CHAPTER 2

Office Provisioning

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This chapter describes the Call Agent Office Provisioning commands and their associated tables. Office tables are the primary tables provisioned for call processing that describe the hardware and protocols used.

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

AAA Server Group (Release 4.5)

The AAA Server Group (aaa-server-grp) table holds all the information about the prepaid feature for a point of presence (POP). An AAA Server Group record can be shared by multiple POPs.

Table Name: AAA-SERVER-GRP

Table Containment Area: POTS Feature Server

Command Types Show, add, change, and delete

Examples

```
show aaa-server-grp id=prepaidgrp1;
add aaa-server-grp id=prepaidgrp1;radius-profilepid=rds1;
change aaa-server-grp id=prepaidgrp1;radius-profile-id=rds3;
delete aaa-server-grp id=prepaidgrp1;
```

Usage Guidelines Primary Key Token(s): id

Syntax Description

* ID	Primary key. Unique id for this prepaid profile. VARCHAR(16): 1–16 ASCII characters.
* RADIUS-PROFILE-ID	Foreign key: Radius Profile table. Radius Profile id. VARCHAR(16): 1–16 ASCII characters.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DESCRIPTION	Service provider-defined description. VARCHAR(64): 1–64 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
SERVER-TYPE	Not used.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
WARNING-TIMER	Specifies the time, in seconds, to provide a low balance warning tone before a call is disconnected. INTEGER: 0–120 (Default = 30).

Aggregation

The Aggregation (aggr) table is used to define aggregation devices used in cable or Network Based Call Signaling (NCS) markets. The table holds Cable Modem Termination System (CMTS)/edge router (ER) related information. Cable Networks use a CMTS; NCS markets use ERs.

The CMTS node configuration table is used by the Common Open Policy Service (COPS) adapter to establish and terminate TCP connections to the CMTS. When a TCP connection is established, the CMTS initiates a client-open procedure to establish end-to-end client connectivity.

Table Name: AGGR

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show aggr id=er1;
show aggr;
add aggr id=er1; tsap-addr=190.101.100.123;
change aggr id=er1; dqos-supp=y;
delete aggr id=er1;
```

Usage Guidelines

Primary Key Token(s): id

Add Rules:

- es-event-supp=Y only if es-supp=Y.
- The id and tsap-addr are both required to create a CMTS (or ER) node.

Change Rules:

- no change is allowed on tsap-addr.
- es-event-supp=Y only if es-supp=Y.

Delete Rules: None.

DQoS Rule: To support dynamic quality of service (DQoS) the dqos-supp token must be set to Y.

IPSec Rules:

- es-event-supp=Y only if es-supp=Y.
- ipsec-sa-lifetime must be greater than or equal to 0.
- ipsec-sa-grace-period must be greater than or equal to 0.
- ipsec-sa-grace-period must be less than or equal to 25% of ipsec-sa-lifetime.
- ike-sa-lifetime must be greater than or equal to 0.

Syntax Description

* ID	Primary key. Specifies the user-defined ID for the CMTS, or edge router (ER). Defined by the service provider for the aggregation router. VARCHAR(16): 1–16 ASCII characters.

* TSAP-ADDR	Specifies the FQDN/IP address for the CMTS or edge router (ER). VARCHAR(64): 1–64 ASCII characters.
ACK-TIMEOUT (Not supported)	Time out for retransmission in milliseconds. INTEGER: 10–10000 (Default = 1000).
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DESCRIPTION	Service provider-defined description. VARCHAR(64): 1–64 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
DQOS-SUPP	Specifies whether dynamic quality of service (DQoS), or a non-DQoS mechanism is used when talking to the aggregation router. CHAR(1): Y/N (Default = N). **Note** This token must be set to Y for the CMTS (or ER) to support DQoS.
ES-EVENT-SUPP	Set this token to Y (yes) if the CMTS supports event messages (EMs) for electronic surveillance. (You can set **es-event-supp** to Y only if *es-supp* also is set to Y.) BOOLEAN: Y/N (Default = N).
ES-SUPP	Set to Y (yes) to enable electronic surveillance. The es-supp flag is used to duplicate IP packets if electronic surveillance is supported on the CMTS. CHAR(1): Y/N (Default = N).
GC-RADIUS-TSAP-ADDR (Not supported)	Specifies the IP address for the RKS. VARCHAR(64): 1–64 ASCII characters. **Note** Domain names cannot begin with a number.
IKE-CS	Specifies a list of ciphersuites supported by IKE, in priority order. This list is used to negotiate the encryption-authentication algorithm pair used by IKE. The list can contain only those ciphersuites using the authentication algorithms HMAC-MD5 and HMAC-SHA and the encryption algorithm ESP-3DES. VARCHAR(64): 1–64 ASCII characters. Permitted values are: 3DES-MD5, 3DES-SHA1 (Default list) 3DES-SHA1, 3DES-MD5 3DES-MD5 3DES-SHA1

IKE-GROUP	Specifies the available groups in which the Diffie-Helman exchange can occur. INTEGER: Valid values are 1 and 2 (Default = 2).
IKE-KEY	The IKE preshared key. This value is used for security on the interface between the Cisco BTS 10200 Softswitch and the CMTS. VARCHAR(256): 1–256 ASCII characters. The system encrypts the value of the ike-key token and stores the encrypted value as ike-key-encr. See the ike-key-encr token for additional details. (Release 4.5)
IKE-KEY-ENCR (Release 4.5)	The IKE preshared key in encrypted form (system generated). The system encrypts the value of the ike-key token and stores the encrypted value as ike-key-encr. It is then decrypted and displayed only when accessed by a privileged user. VARCHAR(256): 1–256 ASCII characters.
IKE-SA-LIFETIME	IKE Security Association (SA) expiration in seconds. Valid only for a trunking gateway. INTEGER: 0–MAXINT (Default = 86400). **Note** MAXINT is a 4-byte integer, such as MAXINT = 2 to the power of 32 –1.
IPSEC-SA-ESP-CS	The IPSec SA ESP ciphersuite list in priority order. Used to negotiate an encryption-authentication algorithm pair used by IPSec. The list can contain only those ciphersuites using the authentication algorithms HMAC-MD5 and HMAC-SHA and the encryption algorithms ESP-3DES and ESP-NULL. VARCHAR(64): 1–64 ASCII characters. 3DES-MD5, 3DES-SHA1, NULL-MD5, NULL-SHA1 (Default list) **Note** This list can be modified to be a subset of this initial list using the CLI and can be reordered to specify a new priority selection. For example: - 3DES-MD5, 3DES-SHA1, NULL-SHA1, NULL-MD5 - 3DES-SHA1, NULL-MD5, NULL-SHA1 - 3DES-MD5, NULL-MD5 - NULL-SHA1 and additional values.
IPSEC-SA-GRACE-PERIOD	IPSec SA key expiration grace period in seconds. This is used to calculate the soft expiration. The ipsec-sa-grace-period must be less than or equal to 25% of the configured ipsec-sa-lifetime. If not specified when configuring a new ipsec-sa-lifetime, the ipsec-sa-grace-period defaults to 25% of the ipsec-sa-lifetime. INTEGER: 0–MAXINT (Default= 21600). **Note** MAXINT is a 4-byte integer, such as MAXINT = 2 to the power of 32 –1.
IPSEC-SA-LIFETIME	IPSec SA expiration in seconds. This is the hard expiration. INTEGER: 0–MAXINT (Default = 86400). **Note** MAXINT is a 4-byte integer, such as MAXINT = 2 to the power of 32 –1.

IPSEC-ULP-NAME	IPSec SA upper layer protocol name. Used if the SA is created only for specific protocol traffic (for example, IP traffic). The value is a string as described in getprotobyname(3XNET). VARCHAR(8): 1–8 ASCII characters. Permitted values are: IP (Default) TCP UDP The default value (IP) is adequate for most applications.
KA-TIMER	Specifies the time to wait (in seconds) before sending a keepalive message to a CMTS. INTEGER: 1–10 numeric characters (Default = 2).
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
RADIUS-AUTH-KEY (Not supported)	Specifies the RADIUS authorization key for the RKS. VARCHAR(16): 1–16 ASCII characters (Default = all zeros).
RETRY-COUNT (Not supported)	Number of retransmissions. INTEGER: 0–9 (Default = 0).
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
TYPE (Not provisionable) (Release 4.5)	Specifies the type of aggregation device. VARCHAR(16): 1–16 ASCII characters. Permitted values are: CMTS (0x8008) (Default)—Cable Modem Termination system POLICY-SERVER (0x800A)—Packet Cable Multimedia Policy Server

Announcement

The Announcement (annc) table holds the routing information to get to an announcement. Announcement messages are played if a call cannot be connected. The system comes with preprogrammed (default) announcement audio files, but a service provider can create custom announcement files and load them into the system. System and custom files are saved in a specified

format and stored on the service provider's announcement server. Additionally, Intercept announcements can be used. Intercept announcements can be used for playing messages from the service provider's announcement server when calls require special treatment.

Table Name: ANNC

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show announcement id=200;
add announcement id=200; type=system; announcement-file=ann_id_200.au;
route-guide-id=annc-rg;
```

Caution Announcement filenames must be typed with an underscore (_) or the command will not process correctly.

```
change announcement id=200; announcement-timer=30; send-answer=Y;
delete announcement id=200;
```

Usage Guidelines

Primary Key Token(s): id

Foreign Key Token(s): announcement-timer, route-guide-id

Add Rules: See the *Cisco BTS 10200 Provisioning Guide* for valid announcements that can be added.

Change Rules: id is required if type=annc.

Delete Rules: None.

Syntax Description

* ID	Primary key. There can be multiple announcements to cover different scenarios. All announcements must have a unique id assigned in accordance with the numbering range rules. Any number can be picked within a range. SMALLINT: 1–4 digits (Range is from 1–1000).
ANNOUNCEMENT-FILE	The announcement filename. Audio files must be in 8-bit mu-Law encoded, Next/Sun AU format (.au extension). VARCHAR(64): 1–64 ASCII characters. Format = ann_id_x.au. Files are named ann_id_x.au, where x equals the ID specified above for this announcement. For example, a system announcement with ID=57 has an audio file named ann_id_57.au loaded onto the announcement server. **Caution** Announcement filenames must be typed with an underscore (_) or the command will not process correctly.

ANNOUNCEMENT-NUMBER	Number sent to the announcement server that uses that MCGP announcement package type. SMALLINT: 1–65535.
ANNOUNCEMENT-TIMER	Foreign key: Route Guide table. The announcement timer controls the maximum time the call can be connected to an announcement server. If the caller or the announcement server does not disconnect before the timer expires, the system disconnects the call. INTEGER: 0–600 (Default = 180). 0 indicates to not start the timer.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
BAU-URI (Release 4.5) (Not supported)	Specifies the announcement string sent to the announcement server using an MGCP announcement package type. VARCHAR(128): 1–128 ASCII characters.
DESCRIPTION (EMS-only field)	Described by the service provider. VARCHAR(64): 1–64 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
NUM-REPEAT	The number of times an announcement is repeated in sequence. Service provider assigns. SMALLINT: 1–10 (Default = 1).
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.

ROUTE-GUIDE-ID	Foreign key: Route Guide table. The route id specifies the route for Intercept-External announcements. Same ID as in the Route table. VARCHAR(16): 1–16 ASCII characters.
SEND-ANSWER	Determines if the caller is charged for the announcement. CHAR(1): Y/N (Default = N). N—Nonchargeable. Answer-supervision is not sent. Y—Answer-supervision is sent and the caller is charged for the announcement call.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
TYPE	Type of announcement to play. Internal announcements are specific to Cisco BTS 10200 Softswitch. Intercept-External announcements come from outside the Cisco BTS 10200 Softswitch (for example, the local telephone company put a number out-of-service—the announcement for this is routed from them). Custom announcements are created specifically by or for a customer. VARCHAR(9): 1–9 ASCII characters. Permitted values are: SYSTEM (Default)—Internal announcements. CUSTOM—Announcements created by the service provider for a customer. INTERCEPT—Routes a call to an external intercept system using the route-grp-id of the external intercept system.

Announcement Trunk

The Announcement Trunk (annc-trunk) table is used when an announcement server is required network.

Table Name: ANNC-TRUNK

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show annc-trunk tgn-id=123;
add annc-trunk tgn-id=123; term-id=S0/DS1-1/1;mgw-id=as54001;remote-term-id=S0/DS1-1/1;
remote-mgw-id=as540054002;
change annc-trunk tgn-id=123; remote-mgw-id=as54009;
delete annc-trunk tgn-id=123; term-id=abc; mgw-id=as54009;
```

Usage Guidelines

Primary Key Token(s): tgn-id, term-id

Foreign Key Token(s): tgn-id, term-id, mgw-id, remote-term-id, remote-mgw-id

Add Rules: term-id, mgw-id combination exists; remote-term-id, mgw-id combination exists.

Change Rules:

- term-id, mgw-id combination exists if entered.
- remote-term-id, mgw-id combination exists if entered.
- must enter both remote-mgw-id and remote-term-id together if used

Delete Rules: Trunk must exist.

Syntax Description

* TGN-ID (or * TG)	Primary key. Foreign key: Trunk Group table. Trunk group ID. This field can also be provisioned using TG instead of tgn-id. The EMS looks up the tgn-id based on the trunk group and then provisions it. INTEGER: 1–99999999.
* TERM-ID	Primary key. Foreign key: Termination table. Identifies the termination. Use as a combined key to the Termination table. VARCHAR(32): 1–32 ASCII characters.
* MGW-ID	Foreign key: Media Gateway table. Identifies the media gateway. Use as a combined key to the Termination table. VARCHAR(32): 1–32 ASCII characters.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.

REMOTE-MGW-ID	Foreign key: Termination table. Identifies a remote media gateway. Use as a combined key to the Termination table (required for ATM networks, but not required for IP networks). VARCHAR(32): 1–32 ASCII characters.
REMOTE-TERM-ID	Foreign key: Termination table. Identifies a remote termination. Use as a combined key to the Termination table (required for ATM networks, but not required for IP networks). VARCHAR(32): 1–32 ASCII characters.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

Announcement Trunk Group Profile

The Announcement Trunk Profile (annc-tg-profile) table is required for IP networks and interactive voice response (IVR) trunks.

Table Name: ANNC-TG-PROFILE

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show annc-tg-profile id=vendorx-irv;
add annc-tg-profile id=vendorx-ivr;ivr=y;auto-answer=y;local-trunk-selection=y;
change annc-tg-profile id=vendorx-ivr;local-trunk-selection=n;
delete annc-tg-profile id=vendorx-ivr;
```

Usage Guidelines

Primary Key Token(s): id

Add Rules: None.

Change Rules: None.

Delete Rules: None.

Syntax Description

* ID	Primary key. Unique ID for this trunk group profile. Assigned by service provider. VARCHAR(16): 1–16 ASCII characters.
ANNC	Specifies whether announcements are supported. CHAR(1): Y/N (Default = N) Y—Announcements are supported. N—Announcements are not supported.

AUTO-ANSWER	Specifies whether an answer signal is generated when seized. Specifies if call path is two-way. CHAR(1): Y/N (Default = N). Y—Answer signal is generated when seized. N—Answer signal is not generated.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DESCRIPTION (EMS-only field)	Described by the service provider. VARCHAR(64): 1–64 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
IVR	Specifies whether interactive voice response (IVR) is supported. CHAR(1): Y/N (Default = N) Y—IVR is supported. N—IVR is not supported.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
LOCAL-TRUNK-SELECTION	For some IVRs, the IVR selects the trunk (port). If this is so, this token is set to N. CHAR(1): Y/N (Default = Y) Y—Trunk selection is done locally by Call Agent. N—Trunk selection is done remotely, that is, the IVR does the trunk (port) selection.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

Channel Associated Signaling Trunk Group Profile

The Channel Associated Signaling (CAS) Trunk Group Profile (cas-tg-profile) table holds common information on a CAS trunk group. It supports the following signaling types: DTMF loopstart, DTMF groundstart, MF imstart, MF winkstart, DTMF imstart, DTMF winkstart. A cas-tg-profile record can be shared by multiple CAS trunk groups.

Table Name: CAS-TG-PROFILE

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show cas-tg-profile id=cas-prf1;
add cas-tg-profile id=cas-prf1; sig-type=dtmf; mgcp-pkg-type=dt;
```

Note The mgcp-pkg-type token is obsolete in Release 4.5. The token was moved to the Trunk Group table.

```
change cas-tg-profile id=cas-prf1;
delete cas-tg-profile id=cas-prf1;
```

Usage Guidelines

Primary Key Token(s): id

Add Rules: id must not exist.

Change Rules: id must exist.

Delete Rules: id must not exist in any dependency table, such as trunk-grp::tg-profile-id where tg-type=cas.

Syntax Description

* ID	Primary key. Unique ID for this trunk group profile. VARCHAR(16): 1–16 ASCII characters.
* E911	E911 trunk group. CHAR(1): Y/N (Default = N). N—Group is not an E911 trunk group. Y—Group is an E911 trunk group.
* MGCP-PKG-TYPE (Obsolete as of Release 4.5. Token moved to Trunk Group table in Release 4.5.)	Package type for MGCP based trunks. VARCHAR(16): 1–16 ASCII characters. Permitted values are: DT—DTMF LINE—Test line. MS—MF MT—MF terminating trunks MO—MF operator trunks

* SIG-TYPE	Specifies the CAS signaling type. VARCHAR(16): 1–16 ASCII characters. Permitted values are: MF—MF signaling (wink or immediate start) using MS package or EAOSS and FG-D signaling using the AUTO package in the trunk group. DTMF—DTMF signaling (wink or immediate start) using DT package. MF-OSS—MF signaling, operator services. MF-TERM—MF terminating trunks. LINE—Regular subscriber line. (Release 4.5)
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DESCRIPTION (EMS-only field)	Described by the service provider. VARCHAR(64): 1–64 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
INBAND-INFO (Release 4.5)	Specifies whether to send a release, provide a tone, or provide an announcement if data is available. CHAR(1): Y / N (Default = N).
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
MF-OSS-TYPE	Mandatory if mgcp-pkg-type in Trunk Group table is MO; and applies only if sig-type=mf-oss where mf-oss=MO-7I or MO-7II or MO-10I or MO-10II. Specifies the type of ANI to send. Used for OSS signaling. VARCHAR(16): 1–16 ASCII characters. Permitted values are: MO-7I(MO)—Used with MO package. Send 1 information digit (I) + 7-digit ANI. MO-7II(MO)—Used with MO package. Send 2 information digits (II) + 7-digit ANI. MO-10I(MO)—Used with MO package. Send 1 information digit (I) + 10-digit ANI. MO-10II(MO)—Used with MO package. Send 2 information digits (II) + 10-digit ANI. MO-NOANI(MO) (Not supported)—Give MO10II treatment.

NO-ANSWER-ACTION (Release 4.5)	Specifies what action to perform if the No Answer timer expires. Can set to RELEASE or ANSWER only if no-answer-timer greater than zero. VARCHAR(32): 1–32 ASCII characters. Permitted values are: RELEASE—Release call on no-answer-timer timeout. ANSWER—Consider the call as ANSWERED on no-answer-timer timeout. NA (Default)—Only applicable if no-answer-timer is 0. Allowed only if no-answer-timer=0;
NO-ANSWER-TIMER (Release 4.5)	Specifies the amount of time in seconds after which, if the user does not answer the call, the call is released. INTEGER: 0–900 (Default = 0). 0—Do not start the No Answer timer. Use the gateway default timer.
NO-TEST-TRUNK	Busy line verification trunk group. CHAR(1): Y/N (Default = N). N—Group is not a busy line verification trunk group. Y—Group is a busy line verification trunk group.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
OSS-SIG (Obsoleted in 4.5—use oss-sig-type)	Operator services system signaling. CHAR(1): Y/N (Default = N). Y—Operator services signaling supported. N—Operator services signaling not supported.
OSS-SIG-TYPE (Release 4.5)	Operator Services System Signaling type. VARCHAR(16): 1–16 ASCII characters. Permitted values are: MOSS—Modified operator services signaling (same as Backward Error Correction (BEC)). NBEC—Non Bell Exchange Carrier. EAOSS—Exchange Access operator services signaling. NONE (Default)—No operator signaling (use regular Signaling Transport (ST) signaling).
PLAY-DIAL-TONE (Release 4.5)	Specifies whether to play a dial tone on origination. Applies only if sig-type=DTMF. CHAR(1): Y/N (Default = N). Y—Play a dial tone on origination. N—Do not play a dial tone on origination.
PLAY-RINGBACK-TONE (Release 4.5)	Specifies whether to play a ringback tone on a CAS trunk. CHAR(1): Y/N (Default = Y).

SEND-ANI (Release 4.5)	Specifies whether to send the Charge Number and Originating Line Information parameters. Applies only to EAOSS trunk groups. Does not apply to MO trunks. CHAR(1): Y/N (Default = N). Y—Send Charge Number and Originating Line Information parameters. N—Do not send Charge Number and Originating Line Information parameters.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
TEST-LINE	Test line trunk group. CHAR(1): Y/N (Default = N). Y—Test line. N—Not a test line.
TEST-LINE-TYPE (Release 4.5)	Specifies the type of test line. Valid only when test-line=Y. VARCHAR(16): 1–16 ASCII characters. Permitted values are: NONE (Default)—Not a test line. Test line based on dialed number (such as 108 test). NLB-LINE—Dedicated network loopback test line. Used to perform a test call on a subscriber line endpoint. NCT-LINE—Dedicated Network continuity test line. Used to perform a test call on a subscriber line endpoint. NLB-TRUNK—Dedicated network loopback test line. Used to perform a test call on a trunk endpoint. NCT-TRUNK—Dedicated network continuity test line. Used to perform a test call on a trunk endpoint. NTE—Shared trunk group that can originate more than one type of test call. The type of test call is based on detection of the <test-prefix> in the dialed digits.

DS1

The DS1 (ds1) table allows bulk provisioning of a large trunking gateway, reducing the number of CLI commands that are entered.

Note Slot, line, or port, as used in this table, refers to the physical location of an endpoint on a gateway. Whether slot, line, or port is specified depends on the gateway type.

Table Name: DS1

Table Containment Area: Call Agent

Command Types

Show, add, and delete

Examples

