

PGW 2200 Softswitch: Retrieve Information on the VISM Endpoint

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Introduction

This document helps you troubleshoot and explains the steps to find detailed information for the Cisco Voice Interworking Service Module (VISM) Media Gateway Control Protocol (MGCP) endpoint on a Call Control Cisco PGW 2200 solution. It helps you find Cisco VISM information and correlate the digital signal processor (DSP) and MGCP endpoint connection.

Prerequisites

Requirements

Readers of this document should have knowledge of these topics:

- Cisco Media Gateway Controller Software Release 9 Documentation
- Release Notes for the Cisco Media Gateway Controller Software Release 9.3(2)
- Release Notes for the Cisco Media Gateway Controller Software Release 9.4(1)

Components Used

The information in this document is based on these software and hardware versions:

- Cisco PGW 2200 Software Releases 9.3(2) and 9.4(1)
- Cisco VISM release 003.001.002.000

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

VISM MGCP Endpoints

Run a Cisco Snooter to display MGCP endpoint details. These details display SS7 IAM messages that include calling and called numbers and are linked to an MGCP endpoint. In this case, the CalledPartyNumber=92169679F and the CallingPartyNumber =9678. These are linked to MGCP endpoint **vism/e1-1/31** via the MGCP Create Connection (CRCX).

Note: This output has been consolidated for spatial reasons.

```
09:27:11.632318 10.48.84.20:2427 22.22.21.1:2427
MGCP..... -> AUEP 900000160 vism/e1-1/10@vism21-8850-2 MGCP 0.1
F:
09:27:11.635347 22.22.21.1:2427 10.48.84.20:2427
MGCP..... -> 200 900000160 OK
09:27:11.639119 22.22.21.1:2427 10.48.84.20:2427
MGCP..... -> 200 900000160 OK
09:27:13.872085 10.48.84.20:2427 22.22.21.1:2427
MGCP..... -> CRCX 167 vism/e1-1/31@vism21-8850-2 MGCP 0.1
C: 2
L: e:off,a:PCMA
M: inactive
R:
S:
X: A6
09:27:13.889686 22.22.21.1:2427 10.48.84.20:2427 MGCP..... -> 200 167 OK
I: d7
v=0
o=- 0 0 IN IP4 22.22.21.1
s=-
c=IN IP4 22.22.21.1
t=0 0
m=audio 49580 RTP/AVP 8 102 103
a=rtpmap:102 X-NSE/8000
a=rtpmap:103 X-cisco-rtp/8000
a=fmtp:102 0-15,192-198,200-202,20
a=fmtp:103 0-15
a=X-sqn: 0
a=X-cap: 1 image udptl t38
a=sqn: 0
a=cdsc: 1 image udptl t38
09:27:13.902554 1-004-1[02081] 1-010-1[02129]
ITU ISUP. -> IAM (01) CIC=00093 CDPN=92169679F CGPN=9678
SLS=13 Pr:0 Ni:NT
09:27:14.148778 1-010-1[02129] 1-004-1[02081] ITU ISUP. -> ACM (06) CIC=0009
SLS=13 Pr:0 Ni:NT
09:27:14.229884 1-010-1[02129] 1-004-1[02081] ITU ISUP. -> CPG (2c) CIC=0009
SLS=13 Pr:0 Ni:NT
09:27:14.342175 10.48.84.20:2427 22.22.21.1:2427 MGCP..... ->
MDCX 169 vism/e1-1/31@vism21-8850-2 MGCP 0.1
C: 2
I: d7
L: e:off
M: sendonly
R:
X: A8
v=0
o=Cisco 0003640032300613142210
35171000000000012060124312 0
IN IP4 www.cisco.com
s=00F40398-31CC-911D-7900-00000A3054
c=IN IP4 10.48.84.202
t=0 0
m=audio 20126 RTP/AVP 8
09:27:14.369368 22.22.21.1:2427 10.48.84.20:2427 MGCP..... -> 200 169 OK
```

```

v=0
o=- 0 0 IN IP4 22.22.21.1
s=-
c=IN IP4 22.22.21.1
t=0 0
m=audio 49580 RTP/AVP 8
a=X-sqn: 0
a=X-cap: 1 image udptl t38
a=sqn: 0
a=cdsc: 1 image udptl t38
09:27:15.139029 1-010-1[02129] 1-004-1[02081] ITU ISUP. -> ANM (09) CIC=00093
SLS=13 Pr:0 Ni:NLT
09:27:15.152361 10.48.84.20:2427 22.22.21.1:2427
MGCP..... -> MDCX 171 vism/e1-1/31@vism21-8850-2 MGCP 0.1
C: 2
I: d7
L: e:off
M: sendrecv
R:
X: AA
09:27:15.159173 22.22.21.1:2427 10.48.84.20:2427
MGCP..... -> 200 171 OK
09:27:15.172185 10.48.84.20:2427 22.22.21.1:2427
MGCP..... -> RQNT 173 vism/e1-1/31@vism21-8850-2 MGCP 0.1
R: D/[0-9*#]
S:
Q: loop
X: AC
09:27:15.176861 22.22.21.1:2427 10.48.84.20:2427
MGCP..... -> 200 173 OK
09:27:16.581885 10.48.84.20:2427 10.48.84.189:2427
MGCP..... -> AUEP 900000165 s0/ds1-0/8@v5300-4.cisco.com MGCP 0.1
F:
09:27:16.582014 10.48.84.20:2427 10.48.84.10:2427
MGCP..... -> AUEP 900000165 s7/ds1-0/8@v5400-3 MGCP 0.1
F:
09:27:16.582679 10.48.84.10:2427 10.48.84.20:2427
MGCP..... -> 200 900000165 Endpoint exists
09:27:16.583949 10.48.84.189:2427 10.48.84.20:2427
MGCP..... -> 200 900000165 Endpoint exists

