



# Release Notes for Cisco Phone Control and Presence 8.0 with IBM Lotus Sametime

---

**Published: December 8, 2010**

These release notes describe the new features and caveats for Cisco Phone Control and Presence 8.0(1) with IBM Lotus Sametime.

You can access the latest software for the Cisco Phone Control and Presence plug-in from the Cisco Unified Communications with IBM Lotus > Unified Communications Plug-ins for IBM Lotus Sametime Software page at <http://www.cisco.com/cgi-bin/tablebuild.pl/cucplugin>.

## Contents

- [Introduction, page 2](#)
- [System Requirements, page 3](#)
- [Finding Documentation, page 5](#)
- [Limitations and Restrictions, page 5](#)
- [Important Notes, page 6](#)
- [Caveats, page 10](#)
- [Obtaining Documentation, Support, and Security Guidelines, page 12](#)



---

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

# Introduction

Cisco Phone Control and Presence with IBM Lotus Sametime is a client-based plug-in that integrates Sametime Connect with Cisco IP phones so that users can make and answer calls directly from Sametime. Users can call contacts from the Sametime main window or from a chat session. Users who have the Cisco Unified Messaging plug-in for Sametime Connect can return a call to a voicemail sender directly from a message in the voicemail pane. If users have Cisco Unified Presence accounts, they can view the phone availability status of contacts.

In addition, Cisco Phone Control and Presence with IBM Lotus Sametime can be integrated with IBM Lotus Notes to achieve the following:

- Sametime is displayed in a pane within the Notes client.
- Native capabilities of Sametime—as well as those exposed through plug-ins—are accessible from within the Notes client.

## Phone Control Modes

You can configure the plug-in to run in one of the following modes:

- Control Desk Phone mode — Users can place calls, answer calls, and make conference calls in Sametime Connect, using the Cisco IP phone device that they specify. The plug-in provides a Conversation window to manage calls in progress.
- Dial Using Cisco IP Communicator mode — Users can place calls from Sametime Connect. The plug-in sends the dialed number to Cisco IP Communicator, where the user manages the call.

When you deploy the plug-in, you can enable both modes so that users have a choice. They can toggle between phone modes using a button on the main toolbar. Or, you can disable one option to ensure that users use the preferred mode.

## Phone Availability Status

If you enable the Phone Status feature when you deploy the plug-in, then users who are provisioned in Cisco Unified Presence, can configure the plug-in to display the phone availability status of contacts. This feature provides on-hook and off-hook icons to be displayed next to contact names.

## Partial Support for Multiple Lines

Cisco Phone Control and Presence with IBM Lotus Sametime can only control one call session button on a phone that is configured for multiple lines. Cisco Phone Control and Presence with IBM Lotus Sametime can control the first line in the list of lines returned by the Cisco Unified Communications Manager CTI service.

You cannot change which line is controlled when the lines are partitioned. You can change which line is controlled by Cisco Phone Control and Presence with IBM Lotus Sametime if the lines are not partitioned, that is, they have different directory numbers.

# System Requirements

- [Server Requirements, page 3](#)
- [Client PC Requirements, page 3](#)

## Server Requirements

- Cisco Unified Communications Manager Version 6.1 or later is supported.
- Cisco Unified Presence Server—Required for the Phone Availability Status feature. Version 7.0.3 or later is supported, with the exception of Version 8.0.1, which is not supported.

See the [Configuring License Capabilities Assignments for the Phone Status Feature, page 7](#) for information about Device License Unit requirements for Cisco Unified Presence.

## Client PC Requirements

- Microsoft Windows OS—The following versions are supported:
  - Windows XP SP2 or later
  - Windows Vista—Business and Enterprise Editions
  - Windows 7—Professional Edition, Enterprise Edition, or Ultimate Edition
- Disk Space—20 MB free hard drive space minimum
- Memory—512 MB RAM minimum
- Screen Resolution—1024 x 768 minimum
- Cisco IP Communicator—Required if you plan to deploy the Dial Using Cisco IP Communicator feature. Version 2.1(3) or later is supported.
- Cisco Unified IP Phone—Required to use the Control Desk Phone feature. The following models are supported: 6921, 6941, 6961, 7985, 7975, 7970, 7965, 7962, 7961, 7942, 7941, 7931, 7921, 7911, 8961, 9951, and 9971.

