CHAPTER 64

Working with the Tool for Auto-Registered Phones Support (TAPS)

The Tool for Auto-Registered Phones Support (TAPS) enables phone users to call the TAPS directory number and download the preconfigured phone settings for the user's directory number. TAPS works in conjunction with Cisco Unified Communications Manager Administration to provide these capabilities:

Configure TAPS—Allows you to enable TAPS usage for all phones that use auto-registration or to limit TAPS to only phones that are added through BAT with dummy MAC addresses. See the "Configuring Auto-Registration Options for TAPS" section on page 64-7.

Secure TAPS—Allows you to keep some directory numbers from being updated through TAPS. See the "Setting Secure Directory Numbers" section on page 64-8.

User Locales for TAPS—Allows you to choose the languages for TAPS prompts. See the "Setting the User Locales for Tool for Auto-Registered Phones Support" section on page 65-1.

The following topics provide information about using, installing, and configuring TAPS:

Introducing TAPS

TAPS components get installed on the Cisco Unified Communications Manager first node as part of the Cisco Unified Communications Manager installation. You must enable auto-registration in Cisco Unified Communications Manager Serviceability for TAPS to function.

Note When you use TAPS, it leads to the depletion of auto-registration range on the Cisco Unified Communications Manager. After update through TAPS, the auto-registered directory number (DN) of the phone becomes an unassigned DN. You should delete unassigned DNs using BAT periodically to free up the auto-registration range. For more information, refer to *Cisco Unified Communications Manager Administration Guide*.

You must install TAPS application on the Cisco Customer Response Solutions (Cisco CRS) server. TAPS requires the Cisco IP Interactive Voice Response (IP IVR) application that runs on the Cisco CRS server for the user interface and prompts.

Administrators need to provide instructions to tell end users how to use TAPS to configure their new phones. For end user instructions, see the "Tool for Auto-Registered Phones Support Information for End Users" section on page 65-2

Note Cisco recommends that you stop the TAPS service when you are not using TAPS to add phones to Cisco Unified Communications Manager database.

Additional Topics

See the "Related Topics" section on page 64-10.

Auto-registration Options for TAPS

You can set the following options for using TAPS to update auto-registering phones.

- Update MAC addresses and download a predefined configuration for new phones.
- Reload the configuration for replacement phones.

Use the following topics.

Using TAPS with New Phones

After BAT has added the new phone configurations with dummy MAC addresses in Cisco Unified Communications Manager Administration, you can plug the phones into the network. You or the phone user can dial a TAPS directory number that causes the phone to download its configuration. At the same time, the phone gets updated in Cisco Unified Communications Manager Administration with the correct MAC address. You must make sure that Auto-registration is enabled in Cisco Unified Communications Manager Administration for TAPS to function.

Note When you use TAPS, it leads to the depletion of auto-registration range on the Cisco Unified Communications Manager. After update through TAPS, the auto-registered directory number (DN) of the phone becomes an unassigned DN. You should delete unassigned DNs using BAT periodically to free up the auto-registration range. For more information, refer to *Cisco Communications Manager Administration Guide*.

Example

You have 100 new-hire employees starting on Monday. You must add these users and their new phones to Cisco Unified Communications Manager Administration. You can use BAT to create a phone template for these 100 phones and a CSV data file for phones and users. By using the dummy MAC address option in the CSV data file, you do not need to add the individual MAC addresses for the new phones. With auto-registration enabled in Cisco Unified Communications Manager, you can plug the phones directly into the network. You or the new employee can load the configuration by dialing the TAPS directory number and following the voice-prompt instructions.

Using TAPS for Reloading Configurations

When you must replace an existing phone that is not functioning, you can use TAPS to download the existing phone configuration to the new phone. After the user receives the new phone and plugs the phone into the network, the user dials the TAPS directory number to download configuration for the previous phone. The user makes no configuration changes during this process.

In Cisco Unified Communications Manager Administration, you must enable auto-registration. You must ensure that you configure TAPS usage for all phones to enable a user to download an existing phone configuration. See the "Configuring Auto-Registration Options for TAPS" section on page 64-7.