```
show ds1 mgw-id=mgw1;
add ds1 mgw-id=mgw1; slot-start=11; slot-end=16; line-num-start=1; line-num-end=168;
line-type=t1; port-start=1; port-end=24; type=trunk; mgcp-pkg-type=trunk;
delete ds1 mgw-id=mgw1; slot-start=11; slot-end=16; line-num-start=1; line-num-end=168;
```

Usage Guidelines

Primary Key Token(s): mgw-id, slot, line-num, port-start, port-end

Foreign Key Token(s): mgw-id

Add Rules:

- If line-type=t1, number of ports allowed = 24.
- If line-type=e1, number of ports allowed = 32.

Delete rules:

- If ds1 is deleted, you must also delete the terminations in the Termination table.
- status=oos.

Syntax Description

* MGW-ID	Primary key. Foreign key: Media Gateway table. The ID of the associated media gateway. This ID must match an ID in the Media Gateway table. VARCHAR(32): 1–32 ASCII characters.
* SLOT-START	Beginning slot number on the specified media gateway. INTEGER: 0–28.
* SLOT-END	Ending slot number on the specified media gateway. INTEGER: 0–28.
SLOT (Not provisionable)	Primary key. Slot number where the gateway endpoint is physically located. Created from slot-start/slot-end. INTEGER: system generated.
* LINE-NUM-START	Beginning DS1 level line card number where the gateway endpoint is physically located. INTEGER: 0–168.
* LINE-NUM-END	Ending DS1 level line card number. INTEGER: 0–168.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.

DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
LINE-NUM (Not provisionable)	Primary key. DS1 level line card number. Created from line-num-start/line-num-end. INTEGER: System generated.
LINE-TYPE	Specifies whether the line is T1 or E1. CHAR(2). Permitted values are: T1 (Default)—Used in USA. E1—Used in countries outside the USA. E1 is not supported at this time.
MGCP-PKG-TYPE	Primary key. The mgcp-pkg-type provides termination capabilities information by gateway. Used to create termination endpoints such as when port-start and port-end are specified. VARCHAR(10): 1–10 ASCII characters. Permitted values are: LINE-MGCP—Used for residential gateways that support MGCP specification 0.1 and up (for example: all Cisco residential gateways). LINE-NCS—Packet cable specification for residential gateways (a variant of MGCP). For example, a Telogy residential gateway. MO—Packet cable specification for CAS operator services used in case of 911, and so forth. For example, a Cisco 3810 CAS gateway. MT—Not used. MS—Cisco specification (also proposed to Soft Switch Consortium) for CAS MF endpoints. For example, a Cisco 3810 CAS gateway. DT—Cisco specification (also proposed to Soft Switch Consortium) for CAS DTMF endpoints. For example, a Cisco 3810 CAS gateway. BL—Not used. ANNC—MGCP specification for announcements, used for announcement endpoints. For example, a Cisco AS54005400 trunking gateway. TRUNK (Default)—MGCP specification for trunking gateways that includes ISDN and SS7 but not CAS. For example, a Cisco AS5400 trunking gateway.

OPER-STATUS	Operational status. VARCHAR(5): 1–5 ASCII characters. Permitted values are: NF (Default)—Nonfaulty FA—Faulty NF-RB—Nonfaulty remotely blocked FA-RB—Faulty remotely blocked
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
PORT-END	Primary key. DS0 level port number (ending port number). INTEGER: Permitted values are: 1–24 for T1. 1–32 for E1. E1 is not supported at this time.
PORT-START	Primary key. DS0 level port number (beginning port number). This is the actual gateway endpoint. A temporary token, port-num, is generated from the port-start and port-end tokens. The port-num token is not a part of the DS1 table, but it generates records for the Termination table. INTEGER: Permitted values are: 1–24 for T1. 1–32 for E1. E1 is not supported at this time.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
STATUS	Administrative status. VARCHAR(15): 1–15 ASCII characters. Permitted values are: OOS (Default)—Out-of-Service MAINT—Maintenance (Manual Override) INS—In-Service OOS-PENDING— Waiting to go in OOS state. MAINT-PENDING—Waiting to go in MAINT state.
TYPE	Termination type. Used to create termination endpoints such as when port-start and port-end are specified. VARCHAR(5): 1–5 ASCII characters. Permitted values are: LINE—Termination endpoint is a *line*. TRUNK (Default)—Termination endpoint is a *trunk*.

Exchange Code

The Exchange Code (exchange-code) table specifies the office codes assigned to a particular Call Agent. This table defines the office-code-index (normalized office code) that is used as an index in the DN2Subscriber table.

Table Name: EXCHANGE-CODE

Table Containment Area: EMS, Call Agent

Command Types

Show, add, and delete

Examples

```
show exchange-code ndc=972;
add exchange-code ndc=972; ec=671; office-code-index=5;
delete exchange-code ndc=972; ec=671;
```

Usage Guidelines

Primary Key Token(s): ndc, ec (Releases 4.1, 4.2, 4.4.0 and 4.4.1)

Primary Key Token(s): digit-string (Release 4.5)

Foreign Key Token(s): ndc

Unique Key Token(s): ndc+ec+office-code-index

Add Rules:

- If office-code-index is null, then office-code-index=max (office-code-index) + 1.
- New exchange digit string is rejected if a superset or subset of an existing digit string. For example: if exchange-code ndc=972 already exists, then add exchange-code ndc=97 is rejected. (Release 4.5.1)

Change Rules: No change is allowed.

Delete Rules: NDC and EC cannot exist in the Office Code table.

Syntax Description

* EC	Primary key (Releases 4.1, 4.2, 4.4.0 and 4.4.1 only). Exchange code. VARCHAR(6): 1–6 ASCII characters.
* NDC (Optional in Release 4.5)	Primary key (Releases 4.1, 4.2, 4.4.0 and 4.4.1 only). Foreign key: National Destination Code table. National destination code. VARCHAR(6): 1–6 ASCII characters.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.

DESCRIPTION (EMS-only field) (Release 4.5)	Described by the service provider. VARCHAR(64): 1–64 ASCII characters.
DIGIT-STRING (Release 4.5)	Primary key. Permits provisioning DNs without area codes. Not provisionable, this token is automatically created by combining the NDC and EC tokens. If an NDC is not specified, this digit-string token is created from the EC token. VARCHAR(12): 1–12 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
FORCED (Release 4.5.1)	Specifies whether to override add, change or delete rules. CHAR(1): Y/N (Default=N). Y—Override rule and add, change or delete. N—Do not override rules.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
MAX-DN-LENGTH	Maximum DN length. SMALLINT: 1–14 numeric characters (Default = 10).
MIN-DN-LENGTH	Minimum distributed number (DN) length. SMALLINT: 1–14 numeric characters (Default = 10).
OFFICE-CODE-INDEX	An arbitrary number to be assigned by the service provider. SMALLINT: 1–65535. This field is automatically provisioned if not entered. The default is the highest used office-code-index + 1.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

GTD Parameter Values (Release 4.4.1)

The Generic Transparency Descriptor (GTD) Parameter Values (gtd-parm-values) table is used to validate the new gtd-parms token in the Softswitch Trunk Group Profile table. This is a nonprovisionable static table that contains all the valid GTD parameters and their descriptions. It also contains the special keyword ALL that is used when all GTD parameters are encoded.

Table Name: GTD-PARM-VALUES

Table Containment Area: EMS

Command Types

Show

Examples

```
show gtd-parm-values id=adi description=access delivery information
show gtd-parm-values id=BCI name=Backward Call Indicators
```

Usage Guidelines

Primary Key Token(s): id

Syntax Description

* ID	Primary key. The GTD parameter ID. CHAR(3): 3 ASCII characters.
* DESCRIPTION	Full GTD parameter name. VARCHAR(64): 1–64 ASCII characters.
AUTO-REFRESH	Specifies whether to display cached data on the screen. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DISPLAY	Specifies what token information to display on the screen. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. INTEGER: 1–100000000 (Default = 1).

Table 2-1 lists the GTD parameter values supported by the Cisco BTS 10200 Softswitch.

Table 2-1 Supported GTD Parameters

GTD Parameter	Name	GTD IAM	GTD ACM	GTD CPG	GTD ANM	GTD CON	GTD REL	GTD SUS	GTD RES
ACL	Automatic Congestion Level						YES		
ATP	Access Transport	YES	YES	YES	YES	YES	YES		
BCI	Backward Call Indicators		YES	YES	YES	YES			
CAI	Cause Indicators		YES	YES			YES		
CDI	Call Diversion Information		YES	YES					
CGN	Calling Party Number	YES							
CHN	Charge Number	YES							
CID	Carrier Identification	YES							
CNN	Connected Number				YES	YES			
CPC	Calling Party Category	YES							
CPN	Called Party Number	YES							
CSI	Carrier Selection Information	YES							
DIS	Display Information				YES	YES	YES		
EVI	Event Information Indicators		YES	YES			YES		
FCI	Forward Call Indicators	YES							
GCI	Global Call Identification	YES				YES			
GEA	Generic Address	YES							
GED	Generic Digits	YES							
GEN	Generic Name	YES				YES			
GNO	Generic Notification	YES	YES	YES					
HOC	Hop Counter	YES							
JUR	Jurisdiction	YES							
NOC	Nature of Connection Indicators	YES							
NSF	Network Specific Facilities		YES	YES					
OBI	Optional Backward Call Indicators		YES	YES	YES	YES			
OCN	Original Called Number	YES							
OLI	Originating Line Information	YES							
RCT	Redirect Counter	YES							
RGN	Redirecting Number	YES							
RNI	Redirection Information	YES							
RNN	Redirection Number		YES	YES	YES	YES	YES		
RNR	Redirection Number Restriction		YES	YES	YES	YES			
SCI	Service Code Indicator	YES							

Table 2-1 Supported GTD Parameters (continued)

GTD Parameter	Name	GTD IAM	GTD ACM	GTD CPG	GTD ANM	GTD CON	GTD REL	GTD SUS	GTD RES
SRI	Suspend/Resume Indicators							YES	YES
TMR	Transmission Medium Required	YES				YES			
TNS	Transit Network Selection	YES							
UID	UID Indicators		YES*	YES*					
UUI	User-To-User Indicators		YES	YES	YES	YES			
UUS	User-To-User Information	YES	YES	YES	YES	YES			

Local Access and Transport Area

The Local Access and Transport Area (lata) table defines the LATA ID, state, and country. LATAs are also called service areas by some telephone companies.

Table Name: LATA

Table Containment Area: FSPTC, Call Agent

Command Types

Show, add, change, and delete

Examples

```
show lata id=201;
add lata id=201; state=TX;
change lata id=201; country=US;
delete lata id=201;
```

Usage Guidelines

Primary Key Token(s): id

Add Rules: None.

Delete Rules: None.

Syntax Description

* ID	Primary key. 3- to 5-digit LATA-ID. The first 3 digits represent the LATA-ID. The last 2 digits are for entering the LATA subzone. 5-digit LATA numbers exist only in Florida and in those countries which are outside of the U.S.A. but in World Zone 1. For example: Most LATA IDs are 3 digits and fall in the range 100-999. Others are 5 digits and fall in the range 4xxxx. INTEGER: 100–65535 INTEGER: 100–99999 (Release 4.5)
* STATE	Standard 2-character U.S. state abbreviation. CHAR(2): 2 characters, state codes.

AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
COUNTRY	Name of country. Country: US, CAN, and so forth. VARCHAR(16): 1–16 ASCII characters (Default = US). VARCHAR(16): 1–16 ASCII characters. (Release 4.5: no default)
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

Local Access and Transport Area Map

The Local Access and Transport Area Map (lata-map) table associates NANP-digits with a LATA. The LATA map and LATA tables are required if *Intra-State Calls Only* and/or *National Calls Only* COS screening is required.

Table Name: LATA-MAP

Table Containment Area: FSPTC

Command Types

Show, add, and delete

Examples

```
show lata-map digit-string=972-671;
add lata-map digit-string=972-671; lata-id=123;
delete lata-map digit-string=972-671;
```

Usage Guidelines

Primary Key Token(s): digit-string

Add Rules: None.

Delete Rules: None.

Syntax Description

* DIGIT-STRING	Primary key. Numbering plan area (area code). VARCHAR(6): 3 or 6 numeric digits. Format: NPA or NPA-NXX
* LATA-ID	ID number assigned to the subscriber in the LATA table. The local access and transport area. INTEGER: 100–65535 (3–5 numeric digits). INTEGER: 100–99999 (3–5 numeric digits). (Release 4.5) There are 5 spaces for entering the LATA code. The last two digits are for entering the LATA sub-zone (only Florida has 5-digit LATA numbers, which represent Equal Access Exchange Areas [EAEAs]), if applicable.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

Media Gateway

The Media Gateway (mgw) table holds information about each MGW managed by the Call Agent. The MGW can be uniquely addressed by domain name, an IP address, or the TSAP address.

The Media Gateway table has two associated commands: RGW and TGW. The RGW command provisions gateways as only residential gateways, with the type token automatically set to RGW. The TGW command provisions gateways as only trunking gateways, with the type token automatically set to TGW. Both commands provision the Media Gateway table, but a service provider can use these commands to provide user security to certain individuals based on their roles. That is, some users can be allowed to provision only residential gateways, and others can be allowed to provision only trunking gateways. A service provider sets up the users security accordingly. Both commands provision the Media Gateway table in the Call Agent.

Note Domain names cannot begin with a number.

Table Name: MGW

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show mgw id=rgw242;
add mgw id=rgw242; tsap-addr=190.101.100.61; call-agent-id=CA146; mgw-profile-id=ubr1;
change mgw id=rgw242; call-agent-control-port=5000;
delete mgw id=rgw242;
```

Usage Guidelines

Primary Key Token(s): id

Add Rules: None.

Change Rules: None.

Delete Rules:

- ID does not exist in any termination::mgw-id.
- ID does not exist in any trunk-grp::mgw-id.
- ID does not exist in any annc-trunk::mgw-id.
- ID does not exist in any annc-trunk::remote-mgw-id.
- ID does not exist in any mlhg-terminal::mgw-id.

Syntax Description

* ID	Primary key. Media gateway identifier, assigned by the service provider. VARCHAR(32): 1–32 ASCII characters.
* CALL-AGENT-ID	ID of the call-agent the subscriber is assigned to in the Call Agent table. VARCHAR(8): 1–8 ASCII characters.
* MGW-PROFILE-ID	ID of the mgw-profile the subscriber is assigned to in the MGW Profile table. VARCHAR(16): 1–16 ASCII characters.
* TSAP-ADDR	Specifies the DNS/IP address for the MTA or TGW. You can also enter the IP address and port number. VARCHAR(64): 1–64 ASCII characters.

* TYPE	Type of gateway. VARCHAR(3): 1–3 ASCII characters. Permitted values are: RGW—Residential gateway. TGW—Trunking gateway.
AGGR-ID	ID of the aggregation device cable modem termination system (CMTS). This token is mandatory if supporting PacketCable DQoS; it is how the Cisco BTS 10200 Softswitch call management server (CMS) determines the CMTS to which a media terminal adapter (MTA) is attached, so it can issue gate control commands to the correct CMTS. VARCHAR(16): 1–16 ASCII characters.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
CALL-AGENT-CONTROL-PORT	The Call Agent MGCP listening port for the specified MGW. If it is configured as zero, the Call Agent automatically assigns an MGCP listening port for that MGW. Use the default port for normal operation. SMALLINT: 1–65535 (Default = 0). 0 indicates that no port is configured. If it is non-zero, then the number must be one of the values specified in the system platform.cfg. **Note** If the port number is non-zero, it cannot be a well-known port (except for MGCP ports 2427 or 2727), or port assigned to some other application.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
NODE (Release 4.5)	Defines the hybrid fiber coax (HFC) fiber node the MTA is homed to. The HFC fiber node sits between the CMTS and the MTA. Every MTA is assigned to a particular node—then one or more nodes are assigned to a given CMTS. VARCHAR(20): 1–20 ASCII characters.

OPER-STATUS	Operational status of the media gateway. VARCHAR(5): 1–5 ASCII characters. Permitted values are: NF (Default)—Nonfaulty state. FA—Faulty state. NF-RB—Nonfaulty remotely blocked state. FA-RB—Faulty remotely blocked state.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
STATUS (System generated)	Service state of the MGW. VARCHAR(15): 1–15 ASCII characters. Permitted values are: OOS (Default)—Out-of-Service state MAINT—Maintenance state, manual override. INS—In-Service state.

Residential Gateway Command

The Residential Gateway (RGW) command provisions the Media Gateway table with gateways automatically configured as residential gateways (type=rgw). An RGW can be uniquely addressed by domain name, an IP address, or the TSAP address. A service provider can set up security to allow a user to provision only residential gateways.

Table Name: MGW

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show rgw id=rgw1;
add rgw id=rgw1; tsap-addr=rgw1@cisco.com; call-agent-id=ca145; mgw-profile-id=iad2420;
change rgw id=rgw1; aggr-id=aggr1@cisco.com;
delete rgw id=rgw1;
```

Usage Guidelines

Primary Key Token(s): id

Add Rules: If noun RGW is used, provision the Media Gateway table with type=rgw.

Syntax Description See the Media Gateway table for token descriptions.

Trunking Gateway Command

The Trunking Gateway (TGW) command provisions the Media Gateway table with gateways automatically configured as trunking gateways (type=tgw). A TGW can be uniquely addressed by domain name, an IP address, or the TSAP address. A service provider can set up security to allow a user to provision only trunking gateways.

Table Name: MGW

Table Containment Area: Call Agent

Command Types Show, add, change, and delete

Examples

```
show tgw id=tgw1;
add tgw id=tgw1; tsap-addr=tgw1@cisco.com; call-agent-id=ca145; mgw-profile-id=mgx8850;
change tgw id=tgw1;
delete tgw id=tgw1;
```

Usage Guidelines Primary Key Token(s): id

Add Rules: If the noun TGW is used, provision the Media Gateway table with type=tgw.

Syntax Description See the Media Gateway table for token descriptions.

Media Gateway Profile

The Media Gateway Profile (mgw-profile) table provides templates for defining a media gateway by hardware vendor. The table identifies the specifications and settings necessary for communications between the Call Agent and each type of media gateway. An ID must be created in this table before entries can be added to the Media Gateway table.

Several tokens have values that can be overwritten after the Call Agent queries the media gateway for supported capabilities. If the media gateway returns a value that is different from the value originally provisioned, the returned value automatically replaces the originally provisioned value.

Table Name: MGW-PROFILE

Table Containment Area: Call Agent

Command Types Show, add, change, and delete

Examples