See [Configuring Users of Cisco Unified IP Phone Model 6900, 8900 and 9900 Series to Control Desk Phone, page 9](#) for more information about the 6900, 8900, 9900 series models.




---

**Note** Cisco Unified Video Advantage 2.0 or later is supported for use with Cisco IP Communicator and Cisco Unified IP Phones.

---

- One of the following:
  - IBM Lotus Sametime Version 8.0.1 or later.  
Refer to the Sametime documentation for the CPU requirements for Sametime Connect.
  - IBM Lotus Notes Version 8.0.1 or later.

# New and Changed Information

## Release 8.0(1)

Cisco Phone Control and Presence Release 8.0(1) with IBM Lotus Sametime supports the following new features:

- A new JTAPI plug-in that dynamically checks if JTAPI is installed on the IBM Lotus Sametime Connect client and if it is, compares the installed version with the version of JTAPI that is installed on the Cisco Unified Communications Manager server. If the versions do not match, the JTAPI plug-in downloads the version of JTAPI that is installed in Cisco Unified Communications Manager and installs the software.
- Support for the Cisco Unified IP Phone 8900 and 9900 Model Series.
- Support for Cisco Unified Communications Manager Version 8.0 or later.
- Support for Cisco Unified Presence Version 8.0.2 or later.
- Support for IBM Lotus Sametime 8.5 and 8.5.1
- Support for IBM Lotus Notes 8.5.1

## Release 7.1(2)

This release provides updated information for the following:

- [Hotfix for Sametime Context Menu Problems](#)
- [Hotfix for Sametime Telephony Issues](#)

See the [Resolved Caveats](#) section for the list of defects fixed in this release.

## Release 7.1

Cisco Phone Control and Presence Release 7.1 with IBM Lotus Sametime supports the following new features:

- Support for IBM Lotus Sametime 8.0(2) and IBM Lotus Notes 8.5
- User ID Mapping Flexibility
- Cisco Unified Communications Manager and Cisco Unified Presence Failover. This requires Cisco Unified Presence version 7.0 or later.
- Localized End User Content into French, German, Japanese, Spanish, Italian, and Swedish
- Click-to-Call from “live names” and Phone Presence from IBM Lotus Notes
- Toolbar button to change phone modes

## Finding Documentation

The following documentation is available on Cisco.com:

- For users: *Quick Start Guide for Installing and Using Cisco Phone Control and Presence with IBM Lotus Sametime* is available at:  
[http://www.cisco.com/en/US/products/ps9830/products\\_user\\_guide\\_list.html](http://www.cisco.com/en/US/products/ps9830/products_user_guide_list.html)
- For system administrators: *Integration Guide for Deploying Cisco Phone Control and Presence with IBM Lotus Sametime* is available at:  
[http://www.cisco.com/en/US/products/ps9830/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps9830/prod_installation_guides_list.html)

## Differences Between the English-Language and Translated Documentation

### Quick Start Guide

The *Quick Start Guide for Installing and Using Cisco Phone Control and Presence 8.0 with IBM Lotus Sametime* is available in English-only for the 8.0 release. The translated versions of this guide are not available for the 8.0 release.

## Reinstalling Sametime Connect and the Plug-in

If users uninstall Sametime Connect, they must reinstall the plug-in after they reinstall the application. To avoid this, you can configure a push update to install Sametime Connect and the plug-in automatically.

## Limitations and Restrictions

Review [Table 1](#) before you begin working with the Cisco Phone Control and Presence plug-in. These are known limitations that will not be fixed, and there is not always a workaround. Some features might not work as documented, and some features could be affected by recent changes to the product.

For more information about an individual limitation, including workarounds, click the associated caveat number in the table to access the online record in Bug Toolkit for that defect. (For information about accessing Bug Toolkit, see the [“Using Bug Toolkit” section on page 10](#)). Caveats are listed in order of severity, and then in alphanumeric order by caveat number.

