



Extension Mobility Configuration



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Agenda

- Overview
- Configuration Check
- Common Problems & Troubleshooting

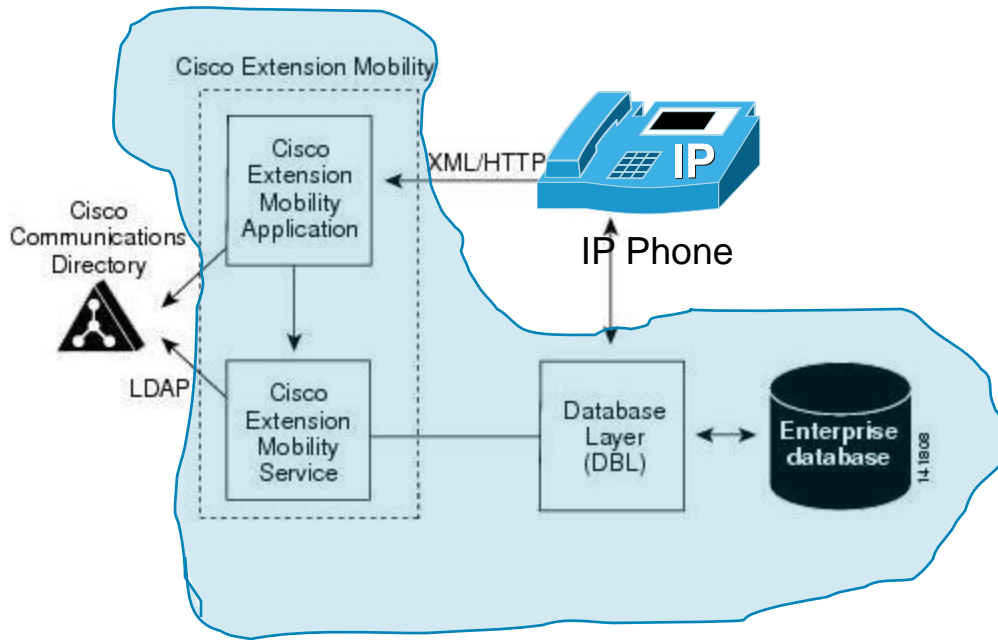
Overview



Overview

- The Cisco Extension Mobility feature allows users to temporarily access their Cisco Unified IP Phone configuration such as line appearances, services, and speed dials from other Cisco Unified IP Phones.
- The “same” phone in a different place!
- This guide will provide a step by step Extension Mobility configuration for 5.x/6.x/7.x.
- We are assuming that the AD/LDAP structure all works properly and all users/phones have been added correctly.

High-Level Components and Protocols



CCM/CUCM Server 5.x/6.x/7.x



Services Button

Config 1



Blank phone and all of your users log in to the phone as needed.

Config 2



Users have an “everyday” phone and then use other phones for EM as needed.



Configuration Check



Configuration Check

- Enable the EM service as needed on each server

The screenshot displays the Cisco Unified Serviceability web interface. The page title is "Cisco Unified Serviceability For Cisco Unified Communications Solutions". The user is logged in as "CCMAdministrator". The "Service Activation" section is active, showing a status of "Ready". Below this, there is a "Select Server" section with a dropdown menu set to "10.88.192.205" and a "Go" button. A checkbox for "Check All Services" is present. The main content area is divided into three sections: "CM Services", "CTI Services", and "CDR Services". Each section contains a table with columns for "Service Name" and "Activation Status".

CM Services

	Service Name	Activation Status
<input checked="" type="checkbox"/>	Cisco CallManager	Activated
<input checked="" type="checkbox"/>	Cisco Tftp	Activated
<input checked="" type="checkbox"/>	Cisco Messaging Interface	Activated
<input checked="" type="checkbox"/>	Cisco Unified Mobile Voice Access Service	Activated
<input checked="" type="checkbox"/>	Cisco IP Voice Media Streaming App	Activated
<input checked="" type="checkbox"/>	Cisco CTIManager	Activated
<input checked="" type="checkbox"/>	Cisco Extension Mobility	Activated
<input checked="" type="checkbox"/>	Cisco Extended Functions	Activated
<input checked="" type="checkbox"/>	Cisco Dialed Number Analyzer	Activated
<input checked="" type="checkbox"/>	Cisco DHCP Monitor Service	Activated

CTI Services

	Service Name	Activation Status
<input checked="" type="checkbox"/>	Cisco CallManager Attendant Console Server	Activated
<input checked="" type="checkbox"/>	Cisco IP Manager Assistant	Activated
<input checked="" type="checkbox"/>	Cisco WebDialer Web Service	Activated

CDR Services

	Service Name	Activation Status
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- Create the EM “phone service” for both users and phones

The screenshot shows the Cisco Unified CM Administration interface. The 'Find and List IP Phone Services' page is active. A dropdown menu is open under 'Device Settings', with 'Phone Services' selected. The main table displays two records: 'EM' and 'TEST'. The status bar indicates '2 records found'.