```
show mgw-profile id=resgw2000;
```

```
add mgw-profile id=resgw2000; vendor=cisco;
change mgw-profile id=resgw2000; packet-type=ip; mgcp-to-supp=n;
delete mgw-profile id=resgw2000;
```

Usage Guidelines

Primary Key Token(s): id

Add Rules:

- if fax-pref-mode=FAX-T38CAMODE, then fax-t38-camode-supp=Y (Obsolete as of Release 4.5.)
- if fax-pref-mode=FAX-INBAND, then fax-inband-supp=Y. (Obsolete as of Release 4.5.)
- if mgcp-variant=ncs-1-0 or tgcp-1-0; then mgcp-version=mgcp-1-0.
- the mgcp-max-keepalive-interval must be greater than or equal to the mgcp-keepalive-interval (Release 4.5).
- the mgcp-max1-retries must be less than mgcp-max2-retries.

Change Rules: the mgcp-max1-retries must be less than mgcp-max2-retries.

Delete Rules: id does not exist in any mgw::mgw-profile-id.

Other rules: for parallel-netwloop-supp: if (mgcp-variant = ncs-1-0), then set to Y—else set to N. (Release 4.5)

Syntax Description

* ID	Primary key. Unique ID assigned to this MGW profile by the service provider. VARCHAR(16): 1–16 ASCII characters.
AAL1 (Voice)	ATM adaptation layer (AAL) parameters. The AAL is a standards layer that allows multiple applications to have data converted to and from an ATM cell. It uses a protocol that translates higher layer services into the size and format of an ATM cell. CHAR(1): Y/N (Default = N). Y—MGW supports Class A traffic (constant bit rate (CBR), voice, and video). N—MGW does not support Class A traffic (CBR, voice, and video).
AAL2 (Voice over ATM)	ATM adaptation layer parameters. The AAL is the standards layer that allows multiple applications to have data converted to and from the ATM cell. It uses a protocol that translates higher layer services into the size and format of an ATM cell. CHAR(1): Y/N (Default = N). Y—MGW supports Class B traffic (variable bit rate (VBR), delay intolerant, voice, and video). N—MGW does not support Class B traffic (VBR, delay intolerant, voice, and video).

AAL5	ATM adaptation layer parameters. The ATM adaptation layer is the standards layer that allows multiple applications to have data converted to and from the ATM cell. It uses a protocol that translates higher layer services into the size and format of an ATM cell. CHAR(1): Y/N (Default = N). Y—MGW supports Class C traffic (VBR, delay tolerant data). N—MGW does not support Class C traffic (VBR, delay tolerant data).
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
BTXML-DISPLAY-PREFIX	Specifies the prefix used to identify the display endpoint. This field is valid only if btxml-supp = Y. VARCHAR(12): 1–12 ASCII characters.
BTXML-SUPP	Specifies whether the BTXML package is supported by the MGCP phone or not. CHAR(1): Y/N (Default = N).

CODEC-NEG-SUPP	Indicates whether to specify a list of codecs (the set of codecs common to both sides of the call) in the local connection option (LCO) parameter of the create connection (CRCX) message. CHAR(1): Y/N (Default = Y). Y—(Release 4.1~4.5)Send the list of common codecs (the codecs that both legs of a call can support). This is valid if both legs of the call use the MGCP connection control protocol (for network elements such as IAD, eMTA, SS7/ISDN gateways, announcement servers, and so forth). The Cisco BTS 10200 Softswitch uses the following method to determine the preferred codec in the list of common codecs. A preferred codec is the first codec in the list of codecs sent with LCO. Y—(Release 4.5.1) Send the list of common codecs (the codecs that one leg of a call can support). This is valid if one of the legs of a call use the MGCP connection control protocol (for network elements such as IAD, eMTA, SS7/ISDN gateways, announcement servers, SIP, H323 and so forth). The Cisco BTS 10200 Softswitch uses the following method to determine the preferred codec in the list of common codecs. A preferred codec is the first codec in the list of codecs sent with LCO. In the common codec list, the first (preferred) codec is the codec specified in the Quality of Service (QOS) table for the originating leg, unless that codec does not appear in the common codec list. If the codec specified in the QOS table for the originating leg is not in the common codec list, then the first (preferred) codec is the codec specified in the QOS table for the terminating leg. N—Send only the single codec configured in the QOS table of the originating side, regardless of whether the gateway reported that it supports that codec. **Caution** Use this parameter with care. This parameter must be set appropriately for the codec capabilities of the gateways using this profile. Otherwise, some calls may not complete. For the available codec types, see the codec-type token in the Quality of Service table. If the QOS table does not exist (was not created with the add command, or was deleted), the system uses the information from the default-codec-type token in the Call Agent Configuration table.
CONN-MODE-REQUIRED-IN-MDCX	Specifies whether connection mode is always required in MDCX. CHAR(1): Y/N (Default = N). Y—Connection mode is always required in MDCX. N—Connection mode is not required unless it is changed.
DESCRIPTION (EMS-only field)	Described by the service provider. VARCHAR(64): 1–64 ASCII characters.

DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
DOMAIN-NAME-CACHING-SUPP	Specifies whether the MGW supports IP address caching. Set this value to Y (default value) for best processing performance. Y—The MGA does not cache the IP addresses for the gateway domain names. Every time the MGA sends a message to a gateway, it does a gethostbyname. N—The MGA does a gethostbyname only on the first message sent to a gateway, and then internally caches the IP address. Subsequently, when the MGA sends messages to that gateway, it gets the IP address from the internal cache and does not do a gethostbyname. ⚠ **Caution** Disabling domain name caching can result in the Cisco BTS 10200 Softswitch becoming overloaded under high traffic conditions. Also, do not disable domain name caching if you are using an external DNS server.
DTMF-OOB-SUPP	Specifies if out-of-band relay using MGCP NTFY DTMF midcall digits is supported. CHAR(1): Y/N (Default = N).
EC-SUPP	Specifies whether MGW supports echo cancellation. The value is provisioned by the service provider, but can be overwritten automatically by the Call Agent upon query from the MGW. CHAR(1): Y/N (Default = N). Y—MGW supports echo cancellation. N—MGW does not support echo cancellation.
FAX-FAILURE-HANDLING (Not provisionable) (Release 4.5)	Specifies, in a failure scenario, whether to send an L:off or to send L:<codec> error to the side that has switched to T38 fax. This error condition typically happens when a CRCX to the fax-detecting side is successful, but the MDCX fails on the other side because it does not support fax. In order to fall back to voice, the fax-detecting side must receive an MDCX with either an L:off or L:<codec> error in it. VARCHAR(32): 1–32 ASCII characters. Permitted values are: VOICE-CODEC-REVERSAL (Default)—The Cisco BTS 10200 Softswitch falls back to the same voice codec that was used before the fax started. VOICE-CODEC-G711—The Cisco BTS 10200 Softswitch always falls back to the G711 codec irrespective of the codec that was used before the fax started. FXR-T38-OFF—The Cisco BTS 10200 Softswitch uses the error L:fxr/fx:off for failure handling.

FAX-INBAND-METHOD (Release 4.5)	Allows gateways to use one of the inband fax methods. Applies only if the token fax-t38-enabled in the Quality of Service table is set to N. VARCHAR(16): 1–16 ASCII characters. Permitted values are: T38-FXR-OFF—The Cisco BTS 10200 Softswitch explicitly tells the gateway to turn off the T.38 call agent and gateway-controlled mode. GW-SPECIFIED (Default)—The Cisco BTS 10200 Softswitch does not explicitly specify any mode to the gateway. The mode configured in the gateway is used as long as the Cisco BTS 10200 Softswitch is not involved in call flows. FT-UPSPEED (Not supported)—The Cisco BTS 10200 Softswitch does codec upspeed based on fax tone (ft) received from the gateway.
FAX-T38-CAMODE-SUPP	Specifies whether Call Agent instructs the gateway to switch to T.38 mode in real time. CHAR(1): Y/N (Default = N).
FAX-T38-GWMODE-SUPP (Not supported)	Specifies whether gateway uses the NSE to switch to T.38 mode in real time. CHAR(1): Y/N (Default = N).
IKE-CS	Specifies the list of ciphersuites supported by IKE, in priority order. This list is used to negotiate the encryption-authentication algorithm pair used by IKE. The list can contain only those ciphersuites using the authentication algorithms HMAC-MD5 and HMAC-SHA and the encryption algorithm ESP-3DES. VARCHAR(64): 1–64 ASCII characters. Permitted values are: 3DES-MD5, 3DES-SHA1 (Default list) 3DES-SHA1, 3DES-MD5 3DES-MD5 3DES-SHA1
IKE-GROUP	Specifies the available groups in which the Diffie Helman exchange may occur. This token is valid only for trunking gateways. INTEGER: Valid values are 1 and 2 (Default = 2).
IKE-KEY	The IKE preshared key. This value is used for security on the interface between the Cisco BTS 10200 Softswitch and the trunking gateway. This token is valid only for trunking gateways. VARCHAR(256): 1–256 ASCII characters. The system encrypts the value of the ike-key token and stores the encrypted value as ike-key-encr. See the ike-key-encr token for additional details. (Release 4.5)
IKE-KEY-ENCR (System generated) (Release 4.5)	The IKE preshared key in encrypted form. VARCHAR(256): 1–256 ASCII characters. **Note** The system encrypts the value of the ike-key token and stores the encrypted value as ike-key-encr. It is then decrypted and displayed only when accessed by a privileged user.

IKE-SA-LIFETIME	The IKE SA expiration in seconds. INTEGER: 0–MAXINT (Default = 86400). **Note** MAXINT is a 4-byte integer, such as MAXINT = 2 to the power of 32 –1.
IPSEC-CMS-CONTROL-PORT	The IPSec SA outbound control port. Used when the SA is created for a particular outbound port for this device class. SMALLINT: 0–65534 (Default = 0).
IPSEC-MGW-CONTROL-PORT	The IPSec SA inbound control port. Used when the SA is created for a particular inbound port for this device class. SMALLINT: 0–65534 (Default = 0).
IPSEC-SA-ESP-CS	The IPSec SA ESP ciphersuite list in priority order. Used to negotiate an encryption-authentication algorithm pair used by IPSec. The list can contain only those ciphersuites using the authentication algorithms HMAC-MD5 and HMAC-SHA and the encryption algorithms ESP-3DES and ESP-NULL. VARCHAR(64): 1–64 ASCII characters. 3DES-MD5, 3DES-SHA1, NULL-MD5, NULL-SHA1 (Default list) **Note** This list can be modified to be a subset of this initial list using the CLI and can be reordered to specify a new priority selection. For example: - 3DES-MD5, 3DES-SHA1, NULL-SHA1, NULL-MD5 - 3DES-SHA1, NULL-MD5, NULL-SHA1 - 3DES-MD5, NULL-MD5 - NULL-SHA1 and additional values.
IPSEC-SA-GRACE-PERIOD	The IPSec SA key expiration grace period in seconds. Used to calculate the soft expiration. The ipsec-sa-grace-period must be less than ipsec-sa-lifetime. The ipsec-sa-grace-period must be less than or equal to 25% of the configured ipsec-sa-lifetime. If not specified when configuring a new ipsec-sa-lifetime, the ipsec-sa-grace-period defaults to 25% of the ipsec-sa-lifetime. INTEGER: 0–MAXINT (Default = 21600). **Note** MAXINT is a 4-byte integer, such as MAXINT = 2 to the power of 32 –1.
IPSEC-SA-LIFETIME	The IPSec SA expiration in seconds. This is the hard expiration. INTEGER: 0–MAXINT (Default = 86400). **Note** MAXINT is a 4-byte integer, such as MAXINT=2 to the power of 32 –1.

IPSEC-ULP-NAME	IPSec SA upper-layer protocol name. Used if the SA is created only for specific protocol traffic (for example, IP traffic). The value is a string as described in getprotobyname(3XNET). VARCHAR(8): 1–8 ASCII characters. Permitted values are: IP (Default) TCP UDP **Note** The default value (IP) is adequate for most applications.
IPTOS-RTP-SUPP	Determines whether to send type of service (TOS) information or not, since not all gateways support the TOS parameter. CHAR(1): Y/N (Default = Y). Y—Send TOS information. N—Do not send TOS information.
KEEPALIVE-METHOD (Release 4.4.1)	Indicates type of protocol method used for keepalive procedure between the Call Agent and the media gateway. VARCHAR(16): 1–16 ASCII characters. NONE—Turns off AUEP ping and ICMP ping. AUEP (Default)—Performs AUEP ping. AUEP-ICMP—Performs AUEP ping, but if it fails, then performs ICMP ping. **Note** For more information on how the keepalive procedure works, see the applicable appendix (Release 4.4.x Keepalive or Release 4.5.x Keepalive) in the *Cisco BTS 10200 Softswitch Troubleshooting Guide*.
KRB-REEST-FLAG	Kerberos Reestablishment Flag. If enabled, the Kerberos SA is automatically reestablished upon expiration. CHAR(1): Y/N (Default = Y).
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
LINE-PREFIX	DS1 level prefix. For example, DS1 as in DS1-1. Used by EMS during bulk provisioning. VARCHAR(8): 1–8 ASCII characters.

MGCP-3WAY-HSHAKE-SUPP	Specifies whether the gateway supports three-way handshaking. Handshaking is the initial exchange between two systems before data transmission. This is a procedure of greeting, verifying identities, determining communication speed and other functions before transmission occurs. CHAR(1): Y/N (Default = Y). Y—MGW supports three-way handshaking. N—MGW does not support three-way handshaking. **Note** Transaction identifiers and three-way handshake: transaction identifiers are integer numbers that range from 0 to 999,999,999. Call Agents can use a specific number space for each of the gateways that they manage, or use the same number space for all gateways that belong to some arbitrary group. Call Agents can share the load of managing a large gateway between several independent processes. These processes share the same transaction number space. There are multiple possible implementations of this sharing, such as having a centralized allocation of transaction identifiers, or preallocating nonoverlapping ranges of identifiers to different processes. The implementations must guarantee that unique transaction identifiers are allocated to all transactions that originate from a logical Call Agent. Gateways detect duplicate transactions by looking at the transaction identifier only.
MGCP-CALEA-SUPP	Specifies whether the gateway supports CALEA. CHAR(1): Y/N (Default = Y). Y—CALEA is supported. N—CALEA is not supported.
MGCP-CAP-NEG-REQ	Specifies whether to negotiate capabilities between originating and terminating endpoints of the connection while creating a connection. CHAR(1): Y/N (Default = Y).
MGCP-CAS-BLOCK-SUPP	Specifies whether a media gateway supports a blocking signal (bl signal as defined in the CAS packages MS and DT). This token applies to CAS TGWs only. For CAS TGW, set to N (default value) to be PacketCable compliant. PacketCable signaling does not send a blocking signal. CHAR(1): Y/N (Default = N).

MGCP-CMD-SEQ-SUPP Provisionable only as N in Release 4.2. Not provisionable as of Release 4.2.1.	MGCP does not mandate that the underlying transport protocol guarantees the sequencing of commands sent to a gateway or an endpoint. This property tends to maximize the timeliness of actions, but it has a few drawbacks. For example: Notify commands can be delayed and arrive at the Call Agent after the transmission of a new NotificationRequest command. If a new NotificationRequest is transmitted before a previous one is acknowledged, there is no guarantee that it will be received after the first one. See RFC 2705. CHAR(1): Y/N (Default = N). Y—MGW supports multiple messages from the Call Agent before sending an ACK. N—MGW does not support command sequencing. Waits for an ACK before sending the next MGCP command.
MGCP-CONN-ID-AT-GW-SUPP	Specifies how the Cisco BTS 10200 Softswitch performs audit and resynchronization of connection status between itself and the MGW. CHAR(1): Y/N (Default = Y). Y—MGW is capable of reporting the active connections on specified endpoints. During audit and resynchronization, the Cisco BTS 10200 Softswitch only deletes connections that are mismatched between the media gateway and the Call Agent. N—MGW is not capable of reporting the active connections on specified endpoints. During audit and resynchronization, in the case of connection-state mismatches, the Cisco BTS 10200 Softswitch deletes all endpoint connections. **Note** The default value (Y) is appropriate in most cases. Use the value N only if there are specific interoperability issues identified on a particular media gateway.

MGCP-DEFAULT-PKG	Specifies the MGCP default package. VARCHAR(8): 1–8 ASCII characters. Permitted values are: NONE (Default)—No package specified. ANNC—MGCP specification for announcements, used for announcement endpoints (for example, the Cisco AS5400 trunking gateway). AUDIO—Audio package used for IVR. BL—Not supported. DT—Cisco specification (also proposed to Soft Switch Consortium) for CAS DTMF endpoints (for example, a Cisco 3810 CAS gateway). G—Generic package. LINE—Subscriber Line (MGCP/NCS). Use this value for an MTA. MD—North American Feature Group D Bellcore FGD Exchange Access North American Signaling (EANA) and Bellcore FGD Exchange Access North American Signaling (EAIN) CAS trunks. (Release 4.5) (Not supported) MO—PacketCable specification for CAS operator services used for 911 calls, and so forth (for example, Cisco 3810 CAS gateway). MS—Cisco specification for CAS MF endpoints (for example, a Cisco 3810 CAS gateway). MT—Not supported. TRUNK—MGCP specification for trunking gateways that includes ISDN and SS7 but not CAS (for example, a Cisco AS5400 trunking gateway). If the mgcp-variant=TGCP, the mgcp-pkg-type must be set to IT (ISUP trunk).
MGCP-DIALTONE-TO-SUPP (Obsolete in Release 4.5.1—use MGCP-TO-SUPP)	Specifies whether the media gateway supports a dial tone timeout. Dial tone timeout is set in the Call Agent Configuration table. CHAR(1): Y/N (Default = N). Y—MGW supports dial tone timeout. N—MGW does not support dial tone timeout. **Note** If dialtone issues occur using this token, use mgcp-to-supp.
MGCP-EP-SPECIFIC-CAP-SUPP	Specifies whether the media gateway supports endpoint-specific capability or not. If gateway does not support endpoint-specific capability, then the MGA queries only one endpoint for capability instead of querying all the endpoints of that gateway. CHAR(1): Y/N (Default = N).
MGCP-ERQNT-SUPP	Specifies whether the media gateway supports Embedded Requests for Notification (ERQNT). CHAR(1): Y/N (Default = Y). Y—MGW supports ERQNT. N—MGW does not support ERQNT.

MGCP-HAIRPIN-SUPP	Specifies the setting of the network-type (nt) parameter in the local connection option (LCO) of the create connection (CRCX) message that the Cisco BTS 10200 Softswitch sends to the MGW (or MGWs). **Note** This parameter applies only when both endpoints in a call are controlled by the same media gateway. If the two endpoints are controlled by two separate media gateways, this parameter has no effect. CHAR(1): Y/N (Default = Y). Y—If the Cisco BTS 10200 Softswitch detects that both endpoints are on the same MGW, the Cisco BTS 10200 Softswitch sends the LCO parameter L:nt:*local* to the MGW. However, if the two endpoints are on separate MGWs, the Cisco BTS 10200 Softswitch sends L:nt:*in*. **Note** The L:nt:local flag typically results in the media gateway using TDM hairpinning for the call if it is capable of TDM hairpinning. If this parameter is set to Y, see also the parameter MGCP-HAIRPIN-Z2-SUPP in this table for additional options. N—Send the LCO parameter L:nt:*in*. Use this value (N) if the MGW does not support TDM hairpinning, or if TDM hairpinning is not desired.
MGCP-HAIRPIN-Z2-SUPP	Specifies the messaging procedure for the hairpin connection. CHAR(1): Y/N (Default = N). Y—The Cisco BTS 10200 Softswitch sends a single create-connection (CRCX) message specifying both endpoints in the call. N—The Cisco BTS 10200 Softswitch sends two separate CRCX messages, one for each endpoint in the call. **Note** This parameter applies only if mgcp-hairpin-supp is set to Y. Otherwise, this parameter is ignored.
MGCP-KEEPALIVE-INTERVAL	Specifies the time interval in which MGW connectivity is monitored when no activity is detected between the MGW and the Cisco BTS 10200. INTEGER: 1–86400 seconds (Default = 60). **Note** For more information on how the keepalive procedure works, see the applicable appendix (Release 4.4.x Keepalive or Release 4.5.x Keepalive) in the *Cisco BTS 10200 Softswitch Troubleshooting Guide*.
MGCP-KEEPALIVE-RETRIES	Specifies the number of keepalive retries if the first MGW status monitor fails. INTEGER: 0–50 (Default = 3). **Note** For more information on how the keepalive procedure works, see the applicable appendix (Release 4.4.x Keepalive or Release 4.5.x Keepalive) in the *Cisco BTS 10200 Softswitch Troubleshooting Guide*.

MGCP-MAX1-RETRIES	Specifies the number of retransmission attempts for each MGW IP address. INTEGER: 1–10 (Default = 2). INTEGER: 1–9 (Default = 2) (Release 4.5.1) **Note** For more information on message retransmission procedures, see the applicable appendix (Release 4.4.x Keepalive or Release 4.5.x Keepalive) in the *Cisco BTS 10200 Softswitch Troubleshooting Guide*.
MGCP-MAX2-RETRIES	Specifies the maximum number of retransmit attempts for the last MGW IP address before declaring the address unreachable. Also known as the disconnection threshold. INTEGER: 1–10 (Default = 3). INTEGER: 2–10 (Default = 3) (Release 4.5.1). **Note** For more information on message retransmission procedures, see the applicable appendix (Release 4.4.x Keepalive or Release 4.5.x Keepalive) in the *Cisco BTS 10200 Softswitch Troubleshooting Guide*.
MGCP-MAX-KEEPALIVE-INTERVAL (Release 4.5)	Specifies the maximum MGCP keepalive interval in seconds. INTEGER: 1–86400 (Default = 600). **Note** For more information on how the keepalive procedure works, see the applicable appendix (Release 4.4.x Keepalive or Release 4.5.x Keepalive) in the *Cisco BTS 10200 Softswitch Troubleshooting Guide*.
MGCP-MWI-SUPP	Specifies whether message waiting indicators are supported. CHAR(1): Y/N (Default = Y). Y—Message waiting indicators are supported. When the user goes off-hook and there is a message waiting, the user receives an MWA tone. N—Message waiting indicators are not supported. When the user goes off-hook and there is a message waiting, the user receives a stutter tone.
MGCP-NAS-SUPP	Specifies whether the gateway supports NAS functionality. CHAR(1): Y/N (Default = Y). Y—NAS functionality is supported. N—NAS functionality is not supported.
MGCP-NE-LOCALNAME-SUPP	Specifies whether the media gateway supports a local name in the notified entity (NE) parameter. CHAR(1): Y/N (Default = N). Y—The gateway supports a local name in the NE. The Call Agent sends the localname@domainName as the NE parameter. N—The gateway does not support a local name in the NE. The Call Agent sends only the domainName as NE parameter.

MGCP-PIGGYBACK-MSG-SUPP (Release 4.5)	Specifies whether the MGCP subsystem enables or disables piggybacking MGCP commands in an ACK message toward a media gateway. CHAR(1): Y/N (Default = Y). Y—Enable MGCP piggyback message support. N—Disable MGCP piggyback message support.
MGCP-QDISCARD-SUPP (Release 4.5)	Specifies whether the Cisco BTS 10200 Softswitch supports sending the quarantine handling process control discard method. CHAR(1): Y/N (Default = Y).
MGCP-QLOOP-SUPP	Specifies whether the gateway supports quarantine looping (QLOOP). CHAR(1): Y/N (Default = Y). Y—MGW supports QLOOP. N—MGW does not support QLOOP.
MGCP-REQ-ID-SUPP (Release 4.5)	Specifies whether the MGW supports use of a Request Identifier (correlation of Request Identifier from RQNT to NTFY message). CHAR(1): Y/N (Default = N).
MGCP-RSIPSTAR-SUPP	Specifies whether media gateway endpoints are available on Restart In Progress (RSIP)*. Used for high-density gateways. An RSIP message with endpoint as * from a gateway only suggests whole gateway availability. It does not mean that all endpoints on the gateway are available. A gateway issues an RSIP */*/*@<mgw domain name> if all endpoints are available or RSIP S1/*/*@<mgw domain name> if only the endpoints in slot S1 are available. CHAR(1): Y/N (Default = Y). Y—MGW supports RSIP. N—MGW does not support RSIP.
MGCP-RSVP-SUPP	Provides static value for media gateway support of the Resource Reservation Protocol (RSVP). This field is only used if the Call Agent cannot read dynamic RSVP support data from a media gateway. This ensures enough bandwidth reserves for IP packets. Used only for non-PacketCable devices. CHAR(1): Y/N (Default = N). Y—MGW supports RSVP. N—MGW does not support RSVP.

MGCP-TERM-INIT-LEVEL	Specifies the termination initialization level. This token applies to certain TGWs, such as the Cisco MGX 8850. Set this to a numerical value: 0, 1, 2, or 3. SMALLINT. Permitted values are: 0—Level 0 (Default). All terminations are initialized individually (TGW: S0/DS1-1/1) 1—Level 1. Level 1 group of terminations (Span/T1/port) are initialized in bulk (TGW: S0/DS1-1/*) 2—Level 2. Level 2 group of terminations (Slot/board) are initialized in bulk (TGW: S0/*) 3—Level 3. Level 3 group of terminations (gateway) are initialized in bulk (TGW: *)
MGCP-TEST-CONN-SUPP (Release 4.5)	Specifies whether to inhibit any network loopback or continuity test call attempts on a media gateway. Currently, the Cisco BTS 10200 Softswitch does not support network loopback and continuity test on trunking gateways (including IMTs used for SS7, ISDN and CAS signaling). CHAR(1): Y/N (Default = Y). Y—If Y, and the MGW returns connection mode capabilities netwloop and netwtest in response to an AuditEndpoint message, the Cisco BTS 10200 Softswitch allows a network loopback connection on the MGW. N—If N, or if the MGW does not return connection mode capabilities netwloop and netwtest in response to an AuditEndpoint message, the Cisco BTS 10200 Softswitch does not allow a network loopback connection on the MGW.
MGCP-T-LONGTRAN	Specifies the initial MGCP transaction timeout, in seconds, after receiving a provisional response (return code 100) from the MGW. INTEGER: 1–10 (Default = 5).
MGCP-TO-SUPP (Release 4.5)	Specifies whether a media gateway supports the timeout parameter (TO) for signaling. The ring timeout is decided based on call type—same as no answer timeout. An MGA always sends TO=0 indicating ring for infinite time (no ring timeout). CHAR(1): Y/N (Default = Y).
MGCP-T-TRAN	Specifies the initial timeout (in milliseconds) after which a command is retransmitted. All subsequent reattempt durations grow exponentially until a limit is reached. INTEGER: 200–8000 in multiples of 200 (Default = 400). **Note** For more information, see the applicable appendix (Release 4.4.x Keepalive or Release 4.5.x Keepalive) in the *Cisco BTS 10200 Softswitch Troubleshooting Guide*.

MGCP-VARIANT	The MGCP variant supported by this type of media gateway. VARCHAR(8): 1–8 ASCII characters. Permitted values are: NONE (Default)—No MGCP variant. NCS-1-0—Protocol as defined by PacketCable. Use this value to create an MGW profile for an MTA. TGCP-1-0—Protocol as defined by PacketCable. Use this value to create a MGW profile for a TGW. BIS—Not used.
MGCP-VERSION	The MGCP version supported by this media gateway. (MGCP Protocol as defined by the Internet Engineering Task Force [IETF]). VARCHAR(8). Permitted values are: MGCP-0-1—MGCP0.1 version is supported by the media gateway. MGCP-1-0—MGCP1.0 version is supported by the media gateway. This is the default version for an MTA. Required for NCS and TGCP.
MGCP-VMWI-SUPP	Specifies whether the media gateway supports visual message waiting indicators (VMWIs). Used for voice mail. CHAR(1): Y/N (Default = N). Y—Does support VMWI. N—Does not support VMWI.
MGCP-XDLCX-SUPP	Specifies whether the MGW supports the Request Identifier (X) parameter in received delete connection (DLCX) messages without any CallId (I) and ConnectionId (I) parameters. CHAR(1): Y/N (Default = N). Y—Use for IOS-based MGCP gateways, not for MTAs. N—Use for PacketCable.

MGW-TYPE	Media gateway type. Used when the gateway is auto-provisionable from the CLI. VARCHAR(16): 1–16 ASCII characters. Permitted values are: UNSPECIFIED (Default)—Generic or unknown gateway type. 2420—RGW and CAS trunking gateway. 2421—RGW and CAS trunking gateway or SS7 and ISDN gateway. 3660—CAS trunking gateway, SS7 or ISDN gateway. 3810—RGW or CAS trunking gateway, or SS7 and ISDN gateway. 5850—CAS, ISDN, SS7 or announcement gateway. 827—Cisco 827 Router. AS5300—CAS, ISDN, SS7 or announcement gateway. AS5400—CAS, ISDN, SS7 or announcement gateway. ATA—Analog telephone adapter. MGX8260—CAS, ISDN, SS7 or announcement gateway. (Obsolete as of Release 4.4.1) MGX8850—CAS, ISDN, SS7 or announcement gateway. OTHER—A device other than one of those listed for this token. UBR—Residential gateways (RGWs).
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
OSI-SUPP	Specifies if open switch interval (OSI) is supported or unsupported. When supported, OSI facilitates call flows involving answering machines or other automated devices acting as a terminating party and aids notification that an originating party is on-hook to such devices. See *Telecordia GR506* for further information. CHAR(1): Y/N (Default = N). Y—Gateway supports OSI. N—Gateway does not support OSI.
PACKET-TYPE	Underlying network layer. VARCHAR(4). Permitted values are: BOTH (Default)—Supports both ATM and IP packet types. ATM—Supports only ATM packet types. IP—Supports only IP packet types.
PARALLEL-NETWLOOP-SUPP (Release 4.5)	Specifies whether the media gateway allows a network loopback connection in parallel to another inactive, recvonly, or sendrecv mode connection. **Note** See the NCS specification (PKT-SP-EC-MGCP-I10-040402), section 4.3 for more information.

PARALLEL-TEST-CONN-SUPP (Release 4.5)	Specifies whether the media gateway allows a network loopback or continuity test connection in parallel to another inactive or recvonly or sendrecv mode connection. CHAR(1): Y/N (Default = Y if variant=NCS, if variant is not equal to NCS the default is N. **Note** See NCS specification PKT-SP-EC-MGCP-I10-040402 section 4.3 for further information.
PC-MPTIME-SUPP	Specifies whether MGW (RGW or TGW) supports multiple packetization (MP)—which means there are individual packetization periods for each codec as defined by PacketCable ECN MGCP-N-02101. This token applies only if mgcp-variant = NCS or TGCP. The default value (Y) works for MGCP (variant=none) since this token is not used for MGCP. CHAR(1): Y/N (Default = Y). **Note** This token is typically set to Y for MTAs, and N for MGCP-based MGWs and TGWs. ⚠ **Caution** This token should not be changed, unless service provider uses an MTA or trunking gateway that is partially compliant to NCS/TGCP (that is, supports NCS/TGCP, but does not support multiple packetization parameter in Local Connection Option field of CRCX/MDCX message).
PORT-START	Specifies the starting port on a gateway. Ports on some residential gateways are numbered as 0, 1 and others are numbered as 1, 2. The port-start value is useful when provisioning terminations. The Cisco BTS 10200 Softswitch supports gateways with port 1 but not 2. That is, if the MGW has 0 or 1 based numbering (ports start with 0 or 1 when describing the first port), then it is supported. CHAR(1): 0 or 1 (Default = 0).
PVC	Specifies whether MGW supports permanent virtual circuits (PVCs). CHAR(1): Y/N (Default = N). Y—MGW supports PVCs. N—MGW does not support PVCs.
RBK-ON-CONN-SUPP	Ringback on connection support specifies whether the MGW or TGW has the ability to send a ringback signal to the calling party on connection. The default value is Y. Y—MGW has the capability to send a ringback signal (inband RTP). N—MGW does not have the capability to send a ringback signal (local ringback at origination).
RBK-ON-INACTIVE-CONN-SUPP (Not supported)	Ringback on an inactive connection support. CHAR(1): Y/N (Default = N). N—MGW cannot send a ringback signal on an inactive connection. Y—MGW can send a ringback signal on an inactive connection.

REFRESH-DIGIT-MAP	Specifies whether the digit map is refreshed at the gateway on every call. CHAR(1): Y/N (Default = N).
SDP-ATTRIB-SUPP	Session Description Protocol (SDP) parameters are used for interoperability with various MGWs. CHAR(1): Y/N (Default = Y).
SDP-BANDWIDTH-SUPP	Specifies whether bandwidth SDP parameters are needed for interoperability with various MGWs. CHAR(1): Y/N (Default = Y).
SDP-CAP-ENCODE-TYPE (Release 4.5)	Specifies the SDP Capability encoding type. There are two specific formats by which SDP capabilities can be encoded—STD and CISCO. VARCHAR(16): 1–16 ASCII characters. Permitted values are: STD—RFC 3407-based SDP attribute encoding. CISCO—Cisco proprietary method of encoding SDP capability attribute parameters using the "X-" prefix. AUTO (Default)—Does not force an endpoint to use a specific format. An endpoint uses the same format as received from the other endpoint.
SDP-EMAIL-SUPP	Specifies whether e-mail SDP parameters are needed for interoperability with various MGWs. CHAR(1): Y/N (Default = Y).
SDP-INFO-SUPP	Specifies whether information SDP parameters are needed for interoperability with various MGWs. CHAR(1): Y/N (Default = Y).
SDP-ORIGFIELD-SUPP	Specifies whether origination field SDP parameters are needed for interoperability with various MGWs. See RFC 2327. CHAR(1): Y/N (Default = N). Y—Gateway does not support SDP. N—Gateway supports SDP.
SDP-PHONE-SUPP	Specifies whether telephone SDP parameters are needed for interoperability with various MGWs. CHAR(1): Y/N (Default = Y).
SDP-SESSNAME-SUPP	Specifies whether session name SDP parameters are needed for interoperability with various MGWs. CHAR(1): Y/N (Default = Y).
SDP-TIME-SUPP	Specifies whether time SDP parameters are needed for interoperability with various MGWs. CHAR(1): Y/N (Default = Y).
SDP-URI-SUPP	Specifies whether URI SDP parameters are needed for interoperability with various MGWs. CHAR(1): Y/N (Default = Y).
SLOT-PREFIX	Slot Level prefix. For example, S as in S0. Used by EMS during bulk provisioning. VARCHAR(8): 1–8 ASCII characters.

SPARE1-SUPP (Release 4.4.0/1)	Specifies whether to optimize the initialization sequence when the Cisco BTS 10200 Softswitch receives an "RSIP rm:disconnected" message from an MGW. This supports MGWs (such as VXSM) that support redundancy and stateful switchover; and sends an "RSIP rm:disconnected" during an MGW failover. CHAR(1): N/Y (Default = N). Y—If an "RSIP rm:disconnected received" message is received and the endpoint point does not have an active call (from a Call Agent perspective), the Cisco BTS 10200 Softswitch sends a DLCX message to all effected endpoints with no CallIdentifier/ConnectionIdentifier. For endpoints with active calls, the Cisco BTS 10200 Softswitch sends an MDCX command with the appropriate connection mode. N—If an "RSIP rm:disconnected" is received and the endpoint point does not have active call (from a Call Agent perspective), the Cisco BTS 10200 Softswitch sends an AUEP command to get the active connections and sends a "DLCX stray connections" or sends an MDCX with appropriate connection mode and RQNT if necessary). For endpoints with active calls, the Cisco BTS 10200 Softswitch sends an AUEP command to get the active connections and sends a "DLCX stray connections" or sends MDCX with appropriate connection mode and RQNT if necessary.
Obsolete in Release 4.5. Release 4.5.1	Specifies whether to release active calls when an MGW becomes unreachable. CHAR(1): N/Y (Default = N). Y—If the MGW becomes unreachable, all active calls on that MGW are released. N—Active calls are not released when MGW becomes unreachable. If the MGW becomes reachable later, the Cisco BTS 10200 Softswitch audits all stable calls on that MGW and releases any mismatched calls. **Note** The feature behavior of not releasing active calls on unreachable MGWs was introduced in Release 4.4 and is the default behavior for Releases 4.4.0, 4.4.1 and 4.5. However, this can be overridden by adding *releaseCallOnUnreachable=Y* in the MGA section of the platform.cfg. Contact Cisco TAC before modifying the platform.cfg. In release 4.5.1 onwards it is CLI configurable.

SPARE2-SUPP (Release 4.4.1)	Specifies whether calls are considered network loopback test calls. When configured as Y, the calls from the MGW configured with this MGW-PROFILE are considered as Network loopback test calls. CHAR(1): Y/N (Default = N). Y—Calls from an MGW are considered network loopback test calls. N—Calls from an MGW are not considered network loopback test calls.
(Release 4.5)	Specifies whether to update or flush the MGW DNS cache. CHAR(1): Y/N (Default = N). Y—Update the MGW DNS cache with UDP source address from RSIP message. N—Flush the MGW DNS cache on RSIP. **Note** As of Release 4.5, use the CAS Trunk Group Profile table for network loopback provisioning.
SPVC	Specifies whether MGW supports soft permanent virtual circuits (SPVCs). CHAR(1): Y/N (Default = N). Y—MGW supports SPVCs. N—MGW does not support SPVCs.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
SVC	Specifies whether MGW supports switched virtual circuits (SVCs). CHAR(1): Y/N (Default = N). Y—MGW supports SVCs. N—MGW does not support SVCs.
T38-FXR-GW-SUPP (Not provisionable) (Release 4.5)	Specifies whether T.38 gateway mode fax is supported for a media gateway. Applies only if the fax-t38-enabled token is set to Y in the Quality of Service table. VARCHAR(8): Y/N or AUTO (Default = N). AUTO—Call Agent determines support based on dynamically obtained capability for a media gateway as received in an AUEP ACK message. Y or N—Overrides the dynamically obtained capability of AUTO.

T38-FXR-LOOSE-SUPP (Release 4.5)	Specifies whether Call Agent-controlled T38 Loose Mode Fax is supported for a media gateway (that is, whether to send or not send the FXR parameter in CRCX:LCO). Applies only if the fax-t38-enabled token is set to Y in the Quality of Service table. VARCHAR(8): Y/N or AUTO (Default = AUTO) AUTO—Call Agent determines support based on dynamically obtained capability for a MGW as received in an AUEP ACK message. Y—send FXR in CRCX:LCO. or N—do not send FXR in CRCX:LCO. **Note** If this token is changed, the change does not take affect until the gateway or subscriber termination is reset. If the value is set to AUTO and gateway does not report T.38 capability in an AUEP ACK, then the Cisco BTS 10200 Softswitch assumes that the gateway does not support T.38 even if the gateway did support it. Set this token to Y in this case. Also, while changing this value to AUTO brings the functionality back to the repossess of the endpoint to AUEP, this does not take effect until the Cisco BTS 10200 Softswitch sends an AUEP after the change to AUTO. Until then, the Cisco BTS 10200 Softswitch functions according to the previous value.
TERMINATION-PREFIX	The default termination prefix to be used for the MGW profile, for example, AALN/. The termination prefix value is useful when provisioning terminations. VARCHAR(32): 1–32 ASCII characters. **Note** For announcements using equipment such as IPUnity, you need to configure this token as ann/. The Cisco BTS 10200 Softswitch then sends ann/$@<ivr-domain-name.net>.
USE-STATIC-PROFILE	Specifies whether to use static or dynamic information. CHAR(1): Y/N (Default = N).
VENDOR	Name of the gateway manufacturer. VARCHAR(32): 1–32 ASCII characters. For example: Cisco.

Media Gateway Control Protocol Return Code Action

The Media Gateway Control Protocol Return Code Action (mgcp-retcode-action) table specifies what action to take when an MGCP message is received from a media gateway.

Table Name: MGCP-RETCODE-ACTION

Table Containment Area: Call Agent

Command Types Show, add, change, and delete

Examples

