



Release Notes for Cisco Voice Switch Service Module (VXSM) Release 5.2.10.201

These release notes are part number OL-10037-01 Rev. A0, March 16, 2006.

The Voice Switch Service Module (VXSM) product is supported by the MGX 8880 Media Gateway and the MGX 8850 Multiservice Switch. Refer to their respective release notes for platform and version level support guidelines.

The VXSM software release notes are supported by the *Cisco Voice Switch Services (VXSM) Configuration Guide, Release 5.2* and the *Cisco Voice Switch Services (VXSM) Command Reference, Release 5.2*, which are available on cisco.com.

Table of Contents

Table of Contents	1
About Release 5.2.10.201	2
New Features in Release 5.2.10.201	2
Firmware Images	2
Upgrading from an Earlier VXSM Release	3
Feature Clarifications	4
VXSM Applications	4
Online Diagnostic feature as applied to VXSM.	4
DSP Resources under Mixed Codec Conditions	4
Configuring Switching and Trunking Applications	4
VXSM Management Information Base	4
Service Module Support By Platform	5
Compatibility	6
Caveats for VXSM Release 5.2.10.201	8
Open Caveats in Release 5.2.10.201	8



Corporate Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

Copyright © 2004 Cisco Systems, Inc. All rights reserved.

Resolved Caveates in Release 5.2.10.201	16
Resolved Caveats in Release 5.2.10.200	16
Removed Caveats in Release 5.2.10.200	17
Related Documentation	17
Obtaining Documentation	18
Cisco.com	18
Documentation DVD	18
Ordering Documentation	18
Documentation Feedback	19
Cisco Product Security Overview	19
Reporting Security Problems in Cisco Products	19
Obtaining Technical Assistance	20
Cisco Technical Support Website	20
Submitting a Service Request	21
Definitions of Service Request Severity	21
Obtaining Additional Publications and Information	21

About Release 5.2.10.201

The VXSM Release 5.2.10.201 follows VXSM Release 5.2.10.200

New Features in Release 5.2.10.201

Release 5.2.10.201 is solely a maintenance release containing fixed anomalies but no new features.

Firmware Images

For each VXSM card type (OC-3, T1/E1, or T3), two firmware images are available, namely, Non-CALEA and CALEA. At order time, the user must specify whether a Non-CALEA or CALEA image is required.

The Non-CALEA image supports three Media Gateway Call Control (MGC) protocols, namely, H.248, MGCP, and TGCP. However, the image supports only one protocol at a time. The user must choose between the H.248, MGCP, and TGCP versions when the image is first loaded from the PXM using the **setrev** command.

The CALEA image supports TGCP and MGCP only. The protocol must be explicitly selected when the image is loaded from the PXM using the **setrev** command.

Upgrading from an Earlier VXSM Release

VXSM can be gracefully upgraded (configuration is preserved) from VXSM Release 5.0.70, Release 5.2.0 and Release 5.2.10.200 so long as the original and the upgraded images are of the same version (for example Non-CALEA, TGCP to Non-CALEA, TGCP). When loading or upgrading a boot or runtime image to a VXSM card, users must observe the following caution.



Warning

Many of the commands involved in loading or upgrading boot and runtime images can take several minutes to execute completely. If the user resets or otherwise disturbs the VXSM card during a loading or upgrading process, the card can easily be damaged even to the extent that it must be returned to the factory for repair.

In particular:

Do not reset VXSM or PXM cards manually or through commands such as `resetcd` or `resetsys`

Do not save all MGX configurations with commands such as `saveallcnfs`.

Do not toggle primary/secondary cards through commands such as `switchredcd`, `delred`

Do not change the name of software image before or during the upgrade

Do not change any configuration of active primary card during the upgrade

THE REAPPEARANCE OF THE COMMAND PROMPT AFTER A COMMAND IS ENTERED DOES NOT INDICATE THAT THE IMAGE LOAD OR UPGRADE HAS BEEN COMPLETED.

After the execution of the `burnboot`, `clrsmcnf`, `loadrev`, or `setrev` commands, the user must execute either a `dspcds` or `dsprev` command periodically to verify that the state of the VXSM card being loaded or upgraded is either Active, Standby, or Failed.

ONLY WHEN THE CARD IS DISPLAYED TO BE IN ONE OF THESE STATES IS IT SAFE TO GO TO THE NEXT STEP.

If the upgrade procedure is interrupted for reasons outside the control of the user (for example, a power outage), see "Interrupted Procedure Recovery" below for instructions.

Interrupted Procedure Recovery

In the event that a VXSM software upgrade procedure is interrupted (for example, power outage), and both Primary and Secondary are stuck in 'Failed-U' state, perform the following procedure

-
- Step 1** Execute the `abortrev` command:
- ```
abortrev <PrimarySlot> <NewImageRevision>
```
- Step 2** If the primary VXSM becomes "Failed/Active" (out of Failed-U/Active"), then execute the `resetcd` command
- ```
resetcd <PrimarySlot> (
```
- Step 3** If the secondary VXSM becomes "Failed/Active" (out of Failed-U/Active"), then execute the `resetcd` command:
- ```
resetcd <SecondarySlot>
```
- Step 4** Both primary and secondary VXSM cards should now have their original SW image and original DB
-

# Feature Clarifications

## VXSM Applications

A single VXSM card can be configured for either switching VoIP applications or AAL 2 trunking applications but not both. However, both applications can be supported in a single gateway by configuring some VXSM cards for switching VoIP and other VXSM cards for AAL 2 trunking.

