Release Notes for Cisco Voice Interworking Service Module Release 2.1(0)

July 2001

The Voice Interworking Service Module (VISM) product is supported by Media Gateways. Refer to these release notes for Media Gateway and version level support guidelines.

Note

Voice over Internet Protocol (VoIP) with G.729ab compression is supported and has been supported beginning with the VISM 2.0(0) release. This fact was unintentionally omitted from earlier release notes.

About Release 2.1(0)

The 2.1(0) release is a feature upgrade of the VISM 2.0(1.1) Release. There are several major new features in VISM Release 2.1(0) that are listed in detail in the “Features” section on page 2, including the bug fixes found in prior releases.

This release is compatible with the MGX 8850/8250/8230 release 1.1.32 software.

The VISM Release 2.1(0) is supported by the Cisco Voice Interworking Service Module Guide, which is available on the Web at the following locations:


About Release 2.0(1.1)

The 2.0(1.1) Release is a maintenance upgrade of the VISM 2.0(0) release and is compatible with the MGX 8850/8250 release 1.1.32 software. This release consists of the following:

- 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 corrects the following caveats discovered during internal Cisco testing:
- CSCdt18335—RUDP is lost and not recovered after running extensive PRI calls.
- CSCdt33712—VISM goes into failed state after several hours.

### About Release 2.0(0)

The 2.0(0) release is an upgrade of the VISM 1.5 release train. 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.

### About Release 1.5(5)

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 caveats.

### About Release 1.5(4)

The 1.5(4) release is a maintenance upgrade of the VISM 1.5(3) release with a small number of caveats being corrected. There is also better support for E1 lines.

### About Release 1.5(3)

The 1.5(3) release is the first orderable VISM release.

### Features

This section lists the features introduced in the VISM 2.1(0), VISM 2.0(1.1), VISM 2.0(0) and VISM 1.5.(x) releases.

### Features Introduced in Release 2.1(0)

This section describes the VoIP, ATM Adaptation Layer 2 (AAL2), and general features introduced for the VISM 2.1(0) release.

### VoIP Features

The following VoIP features are included in VISM Release 2.1(0):
- Verified MGCP 0.1 protocol compliance.
Features

- PBX CAS event delivery to a Call Agent using MGCP 0.1:
  - DTMF: Wink and ground start.
  - MF: Wink.
  - RFC 3064 CAS packages: BL, MS, DT.
  - TFTP download of CAS variant state machine.

- Interoperability enhancements:
  - Configurable codec strings (IANA naming conventions as well as customized ones).
  - Codec negotiation with configurable preference order.

- Exponential backoff for:
  - XGCP retry timers.
  - SRCP retry timers.
  - Configurable per CAS variant.


- Enhancement to Fax/modem up-speed/pass-through procedures:
  - Configurable CAC failure and carrier loss policies.
  - Up-speed to clear channel.

- Added support for G.726: 16, 24, 32, and 40 kbps, with packetization periods ranging from 10 to 40 msec.

- Support for VBR-rt (Variable Bit Rate-Real Time) and VBR-nrt (nonreal time) ATM traffic classes, including traffic shaping to the relevant traffic descriptors.

- Configurable VAD model parameter for traffic engineering.

- In E1 applications, support for 31 DS0 per span and a total of 248 channels per card.

- Tested CRTP support through RPM for voice and voice band data calls.

- Verified bearer interoperability with 3810.

AAL2 Features

The following AAL2 features are included in VISM Release 2.1(0):

- Switched PVCs using SGCP 1.5
  - SDP and SGCP extensions allowing xGCP Call Agent control of AAL2 bearers.
  - Support of SGCP 1.5 digit maps and error codes.

- Support for card level coexistence of switched AAL2 mode (under Call Agent control) and trunked AAL2 mode on PVCs, on an endpoint (DS0) basis.

- PBX CAS event delivery to a Call Agent using SGCP 1.5:
  - DTMF: Wink and ground start.
  - MF: Wink.
  - TFTP download of CAS variant state machine.
Features

- Interoperability and configurability enhancements:
  - Configurable codec strings (IANA naming conventions as well as customized ones).
  - Profile negotiation and configurable preference order.
  - Configurable voice and VBD (i.e., up-speed codec) per profile.
- Exponential backoff for:
  - XGCP retry timers.
  - SRCP retry timers.
  - Configurable per CAS variant.
- Added support for custom profile 110 and 200 (clear channel), ITU profiles 3 and 8.
- User-configurable AAL2 Silence Indicator Description (SID) for all profiles.
- Type 3 Packet Support for proxy ringback (xrbk), packet side bearer continuity check (co3/co4 COT), and midcall DTMF relay.
- Enhancement to Fax/modem up-speed/pass-through procedures:
  - Configurable CAC failure and carrier loss policies.
  - Up-speed to clear channel.
- Supports VBR-rt (Variable Bit Rate-Real Time) and VBR-nrt (nonreal time) ATM traffic classes, including traffic shaping to the relevant traffic descriptors.
- Connection admission control (CAC) enhancements:
  - Patented CAC method factoring in VAD and subcell multiplexing savings.
  - Configurable VAD model parameter for traffic engineering.
- Configurable AAL2 cell fill timer.
- AAL2 alarm enhancements: per span, VC, and per channel (CID) conditioning.
- Display, clear, and reset AAL2 performance related counters.
- In E1 AAL2 trunking applications, support for 31 DS0 per span and a total of 248 channels per card.
- Verified bearer interoperability with 3810 and third-party vendors.

General Features

The following general features are included in VISM Release 2.1(0):

- Infrastructure work and enhanced support for three operating modes: VoIP switching, AAL2 trunking, and Switched AAL2 PVC.
- Graceful upgrade VISM 2.0 and 2.0(1) to VISM 2.1(0).

Features Introduced in Release 2.0(1.1)

The following features are included in the VISM 2.0(1.1) release:

- 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. Refer to the “Notes for Release 2.0(1.1)” section on page 15 for more information.

---

### Features Introduced in Release 2.0(0)

The following features are included in the VISM 2.0(0) release:

- CCS/PRI backhaul between VISM and a Call Agent in VoIP mode.
- Support VoIP G.729ab compression.

### Features Introduced in Release 1.5(5)

The following features are included in the VISM 1.5(5) release:

- Idle channel suppression.
- Support for setting the IP precedence bit.
- Support for Q.50 CAS signaling variant
- Negotiable packetization period.
- AAL2 subcell multiplexing.

### Features Introduced in Release 1.5(4)

The following feature is included in the VISM 1.5(4) release:

- E1 back card support in AAL2 Trunking Mode.

### Features Introduced in Release 1.5(3)

The following features are included in the VISM 1.5(3) release:

- E1 back card support (VoIP mode only).
- Provides 8 standard T1 interfaces with B8ZS, AMI and HDB3 line coding.
- Support for voice over ATM using AAL2 cells (multiplexing only, no LLC/SNAP encapsulation).
- 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).
Notes for Release 2.1(0)

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) for switched calls.

1:N hot redundancy for trunking applications only.

Courtesy downing of ongoing voice calls when the VISM is taken out of service for maintenance or other reasons.

Notes for Release 2.1(0)

Notes for all previous releases still apply—refer to the sections immediately following this section.

VISM Hardware

VISM hardware consists of two versions of a front card, one supporting T1 and one supporting E1. The following versions of back cards are supported by VISM Release 2.1(0):

- 8-port T1 version using RJ-48 connectors.
- 8-port E1 version using RJ-48 connectors.
- 8-port E1 version using SMB connectors.

Each back card has a redundant version. Refer to Table 1 for the front card and back card model and revision numbers for VISM Release 2.1(0) hardware.

Table 1  VISM Release 2.1(0) Front and Back Card Model and Revision Numbers

<table>
<thead>
<tr>
<th>Front Card Model Number</th>
<th>Revision Number</th>
<th>Back Card Model Number</th>
<th>Revision Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>AX-VISM-8T1</td>
<td>B1</td>
<td>AX-RJ48-8T1</td>
<td>B1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AX-R-RJ48-8T1</td>
<td>B1</td>
</tr>
<tr>
<td>AX-VISM-8E1</td>
<td>B1</td>
<td>AX-SMB-8E1</td>
<td>B0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AX-R-SMB-8E1</td>
<td>B1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AX-RJ48-8E1</td>
<td>C2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AX-R-RJ48-8E1</td>
<td>B1</td>
</tr>
</tbody>
</table>

VISM Hardware Not Supported in Release 2.1(0)

None.
VISM Redundancy

Refer to Table 2 for the support level for 1:N Service Module Redundancy (N = 1 through 11).

