



# Release Notes for Cisco Customer Response Applications 3.5(3)

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**April 7, 2006**

These release notes are for use with Cisco Customer Response Applications (Cisco CRA) Release 3.5(3) and Cisco CallManager Extended Services.

These release notes may be updated occasionally with new information. For the latest version of these release notes, go to this URL:

[http://www.cisco.com/univercd/cc/td/doc/product/voice/sw\\_ap\\_to/apps\\_3\\_5/english/relnote/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/sw_ap_to/apps_3_5/english/relnote/index.htm)

Effective with release 3.0, Cisco Customer Response Applications (CRA) has been renamed Cisco Customer Response Solutions (CRS), and the following product names have been changed:

- IP ICD (IP Integrated Contact Distribution) is now IPCC Express (IP Contact Center Express)
- IP ICD Standard is now IPCC Express Standard
- IP ICD Enhanced is now IPCC Express Enhanced
- IP ICD Enhanced with CTI Option is now IPCC Express Premium



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The Cisco website and packaging materials have been updated to reflect the new names, but the user interface, and therefore the documentation, have not.

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## What's New in Cisco CRA Release 3.5(3)

- Enhancements to the installation procedure
- Resolved caveats, including those described in the [“Resolved Caveats” section on page 40](#)

## Late-Breaking Information

This section provides important information that is not included in the Cisco CRA documentation.

- If you are performing a new coresident installation of Cisco CRA (an installation in which Cisco CRA and Cisco CallManager reside on the same server), make sure to apply this hotfix:

OS\_Hotfix\_for\_CCM4.x\_co-res\_CRS3.5.x.exe

This hotfix is available at this URL:

<http://www.cisco.com/cgi-bin/tablebuild.pl/crs35>

If you do not apply this hotfix, the Cisco CallManager Administration application may not start or some Cisco CallManager or Cisco CRA services may not start.

- If you set up a Dedicated ICD Call Monitoring server, there must also be one server that has the ICD Record/Statistics Server component installed on it. This server can be the CRA server or a dedicated server, but only one instance of the ICD Record/Statistics Server component can be installed on it.
- If you upgrade to Cisco CRA release 3.5, you must obtain Cisco CRA 3.5 product licenses. You cannot use product licenses from earlier versions of Cisco CRA.

- If you upgrade Cisco CRA to release 3.5(3), you must upgrade the Cisco Agent Desktop and the Cisco Supervisor Desktop to release 4.5.7.4 after you upgrade Cisco CRA.
- When you install or upgrade Cisco CRA in a co-resident scenario (where Cisco CRA and Cisco CallManager reside on the same server), a dialog box will appear that asks you to continue in mixed mode. When you see this dialog box, click **Yes** to continue. In this way, Cisco CRS can connect to the SQL server database using SQL authentication.
- Cisco CRA 3.5(3) is compatible with McAfee VirusScan Enterprise 7.0.
- Adding third-party software to a Cisco CRA system may affect how Cisco CRA functions and may affect Cisco's support for Cisco CRA. Such third-party software includes Microsoft critical security updates, anti-virus software, and other non-required third-party software. For information about Cisco's policy regarding third-party software, refer to this URL:  
[http://www.cisco.com/application/pdf/en/us/guest/products/ps3651/c1037/cmigration\\_09186a0080207fb9.pdf](http://www.cisco.com/application/pdf/en/us/guest/products/ps3651/c1037/cmigration_09186a0080207fb9.pdf)
- When you try to configure a network share for TTS, you may see this message when providing credentials for the network share: `Network share connection failed. [Bad username/pwd or Server unreachable]`. If you see this message, follow these steps:
  - a. Choose **Start > Programs > Administrative Tools > Services**. The Services window appears.
  - b. Right-click the CiscoCRAServletEngine service, choose **Properties**, and click the **Log On** tab. Make sure that the **This account** radio button is checked and that the account is set to Administrator. Click **OK**.
  - c. Right-click the Cisco CRA Engine service, choose **Properties**, and click the **Log On** tab. Make sure that the **This account** radio button is checked and that the account is set to Administrator. Click **OK**.
  - d. If you made any change to the CiscoCRAServletEngine service properties in Step b or to the Cisco CRA Engine service properties in Step c, restart the service to cause the changes to take effect.

- If you are using a proxy service in Internet Explorer on the CRA Historical Reports client system, scheduled historical reports might not run and you might see this message in the CiscoSch.log file: [CRA\_DATABASE] entry not found in the properties file followed by failed to validate user OR get MaxConnections of database value. If this situation occurs but you can run the report directly from the CRA Historical Reports client system, follow these steps:
  - a. From Internet Explorer on the Historical Reports client system, choose **Tools > Internet Options**.
  - b. Click **Connections**.
  - c. Click **LAN Settings**.

The Use a Proxy Service check box will be checked if you are using a proxy server.
  - d. Click **Advanced**.
  - e. In the Do not use proxy server for addresses beginning with field, enter the IP address of the Cisco CRA server that the Historical Reports client system logs in to.
  - f. Click **OK** as needed to save your changes.
- If a large number of VRU scripts are configured for your system, the Add VRU Script operation and the Refresh Scripts operation can take a long time to complete. These tasks can also result in high CPU utilization.
- If you create a custom report as described in *Creating Custom Reports for Cisco Customer Response Applications*, you must use Crystal Reports version 8.5 to create and save the report.
- Any server on which you install Cisco CRA must be a Cisco-approved server. For a list of approved servers, refer to *Cisco CallManager Compatibility Matrix*, which is available at this URL:  
[http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/ccmcomp.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm)
- The JTAPI Client Update Tool synchronizes the Cisco CallManager Plugin with Cisco CRA and the Cisco Agent Desktop (CAD). You must run this tool from the Cisco CRA Server whenever you update Cisco CallManager. For

detailed information about the JTAPI Client Update Tool, refer to *Cisco Customer Response Applications Administrator Guide*, which is available at this URL:

[http://www.cisco.com/univercd/cc/td/doc/product/voice/sw\\_ap\\_to/apps\\_3\\_5/english/admn\\_app/apadm35.pdf](http://www.cisco.com/univercd/cc/td/doc/product/voice/sw_ap_to/apps_3_5/english/admn_app/apadm35.pdf)

- Cisco CRA does not support the use of child domains with Active Directory.
- The use of dual network interface cards (NICs) is supported on a server that is running Nuance ASR if the NICs are used for traffic segregation and not for redundancy. If you install dual NICs on such a server, you must configure the Nuance ASR software to use the primary NIC. In addition, you should configure Nuance processes to refer to host servers using the IP addresses of the host server, not their host names.
- Cisco CRS does not support NIC teaming.
- If you are deploying an MCS-7835-I1, MCS-7845-I1, or IBM xSeries-346 server, refer to the field notice Some Cisco Media Convergence Server (MCS) Encounter Network Interface Card (NIC) Numbering Reversal, which is available at this URL:

[http://www.cisco.com/en/US/products/hw/voiceapp/ps378/products\\_field\\_notice09186a0080415411.shtml](http://www.cisco.com/en/US/products/hw/voiceapp/ps378/products_field_notice09186a0080415411.shtml)

- When you install the Windows 2000 Server operating system provided by Cisco on a server on which you will install Cisco CRS, but not Cisco CallManager, use the following Cisco CRS product key:

FVHD IAZA ROFJ DERJ

When you install the operating system on a server on which you will install Cisco CRS and Cisco CallManager, use a valid Cisco CallManager Manager product key instead of the Cisco CRS product key.

- The only supported username for the Windows account on a server that is running Cisco CRS is Administrator. If you use another user name, the CRSAdminUtil.exe tool may not work properly.
- If you create a custom button in the Cisco Agent Desktop that changes the agent state to AgentWork, the button will allow an agent to go from Ready state to Work state. However, this state change is not supported. To work around this issue, remove the custom button and use the Work button on the Cisco Agent Desktop to go from Ready state to Work state.

