



You make **possible**



Top Ten Tips for Deploying Cisco Phones in the Cloud

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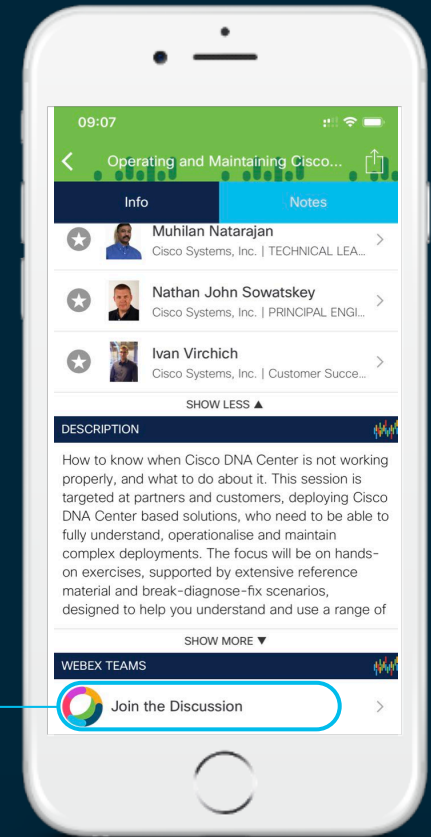
Cisco Webex Teams

Questions?

Use Cisco Webex Teams to chat with the speaker after the session

How

- 1 Find this session in the Cisco Events Mobile App
- 2 Click “Join the Discussion”
- 3 Install Webex Teams or go directly to the team space
- 4 Enter messages/questions in the team space