The screenshot shows the 'Phone Services Configuration' page. The 'Service Name' field is set to 'EM'. The 'Service URL' field contains the URL 'http://10.88.192.205:8080/emapp/EMAppServlet?devi'. The status bar indicates 'Status: Ready'.

The screenshot shows the 'Service Parameter Information' section. A 'New Parameter' button is highlighted with a black arrow. A Notepad window is open in the foreground, showing the URL 'http://10.88.192.205:8080/emapp/EMAppServlet?device=#DEVICENAME#'.

- Create the Device Profile corresponding to each phone you are going to use, then subscribe that profile to the user

The screenshot displays the Cisco Unified CM Administration interface. The top navigation bar includes 'Cisco Unified CM Administration' and 'For Cisco Unified Communications Solutions'. The main menu shows 'Device' > 'Device Profile'. A table lists device profiles with columns for Name, Description, and Device Type. Below this is the 'Device Profile Configuration' page for profile '7971EM'. The 'Association Info' section contains a list of 15 items, with a blue arrow pointing to item 2, 'Line [2] - Add a new DN'. A text overlay reads 'Add a DN as needed'. The right side of the page shows 'User Device Profile Information' with fields for Product Type, Device Protocol, and various configuration options.

Name	Description	Device Type
7941EM	7941EM	Cisco 7941
7960EM	7960EM	Cisco 7960
7961EM	7961EM	Cisco 7961
7970EM		Cisco 7970
test		Cisco 7975

Association Info

- Line [1] - Add a new DN
- Line [2] - Add a new DN
- Add a new SD
- Add a new SD
- Add a new SD
- Add a new SD
- Add a new SD
- Add a new SD
- Unassigned Associated Items
- Add a new SD
- Add a new SURL
- Add a new BLF SD
- Add a new BLF Directed Call Park
- CallBack
- Call Park
- Call Pickup

User Device Profile Information

- Product Type: Cisco 7971
- Device Protocol: SCCP
- Device Profile Name*: 7971EM
- Description: 7971EM
- User Hold MOH Audio Source: < None >
- User Locale: < None >
- Phone Button Template*: Standard 7971 SCCP
- Softkey Template: < None >
- Privacy*: Default
- Single Button Barge: Default
- Join Across Lines: Default
- Ignore Presentation Indicators (internal calls only):
- Do Not Disturb:
- DND Incoming Call Alert: < None >

Device Profile Configuration

Related Links: Back To Find/List Go

Save Delete Copy Add New

- Status

Status: Ready

Association Info

Modify Button Items

- 1 [7971 Line \[1\] - Add a new DN](#)
- 2 [7971 Line \[2\] - Add a new DN](#)
- 3 [Add a new SD](#)
- 4 [Add a new SD](#)
- 5 [Add a new SD](#)
- 6 [Add a new SD](#)
- 7 [Add a new SD](#)
- 8 [Add a new SD](#)
- Unassigned Associated Items -----
- 9 [Add a new SD](#)
- 10 [Add a new SURL](#)

User Device Profile Information

Product Type: Cisco 7971
Device Protocol: SCCP
Device Profile Name* 7971EM
Description 7971EM
User Hold MOH Audio Source < None >
User Locale < None >
Phone Button Template* Standard 7971 SCCP
Softkey Template < None >
Privacy* Default
Single Button Barge Default
Join Across Lines Default
 Ignore Presentation Indicators (internal calls only)
 Do Not Disturb
DND Incoming Call Alert < None >

- Back To Find/List
- Dependency Records
- Add a New Line Appearance
- Add/Update Speed Dials
- Add/Update Busy Lamp Field Speed Dials
- Add/Update Busy Lamp Field Directed Call Park
- Add/Update Service URL Buttons
- Subscribe/Unsubscribe Services