## Online Diagnostic feature as applied to VXSM.

The online diagnostics feature as implemented on the PXM45 card is supported on VXSM Release 5.2. When enabled, using the PXM45 **cnfdiag** command, this feature performs non-intrusive diagnostic tests that use four of the VXSM's DSP codecs.

If the user executes the VXSM **dspspcodecpools** command, the resulting display shows the four codecs being used (for diagnostics) and subtracts them from the remaining available codecs (see example below).

```
MGX8850.9.VXSM.a > dspspcodecpools
=====
 DSP codec capacity usage
=====
Codec pool Current utilized Current available
 capacity (#calls) capacity (#calls)
=====
G711 family 4 8060
G729/G726/T.38 family 0 4030
```

The online diagnostics feature does not reduce the maximum number of 8064 codecs available for calls on the VXSM card. If the number of call requests on the VXSM is sufficiently high, the online diagnostic feature is disabled automatically and the four codecs are made available for active calls.

## DSP Resources under Mixed Codec Conditions

When the same codec is used to setup calls on the gateway the available DSP resources will be fully utilized. However when different codecs are used to setup calls the amount of utilizable DSP resources may be limited in certain cases due to fragmentation.

Fragmentation is said to have occurred when the available capacities on two different DSP resources have enough available capacity to support a call of a particular codec type but cannot support that codec type individually.

Consider two DSP resources whose available capacity is 1 unit each making the total available capacity 2 units. However a codec that requires 2 units cannot be supported in the system because the available capacities have been fragmented across the individual DSP resources.

The DSP allocation algorithm on VXSM does make an attempt to smooth the effects of fragmentation but towards the end, fragmentation could happen as the future pattern of calls cannot be predicted beforehand.

## Configuring Switching and Trunking Applications

The simultaneous operation of mixed applications (Switched VoIP applications and Non-switched Trunking applications) is not supported on a VXSM card. However, both applications can be supported in the Media Gateway by using multiple VXSM cards.

## VXSM Management Information Base

The VXSM Management Information Base (MIB) Version 5.2 is available by request through your Cisco VXSM product marketing representative.

Alternatively, users with CCO accounts can access the MIB and VXSM software on-line at:

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

The procedure is:

- 
- Step 1** Log on to <http://www.cisco.com/kobayashi/sw-center/sw-wan.shtml>
  - Step 2** Locate the VXSM platform (either VXSM 8880 or VXSM 8850) and click the down arrow to expand the “Select Release Level” drop down menu.
  - Step 3** Select the desired MIB release level (for example, Release 5200) to display a list of downloadable files.
  - Step 4** Click on the desired file (for example, mgx8850-fw-5200.tar).
  - Step 5** Read the license agreement and, if approved, click Accept.
  - Step 6** In the Software Download dialog box, click on Download: *filename* (where *filename* is the name of the file selected for download). This step starts the download procedure.
  - Step 7** Follow the normal file download procedure for your computer.
  - Step 8** When the file has been downloaded, untar or unzip the downloaded file. The MIB file is included in the downloaded file and is listed as a tar file (for example mgx8850rel5070mib.tar).
  - Step 9** Untar the MIB file to display its contents.
- 

## Service Module Support By Platform

| Service Module  | MGX8880 | MGX8850 |         |         |         |       | MGX8850/B |         |       |
|-----------------|---------|---------|---------|---------|---------|-------|-----------|---------|-------|
|                 | PXM45/C | PXM1    | PXM45/A | PXM45/B | PXM45/C | PXM1E | PXM45/B   | PXM45/C | PXM1E |
| MGX-RPM-XF-512  | Yes     |         |         | Yes     | Yes     |       | Yes       | Yes     |       |
| VISM-PR         | Yes     | Yes     |         | Yes     | Yes     | Yes   | Yes       | Yes     | Yes   |
| AXSM-1-2488/B   | Yes     |         |         | Yes     | Yes     |       | Yes       | Yes     |       |
| AXSM-16-155/B   | Yes     |         |         | Yes     | Yes     |       | Yes       | Yes     |       |
| AXSM-4-622/B    | Yes     |         |         | Yes     | Yes     |       | Yes       | Yes     |       |
| AXSM-16-T3/E3/B | Yes     |         |         | Yes     | Yes     |       | Yes       | Yes     |       |

| Service Module | MGX8880 | MGX8850 |         |         |         |       | MGX8850/B |         |       |
|----------------|---------|---------|---------|---------|---------|-------|-----------|---------|-------|
|                | PXM45/C | PXM1    | PXM45/A | PXM45/B | PXM45/C | PXM1E | PXM45/B   | PXM45/C | PXM1E |
| AXSM-32-T1E1-E | Yes     |         |         | Yes     | Yes     |       | Yes       | Yes     |       |
| MGX-VXSM-155   | Yes     |         |         | Yes     | Yes     |       | Yes       | Yes     |       |
| MGX-VXSM-T1E1  | Yes     |         |         | Yes     | Yes     |       | Yes       | Yes     |       |
| MGX-VXSM-T3    | Yes     |         |         | Yes     | Yes     |       | Yes       | Yes     |       |
| MPSM-T3E3-155  |         |         |         | Yes     | Yes     | Yes   | Yes       | Yes     | Yes   |
| RCON-1TO5-8850 | Yes     |         |         |         |         |       | Yes       | Yes     | Yes   |

## Compatibility



**Note**

VXSM Release 5.2.10.201 is supported only with PXM-45.

VXSM software interoperability with the MGX 8880 Media Gateway or the Cisco MGX 8850 (PXM45) Multiservice Switch platform software is listed in [Table 1](#).

