CHAPTER 1

Administration, Diagnostic, and Maintenance Commands

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This chapter describes the Administration, Diagnostic, and Maintenance (ADM) commands. With the exception of the Status Update Processor command, status and control commands do not have their own tables. They use the tokens in the applicable tables from the Call Processing chapters in this document. Tokens used in addition to the tokens from the tables in the Call Processing chapters are noted where applicable in this document.

Note In this chapter, an asterisk preceding a token name means the token is mandatory. A token without an asterisk is optional.

Command Responses

See the *Cisco BTS 10200 Softswitch Operations and Maintenance Guide* and the *Cisco BTS 10200 Softswitch Troubleshooting Guide* for command response information,

Generic Status and Control Commands

Generic status and control commands apply to all media gateways, subscribers, trunks, trunk groups and in one specific case, system. Some sample responses, replies, and failure reasons are also listed in this section. For a complete list, see the *Cisco BTS 10200 Softswitch Operations Manual*.

Administration and Maintenance

Administration and Maintenance commands consist of commands that control or show the status of a component. The following commands are specific to, and listed under, the applicable type. Sample responses, replies, and failure reasons are also listed in this section. For a complete list, see the *Cisco BTS 10200 Softswitch Operations Manual*.

Address of Record to Subscriber Status and Control Commands

This section describes the status and control commands for the Address of Record (AOR) to Subscriber (aor2sub) table.

Caution These commands are no longer supported in Release 4.4.1. Use the **change aor2sub** command to control an aor2sub id, and the **show aor2sub** to check the status.

Control Command

An aor2sub id must be put in service to terminate a call to a Session Initiation Protocol (SIP) subscriber.

Command Types Control

Examples

```
control aor2sub aor-id=4692551114@prica45.ipclab.cisco.com; target-state=oos
control aor2sub aor-id=4692551114@prica45.ipclab.cisco.com; target-state=ins
```

Status Command

The status command determines the status of the dynamic contact for the particular AOR. This shows if the AOR (SIP phone subscriber) has a registered contact or not. Calls cannot be terminated to SIP subscribers if the AOR does not have a registered contact (such as an expired or freed contact).

Command Types Status

Examples

```
status sip-reg-contact AOR-ID=4692552222@prica45.ipclab.cisco.com
```

Reply example:

```
AOR ID ->
USER ->
HOST ->
PORT -> 0
USER TYPE ->
EXPIRES ->
EXPIRETIME ->
STATUS -> FREED CONTACT

Reply : Success:
AOR ID -> 4692552222@prica45.ipclab.cisco.com
USER -> 4692552222
HOST -> 64.101.150.141
PORT -> 5062
USER TYPE -> USER_IP_TYPE
EXPIRES -> 1800
EXPIRETIME -> Wed Jun 4 11:08:33 2003

STATUS -> EXPIRED CONTACT
```

```
Reply : Success:

status sip-reg-contact AOR_ID=4692552222@prica45.ipclab.cisco.com

AOR ID -> 4692552222@prica45.ipclab.cisco.com
USER -> 4692552222
HOST -> 64.101.150.141
PORT -> 5060
USER TYPE -> USER_IP_TYPE
EXPIRES -> 3600
EXPIRETIME -> Wed Jun 4 11:37:44 2003

STATUS -> REGISTERED CONTACT

Reply : Success:
```

Aggregation Status Command

This section describes the status command for an aggregation (aggr) router. Aggregation routers are used in cable and network-based call signaling (NCS) markets. In cable markets, they are used as cable modem termination systems (CMTSs). In NCS markets, they are used as edge routers.

Command Types

Status

Examples

`status aggr id=CMTS1`

Reply Example:

```
Reply: Success:

AGGR ID -> CMTS1
OPER STATE -> AGGR IN Service
RESULT -> ADM configure result in success
REASON -> ADM executed successful
```

Usage Guidelines

The following list provides the AGGR operational-state values and possible responses for the command:

1. IN SERVICE
   a. Means the TCP connection to the AGGR is up.
   b. CLI output: AGGR IN SERVICE.
2. CONNECTING
   a. Means the TCP connection to the AGGR is being set up.
   b. CLI output: AGGR CONNECTING.
3. INITIALIZING
   a. Identifies the initial state of the AGGR before a Call Agent (CA) attempts to connect to it.
   b. CLI output: AGGR INITIALIZING (this is a transitional state, which a user may rarely see).
4. OUT OF SERVICE

a. Means the AGGR is out of service.

b. CLI output: AGGR OUT OF SERVICE.

Syntax Description

The following token may be used with the status command:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

Destination Point Code Status Command

This section describes the status command for destination point codes (DPCs).

Command Types

Status

Examples

```
status dpc id=dpc1;
```

Syntax Description

The following token may be used with the destination point code status command:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

H.323 Gateway Status and Control Command

This section describes the status and control commands for H.323 gateways.

Command Types

Status and control

Examples

```
status h323-gw id=CHINA-1;
```

Reply Example:

```
Reply : Success:

ADMIN_STATE -> ADMIN_INS
H3A PROCESS NUMBER -> 30
H3A PROCESS NAME -> H3A1
ENDPOINT ID ->
ACTIVE CALLS -> 0
RAS STATE -> CCH323_RAS_STATE_GRQ
RAS PORT -> 35881
IP ADDRESS -> 10.89.224.125
REGISTERED GATEKEEPER ID ->
PRIMARY GATEKEEPER ID ->
PRIMARY GATEKEEPER PORT -> 0
PRIMARY GATEKEEPER IP ->
H323 VERSION -> 4
TIME TO LIVE -> 0
NUM ALT GATEKEEPERS -> 0
ALT GATEKEEPER PERMANENT -> TRUE
THRESHOLD_ENABLED -> FALSE
OUT_OF_RESOURCES -> FALSE
ALT GATEKEEPER LIST ->
```

```
control h323-gw id=CHINA_1; target-state=INS;
```

Reply Example:

```
Reply : Failure:

INITIAL STATE -> ADMIN_INS
REQUEST STATE -> ADMIN_INS
RESULT STATE -> ADMIN_INS
FAIL REASON -> ADM entity in desired state
REASON -> ADM is in request state
RESULT -> ADM configure result in warning
H323GW ID -> CHINA_1
```

Syntax Description

The following token may be used with the H.323 status and control commands:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

Media Gateway Status and Control Commands

This section describes the status and control commands for media gateways.

Command Types

Status and control

Examples

```
status mgw id=c5400_197;
```

Reply Example:

```
Reply : Success:

MGW ID -> c5400_197
RESULT -> ADM configure result in success
REASON -> ADM executed successful
ADMIN STATE -> ADMIN_INS
OPER STATE -> Media gateway in working status
```

Table 1-1 lists the administrative states the system can return.

Table 1-1 Returnable Administrative States

State	Definition
ADMIN-INS	In Service.
ADMIN-OOS	Out of Service.
ADMIN-MAINT	Maintenance Mode.
ADMIN-OOS-PENDING	Transitioning to Out of Service.
ADMIN-MAINT-PENDING	Transitioning to Maintenance Mode.

The following command shows how to control a media gateway in service. Modes can be either forced or graceful. Forced tears down all calls immediately; graceful allows calls in progress to complete before teardown.

```
control mgw id=c5400_162; mode=forced; target-state=INS;
```

Reply Example:

```
Reply : Success: CLI change successful

MGW ID -> c5400_162
INITIAL STATE -> ADMIN_OOS
REQUEST STATE -> ADMIN_INS
RESULT STATE -> ADMIN_INS
FAIL REASON -> ADM found no failure
REASON -> ADM executed successful
RESULT -> ADM configure result in success
```

Syntax Description

The following token may be used with the media gateway status command:

- THROTTLE—Internal token used only by programs. CHAR(1): Y / N (Default = N).