```

When you log into the MGX8850, check the version and VISM card position with the **dspcd** and **dspcds** commands.

```

8850bru2.1.7.PXM.a > dspcd

ModuleSlotNumber:      7
FunctionModuleState:   Active
FunctionModuleType:    PXM1-OC3
FunctionModuleSerialNum: SBK04330026
FunctionModuleHWRev:   B0
FunctionModuleFWRev:   1.2.13
FunctionModuleResetReason: Power Up
LineModuleType:        PXM-UI
LineModuleState:       Present
SecondaryLineModuleType: SMFIR-4-155
SecondaryLineModuleState: Present
mibVersionNumber:      1.2.10
configChangeTypeBitMap: No changes
cardIntegratedAlarm:   Clear
cardMajorAlarmBitMap:  Clear
cardMinorAlarmBitMap:  Clear
BkCardSerialNum:       SBK044101FT
TrunkBkCardSerialNum:  SBK0316008E
FrontCardPCBNumber:    800-06229-02

```

```
TrunkBkCardPCBNumber:      800-03060-02
UIBkCardPCBNumber:         800-03688-01
SrmBackCardPCBNumber:     Not Applicable
```

```
8850bru2.1.7.PXM.a >
```

The **dspcds** command displays all of the hardware and information on the status of the cards.

The **dspcd** command displays information on the current card that you are logged and the **dspcds** command displays information on all cards.

```
8850bru2.1.7.PXM.a > dspcds
```

Slot	CardState	CardType	CardAlarm	Redundancy
1.1	Active	VISM-8E1	Major	
1.2	Active	VISM-8E1	Clear	
1.3	Empty			Clear
1.4	Empty			Clear
1.5	Empty			Clear
1.6	Empty			Clear
1.7	Active	PXM1-OC3		Clear
1.8	Empty			Clear
1.9	Empty			Clear

```
<snip>
```

```
NumOfValidEntries:      32
NodeName:                8850bru2
Date:                    05/25/2004
Time:                    11:23:21
TimeZone:                PST
TimeZoneGMTOff:         -8
StatsMasterIpAddress:   10.200.88.154
shelfIntegratedAlarm:   Major
BkplnSerialNum:         SCA0448003C
BkplnType:               0
BkplnFabNumber:         28-2681-03
BkplnHwRev:              E0
ChassisType:             MGX8250
Power Supply Wattage:    1200
```

```
8850bru2.1.7.PXM.a >
```

Issue the **cc** command to connect to VISM card 2. The **cc** command changes the card that you are currently logged into. Issue the **cc** command to change to the card that you would like to debug. If you would like to debug the control card, you do not need to execute the **cc** command since you are logged into the control card by default.

```
8850bru2.1.7.PXM.a > cc 2
```

```
(session redirected)
```

```
8850bru2.1.2.VISM8.a >
```

Check line LEDs and use **dspalm** to check the line status.

```
Syntax : dspalm "-ds1 <LineNum>"
          -ds1 <LineNum> where LineNum = 1 - n, n = 8 if VISM
          value = -1 = 0xffffffff
8850bru2.1.2.VISM8.a > dspalm -ds1 1
LineNum:                1
LineAlarmState:         No Alarms
```

```
LineStatisticalAlarmState: No Statistical Alarms
8850bru2.1.2.VISM8.a >
```

To find out the endpoint details and correlate this with the Cisco Snooper details, issue the **dspxgcpcons** command. This command provides the xGCP Connection ID information. If you forget the command, issue the **help** command in combination with a list of available debug commands. For example:

```
8850bru2.1.2.VISM8.a > help dsp
```

This is example output of the **dspxgcpcons** command.

```
8850bru2.1.2.VISM8.a > dspxgcpcons

xGCP Connection ID  xGCP Endpoint Name  xGCP Call ID
-----
          d7              vism/E1-1/31              2

8850bru2.1.2.VISM8.a >
```

In this scenario, MGCP endpoint vism/E1-1/31 is linked to MGCP Connection ID = d7. Run the command **dspxgcpcon d7 2** to display the attributes associated with a call agent established connection. This command gives you details about the Local/Remote RTP port, the remote IP address, and the connection mode .

