



Release Notes for Cisco Unified Messaging Gateway Release 8.0

Last updated: November 11, 2010

These release notes support Cisco Unified Messaging Gateway (Cisco UMG) Release 8.0. [Table 1](#) describes the history of this release.

Table 1 *Cisco UMG Release History*

Release	Date Released
8.0.1	April 12, 2010
8.0.2	September 7, 2010



Note

- The user documentation for Cisco UMG refers to this release as 8.0. Release 8.0.2 is the second released version for Cisco UMG Release 8.0.
- Upgrading from Cisco UMG Release 1.0 to Release 8.0 is not supported. If you are currently running Cisco UMG Release 1.0 and want to move to Cisco UMG Release 8.0, you need to perform a fresh installation. See the [Installation and Upgrade Guide for Cisco UMG Release 8.0](#) for complete information.

These Release Notes contain the following sections:

- [System Requirements, page 2](#)
- [Limitations, page 7](#)
- [New Features and Enhancements, page 8](#)
- [Caveats, page 9](#)
- [Additional References, page 11](#)
- [Obtaining Documentation and Submitting a Service Request, page 11](#)



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

System Requirements

- [Hardware Supported by Cisco UMG Release 8.0, page 2](#)
- [Network Modules Supported by Cisco UMG Release 8.0, page 3](#)
- [CautionDo not combine the NME-UMG and NME-UMG-EC network modules into a single system. Because the messaging gateways must be synchronized, they must all be able to accommodate the same size of data dump., page 3](#)
- [Software SKUs for Cisco UMG Release 8.0, page 3](#)
- [Feature Licenses for Cisco UMG Release 8.0, page 4](#)
- [File Packages for Cisco UMG Release 8.0.x, page 5](#)
- [Software Compatibility for Cisco UMG Release 8.0 SRSV-UMG Licenses, page 6](#)
- [Software Compatibility for Cisco UMG 8.0 VPIM Licenses, page 7](#)

Hardware Supported by Cisco UMG Release 8.0

[Table 2](#) lists supported platforms and the minimum Cisco IOS software release required to support Cisco UMG Release 8.0.

Table 2 *Cisco UMG Release 8.0: Supported Platforms and Minimum Cisco IOS Release Required*

Cisco Platform	Cisco UMG Enhanced Network Module (NME-UMG)	Cisco UMG Enhanced Network Module Extended Capacity (NME-UMG-EC)	Cisco UMG on SM-SRE-700-K9 ¹	Cisco UMG on SM-SRE-900-K9 ¹
Cisco 2811 Cisco 2821 Cisco 2851	12.2(24)T	12.2(24)T	—	—
Cisco 2911 Cisco 2921 Cisco 2951	15.0(1)M ²	15.0(1)M ²	15.0(1)M	15.0(1)M
Cisco 3825 Cisco 3845	12.2(24)T	12.2(24)T	—	—
Cisco 3925 Cisco 3945	15.0(1)M ²	15.0(1)M ²	15.0(1)M	15.0(1)M
Cisco 3925E Cisco 3945E	15.0(1)M ²	15.0(1)M ²	15.1(1)T	15.1(1)T

1. Supported beginning with Cisco UMG version 8.0.2.

2. The NME-UMG and NME-UMG-EC are supported on the Cisco 29xx and 39xx platforms using the SM-NM-ADAPTR.

Network Modules Supported by Cisco UMG Release 8.0

Table 3 lists the network modules and their respective capacities.

Table 3 *Cisco UMG Release 8.0: Supported Network Modules*

Model	Maximum number of Cisco Unity Express endpoints supported per Cisco UMG network module	Number of subscribers on Cisco Unity Express endpoints supported per system of 20 Cisco UMGs	Maximum number of branch voicemail servers supported per Cisco UMG network module
NME-UMG	250	125,000	250
NME-UMG-EC	1,000	500,000	1,000
Cisco UMG on SM-SRE-700-K9	1,000	500,000	1,000
Cisco UMG on SM-SRE-900-K9	1,000	500,000	1,000

A system of 20 Cisco UMGs comprises both primary and secondary messaging gateways; therefore such a system supports 500,000 subscribers instead of 1,000,000.



