



2.0.(1.1) Version Release Notes Cisco MGX 8250/8230 VISM

About These Release Notes

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Note

VoIP with G.729ab compression is supported and has been supported beginning with the VISM 1.5(2) release. This fact was unintentionally omitted from earlier release notes

About the 2.0.(1.1) Release

The 2.0.(1.1) release is a maintenance upgrade of the VISM 2.0.(0) release. This release contains:

- All the features and functions of the 2.0.(0) release
- Fixes for inconsistencies found in the 2.0.(0) release
- Support for the O, S, and T lines in the Session Description Protocol (SDP)

This release is compatible with the MGX 8850/8250 release 1.1.32 software.

This release also addresses two anomalies discovered during internal Cisco testing. The two anomalies are:

CSCdt33712 - VISM goes into failed state after several hours.

CSCdt18335 - RUDP is lost and not recovered after running extensive PRI calls



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Both of these anomalies have now been corrected.

About the 2.0.(0) Release

The 2.0.(0) release is an upgrade of the VISM 1.5.(5) release. This release contains all the features and functions of the 1.5.(5) release and, in addition, has the ability to backhaul ISDN PRI signaling from the TDM network to the Call Agent. This release is compatible with the MGX 8850 release 1.1.24

About the 1.5.(5) Release

The 1.5.(5) release is a maintenance upgrade of the VISM 1.5.(4) release with some minor feature enhancements and a small number of corrected anomalies. This release is compatible with the MGX 8850 release 1.1.24.

About the 1.5.(4) Release

The 1.5.(4) release is a maintenance upgrade of the VISM 1.5.(3) release with a small number of Anomalies being corrected. There is also better support for E1 lines. This release is compatible with the MGX 8850 release 1.1.23.

About the 1.5.(3) Release

The 1.5.(3) release is a maintenance upgrade of the VISM 1.5.(2) release with a small number of Anomalies being corrected. This release is compatible with the MGX 8850 release 1.1.23.

About the 1.5.(2) Release

The previous release of VISM, known as Release 1.5.(1), was part of the general MGX 8850 Release 1.1.22.

VISM releases have now been unbundled from the MGX8850.

This VISM release, known as Release 1.5.(2), is, therefore, an independent VISM software release that stands alone and is not part of a general MGX 8850 release. There are, however, compatibility issues regarding which release of VISM can operate with which release of the MGX 8850 and other Cisco products, see the Compatibility section of these release notes for details.

The update procedure included in these release notes should be noted to work around a clrmscnf problem on slots with VISM cards.

Features

This section lists the features supported in each of the VISM 2.0.(1.1), VISM 2.0.(0) and VISM 1.5.(x) releases.

Features Introduced in Release 2.0.(1.1)

- The ability to enable or disable the Call Agent protocol SDP OST feature in the event the peer gateway may or may not support SDP OST. This feature allows interoperability with the Cisco AS5300 Universal Access Server and other equipment.
- The ability for VISM to perform as either the network or user side of the LAPD protocol for PRI backhaul.



Note

These features are supported by two new CLI commands and two modified commands, see section “*Notes and Cautions for Release 2.0.(1.1)*” later in these notes for details.

Features Introduced in Release 2.0.(0)

CCS/PRI backhaul between VISM and a Call Agent in VoIP mode.

Features Introduced in Release 1.5.(5)

Idle channel suppression.
 Support for setting the IP precedence bit.
 Support for Q.50 CAS signaling variant
 Negotiable packetization period.

Features Introduced in Release 1.5.(4)

E1 Backcard support in AAL2 Trunking Mode.
 AAL2 sub-cell multiplexing.

Features Introduced in Release 1.5.(3)

None

Features Introduced in Release 1.5.(2)

VISM 1.5.(2) includes all the features included with Release 1.5.(1) and introduces the following new features:

- E1 backcard support (VoIP mode only).

- Support for the VoIP G.729ab compression scheme.
- The following new CLI commands
 dsploops - display line and endpoint loopbacks
 pinglndsp - display the health of DSPs for a specified line
 dsplndptstatus - display endpoint status for a specified line.
- The addcon command has been modified to allow the user to specify the local VCI to be used for the connection.

Features Introduced in Release 1.5.(1)

The features provided in VISM 1.5.(1) are:

- Provides 8 standard T1 interfaces with B8ZS, AMI & HDB3 line coding.
- Support for voice over ATM using AAL 2 cells (multiplexing only, no LLC/SNAP encapsulation).
- Voice over IP (VoIP) using AAL5 cells to RFC 1889.
- Support for both PCM a-law and u-law.
- Programmable 24, 32, 48, 64, 80, 96, 112, 128 ms near end echo cancellation.
- Voice compression to G.711 and G.726-32K standards.
- Nx64 clear channel (N = 1 only) support.
- Voice activity detection (VAD) and comfort noise generation (CNG) using variable threshold energy (Cisco proprietary).
- Support for call agent Simple Gateway Control Protocol (SGCP) version 1.0, SGCP 1.1+, and Media Gateway Control Protocol (MGCP) 0.1.
- Support for CCS signaling transport across an AAL5 trunk.
- Support for Fax and modem VoIP bearer transmissions.
- Support for dual (redundant) virtual circuits across the packet network
- Support for full continuity testing (COT). Supports origination and terminating loopback and transponder COT towards the packet bearer and the TDM sides.
- Support for looptiming, payload and line loopbacks.
- 1:N cold redundancy using SRM-3T3 capabilities (bulk mode support for T1 lines only). Call do not persist during switchover.
- Courtesy downing of ongoing voice calls when the VISM is taken out of service for maintenance or other reasons.

