State: Gs-Null SGSN Number: Gs-
Association: Normal, unspecified
TELESERVICES
TELEPHONY, AUXTELEPHONY, SMSMT, SMSMO, FAX3ALTSPCH
```

### Switch output

The following is a switch output example:

```
>qgsmvlr imsi 312042146851124
```

```
-----
MOBILE SUBSCRIBER
IMSI : 312042146851124 IS ATTACHED TMSI : 447184266
IMEI NUMBER: 001004150366930
IMEI STATUS: White
```

```
LOC DONE      : FALSE
MSISDN       : 1 1 1 12146851124
MSRN         : <not allocated>
TIMESTAMP    : 535
535 AGEOFLOC: 2
HLR NUMBER   : 14696190000
LOCATION ID    : 1
CATEGORY     : #0A
: NO AN: BSS
HLRCONF     : Confirmed
Confirmed
AUXMISDN    : $
: $
RRDTUF      : NO
Age Indicator : 06 12 34 56 78 90 00
LMU INDICATOR : NO
Multiband_Restrict : NO
PIC LIST     : <not provisioned>
Gs-State: Gs-Null
Gs-Association: Normal, unspecified
TELESERVICES
TELEPHONY, SMSMT, SMSMO
BEARER SERVICES
OPERATOR DETERMINED BARRING:
SERVICE GRANTED
SPEECH SS DATA IN VLR
CFU d e o, CFB e d o, CFNRY e d o, CFNRC e d o, BOIC d e o, CW
d e o,
MPTY-3Port a r o, HOLD a r o, ECT a r o
AUX SPCH SS DATA IN VLR
*** NOT PROVISIONED ***
CDA SS
*** NOT PROVISIONED ***
CDS SS
*** NOT PROVISIONED ***
FAX SS
*** NOT PROVISIONED ***
SMS_MO SS
BOIC a r o
VGS SS
*** NOT PROVISIONED ***
VGCS SUBSCRIPTION
*** NOT PROVISIONED ***
VBS SUBSCRIPTION
*** NOT PROVISIONED ***

LCS SUBSCRIPTION DATA
*** NOT PROVISIONED ***
REGIONAL SUBSCRIPTION
*** NOT PROVISIONED ***
The subscriber is in MMU 1
```

**Query report fields**

Table 3-28 provides definitions of the fields presented on the mobile subscriber query report shown in Figure 3-7.

**Table 3-28**  
**Mobile subscriber query field definitions**

Field	Definition
Age Indicator	Describes age of subscriber data.
IMSI	Identifies the IMSI assigned to the mobile subscriber.
IMEI Number	Identifies the valid IMEI number.
IMEI Status	Identifies the IMEI status (white, black, grey, and unknown equipment).
LOC DONE	Identifies if a call is the first call made after a location update (TRUE) or otherwise (FALSE).
MSISDN	<p>Identifies the ISDN number used to dial the mobile subscriber. The first three 2-character fields of the number identify the following:</p> <ul style="list-style-type: none"> <li>• GSM_MAP_NUMBERING_PLAN                      0= NP_UNKNOWN                      1= ISDN                      2= NP_SPARE_2                      3= DATA                      4= TELEX                      5= NP_NATL_5                      6= NP_NATL_6                      7= NP_SPARE_7                      8= NATL                      9= PRIV                      10= NP_EXT}</li> <li>• GSM_MAP_NATURE_OR_ADDRESS                      0= NA_UNKNOWN                      1= INTL                      2= NATL                      3= NET_SPEC                      4= DEC_PAD                      5= NA_RESRV_5                      6= NA_RESRV_6                      7= NA_EXT</li> <li>• EXTENSIONS BIT                      0 = EXT                      1 = NO_EXT</li> </ul>
—sheet 1 of 5—	

**Table 3-28**  
**Mobile subscriber query field definitions (continued)**

Field	Definition
MSRN	Identifies the mobile subscriber roaming number.
TIMESTAMP	
VLR TIMESTAMP	
AGEOFLOC	
HLR NUMBER	Identifies the HLRNUM that should be contacted for the mobile subscriber.
LAC	Indicates one of the following: <ul style="list-style-type: none"> <li>• ALLOW_LACS—the subset of this zone are the LACs where service is allowed in the MSC/VLR.</li> <li>• RESTRICT_LACS—the subset of this zone are the LACs where service is restricted in the MSC/VLR</li> <li>• ALLOW_ALL_LACS—service is allowed for all LACs in the MSC/VLR. No LACs should be mapped to a zone with this permission type.</li> <li>• RESTRICT_ALL_LACS—service is restricted for all LACs in the MSC/VLR. No LACs should be mapped to a zone with this permission type.</li> </ul>
LOCATION ID	Identifies the location area code of the call made by the mobile subscriber.
CATEGORY	Identifies the GSM category to which the mobile subscriber is assigned: <ul style="list-style-type: none"> <li>• #0a = Ordinary subscribers</li> <li>• #0b = Priority subscribers</li> <li>• #0c = Data call</li> <li>• #0d = Test call</li> <li>• #0f = Payphone call</li> </ul>
MSG WAITING	Indicates if the message waiting function is assigned to the mobile subscriber. (YES/NO)
HLRCONF	Indicates that contact with the HLR has been confirmed or not confirmed.
—sheet 2 of 5—	

**Table 3-28**  
**Mobile subscriber query field definitions (continued)**

Field	Definition
LOCCONF	Indicates that location information has been confirmed in the HLR.
RADCONF	
AUXMISDN	
DATMISDN	
RRDTUF	The Roaming Restriction Due To Unsupported Feature (RRDTUF) field displays the status of subscriber's roaming restrictions for the MSC. (YES/NO)
LAC REGIONALLY RESTRICTED	Displays regional subscription information on a per subscriber basis and shows the "status" of regional subscription at the VLR. Values include: <ul style="list-style-type: none"> <li>• YES</li> <li>• NO</li> <li>• MSC AREA RESTRICTED</li> </ul>
LMU INDICATOR	<ul style="list-style-type: none"> <li>• YES</li> <li>• NO</li> </ul>
Multiband_Restrict	<ul style="list-style-type: none"> <li>• YES</li> <li>• NO</li> </ul>
PIC LIST	Identifies the primary interLATA carrier, which is a type of carrier identification code (CIC).
Gs-State	
SGSN Number	
Gs-Association	
TELESERVICES	Identifies the teleservices that are assigned to the mobile subscriber. Valid teleservices include: <ul style="list-style-type: none"> <li>• TELEPHONY</li> <li>• SMSMT</li> <li>• SMSMO</li> </ul>
—sheet 3 of 5—	

**Table 3-28**  
**Mobile subscriber query field definitions (continued)**

Field	Definition
BEARER SERVICES	
OPERATOR DETERMINED BARRING	<p>Indicates the list of applied categories if the subscriber status is OPERATOR BARRED. Category types include:</p> <ul style="list-style-type: none"> <li>• CATEGORY1 baoc</li> <li>• CATEGORY2 boic</li> <li>• CATEGORY3 boicExHC</li> <li>• CATEGORY4 (NS) prem_info</li> <li>• CATEGORY5 (NS) prem_ent</li> <li>• CATEGORY6 (NS) ciss</li> <li>• CATEGORY10 baect – allECT-Barred</li> <li>• CATEGORY11 bchrdect – chargableECT-Barred</li> <li>• CATEGORY12 bintect – internationalECT-Barred</li> <li>• CATEGORY14 bdbchect – doublyChargeable ECT-Barred</li> </ul> <p>If the subscriber does not have a subscriber status of OPERATOR BARRED, SERVICE GRANTED displays in this field.</p>
SPEECH SS DATA IN VLR	<p>Displays when mobile subscriber information is queried and the subscriber has subscribed to at least one trigger detection point-request (TDP-R) in the VLR. If not, it is not displayed at all.</p>
CFU	d, e, o
CFB	d, e, o
CFNRY	e, d, o
CFNRC	e, d, o
BOIC	d, e, o
CW	d, e, o
AUX SPCH SS DATA IN VLR	<p>Indicates that the user has auxiliary speech (auxiliary telephony) teleservice.</p>
CDA SS	<p>Indicates that the user has circuit duplex asynchronous supplementary service.</p>
—sheet 4 of 5—	

**Table 3-28**  
**Mobile subscriber query field definitions (continued)**

Field	Definition
CDS SS	Indicates that the user has circuit duplex synchronous supplementary service.
FAX SS	Indicates that the user has facsimile supplementary service.
SMS_MO SS	Indicates that the user has short message services mobile origination supplementary service.
VGS SS	
VGCS SUBSCRIPTION	
VBS SUBSCRIPTION	
LCS SUBSCRIPTION DATA	
REGIONAL SUBSCRIPTION	Determines whether the regional subscription information of LAC is allowed.
—sheet 5 of 5—	

### Example

An output example of Long Duration Call Notification follows:

```
GMSC618 AUG18 00:45:00 5796 INFO System Action
CKT ITACBSS1 2
LOCATION: GSMMSC Software Audit
DESCRIPTION: LONG CALL NOTIFICATION REPORT
MSISDN: 63664209209
DURATION: exceed 120 minutes, CALLING DN: 61411233001
```

### Switch output

An example of switch output follows:

```
LOGUTIL:
>imagenname
XAGSM BCS 54 BO built on 2003-JUL-14 at 17:08:00 using
pgsmmhsul7bs
PRODUCT: GMHU.170
LOAD: GMHU0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BS
>open gmsc 618;back
Done.
MSCI      GMSC618 JUL18 10:31:15 8300 INFO System Action
          Location: GSMMSC Software Audit
```

Description: DMS Maintenance, forced release  
MSISDN: 14693210001  
DURATION: CallUp 1 hours 0 mins, CALLED DN: 9726845831

MSCI GMSC618 JUL18 10:28:31 5900 INFO System Action  
CKT SPMHWGRP1 16  
Location: GSMSC Software Audit  
Description: DMS Maintenance, forced release  
CIC: 0  
MSISDN: 14693210003  
DURATION: CallUp 1 hours 0 mins, CALLING DN: 1232361

---

# QUARANTINE

---

## About QUARANTINE

This tool is part of the MMU functionality and provides the capability to put an MMU in QUARANTINE state to bring down the workload on an MMU before it is taken Out-of-Service. In this state, the MSC does not send additional calls to the specified MMU but the existing calls are allowed to proceed as normal. Once an MMU is put in QUARANTINE state, the tool enables the crafts person to verify the number of calls running on that MMU and for how long the MMU has been in QUARANTINE. The craftsperson can use this tool to allow completion of existing calls before an MMU is taken Out-of-Service.

*Note:* At any given time, access to this tool is restricted to a single, authorized GPS/TAS person with access to TOOLSUP facilities.

## Access QUARANTINE

To access QUARANTINE from the CI prompt, enter the following command and press return:

```
> QUARANTINE
```

## Exit QUARANTINE

To exit the QUARANTINE level and return to CI, enter the following command and press return:

```
> QUIT
```

## Commands

QUARANTINE provides the following commands to operating company personnel:

- SELECTMMU—selects a specified MMU in Quarantine
- REMOVEMMU—removes a specified MMU from the Quarantine
- HALTMMU—invokes the HALTMMU subtool
- STATUS—displays the status of MMU servers in Quarantine
- HELP—displays the help screen
- QUIT—exits the Quarantine tool

## SELECTMMU command

The SELECTMMU subcommand puts a specified MMU in QUARANTINE state and initiates check-in of VLR tuples. A permission is sought to execute the command from the user.

### Syntax

The command syntax for SELECTMMU is:

**SELECTMMU par is: <SVR7ID> {1 to 14}**  
**Enter: <SVR7ID>**

*Note:* If an MMU is selected in QUARANTINE, it is not available to service any new calls. However, it continues to service existing calls.

### Parameters

Table 3-29 lists and defines the command parameters used with the SELECTMMU command.

**Table 3-29**  
**SELECTMMU command parameters**

Parameter	Value	Definition
SVR7ID	1 to 14	C7 Server ID from table C7SERVER

### Error messages

Table 3-30 provides the descriptions of the error messages produced by the SELECTMMU command.

**Table 3-30**  
**SELECTMMU error messages**

Error	Descriptions
WARNING: CM is in OVERLOAD state. It is NOT recommended to quarantine/deload MMUs while CM is in overload state.	<p>The core is in OVERLOAD state. Verify it by using MSCCAPCI (BRISC node/CAPCI (XACore node) command on Core. Putting an MMU into QUARANTINE while the Core is overloaded might result in:</p> <ul style="list-style-type: none"> <li>• Loss of latest subscriber information checked in from MMU.</li> <li>• MMU VLRocc (displayed through POOL command of MMUSELECT tool) might not be updated.</li> </ul> <p>User action: A permission is sought from the user. It is NOT recommended to go ahead with this command. Quarantining of the MMU should be done in the next maintenance window. The user should proceed with the command only if there is no other alternative.</p>

**Table 3-30**  
**SELECTMMU error messages (continued)**

Error	Descriptions
<p>ERROR: This MMU is already selected in QUARANTINE.</p>	<p>The MMU specified is already in QUARANTINE state.</p> <p>User action: No action is required, MMU is already selected. User can check it using the STATUS command.</p>
<p>ERROR: MMUs &lt;mmu1&gt;, &lt;mmu2&gt; and &lt;mmu3&gt; is/are already in Quarantine/Deload. A maximum of three MMUs can be selected in Quarantine/Deload at a time.</p>	<p>mmu1, mmu2 and mmu3 are C7SERVER ids from c7server table. Three MMUs specified are already in QUARANTINE state. At a time, user can select a maximum of 3 MMUs in QUARANTINE.</p> <p>User action: Three MMUs are already selected in QUARANTINE. If user want to select another MMU, remove any of the quarantined MMU using command REMOVE MMU. Alternately, perform some maintenance action (for example, MAN B) on the current MMU to take it out of QUARANTINE. User can check QUARANTINE status using STATUS command.</p>
<p>WARNING: &lt;num_of_MMUs&gt; MMU(s) are already in Quarantine/Deload. It is NOT recommended to quarantine/deload more than one MMU under high CM/MMU traffic conditions</p>	<p>num_of_MMUs is the number of MMUs under quarantine.</p> <p>This warning is displayed if SELECTMMU command is used to quarantine an MMU when one or more MMUs are already in quarantine.</p> <p>User action: It is NOT recommended to quarantine the MMU in this scenario. MMU quarantine should be tried in the next maintenance window. This is because quarantining an MMU more than once might result in:</p> <ul style="list-style-type: none"> <li>• Overloading the Core.</li> <li>• Loss of latest subscriber information checked in from any of the MMUs in quarantine.</li> <li>• MMU VLRocc (displayed through POOL command of MMUSELECT tool) might not be updated.</li> </ul>

**Table 3-30**  
**SELECTMMU error messages (continued)**

<b>Error</b>	<b>Descriptions</b>
ERROR: Server is not an MMU.	The Server is not datafilled as MMU in table C7SERVER.  User action: QUARANTINE tool is only for MMUs. The server must be datafilled as MMU for selecting it in QUARANTINE. Refer to MMU Provisioning rules.
ERROR: Unable to set the state of MMU.	MMU provisioning is not correct.  <b>User action:</b> Check MMU provisioning.
ERROR: Availability of this MMU is not complete. Server availability is invalid to QUARANTINE the server	MMU provisioning is not correct.  <b>User action:</b> Check the MAP status of SVR7 peripheral and MMU server. Both must be in service. Check MMU provisioning.

—sheet 3 of 4—

**Table 3-30**  
**SELECTMMU error messages (continued)**

Error	Descriptions
ERROR: Server is not inservice. Server state is invalid to Quarantine the server.	SVR7(PM) or MMU Server is not inservice. Both must be inservice to QUARANTINE the MMU.  <b>User action:</b> Check the MAP state of MMU Server and SVR7 PM, both should be inservice to QUARANTINE it. For further information, refer to MMU provisioning rules.
ERROR: Unable to get the maintenance state of Server, MMU may not be configured.	MMU maintenance state is not correct.  <b>User action:</b> Check MMU provisioning.
Call count on this server is 0.	There are no calls active on this MMU.  <b>User action:</b> User can cancel Quarantine and perform maintenance on this MMU without risk of losing calls.
Warning: Unable to get the call count for this MMU.	Tool is not able to retrieve the number of calls active on this MMU.  <b>User action:</b> The server must be datafilled as MMU in table C7SERVER. Check MMU provisioning.
—sheet 4 of 4—	

## REMOVEMMU command

The REMOVEMMU subcommand takes an MMU out of QUARANTINE state and returns it to normal functioning. It also halts Check-In of VLR tuples from the MMU to the MSC.

### Syntax

The command syntax for REMOVEMMU is:

**REMOVEMMU par is: <SVR7ID> {1 to 14}**  
**Enter: <SVR7ID>**

**Note:** If an MMU is removed from Quarantine, it will be available to service new call requests.

**Parameters**

Table 3-31 lists and defines the command parameters used with the REMOVEMMU command.

**Table 3-31  
 REMOVEMMU command parameters**

Parameter	Value	Definition
SVR7ID	1 to 14	C7 Server ID from table C7SERVER

**Error messages**

Table 3-32 provides the descriptions of the error messages produced by the REMOVEMMU command.

**Table 3-32  
 REMOVEMMU error messages**

Error	Descriptions
Error: Server is not selected in Quarantine.	This server is not selected in Quarantine, and the request to remove server for Quarantine is invalid.  <b>User action:</b> Check Quarantine status to determine which server is in Quarantine.
ERROR: Unable to set the availability of MMU.	Tool is not able to deselect a particular MMU. MAP state of MMU server or SVR7 is not correct.  <b>User action:</b> Check state of MMU server and SVR7.
ERROR: MMU availability is not partial.	MMU state is not a valid state of QUARANTINE.  <b>User action:</b> Check the provisioning and state of MMU. Refer to MMU provisioning rules.
ERROR: Server is not in service.	SVR7 server or MMU(PM) is not in service. Server must be in service to remove from Quarantine.  <b>User action:</b> Check the state of MMU/SVR7. It must be in service.
Warning: MMU maintenance state not found.	MMU maintenance state is not proper.  <b>User action:</b> Check MMU provisioning.
—sheet 1 of 2—	

**Table 3-32**  
**REMOVEMMU error messages (continued)**

Error	Descriptions
Warning: MMU maintenance state not found	Check the provisioning of MMU.  <b>User action:</b> Refer to MMU provisioning rules.
Warning: MMU availability is not partial.	MMU is not in a valid state of Quarantine.  <b>User action:</b> Check the provisioning and state of MMU.
Warning: Unable to get the availability of MMU.	MMU is not properly provisioned.  <b>User action:</b> Check the provisioning and state of MMU.
—sheet 2 of 2—	

## HALTMMU command

This command provides the ability to HALT all the MMUs. All MMUs are put into QUARANTINE. In this state, no new work is assigned to any of the MMUs, however, these MMUs continue to service existing calls. checkIn of MMU VLR tuples is also terminated, so the latest subscriber information still remains with the MMU.

The craftsperson can access this subtool only from within the QUARANTINE tool and use it to allow the existing calls before off-loading an MMU.

HALTMMU has two subcommands, SELECTALL and RESTOREALL.

### Warning

If an authorized user is already using this subtool, then a warning is generated telling the craftsperson that access is restricted to only a single, authorized user at any given time.

### Accessing

To access the command, do the following MAPCI commands:

>QUARANTINE

>HALTMMU

To return to CI level, type the following:

>QUIT 2

---

## Status command

This command displays the Quarantine status of MMU (Selected/Not Selected), number of calls running on each MMU, and time the MMU has been in Quarantine mode.

### Syntax

The command syntax for STATUS is:

```
>status
```

### Parameters

There are no parameters for the Status command.

### Example

An example of the switch output follows:

```
>imagename
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using
pgmscstpcl7bn
PRODUCT: GMSO.170
LOAD: GMSO0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>
>
2003/07/03 10:31 MFAST ** MSCX GSM17 ** GMSO0170 6/19/2003
QUARANTINE:
>help
```

```
MMU Isolation tool.
```

```
-----
Quarantine tool is for isolating the MMU servers for
any maintenance action. Once an MMU is selected,
no new call origination requests will be routed to
that MMU. However, the MMU will service already
established calls. The idea is to bring down the number of
calls on that MMU so that any maintenance action
can be performed.
```

Available commands are

```
SELECTMMU : Selects a specified MMU in Quarantine.
REMOVEMMU : Removes a specified MMU from the Quarantine.
HALTMMU   : Invokes the HALTMMU SubTool.
STATUS    : Displays the status of MMU servers in Quarantine.
HELP      : Displays this help screen.
QUIT      : Exits Quarantine tool
```

For help on a specific command, enter Q <subcommand> at the MAP.

Figure 3-32 shows the response received before selecting Time in quarantine status. Figure 3-33 shows the response after selecting Time in quarantine status.

**Figure 3-25**  
Example before selecting in quarantine

Server ID	PM	Status	Time in Quarantine HH MM SS	Call Count
1	SVR7 400	Selected	00:00:00	0

**Figure 3-26**  
Example after selecting in quarantine

Server ID	PM	Status	Time in Quarantine HH MM SS	Call Count
1	SVR7 400	Selected	00:00:04	0

**HELP command**

This command displays the usage of each command provided by the MMU\_Quarantine tool.

**Syntax**

The command syntax for HELP is:

**HELP**

**QUIT command**

This command exits the Quarantine tool

**Syntax**

The command syntax for QUIT is:

**QUIT**

---

# RELEASE\_SUB

---

## About RELEASE\_SUB

The RELEASE\_SUB command enables operating company personnel to manually release subscribers. This command is part of the Long Duration Call Identification and Teardown feature and Long Call Release.

Call teardown can occur automatically or manually. Calls are automatically torn down when they exceed a definable threshold in the MSC. Use the RELEASE\_SUB command to manually tear down a call.

### Implementing long duration call identification and teardown

Use the steps outlined in [Procedure 3-2](#) to activate the Long Duration Call Identification and Teardown feature.

#### Procedure 3-2

#### Activate long duration call ID and teardown feature

Step	Action
1	Go to table OFCVAR.
2	Change the parameters for: <b>GSM_LONG_CALL_TEARDOWN</b>
3	Set the value of the <b>Type</b> field to: <ul style="list-style-type: none"><li>• AUTO</li><li>• MANUAL</li><li>• OFF (default)</li></ul>
4	Set the value of the <b>Hours</b> field to: <ul style="list-style-type: none"><li>• 0 – 24 (zero is default)</li></ul>
5	Set the value of the <b>Minutes</b> field to: <ul style="list-style-type: none"><li>• 0 (default)</li><li>• 15</li><li>• 30</li><li>• 45</li></ul>
6	Quit the table editor.

—end—

---

**Accessing office parameter GSM\_LONG\_CALL\_TEARDOWN**

The office parameter GSM\_LONG\_CALL\_TEARDOWN is located in table OFCVAR. To view the settings from the table OFCVAR, enter:

**pos GSM\_LONG\_CALL\_TEARDOWN**

The system responds with the parameter values for type, hours, and minutes as shown in [Figure 3-27](#).

**Figure 3-27**  
**GSM\_Long\_Call\_Teardown format**

```
>table ofcvar
TABLE: OFCVAR
>pos gsm_long_call_teardown
      GSM_LONG_CALL_TEARDOWN          OFF  0  0
```

The parameter GSM\_LONG\_CALL\_TEARDOWN contains the following fields:

- glctd\_type
- glctd\_hours
- glctd\_minutes

[Table 3-33](#) provides datafill values for office parameter GSM\_LONG\_CALL\_TEARDOWN.

**Table 3-33**  
**Possible Datafill Values for GSM\_LONG\_CALL\_TEARDOWN in Table OFCVAR**

Parmname	Parmval		
	Type	Hours	Minutes
GSM_LONG_CALL_TEARDOWN	AUTO, MANUAL, OFF	0 - 24	0, 15, 30, 45

**Syntax**

The syntax for the RELEASE\_SUB command is:

**Parms: <identifier> {MSISDN <msisdn value> STRING}**  
**release\_sub msisdn 63664209209**

## Parameters

The parameter for Release\_sub is shown in [Table 3-34](#).

**Table 3-34**  
**RELEASE\_SUB parameters**

Parameter	Value	Definition
MSISDN	valid MSISDN digit stream (4 to 15 digit)	Identifies the mobile subscriber to be located. MSISDN has to be selected to identify the mobile subscriber.

## Examples

[Figure 3-28](#) shows the entries used to define a mobile subscriber long call as a call that exceeds 4 hours and 30 minutes. After the 4 hours and 30 minutes, the datafill enables operating company personnel to manually release the call.

**Figure 3-28**  
**Long Duration Call manual set up**