Subscribed Cisco IP Phone Services for 7970EM

Next ? Help

Status
 Status: Ready

Service Information
 Service Subscription: New
 Select a Service* -- Not Selected --
 Service Description -- Not Selected --
 EM

Subscribed Services
 EM

Next Close

Done 10.88.192.205:8443

- 5 [Add a new SD](#)
- 6 [Add a new SD](#)
- 7 [Add a new SD](#)
- 8 [Add a new SD](#)
- Unassigned Associated Items -----
- 9 [Add a new SD](#)
- 10 [Add a new SURL](#)
- 11 [Add a new BLE SD](#)

Phone Button Template* Standard 7970 SCCP
Softkey Template < None >
Privacy* Default
Single Button Barge Default
Join Across Lines Default
 Ignore Presentation Indicators (internal calls only)
 Do Not Disturb
DND Incoming Call Alert < None >

Expansion Module Information

- Subscribe all EM users to the EM service and associate them with EM Device profiles

Find and List Users

Status: 5 records found

User (1 - 5 of 5)

<input type="checkbox"/>	User ID ^	First Name	Last Name
<input type="checkbox"/>	itesar	Jeff	Tesar
<input type="checkbox"/>	lyanes	Luis	Yanes
<input type="checkbox"/>	okie280	Ryan	Bennett
<input type="checkbox"/>	vballapu	Vijay	Ballapu
<input type="checkbox"/>	yspiner	Ywayne	Spiner

**Configure your PIN,
making it only numbers
do not use letters**

End User Configuration

NOTE: The add and delete function are disabled because the user directory is sync (i.e. The Enable Synchronization From LDAP Server flag on the LDAP System Configuration page)

LDAP Sync Status: Active
User ID*: okie280
PIN: *****
Confirm PIN: *****

Last name*: Bennett
Middle name:
First name: Ryan
Telephone Number:
Mail ID:
Manager User ID:
Department:
User Locale: < None >

Associated PC:
Digest Credentials: *****
Confirm Digest Credentials: *****

-Device Associations-

Controlled Devices: SEP001469FB5609, SEP001AA29F7F2E, SEP001B2A897E41, SEP001E7AC407AC, SEP0023339DC212

-Extension Mobility-

Available Profiles: 7941EM, 7961EM, 7970EM, 7971EM, test

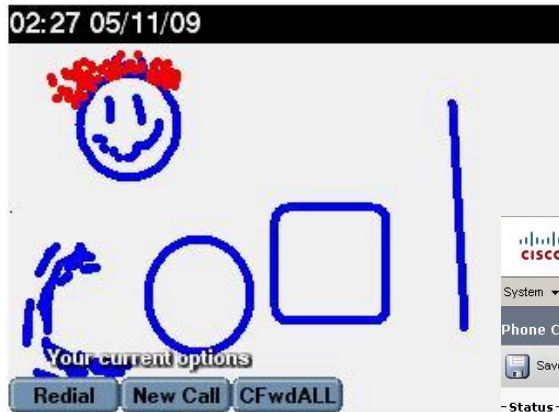
Controlled Profiles: 7960EM

Default Profile: -- Not Selected --
Presence Group*: Standard Presence group

**Placing a profile
in the “Controlled Profiles”
box successfully configures
that user for EM.**

- Config 1 - Phone without DN/User information configured

- Find a phone that hasn't been configured with a DN, or configure one accordingly (without the DN)



02:27 05/11/09

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

Navigation: Cisco Unified CM Administration | CCMAdministrator | About | Logout

System | Call Routing | Media Resources | Voice Mail | Device | Application | User Management | Bulk Administration | Help

Phone Configuration | Related Links: Back To Find/List

Save | Delete | Copy | Reset | Add New

-Status-
Update successful

Association Information		Phone Type	
Modify Button Items		Product Type:	Cisco 7971
		Device Protocol:	SCCP
Device Information		Registration	Registered with Cisco Unified Communications Manager 10.88.192.205
1	Line [1] - Add a new DN	IP Address	10.88.130.211
2	Line [2] - Add a new DN	MAC Address*	001E7AC407AC
3	Add a new SD	Description	Auto 7514
4	Add a new SD	Device Pool*	Default View Details
5	Add a new SD	Common Device Configuration	< None > View Details
6	Add a new SD	Phone Button Template*	Standard 7971 SCCP
7	Add a new SD	Softkey Template	< None >
8	Add a new SD	Common Phone Profile*	Standard Common Phone Profile
----- Unassigned Associated Items -----		Calling Search Space	< None >
9	Add a new SD	AAR Calling Search Space	< None >
10	Add a new SURL	Media Resource Group List	< None >
11	Add a new BLF SD	User Hold MOH Audio Source	< None >
12	Add a new BLF Directed Call Park	Network Hold MOH Audio Source	< None >
13	CallBack	Location*	Hub_None
14	Call Park	AAR Group	< None >
15	Call Pickup		