- An ICD Call Recording and Monitoring Server can support up to 32 simultaneous monitoring and recording sessions.
- An ICD Call Statistics, Recording, and Monitoring Server checks the maximum number of concurrent recordings. If it reaches the limit of 32, it will not allow any more recordings to be made.
- Attempting to generate a scheduled custom report fails with the error “Invalid name” when the showUserNameOnReport parameter is set to 1 in the Historical Reports hrcConfig.ini file. To work around this problem, add the label @\$UserName to the .rpt report file that you create with Crystal Reports. To determine where to place this attribute, look at the definition file for any of the Cisco-provided historical reports.
- If you are using Cisco CRS Historical Reports client software, it must be the same version as the version of Cisco CRS that you are running.
- To access the CRA User Options pages or the CRA Supervision pages, you must use Microsoft Internet Explorer 5.x or 6.x.
- If there is a firewall between the Cisco CRA Server and the LDAP server, make sure that the firewall allows ICMP connectivity between these servers.
- The following information applies to the information in the Cisco CRA SRND:

The Cisco CRS Installer requires ICMP access to the LDAP server. If ICMP is not configured between Cisco CRA and the LDAP server, the installation fails.

## Cisco CRS 3.5 Admin Password Utility

With Cisco CallManager 4.x releases, the Cisco CallManager database uses NT authentication instead of mixed mode authentication. With this change, any service that accesses the Cisco CallManager database must be a valid NT user on the Cisco CallManager server, with privileges set for accessing the Cisco CallManager database.

These Cisco CRA services run under the CCMSERVICE NT user account, which provides access to Cisco CallManager Database:

- Cisco Desktop Sync Server
- Cisco Desktop VoIP Monitor Server (installed with Cisco IP ICD enhanced license)

If the password for the Cisco CallManager CCMSERVICE NT account is changed using Cisco CallManager AdminUtility, the password change must be applied to the Cisco Desktop Sync Server and the Cisco Desktop VoIP Monitor Server services. Otherwise, they will not be able to access the Cisco CallManager database. The Cisco CRS CRSAdminUtil utility applies the password change to these services. This utility is stored in the C:\Program Files\Cisco\Bin directory on a server that is running Cisco CRA.

It is not necessary to use the CRSAdminUtil utility on a co-resident server (a server on which Cisco CRA and Cisco CallManager are installed on the same server). On a co-resident server, the Cisco CallManager AdminUtility changes the password of the CCMSERVICE account, applies the new password to the Cisco Desktop Sync Server service and to the Cisco Desktop VoIP Monitor Server service (if present), and restarts these services automatically.

In other deployments, when you use the Cisco CallManager AdminUtility, you should run the CRSAdminUtil utility as follows:

- In a standalone deployment (In which Cisco CRA and Cisco CallManager are installed on the separate servers), run the CRSAdminUtil utility on the Cisco CRS server. This process will restart the Cisco Desktop Sync Server and the Cisco Desktop VoIP Monitor Server services, if they are running.
- If your deployment includes a dedicated ICD Call Statistics, Recording, and Monitoring Server or ICD Call Recording and Monitoring Servers, run the CRSAdminUtil utility on each of these servers. This process will restart the Cisco Desktop VoIP Monitor Server service on the server, if the service is running.

To run the CRSAdminUtil utility, follow these steps:

### Procedure

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- Step 1** Open a command window.
- Step 2** In the command window, enter this command and then press **Enter**:
- cd C:\Program Files\Cisco\Bin**
- Step 3** Enter this command and then press **Enter**:
- CRSAdminUtil -u CCMSERVICE -p *password\_phrase***
- Replace *password\_phrase* with the password phrase you entered when you used the Cisco CallManager AdminUtility to change Cisco CallManager NT accounts password.
- If you enter different a password phrase, the CRSAdminUtil utility will generate a password that does not match the password that was generated by the Cisco CallManager AdminUtil, and the Cisco Desktop Sync Server and the Cisco Desktop VoIP Monitor Server services will not be able to access the Cisco CallManager database. In this case, run the CRSAdminUtil utility again, making sure to enter the correct password phrase.
- Step 4** Enter the Windows system administrator password for the server on which you are running the CRSAdminUtil utility when prompted.
- Step 5** Enter **y** when prompted to confirm that you want to change the password phrase.
- CRSAdminUtil utility generates a strong password using the password phrase that you entered, applies the password to the CCMSERVICE NT user account, and applies the password to the Cisco Desktop Sync Server and the Cisco Desktop VoIP Monitor Server services. If these services are running, the CRSAdminUtil restarts them.
-

# Obtaining Double-Byte Data in a Cisco CRA Script

The following guidelines apply when you use a Cisco CRA script to obtain double-byte data from a database:

- The database table must be defined to return UTF-8.
- Load the data from the database into an Editor variable (for example, dbString) with UTF-8 bytes using the DB Read and DB Get steps.
- Write a custom Java Class that takes the Editor UTF-8 string from the variable returns a UTF-16 string
- Pass the returned string to the step in which it needs to be used. For example, the Set Enterprise Data step.

## Unsupported and Supported Actions for Cisco ICD Agents

This section outlines the unsupported and supported actions for agents using the Cisco Agent Desktop or the Cisco IP Phone Agent Service. Agents can access similar information in the Cisco Agent Desktop online help.

### Unsupported Actions for Cisco IP ICD Agents

Use of the following softkeys on a Cisco IP Phone is not supported:

- **Barge**
- **cBarge**
- **DirTrfr**
- **GPickup**
- **iDivert**
- **Join**
- **MeetMe**
- **Pickup**

## Supported Configurations for Agent Phones

To determine the phone devices that supported by the Cisco Agent Desktop and for use by Cisco IP Phone Agents, refer to *Cisco Customer Response Solutions (CRS) Software and Hardware Compatibility Guide*, which is available at this URL:

[http://www.cisco.com/univercd/cc/td/doc/product/voice/sw\\_ap\\_to/crscomtx.pdf](http://www.cisco.com/univercd/cc/td/doc/product/voice/sw_ap_to/crscomtx.pdf)

The following configurations are supported for agent phones:

- An ICD extension configured on a single device (but not on multiple devices).
- An ICD extension configured in a single device profile (but not in multiple device profiles).
- Multiple agents sharing the same ICD extension, which you can set up as follows:
  - a. Configure the ICD extension on a single phone (not in a device profile).
  - b. Associate that phone with each agent who will use that extension.
  - c. Select the appropriate directory number (DN) as the ICD extension for each agent.

In this configuration, only one agent at a time can be logged in.



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**Note** All agents that currently have the ICD extension to be shared must log out before you can configure additional agents to share that extension.

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## Unsupported Configurations for Agent Phones

The following configurations are not supported for agent phones:

- Two lines on an agent's phone that have the same extension but exist in different partitions.
- An ICD extension assigned to multiple devices.
- Configuring the same ICD extension in more than one device profile, or configuring the same ICD extension in any combination of device profiles and devices. (Configuring an ICD extension in a single device profile is supported.)

- In the Cisco CallManager Administration Directory Number Configuration web page for each ICD line, setting Maximum Number of Calls to a value other than 2.
- In the Cisco CallManager Administration Directory Number Configuration web page for each ICD line, setting Busy Trigger to a value other than 1.
- Configuring a Cisco IP Phone with SRTP on.
- No Cisco Call Manager device can be forwarded to the ICD extension of an agent.
- The ICD extension of an agent cannot be configured to forward to a Cisco CRA route point.
- Use of characters other than the numerals 0 - 9 in the ICD extension of an agent.

## Unsupported Features in Cisco CallManager

The following Cisco CallManager features are not supported by Cisco CRA 3.5(3). These features are disabled by default and should not be enabled for Cisco CRA. For more information about these features, refer to the Cisco CallManager documentation.

- Block External to External Transfer.
- Drop Adhoc Conference When Creator Leaves.
- Multilevel precedence and preemption (MLPP).
- Q Signalling (QSIG) Path Replacement (PR).

This feature must be disabled when Cisco CRS is deployed. To disable this feature, set the Cisco CallManager service parameters Path Replacement Enabled and Path Replacement on Tromboned Calls to False.