**Table 1**      **Closed Caveats for Cisco Phone Control and Presence Plug-in with IBM Lotus Sametime**

| Identifier                 | Severity | Component | Headline                                                              |
|----------------------------|----------|-----------|-----------------------------------------------------------------------|
| <a href="#">CSCte95300</a> | 2        | presence  | Phone Status not displayed after Presence Server restart              |
| <a href="#">CSCso21118</a> | 3        | deskphone | Cisco 7931 IP Phone does not support conferencing (by default)        |
| <a href="#">CSCso76269</a> | 3        | deskphone | Conference non-initiator cannot merge call into a current conference  |
| <a href="#">CSCsx42570</a> | 3        | deskphone | Incoming caller is not resolved into Sametime contact in Cisco        |
| <a href="#">CSCtb70548</a> | 3        | deskphone | No call control window for invalid numbers on 8900/9900 series phones |
| <a href="#">CSCtd44316</a> | 3        | deskphone | Dial pad does not work when user controlling a 9900 series phone      |

**Table 1** *Closed Caveats for Cisco Phone Control and Presence Plug-in with IBM Lotus Sametime (continued)*

| Identifier                 | Severity | Component | Headline                                                      |
|----------------------------|----------|-----------|---------------------------------------------------------------|
| <a href="#">CSCtd91711</a> | 3        | deskphone | Sequence of right clicks on Lotus Notes corrupts context menu |
| <a href="#">CSCsq64305</a> | 3        | presence  | Spike of high Sametime CPU when detailed logging enabled      |

## Important Notes

- [Disclaimer: Using Softphone Technology During an Emergency](#), page 6
- [Hotfix for Sametime Context Menu Problems](#), page 6
- [Hotfix for Sametime Telephony Issues](#), page 7
- [Configuring License Capabilities Assignments for the Phone Status Feature](#), page 7
- [Deploying Cisco Phone Control and Presence in a Mixed User Environment](#), page 8
- [Dial Using Cisco IP Communicator Mode and E. 164 Dialing](#), page 9
- [Cisco Unified Presence Support](#), page 9
- [Using the Cisco Unified IP Phone Model 6900, 8900 or 9900 Series](#), page 9

## Disclaimer: Using Softphone Technology During an Emergency

**IMPORTANT NOTICE—PLEASE READ:** During an emergency, softphone technology may not provide the most timely or accurate location data if used for a 911 emergency call. Calls may be misdirected to the wrong emergency response center or the emergency response center may make errors when determining your location. **USE A SOFTPHONE ONLY AT YOUR OWN RISK DURING AN EMERGENCY.** Cisco will not be liable for resulting errors or delays.

## Hotfix for Sametime Context Menu Problems

If you are using a Sametime version earlier than 8.0.1, we recommend you set up an update site to deploy the Sametime Context Menu hotfix. Without the hotfix, users may experience problems with menu item contexts that do not display correctly. For example, menu items for an individual contact might appear for all contacts in a group.

## Lotus Software Knowledge Base Document

This hotfix is available from IBM. See the following technical note for further details:

<http://www-01.ibm.com/support/docview.wss?rs=899&uid=swg21415161>

The hotfix update site can be separate from or integrated with the Cisco Phone Control and Presence plug-in and other plug-ins, and can include both versions of the hotfixes.

To deploy a hotfix, determine the update site directory, unzip the hotfix to it, and install the hotfix with the same method used for the plug-in (autopush or user-initiated installation).

## Hotfix for Sametime Telephony Issues

Both IBM Lotus Sametime Connect and Cisco Phone Control and Presence display a phone icon in the user interface toolbar. This can cause confusion for users.

When the Cisco Phone Control and Presence plug-in is installed, you can disable the IBM Lotus Sametime phone icon by deactivating telephony on the Sametime server. On the Sametime server, in the “Allow telephony” field, choose the option “No” to disable the icon.

When the Cisco Phone Control and Presence plug-in and the MeetingPlace with Sametime Web Conferencing plug-in are installed you must select a different option on the Sametime server. In this scenario, on the “Allow telephony” field, choose the option “Instant meetings only”.

With both plug-ins installed and this option set, the IBM Lotus Sametime phone icon is disabled while still allowing the MeetingPlace plug-in the access it needs to telephony.

In addition to the “Allow telephony” settings, you must also do the following:

- Verify the “Allow client-to-client video call” checkbox is deselected.
- Verify the “Allow client-to-client voice call” checkbox is deselected.