<table>
<thead>
<tr>
<th>Front Card Model Number</th>
<th>Redundancy Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGX-VISM-8T1</td>
<td>1:N redundancy (bulk mode support for T1 lines only).</td>
</tr>
<tr>
<td>MGX-VISM-8E1</td>
<td>1:N redundancy (bulk mode support for E1 lines only).</td>
</tr>
</tbody>
</table>

There is support for Bulk Distribution using the SRM-3T3B card.

VISM Management Information Base

The VISM Management Information Base (MIB) Version 0.0.22 is provided with the delivery of VISM Release 2.1(0) software, which bundles with the MGX 8230, 8250 and 8850 Release 1 software on CCO and is located on the Web at the following location:


When the selected FW *.tar file or FW*.zip file is downloaded, untar or unzip the file and you will find all the latest MIBs bundled with this release.

The MIB is in standard ASN.1 form and can be compiled with most standards-based MIB compilers. Refer to the MIB release notes on CCO.

MIB Changes for VISM Release 2.1(0)—from VISM Release 2.0(1.1)

This section describes new and modified MIB objects for VISM Release 2.1(0).

New MIB Objects

The following new MIB objects were added for VISM Release 2.1(0):

- vismLapdSide
- vismXgcpSdpOst
- vismVoIpDtmfRelay
- vismVoIpCasTransport
- vismVoIpVADTimer
- vismVoIpTripleRedundancy
- vismVADTolerance
- vismVADDutyCycle
- vismAggregateTrafficClipping
- vismAggregateSvcBandwidth
- vismDsx1CircuitIdentifier
- vismXgcpRequestMaxTimeout
- bearerCntClrButton
A new group, aal2ProfilesGrp, which includes the following objects, was added:

- aal2ProfileType
- aal2ProfileNumber
- aal2ProfilePreference
- aal2ProfileVoiceCodec: Has the following enumerated values:
  - g72616 (7)
  - g72624 (8)
  - g72640 (9)
- aal2ProfileVoicePktPeriod
- aal2ProfileVoiceVAD
- aal2ProfileVBDCodec
- aal2ProfileVBDPktPeriod

A new group, vismCardCacFailureGrp, which includes the following objects, was added:

- vismPortCacPvcAddFailures
- vismPortCacSvcAddFailures

**Note**  
This object—vismPortCacSvcAddFailures—is not supported in this release.

- vismVcCacPvcFailures
- vismVcCacPvcUpspeedFailures
- vismPortCacSvcUpspeedFailures

**Note**  
This object—vismPortCacSvcUpspeedFailures—is not supported in this release.

A new subgroup, srpAdminRetyObjects, which includes the following objects, was added:

- srpRequestTimeout
- srpRequestRetries
- srpRequestMaxTimeout

New file:

- CISCO-WAN-VISM-AAL2-PROFILES-MIB.my

### Unsupported MIB Objects

The following MIB objects are not supported in VISM Release 2.1(0).

**Note**  
The following vismSvc groups and any other Svc objects are not supported in this release.

A new group, vismSvcGrp, which includes the following objects, was added:

- vismSvcTxSetups
- vismSvcRxSetups
- vismSvcTxCallProcs
- vismSvcRxCallProcs
- vismSvcTxConns
- vismSvcTxConnAcks
- vismSvcRxConns
- vismSvcRxConnAcks
- vismSvcTxReleases
- vismSvcTxReleaseCompls
- vismSvcRxReleases
- vismSvcRxReleaseCompls
- vismSvcTxRestarts
- vismSvcTxRestartAcks
- vismSvcRxRestarts
- vismSvcRestartAcks
- vismSvcTxResyncStrts
- vismSvcTxResyncStrtAcks
- vismSvcRxResyncStrts
- vismSvcRxResyncStrtAcks
- vismSvcTxResyncEnds
- vismSvcTxResyncEndAcks
- vismSvcRxResyncEnds
- vismSvcRxResyncEndAcks
- vismSvcTxBulkResyncs
- vismSvcRxBulkResyncs
- vismSvcCallProcExpiries
- vismSvcReleaseExpiries
- vismSvcConnExpiries
- vismSvcConnAckExpiries
- vismSvcRestartExpiries
- vismSvcResyncExpiries

A new group, vismSvcAtmQosGrp, which includes the following objects, was added:
- vismSvcAtmQosCdv
- vismSvcAtmQosCtd
- vismSvcAtmQosClr

A new group, vismSvcTrfScalingGrp, which includes the following object, was added:
- vismSvcTrfScalingFactor

A new group, vismSvcAal2CidGrp, which includes the following object, was added:
• vismSvcAal2CidNumber

The following objects were added to the existing vismIpGrp group:
• vismBearerIpAddress
• vismBearerSubNetMask

The vismFeatureBitMap object added a new bit-value: Bit 10—Domain Name.

Note

There are two unsupported MIB objects in the new vismCardCacFailureGrp group. Refer to the “New MIB Objects” section on page 7 for more information.

Modified MIB Objects

The following MIB objects were modified for VISM Release 2.1(0):
• vismBearerContinuityTimer: Changed the range from 200 through 10000 to 0 through 10000.
• vismJitterInitialDelay: Changed the default value from 60 ms to 40 ms.
• vismMode: Added additional enumerate values and changed the definition:
  – switchedAal2Svc (7)
  – switchedAal2Pvc (8)
• vismPortRowStatus: Description changed.
• vismChanVADTolerance: Changed the range from 1 through 10000 to 0 through 10000.
• vismChanVADDutyCycle: Changed the range from 1 through 100 to 0 through 100.
• vismAal2CidNum: Changed the range from 9 through 255 to 8 through 255.
• vismAal2CidProfileType: Changed description. This object is now mandatory while adding a CID.
• vismAal2CidProfileNum: Changed description. This object is now mandatory while adding a CID.
• ds0CasParameterSource: Default value changed from mibValue to CasAppl.
• ds0CasOnHookMinMakeTime: Default value changed from 20 to 300.
• aal2ProfileNumber: Added an additional enumerate value:
  – three (3)
• vismAal2CidCodecType: Added the following enumerated values:
  – g726r16000 (7)
  – g726r24000 (8)
  – g726r40000 (9)
• vismCodecCnfIndex: Added the following enumerated values.
  – g726r16000 (7)
  – g726r24000 (8)
  – g726r40000 (9)
• vismCodecPreference: Description changed.
• vismCodecPktPeriod: Description changed.
• vismCodecString: Description changed.
• vismLapdWinSize: Changed the range from 1 through 128 to 1 through 127.
• vismCarrierLossPolicy: Description changed.
• vismCacRejectionPolicy: Description changed.
• vismAal2CidFillTimer: Description changed.
• vismChanCarrierLossPolicy: Description changed.
• vismCasVariantTable: Description changed.
• vismCodecSupported: Added additional bit-values:
  – Bit 6—represents the G.726 codec at 16 kbps.
  – Bit 7—represents the G.726 codec at 24 kbps.
  – Bit 8—represents the G.726 codec at 40 kbps.
• vismPortSpeed: Added additional attributes:
  – New range—1 to 200000.
  – New default value—200000.
  – Description changed.

New Traps

The following traps were added for VISM Release 2.1(0):
• vismConfigChangeTypeBitMap: Added additional bits:
  When used in vismTableChanged trap, the bits indicate the following:
  – Bit 19 set = vismPortCnfGrpTable changed.
  When used in vismScalarChanged trap, the bits indicate the following:
  – Bit 9 set = vismSvcAtmQosGrp Objects group changed.
  – Bit 10 set = vismSvcTrfScalingGrp Objects group changed.
  – Bit 11 set = vismSvcAal2CidGrp Objects group changed.
  – Bit 12 set = srcpAdminRetryObjects Objects group changed.
• persistentXgcpEventCreated
• persistentXgcpEventDeleted
• mgDomainNameAdded
• mgDomainNameDeleted

Deprecated MIB Objects

The following MIB object has been deleted for VISM Release 2.1(0):
• vismPrevMode

VISM Call Rate

VISM Release 2.1(0) handles at least 10 CAS SS7 and PRI calls per second per VISM card.
Release 2.1(0) includes many new, modified, unsupported, and obsolete Command Line Interface (CLI) commands. The syntax and use of these commands is described in Cisco Voice Interworking Service Module Installation and Configuration Guide, Release 2.1.
New, Modified, and Unsupported CLI Commands

Table 3 describes the new CLI commands contained in VISM Release 2.1(0).