```
show mgcp-retcode-action mgw-profile-id=mgw2420; mgcp-msg=CRCX; mgcp-retcode=200;
add mgcp-retcode-action mgw-profile-id=mgw2420; mgcp-msg=CRCX; mgcp-retcode=000;
ep-action=none; call-action=none;
change mgcp-retcode-action mgw-profile-id=mgw2420; mgcp-msg=CRCX; mgcp-retcode=000;
ep-action=none; call-action=none;
delete mgcp-retcode-action mgw-profile-id=mgw2420; mgcp-msg=CRCX; mgcp-retcode=000;
```

Usage Guidelines

Primary Key Token(s): mgw-profile-id; mgcp-msg, mgcp-retcode;

Foreign Key Token(s): mgw-profile-id

Add Rules: Foreign key constraints

Change Rules: Foreign key constraints

Delete Rules: Foreign key constraints

Syntax Description

* MGW-PROFILE-ID	Primary key. Foreign key: Media Gateway Profile table. ID from the Media Gateway Profile table. VARCHAR(16): 1–16 ASCII characters.
* MGCP-MSG	Primary key. The MGCP command for which an acknowledge is received with the return code. VARCHAR(16): 1–16 ASCII characters. Permitted values are: AUEP—Audit endpoint. See Table 2-6, for AUEP return code values. RQNT—Notification request. See Table 2-2, for RQNT return code values. CRCX—Create connection. See Table 2-3, for CRCX return code values. MDCX—Modify connection. See Table 2-4 for MDCS return code values. DLCX—Delete connection. See Table 2-5, for AUEP return code values. AUCX—Not used EPCF—Not used
* MGCP-RETCODE	Primary key. The MGCP return code received from the media gateway. INTEGER: for example, 100, 101, 200, 250, 400-499, 500-599, 900-918.

* EP-ACTION	The action, or recovery, operation to be done on an endpoint. VARCHAR(16): 1–16 ASCII characters. Permitted values are: NONE—No action required, consume the response. For example: 000. OK—Take appropriate action based on the MGCP message. Treat it like SUCCESSFUL response code, which indicates that the mgcp command has been successfully executed on the gateway. For example: 200, 250. PROV-OK—The gateway requires more time to execute the command, so it is waiting for the final response. For connection messages, pass the response to connection module; otherwise, ignore it. For example: 100. RETRY—Retry the command transmission with a different transaction id (used for special cases such as the 400 return code). UPDATE—Update the termination state based on the return code. For example: if 401 is received, play the dial tone. RESET—Perform automatic recovery operation once to idle the endpoint; if it fails, then mark the termination faulty. RECOVER—Perform automatic recover multiple times before declaring the endpoint faulty. FAULTY—Nonrecoverable error, mark the endpoint as faulty.
* CALL-ACTION	Specifies the action to be taken when a given cause code is received on the outgoing leg. VARCHAR (16): 1–16 ASCII characters. Permitted values are: NONE—No action required. Consume the response. For example: 000. OK—Take the appropriate action based on the MGCP message. Treat it like SUCCESSFUL response code, meaning the MGCP command has been successfully executed on the gateway. For example: 200, 250. PROV-OK—The gateway requires more time to execute the command; waiting for the final response. For connection messages, pass the response to the connection module; otherwise, ignore it. For example: 100. REATTEMPT (applies only to trunks)—Reattempt the call by choosing a different trunk in the trunk group. RELEASE—Release the call with the appropriate cause value.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.

LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

Table 2-2 lists the valid return code combinations when mgcp-msg=rqnt.

Table 2-2 Return Code Values for mgcp-msg=rqnt

MGCP-MSG	Return Code	Valid Values of Call Action	Valid Values of Endpoint Action
RQNT	000	Same as 100	Same as 100
RQNT	0xx	Same as 100	Same as 100
RQNT	200	CALL-ACTION-OK	EP-ACTION-NONE EP-ACTION-OK
RQNT	250	CALL-ACTION-REATTEMPT CALL-ACTION-RELEASE	Can take any possible values specified in CLI guide.
RQNT	100	None	None (User cannot provision this row from the Cisco BTS 10200 CLI.)
RQNT	401	Same as 250	Same as 250
RQNT	402	Same as 401	Same as 401
RQNT	2xx	Same as 200	Same as 200
RQNT	1xx	Same as 100	Same as 100
RQNT	3xx	Same as 250	Same as 250
RQNT	4xx	Same as 250	Same as 250
RQNT	5xx	Same as 4xx	Same as 4xx
RQNT	6xx	Same as 4xx	Same as 4xx
RQNT	7xx	Same as 4xx	Same as 4xx
RQNT	8xx	Same as 4xx	Same as 4xx
RQNT	9xx	Same as 4xx	Same as 4xx

Table 2-3 lists valid return code combinations when mgcp-msg=crcx.

Table 2-3 Return Code Values for mgcp-msg=crcx

MGCP-MSG	Return Code	Valid Values of Call Action	Valid Values of Endpoint Action
CRCX	000	Same as 100	Same as 100
CRCX	0xx	Same as 100	Same as 100
CRCX	200	CALL-ACTION-OK	EP-ACTION-NONE EP-ACTION-OK
CRCX	250	CALL-ACTION-REATTEMPT CALL-ACTION-RELEASE	Can take any possible values specified in CLI guide.
CRCX	100	None	None (User cannot provision this row from the Cisco BTS 10200 CLI.)
CRCX	401	Same as 250	Same as 250
CRCX	402	Same as 401	Same as 401
CRCX	2xx	Same as 200	Same as 200
CRCX	1xx	Same as 100	Same as 100
CRCX	3xx	Same as 401	Same as 401
CRCX	4xx	Same as 401	Same as 401
CRCX	5xx	Same as 4xx	Same as 4xx
CRCX	6xx	Same as 4xx	Same as 4xx
CRCX	7xx	Same as 4xx	Same as 4xx
CRCX	8xx	Same as 4xx	Same as 4xx
CRCX	9xx	Same as 4xx	Same as 4xx

Table 2-4 lists valid return code combinations when mgcp-msg=mdcx.

Table 2-4 Return Code Values for mgcp-msg=mdcx

MGCP-MSG	Return Code	Valid Values of Call Action	Valid Values of Endpoint Action
MDCX	000	Same as 100	Same as 100
MDCX	0xx	Same as 100	Same as 100
MDCX	200	CALL-ACTION-OK	EP-ACTION-NONE EP-ACTION-OK
MDCX	250	CALL-ACTION-REATTEMPT CALL-ACTION-RELEASE	Can take any possible values specified in CLI guide.
MDCX	100	None	None (User cannot provision this row from the Cisco BTS 10200 CLI.)
MDCX	401	Same as 250	Same as 250
MDCX	402	Same as 250	Same as 250
MDCX	2xx	Same as 200	Same as 200

Table 2-4 Return Code Values for mgcp-msg=mdcx (continued)

MGCP-MSG	Return Code	Valid Values of Call Action	Valid Values of Endpoint Action
MDCX	1xx	Same as 100	Same as 100
MDCX	3xx	Same as 250	Same as 250
		None (Release 4.5)	EP_ACTION_NONE (Release 4.5)
MDCX	4xx	Same as 250	Same as 250
		None (Release 4.5)	EP_ACTION_NONE (Release 4.5)
MDCX	5xx	Same as 250	Same as 250
		None (Release 4.5)	EP_ACTION_NONE (Release 4.5)
MDCX	6xx	Same as 250	Same as 250
		None (Release 4.5)	EP_ACTION_NONE (Release 4.5)
MDCX	7xx	Same as 250	Same as 250
		None (Release 4.5)	EP_ACTION_NONE (Release 4.5)
MDCX	8xx	Same as 250	Same as 250
		None (Release 4.5)	EP_ACTION_NONE (Release 4.5)
MDCX	9xx	Same as 250	Same as 250
		None (Release 4.5)	EP_ACTION_NONE (Release 4.5)

Table 2-5 lists valid return code combinations when mgcp-msg=dlcx.

Table 2-5 Return Code Values for mgcp-msg=dlcx

MGCP-MSG	Return Code	Valid Values of Call Action	Valid Values of Endpoint Action
DLCX	000	Same as 100	Same as 100
DLCX	0xx	Same as 100	Same as 100
DLCX	200	CALL-ACTION-OK	EP-ACTION-OK
DLCX	250	CALL-ACTION-OK	EP-ACTION-OK
DLCX	100	None	None (User cannot provision this row from the Cisco BTS 10200 CLI.)
DLCX	401	CALL-ACTION-RELEASE	EP-ACTION-FAULTY
		CALL-ACTION-REATTEMPT	
DLCX	402	Same as 401	Same as 401
DLCX	2xx	Same as 200	Same as 200
DLCX	1xx	Same as 100	Same as 100
DLCX	3xx	Same as 401	Same as 401
DLCX	4xx	Same as 401	Same as 401
DLCX	5xx	Same as 4xx	Same as 4xx
DLCX	6xx	Same as 4xx	Same as 4xx
DLCX	7xx	Same as 4xx	Same as 4xx

Table 2-5 Return Code Values for mgcp-msg=dlcx (continued)

MGCP-MSG	Return Code	Valid Values of Call Action	Valid Values of Endpoint Action
DLCX	8xx	Same as 4xx	Same as 4xx
DLCX	9xx	Same as 4xx	Same as 4xx

Table 2-6 lists valid return code combinations when mgcp-msg=auep.

Table 2-6 Return Code Values for mgcp-msg=auep

MGCP-MSG	Return Code	Valid Values of Call Action	Valid Values of Endpoint Action
AUEP	000	Same as 100	Same as 100
AUEP	0xx	Same as 100	Same as 100
AUEP	200	CALL-ACTION-OK	EP-ACTION-OK
AUEP	250	CALL-ACTION-REATTEMPT	EP-ACTION-RETRY
		CALL-ACTION-RELEASE	EP-ACTION-RESET
			EP-ACTION-FAULTY
			EP-ACTION-RECOVER
AUEP	100	None	None (User cannot provision this row from the Cisco BTS 10200 CLI.)
AUEP	401	Same as 250	Same as 250
AUEP	402	Same as 401	Same as 401
AUEP	2xx	Same as 200	Same as 200
AUEP	1xx	Same as 100	Same as 100
AUEP	3xx	Same as 250	Same as 250
AUEP	4xx	Same as 3xx	Same as 3xx
AUEP	5xx	Same as 3xx	Same as 3xx
AUEP	6xx	Same as 3xx	Same as 3xx
AUEP	7xx	Same as 3xx	Same as 3xx
AUEP	8xx	Same as 3xx	Same as 3xx
AUEP	9xx	Same as 3xx	Same as 3xx

National Destination Code

The national destination code (ndc) table defines the home area codes supported by the Call Agent.

Table Name: NDC

Table Containment Area: Call Agent

Command Types Show, add, and delete

Examples