- Forced Authorization Code and Client Matter Code.

Because these feature can be enabled per route pattern, they should be turned off for all route patterns in the Cisco CallManager cluster that Cisco CRS might use. Enabling these features for route patterns that Cisco CRS does not use will not affect Cisco CRS.

In addition, do not configure shared lines for CTI ports and for CTI route points.

# Upgrading from Nuance Vocalizer 1.0 to Nuance Vocalizer 3.0

Upgrading from Nuance Vocalizer 1.0 to Nuance Vocalizer 3.0 requires new license files, so when you upgrade, you must also reinstall Cisco CRA. You also must reinstall the Nuance Speech Server software on each server on which it is currently installed.

**Note**

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When you upgrade to Nuance Vocalizer 3.0, all existing TTS configuration information will be deleted and will need to be reconfigured.

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**Procedure**

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**Step 1** Remove the Vocalizer 1.0 license files from the Cisco CRA server.

If the Nuance Speech Server software is installed on a dedicated server, remove the Vocalizer 1.0 license files from that server also.

To determine if a license file is for Vocalizer 1.0, use a text editor to open the file and search for this string: CRA\_NUANCETTSSW. If this string is found, the file is a Vocalizer 1.0 license file.

**Step 2** Copy the Vocalizer 3 license file or files to the Cisco CRA server.

If you will install the Nuance Speech Server software on a dedicated server, copy the Vocalizer 3 license file or files to that server also.

For information about copying license files, refer to the “Transferring License Files to the CRA Server” section in *Getting Started with Cisco Customer Response Applications 3.5*.

**Step 3** Install Cisco CRA on the Cisco CRA Server.

For instructions, refer to *Getting Started with Cisco Customer Response Applications 3.5*.

Make sure to select all appropriate components and languages during the installation.



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**Note** The installation will not indicate the presence of ASR and TTS licenses. However, you can continue with the installation.

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**Step 4** Set up Cisco CRA.

Refer to the “Accessing the CRA Administration Web Interface” and the sections that follow in *Getting Started with Cisco Customer Response Applications 3.5*.



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**Note** Do not configure TTS after completing this setup procedure. Instead, continue with this procedure.

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**Step 5** Install the latest available Cisco CRA Service Release.

For instructions, see the “Installing a Required Service Release” section in *Getting Started with Cisco Customer Response Applications 3.5*.

**Step 6** Install the Nuance Speech Server software on the Cisco CRA server using Cisco Customer Response Solutions CD-ROM 5.

For instructions, refer to the “Installing Nuance ASR and TTS” in *Getting Started with Cisco Customer Response Applications 3.5*.

The installation program will indicate the presence of ASR and TTS license files. Make sure that the program indicates TTS3, which is for Vocalizer 3 license files.

The installation program will detect a previous installation of Vocalizer 1.0 and will prompt you to uninstall that version. Follow the prompts to uninstall Vocalizer 1.0 and re-run the Nuance Speech Server installation program.

- Step 7** Install the Nuance Speech Server software on a dedicated speech server, if appropriate.
- Step 8** Configure the speech server.
- For instructions, refer to the “Provision the Nuance TTS Subsystem” section in *Cisco Customer Response Applications Administrator Guide*.
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## Changing the IP Address of a Cisco CRA Server

To change the IP address on the Cisco CRA server, perform the following steps. If you do not follow these steps when you change the IP address, the CRA Engine will not come into service.

### Procedure

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- Step 1** From the Cisco CRA Administration web page, choose **System > Engine**, click **Stop Engine** in the Engine web page, and then exit Cisco CRA Administration.
- Step 2** Change the IP address on the Cisco CRA server to the new address.
- Step 3** Reinstall and configure Cisco CRA 3.5. (Do not uninstall Cisco CRA 3.5 before reinstalling it.) Make sure to also install the latest Service release. Do not reinstall the Speech Server now.
- Refer to *Getting Started with Cisco Customer Response Applications 3.5* for installation instructions.
- Step 4** From the Cisco CRA Administration web page, choose **System > Engine**, click the **Engine Configuration** hyperlink, enter the new Cisco CRA server IP address in the Application Engine Hostname field, and then click **Update**.
- Step 5** If you are using Cisco ICD, follow the procedure described in the “Updating the CAD Servers’ IP Address” section in *Cisco Desktop Product Suite 4.5.5 (ICD) Service Information*.
- Step 6** If you are using the Cisco IP Phone Agent service on Cisco CallManager, update the information in the Service URL field in the Cisco CallManager Administration Cisco IP Phone Services Configuration page with the new Cisco CRA server IP address.

- Step 7** If you are using Cisco CRA Historical Reports:
- a. Stop the Cisco CRA Engine (see [Step 1](#)).
  - b. From the Cisco CRA Administration web page, choose **Tools > Historical Reporting**, click the **Database Server Configuration** hyperlink, and then click **Update**.
  - c. Start the Historical Reports Client, click **Server** in the Login dialog box, and change the server IP address to the new Cisco CRA server IP address.
- Step 8** If you are using the ICM subsystem on the Cisco CRA server, change the VRU PIM configuration to point to the new Cisco CRA server IP Address.
- Step 9** On each client computer from which you run real-time reports, point the web browser to the new Cisco CRA server IP Address.
- Step 10** If you have installed Nuance ASR on one or more dedicated servers, follow these steps on each such dedicated server:
- a. Choose **Start > Programs > Administrative Tools > Data Sources (ODBC)**.
  - b. Click the **System DSN** tab.
  - c. Click **wfnuance** in the System Data Sources pane and click **Configure**.
  - d. In the Server field, type in the new IP address of the Cisco CRA server and then click **Next**.
  - e. In the Microsoft SQL Server DSN Configuration dialog box, make sure that this radio button is selected: **With SQL Server authentication using a login ID and password entered by the user**.
  - f. Also in the Microsoft SQL Server DSN Configuration dialog box, enter **nuance** in the password field and then click **Next**.
  - g. Click **Next** on the next dialog box that appears.
  - h. Click **Finish** on the next dialog box that appears.

- i. In the ODBC Microsoft SQL Server Setup dialog box, click **Test Data Source** and verify that the operation completes successfully.
- j. Click **OK**.



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**Note** You do not need to take any action for Nuance TTS.

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**Step 11** Reboot the Cisco CRA server.

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**Note** Before logging in to the Cisco Agent Desktop or in to the Cisco Supervisor Desktop, choose **Start > Run** on the computer on which you are running either of these programs and enter the following command, where *new\_ip* is the new IP address of the Cisco CRA server: `\\new_ip\DESKTOP_CFG\desktop\`.

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## Entering a Datasource Name in Cisco CRA Administration

If the datasource name in the Cisco CRA Administration Enterprise Database Subsystem Configuration web page does not match exactly the datasource name in the Windows ODBC DSN configuration window, the connection to the CRA database will fail and the message `PARTIAL SERVICE` appears for the database subsystem in the Cisco CRA Administration Engine Status web page.

To workaroud this problem, change the datasource name in the Cisco CRA Administration Enterprise Database Subsystem Configuration web page to match the Windows ODBC DSN name.

# Contact Dispositions in Cisco CRA Real-Time Reports and Historical Reports

The following notes will help clarify information regarding contact dispositions on various Cisco CRA real-time reports and historical reports.