<table>
<thead>
<tr>
<th>Command</th>
<th>Name</th>
<th>VoIP Switching</th>
<th>AAL2 Trunking</th>
<th>AAL2 PVC Switching</th>
</tr>
</thead>
<tbody>
<tr>
<td>addxgcppersistevt</td>
<td>Add xgcp persistent event</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>clrcaaafailcntrs</td>
<td>Resets all CAC failure statistics to 0</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>clrnrngcident</td>
<td>Clear AAL2 counters</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>cnfaal2timerparams</td>
<td>Configure AAL2 timer parameters</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>cnfaal2transparams</td>
<td>Configure AAL2 transport parameters</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>cnfcaparams</td>
<td>Configure CAC parameters</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>cnfcsasdelaltime</td>
<td>Configure CAS delay</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfcsasglaretime</td>
<td>Configure CAS glare time</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfcsasguardtime</td>
<td>Configure CAS guard time</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfcsasoffhooktime</td>
<td>Configure CAS off-hook time</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfcsasonhooktime</td>
<td>Configure CAS on-hook time</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfcsasparamsource</td>
<td>Configure CAS parameter source</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfcsaswinktime</td>
<td>Configure CAS wink timer</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfco4timer</td>
<td>Configure CO4 timer</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfcodecneg</td>
<td>Configure codec negotiation</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfconcacparams</td>
<td>Configure connection CAC parameters</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>cnfconvbdpol</td>
<td>Configure connection voiceband data policies</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>cnfconvcci</td>
<td>Configure connection virtual circuit connection identifier</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfprofelemvbd</td>
<td>Configure profile element for voiceband data</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>cnfprofelemvoice</td>
<td>Configure profile element for voice</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>cnfprofneg</td>
<td>Configure profile negotiation</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>cnfprofparams</td>
<td>Configure profile parameters</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>cnfsrcretry</td>
<td>Configure SRCP retries</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>cnfvbdcodec</td>
<td>Configure voiceband data codec</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfvbdpol</td>
<td>Configure voiceband data policies</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfoiptransparams</td>
<td>Configure VoIP transport parameters</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cnfxgcpbt</td>
<td>Configure xgcp bearer traffic</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>delxgcpcon</td>
<td>Delete xgcp connection</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>delxgcppersistevt</td>
<td>Delete xgcp persistent event</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>dspaal2params</td>
<td>Display AAL2 parameters</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>dspcaafailcntrs</td>
<td>Displays all CAC failure statistics</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
Table 3  New CLI Commands for VISM Release 2.1(0) (continued)

<table>
<thead>
<tr>
<th>Command</th>
<th>Name</th>
<th>VoIP Switching</th>
<th>AAL2 Trunking</th>
<th>AAL2 PVC Switching</th>
</tr>
</thead>
<tbody>
<tr>
<td>dspcasparamsource</td>
<td>Display CAS parameter source</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dpcastimers</td>
<td>Display CAS timers</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dspco4timer</td>
<td>Display CO4 timer</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dspcodecparams</td>
<td>Display codec parameters</td>
<td>X</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>dspconvbdpol</td>
<td>Display connection voiceband data policies</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>dsplinecasbits</td>
<td>Display incoming and outgoing CAS bits for a specified line</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>dspprofparams</td>
<td>Display profile parameters</td>
<td>—</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>dpsrcpretry</td>
<td>Display SRCP retries</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dsvpbdcodec</td>
<td>Display voiceband data codec</td>
<td>X</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>dsvpbdpol</td>
<td>Display voiceband data policies</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>dsvpvoipparams</td>
<td>Display VoIP parameters</td>
<td>X</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>dpxgcpcalls</td>
<td>Display xgcp calls</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dpxgcpcids</td>
<td>Display xgcp CIDs</td>
<td>—</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dpxgpcpcon</td>
<td>Display xgcp connection</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dpxgpccons</td>
<td>Display xgcp connections</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dpxgcpendpt</td>
<td>Display xgcp endpoint</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dpxgcpendptcons</td>
<td>Display xgcp endpoint connections</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dpxgcplncons</td>
<td>Display xgcp line connections</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dpxgcppersistevts</td>
<td>Display xgcp persistent events</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>dpxgcpretry</td>
<td>Display xgcp retries</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
</tbody>
</table>

Table 4 describes the modified CLI commands contained in VISM Release 2.1(0).

Table 4  Modified CLI Commands for VISM Release 2.1(0)

<table>
<thead>
<tr>
<th>Command</th>
<th>Name</th>
<th>VoIP Switching</th>
<th>AAL2 Trunking</th>
<th>AAL2 PVC Switching</th>
</tr>
</thead>
<tbody>
<tr>
<td>addcid</td>
<td>Add CID</td>
<td>—</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>addcon</td>
<td>Add connection</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>adddn</td>
<td>Add domain name</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td>cnfcasxgcp</td>
<td>Configure CAS xgcp</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>cnfcodecparams</td>
<td>Configure codec parameters</td>
<td>X</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>cnfln</td>
<td>Configure line identifier</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>cnfvismip</td>
<td>Configure VISM IP address</td>
<td>X</td>
<td>—</td>
<td>X</td>
</tr>
</tbody>
</table>
The following CLI commands are included in this release, but are not currently supported:

- `adddnip`
- `cnfcomsize`
- `cnfdn`
- `cnfdnssrvr`
- `cnfvoiptimerparams`
- `deldnip`
- `dpsnallips`
- `dspdnip`
- `dpsdnssrvr`
- `setfaxmodemtrace`

**Note**
Entering one of these CLI commands will generate the error message “ERROR:xxxx procedure not implemented”, where xxxx is the name of the CLI command you entered.

The following CLI commands are obsolete as of VISM Release 1.5(4):

- `cnfecanidle`
- `cnfecannrn`
- `cnfecantime`
- `cnflincadence`
- `cnfpktperiod`
Notes for Release 2.0(1.1)

Note

All other notes for VISM Release 1.5(3) still apply. Refer to the “Notes for Release 1.5(3)” section on page 21.

New and Modified CLI Commands

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

New CLI Commands

The following CLI commands are new to VISM Release 2.0(1.1):

- `cnfxgcpinteropsdpost`—Use this command to enable or disable SDP (Session Descriptor Protocol) OST interoperability in the Call Control protocol. When a CRCX or an MDCX command is received from the Call Agent, VISM can respond by building SDP OST (O=, 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 this command to display the status of the SDP OST interoperability feature.
  
The syntax for this command is:
  
  `dspxgcpinterops`

Modified CLI Commands

The following CLI commands are modified in VISM Release 2.0(1.1):

- `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>]]`

  The lapdside 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 set up PRI backhaul.

- `cnflapdwinsize`—The window size parameter in this command now takes values in the range 1 to 127 (the range was 1 to 128).
Notes for Release 2.0(0)

VISM Management Information Base

This section describes new and modified MIB objects for VISM Release 2.0(0).

New MIB Objects

The following MIB objects were added for VISM Release 2.0(0):

- vismXgcpBearerNetworkType
- vismXgcpBearerVCType
- vismXgcpBearerConnectionType
- vismCodecPreference

Modified MIB Objects

The following MIB objects were modified for VISM Release 2.0(0):

- vismJitterInitialDelay—added the following additional enumerate values and changed the description:
  - zero (0)
  - five (5)
  - fifteen (15)
  - twentyfive (25)
  - thirtyfive (35)
  - fortyfive (45)
  - fiftyfive (55)
  - sixtyfive (65)
  - seventyfive (75)
  - eightyfive (85)
  - ninetysfive (95)

Notes for Release 1.5(5)

VISM Management Information Base

This section describes new, modified, and deprecated MIB objects for VISM Release 1.5(5).
New MIB Object

The vismBearerContinuityTimer MIB object was added for VISM Release 1.5(5).

Modified MIB Objects

The following MIB objects were modified for VISM Release 1.5(5):
- vismSignalingType—description changed.
- vismCasTRinging—changed the range from 10 through 100 to 10 through 600. Changed the default from 30 to 180.
- vismJitterInitialDelay—description changed.

Deprecated MIB Objects

The following MIB objects were deleted from VISM Release 1.5(5):
- vismEcanToneDisable
- vismEcanCnfNRN

New and Modified CLI Commands

This section describes CLI changes that have been made between VISM Release 1.5(4) and 1.5(5).

New CLI Commands

The following commands have been added for VISM Release 1.5(5).
- cnfco4timer
- dspco4timer

Modified CLI Command

The following command has been modified for VISM Release 1.5(5).
- dsplinedsp
  Old Display Parameters:
  - VismLineNum
  - ECANReenable
  - ToneDisable
  - MaximumTail
  - ResidualEcho
  - VoiceDetection
  New Display Parameters:
  - VismLineNum
  - MaximumTail
Notes for Release 1.5(4)

VISM Management Information Base

This section describes new traps and new, modified, and deprecated MIB objects for VISM Release 1.5(4).