**Table 1** *VXSM Software Interoperability*

| Product                                    | Latest Firmware             | Min. Firmware               |
|--------------------------------------------|-----------------------------|-----------------------------|
| PXM45                                      | 5.2.10.201                  | 5.2.10.201                  |
| MGX-RPM-XF-512                             | 12.3(11)T9                  | 12.3(11)T9                  |
| CWM                                        | 15.1.50P1                   | 15.1.50P1                   |
| CTM                                        | 6.0                         | 6.0                         |
| VISM-PR                                    | 3.3.25                      | 3.3.25                      |
| AXSM-1-2488/B                              | 5.2.10.200                  | 5.2.10.200                  |
| AXSM-16-155/B                              | 5.2.10.200                  | 5.2.10.200                  |
| AXSM-4-622/B                               | 5.2.10.200                  | 5.2.10.200                  |
| AXSM-16-T3/E3/B                            | 5.2.10.200                  | 5.2.10.200                  |
| AXSM-32-T1E1-E                             | 5.2.10.200                  | 5.2.10.200                  |
| MPSM-T3E3-155                              | 5.2.10.200                  | 5.2.10.200                  |
| BTS                                        | 4.5                         | 4.5                         |
| PGW                                        | 9.5.2                       | 9.5.2                       |
| Cisco 2600 Series Routers                  | c2600-ipvoice-mz.123-9.13.T | c2600-ipvoice-mz.123-9.13.T |
| Cisco 2600 for use as an IP Transfer Point | c2600-itp-mz.122-21.SW bin  | c2600-itp-mz.122-21.SW bin  |
| Cisco 3700 Series Routers                  | c3725-ipvoice-mz,123-9.13.T | c3725-ipvoice-mz,123-9.13.T |
| Cisco ATA 188                              | 3.2.0 for SIP/MGCP/H323     | 3.2.0 for SIP/MGCP/H323     |
| Linksys PAP2 Phone Adapter                 | Version 2.0.6 (LS)          | Version 2.0.6 (LS)          |

**Table 1** VXSM Software Interoperability (continued)

| Product             | Latest Firmware | Min. Firmware   |
|---------------------|-----------------|-----------------|
| Linksys RT31 Router | Version 1.27.01 | Version 1.27.01 |
| Sipura 2100 ATA     | Version 3.2.3   | Version 3.2.3   |

Table 2 describes the software images available for Release 5.2.10.201 for VXSM.

**Table 2** Software Images for Release 5.2.10.201 for VXSM

| Board Pair                  | Latest Boot Code Version   | Minimum Boot Code Version  | Firmware                |
|-----------------------------|----------------------------|----------------------------|-------------------------|
| MGX-VXSM-155,<br>CALEA      | vxsm_005.002.010.201_bt.fw | vxsm_005.002.010.201_bt.fw | vxsm_005.052.010.201.fw |
| MGX-VXSM-155,<br>Non-CALEA  | vxsm_005.002.010.201_bt.fw | vxsm_005.002.010.201_bt.fw | vxsm_005.002.010.201.fw |
| MGX-VXSM-T1E1,<br>CALEA     | vxsm_005.002.010.201_bt.fw | vxsm_005.002.010.201_bt.fw | vxsm_005.052.010.201.fw |
| MGX-VXSM-T1E1,<br>Non-CALEA | vxsm_005.002.010.201_bt.fw | vxsm_005.002.010.201_bt.fw | vxsm_005.002.010.201.fw |
| MGX-VXSM-T3,<br>CALEA       | vxsm_005.002.010.201_bt.fw | vxsm_005.002.010.201_bt.fw | vxsm_005.052.010.201.fw |
| MGX-VXSM-T3,<br>Non-CALEA   | vxsm_005.002.010.201_bt.fw | vxsm_005.002.010.201_bt.fw | vxsm_005.002.010.201.fw |

# Caveats for VXSM Release 5.2.10.201

This section describes software caveats for Release 5.2.10.201

## Open Caveats in Release 5.2.10.201

Table 3 describes the open caveats in VXSM Release 5.2.10.201

**Table 3** Open Software Caveats for VXSM Release 5.2.10.201

| DDTS Issue | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSCeh20283 | <p><b>Headline:</b> AAL2 CPS pkts with bad LI cause Repeater PLD to freeze.</p> <p><b>Symptom:</b> The card goes into an Active-F state if redundancy is not configured. Otherwise, the card switches over to the standby. One-way audio was seen on 3 ds0s of an STM1 just prior to this transition to Active-F state in a setup without redundancy.</p> <p><b>Conditions:</b>It can be caused by corruption of ATM cells in the ATM network.</p> <p><b>Workaround:</b>There is no workarounds currently known. The only way to clear the problem is to reset the VXSM card.</p>                                                                                                                                                    |
| CSCeh25926 | <p><b>Headline:</b> No digit detect for the ltd hairpin call</p> <p><b>Symptom:</b> When the CA requests that digits be notified to itself on a hairpin call, digits are not notified.</p> <p><b>Condition:</b> This problem only applies to H.248 protocol and only to tdm hairpin calls. A conference unit hairpin connection is established between the two DSP channels that are part of the TDM hairpin call. Digit detection and report to the CA is enabled on one of the channels. The digit detector that is used is the one that is after the conference unit. Hence, this digit detector does not receive the digit tones from the TDM side. Hence, digits are not reported to the CA.</p> <p><b>Workaround:</b> none</p> |
| CSCeh56654 | <p><b>Headline:</b> AAL2MP:VSIC-2-VSIMAJORERR on VXSM-RED after PXM45 reset</p> <p><b>Symptom:</b> VSI error log on the system</p> <p><b>Conditions:</b> This error is for releasing TCB buffers and it happens when PXM card gets reset in the shelf without having redundancy for PXM card.</p> <p><b>Workaround:</b> The error is harmless but needs to be identified</p>                                                                                                                                                                                                                                                                                                                                                         |