Caution

Do not combine the NME-UMG and NME-UMG-EC network modules into a single system. Because the messaging gateways must be synchronized, they must all be able to accommodate the same size of data dump.

Hardware SKUs for Cisco UMG Release 8.0

Table 4 shows the hardware SKUs for Cisco UMG Release 8.0.

Table 4 *Cisco UMG Release 8.0: Hardware SKUs*

SKU	Description
NME-UMG	Cisco Unified Messaging Gateway
NME-UMG-EC	Cisco Unified Messaging Gateway Expanded Capacity
SM-SRE-700-K9	Services Module (SM) 700 with Services Ready Engine
SM-SRE-900-K9	Services Module (SM) 900 with Services Ready Engine

Software SKUs for Cisco UMG Release 8.0

Table 5 shows the software SKUs for Cisco UMG Release 8.0.

Table 5 *Cisco UMG Release 8.0: Software SKUs*

SKU	Description
SUMG-NME-80-K9	Cisco Unified Messaging Gateway NME Software Release 8.0
SUMG-NME-EC-80-K9	Cisco Unified Messaging Gateway NME-UMG-EC Software Release 8.0
SUMG-SM7-80-K9 ¹	Cisco Unified Messaging Gateway SM SRE 700 Software 8.0 Release
SUMG-SM9-80-K9 ¹	Cisco Unified Messaging Gateway SM SRE 900 Software 8.0 Release

1. Supported beginning in Cisco UMG version 8.0.2.

Feature Licenses for Cisco UMG Release 8.0

Cisco UMG 8.0 requires that feature licenses be purchased. Please note the following:

- Licensing is based on the Cisco Software Licensing (CSL) feature.
- This release introduces licensing for legacy Cisco UMG functionality; both Cisco Unified Survivable Remote Site Voicemail (SRSV) and Voice Profile for Internet Mail (VPIM) nodes are licensed.
- Evaluation licenses are supported.
- If your system has a secondary Cisco UMG for high availability, you must purchase additional licenses for the secondary Cisco UMG.
- If implementing the Cisco Unified Survivable Remote Site Voicemail (SRSV) solution, you must also order the feature licenses for the Cisco Unified Survivable Remote Site Voicemail-Cisco Unity Express (SRSV-CUE) for the branch office. For more information, see the [Release Notes for Cisco Unified Survivable Remote Site Voicemail-Cisco Unity Express Release 8.0](#).

The Cisco UMG licenses support connecting multiple voicemail systems together for directory services. The licenses allow the Cisco UMG to connect to a maximum number of voicemail systems or nodes. The licenses do not apply to the number of mailboxes or users per node.

The number of nodes supported depends on the Cisco UMG licenses purchased, per [Table 6](#).

Table 6 *Cisco UMG Release 8.0: Feature Licenses*

SKU	Licensed Feature Name	Quantity per License	Quantity Max. for NME-UMG	Quantity Max. for NME-UMG-EC	Quantity Max. for SM-SRE-700-K9	Quantity Max. for SM-SRE-900-K9
FL-SRSV-NODE-25	CUMG-SRSV-NODE	25	250	1000	1000	1000
FL-VPIM-NODE-25	CUMG-VPIM-NODE	25	250	1000	1000	1000
L-FL-SRSV-NODE-25 ¹	CUMG-SRSV-NODE	25	250	1000	1000	1000
L-FL-VPIM-NODE-25 ¹	CUMG-VPIM-NODE	25	250	1000	1000	1000

1. The “L-” prefix indicates that the license is delivered electronically (“E-delivery”).

If you order the Cisco UMG Release 8.0 software and licenses when you order the Cisco UMG hardware modules and routers, the factory installs the software and licenses on the modules for you. No additional key or code is required to enable the license. However, if you order spare licenses after the original hardware purchase, you will get a product activation key (PAK) that can be used to generate a license from <http://www.cisco.com/go/license>.

File Packages for Cisco UMG Release 8.0.x

[Table 7](#) lists the file packages available in Cisco UMG Release 8.0.x for the NME-UMG and the NME-UMG-EC. [Table 8](#) lists the file packages available in Cisco UMG Release 8.0.x for the SM-SRE-700-K9 and SM-SRE-900-K9 modules, supported beginning with the Cisco UMG 8.0.2 release.