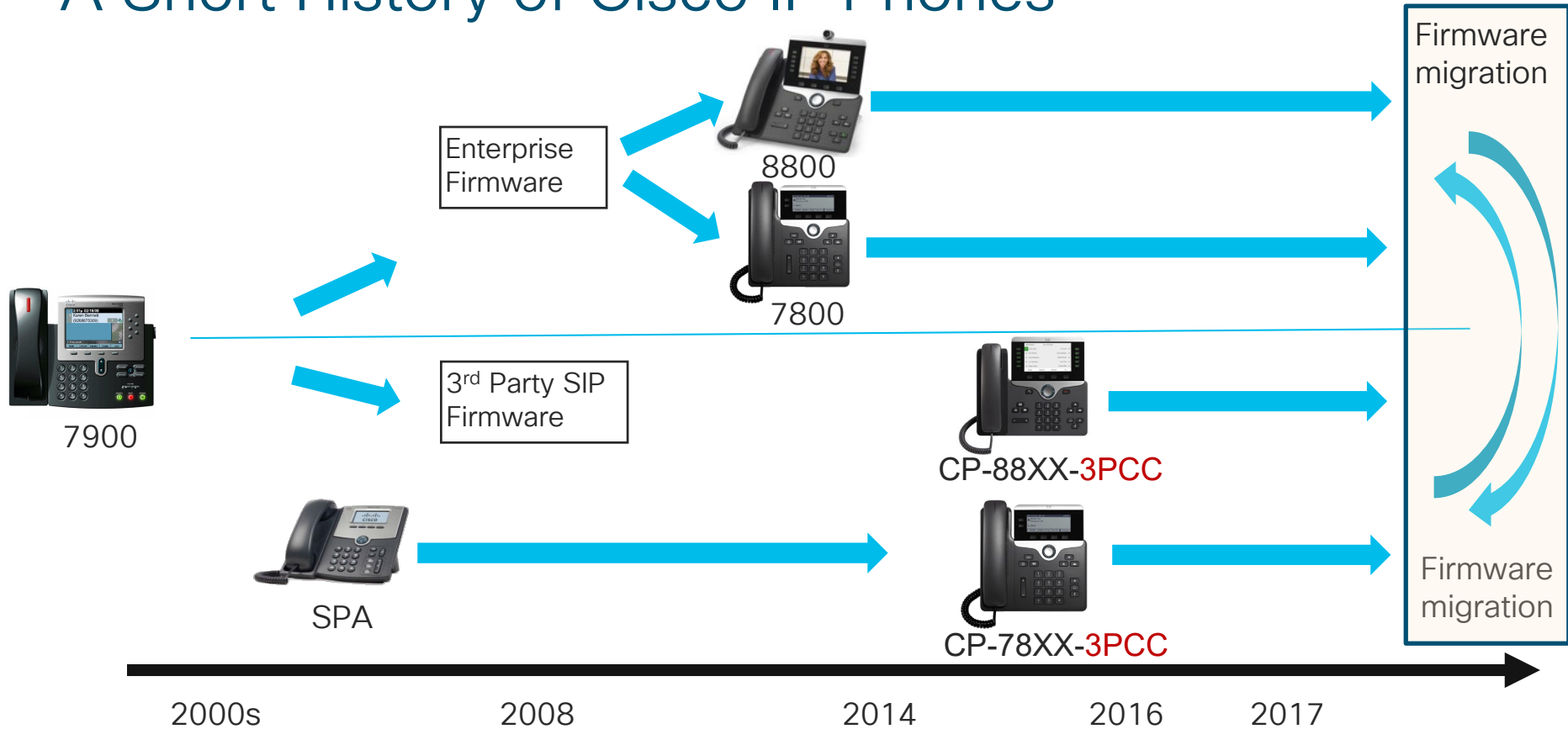


Agenda

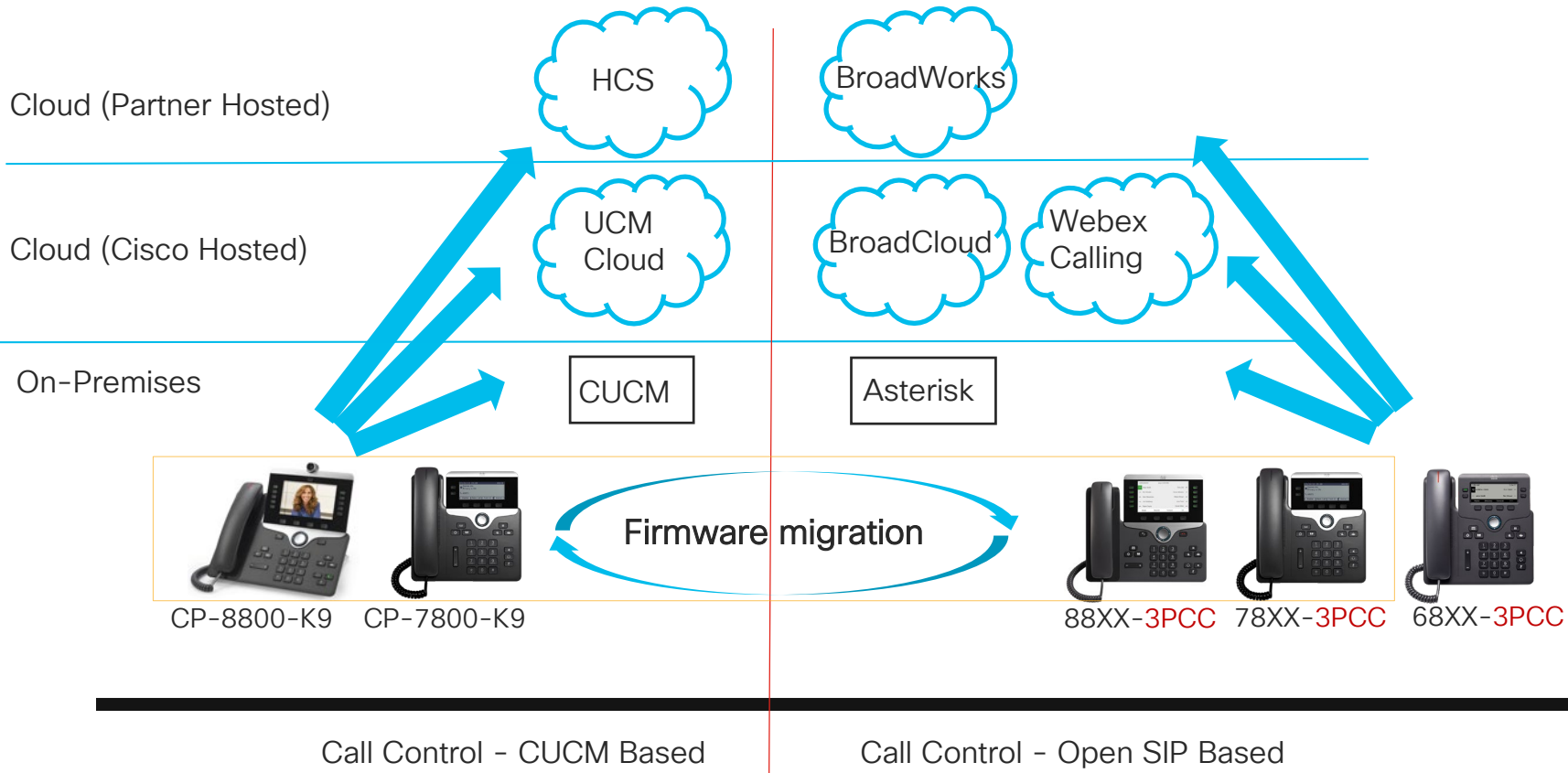
1. Understand MPP
2. Look at the 6800 series
3. Learn the Web-UI of MPP firmware
4. Know the boot sequence
5. Enable CDA/EDOS
6. Explore the firmware migration options for 7800/8800
7. Go to [Upgrade.cisco.com](https://upgrade.cisco.com)
8. Use Activation Codes
9. Deploy 11.3 Firmware
10. Read and Write NFC on MPP

1. Understand MPP

A Short History of Cisco IP Phones



A Short History of Cisco IP Phones



What are Multiplatform Phones?

<http://www.cisco.com/go/mpp>

- Multiplatform Phone (MPP)
- Phones for open SIP environments
- The MPP product line will connect to:
 - Webex Calling
 - BroadSoft-based call control:
 - BroadWorks
 - BroadCloud
 - Open SIP Platforms such as Asterisk

Has **more in common** with Cisco SPA phones than they do with CUCM enterprise firmware. Cisco SPA phones were....

- Developed primarily for service providers
- Popular with 3rd-party call control
- **Standards-based**, RFC3261 and related RFCs
- **Highly configurable** (> 1,600 **exposed** parameters on phone)
- Highly provisionable (leader in the industry), also with TR-069
- Configurable via LCD, web-UI, or config file

Firmware Migration Options for 7800/8800

CP-78XX-K9=
CP-88XX-K9=



Migration Permitted
from Enterprise to MPP
firmware or vice-verse



CP-78XX-3PCC-K9=
CP-88XX-3PCC-K9=



- Existing on-premise phone migration permitted
- Buying new phones and immediately migrating is not permitted
- Costs waived under an eligible Flex plan

Cisco IP Phone 7800 Series

Key Features

CP-7811



CP-7821



CP-7841



CP-7861



Replaceable Bezel	✓	✓	✓	✓
Screen	384 x 106 Mono (3.28")	396 x 162 Mono (3.5")	396 x 162 Mono (3.5")	396 x 162 Mono (3.5")
Ethernet Switch	10/100	10/100	10/100/1000	10/100
Programmable Line Keys	N/A	2	4	16
Programmable Soft Keys	4	4	4	4
Headset Port	N/A	✓	✓	✓
EHH Support (AUX)	N/A	✓	✓	✓
Full Duplex Speakerphone	✓ (Narrowband)	✓	✓	✓
Wideband Audio	Available with additional wideband handset	✓	✓	✓
POE Class	1	1	1	1
Protocols	SIP	SIP	SIP	SIP

Cisco IP Phone 8800 Series

Key Features



CP-8811

CP-8841



CP-8845



CP-8851

CP-8861



CP-8865

Display	800 x 480 Greyscale(5")	800 x 480 WVGA (5")	800 x 480 WVGA (5")	800 x 480 WVGA (5")	800 x 480 WVGA (5")	800 x 480 WVGA (5")
Ethernet Switch	10 / 100 / 1000	10 / 100 / 1000	10 / 100 / 1000	10 / 100 / 1000	10 / 100 / 1000	10 / 100 / 1000
Programmable Line Keys	5 x 5	5 x 5	5 x 5	5 x 5	5 x 5	5 x 5
Programmable Soft Keys	4	4	4	4	4	4
Headset Port (RJ9)	✓	✓	✓	✓	✓	✓
EHS Support	✓	✓	✓	✓	✓	✓
Full Duplex Speakerphone	✓	✓	✓	✓	✓	✓
Wideband Audio	✓	✓	✓	✓	✓	✓
Integrated Bluetooth			✓	✓	✓	✓
USB				✓	✓	✓
KEM Support				✓(2)	✓(3)	✓(3)
Wifi					✓	✓
External Audio Port					✓	✓
HD 720p Video			✓			✓
POE Class	2	2	2	4	4	4

2. Look at the 6800 Series

The Cisco lineup of multiplatform IP phones

Cloud Only

Cisco 6800 Series



- New family of entry-level phones
- The only IP phones exclusive to multiplatform
- Enterprise-grade quality with a user experience similar to the 7800/8800 Series

CUCM or Cloud

Cisco 7800 Series



- Ideal for lightly- to highly-active voice users
- High-quality wideband audio
- Easy-to-use
- Backlit grey scale displays
- Speakerphone on all models

Cisco 8800 Series



- Ideal for knowledge and administrative workers, managers, and executives
- Color display and Bluetooth
- Cisco Intelligent Proximity for smartphone integration
- Optional key expansion modules