Caution Setting this token to Y results in “Reply : Success” as the output. All other output is suppressed.

  - Y—Throttle output and suppress the results for internal programs to use.
  - N—Do not throttle output and display results as normal.

The following token may be used with the media gateway status and control commands:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

Signaling Gateway Get and Set Trace Commands

This section details the set-trace and get-trace commands for the Signaling Gateway table. The get-trace command retrieves trace information for the Signaling Gateway table. The set-trace command sets what trace information to log for the Signaling Gateway table.

Command Types

get-trace and set-trace

Examples

```
get-trace sg id=sg1;
set-trace sg id=sg1;
```

Syntax Description

The following tokens are used with the get-trace and set-trace commands:

- ID—The Signaling Gateway id. VARCHAR(16): 1-16 ASCII characters. Mandatory.
- PLATFORM ID—Platform ID (must be a valid Call Agent or Feature Server ID). VARCHAR(16): 1–16 ASCII characters. Optional.

The following tokens may be used with the set-trace command:

- TRACE-DPC-STATE—DBM only. The DPC trace state. CHAR(1): Y/N (Default = N). Optional.
- TRACE-ERR—DBM only. The trace error. CHAR(1): Y/N (Default = N). Optional.
- TRACE-ERRIND—DBM only. The trace error indicator. CHAR(1): Y/N (Default = N). Optional.
- TRACE-SG-STATE—DBM only. The signaling gateway trace state. CHAR(1): Y/N (Default = N). Optional.

Signaling Gateway Process Status, Get-Trace and Set Trace Commands

This section details the status, set-trace, and get-trace commands for the Signaling Gateway Process table.

Status Command

The SGP status command returns the state of the SGP.

Command Types Status

Examples

```
status sgp id=sgp1;
```

Syntax Description The following token may be used with the status command:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

Get Trace and Set Trace Commands

The get-trace command retrieves trace information for the Signaling Gateway Process table. The set-trace command sets what trace information to log for the Signaling Gateway Process table.

Command Types Get-trace and set-trace

Examples

```
get-trace sgp id=sgp1;
set-trace sgp id=sgp1; trace-err=Y;
```

Syntax Description The following tokens may be used with the get-trace and set-trace commands:

- ID—Unique signaling gateway process identifier. VARCHAR(16): 1–16 ASCII characters. Mandatory.
- SG-ID—Unique signaling gateway identifier. VARCHAR(16): Y/N (Default = N). Mandatory.
- TRACE-SCTP—CHAR(1): Y/N (Default = N).
- TRACE-PAK—CHAR(1): Y/N (Default = N).
- TRACE-HB—CHAR(1): Y/N (Default = N).
- TRACE-ERR—The SGP trace error. CHAR(1): Y/N (Default = N).
- TRACE-ERRIND—The SGP trace error indicator. CHAR(1): Y/N (Default = N).

Session Initiation Protocol Registration Status

The Session Initiation Protocol Registration Check command checks the AOR status of a SIP subscriber.

Command Types Status

Examples
```
status sip-reg-contact;
```

Signaling System 7 Trace Command

The Signaling System 7 (SS7) trace command performs a trace of a CIC for a specific trunk.

Command Types Start and Stop

Examples
```
start ss7-trace cic=1-2; tgn-id=1; file-prefix=tgn-1;
stop ss7-trace tgn-id=1; file-name=tgn-1_20030826110057;
```

Upon successful completion of this command a trace file name is returned. Trace file name has the format <file-prefix>-<time stamp>. Traces files are stored in /opt/OptiCall/CA146/mdltrace directory.

Traces can be started by specifying the time duration for which they can be active. By default all traces are active for 10 minutes.

Upon successful completion of this command a trace file name is returned. The trace file name format is <file-prefix>_<time stamp>. Trace report files are stored in /opt/OptiCall/CA146/mdltrace directory. Trace files must be converted using the mtv.sh script:

```
cd /opt/OptiCall/CA146/bin ./mtv.sh <trace-file-name>_<timestamp>.btr
```

See the *Cisco BTS 10200 Softswitch Operations and Maintenance Guide* for more information on using the mtv.sh script.

Status Update Processor Command

The Status Update Processor (SUP) Configuration (sup-config) table stores configurable values used by the SUP process to poll various components on the CA/FS. Each value is used to modify the SUP so that the collection of statuses is least intrusive depending on the size of the Softswitch (number of media gateways, trunk groups, and terminations). Most of the values are used for performance tuning.

Note This table is initially provisioned with default values at installation. During upgrades the values in these tables are not maintained.

Table Name: SUP-CONFIG

Table Containment Area: OAMP

Command Types Show and change

Examples

```
show sup-config

change sup-config type= refresh-rate; value=600
```

Usage Guidelines

Primary Key Token(s): type

Change Rules: None

Syntax Description

The following tokens may be used for the status update processor command:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.
- TYPE—Identifies the configurable property of the SUP process to change or show. VARCHAR: 1–64 ASCII characters. Mandatory. Permitted values are:
  - REFRESH-RATE—Specifies the interval in seconds between each collection period in seconds. The value must be greater than 30 seconds.
  - PRIORITY—Specifies the inner priority of the Collection Thread. The value can range from 1 to 10 and the default value is 5. Modifying this value has a minor effect in changing the CPU utilization of the SUP.
  - SUBTERM-MGW-BLOCK—Specifies the block of subterms within a gateway to retrieve and update at a time. Default value is 5 subterm blocks at a time.
  - SUBTERM-BLOCK-PAUSE—Specifies the time in milliseconds to pause between each subterm block from each subterm-mgw-block retrieved. The default value is 9000 milliseconds (9 seconds).
  - SUBTERM-STATUS-PAUSE—Specifies the time in milliseconds to pause between each bulk subterm status command. The default value is 0 milliseconds.
  - TRUNKTERM-TG-BLOCK—Specifies the block of trunk terms within a trunk group to retrieve and update at a time. Default value is 5 trunk term blocks at a time.
  - TRUNKTERM-BLOCK-PAUSE—Specifies the time in milliseconds to pause between each trunk term block for each trunkterm-tg-block retrieved. The default value is 9000 milliseconds (9 seconds).
  - TRUNKTERM-STATUS-PAUSE—Specifies the time in milliseconds to pause between each bulk trunk term status command. The default value is 0 milliseconds.
  - TRUNKTERM-RANGE-BLOCK—Specifies the range of CICs to retrieve on each bulk trunk term status. The default value is 1000 CICs per query.
  - TRUNKTERM-RANGE-PAUSE—Specifies the time in milliseconds to pause between each block of the trunkterm-range-block retrieved. The default value is 20000 milliseconds (20 seconds).

- VALUE—Identifies the values of the configurable property specified in the TYPE token. VARCHAR: 1–64 ASCII characters. Optional.

Stream Control Transmission Protocol Association Control and Status Commands

This section details the status and control commands for the Stream Control Transmission Protocol (SCTP) Association table. Use the control command to control an SCTP out of service. The status command checks the status of an SCTP association.

Command Types Control and status

Examples

```
control sctp-assoc id=sctpassoc1; target-state=OOS
status sctp-assoc id=sctpassoc1;
```

Syntax Description The following tokens may be used with the SCTP status and control commands:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.
- MODE—Specifies the control mode. VARCHAR(6): 1–6 ASCII characters. The only permitted value is FORCED.
  - Forced—immediately tears down all calls.

Trunk Group Status and Control Commands

This section describes the status and control commands for trunk groups.

Command Types Status and control

Examples The following command shows how to display the status of one trunk group id:

```
status trunk-grp id=2;
```

Reply Example:

```
RESULT -> ADM configure result in success
REASON -> ADM executed successful
ADMIN STATE -> ADMIN_INS
OPER STATE -> Trunk group in-service
TGN ID -> 2
```

Table 1-2 lists the administrative states the system can return.