```
>table ofcvar
TABLE: OFCVAR
>pos gsm_long_call_teardown
      GSM_LONG_CALL_TEARDOWN      OFF  0  0

>cha
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
>Y
PARMVAL: OFF  0  0
>manual 4 30
TUPLE TO BE CHANGED:
      GSM_LONG_CALL_TEARDOWN
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>Y
TUPLE CHANGED
```

[Figure 3-29](#) shows the entry used to manually release a mobile defined as a Long Duration Call subscriber. The figure also shows the resulting confirmation message.

**Figure 3-29**  
**Long Duration Call manual release**

```
>release_sub msisdn 63664209209

***** LONG CALL RELEASE CI TOOL OUTPUT *****

MSISDN: 63664209209
IMSI: 50502410125030
***** MANUAL RELEASE SUCCESSFUL *****
```

### Error messages

The following error messages can be produced by the RELEASE\_SUB command.

- Any input error.
- Invalid digits in MSISDN.
- Too few digits in MSISDN.
- Process aborted by user.
- Error in accessing the MSC Database.
- Race condition - mobile has probably roamed out of the VLR.
- CP race condition occurred - please retry.
- VLR empty
- Mobile is not found in VLR.
- Any software problem.
- Mobile is linked to another process - please retry.
- Mobile is not involved in a call.
- Unexpected link state in MSC Database - see possible SWERR.
- Mobile is involved in an emergency call.

### Verifying long calls through log GMSC618

Log report GMSC618 enables personnel to view or verify long duration call activity. An example of this log report is shown in [Figure 3-30](#). In this example, the mobile subscriber 63664209209 exceeded the Long Duration Call Limit of 120 minutes.

**Figure 3-30**  
**Long Duration Call Notification**

```
GMSC618 AUG18 00:45:00 5796 INFO System Action
CKT          ITACBSS1    2
LOCATION: GSM MSC Software Audit
DESCRIPTION: LONG CALL NOTIFICATION REPORT
MSISDN: 63664209209
DURATION: exceed 120 minutes, CALLING DN: 61411233001
```

### Example

An output example follows:

```
LOGUTIL:
>imagenname
XAGSM BCS 54 BO built on 2003-JUL-14 at 17:08:00 using
pgsmmhsul7bs
PRODUCT: GMHU.170
LOAD: GMHU0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BS

>open gmsc 618;back
Done.
MSCI      GMSC618 JUL18 10:31:15 8300 INFO System Action
Location: GSM MSC Software Audit
Description: DMS Maintenance, forced release
MSISDN: 14693210001
DURATION: CallUp 1 hours 0 mins, CALLED DN: 9726845831

MSCI      GMSC618 JUL18 10:28:31 5900 INFO System Action
CKT      SPMHWGRP1    16
Location: GSM MSC Software Audit
Description: DMS Maintenance, forced release
CIC: 0
MSISDN: 14693210003
DURATION: CallUp 1 hours 0 mins, CALLING DN: 1232361
```

# RENAME\_IWFLKSET

## About RENAME\_IWFLKSET

This command allows operating company personnel to rename an existing link in table IWFLKSET. Link names datafilled in table IWFMEM are automatically changed as well.

### Syntax

The command syntax for RENAME\_IWFLKSET is:

**RENAME\_IWFLKSET <existing link name> <new link name>**

Figure 3-31 shows the response received when both the existing and new link names are valid. Personnel is prompted to initiate the rename. Enter **Y** to rename the link or **N** to abort the process. The response is visible on both the 88000 and 68000 systems.

**Figure 3-31**

**Example of the RENAME\_IWFLKSET command response**

```
> RENAME_IWFLKSET IWFLINK1 NEWLINK1
> 'Do you really want to rename it?' Y
>
```

### Parameters

Table 3-35 lists and defines the parameters used with the RENAME\_IWFLKSET command.

**Table 3-35**  
**REN\_IWFLKSET command parameters**

Parameter	Value	Definition
<existing link name>	1 - 16 alphanumeric characters	Identifies the old link name in table IWFLKSET.
<new link name>	1 - 16 alphanumeric characters	Identifies the new link name in table IWFLKSET.

### Switch output

An example of switch output follows:

```
CI:
>imagenam
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using
pgmscstpc17bn
```

```
PRODUCT: GMSO.170
LOAD: GMSO0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>ran RENAME_IWFLKSET
Command to rename an IWF LinkSet
```

SYNTAX

```
rename_iwflkset <old linkset name> <new linkset name>
This command allows the user to rename an IWF linkset in
table IWFLKSET without deleting the link set and adding
it back.
Parms: <Old Linkset Name> STRING
       <New Lkset Name > STRING
```

**Error messages**

[Table 3-36](#) provides the descriptions of the error messages produced by the RENAME\_IWFLKSET command.

**Table 3-36**  
**RENAME\_IWFLKSET error messages**

Error	Description
Existing IWF link was not in table IWFLKSET.	The link name entered does not exist in table IWFLKSET.
New IWF link is already in table IWFLKSET.	The link name entered already exists in table IWFLKSET.
New IWF link name is too long. No more than 16 characters.	The link name is longer than 16 alphanumeric characters. Enter a shorter name.

# STATUS

## About STATUS

This command displays the Quarantine status of MMU (Selected/Not Selected), number of calls running on each MMU, and time the MMU has been in Quarantine mode.

### Syntax

The command syntax for STATUS is:

**status**

### Example

Figure 3-32 shows the response received before selecting in quarantine status. Figure 3-33 shows the response after selecting in quarantine status.

**Figure 3-32**  
Example before selecting in quarantine

Server ID	PM	Status	Time in Quarantine HH MM SS	Call Count
1	SVR7 400	Selected	00:00:00	0

**Figure 3-33**  
Example after selecting in quarantine

Server ID	PM	Status	Time in Quarantine HH MM SS	Call Count
1	SVR7 400	Selected	00:00:04	0

---

# TRAVER

---

## About TRAVER

The TRAVER (TRAnslations VERification) command is a MAP level command used to examine the translation routes of a particular call. It does involve a Call Process; however, it only simulates the translation path that a real Call Process would go through. For example, when you perform a TRAVER for a trunk-to-mobile call, it does not start a trunk-to-mobile call, but only displays the translations path that such a call would follow.

The CPC option in the TRAVER command allows specification of the Subscriber Category for use during translation verification. The CPC option accepts CPC values in the range 17 to 254.

Traver also displays results for the search for a match in Table GCPCXLA for the case of MS selector.

TRAVER uses RC SVC VIDEO input to display any new datafilled RC selector set SVC VIDEO in table GSMCHAR2.

The TRAVER command allows the user to verify the translations tables for a user-specified call. It provides translations and routing information as if it received the digits from an originator and displays the results. A TRAVER report can display the tuples of the translation tables used to translate a call with the TRACE (T) option, or the route list arrived from the result of translations with the NO TRACE (NT) option, or the results of the T and NT options with the BOTH (B) option.

TRAVER displays the results of a search for a match in table CDNCHAR. However, for table CDNCHAR based translations, only the T option is supported. The T option provides a route with CDNCHAR based translations. The NT option would give a route without CDNCHAR functionality. The B option would result in two different set of routes for call termination in the same display. This allows the user to know what could have been a possible path if CDNCHAR functionality was not used.

It can also display the results of a search for a match in table CDNCHAR for CAP and INAP protocol. Only TRAVER option B for MS selector is supported. LAC, CID/SAC options can now be replaced with XLAENTRY option. This only works with MS selector.

TRAVER was designed to help the user quickly identify translations errors, oversights, or misdirection while debugging and testing software. This allows the user to correct datafill problems more efficiently.

TRAVER is best used at the CI level of the MAP. With TRAVER, the user can specify the type of call originator, the number being processed, and the kind of report desired. TRAVER also can be used as a teaching tool to reveal how a call works its way through the MSC. For additional information on the TRAVER command, refer to *DMS-100 Family Command Reference Manual*, 297-1001-822.

## Syntax

Following is the format and feature subset for the MSC TRAVER command that is used to test GSM wireless calls (it is not a complete list):

```
> help traver
Parms: <ORIG> {MX <OPTION> {MOBORIG}
..... (Note: All options not shown)
[<CPC> {CPC <CPCNAME> {FRENCH,ENGLISH
GERMAN,
RUSSIA,
SPANISH,
SPARLNG1,
SPARLNG2,
SPARLNG3,
RESERVED,
OCS,
CSP,
DATA,
TEST,
NONVOICE,
PAYPHONE,
CATEGORY17
CATEGORY18
..... (CATEGORYxx)
CATEGORY225
NSEP
CATEGORY227
.....(CATEGORYxxx)
CATEGORY254}}]
.....
```

## Switch output

A switch output example of the TRAVER command follows:

```
CI:
>imagenam
XAGSM BCS 54 BO built on 2003-JUN-11 at 11:53:00 using
pgmscstpcl7bn
PRODUCT: GMSO.170
LOAD: GMSO0.170
LAYER: BAS.20.0.BO
LAYER: TL.19.0.BO
LAYER: SHR.19.0.AA
LAYER: GSM.17.0.BN
>traver
```

```
Next par is: <ORIG> {MX <OPTION> {MOBORIG}
<PROFNAME> STRING
[<CENTREX> {CTX <ORIGMIN> STRING}]
[<ORIGMIN> {ORIGMIN <ORIGMIN> STRING}]
[<CELL> {CELL <CELLSTR> STRING}],
RR <SWID> {1 TO 127}
<TERMTRK> {1 TO 8191}
<TRACE> {NT,
T,
B},
MS <MSISDN> STRING
[<XLATE_ON> {MSRN,
CFN,
HON}]
[<LAC> {LAC <LAC> {0 TO 65535}}]
[<CELL/SAC> {CID <CID> {0 TO 65535},
SAC <SAC> {0 TO 65535}}]
[<CUSTGRP> {CUSTGRP <CUSTGRP> {0 TO 4095}}]
[<NCOS> {NCOS <NCOS> {0 TO 511}}]
[<PIC> {PIC <PIC> STRING}]
[<IMSI> {IMSI <IMSI> STRING}]
BOIC,
BOICEXHC,
PREMINFO,
PREMENT,
OPS1,
OPS2,
OPS3,
OPS4}}],
TA <TABLE> {SERVICE <RTEREF> {1 TO 99},
BGIDMAP},
AVLNP <CLLI> STRING
<MEMBER> {0 TO 9999},
R <TABLE> {HNPARTE <HNPA> {0 TO 999}
<RTEREF> {1 TO 1023},
FNPARTE <FNPA> {0 TO 999}
<RTEREF> {1 TO 1023},
STSRTE <FNPA> {0 TO 999}
<STS> {0 TO 999}
<RTEREF> {1 TO 1023},
OFRT <RTEREF> {1 TO 1023},
IBNRTE <RTEREF> {1 TO 1023},
PXRTE <XLANAME> STRING
<RTEREF> {1 TO 1023},
FARTE <XLANAME> STRING
<RTEREF> {1 TO 1023},
OFCRTE <XLANAME> STRING
<RTEREF> {1 TO 1023},
CTRTE <XLANAME> STRING
<RTEREF> {1 TO 1023},
IBNRT2 <RTEREF> {1 TO 1023},
IBNRT3 <RTEREF> {1 TO 1023},
IBNRT4 <RTEREF> {1 TO 1023},
OFR2 <RTEREF> {1 TO 1023},
OFR3 <RTEREF> {1 TO 1023},
```

