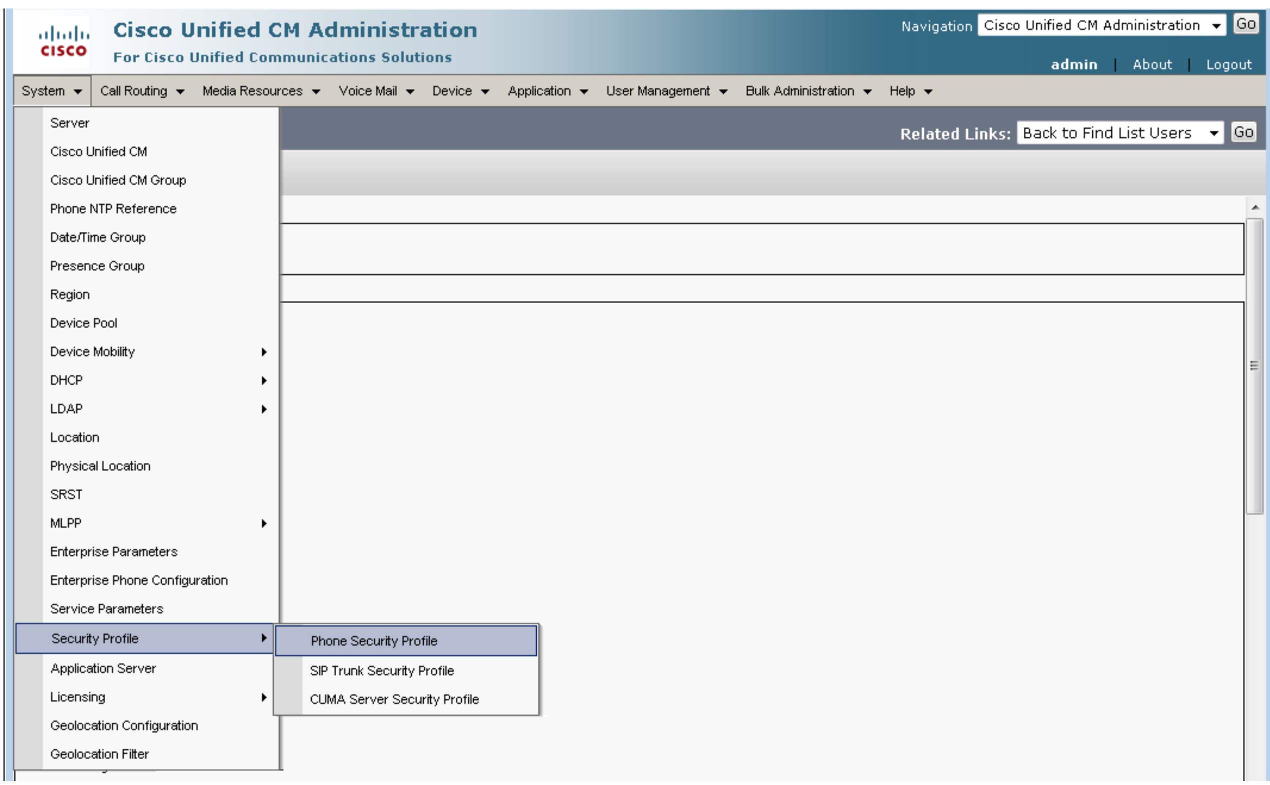
Cisco Unified Communications Manager 11.0 SIP Configuration Guide

Valcom Session Initiation Protocol (SIP) VIP devices are compatible with Cisco Unified Communications Manager (formerly Cisco Unified CallManager) (SIP enabled versions). The Valcom device is added to the Communications Manager as a Third-party SIP Device (Basic or Advanced). Third-party SIP Device (Basic) supports one line, Third-party SIP Device (Advanced) supports up to eight lines.

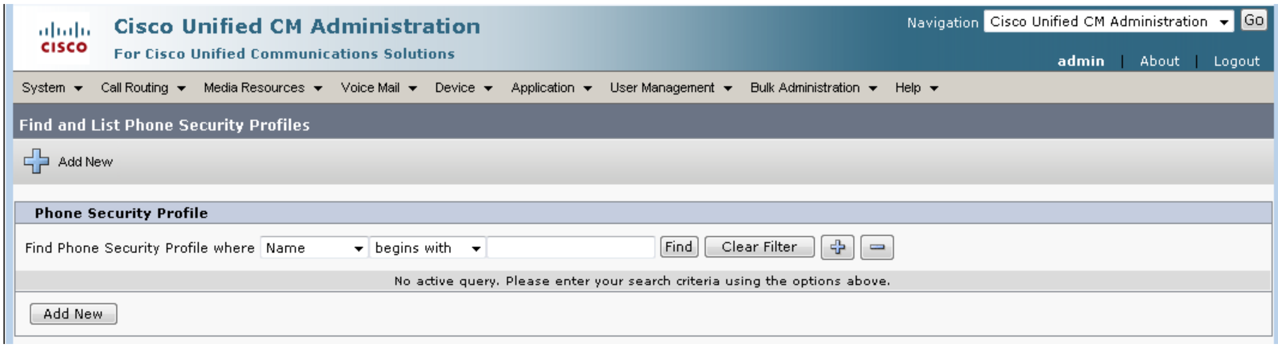
Default, non-secure Phone Security Profiles do not require authentication for a phone to register. To enable digest authentication, a new Phone Security Profile must be configured. If an appropriate profile has already been defined, it may be used for the Valcom device. Skip to Step 5 if an existing profile will be used, or if authentication is not required and a built-in (non-secure) profile will be used.

Navigate your web browser to the IP address of your Cisco Unified Communications Manager server and login.

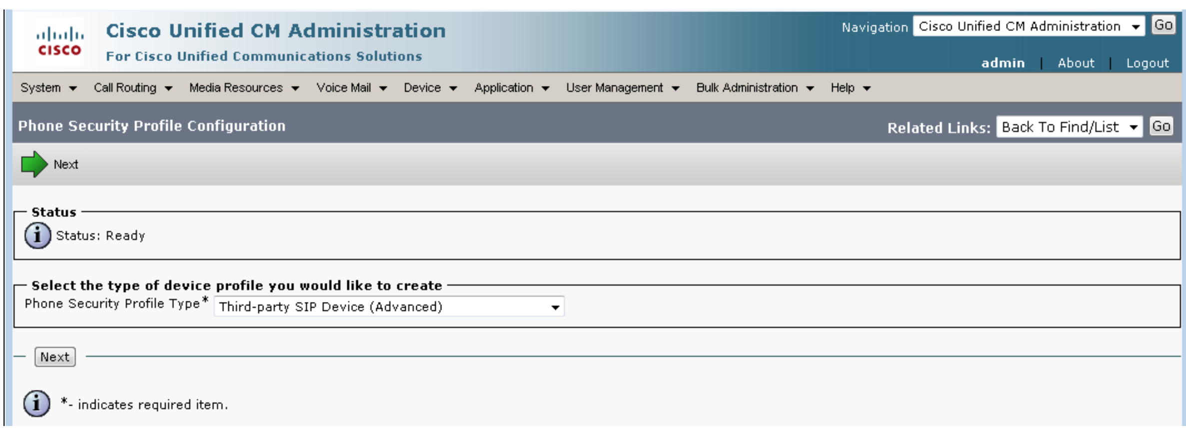
1. Go to the “System” menu, and then click “Security Profile”, then click “Phone Security Profile”.



