



Application Note

Provisioning Cisco® Unified Communications Manager (CallManager)
for the Bose Professional ControlSpace EX-1280C

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Summary

This application note describes the basic configuration steps required to integrate the Bose Professional ControlSpace EX-1280C processor with the Cisco® Unified Communications Manager (CallManager) platform. Depending on the already configured CallManager, other steps might be required.

Overview

The Bose Professional ControlSpace EX-1280C processor behaves as a third-party Session Initiation Protocol (SIP) device. It makes outbound calls and receives incoming calls. Two dedicated VoIP lines can be supported. Review the project requirements with your AV contractor or consultant to determine the number of lines needed.

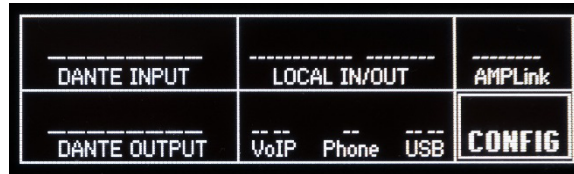
Required Software:

- Cisco CallManager: Version 10.5.2.11900-3
- Bose Professional ControlSpace Designer: Version 5.2 or higher

Configuring Cisco Unified Communications Manager (CallManager)

Documenting the VoIP MAC address

1. On the EX-1280C, turn the **rotary knob** to select **CONFIG**, and then press the **rotary knob** to enter its menu.



2. Turn the **rotary knob** to select **VoIP NETW SETTINGS**, and then press the **rotary knob** to show the settings.

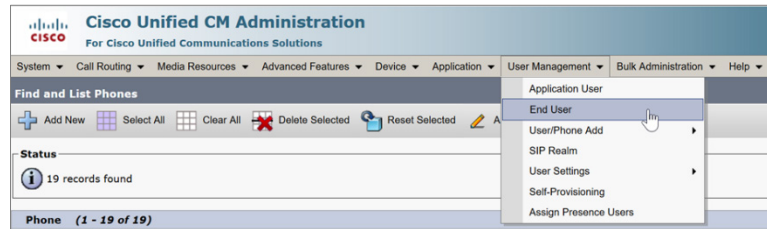


3. Document the **MAC ADDRESS** (e.g., A0:F6:FD:6E:46:15).



Adding Users to CallManager

1. Sign into CallManager with your administration credentials.
2. Click **Call Routing**, and then click **Route Plan Report**.
3. Find one or two numbers that are not in use, and document them (e.g., 314510, 314511).
4. Click the **User Management** menu, and then click **End User**.



5. Click **Add New**.
6. In **End User Configuration**, under **User Information**, populate the following fields for the information that you documented in [Step 3](#):

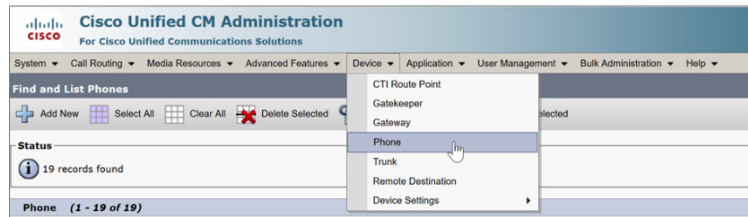
User ID	Enter the user number (e.g., 314510).
Password	Enter a password.
Confirm Password	Enter the same password.
Self Service User ID	Enter the self-service user number (e.g., 314510).
PIN	Enter a PIN.
Confirm PIN	Enter the same PIN.
Last Name	Enter a name (e.g., Conferencing).
Telephone Number	Enter the user number (e.g., 314510).

7. Click **Save**.
8. Repeat [Steps 4-7](#) to enter a second line.
9. Scroll down to the **Permission Information** section.

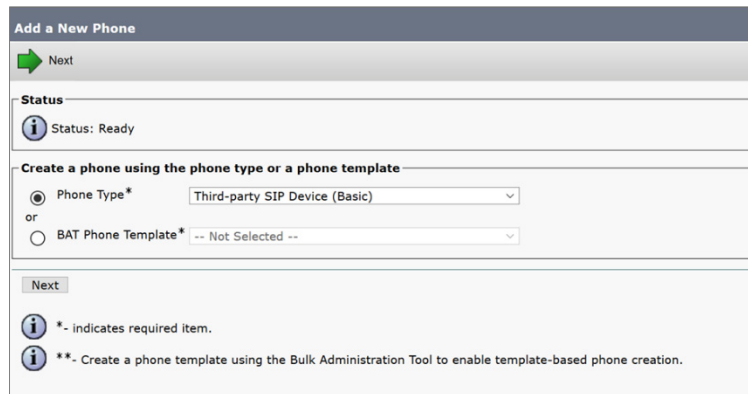
10. Click **Add to Access Control Group**.
11. Click **Find**.
12. Select **Standard CCM Admin Users** and **Standard CCM End Users**.
13. Click **Add Selected**.
14. Click **Save**.