```
OFR4 <RTEREF> {1 TO 1023},
OVR0 <RTEREF> {1 TO 1023},
OVR1 <RTEREF> {1 TO 1023},
OVR2 <RTEREF> {1 TO 1023},
OVR3 <RTEREF> {1 TO 1023},
OVR4 <RTEREF> {1 TO 1023},
OVR5 <RTEREF> {1 TO 1023},
OVR6 <RTEREF> {1 TO 1023},
OVR7 <RTEREF> {1 TO 1023},
OVR8 <RTEREF> {1 TO 1023},
OVR9 <RTEREF> {1 TO 1023},
OVR10 <RTEREF> {1 TO 1023},
OVR11 <RTEREF> {1 TO 1023},
OVR12 <RTEREF> {1 TO 1023},
OVR13 <RTEREF> {1 TO 1023},
OVR14 <RTEREF> {1 TO 1023},
OVR15 <RTEREF> {1 TO 1023},
OVR16 <RTEREF> {1 TO 1023},
OVR17 <RTEREF> {1 TO 1023},
OVR18 <RTEREF> {1 TO 1023},
OVR19 <RTEREF> {1 TO 1023},
OVR20 <RTEREF> {1 TO 1023},
OVR21 <RTEREF> {1 TO 1023},
OVR22 <RTEREF> {1 TO 1023},
OVR23 <RTEREF> {1 TO 1023},
OVR24 <RTEREF> {1 TO 1023},
OVR25 <RTEREF> {1 TO 1023},
OVR26 <RTEREF> {1 TO 1023},
OVR27 <RTEREF> {1 TO 1023},
OVR28 <RTEREF> {1 TO 1023},
OVR29 <RTEREF> {1 TO 1023},
OVR30 <RTEREF> {1 TO 1023},
OVR31 <RTEREF> {1 TO 1023},
OVR32 <RTEREF> {1 TO 1023},
OVR33 <RTEREF> {1 TO 1023},
OVR34 <RTEREF> {1 TO 1023},
OVR35 <RTEREF> {1 TO 1023},
OVR36 <RTEREF> {1 TO 1023},
OVR37 <RTEREF> {1 TO 1023},
OVR38 <RTEREF> {1 TO 1023},
OVR39 <RTEREF> {1 TO 1023},
OVR40 <RTEREF> {1 TO 1023},
OVR41 <RTEREF> {1 TO 1023},
OVR42 <RTEREF> {1 TO 1023},
OVR43 <RTEREF> {1 TO 1023},
OVR44 <RTEREF> {1 TO 1023},
OVR45 <RTEREF> {1 TO 1023},
OVR46 <RTEREF> {1 TO 1023},
OVR47 <RTEREF> {1 TO 1023},
OVR48 <RTEREF> {1 TO 1023},
OVR49 <RTEREF> {1 TO 1023},
OVR50 <RTEREF> {1 TO 1023},
OVR51 <RTEREF> {1 TO 1023},
OVR52 <RTEREF> {1 TO 1023},
OVR53 <RTEREF> {1 TO 1023},
```

```
OVR54 <RTEREF> {1 TO 1023},
OVR55 <RTEREF> {1 TO 1023},
OVR56 <RTEREF> {1 TO 1023},
OVR57 <RTEREF> {1 TO 1023},
OVR58 <RTEREF> {1 TO 1023},
OVR59 <RTEREF> {1 TO 1023},
OVR60 <RTEREF> {1 TO 1023},
OVR61 <RTEREF> {1 TO 1023},
OVR62 <RTEREF> {1 TO 1023},
OVR63 <RTEREF> {1 TO 1023},
OVR64 <RTEREF> {1 TO 1023},
OVR65 <RTEREF> {1 TO 1023},
OVR66 <RTEREF> {1 TO 1023},
OVR67 <RTEREF> {1 TO 1023},
OVR68 <RTEREF> {1 TO 1023},
OVR69 <RTEREF> {1 TO 1023},
OVR70 <RTEREF> {1 TO 1023},
OVR71 <RTEREF> {1 TO 1023},
OVR72 <RTEREF> {1 TO 1023},
OVR73 <RTEREF> {1 TO 1023},
OVR74 <RTEREF> {1 TO 1023},
OVR75 <RTEREF> {1 TO 1023},
OVR76 <RTEREF> {1 TO 1023},
OVR77 <RTEREF> {1 TO 1023},
OVR78 <RTEREF> {1 TO 1023},
OVR79 <RTEREF> {1 TO 1023},
OVR80 <RTEREF> {1 TO 1023},
OVR81 <RTEREF> {1 TO 1023},
OVR82 <RTEREF> {1 TO 1023},
OVR83 <RTEREF> {1 TO 1023},
OVR84 <RTEREF> {1 TO 1023},
OVR85 <RTEREF> {1 TO 1023},
OVR86 <RTEREF> {1 TO 1023},
OVR87 <RTEREF> {1 TO 1023},
OVR88 <RTEREF> {1 TO 1023},
OVR89 <RTEREF> {1 TO 1023}},
C <CONSOLE> STRING,
V <VFG> STRING
[<OPT> {OW <ZONE> STRING}],
L <LINE> STRING
[<CALL_TYPE> {VI,
CMD,
PMD}]
[<FLASH> {FLASH}]
[<NSC> {NSC}],
TR <CLLI> STRING
[<CLLIOPT> {SAT <BOOL> "TRUE" or "FALSE"}]
[<MBGOPTS> {MBG <TYPE> {LOCAL,
NATL}
<ID> {0 TO 4294967295}
<LP> {0 TO 255}
<GAP> STRING}]
[<TRIGOPT> {TRIG <PIC> {ALL,
ORIG,
COLLECT}}
```

```

<ACCESS_TYPE> {FGD [<INFODIGS_OPTION> {INFODIGS
<INFODIGS_VALUE> STRING}],
FGDSNC [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE> STRING}],
FGDCUT [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE> STRING}],
FGDTRANS [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE>
STRING}],
UAAUTH [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE> STRING}],
UACARD [<INFODIGS_OPTION> {INFODIGS <INFODIGS_VALUE> STRING}],
    PRI,
    DAL,
    EDAL,
    ONAL,
    ONAT,
    GTWIMT,
    ESNPRI,
    OTHER,
    ESP,
    IMT}
<CALL_TYPE> {ONNET,
    OFFNET,
    IDDD,
    N00,
    I800,
    TIE,
    WATS,
    IVPN,
    ZPLUSOFFNET,
    ZPLUSONNET,
    INTOA,
    IGA,
    IDA,
    GVPN,
    UNDETERMINED,
    OTHER}
<CRITERIA> {NIL,
    TRI,    REDIRECTION,
    CONFERENCE}}]
[<TRKMEM> {TRKMEM <TRKMEM> {0 TO 9999}}}]
Enter: <ORIG> <DIGITS OR N FOR NO DIGITS> [<CDNIE>] [<NSF>]
[<TNSIE>] [<OSAIE>] [<BC>] [<SR>] [<PI>] [<TRI>]
[<NETINFO>] [<FINFO>] [<RPOAP>] [<RPOAS>] [<NOA>]
[<AIN_OPTIONS>] [<AIN_INFO
>

```

**Parameters**

Table 3-37 lists and describes the parameters used with the TRAVER command.

**Table 3-37**  
**TRAVER parameter descriptions**

Parameter	Requirement	Description
<ORIG>	Mandatory	Origination.
MS <MSISDN>		The MSISDN parameter is a string used as the MSISDN of the originating mobile station. The MSISDN should be no more than 18 digits. After verifying that only digits are entered, the MSISDN is used as the calling number and the billing number. It is not ensured that a valid MSISDN is entered.
LAC	Mandatory	Location Area Code of the originating mobile. This parameter must be used in conjunction with the CID parameter or an error will result.  The LAC specified must: <ul style="list-style-type: none"> <li>• Be valid LAC used within the MSC</li> <li>• Use LAC 1000 when TRAVERing call forwarding, msrn, hon, vms, and vlr translations.</li> </ul>
CID	Mandatory	Cell Identifier within the location area. This parameter must be used in conjunction with the LAC parameter or an error will result.  The CID specified must: <ul style="list-style-type: none"> <li>• Be valid CID used within the MSC</li> <li>• Use CID 1,2,3,7 &amp; 8 respectively for TRAVERing call forwarding, msrn, hon, vms, and vlr translations.</li> </ul>
CPC	Optional	Subscriber's category
—sheet 1 of 3—		

**Table 3-37**  
**TRAVER parameter descriptions (continued)**

Parameter	Requirement	Description
CUSTGRP	Optional	Customer group number. This parameter must be used in conjunction with NCOS. Valid entries: 0 to 4095.  The CUSTGRP must: <ul style="list-style-type: none"> <li>• Be used for hotlines</li> <li>• Be used for specialized routing if class of service is required.</li> </ul>
IMSI	Optional	The International Mobile Subscriber Identifier.
NCOS	Optional	Network class of service. This parameter is used only for Mobile Subscribers with a class of service. Valid entries: 0 to 255  The NCOS must be used in conjunction with CUSTGRP TRAVERS.
PIC	Optional	
ODB	Optional	
TR <CLLI>	Mandatory	The name of the trunk group entry. This type of TRAVER is used for: <ul style="list-style-type: none"> <li>• Incoming call from PSTN/IMT to mobile</li> <li>• Incoming call from PSTN/IMT to VMS and/or specified digits allowed by customer</li> </ul>
<DIGITS OR N FOR NO DIGITS>	Optional	
<TNS_DIGITS>	Optional	
<CPC>	Optional	
—sheet 2 of 3—		

**Table 3-37**  
**TRAVER parameter descriptions (continued)**

Parameter	Requirement	Description
<PREXLA> {P}	Optional	Performs pre-visitor location register (VLR) translation verification using PREXLIDX from table LAC. This parameter is only available when using the MS selector. <b>Valid entries:</b> P  <b>Note:</b> If the “P” is not entered, TRAVER performs post-VLR translation verification using XLAIDX taken from Table LAC.
<TRACE>	Mandatory	Used to specify the type of trace to be performed: <ul style="list-style-type: none"> <li>• T - Simulates a call and displays the tables used to translate and route a call along with the appropriate tuple for each table.</li> <li>• NT - Displays digit translation routes, position routes, and the circuits and/or treatments on which the call would terminate.</li> <li>• B - Invokes both the T and NT option, displaying the tables used to translate and the routes and treatments.</li> </ul>
—sheet 3 of 3—		

**TRAVER parameters**

- A mobile-to-mobile call TRAVER does not display all the tables up to call termination in one pass. Multiple TRAVER commands are required to analyze different stages of translation. There are separate TRAVER commands to verify termination to HLR query and to verify the MSRN, HON or CFN translations.
- The PCS1900 TRAVER command to verify Other Common Carrier route (Equal Access) does not automatically append PIC to the called number. The PIC information must be entered as a CAC dialed call (10XXX/101XXXX + Called Number), where XXX/XXXX is subscriber PIC.
- Index 0 of table PCSATTR is used to get the originating LATA of the call. It must be datafilled with at least the originating LATA in tuple 0.
- PROTOCOL Option verifies the INAP and CAP NOA translation. PROTOCOL option is supported when MS option and CDNCHAR option are input. The PROTOCOL option is either INAP or CAP, followed by NPI and NOA values.

PROTOCOL option is supported for MS option only. When the MS option is specified, and the CDNCHAR is used, then the INAP/CAP

option is required.

When all the required information are specified for the TRAVER, table CDNCHAR displays the result information in TRAVER. If a match is found in table CDNCHAR, the CDNNAME which has been matched is displayed. If no match is found, this fact is shown in the TRAVER. If the CDNCHAR option is not specified, table CDNCHAR does not appear in the TRAVER.

- XLAENTRY option is supported for MS option only. When the MS option is specified, the XLAENTRY option can be selected to input an index which matches a tuple in table XLAENTRY.

The XLAENTRY index is used by the TRAVER to enter a translation entry point in table XLAENTRY and then continue the translation verification.

**Examples**

Figure 3-34 through Figure 3-59 provide various TRAVER examples.

**TRAVER call types**

Use Table 3-38 to find examples of the various TRAVER call types.

**Table 3-38**  
**TRAVER call types**

Description	Figure
TRAVER outgoing call for MS-to-MS call trace using T trace option	Figure 3-34
TRAVER incoming call for land-to-MS call trace with the T parameter	Figure 3-35
MS with CUSTGRP/NCOS to another MS	Figure 3-36
MS-to-land call	Figure 3-37
MS-to-land call with source directed routing specified	Figure 3-38
TRAVER with BC translation (1 of 2)	Figure 3-52
TRAVER with GSM category (CPC) translation	Figure 3-54
TRAVER with ODB translation	Figure 3-55
TRAVER with RANN translation	Figure 3-56
TRAVER with INAP DP3 query	Figure 3-57
Traver with CDNCHAR table output with CDNNAME match	Figure 3-58
TRAVER XLAENTRY option	Figure 3-59

**Table 3-38**  
**TRAVER call types (continued)**

Description	Figure
PCS-1900 MS-to-land call outside the continental USA	Figure 3-39
PCS-1900 MS using CAC to call an international number	Figure 3-40
PCS-1900 MS using CAC to call a national number	Figure 3-41
PCS-1900 MS originated call using FGB	Figure 3-42
MSRN returned from the HLR	Figure 3-43
MS handover call	Figure 3-44
MS call forwarding to another MS	Figure 3-45
MS call forward to land	Figure 3-46
Lack of IN1 query capability	Figure 3-47
TRAVER with TNS parameter in an incoming IAM	Figure 3-48
TRAVER with TNS parameter received with MSRN in IAM	Figure 3-49
TRAVER with BC translation (1 of 2)	Figure 3-52
TRAVER with GSM category (CPC) translation	Figure 3-54
TRAVER with ODB translation	Figure 3-55
TRAVER with RANN translation	Figure 3-56
TRAVER with INAP DP3 query	Figure 3-57
Traver with CDNCHAR table output with CDNNAME match	Figure 3-58
TRAVER XLAENTRY option	Figure 3-59

**TRAVER of outgoing mobile-to-mobile call trace using T trace option**

Figure 3-34 shows TRAVER output of a test call when 61411002131002 is dialed out on a simulated network. The ‘T’ option provides call simulation and displays the tables used to translate and route the call.

**Figure 3-34**  
**TRAVER outgoing call for MS-to-MS call trace using T trace option**

Line	Output
7	>traver ms 1002131001 61411002131002 t
8	
9	WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
10	TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.
11	
12	*** MSC TRANSLATION ***
13	
14	TABLE XLAENTRY
15	0 PX GSMOBILE
16	
17	TABLE PXHEAD
18	GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)\$ NODFOP CON
19	STD
20	THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61411002131002
21	TABLE PXCODE
22	GSMOBILE 61411002 61411002 CONT (MM 3 18) (CONSUME 2) (XLT OFC SRI)\$
23	TABLE OFCHEAD
24	SRI SDFLT NODFOP NOCON STD
25	THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 411002131002
26	TABLE OFCCODE
27	SRI 411002 411002 DBQ (NSC GSMSRI) (MM 3 18) (GSMIDX INTL)\$
28	TABLE GSMDEFS
29	INTL (MODIFY (NOA NOA_INTL) (NPI NPI_ISDN) (TIMEOUT 20) \$)\$
30	
31	+++ TRAVER: SUCCESSFUL CALL TRACE +++

Lines 7–22 consist of the universal translations tables that are used to determine how this call should be translated. The call is given an XLANAME (translation name) of “GSMOBILE.”

Line 25 shows that the call was successfully processed.

### **TRAVER of incoming land-to-mobile call trace with the T parameter**

[Figure 3-35](#) shows an example of a TRAVER of an incoming land-to-mobile call.

**Figure 3-35**  
**TRAVER incoming call for land-to-MS call trace with the T parameter**

Line	Output
32	>traver tr pet7etsi1 61411002131002 t
33	TABLE TRKGRP
34	PET7ETSI1 PET 0 NPDGP NCRT 0 ASEQ PX GSMOBILE NILLATA MSC Y 5 1 0 0
35	CONT ALLOWED ALWAYS Y 6141 \$
36	TABLE PXHEAD
37	GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)\$ NODFOP CON
38	STD
39	THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61411002131002
40	TABLE PXCODE
41	GSMOBILE 61411002 61411002 CONT (MM 3 18) (CONSUME 2) (XLT OFC SRI)\$
42	TABLE OFCHEAD
43	SRI SDFLT NODFOP NOCON STD
44	THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 411002131002
45	TABLE OFCCODE
46	SRI 411002 411002 DBQ (NSC GSMSRI) (MM 3 18) (GSMIDX INTL)\$
47	TABLE GSMDEFS
48	INTL (MODIFY (NOA NOA_INTL) (NPI NPI_ISDN) (TIMEOUT 20) \$)\$
49	
50	+++ TRAVER: SUCCESSFUL CALL TRACE +++

Line 1 shows a TRAVER for a trunk originated call.

Lines 2–4 show the TRKGRP table used to bring the call in from the network in preparation for entry into the universal translations tables.

Lines 5–17 consist of the universal translations tables used to determined how this call should be translated.

**TRAVER of mobile with CUSTGRP/NCOS to another MS**

Figure 3-36 shows a TRAVER of an MS-to-MS call with a customer group of 37 and network class of service of 5.

**Figure 3-36  
MS with CUSTGRP/NCOS to another MS**