Release 2.0.(1.1) VISM Hardware

VISM hardware consists of two versions of a front card, one supporting T1 and one supporting E1.

The following versions of back card are supported by VISM Rel. 2.0.(1.1):

An 8-port T1 version using RJ48 connectors.

An 8-port E1 version using RJ48 connectors.

An 8-port E1 version using SMB connectors.

Each of the above backcards also has a redundant version.

Release 2.0.(1) hardware front cards and back cards and their revisions that are supported are as follows:

Front card model #	Rev #	Back card model #	Rev #
Ax-VISM-8T1	B1	AX-RJ48-8T1	A
		AX-R-RJ48-8T1	A
AX-VISM-8E1	B1	AX-SMB-8/E1	A
		AX-R-SMB-8E1	A
		AX-RJ48-8/E1	A
		AX-R-RJ48-8E1	A



Note

The E1 versions of the above front and back cards are supported only when VISM is operating in VoIP mode.

VISM Hardware not supported on Release 2.0.(1.1)

None

Redundancy

Support for 1:N and 1:1 Service Module Redundancy, as indicated in the table below:

Front card model #	Redundancy supported
MGX-VISM-8T1	1:N redundancy (bulk mode support for T1 lines only)
MGX-VISM-8E1	1:N redundancy (bulk mode support for T1 lines only)

Support for Bulk Distribution using SRM-3T3B card.

Features not Supported in this Release:

- CAS Backhaul
- VBR Provisioning - Although the CLI allows the user to specify VBR (variable bit rate), VISM does not actually provision the card for VBR in this release.
- ABR/UBR Provisioning - These connections are not supported in this release and not connections are made when these parameters are specified by the user through the CLI.
- Of the total of 248 ds0's on 8 E1 lines, support is for 240 ds0's only.

**Note**

Code for the above features may be included in the VISM code image. However, no specific mechanism has been included to prevent the use of these unsupported features. If the user attempts to use these unsupported features, there is no guarantee that the features will operate correctly.

VISM MIB:

The VISM MIB is being provided with the delivery of Release 2.0.(1.1) of the VISM software bundles with the MGX 8250 software on CCO and is located at:

<http://www.cisco.com/kobayashi/sw-center/wan/wan-planner.shtml>

Under MGX8250, select the release (in this case 1.1.32) and click GO.

When the selected FW *.tar file is downloaded, un tar the file & you will find all the latest MIBs bundled with this release.

The MIB is in standard ASN.1 form and may be compiled with most standards-based MIB compilers. For changes in this MIB from release 1.5.(1) please refer to the MIB release notes on CCO.

**Note**

Among the new MIB's in this release, there are 3 MIB's that are not related to the features in this release and are not used in this release. They are:

vismXgcpBearerNetworkType
vismXgcpBearerVCType
vismXgcpBearerConnectionType

Notes and Cautions for Release 2.0.(1.1)

Do NOT upgrade the VISM backup boot firmware as this may render the VISM card inoperable.

**Note**

All other Notes and Cautions for Release 1.5.(2) still apply (see below).

VISM Call Limitation

VISM 2.0.(1.1) has the limitation of handling up to a maximum of 10 calls per second per VISM card.

CLI Modifications and Changes:

Release 2.0.(1.1) includes two new CLI commands and two modified commands.

New Commands:

cnfxgcpinteropsdpost.

Use the **cnfxgcpinteropsdpost** command to enable or disable SDP (Session Descriptor Protocol) OST interoperability in the Call Control protocol. When a CRCX or a MDCX command is received from the Call Agent, VISM can respond by building SDP OST (0=, s=, and t=) lines. If a peer gateway does not support SDP OST, this command can be used to disable VISM from building SDP OST lines.

The syntax for this command is:

cnfxgcpinteropsdpost <*SdpOstFlag*>

where SWdpOstFlag = Enable or disable SDP OST interoperability. 1 = enable, 2 = disable. The default is 1 = enable.

dspxgcpinterops.

Use the **dspxgcpinterops** command to display the status of the SDP OST interoperability feature.

The syntax for this command is:

dspxgcpinterops

Modified Commands:

addlapd

The add LAPD command (addlapd) has a new parameter named *lapdside*

The syntax is now:

addlapd <*line number*><*ds0 number*>[<*lapd side*>][<*lapd app type*>]

This new parameter allows the user to specify whether VISM should perform as the Network or User side of the LAPD protocol. 1 = network, 2 = user. The default is 1 = network.

This command is used to setup PRI backhaul.

cnflapdwinsize

The cnflapdwinsize command has been modified in that the window size parameter now takes values in the range 1 - 127 (the range was 1 - 128).

Notes and Cautions for Release 2.0.(0)

Do NOT upgrade the VISM backup boot firmware as this may render the VISM card inoperable.

None -All other Notes and Cautions for Release 1.5.(2) still apply (see below).

Notes and Cautions for Release 1.5.(5)

Do NOT upgrade the VISM backup boot firmware as this may render the VISM card inoperable.

None -All other Notes and Cautions for Release 1.5.(2) still apply (see below).

Notes and Cautions for Release 1.5.(4)

Do NOT upgrade the VISM backup boot firmware as this may render the VISM card inoperable.

None -All other Notes and Cautions for Release 1.5.(2) still apply (see below).

Notes and Cautions for Release 1.5.(3)

Do NOT upgrade the VISM backup boot firmware as this may render the VISM card inoperable.

None - All other Notes and Cautions for Release 1.5.(2) still apply (see below).