Adding a SIP Device in CallManager

1. Click the **Device** menu, and then click **Phone**.



2. In the **Create a phone using the phone type or a phone template** section, click **Phone Type** to select it.



3. Click the menu next to **Phone Type**, and then select **Third-party SIP Device (Basic)**.
4. Click **Next**.
5. In the **Device Information**, populate the fields with the following information:

MAC Address	Documented in Documenting the VoIP MAC address, Step 3 .
Description	SEP followed by the MAC address (e.g., SEPA0F6FD6E4615).
Device Pool*	Provided by the IT specialist.
Phone Button Template	Select Third-party SIP device (Basic) .
Common Phone Profile*	Provided by the IT specialist.
Owner	Select Anonymous (Public/Shared Space) .

Device Information	
<input checked="" type="checkbox"/> Device is Active	
<input type="checkbox"/> Device is not trusted	
MAC Address*	A0F6FD6E4615
Description	SEPA0F6FD6E4615
Device Pool*	NL-PUM View Details
Common Device Configuration	< None > View Details
Phone Button Template*	Third-party SIP Device (Basic)
Common Phone Profile*	Standard Common Phone Profile View Details
Calling Search Space	< None >
AAR Calling Search Space	< None >
Media Resource Group List	< None >
Location*	NL-PUM
AAR Group	< None >
Device Mobility Mode*	Default View Current Device Mobility Settings
Owner	<input type="radio"/> User <input checked="" type="radio"/> Anonymous (Public/Shared Space)
Owner User ID	
Use Trusted Relay Point*	Default
Always Use Prime Line*	Default
Always Use Prime Line for Voice Message*	Default
Geolocation	Bose Office The Netherlands
<input type="checkbox"/> Ignore Presentation Indicators (internal calls only)	
<input checked="" type="checkbox"/> Logged Into Hunt Group	
<input type="checkbox"/> Remote Device	

- Click **Save**.
- Scroll down to the **Protocol Specific Information** section.
- Click the following menus to select the following options:

Device Security Profile* Select **Third-party SIP Device (Basic) - Digest Required**

SIP Profile* Select **Standard SIP Profile**.

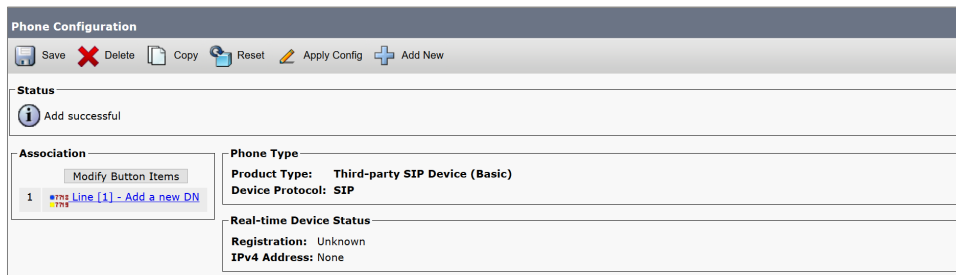
Digest User Click **Find** next to the menu, and then select **User ID** in the search drop-down menu. Select **Begin with**, and then enter the user number (e.g., 314510).

Protocol Specific Information	
BLF Presence Group*	Standard Presence group
MTP Preferred Originating Codec*	711ulaw
Device Security Profile*	Third-party SIP Device Basic - Digest Required
Rerouting Calling Search Space	< None >
SUBSCRIBE Calling Search Space	< None >
SIP Profile*	Standard SIP Profile View Details
Digest User	314510 Find
<input type="checkbox"/> Media Termination Point Required	
<input type="checkbox"/> Unattended Port	
<input type="checkbox"/> Require DTMF Reception	

- Click **Save**.

Adding Directory Numbers to SIP Service

1. On the left side of the **Phone Configuration** window, in the **Association** section, click **Line [1] - Add a new DN**.



2. In the **Directory Number Information** section, populate the fields with the following information:

Directory Number *	Enter the user number (e.g., 314510).
Urgent Priority	Click this box to select it.
Route Partition	Provided by the IT specialist.
Description	Enter the user number (e.g., 314510).
Alerting Name	Enter the user number (e.g., 314510).
ASCII Alerting Name	Enter the user number (e.g., 314510).
Calling Search Space	Provided by the IT specialist.

