Cisco PGW 2200 Softswitch Usability Enhancements—Phase 1 Feature Module

Document Release History

<table>
<thead>
<tr>
<th>Publication Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>July, 2009</td>
<td>Initial release of document Available for 9.7(3) Patch S26P26</td>
</tr>
</tbody>
</table>

Feature History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.7(3)</td>
<td>The Usability Enhancements—Phase 1 feature was introduced on the Cisco PGW 2200 Softswitch software.</td>
</tr>
</tbody>
</table>

This document describes the Usability Enhancements—Phase 1 feature.

This feature is described in the following sections:

- Feature Description, page 2
- MML Command Reference, page 3
- Software Changes for This Feature, page 32
- Obtaining Documentation, Obtaining Support, and Security Guidelines, page 38
- Glossary, page 38
Feature Description

The Usability Enhancements—Phase 1 feature for the Cisco PGW 2200 Softswitch encompasses additions and modifications to the software that enable customers to monitor the operation of the system more fully. The enhancements include

- Two new MML commands and five modified MML commands
- A new script named collectdata enables service providers to collect debug trace data from files in a number of different directories and to create a log that collects activity for a specified period of time.
- Service providers can display, in the platform.log, pstack information for the heartbeat time-out process before the system procM process kills the heart-beat time-out process.

Note

The pstack is a function performed by the operating system running on the Sun platform to check the status of threads running for active processes. Experienced system engineers can search the platform.log for pstack information.

Benefits

This feature provides the following benefits:

- MML commands that enable you to retrieve system status and performance data in greater detail, which makes troubleshooting the system more efficient.
- The new script, collectdata, which compiles information from files in several directories. The script creates a log of system activity that occurs during a specified period of time. The log generated by the collectdata script enables you to find important system data without having to search in a number of different directories.
- You can retrieve information from the platform.log about the heartbeat time-out process produced by the pstack before the system procM process kills the heartbeat time-out process.

Prerequisites


Related Documents

This document contains information that is strictly related to this feature. The documents that contain additional information related to the Cisco MGC are at http://www.cisco.com/en/US/products/hw/vcallcon/ps2027/tsd_products_support_series_home.html
MML Command Reference

This section documents new, modified, or deleted Man-Machine Language (MML) commands. All other MML commands are documented in the Cisco Media Gateway Controller Software Release 9 MML Command Reference.

Five of the MML commands included in this feature are modified versions of existing commands:

- rtrv-callinfo
- rtrv-eic
- rtrv-lics:validate
- rtrv-ne
- rtrv-tc

Two of the MML commands included in this feature document are new:

- rtrv-sysinfo
- rtrv-vir-tc

Modified MML Commands

This section provides the descriptions of MML commands that have been modified by the Usability Enhancements—Phase 1 feature.

RTRV-CALLINFO—Display Call IDs of EISUP/SIP and SS7, ISDN, DPNSS (Release 9.7(3))

The rtrv-callinfo command has been enhanced so that it can retrieve information for TDM calls associated with specific trunk groups. Also, the command can display more call information such as the span ID, channel number, and circuit number.

Purpose: Displays information not only for a SIP/EISUP call leg, but also for a TDM call leg, including SS7, ISDN, and DPNSS

Syntax: rtrv-callinfo: <target>[:<meprottype='partner protocol type'>] [,<calltime=minutes>] [,CgPN='calling party number ''] [,CdPN='called party number ''] [,MediaIpAddr='Media Ip Address'] [,MediaPort='Media port number'] [,Codec='codec used in the call'] [,Call_Type='call type'] [,detail]
mateprottype—With this parameter, the command retrieves and displays calls with at least one SIP/EISUP/TDM call leg sorted by protocol type, which can be one of the following values:

- **ALL**—This value retrieves all call legs from the specified target (related to TDM/SIP/EISUP)
- **SIP**—Retrieves and displays all call legs from the specified target that have a leg of type SIP
- **EISUP**—Retrieves and displays all call legs from the specified target that have a leg of type EISUP
- **IP**—Retrieves and displays all call legs from the specified target that have a leg of type SIP, EISUP, or H323
- **TDM**—Retrieves and displays all call legs from the specified target that have a leg of type SS7, ISDN, DPNSS, QSIG, etc.
- **SS7**—Retrieves and displays all call legs from the specified target that have a leg of type SS7
- **ISDN**—Retrieves and displays all call legs from the specified target that have a leg of type ISDN
- **DPNSS**—Retrieves and displays all call legs from the specified target that have a leg of type Digital Private Network Signaling System (DPNSS)

*Note* The command can retrieve half calls if you specify the ALL option or if you ignore the mateprottype option.

calltime—Retrieves and displays calls that have been established on the system for at least the specified period, which is given in minutes. For example, calltime=120 displays all calls established for 2 hours or more.

- **CgPN**—Retrieves and displays a call that has the specified calling party number.
- **CdPN**—Retrieves and displays a call that has the specified called party number.
- **MediaIpAddr**—Retrieves and displays calls that have the specified IP address of the media stream.
- **MediaPort**—Retrieves and displays calls that have the specified port number of the media stream.
- **Codec**—Retrieves and displays calls that have the specified codec.
Call_Type—Retrieves and displays calls of the specified call type. Valid values for this parameter are

- REAL—The call type is REAL.
- SLAVE—The call type of a call that is a half call, which is usually created in a transfer or in a route optimization (RO) scenario.
- COT—The call type for a call which is created for COT testing.
- SERVICE—The call type for a call that is created to send out a maintenance message.

Note If you issue this command when the signaling path or trunk is in blk-cic, unblk-cic, reset-cic, or set-admin-state, the Cisco PGW 2200 Softswitch creates a call to block, unblock, or reset the CIC(s)/bearer channel(s), or to set the admin state.

detail—Displays call and call-leg information. This information includes the call’s global ID (CallID), call type (Call_Type), call start time (CALL_STA), calling Party Number (CgPN), Called Party Number (CdPN), and codec of the call (codec).

Call leg information includes the Call reference ID (CID), node ID (NODEID) only for E163UP calls, CIC for SS7, TC for ISDN/DPNSS, SPAN for ISDN, MediaIpAddr, and MediaPort.
Output Description: The `rtrv-callinfo` command displays the following information in the command output if you specify the parameter “detail” when you issue the command:

- **CallID**—The global ID of the call leg on which the call is carried.
- **Call_Type**—The type of the call. The call types are
  - **REAL**—The call type is REAL.
  - **SLAVE**—The call type of a call that is a half call, which is usually created in a transfer or in a route optimization (RO) scenario.
  - **COT**—The call type for a call which is created for COT testing.
  - **SERVICE**—The call type for a call that is created to send out a maintenance message.
- **CGPN**—The calling-party number of the call.
- **CDPN**—The called-party number of the call. If a call is overlapping, the number might be incomplete. In this case, the indicator “OverLap” appears in the command output.
- **Codec**—The codec applied to the call, which is associated with the call leg on which the call is carried.
  
  If the codec is static, the valid values are PCMU, 1016, G721, GSM, G723, DVI4, LPC, PCMA, G722, L16, QCELP, CN, MPA, G728, and G729.
  
  If the codec was set dynamically, the command output displays the encoding name, which is derived from rtpmap in SDP. In general, the format of rtpmap for a codec in SDP is `<payload type> <encoding name>/<clock rate[<encoding parameters>]]`. The command displays the encoding name as the codec.

  The following examples show the information extracted from SDP and displayed for codecs that were set dynamically:

**Example 1—G.726-16**

```
  m=audio 17256 RTP/AVP 99
  a=rtpmap:99 G.726-16/8000
```

**Example 2—G.729b**

```
  m=audio 17256 RTP/AVP 104
  a=rtpmap:104 G.729b/8000
```

- **OverLap**—This output indicates that the call is in overlap status, which implies that the called-party number might be incomplete.
- **CALL_STA**—The local time when the call was created.
- **CID**—The ID of the call leg.
- **NODEID**—The node ID of the EISUP call leg.
- **CALL**—The direction of the call leg: In or Out
- **CIC**—The circuit number associated with the SS7 call leg.
- **TC**—The bearer channel ID for an ISDN or DPNSS call leg.
- **SPAN**—The span ID for the ISDN call leg.
- **MedialIPAddr**—The source or destination address that is included in the SDP of a message to establish an RTP stream. Valid values can be an IP address, a host name,
- **MediaPort**—The source or destination port number included in the SDP of a message to establish an RTP stream.
- **Mate_SigPath**—The sigpath name of the other call leg associated with a call.
- **Mate_Trunkgroup**—The name of the trunk group associated with the other call leg of a call.
- **Mate_Family**—This appears in the command output only when you issue the command without the “detail” parameter. The output indicates the protocol that is running on the mate leg of the call. Valid values of MATE_FAMILY are SS7, ISDN, EISUP, DPNSS, SIP, and UKWN.
Examples:

```
mml> rtrv-callinfo:all
mml> rtrv-callinfo:ss7path-paladin
mml> rtrv-callinfo:tg-1001
mml> rtrv-callinfo:sippath:detai
mml> rtrv-callinfo:ss7path:detail
mml> rtrv-callinfo:dpnsspath:detail
mml> rtrv-callinfo:eisuppath:detail
mml> rtrv-callinfo:tg-2001:detail
mml> rtrv-callinfo:naspath:detail
```

Comments: Performance Impact Category: D

For the original version of `rtrv-callinfo`, if you issued the command with the “all” parameter, the command retrieved all SIP calls. For the enhanced version of the command in Release 9.7(3), you must issue the command with the parameter sigpath for SIP calls.