Notes & Cautions For Release 1.5.(2)

Do NOT upgrade the VISM backup boot firmware as this may render the VISM card inoperable.

CLI modification and changes:

- The following new CLI commands
 dsploops - display line and endpoint loopbacks. This command has no parameters.
 pingIndsp <line #>- display the health of DSPs for a specified line
 dsplnendptstatus <line#>- display the endpoint status for a specified line.
- The following CLI commands are not supported in Release 1.5.(2)
 cnfcasxgcp - configure CAS CGCP.
- The dspxcgcpstat and dspxcgcpstats commands have been renamed to dspxcgcpent and dspxcgcpents respectively.
- Both codec templates, 1 and 2, now include clear channel
- The addcon command has been changed to include a new “localVCI” parameter. Also the permissible ranges for the addcon PCR parameter have been changed.

The format of the addcon command is now:

```
addcon <localVCI><preference><pvcType><application><PCR><mastership>[<remoteConnId>]
```

Where:

localVCI	The local VCI to be used for the connection in the range 131 - 510. The value entered is also used as the LCN value.
preference	Specifies the use of a primary or secondary channel, 1 for primary, 2 for secondary.
pvcType	Specifies the AAL type of the connection. 1 for AAL5, 2 for AAL2
application	The application of the connection. 1 = control, 2 = bearer, 3 = signaling. If the connection is used for bearer and signaling, specify 2 for bearer
PCR	Peak cell rate in Cells per Second. Ranges are: 1 - 75600 for VoIP bearer, 1 - 24400 for VoIP control, 1 - 50000 for AAL2 T1, 1- 60000 for AAL2 E1, 1 - 400 for AAL2 signaling (trunking).
mastership	Specifies the connection as master or slave. 1 = master, 2 = slave (default).
remoteConnId	Remote connection identifier. This parameter has the format “nodename.slot.port.vpi.vci”. (This parameter is used only when mastership is set to 1).

Problems Fixed in Release 2.0.(1.1)

Bug ID	Description
CSCdt33712	<p>Title: VISM goes into failed state after several hours.</p> <p>Description: After the VISM is configured and is active for an undetermined number of hours, the VISM may fail and report that it's in a Failed State. The Card will recover after a reset.</p> <p>Workaround: None, this problem has been resolved.</p>
CSCdt18335	<p>Title: RUDP is lost and not recovered after running extensive PRI calls</p> <p>Description: After extensive PRI calls and is under heavy load, the VISM will crash due to memory corruption in the RUDP task.</p> <p>Workaround: None, this problem has been resolved.</p>
CSCdr91649	<p>Title: SDP o, s, and t parameters for 5300 VoIP InterOp are not supported</p> <p>Description: VISM does not include (o=, s= and t=) SDP lines in the response to CRCX or MDCX command sent from 5300. VISM also rejects CRCX command which contains (o=, s= and t=) SDP lines. This is a interoperability problem. VISM receives a CRCX/MDCX command which contain (o=, s= and t=) SDP lines or VISM revives a CRCX/MDCX command without SDP lines.</p> <p>Workaround: None, this problem has been resolved.</p>
CSCds35222	<p>Title: VISM will not allow any other subnet mask besides 255.255.255.248.</p> <p>Description: It is required that masks other than 255.255.255.248 can be used so that users can use the IP addresses of their choice.</p> <p>Workaround: None, this problem has been resolved.</p>
CSCds55478	<p>Title: The cnflntrunkcond does not execute correctly.</p> <p>Description: Unable to do cnflntrunkcond even when there are no endpoints</p> <p>Workaround: None, this problem has been resolved.</p>
CSCds89960	<p>Title: Normal Values for VPN Group InactivityTimeout keyword not validated.</p> <p>Description: Regular values of InactivityTimeout keyword in the VPN Group Section are not being validated. For example, for the value of 40 seconds, the following message is generated:</p> <p>Numeric value out of range (too high): `40',for the InactivityTimeout, at the `InactivityTimeout' prompt</p> <p>The regular values are between 0 and 65535 seconds and 0 is the default.</p> <p>Workaround: None, this problem has been resolved.</p>
CSCdr58602	<p>Title: DTMF is not supported for G729 in VoIP</p> <p>Description: For VoIP application, DTMF digit relay fails for G.729a and G.729ab codecs. The failure is determined to be due to the digit being leaked out over bearer while simultaneously being relayed as NSE packet.</p> <p>Work around: None, this problem has been resolved.</p>

Problems Fixed in Release 2.0.(0)

VoIP Mode

Bug ID	Description
CSCdr58602	<p>Headline: DTMF is not supported for G729 in VoIP.</p> <p>For VoIP application, DTMF digit relay fails for G.729a and G.729ab codecs. The failure is determined to be due to the digit being leaked out over bearer while simultaneously being relayed as NSE packet.</p> <p>Work around: None. Do not use G.729a, G.729ab for VoIP application.</p>

AAL2 Mode .

Bug ID	Description
CSCdr63059	<p>Headline: DTMF Digits failure during the call</p> <p>Problem: When a call originates at VISM A and VISM B tests the speech path using digits transmitted from the terminating end (VISM B), a failure rate of 0.1% is observed for Digit ON time less than 80 - msecs (OFF time fixed at 60 msec). Failure rate increases as ON time is decreased.</p> <p>The failure rate is observed to be independent of DTMF digit relay being turned ON or turned OFF</p> <p>Work Around: Use a digit ON time greater than 120 msecs.</p>

Problems Fixed in Release 1.5.(5)

AAL2 Mode Anomalies.