Table 7 *Cisco UMG Release 8.0: NME-UMG and NME-UMG-EC File Packages*

Filename	Description
umg-installer.nmx.8.0.x	Boot helper binary image for installation recovery work associated with the Cisco UMG application on the NME-UMG and NME-UMG-EC network modules.
umg-full-k9.nmx.8.0.x.prt1	Package payload containing all data and executable files associated with the Cisco UMG full installation on NME-UMG and NME-UMG-EC network modules.
umg-installer-k9.nmx.8.0.x.prt1	Archive of all data and executable files for the installer subsystem associated with the Cisco UMG application on the NME-UMG or NME-UMG-EC network module.
umg-k9.nmx.8.0.x.pkg	Main package for the Cisco UMG application on the NME-UMG and NME-UMG-EC network modules.

Table 8 *Cisco UMG Release 8.0: SM-SRE-700-K9 and SM-SRE-900-K9 File Packages*

Filename	Description
umg-installer.sme.8.0.x	Boot helper binary image for installation recovery work associated with the Cisco UMG application on the SM-SRE-700-K9 and SM-SRE-900-K9 service modules.
umg-full-k9.sme.8.0.x.prt1	Package payload containing all data and executable files associated with the Cisco UMG full installation on the SM-SRE-700-K9 and SM-SRE-900-K9 service modules.
umg-installer-k9.sme.8.0.x.prt1	Archive of all data and executable files for the installer subsystem associated with the Cisco UMG application the SM-SRE-700-K9 and SM-SRE-900-K9 service modules.
umg-k9.sme.8.0.x.pkg	Main package for the Cisco UMG application on the SM-SRE-700-K9 and SM-SRE-900-K9 service modules.
umg-k9.sme.8.0.x.key	Application key package for the Cisco UMG application on the SM-SRE-700-K9 and SM-SRE-900-K9 service modules.

Table 8 *Cisco UMG Release 8.0: SM-SRE-700-K9 and SM-SRE-900-K9 File Packages*

Filename	Description
umg-k9.sme.8.0.x.pkg.install.sre	Installer package for the Cisco UMG application on the SM-SRE-700-K9 and SM-SRE-900-K9 service modules.
umg-k9.sme.8.0.x.pkg.install.sre.header	Header installation package for the Cisco UMG application on the SM-SRE-700-K9 and SM-SRE-900-K9 service modules.

Software Compatibility for Cisco UMG Release 8.0 SRSV-UMG Licenses

Cisco UMG Release 8.0 SRSV-UMG software is compatible with different versions of Cisco Unified Communications Manager, Cisco Unified SRSV-CUE and Cisco Unified Survivable Remote Site Telephony (SRST). [Table 9](#) lists the versions of the software with which Cisco UMG Release 8.0 is compatible.


Note

Neither Cisco Unity nor Cisco Communication Manager Business Edition is supported in Cisco UMG Release 8.0.

Table 9 *Cisco UMG Release 8.0: Software Compatible with SRSV-UMG*

Component	Release	Supported Platforms
Cisco Unified Communications Manager ¹	6.1.3, 7.x, 8.0	All Cisco Unified Communications Manager platforms
Cisco Unity Connection	7.1.3 ^{2 3} , 8.0	All Cisco Unity Connection platforms
Cisco Unified SRSV-UMG (this product)	8.0.1	NME-UMG, NME-UMG-EC
	8.0.2 and later	NME-UMG, NME-UMG-EC, SM-SRE-700-K9, SM-SRE-900-K9
Cisco Unified SRSV-CUE	8.0.1	AIM2-CUE, NME-CUE
	8.0.2 and later	AIM2-CUE, NME-CUE, ISM-SRE-300-K9, SM-SRE-700-K9, SM-SRE-900-K9
Cisco Unified SRST or Cisco Unified Communications Manager Express-as-SRST	7.1, 8.0	ISR, ISR-G2

1. Extension Mobility is not supported for SRSV deployments in Cisco UMG 8.0.
2. In Cisco Unity Connection Release 7.1.3, the system uploads messages that were deleted in Cisco Unified SRSV as new messages. The subscriber must manually log in to his voicemail on Cisco Unity Connection and delete the messages again. In Cisco Unity Connection Release 8.0, the system uploads deleted voicemails as deleted.
3. The auto attendant feature is not supported with Cisco Unity Connection Release 7.1.3, only with Cisco Unity Connection Release 8.0.