Table 1-2 Returnable Administrative States

State	Definition
ADMIN-INS	In Service.
ADMIN-OOS	Out of Service.
ADMIN-MAINT	Maintenance Mode.
ADMIN-OOS-Pending	Transitioning to Out of Service.
ADMIN-MAINT-Pending	Transitioning to Maintenance Mode.
ACL	Congestion is at level 1.
ACL	Congestion is at level 2.
ACL	Congestion is at level 3.
TFC	Congestion is at level 1.
TFC	Congestion is at level 2.
TFC	Congestion is at level 3.

See the *Cisco BTS 10200 Softswitch Operations and Maintenance Guide* for returnable operating states.

Examples

The following command shows how to control one trunk group id:

```
control trunk-grp tgn-id=2; mode=forced; target-state=INS;
```

Reply Example:

```
Reply : Success: CLI change successful

INITIAL STATE -> ADMIN_OOS
REQUEST STATE -> ADMIN_INS
RESULT STATE -> ADMIN_INS
FAIL REASON -> ADM found no failure
REASON -> ADM executed successful
RESULT -> ADM configure result in success
TGN ID -> 2
```

Caution To control an ISDN trunk in-service, the media gateway must be in-service.

Usage Guidelines

The administrative target-state MAINT is for ISDN trunk groups only.

Syntax Description

The following token may be used with the trunk group commandS:

- THROTTLE—Internal token used only by programs. CHAR(1): Y / N (Default = N).

Caution Setting this token to Y results in "Reply : Success" as the output. All other output is suppressed.

  - Y—Throttle output and suppress the results for internal programs to use.
  - N—Do not throttle output and display results as normal.

The following tokens may be used with the trunk group status and control commands:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.
- MODE—Valid for the control command. Specifies whether shutdown is graceful or forced. VARCHAR(8): 1–8 ASCII characters. Permitted values are:
  - GRACEFUL—Allow applicable processes and components to complete all activity before shutting down.
  - FORCED—All applicable processes and components terminate immediately, including calls.

Subscriber Termination Commands

This section describes the status and control commands for subscriber terminations. Either a range of subscribers can be specified (using *@mgw-id for the ID parameter), or a single subscriber can be specified (for example: sub-ctx1@Cisco.com).

Status Command

This section describes the subscriber termination status command.

Command Types

Status

Examples

The following command shows how to display the status for one subscriber termination:

```
status subscriber-termination id=ubr204_1;
```

Reply Example:

```
RESULT -> ADM configure result in success
REASON -> ADM executed successful
ADMIN STATE -> ADMIN_INS
OPER STATE -> Termination is idle
SUBCRIBER ID -> ubr204_1
FAULT REASON -> No fault reason available
```

Table 1-3 lists the administrative states the system can return.

Table 1-3 Returnable Administrative States

State	Definition
ADMIN-UEQP	Unequipped.
ADMIN-INS	In Service.
ADMIN-OOS	Out of Service.
ADMIN-MAINT	Maintenance Mode.
ADMIN-OOS-Pending	Transitioning to Out of Service.
ADMIN-MAINT-Pending	Transitioning to Maintenance Mode.

Show the status for all subscriber terminations on a particular gateway using the following command:

```
status subscriber-termination id=*@ubr235;
```

Reply Example:

```
SUBCRIBER DN -> ubr235_1
ADMIN STATE -> ADMIN_UEQP
OPER STATE -> Termination is unequiped
REASON -> ADM executed successful
RESULT -> ADM configure result in success
FAULT REASON -> No fault reason available

SUBCRIBER DN -> ubr235_2
ADMIN STATE -> ADMIN_UEQP
OPER STATE -> Termination is unequiped
REASON -> ADM executed successful
RESULT -> ADM configure result in success
FAULT REASON -> No fault reason available

Reply : Success:
```

Syntax Description

The following token may be used with the subscriber termination status command:

- THROTTLE—Internal token used only by programs. CHAR(1): Y / N (Default = N).

Caution Setting this token to Y results in “Reply : Success” as the output. All other output is suppressed.

  - Y—Throttle output and suppress the results for internal programs to use.
  - N—Do not throttle output and display results as normal.

The following tokens may be used with the subscriber termination status command:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.

  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

- OPER-STATE—Operating state. Expands the range of useful information returned by the status subscriber-termination command. Permitted values are:
  - FA—Faulty
  - NF—Not faulty
  - IDLE—Termination idle
  - LBLK—Trunk local blocked
  - RBLK—Trunk remote blocked
  - ACTIVE—Termination active
  - DOWN—Termination down
  - TERM-FA—Termination fault
  - TEMP-DOWN—Termination temporarily down
  - UNREACH—Termination unreachable
  - INT-MAINT—Termination internal maintenance
  - UEQP—Termination unequipped
  - ALL—All states, same as executing command without oper-state token

Note The values for the oper-state token are not the same as the operational status responses returned for the command.

The following command example returns only those subscriber terminations that are FA (if any):

```
status subscriber-termination id=*@ubr235; oper-state=FA;
```

- SOURCE—Source. The source token specifies whether to query the Call Agent or the EMS for status information. It is an optional token. Permitted values are:
  - EMS (Default)—Query the local EMS database for most current status.
  - AGENT—Query the remote Call Agent database for most current status.

The following command example returns the current status of the Call Agent:

```
status subscriber-termination id=*@ubr235; source=AGENT;
```

Control Command

This section describes how to control subscriber-terminations on a particular gateway. To control a subscriber termination to the unequipped or equipped state, use the equip or unequip commands.

Command Types Control

Examples

```
control subscriber-termination id=*@c3810_167; mode=forced; target-state=INS;
```

Reply Example:

```
Reply : Success: CLI change successful

ID -> c3810_167
REQUEST STATE -> ADMIN_INS
RESULT STATE -> ADMIN_INS
FAIL REASON -> ADM found no failure
REASON -> ADM executed successful
RESULT -> ADM configure result in success
```

Control all subscriber-terminations on a particular gateway using the following command:

```
control subscriber-termination id=*@ubr235; mode=forced; target-state=MAINT
```

Reply Example:

```
Reply : Success: CLI change successful

ID -> ubr235
REASON -> ADM executed successful
RESULT -> ADM configure result in success
REQUEST STATE -> ADMIN_MAINT
RESULT STATE -> ADMIN_MAINT
FAIL REASON -> ADM found no failure
```

Syntax Description

The following tokens may be used with the subscriber termination control command:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

Equip Command

The equip command changes the administrative state of terminations that are in the UEQP state to OOS state. It ignores the terminations in the states INS, MAINT, or OOS.

Use the equip command or the control trunk-grp command to change the termination state for a subscriber to an ISDN trunk. The control trunk-grp command changes all trunks in the specified trunk group to the specified state. For trunk types other than ISDN, use the equip command to set the subscriber termination state. Thereafter, to change the termination state, use the control command.

A subscriber termination state must set to unequipped before it can be deleted.

You cannot use the control command to change a termination state to UEQP. Furthermore, you cannot use the control command to change the state of any subscriber termination that is already in the UEQP state.