Bug ID	Description
CSCdr22479	<p>Headline: PSQM high scores with VAC on.</p> <p>Description: The PSQM threshold was set to be at 2.5, however, the resulting scores were in the 6.5 range. Post analysis showed that leading edge and trailing edge were missing.</p>
CSCdr26132	<p>Headline: CAC was enabled even when the connection bandwidth was in excess of the allowed bandwidth.</p> <p>Description: Added connections (PVC) with a specific PCR, and added CIDS without CAC enabled. Reenabling CAC should fail to enable the CAC on the card because the current bandwidth was in excess of the allowed bandwidth. Instead of failing to enable CAC, CAC is enabled.</p>
CSCdr26900	<p>Headline: Upspeeded CID is not down speeded when FAX call made</p> <p>Description: When the FAX call was made with both the end of the connections were in MASTER mode of CAC, one end of CID upspeeded but the other end did not. After the FAX call was disconnected, the upspeeded end of the CID did not return to the original Codec type. Subsequent calls were not able to be made.</p> <p>Workaround: Configure connection CAC to Slave before making any calls.</p>

VoIP Mode Anomalies

Bug ID	Description
CSCdr08976 VoIP	Headline:E1 Vism allows calls with depleted bandwidth. Description: After 60 call completions, VISM begins to borrow or deplete bandwidth from stable calls to be used in newly setup calls.This results in tone verification failure and calls getting torn down. Once PVC bandwidth has been depleted with active calls, VISM should reject any new incoming calls. Currently it does not.
CSCdr13493 VoIP	Headline: Vism E1: Ecan/Vad not disabled during modem call detection Description: Make a modem call from the PC to the NAS via the DMS/VSC/VISM. The VISM-E1 does not dynamically disable ECAN during the detection of the modem call. After entering the VISM shellconn/CLI to disable ECAN/VAD and ignore ECAN/VAD, and changing jitter=20ms, the modem call is established with V.90 mode.

Problems Fixed in Release 1.5.(4)**AAL2 Mode Anomalies.**

Bug ID	Description
CSCdp49340 VoAAL2	Headline: cnfcon does not change the PCR Description: When the value of the PCR parameter is changed through the cnfcon command, Vism does not change the value in the MIB
CSCdp72954 VoAAL2	Headline: LOS does not cause Vism to switch clock if vism is clocking the shelf Description: When the VISM line is used to clock the MGX shelf, if the VISM gets a loss of signal on the T1 line, or, if the line from which clock is derived is deleted, the PXM does not switch to the secondary clock source as expected. Loss of clock is recognized at the PXM only when the VISM port is down (when a card is reset or if a port is deleted).
CSCdr16013 VoAAL2	Headline: Vism & 3810 Tx ones (seizures) on last 6 ds0s to pbx. Description: Vism & 3810 Tx ones (seizures) on last 6 ds0s to pbx. On testbed (pbx loop - i.e. no 4ESS connection), both 3810 & Vism are transmitting ones on ds0s 19 to 24.

VoIP Mode Anomalies

Bug ID	Description
CSCdr17034 VoIP	Headline: Unable to detect co2 in transponder mode. Description: The NTFY message is not forwarded to the CA and cot fails.

Problems Fixed in Release 1.5.(3)

Bug ID	Description
CSCdr16005 VoAAL2	<p>Headline: Manual call upspeeds by itself after static pops</p> <p>Description: While testing CCS INC to Frame with 20 Hammer calls up, one modem call up and one manual call, the manual call would have a static pop and then upspeed and downspeed. Testing with CNN on one end of the call this was happening about every second. With two people talking, it happened much less often but still happened.</p>
CSCdr16020 VoAAL2	<p>Headline: Vism sending packets to Cisco 3810 when no voice call is active.</p> <p>Description:</p>
CSCdr12039 VoAAL2	<p>Headline: Vism bulk stress test call failure</p> <p>Description: During test using using the VCO4k some degradation in tone shaping was detected. the VCO4k flag these calls as failed. No call drops resulted from this condition.</p>

Problems Fixed in Release 1.5.(2)

Bug ID	Description
CSCdp69061	<p>Headline: vism cards reset during 15 cps test</p> <p>Description: During a 15 cps test, all vism cards reset unexpectedly stopping all traffic.Cause is being investigated.</p> <p>Workaround: None</p>
CSCdp68582	<p>Headline: Loss of voice quality on PXM to PXM calls</p> <p>Description: Some voice dropout and clipping experienced during testing on PXM to PXM calls. Cause is being investigated.</p> <p>Workaround: None.</p>
CSCdp66621	<p>Headline: Slower data rates when modem calls pass through vism cards</p> <p>Description: When modem calls were passed through VISM, the achieved data rates were lower than expected.</p> <p>Workaround: Modem support is limited to V.34 in this release</p>