```
show ndc;
add ndc digit-string=972;
delete ndc digit-string=972;
```

Usage Guidelines

Primary Key Token(s): digit-string

Add Rules: New NDC digit string is rejected if it is a superset or subset of an existing digit string. For example: if ndc=972 already exists, add ndc=97 is rejected.

Change Rules: None.

Delete Rules: digit-string cannot exist in exchange-code.

Syntax Description

* DIGIT-STRING	Primary key. The digit string consists of the area code (referred to as a National Destination Code (NDC) in ITU) portion of the national (significant) number (N(S)N). VARCHAR(6): 1–6 ASCII characters.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
FORCED (Release 4.5.1)	Valid only for the add command. Specifies whether to override add rules. CHAR(1): Y/N (Default = N). Y—Override rule and add, change or delete. N—Do not override rules.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

Office Code

The Office Code (office-code) table specifies the office codes assigned to a particular Call Agent. The office codes defined in this table normally terminate to a subscriber. This table defines the office-code-index (normalized office code) that is used as an index in the DN2Subscriber table.

Table Name: OFFICE-CODE

Table Containment Area: Call Agent, Feature Server

Command Types

Show, add, and delete

Examples

```
show office-code ndc=972; ec=671; dn-group=23xx;
add office-code ndc=972; ec=671; dn-group=23xx;
delete office-code ndc=972; ec=671; dn-group=23xx;
```

Usage Guidelines

Primary Key Token(s): digit-string

Unique Key Token(s): ndc, ec, dn-group

Foreign Key Token(s): ndc, ec, office-code-index

Add Rules:

- if new digit string is a subset of an existing digit string, and
  - if new digit string direct inward dialing (DID)=Y and existing digit string DID=Y, reject.
  - if new digit string DID=Y and existing digit string DID=N, permit with the same OCI value and check that no DN is the DN2 Subscriber table belongs to the new dn-group.
  - if new digit string DID=N and existing digit string DID=Y, reject.
  - if new digit string DID=N and existing digit string DID=N, reject.
- if new digit string is a superset of an existing digit string, and
  - if new digit string DID=Y and existing digit string DID=Y, reject because there are DNs that already exist in the subset.
  - if new digit string DID=Y and existing digit string DID=N, reject because there are DNs that already exist in the subset.
  - if new digit string DID=N and existing digit string DID=Y, permit with the same OCI.
  - if new digit string DID=N and existing digit string DID=N, permit with the same OCI.

Change Rules:

- call-agent-id is required.
- if the change digit-string is a subset of an existing digit-string, and
  - if change digit-string DID=N, and the existing digit-string DID=Y, the digit-string cannot be changed.
  - if change digit-string DID=Y, and the existing digit-string DID=Y, the digit-string cannot be changed.

  - if change digit-string DID=Y, and the existing digit-string DID=N, the digit-string can be changed if no DN in the DN2 Subscriber table belongs to the dn-group.
  - if change digit-string DID=N, and the existing digit-string DID=N, the digit-string can be changed if no DN in the DN2 Subsurface table belongs to the dn-group.
- if the change digit-string is a superset of an existing digit-string, and
  - if change digit-string DID=N, and the existing digit-string DID=Y, the digit-string cannot be changed.
  - if change digit-string DID=Y, and the existing digit-string DID=Y, the digit-string cannot be changed.
  - if change digit-string DID=Y, and the existing digit-string DID=N, the digit-string cannot be changed.
  - if change digit-string DID=N, and the existing digit-string DID=N, the digit-string cannot be changed.

Delete Rules:

- dest: office-code-index: office-code-index cannot exist in any DN2Subscriber::office-code-index.
- if the delete digit string is a subset of an existing digit string, and
  - if delete dn-group DID=Y and existing dn-group DID=Y, the digit string cannot be deleted.
  - if delete dn-group DID=Y and existing dn-group DID=N, and there is no record in the DN2 Subscriber table in the range of the dn-group, the digit string can be deleted.
  - if delete dn-group DID=N and existing dn-group DID=Y, the digit string cannot be deleted.
  - if delete dn-group DID=N and existing dn-group DID=N, the DN2 Subscriber table is not checked because there is a superset digit-string, and the dn-group can be deleted.
- if delete digit-string is a superset of an existing digit-string, and
  - if delete dn-group DID=Y and existing dn-group DID=Y, the dn-group cannot be deleted.
  - if delete dn-group DID=Y and existing dn-group DID=N, the dn-group cannot be deleted.
  - if delete dn-group DID=N and existing dn-group DID=Y, the dn-group can be deleted if no other DNs fall outside the range of the existing dn-group.
  - if delete dn-group DID=Y and existing dn-group DID=Y, the dn-group can be deleted if no other DNs fall outside the range of the existing dn-group.

Digit String Token Rules:

- If digit-string is a subset of another digit-string, then use the same office code index.
- If new digit-string is a superset of another digit-string, then use the same office code index.

Other Rules:

- FORCED=Y overrides add and delete digit-string rules.
- if DID=Y, the dn-group defined in the office code table is used as the DN.

Syntax Description

* DIGIT-STRING	Primary key. The digit string consists of the NPA-NXX-(XXX) portion of the directory number. This token represents the directory number pool available for the Call Agent. For example, if the digit string consists of 6 digits: NPA-NXX, the remaining 4 digits of the DN are available for assignment. If the digit string consists of NPA-NXX-X, DNs in the thousands group are available for assignment. VARCHAR(14): 4–14 ASCII characters. The digit string is a concatenation of the ndc, ec, and dn-group. VARCHAR(14): 1–14 ASCII characters. The digit string is a concatenation of the ndc, ec, and dn-group. (Release 4.5)
* EC	Unique key: ndc, ec, dn-group. Foreign key: ndc+ec+office-code-index to the Exchange Code table. Exchange Code. VARCHAR(6): 1–6 ASCII characters.
* NDC (Optional in Release 4.5)	Unique key: ndc, ec, dn-group. Foreign key: ndc+ec+office-code-index to the Exchange Code table. National Destination Code. VARCHAR(6): 1–6 ASCII characters.
* DN-GROUP	Unique key: ndc, ec, dn-group. A combination of the dn and dn-length tokens that defines the DN range available in the Call Agent. VARCHAR(4): 1–4 ASCII characters, in the following format: For one digit: n or x For two digits: nn or nx or xx For three digits: nnn or nnx or nxx or xxx For four digits: nnnn or nnnx or nnxx or nxxx or xxxx where n = 0–9, x is a wildcard and is entered as ASCII character *x*.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
CALL-AGENT-ID	Mandatory if in Call Agent. Foreign key: Call Agent table. Valid home Call Agent ID for the dialed NPA or NPA-NXX. VARCHAR(8): 8 ASCII characters. Format is CAnnn or cannn, where nnn = 001–999. Three characters are reserved.
DIALABLE	Dialable indicator. CHAR(1): Y/N (Default = Y). Y—This office code can be reached via user dialing. N—This office code is not reachable via user dialing.

DID	Indicates if the digit string is a subscriber or a direct inward dialing (DID) number. DID allows a user to direct dial without going through an attendant. CHAR(1): Y/N (Default = N). Y—DID number. N—Subscriber number.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
FORCED	Specifies whether to override digit-string add, change or delete rules. CHAR(1): Y/N (Default = N). Y—Override rule and add, change or delete digit-string. N—Do not override digit-string rules.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
OFFICE-CODE-INDEX	Foreign key: ndc+ec+office-code-index to the Exchange Code table. The office code index is automatically assigned when ndc and ec are defined. If the user does not enter it, the system automatically adds 1 to the previous OCI. When an entry is added to the office code table, the office code index from the Exchange Code table is used. SMALLINT: 1–65535.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

Point of Presence

The Cisco BTS 10200 Softswitch Call Agent can serve several geographical regions or Metropolitan Statistical Areas (MSAs) simultaneously. Each geographical region is referred to as a point of presence (POP). Each POP has its own unique dialing and routing characteristics. The Point of Presence (pop) table contains the default dialing and routing characteristics. Each originating entity (subscriber or trunk group) is assigned to a POP. The POP also performs policy routing, for example, to route the call to the nearest announcement server in the POP, or to the nearest interLATA carrier location within a POP.

Table Name: POP

Table Containment Area: Call Agent, FSPOTS, FSAIN

Command Types

Show, add, change, and delete

Examples

```
show pop id=dallaspop;
add pop id=dallaspop; state=tx; country=usa;
change pop id=dallaspop; jip=972-671;
delete pop id=dallaspop;
```

Usage Guidelines

Primary Key Token(s): id

Foreign Key Token(s): aaa-server-grp-id, at-route-guide-id, call-agent-id, digit-map-id, lecoss-route-guide-id, lnp-dp-id, lsa-id, opc-id,

Foreign Key Token(s): timezone, office-service-id, temp-disc-cos-restrict-id, policy-server-id. clli-code-id, enum-profile id, virtual-nsa-subscriber-id, voice-mail-id, privacy-manager-id (Release 4.5), ocb-profile-id (Release 4.4.1)

Unique Key Token(s): pop

Add Rules: None.

Change Rules: None.

Delete Rules:

- Foreign key constraints.
- ID cannot exist in any trunk-grp::pop-id.
- ID cannot exist in any sub-profile::pop-id.

Syntax Description

* ID	Primary key. POP identifier. VARCHAR(16): 1–16 ASCII characters.

* TIMEZONE (This token is optional as of Release 4.5)	Foreign Key: Timezone table (Release 4.5). Time zone the POP is in. Defaults to EST if not provisioned. Defaults to LOCAL if not provisioned in Release 4.5. **NOTE**: Settings such as "GMT+n" and "GMT-n" (where "n" is the numeric value representing the hour) should not be used in POP timezone settings. VARCHAR(20): 1–20 ASCII characters. VARCHAR(32): 1–32 ASCII characters. (Release 4.5) Permitted values are: EST—(Default) Eastern standard time ADT—Atlantic daylight time AST—Atlantic standard time CDT—Central daylight time CST—Central standard time EDT—Eastern daylight time GMT—Greenwich mean time HONGKONG—Hong Kong, China LOCAL—Local POP timezone. MDT—Mountain daylight time MST—Mountain standard time PDT—Pacific daylight time PRC—Peoples Republic of China PST—Pacific standard time **Note** The number of valid timezones expanded in Release 4.5. See Appendix F, "Timezones" for a complete list.
AAA-SERVER-GRP-ID (Release 4.4.1)	Foreign key: Authentication, authorization, and accounting (AAA) Server Group table. Specifies the AAA Server Group ID used for prepaid or limited call duration features. VARCHAR(16): 1–16 ASCII characters.
AR-ACTIVATION-LEVEL (Release 4.4.0)	Specifies AR activation level (1-level, 2-level). If not provisioned, the system uses the default from the Call Agent Configuration table. VARCHAR(3): 1–3 ASCII characters. ONE—1-level AR Activation TWO—2-level AR Activation
AT-ROUTE-GUIDE-ID	Foreign key: Route Guide table. Access tandem route guide ID. Must match a valid route in the Route Guide table. VARCHAR(16): 1–16 ASCII characters.

AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
BLOCK-EAWOPIC	Specifies treatment of Equal Access (interLATA) calls from subscribers without preferred interlata carrier (PIC). CHAR(1): Y/N (Default = Y). N—Route to LECOSS. Y—Block call.
CALL-AGENT-ID	Foreign key: Call Agent table. Valid home Call Agent of the POP. VARCHAR(8): 8 ASCII characters. Format CAnnn or cannn where nnn = 001–999. (3 characters are reserved for Not Used use.)
CLLI-CODE-ID (Release 4.5)	Foreign key: CLLI Code table. Specifies the Common Language Location Identifier (CLLI) for the local POP. VARCHAR(11): must be exactly 11 ASCII characters.
CNAM-OPTION	Determines if a line information database (LIDB) query is to be performed for calls terminating within the Call Agent (subscriber to subscriber). VARCHAR(13). Permitted values are: LOCAL—Use the local name only. Do not use LIDB. EXT-LIDB—Use LIDB name only. LOCAL-OR-LIDB—Use the local name if available. Otherwise use the LIDB name. NONE (Default)—No name is provided.
COUNTRY	Geographical state of the POP. For example: USA. VARCHAR(16): 1–16 ASCII characters (Default = USA). VARCHAR(16): 1–16 ASCII characters. (Release 4.5)
CUSTOMER-SUPPORT-DN (Release 4.5)	Specifies the DN to voice back to reach customer support. This DN is used in conjunction with the temporarily disconnected announcement id. VARCHAR(14): 1–14 numeric digits.
DESCRIPTION (EMS-only field)	Described by the service provider. VARCHAR(64): 1–64 ASCII characters.
DIGIT-MAP-ID	Foreign key: Digit Map table. Default digit-map-id for POP. VARCHAR(16): 1–16 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.

ENUM-PROFILE-ID (Release 4.5)	Mandatory if enum-supp=Y. Foreign key: Enum Profile table. The enumeration profile id. VARCHAR(16): 1–16 ASCII characters.
ENUM-SUPP (Release 4.5)	Specifies whether to perform an ENUM query CHAR(1): Y/N (Default = N).
ITP	Specifies whether intraLATA toll presubscription is supported. CHAR(1): Y/N (Default = N). Y—PIC2 N—LEC
IVR-DN (Release 4.5)	Specifies a POP-specific IVR DN. If this field is not provisioned, the Cisco BTS 10200 Softswitch defaults to the IVR-DN specified in the Call Agent Configuration table. VARCHAR(14): 1–14 ASCII characters.
JIP	Jurisdiction information parameter; sent in the IAM message. VARCHAR(6): 1–6 numeric digits in the format NPANXX. VARCHAR(6): must be exactly 6 digits in the format NPANXX (Release 4.5)
LATA	LATA associated with the POP. INTEGER: 100–65535 (3–5 numeric digits). INTEGER: 100–99999 (Default = 99999) (3–5 numeric digits). (Release 4.5)
LECOSS-ROUTE-GUIDE-ID	Foreign key: Route Guide table. Route-guide-id for LEC Operator Services Signaling System (OSSS). Must match a valid route in the Route Guide table. VARCHAR(16): 1–16 ASCII characters.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
LNP-DP-ID	Foreign key: Dial Plan Profile table. Use this dial plan to translate the local routing number (LRN). Must match a valid dial plan profile in the Dial Plan Profile table. VARCHAR(16): 1–16 ASCII characters.
LOCAL-7D-DIALING	Specifies if 7-digit local dialing is supported. CHAR(1): Y/N (Default = Y).
LSA-ID	Foreign key: LSA Profile table. Default local service area for the POP. Must match a valid ID in the LSA Profile table. VARCHAR(16): 1–16 ASCII characters.
MY-LRN	LRN assigned to POP. CHAR(10): 10 numeric characters.
OCB-PROFILE-ID (Release 4.4.1)	Foreign key: OCB Profile table.The OCB Profile ID. If not provisioned, the OCB feature uses the default values defined in the Feature table. VARCHAR(16): 1–16 ASCII characters.

OFFICE-SERVICE-ID (Release 4.5)	Foreign key: Service table. When provisioned, this token becomes the Office Service id. If this token is not provisioned, the system uses the service id provisioned in the Call Agent Configuration table. VARCHAR(16): 1–16 ASCII characters.
OPC-ID	Foreign key: Origination Point Code (OPC) table. Specifies the OPC to use for TCAP queries originating on behalf of subscribers assigned to this POP. VARCHAR(16): 1–16 ASCII characters.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
PIC2-REQD	This option is used when an intraLATA Pic (ITP) is used in the POP as the preferred interchange. CHAR(1): Y/N (Default = N). Y—PIC2 required. Call cannot be routed without a PIC. N—Not required. Call can be routed without a PIC.
POLICY-SERVER-ID (Not supported)	Foreign key: Aggregation table. Specifies which policy server to use for calls requiring Quality of Service (QoS) using the PacketCable Multimedia model. VARCHAR(16): 1–16 ASCII characters.
POP	Unique key. Name for the POP. VARCHAR(16): 1–16 ASCII characters.
PRIVACY-MANAGER-ID (Release 4.5)	Foreign key: Application Server table. Specifies the Default Privacy Manager id for all subscribers belonging to a particular subscriber profile. Type must equal PM in the Application Server table. VARCHAR(16): 1–16 ASCII characters.
SENSOR-ID (Release 4.5)	Mandatory for trunks. Identifies the type of sensor (any system or device that producing usage measurement data) that generates or formats Bellcore Automatic Message Accounting (AMA) Format (BAF) records. A specified sensor-id is included in the call detail record (CDR) and is used to collect usage measurements for billing purposes. Only characters 2 through 7 are specified here. A sensor id is a 7-character field where character 1 contains: • 0 if the record was not previously output to a downstream system (primary data) • 1 if the record was previously output to a downstream system (secondary data) • 2 if the record may have been previously output, but this is not confirmed. Characters 2 through 7 contain a 6-digit identification code assigned by the service provider of the sensor that generated or formatted the Bellcore Automatic Message Accounting (AMA) Format (BAF) record. VARCHAR(6): 6 numeric characters, 000000 to 999998 (Default = 000000). The value 999999 is reserved for sensors that output only AMA test tapes.

START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
STATE	Geographical state of the POP. For example: Tx, Ca, and so forth. CHAR(2): 2 alpha characters. VARCHAR(16): 1–16 ASCII characters. Uppercase only. Use two uppercase characters for U.S. states. For example: TX, CA, and so forth. (Release 4.5)
TEMP-DISC-COS-RESTRICT-ID (Release 4.5)	Mandatory if temp-disc-service-allowed=Y. Foreign key: COS Restrict table. This cos-restrict-id screens calls dialed by a temporarily disconnected subscriber. VARCHAR(16): 1–16 ASCII characters.
TEMP-DISC-SERVICE-ALLOWED (Release 4.5)	Controls the behavior of the Cisco BTS 10200 Softswitch when a subscriber is marked as temporarily disconnected. CHAR(1): Y/N (Default = N). N—Deny service. Y—Use the temp-disc-cos-restrict-id to screen all calls.
TREAT-IMS-ANONYMOUS	Specifies whether to treat entries in the incoming memory slot (IMS) as anonymous when copying to the screening list. Allows control of calls with no incoming identification. CHAR(1): Y/N (Default = N). N—Do not treat IMS entry as anonymous. Y—Treat IMS entry as anonymous.
VIRTUAL-NSA-SUBSCRIBER-ID (Release 4.5)	Foreign key: Subscriber table. Specifies the Virtual No Solicitation Announcement (NSA) subscriber ID that defines what default schedule to use to provide the NSA feature. VARCHAR(30): 1–30 ASCII characters.
VOICE-MAIL-ID (Release 4.5)	Foreign key: Application Server table. Specifies the default voice-mail id for all subscribers belonging to a particular subscriber profile. Type must equal VM in the Application Server table. VARCHAR(16): 1–16 ASCII characters.
ZERO-MINUS	Specifies how to route 0- calls within the POP. VARCHAR(4). Permitted values are: LEC (Default) PIC2
ZERO-PLUS-LOCAL (Not supported)	Specifies if 0+ LOCAL calls are supported. CHAR(1): Y/N (Default = N).

Ported Office Code

The Ported Office Code (ported-office-code) table specifies numbers, or ranges of numbers, that might have been ported-in to this switch. If a called number matches any of the ported numbers, or is within any of the specified ranges of numbers, the Call Agent queries the DN2subscriber table to determine the current status of the DN.

Table Name: PORTED-OFFICE-CODE

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show ported-office-code digit-string=972-671-23;
add ported-office-code digit-string=972-671-23;
change ported-office-code digit-string=972-222; in-call-agent=Y;
delete ported-office-code digit-string=972-671-23;
```

Usage Guidelines

Primary Key Token(s): digit-string

Add Rules: None.

Change Rules: None.

Delete Rules: None.

Syntax Description

* DIGIT-STRING	Primary key. Ported number which can be 7, 8, or 10 digits in the format NPA-NXX-XXXX, where NPA is the assigned geographic numbering plan area, NXX designates a specific central office within the NPA, and XXXX is the subscriber's number. N in the NXX portion of the number can be any number from 2 to 9 and X can be any number from 0 to 9. To support number pooling, the digit string can specify a pool of 1000 numbers (which requires 7 digits, NPA-NXX-X) or a pool of 100 numbers (which requires 8 digits, NPA-NXX-XX). VARCHAR(10): 7, 8, or 10 ASCII characters in the NPA-NXX-XXXX format.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.

IN-CALL-AGENT	Specifies whether the Call Agent is the recipient switch for a ported-in number, or a range of numbers, as specified in the digit-string token. CHAR(1): Y/N (Default = N). Y—Call Agent is the recipient switch. The DN2Subscriber table is queried to determine whether to send an LNP query to the SS7 network. If the number appears in the DN2subscriber table and the lnp-trigger is set to Y, an LNP query is performed. N—Call Agent is not the recipient switch. The DN2Subscriber table is not queried.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

Quality of Service

The Quality of Service (qos) table provides Codec Negotiation service. Codec Negotiation service is the process a Call Agent uses to find a common codec (compression/decompression of a signal) between two gateways so a call can go through.