Software Compatibility for Cisco UMG 8.0 VPIM Licenses

Cisco UMG 8.0 VPIM software is compatible with different versions of Cisco Unity Express, Cisco Unity, and Avaya Interchange. [Table 10](#) lists the versions of the different endpoints/nodes with which Cisco UMG 8.0 VPIM is compatible.

Table 10 *Cisco UMG Release 8.0: Software Compatible with VPIM*

Product	Version
Cisco Unity Express	2.3 and later versions
Cisco Unity for Microsoft Exchange only	4.2 and later versions
Cisco Unity Connection	7.0 and later versions
Avaya Interchange	5.4

Determining the Software Version

To determine the software version of Cisco UMG, perform the following steps.

Procedure

-
- Step 1** Open a Telnet session.
- Step 2** Telnet to the router by entering **telnet ip-address**.
- Step 3** Enter the user ID and password of the router.
- Step 4** Enter the following command to enter the Cisco UMG command environment:
- enable**
- <router_password>**
- On the NME-UMG and NME-UMG-EC, enter:
service-module integrated-service-engine slot/port session
 - On the SM-SRE-700-K9 and SM-SRE-900-K9, enter:
service-module sm slot/0 session
- Step 5** Enter the following command to display the Cisco UMG software version:
- show software versions**
-

Limitations

This section lists some of the main limitations for Cisco UMG. For additional limitations, see the [GUI Administrator Guide for Cisco Unified Messaging Gateway \(Cisco UMG\) Release 8.0](#).

CSCtf22534, Provisioning distribution list created in CUC with long extensions fails in SRSV.

Phone extensions and E.164 numbers are limited to 15 digits for all entities, including subscribers and distribution lists.

CSCtf31457, Document lack of support for provisioning distribution list recorded name.

Cisco UMG Release 8.0 does not support pulling recorded names for distribution lists from Cisco Unity Connection and provisioning them on the SRSV-CUE device.

CSCtd90287, Provisioning fails if alias name contains special characters.

For the user ID field, SRSV-CUE devices do not support all the characters that are supported on Cisco Unity Connection. SRSV-CUE devices only support the following characters: alpha-numeric, period [.] , dash [-], and underscore [_]. In addition, the user ID cannot start with a number. The user ID can contain numbers, but cannot start with a number.

CSCtd61458, New subscriber PIN is unknown after SRSV provisioning.

Subscribers cannot log in to Cisco Unified SRSV-CUE devices until they set up their voicemail preferences on Cisco Unity Connection.

CSCte01389, Need to handle CUC MD5 hashed PINs.

Cisco Unified SRSV-CUE devices only support PINs in the SHA1 format. If you are upgrading to the Cisco Unified SRSV system from Cisco Unity Connection, ensure that all your subscribers reset their PINs so that they are saved in the SHA1 format.

New Features and Enhancements

This section describes new features and enhancements in Cisco Unified SRSV-CUE 8.0 and is divided into the following sections:

- [New Hardware Supported in Cisco UMG 8.0.2, page 8](#)

New Hardware Supported in Cisco UMG 8.0.2

Cisco UMG 8.0.2 supports the following new hardware:

- [SM-SRE-700-K9](#)
- [SM-SRE-900-K9](#)

SM-SRE-700-K9

Cisco UMG 8.0.2 adds support for the SM-SRE-700-K9 module. This module is a Services Ready Engine (SRE) module supported on the following router models:

- Cisco 2911
- Cisco 2921
- Cisco 2951
- Cisco 3925
- Cisco 3945
- Cisco 3925E
- Cisco 3945E

For more information, see the [Cisco SRE Service Module Configuration and Installation Guide](#).