**Table 3 Open Software Caveats for VXSM Release 5.2.10.201 (continued)**

| DDTS Issue | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSCeh91387 | <p><b>Headline:</b> T.38 calls fail in mixed voice/fax setup with G711 as voice codec</p> <p><b>Symptom:</b> Some T.38 fax attempts fail when original voice codec has been used is G.711.</p> <p><b>Conditions:</b> This problem happens under the following two conditons,</p> <ol style="list-style-type: none"> <li>1) When the VXSM card is almost fully loaded with calls (say, approx. less than 252 DSP channels are left)</li> <li>2) Voice codec for the T.38 calls is a low-complexity one - G.711(A/U)</li> </ol> <p><b>Workaround:</b></p> <ol style="list-style-type: none"> <li>1) Use high complexity codec (G.729/G.726 family) as voice codec for those T.38 calls - to stop any call failure or</li> <li>2) Do not load the card fully with calls (leave approx. 300-400 channels - depends on the call setup/teardown pattern too) to reduce the probability of failure (to 0 or close to 0).</li> </ol> |
| CSCeh92932 | <p><b>Headline:</b> V.34 Modem Upspeed Fails with voice pp 30 and higher</p> <p><b>Symptom:</b> V.34 modem calls with fixed mode negotiation train up at a compromised speed. of 28800/28800 instead of 33600/33600.</p> <p><b>Conditions:</b> Original voice call must have been set up with packetization period (pp) of 30 ms or above.</p> <p><b>Workaround:</b> While setting up voice calls, use a lower packetization period (&lt;30 ms)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| CSCei25313 | <p><b>Headline:</b> R1.5MR-&gt;R2.0 in-service upgrade: max_cps == 20cps</p> <p><b>Symptom:</b> During an in-service graceful upgrade, the standby VXSM will go into Failed State.</p> <p><b>Conditions :</b> VXSM card supports in-service graceful upgrade. If upgrade is performed from a previous release (5.0 or 5.1) to (5.2) the call load on the system must not exceed 20 cps. If the call load is higher than 20 cps during upgrade, this particular problem will be observed.</p> <p><b>Workaround :</b> Make sure that the call load on the system is at a maximum of 20 cps when upgrade is being performed. It is recommended that upgrade is performed on the system when the traffic load is at its minimum.</p>                                                                                                                                                                                             |
| CSCei32747 | <p><b>Headline:</b> In T.38 call with L:fxr/fx:gw;t38 NTFY gwfax(start) rcvd after DLCX</p> <p><b>Symptom:</b> A NTFY message (gwfax(start)) is sent to the call agent just before a DLCX is received for a T.38 call. Since this NTFY is ignored by the call agent there is no impact to the operation of the system.</p> <p><b>Conditions :</b> This problem is intermittent.</p> <p><b>Workaround :</b> none</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

Table 3 Open Software Caveats for VXSM Release 5.2.10.201 (continued)

| DDTS Issue | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSCei53902 | <p><b>Headline:</b> Stuck calls on VXSM (crml_nw_reserve_cac failures)</p> <p><b>Symptom:</b> A lot of CRCX failures due to '403, Gateway does not have available resource'.</p> <p><b>Conditions:</b> This happens whenever a DIM timeout happens for an open channel requests and the subsequent close channel request. The resources for such calls are not released resulting in subsequent call attempts on that physical endpoint failing.</p> <p><b>Workaround:</b> None.</p>                                                                                                                                                                                                                                                                   |
| CSCei68726 | <p><b>Headline:</b> Incorrect sensor shown in AlarmTrap on configuring temp-volt values</p> <p><b>Symptom:</b> Alarm description in the alarm trap generated is incorrect for all voltage and temp sensors that are after the obsoleted voltage sensor in the MIB listings.</p> <p><b>Condition:</b> The voltage sensor number 5 (0 based) is obsolete. Due to a software bug, the description of the trap for all sensors, in the MIB list, after this obsoleted voltage sensor is incorrect.</p> <p><b>Workaround:</b> None</p>                                                                                                                                                                                                                      |
| CSCei68739 | <p><b>Headline:</b> Card reset during pcm trace with invalid ftp password</p> <p><b>Symptoms:</b> Card resets while performing a PCM trace</p> <p><b>Conditions:</b> PCM trace with FTP is performed. This problem would occur if either the IP address (of the FTP server), the username or the password for the FTP server are incorrect. These error conditions should exist for at least 4 minutes.</p> <p><b>Workaround:</b> Use proper password and have proper access rights. Stop the Bearer trace or delete the bearertracesrvprof as soon as you see the "invalidPassword" warning.</p> <p><b>Further problem description:</b> Although this action makes the card fail, it is easily avoidable thus it is listed with a lower severity.</p> |
| CSCei73487 | <p><b>Headline:</b> Executing "cnfgwis" doesn't bring the line back into service.</p> <p><b>Conditions:</b></p> <ol style="list-style-type: none"> <li>1. Force the line OOS, using cnfgwoos 2</li> <li>2. Physically break the line.</li> <li>3. Physically restore the line.</li> <li>4. Force the line IS using cnfgwis cli.</li> </ol> <p><b>Workaround :</b> None</p>                                                                                                                                                                                                                                                                                                                                                                             |
| CSCei74287 | <p><b>Headline:</b> Request Event List gets deleted on sending DLCX</p> <p><b>Symptom:</b> On sending the DLCX *, the requested events applied to the endpoint also get deleted, which should not be deleted as these events are applied to endpoint not to a connection.</p> <p><b>Condition:</b> Not any special condition. Just apply the RQNT say co1 on a endpoint, create a connection and delete the connection with DLCX *. The applies requested event co1 also get deleted, which should not.</p> <p><b>Workaround:</b> Use fully specified DLCX instead of DLCX *.</p>                                                                                                                                                                      |