For the enhanced version of the command, if you use the “all” parameter, the command retrieves all calls that have at least one TDM, EISUP, or SIP call leg.

The original version of the command displayed the CID or NODEID. Now that the enhanced command supports TDM calls, the command displays the span ID, channel number, or circuit number.

The enhanced command displays the call ID (CallID) and the call start time (CALL_STA).

For the enhanced command, if you issue the command with the “detail” parameter, the command displays the signaling path (sigpath) of the other side. If the other side of the call is TDM, the command displays the channel number or circuit number. If the other side is ISDN, the command displays the span id.

The enhanced command inserts a blank line to separate information about two call legs that do not belong to the same call. If the call legs are associated with the same call, the command does not insert a blank line to separate the information displayed and does not display information about a mate sigpath, span id, or bearer channel.

For a hairpinned call for which both call legs are in the same Cisco IOS gateway, the value of MediaIpAddr=“LOCAL” and MediaPort=0.

In Signaling/Nailed-up mode, the command cannot retrieve call information based on trunk group. Moreover, because no SDP is involved in calls in Signaling/Nailed-up mode, the MediaIpAddr, MediaPort, and codec are not displayed.

If a call does not include a value for CgPN, CdPN, Codec, or MediaIpAddr, the command does not display them.

For calls of call type COT or SERVICE, information for the output parameters CgPN, CdPN, Codec, MediaIpAddr, and mate leg is not displayed.

For a call of call type SLAVE, the Cisco PGW 2200 Softswitch does not display information for MediaIpAddr, MediaPort, and codec.
RTRV-CALLINFO Command Examples

The following sample commands show how you might issue the enhanced version of the rtrv-callinfo command and the output that the command displays.

**Example 1**
This sample command shows the information displayed for a call leg when you specify the “all” parameter.

```
mml> rtrv-callinfo:all
```

```
Retrieving results. This could take a few moments...
MGC-01 - Media Gateway Controller 2009-04-05 14:17:11.241 CST
M  RTRV
   "ipfas-sh-daisy:CID=0x8003,TC=31,SPAN=FFFF,CALL=OUT,MATE_FAMILY=SS7"
   "ss7path-paladin:CID=1,CIC=1,CALL=IN,MATE_FAMILY=ISDN"
   "dpnss-stim:CID=1,TC=1,CALL=IN,MATE_FAMILY=EISUP"
   "sip-path:CID=00120080-0ec7002b-75b24169-1105a29d010.0.6.205,CALL=IN,MATE_FAMILY=SS7"
   "eisup-path:CID=1,NODEID=28871553,CALL=OUT,MATE_FAMILY=DPNSS"
```

**Example 2**
This sample command shows the information displayed that is associated with a signaling path parameter.

```
mml> rtrv-callinfo:ss7path-paladin
```

```
Retrieving results. This could take a few moments...
MGC-01 - Media Gateway Controller 2009-04-05 14:17:11.241 CST
M  RTRV
   "ss7path-paladin:CID=1,CIC=1,CALL=IN,MATE_FAMILY=ISDN"
```

**Example 3**
This sample command shows the information displayed when you specify the trunk group parameter.

```
mml> rtrv-callinfo:tg-1001
```

```
Retrieving results. This could take a few moments...
MGC-01 - Media Gateway Controller 2009-04-05 14:17:11.241 CST
M  RTRV
   "tg-1001:CID=1,CIC=1,CALL=IN,MATE_FAMILY=ISDN"
```
Example 4

This sample command shows the information displayed when you specify a SIP signaling path parameter (sippath) and the “detail” parameter.

mml> rtrv-callinfo:sip-path:detail

Retrieving results. This could take a few moments...

MGC-01 - Media Gateway Controller 2009-01-18 21:35:30.219 CST

RTRV

*sip-path:CallID=34, Call_Type=REAL ,CgPN=1234567,CdPN=11876543*
*sip-path:Codec=g711,CALL_STA=2009-01-18 21:20:30.219 CST *
*sip-path:CID=001200080-0ec7002b-75b24169-1105a29d010.0.6.205, CALL=IN, MediaIPAddr=10.0.6.205, MediaPort= 34003*
*sip-path:Mate_SigPath=sig-ss7,CIC=1",MediaIPAddr=10.72.34.22, MediaPort= 34003"

*sip-path:CallID=35, Call_Type=REAL ,CgPN=1234567,CdPN=22876544*
*sip-path:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*sip-path:CID=00192f0b-f4fd0021-4fb954c4-6bb85b51010.0.77.11, CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003*
*sip-path:Mate_SigPath=sig-ipfas, TC=2,SPAN=FFFF, MediaIPAddr=10.72.34.22, MediaPort= 34005"

*sip-path:CallID=36, Call_Type=REAL ,CgPN=1234567,CdPN=33876544*
*sip-path:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*sip-path:CID=00192f0b-f4fd0021-4fb954c4-6bb85b51010.0.77.11, CALL=IN, MediaIPAddr=10.0.77.11,MediaPort= 34003*
*sip-path:Mate_SigPath=sig-dpnsk,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005"

*sip-path:CallID=37, Call_Type=REAL ,CgPN=1234567,CdPN=44876544*
*sip-path:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*sip-path:CID=00192f0b-f4fd0021-4fb954c4-6bb85b51010.0.77.11, CALL=IN, MediaIPAddr=10.0.77.11,MediaPort= 34003*
*sip-path:CID=00192f0b-632fd0021-4fb453c4-6bb85e343010.0.77.11, CALL=IN,MediaIPAddr=10.72.34.22, MediaPort= 34005"

*sip-path:CallID=38, Call_Type=REAL ,CgPN=1234567,CdPN=55876544*
*sip-path:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*sip-path:CID=00192f0b-f4fd0021-4fb954c4-6bb85b51010.0.77.11, CALL=IN, MediaIPAddr=10.0.77.11,MediaPort= 34003*
*sip-path:Mate_SigPath=sig-eisup,MediaIPAddr=10.72.34.22, MediaPort= 34005"
Example 5

This sample command shows the information displayed when you specify a SS7 signaling path parameter (sig-ss7) and the “detail” parameter.

```
mml> rtrv-callinfo:sig-ss7:detail
```

Retrieving results. This could take a few moments...

```
M
RTRV
"sig-ss7:CallID=34, Call_Type=REAL ,CgPN=1234567,CdPN=11876543"
"sig-ss7:Codec=g711,CALL_STA=2009-01-18 21:20:30.219 CST"
"sig-ss7:CID=1,CIC=1,CALL=IN,MediaIPAddr=10.0.6.205,MediaPort= 34003"
"sig-ss7:Mate_SigPath=sig-ss72,CIC=1",MediaIPAddr=10.72.34.22, MediaPort= 34003"

"sig-ss7:CallID=35, Call_Type=REAL ,CgPN=1234567,CdPN=22876544"
"sig-ss7:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST"
"sig-ss7:CID=1,CIC=1,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003"
"sig-ss7:Mate_SigPath=sig-ipfas,TC=2,SPAN=FFFF,MediaIPAddr=10.72.34.22, MediaPort= 34005"

"sig-ss7:CallID=36, Call_Type=REAL ,CgPN=1234567,CdPN=33876544"
"sig-ss7:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST"
"sig-ss7:CID=1,CIC=1,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003"
"sig-ss7:Mate_SigPath=sig-dpnss,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005"

"sig-ss7:CallID=37, Call_Type=REAL ,CgPN=1234567,CdPN=44876544"
"sig-ss7:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST"
"sig-ss7:CID=1,CIC=1,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003"
"sig-ss7:Mate_SigPath=sip-path,MediaIPAddr=10.72.34.22, MediaPort= 34005"

"sig-ss7:CallID=38, Call_Type=REAL ,CgPN=1234567,CdPN=55876544"
"sig-ss7:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST"
"sig-ss7:CID=1,CIC=1,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003"
"sig-path:Mate_SigPath=sig-eisup,MediaIPAddr=10.72.34.22, MediaPort= 34005"
Example 6

This sample command shows the information displayed when you specify an ISDN signaling path parameter (ipfaspath) and the “detail” parameter.

```
mml> rtrv-callinfo:sig-ipfas:detail
```

Retrieving results. This could take a few moments...