Note: The syntax is **dspxgcpcon <conn_id><display_level>**

```
8850bru2.1.2.VISM8.a > dspxgcpcon d7 2

*****
          Attributes of Connection ID: d7
*****
Call ID                = 2
Endpoint Name          = vism/E1-1/31
Line Number            = 1
Connection ID          = d7
Admitted Codec         = PCMA
admittedCodecPt        = ? (8)
Admitted Pkt. period   = 10 ms
Connection Mode        = sendrecv
Echo Cancellation      = FALSE
Type of Service        = 0xa0
Network Type           = IP
Remote Address Type    = Invalid (0)
Continuity Test        = FALSE
Loopback               = FALSE
Local RTP Port         = 49580
Remote RTP Port        = 20126
Remote RTP Port Count  = 1
Remote Address         =10.48.84.202
Silence Suppression    = TRUE
SID                    = TRUE
VAD Timer              = 250 ms
CAS Type               = None
Triple Redundancy      = TRUE
DTMF forwarding        = FALSE
DTMF forwarding (negotiated) = 0
Local Connection Options (lco string) = L: e:off

Remote Session Descriptor (sdp string) =
-----
v=0
```

```

o=Cisco 00036400323006131422103517100000000012060124312 0 IN IP4 www.cisco.com
s=00F40398-31CC-911D-7900-00000A3054CA
c=IN IP4 10.48.84.202
t=0 0
m=audio 20126 RTP/AVP 8
-----

```

Timestamp Information:

```

Display Type = Originating
CRCX Ack (CRCX Ack - CRCX) = 20.000000000 ms
MDCX Command (MDCX - CRCX) = 25251650.000531935 ms
MDCX Ack (MDCX Ack - CRCX) = 500.000000000 ms
Time since the CRCX was received = 188.310000000 sec
(CRCX Command is not shown since it is used as reference)

```

```

Codec List: Codec[1] = PCMA
codecPt[1] = (8)
Pkt. Period List[1]: Pkt. Period[1] = 10 ms
Pkt. Period Range[1] - Low = 10 ms
Pkt. Period Range[1] - High = 10 ms

```

```

ntePt = (255)
nteEvents =
nsePt = (255)
nseEvents =
ciscoRtpPt = (255)
ciscoRtpEvents =
LCO Codec List[1] = PCMA
LCO Pkt. Period Range - Low = 0 ms
LCO Pkt. Period Range - High = 0 ms

```

```

TDM Endpoint Connected to DSP Channel = TRUE
DSP Channel Connected to Network Endpoint = TRUE

```

8850bru2.1.2.VISM8.a >

shellConn Connections and Endpoints Commands

8850bru2.1.2.VISM8.a > **shellConn**

Print all of the connections associated with all of the calls with the **ccCallTablePrint** shellConn command.

```

8850bru2.1.2.VISM8.a > ccCallTablePrint
ccCallTablePrint
ccCallTablePrint

```

Hash Index	Call Index	Call ID	Connection Indices
50	192	2	215

```

value = 1 = 0x1
8850bru2.1.2.VISM8.a >

```

The **ccConnPrint** shellConn command prints all of the information related to a call. This includes the **endptIdx** value which is used for the shellConn **dspm_endpt_info** command.

```

Syntax : ccConnPrint Connection-Index[1 - 248]
8850bru2.1.2.VISM8.a > ccConnPrint 215
ccConnPrint 215
ccConnPrint(215)

