Configure Self-Provisioning

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Self-Provisioning Overview

The Self-Provisioning feature helps you provision phones for your network by giving end users the ability to provision their own phones without contacting an administrator. If the system is configured for self-provisioning, and an individual end user is enabled for self-provisioning, then end user can provision a new phone by plugging the phone into the network and follow the specified few prompts. Cisco Unified Communications Manager configures the phone and the phone line by applying pre-configured templates.

Self-provisioning can be used either by administrators to provision phones on behalf of their end users, or end users can use self-provisioning to provision their own phones.

Self-provisioning is supported whether the cluster security setting is nonsecure or mixed mode.

Security Modes

You can configure self-provisioning in one of two modes:

- Secure mode—In secure mode, users or administrators must be authenticated in order to access self-provisioning. End users can be authenticated against their password or PIN. Administrators can enter a pre-configured authentication code.
- Non-secure mode—In non-secure mode, users or administrators can enter their user ID, or a self-provisioning ID, in order to associate the phone to a user account. Non-secure mode is not recommended for day-to-day use.

Configuration through Universal Line and Device Templates

Self-provisioning uses the universal line template and universal device template configurations to configure provisioned phones and phone lines for an end user. When a user provisions their own phone, the system references the user profile for that user and applies the associated universal line template to the provisioned phone line and the universal device template to the provisioned phone.

Self-Provisioning Phones

When the feature is configured, you can provision a phone by doing the following:

- Plug the phone into the network.
- Dial the self-provisioning IVR extension.
- Follow the prompts to configure the phone, and associate the phone to an end user. Depending on how you have configured self-provisioning, the end user may to enter the user password, PIN, or an administrative authentication code.

Tip If you are provisioning a large number of phones on behalf of your end users, configure a speed dial on the universal device template that forwards to the self-provisioning IVR extension.

Self Provisioning Analog FXS Ports

You can enable self-provisioning on analog FXS ports so that the users can call the self-provisioning IVR and assign their associated DN to that analog port. In addition, for the provisioned phones, the user can unassign the DN associated with the analog voice gateway port and assign it to another user.

Procedure

1. Plugin the analog phone in the gateway's FXS voice port. Since the port is auto-registered or pre configured (manually), the phone will automatically get DN from the auto-registered pool or assigned DN.
2. Call Self-Provision IVR from the auto-registered analog device.
3. Enter Self-Service ID and PIN.

Note Upon confirmation, the analog device is provisioned using the End User Primary Extension. The auto-registered DN is released to the pool.

Self-Provisioning Prerequisites

Before your end users can use self-provisioning, your end users be configured with the following items:

- Your end users must have a primary extension.
- Your end users must be associated to a user profile or feature group template that includes a universal line template, universal device template. The user profile must be enabled for self-provisioning.

Self-Provisioning Configuration Task Flow

Procedure

	Command or Action	Purpose
Step 1	Activate Services for Self-Provisioning, on page 3	In Cisco Unified Serviceability, activate the **Self-Provisioning IVR** and **CTI Manager** services.
Step 2	Enable Autoregistration for Self-Provisioning, on page 4	Enable autoregistration parameter for self-provisioning
Step 3	Configure CTI Route Point, on page 4	Configure a CTI route point to handle the self-provisioning IVR service.
Step 4	Assign a Directory Number to the CTI Route Point, on page 5	Configure the extension that users will dial in order to access the self-provisioning IVR and associate that extension to the CTI route point.
Step 5	Configure Application User for Self-Provisioning, on page 5	Configure an application user for the self-provisioning IVR. Associate the CTI route point to the application user.
Step 6	Configure the System for Self-Provisioning, on page 6	Configure self-provisioning settings for your system, including associating the application user and CTI route point to the self-provisioning IVR.
Step 7	Enable Self-Provisioning in a User Profile, on page 6	Enables the users to Self-Provision phones in the user profile to which they are assigned.

Activate Services for Self-Provisioning

Use this procedure to activate the services that support the Self-Provisioning feature. Ensure that both the Self-Provisioning IVR and Cisco CTI Manager services are running.

Procedure

Step 1 From Cisco Unified Serviceability, choose **Tools** > **Service Activation**.

Step 2 From the **Server** drop-down list, select the publisher node and click **Go**.

Step 3 Under **CM Services**, check **Cisco CTI Manager**.

Step 4 Under **CTI Services**, check **Self Provisioning IVR**.

Step 5 Click **Save**.

Enable Autoregistration for Self-Provisioning

Use this procedure for self-provisioning, you must configure the auto-registration parameters on the publisher.

Procedure

Step 1 In Cisco Unified CM Administration, choose **System** > **Cisco Unified CM**.

Step 2 Click on the publisher node.

Step 3 Select the **Universal Device Template** that you want to be applied to provisioned phones.

Step 4 Select the **Universal Line Template** that you want to be applied to the phone lines for provisioned phones.

Step 5 Use the **Starting Directory Number** and **Ending Directory Number** fields to enter a range of directory numbers to apply to provisioned phones.

Step 6 Uncheck the **Auto-registration Disabled on the Cisco Unified Communications Manager** check box.

Step 7 Confirm the ports that will be used for SIP registrations. In most cases, there is no need to change the ports from their default settings.

Step 8 Click **Save**.

Configure CTI Route Point

Us this procedure to configure a CTI Route Point for the Self-Provisioning IVR.