Compatibility Notes

VISM Software Interoperability with MGX 8250/8230 Platform Software

PCB Description	CW2000 Name	Latest F/W	Min F/W
PXM1	PXM-1	1.1.32	1.1.32
PXM1-2-T3E3	PXM1-2T3E3	1.1.32	1.1.32
PXM1-4-155	PXM1-4OC3	1.1.32	1.1.32
PXM1-1-622	PXM1-OC12	1.1.32	1.1.32
MGX-SRM-3T3/B	SRM-3T3	n/a	n/a
AX-CESM-8E1	CESM-8E1	10.0.21	10.0.21
AX-CESM-8T1	CESM-8T1	10.0.21	10.0.21
MGX-AUSM-8E1/B	AUSMB-8E1	10.0.21	10.0.21
MGX-AUSM-8T1/B	AUSMB-8T1	10.0.21	10.0.21
MGX-CESM-T3	CESM-T3	10.0.21	10.0.21
MGX-CESM-E3	CESM-E3	10.0.21	10.0.21
AX-FRSM-8E1/E1-C	FRSM-8E1	10.0.21	10.0.21
AX-FRSM-8T1/T1-C	FRSM-8T1	10.0.21	10.0.21
MGX-FRSM-HS2	FRSM-HS2	10.0.22	10.0.22
MGX-FRSM-2CT3	FRSM-2CT3	10.0.22	10.0.22
MGX-FRSM-2T3E3	FRSM-2T3	10.0.22	10.0.22
MGX-FRSM-2T3E3	FRSM-2E3	10.0.22	10.0.22
MGX-FRSM-HS1/B	FRSM-HS1/B	10.0.21	10.0.21
MGX-VISM-8T1	VISM-8T1	2.0.(1)	1.5.(5)
MGX-VISM-8E1	VISM-8E1	2.0.(1)	1.5.(5)
CWM		10.4*	10.4*

Table 1 VISM 2.0.(1) Software Interoperability with other Cisco Products

Cisco 3810	MC3810_A2JSV5_MZ.121_1.XA2
Network Management Software:	CWM 10.4*
CiscoView:	Bundled in CWM 10.4
Virtual Switch Controller Software	VSC 7.4(11)

Table 2 VISM 2.0.(1.1) Software Boot and Runtime Firmware Requirements:

Board Pair	Latest Boot Code Version	Minimum Boot Code Version	Firmware	Latest Firmware Version	Minimum Firmware Version
MGX-VISM-8T1	vism_8tle1_VI8_BT_2.0.1.fw	1.0.02	vism_8tle1_002.000.001.001.fw	2.0.(1.1)	2.0.(1.1)
MGX-VISM-8E1	vism_8tle1_VI8_BT_2.0.1.fw	1.0.02	vism_8tle1_002.000.001.001.fw	2.0.(1.1)	2.0.(1.1)

Table 3 VISM 2.0.(0) Software Boot and Runtime Firmware Requirements:

Board Pair	Latest Boot Code Version	Minimum Boot Code Version	Firmware	Latest Firmware Version	Minimum Firmware Version
MGX-VISM-8T1	vism_8tle_VI8_BT_1.0.02.fw	1.0.02	vism_8tle1_002.000.000.000.fw	2.0.00	2.0.00
MGX-VISM-8E1	vism_8tle_VI8_BT_1.0.02.fw	1.0.02	vism_8tle1_002.000.000.000.fw	2.0.00	2.0.00

Table 4 VISM 1.5.(5) Software Boot and Runtime Firmware Requirements:

Board Pair	Latest Boot Code Version	Minimum Boot Code Version	Firmware	Latest Firmware Version	Minimum Firmware Version
MGX-VISM-8T1	vism_8tle_VI8_BT_1.0.02.fw	1.0.02	vism_8tle1_1.5.0_5.fw	1.5.(5)	1.5.(5)
MGX-VISM-8E1	vism_8tle_VI8_BT_1.0.02.fw	1.0.02	vism_8tle1_1.5.0_5.fw	1.5.(5)	1.5.(5)

:

Table 5 VISM 1.5.(4) Software Boot and Runtime Firmware Requirements:

Board Pair	Latest Boot Code Version	Minimum Boot Code Version	Firmware	Latest Firmware Version	Minimum Firmware Version
MGX-VISM-8T1	vism_8tle_VI8_BT_1.0.02.fw	1.0.02	vism_8tle1_1.5.0_4.fw	1.5.(4)	1.5.(4)
MGX-VISM-8E1	vism_8tle_VI8_BT_1.0.02.fw	1.0.02	vism_8tle1_1.5.0_4.fw	1.5.(4)	1.5.(4)

Table 6 VISM 1.5.(3) Software Boot and Runtime Firmware Requirements:

Board Pair	Latest Boot Code Version	Minimum Boot Code Version	Firmware	Latest Firmware Version	Minimum Firmware Version
MGX-VISM-8T1	vism_8tle_VI8_BT_1.0.02.fw	1.0.02	vism_8tle1_1.5.0_2.fw	1.5.(3)	1.5.(3)
MGX-VISM-8E1	vism_8tle_VI8_BT_1.0.02.fw	1.0.02	vism_8tle1_1.5.0_2.fw	1.5.(3)	1.5.(3)

Table 7 VISM 1.5.(2) Software Boot and Runtime Firmware Requirements:

Board Pair	Latest Boot Code Version	Minimum Boot Code Version	Firmware	Latest Firmware Version	Minimum Firmware Version
MGX-VISM-8T1	vism_8tle_VI8_BT_1.0.02.fw	1.0.02	vism_8tle1_1.5.0_2.fw	1.5.(2)	1.5.(2)
MGX-VISM-8E1	vism_8tle_VI8_BT_1.0.02.fw	1.5.(2)	vism_8tle1_1.5.0_2.fw	1.5.(2)	1.5.(2)

Table 8 VISM 1.5.(1) Software Boot and Runtime Firmware Requirements:

Board Pair	Latest Boot Code Version	Minimum Boot Code Version	Firmware	Latest Firmware Version	Minimum Firmware Version
MGX-VISM-8T1	vism_8tle_VI8_BT_1.0.02.fw	1.0.01	vism_8tle1_VI8_1.5_01fw	1.5.(1)	1.5.(1)
MGX-VISM-8E1	vism_8tle_VI8_BT_1.0.02.fw	1.0.01	vism_8tle1_VI8_15_01.fw	1.5.(1)	1.5.(1)

Special Installation and Upgrade Requirements

VISM Firmware Download Procedure

- Step 1** Download the selected revision of service module firmware into the service module in the selected slot.

```
tftp <node_name or IP address>
bin
put <backup boot> POPEYE@SM_1_<slot#>.BOOT
quit
```

- Step 2** Proceed to Step 2a. to upgrade all VISM cards or proceed to Step 2b. to upgrade an individual VISM card.

```
a. put <FW file> POPEYE@SM_1_0.FW
quit
b. put <FW file> POPEYE@SM_1_<slot number of card to upgrade>.FW
quit
```



Note Do not enter two **put** commands in the same TFTP session.