For example, consider a case in which 24 CICs in a trunk group are in the following initial states:

- CICs 1–10 in OOS state

- CICs 11–15 in UEQP state
- CICs 16–24 in MAINT state

For this case, issuing the control, equip, or unequip commands would affect the initial state of the CICs as follows:

- If a control command is used with target-state = ins, the final states of all the CICs are:
  - CICs 1–10 in INS state
  - CICs 11–15 in UEQP state
  - CICs 16–24 in INS state
- If an equip command is applied to the CICs in the initial states, the final states of all the CICs are:
  - CICs 1–10 in OOS state
  - CICs 11–15 in OOS state
  - CICs 16–24 in MAINT state
- If an unequip command is applied to the CICs in the initial states, the final states of the CICs are:
  - CICs 1–10 in UEQP state
  - CICs 11–15 in UEQP state
  - CICs 16–24 in MAINT state

Command Types

Equip

Examples

```
equip subscriber-termination id=97_8@ipclab.cisco.com;
```

Reply Example:

```
Reply : Success: CLI change successful

ID -> Subcriber ID -> 97_8@ipclab.cisco.com
REASON -> ADM executed successful
RESULT -> ADM configure result in success
FAIL REASON -> ADM found no failure
```

Syntax Description

The following token may be used with the equip command:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

Unequip Command

The unequip command changes the administrative state of subscriber terminations that are in OOS state into UEQP state. It ignores the terminations in the states: INS, MAINT, or UEQP.

Command Types Unequip

Examples

```
unequip subscriber-termination id=97_8@ipclab.cisco.com;
```

Reply Example:

```
Reply : Success: CLI change successful

ID -> Subcriber ID -> 97_8@ipclab.cisco.com
REASON -> ADM executed successful
RESULT -> ADM configure result in success
FAIL REASON -> ADM found no failure
FAIL REASON -> ADM found no failure
```

Subsystem Status and Control Commands

This section describes the status and control commands for the Subsystem table. Use the status command to display the state of a subsystem. Use the control command to control a subsystem out of service in forced mode.

Command Types Status and control

Examples

```
status subsystem id=SSN1;
control subsystem id=SSN1; OPC-ID=dallas-pc; target-state=OOS; mode=FORCED;
```

Syntax Description The following token may be used with the subsystem status and control commands:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

Subsystem Group Status and Control Commands (Release 4.5)

This section describes the status and control commands for the Subsystem Group table. Use the status command to display the state of a subsystem group. Use the control command to control a subsystem out of service in forced mode.

Command Types

Status and control

Examples

```
status subsystem-grp id=CNAM
```

The following command controls one system-OPC combination out of service:

```
control subsystem-grp id=SSN1; OPC-ID=dallas-pc; target-state=OOS; mode=FORCED;
```

Note If you have controlled one system in a group OOS, and the group is controlled OOS then back to INS, all subsystems (including the one system originally controlled OOS) are returned to INS.

The following command controls all subsystem-OPC combinations out-of-service. If a subsystem-OPC combination is taken out-of-service individually, the state of the subsystem group is in-service while individual members of the group are out-of-service.

```
control subsystem-grp id=CNAM; mode=forced; target_state=UOS;
```

Syntax Description

The following token may be used with the subsystem group status and control commands:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

Trunk Termination Status and Control Commands

This section describes the status and control commands for trunk terminations. Either a range (for example, cic=1–24;) or a single value (for example, cic=1;) for the CIC parameter can be specified for the status and control of trunk terminations.

Status Command

This command can be executed for one CIC (for example, cic=1;), a range of CICs (for example, cic=1–12;) or for all CICs (cic=all;).

Command Types

Status

Examples

```
status trunk-termination tgn-id=2; cic=8;
```

Reply Example:

```
Reply : Success:

RESULT -> ADM configure result in success
REASON -> ADM executed successful
TGN ID -> 2
CIC -> 8
TERM ADMIN STATE -> ADMIN_INS
TERM OPER STATE -> Termination is idle
TERM REASON -> No fault reason available
TRUNK STATIC STATE -> ACTV
TRUNK DYNAMIC STATE -> TRNS
TRUNK REASON -> NON_FAULTY
```

The following command returns only those trunk terminations that are in administrative state OOS (if any), and operating state IDLE (if any):

```
status trunk-termination tgn-id=12; cic=1-1000; admin-state=OOS; oper-state=idle
```

Table 1-4 lists the administrative states the system can return for the *term admin state* response.

Table 1-4 Returnable Administrative States

State	Definition
ADMIN-UNEQP	Unequipped.
ADMIN-INS	In Service.
ADMIN-OOS	Out of Service.
ADMIN-MAINT	Maintenance Mode.
ADMIN-OOS-Pending	Transitioning to Out of Service.
ADMIN-MAINT-Pending	Transitioning to Maintenance Mode.
ADMIN-NULL	Resource does not exist.

Syntax Description

The following tokens may be used with the trunk termination status command:

- Administrative State (admin-state). Permitted values are:
  - UEQP: Unequipped; resource is not commissioned. Resource not registered.
  - OOS: Termination was manually controlled out of service.
  - INS: Termination was manually controlled in service, but operationally may be available or unavailable.
  - OOS-PENDING: Termination was manually controlled out of service with mode graceful, termination is still involved in a call.
  - MAINT: Termination in maintenance mode, can run diagnostic commands.
  - MAINT-PENDING: Termination was manually controlled to MAINT state, but termination is still involved in call.

  - ALL: Return all possible states.

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. Permitted values are:
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N (Default)—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

The following token may be used with the trunk termination status command:

- THROTTLE—Internal token used only by programs. CHAR(1): Y / N (Default = N).

Caution Setting this token to Y results in "Reply : Success" as the output. All other output is suppressed.

  - Y—Throttle output and suppress the results for internal programs to use.
  - N—Do not throttle output and display results as normal.

- Operating State (oper-state). Valid values are:
  - FA—Includes FAULTY, UNREACH, TEMP-DOWN, and DOWN.
  - FAULTY—The MGCP endpoint returned a permanent error code.
  - UNREACH—The MGCP endpoint was declared as not reachable. This indicates gateway connectivity problems.
  - TEMP-DOWN—The MGCP endpoint is temporarily down.
  - DOWN—MGCP endpoint is down because GW termination has sent RSIP-down message.
  - NF—Includes INT-MAINT, IDLE, BUSY, and ACTIVE.
  - INT-MAINT—Internal error recovery is in progress.
  - IDLE—Termination is not involved in a call, but is available.
  - BUSY— Termination is involved in transient call.
  - ACTIVE—Termination is involved in stable call.
  - UEQP—Termination is not equipped.
  - ALL—Returns all possible operational states.

  The following command example returns only those trunk terminations that are FA (if any):

```
status trunk-termination tgn-id=12; cic=ALL; oper-state=FA;
```

- Static State (static-state). Valid values are:
  - UEQP—Unequipped resource is not commissioned. Resource is not registered.
  - LBLK—Termination is locally blocked: either manually taken OOS/MAINT (block reason can be MANUAL-OOS, MAINT-OOS), or automatically went out of service (see block-reason: TERM-FAULT, SIG-FAULT).
  - RBLK—Termination is remotely blocked (blocked by remote side).
  - ACTV—Available.

  - All—Returns all possible static states.

  The following command example returns only those terminations that are locally blocked (if any):

```
status trunk-termination tgn-id=101; cic=1-24; static-state=lblk;l
```

- Dynamic State (dynamic-state). Valid values are:
  - IBSY—Trunk-termination is involved in an incoming active call.
  - OBSY—Trunk-termination is involved in an outgoing active call.
  - TRNS—Transient maintenance state (sent maintenance signaling message and waiting for response).
  - IDLE—Termination is not involved in a call.
  - IBSY-TRNS—Termination is involved in a transient call (for example, waiting to send first backward signaling message, such as ACM/ALERTING).
  - OBSY-TRNS—Termination is involved in a transient call (for example, waiting to receive first backward signaling message, such as ACM/ALERTING).
  - ALL—All possible dynamic states.

  The following command example returns only those terminations that are idle (if any):

```
status trunk-termination tgn-id=101; cic=1-24; dynamic-state=idle;
```

- Off-normal State (off-normal). Valid values are:
  - Yes—Return all terminations in off-normal state.
  - No—Return all terminations in normal state.