- Many real-time and historical reports show the disposition of a call. CSQ reports show the disposition as Handled, Abandoned, or Dequeued. Other reports show the disposition as Handled or Abandoned.
- A contact that is queued and answered by an agent will show as handled in real-time and in historical reports.
- A contact that is queued but abandoned before it is answered by an agent will be shown as handled in the Overall IP ICD Stats real-time report if a SetContactInfo step in the workflow marks the call as handled. The call will be shown as abandoned otherwise. The CSQ IP ICD Stats real-time report will show the call as abandoned in both cases because it does not consider the SetContactInfo step.
- The historical CSQ reports take into account whether a contact is marked as handled by the SetContactInfo step to determine if a contact is dequeued. The CSQ IP ICD Stats does not consider the SetContactInfo step. Therefore, if a call is queued, then marked as handled, and then disconnects, the historical CSQ reports will show the call as dequeued and the real-time CSQ IP ICD Stats report will show it as abandoned.
- If the Dequeue step is used, the CSQ historical reports will show a contact as dequeued for each CSQ that it was dequeued from, but only if the contact is marked as handled. If a call is dequeued (by the Dequeue step), and then disconnects without being marked handled, the CSQ historical reports will show the contact as abandoned.
- If a call is dequeued using the Dequeue step and the caller drops, the CSQ IP ICD Stats real-time report will show the call as dequeued. If a call is dequeued from CSQ1 and is eventually handled by CSQ2, the CSQ IP ICD Stats report will show the call as dequeued for CSQ1 and handled for CSQ2. If a call is queued on multiple CSQs and is eventually handled by CSQ1, the CSQ IP ICD Stats report will show the call as handled for CSQ1 and dequeued for all other CSQs.

# Cisco CRA Historical Reports Upgrades and Enhancements

This section describes enhancements to Cisco CRA Historical Reports that are not yet documented in *Cisco CRA Historical Reports User Guide*. These enhancements were added in previous Cisco CRA 3.1 or 3.5 releases and are currently available in English only.

This section includes the topics:

- [Abandoned Call Detail Activity Report, page 20](#)—Describes new fields in this report
- [Agent Detail Report, page 20](#)—Describes new fields in this report
- [Agent Login Logout Activity Report, page 20](#)—Describes new fields in this report
- [Agent State Summary Report \(by Agent\), page 20](#)—Describes new fields in this report
- [Agent State Summary Report \(by Interval\), page 21](#)—Describes new fields in this report
- [Call Custom Variables Report, page 21](#)—Describes new filter parameters in this report
- [Common Skill Contact Service Queue Activity Report \(by Interval\), page 22](#)—Describes this new report
- [Detailed Call by Call CDR Report, page 23](#)—Describes new filter parameters in this report
- [Detailed Call, CSQ, Agent Report, page 23](#)—Describes this new report

## Abandoned Call Detail Activity Report

- This report displays up to three skills for the CSQ to which the call was routed. (This enhancement was added in Cisco CRA 3.1(1).)
- The Average Time to Abandon field has been added to this report.

Time to abandon is the duration from the time when the call comes to the system to the time when the call is abandoned. Average time to abandon is the average value for all calls abandoned during the report range. The format is hh:mm:ss.

## Agent Detail Report

This report displays up to three skills for the CSQ to which the call was routed. (This enhancement was added in Cisco CRA 3.1(1).)

## Agent Login Logout Activity Report

The following fields have been added to this report:

- Extension—Cisco ICD extension that the Cisco CallManager assigned to the agent.
- Logout Reason Code—Reason code that the agent enters when the agent logs out from the Cisco Agent Desktop. A value of -1 indicates that no logout reason code is configured or that the agent was unable to enter a reason code.
- Grand Total—Total logged-in duration for all agents during the report period.

## Agent State Summary Report (by Agent)

The Grand Total field has been added to this report. If the report is generated with 30-minute or 60-minute intervals, the grand total displays the total for all agents for all intervals during the report period. If the report is generated with the entire report range, the grand total displays the same values as the summary line. The grand total includes total logged-in time, total and percentage not ready time, total and percentage ready time, total and percentage reserved time, total and percentage talk time, and total and percentage work time.

## Agent State Summary Report (by Interval)

The Grand Total field has been added to this report. If the report is generated with 30-minute or 60-minute intervals, the grand total displays the total for all agents for all intervals during the report range. If the report is generated with the entire report range, the grand total displays the same values as the summary line. The grand total includes total logged-in time, total and percentage not ready time, total and percentage ready time, total and percentage reserved time, total and percentage talk time, and total and percentage work time.

## Call Custom Variables Report

The following filter parameters have been added to this report:

- Original Called Number—Displays information for the specified original called number(s).
- Called Number—Displays information for the specified called number(s).
- Calling Number—Displays information for the specified calling number(s). Calling number is the same as Originator DN.
- Application Name—Displays information for the specified application name(s).
- Contact Type—Displays information for the specified contact type(s) (incoming, outgoing, or internal).
- Originator Type—Displays information for the specified originator type(s) (agent, device, or unknown).
- Destination Types—Displays information for the specified destination type(s) (agent, device, or unknown).
- Duration Greater Than or Equal to T seconds—Displays calls with duration greater than or equal to the number of seconds specified by T.
- Duration Less Than or Equal to T seconds—Displays calls with duration less than or equal to the number of seconds specified by T.
- Custom Variable 1—Enter a whole string or substring to search for. Separate multiple strings with commas. When this filter parameter is specified, the report displays calls for which Custom Variable 1 contains the string or any of the substrings entered.

- Custom Variable 2—Enter a whole string or substring to search for. Separate multiple strings with commas. When this filter parameter is specified, the report displays calls for which Custom Variable 2 contains the string or any of the substrings entered.
- Custom Variable 3—Enter a whole string or substring to search for. Separate multiple strings with commas. When this filter parameter is specified, the report displays calls for which Custom Variable 3 contains the string or any of the substrings entered.
- Custom Variable 4—Enter a whole string or substring to search for. Separate multiple strings with commas. When this filter parameter is specified, the report displays calls for which Custom Variable 4 contains the string or any of the substrings entered.
- Custom Variable 5:—Enter a whole string or substring to search for. Separate multiple strings with commas. When this filter parameter is specified, the report displays calls for which Custom Variable 5 contains the string or any of the substrings entered.
- Any Custom Variable—Enter a whole string or substring to search for. Separate multiple strings with commas. When this filter parameter is specified, the report displays calls with any of the five custom variables containing the string or any of the substrings entered.

## Common Skill Contact Service Queue Activity Report (by Interval)

As of Cisco CRA 3.1(1), the Common Skill Contact Service Queue Activity Report (by Interval) has been added to Cisco CRA Historical Reports. This report provides the following summary information for each group of CSQs:

- Calls Presented—Maximum number of calls offered to each individual CSQ within the group. The maximum number rather than the sum is shown because the same call can be presented to multiple CSQs within the same group.
- Calls Handled—Sum of calls handled by each individual CSQ within the group. The sum is used because each call, if handled, is handled by only one CSQ .
- Calls Abandoned—Maximum number of calls abandoned from the same group. The maximum number is shown because a call abandoned is considered to be abandoned from all the CSQs for which it was queued.

## Detailed Call by Call CDR Report

The following filter parameters have been added to this report:

- Original Called Number—Displays information for the specified original called number(s).
- Called Number—Displays information for the specified called number(s).
- Calling Number—Displays information for the specified calling number(s). Calling number is the same as Originator DN.
- Application Name—Displays information for the specified application name(s).
- Contact Type—Displays information for the specified contact type(s) (incoming, outgoing, or internal).
- Originator Type—Displays information for the specified originator type(s) (agent, device, or unknown).
- Destination Type—Displays information for the specified destination type(s) (agent, device, or unknown).
- Duration Greater Than or Equal to T seconds—Displays calls with duration greater than or equal to the number of seconds specified by T.
- Duration Less Than or Equal to T seconds—Displays calls with duration less than or equal to the number of seconds specified by T.

## Detailed Call, CSQ, Agent Report

This new report has been added.

The Detailed Call, CSQ, Agent Report includes this chart:

- Total Calls by Called Number—Displays the total number of calls to each called number.

The Detailed Call, CSQ, Agent Report includes these fields:

- Session ID - Sequence No.—Session ID is the unique session identification number that the system assigned to a call. Sequence No. is the session sequence number that the system assigned to each call leg. The session sequence number increases by 1 for each leg of a call.
- Call Start Time—Date and time that the call started.