Please refer to the technical note from IBM. It explains the details of the hotfix.

## Lotus Software Knowledge Base Document

The Sametime Connect 8.0.2 client has the ability to read this new “Instant meetings only” setting, but Sametime Connect 8.0.1 does not. If users are using Sametime 8.0.1, they need the appropriate hotfix.

**This hotfix is available from IBM. See the following technical note for further details:**

<http://www-01.ibm.com/support/docview.wss?uid=swg21367535>

- With Sametime 8.0.1 and the hotfix, the IBM phone icon is removed.
- With Sametime 8.0.2, the IBM phone icon is disabled.
- Please note, you must have a Sametime 8.0.2 server to set the “Instant meetings only” setting.
- If you have a Sametime server that is prior to version 8.0.2, you must export these settings and import them into your Sametime server. There details for that process in the technical note.
- This hotfix is not available for IBM Lotus Notes.

## Configuring License Capabilities Assignments for the Phone Status Feature

To enable the Phone Status feature, you must purchase one Cisco Unified Presence End User License Agreement (EULA) for each user who requires the Phone Status feature. To enable the license, you must:

- Load the license in Cisco Unified Communications Manager.
- Enable the presence service for each user in Cisco Unified Communications Manager.

## Deploying Cisco Phone Control and Presence in a Mixed User Environment

In addition to the Cisco Phone Control and Presence plug-in, a server-side Cisco Click-to-Call plug-in is also available for use with IBM Lotus Sametime.

Your organization may need to deploy the client-side Cisco Phone Control and Presence plug-in for some users of IBM Sametime and the server-side Cisco Click-to-Call plug-in for others. Cisco supports the simultaneous deployment of both plug-in types on a single Sametime server. However, Cisco highly recommends that you do NOT allow users simultaneous access to both plug-ins.

In a mixed user environment, you should disable the Cisco Click-to-Call plug-in for those users who are using the Cisco Phone Control and Presence plug-in.

To enable the plug-ins on a per-user basis, you can create multiple policies and do the following:

- assign users of the Cisco Phone Control and Presence plug-in to a policy that has telephony disabled
- assign users of the Click-to-Call plug-in to a policy that has telephony enabled

The following procedure describes how to configure a policy on the Lotus Sametime Server, enable or disable telephony for a plug-in and assign users to the policy.

### Procedure

---

- Step 1** Enter the following URL to access your Lotus Sametime Server:
- `http://server-address/stcenter.nsf`
- where
- server-address is the domain name or IP address of your Lotus Sametime Server.
- Step 2** Select **Administer the Server**.
- Step 3** Log in to Lotus Sametime Server.
- Step 4** Select **Policies**.
- Step 5** Select **New**.
- Step 6** Enter a name and description for the new policy.
- Step 7** Select the policy attributes to enable or disable telephony, and click **OK**.
- Step 8** Select **Assign Users**.
- Step 9** Complete the following on the Assign Users page:
- a. Select the directory from which to add users or groups to the policy.
  - b. Search for or enter the names of the users or groups to add to the policy.
  - c. Add the selected users to the policy.
  - d. Select **OK**.
- Step 10** Complete the following to ensure your policy changes take effect:
- a. Restart the Lotus Domino Server service.
  - b. Verify that the Lotus Domino Server service is running.
-

## Dial Using Cisco IP Communicator Mode and E.164 Dialing

If users will use the Dial Using Cisco IP Communicator option to dial numbers in E.164 format, ensure that the Cisco Unified Communications Manager administrator configures Cisco IP Communicator to process E.164 dialing. Otherwise, calls to these phone numbers will fail.

## Cisco Unified Presence Support

Cisco Unified Presence Version 8.0.1 is not supported.

Cisco Unified Presence Version 8.0.2 is supported, but does not support failover.

## Using the Cisco Unified IP Phone Model 6900, 8900 or 9900 Series

- [Call Control on Cisco Unified IP Phone 6900, 8900, and 9900 Model Series, page 9](#)
- [Configuring Users of Cisco Unified IP Phone Model 6900, 8900 and 9900 Series to Control Desk Phone, page 9](#)

## Call Control on Cisco Unified IP Phone 6900, 8900, and 9900 Model Series

Cisco Phone Control and Presence with IBM Lotus Sametime monitors only one call session button on the desk phone that is associated with it. The Cisco Unified IP Phone 6900, 8900, and 9900 model series allow simultaneous calls on multiple call session buttons. Any call operations that happen on buttons other than the one that Cisco Phone Control and Presence with IBM Lotus Sametime monitors are not reflected in the Cisco Phone Control and Presence with IBM Lotus Sametime user interface.