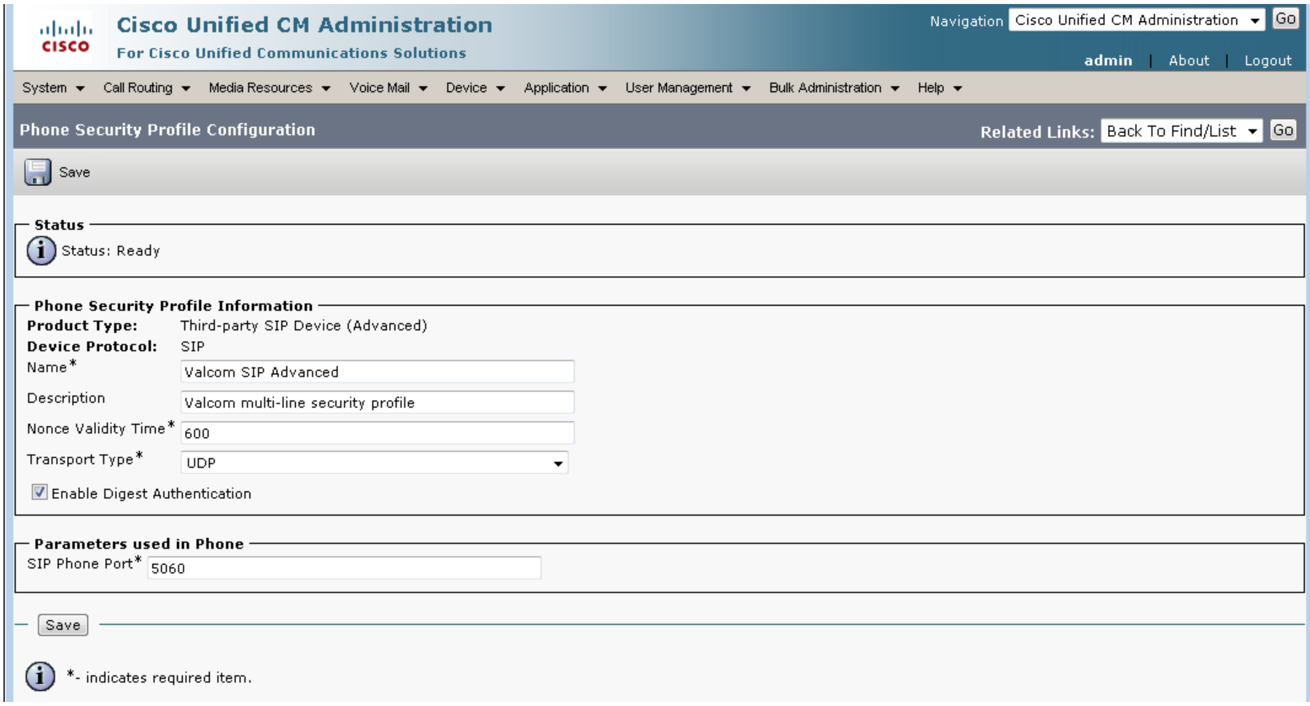
2. Click on “Add New”



3. On the Phone Security Profile Configuration screen, select the appropriate Profile Type from the dropdown list. For Valcom devices, the type will be either Third-party SIP Device (Advanced) or Third-party SIP Device (Basic). The profile being created will only be available for the phone type that is selected. Use Basic for devices that only have a single SIP identity (such as a SIP speaker). Select Advanced for devices that have multiple SIP identities (such as the VIP-201 Paging Server). Click “Next” after selecting the Type.

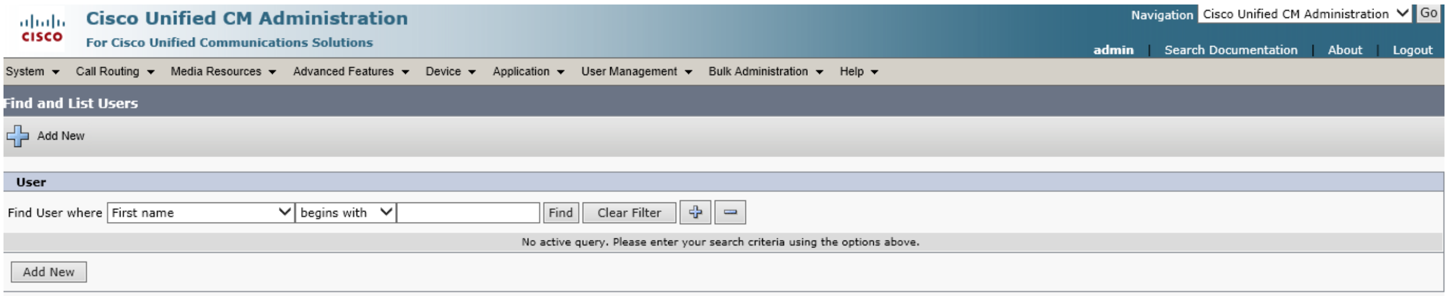


4. Enter the Phone Security Profile Information.
   - A) Enter “Name*” (ex. Valcom SIP Advanced)
   - B) Enter “Nonce Validity Time*” in seconds (default 600)
   - C) For “Transport Type*” select “UDP” from the dropdown list
   - D) Check the box for “Enable Digest Authentication”
   - E) The “SIP Phone Port*” should be left at the default of 5060, unless it is also changed in the Valcom device.
   - F) Click the “Save” button when all fields have been entered.