- Call End Time—Date and time that the call was disconnected or transferred.
- Contact Disposition: Disposition of a call (abandoned or handled)—For an ICD call, the call is abandoned if the call disconnects before connecting to an agent. The call is handled when the call is connected to an agent. For an IVR call, the call is abandoned if it does not reach the workflow step that defines the call as handled. The call is handled when it reaches this step.
- Orig. DN (Calling No.)—Originator directory number. This number is the same as the calling number. If originator type is agent, this field shows the ICD extension of the agent. If originator type is device, this field shows the CTI port number. If originator type is unknown (through gateway), this field shows the telephone number of the caller.
- Destination DN—Destination directory number. If destination type is agent, this field shows the ICD extension of the agent. If destination type is device, this field shows the CTI port number. If destination type is unknown (through gateway), this field shows the telephone number called.
- Called Number—If the call was a transfer, this field shows the number that the call was transferred to. Otherwise, this field shows the number originally dialed by the caller. This number can be either a route point number or an agent extension.
- Application Name—Name of the Cisco ICD or IVR application associated with the route point.
- CSQ Names—Name(s) of the contact service queue (CSQ) or queues for which the call was queued. This field displays a maximum of three CSQs separated by comma. The CSQ that handled the call is marked with an asterisk (\*). This field is blank if the call did not queue for any CSQ.
- Queue Time—Time that elapsed between the time a call entered the CSQ and the time the call was answered by an agent or disconnected. This field is blank if the call did not queue for any CSQ.
- Agent Name—Name of the agent who handled the call, name of the agent who participated in the conference call, or name of the supervisor who barged the call. This field is blank if the call was not presented to any agent.
- Ring Time—Time that elapsed between the time that a call rang at the Cisco Agent Desktop and the time that the call was answered by an agent, presented to another agent (if the first agent did not answer the call), or disconnected. This field is blank if the call was not presented to any agent.

- **Talk Time**—Time that elapsed between the time that an agent answered the call and when the call was disconnected or transferred, not including hold time.
- **Work Time**—Amount of time that an agent spent in Work State after the call. This field is blank if the call was not handled by any agent.

The Detailed Call, CSQ, Agent Report includes these sort criteria:

- **Session ID**—Displays the report in order of the unique session identification number that the system assigned to a call.
- **Call Start Time**—Displays the report in order of the date and time that the call started.
- **Called Number**—Displays the report in order of the number called.

The Detailed Call, CSQ, Agent Report includes these filter parameters:

- **Called Number**—Displays information for the specified called number(s).
- **Calling Number**—Displays information for the specified calling number(s). Calling number is the same as Originator DN.
- **Application Name**—Displays information for the specified application name(s).
- **Contact Type**—Displays information for the specified contact type(s): incoming, outgoing, or internal.
- **Originator Type**—Displays information for the specified originator type(s): agent, device, or unknown.
- **Destination Type**—Displays information for the specified destination type(s): agent, device, or unknown.
- **Agent Name**—Displays ICD calls handled by the specified agent(s), conference calls which were participated by the specified agent(s), and calls which were barged by the specified supervisor(s).
- **CSQ Name**—Displays calls which queued for any of the specified CSQs.
- **Duration Greater Than or Equal to T seconds**—Displays calls with duration greater than or equal to the number of seconds specified by T.
- **Duration Less Than or Equal to T seconds**—Displays calls with duration less than or equal to the number of seconds specified by T.

# Sharing Cisco CRA Historical Reports on the Web

This section explains how you can make Cisco CRA Historical Reports available to users over the web. Because historical reports can contain proprietary information, you may want to make them available through your company intranet (rather than the public Internet) so that you can control access to them.

Before you make historical reports through the web, go to the following URL and refer to the “Crystal Reports Developer Edition from Crystal Decisions” information in the “Licensing and Copyright Information” section. This material includes important usage information and restrictions of which you should be aware.

[http://www.cisco.com/univercd/cc/td/doc/product/voice/sw\\_ap\\_to/apps\\_3\\_0/english/admn\\_app/relnote/rel3\\_0.pdf](http://www.cisco.com/univercd/cc/td/doc/product/voice/sw_ap_to/apps_3_0/english/admn_app/relnote/rel3_0.pdf)

In addition, refer to *Cisco CRA Historical Reports User Guide* for information about scheduling and exporting historical reports.

To provide web access to historical reports, perform the following procedure. This procedure creates a folder on the web server in which historical reports are stored. It also sets up the Cisco CRA Historical Reports client computer to export reports to the web server for sharing. The web server must be running the Windows 2000 Server operating system.



## Note

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Do not use the Cisco CRA server or a Remote Database Server as the web server to avoid affecting the performance of these servers.

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## Procedure

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- Step 1** On the web server, make sure that the following services are running:
- IIS Admin service
  - World Wide Web Publisher service
- Step 2** On the web server, create a folder in which to store historical reports. For example, create a folder on the C:\ drive and name it Reports.
- Step 3** Locate and right-click the new folder you created and choose **Sharing**.
- Step 4** In the Properties dialog box, click the **Web Sharing** tab.

- Step 5** In the Web Sharing area:
- a. Choose Default Web Site from the Share on drop-down list.
  - b. Click the **Share this folder** radio button.
  - c. Highlight the alias for the folder you created and click **Edit Properties**.

- Step 6** In the Edit Alias dialog box:
- a. Check the **Read** check box.
  - b. Check the **Directory browsing** check box.
  - c. Uncheck any other check boxes if they are checked.
  - d. Click the **None** radio button.
  - e. Click **OK**.

- Step 7** In the Properties dialog box, click **OK**.

The new folder you created can now be accessed by entering the following URL in a web browser, where *server* is the name or the IP address of the web server and *folder* is the alias of the new folder:

`http://server/folder/`

- Step 8** On the Cisco CRA Historical Reports client computer, map a network drive to the folder on the web server that you set up for sharing historical reports.

Set up mapping to reconnect at logon.

For example, if you created a folder on the web server called Reports, map the network drive to the Reports folder on the web server.

Refer to your Windows documentation for information about mapping a network drive.

**Step 9** When you schedule or export reports from the Cisco CRA Historical Reports client, use the drive letter from the mapping process when you specify the export location.

For example, if the drive letter from the mapping process is F and if you are exporting a report called myreport.pdf, specify F:\myreport.pdf as export location.

The report you export will be available at the following URL, where *server* is name or IP address of the web server, *folder* is the alias of the web server folder in which reports are stored, and *report* is the name of the report:

<http://server/folder/report.pdf>.

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## Adding a 15-Minute Interval Length to a Cisco CRA Historical Report Filter Parameter

The following Cisco CRA historical reports provide filter parameters that let you display information for 30-minute intervals or for 60 minute intervals within the report period.

- Contact Service Queue Activity Report (by CSQ)
- Contact Service Queue Activity Report (by Interval)
- Agent State Summary Report (by Agent)
- Agent State Summary Report (by Interval)
- Common Skill Contact Service Queue Activity Report (by Interval)

You can add a filter parameter that lets you display information for 15-minute intervals during the report period. To do so, follow these steps:

### Procedure

- Step 1** Locate the report definition file for the report that you want to update and make a backup copy of this file.

Report definition files have descriptive names and are located in the following folder under the folder in which you installed the Cisco CRA Historical Report client system. (By default, the client system installs in the Program Files directory.)

Cisco CRS Historical Reports\ReportTemplates\Language

For example, the report definition file for the U.S. English version of the Contact Service Queue Activity Report (by Interval) report is named:

ICD\_Contact\_Service\_Queue\_Activity\_by\_Interval\_en\_us.xml

By default, this file is located in this directory:

C:\Program Files\Cisco CRS Historical Reports\ReportTemplates\EN\_us

- Step 2** Use a Windows text editor to open the report definition file for the report that you want to update.

- Step 3** In the report definition file, locate this line:

```
<ListOption OptionSelected="True" OptionValue="0">Entire report range</ListOption>
```

- Step 4** Insert this line immediately after the line that you located:

```
<ListOption OptionSelected="False" OptionValue="15">Fifteen (15) minutes</ListOption>
```

Now there is a series of lines in the file that looks like this:

```
<ListOption OptionSelected="True" OptionValue="0">Entire report range</ListOption>
<ListOption OptionSelected="False" OptionValue="15">Fifteen (15) minutes</ListOption>
<ListOption OptionSelected="False" OptionValue="30">Thirty (30) minutes</ListOption>
<ListOption OptionSelected="False" OptionValue="60">Sixty (60) minutes</ListOption>
```

**Step 5** Save your changes and exit the text editor.

A new option for the Interval Length filter parameter is available for the report that you updated. The new option lets you designate a 15-minute interval for the report.