Note When you use TAPS, it leads to the depletion of auto-registration range on the Cisco Unified Communications Manager. After update through TAPS, the auto-registered directory number (DN) of the phone becomes an unassigned DN. You should delete unassigned DNs using BAT periodically to free up the auto-registration range. For more information, refer to *Cisco Unified Communications Manager Administration Guide*.

Example

John's Cisco Unified IP Phone model 7940 gets short-circuited during a lightning storm. He receives a new Cisco Unified IP Phone model 7940 and plugs it into the network. John can dial the TAPS directory number, and the new phone will download the configuration that was previously used for the damaged phone. TAPS automatically updates device information in Cisco Unified Communications Manager Administration.

Additional Topics

See the "Related Topics" section on page 64-10.

Secured Directory Numbers

Because TAPS can replace a directory number, you can protect certain directory numbers from being overwritten. To protect important directory numbers, you can use the Secure TAPS option. See the "Setting Secure Directory Numbers" section on page 64-8 for more information.

Example

The directory number 5000 provides voice-messaging access for your system. You do not want a new user to mistakenly configure 5000 on the new phone. The Secure TAPS option allows you to specify that TAPS cannot access directory number "5000."

Additional Topics

See the "Related Topics" section on page 64-10.

Language Prompts for TAPS Users

You can configure user prompts for TAPS to play in several languages. Administrators can choose the languages to make available to users. See the "Setting the User Locales for Tool for Auto-Registered Phones Support" section on page 65-1.

If you need to use language prompts other than English prompts, make sure that you installed the Cisco Unified Communications Manager Locale Installer on every Cisco Unified Communications Manager and Cisco CRS server in the cluster before you install, upgrade, or configure TAPS. Using the locale installer ensures that you have the latest translated text, translated voice prompts, country-specific phone tones, and country-specific gateways tones available for the phones. For more information on the Cisco Unified Communications Manager Locale Installer, refer to the specific locale installer documentation.

Additional Topics

See the "Related Topics" section on page 64-10.

Installing TAPS

This section provides information about installing, reinstalling, and uninstalling TAPS. TAPS interfaces with both Cisco Unified Communications Manager server and Cisco Customer Response Solution (CRS) 4.5 server. This installation procedure involves installing TAPS on the CRS server.

You cannot use Windows Terminal Services to install TAPS. You must install TAPS directly from the Cisco Unified Communications Manager first node server and the Cisco CRS server.

Before You Begin

The following prerequisites apply to the TAPS installation for BAT Release 5.2(1):

- Make sure that the Cisco Unified Communications Manager first node database is configured and running.
- Have the IP address for the Cisco Unified Communications Manager first node server.
- Ensure the Cisco CRS server is configured. The Cisco CRS 4.5 application can reside on its own dedicated server.
- Be sure to use the locale installer to create the country-specific TAPS prompts.

To install TAPS on CRS application server, use the following procedure:

Procedure

Step 1 Log on with administrator privileges to the system that is running the Cisco Unified Communications Manager first node database.

Step 2 Choose **Applications > Plugins**. The Find and List Plugins window displays.

Step 3 Find TAPS for Windows and click **Download** and save the plugin to your Windows server where the CRS application server is installed.

Step 4 The Welcome window for the installation wizard opens. This installation program installs TAPS on the CRS applications server. Click **Next**.

Note When you are installing TAPS in a network with a dedicated CRS server, you must run the TAPS installation program again on the CRS server. Use CRS online help for assistance with installation and configuration.

Step 5 Enter the CRS application server IP address in the IP Address field, and click **Next**.

Step 6 The Installing TAPSonAppsServer window displays a progress bar that shows the status of the installation. Click **Next** to begin the installation.

Step 7 The Installation Completed window displays when the installation ends. Click **Finish**.

Additional Topics

See the "Related Topics" section on page 64-10.

Configuring the TAPS Application in CRS Applications Server

You can review the Cisco CRS 4.5 application server documentation by browsing to Cisco Voice Applications and Tools at http://www.cisco.com. Refer to the *Cisco Customer Response Administration Guide* for instructions on how to configure an application.

Additional Topics

See the "Related Topics" section on page 64-10.

Uninstalling TAPS

The uninstall program removes the TAPS applications from the Cisco CRS server.

