VoIP Integration

The integration of VoIP phone to Cisco PAM enables users to grant access to doors through the VoIP phone. This new feature of Cisco PAM allows the entry of personnel without badges. The VoIP integration does not require any configuration on the Cisco PAM. The Cisco PAM user receives the access request from the personnel/employees, enquires the credentials and grants them access through the VoIP phone.

VoIP phone integration to Cisco PAM is achieved by the following processes:

- Creating a phone service in **Cisco Unified Call Manager (CUCM)** and
- Subscribing a service to a VoIP phone.

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Creating a phone service in CUCM

By creating a service in CUCM, you establish a link between the Cisco PAM and CUCM. The Cisco PAM IP is given while creating the service. The services can be created for single door or multiple doors in Cisco PAM. You need to ensure that the URL is validated before creating a service.

For example, If you paste the below URL in your browser to list all doors,

http://10.78.177.196/IPPhoneManager.jsp?UserName=cpamadmin&pass=cisco&method=authenticate

The following page with the URL is displayed in your screen, else the URL is incorrect.

![Figure 16-1 Validating the URL](image)

**Procedure**

To create a phone service, do the following:

**Step 1** Go to the CUCM administration page.

**Step 2** Choose Device -> Device Settings -> Phone services.
Step 3 Click Add New to create a new service.
- You can also modify existing services.

Step 4 Enter the details in the IP Phone Services Configuration window.

Note Enter the Cisco PAM IP in the Service URL field. You can give an url to display all doors or a static url that will display specific doors. Ensure that you add the unique id of the door in the url if it is for static door configuration.

Tip To configure for a single door, use the following url:
http://ip_address_of_cpam/QuickUnlock.jsp?UserName=<cpamadmin>&pass=<password_for_cpamadmin>&method=authenticate&resourceId=<Door_Unique_ID>&resourceType=door
Creating a phone service in CUCM

Figure 16-3  Service URL

Step 5  Click Save. The service is created.

Additional Information

Cisco PAM supports three different URL's. You can configure any one of the below URLs based on your requirement.

**URL 1: Just the URL**

http://<ip_address_of_cpam>/IPPhoneManager.jsp

Use the above URL to create a service without username and password to display all doors. Once configured, the user is requested for the user credentials for each access.

**URL 2: URL with Username and Password:**

http://<ip_address_of_cpam>/IPPhoneManager.jsp?method=authenticate&UserName=<cpamadmin>&pass=<password_for_cpamadmin>

Use the above URL to create a service with username and password to display all doors. Once configured, the user can select a door and grant access without giving the user credentials each time.

Use case example for URL 2: For a receptionist in a busy school/university, if the number of keystrokes necessary to unlock a door at the phone are too many, then you can pre-configure the URL with their(receptionist) Username and the Password.

**URL 3: Quick unlock: Just one click to unlock/grant access to the door:**

http://<ip_address_of_cpam>/QuickUnlock.jsp?method=authenticate&UserName=<cpamadmin>&pass=<password_for_cpamadmin>&resourceId=<Door_Unique_ID>&resourceType=door
More Information on the URL’s

For quick unlock of a door:

http://ip_address_of_cpam/QuickUnlock.jsp?UserName=<cpamadmin>&pass=<password_for_cpamadmin>&method=authenticate&resourceId=<Door_Unique_ID>&resourceType=door

Configure the above URL as a service and name it “Door name to be unlocked”. Select the Service and the door will unlock, you will see the user friendly message on the phone.

To retrieve Resource ID:

http://ip_address_of_cpam/IPPhoneManager.jsp?method=authenticate&UserName=cpamadmin&pass=cpam

Go to the above URL to see the list of doors and select the door to configure as the individual door.

To authenticate username and password:

http://ip_address_of_cpam/IPPhoneManager.jsp?method=authenticate&UserName=cpamadmin&pass=cpam

Subscribing a service to a VoIP Phone

These steps enable you to subscribe a service to the VoIP phone. Once subscribed, the doors are displayed on the Phone UI. The user can now grant access to doors displayed on the phone UI

Note: To Configure VoIP phone to CUCM contact the CUCM Admin.

Procedure

Step 1: Go to Device->Phone in the CUCM admin Page. The Find and List Phones window appears.

Step 2: Select and click a specific VoIP phone from the list. The Phone configuration window appears.

Figure 16-4 Selecting a VoIP Phone

Step 3: Choose Subscribe/Unsubscribe Services from Related Links and click GO.
Step 4  Select a Service from the drop down list. Click **Next**.

Step 5  Click **Subscribe**. The service is now subscribed to the phone and is listed under **Subscribed Services**.
Figure 16-7  Service Subscribed

To subscribe for more services, Click Subscribe a New Service link in the subscribed services.

Step 6  Click Save and close the window. The service is subscribed now.

To Display the service on the VoIP phone, follow the steps below:

Step 7  Click Add a new SURL under Associate Information in the Phone Configuration window.

Figure 16-8  Add a new SURL
Step 8   Select the service to configure the service URL button.

Figure 16-9  Configure Service URL button

Step 9   Click Save. The service is listed in the VoIP phone.

Step 10  In the VoIP phone, click the button next to the service. The user credentials are requested.

Step 11  Enter the **Username** and **Password** and click **Submit** to display the door(s).

Figure 16-10  User Name and Password

Step 12  Press the button next to the selected door.

  - The services are displayed based on user profile. Only doors assigned to the user login will be displayed.
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For an admin user eg: Cisco PAM admin, all doors will be displayed.

Step 13  If the credentials are true, the following message is displayed.

- Successfully granted access on Door_8 (name of the door).

If the credentials are false, the following message is displayed.

- Authentication failed.

Note

- If you have configured a list of doors to a service, you have to select the door from the list displayed on the phone.
- The VoIP phone displays the list of doors in the alphabetic order. The doors are displayed in any of the states like “UNKNOWN, UP, DOWN, MISMATCH”

Step 14  The events are displayed in Cisco PAM under Events and Alarms->Monitoring->Events.

Figure 16-11  Events

Limitations

- A VoIP phone can support up to display of 100 doors. If a server has more than 100 doors then you need to configure the remaining doors as a static URL.
- A disabled door will not be available in the list of doors displayed on the VoIP phone.
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