- Enable EM on the phone in the checkbox, and then associate it with a blank device profile or leave the -- Use Current Device Settings – Log Out Profile

Phone Configuration

Expansion Module Information

Module 1 < None >

Module 1 Load Name

Module 2 < None >

Module 2 Load Name

External Data Locations Information (Leave blank to use default)

Information

Directory

Messages

Services

Authentication Server

Proxy Server

Idle

Idle Timer (seconds)

Extension Information

Enable Extension Mobility

Log Out Profile 7971EM

Log In Time < None >

Log Out Time < None >

MLPP Information

MLPP Domain < None >

MLPP Indication* Default

MLPP Preemption* Default

Phone Configuration

Association Information

1. Add a new DN

2. Add a new DN

3. Add a new SD

4. Add a new SD

5. Add a new SD

6. Add a new SD

7. Add a new SD

8. Add a new SD

9. Unassigned Associated Items

10. Add a new SURL

11. Add a new BLF SD

12. Add a new BLF Directed Call F

13. CallBack

14. Call Park

15. Call Pickup

16. Conference List

17. Conference

Phone Type

Product Type: Cisco 7971

Device Protocol: SCCP

Device Information

Registration Registered with Cisco Unified Communications Manager 10.88.192.205

IP Address 10.88.130.211

MAC Address* 001E7AC407AC

Service Information

Service Subscription: New

Select a Service* EM

Service Description EM

Subscribed Services

EM

Subscribed Services

5. Add a new SD

6. Add a new SD

7. Add a new SD

8. Add a new SD

9. Unassigned Associated Items

10. Add a new SURL

11. Add a new BLF SD

12. Add a new BLF Directed Call Park

13. CallBack

14. Call Park

15. Call Pickup

16. Conference List

17. Conference

Description Auto 7514

Device Pool* Default

Common Device Configuration < None >

Phone Button Template* Standard 7971 SCCP

Softkey Template < None >

Common Phone Profile* Standard Common Phone Profile

Calling Search Space < None >

AAR Calling Search Space < None >

Media Resource Group List < None >

User Hold MOH Audio Source < None >

Network Hold MOH Audio Source < None >

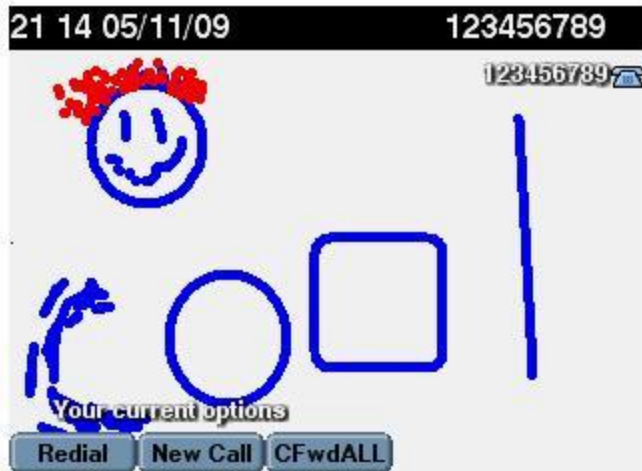
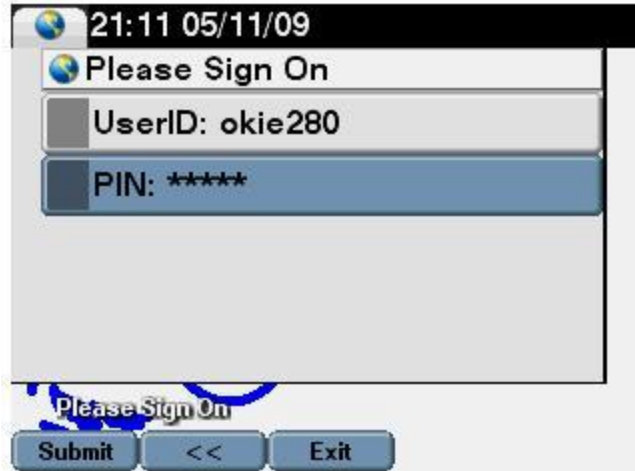
Location* Hub_None