## Selecting Languages for ASR

If you will install Nuance ASR, you must select the appropriate country-specific language or languages for use with ASR when you install Cisco CRA. [Table 1](#) shows the Cisco CRA country-specific languages that correspond to the ASR languages. When you install Cisco CRA, make sure to select the appropriate country-specific languages for the ASR languages that you will install.

**Table 1** *CRA Country-Specific Languages and ASR Languages*

<b>Cisco CRA Country-Specific Language</b>	<b>Corresponding ASR Language</b>
en_US or en_CA	en_US
en_GB	en_GB
es_MX or es_US	es_MX
es_CO	es_CO
es_ES	es_ES
fr_FR	fr_FR
fr_CA	fr_CA
it_IT	it_IT
ja_JP	ja_JP
de_DE	de_DE

# Using Cisco CRA Clients with Microsoft Windows XP-SP2

This section describes the steps you must take to allow the following Cisco CRA client applications to function on a PC that is running Microsoft Windows XP-Service Pack 2 (Windows XP-SP2) and on which the Windows Firewall is operating:

- Cisco Agent Desktop
- Cisco Agent Desktop with Media Termination
- Cisco Supervisor Desktop
- Cisco Desktop Administrator

The procedures in this section are not required for the Cisco CRA Editor or for the Cisco CRA Historical Reporting client.

This section includes these topics:

- [Upgrading a PC on which a Cisco CRA Client is Already Running to Windows XP-SP2, page 31](#)
- [Installing a Cisco Desktop Client on a PC on which Windows XP-SP2 is Already Running, page 34](#)
- [Unblocking Applications, page 35](#)

## Upgrading a PC on which a Cisco CRA Client is Already Running to Windows XP-SP2

The following sections explain the steps you must take when you install Windows XP-SP2 on a PC on which a Cisco CRA Client is already installed:

- [Cisco Agent Desktop and Cisco Supervisor Desktop, page 32](#)
- [Cisco Agent Desktop with Media Termination, page 32](#)
- [Cisco Desktop Administrator, page 33](#)

## Cisco Agent Desktop and Cisco Supervisor Desktop

After you upgrade a PC to Windows XP-SP2, an agent or supervisor will see a Windows Security Alert when attempting to log in to Cisco Agent Desktop for the first time or when selecting a team using the Cisco Supervisor Desktop.

- If the agent or supervisor is logged in to Windows without administrator privileges, the alert prompts: To help protect your computer, Windows Firewall has blocked some features of this program. Your computer administrator can unblock this program for you.

In this case, perform the procedure described in the [“Unblocking Applications” section on page 35](#).

- If the agent or supervisor is logged in to Windows with administrator privileges, the alert prompts: To help protect your computer, Windows has blocked some features on this program. Do you want to keep blocking this program?

In this case, the agent or supervisor should click the **Unblock** button to continue. If the agent or supervisor clicks the **Keep Blocking** button or the **Ask Me Later** button, various features in the Cisco Agent Desktop or Cisco Supervisor Desktop will not work properly. To correct this problem, perform the procedure described in the [“Unblocking Applications” section on page 35](#).

## Cisco Agent Desktop with Media Termination

After you upgrade a PC to Windows XP-SP2, an agent or supervisor will see a Windows Security Alert when attempting log in to the Cisco Agent Desktop with Media Termination for the first time.

- If the agent or supervisor is logged in to Windows without administrator privileges, the alert prints: To help protect your computer, Windows Firewall has blocked some features of this program. Your computer administrator can unblock this program for you.

In this case, perform the procedure described in the [“Unblocking Applications” section on page 35](#).

- If the agent or supervisor is logged in to Windows with administrator privileges, this alert prompts: To help protect your computer, Windows has blocked some features on this program. Do you want to keep blocking this program?

In this case, the agent or supervisor should click the **Unblock** button to continue. If the agent or supervisor clicks the **Keep Blocking** button or the **Ask Me Later** button, various features in the Cisco Agent Desktop or Cisco Supervisor Desktop will not work properly. In addition, the agent or supervisor will be unable to hear callers. To correct this problem, perform the procedure described in the “[Unblocking Applications](#)” section on page 35.




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**Note** If you have unblocked the Cisco Agent Desktop but not the Media Termination module, an agent or supervisor will see a Windows Security Alert for the Media Termination module the first time a call is presented. In this case, the agent or supervisor should click the **Unblock** button to continue. If the agent or supervisor clicks the **Keep Blocking** button or the **Ask Me Later** button, perform the procedure described in the “[Unblocking Applications](#)” section on page 35.

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## Cisco Desktop Administrator

After you upgrade a PC to Windows XP-SP2, an agent or supervisor will see a Windows Security Alert when attempting access the Cisco Desktop Administrator for the first time.

- If the agent or supervisor is logged in to Windows without administrator privileges, the alert prints: *To help protect your computer, Windows Firewall has blocked some features of this program. Your computer administrator can unblock this program for you.*

In this case, perform the procedure described in the “[Unblocking Applications](#)” section on page 35.

- If the agent or supervisor is logged in to Windows with administrator privileges, this alert prompts: *To help protect your computer, Windows has blocked some features on this program. Do you want to keep blocking this program?*

In this case, the agent or supervisor should click the **Unblock** button to continue. If the agent or supervisor clicks the **Keep Blocking** button or the **Ask Me Later** button, the Logical Call Center and other data will not appear in the Cisco Desktop Administrator. To correct this problem, perform the procedure described in the [“Unblocking Applications” section on page 35](#).

## Installing a Cisco Desktop Client on a PC on which Windows XP-SP2 is Already Running

When you install the Cisco Agent Desktop (with or without Media Termination), the Cisco Supervisor Desktop, or the Cisco Desktop Administrator on a PC on which Windows XP-SP2 is already installed, the following message will appear:

Security Warning message. The publisher could not be verified. Are you sure you want to run this software?

When you see this message, click **Yes** to continue.

After you upgrade a PC to Windows XP-SP2, an agent or supervisor will see a Windows Security Alert in the following situations:

- When attempting to log in to the Cisco Agent Desktop for the first time
- When selecting a team using the Cisco Supervisor Desktop
- When performing these actions in the Cisco Desktop Administrator:
  - Launching Cisco Desktop Administrator (for the application Administrator.exe)
  - Clicking **Enterprise Data Configuration/Enterprise Data** for the application TSSPAdm
  - Attempting to save a Reason Code that you added under the Desktop Configuration\Reason Codes node (for the application SplkView)

The Windows Security Alert varies depending on how the agent or supervisor is logged in.

- If the agent or supervisor is logged in to Windows without administrator privileges, this alert prompts: *To help protect your computer, Windows Firewall has blocked some features of this program. Your computer administrator can unblock this program for you.*

In this case, perform the procedure described in the [“Unblocking Applications” section on page 35](#).

- If the agent or supervisor is logged in to Windows with administrator privileges, this alert prompts: *To help protect your computer, Windows has blocked some features on this program. Do you want to keep blocking this program?*

In this case, the agent or supervisor should click the **Unblock** button to continue. If the agent or supervisor clicks the **Keep Blocking** button or the **Ask Me Later** button, various features in the Cisco Agent Desktop or Cisco Supervisor Desktop will not work properly. In addition, an agent or supervisor will be unable to hear callers if using Media Termination, and the Logical Call Center and other data will not appear in the Cisco Desktop Administrator. To correct these problems, perform the procedure described in the [“Unblocking Applications” section on page 35](#).

## Unblocking Applications

### Procedure

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- Step 1** Log into the PC as the Windows administrator.
- Step 2** Choose **Start > Settings > Control Panel > Security Center > Windows Firewall**.
- Step 3** Click the **Exceptions** tab.