```

```

entryType = 9
pConnForw = 0x813d9cc0

```

```

pConnBack           = 0x813f5230
pCallConnForw      = 0x8140a740
pCallConnBack      = 0x8140a740
pEndptConnForw    = 0x8133cf80
pEndptConnBack    = 0x8133cf80
connIdx            = 215
callIdx            = 192
endptIdx           = 31
lineIdx            = 1
srcGrpNum          = 1
switched           = TRUE (1)
connId             = d7
pMgcpPkt           = 0x0
codec[0]           = PCMA (2)
codecPt[0]         = (8)
ppList[0].pktPeriod[0] = 10
ppRange[0].low     = 10
ppRange[0].high    = 10
ntePt              = (255)
nteEvents          =
nsePt              = (255)
nseEvents          =
ciscoRtpPt        = (255)
ciscoRtpEvents    =
lcoCodec[0]       = PCMA (2)
lcoPpRange.low    = 0
lcoPpRange.high   = 0
admittedCodec     = PCMA (2)
admittedCodecPt   = ? (8)
admittedPp        = 10
connMode          = sendrecv (3)
ecan              = FALSE (0)
silenceSupp      = TRUE (1)
sid               = TRUE (1)
fx                = MGCP_FX_GW_PT (1)
fxLCO             = gw (1)
serviceType       = 0xa0
networkType       = IP (1)
contTest          = FALSE (0)
loopback          = FALSE (0)
localRtpPort      = 49580
remoteRtpPort     = 20126
remoteRtpPortCount = 1
remoteSdp         = TRUE (1)
endptDspConnected = TRUE (1)
dspPortConnected = TRUE (1)
remoteAddr        = 10.48.84.202
remoteConnDesc    = v=0
o=Cisco 000364003230061314221035171000000000012060124312 0 IN IP4 www.cisco.com
s=00F40398-31CC-911D-7900-00000A3054CA
c=IN IP4 10.48.84.202
t=0 0
m=audio 20126 RTP/AVP 8
remoteConnDescLen = 180
localConnOptions  = L: e:off
localConnOptionsLen = 8
responseCode      = 0
timerId           = 0
gain control option = FALSE (0)
gain control string = FALSE (0)
gainControl       = 0
Timestamp Information:
  Display Type     = Originating
  CRCX Command     = 1085513847.720000000 ms
  CRCX Ack         = 1085513847.740000000 ms
  MDCX Command     = 1128488771.1330531935 ms

```

```

MDCX Ack = 1085513848.220000000 ms
NTFY Command = 0.000000000 ms
DLCX Command = 0.000000000 ms
DLCX Ack = 0.000000000 ms
DM Connect = 1085513847.740000000 ms
DM Connect Ack = 1085513847.740000000 ms
DM Disconnect = 0.000000000 ms
DM Disconnect Ack = 0.000000000 ms
reasonCode = (null) (0)
connCmaIndex = 0
ecanBypass = FALSE (0)
casFwdBh = 0
tripleRed = 1
dtmfFwd = 0
negDtmfRelayType = 0
vadTimer = 250

value = 0 = 0x0
8850bru2.1.2.VISM8.a >

```

The **dspm_endpt_info** ShellConn command provides details on the MGCP endpoint that concerns the DSP number, DSP channel, the status, the transmit (TX)/receive (RX) tone, voice activity detection (VAD), and so forth. This command also provides detailed information on the previous codec. Alternatively, you can run the **dspm_active** ShellConn command which provides basic details for the connection and endpoint index.

```

Syntax : dspm_endpt_info endptIdx
8850bru2.1.2.VISM8.a > dspm_endpt_info 31
dspm_endpt_info 31
DSP Number = 1
DSP Channel = 2
Status = Connected
Connection Index = 215
Endpoint Index = 31
Codec = G711 A-Law
Previous Codec = G711 A-Law
Conn. DSP Number = 0
Conn. DSP Channel = 0
Conn. DS0 = 31
ECAN Tail Length = 0
Last Timeslot = 2
Loopback Type = No Loopback
Rx Tone = 0
Tx Tone = 0
Tx Tone Duration = 0
TDM Timer ID = 1275
NTWK Timer ID = 1276
Channel Mode = Voice
Encapsulation Type = RTP - Voice over IP
Packetization Per. = 10
Timing Event = No TDM Timing
No Network Timing
VAD = 250
Previous VAD = 0
Voice mode input gain = 0
Voice mode output gain = 0
Event Registration
Client Name = Call Control
Signaling State Change NO
Signaling State Response NO
Digit Detection NO
Digit End NO
Tone Dial Completion NO
Pulse Dial Completion NO
FAX Tone Detection NO
MODEM Tone Detection NO