New MIB Objects

The following new MIB objects were added for VISM Release 1.5(4):
- vismTftpServerDn
- vismAal2SubcellMuxing
- vismTrunkConditionEnable
- ds0CasCadenceOnTime
- ds0CasCadenceOffTime
- dsInsertLocalCas
- ds0LocalCasPattern
- ds0LoopbackCommand
- vismAal2CnfPktPeriod
- vismAal2CidICSEnable
- bearerAal2ExtAISCnts
- bearerAal2ExtRAICnts
- bearerAal2ConnAISCnts
- bearerAal2ConnRDICnts
- A new group, vismCodecCnfGrp, was added.

Modified MIB Objects

The following MIB objects were modified for VISM Release 1.5(4):
- vismIpAddress—description changed.
- lineType—Added the following enumerated values:
  - dsx1E1Q50 (8)
  - dsx1E1Q50CRC (9)
- lineLoopbackCommand—Added an additional enumerate value:
  - dsx1PayloadLoop (4)
- vismCasFileName—description changed.

- ResidualEcho
- VoiceDetection
**Deprecated MIB Objects**

The following objects have been deleted from VISM Release 1.5(4):

- `vismPacketizationPeriod`
- `vismEcanCnfIdlePattern`
- `vismEcanCnfIdleDirection`
- `vismCadenceTime`
- `ds0TransmitCodesEnable` has been replaced with the new object `vismTrunkConditionEnable`

**New Traps**

The following traps were added for VISM Release 1.5(4):

- `trapVismAal2Muxing`
- `vismConfigChangeTypeBitMap`—added an additional bit:
  - Bit 14 set = `vismCodecCnfTable` changed

**New, Modified, and Removed CLI Commands**

This section describes CLI changes that have been made between VISM Release 1.5(3) and 1.5(4).

**New CLI Commands**

The following commands have been added for VISM Release 1.5(4).

- `cnfaal2subcellmuxing`
- `dpscavarendpts`
- `cnfcodecparams`
- `dspcodecparams`
- `cnfendptcadence`
- `dspcasendpts`
- `cnftftpdn`
- `cnflntrunkcond`
- `cnfds0localcas`
- `dspds0localcasstatus`
- `cnfds0loop`
- `dspds0loop`

The following existing CLI commands were put into the AAL2 Trunking mode:

- `addcasvar`
- `dpscavard`
- `dpscasvars`
- `delcasvar`
Notes for Release 1.5(4)

- cnfcasvar
- cnfcasendpt

**Modified CLI Commands**

The following commands have been modified for VISM Release 1.5(4).

- **addcon**
  
  Old Command Parameters—preference pvcType application PCR mastership [remoteConnId]
  
  New Command Parameters—localVCI preference pvcType application PCR mastership [remoteConnId]

- **addcid**
  
  Old Command Parameters—endptNum LCN cidNum codecType [profileType profileNum vadOnOff VADInitTimer ecan type3Redun casTrans dtmfTrans]
  
  New Command Parameters—endptNum LCN cidNum codecType [profileType profileNum vadOnOff VADInitTimer ecan type3Redun casTrans dtmfTrans ICSEnab pktPeriod] 

- **cnfcasvar**
  
  Old Command Parameters—variant_name country_code Tring Tpart Tcrit TMF
  
  New Command Parameters—variant_name country_code Tring Tpart Tcrit TM

- **dspln**
  
  Old Display Parameters—LineCadenceTime
  
  New Display Parameters—LineTrunkConditioning

- **dspcardsp**
  
  Old Display Parameters—IdlePattern IdleDirection PacketSize DBLoss PacketizationPeriod JitterBufferMode JitterBufferSize AdaptiveGainControl DefaultTOS
  
  New Display Parameters—IdlePattern IdleDirection PacketSize DBLoss (removed) JitterBufferMode JitterBufferSize AdaptiveGainControl DefaultTOS

- **dsplndx0s**
  
  Old Display Parameters—Ds0IfIndex Ds0RobbedBitSignalling Ds0IdleCode Ds0SeizedCode Ds0BundleMapped Ds0IfType Ds0CasVariantName
  
  New Display Parameters—Ds0IfIndex Ds0RobbedBitSignalling Ds0IdleCode Ds0SeizedCode Ds0BundleMapped Ds0IfType Ds0CasVariantName Ds0CadenceOnTime Ds0CadenceOffTime

- **dspcid**
  
  Old Display Parameters—LCN CID Endpoint CidRowStatus Type3redundancy VAD VADInitTimer ProfileType ProfileNumber CodecType CasTrans DTMF Ecan
  
  New Display Parameters—LCN CID Endpoint CidRowStatus Type3redundancy VAD VADInitTimer ProfileType ProfileNumber CodecType CasTrans DTMF Ecan ICSEnable PktPeriod

- **dspvismparam**
  
  Old Display Parameters—VISMmode CAC DS0sAvail TemplateNumber PercentDSPs IPAddress SubnetMask RTPPinterval RTPtimer ControlTos BearerTos
  
  New Display Parameters—VISMmode CAC DS0sAvail TemplateNumber PercentDSPs IPAddress SubnetMask RTPPinterval RTPtimer ControlTos BearerTos Aal2muxing TftpServerDn
Notes for Release 1.5(3)

New, Unsupported, and Modified CLI Commands

VISM Release 1.5(3) includes new, unsupported, and modified, CLI commands.

New CLI Commands

The following CLI commands are new to VISM Release 1.5(3):

- `dsploops`—Display line and endpoint loopbacks. This command has no parameters.
- `pinglndsp <line #>`—Display the health of DSPs for a specified line.
- `dsplnendptstatus <line#>`—Display the endpoint status for a specified line.

Unsupported CLI Command

The following CLI command is not supported in VISM Release 1.5(3):

- `cnfcasxgcp`—Configure CAS CGCP.

Modified CLI Commands

The following CLI commands are modified in VISM Release 1.5(3):

- The `dspxgcpstat` command is renamed to `dspxgcpcnt`.
- The `dspxgcpstats` command is renamed to `dspxgcpcents`.
- The `addcon` command has been modified to include a new parameter—`localVCI`—and 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 to 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 to 75600 for VoIP bearer, 1 to 24400 for VoIP control, 1 to 50000 for AAL2 T1, 1 to 60000 for AAL2 E1, and 1 to 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).

In addition to CLI command modifications, there are template modifications. Both codec templates, 1 and 2, now include clear channel.

### Resolved Caveats for VISM Release 2.1(0)

Table 5 describes the AAL2 mode caveats issued against VISM that have been resolved in Release 2.1(0).

#### Table 5  Resolved AAL2 Mode Caveats for VISM Release 2.1(0)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCdt27208</td>
<td>Title: After running thousands of calls bearer - one way (cnfsgcpbt done). In this bug, VISM may see excessive AAL2 HEC errors or buffer losses in subcell multiplexing mode after it receives some bad CPS packets from the network side. This bug has been fixed in this release. Workaround: None, this issue has been resolved.</td>
</tr>
<tr>
<td>CSCdt91971</td>
<td>Title: Subcell muxing not working with Nortel PVG. Description: This bug appears because of the absence of the sequence number in the start field of the AAL2 cells generated by VISM in subcell multiplexing mode. This has been fixed in this release by using the sequence number in AAL2 mode. Workaround: None, this issue has been resolved.</td>
</tr>
</tbody>
</table>

