



CHAPTER 14

Query

Revised: July 24, 2009, OL-3743-42

This chapter describes the Cisco BTS 10200 Softswitch Query commands. For information regarding using query commands in troubleshooting, see the *Cisco BTS 10200 Softswitch Troubleshooting Guide*.

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

Query Call Trace (Release 4.5)

This section describes the query call trace command, which displays the call information of a currently active call. The command applies to originating or terminating calls. With this command, a service provider can enter a directory number (DN) or other suitable input and retrieve information about any call(s) the subscriber is currently involved in. This type of trace is made on a call in progress.

Command parameters are any subscriber specific information such as DN or Fully Qualified Domain Name (FQDN) of a residential gateway. The call processing information displayed includes originating number, terminating number, residential gateway(s) and Session Description Protocol (SDP) IP addresses involved, trunk group number and Carrier Identification Code (CIC) as applicable (such as off-net calling) as well as any other information pertaining to the call made by the subject.

Command Types

Query

Examples

```
query call-trace dn=4695551234;
query call-trace mlhg-id=mlhg1 terminal=23;
query call-trace ctxg-id=ctxg1 ext=1234;
query call-trace tgn-id=123 trunk-id=456;
query call-trace sip-call-id=1494777952@sia1.test.cisco.com;
query call-trace h323-call-id=29C51D96AC1C11D98007C67E816B4BFB;
query call-trace term=aaln/2@x1-6-00-00-ca-30-88-79.ctlab.cisco.com; (This example uses
the MGW termination and FQDN to identify term.)
query call-trace term=aaln/2@10.101.140.231; (This example uses the MGW termination and IP
address to identify term.)
query call-trace rgw=x1-6-00-00-ca-30-88-79.ctlab.cisco.com; (This example uses the FQDN
of the RGW.)
query call-trace rgw=10.101.140.231; (This example uses the IP address of the RGW.)
```

Usage Guidelines

Foreign keys: ctxg-id, ext, dn, mgw, mlhg-id, terminal, term, tgn-id, trunk-id.

The mode token is optional (default=brief).

One token (or token pair) from the following list is mandatory for this command (see the examples):

- ctxg-id and ext
- dn
- h323-call-id
- mlhg-id and terminal
- rgw
- sip-call-id
- term
- tgn-id and trunk-id

Syntax Description

CTXG-ID	Foreign key: Centrex Group table. Valid Centrex group ID. Use for POTS Centrex subscribers. Note Use with the EXT token. VARCHAR(16): 1–16 ASCII characters.
DN	Foreign key: Subscriber table. Directory number. Use for POTS/H323/SIP subscribers. VARCHAR(10): 10 digits in the format npaxxxxxxx.
EXT	Foreign key: Extension2Subscriber table. Valid extension in the Centrex group. Note Use with the CTXG-ID token. VARCHAR(7): 1–7 digits.
H323-CALL-ID	Where the call originated. Can be obtained from a Call Agent logfile. Use for H.323 trunks.
MLHG-ID	Foreign key: Multiline Hunt Group table. ID for this MLHG in the Multiline Hunt Group table. Use for POTS MLHG terminals. Note Use with the TERMINAL token. VARCHAR(16): 1–16 ASCII characters.
MODE	Specifies the information returned by the command. VARCHAR(8): 1–8 ASCII characters (Default = BRIEF). Permitted values are: BRIEF—See Table 14-1 . VERBOSE—See Table 14-1 .
RGW	Foreign key: Media Gateway table. The residential gateway TSAP address (either FQDN or IP address) from the MGW table. VARCHAR(32): 1–32 ASCII characters.