To uninstall TAPS by using the Add/Remove Programs in the Control Panel, use the following procedure.

Procedure

Step 1 On the Cisco CRS server, choose **Start > Settings > Control Panel > Add/Remove Programs**.

Step 2 Choose TAPS and click the **Change/Remove** button. A message displays that confirms the uninstall operation.

Step 3 To uninstall TAPS, click **Yes;** or **No** to cancel. If you clicked Yes, TAPS gets uninstalled from the Cisco CRS server.

Step 4 To exit the uninstallation, click **OK**.

Additional Topics

See the "Related Topics" section on page 64-10.

Activating TAPS Service

You can activate and deactivate TAPS service by using Cisco Unified Communications Manager Serviceability after you access it by using the appropriate URL. Use the following procedure to activate the service.

Procedure

Step 1 Access Cisco Unified Communications Manager Serviceability.

Step 2 Choose **Tools > Service Activation**.

The Service Activation window displays.

Step 3 Choose the appropriate server from the drop-down list box. Click **Next**.

Step 4 Choose TAPS Service from Database and Admin Services of the Unified CMServices list and click **Save**.

Note If the service is already activated, the Activation Status will display as Activated.

Step 5 The service gets activated, and the Activation Status column displays the status as Activated.

Starting/Stopping/Restarting TAPS

The TAPS service starts automatically after it is activated by using Cisco Unified Communications Manager Serviceability. This section describes the procedures to stop or restart the TAPS service.

Procedure

Step 1 In Cisco Unified Communications Manager Serviceability, choose **Tools > Control Center - Feature Services.**

The Control Center–Feature Services window displays.

Step 2 Choose the Cisco Unified Communications Manager server from the Servers drop-down list box.

TAPS Service displays in list under Database and Admin Services column, in the Unified CMServices.

Note If TAPS was activated by using "Activating TAPS Service" section on page 64-6, the Status displays as Activated.

Step 3 Check the check box that corresponds to TAPS Service.

Step 4 If you want to restart the TAPS service, click **Restart**.

The service restarts, and the message, Service Successfully Restarted, displays.

Step 5 If you want to stop the TAPS service, click **Stop**.

The service stops, and the message, Service Successfully Stopped, displays.

Step 6 If you want to start a stopped TAPS service, click **Start**.

The service starts, and the message, Service Successfully Started, displays.

Setting TAPS Options

Administrators can choose how to use TAPS in their Cisco Unified Communications Manager system. These TAPS feature options provide more flexibility when allowing users to update phones or download phone profiles. TAPS options include:

- Configuring Auto-Registration Options for TAPS, page 64-7
- Setting Secure Directory Numbers, page 64-8
- Setting the User Locales for Tool for Auto-Registered Phones Support, page 65-1

Configuring Auto-Registration Options for TAPS

The Configure TAPS option provides two ways to use TAPS to update phones that auto-register with the Cisco Unified Communications Manager database.

- For phones that are added by using BAT and have a dummy MAC address.
- For existing phones in Cisco Unified Communications Manager Administration

The default setting limits use of TAPS to phones that have a dummy MAC address with a device name that starts with the prefix “BAT.”

You can set the Configure TAPS option to allow any phone to auto-register in the Cisco Unified Communications Manager system, including phones that have a standard MAC address.

Note When you use TAPS, it leads to the depletion of auto-registration range on the Cisco Unified Communications Manager. After update through TAPS, the auto-registered directory number (DN) of the phone becomes an unassigned DN. You should delete unassigned DNs using BAT periodically to free up the auto-registration range. For more information, refer to *Cisco Unified Communications Manager Administration Guide*.

To set the Configure TAPS option, use this procedure.

Procedure

Step 1 In the Cisco Unified Communications Manager Administration window, choose **System > Service Parameters.** The Service Parameter Configuration window displays.

Step 2 From the Server drop-down list, choose the appropriate server.

Step 3 From the Service drop-down list, choose **TAPS Service**.

Step 4 Choose one of these two options from the Parameter Value drop-down list box.

- **Allow Auto-Registered phones to reset with a profile with a dummy MAC address**.

  TAPS updates auto-registered phones with a profile that have the dummy MAC address only.
- **Allow Auto-Registered phones to reset with any profile**.