MPP and Cisco Headset Integration



520 Series



530 Series



560 Series
Standard Base



560 Series
Multi Base



Cisco Headset 730 Series

End Users Can:

- Test your Headset Microphone with built-in test/playback utility
- Adjust Bass/Treble
- Adjust Gain
- Adjust Sidetone

Administrators can:

- Manage Firmware



Cisco IP Phones 6800 Series



	6821	6841	6851
Screen	240 x 120 Backlit Mono (2.5")	396 x 162 Backlit Mono (3.5")	396 x 162 Backlit Mono (3.5")
Ethernet Switch	10/100	10/100/1000	10/100/1000
Programmable Line Keys	2	4	4
Programmable Soft Keys	2	4	4
Headset Port	✓	✓	✓
EHH Support (AUX)			✓
Full Duplex Speakerphone		✓	✓
Wideband Audio		Handset Sold Separately	Handset Sold Separately
POE Class	2		2
Optional KEM			1
Footstand	Single, upright position	Single, upright position	Single, upright position
Wall Mount	✓	✓	✓

Cisco IP Phone 6861

- Made for install challenging environments – Asbestos, Stone Walls, etc.
- 4-Line IP Phone
- Dual-Band Embedded Wi-Fi support 802.11a/b/g/n
- AP Auto Scan
- Full spectrum of CODEC support including Opus



Cisco IP Phone 6871

- 3.5" color LCD screen (480x272)
- 6 Programmable Feature Keys
- Electronic Hook Switch (AUX)
- 1 x USB-A port
- POE
- 2 x RJ-45 10/100/1000 Ports



Cisco IP DECT 6825 Handset and 2110 Base Station

- Excellent Indoor / Outdoor Range
- Great Roaming / Mobility
- Secure Radio Communications
- No on-site expertise required
- Minimize installation costs, reduce time to dial tone
- Bluetooth and 3.5mm Headset jack
- Built-in Belt Clip



Comparing Multi-Cell and Single Cell DECT

Multi-Cell System

Single Cell System

Buildings, Retail, Factories, Etc.

Ideal For

Small Office, Home Office

Start Small, Pay As You Grow

Investment Protection

Start Small, Replace
Infrastructure

Slight Premium

Cost

Entry Level Pricing

Up to 1,000 Phones

Capacity

8-10 Phones Max (Typically)

Add Basestations, extend Range
and Capacity

Expansion

Add Repeaters to Extend Range,
Repeaters limit capacity

Seamless handoff between
basestations in the system

Mobility, Roaming

Roam within range of basestation
and repeaters

MPP 6800 series - DECT Deployment Guide

<https://community.cisco.com/t5/collaboration-voice-and-video/mpp-6800-series-dect-deployment-guide/ta-p/3996262>

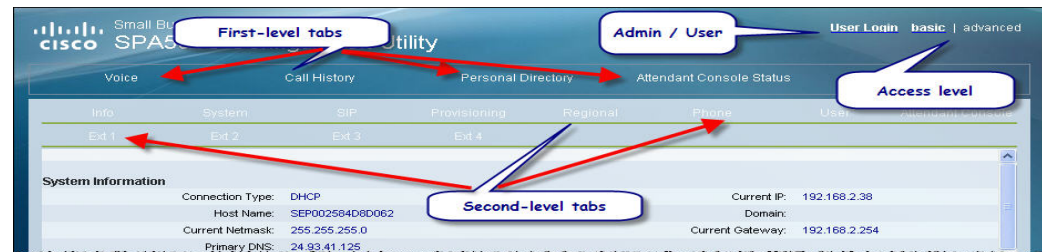
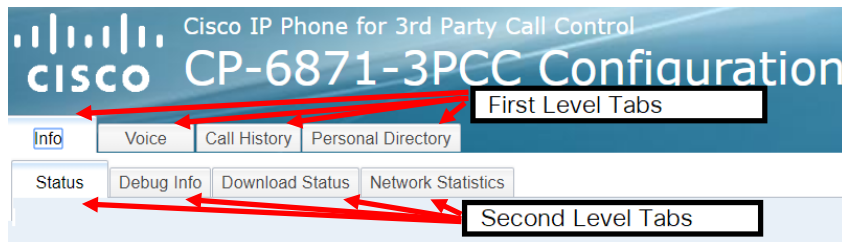
3. Learn the Web-UI

Configuration Similarity between MPP and SPA

- 6800/7800/8800 (MPP) and SPA Phones share similar interfaces
- User and Admin level access: Two tiers of authentication, each with basic/advanced
- User = http://ip-address-of-phone
- Admin = http://ip-address-of-phone/admin/advanced (this is preferred URL for configuring)

6800/7800/8800 (MPP)

Cisco SPA Phone



CISCO Live!

Web-UI MPP Main Tabs



Cisco IP Phone for 3rd Party Call Control

CP-6871-3PCC Configuration Utility

Info

Voice

Call History

Personal Directory

Status

Debug Info

Download Status

Network Statistics

Tab	Description
Info	Info Tab is used to show phone's information. It contains sub-tabs: Status, Debug info, Download Status, Network Statistics
Voice	Voice Tab is used to set System, SIP, Provisioning, Regional, Phone, Extension, User and Attendant Console parameters.
Call History	Call History Tab is used to show call history for placed calls, missed calls and incoming calls.
Personal Directory	Personal Directory Tab is used for creating and updating the entries for personal address book.

Web-UI MPP Main Tabs



Cisco IP Phone for 3rd Party Call Control

CP-6871-3PCC Configuration Utility

Info

Voice

Call History

Personal Directory

Status

Debug Info

Download Status

Network Statistics

Tab	Description
Info	Info Tab is used to show phone's information. It contains tsub-tabs: Status, Debug info, Download Status, Network Statistics
Voice	Voice Tab is used to set System, SIP, Provisioning, Regional, Phone, Extension, User and Attendant Console parameters.
Call History	Call History Tab is used to show call history for placed calls, missed calls and incoming calls.
Personal Directory	Personal Directory Tab is used for creating and updating the entries for personal address book.

Manually Registering a Phone

- Specify the 3PCC server and populate authentication parameters. These are typically:
- Proxy and Outbound Proxy (if required)
- User ID, Password, Auth ID
- Reversed Auth Realm (if required)

The screenshot shows a web interface for configuring a phone. The top navigation bar includes tabs for 'Info', 'Voice', 'Call History', and 'Personal Directory'. Below this is a sub-navigation bar with tabs for 'System', 'SIP', 'Provisioning', 'Regional', 'Phone', and a series of extension tabs labeled 'Ext 1' through 'Ext 6', 'User', 'Att Console', and 'TR-069'. The 'Ext 1' tab is currently selected.