**Step 4** Check one or more of the following check boxes in the Program and Services window, as appropriate.

If an appropriate application does not appear, click **Add Programs**, and then browse to C:\Program Files\Cisco\Desktop\Bin and select the program.

- **CallChat**—In all cases
- **Cisco Agent Desktop**—In all cases
- **MediaClient Module**—In all cases
- **Cisco Supervisor**—If the Cisco Supervisor Desktop is running on the PC
- **Supervisor Log Viewer**—If the Cisco Supervisor Desktop is running on the PC
- **Cisco Desktop Administrator**—If the Cisco Desktop Administrator is running on the PC
- **SpkView**—If the Cisco Desktop Administrator is running on the PC
- **TSSPAdm**—If the Cisco Desktop Administrator is running on the PC

**Step 5** Click **OK**.

## Features Available with Each Product Package

Table 2 lists the Cisco CRA features that are available with each Cisco CRA product Package.

**Table 2** Features Enabled by Each Product Package

Feature	IP IVR <sup>1</sup>	IPCC Express Standard	IPCC Express Enhanced	IPCC Express Premium	Extended Services
Telephony Apps	X	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	
ICD <sup>3</sup>		X	X	X	
Queue Manager	X				

**Table 2** Features Enabled by Each Product Package (continued)

Feature	IP IVR <sup>1</sup>	IPCC Express Standard	IPCC Express Enhanced	IPCC Express Premium	Extended Services
Extension Mobility	X <sup>4</sup>			X <sup>4</sup>	X
Auto Attendant	X <sup>4</sup>			X <sup>4</sup>	X
Multiple Language Support	X	X	X	X	
JTAPI <sup>5</sup>	X	X	X	X	X
HTTP <sup>6</sup>	X			X	
Email	X			X	
Database	X			X	
Cisco Media Termination	X	X	X	X	X
ASR <sup>7</sup>	X <sup>8</sup>		X <sup>8</sup>	X <sup>8</sup>	
TTS <sup>9</sup>	X <sup>8</sup>		X <sup>8</sup>	X <sup>8</sup>	
Voice Browser	X <sup>10</sup>		X <sup>10</sup>	X <sup>10</sup>	
Real-Time Reporting	X	X	X	X	X
Historical Reporting	X <sup>11</sup>	X <sup>12</sup>	X <sup>13</sup>	X <sup>13</sup>	
Editor	X <sup>14</sup>	X <sup>15</sup>	X <sup>16</sup>	X <sup>17</sup>	

1. IP IVR = Cisco IP Interactive Voice Response
2. Cisco Intelligent Contact Management (ICM) (Translation routes and Post-routes can not be configured)
3. ICD = Integrated Contact Distribution
4. Sample Scripts Included
5. JTAPI = Java Telephony Application Programming Interface
6. For Extended Services, the HTTP subsystem and the ability to configure HTTP triggers is included for use with Extension Mobility
7. ASR = Automatic Speech Recognition
8. Add-on Feature
9. TTS = Text-To-Speech

10. Only available if ASR option is purchased
11. Only IVR Reports
12. ICD Standard Historical Reporting Client can be purchased
13. ICD Enhanced Historical Reporting Client can be purchased
14. ICD Steps not included
15. Email, Http, DB, ICM and Java steps not included, and the Set Priority step is not included
16. Email, Http, DB, ICM and Java steps not included
17. ICM Steps not included

## Related Documentation

Table 3 provides references to related documentation. In addition, you can obtain online help from the Cisco CRA Administration web pages, the Cisco CRA Editor, the Cisco Agent Desktop, the Cisco Supervisor Desktop, the Cisco Desktop Administrator, and the Cisco CRA Historical Reports client interface.



**Note**

If a Cisco CRA document is not updated from a previous release of Cisco CRA, that document remains valid for the current release.

**Table 3**    *Related Documentation*

Related Information and Software	Document or URL
Cisco CRA documentation overview	<i>Cisco Customer Response Applications 3.5 Resources Card</i> in your Cisco CRA product package
Cisco CRA documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/sw_ap_to/apps_3_5/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/sw_ap_to/apps_3_5/index.htm</a>
<i>Cisco Customer Response Solutions (CRS) Software and Hardware Compatibility Guide</i>	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/sw_ap_to/crscomtx.pdf">http://www.cisco.com/univercd/cc/td/doc/product/voice/sw_ap_to/crscomtx.pdf</a>
Cisco voice products documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/index.htm</a>

**Table 3** *Related Documentation (continued)*

Related Information and Software	Document or URL
Operating system documentation and Virtual Network Computing (VNC) documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/iptel_os/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/iptel_os/index.htm</a>
Cisco MCS hardware specifications	<a href="http://www.cisco.com/en/US/products/hw/voiceapp/ps378/products_data_sheets_list.html">http://www.cisco.com/en/US/products/hw/voiceapp/ps378/products_data_sheets_list.html</a>
<i>Cisco CallManager Compatibility Matrix</i>	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm</a>
Cisco CallManager documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/index.htm</a>
Backup and restore documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/backup/index.htm</a>
Service releases	<a href="http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml">http://www.cisco.com/kobayashi/sw-center/sw-voice.shtml</a>
Related Cisco IP telephony application documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/index.htm</a>
Cisco CallManager Extended Services	<a href="http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/extendsv/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/extendsv/index.htm</a>
Cisco ICM Software and Cisco IPCC documentation	<a href="http://www.cisco.com/univercd/cc/td/doc/product/icm/index.htm">http://www.cisco.com/univercd/cc/td/doc/product/icm/index.htm</a>

## Caveats

This section includes the following topics:

- [Resolved Caveats, page 40](#)—Severity 1, 2, and 3 defects that were resolved in this release of Cisco CRA
- [Closed Caveats, page 41](#)—Severity 1, 2, and 3 defects that were closed in this release of Cisco CRA
- [Open Caveats, page 42](#)—Severity 1, 2, and 3 defects in this release of Cisco CRA

If you have an account with Cisco.com, you can use the Bug Toolkit to find caveats of any severity for any release.

To access the Bug Toolkit, perform either of these actions:

- Go to this URL:  
[http://www.cisco.com/cgi-bin/Support/Bugtool/launch\\_bugtool.pl](http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl)
- Log in to Cisco.com, click **Technical Support**, then click **Tools & Utilities**, then click **Software Bug Toolkit** under Troubleshooting Tools

For information about issues relating to VoiceXML implementation, refer to the “VoiceXML Implementation for Cisco Voice Browser” appendix in *Cisco Customer Response Applications Developer Guide*.

## Resolved Caveats

Table 4 describes Severity 1, 2, and 3 defects that were resolved in this release of Cisco CRA.

**Table 4 Resolved Caveats for Cisco CRA 3.5(3)**

Identifier	Summary
CSCee47370	Refresh after adding CSQ adds another record of the same CSQ
CSCef04789	Cisco Agent Desktop shows lingering calls even after call has terminated
CSCef18373	SyncServer/VoIP server not started after password change using CRSAdminUtil
CSCef33922	Time of Day Cust. gives Time Ranges Overlap error for valid input
CSCef68013	DB Write step throws ArrayIndexOutOfBoundsException
CSCef73801	Real time reports show call stuck in queue after call RNAs to agent
CSCef86091	RTP input event lost under load test
CSCef86688	Issue in Historical Reporting Client Scheduler
CSCef88742	Enhance consult transfer to support off-net destinations
CSCef91600	Getdigitstring operated different prior to 3.1 for ASR channels
CSCef97357	SL: FCVoIPMonSvr.exe takes 100% after installing Cisco Security Agent
CSCeg01517	On intercept, the Cisco Supervisor Desktop shows Improper data
CSCeg13020	Misspelling on CRA 3.5(2) Installation Wizard
CSCeg14592	Install: Some install errors result in the Installer not aborting
CSCeg16848	CRA install continues with invalid license