```
M RTRV
'sig-ipfas:CallID=34, Call_Type=REAL, CgPN=1234567,CdPN=11876543'
'sig-ipfas:Codec=g711,CALL_STA=2009-01-18 21:20:30.219 CST'
'sig-ipfas:CID=1,TC=1, SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.6.205,MediaPort= 34003'
'sig-ipfas:Mate_SigPath=sig-ipfas2,TC=2,SPAN=FFFF,MediaIPAddr=10.72.34.22, MediaPort= 34005'
'sig-ipfas:CallID=35, Call_Type=REAL, CgPN=1234567,CdPN=22876544'
'sig-ipfas:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST'
'sig-ipfas:CID=1, TC=1, SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003'
'sig-ipfas:Mate_SigPath=sig-ipfas2,TC=2,SPAN=FFFF,MediaIPAddr=10.72.34.22, MediaPort= 34005'
'sig-ipfas:CallID=36, Call_Type=REAL, CgPN=1234567,CdPN=33876544'
'sig-ipfas:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST'
'sig-ipfas:CID=1, TC=1, SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003'
'sig-ipfas:Mate_SigPath=sig-dpnss,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005'
'sig-ipfas:CallID=37, Call_Type=REAL, CgPN=1234567,CdPN=44876544'
'sig-ipfas:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST'
'sig-ipfas:CID=1, TC=1, SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003'
'sig-ipfas:Mate_SigPath=sig-dpnss2,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005'
'sig-ipfas:CallID=38, Call_Type=REAL, CgPN=1234567,CdPN=55876544'
'sig-ipfas:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST'
'sig-ipfas:CID=1, TC=1, SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003'
'sig-ipfas:Mate_SigPath=sig-eisup,MediaIPAddr=10.72.34.22, MediaPort= 34005'
```

Example 7

This sample command shows the information displayed when you specify a DPNSS signaling path parameter (dpnsspath) and the “detail” parameter.

```
mml> rtrv-callinfo:sig-dpnss:detail
```

Retrieving results. This could take a few moments...

```
M RTRV
'sig-dpnss:CallID=34, Call_Type=REAL, CgPN=1234567,CdPN=11876543'
'sig-dpnss:Codec=g711,CALL_STA=2009-01-18 21:20:30.219 CST'
'sig-dpnss:CID=1,TC=1, SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.6.205,MediaPort= 34003'
'sig-dpnss:Mate_SigPath=sig-ss7,CIC=1",MediaIPAddr=10.72.34.22, MediaPort= 34003"
'sig-dpnss:CallID=35, Call_Type=REAL, CgPN=1234567,CdPN=22876544'
'sig-dpnss:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST'
'sig-dpnss:CID=1, TC=1, SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003'
'sig-dpnss:Mate_SigPath=sig-ss7,CIC=1",MediaIPAddr=10.72.34.22, MediaPort= 34003"
'sig-dpnss:CallID=36, Call_Type=REAL, CgPN=1234567,CdPN=33876544'
'sig-dpnss:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST'
'sig-dpnss:CID=1, TC=1, SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003'
'sig-dpnss:Mate_SigPath=sig-dpnss2,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005'
'sig-dpnss:CallID=37, Call_Type=REAL, CgPN=1234567,CdPN=44876544'
'sig-dpnss:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST'
'sig-dpnss:CID=1, TC=1, SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003'
'sig-dpnss:Mate_SigPath=sig-dpnss2,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005'
'sig-dpnss:CallID=38, Call_Type=REAL, CgPN=1234567,CdPN=55876544'
'sig-dpnss:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST'
'sig-dpnss:CID=1, TC=1, SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003'
'sig-dpnss:Mate_SigPath=sig-eisup,MediaIPAddr=10.72.34.22, MediaPort= 34005"
Example 8
This sample command shows the information displayed when you specify an EISUP signaling path parameter (eisuppath) and the "detail" parameter.

```
mml> rtrv-callinfo:sig-eisup:detail
Retrieving results.  This could take a few moments...
M RTRV
"sig-eisup:CallID=34,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
"sig-eisup:Codec=g711,CALL_STA=2009-01-18 21:20:30.219 CST"
"sig-eisup:CID=1,NODEID=28871553,CALL=IN,MediaIPAddr=10.0.6.205,MediaPort= 34003"
"sig-eisup:Mate_SigPath=sig-ss7,CIC=1",MediaIPAddr=10.72.34.22, MediaPort= 34005"
```

Example 9
This sample command shows the information displayed when you specify a SIP trunk group parameter (tg-) and the “detail” parameter.

```
mml> rtrv-callinfo:tg-2001:detail
Retrieving results.  This could take a few moments...
MGC-01 - Media Gateway Controller 2009-01-18 21:35:30.219 CST
M RTRV
"tg-2001:CallID=34,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
"tg-2001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST"
"tg-2001:CID=1,NODEID=28871553,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003"
"tg-2001:Mate_TrunkGroup=tg-1001,CIC=1",MediaIPAddr=10.72.34.22, MediaPort= 34005"
```

"sig-dpnss:Mate_SigPath=sip-path,MediaIPAddr=10.72.34.22, MediaPort= 34005"

"sig-dpnss:CallID=38,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
"sig-dpnss:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST"
"sig-dpnss:CID=1,TC=1,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003"
"sig-dpnss:Mate_SigPath=sig-eisup,MediaIPAddr=10.72.34.22, MediaPort= 34005"
MediaPort= 34005"
'tg-2001:CallID=36,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
'tg-2001:CID=00120080-0ec7002b-75b24169-1105a929d@10.0.6.205, CALL=IN,
MedialIPAddr=10.0.77.11,MediaPort= 34003"
'tg-2001:Mate_TrunkGroup=tg-4001,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005"
'tg-2001:CallID=37,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
'tg-2001:CID=00120080-0ec7002b-75b24169-1105a929d@10.0.6.205, CALL=IN,
MedialIPAddr=10.0.77.11,MediaPort= 34003"
'tg-2001:Mate_TrunkGroup=tg-3001,TC=2,SPAN=FFFF,MediaIPAddr=10.72.34.22,
MediaPort= 34005"
'tg-2001:CallID=38,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
'tg-2001:CID=00120080-0ec7002b-75b24169-1105a929d@10.0.6.205, CALL=IN,
MedialIPAddr=10.0.77.11,MediaPort= 34003"
'tg-2001:Mate_TrunkGroup=tg-2001,MedialIPAddr=10.72.34.22, MediaPort= 34005"
'tg-2001:CallID=39,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
'tg-2001:CID=00120080-0ec7002b-75b24169-1105a929d@10.0.6.205, CALL=IN,
MedialIPAddr=10.0.77.11,MediaPort= 34003"
'tg-2001:Mate_TrunkGroup=tg-5001,MedialIPAddr=10.72.34.22, MediaPort= 34005"

Example 10
This sample command shows the information displayed when you specify a SS7 trunk group
parameter (tg-) and the “detail” parameter.

mml> rtrv-callinfo: tg-1001:detail
Retrieving results. This could take a few moments...

M RTRV
'tg-1001:CallID=34,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
'tg-1001:Codec=g711,CALL_STA=2009-01-18 21:20:30.219 CST"
'tg-1001:CID=1,CIC=1,CALL=IN,MedialIPAddr=10.0.6.205,MediaPort= 34003"
'tg-1001:Mate_TrunkGroup=tg-1002,CIC=1,MediaIPAddr=10.72.34.22, MediaPort= 34003"
'tg-1001:CallID=35,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
'tg-1001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST"
'tg-1001:CID=1,CIC=1,CALL=IN,MedialIPAddr=10.0.77.11,MediaPort= 34003"
'tg-1001:Mate_TrunkGroup=tg-3001,TC=2,SPAN=FFFF,MediaIPAddr=10.72.34.22,
MediaPort= 34005"
'tg-1001:CallID=36,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
'tg-1001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST"
'tg-1001:CID=1,CIC=1,CALL=IN,MedialIPAddr=10.0.77.11,MediaPort= 34003"
'tg-1001:Mate_TrunkGroup=tg-4001,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005"
'tg-1001:CallID=37,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
'tg-1001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST"
'tg-1001:CID=1,CIC=1,CALL=IN,MedialIPAddr=10.0.77.11,MediaPort= 34003"
'tg-1001:Mate_TrunkGroup=tg-2001,MedialIPAddr=10.72.34.22, MediaPort= 34005"
'tg-1001:CallID=38,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
'tg-1001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST"
'tg-1001:CID=1,CIC=1,CALL=IN,MedialIPAddr=10.0.77.11,MediaPort= 34003"
'tg-1001:Mate_TrunkGroup=tg-5001,MedialIPAddr=10.72.34.22, MediaPort= 34005"
Example 11

This sample command shows the information displayed when you specify an ISDN trunk group parameter (tg-) and the “detail” parameter.

\>`rtrv-callinfo: tg-3001:detail

Retrieving results.  This could take a few moments...