The main content area is divided into two sections:

Proxy and Registration

Proxy:	<input type="text"/>	Register:	<input type="text" value="Yes"/>
Outbound Proxy:	<input type="text"/>	Register Expires:	<input type="text" value="3600"/>
Alternate Proxy:	<input type="text"/>	Use DNS SRV:	<input type="text" value="No"/>
Alternate Outbound Proxy:	<input type="text"/>	Proxy Fallback Intvl:	<input type="text" value="3600"/>
Use OB Proxy In Dialog:	<input type="text" value="Yes"/>	Dual Registration:	<input type="text" value="No"/>
Make Call Without Reg:	<input type="text" value="No"/>	TLS Name Validate:	<input type="text" value="Yes"/>
Ans Call Without Reg:	<input type="text" value="No"/>		
DNS SRV Auto Prefix:	<input type="text" value="Yes"/>		
Proxy Redundancy Method:	<input type="text" value="Normal"/>		
Auto Register When Failover:	<input type="text" value="No"/>		

Subscriber Information

Display Name:	<input type="text"/>	User ID:	<input type="text"/>
Password:	<input type="text"/>	Auth ID:	<input type="text"/>
Reversed Auth Realm:	<input type="text"/>	SIP URI:	<input type="text"/>

Manually Upgrading MPP Phones

- Populate the path to the firmware
 - Voice->Provisioning->Firmware Upgrade -> Upgrade Rule
- Submit All Changes
- The Upgrade Rule can use tftp, http, or https
- File must be a *.loads file
- Example: <tftp://192.168.1.1/sip88xx.11-3-1MPP-697.loads>

Firmware Upgrade	
Upgrade Enable:	<input type="button" value="Yes"/> ▾
Upgrade Rule:	<input type="text"/>

Cisco Tech Talk: MPP Manual Upgrade Example
<https://www.youtube.com/watch?v=a0nheo8jBTg>

Direct Action URLs, Speed Dials, BLF

Screenshot	http://ip_address_phone/admin/screendump.bmp
XML Configuration	http://ip_address_phone/admin/cfg.xml
Reboot	http://ip_address_phone/admin/reboot
Log File	http://ip_address_phone/admin/log.tar
Upgrade	http://ip_address_phone/admin/upgrade?http://my_upgrade_server.com/loads/sip88xx.11.3.1MPP-697.loads
Status	http://ip_address_phone/admin/status.xml

To disable the web server or direct action URL: MPP -> Voice -> System

Speed Dial Example: `fnc=sd;ext=1001@172.16.1.10;vid=1;nme=Albert`

Busy Lamp Field Example: `fnc=blf;sub=George@172.16.1.10;usr=1001@172.16.1.10`

Cisco Tech Talk: Busy Lamp Field (BLF)

https://www.youtube.com/watch?v=aI_0qCSWabU

Cisco Tech Talk: Set an MPP Speed Dial

<https://www.youtube.com/watch?v=AHh70pN6Amo>

4. Know the Boot Sequence

Boot Process Overview

MPP 7800/8800 factory-fresh device performs DHCP DISCOVER

DHCP Options affect behavior [66, 159, 160, 150]



DHCP option 66 [TFTP server's IP address]

DHCP option 159 [Server's IP address, default protocol HTTPS]

DHCP option 160 [Server's name, default protocol HTTPS]

DHCP option 150 [Cisco current usage]

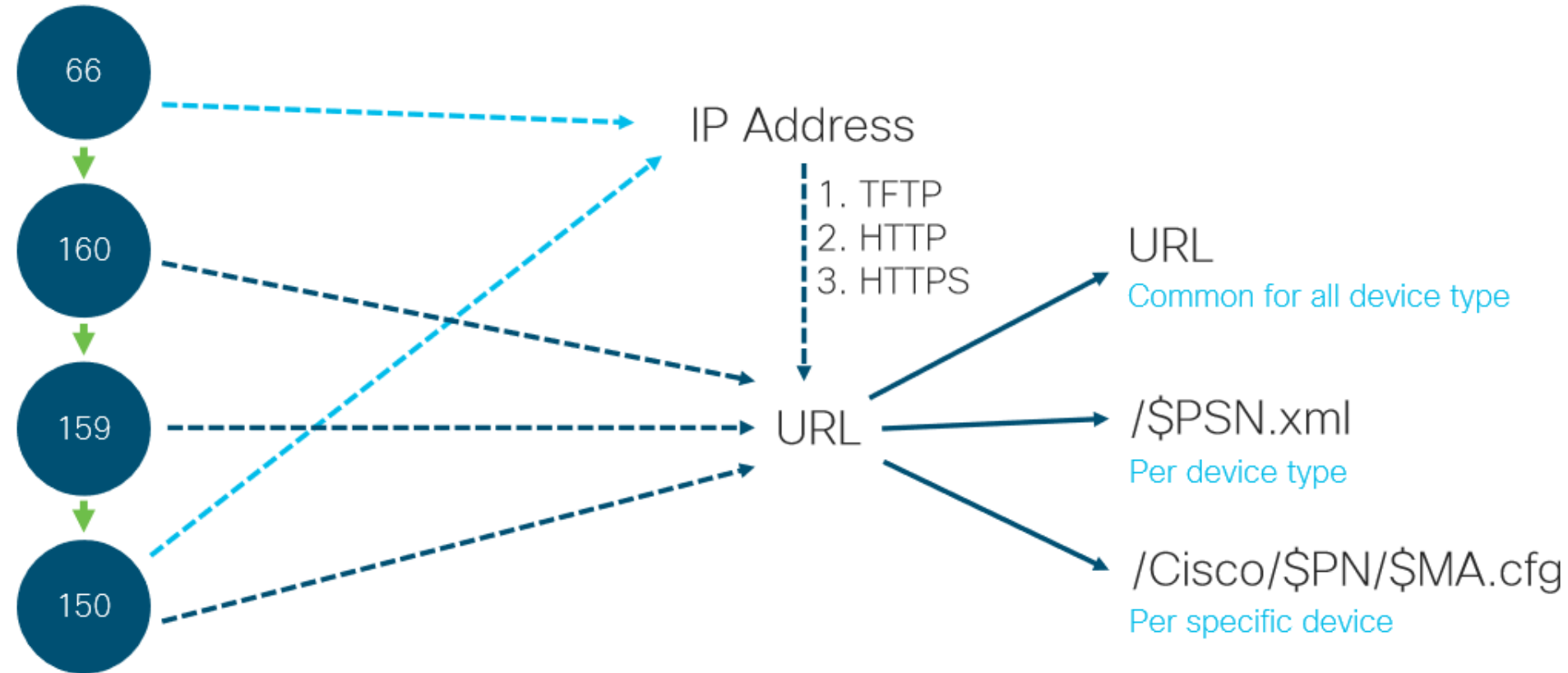


By default the phone has a profile that requests the PSN [Product Series Number] xml file from the configuration server

Profile Rule:	<input type="text" value="/\$PSN.xml"/>
Profile Rule B:	<input type="text"/>
Profile Rule C:	<input type="text"/>

This is a screenshot of the default phone profile rule as viewed on the phone's Web-UI page

MPP Firmware – DHCP options



Boot Sequence Overview (without DHCP Option)

Wireshark capture of 8851 (MPP) booting up after a factory reset

1. Phone has been factory reset
2. Phone receives no DHCP Option 150
3. Then queries activate.cisco.com*
4. There is no configuration in the Cisco Cloud. Phone shows activation code screen.