```

>traver ms 61411002131002 lac 1 cid 1 custgrp 37 ncoc 5 647799 t
*** VLR TRANSLATION FOR CUSTGRP AND NCOS ***
TABLE GSMCUST
37 BANK (XLT PX BANKXLA)$
TABLE GSMNCOS
37 5 BANK_MX (XLT PX MEXICXLA)$
TABLE PXHEAD
MEXICXLA SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                647799
TABLE PXCOD
MEXICXLA 64 64 DMOD (INSRT 214684) (DEL 2) (XLT PX DEADRTE)$
TABLE PXHEAD
DEADRTE SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                2146847799
TABLE PXCOD
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
VLR TRANSFORMED CALLED NUMBER IS:                            2146847799
*** MSC TRANSLATION ***
TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 0 (11)$ $ $ $ (AOC 1 ZONE1)$
TABLE XLAENTRY
11 PX LAC1XLA
TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM RENPXLA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                2146847799
TABLE PXCOD
LAC1XLA 21468 21468 DBQ (NSC GSM SRI) (GSMIDX SRI6)$
TABLE GSMDEFS
SRI6 (MODIFY (NOA NOA_INTL) (NPI NPI_ISDN) (TIMEOUT 25) $)$
+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

### TRAVER of a mobile-to-land call

Figure 3-37 shows a TRAVER of a mobile-to-land call. NPI and NOA are input to TRAVER command using the CNDCHAR option. Options T and NT are not supported.

Table CDNCHAR displays the required information in TRAVER. If a match is found in table CDNCHAR, the matching CDNNAME tuple is displayed. If no match is found, it is indicated in the TRAVER.

**Figure 3-37**  
**MS-to-land call**

```
>traver ms 61411002131002 19726850423 b
WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL.  THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

*** MSC TRANSLATION ***

TABLE XLAENTRY
0 PX GSMOBILE

TABLE PXHEAD
GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                19726850423
TABLE PXCDE
GSMOBILE 1972 1972 CONT (CONSUME 0) (XLT OFC PET7ETSI)$
TABLE OFCHEAD
PET7ETSI SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                19726850423
TABLE OFCCDE
PET7ETSI 1 1 RTE (DEST 1)$
TABLE: OFCRTE
KEY: PET7ETSI      1
. S PET7ETSI1
EXIT TABLE OFCRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL.  THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

DIGIT TRANSLATION ROUTES
1 ETSIISUPP          61410315000          ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T120

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**TRAVER of mobile-to-land call with source directed routing specified**

Figure 3-38 shows a TRAVER of a mobile-to-land call that has the location area code and cell identifier specified.

**Figure 3-38**  
**MS-to-land call with source directed routing specified**

```
>traver ms 61411002131002 lac 1 cid 2 19726850423 b
*** MSC TRANSLATION ***
TABLE LAC
1 2 ITACBSS1 UNRSTRCT 0 0 0 (11)$ $ $ $ (AOC 1 ZONE1)$
TABLE XLAENTRY
11 PX LAC1XLA
TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM RENPXLA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                19726850423
TABLE PXCDE
LAC1XLA 1972 1972 CONT (CONSUME 0) (XLT OFC PET7ETSI)$
TABLE OFCHEAD
PET7ETSI SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                19726850423
TABLE OFCCDE
PET7ETSI 1 1 RTE (DEST 1)$
TABLE: OFCRTE
KEY: PET7ETSI      1
. S PET7ETSI1
EXIT TABLE OFCRTE
+++ TRAVER: SUCCESSFUL CALL TRACE +++
DIGIT TRANSLATION ROUTES
1 PET7ETSI1          19726850423      ST
  BILL              61411002131002    ST
TREATMENT ROUTES.  TREATMENT IS: GNCT
1 VCA
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**TRAVER of PCS-1900 calls**

Figure 3-39 through Figure 3-42 show TRAVERs of various PCS-1900 calls.

**Figure 3-39**  
**PCS-1900 MS-to-land call outside the continental USA**

```
>TRAVER MS 5002223242 LAC 1 CID 1 14034476674 B

*** MSC TRANSLATION ***

TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 (11)$ (GSMNA 1)$
TABLE PCSATTR
1 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 722) $
TABLE XLAENTRY
11 PX LAC1XLA

TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM FINDDIG)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          14034476674
TABLE PXCOD
LAC1XLA 12 19 GCP (SC 101) (XLT PX EAXLA) (MM 8 11) $
TABLE PXHEAD
EAXLA DFLT CONT (XLT AM FINDDIG)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          101044414034476674
TABLE PXCOD
EAXLA 1010444 1010444 GCP (DC) (XLT PX CAR4XLA) (PF 7) $
TABLE PXHEAD
CAR4XLA DFLT CONT $ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          14034476674
TABLE PXCOD
CAR4XLA 12 19 CONT (XLT FA CAR4XLA) (PF 1) $
TABLE FAHEAD
CAR4XLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 92214573140
TABLE PXCOD
CAR4XLA 9 9 CONT (XLT FA CAR4XLA) $
TABLE FAHEAD
CAR4XLA DFLT RTE (DEST 1) $ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 92214573140
TABLE FACOD
CAR3 XLA 2 9 CRSC (CARRIER CAR 3DIG) (XLT PX SCARXLA) $
TABLE OCCINFO
CAR1 0444 TRANS Y Y Y Y N N N N N Y Y SHORT 0 NONE N N N N N N N N
N Y N N
TABLE FAHEAD
SCARXLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          4034476674
TABLE FACOD
TABLE: FARTE SCARXLA 403 403 RTE (DEST 1)$

KEY: SCARXLA      1
     . S ITACANSI2
EXIT TABLE FARTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ITACANSI2          4034476674      ST
  BILL              5002223242      ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Figure 3-40**  
**PCS-1900 MS using CAC to call an international number**

```

>TRAVER MS 5002223242 LAC 1 CID 1 1022201192214573140 B

*** MSC TRANSLATION ***

TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 (11)$ (GSMNA 1)$
TABLE PCSATTR
1 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 722) $
TABLE XLAENTRY
11 PX LAC1XLA

TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM FINDDIG)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          1022201192214573140
TABLE PXCDE
LAC1XLA 10222 10222 GCP (DC) (XLT PX CAR3XLA) (PF 5) $
TABLE PXHEAD
CAR3XLA DFLT CONT $NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          01192214573140
TABLE PXCDE
CAR3XLA 011 011 GCP (INTL) (XLT PX CAR3XLA) (CLASS INTL) (PF 3)$
TABLE PXHEAD
CAR3XLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          92214573140
TABLE PXCDE
CAR4XLA 12 19 CONT (XLT FA CAR4XLA) (PF 1) $
TABLE FAHEAD
CAR4XLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          4034476674
TABLE FACODE
CAR3XLA 2 9 CRSC (CARRIER CAR 3DIG) (XLT PX SCARXLA) $
TABLE OCCINFO
CAR1 0222 TRANS Y Y Y Y N N N N N Y Y SHORT 0 NONE N N N N N N N N
N Y N N
TABLE PXHEAD
CAR1XLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          92214573140
TABLE PXCDE
SCARXLA 2 9 RTE (DEST 1)$
TABLE: PXRTE
KEY: SCARXLA      1
. S ITACANSI2
EXIT TABLE PXRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ITACANSI2          92214573140      ST
  BILL              5002223242      ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