SM-SRE-900-K9

Cisco UMG 8.0.2 adds support for the SM-SRE-900-K9 module. This module is a Services Ready Engine (SRE) module supported on the following router models:

- Cisco 2911
- Cisco 2921
- Cisco 2951
- Cisco 3925
- Cisco 3945
- Cisco 3925E
- Cisco 3945E

For more information, see the [Cisco SRE Service Module Configuration and Installation Guide](#).

Caveats

Caveats describe unexpected behavior in Cisco UMG Release 8.0. Severity 1 caveats are the most serious caveats. Severity 2 caveats are less serious. Severity 3 caveats are moderate caveats, and only selected severity 3 caveats are included in the caveats document.

- [Using the Bug Toolkit, page 9](#)
- [Resolved Caveats for Cisco UMG Release 8.0.2, page 10](#)
- [Open Caveats for Cisco UMG Release 8.0.1 and 8.0.2, page 10](#)

Using the Bug Toolkit

To find the latest Cisco UMG caveat information, go to Bug Toolkit and search, by product, for Cisco Unified Messaging Gateway.

The following information is provided for each caveat:

- Symptoms—A description of what is observed when the caveat occurs.
- Conditions—The conditions under which the caveat has been known to occur.
- Workaround—Solutions, if available, to counteract the caveat.



Note

You must have an account on Cisco.com to use the Bug Toolkit. If you do not have an account on Cisco.com, you can register to open an account by completing the online registration form.

Procedure

- Step 1** Navigate to the Bug Toolkit URL: http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl
- Step 2** Log in to Cisco.com.
- Step 3** Click **Launch Bug Toolkit**.
- Step 4** Under Select Product Category, choose **Voice and Unified Communications** from the drop-down menu.

- Step 5** Under Select Products, scroll down and highlight **Cisco Unified Messaging Gateway**.
Note that in the Bug Toolkit, the terminology “Cisco Unified Messaging Gateway” refers specifically to VPIM functionality, and “Cisco Survivable Remote Site Voicemail” refers to SRSV functionality.
- Step 6** Choose the Cisco UMG version.
- Step 7** (Optional) If you want to search the for keywords, enter the keyword or phrase.
- Step 8** Click **Use default settings**.
- Step 9** Click **Search**.
- The Bug Toolkit displays a list of caveats that fit your search criteria.
-

Resolved Caveats for Cisco UMG Release 8.0.2

The following caveats have been resolved in Cisco UMG Release 8.0.1.

CSCtg38930, UMG does not send proper MIME version header for NDR message

Symptom: Cisco Unity Connection cannot deliver NDR message generated by UMG to the subscriber.

Conditions: Cisco Unity Connection running 71.3 ES26 and UMG running 1.0.3 version.

Workaround: None at the moment. Upgrade UMG to a version that has fix for this defect.

CSCtg92093, UMG needs to translate sender's header field to match VPIM location

Symptom: Cisco Unity Connection cannot deliver NDR messages generated by CUE endpoints which are routed via UMG, and moves them to a bad mailbox folder.

Conditions: Cisco Unity Connection running 71.3 ES26 and UMG running 1.0.3 version.

Workaround: Currently there is no workaround. Need to upgrade UMG to a version that has the fix for this defect.

CSCth51222, UMG - unable to activate evaluation license, Session Closed

Symptom: It is not possible to activate the evaluation license on UMG software version 8.0(1). When attempting to activate the license using the **license activate** command, all that appears is “Session Closed”. For example:

```
router-umg# license activate vpim nodes 100
Session closed
router-umg#
```

Conditions: This was seen on a fresh install of UMG 8.0(1) on an NME-UMG.

Workaround: Install a permanent license.

Open Caveats for Cisco UMG Release 8.0.1 and 8.0.2

See the Bug Toolkit at http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl for the current open caveats.

Additional References

Table 11 lists the related documentation available for Cisco UMG Release 8.0. All Cisco UMG documentation can be found at http://www.cisco.com/en/US/products/ps8605/tsd_products_support_series_home.html.