AAR Group < None >

User Locale < None >

Network Locale

- Log in to the phone with the user/PIN that you prefer to test the setup, hit the “Services” button

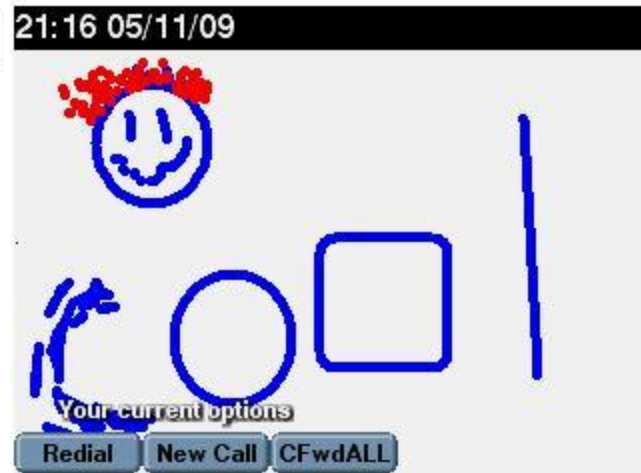
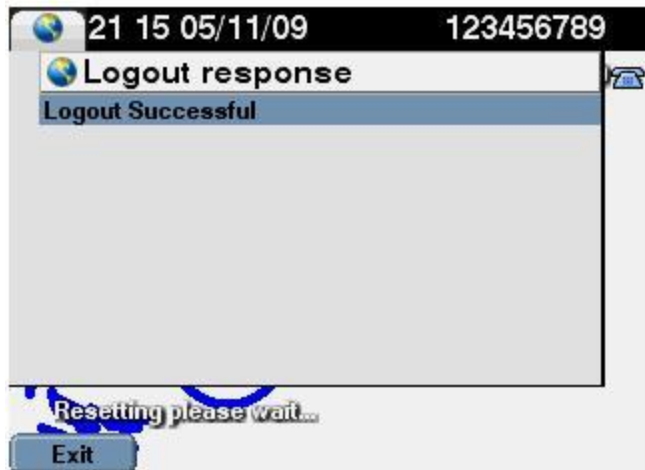


After logging in successfully you should be able to view the new DN/Device information that was placed on the Device Profile information

- Log out of the phone with the user/PIN that you prefer to test the setup, hit the “Services” button

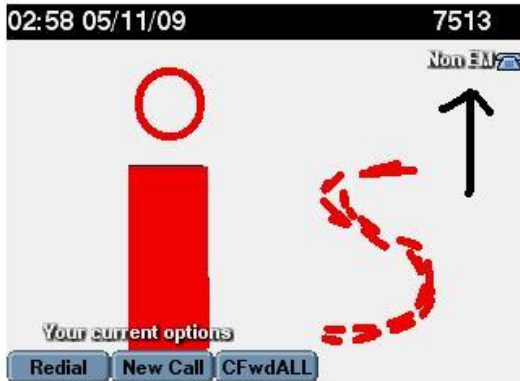


After logging out successfully you should see the screen you logged in to originally



- Config 2 Phone with DN/User information configured

- Find a phone that has been configured with a DN, or configure one accordingly (with any DN you wish)



A screenshot of the Cisco Unified CM Administration web interface. The page title is 'Cisco Unified CM Administration' and it is for 'Cisco Unified Communications Solutions'. The user is logged in as 'CCMAdministrator'. The navigation menu includes System, Call Routing, Media Resources, Voice Mail, Device, Application, User Management, Bulk Administration, and Help. The current page is 'Phone Configuration' for a specific phone. The 'Status' is 'Ready'. The 'Association Information' section shows a list of 16 items, including Line 1 (7513), Line 2 (Add a new DN), and various SD and BLF SD options. The 'Phone Type' section shows 'Product Type: Cisco 7971' and 'Device Protocol: SCCP'. The 'Device Information' section shows registration details, IP Address (10.88.130.3), MAC Address (001E4AF13511), and various configuration options like Device Pool (SUBPUB), Common Device Configuration (< None >), Phone Button Template* (Standard 7971 SCCP), Softkey Template (< None >), Common Phone Profile* (Standard Common Phone Profile), Calling Search Space (< None >), AAR Calling Search Space (< None >), Media Resource Group List (MRGL), User Hold MOH Audio Source (< None >), Network Hold MOH Audio Source (< None >), Location* (Hub_None), AAR Group (< None >), and User Locale (< None >).