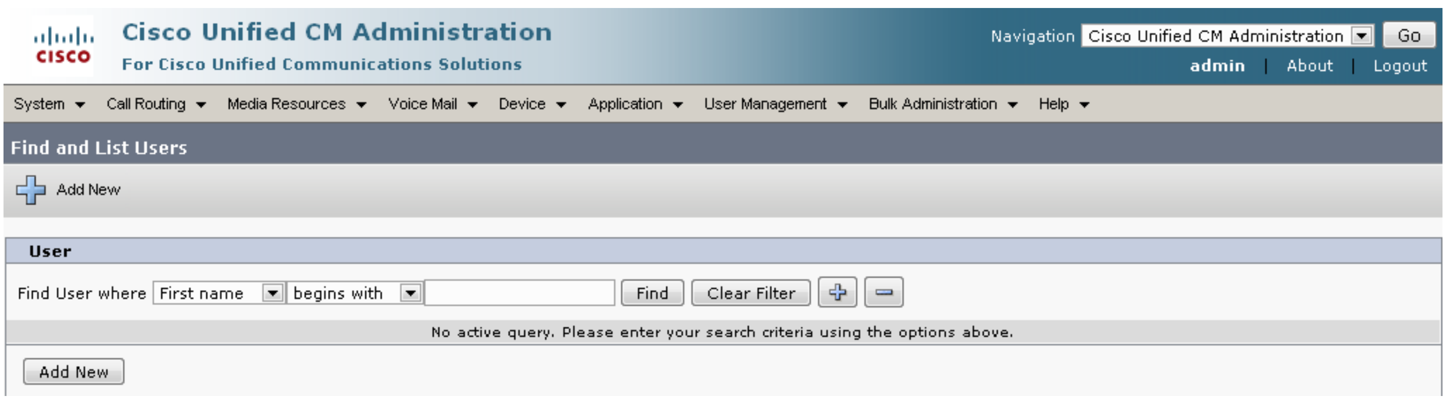

Cisco Unified CM Administration
For Cisco Unified Communications Solutions
Navigation Cisco Unified CM Administration Go
admin | About | Logout
System Call Routing Media Resources Voice Mail Device Application User Management Bulk Administration Help
Phone Security Profile Configuration
Related Links: Back To Find/List Go
Save
Status
Status: Ready
Phone Security Profile Information
Product Type: Third-party SIP Device (Advanced)
Device Protocol: SIP
Name* Valcom SIP Advanced
Description Valcom multi-line security profile
Nonce Validity Time* 600
Transport Type* UDP
Enable Digest Authentication
Parameters used in Phone
SIP Phone Port* 5060
Save
*- indicates required item.

The following steps outline the typical device configuration process:

1. Under the “User Management” menu, select “End User”

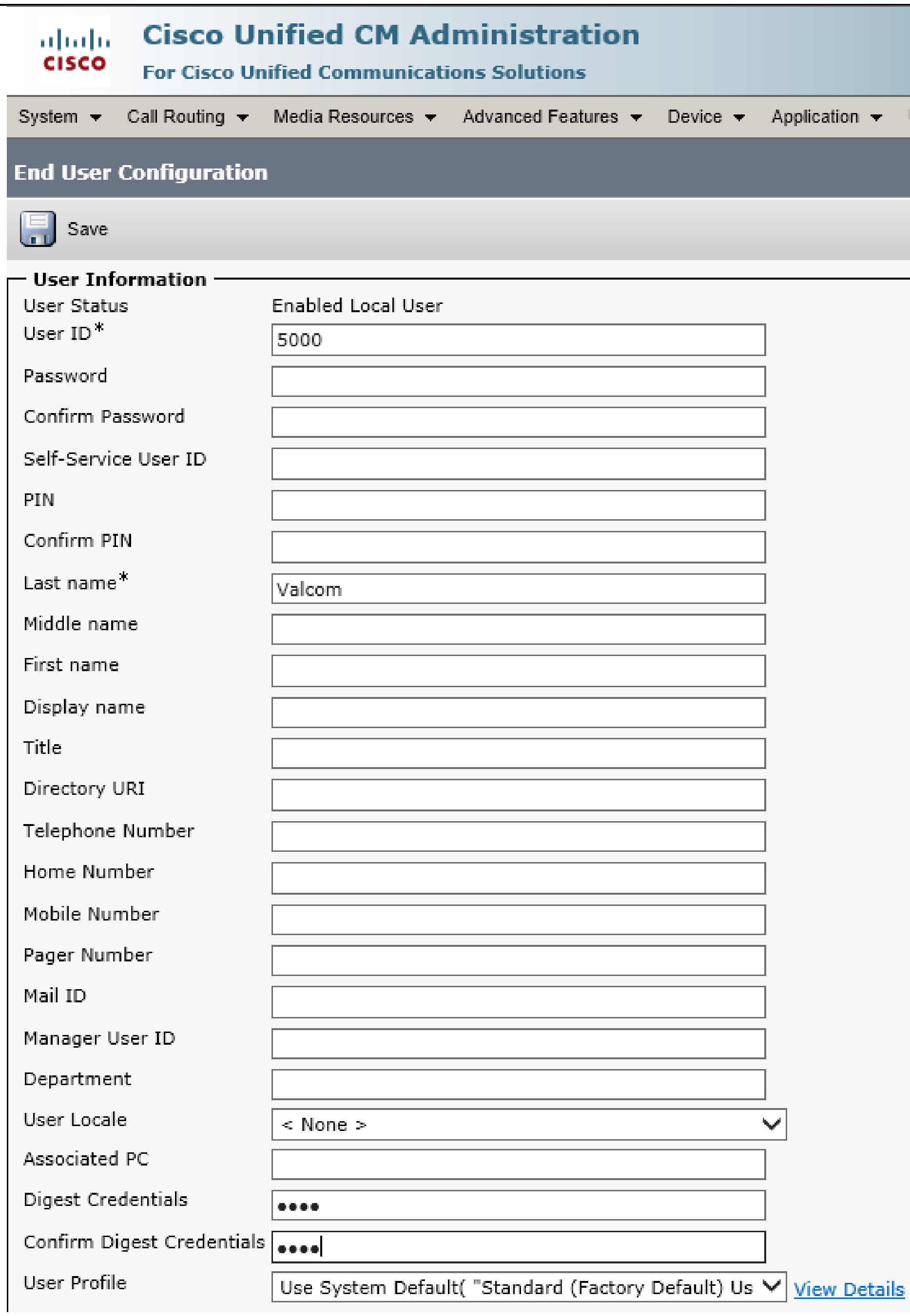


2. Click on “Add New”

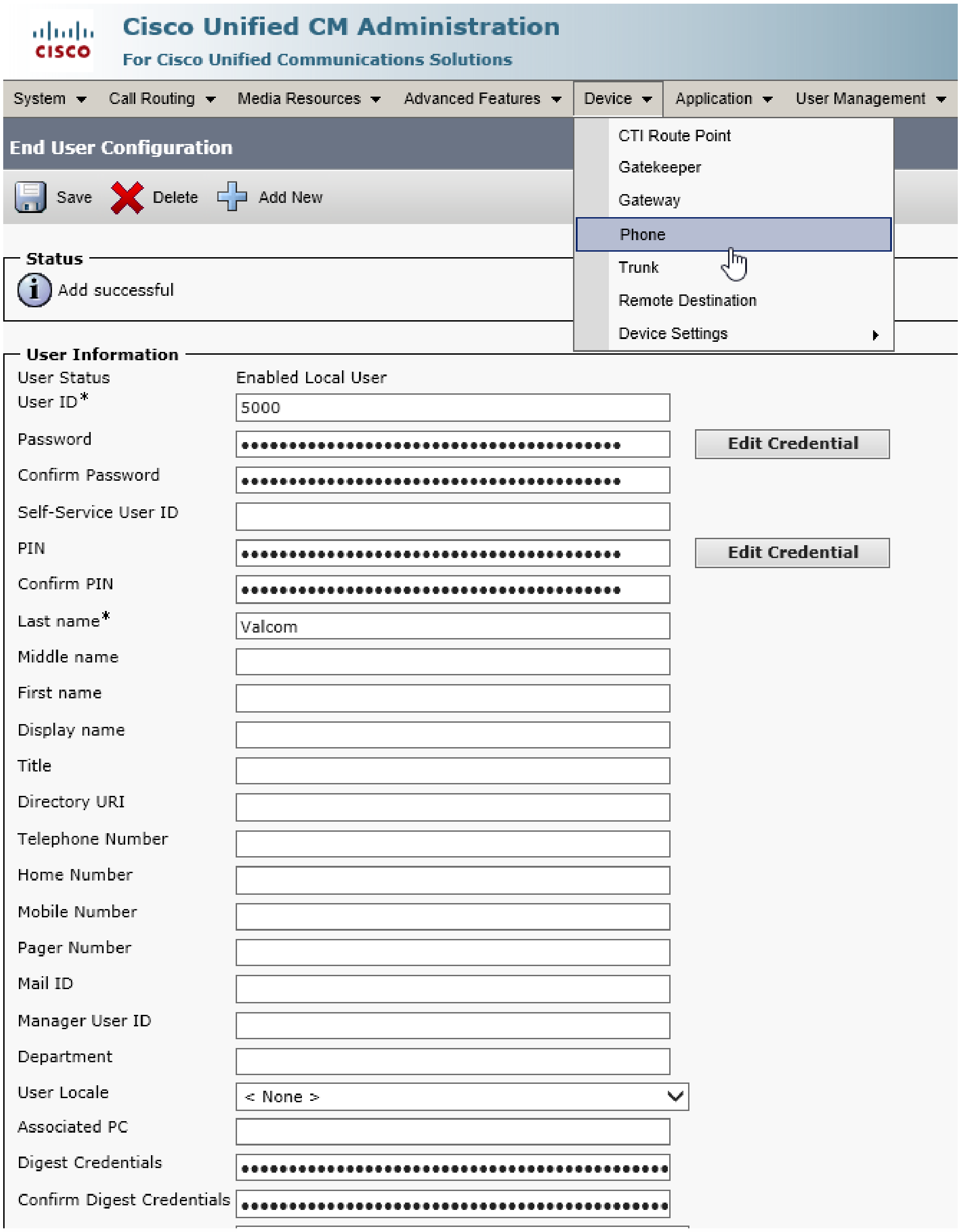


3. Complete the following steps:

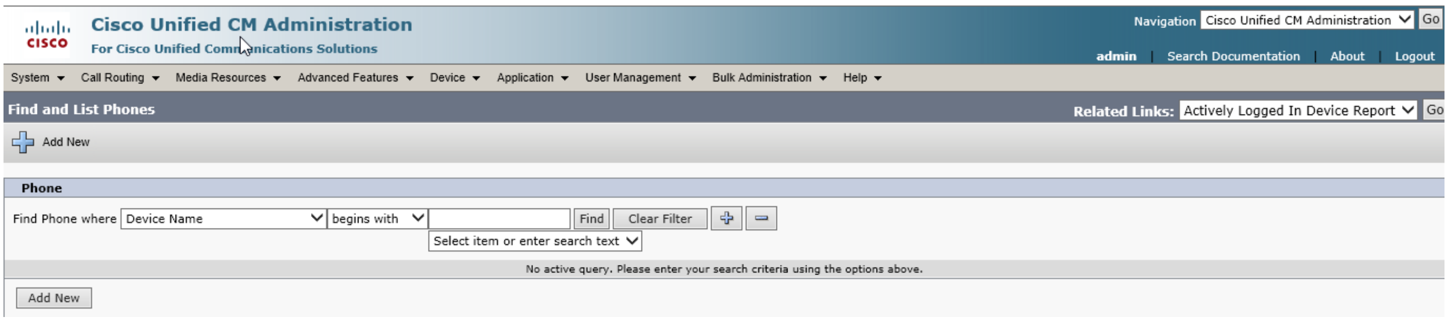
A) Enter “User ID*” (ex. 5000) –[*required for Valcom device*]
B) Enter “Last name*” (ex. 5000) –[*required for Call Manager only*]
C) Enter “Digest Credentials” (ex. 1234) –[*required for Valcom device*]
D) Enter “Confirm Digest Credentials” (ex. 1234) –[*required for Valcom device*]
E) Select “Save” at the top of the screen


cisco
Cisco Unified CM Administration
For Cisco Unified Communications Solutions
System
Call Routing
Media Resources
Advanced Features
Device
Application
End User Configuration
Save
User Information
User Status
Enabled Local User
User ID*
5000
Password
Confirm Password
Self-Service User ID
PIN
Confirm PIN
Last name*
Valcom
Middle name
First name
Display name
Title
Directory URI
Telephone Number
Home Number
Mobile Number
Pager Number
Mail ID
Manager User ID
Department
User Locale
< None >
Associated PC
Digest Credentials
Confirm Digest Credentials
User Profile
Use System Default("Standard (Factory Default) Us
View Details

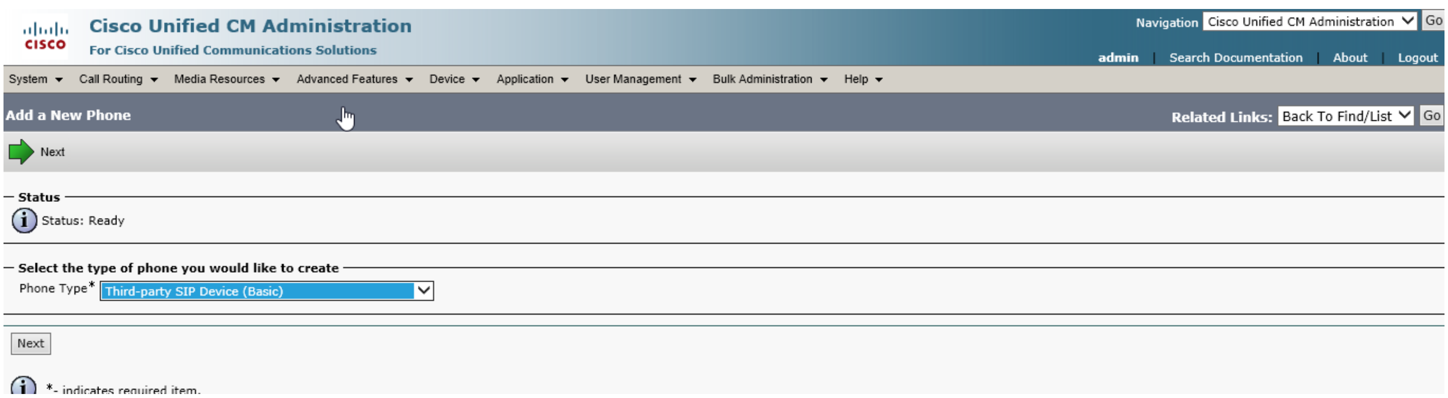
4. Click on “Device”, then click on “Phone”



Click on “Add New”