  The following command example returns only those terminations in an off-normal state (if any):

```
status trunk-termination tgn-id=101; cic=1-24; off-normal=yes;
```

  A termination is in an off-normal state when it is *not* in one of the state combinations shown in Table 1-5.

- Source (source)—specifies whether to query the Call Agent or the EMS, for status information. It is an optional token. Valid values are:
  - EMS (Default)—Query the local EMS database for the most current status.
  - AGENT—Query the remote Call Agent database for the most current status.

  The following command example returns the current status of the Call Agent:

```
status trunk-termination tgn-id=101; cic=1-24; source=AGENT;
```

Table 1-5 Valid Normal Trunk Termination States

State/Token	ADMIN-STATE	OPER-STATE	STATIC-STATE	DYNAMIC-STATE
UNEQP	UNEQP	ANY	UEQP	IDLE
MANUALLY OOS	OOS	ANY	LBLK	IDLE
MANUALLY MAIN	MAINT	IDLE	LBLK	IDLE
IDLE	INS	IDLE	ACTV	IDLE
ACTIVE INCOMING	INS	IDLE	ACTV	IDLE
ACTIVE OUTGOING	INS	ACTIVE	ACTV	OBSY

Table 1-5 Valid Normal Trunk Termination States (continued)

State/Token	ADMIN-STATE	OPER-STATE	STATIC-STATE	DYNAMIC-STATE
TRANSIENT INCOMING	INS	ACTIVE	ACTV	IBY-TRNS
TRANSIENT OUTGOING	INS	BUSY	ACTV	OBSY-TRNS

The following command example (**status tt**) returns current status in a tabular format.

```
status tt tgn-id=994; cic=all
```

Reply Example (column headings will not appear on screen):

TGN ID	CIC	ADMIN STATE	OPER STATE	STATIC STATE	DYNAMIC STATE	REASON
994	1	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	2	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	3	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	4	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	5	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	6	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	7	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	8	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	9	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	10	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	11	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	12	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	13	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	14	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	15	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	16	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	17	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	18	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	19	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	20	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	21	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	22	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	23	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY
994	24	ADMIN_INS	TERM_ACTIVE_IDLE	ACTV	IDLE	NON_FAULTY

```
Reply : Success:
```

Control Command

This section describes how to control a trunk termination.

Command Types Control

Examples

The following command controls one trunk termination into OOS.

```
control trunk-termination tgn-id=22; cic=1; target-state=OOS; mode=forced;
```

Reply Example:

```
Reply : Success: CLI change successful

TGN ID -> 22
REASON -> ADM executed successful
RESULT -> ADM configure result in success
CIC START -> 1
CIC END -> 1
FAIL REASON -> ADM found no failure
REQUEST STATE -> ADMIN_OOS
RESULT STATE -> ADMIN_OOS
```

The following command controls all trunk terminations for a particular CIC or group of CICs to OOS:

```
control trunk-termination tgn-id=17; cic=1-23; target-state=oos; mode=forced;
```

Reply Example:

```
Reply: Request was successful.
REPLY=CONFIGURATION COMMAND EXECUTED ISDN-TRUNK-GROUP -> 17
INIT STATE -> ADMIN-OOS
FINAL STATE -> ADMIN-OOS
```

Syntax Description

The following token may be used with the trunk termination control command:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

Reset Command

This command clears all manual and blocked states as well as any active/transient calls on a trunk termination, with the exception of SS7 trunk terminations. It brings a trunk into INS mode.

Required Parameters:

- tgn-id: The trunk group ID to be reset (a number).
- CIC: Circuit Identification Code (CIC) to be reset. All, a range, or only one CIC can be reset.

Examples

The following command resets a single CIC:

```
reset trunk-termination tgn-id=22; cic=1
```

Reply Example:

```
Reply : Success:
```

```
TGN ID -> 13
REASON -> ADM executed successful
RESULT -> ADM configure result in success
CIC START -> 1
CIC END -> 24
FAIL REASON -> ADM found no failure
```

The following command resets a range of CICs:

```
reset trunk-termination tgn-id=13; cic=1-6;
```

Reply Example:

```
Reply: Request was successful.
REPLY=CONFIGURATION COMMAND EXECUTED -> reset trunk-termination
```

The following command resets all CICs:

```
reset trunk-termination tgn-id=13; cic=all;
```

Reply Example:

```
Reply: Request was successful.
REPLY=CONFIGURATION COMMAND EXECUTED -> reset trunk-termination
```

Equip Command

The equip command changes the administrative state of terminations that are in the UEQP state to OOS state. It ignores the terminations in the states: INS, MAINT, or OOS.

Use the equip command or the control trunk-grp command to change the termination state for a subscriber to an ISDN trunk. The control trunk-grp command changes all trunks in the specified trunk group to the specified state. For trunk types other than ISDN, use the equip command to set the subscriber termination state. Thereafter, to change the termination state, use the control command.

A subscriber termination state must set to unequipped before it can be deleted.

You cannot use the control command to change a termination state to UEQP. Furthermore, you cannot use the control command to change the state of any subscriber termination that is already in the UEQP state.

For example, consider a case in which 24 CICs in a trunk group are in the following initial states:

- CICs 1–10 in OOS state
- CICs 11–15 in UEQP state
- CICs 16–24 in MAINT state

For this case, issuing the control, equip, or unequip commands would affect the initial state of the CICs as follows:

- If a control command is used with target-state = ins, the final states of all the CICs are:
  - CICs 1–10 in INS state
  - CICs 11–15 in UEQP state
  - CICs 16–24 in INS state
- If an equip command is applied to the CICs in the initial states, the final states of all the CICs are:
  - CICs 1–10 in OOS state

  - CICs 11–15 in OOS state
  - CICs 16–24 in MAINT state
- If an unequip command is applied to the CICs in the initial states, the final states of the CICs are:
  - CICs 1–10 in UEQP state
  - CICs 11–15 in UEQP state
  - CICs 16–24 in MAINT state

Command Types Equip

Examples Use the following command to change the termination administrative state to EQP:

```
equip trunk-termination tgn-id=13; cic=all;
```

Reply Example:

```
Reply : Success: CLI change successful

TGN ID -> 13
REASON -> ADM executed successful
RESULT -> ADM configure result in success
CIC START -> 1
CIC END -> 24
FAIL REASON -> ADM found no failure
```

Syntax Description The following token may be used with the trunk termination equip command:

- WAIT (Release 4.5)—Specifies a waiting period so that previously issued provisioning commands (for example, an add command) can complete before a status, control, or equip command executes. CHAR(1): Y/N (Default = N).
  - Y—System checks whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. The provisioning commands are allowed to execute before the status, control, or equip command is executed.
  - N—System does not check whether there are any pending provisioning requests in the transaction queue issued before the status, control or equip command. All commands execute according to their order in the transaction queue.

Unequip Command

The unequip command changes the administrative state of terminations that are in OOS state into UEQP state. It ignores the terminations in the states: INS, MAINT, or UEQP.

Command Types Unequip

Examples

```
unequip trunk-termination tgn-id=13; cic=all;
```

Reply Example:

```
Reply : Success: CLI change successful

TGN ID -> 13
REASON -> ADM executed successful
RESULT -> ADM configure result in success
CIC START -> 1
CIC END -> 24
```

Diagnostic Tests

This section describes diagnostic tests that can be performed on media gateways, subscriber terminations, and trunk terminations. SS7 COT, CVM, and CQM tests must be performed while in service. All other tests require the MAINT state for testing.