```

Digit Detect Timeout	NO
Peer Message Detection	YES
Peer Message Detection Timeout	NO
First Audio Packet Detection	NO
Fax Relay	NO
DSPM Event 14 - Not Used	NO
Client Name = CAS FSM	
Signaling State Change	NO
Signaling State Response	NO
Digit Detection	YES
Digit End	YES
Tone Dial Completion	NO
Pulse Dial Completion	NO
FAX Tone Detection	NO
MODEM Tone Detection	NO
Digit Detect Timeout	NO
Peer Message Detection	YES
Peer Message Detection Timeout	NO
First Audio Packet Detection	NO
Fax Relay	NO
DSPM Event 14 - Not Used	NO
Client Name = Line Monitor	
Signaling State Change	NO
Signaling State Response	NO
Digit Detection	NO
Digit End	NO
Tone Dial Completion	NO
Pulse Dial Completion	NO
FAX Tone Detection	NO
MODEM Tone Detection	NO
Digit Detect Timeout	NO
Peer Message Detection	NO
Peer Message Detection Timeout	NO
First Audio Packet Detection	NO
Fax Relay	NO
DSPM Event 14 - Not Used	NO
Channel Flags	
In Test	FALSE
Detecting Tone	FALSE
Sending Digit	FALSE
Sending Tone	FALSE
Call Progress Tone	FALSE
Upspeed	FALSE
Detecting Digit	TRUE. Type = 1
Tx Tone Pending	FALSE
CAS	FALSE
TDM Timer ON	FALSE
Network Timer ON	FALSE
Gen. Peer to Peer	FALSE
Fax in Progress	FALSE
Data in Progress	FALSE
Phase Reversal Detected	FALSE
Waiting for VBD ACK	FALSE
Generating Voice Packet	TRUE
Generating CAS Packet	FALSE
Received a CAC Request	FALSE
CAC Pass	FALSE
Bypass ECAN	FALSE
CAS Ack	FALSE
ICS Enable	FALSE
modem tone notified	FALSE
fax tone notified	FALSE
ecan disable	FALSE
t38 failed	FALSE
wait t38 ack	FALSE
fax relay in progress	FALSE

```

wait t38 switch                FALSE
pt failed                      FALSE
pt pass in pt_gw              FALSE
wait dm return                FALSE
fax cac pass                  FALSE
fax clear down                FALSE
t38 nse ack                   FALSE
wait sending nse201          FALSE
dm fax mode                   FALSE
Fax Relay Instruction          = 0
Inband Signal Detection        = 423
R1 Taiwan                    FALSE
R1                            FALSE
MF                            FALSE
R2 Backward                   FALSE
R2 Forward                    FALSE
DTMF                          TRUE
CAS                            FALSE
Voice                          FALSE
Silence                        FALSE
Modem                          TRUE
Supervisory                   FALSE
FAX                            TRUE
value = 1 = 0x1
8850bru2.1.2.VISM8.a >

```

```

8850bru2.1.2.VISM8.a > dspm_active
dspm_active

```

```

dsp chan status cIdx eIdx codec dsp/ecan chan line ds0 tail

```

```

-----
 1      2  Cnt   215    31    2      0      0      1  31    0
 2      1  Cnt    0     2     2      0      0      1   2    0
 3      1  Cnt    0     3     2      0      0      1   3    0

```

<snip>

```

value = 1 = 0x1
8850bru2.1.2.VISM8.a >dspm_get_err 1
dspm_get_err 1
packet ID 198 is ERROR STAT. Packet length is 44.
  Incoming packets dropped due to invalid header= 0
  Transmit packets dropped due to HPI SAM overflow= 0

```

No more message in Q.

```

8850bru2.1.2.VISM8.a >

```

If the error count is non-zero, and continues to increase as this command is entered again, this is a source of the problem for future investigation. Check the RTP packet send/receive situation as seen here.

```

Syntax : dsendpt "endpt_num"
        endpt_num -- values : template 1: 1 - 145 for VISM,
                             1 - 192 for VISM-PR T1,
                             1 - 248 for VISM-PR E1;
                             template 2: 1 - 192 for T1,
                             1 - 248 for E1;
                             template 3: 1 - 120 for VISM,
                             1 - 192 for VISM-PR T1,
                             1 - 248 for VISM-PR E1;
                             template 4: 1 - 64 for VISM,
                             1 - 144 for VISM-PR.

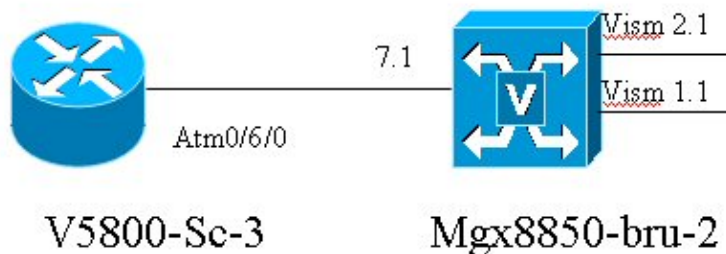
```

```

8850bru2.1.2.VISM8.a > dspendpt 31
      EndptNum:          31
      EndptLineNum:     1
      EndptName:        E1-1/31@vism21-8850-2
      EndptSpeed:       64 kbps
      EndptState:       active
      EndptChannelMap:  80000000
      EndptEnable:      active
      EndptLoopback:    disabled
Syntax : dsprtpconnstat "endpt_num"
8850bru2.1.2.VISM8.a > dsprtpconnstat 31
Sent msg 83 (GET_VOICE_PLAYOUT_DELAY_STAT) to [DSP 1, Chan 2, 1 Params] : 0
ConnIdx = 31
  No. of RTP Packets Sent      = 213
  No. of RTP Packets Received = 54104
  No. of Octets Sent           = 8403
  No. of Octets Received      = 2162731
  No. of RTP Packets Lost     = 0
  Interarrival Jitter         = 24
  Latency                      = 0
8850bru2.1.2.VISM8.a >