Table 11 *Cisco UMG Release 8.0: Documentation*

Documentation	Title
Release Notes for Cisco UMG Release 8.0 (this document)	Contains system requirements and caveats for the Cisco Unified SRSV-UMG component.
Release Notes for Cisco Unified SRSV-CUE Release 8.0	Contains system requirements and caveats for the Cisco Unified SRSV-CUE component.
Installation and Upgrade Guide for Cisco UMG Release 8.0	Describes how to install the Cisco UMG Release 8.0 software, including licenses.
GUI Administrator Guide for Cisco UMG Release 8.0	Contains administrator information, such as maintenance and troubleshooting, for tasks that are performed from the GUI. Includes the online help.
CLI Administrator Guide for Cisco UMG Release 8.0	Contains administrator information, such as maintenance and troubleshooting, for tasks that are performed from the CLI.
Command Reference for Cisco UMG Release 8.0	Contains descriptions of all the Cisco UMG Release 8.0-specific CLI commands. Does not include Cisco Unity Express commands.
Installation and Administration Guide for Cisco Unified SRSV-CUE Release 8.0	Contains installation, administration, maintenance, troubleshooting, and CLI information for the Cisco Unified SRSV-CUE component.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

DISCLAIMER FOR RECORDING A CONVERSATION

The use of monitoring, recording, or listening devices to eavesdrop, monitor, retrieve, or record phone conversations or other sound activities, whether or not contemporaneous with transmission, may be illegal in certain circumstances under federal, state and/or local laws. Legal advice should be sought prior to implementing any practice that monitors or records any phone conversation. Some laws require some form of notification to all parties to a phone conversation, such as by using a beep tone or other notification method or requiring the consent of all parties to the phone conversation, prior to monitoring or recording the phone conversation. Some of these laws incorporate strict penalties. In cases where local laws require a periodic beep while a conversation is being recorded, the Cisco Unity Express voice-mail system provides a user with the option of activating "the beep." Prior to activating the Cisco Unity Express live record function, check the laws of all applicable jurisdictions. This is not legal advice and should not take the place of obtaining legal advice from a lawyer. IN ADDITION TO THE GENERAL DISCLAIMER THAT ACCOMPANIES THIS CISCO UNITY EXPRESS PRODUCT, CISCO ADDITIONALLY DISCLAIMS ANY AND ALL LIABILITY, BOTH CIVIL AND CRIMINAL, AND ASSUMES NO RESPONSIBILITY FOR THE UNAUTHORIZED AND/OR ILLEGAL USE OF THIS CISCO UNITY EXPRESS PRODUCT. THIS DISCLAIMER OF LIABILITY INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, THE UNAUTHORIZED AND/OR ILLEGAL RECORDING AND MONITORING OF TELEPHONE CONVERSATIONS IN VIOLATION OF APPLICABLE FEDERAL, STATE AND/OR LOCAL LAWS.

CCDE, CCENT, CCSI, Cisco Eos, Cisco Explorer, Cisco HealthPresence, Cisco IronPort, the Cisco logo, Cisco Nurse Connect, Cisco Pulse, Cisco SensorBase, Cisco StackPower, Cisco StadiumVision, Cisco TelePresence, Cisco TrustSec, Cisco Unified Computing System, Cisco WebEx, DCE, Flip Channels, Flip for Good, Flip Mino, Flipshare (Design), Flip Ultra, Flip Video, Flip Video (Design), Instant Broadband, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn, Cisco Capital, Cisco Capital (Design), Cisco:Financed (Stylized), Cisco Store, Flip Gift Card, and One Million Acts of Green are service marks; and Access Registrar, Aironet, AllTouch, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Lumin, Cisco Nexus, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, Continuum, EtherFast, EtherSwitch, Event Center, Explorer, Follow Me Browsing, GainMaker, iLynx, IOS, iPhone, IronPort, the IronPort logo, Laser Link, LightStream, Linksys, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, PCNow, PIX, PowerKEY, PowerPanels, PowerTV, PowerTV (Design), PowerVu, Prisma, ProConnect, ROSA, SenderBase, SMARTnet, Spectrum Expert, StackWise, WebEx, and the WebEx logo are registered trademarks of Cisco 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. (1002R)

Copyright © 2010, Cisco Systems, Inc. All rights reserved.