**Figure 3-41**  
**PCS-1900 MS using CAC to call a national number**

```
>TRAVER MS 5002223242 LAC 1 CID 1 1044417133308214 B

*** MSC TRANSLATION ***

TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 (11)$ (GSMNA 1)$
TABLE PCSATTR
1 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 722) $
TABLE XLAENTRY
11 PX LAC1XLA

TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM FINDDIG)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          1044417133308214
TABLE PXCDEF
LAC1XLA 10444 10444 GCP (DC) (XLT PX CAR3XLA) (CONSUME 5) (PF 5) $
TABLE PXHEAD
CAR3XLA DFLT CONT $NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          17133308214
TABLE PXCDEF
CAR3XLA 12 19 CONT ((XLT FA CAR3XLA) (PF 1) $
TABLE FAHEAD
CAR3XLA DFLT CONT $NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          7133308214
TABLE FACDEF
CAR3XLA 2 9 CRSC ((CARRIER CAR 3DIG) (XLT FA SCARXLA) $
TABLE OCCRDIG
TUPLE NOT FOUND
INSIDE CONTINENTAL USA CALL
TABLE LATAXLA
DIGITS USED TO INDEX TABLE LATAXLA ARE :              7133308214
DALLAS 713 INTER INTRA STD
TABLE OCCINFO
CAR1 0444 TRANS Y Y Y Y N N N N N Y Y SHORT 0 NONE N N N N N N N
N Y N N
TABLE FAHEAD
SCARXLA DFLT RTE (DEST 1)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          7133308214
TABLE FACDEF
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE: FARTE
KEY: SCARXLA      1
. S ITACANSI2
EXIT TABLE PXRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ITACANSI2          17133308214      ST
  BILL              5002223242      ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Figure 3-42**  
**PCS-1900 MS originated call using FGB**

```

> TRAVER MS 5002223242 LAC 1 CID 1 9503665 B
*** MSC TRANSLATION ***

TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 (11)$ (GSMNA 1)$
TABLE PCSATTR
1 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 722) $
TABLE XLAENTRY
11 PX LAC1XLA

TABLE PXHEAD
LAC1XLA DFLT CONT (XLT AM FINDDIG)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                9503665
TABLE PXCOD
LAC1XLA 9503665 9503665 FGB (XLT PX CARXLA) (CARRIER CAR)$
TABLE PFGBCIC4
CAR2 3665
TABLE PXHEAD
CARXLA DFLT TRMT (OFC VACT)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                9503665
TABLE PXCOD
CARXLA 9503665 9503665 RTE (DEST 1)$
TABLE: PXRTE
KEY: CARXLA 1
. S ITACANSI2
EXIT TABLE PXRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ITACANSI2                9503665                ST
  BILL                    5002223242                ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
    
```

**TRAVER of mobile whose MSRN is returned from the HLR**

Figure 3-43 shows a TRAVER of a call in which the HLR returns the mobile’s MSRN.

**Figure 3-43**  
**MSRN returned from the HLR**

```
>traver ms 61411002131002 msrn 614140800100 b

WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

*** MSC TRANSLATION ***

TABLE XLAENTRY
2 PX MSRNXLA

TABLE PXHEAD
MSRNXLA DFLT CONT (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          614140800100
TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE PXHEAD
GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          614140800100
TABLE PXCODE
GSMOBILE 61414 61414 CONT (MM 3 18) (CONSUME 4) (XLT PX MSRNXLA)$
TABLE PXHEAD
MSRNXLA DFLT CONT (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          40800100
TABLE PXCODE
MSRNXLA 408 408 CONT (CONSUME 0) (XLT OFC PAGING)$
TABLE OFCHEAD
PAGING SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          40800100
TABLE OFCCODE
PAGING 408 408 DNRTE (DN 6141 4080)$

+++ TRAVER: SUCCESSFUL CALL TRACE +++

WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

DIGIT TRANSLATION ROUTES

1 FEATURE          614140800100          ST
  BILL             1411002131002

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 VCA

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**TRAVER of mobile handover call**

Figure 3-44 shows a TRAVER of an MS handover call.

**Figure 3-44**  
**MS handover call**

```
>traver ms 4151234566 hon 5291234567 b

WARNING: NO LAC AND CID/SAC PROVIDED FOR MOBILE ORIG CALL.  THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

*** MSC TRANSLATION ***

TABLE PCSATTR
0 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 702) $
TABLE XLAENTRY
3 PX HONXLA

TABLE PXHEAD
HONXLA DFLT CONT ( CONSUME 0) ( XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                5291234567
TABLE PXCDE
HONXLA 529 529 CONT ( CONSUME 0) ( XLT OFC HANDOVER)$
TABLE OFCHEAD
HANDOVER SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                5291234567
TABLE OFCCDE
HANDOVER 529 529 DNRTE ( DN 214 529)$

+++ TRAVER: SUCCESSFUL CALL TRACE +++

WARNING: NO LAC AND CID/SAC PROVIDED FOR MOBILE ORIG CALL.  THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

TREATMENT ROUTES.  TREATMENT IS: BLDN
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**TRAVER of a mobile call forwarding to another mobile**

[Figure 3-45](#) shows a TRAVER of a mobile call forwarding to another mobile.

**Figure 3-45**  
**MS call forwarding to another MS**

```
> traver ms 61411002131002 cfn 61411002131007 b
WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

*** MSC TRANSLATION ***

TABLE XLAENTRY
1 PX CFXLA

TABLE PXHEAD
CFXLA DFLT CONT (XLT PX GSMOBILE)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          61411002131007
TABLE PXCDEF
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE PXHEAD
GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          61411002131007
TABLE PXCDEF
GSMOBILE 61411002 61411002 CONT (MM 3 18) (CONSUME 2) (XLT OFC SRI)$
TABLE OFCHEAD
SRI SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          411002131007
TABLE OFCDEF
SRI 411002 411002 DBQ (NSC GSMSRI) (MM 3 18) (GSMIDX INTL)$
TABLE GSMDEF
(MODIFY (NOA NOA_INTL) (NPI NPI_ISDN) (TIMEOUT 20) $)$
+++ TRAVER: SUCCESSFUL CALL TRACE +++

WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

+++ TRANSLATION ROUTES TO SRI QUERY FEATURE +++
    DIGIT TRANSLATION ROUTE NOT AVAILABLE

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**TRAVER of mobile call forwarding to land**

[Figure 3-46](#) shows a TRAVER of a mobile call forwarding to land.

**Figure 3-46**  
**MS call forward to land**

```

>traver ms 61411002131002 cfn 19726850423 b
WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

*** MSC TRANSLATION ***

TABLE XLAENTRY
1 PX CFXLA

TABLE PXHEAD
CFXLA DFLT CONT (XLT PX GSMOBILE)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          19726850423
TABLE PXCORE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE PXHEAD
GSMOBILE DFLT CONT (MM 1 18) (CONSUME 0) (XLT PX GSMOBILE)$ NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          19726850423
TABLE PXCORE
GSMOBILE 1972 1972 CONT (CONSUME 0) (XLT OFC PET7ETSI)$
TABLE OFCHEAD
PET7ETSI SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          19726850423
TABLE OFCCODE
PET7ETSI 1 1 RTE (DEST 1)$
TABLE: OFCRTE
KEY: PET7ETSI      1
   . S PET7ETSI1
EXIT TABLE OFCRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS
TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.

DIGIT TRANSLATION ROUTES

1 PET7ETSI1          19726850423      ST
  BILL              61411002131002    ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 VCA

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

### TRAVER for lack of IN1 query capability

TRAVER can print a message if the call has routed to the IN1 feature, or display an error message if the MSC does not have IN1 Query capability (that is, the GSM\_IN1\_ACTIVE office parameter is set to “N”). After the office parameter has been modified, the TRAVER can be used to determine whether toll free SAC calls are being routed correctly to the IN1 feature. See [Figure 3-47](#).

### Detecting a route on SCP returned routing number

A TRAVER can be performed on the SCP returned routing number. To route on the toll free number and SCP returned routing number, additional tables must be datafilled. For details on the TRAVER command, see NTP *DMX-MTX Customer Data Schema Reference Manual*; 411-2131-451, Volume 1, 2, or 3, or NTP *DMS-100 Family Command Reference Manual*, 297-1001-822.

**Figure 3-47**  
**Lack of IN1 query capability**

```
> TRAVER MS 5002223242 LAC 81 CID 1 18005551212 B
*** MSC TRANSLATION ***

TABLE LAC
81 1 ITACBSS1 UNRSTRCT 0 0 (81)$ (GSMNA 1)$
TABLE PCSATTR
1 DALLAS (PSEUDONO 214 722 1234) (JIPINFO 214 702) $
TABLE XLAENTRY
81 PX TFSACXLA
TABLE PXHEAD
TFSACXLA DFLT CONT (XLT AM PCSEA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          18005551212
TABLE PXCODE
TFSACXLA 1800 1800 DBQ (IN1TF 3) (DBQCONT AM SCPRETXLA) $

+++ THIS MSC DOES NOT HAVE IN1 SCP QUERY CAPABILITY +++

TABLE AMHEAD
SCPRETXLA SDFLT NODFOP CON STD
...etc...

+++ TRAVER: SUCCESSFUL CALL TRACE +++

+++ THIS MSC DOES NOT HAVE IN1 SCP QUERY CAPABILITY +++

+++ TRANSLATION ROUTES TO IN1 TOLL FREE QUERY FEATURE +++

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

### TRAVER with TNS parameter in an incoming IAM

The TRAVER command can be used to simulate the receipt of a TNS parameter on an incoming IAM by using the following command syntax:

**TRAVER tr <trunk name> <10xxx/101xxxx + dialled digits> b**

Since the TNS parameter is automatically prefixed to the CALLED NUMBER, the called number must be prefixed with the correct 10XXX/101XXXX CAC combination:

- If the EAEO\_FOUR\_DIGIT\_CIC\_STATUS is set to THREEDIG, the called number must be prefixed with a 10XXX, where XXX is the three digit TNS value received in the incoming IAM.
- If the office parameter is set to FOURDIG, a 101XXXX should be prefixed before the called number.
- If the office parameter is set to PERMISSIVE, you must determine whether a 3- or 4-digit TNS value is to be received and prefix the correct CAC to the called number.

The example shown in [Figure 3-48](#) assumes that appropriate datafill is present in the associated tables. Datafill has to be set up so that a 1 is prefixed before the called number but after the 10XXX/101XXXX CAC. If not, the called number should include the 1 between the 10XXX/101XXXX and the called number.

**Figure 3-48**  
**TRAVER with TNS parameter in an incoming IAM**

```
>traver tr tac7at1 106668175611111 b
TABLE TRKGRP
TAC7AT1 PET 0 NPDGP NCRT 0 ASEQ PX LAC81XLA DALLAS AT Y 5 0 CONT ALLOWED
ALLOWED Y 214810 $
TABLE PXHEAD
LAC81XLA DFLT CONT (XLT AM PCSEA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          106668175611111
TABLE PXCOD
LAC81XLA 10666 10666 DMOD (INSRT 1) (AFTER 5) (XLT FA PICXLA)$
TABLE FAHEAD
PICXLA SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          1066618175611111
TABLE FACOD
PICXLA 10666 10666 EA (MM 3 18) (XLT FA SWBXLA) (PF 5) (CARRIER SWBELL)$
TABLE OCCRDIG
TUPLE NOT FOUND
INSIDE CONTINENTAL USA CALL
TABLE LATAXLA
DIGITS USED TO INDEX TABLE LATAXLA ARE:              8175611111
DALLAS 817 INTER INTRA STD
TABLE OCCINFO
SWBELL 0666 TRANS Y Y Y N Y N N N N Y Y SHORT 0 NONE Y Y Y N Y N N N N Y Y N
TABLE FAHEAD
SWBXLA SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          18175611111
TABLE FACOD
SWBXLA 1817 1817 CONT (MM 3 18) (CONSUME 4) (XLT FA SWBXLA)$
TABLE FAHEAD
SWBXLA SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          5611111
TABLE FACOD
SWBXLA 561 561 RTE (PF 4) (DEST 1)$
TABLE: FARTE
KEY:   SWBXLA    1
      . S TAC7IC1
EXIT TABLE FARTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

---

**TRAVEL with TNS option received with MSRN in IAM**

This section applies to incoming IAMs that meet the following criteria:

- The CALLED NUMBER is an MSRN (Mobile Subscriber Roaming Number)
- The incoming trunk is an INC (International Carrier) trunk
- A TNS parameter is included as an optional parameter

If these conditions are met and the call is trying to terminate to a mobile currently served by this MSC, the mobile will **not** be paged unless the operator removes the CAC from the CALLED NUMBER by using the DMOD option. For example, if an MSRN of 12144110000 is received in the incoming IAM from trkgrp TAC7AT1 with a TNS of 666, the datafill must use the DMOD option to completely remove the CAC from the CALLED NUMBER. See [Figure 3-49](#).

**Figure 3-49**  
**TRAVER with TNS parameter received with MSRN in IAM**

```
> traver tr tac7at1 12144110000 tns us cic 666 b
Warning: Routing characteristics are present.
Originator must be able to send in characteristics specified.
TABLE TRKGRP
TAC7AT1 PET 0 NPDGP NCRT 0 ASEQ PX LAC81XLA DALLAS AT Y 5
0 CONT ALLOWED ALLOWED Y 214810 $
TABLE PXHEAD
LAC81XLA DFLT CONT (XLT AM PCSEA)$ NODFOP TABLE PXCDE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE AMHEAD
PCSEA SDFLT
THE TOTAL NUMBER OF DIGITS IS 16.
TABLE AMCODE
PCSEA 16 EQ DMOD (XLT FA PICXLA)$
TABLE FAHEAD
PICXLA SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          1066612144110000
NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          1066612144110000
TABLE FACODE
PICXLA 10666 10666 DMOD (DEL 5) (XLT FA PCSXLA) (CONSUME 0)$
TABLE FAHEAD
PCSXLA SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          12144110000
TABLE FACODE
PCSXLA 1214411 1214411 CONT (PF 1) (MM 3 18) (CONSUME 4) (XLT OFC PAGING)$
TABLE OFCHEAD
PAGING SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          4110000
TABLE OFCCODE
PAGING 411 411 DNRTE (DN 1214 411)$

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 TREATMENT ROUTES.  TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**TRAVER with ETSI in ISUP**

Figure 3-50 shows the TRAVER with ETSI in ISUP command output.