M RTRV

*tg-3001:CallID=34,Call_Type=REAL,CgPN=1234567,CdPN=22876544*
*tg-3001:Codec=g711,CALL_STA=2009-01-18 21:20:30.219 CST*
*tg-3001:CID=1, TC=1,SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.6.205,MediaPort= 34003*
*tg-3001:Mate_TrunkGroup=tg-1001,CIC=1",MediaIPAddr=10.72.34.22, MediaPort= 34003*

*tg-3001:CallID=35,Call_Type=REAL,CgPN=1234567,CdPN=22876544*
*tg-3001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*tg-3001:CID=1, TC=1,SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003*
*tg-3001:Mate_TrunkGroup=tg-3001,TC=2,SPAN=FFFF,MediaIPAddr=10.72.34.22, MediaPort= 34005*

*tg-3001:CallID=36,Call_Type=REAL,CgPN=1234567,CdPN=22876544*  
*tg-3001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*tg-3001:CID=1, TC=1,SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003*
*tg-3001:Mate_TrunkGroup=tg-4001,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005*

*tg-3001:CallID=37,Call_Type=REAL,CgPN=1234567,CdPN=22876544*  
*tg-3001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*tg-3001:CID=1, TC=1,SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003*
*tg-3001:Mate_TrunkGroup=tg-5001,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005*

*tg-3001:CallID=38,Call_Type=REAL,CgPN=1234567,CdPN=22876544*  
*tg-3001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*tg-3001:CID=1, TC=1,SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003*
*tg-3001:Mate_TrunkGroup=tg-2001,MediaIPAddr=10.72.34.22, MediaPort= 34005*

Example 12

This sample command shows the information displayed when you specify a DPNSS trunk group parameter (tg-) and the “detail” parameter.

\>`rtrv-callinfo: tg-4001:detail

Retrieving results.  This could take a few moments...


M RTRV

*tg-4001:CallID=34,Call_Type=REAL,CgPN=1234567,CdPN=22876544*  
*tg-4001:Codec=g711,CALL_STA=2009-01-18 21:20:30.219 CST*
*tg-4001:CID=1, TC=1,CALL=IN,MediaIPAddr=10.0.6.205,MediaPort= 34003*
*tg-4001:Mate_TrunkGroup=tg-1001,CIC=1",MediaIPAddr=10.72.34.22, MediaPort= 34003*

*tg-4001:CallID=35,Call_Type=REAL,CgPN=1234567,CdPN=22876544*
*tg-4001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*tg-4001:CID=1, TC=1,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003*
*tg-4001:Mate_TrunkGroup=tg-3001,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005*

*tg-4001:CallID=36,Call_Type=REAL,CgPN=1234567,CdPN=22876544*
*tg-4001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*tg-4001:CID=1, TC=1,SPAN=FFFF,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003*
*tg-4001:Mate_TrunkGroup=tg-4002,TC=2,MediaIPAddr=10.72.34.22, MediaPort= 34005*

*tg-4001:CallID=37,Call_Type=REAL,CgPN=1234567,CdPN=22876544*
*tg-4001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*tg-4001:CID=1, TC=1,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003*
*tg-4001:Mate_TrunkGroup=tg-5001,MediaIPAddr=10.72.34.22, MediaPort= 34005*

*tg-4001:CallID=38,Call_Type=REAL,CgPN=1234567,CdPN=22876544*
*tg-4001:Codec=g711,CALL_STA=2009-01-18 21:21:10.110 CST*
*tg-4001:CID=1, TC=1,CALL=IN,MediaIPAddr=10.0.77.11,MediaPort= 34003*
Example 13
This sample command shows the information displayed when you specify an EISUP trunk group parameter (tg-) and the "detail" parameter.

```mml
rtrv-callinfo: tg-5001:detail
```

Retrieving results. This could take a few moments...

```
M RTRV

tg-5001:CallID=34,Call_Type=REAL,CgPN=1234567,CdPN=22876544
'tg-5001:Codec=q711,CALL_STA=2009-01-18 21:20:30.219 CST
'tg-5001:CID=1,NODEID=28871553,CALL=IN,MedialIPAddr=10.0.77.11,MediaPort= 34003
'tg-5001:Mate_TrunkGroup=1001,CIC=1",MedialIPAddr=10.72.34.22, MediaPort= 34005

tg-5001:CallID=35,Call_Type=REAL,CgPN=1234567,CdPN=22876544
'tg-5001:CID=1,NODEID=28871553,CALL=IN,MedialIPAddr=10.0.77.11,MediaPort= 34003
'tg-5001:Mate_TrunkGroup=3001,TC=2,SPAN=FFFF,MedialIPAddr=10.72.34.22, MediaPort= 34005

tg-5001:CallID=36,Call_Type=REAL,CgPN=1234567,CdPN=22876544
'tg-5001:CID=1,NODEID=28871553,CALL=IN,MedialIPAddr=10.0.77.11,MediaPort= 34003
'tg-5001:Mate_TrunkGroup=4001,TC=2,MedialIPAddr=10.72.34.22, MediaPort= 34005

tg-5001:CallID=37,Call_Type=REAL,CgPN=1234567,CdPN=22876544
'tg-5001:CID=1,NODEID=28871553,CALL=IN,MedialIPAddr=10.0.77.11,MediaPort= 34003
'tg-5001:Mate_TrunkGroup=5001,MedialIPAddr=10.72.34.22, MediaPort= 34005

tg-5001:CallID=38,Call_Type=REAL,CgPN=1234567,CdPN=22876544
'tg-5001:CID=1,NODEID=28871553,CALL=IN,MedialIPAddr=10.0.77.11,MediaPort= 34003
'tg-5001:Mate_TrunkGroup=5001,MedialIPAddr=10.72.34.22, MediaPort= 34005
```

Example 14
This sample command shows the information displayed, for a single call leg only, when you specify a SS7 signaling path parameter (sig-ss7) and the "detail" parameter.

```mml
rtrv-callinfo: sig-ss7:detail
```

Retrieving results. This could take a few moments...

```
M RTRV

'sig-ss7:CallID=35, Call_Type=REAL,CgPN=8834567,CdPN=876544
'sig-ss7:Codec=q711,CALL_STA=2009-01-18 21:21:10.110 CST
'sig-ss7:CID=2,CIC=2,CALL=IN",MedialIPAddr=10.72.34.22, MediaPort= 34005
'sig-ss7:Mate_SigPath=Unknown
```
Example 15

This sample command shows the information displayed, for a single call leg only, when you specify a trunk group and the “detail” parameter.

```
mml> rtrv-callinfo:tg-1001:detail

Retrieving results. This could take a few moments...
M RTRV
"tg-1001:CallID=35, CNG=8834567,CED=876544,Call_Type=REAL,Codec=g711"
"tg-1001:CID=2,CIC=2,CALL=IN",MedialIPAddr=10.72.34.22, MediaPort= 34005"
"tg-1001:Mate_TrunkGroup=Unknown"
```

Example 16

This sample command shows the information displayed for a hair-pinned call when you specify a signaling path parameter and the “detail” parameter.

```
mml> rtrv-callinfo:sig-ss7:detail

Retrieving results. This could take a few moments...
MGC-01 - Media Gateway Controller 2009-04-08 10:43:03.981 CST
M RTRV
"sig-ss7:CallID=36,Call_Type=REAL ,CgPN=233001,CdPN=12106689001"
"sig-ss7:Codec=PCMU,CALL_STA=2009-04-08 09:40:25 CST"
"sig-ss7:CID=1,CIC=1,CALL=IN,MediaIPAddr=LOCAL,MediaPort=0"
"sig-ss7:CID=5,CIC=5,CALL=OUT,MediaIPAddr=LOCAL,MediaPort=0"
```

Example 17

This sample command shows the information displayed for a hair-pinned call when you specify a trunk group.

```
mml> rtrv-callinfo:tg-1001:detail

Retrieving results. This could take a few moments...
MGC-01 - Media Gateway Controller 2009-04-08 10:43:03.981 CST
M RTRV
"tg-1001:CallID=36,Call_Type=REAL,CgPN=233001,CdPN=12106689001"
"tg-1001:Codec=PCMU,CALL_STA=2009-04-08 09:40:25 CST"
"tg-1001:CID=1,CIC=1,CALL=IN,MediaIPAddr=LOCAL,MediaPort=0"
"tg-1001:CID=5,CIC=5,CALL=OUT,MediaIPAddr=LOCAL,MediaPort=0"
```

Example 18

This sample command shows the information displayed for a call of call type SERVICE by blk-cic in a signaling path.

```
mml> rtrv-callinfo: ss7path-paladin:detail

Retrieving results. This could take a few moments...
M RTRV
"ss7path-paladin:CallID=5,Call_Type=SERVICE,CALL_STA=2009-04-21 15:05:19 CST"
"ss7path-paladin:CID=2,CIC=2,CALL=IN"
```
Example 19
This sample command shows the information displayed for a call of call type SERVICE by blk-cic in a trunk group.

```mml
rtrv-callinfo:tg-1001:detail
```