```

Note: Run the **dsprtpconnstat "endpt_num"** command several times to check the increasement of the RTP packets sent and received. Additionally, you can go to the Cisco router connection. This has a PVC connection to the MGX8850. Issue this command:



```

v5800-3-sc#show atm vc interface ATM0/6/0.1
      VCD /
Interface Name          VPI  VCI  Type  Peak  Avg/Min  Burst
0/6/0.1      1      0   22  PVC   Encaps  SC   Kbps  Kbps  Cells  Sts
v5800-3-sc#

```

With the 'detail' information you can see the in/out packets increase. You can run this command several times to check how the in/out packets increase in combination with the VISM comamnd **dsprtpconnstat "endpt_num"**.

```

v5800-3-sc#show atm vc interface ATM0/6/0.1 detail
ATM0/6/0.1: VCD: 1, VPI: 0, VCI: 22
UBR, PeakRate: 155000 (365567 cps)
AAL5-MUX, etype:0x800, Flags: 0xC24, VCmode: 0x0, Encapsize: 4
OAM frequency: 10 second(s)
InARP DISABLED
InPkts: 5416453, OutPkts: 5306179, InBytes: 337330144, OutBytes: 487165102
InPRoc: 9674, OutPRoc: 19273
InFast: 5406779, OutFast: 0, InAS: 0, OutAS: 5286906
OAM cells received: 19472618
OAM cells sent: 19472601Status: UPv5800-3-sc#

```

Issue the **dspm_active ShellConn** command to retrieve the same details with **dspm_table <dsp>** . This is the same information you recieved with the ShellConn command **dspm_endpt_info**.

```
8850bru2.1.2.VISM8.a > dspm_table 1
dspm_table 1
```

```
Comp Dsp=1 Group=G.729, G.726, G.711, ITU-T.38 D/L Count=1 Status=ACTIVE
```

Chann :	1	2	3	4
Testng:	no	no	no	no
Status:	Cnt	Cnt	Idl	Idl
T_slot:	1	2	-1	-1
CnIdx :	0	215	0	0
EndIdx:	1	31	0	0
Codec :	2	2	0	0
P.Codc:	0	2	0	0
VAD :	0	250	0	0
P.Vad :	0	0	0	0
Vo.Pkt:	no	yes	no	no
Cs.Pkt:	no	no	no	no
Lpback:	0	0	0	0
DtTone:	no	no	no	no
SdTone:	no	no	no	no
CPgTone:	no	no	no	no
DtDigt:	no	yes	no	no
SdDigt:	no	no	no	no
CAS :	no	no	no	no
Uspgd :	no	no	no	no
Encaps:	RTP RTP	0	0	0
Ecan :	0	0	0	0
Chan :	0	0	0	0
Line :	1	1	0	0
Ds0 :	1	31	0	0

value = 0 = 0x0

```
8850bru2.1.2.VISM8.a >
```

The **dspm_buildinfo_print** command provides the DSP release and Firmware build information.

```
8850bru2.1.2.VISM8.a > dspm_buildinfo_print
dspm_buildinfo_print
```

```
c549_dspm_code_ecan_t1.h
Major Release : 9
Minor Release : 4
Build No. : 0
Built by pbecerra on Mon Jun 17 13:24:48 2002
```

```
c549_dspm_code_ecan_e1.h
Major Release : 9
Minor Release : 4
Build No. : 0
Built by pbecerra on Mon Jun 17 11:58:23 2002
```

```
c549_dspm_code_g711.h
Major Release : 3
Minor Release : 6
Build No. : 25
Built by yubo on Sun Mar 23 21:27:30 2003
```

```
c549_dspm_code_g729.h
Major Release : 3
Minor Release : 6
Build No. : 25
Built by yubo on Sun Mar 23 21:29:12 2003
```

```
c549_dspm_code_g729_fax.h
Major Release : 3
```

Minor Release : 6
Build No. : 25
Built by yubo on Sun Mar 23 21:29:12 2003

value = 0 = 0x0
8850bru2.1.2.VISM8.a >

Issue the **dspm_ping** Shellconn command to check the DSP status.

```
8850bru2.1.2.VISM8.a > dspm_ping
dspm_ping

Received status_response from dsp 1.
Received status_response from dsp 2.
Received status_response from dsp 3.
Received ping-ack from ecan 4.
Received ping-ack from ecan 5.
Received ping-ack from ecan 6.
```