- Enable EM on the phone in the checkbox, and then leave the -- Use Current Device Settings -- Log Out Profile

Phone Configuration

Expansion module information

Module 1 < None >

Module 1 Load Name

Module 2 < None >

Module 2 Load Name

External Data Locations Information (Leave blank to use default)

Information

Directory

Messages

Services

Authentication Server

Proxy Server

Idle

Idle Timer (seconds)

Extension Information

Enable Extension Mobility

Log Out Profile -- Use Current Device Settings --

Log in Time < None >

Log out Time < None >

MLPP Information

MLPP Domain < None >

MLPP Indication* Default

MLPP Preemption* Default

Do Not Disturb

Do Not Disturb

DND Option* Ringer Off

DND Incoming Call Alert < None >

Phone Configuration

Phone Type

Product Type: Cisco 7971

Device Protocol: SCCP

Device Information

Registration: Registered with Cisco Unified Communications Manager 10.88.192.207

IP Address: 10.88.130.3

MAC Address*: 001E4AF13511

Subscribed Cisco IP Phone Services for SEP001E4AF13511

Status: Ready

Service Information

Service Subscription: New

Select a Service*: -- Not Selected --

Service Description: EM

Subscribed Services

EM

Association Information

1 Line [1] - 7513 (no partition)

2 Line [2] - Add a new DN

3 Add a new SD

4 Add a new SD

5 Add a new SD

6 Add a new SD

7 Add a new SD

8 Add a new SD

9 Add a new URL

10 Add a new SURL

11 Add a new RLF SD

12 Add a new RLF Directed Call Park

13 CallBack

14 Call Park

15 Call Pickup

16 Conference List

17 Conference

Device Information

5 Auto 7513

6 SUBPUB

7 Common Device Configuration < None >

8 Phone Button Template* Standard 7971 SCCP

9 Softkey Template < None >

10 Common Phone Profile* Standard Common Phone Profile

11 Calling Search Space < None >

12 AAR Calling Search Space < None >

13 Media Resource Group List MRGL

14 User Hold MOH Audio Source < None >

15 Network Hold MOH Audio Source < None >

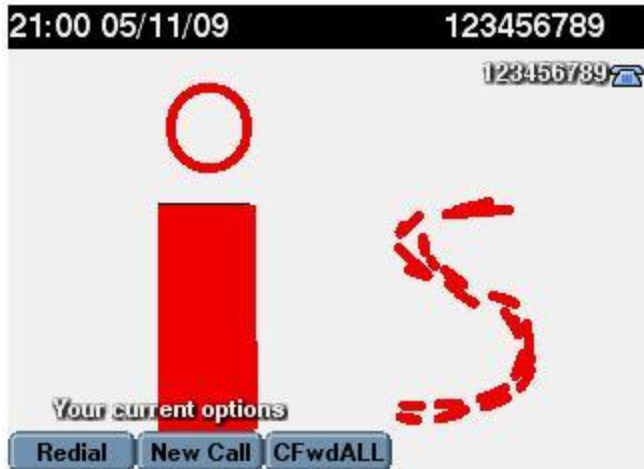
16 Location* Hub_None

17 AAR Location < None >

User Locale < None >

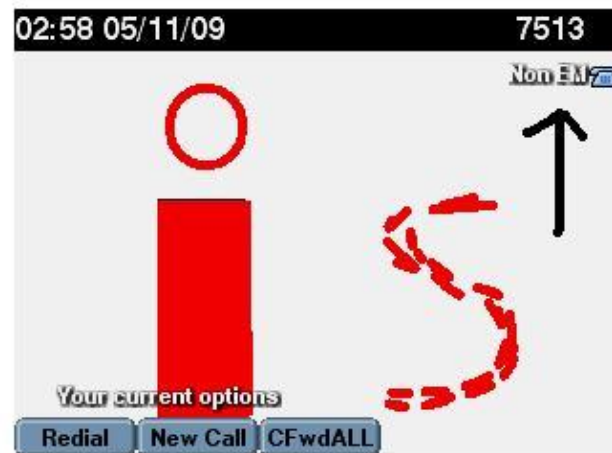
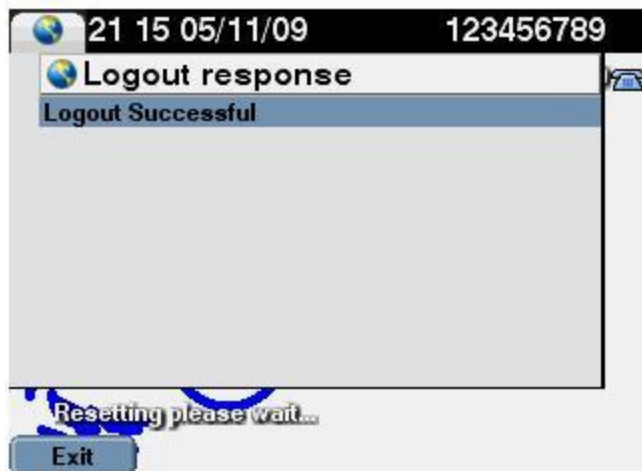
Network Locale < None >

- Log in to the phone with the user/PIN that you prefer to test the setup



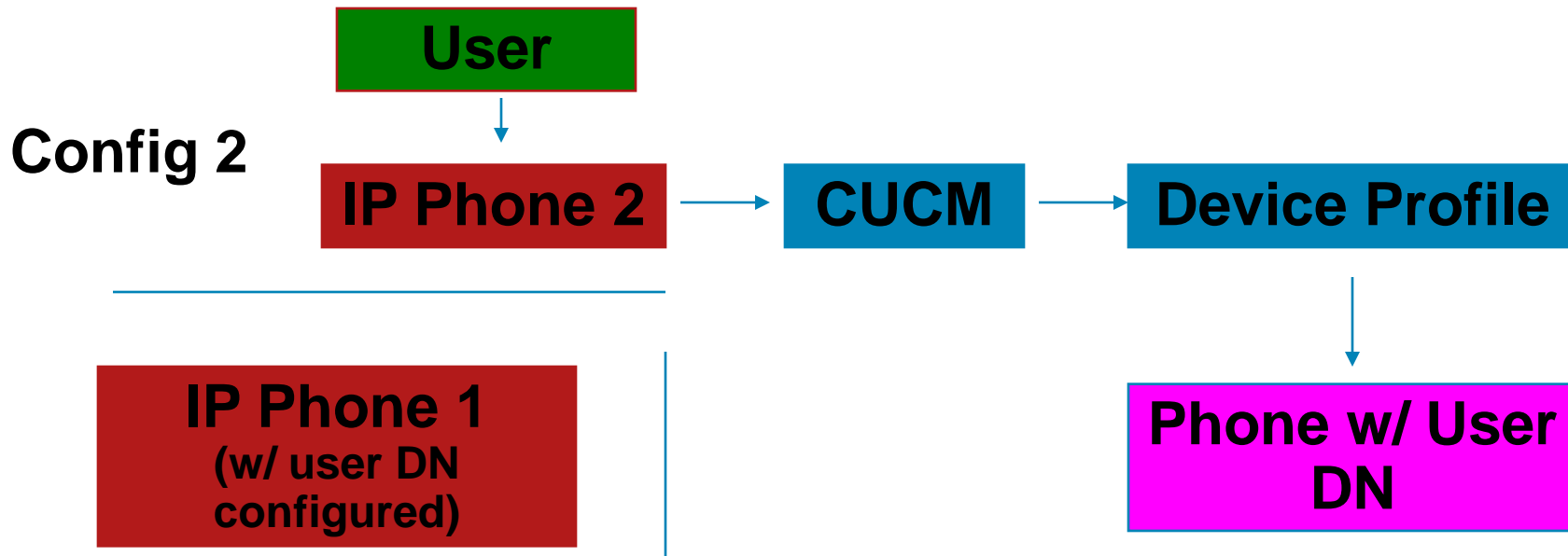
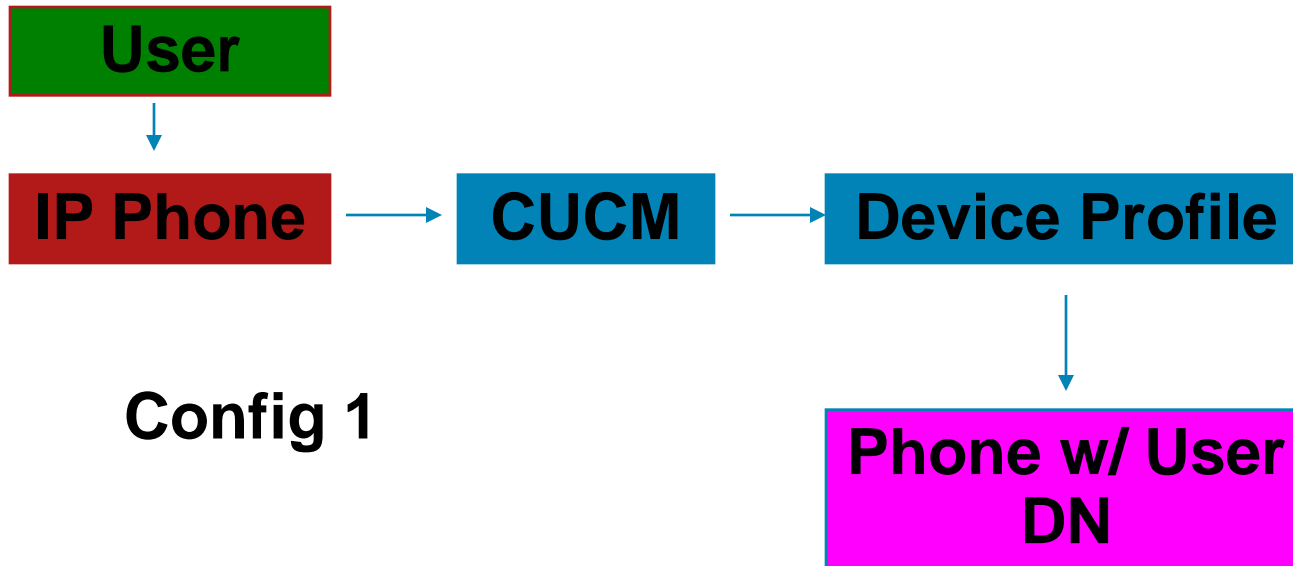
After logging in successfully you should be able to view the new DN/Device information that was placed on the Device Profile information