**Table 3** Open Software Caveats for VXSM Release 5.2.10.201 (continued)

| DDTS Issue | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSCej06027 | <p><b>Headline:</b> RT2.0: upgrade fr 1.5MR Patch to 2.0 failed RDM-a-APP_CALLBACK_EXE</p> <p><b>Symptom:</b> VXSM card goes to Failed-U during an upgrade from R1.5 to R2.0 image.</p> <p><b>Condition:</b> This may happen when PRI (LAPD) lines are configured. While the upgrade is in progress, the PRI lines should not flap. If the PRI line(s) flap, the upgrade may fail. Please make sure that the PRI lines are all in "I2Active" state (dsplapd(s) CLI), and they don't flap between "inactive" and "I2Active" states.</p> <p><b>Workaround:</b> To either delete the PRI lines that are flapping, or to remove the connection to the PRI lines that are flapping so that the lines stay in down ("inactive") state.</p> |
| CSCej14688 | <p><b>Headline:</b> Unsupported packages M, H, R appear as supported in cnf/dspxcgcppkgs</p> <p><b>Symptom:</b> Packages M, H and R are shown in CLIs cnf/dspxcgcppkgs even though they're not supported.</p> <p><b>Condition:</b> Always true, these CLIs apply to the whole card.</p> <p><b>Workaround:</b> Don't use events or signals from these packages in calls. To ensure that these packages can't be used, disable them using the CLI: "cnfxgcppkgs &lt;PackageIds&gt;". The list of supported packages is: G D T MO IT MT FXR BA. This list of only these supported packages can be enabled using: "cnfxgcppkgs 2,3,5,15,18,19,23,24".</p>                                                                                |
| CSCej17721 | <p><b>Headline:</b> Error logs for long run/Switchover reported in dsplog</p> <p><b>Symptom:</b> Occasionally, the following error messages are logged in the PXM log during BLV call setup:</p> <pre>01A00105 09/11/2005-22:17:52 CAS-4-GENERAL_ERROR     tCasTask  lsmCnfgDigitDetect CAS-ERR: Ept:536, Unable to conf DSP in digit detect mode(0), transId(4768832), endpt(536) 01A00104 09/11/2005-22:17:52 DSM-6-ERR     tCasTask  dsm_digit_detection_con DSM-ERR: Bearer chan not open: ds1 17 ds0 24 (1-base) time(us) 0xc087bfbe</pre> <p><b>Conditions:</b> This error is displayed intermitently when making BLV calls, the calls are not effected.</p> <p><b>Workaround:</b> No workaround.</p>                          |

**Table 3 Open Software Caveats for VXSM Release 5.2.10.201 (continued)**

| <b>DDTS Issue</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSCej23510        | <p><b>Headline:</b> SRT2.0: Err logs received and long duration calls not successful</p> <p><b>Symptom:</b> Following error message are received for long run CAS calls for cable DSP image and some CAS calls fail.</p> <p>1) ssiSemGive failed in CIL:<br/>SSI_SEMID 0x1001c is not owned by giving task. It is owned by task 0xffffffff.</p> <p>2) CIL SLHeaderChunk memory full</p> <p>3) SCIL Request Node Chunk memory is full</p> <p><b>Condition:</b> This problem happens under heavy call load, running OI/BLV calls together with E911 and SS7 calls. The situation is intermittent.</p> <p><b>Workaround:</b> None</p> |
| CSCej41250        | <p><b>Headline:</b> E911 call released and VXSM sends RSIP to reset endpoints</p> <p><b>Conditions:</b> E911 calls are released and as a result VXSM sends RSIP message to reset the CAS interface.</p> <p><b>Workaround:</b> None.</p>                                                                                                                                                                                                                                                                                                                                                                                            |
| CSCek17512        | <p><b>Headline:</b> VXSM card resets while bulk configuring AAL2 cnfvifec and addvif</p> <p><b>Symptom:</b> VXSM Card resets while some AAL2 trunking configuration is done in bulk. This problem is intermittent.</p> <p><b>Condition:</b> The problem only happens when adding bulk configuration for about 1 OC3 worth of endpoints.</p> <p><b>Workaround:</b> Use smaller number of repetitions (less than 1953 ports) in configuring AAL2 trunking.</p>                                                                                                                                                                       |
| CSCek18206        | <p><b>Symptom:</b> No CLIs can be executed on the VXSM Card after having executed addconip.</p> <p><b>Conditions:</b> When addconip CLI was executed, a problem in this CLI lead to an exception. After this exception since the semaphore was taken by the crashing task, no other CLIs can be executed. The problem in addconip CLI is intermittent.</p> <p><b>Workaround:</b> Reset the VXSM card.</p>                                                                                                                                                                                                                          |
| CSCek24508        | <p><b>Headline:</b> Standby card goes into Failed State due to IPC Failure.</p> <p><b>Symptom:</b> The standby card resets randomly in a trunking configuration.</p> <p><b>Condition:</b> The logs indicate that the standby card is reset because IPC communication is lost to the card. It is not clear under which condition this problem is encountered, except that the problem happens in trunking configuration.</p> <p><b>Workaround:</b> None.</p>                                                                                                                                                                        |
| CSCek26432        | <p><b>Headline:</b> syncram DB takes more than 15% CPU in 60cps</p> <p><b>Symptom:</b> Run 8K calls with mix NFAS and ISDN setup at 60 cps, The call rate is up to 100% for about 1 hour; after that, the call rate starts to fail. With ISDN setup only and run 16 hours @ 60cps, no call failed seen.</p> <p><b>Workaround:</b> Reduce the call rate to 40cps when set up 8K calls with mix NFAS and ISDN. Or run 60cps with ISDN setup only.</p>                                                                                                                                                                                |