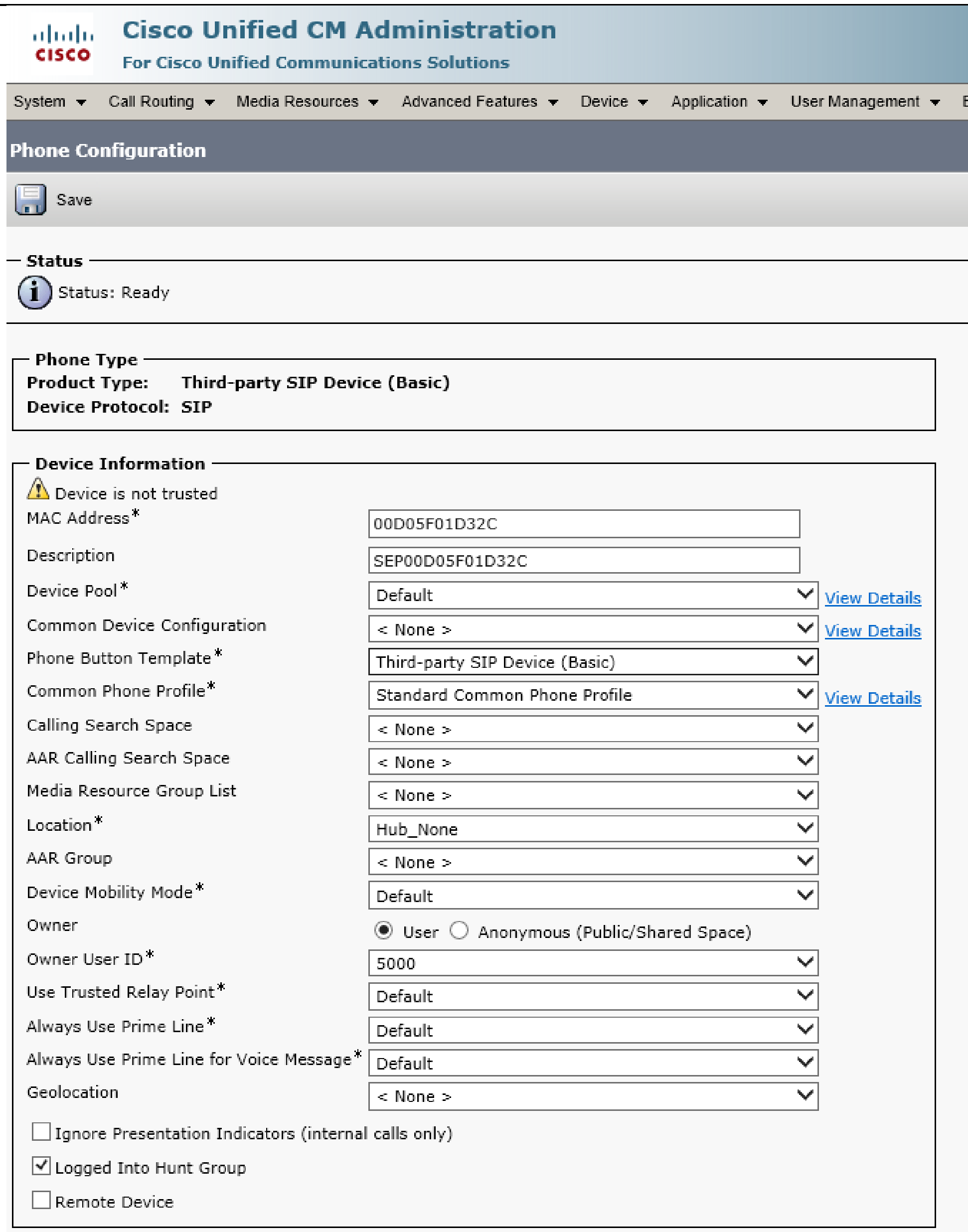


5. Select “Third-party SIP Device (Basic)” or “Third-party SIP Device (Advanced)” from the dropdown, then click “Next”
   (*VIP speakers would be “Basic”, other VIP devices can be either, depending on whether more than one extension/Directory Number will be used on a VIP device*)