Table 6 describes the VoIP mode caveats issued against VISM that have been resolved in Release 2.1(0).
### Table 6  Resolved VoIP Mode Caveats for VISM Release 2.1(0)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdrt63890      | Title: VISM-8E1 does not conform to ETSI PRI Frame Alignment w/o CRC procedures.  
                    Description: VISM-8E1 fails to respond properly to test sequences 7, 8, and 10. In sequence 7, Frames with Bit 2=1 and FAS are sent to the VISM. Normal Operational Frames should be received. However VISM sends Remote Alarm Indication (RAI). There should be no alarm sent. 
                    This requires the line to respond to a very short span of incorrect frames. At present, VISM uses a 10-ms polling scheme. Therefore, any error that happens for a duration of less than 10 ms will not be captured by VISM. 
                    Workaround: None.                                                                                                                                                                                      |
| CSCds61893       | Title: Calls stay active when no bearer path is available. 
                    Description: RTP timer does not tear down call when bearer path is down before the call is activated. Test passes when call is active and bearer path is dropped, RTP timer sends a DLCX request and call is dropped within 5 seconds. Failure is when bearer path is down and then call is activated, call will stay up. 
                    Workaround: None.                                                                                                                                                                                      |
| CSCdt43990       | Title: VISM not supporting cutthrough for announcement from AS (announcement server). 
                    Description: Packets from announcement server were getting dropped because of UDP checksum. 
                    Workaround: None.                                                                                                                                                                                      |
| CSCdt81753       | Title: PRI calls fail after upgrade from VISM 2.0.1.1 
                    Description: A conversion function is provided so that when you upgrade from VISM 2.0(1.1) to VISM 2.1(0), the BearerNetworkType and BearerConnectionType will be set to IP and notApplicable. 
                    Workaround: None.                                                                                                                                                                                      |
| CSCdt95361       | Title: DTMF digit loss. 
                    Description: With certain versions of VISM, MC3810 will register lost RTP packets when VISM sends a Silence Indicator Description (SID) or DTMF-relay packets. Additionally, MC3810 will not play out any DTMF tones. Problem also occurs when VISM is transmitting VoIP packets to other IOS-based gateways. 
                    The root cause is that VISM VoIP packets have a different Synchronization Source (SSRC) value for SID or DTMF relay payloads, causing IOS gateways to discard the packets. 
                    Workaround: Disable VAD and DTMF relay on VISM. In VISM Release 2.1(0), SID and DTMF relay SSRC values are the same as primary voice payload, so DTMF relay works properly without reported RTP packet loss. |
| CSCdu12762       | The RTP packets sequence number is reused when the Payload type is changed from Audio to SID. Also the transition from SID to Audio increments 2 in the sequence number. This scenario occurs with the packetization periods 20, 30 and 40 on G.726-32 codec. |
Table 6  Resolved VoIP Mode Caveats for VISM Release 2.1(0) (continued)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCdu20580</td>
<td>VISM RTCP reports are not sent at correct intervals.</td>
</tr>
<tr>
<td>CSCdu22472</td>
<td>VISM is modified to send a local endpoint name with a single asterisk, *, corresponding to a SGCP 1.1+ and SGCP 1.5 RSIP command.</td>
</tr>
<tr>
<td>CSCdu31627</td>
<td>During a phone call between a VISM and a 3810, a hissing noise is heard on the 3810 side.</td>
</tr>
</tbody>
</table>

Table 7 describes caveats that are applicable to both AAL2 and VoIP modes issued against VISM that have been resolved in Release 2.1(0).

Table 7  Resolved AAL2 and VoIP Mode Caveats for VISM Release 2.1(0)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCds28284 | Title: In dspvismparam, TFTPDOMAIN is misspelled and displays TFTPDOMIAN. Description: This problem occurs when upgrading from an image without the fix for TFTPDOMAIN to an image with the fix. Workaround: 
1. Add a dummy domain on VISM. (This example assumes there are 3 domains already configured on the VISM.)
   adddn  4  tftp_domain   10.10.10.2   1
2. Add the new domain as the TFTP domain for VISM.
   cnftftpdn   tftp_domain
3. Delete the domain you just added.
   deldn   4
   At this point, the MIB gets populated with the default domain name with the correct spelling.
4. Reset the VISM card. (This example assumes that the card in question is in slot 12.)
   cc   7
   resetcd   12
   Execute steps 1 through 4 on all affected VISM cards. |
| CSCdt02545 | Title: Endpoint id cannot take capital VISM. Description: CRCX message has the format with endpoint ID as VISM/T1-1/1@a.b.com. When uppercase VISM is used, the VISM replies to the CA with unidentified endpoint. The VISM wants the format as vism/T1-1/1@a.b.com with lowercase vism in the CRCX. Workaround: Have CA use lowercase vism. |

Note  This procedure needs to be followed only for Release 2.1(0) when upgrading from Release 2.0(0) or 2.0(1.1).
Table 7  Resolved AAL2 and VoIP Mode Caveats for VISM Release 2.1(0) (continued)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdt36297  | Title: Fax Call Failed.  
Description: Fax machine to Fax machine calls originating on a G.729 preferred VISM to G.729 preferred VISM.  
Fax call fails after the CED tone is sent for approximately 250 ms. Call is initially set up using G729 codec. However, after the CED tone is received from the terminating Fax machine, the codec is changed to G.711.  
The Fax call fails soon after this happens.  
Workaround: Do not use G.729 as preferred codec. |
| CSCdu31170  | Description:The AULN sgcp response from the VISM does not show the correct status of the endpoints.  
Condition:When the AULN command was sent to VISM by the call Agent, VISM returns an incorrect status of all the lines. The status of all the lines appears to be the same and the endpoint status on these lines were incorrect as well. |
| CSCdu30240  | Description:The answer to AULN which reports the state of lines E1-2, E1-3, E1-4, E1-5, E1-6, E1-7, E1-8, is the copy of the line E1-1’s state.  
Symptom:When the AULN command was sent to VISM by the call Agent, VISM is returning incorrect status of all the lines. The status of all the lines appears to be the same and the endpoint status on these lines were incorrect as well. |

Resolved Caveats for VISM Release 2.0(1.1)

Table 8 describes the caveats issued against VISM that have been resolved in Release 2.0(1.1).

Table 8  Resolved Caveats for VISM Release 2.0(1.1)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdr58602  | Title: DTMF is not supported for G729 in VoIP  
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 a bearer while simultaneously being relayed as an NSE packet.  
Workaround: None, this issue has been resolved. |
| CSCdr91649  | Title: SDP o, s, and t parameters for 5300 VoIP InterOp are not supported  
Description: VISM does not include (o=, s= and t=) SDP lines in the response to a CRCX or an MDCX command sent from 5300. VISM also rejects a 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.  
Workaround: None, this issue has been resolved. |
Resolved Caveats for VISM Release 2.0(0)

Table 9 describes the AAL2 mode caveat issued against VISM that has been resolved in Release 2.0(0).

Table 9  Resolved AAL2 Mode Caveat for VISM Release 2.0(0)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdr63059 | Title: DTMF Digits failure during the call  
Description: 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 ms (OFF time fixed at 60 ms). Failure rate increases as ON time is decreased. 
The failure rate is observed to be independent of DTMF digit relay being turned ON or turned OFF.  
Workaround: Use a digit ON time greater than 120 ms. |
Table 10 describes the VoIP mode caveat issued against VISM that has been resolved in Release 2.0(0).

Table 10  Resolved VoIP Mode Caveat for VISM Release 2.0(0)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCdr58602</td>
<td>Title: DTMF is not supported for G729 in VoIP.</td>
</tr>
<tr>
<td></td>
<td>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 a bearer while simultaneously being relayed as an NSE packet.</td>
</tr>
<tr>
<td></td>
<td>Workaround: None. Do not use G.729a, G.729ab for VoIP application.</td>
</tr>
</tbody>
</table>

Resolved Caveats for VISM Release 1.5(5)

Table 11 describes the AAL2 mode caveats issued against VISM that have been resolved in Release 1.5(5).

Table 11  Resolved AAL2 Mode Caveats for VISM Release 1.5(5)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCdr22479</td>
<td>Title: PSQM scores fails with E1 line bearer tests on HAMMER.</td>
</tr>
<tr>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>CSCdr26132</td>
<td>Title: CAC was enabled even when the connection bandwidth was in excess of the allowed bandwidth.</td>
</tr>
<tr>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>CSCdr26900</td>
<td>Title: Upspeeded CID is not down speeded when FAX call made</td>
</tr>
<tr>
<td></td>
<td>Description: When the FAX call was made with both ends of the connections in MASTER mode of CAC, one end of CID up-speeded but the other end did not. After the FAX call was disconnected, the up-speeded end of the CID did not return to the original Codec type. Subsequent calls could not be made.</td>
</tr>
<tr>
<td></td>
<td>Workaround: Configure connection CAC to Slave before making any calls.</td>
</tr>
</tbody>
</table>

Table 12 describes the VoIP mode caveats issued against VISM that have been resolved in Release 1.5(5).
Table 12  Resolved VoIP Mode Caveats for VISM Release 1.5(4)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCdr08976</td>
<td>Title: E1 Vism allows calls with depleted bandwidth.</td>
</tr>
<tr>
<td></td>
<td>Description: After 60 call completions, VISM begins to borrow or deplete bandwidth from stable calls to be used in newly set up 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.</td>
</tr>
<tr>
<td>CSCdr13493</td>
<td>Title: Vism E1: Ecan/Vad not disabled during modem call detection</td>
</tr>
<tr>
<td></td>
<td>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 = 20 ms, the modem call is established with V.90 mode.</td>
</tr>
</tbody>
</table>

Resolved Caveats for VISM Release 1.5(4)

Table 13 describes the AAL2 mode caveats issued against VISM that have been resolved in Release 1.5(4).