- Step 3** Proceed to the “VISM Upgrade to 2.0.(1)” section on page 16 to install the download.

VISM Upgrade to 2.0.(1)

From VISM 2.0.(0)

VISM support a graceful upgrade (one in which the existing VISM configuration is preserved throughout the upgrade procedure) from Release 2.0.(0) to Release 2.0.(1.1).

Initial Conditions

The following initial conditions are required before the graceful upgrade procedure can be started.

- The MGX 8250/8230 must be configured with at least two VISM cards in a redundant configuration (see the add redundancy, **addred**, command in the MGX 8850 Command Reference for details).
- The VISM cards must be running VISM 2.0.(0) and be configured to the desired configuration.
- The VISM new software must have been already downloaded to the MGX 8850 (see the VISM Release Notes for the new version for details).

Upgrade Procedure

In the following procedure:

- Two VISM card are involved, one initially active and one initially standby. In this procedure description, the initially active VISM is identified as VISM 1 and the initially standby VISM as VISM 2.
- Old-rev refers to the firmware before the upgrade (2.0.(0)).
- New-rev refers to the firmware after the upgrade (2.0.(1.1)).

Step 1 Logon to the active PXM card (slot 7 or 8).

Step 2 Execute the PXM **install** command:

```
install sm<SM slot#><new-rev>
```

where:

SM slot# is the slot number of the VISM 2 card and new-rev is the file name of the new firmware (for example vism_8tle1_002.000.001.001.fw).

This command causes the standby VISM 2 to reset and come up in the “hold” state, running the new-rev firmware. The active VISM 1 is unaffected by this command. At this point the primary firmware still the old-rev and the secondary firmware is new-rev.

Step 3 Execute the PXM newrev command:

```
newrev sm<SM slot#><new-rev>
```

where:

SM slot# is the slot number of the VISM 2 and new-rev is the filename of the new firmware.

This command causes the VISM 2 to become the active VISM running the new-rev firmware. The previously active VISM 1 changes to a “hold” state and is still running the old-rev firmware. The primary and secondary firmware switches with the new-rev becoming the primary firmware.

Step 4 Execute the PXM commit command:

```
commit sm<SMslot#><new-rev>
```

where:

SM slot# is the slot number of the standby VISM 1 and new-rev is the filename of the new firmware. This command causes both VISM cards to run the new-rev firmware. At first, VISM 2 is the active VISM with VISM 1 remaining in the hold state. After a short time, the cards switch automatically with VISM 1 becoming the active card and VISM 2 the standby card.

The two VISM cards are now back to their original condition except that both cards are now running the new-rev firmware.

- Step 5** Logon to the active VISM card and use the display commands (dspndpts, dspcasvar, etc.) to confirm that the configuration has been preserved through the upgrade process.

It is also recommended that a further verification be performed by making some minor modifications to the configuration, checking that the changes have been executed correctly, and then changing the configuration back again.

From VISM 1.5(x)

VISM 2.0.(1.1) does not provide a procedure for the graceful upgrade (one in which the existing VISM configuration is preserved throughout the upgrade procedure) from the 1.5 releases.

If upgrading from a VISM release 1.5, please execute clrallcnf and start loading the software as if it's a new system configuration or clrsmcnf for individual card configuration (verify that there are no connections configured first).



Note

The printed version of the VISM Installation and Configuration Guide, Release 2.0 states that a graceful upgrade is available from VISM release 1.5.3 onwards. This statement is in error, the graceful upgrade can only be performed from VISM 2.0(0). This error has been corrected in the on-line (CCO) version of the document.

Known Anomalies for VISM

VISM 2.0.(1) Anomalies

There are no known severity 1 or 2 anomalies in this release. There are a number of severity 3 anomalies that can be found using the software bug navigator. These anomalies will be fixed in the next maintenance release.

VISM 1.5.(5) Anomalies

The following is the list of known anomalies in the VISM service module, Release 1.5.(5) delivery. Included with each is a brief discussion of the problem.

VoIP Mode Anomalies

Bug ID	Description
CSCdr58602	<p>Headline: DTMF is not supported for G729 in VoIP.</p> <p>For VoIP application, DTMF digit relay fails for G.729a and G.729ab codecs. The failure is determined to be due to the digit being leaked out over bearer while simultaneously being relayed as NSE packet.</p> <p>Work around: None. Do not use G.729a, G.729ab for VoIP application.</p>

AAI2 Mode Anomalies.

Bug ID	Description
CSCdr63059	<p>Headline: DTMF Digits failure during the call</p> <p>Problem: When a call originates at VISM A and VISM B tests the speech path using digits transmitted from the terminating end (VISM B), a failure rate of 0.1% is observed for Digit ON time less than 80 - msec (OFF time fixed at 60 msec). Failure rate increases as ON time is decreased.</p> <p>The failure rate is observed to be independent of DTMF digit relay being turned ON or turned OFF</p> <p>Work Around: Use a digit ON time greater than 120 msec.</p>

VISM 1.5.(4) Anomalies

The following is the list of known anomalies in the VISM service module, Release 1.5.(4) delivery. Included with each is a brief discussion of the problem.