Table Name: QOS

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show qos id=gold-service;
add qos id=gold-service; codec-type=g.711u; description=all calls are carried as g711;
change qos id=gold-service; codec-type=g.726-32k; description=use g.726-32k codecs.
delete qos id=gold-service;
```

Usage Guidelines

Primary Key Token(s): id

Foreign Key Token(s): ciphersuite-profile-id

Add Rules: LBW must be less than or equal to HBW.

Change Rules: Qos-id must exist.

Delete Rules: Qos-id must exist.

Syntax Description

* ID	User-defined QoS profile name. VARCHAR(16): 1–16 ASCII characters.
AUTO-GAIN-CONTROL	Specifies if gain control is automatically selected by the gateway. CHAR(1): Y/N (Default = Y). Y—Gain control is automatically selected by the gateway. N—Gain control is not automatically selected by the gateway.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
CIPHERSUITE-PROFILE-ID	Foreign key: Ciphersuite Profile table. The ciphersuite-profile index to use. VARCHAR(16): 1–16 ASCII characters.
CLIENT-TYPE (Release 4.5)	Specifies the type of client based on requiring different methods of Quality of Service. VARCHAR(16): 1–16 ASCII characters (Default = NONE). Permitted values are: NONE (Default)—Other MM-COPS—Packet Cable multimedia DOQS—Dynamic QOS

CODEC-TYPE	Specifies the preferred codec type to use on calls originating from the subscriber or trunking gateway configured with this QoS. When communicating with an RGW (IAD or eMTA) or TGW, the Cisco BTS 10200 Softswitch checks this token for the preferred codec type for the originating endpoint. This is the highest priority codec in the list sent by the Cisco BTS 10200 Softswitch to the MTA (or TGW) in the CRCX message. **Note** The rest of the codec list is based on the data in the AUEP ACK message. VARCHAR(16): 1–16 ASCII characters. Permitted values are: PCMU (or G.711U) (Default)—G.711 ulaw (PCMU) PCMA (or G.711A—G.711 alaw (PCMA) G.722—G.722 G.723.1-H—G.723.1 high rate G.723.1A-H—G.723.1 Annex A High rate G.723.1-L—G.723.1 Low rate G.723.1A-L— G.723.1 Annex A Low rate G.726-16K—G.726 16K rate G.726-24K—G.726 24K rate G.726-32K—G.726 32K rate G.726-40K—G.726 40K rate G.728—G.728 G.729—G.729 G.729A—G.729 Annex A G.729AB—G.729AB G.729B—G.729 Annex B G.729E—G.729 Annex E G.CLEAR (Not supported)—Clear Channel **Note** See also the codec-neg-supp token in the Media Gateway Profile table.
DESCRIPTION (EMS-only field)	Described by service provider. VARCHAR(64): 1–64 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
DOCSIS-DSCP-TOS (Release 4.5)	Identifies the DSCP/TOS value that must be matched for packets to be classified onto the IP flow. INTEGER: 0–255 (Default = 160). (Binary: 1010 0000)

DOCSIS-DSCP-TOS-BITMASK (Release 4.5)	Determines what bits in the DSCP/TOS byte to use as filters in classifying packets. INTEGER: 0–255 (Default=224). (Binary: 1110 0000)
DQOS-CMTS-DSCP-TOS	The Differentiated Services Code Point (DSCP) value or type of service (TOS) value to be sent to the CMTS in the gate-set message. This affects the QoS level for the packets (media traffic) that are about to enter the service provider network from the CMTS. VARCHAR(4): 0–255 ASCII characters (Default = 160). **Note** The operator can provision a value either for the DSCP byte, or for the IPv4 TOS byte, for each subscriber. When the subscriber makes a call, the DSCP/TOS value is provided to a CMTS in the gate-set message. The CMTS inserts the DSCP/TOS value into IP packets before delivering the packets to the IP core. Routers in the IP network use this value to make per-hop behavior (PHB) decisions about packet classification and traffic conditioning functions. For information on specific DSCP and TOS bits, see Appendix H, "Data Values for TOS, DSCP, and PHB Parameters."
DQOS-DSCP-TOS-BITMASK (Release 4.5)	Specifies the particular bits within the IPv4 DSCP/TOS byte to use INTEGER: 0–255 (Default=224). BINARY (1110 0000)
DTMF-PREF-MODE	Specifies the preferred DTMF relay method. VARCHAR(16): 1–16 ASCII characters (Default = DTMF-INBAND). Permitted values are: DTMF-INBAND—DTMF digits are exchanged in the voice path itself. This method may not work for low-speed codecs. In this method, no digits are reported to the Cisco BTS 10200 Softswitch and digits are exchanged over the bearer path. DTMF-CISCO-RTP—DTMF digits are exchanged using a Cisco proprietary method, where DTMF digits are encoded in RTP packets. In this method, no digits are reported to the Cisco BTS 10200 Softswitch and digits are exchanged over the bearer path. DTMF-CISCO-NSE (Not supported)—DTMF digits are exchanged using a Cisco proprietary method, where DTMF digits are encoded using NSE in RTP packets. In this method, no digits are reported to Cisco BTS 10200 Softswitch and digits are exchanged over the bearer path. DTMF-GW-NTE (Not supported)—DTMF digits are exchanged using RFC 2833 based NTE method. In this method, no digits are reported to Cisco BTS 10200 Softswitch and digits are exchanged over the bearer path. DTMF-OOB—All DTMF digits are reported to Cisco BTS 10200 Softswitch and digits are relayed to the other side by the Cisco BTS 10200.

FAX-PREF-MODE (Obsolete in Release 4.5)	Specifies the preferred fax relay method. VARCHAR(16): 1–16 ASCII characters. Permitted values are: FAX-T38-GWMODE (Default)—Gateway-controlled relay (uses NSE to switch to T.38 mode) in real time. FAX-T38-CAMODE—Call Agent controlled relay (Call Agent instructs gateway to switch to T.38 mode) in real time. FAX-INBAND—Use only for G.711 and G.726.
FAX-T38-ENABLED (Release 4.5)	Specifies whether to use the T.38 protocol for fax transmission. When a call is established between two endpoints, the Cisco BTS 10200 Softswitch uses the value of this token on each endpoint in determining whether to use the T.38 protocol for fax transmission. This token applies only to endpoints that have an associated QOS entry. If QoS is not defined for a trunk or a subscriber, the Cisco BTS 10200 Softswitch operates as if token is set to Y. The Cisco BTS 10200 Softswitch also acts as a transit for H323<->H323 and SIP<->SIP calls. In these cases, the fax_t38 _enabled value is ignored. CHAR(1): Y/N (Default = Y). Y—On an MGCP/NCS/TGCP interface, the system uses the T38 fax method specified in the corresponding Media Gateway Profile table. On an H.323 interface, the system uses the H.323 Annex D v2 to handle the fax over T.38. N—On an MGCP/NCS interface, the system does not use the T.38 protocol for fax transmission, including calls inter-working between this interface and SIP/H.323. The system does not send the local connection options (“L:”) for T.38 fax. However, if the gateways report T.38 fax capability in the SDP, the fax may still transmit using T.38 facilitated by SDP exchange. For example, for SIP<->MGCP calls (where this token is set to N for MGCP), the SIP endpoint can send T.38 fax parameters in SDP. On a media gateway, the MGW uses one of the inband fax methods defined in the media gateway profile. On an H.323 interface, N disables T38 fax for H323<->MGCP, and H323<->SIP calls but not for H323<->H323 calls. **Note** The Cisco BTS 10200 Softswitch uses the T.38 fax protocol when a fax is detected. Usage depends on the value of the QoS fax_t38_enabled token for each endpoint involved in the call, as well as the protocol type of each endpoint. The symbols used in the table are: T38—The Cisco BTS 10200 Softswitch uses the T.38 protocol for fax transmission. X—The Cisco BTS 10200 Softswitch does not use the T.38 protocol for fax transmission. T38*—Since one of the field values in this combination is set to N, the MGCP endpoint involved in this call does not receive the local connection option (L:fxr:fx/t38) in the initial CRCX request from Cisco BTS 10200 Softswitch. However, if the endpoint receives a T.38 SDP from the remote end detecting fax, then it is assumed to support the switch to T.38 media connection.

GAIN-VALUE	Telephony gateways can perform gain control to adapt the level of the signal. However, it is sometimes necessary to turn off this function, for example, for modem calls. The gain control parameter can be specified as either automatic or as an explicit number of decibels of gain. The default is to not perform gain control, which is the equivalent of specifying a gain of 0 decibels. INTEGER: –9999 to +9999 (Default = 0). **Note** This token is used only if auto-gain-control=N and value is non-zero.
HBW	Specifies higher bandwidth in kilobits per second. INTEGER: 0–9999 (Default = 0). 0 = gateway chosen.
HPTIME	Higher packetization time in milliseconds. INTEGER: 5–50 (Default = 10). **Note** For a call to be set up, the two MGWS involved in a call (the originating and terminating MGWs) must use the same packetization rate when they connect to the Cisco BTS 10200 Softswitch. Normally, two MTAs report their packetization rate automatically. However, if one of the MGW units fails to report dynamically, the provisioned values for lptime and hptime are used in the call. ⚠ **Caution** A single value (not a range) must be provisioned for hptime and lptime for both MGWs in a call, so that the two MGWs use the same packetization time. Otherwise, the two MGWs may not communicate properly can the call may not go through. This applies to all pairs of MGWs in a network that communicate with each other, including IVR and announcement servers, TGWs, eMTAs and various other MGCP-based gateways. The qos-id in the Trunk Group table must also be provisioned for each trunk in a call even if you are accepting the default hptime and lptime default values.

IPTOS-RTP-LOWDELAY	Specifies whether to set real-time transport protocol low delay. Low delay refers to the waiting time, or latency involved in sending and receiving a packet. You can set various options on the TCP socket to tune or optimize for certain performance parameters. The TOS provides an indication of the abstract parameters of the quality of service desired. These parameters guide the selection of the actual service parameters when transmitting a datagram through a particular network. See RFC 1349, RFC 791, and RFC 795 for detailed information. CHAR(1): Y/N (Default = N). Y—(1) Set to low delay. N—(0) Set to normal delay. **Caution** Cisco does not recommend using any value other than the specified default. Changing this value from its default may significantly impact network performance. Contact Cisco TAC for further information. **Note** This data is sent only if the iptos-rtp-supp token in the Media Gateway Profile table is set to Y. If you prefer to use DSCP values instead of TOS values, derive the appropriate TOS values using the DSCP/TOS mapping information in Appendix H, "Data Values for TOS, DSCP, and PHB Parameters."
IPTOS-RTP-PRECEDENCE	Specifies which IP precedence to use for the RTP stream. IP precedence utilizes the 3 precedence bits in the type of service (TOS) field in the IP header to specify a class of service assignment for each IP packet. The TOS provides an indication of the abstract parameters of the quality of service desired. These parameters are to be used to guide the selection of the actual service parameters when transmitting a datagram through a particular network. See RFC 1349, RFC 791, and RFC 795 for detailed information. VARCHAR(16): 1–16 ASCII characters. Permitted values are: CRITICAL (Default = 5) NETCONTROL (= 7) INTERNETCONTROL (= 6) FLASHOVERRIDE (= 4) FLASH (= 3) IMMEDIATE (= 2) PRIORITY (= 1) ROUTINE (= 0) **Caution** Cisco does not recommend using any value other than the specified default. Changing this value from its default may significantly impact network performance. Contact Cisco TAC for further information.

IPTOS-RTP-RELIABILITY	Specifies whether to set real-time transport protocol reliability. Reliability refers to the dependability of packet delivery. The TOS provides an indication of the abstract parameters of the quality of service desired. These parameters guide the selection of the actual service parameters when transmitting a datagram through a particular network. See RFC 1349, RFC 791, and RFC 795 for detailed information. CHAR(1): Y/N (Default = N). Y—(1) Set to high reliability. N—(0) Set to normal reliability. **Caution** Cisco does not recommend using any value other than the specified default. Changing this value from its default may significantly impact network performance. Contact Cisco TAC for further information. **Note** This data is sent only if the iptos-rtp-supp token in the Media Gateway Profile table is set to Y. If you prefer to use DSCP values instead of TOS values, derive the appropriate TOS values using the DSCP/TOS mapping information in Appendix H, "Data Values for TOS, DSCP, and PHB Parameters."
IPTOS-RTP-THROUGHPUT	Specifies whether to set real-time transport protocol throughput. Throughput refers to the actual amount of useful and non-redundant information that is transmitted or processed. The TOS provides an indication of the abstract parameters of the quality of service desired. These parameters guide the selection of the actual service parameters when transmitting a datagram through a particular network. Throughput is a function of bandwidth, error performance, congestion, and other factors. See RFC 1349, RFC 791, and RFC 795 for detailed information. CHAR(1): Y/N (Default = N). Y—(1) Set to high throughput. N—(0) Set to normal throughput. **Caution** Cisco does not recommend using any value other than the specified default. Changing this value from its default may significantly impact network performance. Contact Cisco TAC for further information. **Note** This data is sent only if the iptos-rtp-supp token in the Media Gateway Profile table is set to Y. If you prefer to use DSCP values instead of TOS values, derive the appropriate TOS values using the DSCP/TOS mapping information in Appendix H, "Data Values for TOS, DSCP, and PHB Parameters."
LBW	Specifies lower bandwidth in kilobits per second. INTEGER: 0–9999 (Default = 0). 0 = gateway chosen.

LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
LPTIME	Lower packetization time in milliseconds. INTEGER: 5–50 (Default = 10). **Caution** A single value (not a range) must be provisioned for hptime and lptime for both MGWs in a call, so that the two MGWs use the same packetization time. Otherwise, the two MGWs may not communicate properly can the call may not go through. This applies to all pairs of MGWs in a network that communicate with each other, including IVR and announcement servers, TGWs, eMTAs and various other MGCP-based gateways. The qos-id in the Trunk Group table must also be provisioned for each trunk in a call even if you are accepting the default hptime and lptime default values.
MAX-DQOS-AUTH-BANDWIDTH (Release 4.5)	Specifies the maximum authorized bandwidth for DQoS. A value of HIGH refers to codec G.711. A value of LOW refers to codec G.72x. VARCHAR(4): 1–4 ASCII characters. Permitted values are: HIGH (Default)—Refers to codec G.711 LOW—Refers to codec G.72x.
MAX-DQOS-SESSIONS	The maximum number of DQoS sessions allowed for this subscriber. VARCHAR(50): 1–50 ASCII characters. (Default = 5).
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
RESOURCE-RESERVATION	The gateways can be instructed to perform a reservation, for example, using RSVP, on a given connection. When a reservation is needed, the Call Agent specifies the reservation profile to be used, which is either *controlled load* or *guaranteed* service. The absence of reservation can be indicated by asking for the *best effort* service, which is the default value of this parameter. VARCHAR(2): 1–2 ASCII characters. Permitted values are: BE (Default)—Best effort. G—Guaranteed. CL—Controlled load.
RSVP-REQUIRED	Specifies whether the Resource Reservation Protocol (RSVP) is required on connection. CHAR(1): Y/N (Default = N).

SILENT-SUPPRESS -SUP	Silent suppression function. It detects a silent interval and suppresses transmission of silent packets to save bandwidth. The Call Agent can automatically overwrite the service-provider-provisioned value upon querying the media gateway. Whether the silence suppression parameter is sent down to the MGW in the LocalConnectionOption parameter of a CRCX or MDCX MGCP message is decided by performing a logical "and" operation on the Originating side and Terminating side endpoints dynamic (received in AUEP ACK message from GW) and static capabilities (configured in Media Gateway Profile table). CHAR(1): Y/N (Default = Y). Y—MGW supports silent suppression. N—MGW does not support silent suppression.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
VIDEO-CODEC-TYPE (Release 4.2)	Not supported. VARCHAR(16): 1–16 ASCII characters. Permitted values are: NONE (Default) H.261 H.263 H.264

Region Code (Release 4.5)

The Region Code (region-code) table defines the Region Code "R" digit associated with NPAs outside the U.S. contiguous 48 states but within world zone-1 (Alaska, Canada, the Caribbean, and Mexico). The CC (1) to world zone 1 numbers is padded with "0" and is suffixed with the R digit to form 3 digits in the form of "01R" when MF INC signaling is used towards international or consolidated carriers. If the dialed NPA is not provisioned in this table, then a value of 0 is assumed for region-code indicating no information is available.

Table Name: REGION-CODE

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show region-code digit-string=506;
add region-code digit-string=506; region-code=2;
change region-code digit-string=506; region-code=1;
delete region-code digit-string=506;
```

Usage Guidelines

Primary Key Token(s): digit-string

Add Rules: None.

Change Rules: None.

Delete Rules: None.

Syntax Description

* DIGIT-STRING	Primary key. Specifies the NPA within world zone 1. VARCHAR(3): 3 numeric digits.
* REGION-CODE	Required for calls to country codes in world zone-1 (U.S.(outside the contiguous 48 states), Canada, the Caribbean, and Mexico). Used for signaling to "01R" where R is the region code. INTEGER: 0–9 numeric digits.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DESCRIPTION (EMS-only field)	Described by the service provider. VARCHAR(64): 1–64 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

Release Cause

The Release Cause (release-cause) table is an internal table used by call processing to map SS7, ISDN, and generic release cause values (codes) to an announcement ID. This table is preprovisioned, but a service provider can modify.

Table Name: RELEASE-CAUSE

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show release-cause id=159;
add release-cause id=159; annc-id=16;
change release-cause id=159; annc-id=16;
delete release-cause id=159;
```

Usage Guidelines

Primary Key Token(s): id

Foreign Key Token(s): annc-id

Add Rules: None.

Change Rules: None.

Delete Rules: None.

Syntax Description

* ID	Primary key. SS7 release cause identifier. SMALLINT: 0–9999
* ANNC-ID	Foreign key: Announcement table. Announcement ID. SMALLINT: 1–1000.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DESCRIPTION (EMS-only field)	Described by the service provider. VARCHAR(64): 1–64 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.

ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).

Softswitch Trunk Group Profile

The Softswitch Trunk Group Profile (softsw-tg-profile) table holds all the information specific to a Softswitch trunk, such as id, protocol, indicators and echo suppression. The softsw-tg-profile record can be shared by multiple softswitch trunk groups. An ID must be created in this table before entries can be added to the Softswitch Trunk Group table.

Table Name: SOFTSW-TG-PROFILE

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show softsw-tg-profile id=softprf1;
add softsw-tg-profile id=softprf1; protocol-type=sip-t;
change softsw-tg-profile id=softprf1; send-cpn=n;
delete softsw-tg-profile id=softprf1;
```

Usage Guidelines

Primary Key Token(s): id

Add Rules:

- cc-diversion-supp and diversion-header-supp must be mutually exclusive. (Not required as of Release 4.2)
- if cc-diversion-supp=Y; then diversion-header-supp=N; (Not required as of Release 4.2)
- if diversion-header-supp=Y; then cc-diversion-supp=N; (Not required as of Release 4.2)
- both cc-diversion-supp and diversion-header-supp can be set to N. (Not required as of Release 4.2)
- if protocol-type=sip-t; then sipt-isup-ver must be specified. (Release 4.5)
- the sipt-isup-ver token must be defined in the SIPT ISUP Version Base table. (Release 4.5)

Change Rules: None.

Delete Rules: ID cannot exist in any trunk-grp::tg-profile-id where tg-type=softsw.

Syntax Description

* ID	Primary key. Unique ID for this trunk group profile. VARCHAR(16): 1–16 ASCII characters.

* PROTOCOL-TYPE	Specifies the type of signaling for this trunk group. It controls the message type sent between two Cisco BTS 10200 Softswitches. For example, if the protocol-type is SIP-T, then the Cisco BTS 10200 Softswitch sends a SIP-T message, which is a normal SIP ASCII message plus an ISUP MIME attachment. In this case, the origination type can be ISDN, SS7, CAS, MGCP, and so forth. The origination type does not matter. However, if the protocol-type is SIP, then the Cisco BTS 10200 Softswitch sends only an ASCII SIP message without an ISUP MIME attachment. VARCHAR(9): 1–9 ASCII characters. Permitted values are: SIP—Signaling via the Session Initiation Protocol (SIP) multimedia sessions across the Internet. SIP-T—Signaling using SIP-T protocol. SIP-T is an inter Call Agent protocol; SIP-GTD protocol is a normalized inter Call Agent protocol. SIP-T—Signaling using both the SIP-T and SIP-GTD protocol types. SIP-T is an inter Call Agent protocol; SIP-GTD protocol is a normalized inter Call Agent protocol. (Release 4.5) CMSS—Not supported. Call Management System Signaling. CMSS is the protocol used for communication between PacketCable cable (CMS) switches when a call spans across them (similar to Cisco BTS 10200 calls to another Cisco BTS 10200 over SIP). CMSS trunk types are used exclusively for CMS switches.
APPLY-USER-PRIVACY (Release 4.5)	Specifies whether to apply user privacy. CHAR(1): Y/N (Default = N). Y—If the originator requested privacy, aspects of the calling party information (such as the calling name and number in the From:header) in the initial outbound SIP INVITE is hidden. Privacy is requested when either the calling party name or number have presentation restrictions. N—User level privacy is not applied.
AUDIT-THRESHOLD (Release 4.4.1)	Specifies the number of consecutive communication timeouts (SIP transaction timeouts) that triggers a trunk group with this profile to be put out of service. INTEGER: 1–5 (Default = 3).
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.

CC-DIVERSION-SUPP (Obsolete as of Release 4.5)	Specifies whether Call Control (redirecting) information support is needed. The CC-Diversion header allows passing call information through a network of various Feature Servers and Call Agents to support various services and feature capabilities as a call is set up. Do not set the cc-diversion-supp and the diversion-header-supp tokens to yes (Y) simultaneously. Both tokens can be no (N) but only one can be yes (Y). CHAR(1): Y/N (Default = N).
DESCRIPTION (EMS-only field)	Described by the service provider. VARCHAR(64): 1–64 ASCII characters.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
DIVERSION-HEADER-SUPP	Indicates if SIP Diversion Header is supported or not. This header conveys diversion information from other SIP user agents and proxies to the called user agent. This information can be used for enhanced features, including Unified Messaging, Third-Party voice mail, and Automatic Call Distribution (ACD). The most common use of the Diversion Header in the Cisco BTS 10200 Softswitch is for call forwarding features. **Note** Do not set the cc-diversion-supp and the diversion-header-supp tokens to yes (Y) simultaneously. Both tokens can be no (N) but only one can be yes (Y). Not applicable to Release 4.5. CHAR(1): Y/N (Default = N).
DNS-SRV-ADV-ON-RETRANS-TIMEOUT (Release 4.5)	Controls whether the Cisco BTS 10200 Softswitch advances to the next server entry associated with the server (SVR) TSAP address on the trunk, for subsequent retransmission, when a timeout occurs. **Note** This token applies if dns-srv-supp = dns-srv-supp-rfc2782-labels. It does not apply to non-SRV trunks. CHAR(1): Y/N (Default = Y). N—RFC3263 compliant behavior prevails. All retransmissions go to the same server within the list associated with an SRV record. Y—Existing Cisco BTS 10200 Softswitch behavior prevails. Each retransmission goes to a different server in the list associated with the SRV record.
DNS-SRV-SUPP	DNS service (SRV) resolution needed flag. VARCHAR(16): 1–16 ASCII characters. Permitted values are: NONE (Default) RFC2782-LABELS—Prepend the protocol and service labels with an underscore.