**Figure 3-50****TRAVER with ETSI in ISUP**

```

>traver tr etsiisupp 61410315000 b cdnchar 1 1
TABLE CDNCHAR
. Matched on CDNINTL
TABLE TRKGRP
ETSIISUPP PET 0 NPDGP NCRT 0 ASEQ PX GSMOBILE NILLATA MSC Y 5 1 0 0 CONT ALLOWED
ALWAYS Y 6141 $
TABLE PXHEAD
GSMOBILE DFLT CONT ( MM 1 18) ( CONSUME 0) ( XLT PX GSMOBILE)$ NODFOP CON F
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 61410315000
TABLE PXCODE
GSMOBILE 6141031 6141031 CONT ( MM 2 18)( CONSUME 7)( XLT OFC ETSIISUP)( CDNRTE} )
TABLE CDNUXLA
. CDNINTL PX GSMOBILE RTE PX GSMOBILE 4
TABLE: PXRTE
KEY: GSMOBILE 4
. S ANSIISUPP
EXIT TABLE PXRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

**Pre-VLR translation verification**

Figure 3-51 shows an example of a pre-VLR translation verification.

**Figure 3-51**  
**Pre-VLR translation verification**

```
>traver ms 1 lac 1 cid 1 c23 p b
*** MSC TRANSLATION ***
TABLE LAC
1 1 ITACBSS1 UNRSTRCT 0 0 0 (11)$ $ $ $ (AOC 1 ZONE1) (PREXLIDX 100)$
TABLE XLAENTRY
100 PX PREXLA1
TABLE PXHEAD
PREXLA1 DFLT CONT (XLT PX GSMOBILE)$ NODFOP NOCON C
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: C23
TABLE PXCODE
PREXLA1 C23 C23 DMOD (INSRT 62225206709) (DEL 3) (XLT PX VLRXLA)$
TABLE PXHEAD
VLRXLA DFLT CONT (XLT AM VLRXLA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 62225206709
TABLE PXCODE
VLRXLA 62 62 NCNT (PCC 62) (CLASS INTL)$
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

### Call characteristics translations

This feature enhances the existing GSM translation systems to support call translation and routing based on the call's information or the call's characteristics.

The call characteristics are the qualities of a call that can be derived from the call's setup messages, the call agents' office datafill, or can be defined by the call processing software. The following are the call characteristics supported by this feature:

- BC – Bearer Capability
- GSM category – Calling Party Category also described in Q.767.
- ODB – Operator Determined Barring
- ANT – Recorded Announcement (RANN) Type
- INAP DP3 Query

[Figure 3-52](#) through [Figure 3-57](#) all show TRAVERs of a call with the preceding call characteristics.

**Figure 3-52**  
**TRAVER with BC translation (1 of 2)**

```

>traver ms 61904444 lac 9 cid 9 5555 BC 64kdata b
  *** MSC TRANSLATION ***

TABLE GSMCHAR
DATA64K (BC 64KDATA $)

TABLE LAC
9 9 BSS2 UNRSTRCT 0 0 ( 99)$

TABLE XLAENTRY
99 PX GSMXLA

TABLE UXLAMAP
TUPLE NOT FOUND

TABLE PXHEAD
GSMXLA DFLT CONT (XLT AM RENPXLA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                5555
TABLE PXCORE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED

TABLE AMHEAD
RENPXLA SDFLT
THE TOTAL NUMBER OF DIGITS IS 4.
TABLE AMCODE
RENPXLA 4 LE TNUM (NNUM CALLINGDN) ( XLT PX RENPXLA)$

TABLE PXHEAD
RENPXLA DFLT TNUM (NNUM CALLEDDN) ( XLT PX GSMOBILE)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                61904444
TABLE PXCORE
RENPXLA 6190 6190 TNUM (NNUM CALLEDDN) ( XLT FA 90XLA)$

TABLE FAHEAD
90XLA SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                5555
TABLE FACODE
90XLA 5 5 DMOD ( INSRT 00116190) ( XLT PX INTXLA)$

TABLE PXHEAD
INTXLA DFLT CONT ( XLT AM INTXLA)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                001161905555
TABLE PXCORE
INTXLA 0011 0011 DMOD ( DEL 4) ( XLT FA SNP61XLA)$

```

**Figure 3-53**  
**TRAVER with BC translation (2 of 2)**

```
TABLE FAHEAD
SNP61XLA SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                61905555
TABLE FACODE
SNP61XLA 61905 61905 CONT ( XLT FA IBN7XLA)$

TABLE FAHEAD
IBN7XLA DFLT RTE ( DEST 2)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                61905555
TABLE FACODE
TUPLE NOT FOUND

TABLE FARTE
IBN7XLA 2 (S RTE2CLLI)$

TABLE UNIMAP
FA IBN7XLA 2 DATA64K OFC 64KRTE 5
DEFAULT FROM HEAD TABLE USED
TABLE: OFCRTE

KEY: 64KRTE 5
. S IBN64KDATA
EXIT TABLE OFCRTE

KEY: 64KRTE 5
. S IBN64KDATA
EXIT TABLE OFCRTE
```

**Figure 3-54**  
**TRAVER with GSM category (CPC) translation**

```
>traver ms 61904444 lac 9 cid 9 5555 ANT cfnry CPC french b
*** MSC TRANSLATION ***

TABLE GSMCHAR
CFNRYFAN (ANT CFNRY) (CPC FRENCH)$

TABLE LAC
9 9 BSS2 UNRSTRCT 0 0 ( 99)$

TABLE XLAENTRY
99 PX GSMXLA

TABLE UXLAMAP
PX GSMXLA CFNRYFAN PX CFNRYANN

TABLE PXHEAD
CFNRYANN DFLT RTE ( DEST 2 ) NODFOP NOCON STD
TABLE PXCOD
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE SED

TABLE UNIMAP
CFNRYANN 2 CFNRYFAN OFC CFNRYANN 5

TABLE: OFCCRTE
KEY: CFNRYANN 5
. S FRCHANN3
EXIT TABLE OFCCRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Figure 3-55**  
**TRAVER with ODB translation**

```
>traver ms 61904444 odb prement lac 9 cid 9 6666 b
*** MSC TRANSLATION ***
TABLE GSMCHAR
ODBPARENT (ODB PREMENT)$
TABLE XLAENTRY
4 PX RANNODB
TABLE UXLAMAP
TUPLE NOT FOUND
TABLE PXHEAD
RANNODB DFLT TNUM (NNUM CALLINGDN) (XLT AC RANNODB2) NODFOP NOCON STD
TABLE PXCODE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE ACHEAD
RANNODB2 DFLT RTE ( DEST 2)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                61904444
TABLE ACCODE
TUPLE NOT FOUND
TABLE UNIMAP
RANNODB2 2 ODBPRENT OFC RANNODB9 9
TABLE: OFCRTE
KEY: RANNODB9 9
. T OFRT 66
EXIT TABLE OFCRTE
TABLE OFRT
66 (S D ODBann36)
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Figure 3-56**  
**TRAVER with RANN translation**

```
>Trace for: ms 61904444 lac 9 cid 9 5555 BC speech ANT page b
*** MSC TRANSLATION ***
TABLE GSMCHAR
RSPCpage (ANT page)(BC SPEECH)$
TABLE LAC
9 9 BSS2 UNRSTRCT 0 0 ( 99)$
TABLE XLAENTRY
99 PX GSMXLA
TABLE UXLAMAP
PX RANN RSPCpage PX RANN1
TABLE PXHEAD
RANN1 DFLT TNUM (NNUM CALLINGDN) (XLT AC RANN2) NODFOP NOCON STD
TABLE PXCOD
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE ACHEAD
RANN2 DFLT RTE ( DEST 2)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                61904444
TABLE ACCODE
RANN2 6150 6190 RTE (DEST 4)$
TABLE UNIMAP
RANN2 4 RSPCpage OFC RANNCLLI 5
TABLE: OFCRTE
KEY: RANNCLLI 5
. T OFRT 22
EXIT TABLE OFCRTE
TABLE OFRT
22 (S D PageAnnc)
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Figure 3-57**  
**TRAVER with INAP DP3 query**

```
>traver ms 1002131001 LAC 401 CID 11 995551234567 t

*** MSC TRANSLATION ***

TABLE LAC
401 11 BSSP2CP EXNATL 0 0 0 ( 31)$ 1 214 0 ( GSMNA 2) (PREXLIDX 105)$ $
TABLE PCSATTR
2 OKLAHOMA (PSEUDONO 405 722 1234) (JIPINFO 405 702) $
TABLE XLAENTRY
31 PX LAC31XLA

TABLE PXHEAD
LAC31XLA DFLT CONT ( CONSUME 0) ( XLT AM PCSDGS)$ NODFOP NOCON C
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          995551234567
TABLE PXCDEF
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE AMHEAD
PCSDGS SDFLT
THE TOTAL NUMBER OF DIGITS IS 12.
TABLE AMCODE
PCSDGS 12 EQ CONT ( XLT AC 12DIG)$
TABLE ACHEAD
12DIG DFLT NCNT $ DFOP $ NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          995551234567
TABLE ACCODE
12DIG 99 99 DBQ ( INAP $) ( DBQCONT PX INAP)$

Entering INAP Option

+++ TRANSLATIONS WILL CONTINUE WITH THE ROUTING +++
+++          NUMBER RETURNED BY THE SCP IN          +++
+++          TABLE : PXHEAD TABLE                +++
+++ ON XLA NAME : INAP                             +++

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Figure 3-58**  
**Traver with CDNCHAR table output with CDNNAME match**

```
>TRAVER ms 1 61410385000 b CDNCHAR CAP 1 3
TABLE CDNCHAR
. Matched on CAPNATL
...

```

**Figure 3-59**  
**TRAVER XLAENTRY option**

```
>TRAVER ms 123456 xlaentry 8 61410385000 b
*** MSC TRANSLATION ***
TABLE XLAENTRY
8 PX GSMOBILE
TABLE PXHEAD
GSMOBILE DFLT CONT ( MM 1 18) ( CONSUME 0) ( XLT PX GSMOBILE)$ NODFOP CON F
...

```

### **TRAVER for translations based on CPC**

[Figure 3-60](#) shows TRAVER for VLR translations based on CPC. [Figure 3-61](#) shows TRAVER for route characteristic translations based on CPC.