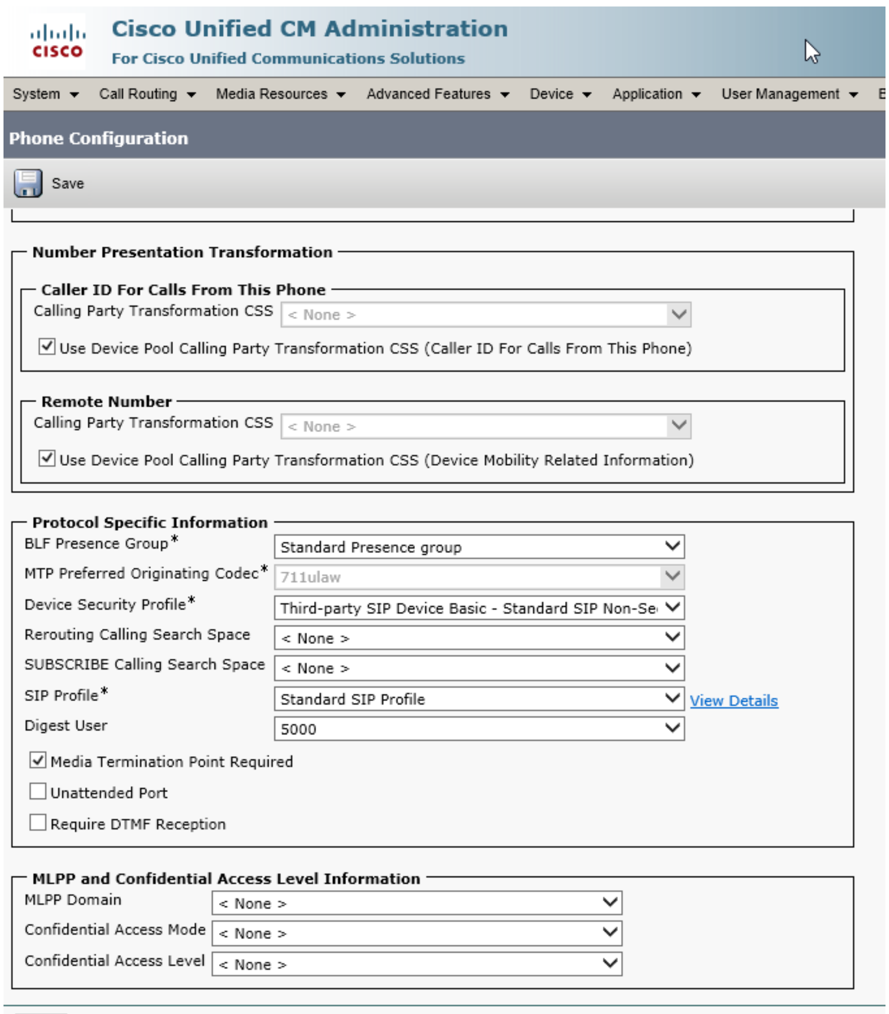


6. Complete the following steps:

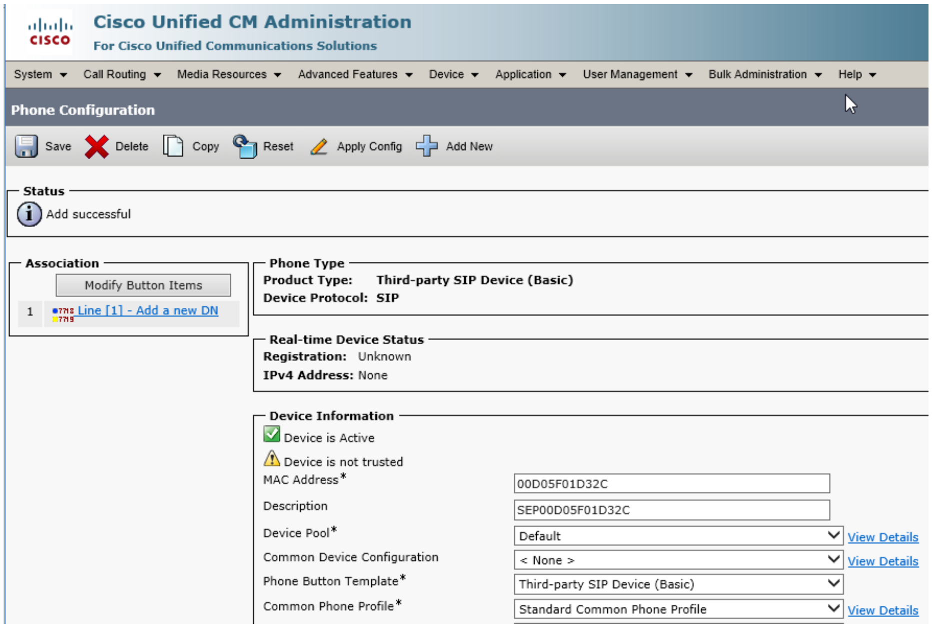
   A) Enter “MAC Address*” (ex. 00D05F01D32C, use the MAC address from the Valcom device that will be registered)
   B) Select “Device Pool*” → “Default” (*or what is valid for your installation*)
   C) Select “Phone Button Template*” → “Third-party SIP Device (Basic)” or “Third-party SIP Device (Advanced)”
   D) Select “Common Phone Profile*” → “Standard Common Phone Profile”
   E) Select “Location*” → “Hub_None” (*or what is valid for your installation*)
   F) Select “Owner” → User
   G) Select “Owner User ID” → The “User ID” that was created in Step 3A. (ex. 5000)


Cisco Unified CM Administration
For Cisco Unified Communications Solutions
System
Call Routing
Media Resources
Advanced Features
Device
Application
User Management
Phone Configuration
Save
Status
Status: Ready
Phone Type
Product Type: Third-party SIP Device (Basic)
Device Protocol: SIP
Device Information
Device is not trusted
MAC Address* 00D05F01D32C
Description SEP00D05F01D32C
Device Pool* Default 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* Hub_None
AAR Group < None >
Device Mobility Mode* Default
Owner User Anonymous (Public/Shared Space)
Owner User ID* 5000
Use Trusted Relay Point* Default
Always Use Prime Line* Default
Always Use Prime Line for Voice Message* Default
Geolocation < None >
Ignore Presentation Indicators (internal calls only)
Logged Into Hunt Group
Remote Device

H) Select “Presence Group*” → “Standard Presence group” (*or what is valid for your installation*)
I) Select “MTP Preferred Originating Codec*” → “711ulaw”
J) Select “Device Security Profile*” → “Third-party SIP Device Basic – Standard SIP Non-Secure Profile” (or a Secure Profile that you may have created –see Step 1 at the beginning of this document)
K) Select “SIP Profile*” → “Standard SIP Profile”
L) Select “Media Termination Point Required”
M) Select “Digest User” → The “User ID” that was created in Step 3A. (ex. 5000)
N) All other fields can be left at default or configure per your server/site.
O) Select “Save” at the top of the screen.