DTMF-RELAY-METHOD	Specifies which way to send an out-of-band DTMF Relay. VARCHAR(8): 1–8 ASCII characters. Permitted values are: NONE (Default)—Unsolicited DTMF Relay – Not supported. NOTIFY—DTMF Relay supported based on Subscribe/Notify Method. INFO—DTMF Relay supported based on INFO Method.
ECHO-SUPP-REQUIRED (Obsolete as of Release 4.5)	Echo Suppression Required indicator. CHAR(1): Y/N (Default = N).
ES-SUPP (Release 4.4.1)	Specifies whether to send CALEA information on a SIP CMSS interface. Used only for a CMSS type trunk group. Set to Y in case the equipment on the other side of a CMSS SIP interface supports CALEA requirements. CHAR(1): Y/N (Default = N). N—Disable sending of CALEA information on SIP CMSS interface. Y—Enable sending of CALEA information on SIP CMSS interface.
ES-SUPP (Release 4.5)	Used for CALEA. When this token is enabled, surveillance information as defined in Section 8 of RFC 3603 is sent when surveillance is required on the call, and surveillance cannot be performed on this switch. This requires the remote SIP entity interfacing the SIP trunk to support surveillance procedures. CHAR(1): Y/N (Default = N). N—Disable sending of CALEA information on SIP interface. Y—Enable sending of CALEA information on SIP interface.
GTD-MODE (Release 4.5)	Specifies whether to use the compact (default) or verbose mode to encode messages for the SIP-T/GTD trunk group. VARCHAR(8): 1–8 ASCII characters. Permitted values are: COMPACT (Default) VERBOSE

GTD-PARMS (Release 4.4.1)	Mandatory if protocol-type=sip-gtd. Specifies a comma-separated list of Generic Transparency Descriptor (GTD) parameters enabled for this profile. The parameters are parsed against a static table, called the GTD Parameter Values table, which lists all the valid GTD parameters, including the special case parameter ALL. In the DBM of the Call Agent, this comma-separated string is converted into a series of boolean flags, one for each GTD parameter. The Call Agent accesses each individual flag as it builds a GTD attachment. **Note** This value applies only when the protocol-type is SIP_GTD. The Cisco BTS 10200 Softswitch validates each comma-separated GTD parameter in the GTD Parameter Values table. It also verifies that if ALL is used, no other GTD parameters are listed. VARCHAR(500): 3–500 ASCII characters. For example: ALL—use all GTD parameters (or) CPN, CGN, CIC, CPC, BCI (comma-separated list)
HOP-COUNTER-MAX (Release 4.5)	Applies only to received SIP Invite messages that are not SIP-T and contain a max-forwards value in which the max-forwards is scaled down to build the hop counter. If the hop counter derived from the max-forwards is greater than this value, it is set to this value. This value acts as a ceiling for the derived hop counter value. INTEGER: 10–20 (Default = 20).
HOP-COUNTER-SUPP (Release 4.5)	Used for received SIP Invite messages that are not SIP-T and contain a max-forwards value. The default sets the hop counter based on the received max-forwards value. If this flag is set to N, the hop counter field is not populated using the max-forwards value. CHAR(1): Y/N (Default = Y).
INBAND-TONE-AVAILABLE	Send release or provide tone/announcement. CHAR(1): Y/N (Default = Y).
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
MAX-FORWARDS (Release 4.5)	Specifies when an outbound SIP Invite message requires an initial maximum forwards value. INTEGER: 4–80 (Default = 70).
NON-SRV-TRANSPORT	Specifies the transport mechanism to use for signaling. This token is used only when dns-srv-supp=none. VARCHAR(8): 1–8 ASCII characters. Permitted values are: UDP (Default)—Use UDP unless message size requires TCP as described in RFC 3261 and RFC 3263. TCP—Use TCP. UDP-ONLY—Use UDP. Does not attempt TCP even if message size exceeds limits described in RFC 3261 and RFC 3263.

ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
PRACK-FLAG	Specifies if an Invite messages sent on this trunk group require reliable provisional responses. If yes, provisional responses like alerting are delivered. Used with SIP-T. CHAR(1): Y/N (Default = N).
REDIRECT-SUPPORTED	Specifies if the Cisco BTS 10200 Softswitch honors a 3xx class, such as a redirection response for an Invite message sent by the Cisco BTS 10200 Softswitch. VARCHAR(32): 1–32 ASCII characters. Permitted values are: VALID-DOMAINS-ONLY (Default)—If the host name field in the SIP URI of a 3XX contact used for call redirection does not represent this Cisco BTS 10200 Softswitch or a Cisco BTS 10200 Softswitch SIP trunk, then the call is redirected using the SIP trunk used on the previous call redirection. If there was not a previous call redirection, then the SIP trunk that sent the initial Invite is used. If the profile of the selected SIP trunk restricts redirection to only valid domains, then this redirection is blocked and the next contact is tried. Otherwise, it is redirected and the contact URI is used as the request URI of the redirected call. ALL-DOMAINS—Redirects to any allowed domain. NONE—No redirects allowed.
REFER-ALLOWED	Call Transfer allowed on an SS trunk. CHAR(1): Y / N (Default = N).
SATELLITE-CIRCUIT (Obsolete as of Release 4.5)	Satellite Circuit indicator. CHAR(1): Y/N (Default = N).
SCALE-FACTOR (Release 4.5)	Used for conversions between hop counter and max-forwards values; allows no-conversion, one-half, one-third, and one-quarter conversion factors. The default provides a scale relative to the maximum values: if the hop counter is 20, a scale factor of 4 converts to a max-forwards value of 80. Using the default means no conversion. INTEGER: 1–4 (Default = 1).
SEND-ATP (Obsolete in Release 4.5)	Send Access Transport Parameter indicator. CHAR(1): Y/N (Default = Y).
SEND-CIC-PARAM (Release 4.5)	Specifies whether the CIC parameter is included in the request URL for outbound SIP calls. CHAR(1): Y/N (Default = Y)
SEND-CPN (Obsolete in Release 4.5)	Send Calling Party Number indicator. CHAR(1): Y/N (Default = Y).

SEND-FULL-E164 (Release 4.5)	When enabled, all SIP phone numbers contained in SIP messages sent from the Cisco BTS 10200 Softswitch that have an NOA of national significance are represented as fully qualified E.164 numbers prefixed with the local country code and plus sign. This conforms to IETF RFC 3398 Section 12.1. When disabled, national numbers are sent without a country code and plus sign prefix. Numbers of international significance are always sent with a plus sign and country code regardless of this flag setting. CHAR(1): Y/N (Default = N). **Note** The Home Country code is defined in the Call Agent Configuration table.
SEND-GAP (Obsolete in Release 4.5)	Send Generic Address Parameter indicator. CHAR(1) Y/N (Default = Y).
SEND-GN (Obsolete in Release 4.5)	Send Generic Name Indicator. CHAR(1): Y/N (Default = Y).
SEND-JIP (Obsolete in Release 4.5)	Send Jurisdiction Information Parameter indicator. CHAR(1): Y/N (Default = Y).
SEND-OCN (Obsolete in Release 4.5)	Send Original Called Number indicator. CHAR(1): Y/N (Default = Y).
SEND-REDIR-NUM (Obsolete in Release 4.5)	Send Redirecting Number indicator. CHAR(1): Y/N (Default = Y).
SEND-SIP-181-RESP (Release 4.5.1)	Specifies whether the Cisco BTS 10200 Softswitch transmits a 181 response message to a UAC when the terminating side of the Cisco BTS 10200 Softswitch forwarded the call. CHAR(1): Y/N (Default = N)
SESSION-TIMER-ALLOWED	Specifies whether a session timer is allowed. CHAR(1): Y / N (Default = N).
SIP-SIG-LOWDELAY	Specifies whether to set low delay. Low delay refers to the waiting time, or latency involved in sending and receiving a packet. You can set various options on the TCP socket to tune or optimize for certain performance parameters. CHAR(1): Y/N (Default = Y). **Caution** Cisco does not recommend using any value other than the specified default. Changing this value from its default may significantly impact network performance. Contact Cisco TAC for further information. **Note** If you prefer to use DSCP values instead of TOS values, derive the appropriate TOS values using the DSCP/TOS mapping information in Appendix H, "Data Values for TOS, DSCP, and PHB Parameters."

SIP-SIG-PRECEDENCE	Specifies the designation assigned to a phone call by the caller to indicate the relative urgency (and thus the order of handling) of a call. It also sends an indication to the called party of the order in which the call is answered. VARCHAR(16): 1–16 ASCII characters. Permitted values are: FLASH (Default = 3) NETCONTROL (= 7) INTERNETCONTROL (= 6) CRITICAL (= 5) FLASHOVERRIDE (= 4) IMMEDIATE (= 2) PRIORITY (= 1) ROUTINE (= 0) **Caution** Cisco does not recommend using any value other than the specified default. Changing this value from its default may significantly impact network performance. Contact Cisco TAC for further information. **Note** If you prefer to use DSCP values instead of TOS values, derive the appropriate TOS values using the DSCP/TOS mapping information in Appendix H, "Data Values for TOS, DSCP, and PHB Parameters."
SIP-SIG-RELIABILITY	Specifies whether to set reliability. Reliability refers to the dependability of packet delivery. CHAR(1): Y/N (Default = N). **Caution** Cisco does not recommend using any value other than the specified default. Changing this value from its default may significantly impact network performance. Contact Cisco TAC for further information. **Note** If you prefer to use DSCP values instead of TOS values, derive the appropriate TOS values using the DSCP/TOS mapping information in Appendix H, "Data Values for TOS, DSCP, and PHB Parameters."

SIP-SIG-THROUGHPUT	Specifies whether to set throughput. Throughput refers to the actual amount of useful and nonredundant information that is transmitted or processed. The relationship between what went in one end of the network and what came out the other is a measure of the efficiency of that communications network. Throughput is a function of bandwidth, error performance, congestion, and other factors. CHAR(1): Y/N (Default = N). **Caution** Cisco does not recommend using any value other than the specified default. Changing this value from its default may significantly impact network performance. Contact Cisco TAC for further information. **Note** If you prefer to use DSCP values instead of TOS values, derive the appropriate TOS values using the DSCP/TOS mapping information in Appendix H, "Data Values for TOS, DSCP, and PHB Parameters."
SIP-TIMER-PROFILE-ID (Release 4.5)	Foreign key: Softswitch Trunk Group Profile table. Specifies the Timer Profile ID for the Softswitch Trunk Group Profile. VARCHAR(16): 1–16 ASCII characters.
SIPT-ISUP-BASE (Release 4.2)	Not configurable. Mandatory if use-sipt-isup-base=Y. The SIP-T ISUP base version. This field is populated from the SIPT ISUP Version Base table. VARCHAR(32): 1–32 ASCII characters
SIPT-ISUP-VER	Mandatory if protocol-type=SIP-T. Defines the SIP-T or SIP-GTD version. Used only if protocol-type=SIP-T. Defined in the SIPT ISUP Version Base table. **Note** If the value defined in the SIPT ISUP Version Base table has a base value of sip-gtd, then the version is a SIP-GTD type. Otherwise, the version is a SIP-T type. VARCHAR(32): 1–32 ASCII characters. Permitted value is: GR317. **Note** Values other than GR317 are permitted as of Release 4.4.1.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
TRUNK-SUB-GRP-TYPE	Specifies the parameter to be populated when trunk-sub-grp is defined in the Trunk Group table. VARCHAR(16): 1–16 ASCII characters. Permitted values are: NONE (Default)—Trunk-sub-grp is not used. BGID—Encode trunk-sub-grp in the BGID field of the SIP-URI. BGID is a numeric field. TGID—Encode trunk-sub-grp in the TGID field of the SIP-URI.

USE-PAI-HDR-FOR-ANI (Release 4.5)	Controls the p-asserted-id (PAI) header used to send and receive calling party information. **Note** When this token is set to Y, the calling party information is derived from the PAID header on inbound calls. If a SIP INVITE arrives at the Cisco BTS 10200 Softswitch without a PAID header, the Cisco BTS 10200 Softswitch treats the call as though it does not have calling party number. Features that rely on the calling number, such as Customer Originated Trace (COT, *57), may not work properly with use-pai-hdr-for-ani=Y if the incoming SIP INVITE does not have the PAID header. CHAR(1): Y/N (Default = N). Y—Calling party information is derived exclusively from the PAI header on inbound calls. For outbound calls, a PAI header is sent with the calling party information if provided. N—Calling party information is sent or received using the From:header.
USE-SIPT-ISUP-BASE (Release 4.2)	Mandatory if the protocol-type is SIP_T and the sipt-isup-ver is a SIP-T type. If the version selected is a GTD type, this flag is ignored. GTD does not use the base parameter. Specifies whether the SIP-T ISUP base version is included in the MIME header of the SIP-T message. CHAR(1): Y/N (Default = Y). Y—SIP-T ISUP base version is included in the MIME header of the SIP-T message. N—SIP-T ISUP base version is not included in the MIME header of the SIP-T message.
VOICE-MAIL-TRUNK-GRP	Specifies whether the Softswitch trunk group is used for the voice-mail application. CHAR(1): Y/N (Default = N).

Termination

The Termination (termination) table holds information about each termination/endpoint managed by the Call Agent. Termination structure uniformly addresses analog ports, DS0 ports, ISDN circuits and allows termination groupings for ISDN PRI and multiline hunt groups for a single subscriber.

Table Name: TERMINATION

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show termination id= s0/ds1-1/20, mgw-id=tgw1;
```

```
add termination prefix=s0/ds1-2/; port-start=1; port-end=24; type=trunk; mgw-id=c3660.142
change termination id= s0/ds1-1/20, mgw-id=tgw1;
delete termination prefix=s0/ds1-2/; mgw-id=tgw1; port-start=1; port-end=24;
```

Note You can delete a range of terminations, but you cannot change a range of terminations.

Usage Guidelines

Primary Key Token(s): id, mgw-id

Foreign Key Token(s): mgw-id, sub-d, tgn-id

Add Rules: A termination can only be added in the unequipped state. Use the control command (see Trunk Termination Status and Control Commands, page 1-19) to control the termination to the in-service state.

Change Rules: Cannot change a range of terminations.

Delete Rules:

- id, mgw-id combination does not exist in any subscriber::(term-id, mgw-id).
- id, mgw-id combination does not exist in any annc-trunk::(term-id, mgw-id).
- id, mgw-id combination does not exist in any annc-trunk::(remote-term-id, remote-mgw-id).
- id, mgw-id combination does not exist in any trunk::(term-id, mgw-id).
- sub-id, tgn-id, trunk-id = NULL.
- status=ueqp.

This table can use commands that do not match command-to-field of the database. If the prefix token is used during provisioning, the termination ID is generated by concatenating prefix and port-start value and incrementing the termination port number until the port number value reaches port-end. The prefix, port-start, and port-end are not in the table as individual fields.

Enter the following fields:

- prefix: 1–32 ASCII characters
- port-start: 0000–9999 (1–4 numeric characters) (Default = 1)
- port-end: 0000–9999 (1–4 numeric characters) (Default = 24)

Then the system generates the following:

TOKEN	TERMINATION ID
PORT-START	PREFIX + PORT-START
PORT-START+1	PREFIX + PORT-START+1
PORT-START+2	PREFIX + PORT-START+2
.....	.....
PORT-END-1	PREFIX + PORT-END-1
PORT-END	PREFIX + PORT-END

Note Up to 1000 terminations can be added with one add command.

Syntax Description

* ID	Primary key. This is a composite value that identifies the termination. The termination's id is generated from the prefix, port-start, and port-end token parameters, as follows: • prefix—This user-assigned token is required and can be from 1 to 32 ASCII characters. • port-start—This required token can be from 1 to 4 numeric characters. The default is 1. • port-end—This required token can be from 1 to 4 numeric characters. The default is 24.
* MGW-ID	Primary key. Foreign key: Media Gateway table. The ID previously assigned to an MTA or TGW in the mgw table. VARCHAR(32): 1–32 ASCII characters.
TYPE	Termination type. VARCHAR(5): 1–5 ASCII characters. Permitted values are: LINE—Used for telephone connections. Always use this value for MTAs. TRUNK—Used for TGWs.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
OPER-STATUS	Operational status. VARCHAR(5): 1–5 ASCII characters. Permitted values are: NF (Default)—Nonfaulty. FA—Faulty. NF-RB— Remotely blocked. FA-RB—Faulty remotely blocked.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.

START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
STATUS	Status of the termination. VARCHAR(5). Permitted values are: UEQP (Default)—Unequipped. OOS—Out-of-Service. MAINT—Maintenance (manual override). INS—In-Service.
SUB-ID (System generated)	Foreign key: Subscriber table. Subscriber ID of line termination: same as the ID in the Subscriber table. VARCHAR(30): 1–30 ASCII characters.
TGN-ID (or TG) (System generated)	Foreign key: Used as a combined key in the Trunk table. Trunk group ID. This field can also be provisioned using TG instead of tgn-id. The EMS looks up the tgn-id based on the trunk group and then provisions it. SMALLINT.
TRUNK-ID (System generated)	Trunk number within the trunk group. Same as the ID in the trunk-id table. If SS7, the trunk-id is the same as the circuit identification code. SMALLINT.

Trunk

The Trunk (trunk) table identifies the trunk group and maps it to the associated media gateway. It also specifies the circuit identification code (CIC) range and terminations.

Table Name: TRUNK

Table Containment Area: Call Agent

Command Types

Show, add, change, and delete

Examples

```
show trunk id=1; tgn-id=101;
add trunk cic-start=24; cic-end=46; tgn-id=100; mgw-id=mgw-isdn;
termination-prefix=S0/DS1-2/; termination-port-start=1; termination-port-end=23;INTF=1;

(SS7 example) add trunk cic-start=1; cic-end=24; tgn-id=2; mgw-id=c54005400_197;
termination-prefix=S0/DS1-2/; termination-port-start=1; termination-port-end=24;

(ISDN example) add trunk cic-start=1; cic-end=23; tgn-id=100; mgw-id=mgw-isdn;
termination-prefix=S0/DS1-0/; termination-port-start=1; termination-port-end=23;INTF=0;

change trunk id=1; tgn-id=101; term-id=t1ch0; mgw-id=rgw1;
delete trunk cic-start=1; cic-end=24; tgn-id=101;
```

Usage Guidelines

Primary Key Token(s): tgn-id, id

Foreign Key Token(s): term-id, mgw-id, intf

Add Rules: term-id, mgw-id combination exists in the Termination::id table.

Change Rules: term-id, mgw-id combination exists in the Termination::id table.

Delete Rules: None.

Some of the fields in this table are generated by the system after the user enters certain token values:

- The trunk ID is generated beginning with cic-start and incrementing the trunk ID field until the trunk ID value reaches cic-end.
- If the termination-prefix token is used during provisioning, the term-id is generated by concatenating termination-prefix and termination-port-start value and incrementing the termination port number until the port number value reaches termination-port-end.
- If slot-start, slot-end, line-num-start, line-num-end, termination-port-start, and termination-port-end are specified during provisioning, the term-id is generated by concatenating slot-prefix (from the Media Gateway Profile table) with slot number, ds1-prefix (also from Media Gateway Profile table) with line-num, and termination port number.
- The B-channel number is created from the termination-port number.

Note The cic-start, cic-end, termination-prefix, termination-port-start and termination-port-end tokens are not in the table as individual fields.

The user enters the following tokens in the add command:

- cic-start—Range: 0–9999 (1–4 numeric characters)
- cic-end—Range: 0–9999 (1–4 numeric characters)
- termination-prefix—Range: 1–32 ASCII characters
- termination-port-start—Range: 0–9999 (1–4 numeric characters) (Default = 1)
- termination-port-end—Range: 0–9999 (1–4 numeric characters) (Default = 24)
- mgw-id—VARCHAR(32): 1–32 ASCII characters
- tgn-id—Integer

Then the system generates the following:

TRUNK ID	TERM-ID #
CIC-START	TERMINATION-PREFIX + TERMINATION-PORT-START
CIC-START+1	TERMINATION-PREFIX + TERMINATION-PORT-START+1
CIC-START+2	TERMINATION-PREFIX + TERMINATION-PORT-START+2
.....	.....
CIC-END-1	TERMINATION-PREFIX + TERMINATION-PORT-END-1
CIC-END	TERMINATION-PREFIX + TERMINATION-PORT-END

Note (1) The user must enter the same quantity of CICs as termination-ports so that the system can assign each CIC to a termination port.
(2) Up to 1000 trunk ids can be added with one add command.

Syntax Description

* ID (System generated)	Primary key. Identifies the trunk ID. Constructed from the CIC start and CIC end tokens. INTEGER: any number greater than 0.
* TGN-ID (or * TG)	Primary key. Identifies the trunk group ID. This field can also be provisioned using TG instead of TGN-ID. The EMS looks up the TGN-ID based on the trunk group and provisions it. INTEGER: 1–99999999.
* TERM-ID	Foreign key: Termination table. Identifies the termination ID. This token can also be constructed from the termination-prefix, termination-port-start and termination-port-end tokens. Use as a combined key to the Termination table. VARCHAR(32): 1–32 ASCII characters.
* MGW-ID	Foreign key: Media Gateway, Termination tables. Identifies the media gateway. Use as a combined key to the termination table. VARCHAR(32): 1–32 ASCII characters. **Note** For announcements using equipment such as IPUnity, you need to configure the termination-prefix in the Media Gateway Profile table as ann/. The Cisco BTS 10200 Softswitch then sends ann/$@<ivr-domain-name.net>.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
BCHAN	Mandatory if ISDN. The B-channel number for ISDN PRI. Required if NFAS ISDN PRI termination. INTEGER: 1–24.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
DPC (System generated)	Mandatory if SS7. Destination point code. Automatically provisioned from the Trunk Group table. VARCHAR(16): 1–16 ASCII characters.

INTF	Mandatory if ISDN. Foreign key: ISDN Interface table. Interface number. Required if NFAS ISDN PRI termination. INTEGER: 0–31 (Default = 0).
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
LINE-NUM-END	Ending line number on the specified media gateway. If entered, EMS reads the line prefix from the Media Gateway Profile table to create the termination ID. INTEGER: 0–168.
LINE-NUM-START	Beginning line number on the specified media gateway. If entered, EMS reads the line prefix from the Media Gateway Profile table to create the termination ID. INTEGER: 0–168.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
SLOT-END	Ending slot number on the specified media gateway. If entered, EMS reads the slot prefix from the Media Gateway Profile table to create the termination ID. INTEGER: 0–28 numeric characters.
SLOT-START	Beginning slot number on the specified media gateway. If entered, EMS reads the slot prefix from the Media Gateway Profile table to create the termination ID. INTEGER: 0–28 numeric characters.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
TERMINATION-PORT-END	Ending termination port number. INTEGER: 1–24 (Default = 24).
TERMINATION-PORT-START	Beginning termination port number. INTEGER: 1–24 (Default = 1).
TERMINATION-PREFIX	Termination prefix. Used with a termination port number to create a termination ID. VARCHAR(32): 1–32 ASCII characters.

Trunk Group

The Trunk Group (trunk-grp) table identifies the trunk group and maps it to the associated media gateway. Table 2-7 indicates optional tokens that are required during provisioning based on the trunk group type.

The Cisco BTS 10200 Softswitch supports the following trunk group types: announcement, CAS, ISDN, SS7 and SOFTSW. The Trunk Group table defines common information based on the trunk group type. The Cisco BTS 10200 Softswitch supports announcement, CAS, ISDN, SS7 and SOFTSW trunk group profiles.

Table Name: TRUNK-GRP

Table Containment Area: Call Agent

Table 2-7 Required Tokens by Trunk Group

Token	Values	Required Tokens
TG-TYPE	SOFTSW	SOFTSW-TSAP-ADDR, TG-PROFILE-ID, DIAL-PLAN-ID
	ISDN	ID, TG-PROFILE-ID, DIAL-PLAN-ID, TG-TYPE, POP-ID, GLARE, MGCP-PKG-TYPE For ISDN, GLARE must set to ALL and MGCP-PKG-TYPE must be set to T.
	SS7	CALL-CTRL-ROUTE-ID, DPC, TG-PROFILE-ID, DIAL-PLAN-ID
	CAS	TG-PROFILE-ID, DIAL-PLAN-ID
	ANNC	None

Table 2-7 Required Tokens by Trunk Group (continued)

Token	Values	Required Tokens
	H323	H323-GW-ID, TG-PROFILE-ID If you specify the value H323 for the TG-TYPE token, you must provision the association between the trunk group and the H.323 gateway. However, you cannot provision the H.323 trunk group type and the H.323 gateway simultaneously. To provision an H.323 trunk group and H.323 gateway correctly, use the following sequence of commands: Establish the trunk group type as H.323 by using the TG-TYPE token in the Trunk Group table: add trunk-grp tg-type=H323; Establish the association between the H.323 gateway and the trunk group by using the TGN-ID token in the H.323 Gateway table: add h323-gw tgn-id=<*trunk group ID from the trunk group table*>; Establish the association between the specified trunk group and the H.323 gateway by using the H323-GW-ID token in the Trunk Group table. change trunk-grp h323-gw-id=<H.323 gateway ID from the H.323 gateway table>;

Command Types

Show, add, change, and delete

Examples