**Figure 3-60**  
**TRAVER VLR translations based on CPC**

```
>TRAVER MS 7654321 LAC 1 CID 1 cpc category28 647799 b
.....

*** VLR TRANSLATION FOR CPC ***

TABLE GCPCXLA
28 PX NWSIMXLA

TABLE PXHEAD
NWSIMXLA SDFLT DFOP NOCON STD
TABLE PXCODE
NWSIMXLA 64 64 DMOD (DEL 2) (INSRT 214684) $

VLR TRANSFORMED CALLED NUMBER IS: 2146847799

*** MSC TRANSLATION ***

TABLE LAC
1 1 GSMRTESET1 0 0 $
TABLE XLAENTRY
0 PX GSMOBILE

TABLE PXHEAD
GSMOBILE DFLT DMOD (XLT OFC GSMOBILE)$ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 2146847799

TABLE PXCODE
GSMOBILE 21 21 CONT ( XLT OFC GSMOBILE)$

TABLE OFCHEAD
GSMOBILE SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 2146847799
TABLE OFCCODE
GSMOBILE 21 21 RTE ( DEST 2)$
TABLE: OFCRTE
KEY: GSMOBILE 2
. T OFRT 3
. . TABLE OFRT
. . 3 DN 214 684
. . EXIT TABLE OFRT
EXIT TABLE OFCRTE
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Figure 3-61**  
**TRAVER for route characteristic translations based on CPC**

```

>traver ms 61411216030 lac 301 cid 1 614103150 cpc category28 b
Warning: Routing characteristics are present.
        Originator must be able to send in
        characteristics specified.

TABLE GSMCHAR2
TUPLE NOT FOUND
TABLE GSMCHAR
. HOTL (CPC CATEGORY28 $)$

*** MSC TRANSLATION ***

TABLE LAC
301 1 BSSP1CP EXNATL 0 0 0 ( 31)$ 61 41 0 ( AOC 1 ZONE5) (PREXLIDX 118)$ $
TABLE XLAENTRY
31 PX LAC31XLA

TABLE UXLAMAP
. PX LAC31XLA HOTL PX HOTLINE
TABLE PXHEAD
HOTLINE SDFLT NODFOP CON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                614103150
TABLE PXCORE
HOTLINE 61410315 61410315 CONT ( CONSUME 7) ( XLT OFC ETSIISUP)$
TABLE OFCHEAD
ETSIISUP SDFLT NODFOP NOCON F
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                50
TABLE OFCCODE
ETSIISUP 50 50 RTE ( DEST 1)$
TABLE: OFCRTE
KEY: ETSIISUP      1
. S ETSIISUP
EXIT TABLE OFCRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ETSIISUP          614103150          ST
  BILL             61411216030          ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 RELSIG

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

### TRAVER with RC SVC video input

The traver command allows for RC SVC VIDEO input to display any new datafilled RC selector set SVC VIDEO in table GSMCHAR2.

Figure 3-62 shows TRAVER ITU-T ISUP V3 to ITU-T ISUP V3 tandem (transit) call.

Figure 3-63 shows Traver for a 3GPP RANAP to ITU-T ISUP V3 call.

Figure 3-64 shows Traver for a ITU-T PRI to ITU-T ISUP V3 call.

**Figure 3-62**  
**TRAVER ITU-T ISUP V3 to ITU-T ISUP V3 tandem (transit) call**

```
> traver tr TRKGRP1 215780220 bc 64kdata svc video t

Warning: Routing characteristics are present.
Originator must be able to send in characteristics specified.

TABLE GSMCHAR2
. UDIVID ( BC 64KDATA SVC VIDEO (CPC ALL)$)$ 3
TABLE TRKGRP
TRKGRP1 PET 0 STDTK NCRT 0 CNTLEVN PX TRKGRP1_name NILLATA OTHER N 0 0 0 0 CONT
NEVER ALWAYS N 43664 $
TABLE UXLAMAP
TUPLE NOT FOUND
TABLE PXHEAD
TRKGRP1_name SDFLT NODFOP NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                215780220
TABLE PXCORE
TRKGRP1_name 21 21 CONT ( XLT OFC TRKGRP1_name)$
TABLE OFCHEAD
TRKGRP1_name SDFLT DFOP ( CDN NATL N)$ NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                215780220
TABLE OFCCODE
TRKGRP1_name 21 21 RTE ( MM 6 18) ( DEST 1) ( MZONE 10) ( LNET HOMENET)$
TABLE UNIMAP
. OFC TRKGRP1_name 1 UDIVID OFC TRKGRP1_vid_name 10
TABLE: OFCRTE
KEY: TRKGRP1_vid_name 10
. S TRKGRP_og_video
EXIT TABLE FARTE
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Figure 3-63**  
**Traver for a 3GPP RANAP to ITU-T ISUP V3 call**

```

>traver ms 436642021011 lac 7 cid 701 0215780220 bc 64kdata svc video t

Warning: Routing characteristics are present.
Originator must be able to send in characteristics specified.

TABLE GSMCHAR2
. UDIVID ( BC 64KDATA svc video (CPC ALL)$)$ 2

*** MSC TRANSLATION ***

TABLE LAC
7 701 RSBSS1G UNRSTRCT 0 0 0 ( 701)$ $ $ $ ( AOC 10 $)$ 2
TABLE XLAENTRY
701 PX PXIDX40

TABLE UXLAMAP
TUPLE NOT FOUND
TABLE PXHEAD
PXIDX40 DFLT CONT ( XLT PX PXBSCG)$ NODFOP NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 0215780220
TABLE PXC0DE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
TABLE PXHEAD
PXBSCG SDFLT NODFOP NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 0215780220
TABLE PXC0DE
PXBSCG 02 02 CONT ( PF 1) ( XLT FA FAMOC0G)$
TABLE FAHEAD
FAMOC0G SDFLT DFOP ( CDN NATL N)$ NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 215780220
TABLE FAC0DE
FAMOC0G 21 21 RTE ( MM 6 18) ( DEST 21) ( MZONE 10) ( LNET HOMENET)$
TABLE UNIMAP
. FA FAMOC0G 21 UDIVID FA FAMOC0G 22
TABLE: FARTE
KEY: FAMOC0G 22
. S TRKPSTN1G
EXIT TABLE FARTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

**Figure 3-64**  
**Traver for a ITU-T PRI to ITU-T ISUP V3 call**

```
>traver tr prapbx1g 0215780220 bc 64kdata svc video t

Warning: Routing characteristics are present.
Originator must be able to send in characteristics specified.

TABLE GSMCHAR2
. UDICALL ( BC 64KDATA svc video (CPC ALL)$) $ 2
TABLE TRKGRP
PRAPBX1G PET 0 PRAC NCRT 0 LIDL PX PXPRAG NILLATA MSC N 0 0 2 0 CONT NEVER
ALWAYS N 43664 (LTID PRAATPBX 500) (RLT ) $
TABLE UXLAMAP
TUPLE NOT FOUND
TABLE PXHEAD
PXPRAG SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 0215780220
TABLE PXC0DE
PXPRAG 02 02 CONT ( PF 1) ( XLT FA FAMOC0G)$
TABLE FAHEAD
FAMOC0G SDFLT DFOP ( CDN NATL N)$ NOCON 9
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 215780220
TABLE FACODE
FAMOC0G 21 21 RTE ( MM 6 18) ( DEST 21) ( MZONE 10) ( LNET HOMENET)$
TABLE UNIMAP
. FA FAMOC0G 21 UDIVID FA FAMOC0G 22

TABLE: FARTE
KEY: FAMOC0G 22
. S TRKPSTN1G
EXIT TABLE FARTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

**Error messages**

Table 3-39 identifies the error messages that are produced by the TRAVER command.

**Table 3-39**  
**TRAVER error messages**

Error	Description
<p>DO NOT ENTER LAC, CID, CUSTGRP OR NCOS WITH MSRN/CFN/HON OPTIONS. PLEASE USE THE FOLLOWING SYNTAX WITH MSRN/CFN/HON OPTIONS:</p> <p>TRAVER MS &lt;MSISDN&gt; MSRN/CFN/HON [PIC XXXX] &lt;CALLED DIGITS&gt; &lt;TRACE&gt;</p> <p>RESTART TRAVER</p>	<p>The MSRN, CFN and HON options are not allowed together with LAC, CID, CUSTGRP and NCOS options. Reenter the TRAVER command with proper syntax.</p>
<p>LAC TABLE TRAVER SOFTWARE NOT LOADED</p>	<p>The software to access table LAC is not loaded. Initiate a service report.</p>
<p>INDEX 0 NOT DATAFILLED IN TABLE XLAENTRY. TRANSLATION CANNOT START AS THERE ARE NO DEFAULT ENTRY DATA.</p>	<p>Index '0' of table XLAENTRY is not datafilled. Either use the optional source directed routing parameters or datafill index '0' of table XLAENTRY.</p>
<p>INDEX 0 NOT DATAFILLED IN TABLE PCSATTR. TRANSLATION CANNOT START</p>	<p>Since no source directed routing information is available when using CFN, HON, MSRN option; originating LATA is not known. Index 0 of table PCSATTR is used to get the originating LATA, when these options are used. If index 0 is not datafilled in the table PCSATTR this response is displayed. Datafill index 0 of table PCSATTR to have an originating LATA name. Reenter the TRAVER command.</p>
<p>INVALID MSISDN DIGITS</p>	<p>Characters or symbols other than digits were entered for the MSISDN. Check the MSISDN and re-enter command.</p>
<p>MSISDN MUST BE BETWEEN 1 AND 18 DIGITS</p>	<p>The MSISDN entered was either a nil string or too many digits were entered. Re-enter command with at least one and no more than 18 digits in the MSISDN.</p>
<p>—sheet 1 of 2—</p>	

**Table 3-39**  
**TRAVER error messages (continued)**

<b>Error</b>	<b>Description</b>
ONLY LAC AND CID TOGETHER ARE ACCEPTABLE. RESTART TRAVER WITH: LAC <X> CID <X>.	The source directed routing parameters must be used in conjunction with each other. You cannot enter the LAC parameter without the CID parameter. If both were entered, make sure you used the keyword and the integer part of both parameters. Re-enter command using both source directed routing parameter or neither LAC nor CID parameter.
OPTIONAL PARAMETER ENTERED IGNORED FOR MS SELECTOR	An optional parameter was entered that is not supported. This feature does not support any optional parameters. Re-enter command without any parameters after the trace parameter or after the digit parameter and before the trace parameter.
TABLE LAC TUPLE NOT FOUND LAC AND CID NOT KNOWN IN TABLE LAC	The source directed routing parameters were entered but could not be found in table LAC. Check command to be sure source directed routing are correct. If they are, check your datafill in table LAC.
WARNING: NO LAC AND CID PROVIDED FOR MOBILE ORIG CALL. THUS TRANSLATION STARTS WITH DEFAULT TRANSLATION ENTRY DATA.	The optional source directed routing parameters were not entered. No action is necessary if you want to use the default translation entry data found in index '0' of table XLAENTRY. This is a warning message to ensure you want to use the default entry and not Source Directed Routing (SDR).
XLAENTRY TABLE TRAVER SOFTWARE NOT LOADED.	The software to access table XLAENTRY is not loaded. Initiate a service report.
—sheet 2 of 2—	



## VLR\_AUDIT

### About VLR\_AUDIT

The VLR\_AUDIT command allows the MSC operator to manually start a VLR mobile audit. When the command has successfully executed, a confirmation message is given to the operator. The command is ignored and a warning message is displayed if one of the following situations occur:

- the VLR-Data Integrity (VLR-DI) is auditing the VLR database
- the VLR-DI is in restoration mode
- the ATTACHED\_MOBILE\_AUDIT and the DETACHED\_MOBILE\_AUDIT are turned off when the CI command is issued

### Accessing VLR\_AUDIT

To manually start the VLR audit, enter the VLR\_AUDIT command at the CI prompt. See [Figure 3-65](#).

**Figure 3-65**  
VLR\_AUDIT execution

```
CI:  
> VLR_AUDIT  
THE VLR MOBILE AUDIT STARTED.
```

### Error messages

[Table 3-40](#) identifies the error messages produced by the VLR\_AUDIT command.

**Table 3-40**  
VLR\_AUDIT error messages

Error	Description
Command is ignored. The VLR is currently in restoration.	The VLR_AUDIT command was entered and the VLR-DI was currently in VLR restoration mode.
Command is ignored. The ATTACHED_MOBILE_AUDIT and DETACHED_MOBILE_AUDIT office parms are turned off.	The VLR_AUDIT command was entered and the ATTACHED_MOBILE_AUDIT and the DETACHED_MOBILE_AUDIT office parameters were turned OFF. Turn ON the appropriate office parameters.
Command is ignored. An unexpected error occurs. Please try again.	The VLR_AUDIT command was entered and an error occurred on the system. Enter the VLR_AUDIT command again.

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GSM / UMTS  
**MSC**  
MAP Commands

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