Table 13  Resolved AAL2 Mode Caveats for VISM Release 1.5(4)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCdp49340</td>
<td>Title: cnfcon does not change the PCR</td>
</tr>
<tr>
<td></td>
<td>Description: When the value of the PCR parameter is changed through the cnfcon command, VISM does not change the value in the MIB</td>
</tr>
<tr>
<td>CSCdp72954</td>
<td>Title: LOS does not cause Vism to switch clock if vism is clocking the shelf</td>
</tr>
<tr>
<td></td>
<td>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).</td>
</tr>
<tr>
<td>CSCdr16013</td>
<td>Title: VISM and 3810 Tx ones (seizures) on last 6 DS0s to PBX.</td>
</tr>
<tr>
<td></td>
<td>Description: VISM and 3810 Tx ones (seizures) on last 6 DS0s to PBX. On testbed (PBX loop—i.e. no 4ESS connection), both 3810 and VISM are transmitting ones on DS0s 19 to 24.</td>
</tr>
</tbody>
</table>

Table 14 describes the VoIP mode caveat issued against VISM that has been resolved in Release 1.5(4).

Table 14  Resolved VoIP Mode Caveat for VISM Release 1.5(4)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCdr17034</td>
<td>Title: Unable to detect co2 in transponder mode.</td>
</tr>
<tr>
<td></td>
<td>Description: The NTFY message is not forwarded to the CA and cot fails.</td>
</tr>
</tbody>
</table>
Resolved Caveats for VISM Release 1.5(3)

Table 15 describes the caveats issued against VISM that have been resolved in Release 1.5(3).

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdp66621 | Title: Slower data rates when modem calls pass through vism cards  
Description: When modem calls were passed through VISM, the achieved data rates were lower than expected.  
Workaround: Modem support is limited to V.34 in this release. |
| CSCdp68582 | Title: Loss of voice quality on PXM to PXM calls  
Description: Some voice dropout and clipping experienced during testing on PXM to PXM calls. Cause is being investigated.  
Workaround: None. |
| CSCdp69061 | Title: vism cards reset during 15 cps test  
Description: During a 15 cps test, all VISM cards reset unexpectedly, stopping all traffic. Cause is being investigated.  
Workaround: None. |
| CSCdr12039 | Title: VISM bulk stress test call failure  
Description: During test using the VCO4K some degradation in tone shaping was detected. The VCO4K flags these calls as failed. No call drops resulted from this condition. |
| CSCdr16005 | Title: Manual call upspeeds by itself after static pops  
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. |
| CSCdr16020 | Title: VISM sending packets to Cisco 3810 when no voice call is active. |

Compatibility Notes

VISM software interoperability with MGX 8250 and MGX 8230 platform software is listed in Table 16.

<table>
<thead>
<tr>
<th>PCB Description</th>
<th>CW 2000 Name</th>
<th>Latest Firmware</th>
<th>Min. Firmware</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXM1</td>
<td>PXM-1</td>
<td>1.1.32</td>
<td>1.1.32</td>
</tr>
<tr>
<td>PXM1-2-T3E3</td>
<td>PXM1-2T3E3</td>
<td>1.1.32</td>
<td>1.1.32</td>
</tr>
<tr>
<td>PXM1-4-155</td>
<td>PXM1-4OC3</td>
<td>1.1.32</td>
<td>1.1.32</td>
</tr>
</tbody>
</table>
Table 16  VISM Software Interoperability (continued)

<table>
<thead>
<tr>
<th>PCB Description</th>
<th>CW 2000 Name</th>
<th>Latest Firmware</th>
<th>Min. Firmware</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXM1-1-622</td>
<td>PXM1-OC12</td>
<td>1.1.32</td>
<td>1.1.32</td>
</tr>
<tr>
<td>MGX-SRM-3T3/B</td>
<td>SRM-3T3</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>AX-CESM-8E1</td>
<td>CESM-8E1</td>
<td>10.0.21</td>
<td>10.0.21</td>
</tr>
<tr>
<td>AX-CESM-8T1</td>
<td>CESM-8T1</td>
<td>10.0.21</td>
<td>10.0.21</td>
</tr>
<tr>
<td>MGX-AUSM-8E1/B</td>
<td>AUSMB-8E1</td>
<td>10.0.21</td>
<td>10.0.21</td>
</tr>
<tr>
<td>MGX-AUSM-8T1/B</td>
<td>AUSMB-8T1</td>
<td>10.0.21</td>
<td>10.0.21</td>
</tr>
<tr>
<td>MGX-CESM-T3</td>
<td>CESM-T3</td>
<td>10.0.21</td>
<td>10.0.21</td>
</tr>
<tr>
<td>MGX-CESM-E3</td>
<td>CESM-E3</td>
<td>10.0.21</td>
<td>10.0.21</td>
</tr>
<tr>
<td>AX-FRSM-8E1/E1-C</td>
<td>FRSM-8E1</td>
<td>10.0.21</td>
<td>10.0.21</td>
</tr>
<tr>
<td>AX-FRSM-8T1/T1-C</td>
<td>FRSM-8T1</td>
<td>10.0.21</td>
<td>10.0.21</td>
</tr>
<tr>
<td>MGX-FRSM-HS2</td>
<td>FRSM-HS2</td>
<td>10.0.22</td>
<td>10.0.22</td>
</tr>
<tr>
<td>MGX-FRSM-2CT3</td>
<td>FRSM-2CT3</td>
<td>10.0.22</td>
<td>10.0.22</td>
</tr>
<tr>
<td>MGX-FRSM-2T3E3</td>
<td>FRSM-2T3</td>
<td>10.0.22</td>
<td>10.0.22</td>
</tr>
<tr>
<td>MGX-FRSM-2T3E3</td>
<td>FRSM-2E3</td>
<td>10.0.22</td>
<td>10.0.22</td>
</tr>
<tr>
<td>MGX-FRSM-HS1/B</td>
<td>FRSM-HS1/B</td>
<td>10.0.21</td>
<td>10.0.21</td>
</tr>
<tr>
<td>MGX-VISM-8T1</td>
<td>VISM-8T1</td>
<td>2.1(0)</td>
<td>2.1(0)</td>
</tr>
<tr>
<td>MGX-VISM-8E1</td>
<td>VISM-8E1</td>
<td>2.1(0)</td>
<td>2.1(0)</td>
</tr>
<tr>
<td>CWM</td>
<td>—</td>
<td>10.4</td>
<td>10.4</td>
</tr>
</tbody>
</table>

1. CWM Release 10.4 does not support all of the new MIBs listed in the “VISM Management Information Base” section on page 7.

VISM software interoperability with other Cisco products is described in Table 17.

Table 17  VISM 2.1(0) Software Interoperability with Other Cisco Products

<table>
<thead>
<tr>
<th>Cisco 3810</th>
<th>12.1(5) XM3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Management Software:</td>
<td>CWM 10.4</td>
</tr>
<tr>
<td>CiscoView:</td>
<td>Bundled in CWM 10.4</td>
</tr>
<tr>
<td>Virtual Switch Controller Software</td>
<td>VSC 9.1.4T</td>
</tr>
</tbody>
</table>

1. CWM Release 10.4 does not support all of the new MIBs listed in the “VISM Management Information Base” section on page 7.

The software boot code and run-time firmware requirements for the VISM Releases 2.1(0) through 1.5(3) are described in Table 18 through Table 22.
### Compatibility Notes

**Note**

Loading this release of the backup bootcode is not required for existing VISM not using this new release, but is provided as an optional feature only.

The backup bootcode in this release adds the capability of storing specific crash information from the VISM for debugging purposes, and is available only on this VISM release.

Refer to the “VISM Boot Code Upgrade Procedure” section on page 35.

#### Table 18  VISM 2.1(0) Software Boot and Run-time Firmware Requirements

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MGX-VISM-8T1</td>
<td>vism_8t1e1_VI8_BT_2.0.03.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_002.001.000.000.fw</td>
</tr>
<tr>
<td>MGX-VISM-8E1</td>
<td>vism_8t1e1_VI8_BT_2.0.03.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_002.001.000.000.fw</td>
</tr>
</tbody>
</table>

#### Table 19  VISM 2.0(1.1) Software Boot and Run-time Firmware Requirements

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MGX-VISM-8T1</td>
<td>vism_8t1e1_VI8_BT_2.0.01.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_002.000.001.001.fw</td>
</tr>
<tr>
<td>MGX-VISM-8E1</td>
<td>vism_8t1e1_VI8_BT_2.0.01.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_002.000.001.001.fw</td>
</tr>
</tbody>
</table>

#### Table 20  VISM 2.0(0) Software Boot and Run-time Firmware Requirements

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MGX-VISM-8T1</td>
<td>vism_8t1e_VI8_BT_1.0.02.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_002.000.000.000.fw</td>
</tr>
<tr>
<td>MGX-VISM-8E1</td>
<td>vism_8t1e_VI8_BT_1.0.02.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_002.000.000.000.fw</td>
</tr>
</tbody>
</table>

#### Table 21  VISM 1.5(5) Software Boot and Run-time Firmware Requirements

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MGX-VISM-8T1</td>
<td>vism_8t1e_VI8_BT_1.0.02.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_1.5.0_5.fw</td>
</tr>
<tr>
<td>MGX-VISM-8E1</td>
<td>vism_8t1e_VI8_BT_1.0.02.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_1.5.0_5.fw</td>
</tr>
</tbody>
</table>
Limitations and Restrictions

Table 23 lists the known design constraint valid for VISM Release 2.1(0):

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCdx28408</td>
<td>Temporary traffic loss occurs when using the PXM <code>newrev</code> and <code>commit</code> commands for the VISM graceful upgrade procedure in releases of VISM 2.1.0, VISM 2.1.1, VISM 2.2.0 and VISM 2.2.1.</td>
</tr>
</tbody>
</table>

Special Installation and Upgrade Requirements

This section describes VISM firmware download procedures, VISM software installation procedures, and VISM upgrade and downgrade procedures.