Profile Rule:	/\$PSN.xml
Profile Rule B:	
Profile Rule C:	

133	68.915502	10.0.0.210	75.75.75.75	DNS	78	Standard query 0xd0b1 AAAA	activate.cisco.com
134	68.915807	10.0.0.210	75.75.76.76	DNS	78	Standard query 0xd0b1 AAAA	activate.cisco.com
152	69.126555	10.0.0.210	75.75.75.75	DNS	78	Standard query 0x1656 AAAA	activate.cisco.com
153	69.126556	10.0.0.210	75.75.76.76	DNS	78	Standard query 0x1656 AAAA	activate.cisco.com
158	69.235485	10.0.0.210	72.163.10.134	TCP	66	53063 → 443 [ACK] Seq=1 Ack=1 Win=14600 Len=0	
165	69.591128	10.0.0.210	72.163.10.134	TLSv1.2	583	Client Hello	

Common Macros

\$PSN = Product Series Number

\$PN = Product Name

\$MA = MAC address



URL/\$PSN.xml

Per device type

URL/Cisco/\$PN/\$MA.cfg

Per specific device

* 11.3.1 MPP firmware

Boot Sequence Overview (with DHCP Option)

Wireshark capture of 8851 (MPP) booting up after a factory reset

1. Phone has been factory reset
2. Phone receives DHCP Option 150 but receives no MPP configuration
3. Phone queries activate.cisco.com *after* \$PSN.xml and Cisco/\$PN/\$MA.cfg
4. There is no configuration in the Cisco Cloud. Phone shows activation code screen.

Profile Rule:	/\$PSN.xml
Profile Rule B:	
Profile Rule C:	

622	136.195317	10.64.14.117	10.93.245.62	TFTP	94	Read Request, File: 8851-3PCC.xml, Transfer type: octet,
722	156.233893	10.64.14.117	10.93.245.62	TFTP	116	Read Request, File: Cisco/CP-8851-3PCC/b000b4bba1d2.cfg,
814	176.257245	10.64.14.117	10.93.245.62	TCP	74	52516 → 80 [SYN] Seq=0 Win=14600 Len=0 MSS=1460 SACK_PER
818	176.333362	10.64.14.117	10.93.245.62	TCP	74	52518 → 443 [SYN] Seq=0 Win=14600 Len=0 MSS=1460 SACK_PER
836	176.792712	10.64.14.117	8.8.8.8	DNS	78	Standard query 0x7084 AAAA activate.cisco.com
842	176.940287	10.64.14.117	72.163.10.134	TCP	66	50280 → 443 [ACK] Seq=1 Ack=1 Win=14600 Len=0 TSval=4294
843	177.297802	10.64.14.117	72.163.10.134	TLSv1.2	583	Client Hello

URL/\$PSN.xml

Per device type

URL/Cisco/\$PN/\$MA.cfg

Per specific device



Common Macros

\$PSN = Product Series Number

\$PN = Product Name

\$MA = MAC address

Macro Expansion Variables Details

As you can see a service provider can use different macros to have the phone do many things.

Examples:

Register a phone from scratch.
Phone can check to see if it needs to upgrade its software.



Parameter Name	Description and Default Value
\$	The form \$\$ expands to a single \$ character.
A through P	Replaced by the contents of the general purpose parameters GPP_A through GPP_P.
MA	MAC address using lower case hex digits, for example, 000e08aabbcc.
MAU	MAC address using upper case hex digits, for example 000E08AABBCC.
MAC	MAC address using lower case hex digits, and colons to separate hex digit pairs, for example 00:0e:08:aa:bb:cc.
PN	Product Name. For example, CP-7841-3PCC.
PSN	Product Series Number. For example, V03.
SN	Serial Number string, for example 88012BA01234.
CCERT	SSL Client Certificate status: Installed or Not Installed.
IP	IP address of the Cisco IP Phone within its local subnet, for example 192.168.1.100.
EXTIP	External IP of the Cisco IP Phone, as seen on the Internet, for example 66.43.16.52.
SWVER	Software version string. For example, sip78xx.10-3-1-1-3PCC.
HWVER	Hardware version string, for example 2.0.1
SCHEME	File access scheme, one of TFTP, HTTP, or HTTPS, as obtained after parsing resync or upgrade URL.
SERV	Request target server host name, as obtained after parsing resync or upgrade URL.
SERVIP	Request target server IP address, as obtained after parsing resync or upgrade URL, possibly following DNS lookup.
PORT	Request target UDP/TCP port, as obtained after parsing resync or upgrade URL.

5. Enable CDA/EDOS

Customer Device Activation (CDA)/
Cisco Enablement Data Orchestration System (EDOS)

Cloud Provisioning & Certificate Automation

Cloud Provisioning allows for no touch customization of Cisco 7800 and 8800 Phones

- After order is placed, endpoints may be shipped directly from Cisco distributor to end user
- No need to open the box and preconfigure endpoints = cost savings
- Makes subscriber account activation faster and easier

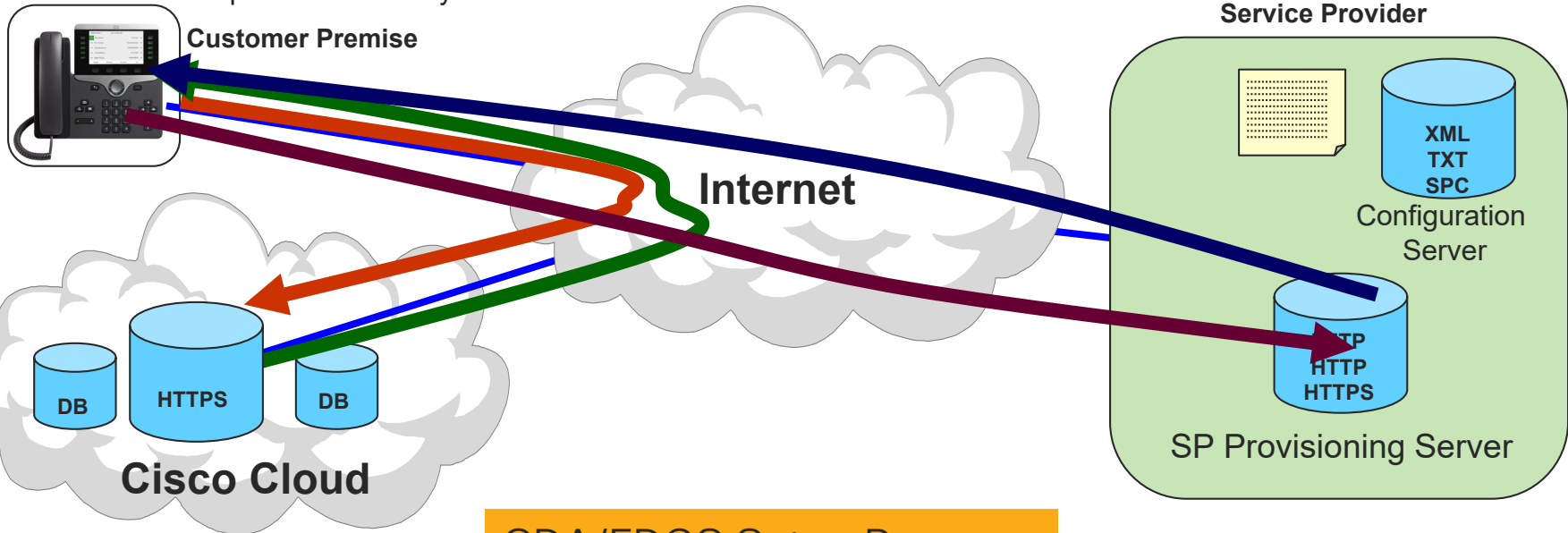
Certificate automation allows customers to:

- Implement security and authenticate phones connecting to their network



Cloud Provisioning

1. When Shipped, Cisco Notes MAC Address of Each Device Along With SP Server Address
2. This Information Is Stored by Cisco in Cisco Cloud
3. On First Power Up, Device “Calls Home” via HTTPS to Cisco Cloud
4. Cisco Cloud validates Unit’s ID belonging to SP, then provides SP Address
5. Unit is redirected to the SP Provisioning Server
6. All Subsequent Profile Resyncs Go To SP Server



CDA/EDOS Setup Process
<http://cs.co/edos-process>

Sample EDOS Redirection Profile

The Provisioning File is Minimal.

Contains Only Information Necessary to Allow the Device to Contact the Service Provider's Provisioning Server.

See the <http://cs.co/edos-process> for Details.

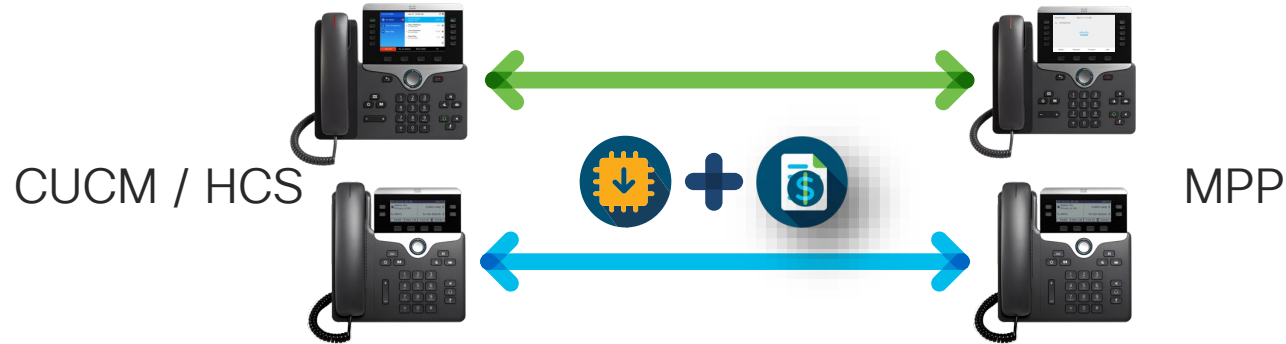
```
<?xml version="1.0" encoding="UTF-8"?>
<device>
<flat-profile>
<Profile_Rule>http://yourserver.com/$PSN.xml</Profile_Rule>
</flat-profile>
</device>
```

Cisco Tech Talk: EDOS Redirection Profile

<https://www.youtube.com/watch?v=09bzdcz2RR8>

6. Explore the firmware migration options for the 7800/8800 series

Firmware Migration – Available Now



Firmware



- Some exclusions for early 78xx
7841 v04 or later
7821/61 v03 or later
- 8821, 8831, 8851NR, 8865NR are excluded
- KEMs do not require migration

License



- Included in Flex
- Per device cost al-a-carte
- Locked to MAC Address
- Perpetual, one-way migration per license

Firmware Migration Process Overview

<http://cs.co/convert-phones>

Or you can type in this long URL ...

<https://www.cisco.com/c/dam/en/us/products/collateral/collaboration-endpoints/unified-ip-phone-7800-series/firmware-migration-master-guide.pdf>

Firmware Migration Process Details

Check Eligibility

Device eligibility Table 1 in <http://cs.co/convert-phones>
Flex plan eligibility in Table 4 <http://cs.co/convert-phones>

Order licenses

Appendix A and B in <http://cs.co/convert-phones>

Setup & Prepare

Obtain licenses and stage on-premise or in cloud*
Upgrade phones to latest enterprise firmware
Set DHCP Options to automate process
[Optional] CDA/EDOS Setup <http://cs.co/edos-process>

Migrate Phones

Upgrade phones to migration firmware in Table 6
Upgrade via CUCM or via DHCP options and cloud*
Once on migration firmware, the rest is automated

7. Go to [Upgrade.cisco.com](https://upgrade.cisco.com)



About

Conversion services



Enterprise->MPP Conversion

MPP->Enterprise Conversion

Upgrade services (Enterprise FW)



Upgrade 7800

Upgrade 8800

Upgrade DX

Upgrade services (Phone with
Multiplatform Firmware (MPP))



Upgrade 6800 / 7800 / 8800

FAQ

Enterprise to MPP Firmware Migration

This service allows customers and partners to perform authorized migration of Cisco IP Phones 78xx/88xx to MultiPlatform Phones(MPP) which is required for services like Webex Calling powered by BroadCloud.

After successful migration your phones will be converted to the MPP firmware version - **11-2-3MSR1-1**

Before you start, prepare for the migration:

- Verify if your phone model is eligible for this migration - [Firmware Migration guide](#).
- Obtain the E2M migration licenses(one license file per phone). Please refer to FAQ and Appendix on how to order licenses - [Firmware Migration guide](#).
- Check the current enterprise firmware version on your phones.
- This tool supports migration via manual or DHCP method. For large set of phones we recommend to use the DHCP Options in order to automate the process. Make sure that you can access your DHCP configuration.
- When adding MPP devices in Webex Control Hub, you have the choice of providing the MAC address of a device or generating an activation code. This tool supports both methods but there are different steps for each. Please make sure to follow the correct steps based on the provisioning method of your choice. For more details, refer to [Configure and Manage Webex Calling Devices](#).