If you place or answer a call on a call session button that is not the one that Cisco Phone Control and Presence with IBM Lotus Sametime monitors, the call does not appear in a conversation window. You cannot use Cisco Phone Control and Presence with IBM Lotus Sametime to control calls on the buttons that Cisco Phone Control and Presence with IBM Lotus Sametime does not monitor.

The impact of Join Across Line (JAL) and Direct Transfer Across Line (DTAL) operations on a call that Cisco Phone Control and Presence with IBM Lotus Sametime controls depends on whether the operation moves a call to a monitored call session button.

If a JAL operation moves a call to a monitored call session button, the call transitions to a conference call. If a JAL operation moves a call to an unmonitored button, the call disappears from the Cisco Phone Control and Presence with IBM Lotus Sametime user interface. Cisco Phone Control and Presence with IBM Lotus Sametime cannot control the call.

Similarly, a DTAL operation moves a call to a monitored call session button, Cisco Phone Control and Presence with IBM Lotus Sametime can control the call, but if the call moves to an unmonitored button, Cisco Phone Control and Presence with IBM Lotus Sametime cannot control the call.

## Configuring Users of Cisco Unified IP Phone Model 6900, 8900 and 9900 Series to Control Desk Phone

To configure users who have a Cisco Unified IP Phone 6900, 8900 or 9900 series model to control their desk phone from Sametime Connect, you must add the users to the appropriate user group in Cisco Unified Communications Manager, as described in the following procedure.

**Procedure**

- 
- Step 1** Select **User Management > End User** in Cisco Unified Communications Manager Administration.
- Step 2** Select the user that you want to add.
- Step 3** Select **Add to User Group** in the Permissions Information group in the End User Configuration window.
- Step 4** Search for “Standard CTI” in the Find and List User Groups window.
- Step 5** Select the **Standard CTI Enabled** user group.
- Step 6** If the phone of the user is a Cisco Unified IP Phone 9900 or 8900 series model, select the **Standard CTI Allow Control of Phones supporting Connected Xfer and conf group**.
- Step 7** If the phone of the user is a Cisco Unified IP Phone 6900 series model, select the **Standard CTI Allow Control of Phones supporting Rollover Mode** group.
- Step 8** Select **Add Selected**.
- Step 9** Select **Save** in the End User Configuration window.
- 

## Caveats

- [Using Bug Toolkit, page 10](#)
- [Open Caveats, page 11](#)

## Using Bug Toolkit

Known caveats are graded according to severity level. These release notes contain descriptions of the following:

- All severity level 1 or 2 bugs.
- Significant severity level 3 bugs.
- All customer-found bugs.

**Before You Begin**

You can search for problems by using the Cisco Software Bug Toolkit. To access Bug Toolkit, you need the following items:

- Internet connection
- Web browser
- Cisco.com user ID and password

**Procedure**

- 
- Step 1** To access the Bug Toolkit, go to <http://tools.cisco.com/Support/BugToolKit/action.do?hdnAction=searchBugs>.
- Step 2** Log in with your Cisco.com user ID and password.

**Step 3** Enter the bug ID number in the “Search for Bug ID” field, then click **Go**.

For information about how to search for bugs, create saved searches, and create bug groups, click **Help** on the Bug Toolkit page.

## Open Caveats

The caveats in [Table 1](#) describe possible unexpected behavior in the latest Cisco Phone Control and Presence release. These caveats may also be open in previous releases. Caveats are listed in order by severity, then in alphanumeric order by identifier.

**Table 1** *Cisco Phone Control and Presence Plug-in with IBM Lotus Sametime Open Caveats*

| Identifier                 | Severity | Component             | Headline                                                                 |
|----------------------------|----------|-----------------------|--------------------------------------------------------------------------|
| <a href="#">CSCsz81954</a> | 4        | presence              | [NOTES] Phone presence intermittently missing when e-mail size over 100  |
| <a href="#">CSCte84441</a> | 4        | admin-conf<br>ig-util | Plug-in config util doesn't create ldap plugin when ADR template changed |

## Resolved Caveats

This section lists caveats that are resolved, but that may have been open in previous releases. Caveats are listed in order by severity, then in alphanumeric order by identifier.