Caution

If you are upgrading the VISM software from 1.5(x), refer to the “Upgrading VISM Software from 1.5(x) to 2.1(0)” section on page 36. VISM Release 2.1(0) does not provide a graceful upgrade procedure from 1.5(x) to 2.1(0).

VISM Firmware Download Procedure

Complete the following steps to download VISM firmware:

---

**Table 22**  VISM 1.5(4) Software Boot and Run-time Firmware Requirements

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MGX-VISM-8T1</td>
<td>vism_8t1e_VI8_BT_1.0.02.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_1.5.0_4.fw</td>
<td>1.5(4)</td>
</tr>
<tr>
<td>MGX-VISM-8E1</td>
<td>vism_8t1e_VI8_BT_1.0.02.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_1.5.0_4.fw</td>
<td>1.5(4)</td>
</tr>
</tbody>
</table>

**Table 23** Known Design Constraint

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCdx28408</td>
<td>Temporary traffic loss occurs when using the PXM <code>newrev</code> and <code>commit</code> commands for the VISM graceful upgrade procedure in releases of VISM 2.1.0, VISM 2.1.1, VISM 2.2.0 and VISM 2.2.1.</td>
</tr>
</tbody>
</table>

---

**Table 23**  VISM 1.5(3) Software Boot and Run-time Firmware Requirements

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MGX-VISM-8T1</td>
<td>vism_8t1e_VI8_BT_1.0.02.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_1.5.0_2.fw</td>
<td>1.5(3)</td>
</tr>
<tr>
<td>MGX-VISM-8E1</td>
<td>vism_8t1e_VI8_BT_1.0.02.fw</td>
<td>1.0.02</td>
<td>vism_8t1e1_1.5.0_2.fw</td>
<td>1.5(3)</td>
</tr>
</tbody>
</table>
Special Installation and Upgrade Requirements

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 “Installing VISM Software Updates” section on page 33 to install the download.

---

Installing VISM Software Updates

VISM Release 2.1 provides a procedure for the graceful upgrade (one in which the existing VISM configuration is preserved throughout the upgrade procedure) from the earlier VISM 2.0 release.

Caution
Temporary traffic loss occurs during Step 4 and Step 5 of the VISM graceful upgrade procedure of the Upgrade Procedure for VISM Release 2.1.0.

Initial Conditions

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

- The MGX 8000 Series shelf must be configured with at least two VISM cards in a redundant configuration (refer to the add redundancy, addred, command in the MGX 8850, MGX 8250, and MGX 8230 command references for more information).
- The VISM cards must be running VISM 2.0 and be configured to the desired configuration.
- The VISM new Release 2.1 software must have been already downloaded to the MGX shelf. Refer to the “VISM Management Information Base” section on page 7 for more information.

Upgrade Procedure

In the following procedure:

- Two VISM cards 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).
- New-rev refers to the firmware after the upgrade (2.1).
Complete the following steps to upgrade the VISM cards:

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Log in to the active PXM card (slot 7 or 8).</th>
</tr>
</thead>
</table>
| Step 2  | Save the existing configuration as a contingency plan by entering:  
         | `savesmcnf <SM slot#>`  
         | This will save the existing configuration in the c:cnf directory. This file can be used during the  
         | downgrade procedure, if necessary. |
| Step 3  | 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_8t1e1_002.001.000.000.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 is still  
         | the old-rev and the secondary firmware is new-rev. |
| Step 4  | 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 5  | Execute the PXM commit command:  
         | `commit sm<SM slot#><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 VISMs 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 6  | Log in to the active VISM card and use the display commands (dspendpts, 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. |

*Note*  
If the VISM card is not part of a redundancy group, *Step 1* to *Step 3* are sufficient.
VISM Boot Code Upgrade Procedure

Upgrade the firmware to Release 2.1 first, and then upgrade the boot code.

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

**Note**
Upgrading bootcode is optional for Release 2.1(0).

VISM Downgrade Procedure

Use this procedure to downgrade VISM software from VISM Release 2.1 to the earlier VISM Release 2.0. By following the downgrade procedure described here, the configurations will be retained after downgrade.

**Note**
It is important to note that the configurations that existed with old-rev firmware should have been saved earlier.

Complete the following steps to downgrade the VISM software from Release 2.1 to Release 2.0:

**Step 1**
If the VISM card is in a redundancy group, remove the redundancy.
```
delred <SM slot#>
```

**Step 2**
Download the old-rev firmware onto the MGX shelf.

**Step 3**
Execute the PXM `clrsmcnf` command:
```
clrsmcnf <SM slot#>
```
where:
- SM slot# is the slot number of the VISM card to be downgraded.
- The VISM card will be reset on executing this command. Wait for the card to come active.

**Step 4**
Execute the PXM `restoresmcnf` command:
```
restoresmcnf -f <filename> -s <SM slot#>
```
where:
- The filename is the name of the old configuration file that was saved while the old-rev firmware was running. The file can be found in the C:CNF directory on the MGX shelf.
- The SM slot# is the slot number of the VISM card to be downgraded.
- The VISM card will be reset again. When the card comes active, it will have the old-rev firmware running and will have the old configuration.

**Step 5**
Reconfigure redundancy group, if required.
Upgrading VISM Software from 1.5(x) to 2.1(0)

⚠️ **Caution**

VISM 2.1(0) 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, execute `clrallcnf` and start loading the software as if it is a new system configuration or `clrsmcnf` for individual card configuration (verify that there are no connections configured first).

📝 **Note**

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

Open Caveats for VISM Release 2.1(0)

Table 24 describes possible unexpected behavior by VISM Release 2.1(0).

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCds66369</td>
<td>Title: VISM telnet sessions lock, unable to cc to card until reset.</td>
</tr>
<tr>
<td></td>
<td>Description: The VISM card allows up to two sessions. Both of these sessions have become locked, which prevents the user from being able to cc to the card. This condition has been reported twice and is not reproducible in the lab.</td>
</tr>
<tr>
<td></td>
<td>Workaround: Reset the card.</td>
</tr>
<tr>
<td>CSCdt20975</td>
<td>Title: Unable to execute cnfcacparams with VadDutyCycle = 100.</td>
</tr>
<tr>
<td></td>
<td>Description: Vism card reboots when issuing &quot;cnfcacparam&quot; with parameter VadDutyCycle = 100. The value is within the syntax range allowed by the MIB and CLI.</td>
</tr>
<tr>
<td></td>
<td>Evaluation: The fix has been applied to CLI where the value of 100 is not allowed. For SNMP the problem persists.</td>
</tr>
<tr>
<td></td>
<td>Workaround: Do not use the value of 100.</td>
</tr>
<tr>
<td></td>
<td>Details: This occurs in AAL2 mode.</td>
</tr>
<tr>
<td></td>
<td>Workaround: This parameter is provisionable on VISM. We need to change to VoIP mode and then change the string name of codec with the &quot;cnfcodecparams&quot; command.</td>
</tr>
</tbody>
</table>
There are no known severity 1 or 2 caveats in this release. There are a number of severity 3 caveats that can be found using the software bug navigator, which will be fixed in the next maintenance release.