Use the following command example to force a media gateway into the MAINT state:

control mgw id=c2421.65; mode=forced; target-state=maint;

Reply Example:

```
Reply : Success: CLI change successful

MGW ID -> c2421.65
INITIAL STATE -> ADMIN_INS
REQUEST STATE -> ADMIN_MAINT
RESULT STATE -> ADMIN_MAINT
FAIL REASON -> ADM found no failure
REASON -> ADM executed successful
RESULT -> ADM configure result in success
```

Media Gateway Tests

This section describes the tests that can be performed on media gateways. The gateway must be in the MAINT state.

Test Menu

This section describes how to display the Test Menu.

Command Types diag

Examples **diag mgw;**

Reply Example:

```
Reply: Diagnostic MGW Menu.
===
(1) MGW Network Connectivity Test
(2) MGW MGCP Connectivity Test
(3) ALL
```

Note Test #1 tests if there is a path to the device (ping).
Test #2 tests if MGCP has access to the device.
Test #3 performs tests 1 and 2.

Tests

This section describes how to perform a specific test.

Command Types

diag

Examples

diag mgw id=ubr-03; test=1;

Reply Example:

```
MEDIA GATEWAY LINE DIAGNOSTIC TEST EXECUTED -> diag mgw
ID -> ubr-03
TEST-TYPE -> ADM-MGW-NETW-CONNECTIVITY-TEST
TEST-DURATION -> 0
RESULT -> TEST-SUCCESS
REASON -> PASSED
Reply: Diagnostic command executed.
```

diag mgw id=ubr-03; test=2;

Reply Example:

```
MEDIA GATEWAY LINE DIAGNOSTIC TEST EXECUTED -> diag mgw
ID -> ubr-03
TEST-TYPE -> ADM-MGW-MGCP-CONNECTIVITY-TEST
TEST-DURATION -> 0
RESULT -> TEST-SUCCESS
REASON -> PASSED
Reply: Diagnostic command executed.
```

diag mgw id=ubr-03; test=3;

Reply Example:

```
MEDIA GATEWAY LINE DIAGNOSTIC TEST EXECUTED -> diag mgw
ID -> ubr-03
TEST-TYPE -> ADM-MGW-NETW-CONNECTIVITY-TEST
TEST-DURATION -> 11
RESULT -> TEST-SUCCESS
REASON -> PASSED

MEDIA GATEWAY LINE DIAGNOSTIC TEST EXECUTED -> diag mgw
ID -> ubr-03
TEST-TYPE -> ADM-MGW-MGCP-CONNECTIVITY-TEST
TEST-DURATION -> 0
RESULT -> TEST-SUCCESS
REASON -> PASSED
Reply: Diagnostic command executed.
```

Subscriber Termination Tests

This section describes the tests that can be performed on subscriber terminations. All terminations must be in the MAINT state.

Test Menu

This section describes how to display the Test Menu.

Command Types diag

Examples

```
diag subscriber-termination;
```

Reply Example:

```
Reply: Diagnostic Subscriber Menu.
===
(1) Subscriber MGCP Connectivity Test
(2) Subscriber Termination Connection Test
(3) Subscriber Termination Ring Test
(4) ALL
```

Note Test #1 tests if MGCP has access to the termination.
Test #2 tests if there is a path to the device (ping).
Test #3 tests if the Subscriber can be rung. The Ring parameter must be specified in seconds for this test. The default is 5 seconds.
Test #4 performs tests 1 through 3.

Tests

This section describes how to perform a specific test.

Command Types diag

Examples

```
diag subscriber-termination id=sub2-ctx2; test=1;
```

Reply Example:

```
SUBSCRIBER LINE DIAGNOSTIC TEST EXECUTED -> diag subscriber-termination
ID -> sub2-ctx2
TEST-TYPE -> ADM-MGW-MGCP-CONNECTIVITY-TEST
TEST-DURATION -> 10
RESULT -> TEST-SUCCESS
REASON -> PASSED: Reason: AUEP-NACK received with RespCode = 510
Reply: Diagnostic command executed.
```

```
diag subscriber-termination id=sub-ubr3-1@cisco.com; test=2;
```

Reply Example:

```
SUBSCRIBER LINE DIAGNOSTIC TEST EXECUTED -> diag subscriber-termination
ID -> sub-ubr3-1@Cisco.com
TEST-TYPE -> ADM-TERM-CONNECTION-TEST
TEST-DURATION -> 55
RESULT -> TEST-SUCCESS
REASON -> PASS successfully.
Reply: Diagnostic command executed.
```

diag subscriber-termination id=sub-ubr3-1@cisco.com; test=3; ring-duration=10;

Reply Example:

```
SUBSCRIBER LINE DIAGNOSTIC TEST EXECUTED -> diag subscriber-termination
ID -> sub-ubr3-1@Cisco.com
TEST-TYPE -> ADM-TERM-RING-TEST
TEST-DURATION -> 9989
RESULT -> TEST-SUCCESS
REASON -> PASSED
Reply: Diagnostic command executed.
```

diag subscriber-termination id=sub-ubr3-1@cisco.com; test=3; ring-duration=10;

-

Note RING-DURATION—Specifies the ring duration in seconds. INTEGER(2): 1–40 (Default = 10). (Release 4.5.1)

Ring-duration values are 0–999 (Default = 5). Maximum ring time is 30 seconds regardless of whether the duration is set higher than or equal to 31 .

Reply Example:

```
SUBSCRIBER LINE DIAGNOSTIC TEST EXECUTED -> diag subscriber-termination
ID -> sub-ubr3-1@Cisco.com
TEST-TYPE -> ADM-TERM-RING-TEST
TEST-DURATION -> 9896
RESULT -> TEST-SUCCESS
REASON -> PASSED
Reply: Diagnostic command executed.
```

Trunk Termination Tests

This section describes diagnostic tests that can be performed on trunk terminations. All must be in the MAINT state for testing. Trunk termination tests are done by trunk type.

SS7 Trunk Termination Tests

This section describes the tests that can be performed on SS7 trunk terminations.

Test Menu

This section describes how to display the Test Menu.

Note Set COT, CVM, and CQM on the terminating gateway or switch to perform these tests. The terminating gateway or switch must be INS. Otherwise, the test or tests will fail. COT must also set in the SS7 trunk-grp-profile to run COT test.

Examples

```
diag ss7-trunk-termination tgn-ID=50079; cic=1
```

Reply Example:

```
Reply: Diagnostic SS7 Trunk Group Menu.
===
(1) SS7 MGCP Connectivity Test
(2) SS7 Termination Connection Test
(3) SS7 COT Test
(4) SS7 CQM Test
(5) SS7 CVT Test
(6) SS7 CIC Audit
(7) ALL
```

Note Test #1 tests if MGCP has access to the SS7 trunk termination.
Test #2 tests if there is a path to the device (ping).
Test #3 tests the integrity of the SS7 Bearer Path.
Test #4 queries the SS7 circuit (or group of circuits) status. A range of CICs can be specified (to a maximum of twenty four). Both remote and local trunk states are displayed in the results.
Test #5 tests to ensure that each end of the circuit has sufficient and consistent information for using the circuit in call connections. CLLI names are included.
Test #6 performs CIC audit.
Test #6 performs tests 1 through 6.

CQM Responses

Table 1-6 lists the responses that can be returned for the CQM test.