<snip>

Issue the **dspvismparam** command to retrieve the general setup of the VISM card.

```
8850bru2.1.2.VISM8.a > dspvismparam

dspvismparam

VISM mode:                voipSwitching/voipTrunking
VISM features Bit Map:    0x5bc
FunctionModuleType:       VISM-8E1
CAC flag:                  enable
DS0s available:           120
Template number:           3
Percent of functional DSPs: 100
IP address:                22.22.21.1
Subnet mask:               255.255.255.248
Bearer IP address:        22.22.21.1
Bearer Subnet mask:        255.255.255.248
RTCP report interval:     1000 msec
RTCP receive multiplier:  3
RTP receive timer:        enable
ControlPrecedence/Tos:    0x60
BearerPrecedence/Tos:     0xa0
Aal2 muxing status:       disable
Tftp Server Dn             TFTPDOMAIN
Aggregate Clipping         enable
Aggregate Svc Bandwidth    0
Codec negotiation option   1
Profile negotiation option 1
VAD Duty Cycle             61
VAD Tolerance              100
VISM Initiated NW COT      Off
VISM CO4 Timer             1000 msec
CALEA flag                 disable
SupportdModuleType:        VISM-8E1.
VismNSAP:                  3838353062727532000000000000000002000100
value = 0 = 0x0
8850bru2.1.2.VISM8.a >
```

To display all statistically provisioned IP addresses and externally resolved IP addresses for all domain names configured on the current VISM card, use the **dspdnallips** command in the VoIP switching/trunking and switched AAL2 PVC operating modes.

```
8850bru2.1.2.VISM8.a > dspdnallips
```

dspdnallips ResolutionIndex	DomainName	IP	State	Pref
1	PWG-SW2	10.48.84.20	Active	1
2	PWG-SW2	10.48.85.20	Inactive	2
3	PWG-SW2	10.48.84.22	Inactive	3
4	PWG-SW2	10.48.85.22	Inactive	4

```
value = 0 = 0x0
```

```
8850bru2.1.2.VISM8.a >
```

In this example, the ResolutionIndex = 1 is the active. Issue the **ccEndptPrint ShellConn** command to check **notifiedEntity** and **mgcNum**. In this case, the VISM sends NTFYS to the active PWG-SW2.

```
Syntax ccEndptPrint <endptIdx>
```

```
where, 1 <= <endptIdx> <= 248
```

```
8850bru2.1.2.VISM8.a > ccEndptPrint 31
```

```
ccEndptPrint 31
entryType                = 5
Valid                    = 1
pEndptForw              = 0x8138e17c
pEndptBack              = 0x8133a670
pEndptConnForw         = 0x813d9854
pEndptConnBack         = 0x813d9854
pEndptNonSwitchedConnForw = 0x8133cf80
pEndptNonSwitchedConnBack = 0x8133cf80
endptIdx                = 31
endptNum                = 31
endptName               = vism/E1-1/31
lineIdx                 = 1
pMgcpPkt                = 0x0
locallySwitched         = FALSE (0)
protocolVersion         = MGCP 0.1 (3)
ecan                    = FALSE (0)
dspNum                  = 1
dspChan                 = 2
annCodec                = 2
annPktPeriod            = 10
annPendingConn          = FALSE (0)
ds0DspMap[00]
  ds0                    = 31
  dspNum                 = 0
  dspChan                = 0
  cas                    = TRUE (1)
  tailLength             = 32
mgcRedGrpNum           = 1
mgcNum                 = 1
  notifiedEntity       = PWG-SW2
caIpAddr                = 0.0.0.0
caUdpPort               = 0
portInNe                = FALSE (0)
NeState                 = 1
useNewLists              = FALSE (0)
requestedEventList      = [0-9A-D*#LXT]
signalEventList         =
accumulatedEventList    =
quarantinedEventList    =
detectEventList         =
casFwdBh                = 0
digitMatchStat          = 4
actionBitMap            = 0x10
casOkFlag               = TRUE (1)
```

```

casAction                = 0
digitFilter              = 0123456789*#
digitCnt                 = 0
Digits Recd              =
useDigitMap              = FALSE (0)
pDigitMap                = NULL
dspPortConnected         = TRUE (1)
dspMsgReceived           = FALSE (0)
pendingPeerMsg           = 0
RetryCount                = 3
minRetryTimeout          = 500
maxRetryTimeout          = 500

```

```

value = 0 = 0x0
8850bru2.1.2.VISM8.a >

```

```

8850bru2.1.2.VISM8.a > dspscodeparams

```

```

dspscodeparams

```

Codec	Codec String	Period (ms)	Packet Preference	IANA Type
1 - G.711u	PCMU	10	8	0
2 - G.711a	PCMA	10	7	8
3 - G.726-32K	G.726-32	10	1	2
4 - G.729a	G.729a	10	2	96
5 - G.729ab	G.729ab	10	1	96
6 - clr chan	CCD	10	9	96
7 - G.726-16K	G726-16	10	3	96
8 - G.726-24K	G726-24	10	4	96
9 - G.726-40K	G726-40	10	6	96
11 - G.723.1-H	G723H	30	10	96
12 - G.723.1a-H	G723AH	30	11	96
13 - G.723.1-L	G723L	30	12	96
14 - G.723.1a-L	G723AL	30	13	96

```

value = 0 = 0x0
8850bru2.1.2.VISM8.a >