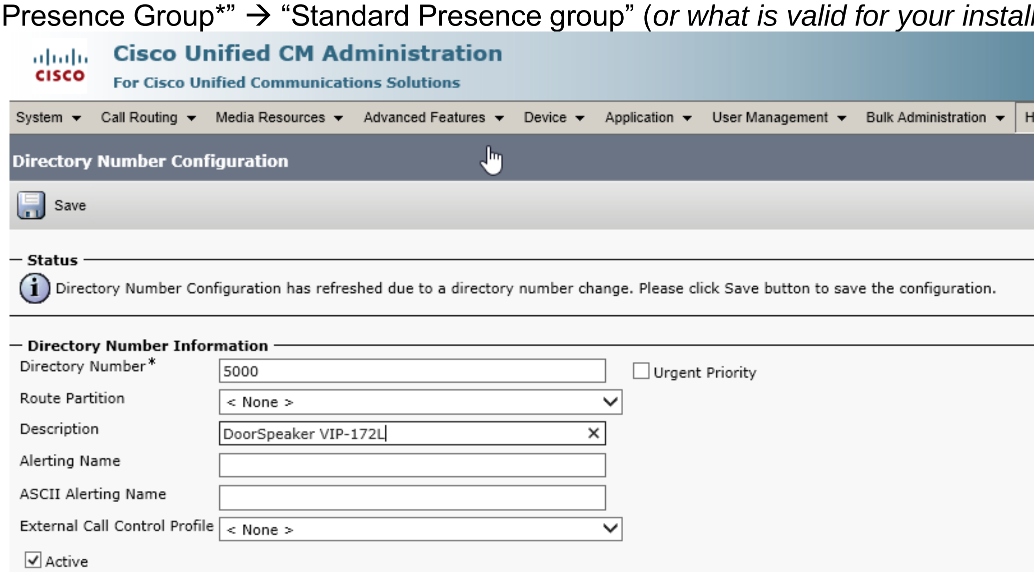


7. Select “Line [1] – Add a new DN” under “Association”.

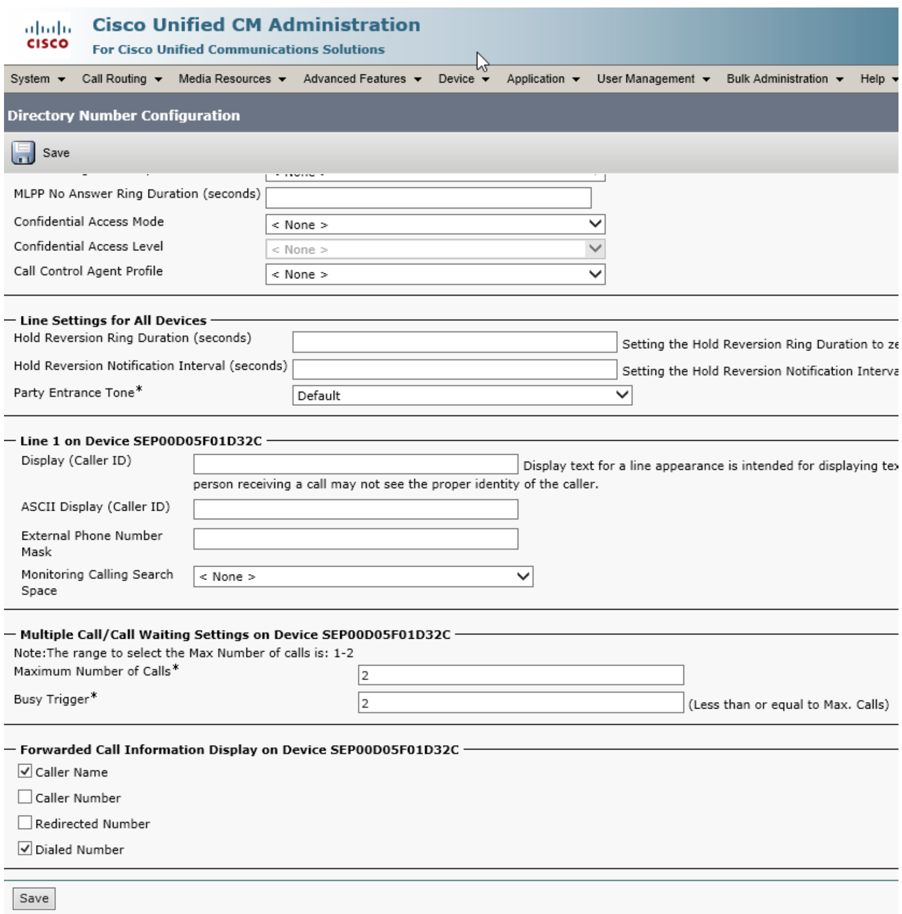


8. Complete the following steps:

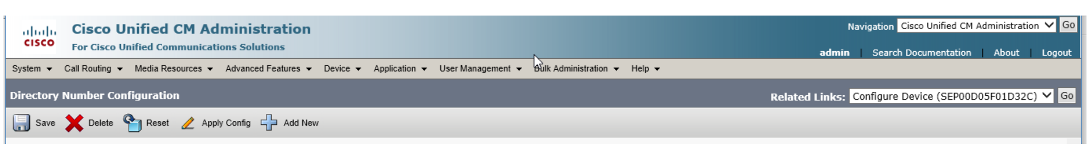
   A) Enter “Directory Number*” (ex. 5000)
   B) Enter “Description” (ex. DoorSpeaker - VIP-172L)
   C) Check the Active checkbox, if not already checked
   D) Select “Presence Group*” → “Standard Presence group” (*or what is valid for your installation*)

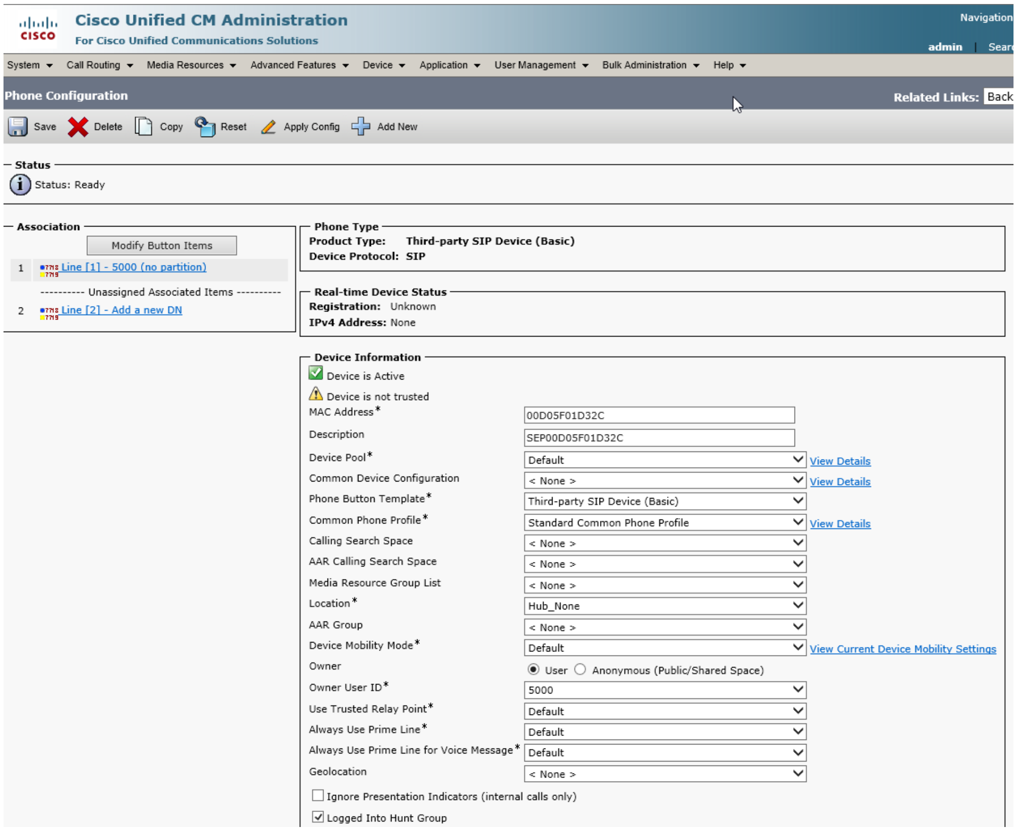


E) Key in “Display (Caller ID)” with a name or number to identify this (DN) extension **useful with talkback speakers that can call into the Call Manager.*
F) Enter “Maximum Number of Calls*” → “2”
G) Enter “Busy Trigger*” → “2”
H) Check “Caller Name”
I) Check “ Dialed Number”
J) Select “Save” at the bottom or top of the screen
K) Click “Apply Config” at top of screen



L) Click Related Links: Configure Device Go button to return to device screen





L) Click "Apply Config"

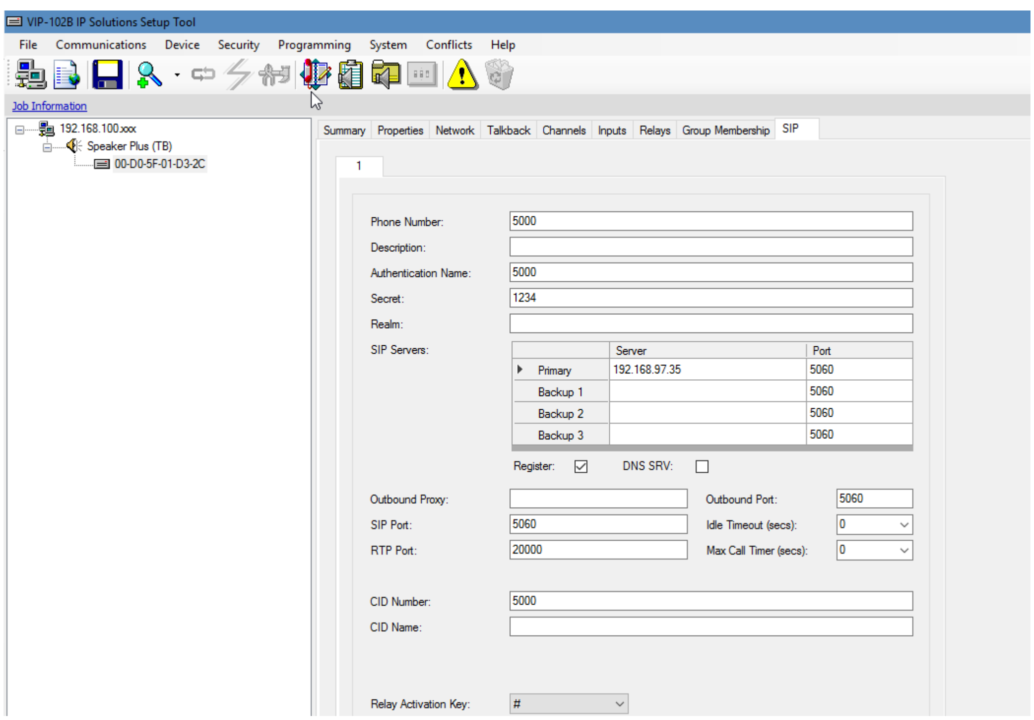
9. Open the VIP-102B tool interface for the Valcom SIP enabled VIP device.