The screenshot shows the 'Directory Number Information' form. The fields are populated as follows: Directory Number * is 314510, Urgent Priority is checked, Route Partition is 00-Internal, Description is 314510, Alerting Name is 314510, ASCII Alerting Name is 314510, External Call Control Profile is <None>, and Associated Devices is SEPA0F6FD6E4615. There are buttons for 'Edit Device' and 'Edit Line Appearance'. Below the form is the 'Directory Number Settings' section with fields for Voice Mail Profile (Default), Calling Search Space, BLF Presence Group* (Standard Presence group), User Hold MOH Audio Source (<None>), and Network Hold MOH Audio Source (<None>). There is also a checkbox for 'Reject Anonymous Calls' and a button for 'Add Enterprise Alternate Number'.

3. Scroll down to the **Line 1 on Device** section, and populate the fields with the following information:

Display (Caller ID)	Enter the user number (e.g., 314510).
ASCII Display (Caller ID)	Enter the user number (e.g., 314510).
External Phone Number Mask	Provided by the IT specialist.

- Line 1 on Device SEPA0F6FD6E4615

Display (Caller ID) Display text for a line appearance is person receiving a call may not see the proper identity of the caller.

ASCII Display (Caller ID)

External Phone Number Mask

Monitoring Calling Search Space

4. Scroll down to the **Users Associated with Line** section.

Users Associated with Line		
	Full Name	User ID
<input type="checkbox"/>	314510	314510

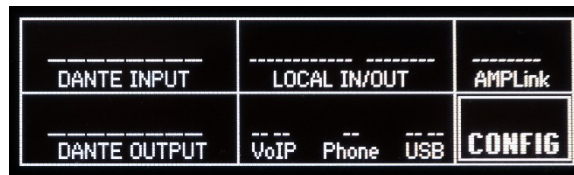
Associate End Users Select All Clear All Delete Selected

Save Delete Reset Apply Config Add New

5. Click the box next to the user number (e.g., 314510) to select it.
6. Click **Associate End Users**.
7. Click **Save**.
8. Repeat [Steps 1-7](#) to add a second line.

Configuring the ControlSpace EX-1280C

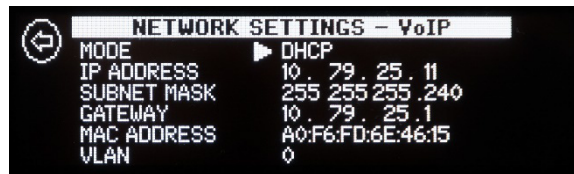
1. Turn the **rotary knob** to select **CONFIG**, and then press the **rotary knob** to enter its menu.



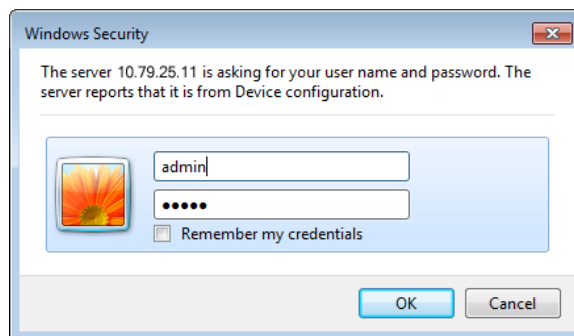
2. Turn the **rotary knob** to select **VoIP NETW SETTINGS**, and then press the **rotary knob** to enter its menu.



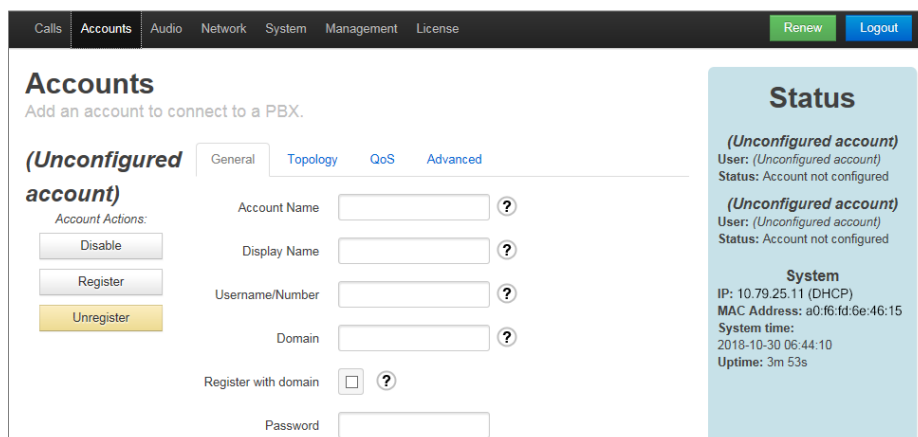
3. Document the **IP ADDRESS** (e.g., 10.79.25.11).



4. Enter the IP address from **Step 3** into a web browser and press **Enter**.
5. If a **Windows Security** notification appears, enter the administrator username and password, and then click **OK**. (The default username and password are **admin**.)



6. Click the **Accounts** tab.



7. In the **General** tab, populate the fields with the following information:

- Account Name** Enter the user number (e.g., 314510).
- Display Name** Enter the name to be displayed (e.g., Room A).
- Username/Number** Enter the user number (e.g., 314510).
- Domain** Provide by the IT specialist.
- Register with domain** Click this box to select it.
- Password** Enter the password.