**Table 4** *Resolved Caveats for Cisco CRA 3.5(3) (continued)*

Identifier	Summary
CSCeg17883	CRA Engine shuts down when RMI port is in use
CSCeg18795	Install: Bad license does not cause install to abort
CSCeg18931	Agent State Summary by Name Report shows duplicate entree for Agent
CSCeg19155	Install: Installer needs to detect license error and not continue
CSCeg22737	IVR does not play -6.00 in Hebrew when passed as a string from ICM
CSCeg30311	French Ver. CAD viewer inconsistency
CSCeg30813	After multiple transfer failures, call not aborted
CSCeg42603	Danish and Malay in language ICD Configuration dropdown list
CSCeg43024	Installation error for Malay and Danish as a country
CSCeg48933	Install: Installer needs to detect license format and not continue
CSCeg49450	Cisco Agent Desktop stops responding if Help menu is selected during SRST
CSCeg51377	MTCAD is unable to drop the call after Publisher failover
CSCeg53384	Error message displays after installation of ASR/TTS
CSCeg54466	Cisco Agent Desktop freezes with SRST switchback or network failure
CSCeg57674	CRA Historical Report Issues with MaxWaitTime for Calls Abandoned
CSCeg58828	VoIP Monitor Subsystem in Partial_Service after network recovery
CSCeg59244	Editor: Get Digit step does not convert properly from CRA 3.1 to CRA 3.5
CSCeg60247	Supervisor cannot monitor remote agents after SRST switchback
CSCeg66013	Call stuck in Cisco Supervisor Desktop when monitoring/recording with SRST
CSCeg70235	The link to modify the keypad mapping is not visible on the Cisco CallManager pages
CSCef80041	Agent and Supervisor desktops experience significant delay with SRST

## Closed Caveats

[Table 5](#) describes list of Severity 1, 2, and 3 defects that were closed in this release of Cisco CRA.

**Table 5** *Closed Caveats for Cisco CRA 3.5(3)*

Identifier	Headline and Bug Toolkit Link
CSCea90780	SL: Supervisor cannot stop recording an agent’s call-specific scenario <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea90780">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea90780</a>
CSCed14055	Blank Agent start time field after consult calls (conf or xfers) <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCed14055">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCed14055</a>
CSCed41480	JRE incompatibility error, JRE too new <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCed41480">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCed41480</a>
CSCeg32653	ASR Server information removed from config after failover and update <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeg32653">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeg32653</a>

## Open Caveats

Table 6 describes Severity 1, 2, and 3 defects in this release of Cisco CRA.

**Table 6** *Open Caveats for Cisco CRA 3.5(3)*

Identifier	Headline and Bug Toolkit Link
CSCdz59921	IP Phone agent shown in Talking state after logoff <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCdz59921">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCdz59921</a>
CSCdz78378	SL: VoIP autorecovery message should mention specific VoIP server IP address <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCdz78378">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCdz78378</a>
CSCdz89970	SL: CAD shows Calling Num Unavailable after answering a conference <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCdz89970">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCdz89970</a>
CSCea03689	SL: Disabling Ent Data from CDA should disable it for IP Phone agent <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea03689">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea03689</a>
CSCea04306	With TAI shutdown, ICD logs out one IP Phone agent but not the other <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea04306">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea04306</a>

**Table 6** Open Caveats for Cisco CRA 3.5(3) (continued)

Identifier	Headline and Bug Toolkit Link
CSCea20537	SA password change after installation needs registry update for sync <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea20537">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea20537</a>
CSCea28382	SL: ICD cant start/restart if Publisher is down <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea28382">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea28382</a>
CSCea32551	SL: Agent cannot see chat messages during conference <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea32551">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea32551</a>
CSCea33430	Agent cannot go Ready after login under certain conditions <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea33430">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea33430</a>
CSCea61018	HR leaks CRDR for arbitrary transfer/conference scenarios <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea61018">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea61018</a>
CSCea81865	OrigCalledNumber in CCDR is blank in redirect to agent scenario <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea81865">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCea81865</a>
CSCeb07043	CSD Italian client inst: no warning text shown on dialog box <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeb07043">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeb07043</a>
CSCeb51726	Agent's Enterprise Data does not get updated for one scenario <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeb51726">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeb51726</a>
CSCec04764	GetCallContactInfo step does not show the transferred arrival type <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCec04764">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCec04764</a>
CSCec10743	CRA ICD Setup does not allow domain name for host in AD section <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCec10743">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCec10743</a>
CSCed21649	Developers Guide for ICD is incorrect when ref ccdrVar usage <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCed21649">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCed21649</a>
CSCed45771	Cannot log in an agent if another one is logged in using same extension <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCed45771">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCed45771</a>
CSCee79930	DB steps cannot see all SQL tables if a table name contains slashes <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee79930">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee79930</a>

**Table 6**    *Open Caveats for Cisco CRA 3.5(3) (continued)*

Identifier	Headline and Bug Toolkit Link
CSCee85626	ICD call transferred from an agent to another ICD rout point fails when call RONAs <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee85626">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee85626</a>
CSCee89415	Cisco CRA with Active Directory fails to upload Spoken Name Prompts <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee89415">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee89415</a>
CSCee90735	Under rare circumstances, Real-Time Reports falsely shows a call stuck in queue <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee90735">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee90735</a>
CSCee92368	Call Stuck in queue—agent stuck in reserved—multiple IDs share DN <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee92368">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee92368</a>
CSCee95240	Historical Reporting: missing a transfer call record in Detail Call, CSQ, Agent Report <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee95240">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCee95240</a>
CSCeg33850	Call transfer fails from desktop if initial attempt is not completed <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeg33850">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeg33850</a>
CSCeg49502	Cisco Agent Desktop and Cisco Supervisor Desktops report incorrect call information after Barge <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeg49502">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeg49502</a>
CSCeg62599	Supervisor can not barge/intercept H.450.2 call flow <a href="http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeg62599">http://www.cisco.com/cgi-bin/Support/Bugtool/onebug.pl?bugid=CSCeg62599</a>

## 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/techsupport>

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)

## Product Documentation DVD

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

The Product Documentation DVD is a comprehensive library of technical product documentation on portable media. The DVD enables you to access multiple versions of hardware and software installation, configuration, and command guides for Cisco products and to view technical documentation in HTML. With the DVD, you have access to the same documentation that is found on the Cisco website without being connected to the Internet. Certain products also have .pdf versions of the documentation available.

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

## Ordering Documentation

Beginning June 30, 2005, registered Cisco.com users may order Cisco documentation at the Product Documentation Store in the Cisco Marketplace at this URL:

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

Nonregistered Cisco.com users can order technical documentation from 8:00 a.m. to 5:00 p.m. (0800 to 1700) PDT by calling 1 866 463-3487 in the United States and Canada, or elsewhere by calling 011 408 519-5055. You can also order documentation by e-mail at [tech-doc-store-mkpl@external.cisco.com](mailto:tech-doc-store-mkpl@external.cisco.com) or by fax at 1 408 519-5001 in the United States and Canada, or elsewhere at 011 408 519-5001.

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You can rate and provide feedback about Cisco technical documents by completing the online feedback form that appears with the technical documents on Cisco.com.

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

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Cisco Systems  
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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)

An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

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

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

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



### 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 linked in the Contact Summary section of the Security Vulnerability Policy page 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)

The link on this page has the current PGP key ID in use.

# Obtaining Technical Assistance

Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

## Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation 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, at this URL:

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

Access to all tools on the Cisco Technical Support & Documentation 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

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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 & Documentation 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.

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## 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 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 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, documentation, 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>

or view the digital edition at this URL:

<http://ciscoiq.texterity.com/ciscoiq/sample/>

- *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>

- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:

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

- Networking Professionals Connection is an interactive website for networking professionals to share questions, suggestions, and information about networking products and technologies with Cisco experts and other networking professionals. Join a discussion at this URL:

<http://www.cisco.com/discuss/networking>

- 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>

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