Table 1-6 CQM Responses

Response	Description
CS_TRANSIENT	Transient
CS_UNEQUIPPED	Unequipped
CS_IC_BUSY	Incoming Busy
CS_IC_BUSY_LOCBLOC	Incoming Busy and Locally Maintenance Blocked
CS_IC_BUSY_REMBLOC	Incoming Busy and Remotely Maintenance Blocked
CS_IC_BUSY_BOTH_BLOC	Incoming Busy and Remotely and Locally Maintenance Blocked
CS_OG_BUSY	Outgoing Busy
CS_OG_BUSY_LOCBLOC	Outgoing Busy and Locally Maintenance Blocked
CS_OG_BUSY_REMBLOC	Outgoing Busy and Remotely Maintenance Blocked

Table 1-6 CQM Responses (continued)

Response	Description
CS_OG_BUSY_BOTH_BLOC	Outgoing Busy and Remotely and Locally Maintenance Blocked
CS_IDLE	Idle
CS_IDLE_LOCBLOC	Idle and Locally Maintenance Blocked
CS_IDLE_REMBLOC	Idle and Remotely maintenance blocked
CS_IDLE_BOTH_BLOC	Idle and Remotely and Locally Maintenance Blocked
CS_HW_LOCBLOC	Locally Hardware Blocked
CS_HW_LOCBLOC_LOCBLOC	Locally Hardware and Locally Maintenance Blocked
CS_HW_LOCBLOC_REMBLOC	Locally Hardware and Remotely Maintenance Blocked
CS_HW_LOCBLOC_BOTHBLOC	Locally Hardware and Remotely and Locally Maintenance Blocked
CS_HW_REMBLOC	Remotely Hardware Blocked
CS_HW_REMBLOC_LOCBLOC	Remotely Hardware and Locally Maintenance Blocked
CS_HW_REMBLOC_REMBLOC	Remotely Hardware and Remotely Maintenance Blocked
CS_HW_REMBLOC_BOTHBLOC	Remotely Hardware and Remotely and Locally Maintenance Blocked
CS_HW_BOTHBLOC	Remotely and Locally Hardware Blocked
CS_HW_BOTHBLOC_LOCBLOC	Remotely and Locally Hardware and Locally Maintenance Blocked
CS_HW_BOTHBLOC_REMBLOC	Remotely and Locally Hardware and Remotely Maintenance Blocked
CS_HW_BOTHBLOC_BOTHBLOC	Remotely and Locally Hardware and Remotely and Locally Maintenance Blocked

Tests

This section describes how to perform specific tests.

Command Types

Diag

Examples

```
diag ss7-trunk-termination tgn-id=103; cic=13; test=1;
```

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 103
CIC -> 13
```

```
TEST-TYPE -> ADM-MGW-MGCP-CONNECTIVITY-TEST
TEST-DURATION -> 0
RESULT -> TEST-SUCCESS
REASON -> PASSED: Reason: AUEP-NACK received with RespCode = 510
Reply: Diagnostic command executed.
```

diag ss7-trunk-termination tgn-id=103; cic=13; test=2;

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 103
CIC -> 13
TEST-TYPE -> ADM-TERM-CONNECTION-TEST
TEST-DURATION -> 33
RESULT -> TEST-SUCCESS
REASON -> PASS successfully.
Reply: Diagnostic command executed.
```

diag ss7-trunk-termination tgn-id=103; cic=14; test=3;

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 103
CIC -> 14
TEST-TYPE -> ADM-SS7-COT-TEST
TEST-DURATION -> 0
RESULT -> TEST-FAILURE
REASON -> ADM-MAINT-STATE-REQUIRED
Reply: Diagnostic command executed.
```

diag ss7-trunk-termination tgn-id=2;cic=1-24;test=4

Reply Example:

```
Reply : Success:

TGN ID -> 2
START CIC -> 1
END CIC -> 24
TEST TYPE -> ADM running SS7 circuit query messagge test
TEST DURATION -> 0
RESULT -> ADM ran test succeessfully
REASON -> CQM test pass
CIC COUNT -> 24
CIC STATES ->

        Remote State         Local State
        CIC 1 -> CS_IDLE     ACTV   IDLE
        CIC 2 -> CS_IDLE     ACTV   IDLE
        CIC 3 -> CS_IDLE     ACTV   IDLE
        CIC 4 -> CS_IDLE     ACTV   IDLE
        CIC 5 -> CS_IDLE     ACTV   IDLE
        CIC 6 -> CS_IDLE     ACTV   IDLE
        CIC 7 -> CS_IDLE     ACTV   IDLE
        CIC 8 -> CS_IDLE     ACTV   IDLE
        CIC 9 -> CS_IDLE     ACTV   IDLE
        CIC 10 -> CS_IDLE    ACTV   IDLE
        CIC 11 -> CS_IDLE    ACTV   IDLE
```

```
CIC 12 -> CS_IDLE    ACTV    IDLE
CIC 13 -> CS_IDLE    ACTV    IDLE
CIC 14 -> CS_IDLE    ACTV    IDLE
CIC 15 -> CS_IDLE    ACTV    IDLE
CIC 16 -> CS_IDLE    ACTV    IDLE
CIC 17 -> CS_IDLE    ACTV    IDLE
CIC 18 -> CS_IDLE    ACTV    IDLE
CIC 19 -> CS_IDLE    ACTV    IDLE
CIC 20 -> CS_IDLE    ACTV    IDLE
CIC 21 -> CS_IDLE    ACTV    IDLE
CIC 22 -> CS_IDLE    ACTV    IDLE
CIC 23 -> CS_IDLE    ACTV    IDLE
CIC 24 -> CS_IDLE    ACTV    IDLE
```

diag ss7-trunk-termination tgn-id=2;cic=1;test=5;

Reply Example:

```
Reply : Success:

TGN ID -> 2
START CIC -> 1
END CIC -> 1
TEST TYPE -> ADM running SS7 circuit validation test
TEST DURATION -> 0
RESULT -> ADM ran test successfully
REASON -> CVT test pass
CLLI -> DALLTXRCDN5
```

ISDN Trunk Termination Tests

This section describes the tests that can be performed on ISDN trunk terminations.

Test Menu

This section describes how to display the Test Menu.

Examples

diag isdn-trunk-termination tgn-id=17; cic=1;

Reply Example:

```
Reply: Diagnostic ISDN Trunk Group Menu.
===
(1) ISDN MGCP Connectivity Test
(2) ISDN Termination Connection Test
(3) ALL
```

Note Test #1 tests if MGCP has access to the ISDN termination.
Test #2 tests if there is a path to the device (ping).
Test #3 performs tests 1 and 2.

Tests

This section describes how to perform a specific test.

Command Types Diag

Examples

```
diag isdn-trunk-termination test=1; tgn-id=17; cic=1;
```

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 17
CIC -> 1
TEST-TYPE -> ADM-MGW-MGCP-CONNECTIVITY-TEST
TEST-DURATION -> 0
RESULT -> TEST-SUCCESS
REASON -> PASSED: Reason: AUEP-NACK received with RespCode = 510
Reply: Diagnostic command executed.
```

```
diag isdn-trunk-termination test=2; tgn-id=17; cic=1;
```

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 17
CIC -> 1
TEST-TYPE -> ADM-TERM-CONNECTION-TEST
TEST-DURATION -> 0
RESULT -> TEST-SUCCESS
REASON -> PASSED: Reason: AUEP-NACK received with RespCode = 510
Reply: Diagnostic command executed.
```

CAS Trunk Termination Tests

This section describes the tests that can be performed on CAS trunk terminations.

Test Menu

This section describes how to display the Test Menu.

Examples

```
diag cas-trunk-termination;tgn-id=64;cic=1;
```

Reply Example:

```
Reply: Diagnostic CAS Trunk Group Menu.
===
(1) CAS MGCP Connectivity Test
(2) CAS Termination Connection Test
(3) ALL
```

Note Test #1 tests if MGCP has access to the CAS termination.
Test #2 tests if there is a path to the device (ping).
Test #3 performs tests 1 and 2.

Tests

This section describes how to perform a specific test.

Command Types

Diag

Examples

diag cas-trunk-termination tgn-id=64;cic=1;test=1;

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 64
CIC -> 1
TEST-TYPE -> ADM-MGW-MGCP-CONNECTIVITY-TEST
TEST-DURATION -> 0
RESULT -> TEST-SUCCESS
REASON -> PASSED: Reason: AUEP-NACK received with RespCode = 510
Reply: Diagnostic command executed.
```

diag cas-trunk-termination tgn-id=64;cic=1;test=2;

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 64
CIC -> 1
TEST-TYPE -> ADM-TERM-CONNECTION-TEST
TEST-DURATION -> 32
RESULT -> TEST-SUCCESS
REASON -> PASS successfully.
Reply: Diagnostic command executed.
```

diag cas-trunk-termination tgn-id=64;cic=1;test=3;

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 64
CIC -> 1
TEST-TYPE -> ADM-MGW-MGCP-CONNECTIVITY-TEST
TEST-DURATION -> 11
RESULT -> TEST-SUCCESS
REASON -> PASSED: Reason: AUEP-NACK received with RespCode = 510

TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 64
CIC -> 1
TEST-TYPE -> ADM-TERM-CONNECTION-TEST
TEST-DURATION -> 32
RESULT -> TEST-SUCCESS
REASON -> PASS successfully.
Reply: Diagnostic command executed.
```

Announcement Trunk Termination Tests

This section describes the tests that can be performed on Announcement trunk terminations.