```
show trunk-grp id=101;
add trunk-grp id=101; call-agent-id=CA146; tg-type=ss7; dial-plan-id=tg-dp;
dpc=101-55-103; tg-profile-id=SS71;call-ctrl-route-id=ccr1;
change trunk-grp id=101; cost=200;
delete trunk-grp id=101;
```

Usage Guidelines

Primary Key Token(s): id

Foreign Key Token(s): call-agent-id, ani-digman-id, call-control-route-id, cause-code-map-id, dial-plan-id, dnis-digman-id, h323-gw-id, main-sub-id, pop-id, qos-id, sp-id, ani-screening-profile-id

Unique Key Token(s): softsw-tsap-addr+trunk-sub-grp, tg (Release 4.5)

Add Rules:

- ID exists in the carrier table; id exists in the subscriber table.
- DIAL-PLAN-ID is required except if tg-typ=ANNC or if main-sub-id is not equal to NULL.

Change Rules:

- Ensure that the id exists in the Subscriber table if entered; ensure the id exists in the Media Gateway table if entered.
- The DPC field cannot be changed.

Delete Rules:

- ID cannot exist in any subscriber::term-id; ID cannot exist in any trunk::term-id.
- ID cannot exist in any mlhg-terminal::term-id.
- Trunk group status must be OOS.

Transit Network Selection (TNS) Rules:

- If a call is interLATA and going to an access tandem (AT), the TNS parameter is sent. This is also known as direct distance, or domestic, dialing (DDD).
- If a call in international, the TNS parameter is sent.
- If a carrier ID is not assigned to a trunk group, the TNS parameter is sent.
- If a carrier ID is assigned to a trunk group, the TNS parameter is not sent.

Trunk/CIC Selection Rules

- Ascending—Whenever a outgoing call is needed, the Cisco BTS 10200 Softswitch always selects the trunk with the lowest available CIC. For example:
  - 3 trunks, CICs 1, 2 and 3
  - outgoing call A uses CIC 1
  - outgoing call B uses CIC 2 (call A has not released)
  - call A releases CIC 1
- outgoing call-C uses CIC 1 again since it is now available.
- Descending—the reverse of ascending. The highest available CIC is always selected.
- Cyclic Ascending (CASC)—when processing outgoing calls, the Cisco BTS 10200 Softswitch loops through all the trunks based on the ascending CIC sequence. For example:
  - 3 trunks, CICs 1, 2 and 3
  - outgoing call A uses CIC 1
  - outgoing call B uses CIC 2 (call A has not released)
  - call A releases CIC 1
  - outgoing call C uses CIC 3 even though CIC 1 is idle and available.
- Cyclic Descending (CDSC)—when processing outgoing calls, the Cisco BTS 10200 Softswitch loops through all the trunks based on the descending CIC sequence. For example:
  - 3 trunks, CICs 1, 2 and 3
  - outgoing call A uses CIC 3
  - outgoing call B uses CIC 2 (call A has not released)
  - call A releases CIC 3
  - outgoing call C uses CIC 1 even though CIC 3 is idle and available.

MGCP-PKG-TYPE/TG-TYPE Rules:

- If mgcp-pkg-type = DT | MS | MT | MO, then it is valid only for CAS tg-type.

- If mgcp-pkg-type = MO, then MF-OSS-TYPE in the Channel Associated Signaling Trunk Group Profile table is required.
- If mgcp-pkg-type = CISCO-TCL | ANNC-CABLE-LABS, then it is valid only for ANNC tg-type.
- Mgcp-pkg-type=line allowed only when tg-type=cas and the corresponding CAS Trunk Group Profile has sig-type=line. (Release 4.5)
- If mgcp-pkg-type=mt, then direction=IN. (Release 4.5)
- If mgcp-pkg-type=mo, then direction=OUT. (Release 4.5)
- If tg-type=ISDN; then glare=ALL.
- If tg-type=ISDN, the mgcp-pkg-type is T or IT.
- If tg-type=SS7, the mgcp-pkg-type is T or IT.
- If tg-type=CAS, the mgcp-pkg-type is one of DT, MS, MT, or MO.
- If tg-type=CAS; then glare=SLAVE.
- If tg-type=ANNC, the mgcp-pkg-type is either tcl-cisco or annc-cable-labs.
- If tg-type=SOFTSW | H323, the mgcp-pkg-type is NA.
- If sig-type in the cas-tg-profile=mf-oss, then the mgcp-pkg-type=MO.
- A trunk-sub-grp is allowed only if tg-type=softsw (Release 4.1 and 4.2) or H.323 (Release 4.2).

MO and MT Rules

- When configuring a trunk group, set the direction token to OUT when the MGCP-PKG-TYPE is MO.
- When configuring a trunk group, set the direction token to IN when the MGCP-PKG-TYPE is MT.

Syntax Description

* ID	Primary key. Trunk group number. INTEGER: 1-99999999.
* CALL-AGENT-ID	Foreign key: Call Agent table. Call Agent ID. Same as ID in Call Agent table. Not valid for the control or status command in Release 4.5.1. VARCHAR(8): 8 ASCII characters. Format is CAnnn or cannn where nnn = 001–999. 3 characters are reserved for Not Used use.
* TG-TYPE	Trunk group type. VARCHAR(6): 1–6 ASCII characters. Permitted values are: ANNC—Announcement. SOFTSW—Softswitch trunk group. CAS—Channel associated signaling. ISDN—Integrated Services Digital Network. SS7—Signaling System 7. H323—H.323 trunk group.
ALT-ROUTE-ON-CONG	Specifies whether to use an alternate route when there is traffic congestion. CHAR(1): Y/N (Default = N). Y—SKIP N—BLOCK

ANI-BASED-ROUTING	Used when there are multiple subscribers homing on the same trunk group. The ANI is used to determine the subscriber ID associated with the call. CHAR(1): Y/N (Default = N). Y—Determine subscriber ID based on the ANI. N—Use normal routing.
ANI-DIGMAN-ID	Foreign key: Digman Profile table. ANI (calling party number) digit manipulation ID. VARCHAR(16): 1–16 ASCII characters.
ANI-SCREENING (Release 4.2)	Specifies to screen the call against the ANI if set. CHAR(1): Y/N (Default = N). N—Perform normal routing. Y—Determine the subscriber ID based on the ANI Screening table.
ANI-SCREENING-PROFILE-ID (Release 4.2)	Foreign key: ANI Screening Profile table. ANI screening profile id. VARCHAR(16): 1–16 ASCII characters.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
CALL-CTRL-ROUTE-ID	Mandatory if tg-type = SS7. Foreign key: Call Control Route table. The Call Control Route ID. VARCHAR(16): 1–16 ASCII characters. **Note** This token cannot be changed.
CARRIER-ID	Carrier ID if direct trunk group to a carrier. Used during incoming call processing. Same as carrier-id in Carrier table. CHAR(4): 4 numeric characters—leading zeros count.
CAUSE-CODE-MAP-ID	Foreign key: Cause Code Map table. The cause code map ID. VARCHAR(16): 1–16 ASCII characters.
CLLI	Common Language Location Identifier for the remote switch. CHAR(11): Eleven ASCII characters.
COST	Relative cost value; used if TG selection is based on least cost routing (LCR). SMALLINT: 0–999.
DEFAULT-CHG	Default charge number. VARCHAR(16): 1–16 numeric digits.
DEL-DIGITS	Specifies the number of digits to delete. SMALLINT: 0–14 numeric characters. (Default = 0).
DESCRIPTION (EMS-only field)	Described by the service provider. VARCHAR(64): 1–64 ASCII characters.

DIAL-PLAN-ID	Foreign key: Dial Plan table. Specifies which dial plan ID to use. For trunk groups with a Main subscriber ID (CAS, ISDN), the Call Agent uses the dial-plan-id assigned to the trunk group (if available), else it uses the dial-plan-id assigned to the subscriber profile. VARCHAR(16): 1–16 ASCII characters.
DIRECTION	Direction of the trunk group. Can be incoming only, outgoing only, or both incoming and outgoing. If bothway, the glare parameter is required. VARCHAR(4): 1–4 ASCII characters. Permitted values are: BOTH (Default)—Bothway trunk group (used for both incoming and outgoing calls). OUT—Used for outgoing calls only. IN—Used for incoming calls only.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
DNIS-DIGMAN-ID	Foreign key: Digman Profile table. DNIS (called party number) digit manipulation ID. VARCHAR(16): 1–16 ASCII characters.
DPC	Not provisionable. Mandatory if tg-type=SS7. Destination Point Code if SS7. The DPC is automatically provisioned from the call-ctrl-route-id. VARCHAR(16): 1–16 ASCII characters.
EARLY-BKWD-MSG-TMR (Release 4.4.1)	Specifies the amount of time, in seconds, for the Early Backward Message timer. Applies only if send-early-bkwd-msg=Y. INTEGER: 0–30 (Default = 5). **Note** Valid only for ANSI variant. Setting has no effect for other SS7 variants.
GLARE	Used in bothway trunks. Defines how to resolve a glare condition—a bothway (simultaneous) trunk seizure. For example, an incoming and an outgoing call on the same endpoint. For ISDN trunk groups, glare *must* be set to ALL. Setting glare to SLAVE can cause CIC/trunk instability. VARCHAR(5): 1–5 ASCII characters. Permitted values are: SLAVE (Default)—This trunk group yields any trunk in glare condition. ALL—This trunk group is master of all trunks. EVEN—This trunk group is master of even numbered trunks. ODD—This trunk group is master of odd numbered trunks. PC—Not used. Point code driven. In the absence of an overriding control assignment (such as all or none), the SPCS with the higher assigned signaling point code controls the even numbered circuits, and the SPCS with the lower signaling point code controls the odd-numbered circuits.

H323-GW-ID	Mandatory if tg-type=h323. Foreign key: H.323 Gateway table. Specifies the gateway ID for this trunk group. VARCHAR(16): 1–16 ASCII characters.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
LOCAL-CLLI	The CLLI for the local switch. VARCHAR(11): 1–11 ASCII characters.
MAIN-SUB-ID	Foreign key: Subscriber table. Used for PBX subscribers. VARCHAR(30): 1–30 ASCII characters.
MGCP-PKG-TYPE	Determines the MGCP Package type for the announcement server. VARCHAR(16): 1–16 ASCII characters. Permitted values are: NA—(Default) For SIP and H.323 trunk groups. ANNC-CABLE-LABS—Announcement signaling type based on the Cable Labs package. AUTO—Used for CAS signaling on a combined trunk group (not supported). DT—DTMF package. IT—ISUP trunk package. LINE—Line package used for Test Line Access. MD—MF FGD package (Release 4.5) (Not supported). MO—MF operator trunks. MS—MF package. MT—MF terminating package. TCL-CISCO (Default)—Announcement signaling type for the Cisco AS5350/AS5400. T—Trunk package.
NUM-OF-TRUNKS (System generated)	Not provisionable. EMS provisions this field when trunks are provisioned for this trunk group. SMALLINT: 1–9999.
OPER-STATUS	Operational status. VARCHAR(5). Permitted values are: NF (Default)—Nonfaulty. FA—Faulty. NF-RB—Nonfaulty remotely blocked. FA-RB—Faulty remotely blocked.

ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
PERFORM-LNP-QUERY (Release 4.5)	Specifies whether to perform an LNP query. This token applies only to incoming calls (for ITU local LNP, when the LNP Profile lnp-db-type is RN). CHAR(1): Y/N (Default = N). Y —Perform an LNP Query if required based on the LNP Profile table and the acq-lnp-query token in the Destination table. This applies to both LNP Types: ACQ and QOR. Set this token to Y when the remote switch is not LNP-capable. N—An LNP query is not required as originating switch is LNP-capable or LNP is not required.
PFX-DIGITS	Specifies what digits to prefix. Digits are prefixed after the specified number of digits are deleted. VARCHAR(10): 1–10 ASCII characters.
POP-ID	Foreign key: POP table. Defines the number of POPs in a Call Agent; used for incoming trunk groups. VARCHAR(16): 1–16 ASCII characters.
QOS-ID	Foreign key: QOS table. Specifies whether or not to use QOS index for codec selection. VARCHAR(16): 1–16 ASCII characters. ⚠ **Caution** This token must be provisioned to match the qos-id for the trunk in the Quality of Service table. If two MGWs are involved in a call, there are additional QoS requirements applicable for the trunk groups on each MGW. See the hptime and lptime token descriptions in the Quality of Service table.
REGION	Region of the incoming trunk group. VARCHAR(16): 1–16 ASCII characters.
REMOTE-SWITCH-LRN	LRN of the previous switch used for billing. VARCHAR(10): 1–10 numeric digits, in the format NPA-NXX-XXXX. (Default = 0).
SCRIPT-SUPP (Release 4.5)	Specifies whether the script package is supported by the trunk group. Used for prepaid service. CHAR(1): Y/N (Default = N).

SEL-POLICY	Trunk selection policy. Control the Call Agent out-of-service, then in-service, after changing the selection policy. Then verify that the selection policy is changed. VARCHAR(4): 1–4 ASCII characters. Permitted values are: ASC (Default)—Select trunks in ascending order. When trunks are released, they are released at the top of the queue. When a new trunk is selected, the lower number trunk (CIC) is selected. CASC—Cyclic ascending. Select trunks in ascending order. When trunks are released, they are released at the end of the list, so when a new trunk is selected, the next higher trunk (CIC) is selected. CDSC—Cyclic descending. Select trunks in descending order. When trunks are released, they are released at the end of the list, so when a new trunk is selected, the next lower trunk (CIC) is selected. DSC—Select trunks in descending order. When trunks are released, they are released at the top of the queue. When a new trunk is selected, the higher number trunk (CIC) is selected. EVEN—Select the least recently used even-numbered trunks. LRU—Select the least recently used trunk. MRU—Not used. Select the most recently used trunk. ODD—Select the least recently used odd-numbered trunks. RAND—Not used. Select a trunk randomly. **Note** When setting ISDN PRI trunk groups to have a CIC selection policy as ASC the first round of calls will always use the last CIC for the first round of calls. It will then start with the first. When setting ISDN PRI trunk groups to have a CIC selection policy as DSC, the first round of calls uses CIC1, then CIC15-23. It will then start with the last.
SEND-EARLY-BKWD-MSG (Release 4.4.1)	Specifies whether to start the Early Backward Message timer. CHAR(1): Y/N (Default = N). Y—Start early backward message timer. An early message is sent when it expires. N—Do not start early backward message timer. **Note** Valid only for ANSI variant. Setting has no effect for other SS7 variants.
SEND-RDN-AS-CPN (Release 4.2)	Use when a call is forwarded and call routing is to the PSTN where Calling Party Number Screening is performed. If redirecting number information is available, the Cisco BTS 10200 Softswitch overwrites the calling party number with RDN. Otherwise, if Original Called number information is available, the Cisco BTS 10200 Softswitch overwrites the calling party number with the OCN. CHAR(1): Y/N (Default = N).

SIGNAL-PORTED-NUMBER	Used for local number portability (LNP) when the next switch does not support LNP. The local routing number (LRN) from the called party number is removed and the called party number parameter is filled with the called party number from GAP. The translated bit (M-bit) is also reset. CHAR(1): Y/N (Default = N). Y—Send IAM without GAP. N—Send GAP.
SOFTSW-TSAP-ADDR	Mandatory if tg-type=softsw. Unique key between softsw-tsap-addr+trunk-sub-grp. TSAP address of the softswitch if tg-type=softsw. Different ports should be used if multiple trunk groups to the same softswitch are supported. VARCHAR(64): 1–64 ASCII characters. Domain names cannot begin with a number.
SP-ID	Foreign key: Service Provider table. The service provider ID. VARCHAR(16): 1–16 ASCII characters.
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).
STATUS (Not provisionable)	Status of the trunk group.Valid only for the show command. Can be updated using the Call Agent commands in Chapter 10, "Maintenance and Administration of System Component Commands." VARCHAR(25): 1–25 ASCII characters.
STATUS-MONITORING (Release 4.4.1)	Trunk Group Status Monitoring Indicator. Determines whether a trunk group is monitored whenever call failures resulting from timeouts occur. CHAR(1): Y/N (Default = N). **Note** If set to Y, and trunk-grp type is SIP or SIPT, an options request is periodically sent over the trunk to determine the status of the trunk.
TG (Release 4.5)	Unique key. ASCII name for the trunk group. VARCHAR(20): 1–20 ASCII characters.
TG-PROFILE-ID	Mandatory if tg-type=annc. The trunk group profile ID. VARCHAR(16): 1–16 ASCII characters.
TRAFFIC-TYPE	Specifies the type of traffic carried over this trunk group. It is required for incoming and bothway trunk groups. If it is not specified, the Call Agent defaults to *local*. VARCHAR(8): 1–8 ASCII characters. Permitted values are: LOCAL (Default)—Local incoming trunk group. PBX—Not used. Incoming PBX trunk group (for ISDN and CAS), DAL, and so forth. TANDEM—Incoming local/tandem trunk group. Calls are allowed to a tandem trunk. USER—Cisco BTS 10200 acts as a user side (PBX) toward the network.

TRUNK-SUB-GRP	Unique key: softsw-tsap-addr+trunk-sub-grp. Identifies a specific trunk group when multiple trunk groups exist between a Cisco BTS 10200 Softswitch and another softswitch. VARCHAR(64): 1–64 ASCII characters. **Note** As of Release 4.2, H.332 trunk groups are supported by this token.
VOICE-INFO-TRANSFER-CAP	Information sent in the forward direction indicating the type of transmission medium required for the connection. VARCHAR(16): 1–16 ASCII characters. Permitted values are: AUTO (Default)—Same as configured or received for the incoming leg/ SPEECH—If voice call, override with Speech. 3POINT1KHZ-AUDIO—If voice call, override with 3.1 KHz audio.
VOICE-LAYER1-USERINFO (Release 4.5)	Specifies the voice encoding codec to use for a call. VARCHAR(16): 1–16 ASCII characters. Permitted values are: AUTO (Default)—Same as configured or received for incoming leg. G711-ULAW—Use the G711 µLaw codec. G711-ALAW—Use the A-Law codec. **Note** Use this token to switch between a-law and u-law voice encoding.

Trunk Group Service Profile

The Trunk Group Service Profile (trunk-grp-service-profile) table links a trunk group to services.

Table Name: TRUNK-GRP-SERVICE-PROFILE

Table Containment Area: Call Agent, Tandem Feature Server

Command Types

Show, add, change, and delete

Examples

```
show trunk-grp-service-profile tgn-id=101; service-id= 2;
add trunk-grp-service-profile tgn-id=101; service-id= 2; priority=1
change trunk-grp-service-profile tgn-id=101; service-id= 2; priority=2
delete trunk-grp-service-profile tgn-id=101; service-id= 2;
```

Usage Guidelines

Primary Key Token(s): tgn-id, service-id

Foreign Key Token(s): tgn-id, service-id

Add Rules: None.

Change Rules: None.

Delete Rules: None.

Syntax Description

* TGN-ID (or * TG)	Primary key. Foreign key: Trunk Group table. Trunk group ID. This field can also be provisioned using tg instead of tgn-id. The EMS looks up the tgn-id based on the trunk group and then provisions it. INTEGER: 1–99999999.
* SERVICE-ID	Primary key. Foreign key: Service table. The number of service-ids that can be assigned to a trunk-grp is limited to 50. Must match valid service-id in the Service table. VARCHAR(16): 1–16 ASCII characters.
AUTO-REFRESH	Specifies whether to display cached data on the screen. Valid only for the show command. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.
DISPLAY	Specifies what token information to display on the screen. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
LIMIT	Specifies the number of rows to display on the screen. Valid only for the show command. INTEGER: 1–100000000 (Default = 100000000). **Note** The actual maximum number of rows displayed is currently lower than 100000000 due to software limitations.
ORDER	Specifies whether to display data on the screen in a sorted order. Valid only for the show command. VARCHAR(1024): 1–1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
PRIORITY	Priority is used if there are multiple services assigned to a trunk group. The service with higher priority is processed first before the service with a lower priority. Priority 1 is the highest. SMALLINT: 1–10 (Default = 1).
START-ROW	Specifies to begin displaying data on the screen at a specific row. Valid only for the show command. INTEGER: 1–100000000 (Default = 1).