Note: The information contained in this guide is limited to configuration of the "SIP" tab in the VIP-102B IP Solutions Setup Tool for the Valcom VIP device that is to be registered to the SIP server. More information on Valcom VIP device configuration, such as IP address assignment, relay activation, etc, may be found in the VIP-102B Reference Manual. This document may be downloaded from our website at http://www.valcom.com

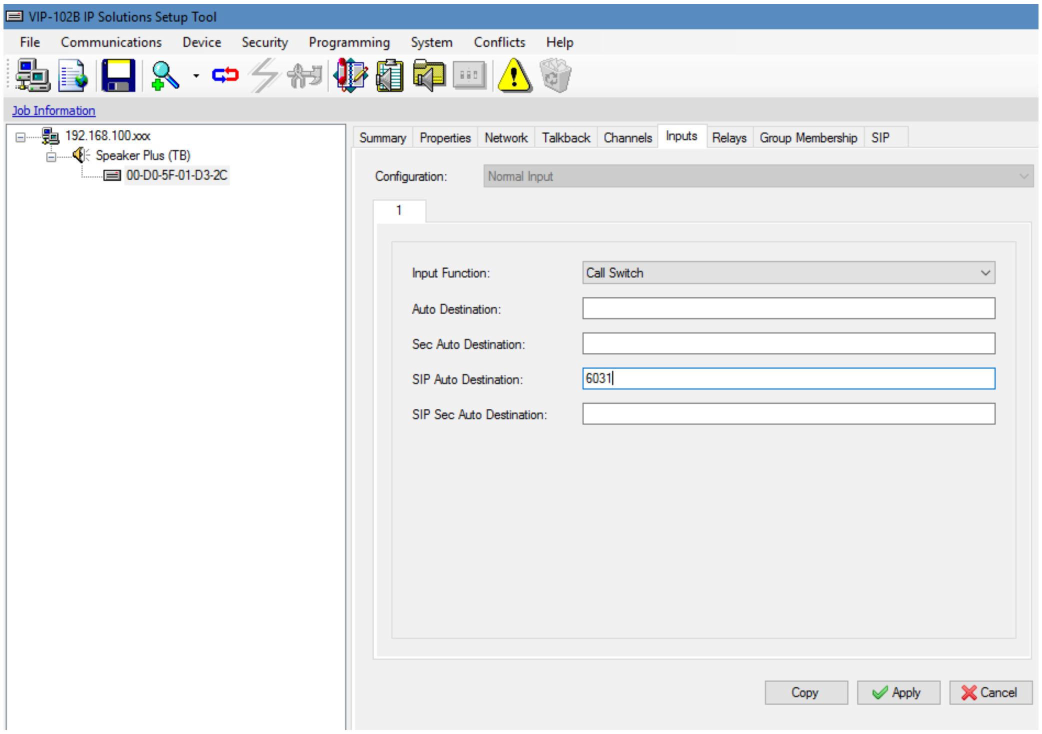
Required Fields: Phone Number, Authentication Name, Secret, SIP Server (primary), Register, SIP Server Port, SIP Port, RTP Port
Optional Fields: Description, Realm, SIP Server Backup 1, 2, and 3, DNS SRV, CID Name, CID Number, Relay Activation Key applies to our example device. Other VIP devices may not show this field.

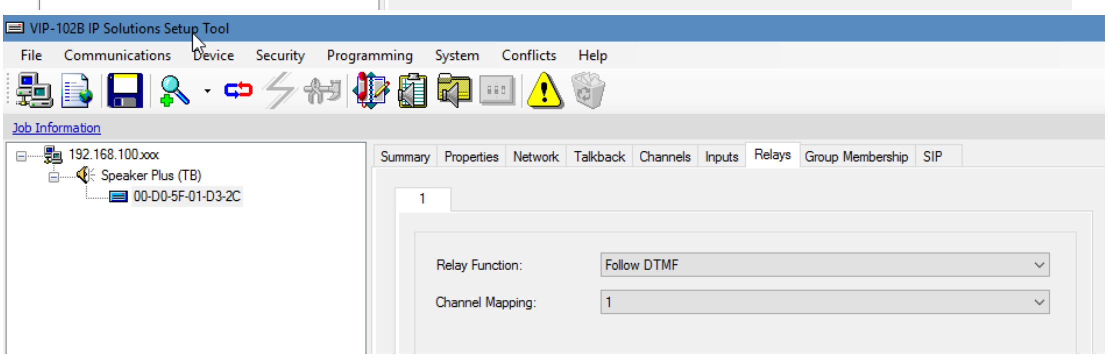
In our example, the SIP Server IP address is the same as our Cisco Call Manager, "192.168.97.35". If using a host name here you must specify at least one DNS server on the Network tab to resolve the name.
Phone Number is the same as our Directory Number in the Cisco Call Manager configuration, "5000".
Secret is the same as our Digest Credentials in the Cisco Call Manager configuration, "1234".
SIP Server Port is the port number, on which the Cisco Call Manager SIP server is listening for SIP data.
SIP Port is the port number, on which the Valcom VIP device is listening for SIP data. By default this is set for "5060". RTP Port is the port number, on which the Valcom VIP device is set to send/receive audio packets, via SIP. By default this is set for "20000". All other optional fields may be used based your server/site requirements.

When the Valcom VIP device configuration is complete, select the "Update Changed Devices" button, at the upper left. When update is complete, click reset, to reboot the device.



On the Inputs tab make sure Call Switch is selected and the appropriate SIP extension to be dialed, when this devices is activated by its call button, is entered in the SIP Auto Destination field. All other fields should be left blank. This may not apply for other devices that do not have an Input tab.





Also for this example only the relay is enabled by setting the Relay Function on the Relay tab to “Follow DTMF”. May not apply to other VIP devices.

10. To confirm a successful configuration, return to Call Manager and click on “Device”, then Phone, then locate the VIP device in the search results. If successfully registered, the status column should show the VIP device is registered to the IP address of the Call Manager with the VIP device’s IP address in the next column under “IP Address”