**Table 3** Open Software Caveats for VXSM Release 5.2.10.201 (continued)

| DDTS Issue | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSCek27035 | <p><b>Headline:</b> Running mix codec g711 and g729 crashed blade VXSM</p> <p><b>Symptom:</b> Primary VXSM card crashes while running VOIP calls with a mix of G.729a and G.711 codec.</p> <p><b>Condition:</b> Running mix codec G.729a and G.711.</p> <p><b>Workaround</b> none.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| CSCek27212 | <p><b>Headline:</b> xgcpndpts are showing down after issuing a loopback on VXSM.</p> <p><b>Symptoms:</b> Endpts will show down on a VOIP connection on a VXSM.</p> <p><b>Conditions:</b> Was observed on a VXSM OC3 card running 5.2(0.200) code. T1 was taken out of service prior to issuing the software loopback.</p> <p><b>Workaround:</b> 1) If you need to put a software loop on a DS1 on the card, please do not take the T1 out of service before issuing the loopback on the T1.</p> <p style="padding-left: 20px;">cnfpath -ds1 x.x.x.x -lbp x is only necessary. Taking the T1 out of service and in service is not necessary when putting up software loops on the T1 of the card.</p> <p>2) If you happen to take the T1 out of service prior to putting up a software loop, please try putting a loop back on the T1 with it in service and release the loop again.</p> <p>Ex) of workaround number two below.</p> <p>Below is T1 # 99 on sonet 1.2</p> <p>If you happen to do A,B,C,D,E,F below, please do try G,H to clear this.</p> <p>A) cnfpathoos 1.2.1.16 2<br/> B) cnfpath -ds1 1.2.1.16 -lpb 3<br/> C) cnfpathis 1.2.1.16<br/> D) cnfpathoos 1.2.1.16<br/> E) cnfpath -ds1 1.2.1.16 -lpb 1<br/> F) cnfpathis -ds1 1.2.1.16<br/> G) cnfpath -ds1 1.2.1.16 -lpb 3<br/> H) cnfpath -ds1 1.2.1.16 -lpb 1</p> <p>3) Tear down the entire path and rebuild it.</p> |

**Table 3 Open Software Caveats for VXSM Release 5.2.10.201 (continued)**

| DDTS Issue                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>CSCek27212<br/>(continued)</p> | <p><b>Further Problem Description:</b> For example: (below is what will trigger this) (below is an example of T1 # 99 that had this problem on sonet 1.2) (Please note: below shows releasing the loop on the T1)</p> <pre>TEST.1.VXSM.a &gt; cnfpathoos 1.2.1.16 2 TEST.1.VXSM.a &gt; cnfpath -ds1 1.2.1.16 -lpb 1 TEST.1.VXSM.a &gt; cnfpathis 1.2.1.16</pre> <p>Below shows that the T1 is good.</p> <pre>TEST.1.VXSM.a &gt; dspspathstate 1.2.1.16 ===== DS1/E1 Service State ===== DS1/E1           :           1.2.1.16 Admin State      :           inService Operational State :           up Service State    :           inService</pre> <p>Total number of matching end-point(s) : 24</p> <pre>===== Display List of End-Point(s) ===== Endpoint          Admin State  Oper State  Accept Call  Connection ===== DS/S-0/DS1-99/1   inService   down        No            No DS/S-0/DS1-99/2   inService   down        No            No DS/S-0/DS1-99/3   inService   down        No            No DS/S-0/DS1-99/4   inService   down        No            No DS/S-0/DS1-99/5   inService   down        No            No DS/S-0/DS1-99/6   inService   down        No            No DS/S-0/DS1-99/7   inService   down        No            No DS/S-0/DS1-99/8   inService   down        No            No DS/S-0/DS1-99/9   inService   down        No            No DS/S-0/DS1-99/10  inService   down        No            No DS/S-0/DS1-99/11  inService   down        No            No DS/S-0/DS1-99/12  inService   down        No            No DS/S-0/DS1-99/13  inService   down        No            No</pre> |
| <p>CSCek28085</p>                 | <p><b>Headline:</b> Default profile codec always picked up for v23Modem</p> <p><b>Symptom:</b> One way voice path only if the default profile has different codec.</p> <p><b>Condition:</b> Only if the voice and VBD codecs on the network are different from the default profile codec. The different codecs between the endpoints in the network causes one way voice traffic.</p> <p><b>Workaround:</b> Configure the default profile with the network voice and upspeed code<br/>cnfvbdprof 1 -upspeed 16</p> <p>Since the default profile can be configured to point to the network codecs, there will not be codec mismatch and there is no need to configure a separate profile.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