SIP-CALL-ID	The SIP call identification. The SIP call id can be obtained from a Call Agent logfile or any switch connected to the Cisco BTS 10200 Softswitch. Use for SIP trunks.
TERM	Foreign keys: Termination table, MGW table. Enter the termination ID (from the Termination table), the @ symbol, and the TSAP address of the MGW (either FQDN or IP address) from the MGW table. See the examples. VARCHAR(32): 1–32 ASCII characters.
TERMINAL	Foreign key: Multiline Hunt Group Terminal table. Valid terminal in the MLHG. Note Use with the MLHG-ID token. SMALLINT: 1–512.
TGN-ID	Foreign key: Trunk Group table. Trunk group ID. Use for SS7, ISDN, and CAS trunks. Note Use with the TRUNK-ID token. INTEGER: 1–99999999.
TRUNK-ID	Foreign key: Trunk table. Valid trunk ID. Note Use with the TGN-ID token. INTEGER: 1–4095. INTEGER: 1–16383 (Release 4.5.1).

Table 14-1 shows the response fields returned when using brief or verbose modes.

Table 14-1 Brief and Verbose Mode Response Fields

Mode	Fields
Brief	CALL-STATE—The state of the call: IDLE OOS CALL-SETUP ALERTING CONNECTED. TYPE—The trunk type: POTS-SUB POTS-MLHG POTS-CTXG SIP-SUB H323-SUB SS7 ISDN CAS SIP-TG H323-TG. CALLING-PARTY-INFO/CALLED-PARTY-INFO—The calling or called party information can be one of the following for POTS/H323/SIP subscribers: DN MLHG-ID TERMINAL CTXG-ID EXT TGN-ID TRUNK-ID SIP-CALL-ID H323-CALL-ID.
Verbose	CALL-STATE—The state of the call: IDLE OOS CALL-SETUP ALERTING CONNECTED. CALLED-NUMBER—The called number. CALLING-NUMBER—The calling number. CALL-STATE—IDLE OOS CALL-SETUP ALERTING CONNECTED CHARGE-NUMBER—The charge number if available. CTXG-ID—The Centrex id. EXT—The Centrex extension. FULL-ENDPOINT-ID—The termination id plus the media gateway id for all POTS subscribers. H323-CALL-ID—The H.323 call id for H.323 trunks. MLHG-ID—The multiline hunt group id. MLHG-TERMINAL—The multiline hung group terminal. ORIGINAL-CALLED-NUMBER—The original called number if available. REDIRECTED-NUMBER—The redirected number if available. SDP-IP-ADDR—The SIP IP address. SDP-IP-PORT—The SDP IP port. SIP-CALL-ID—The SIP call id for SIP trunk groups. TERMINAL-ALIAS—The terminal alias for H323 trunk groups. TG-ID/TGN-ID—The trunk group id for SS7, ISDN and CAS trunks. TYPE—Type of trunk: POTS-SUB POTS-MLHG POTS-CTXG SIP-SUB H323-SUB SS7 ISDN CAS SIP-TG H323-TG.



Note

For call-trace scenarios involving forwarded calls and multileg calls, plus an example of a system response display, see the “[Operations](#)” chapter of the *Cisco BTS 10200 Softswitch Operations and Maintenance Guide*.

Query Verification (Release 4.4)

The Query Verification command generates Transaction Capabilities Application Part (TCAP) queries to external databases. The command supports the following query types:

- Line Information Database (LIDB)-Generated by the POTS Feature Server
- Toll-Free-Generated by the AIN Feature Server
- LNP-Generated by the AIN Feature Server



Note

These query verification commands may also be collectively referred to in documentation as the query verification tool (QVT).

Line Information Database

This section describes the LIDB query verification command.

Command Types

Query

Examples

```
query lidb calling-dn=8002550002; opc-id=opc;
```

Usage Guidelines

Foreign key(s): opc-id

Syntax

* 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.
* CALLING-DN	The caller’s directory number. VARCHAR(10): 10 digits in the format npaxxxxxxx.
TABLE-INFO	Specifies whether to show the tables that are accessed when processing the query. CHAR(1): Y/N (Default = N).