Upgrade.cisco.com Enterprise -> MPP

Step 1. Upgrade Firmware

Ensure that your phones are running the latest enterprise firmware version. The minimum required version is **12.5(1)SR2**. You can use the features of Cloud Upgrader to upgrade your 78xx or 88xx phones to the required version.

Step 2. Upload Licenses

The license files are required to authorize and validate your eligibility to migrate the firmware. The following types of files are allowed to be uploaded:

- A single file per phone(.lic extension)
- A bundle of license files(.zip archives with multiple .lic files)
- Only ZIP archives are allowed and the maximum size is 30 MB

Upgrade.cisco.com Enterprise -> MPP

DHCP method(Code-based activation)

- Configure the DHCP Option **150** to **18.222.93.124**
- The phones will upgrade to the interim image first and then to the final MPP image after successful authorization.
- Skip Step 4 as it is not required for this method.
- As soon as the migration process is completed, each phone will prompt for an activation code.

DHCP method(MAC-based activation)

- Configure the phones in Webex Control Hub to register them immediately after the migration process is completed.
- Configure the DHCP Option **150** to **18.222.93.124**
- Configure the DHCP Option **160** to **http://18.222.93.124/Cisco/EDOS/\$PN/\$MA.cfg**
- The phones will upgrade to the interim image first and then to the final MPP image after successful authorization.
- Skip Step 4 as it is not required for this method.
- As soon as the migration process is completed, the phones should register to Webex Calling. You may need to reboot the phones or wait to resync the config if you add them in Webex Control Hub after the migration.

Upgrade.cisco.com Enterprise -> MPP

Manual method(MAC-based activation)

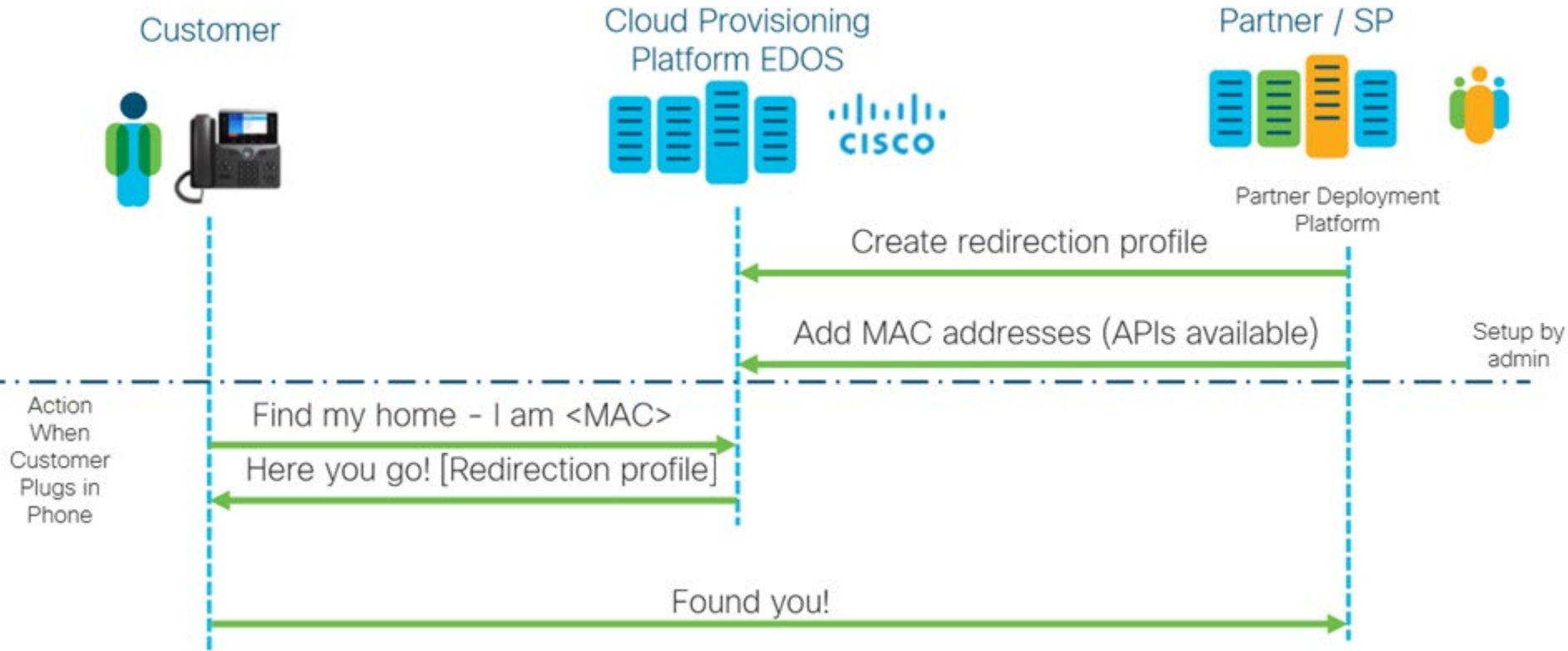
- Configure the phones in Webex Control Hub to register them immediately after the migration process is completed. **Skipping this step may result in the incomplete migration.**
- Configure Alternate TFTP to **18.222.93.124**
- As soon as the migration process is completed, the phone should register to Webex.

Manual method(Code-based activation)

- Configure Alternate TFTP to **18.222.93.124**
- The phones will upgrade to the interim image first and display "Failed to download configuration data. Contact your administrator"
- Navigate to `http://<Phone IP Address>/admin/advanced`.
- Select Voice > Provisioning.
- Enter the following "Profile Rule": **`http://18.222.93.124/Cisco/$PN/$MA.cfg`**
- Save and wait for the phone to reboot
- As soon as the migration process is completed, the phone will prompt for an activation code which you can generate in Webex Control Hub.