Retrieving results. This could take a few moments...
RTRV

"tg-1001:CallID=5,Call_Type=SERVICE,CALL_STA=2009-04-21 15:05:19 CST"
"tg-1001:CID=2,CIC=2,CALL=IN"

Example 20
This sample command show the information displayed for an SS7 call leg that is in signaling/nailed-up mode.

```mml
rtrv-callinfo:sig-ss7:detail
```

"sig-ss7:CallID=35,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
"sig-ss7:CALL_STA=2009-01-18 21:21:10.110 CST"
"sig-ss7:CID=1,CIC=1,CALL=IN"
"sig-ss7:Mate_SigPath=sig-nas,TC=2,SPAN=FFFF"

Example 21
This sample command shows the information displayed for a NAS call leg that is in signaling/nailed-up mode.

```mml
rtrv-callinfo:sig-nas:detail
```

Retrieving results. This could take a few moments...
M RTRV

"sig-nas:CallID=34,Call_Type=REAL,CgPN=1234567,CdPN=22876544"
"sig-nas:CALL_STA=2009-01-18 21:20:30.219 CST"
"sig-nas:CID=1,TC=2,SPAN=FFFF,CALL=IN"
"sig-nas:Mate_SigPath= sig-ss7,CIC=1"

**RTRV-CIC—Retrieve Bearer Channels**

The **rtrv-cic** command is enhanced to include a new input parameter (used) and the command now displays the “call start time.”

**Purpose:** Retrieves bearer channel information for one or more circuits that are identified by a signal path.

**Syntax:**

```mml
rtrv-cic:<sig path>:CIC=<number>[,rng=<range>][,used]
```

**Input Description:**

- **sig path**—MML component name of a signal path component.
- **number**—A valid circuit identification code (CIC).
- **range**—A number such that **number + range** is a valid CIC. All circuits between **number** and **number + range** are displayed.
- **used**—Refers only to the CICs for calls that are active.
Output Description:

- `<SIG PATH>`—MML component name of a signal path component.
- `CIC`—Circuit identification code.
- `PST`—Primary state.
  - `IS`—In service.
  - `OOS`—Out of service
- `CALL`—Call state.
  - `IDLE`—Circuit is idle, available for use.
  - `OOS`—Out of service.
  - `IS`—In service.
- `GW_STAT`—State of the gateway.
  - `CARRIER_FAILURE`—Carrier has failed.
  - `GW_HELD`—The call has been held at the gateway.
  - `CXN_IS`—The connection is in service.
  - `CXN_OOS_ACTIVE`—The connection is out of service on the active system.
  - `CXN_OOS_STANDBY`—The connection is out of service on the standby system.
  - `INTERFACE_DISABLED
- `BLK`—Blocking state
  - `GATEWAY`—Indicates that the CIC is blocked locally due to a gateway event (for example, an RSIP or a group service message).
  - `LOCAUTO`—Indicates that the CIC is blocked by hardware; the circuit is blocked by an external message generated by a network element outside the media gateway.
  - `LOCMAN`—Indicates that the CIC was blocked when an operator entered an MML command. You can remove this blocked state by issuing the `UNBLK-CIC` or `RESET-CIC` commands.
  - `LOCUNK`—Locally blocked for unknown reasons. (This indicates a potential software problem. A circuit has become blocked but the software did not track the cause of the blocking.)
  - `NONE`—There is no block on the CIC. DS0 is available for use.
  - `REMAUTO`—Remotely auto-blocked.
  - `REMMAN`—Remotely manually blocked.
- `CALL_STA`—The call start time.
Example:  The MML command shown in the following example retrieves bearer channel information for CICs 276 through 281 on signal path SS7SVC1:

```
mml> RTRV-CIC:SS7SVC1:CIC=276,RNG=5,used
```

M  RTRV
```
'ss7svc1:CIC=276,PST=IS,CALL=IN,GW_STAT=CXN_IS,BLK=NONE,CALL_STA=2009-01-19 13:20:30.219 CST'
'ss7svc1:CIC=277,PST=IS,CALL=OUT,GW_STAT=CXN_IS,BLK=NONE,CALL_STA=2009-01-19 13:21:37.321 CST'
```

Note  If you issue the **rtrv-cic** command without the “used” parameter, the system displays all CICs from the specified cic + range. If you issue the **rtrv-cic** command with the “used” parameter, the system displays only the CICs in the range that are currently used. Also, the **rtrv-cic** command displays call start time (CALL_STA) information for a particular CIC only if you also specify the parameter “used.”

Comments:  Performance Impact Category: B, C; impact depends on the number of CICs queried. For the enhanced version of the command in Release 9.7(3), if you issue the command with the “used” parameter, the command appends the call start time (CALL_STA) to the output for the status of every active CIC.

**RTRV-CIC Command Example**

The following sample command shows how you might issue the enhanced version of the **rtrv-cic** command and the output that the command displays:

```
mml> rtrv-tc:sig-ss7:USED
```

M  RTRV
```
'sig-ss7:CIC=1,PST=IS,CALL=IN,GW_STAT=CXN_IS,BLK=NONE,
CALL_STA=2009-01-19 13:20:30.219 CST'
'sig-ss7:CIC=3,PST=IS,CALL=OUT,GW_STAT=CXN_IS,BLK=NONE,
CALL_STA=2009-01-19 13:21:37.321 CST'
```

**RTRV-lics:validate—Display Licenses (Release 9.7(3))**

Purpose:  Displays the valid licenses from local license files. You can issue this command on both active and standby Cisco PGW 2200 Softswitches. The licenses include the base license, interface license, and run-time license. Only the run-time license is limited. The command output for an interface license is Yes or No. Yes indicates that the interface is supported.

Syntax:  `rtrv-lics:validate:
```

Input Description:  
- validate—Request a listing of all valid licenses on the system, including the base license and the separately listed licensed interfaces.
Output Description: For each valid license on the system, the command displays the license name, the maximum limit for which the license is set (for run-time licenses), and the time remaining until the license expires.

Example: The MML command shown in the following example displays information about all currently valid licenses on the Cisco PGW 2200 Softswitch:

```
mml> rtrv-lics:validate:

MGc-01 - Media Gateway Controller 2009-02-20 10:52:20.090 CST
M RTRV
"LMAgent:
------------------------------------------------------------------
Server Status:          UP
------------------------------------------------------------------
License information from local license files:
License Name            Entitled       Status
BASE               Fully Featured     permanent
PRIInterface            Y              left days = 28
PRIInterface            Y              left days = 58
SS7Interface            Y              left days = 28
SS7Interface            Y              left days = 28
SS7Interface            Y              left days = 58
SS7Interface            Y              left days = 58
Call Control SS7        60             left days = 28
Call Control SS7        60             left days = 58
SIP                     20000          left days = 28
SIP                     60             left days = 28
SIP                     20000          left days = 58
SIP                     60             left days = 58
H323                    20000          left days = 28
H323                    60             left days = 28
H323                    20000          left days = 58
H323                    60             left days = 58
<Press 'SPACE' for next page, 'Enter' for next line or 'q' to quit this output>
H323                    20000          left days = 58
H323                    60             left days = 58
------------------------------------------------------------------
RT License        Local Files    Server
SS7                     120              120
SIP                     40120          40120
H323                   40120          40120
------------------------------------------------------------------
```

Comments: Performance Impact Category: A
RTRV-LICS: VALIDATE Command Example

The following sample commands show how you might issue the enhanced version of the **rtrv-lics:validate** command and the output that the commands display.

Example 1
This sample command shows the information displayed when the license server is running.

```
mml> rtrv-lics:validate:  
```

```
MGC-01 - Media Gateway Controller 2009-02-20 10:52:20.090 CST
M RTRV
  *LMAgent:  
  Server Status:  UP
  Detail Local License Information

<table>
<thead>
<tr>
<th>License Name</th>
<th>Entitled</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASE</td>
<td>Fully Featured</td>
<td>permanent</td>
</tr>
<tr>
<td>PRIInterface</td>
<td>Y</td>
<td>left days = 28</td>
</tr>
<tr>
<td>PRIInterface</td>
<td>Y</td>
<td>left days = 58</td>
</tr>
<tr>
<td>SS7Interface</td>
<td>Y</td>
<td>left days = 28</td>
</tr>
<tr>
<td>SS7Interface</td>
<td>Y</td>
<td>left days = 28</td>
</tr>
<tr>
<td>SS7Interface</td>
<td>Y</td>
<td>left days = 58</td>
</tr>
<tr>
<td>SS7Interface</td>
<td>Y</td>
<td>left days = 58</td>
</tr>
<tr>
<td>Call Control TDM Ports</td>
<td>60</td>
<td>left days = 28</td>
</tr>
<tr>
<td>Call Control TDM Ports</td>
<td>60</td>
<td>left days = 58</td>
</tr>
<tr>
<td>SIP</td>
<td>20000</td>
<td>left days = 28</td>
</tr>
<tr>
<td>SIP</td>
<td>60</td>
<td>left days = 28</td>
</tr>
<tr>
<td>SIP</td>
<td>20000</td>
<td>left days = 58</td>
</tr>
<tr>
<td>SIP</td>
<td>60</td>
<td>left days = 58</td>
</tr>
<tr>
<td>H323</td>
<td>20000</td>
<td>left days = 28</td>
</tr>
<tr>
<td>H323</td>
<td>60</td>
<td>left days = 28</td>
</tr>
</tbody>
</table>

<Press 'SPACE' for next page, 'Enter' for next line or 'q' to quit this output>

<table>
<thead>
<tr>
<th>License Name</th>
<th>Entitled</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>H323</td>
<td>20000</td>
<td>left days = 58</td>
</tr>
<tr>
<td>H323</td>
<td>60</td>
<td>left days = 58</td>
</tr>
</tbody>
</table>

Validation For License Information

<table>
<thead>
<tr>
<th>RT License</th>
<th>Local Files</th>
<th>Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Control TDM Ports</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>SIP</td>
<td>40120</td>
<td>40120</td>
</tr>
<tr>
<td>H323</td>
<td>40120</td>
<td>40120</td>
</tr>
</tbody>
</table>
```

Example 2
This sample command shows the information displayed when the license server is not running.