Because defect status continually changes, be aware that the table reflects a snapshot of the defects that were resolved at the time this report was compiled. For more information about an individual defect, click the associated identifier in the table to access the online records for that defect, including workarounds. For an updated view of resolved defects, access the Bug Toolkit. See [Using Bug Toolkit, page 10](#).

## Release 8.0(1)

[Table 3](#) lists the caveats resolved in Release 8.0(1).

**Table 2** *Cisco Phone Control and Presence Plug-in with IBM Lotus Sametime Resolved Caveats*

| Identifier                 | Severity | Component | Headline                                                                 |
|----------------------------|----------|-----------|--------------------------------------------------------------------------|
| <a href="#">CSCtc77667</a> | 2        | deskphone | Lotus Notes Integrated Sametime Crash when LDAP Fields Empty             |
| <a href="#">CSCth13867</a> | 3        | presence  | Presence Login fails if User password contains special characters        |
| <a href="#">CSCtd04194</a> | 3        | presence  | Phone presence disappeared sometime                                      |
| <a href="#">CSCtd90169</a> | 3        | deskphone | Not regaining phone control after reset/restart of phone where logged in |
| <a href="#">CSCte72630</a> | 3        | presence  | Plug-in should be case insensitive for presence userids                  |
| <a href="#">CSCtg60805</a> | 4        | presence  | Incoming call TOAST is not clear in Font. Once it is Cached.             |
| <a href="#">CSCso78515</a> | 4        | deskphone | Preferences code not resetting line when EM phone is logged back in      |
| <a href="#">CSCtb68693</a> | 4        | presence  | Phone icons disappear and re-appear on Sametime                          |

**Table 2** *Cisco Phone Control and Presence Plug-in with IBM Lotus Sametime Resolved Caveats (continued)*

| Identifier                 | Severity | Component | Headline                                                           |
|----------------------------|----------|-----------|--------------------------------------------------------------------|
| <a href="#">CSCtd33513</a> | 4        | deskphone | Cannot generate problem report because of illegal characters       |
| <a href="#">CSCte35822</a> | 6        | presence  | Serviceability: Logs should indicate SOAP timeout when timer fires |

## Release 7.1(2)

[Table 3](#) lists the caveats resolved in Release 7.1 (2)

**Table 3** *Cisco Phone Control and Presence Plug-in with IBM Lotus Sametime Resolved Caveats*

| Identifier                 | Severity | Component | Headline                                                     |
|----------------------------|----------|-----------|--------------------------------------------------------------|
| <a href="#">CSCtc77667</a> | 2        | deskphone | Lotus Notes Integrated Sametime Crash when LDAP Fields Empty |
| <a href="#">CSCtd04194</a> | 3        | presence  | Phone presence disappeared sometime                          |
| <a href="#">CSCtd33513</a> | 4        | deskphone | Cannot generate problem report because of illegal characters |
| <a href="#">CSCtb68693</a> | 4        | presence  | Phone icons disappear and re-appear on Sametime              |

## Release 7.1

[Table 4](#) lists the caveat resolved in Release 7.1.

**Table 4** *Cisco Phone Control and Presence Plug-in with IBM Lotus Sametime Resolved Caveats*

| Identifier                 | Severity | Component | Headline                                                                |
|----------------------------|----------|-----------|-------------------------------------------------------------------------|
| <a href="#">CSCsw91726</a> | 3        | presence  | Sametime Plug-in user credentials need to be re-entered intermittently. |

# Obtaining Documentation, Support, and Security Guidelines

For information on obtaining documentation, support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, 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>

Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at [www.cisco.com/go/trademarks](http://www.cisco.com/go/trademarks). Third party trademarks mentioned 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. (1005R)

Any Internet Protocol (IP) addresses used in this document are not intended to be actual addresses. Any examples, command display output, and figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses in illustrative content is unintentional and coincidental.

© 2010 Cisco Systems, Inc. All rights reserved.