AAI2 Mode Anomalies.

Bug ID	Description
CSCdr22479	<p>Headline: PSQM high scores with VAC on.</p> <p>Description: The PSQM threshold was set to be at 2.5, however, the resulting scores were in the 6.5 range. Post analysis showed that leading edge and trailing edge were missing.</p>
CSCdr26132	<p>Headline: CAC was enabled even when the connection bandwidth was in excess of the allowed bandwidth.</p> <p>Description: Added connections (PVC) with a specific PCR, and added CIDS without CAC enabled. Reenabling CAC should fail to enable the CAC on the card because the current bandwidth was in excess of the allowed bandwidth. Instead of failing to enable CAC, CAC is enabled.</p>
CSCdr26900	<p>Headline: Upspeeded CID is not down speeded when FAX call made</p> <p>Description: When the FAX call was made with both the end of the connections were in MASTER mode of CAC, one end of CID upspeeded but the other end did not. After the FAX call was disconnected, the upspeeded end of the CID did not return to the original Codec type. Subsequent calls were not able to be made.</p> <p>Workaround: Configure connection CAC to Slave before making any calls.</p>

VoIP Mode Anomalies

Bug ID	Description
CSCdr08976 VoIP	<p>Headline: E1 Vism allows calls with depleted bandwidth.</p> <p>Description: After 60 call completions, VISM begins to borrow or deplete bandwidth from stable calls to be used in newly setup calls. This results in tone verification failure and calls getting torn down. Once PVC bandwidth has been depleted with active calls, VISM should reject any new incoming calls. Currently it does not.</p>
CSCdr13493 VoIP	<p>Headline: Vism E1: Ecan/Vad not disabled during modem call detection</p> <p>Description: Make a modem call from the PC to the NAS via the DMS/VSC/VISM. The VISM-E1 does not dynamically disable ECAN during the detection of the modem call. After entering the VISM shellconn/CLI to disable ECAN/VAD and ignore ECAN/VAD, and changing jitter=20ms, the modem call is established with V.90 mode.</p>

VISM 1.5.(3) Anomalies

The following is the list of known anomalies in the VISM service module, Release 1.5.(3) delivery. Included with each is a brief discussion of the problem.

AAL2 Mode Anomalies.

Bug ID	Description
CSCdp49340 VoAAL2	<p>Headline: cnfcon does not change the PCR</p> <p>Description: When the value of the PCR parameter is changed through the cnfcon command, Vism does not change the value in the MIB</p>
CSCdp72954 VoAAL2	<p>Headline: LOS does not cause Vism to switch clock if vism clocking the shelf</p> <p>Description: When the VISM line is used to clock the MGX shelf, if the VISM gets a loss of signal on the T1 line (OR) if the line from which clock is derived is deleted, the PXM does not switch to the secondary clock source as expected. Loss of clock is recognized at the PXM only when the VISM port is down (when a card is reset or if a port is deleted).</p>
CSCdr16013 VoAAL2	<p>Headline: Vism & 3810 Tx ones (seizures) on last 6 ds0s to pbx.</p> <p>Description: Vism & 3810 Tx ones (seizures) on last 6 ds0s to pbx. On testbed (pbx loop - i.e. no 4ESS connection), both 3810 & Vism are transmitting ones on ds0s 19 to 24.</p>

VoIP Mode Anomalies

Bug ID	Description
CSCdr08976 VoIP	Headline: E1 Vism allows calls with depleted bandwidth. Description: After 60 call completions, VISM begins to borrow or deplete bandwidth from stable calls to be used in newly setup calls. This results in tone verification failure and calls getting torn down. Once PVC bandwidth has been depleted with active calls, VISM should reject any new incoming calls. Currently it does not.
CSCdr13493 VoIP	Headline: Vism E1: Ecan/Vad not disabled during modem call detection Description: Make a modem call from the PC to the NAS via the DMS/VSC/VISM. The VISM-E1 does not dynamically disable ECAN during the detection of the modem call. After entering the VISM shellconn/CLI to disable ECAN/VAD and ignore ECAN/VAD, and changing jitter=20ms, the modem call is established with V.90 mode.
CSCdr17034 VoIP	Headline: Unable to detect co2 in transponder mode. Description: The NTFY message is not forwarded to the CA and cot fails.

VISM 1.5.(2) Anomalies

The following is the list of known anomalies in the VISM service module, Release 1.5.(2) delivery. Included with each is a brief discussion of the problem.

AAL2 Mode Anomalies.

Bug ID	Description
CSCdp49340 VoAAL2	Headline: cnfcon does not change the PCR Description: When the value of the PCR parameter is changed through the cnfcon command, Vism does not change the value in the MIB
CSCdp72954 VoAAL2	Headline: LOS does not cause Vism to switch clock if vism clocking the shelf Description: When the VISM line is used to clock the MGX shelf, if the VISM gets a loss of signal on the T1 line (OR) if the line from which clock is derived is deleted, the PXM does not switch to the secondary clock source as expected. Loss of clock is recognized at the PXM only when the VISM port is down (when a card is reset or if a port is deleted).
CSCdr12039 VoAAL2	Headline: Vism bulk stress test call failure Description: During test using using the VCO4k some degradation in tone shaping was detected. the VCO4k flag these calls as failed. No call drops resulted from this condition.
CSCdr16013 VoAAL2	Headline: Vism & 3810 Tx ones (seizures) on last 6 ds0s to pbx. Description: Vism & 3810 Tx ones (seizures) on last 6 ds0s to pbx. On testbed (pbx loop - i.e. no 4ESS connection), both 3810 & Vism are transmitting ones on ds0s 19 to 24.