### Table 24  Open Caveats for VISM Release 2.1(0) (continued)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdt78753 | Title: The codec should return to the previous state by default after a fax call. Workaround for AAL2 Trunking:  
  1. Set Carrier loss policy to “previous codec”.  
  2. Set CAC failure policy to “Don’t Care”.  
  Workaround for AAL2 Switching:  
  1. Set Carrier loss policy to “upspeed codec”.  
  2. Set CSC failure policy to “delete connection”.  
  Workaround for VoIP Switching:  
  1. Set Carrier loss policy to “previous codec”.  
  2. Set CAC failure policy to “maintain connection”. |
| CSCdt85106 | Title: G.726-16k, 24k and 40k cannot be configured as Vbdcodec. VISM does not allow G.726-16k, G.726-24k, and G.726-40K to be configured as Vbdcodec for upspeeding during fax/modem calls. Workaround: None |
| CSCdt97685 | Title: DTMF Relay should be ON by default for G.729 codecs Workaround: Always manually configure DTMF Relay when using G.729. |
| CSCdt97846 | Title: The default values of the VOIP should be DTMF Relay ON and Triple Redundancy OFF. This requires a change in the MIB defaults also. Workaround: Manually configure DTMF Relay and Triple Redundancy. |
| CSCdu12726 | Title: A Configuration change for a PVC connections in a DUAL PVC configured will cause anomalies if the same change is not done on both PVC connection. Description: With Dual PVCs voice connection may fail to admit if the bandwidth on the standby PVC is too less compared to the current active PVC. Also there may be more such cases for all configurable PVC connection attribute in DUAL PVC mode. Workaround: User MUST Repeat the same set of commands/operation to both PVC cons (DUAL PVC pair). |
| CSCdu15510 | Title: VISM rejects some supported events by 510. Description: Request to detect g/vbd(N) is rejected as a protocol error (510). This occurs when the Call Agent specifies a (N) with the request to detect vbd. Workaround: Call Agent can specify the g/vbd without the accompanying (N) parameter since this is the default anyway. |
| CSCdu22292 | No comfort noise is heard in certain call setup configurations. |

---

**Open Caveats for VISM Release 2.0(1.1)**

There are no known severity 1 or 2 caveats in this release. There are a number of severity 3 caveats that can be found using the software bug navigator, which will be fixed in the next maintenance release.
Open Caveats for VISM Release 1.5(5)

Table 25 describes a possible unexpected AAL2 mode behavior by VISM Release 1.5(5).

Table 25  Open AAL2 Mode Caveat for VISM Release 1.5(5)

<table>
<thead>
<tr>
<th>DDTs</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdr63059 | Title: DTMF Digits failure during the call  
Description: 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 ms (OFF time fixed at 60 ms). Failure rate increases as ON time is decreased.  
The failure rate is observed to be independent of DTMF digit relay being turned ON or turned OFF.  
Workaround: Use a digit ON time greater than 120 ms. |

Table 26 describes a possible unexpected VoIP mode behavior by VISM Release 1.5(5).

Table 26  Open VoIP Mode Caveat for VISM Release 1.5(5)

<table>
<thead>
<tr>
<th>DDTs</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdr58602 | Title: DTMF is not supported for G729 in VoIP.  
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 a bearer while simultaneously being relayed as an NSE packet.  
Workaround: None. Do not use G.729a, G.729ab for VoIP application. |

Open Caveats for VISM Release 1.5(4)

Table 27 describes possible unexpected AAL2 mode behavior by VISM Release 1.5(4).

Table 27  Open AAL2 Mode Caveats for VISM Release 1.5(4)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdr22479 | Title: PSQM scores fails with E1 line bearer tests on HAMMER.  
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. |
Table 27  Open AAL2 Mode Caveats for VISM Release 1.5(4) (continued)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdr26132 | Title: CAC was enabled even when the connection bandwidth was in excess of the allowed bandwidth.  
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. |
| CSCdr26900 | Title: Upspeeded CID is not down speeded when FAX call made  
Description: When the FAX call was made with both ends of the connections in MASTER mode of CAC, one end of CID up-speeded but the other end did not. After the FAX call was disconnected, the up-speeded end of the CID did not return to the original codec type. Subsequent calls could not be made.  
Workaround: Configure connection CAC to slave before making any calls. |

Table 28 describes possible unexpected VoIP behavior by VISM Release 1.5(4).

Table 28  Open VoIP Mode Caveats for VISM Release 1.5(4)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdr08976 | Title: 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 set up 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 | Title: 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 = 20 ms, the modem call is established with V.90 mode. |

Open Caveats for VISM Release 1.5(3)

Table 29 describes possible unexpected AAL2 mode behavior by VISM Release 1.5(3).

Table 29  Open AAL2 Mode Caveats for VISM Release 1.5(3)

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description</th>
</tr>
</thead>
</table>
| CSCdp49340 | Title: 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. |
Table 29  **Open AAL2 Mode Caveats for VISM Release 1.5(3) (continued)**

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Title: LOS does not cause Vism to switch clock if vism clocking the shelf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>When the VISM line is used to clock the MGX shelf, if the VISM gets a</td>
</tr>
<tr>
<td></td>
<td>loss of signal on the T1 line (OR) if the line from which the clock is</td>
</tr>
<tr>
<td></td>
<td>derived is deleted, the PXM does not switch to the secondary clock source</td>
</tr>
<tr>
<td></td>
<td>as expected. Loss of clock is recognized at the PXM only when the VISM</td>
</tr>
<tr>
<td></td>
<td>port is down (when a card is reset or if a port is deleted).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Title: VISM and 3810 Tx ones (seizures) on last 6 DS0s to PBX.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>VISM and 3810 Tx ones (seizures) on last 6 DS0s to PBX. On testbed</td>
</tr>
<tr>
<td></td>
<td>(PBX loop—i.e. no 4ESS connection), both 3810 and VISM are transmitting</td>
</tr>
<tr>
<td></td>
<td>ones on DS0s 19 to 24.</td>
</tr>
</tbody>
</table>

Table 30 describes possible unexpected VoIP mode behavior by VISM Release 1.5(3).

Table 30  **Open VoIP Mode Caveats for VISM Release 1.5(3)**

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCdr08976</td>
<td>Title: E1 Vism allows calls with depleted bandwidth.</td>
</tr>
<tr>
<td>Description:</td>
<td>After 60 call completions, VISM begins to borrow or deplete bandwidth</td>
</tr>
<tr>
<td></td>
<td>from stable calls to be used in newly set up calls. This results in</td>
</tr>
<tr>
<td></td>
<td>tone verification failure and calls getting torn down. Once PVC bandwidth</td>
</tr>
<tr>
<td></td>
<td>has been depleted with active calls, VISM should reject any new incoming</td>
</tr>
<tr>
<td></td>
<td>calls. Currently it does not.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Title: VISM E1: ECAN/VAD not disabled during modem call detection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>Make a modem call from the PC to the NAS via the DMS/VSC/VISM.</td>
</tr>
<tr>
<td></td>
<td>The VISM-E1 does not dynamically disable ECAN during the detection</td>
</tr>
<tr>
<td></td>
<td>of the modem call. After entering the VISM shellconn/CLI to disable</td>
</tr>
<tr>
<td></td>
<td>ECAN/VAD and ignore ECAN/VAD, and changing jitter = 20 ms, the modem</td>
</tr>
<tr>
<td></td>
<td>call is established with V.90 mode.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DDTs Issue</th>
<th>Title: Unable to detect co2 in transponder mode.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>The NTFY message is not forwarded to the CA and cot fails.</td>
</tr>
</tbody>
</table>

**Related Documentation**

The following document contains information that may be useful to VISM Release 2.1(0):

- *Cisco Voice Interworking Service Module Guide*

**Obtaining Documentation**

The following sections provide sources for obtaining documentation from Cisco Systems.

**World Wide Web**

You can access the most current Cisco documentation on the World Wide Web at the following sites:
Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or as an annual subscription.

Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products MarketPlace:
  
  http://www.cisco.com/cgi-bin/order/order_root.pl

- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:
  
  http://www.cisco.com/go/subscription

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

Documentation Feedback

If you are reading Cisco product documentation on the World Wide Web, you can submit technical comments electronically. Click Feedback in the toolbar and select Documentation. After you complete the form, click Submit to send it to Cisco.

You can e-mail your comments to bug-doc@cisco.com.

To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

Attn Document Resource Connection
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.
Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

Cisco.com provides a broad range of features and services to help customers and partners streamline business processes and improve productivity. Through Cisco.com, you can find information about Cisco and our networking solutions, services, and programs. In addition, you can resolve technical issues with online technical support, download and test software packages, and order Cisco learning materials and merchandise. Valuable online skill assessment, training, and certification programs are also available.

Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users can order products, check on the status of an order, access technical support, and view benefits specific to their relationships with Cisco.

To access Cisco.com, go to the following website:

http://www.cisco.com

Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

http://www.cisco.com/tac

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

http://www.cisco.com/register/

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

http://www.cisco.com/tac/caseopen

Contacting TAC by Telephone

If you have a priority level 1 (P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

P1 and P2 level problems are defined as follows:

- **P1**—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- **P2**—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.