**Table 3** Open Software Caveats for VXSM Release 5.2.10.201 (continued)

| <b>DDTS Issue</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSCek29349        | <p><b>Headline:</b> CA Controlled T38,ced and fax mode as none,no NTFY from GW.</p> <p><b>Symptom:</b> For CA Controlled T38, if ced &amp; V21Tone in eventmappings are set with mode "none", NO Notify is sent from VXSM and hence CA doesn't send Modify to T38.</p> <p><b>Conditions:</b> This issue is happening only when ced is set with mode "none"</p> <p><b>Workaround:</b> For CA controlled T38 Fax, VXSM only requires V21Tone in eventmapping set with HandleType "fax" and mode "none". Don't change any setting for "ced" tone in the eventmapping.</p>                                    |
| CSCek31980        | <p><b>Headline:</b> DSP crashed in AAL2 trunking customer network.</p> <p><b>Symptoms:</b> VXSM switches over to standby VXSM if redundancy is configured. If it is a standalone card, the dspcd shows the card in an Active-F state.</p> <p><b>Conditions:</b> Issue has occurred once so far. Application is AAL2 trunking with DTMF relay enabled.</p> <p><b>Workaround:</b> No workaround</p>                                                                                                                                                                                                         |
| CSCin98678        | <p><b>Headline:</b> Ecan ON during upspd, GClear upspd codec for V17, V21, V22, V22bis, V23</p> <p><b>Symptom:</b> ECAN is on when G.Clear is chosen as the upspeed codec.</p> <p><b>Conditions:</b> G.Clear must be the upspeed codec.</p> <p><b>Workaround:</b> Use another upspeed codec such as G.711.</p>                                                                                                                                                                                                                                                                                            |
| CSCin98779        | <p><b>Headline:</b> Utilized Cell rate for G726-32,pkt:30ms differs from expected value.</p> <p><b>Symptom:</b> Utilized cell rate for G726-32, pp 30msec (only for this combination) takes 1 cps more than the expected value (The expected value is what is obtained from the integer math column of the VXSM CAC bandwidth calculator)</p> <p><b>Condition:</b> This will happen for every call made in H.248/xGCP protocols. No pre-conditions are required.</p> <p><b>Workaround:</b> Use the "BW aggregate" row value value in the VXSM CAC bandwidth calculator for all bandwidth calculations</p> |

## Resolved Caveats in Release 5.2.10.201

Table 5 describes the open caveats that existed in VXSM Release 5.2.10.200 or later and are now resolved in Release 5.2.10.201

**Table 4** Release 5.2 (or later) Caveats that are resolved in Release 5.2.10.200

| DDTS Issue | Description                                                                           |
|------------|---------------------------------------------------------------------------------------|
| CSCek30446 | <b>Headline:</b> Bulk sync for trunking conns fail leading to standby failure.        |
| CSCek31429 | <b>Headline:</b> Disable V.21,V.23 & V.18A during XGCP call setup                     |
| CSCek31988 | <b>Headline:</b> VXSM left with a dangling call-leg on avg of one/week at customer    |
| CSCek32550 | <b>Headline:</b> Codec profile 110, codec G.729ab (13) does not work properly         |
| CSCek33520 | <b>Headline:</b> Connections go to Failed state when RPM-XF switches to secondaryCard |

## Resolved Caveats in Release 5.2.10.200

Table 5 describes the open caveats that existed in VXSM Release 5.2 or later and are now resolved in Release 5.2.10.200

**Table 5** Release 5.2 (or later) Caveats that are resolved in Release 5.2.10.200

| DDTS Issue | Description                                                           |
|------------|-----------------------------------------------------------------------|
| CSCej71152 | fix local mem overwrite issue for DEL op during R2.0->R2.5 MGCP upgd  |
| CSCei07499 | CM data-structures leaked upon PKTAPI returning error                 |
| CSCei13086 | crml_get_active_calls_on_dsx1 not working                             |
| CSCei89988 | AAL2:Difference in Utilized cell rate after downspeed (cust prof 110) |
| CSCej59235 | Exception for pipeRx Task during switchover for sustained call rate   |
| CSCej83223 | GW controlled T38 fax failed to delete termination.                   |
| CSCej84256 | Use special values for g.clear calls                                  |
| CSCej86513 | IUA:Change T200 or T203 caused the LAPD L2 protocol failed            |
| CSCej87841 | VBD runs out of memory during upspeed loadrun with Abacus             |
| CSCek05186 | Configuring fixed CNG results in loud noise during silence w/ VAD ON  |
| CSCek05192 | DSP Knobs cnfdsp -vpb/-vad do not affect already established calls    |
| CSCek05200 | Voice bad with Custom 100 after a fax/modem downspeed                 |
| CSCek07771 | rudpv1EstablishConnection: connP2 is not NULL printed.                |
| CSCek09139 | AAL2 trunking upspeed: VBD info block leaks after CAC failure         |
| CSCek11808 | DTMF relay causes oneway voice                                        |
| CSCek11823 | Connection goes into alarm if percent util changes with odd PCR value |
| CSCek12801 | Buffered DSP failures are not reported to HHM if all cores die @once  |
| CSCek12882 | CNFCID followed by DELCID causes CID stuck in invalid state           |
| CSCek13379 | VBD FSM runs away in while loop                                       |
| CSCek15562 | AAL2 upspeed: Block un-supported tones during addcid                  |