```

Additional VISM Setting Information

The **dspscarddsp** command is used to display all card level parameters for both echo cancellation and voice compression DSPs.

```

8850bru2.1.2.VISM8.a > dspscarddsp

```

```

dspscarddsp

```

```

IdlePattern:           54
IdleDirection:         Both
PacketSize:            80 bytes
DB loss:               sixdb
Jitter buffer mode:    fixed
Jitter buffer size:    forty msec
Adaptive Gain Control: off

```

```

value = 0 = 0x0
8850bru2.1.2.VISM8.a >

```

The **dspsendpts** command displays information about all the endpoints on the VISM card.

```

8850bru2.1.2.VISM8.a > dspsendpts

```

```

dspsendpts

```

```

  EndptNum  Ena/Speed

```

```

-----
1      act/ 64k
2      act/ 64k
3      act/ 64k
4      act/ 64k
5      act/ 64k
6      act/ 64k
7      act/ 64k
8      act/ 64k
9      act/ 64k
10     act/ 64k
11     act/ 64k
12     act/ 64k
13     act/ 64k
14     act/ 64k
15     act/ 64k
16     act/ 64k
17     act/ 64k
18     act/ 64k
19     act/ 64k
20     act/ 64k
21     act/ 64k
22     act/ 64k
23     act/ 64k
24     act/ 64k
25     act/ 64k
26     act/ 64k
27     act/ 64k
28     act/ 64k
29     act/ 64k
30     act/ 64k
31     act/ 64k

```

```

value = 0 = 0x0
8850bru2.1.2.VISM8.a >

```

The VISM command **dspxgcpdetailcnts** displays XGCP detail counts, which gives a better view on which counters increase for the MGCP message fail situation.

```

8850bru2.1.2.VISM8.a > dspxgcpdetailcnts

```

```

dspxgcpdetailcnts

```

```

IP Address           : 10.48.84.20
CRCX Count           : 177
CRCX Fail Count      : 0
MDCX Count           : 113
MDCX Fail Count      : 77
DLCX Received Count  : 175
DLCX Received Fail Count : 0
DLCX Sent Count      : 1
DLCX Sent Fail Count : 0
RQNT Count           : 3
RQNT Fail Count      : 0
Notify Count         : 0
Notify Fail Count    : 0
Audit Endpoint Count : 4637024
Audit Endpoint Fail Count : 33
Audit Connection Count : 0
Audit Connection Fail Count : 0
RSIP Count           : 71
RSIP Fail Count      : 70

```

Issue a **dsplnendptstatus <line #>** command to show the link between the line/ds0 numbers and endpoint numbers.

Issue these commands to check the log and card errors.

```
dsplog
dsperr s1 <slot #>
```

Issue these commands to turn the MGCP debug on for the VISM.

```
8850bru2.1.2.VISM8.a > shellConn
8850bru2.1.2.VISM8.a > mgcp_debug_on
mgcp_debug_on
value = 1 = 0x1
8850bru2.1.2.VISM8.a >
-- mgcp_parse_packet() - call mgcp_parse_header
- mgcp_parse_header()- Request Verb FOUND AUEP
- mgcp_parse_packet() - out mgcp_parse_header
- SUCCESS: mgcp_parse_packet()-MGCP Header parsing was OK
- mgcp_parse_parameter_lines(int_ptr: F: ), len: 3
- mgcp_parse_parameter_lines(), code_str:: , code_len:2, str:F:
- mgcp_parse_parameter_lines(str:F: ) -num_toks: 24
- mgcp_parse_parameter_lines() check NULL str(), in_ptr(F: )
- mgcp_parse_parameter_lines() return Parse function in mgcp_parm_rules_array[1]
- mgcp_parse_req_info() is called
- SUCCESS: Request Info parameter line (F:) parsing OK
- mgcp_val_mandatory_parms()
mgcp_val_mandatory_parms()- AUEP case
mgcp_val_mandatory_parms()- AUEP has F:
```

Issue this command to turn it off.

```
8850bru2.1.2.VISM8.a > mgcp_debug_off
```

MGCP Traces for VISM (shellConn)

- **ccDbgPrint** – Retrieves the current debug status.
- **ccDbgOn "DSPM",4,1** – Enables DSP debug.
- **ccDbgOn "CC",4,1** – Enables MGCP debug.
- **ccDbgOn "CC",1,0** – Disables MGCP debug.
- **ccDbgOn "DSPM",1,0** – Disables DSP debug.

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