Accounts
Add an account to connect to a PBX.

(Unconfigured account)

Account Actions:
Disable Register Unregister

General | Topology | QoS | Advanced

Account Name: 314510
Display Name: Room A
Username/Number: 314510
Domain: 10.76.17.10
Register with domain:
Password:

Status

⚠ After completing all changes to the configuration you must save your settings:
Save changes Revert Changes

(Unconfigured account)
User: (Unconfigured account)
Status: Account not configured

(Unconfigured account)
User: (Unconfigured account)
Status: Account not configured

8. Click **Save changes**.

9. Click **Restart SIP Service**. The SIP service will restart and will try to register the new account.

Status

⚠ Certain changes to the configuration require a restart to the SIP service:
Restart SIP Service

Accounts
Add an account to connect to a PBX.

Room A

Account Actions:
Disable Register Unregister

General | Topology | QoS | Advanced

Account Name: 314510
Display Name: Room A
Username/Number: 314510
Domain: 10.76.17.10
Register with domain:
Password:

Status

Room A
User: 314511@10.76.17.10
Status: Registered

(Unconfigured account)
User: (Unconfigured account)
Status: Account not configured

System
IP: 10.79.25.11 (DHCP)
MAC Address: a0:16:fd:6e:46:15
System time: 2018-10-30 07:03:08
Uptime: 22m 53s

10. Click the **Topology** tab.

- Depending on the CallManager settings, click **TCP** or **UDP** to set the **SIP Transport Mode**, and enter **5060** in the **Local Port** field.

Accounts
Add an account to connect to a PBX.

Room A

Account Actions:
 Disable
 Register
 Unregister

General | **Topology** | QoS | Advanced

SIP Transport Mode
 TCP
 UDP

Local Port: 5060

STUN:

- Click the **QoS** tab, and populate its fields. This information needs to be provided by the IT specialist.

Accounts
Add an account to connect to a PBX.

Room A

Account Actions:
 Disable
 Register
 Unregister

General | Topology | **QoS** | Advanced

802.1Q User Priority: 4

Audio RTP DSCP: 46

Call Control DSCP: 26

- Click the **Advanced** tab, and populate the fields with the following information:

- Auth Username** Enter the user number (e.g., 314510).
- Proxy** Provided by the IT specialist.
- Proxy Port** Enter the **Local Port** number from [Step 11](#).
- Registration Lifetime** Enter the registration lifetime in **seconds**.

Accounts
Add an account to connect to a PBX.

Room A

Account Actions:
 Disable
 Register
 Unregister

General | Topology | QoS | **Advanced**

Auth Username: 314510

Proxy:

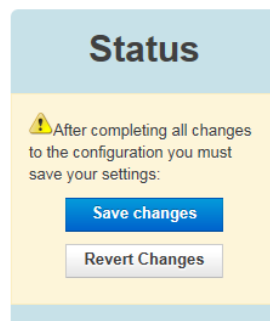
Proxy Port: 5060

Registration Lifetime: 3600 seconds

Keep-Alive:

Silence Suppression:

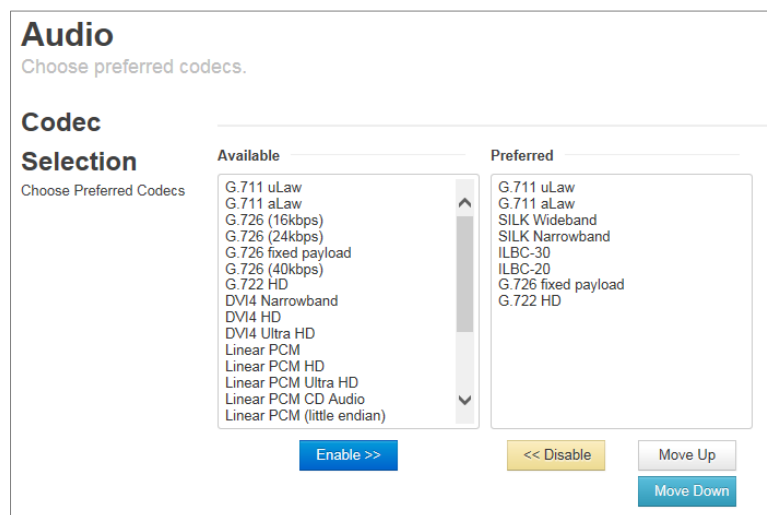
14. Click **Save changes**.



15. Follow [Steps 6–15](#) to create a second account, but during [Step 11](#), enter **5061** in the **Local Port** field.

16. Click the **Audio** tab.

17. In the **Available** list, click your desired codecs, and then click **Enable**.



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