```
mml> rtrv-lics:validate:  
```

```
MGC-01 - Media Gateway Controller 2009-02-20 10:52:20.090 CST
M RTRV
  *LMAgent:  
  Server Status:  DOWN
  Detail Local License Information

<table>
<thead>
<tr>
<th>License Name</th>
<th>Entitled</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASE</td>
<td>Fully Featured</td>
<td>permanent</td>
</tr>
<tr>
<td>PRIInterface</td>
<td>Y</td>
<td>left days = 28</td>
</tr>
<tr>
<td>PRIInterface</td>
<td>Y</td>
<td>left days = 58</td>
</tr>
</tbody>
</table>
```
RTRV-NE—Retrieve Network Element Attributes

The `rtrv-ne` command is enhanced to display the current patch level and system mode of the Cisco PGW 2200 Softswitch software.

**Purpose:** Displays information about the Cisco PGW 2200 Softswitch hardware, software, and current state (active or standby). The enhanced version of the command also displays the current patch level of the Cisco PGW 2200 Softswitch software.

**Syntax:**

```
RTRV-NE
```

**Output Description:**

- **Type**—Type of controller and system mode.
  - Switch mode
  - Signaling (Nailed-up) mode
- **Hardware Platform**—Hardware platform.
- **Vendor**—Cisco PGW 2200 Softswitch vendor.
- **Location**—Controller machine name.
- **Version**—Controller software version.
- **Patch**—The patch level of the Cisco PGW 2200 Softswitch software.
- **Platform State**—Use of controller.
  - **ACTIVE**—The controller in use.
  - **STANDBY**—The redundant controller.
Example: The MML command shown in the following example displays information about the Cisco PGW 2200 Softswitch, including the patch level and system mode:

```
mml> rtrv-ne
```

```
MGC-01 - Media Gateway Controller 2009-01-19 14:08:24.430 EST
M RTRV
"Type:MGC (Switch Mode)"
"Hardware platform:i86pc i386 i86pc"
"Vendor:"Cisco Systems, Inc.""
"Location:MGC-01 - Media Gateway Controller"
"Version:"9.7(3)"
"Patch:"CSCSOgs022/CSCOnn022"
"Platform State:ACTIVE"
```

Comments: Performance Impact Category: A

**RTRV-NE Command Examples**

The following sample commands show how you might issue the enhanced version of the `rtrv-ne` command and the output that the commands display.

**Example 1**

This sample command shows the information displayed when the Cisco PGW 2200 Softswitch is running only the base image.

```
mml> rtrv-ne
```

```
MGC-01 - Media Gateway Controller 2009-01-19 14:08:24.430 EST
M RTRV
"Type:MGC (Switch Mode)"
"Hardware platform:i86pc i386 i86pc"
"Vendor:"Cisco Systems, Inc.""
"Location:MGC-01 - Media Gateway Controller"
"Version:"9.7(3)"
"Patch:"CSCSOgs022/CSCOnn022"
"Platform State:ACTIVE"
```

**Example 2**

This sample command shows the information displayed when the Cisco PGW 2200 Softswitch is running in Signaling/Nailed-up mode with a software patch installed.

```
mml> rtrv-ne
```

```
MGC-01 - Media Gateway Controller 2009-01-19 14:08:24.430 EST
M RTRV
"Type:MGC (Signaling/Nailed-up Mode)"
"Hardware platform:i86pc i386 i86pc"
"Vendor:"Cisco Systems, Inc.""
"Location:MGC-01 - Media Gateway Controller"
"Version:"9.7(3)"
"Patch:"CSCSOgs022/CSCOnn022"
"Platform State:ACTIVE"
```
Example 3
This sample command shows the information displayed when the Cisco PGW 2200 Softswitch is running only the base image in Signaling/Nailed-up mode.

```
mml> rtrv-ne
MG-01 - Media Gateway Controller 2009-01-19 14:08:24.430 EST
RTRV
"Type:MGC (Signaling/Nailed-up Mode)"
"Hardware platform:i86pc i386 i86pc"
"Vendor:"Cisco Systems, Inc.""
"Location:MGC-01 - Media Gateway Controller"
"Version:"9.7(3)"
"Patch:"CSCOs000/CSCOnn000"
"Platform State:ACTIVE"
```

Example 4
This sample command shows the information displayed when the Cisco PGW 2200 Softswitch is running in Switch mode with a patch installed.

```
mml> rtrv-ne
MG-01 - Media Gateway Controller 2009-01-19 14:08:24.430 EST
RTRV
"Type:MGC (Switch Mode)"
"Hardware platform:i86pc i386 i86pc"
"Vendor:"Cisco Systems, Inc.""
"Location:MGC-01 - Media Gateway Controller"
"Version:"9.7(3)"
"Patch:"CSCSoos022/CSCOnnn022"
"Platform State:ACTIVE"
```

**RTRV-TC—Retrieve Bearer States (Release 9.7(3))**

The `rtrv-tc` command is enhanced by the addition of three new input parameters and the command now displays the “call start time”:

- **used**—Causes the command to retrieve information for active CICs only.
- **tg**—Enables the command to retrieve the status of bearer channels based on trunk group.
- **STAT**—Displays the number of CICs per trunk group, shows whether the CIC is coming into the system (IN) or is going out of the system (OUT), and indicates the block status of the active CICs.

**Note**  If you issue the `rtrv-tc` command with the STAT parameter, you cannot add any other parameter to the command syntax. If you try to do it, the system will return an error message.

**Purpose:** Adds a filter to the `rtrv-tc` command so that it can display available bearer states.

**Syntax:**

```
rtrv-tc:all
rtrv-tc:sigpath
rtrv-tc:tg-1001:
rtrv-tc:tg-1001:STAT
rtrv-tc:ss7path:STAT
```
Input Description:

- `all`—Displays the bearer states for all signal paths.
- `sigpath`—Logical signal destination, such as SS7 point code, FAS path, IP FAS path, or DPNSS path. See the *Cisco PGW 2200 Softswitch Release 9 Provisioning Guide* for more information about signal destinations.
  - `call`—Displays the status of the call: IDLE, IN, or OUT (call direction).
  - `pst`—Displays the primary states such as AOOS.
  - `used`—Displays only the CICs for currently active calls.
  - `STAT`—Displays the number of CICs per trunk group, shows whether the CIC is coming into the system (IN) or is going out of the system (OUT), and indicates the block status of the active CICs.
- `tg`—Specifies a particular trunk group.
Output Description:

- `<SIGPATH>`—MML component name of a signal path
- CIC—Circuit identification code
- PST—Primary state; valid values are
  - AOOS—The resource has been taken out of service by the system.
  - INB—Installed busy (The resource has been created but not yet commanded IS or OOS by means of the `SET-DEST` command.)
  - IS—In service.
  - MOOS—Manually taken out of service.
  - OOS—Out of service.
  - TRNS—Transient; the state is currently being changed.
  - UNK—Unknown.
- CALL—Call state; valid values are
  - IDLE—Circuit is idle, available for use.
  - OUT—Out of service.
  - IN—In service.
- GW_STAT—State of the gateway; valid values are
  - CARRIER_FAILURE—Carrier has failed.
  - GW_HELD—The call has been held at the gateway.
  - CXN_IS—The connection is in service.
  - CXN_OOS_ACTIVE—The connection is out of service on the active system.
  - CXN_OOS_STANDBY—The connection is out of service on the standby system.
- BLK—Blocking state; valid values are
  - GATEWAY—Locally blocked due to a gateway event (for example, RSIP or a group service message).
  - LOCAUTO—Hardware blocking type; the circuit is blocked by an external message generated by a network element outside the media gateway.
  - LOCMAN—Indicates that the CIC was blocked when an operator entered an MML command. You can remove this blocked state by issuing the `UNBLK-CIC` or `RESET-CIC` commands.
  - LOCUNK—Locally blocked for unknown reasons. (This indicates a potential software problem. A circuit has become blocked but the software did not track the cause of the blocking.)
  - NONE—There is no block on the CIC. DS0 is available for use.
  - REMAUTO—Remotely auto-blocked.
  - REMMAN—Remotely blocked manually.
- CALL_STA—The call start time.
Example: The MML command shown in the following example displays the status of CICs on an ss7 signaling path:

```
mml> rtrv-tc:ss7path:USED
```

```
M RTRV
"ss7path:CIC=1,PST=IS,CALL=IN,GW_STAT=CXN_IS,BLK=NONE,
 CALL_STA=2009-01-19 13:20:30.219 CST"
"ss7path:CIC=3,PST=IS,CALL=OUT,GW_STAT=CXN_IS,BLK=NONE,
 CALL_STA=2009-01-19 13:21:37.321 CST"
```

Comments: Performance Impact Category: C; avoid issuing `rtrv-tc:all` for large configurations. This command supports wildcarding.

**RTRV-TC Command Examples**

The following sample commands show how you might issue the enhanced version of the `rtrv-tc` command and the output that the commands display.

**Example 1**

This sample command shows the information displayed for the bearer channel of a particular trunk group.