TAPS updates auto-registered phones with any profile.

Step 5 Click **Save**. A status message indicates that the update is successful.

Step 6 To return to the TAPS Options window, click **Back**.

Additional Topics

See the "Related Topics" section on page 64-10.

Setting Secure Directory Numbers

The Secure TAPS options let you specify directory numbers that TAPS cannot access. Use this capability when you want to protect directory numbers from being accidentally assigned to another phone.

Note When you use TAPS, it leads to the depletion of auto-registration range on the Cisco Unified Communications Manager. After update through TAPS, the auto-registered directory number (DN) of the phone becomes an unassigned DN. You should delete unassigned DNs using BAT periodically to free up the auto-registration range. For more information, refer to *Cisco Unified Communications Manager Administration Guide*.

Use the following sections to find restricted directory numbers or to add restrict more directory numbers:

- Finding Secure Directory Numbers, page 64-8
- Restricting Directory Numbers, page 64-9
- Lifting Restriction on a Directory Number, page 64-9

Finding Secure Directory Numbers

Use the following procedure to find and list the directory numbers that have been restricted.

Procedure

Step 1 Choose **Bulk Administration > TAPS > Secure TAPS**. The Find and List Secure Directory Numbers window displays.

Step 2 Click **Next**. The Secure Directory Numbers window displays.

Step 3 Enter the appropriate search criteria and click **Search**. A list of restricted directory numbers displays.

Step 4 To restrict more directory numbers, see the "Restricting Directory Numbers" section on page 64-9. To lift restriction on a directory number, see the, "Lifting Restriction on a Directory Number" section on page 64-9.

Additional Topics

See the "Related Topics" section on page 64-10.

Restricting Directory Numbers

To block TAPS from using directory numbers that you specify, use this procedure. TAPS cannot use any directory number that you include in the list of secured directory numbers.

Procedure

Step 1 Choose **Bulk Administration > TAPS > Secure TAPS**. The Find and List Secure Directory Numbers window displays.

Step 2 Click **Add New**. The Secure Directory Numbers Configuration window displays.

Step 3 In the Directory Number field, enter the number(s) that you want to protect from TAPS. To enter multiple Directory Numbers, use one line for each Directory Number entry.

Step 4 Click **Save**.

Step 5 To return to Find and List Directory Numbers window, choose Back to Find/List from the Related links drop-down list box on the right, top corner of the window and click **Go**.

TAPS cannot use the directory numbers that are shown in this list. If a user tries to update a device profile by entering one of the directory numbers in this list, TAPS will refuse the request.

Additional Topics

See the "Related Topics" section on page 64-10.

Lifting Restriction on a Directory Number

To remove a directory number from the list of directory numbers that TAPS cannot access, use this procedure.

Procedure

Step 1 Choose **Bulk Administration > TAPS > Secure TAPS**. The Find and List Secure Directory Numbers window displays.

Step 2 To find the directory numbers you want to delete, see"Finding Secure Directory Numbers" section on page 64-8.

Step 3 Choose the directory numbers that you want to remove from the secure directory number list and click **Delete**.

Note If two or more phones lines share an unrestricted directory number, and you are trying to update any of these phones, you will be prompted to enter the external phone mask of your phone.

Additional Topics

See the "Related Topics" section on page 64-10.

Viewing TAPS Log Files

Use the following procedure to view TAPS log files.

Step 1 Choose **Bulk Administration > TAPS > View Taps Log File**.

Step 2 The View TAPS Log File window displays.

Step 3 Each row of the log file represents each TAPS transaction.

Additional Topics

See the"Related Topics" section on page 64-10.

Related Topics

- Introducing TAPS, page 64-1
- Installing TAPS, page 64-4
- Uninstalling TAPS, page 64-5
- Activating TAPS Service, page 64-6
- Starting/Stopping/Restarting TAPS, page 64-6
- Setting TAPS Options, page 64-7
- Setting Secure Directory Numbers, page 64-8Auto-registration Options for TAPS, page 64-2
- Viewing TAPS Log Files, page 64-10
- Setting the User Locales for Tool for Auto-Registered Phones Support, page 65-1
- Tool for Auto-Registered Phones Support Information for End Users, page 65-2