Toll-Free and Toll Free Message Type

This section describes the toll-free query verification commands. Use the toll free message type query to determine if the toll free number is IN/1 or AIN0.1.

Command Types

Query

Examples

```
query toll-free opc-id=opc; called-dn=8002550002; user-type=calling-dn;
user-id=2182640018; lata=100;
```

```
query toll-free-msg-type opc-id=opc; (An opc-id is the only needed token for this query.
Queries if the toll free is using IN/1 or AIN0.1.)
```

Usage Guidelines

Foreign key(s): opc-id

Syntax Description

* CALLED-DN	The called DN. VARCHAR(32): 1–32 ASCII characters in the format: npa-nxx-xxxx.
* CALLING-DN	The caller's directory number. VARCHAR(10): 10 digits in the format npaxxxxxxx.
* LATA	Local access and transport area. INTEGER: 100–65535 (3–5 numeric digits). INTEGER: 100–99999 (Default = 99999) (3–5 numeric digits). (Release 4.5) Note 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.
* 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.
* USER-ID	Mandatory for AIN0.1 queries. The trunk group id or calling DN, depending on what was entered for user-type. Not used in IN/1 queries. VARCHAR(32): 1–32 ASCII characters.
* USER-TYPE	Mandatory for AIN0.1 queries. Specifies whether the user-id is a trunk group id or the calling DN. Not used in IN/1 queries. VARCHAR(12): 1–12 ASCII character. Permitted values: TGN_ID CALLING_DN

BEARER-CAPABILITY	Specifies the bearer capability. VARCHAR(12): 1–12 ASCII characters. Permitted values are: SPEECH F31KHZAUDIO B56KBPS B64KBPS
TABLE-INFO	Specifies whether to show the tables that are accessed when processing the query. CHAR(1): Y/N (Default = N).
TRIGGER-CRITERIA	Specifies whether the trigger is npa or npanxxx. Permitted values are: 3—npa 6—npaxxx 7—npaxxxx 8—npaxxxxx 9—npaxxxxxx 10—npaxxxxxxx

Local Number Portability

This section describes the LNP query verification command.

Command Types

Query

Examples

```
query lnp opc-id=opc_tx; user-id=2182640018; called-dn=4692552002; user-type=calling-dn;
lata=100;
```

Usage Guidelines

Foreign key(s): opc-id

Syntax Description

* CALLED-DN	The called DN. VARCHAR(32): 1–32 ASCII characters in the format: npa-nxx-xxxx.
* CALLING-DN	The caller's directory number. VARCHAR(10): 10 digits in the format npaxxxxxxx.

* LATA	Local access and transport area. INTEGER: 100–65535 (3–5 numeric digits). INTEGER: 100–99999 (Default = 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.
* 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.
* USER-ID	Mandatory for AIN0.1 queries. The trunk group id or calling DN, depending on what was entered for user-type. Not used in IN/1 queries. VARCHAR(32): 1–32 ASCII characters.
* USER-TYPE	Mandatory for AIN0.1 queries. Specifies whether the user-id is a trunk group id or the calling DN. Not used in IN/1 queries. VARCHAR(12): 1–12 ASCII character. Permitted values are: TGN-ID CALLING-DN
BEARER-CAPABILITY	Specifies the bearer capability. VARCHAR(12): 1–12 ASCII characters. Permitted values are: SPEECH F31KHZAUDIO B56KBPS B64KBPS
OLI	Originating line information; used if message-type = IN/1. SMALLINT: 0–99 or 255. (Default = 0 (POTS)).
TABLE-INFO	Specifies whether to show the tables that are accessed when processing the query. CHAR(1): Y/N (Default = N).
TRIGGER-CRITERIA	Specifies whether the trigger is npa or npanxxx. Permitted values are: 3—npa 6—npaxxx 7—npaxxxx 8—npaxxxxx 9—npaxxxxxx 10—npaxxxxxxx