Procedure

Step 1 From Cisco Unified CM Administration, choose, **Device** > **CTI Route Points**.

Step 2 Complete either of the following steps:

a) Click **Find** and select an existing CTI route point.
b) Click **Add New** to create a new CTI route point.

Step 3 In the **Device Name** field, enter a unique name to identify the route point.

Step 4 From the **Device Pool** drop-down list, select the device pool that specifies the properties for this device.

Step 5 From the **Location** drop-down list, select the appropriate location for this CTI route point.

Step 6 From the **Use Trusted Relay Point** drop-down list, enable or disable whether Unified Communications Manager inserts a trusted relay point (TRP) device with this media endpoint. The default setting is to use the Common Device Configuration setting that is associated to this device.

Step 7 Complete the remaining fields in the **CTI Route Point Configuration** window. For more information on the fields and their settings, see the online help.

Step 8 Click **Save**.

Assign a Directory Number to the CTI Route Point

Use this procedure to set up the extension that users will dial in to access the self-provisioning IVR. You must associate this extension to the CTI route point that you want to use for self-provisioning.

Procedure

Step 1 From Cisco Unified CM Administration, choose **Device** > **CTI Route Point**.

Step 2 Click **Find** and select the CTI route point that you set up for self-provisioning.

Step 3 Under **Association** click **Line [1] - Add a new DN**.
The **Directory Number Configuration** window displays.

Step 4 In the **Directory Number** field, enter the extension that you want users to dial to access the Self-Provisioning IVR service.

Step 5 Click **Save**.

Step 6 Complete the remaining fields in the **Directory Number Configuration** window. For more information with the fields and their settings, see the online help.

Step 7 Click **Save**.

Configure Application User for Self-Provisioning

You must set up an application user for the self-provisioning IVR and associate the CTI route point that you created to the application user.

Procedure

Step 1 From Cisco Unified CM Administration, choose **User** > **Application User**.

Step 2 Perform either of the following steps:

a) To select an existing application user, click **Find** and select the application user.

b) To create a new application user, click **Add New**.

Step 3 In the **User ID** text box, enter a unique ID for the application user.

Step 4 Select a **BLF Presence Group** for the application user.

Step 5 Associate the CTI route point that you created to the application user by performing the following steps:

a) If the CTI route point that you created does not appear in the **Available Devices** list box, click **Find More Route Points**.
The CTI route point that you created displays as an available device.

b) In the **Available Devices** list, select the CTI route point that you created for self-provisioning and click the down arrow.
The CTI route point displays in the **Controlled Devices** list.

Step 6 Complete the remaining fields in the **Application User Configuration** window. For help with the fields and their settings, see the online help.

Step 7 Click **Save**.

Configure the System for Self-Provisioning

Use this procedure to configure your system for self-provisioning. Self-provisioning provides users in your network with the ability to add their own desk phone through an IVR system, without contacting an administrator.

Note In order to use the self-provisioning feature, your end users must also have the feature enabled in their user profiles.

Procedure

Step 1 From Cisco Unified CM Administration, choose **User Management** > **Self-Provisioning**.

Step 2 Configure whether you want the self-provisioning IVR to authenticate end users by clicking one of the following radio buttons:

- **Require Authentication**—In order to use the self-provisioning IVR, end users must enter their password, PIN, or a system authentication code.
- **No Authentication Required**—End users can access the self-provisioning IVR without authenticating.

Step 3 If the self-provisioning IVR is configured to require authentication, click one of the following radio buttons to configure the method whereby the IVR authenticates end users:

- **Allow authentication for end users only**—End users must enter their password or PIN.
- **Allow authentication for users (via Password/PIN) and Administrators (via Authentication Code)**—End Users must enter an authentication code. If you choose this option, configure the authentication code by entering an integer between 0 and 20 digits in the **Authentication Code** text box.

Step 4 In the **IVR Settings** list boxes, use the arrows to select the Language that you prefer to use for IVR prompts. The list of available languages depends on the language packs that you have installed on your system. Refer to the Downloads section of cisco.com if you want to download additional language packs.

Step 5 From the **CTI Route Points** drop-down list, choose the CTI route point that you have configured for your self-provisioning IVR.

Step 6 From the **Application User** drop-down list, choose the application user that you have configured for self-provisioning.

Step 7 Click **Save**.

Enable Self-Provisioning in a User Profile

In order for users to be able to Self-Provision phones, the feature must be enabled in the user profile to which they are assigned.

Note If you don't know which user profile your users are using, you can open a user's settings in the End User Configuration window and view the **User Profile** field to get the correct profile.

Procedure

Step 1 From Cisco Unified CM Administration, choose **User Management > User Settings > User Profile**.

Step 2 Click **Find and select the user profile** to which the user is assigned.

Step 3 Assign **Universal Line Templates** and **Universal Device Templates** to the user profile.

Step 4 Configure user settings for Self-Provisioning:

- Check the **Allow End User to Provision their own phones** check box.
- Enter a limit for the number of phones a user can provision. The default is 10.
- If you want users to be able to use self-provisioning to reassign a previously assigned phone, check the **Allow Provisioning of a phone that is already assigned to a different End User** setting in the user profile page associated with the end user of old device. Users can reassign a previously assigned phone only if this check box is enabled in the User Profile that is associated to the old device.

Step 5 Click **Save**.