- Log out of the phone with the user/PIN that you prefer to test the setup, hit the “Services” button



IT WORKS!!

- Phone login/configuration flow:



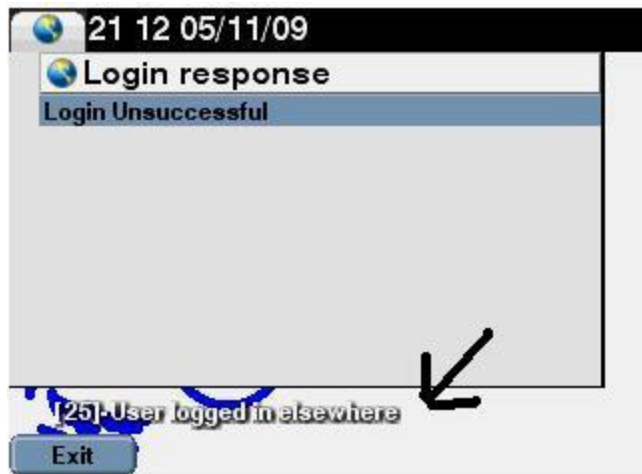
Common Problems & Troubleshooting



Common Problems

- You can't see the EM feature after hitting the services button
 - You need to configure the EM service
 - You need to use the correct link (Slide 8)
 - Start/Restart the EM services on each node you are running
- You can't log in/out of the EM feature but you can see it after pressing the services button
 - You haven't subscribed the phones/device profiles to the service as needed (Slides 10, 13, 17)
 - You haven't associated a user to a device profile (Slide 11)

- You can't log in to EM and it shows the following information:



The above error is because you are logged in to EM on another Phone. You must go Log out of that phone First and then you can Log in elsewhere



The above error is because you haven't subscribed the phone or device profile to the EM profile. Once this is done you should be able to see the EM profile and log in correctly

- Traces to collect for different issues:
 - CallManager Traces (softkey enabled trace!)
 - Extension Mobility
 - Extension Mobility Application
 - TFTP
 - DBL mon

- The traces provided above should definitely be turned on to detailed mode and you would need to recreate the issue prior to taking the traces

**If you've reached this page and can read this,
EM probably isn't working...
Flip this over and visit www.cisco.com ☺**