Test Menu

This section describes how to display the Test Menu.

Examples

diag annc-trunk-termination;tgn-id=13;cic=1

Reply Example:

```
Reply: Diagnostic ANC Trunk Group Menu.
===
(1) ANC MGCP Connectivity Test
(2) ANC Termination Connection Test
(3) ALL
```

Note Test #1 tests if MGCP has access to the ANC termination.
Test #2 tests if there is a path to the device (ping).
Test #3 performs tests 1 and 2.

Tests

This section describes how to perform a specific test.

Command Types

Diag

Examples

diag annc-trunk-termination;test=1;tgn-id=13;cic=1;

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 13
CIC -> 1
TEST-TYPE -> ADM-MGW-MGCP-CONNECTIVITY-TEST
TEST-DURATION -> 0
RESULT -> TEST-SUCCESS
REASON -> PASSED: Reason: AUEP-NACK received with RespCode = 510
Reply: Diagnostic command executed.
```

diag annc-trunk-termination;test=2;tgn-id=13;cic=1

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 13
CIC -> 1
TEST-TYPE -> ADM-TERM-CONNECTION-TEST
TEST-DURATION -> 33
RESULT -> TEST-SUCCESS
REASON -> PASS successfully.
Reply: Diagnostic command executed.
```

diag annc-trunk-termination;test=3;tgn-id=13;cic=1;

Reply Example:

```
TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 13
CIC -> 1
TEST-TYPE -> ADM-MGW-MGCP-CONNECTIVITY-TEST
TEST-DURATION -> 11
RESULT -> TEST-SUCCESS
REASON -> PASSED: Reason: AUEP-NACK received with RespCode = 510

TRUNK DIAGNOSTIC TEST EXECUTED -> diag trunk
TG-NUM -> 13
CIC -> 1
TEST-TYPE -> ADM-TERM-CONNECTION-TEST
TEST-DURATION -> 33
RESULT -> TEST-SUCCESS
REASON -> PASS successfully.
Reply: Diagnostic command executed.
```

Hardware Monitoring

The Hardware Monitor (HMN) subsystem monitors the CPUs, memory consumption, disk, and disk control utilization and returns information and alarms as appropriate.

Command Types

Show, change, control, report, and status

Caution Show and change and control are obsolete as of Release 4.4.0.

Examples

```
show node node=CA146; service=ssh (Obsoleted as of Release 4.4.0)
change node node=CA146; service=ftp; enable=Y (Obsoleted as of Release 4.4.0)_
```

Caution Altering node settings after the delivery of a Cisco BTS 10200 Softswitch can create security issues in your network.

```
control node node=CA146; action=HALT; (Obsoleted as of Release 4.4.0)
```

Caution Modifying nodes are low-level maintenance activities.

Note After halting a Cisco BTS 10200 Softswitch node, local console access or a power cycle may be required to restart the node.

```
report node node=CA146
status node node=CA146;cpu=y;memory=y;
```

Examples

```
report node node=priems123;
report node;
status node node=priems123;cpu=y;memory=y;
status node;
```

Note The hostname is the only permitted value for the node token.

Usage Guidelines

Primary Key Token(s): None

If the report and status commands are entered with no tokens then the commands are executed on the active EMS.

Note In the Syntax Description, an asterisk preceding a token name means the token is mandatory. A token without an asterisk is optional.

Syntax Description

* NODE	The logical host name of the target node in the Cisco BTS 10200 Softswitch. This replaces manually telneting to the box. Use only the hostname (priemsxxx) not the application name (for example, CA146). **Caution** For security purposes, Telnet is no longer supported as of Release 4.4.0/1. STRING: Hostname in the format: priemsxxx.
ACTION	Valid only for the control command. The *action* indicates the type of activity to perform. Both parameters are required. STRING: *REBOOT,* or *HALT,* are the only valid actions for this token.
CPU	Valid only for the status and report commands. Specifies whether to generate a report of CPU utilization. STRING: Y/N (Default = Y).
ENABLE (Obsolete as of Release 4.4.0)	Valid only for the change command. Specifies whether to turn a service on (Y), or off (N). STRING: Y/N (Default = Y).
MEMORY	Valid only for the status and report commands. Specifies whether to generate a report of memory utilization. STRING: Y/N (Default = Y).
NETWORK	Valid only for the status and report commands. Specifies whether to generate a report of network utilization. STRING: Y/N (Default = Y).

PROCESS	Valid only for the status and report commands. Specifies whether to generate a report of process utilization. STRING: Y/N (Default = Y).
SERVICE (Obsolete as of Release 4.4.0)	Valid only for the show and change commands. Specifies the standard UNIX service. STRING: any valid UNIX service. Permitted values are: ftp—File Transfer Protocol telnet—Text-based terminal service ⚠ **Caution** For security purposes, Telnet is no longer supported as of Release 4.4.0/1. echo—Application space service to verify a remote host discard—Solaris testing facility day—Solaris testing facility time—Solaris testing facility chargen—Solaris testing facility smtp—Solaris mail service finger—UNIX user ID service sunrpc—Solaris Remote Procedure Call service exec—Remote execution service login—BSD remote login service shell—BSD remote shell service printer—Solaris printer services uucp—UNIX-to-UNIX copy service nfs—Network File System service lockd—Remote file locking facility x11—X Window graphical services dtscp—Solaris management services font_service—Solaris character set service http—Hyper-Text Transfer Protocol service **Note** These values must be entered in lowercase.

System Health

The System Health Report (system-health) (SHR) allows a service provider to retrieve the status of various processes within the Cisco BTS 10200 Softswitch.

Command Types Report

Examples

Use the following command example to run a SHR immediately.

```
report system-health period=720;
```

Syntax Description

PERIOD	The amount of time to collect back to in hours. INTEGER: 1–720 (Default = 24).

The SHR command can be used in conjunction with the command scheduler. Using the command scheduler, the SHR runs at periodic intervals collecting the last 24 hours (configurable) worth of data. Upon initial installation and startup, there is an SHR command already scheduled to execute at midnight every 24 hours.

To schedule multiple SHR command(s) at different times, the command scheduler add command can be issued multiple times:

```
add scheduled-command verb=report; noun=system-health; <recurrence=DAILY>; <start-time=…>;
<keys=period>; <values=…>
```

Use the following command to remove any scheduled SHR command(s):

```
delete scheduled-command id=NNN
```

To obtain an id, view the list of scheduled commands using the show scheduled command:

```
show scheduled-command verb=report; noun=system-health
```

To reschedule an SHR command at another time, change the recurrence, or change the collection period, use the change command:

```
change scheduled-command id=NNN; <recurrence=DAILY>; <start-time=…>; <keys=period>;
<values=…>
```