```
mml> rtrv-tc:tg-1001:
```

```
MGC-01 - Media Gateway Controller 2009-02-18 16:33:22.470 EST
M RTRV
"tg-1001:CIC=1,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE,
 CALL_STA=2009-01-19 13:20:30.219 CST"
"tg-1001:CIC=2,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"tg-1001:CIC=3,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"tg-1001:CIC=5,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"tg-1001:CIC=6,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
```

**Example 2**

This sample command shows the information displayed when you issue the command and specify a particular trunk group and enter the STAT parameter.

```
mml> rtrv-tc:tg-1001:STAT
```

```
MGC-01 - Media Gateway Controller 2009-02-18 16:33:22.470 EST
M RTRV
"tg-1001:CSV=ss7path,CIC_NUM=31, NONE_BLOCK =29,BLOCK=2
 IN=10, OUT=6,
 LOCAUTO=0
 LOCNUM=1
 GATWAY=1
 REMAUTO=0
 REMMAN=0
 LOCUNK=0
```

Comments: Performance Impact Category: C; avoid issuing `rtrv-tc:all` for large configurations. This command supports wildcarding.
Example 3
This sample command shows the information displayed when you issue the command and specify a signaling path (in signaling nailed-up mode) and the STAT parameter.

```
mml> rtrv-tc:ss7path:STAT
MGC-01 - Media Gateway Controller 2009-02-18 16:33:22.470 EST
M RTRV
"ss7path:CIC_NUM=31, NONE_BLOCK =29,BLOCK=2
 IN=10,
 OUT=6,
 LOCAUTO=0
 LOCMAN=1
 MATE_UNVAIL=1
 REMAUTO=0
 REMMAN=0
 LOCUNK=0
```

New MML Commands

This section provides the descriptions of new MML commands that the Usability Enhancements–Phase 1 feature adds to the Cisco PGW 2200 Softswitch software.

RTRV-SYSINFO—Retrieve Network Element Attributes

**Purpose:** Displays an instance of the system processing, including what is currently processed, the CPU usage, queue-length, and memory usage.

**Syntax:**

```
RTRV-SYSINFO
```

**Output Description:**

- *Cpu: average*—The average percentage of CPU capacity currently in use.
- *Cpu: Engine thread*—The percentage of engine thread load that is larger than one percent of CPU capacity.
- *Queue: Engine Queue*—The percentage of queue load.
- *Memory: Virtual Memory*—The percentage load of virtual memory.
- *Memory: Memory address*—The percentage load of available memory addresses.

**Example:** See the MML command examples in the following section.

**Comments:** Performance Impact Category: D
RTV-SYSINFO Command Examples

The following sample commands show how you might issue the enhanced version of the `rtrv-sysinfo` command and the output that the command displays.

**Example 1**
This sample command shows the information displayed when the system software detects that a machine congestion level (MCL) has been reached. In such cases the command output indicates the activation of an MCL level.

```
mml> rtrv-sysinfo:all
```

```
M RTRV
  " Cpu: average = 90%" MCL=2
  " Cpu: Engine thread 1 = 2%"
  " Queue: EngineMasterSip = 20%"
  " Memory: Virtual Memory = 30%"
  " Memory: Memory address = 2%"
```

**Example 2**
This sample command shows the information displayed when the system software is running some traffic but an MCL has not been reached.

```
mml> rtrv-sysinfo:all
```

```
M RTRV
  " Cpu: average = 10%"
  " Cpu: Engine thread 1 = 5%"
  " Queue: EngineMasterSip < 1%"
  " Memory: Virtual Memory = 40%"
  " Memory: Memory address = 2%"
```

**Example 3**
This sample command shows the information displayed when the system software detects that the system generated engine threads that surpassed 1 percent of CPU capacity and that queue load and memory address load is at 0 percent of capacity.

```
mml> rtrv-sysinfo:all
```

```
M RTRV
  " Cpu: average = 10%"
  " Cpu: All Engine threads < 1%"
  " Queue: All Queue length = 0"
  " Memory: Virtual Memory = 10%"
```

**Example 4**
This sample command shows the information displayed when there is no traffic running on the system and when the CPU number is 1.

```
mml> rtrv-sysinfo:all
```

```
M RTRV
  " Cpu: average = 5%"
  " Queue: All Queue length = 0"
  " Memory: Virtual Memory = 20%"
```
RTRV-VIR-TC—Retrieve DPNSS Virtual Bearer Channel Status

Purpose: Displays the same output as the rtrv-tc command except that it eliminates the SPAN and GW_STAT fields.

Syntax:  

\texttt{rtrv-virt-tc:dpnss-path}

Output Description:

- **VTC**—The virtual channel number.
- **CALL**—The status of the call: IDLE, IN, or OUT (call direction).
- **PST**—Primary state; valid values are
  - AOOS—The resource has been taken out of service by the system.
  - INB—Installed busy (resource has been created but not yet commanded IS or OOS by means of the \texttt{SET-DEST} command).
  - IS—In service.
  - MOOS—Manually taken out of service.
  - OOS—Out of service.
  - TRNS—Transient; the state is currently being changed.
  - UNK—Unknown.
- **BLK**—Blocking state
  - NONE—There is no block on the CIC. DS0 is available for use.
- **TRANS**—Number of active transactions.

Example: The MML command shown in the following example displays information for a DPNSS virtual bearer channel:

```
mml> rtrv-virt-tc:dpnss-path-1:
M RTRV
"dpnss-path-1:VTC=33,CALL=IDLE,PST=IS,BLK=NONE"
"dpnss-path-1:VTC=34,CALL=IDLE,PST=IS,BLK=NONE"
"dpnss-path-1:VTC=35,CALL=IDLE,PST=IS,BLK=NONE"
"dpnss-path-1:VTC=36,CALL=IDLE,PST=IS,BLK=NONE"
"dpnss-path-1:VTC=37,CALL=IDLE,PST=IS,BLK=NONE"
"dpnss-path-1:VTC=38,CALL=IDLE,PST=IS,BLK=NONE"
```

Comments: Performance Impact Category: D
Software Changes for This Feature

The following sections describe software changes related to this feature:

- Alarms, page 32
- Logs, page 32
- Processes, page 32

Alarms

This section lists the alarms that are added, modified, or deleted for this feature. For information on the other alarms for the Cisco MGC software, see the *Cisco Media Gateway Controller Software Release 9 Messages Reference Guide*.

Modified Alarm

The Usability Enhancements—Phase 1 feature sends the alarm “Unequipped cic,” of severity level Warning, to the platform.log. Before the introduction of the feature, the system recorded this alarm only for SS7 CICs. Now, the alarm is raised for ISDN bearer channels also.

Logs

This section lists the logs that are added, modified, or deleted for this feature. For information on the other logs, see the *Cisco Media Gateway Controller Software Release 9 Messages Reference Guide*.

The Usability Enhancement—Phase 1 feature enables the Cisco PGW 2200 Softswitch to send the alarm “Unequipped cic” to the platform.log for both SS7 CICs and ISDN bearer channels.

For additional information about monitoring the operation of the Cisco PGW 2200 Softswitch, see the *Cisco Media Gateway Controller Software Release 9 Operations, Maintenance, and Troubleshooting Guide*.

Processes

The Usability Enhancements feature adds the script “collectdata” to the Cisco PGW 2200 Softswitch software. This script helps you to troubleshoot the system by collecting data from a number of system files located in different directories, including the platform.log, mml.log, alarm.log, CDR files, measurement files, PRT files and the MDL trace.
The collectdata Script

When you run the script /opt/CiscoMGC/local/collectdata, the system displays a menu. Each entry on the menu enables you to collect a specific kind of trace, log, or file.

The following example shows the menu for the collectdata script:

Enter one of the following commands (Case Insensitive):

   B = PGW Base Info
   S = Solaris System Info
   F = FIFO Info
   T = TimesTen Info
   D = CoreDump files and Info
   C = Config Info ...
   L = Log files including platform, mml, alarm, cdr and measurement ...
   M = MDL Trace files ...
   P = Prt files
   O = Process info...
   E = Collect files
   H = Print Help
   Q = Quit

====>help=H [B/S/F/T/D/C/L/M/P/O/E/H/Q]:

Instructions for Using the collectdata Script

Enter the character that corresponds to a command to start to collect a specific kind of trace, log, or file. All commands are case insensitive.

Press “h” or “H” to get help on how to use the script.

The suffix “…” following the entry for a command in the menu shows that a sub-menu exists that you can use to collect different kinds of information. (The command entries for C, L, M, and O have the “…” suffix.)

When you quit the script, if you have used any command to collect data, the script first creates a tar file with the name in the format path/SR.$time.$hostname.tar.gz. The path represents the directory in which the log file is saved (for example, /opt/CiscoMGC/var/log).

Note

Because the collectdata script can collect a number of sizable files, the script compresses the .tar file that it creates to reduce the size of the file that it ultimately saves in the format path/SR.$time.$hostname.tar.gz.

The $time is the time the file was created; the $hostname is the host name of the SUN platform on which the Cisco PGW 2200 Softswitch is running. The tar file includes all the trace, logs, and files you collected by issuing the commands. For example:

All files you collected are packed into a TAR file:
Create TAR file...

Please get the final tar file: /opt/CiscoMGC/var/log/SR.200901192206.sh-n120-cannon.tar.gz

If did not issue any of the script commands before you quit the script, no tar file is created.
Data Displayed by collectdata Script Commands

The following list describes the data displayed when you enter the single-character commands in the collectdata script:

- **B—PGW Base Information**
  - PGW version
  - Patch Level (System and OS)
  - XECfgParm.dat

- **S—Solaris System Information**
  - Number of Processor
  - Disk usage
  - Process Tables
  - CPU utilization
  - Thread status
  - Hardware platform
  - Solaris patch level and OS (Uname -a)
  - Swap space
  - The vm status
  - The cron table
  - Coredump config info
  - Service on System
  - Users logged in
  - System setup
  - When the system was rebooted (last)
  - Dmesg for errors (diagnostic messages)
  - Ethernet interface stats
  - IP Routing

- **F—FIFO Info**
  - FIFO length, which is provided in the directories /tmp and /opt/CiscoMGC/var

- **T—TimesTen Info**
  - TimesTen config status and DB file status
  - Log messages

- **D—CoreDump files and Info**
  - Chk_inv if you have root privilege
  - Pstack, pmap info if you have root privilege
  - Core files

- **C—Config Info ...**
  - Permissions of files under /opt/CiscoMGC/
  - Permissions of files under /opt/CiscoMGC/bin
Software Changes for This Feature

- Permissions of files under /opt/CiscoMGC/etc
- Permissions of files under /opt/CiscoMGC/etc/CONFIG_LIB
- Active_link directory status
- Files (*.dat) under active_link and /opt/CiscoMGC/etc
- Exported files
- Agent Configuration files

- L—Log files, including platform, mml, alarm, cdr and measurement ...
  - platform.log
  - mml.log
  - alm.csv
  - meas.csv
  - CDR files
  - platform.log + mml.log + alm.csv—If you do not enter a parameter, the script collects the latest 3 platform log files, 3 MML log files and 10 alarm files. If you enter only the first parameter (start time), the script collects files from start time until the most recent. If you enter both parameters (start time and end time), the script collects files between the start time and end time.

- M—MDL Trace files ...
  - Convert the *.btr to *.trc file
  - Filter the *.trc file
  - List *.btr trace files
  - List *.trc trace files

Note
MDL trace files can identify a call processing problem. The collectdata script captures MDL trace files by issuing the MML command `sta-sc-trc`.

The script captures btr files by issuing the MML command `sta-sc-trc`. The command collects call data in a bin file. One btr file can include data on many calls.

A trc file is an ASCII file, which corresponds to a single call.

A script that translates the data for a single call into a readable trc file would require a laborious conversion effort when a btr file includes data for many calls. The collectdata script avoids this difficulty by converting the *.btr files to *.trc files.

- P—Prt files
  - Collects the prt files

- O—Process info...
  - Monitor process
  - CPU utilization of the process
  - Reports statistics of processes
  - Reports all open files of the process
  - Prints a hex+symbolic stack trace for each lwp in the process
Software Changes for This Feature

Cisco PGW 2200 Softswitch Usability Enhancements—Phase 1 Feature Module

- Prints the address space map of each process
- System calls and signals invoked by the process
- Generates a core file

- E—Collects files and puts them in a tar file
- H—Print Help
- Q—Quit

Sample collectdata Script Session

In the following sample of a collectdata script session, the user selects the option L to collect log files. From the submenu, the user selects 6 to collect Platform + MML + Alarm files.

The script prompts the user to enter a start time and an end time. The script collects files generated between the specified times. If a user does not specify a start time and end time (as in the example), the script collects the latest 3 platform log files, 3 MML log files and 10 alarm files.

Sample Session

Enter one of the following commands (Case Insensitive):

B = PGW Base Info
S = Solaris System Info
F = FIFO Info
T = TimesTen Info
D = CoreDump files Info
C = PGW Config Info ... 
L = Log files including platform, mml, alarm, cdr and measurement ...
M = MDL Trace files ...
P = Prt files
O = Process info...
E = Collect files
H = Print Help
Q = Quit

===>help=H [B/S/F/T/D/C/L/M/P/O/E/H/Q]: L

1. Platform log files,
2. MML log file
3. Alarm files
4. Cdr files
5. Measurement files
6. Platform + MML + Alarm files

q = Return to main menu

===>Select one item: 6

Please input start time (YYYYMMDDHH) and end time (YYYYMMDDHH) to get log files created between them.
if no time param is input, collect the latest 3 log files and 10 alm files
start time:

--> Get the latest 3 platform files

>>>platform log files...
--- Get the latest 3 mml files
>>>mml log files...

--- Get the latest 10 alm files
>>>alm files...

1. Platform log files,
2. MML log file
3. Alarm files
4. Cdr files
5. Measurement files
6. Platform + MML + Alarm files

q = Return to main menu

==>Select one item: q

Enter one of the following commands (Case Insensitive):

B = PGW Base Info
S = Solaris System Info
F = FIFO Info
T = TimesTen Info
D = CoreDump files Info
C = PGW Config Info ...
L = Log files including platform, mml, alarm, cdr and measurement ...
M = MDL Trace files ...
P = Pkt files
O = Process info...
E = Collect files
H = Print Help
Q = Quit

==>help=H [B/S/F/T/D/C/L/M/P/O/E/H/Q]: q

All files you collected will be packed into a TAR file
Create TAR file...
Please get the final tar file: /opt/CiscoMGC/var/log/SR.200904271517.sh-melbourne.tar.gz
Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly What’s New in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation, at


Glossary

Table 1 Expansion

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIC</td>
<td>circuit identification code</td>
</tr>
<tr>
<td>DPNSS</td>
<td>Digital Private Network Signaling System</td>
</tr>
<tr>
<td>ISDN</td>
<td>Integrated Services Digital Network</td>
</tr>
<tr>
<td>ISUP</td>
<td>Integrated Services Digital Network User Part</td>
</tr>
<tr>
<td>MGC</td>
<td>Cisco Media Gateway Controller</td>
</tr>
<tr>
<td>PGW</td>
<td>PSTN Gateway</td>
</tr>
<tr>
<td>SS7</td>
<td>Signaling System 7</td>
</tr>
<tr>
<td>TDM</td>
<td>time-division multiplexing</td>
</tr>
</tbody>
</table>

CCDE, CCENT, CCSI, Cisco Eos, Cisco HealthPresence, Cisco Ironport, the Cisco logo, Cisco Lumin, Cisco Nexus, Cisco Nurse Connect, Cisco Stackpower, Cisco StadiumVision, Cisco TelePresence, Cisco Unified Computing System, Cisco WebEx, DCE, Flip Channels, Flip for Good, Flip Mino, Flip Video, Flip Video (Design), Flipshare (Design), Flip Ultra, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn, Cisco Store, and Flip Gift Card are service marks; and Access Registrar, Aironet, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, EtherFast, EtherSwitch, Event Center, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, iQuick Study, IronPort, the IronPort logo, LightStream, Linksys, MediaTone, MeetingPlace, MeetingPlace Chime Sound, MGX, Networks, Networking Academy, Network Registrar, PCNow, PIX, PowerPanels, ProConnect, ScriptShare, SenderBase, SMARTnet, Spectrum Expert, StackWise, The Fastest Way to Increase Your Internet Quotient, TransPath, WebEx, and the WebEx logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0907R)