CSCdr16005 VoAAL2	<p>Headline: Manual call upspeeds by itself after static pops</p> <p>Description: While testing CCS INC to Frame with 20 Hammer calls up, one modem call up and one manual call, the manual call would have a static pop and then upspeed and downspeed. Testing with CNN on one end of the call this was happening about every second. With two people talking, it happened much less often but still happened.</p>
CSCdr16020 VoAAL2	<p>Headline: Vism sending packets to Cisco 3810 when no voice call is active.</p> <p>Description:</p>

VoIP Mode Anomalies

Bug ID	Description
CSCdr08976 VoIP	<p>Headline:E1 Vism allows calls with depleted bandwidth.</p> <p>Description: After 60 call completions, VISM begins to borrow or deplete bandwidth from stable calls to be used in newly setup calls.This results in tone verification failure and calls getting torn down. Once PVC bandwidth has been depleted with active calls, VISM should reject any new incoming calls. Currently it does not.</p>
CSCdr13493 VoIP	<p>Headline: Vism E1: Ecan/Vad not disabled during modem call detection</p> <p>Description: Make a modem call from the PC to the NAS via the DMS/VSC/VISM. The VISM-E1 does not dynamically disable ECAN during the detection of the modem call. After entering the VISM shellconn/CLI to disable ECAN/VAD and ignore ECAN/VAD, and changing jitter=20ms, the modem call is established with V.90 mode.</p>
CSCdr17034 VoIP	<p>Headline: Unable to detect co2 in transponder mode.</p> <p>Description: The NTFY message is not forwarded to the CA and cot fails.</p>

VISM 1.5.(1) Anomalies

The following is the list of known anomalies in the VISM service module, Release 1.5.(1) delivery. Included with each is a brief discussion of the problem. A more in depth discussion is available in the release note enclosure of the problem record in Bug Navigator.

Bug ID	Description
CSCdp69061	<p>Headline: vism cards reset during 15 cps test</p> <p>Description: During a 15 cps test, all vism cards reset unexpectedly stopping all traffic.Cause is being investigated.</p> <p>Workaround: None</p>

CSCdp68582	<p>Headline: Loss of voice quality on PXM to PXM calls.</p> <p>Description: Some voice dropout and clipping experienced during testing on PXM to PXM calls. Cause is being investigated.</p> <p>Workaround: None.</p>
CSCdp66621	<p>Headline: Slower data rates when modem calls pass through vism cards.</p> <p>Description: When modem calls were passed through VISM, the achieved data rates were lower than expected.</p> <p>Workaround: Modem support is limited to V.34 in this release.</p>

VISM 1.0 Anomalies

The following is the list of known anomalies in the MGX 8850 VISM service module, Release 1.00 delivery. Included with each is a brief discussion of the problem. A more in depth discussion is available in the release note enclosure of the problem record in Bug Navigator.

Bug ID	Description
CSCdp20174	<p>Symptom:</p> <p>VISM does not recognize LOS</p> <p>Description:</p> <p>If T1 cables are disconnected from the VISM card, or the connected channel bank is powered off, the VISM card does not detect LOS. The card still acts like the line is connected. Reported by ATT Piscataway, MR:000233, Jan Sussman</p>
CSCdp21467	<p>Symptom: VISM ignores echo setting</p> <p>Description: When sending SGCP messages that tell the VISM to turn on echo cancellation, the actual endpoints setup do not have ecan turned on.</p> <p>WorkAround: The work around for this issue in VISM 1.0 is to use the shellcon command <code>ccIgnoreLcoEcan</code>. Please note that this change via the use of this command is not persistent. This command needs to be re-executed everytime VISM is reset/re-booted.</p>
CSCdp32764	<p>Symptom: Undeleted Connections existed on VISM after overnight calls</p> <p>Description: We have set up the VISM to originate and terminate on same T1 line, We ran the overnight calls and we observed that each endpoint had connection associated with it. VSC was sending DLCX message but VISM was responding with 510 NACK message and reason code was - CALL/Endpoint Unknown.</p>

Obtaining Service and Support

For service and support for a product purchased from a reseller, contact the reseller. Resellers offer a wide variety of Cisco service and support programs, which are described in the section “Service and Support” in the information packet that shipped with your chassis.

**Note**

If you purchased your product from a reseller, you can access Cisco Connection On-line (CCO) as a guest. CCO is Cisco Systems' primary, real-time support channel. Your reseller offers programs that include direct access to CCO's services.

For service and support for a product purchased directly from Cisco, use CCO.

Cisco Connection On-line

Cisco Connection On-line (CCO) is Cisco Systems' primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.

Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco's customers and business partners. CCO services include product information, product documentation, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

- WWW: <http://www.cisco.com>
- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: cco.cisco.com
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.

**Note**

If you are a network administrator and need personal technical assistance with a Cisco product that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or tac@cisco.com. To obtain general information about Cisco Systems, Cisco products, or upgrades, contact 800 553-6387, 408 526-7208, or cs-rep@cisco.com.

This document is to be used in conjunction with the Cisco VISM 2.1.00 and 1.1.24 *Cisco WAN Switching MGX 8250* publications.

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