**Table 5** Release 5.2 (or later) Caveats that are resolved in Release 5.2.10.200

| DDTS Issue | Description                                                       |
|------------|-------------------------------------------------------------------|
| CSCek16817 | modem call cause core down when htype NONE                        |
| CSCek17512 | VXSM card resets while bulk configuring AAL2 cnfvifec and addvif  |
| CSCek19617 | VBD info block leaks when upspeed codec is configured as none     |
| CSCek19680 | cnfpath -sts allow payload change with ds1 line still up          |
| CSCek23048 | xGCP ringback tone dBm tone level for slovenia/denmark too low    |
| CSCek23582 | AAL2 Trunking - All 6 cores of a DSP chip crashed.                |
| CSCek23707 | Addcid timeout when the line is configure for CAS signal          |
| CSCek24375 | DSP Crashed when adding 43rd line of CIDs on 48T1E1               |
| CSCek25809 | set upgd cps rate for H.248 and XGCP for R2.0MR->R2.5 upgds       |
| CSCek26987 | VXSM will not play DTMF tones towards the PSTN                    |
| CSCek27587 | cnfcid in DATA mode is rejected                                   |
| CSCek27889 | Adding ConnID level filtering for DSPDRV traces                   |
| CSCek30041 | Bulk sync for trunking conns fails after repeated switchovers.    |
| CSCin98532 | cnfcid reports unknown error while changing codec from u to a law |
| CSCin98713 | Multiple switchovers results VXSM to comeup in Failed state       |

## Removed Caveats in Release 5.2.10.200

Table 6 lists caveats that were listed as open in Release 5.2 but have been removed because they are unreproducible or otherwise invalid.

**Table 6** Release 5.2 (or later) Caveats that are removed in Release 5.2.10.200

| DDTS Issue | Description                                                      |
|------------|------------------------------------------------------------------|
| CSCeh48550 | 30% of modem passthrough call connect in 14400                   |
| CSCei79385 | Call rejected due to mgcp_connect_peer_vox_call_leg failure      |
| CSCei86716 | False alarm on VXSM OC3 card                                     |
| CSCei88677 | AAL2:Some dtmf digits missing for custom profile 110 with VAD ON |
| CSCei93944 | DIM timeout error=2 on Cable DSP image                           |

The MGX-VXSM-155 card is also known as the MGX-VXSM-4OC card.

The MGX-VXSM-T1/E1 card is also known as the MGX-VXSM-48T1/E1 card.

The MGX-VXSM-T3 card is also known as the MGX-VXSM-6T3 card.

## Related Documentation

The following documents contains information that may be useful to software Release 5.2 for VXSM:

- *Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Hardware Installation Guide, Releases 2 Through 5.2*
- *Cisco ATM Services (AXSM) Configuration Guide and Command Reference for MGX Switches, Release 5.2*
- *Cisco MGX Route Processor Module (RPM-XF) Installation and Configuration Guide, Release 4*
- *Cisco MGX 8880 Media Gateway: A Guide to User Documentation.*
- *Release Notes for Cisco MGX 8850 (PXM1E/PXM45), Cisco MGX 8950, and Cisco MGX 8830 Switches, Release 5.2.10*

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

### Documentation DVD

Cisco documentation and additional literature are available in a Documentation DVD package, which may have shipped with your product. The Documentation DVD is updated regularly and may be more current than printed documentation. The Documentation DVD package is available as a single unit.

Registered Cisco.com users (Cisco direct customers) can order a Cisco Documentation DVD (product number DOC-DOCDVD=) from the Ordering tool or Cisco Marketplace.

Cisco Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/>

Cisco Marketplace:

<http://www.cisco.com/go/marketplace/>

### Ordering Documentation

You can find instructions for ordering documentation at this URL:

[http://www.cisco.com/univercd/cc/td/doc/es\\_inpk/pdi.htm](http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm)

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:  
<http://www.cisco.com/en/US/partner/ordering/>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

## Documentation Feedback

You can send comments about technical documentation to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

[http://www.cisco.com/en/US/products/products\\_security\\_vulnerability\\_policy.html](http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html)

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

<http://www.cisco.com/go/psirt>

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

[http://www.cisco.com/en/US/products/products\\_psirt\\_rss\\_feed.html](http://www.cisco.com/en/US/products/products_psirt_rss_feed.html)

## Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies—[security-alert@cisco.com](mailto:security-alert@cisco.com)
- Nonemergencies—[psirt@cisco.com](mailto:psirt@cisco.com)

**Tip**

We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one that has the most recent creation date in this public key server list:

<http://pgp.mit.edu:11371/pks/lookup?search=psirt%40cisco.com&op=index&exact=on>

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

## Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

## Cisco Technical Support Website

The Cisco Technical Support Website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, 365 days a year, at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

**Note**

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support Website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

## Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

## Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

<http://www.cisco.com/go/marketplace/>

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

<http://www.cisco.com/packet>

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

<http://www.cisco.com/go/iqmagazine>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

<http://www.cisco.com/ipj>

- World-class networking training is available from Cisco. You can view current offerings at this URL:

<http://www.cisco.com/en/US/learning/index.html>

CCSP, CCVP, the Cisco Square Bridge logo, Follow Me Browsing, and StackWise are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn, and iQuick Study are service marks of Cisco Systems, Inc.; and Access Registrar, Aironet, ASIST, BPX, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Empowering the Internet Generation, Enterprise/Solver, EtherChannel, EtherFast, EtherSwitch, Fast Step, FormShare, GigaDrive, GigaStack, HomeLink, Internet Quotient, IOS, IP/TV, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, LightStream, Linksys, MeetingPlace, MGX, the Networkers logo, Networking Academy, Network Registrar, *Packet*, PIX, Post-Routing, Pre-Routing, ProConnect, RateMUX, ScriptShare, SlideCast, SMARTnet, StrataView Plus, TeleRouter, The Fastest Way to Increase Your Internet Quotient, and TransPath are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0502R)

Copyright © 2005, Cisco Systems, Inc.  
All rights reserved.