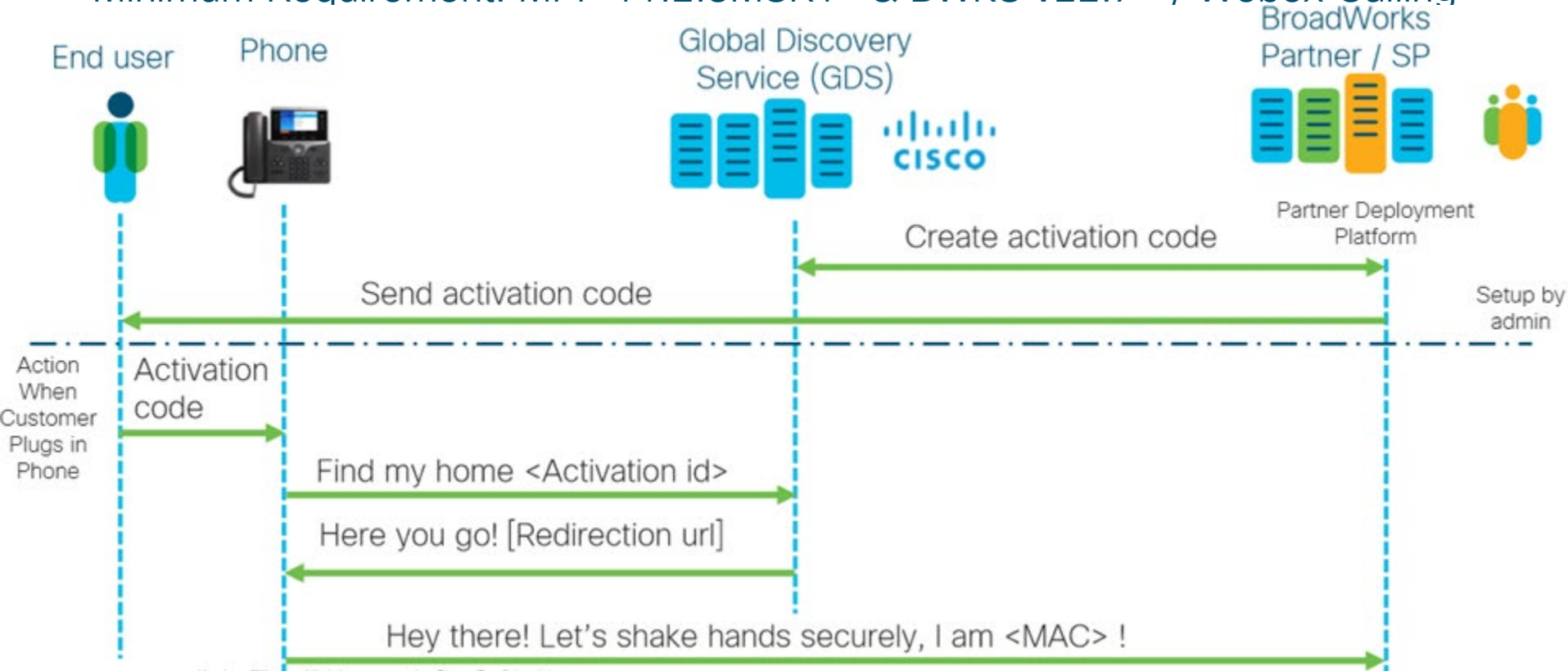
8. Use Activation Codes

Cloud Provisioning via CDA/EDOS



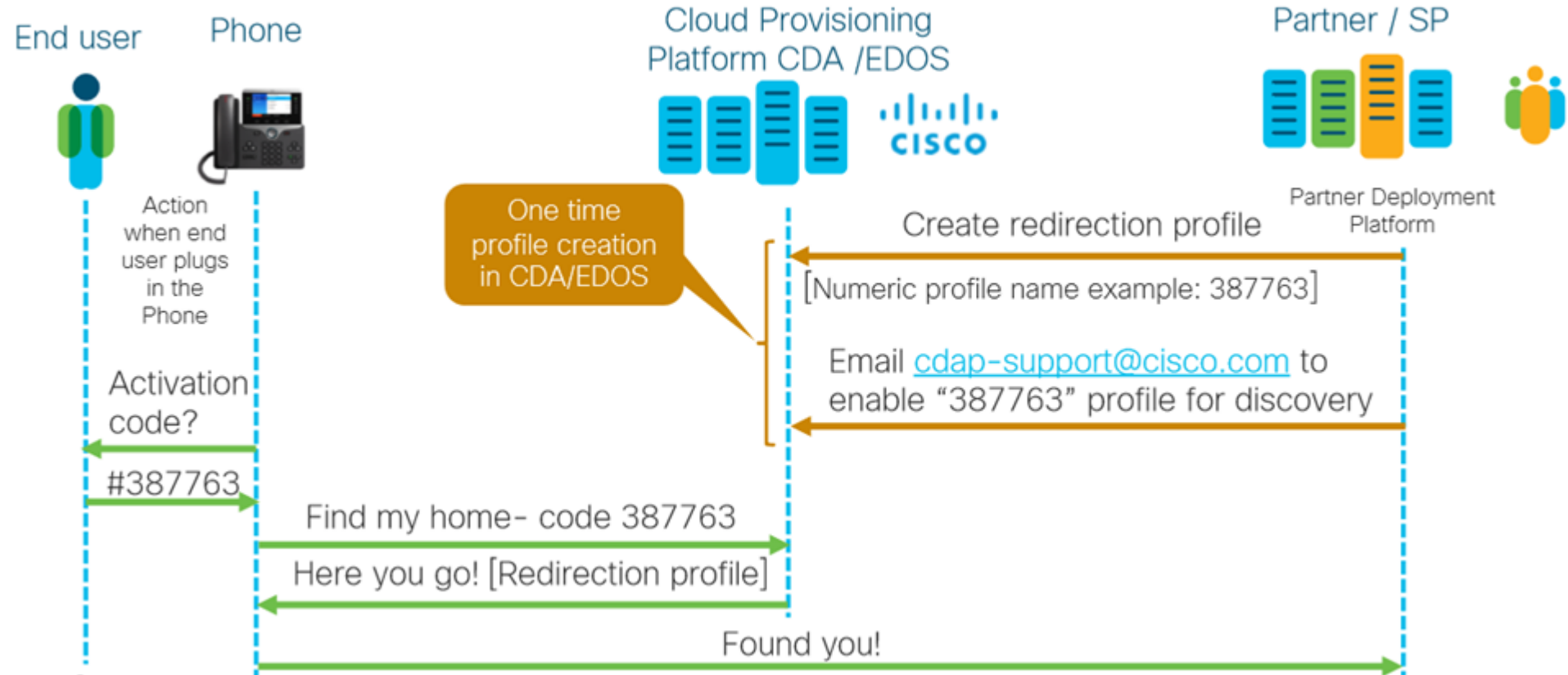
Onboarding via 16 digit unique Activation Code

Minimum Requirement: MPP 11.2.3MSR1+ & BWKS v22.7+ / Webex Calling



Onboarding via short static Activation Code

Minimum Requirement: MPP 11.3.1+



Webex Calling: Activation Codes versus Mac Address

Add Device

Select Device

Cisco 8861

How would you like to setup this device?

By Activation Code

By Mac Address

Add Device

Activation Code

An Activation Code is a **one time password**. Enter this code with the person setting up the Cisco 8861 device belonging to **User One**, or enter it yourself when prompted by the device. Once the device has been successfully activated, you will be able to find and configure it in Users or Devices.

5157-3625-5761-1331

Expires January 9, 2020 4:41 PM (PST)

[Copy](#) [Email](#) [Print](#)



A minimum firmware version of 11-2-3MSR1-1 is required to onboard a device via activation code. To upgrade the firmware for a device, go to [upgrade.cisco.com](https://www.cisco.com) to get the latest firmware.

Welcome

Enter activation code

5157-3625-5761-1331 ✓

Download in progress...

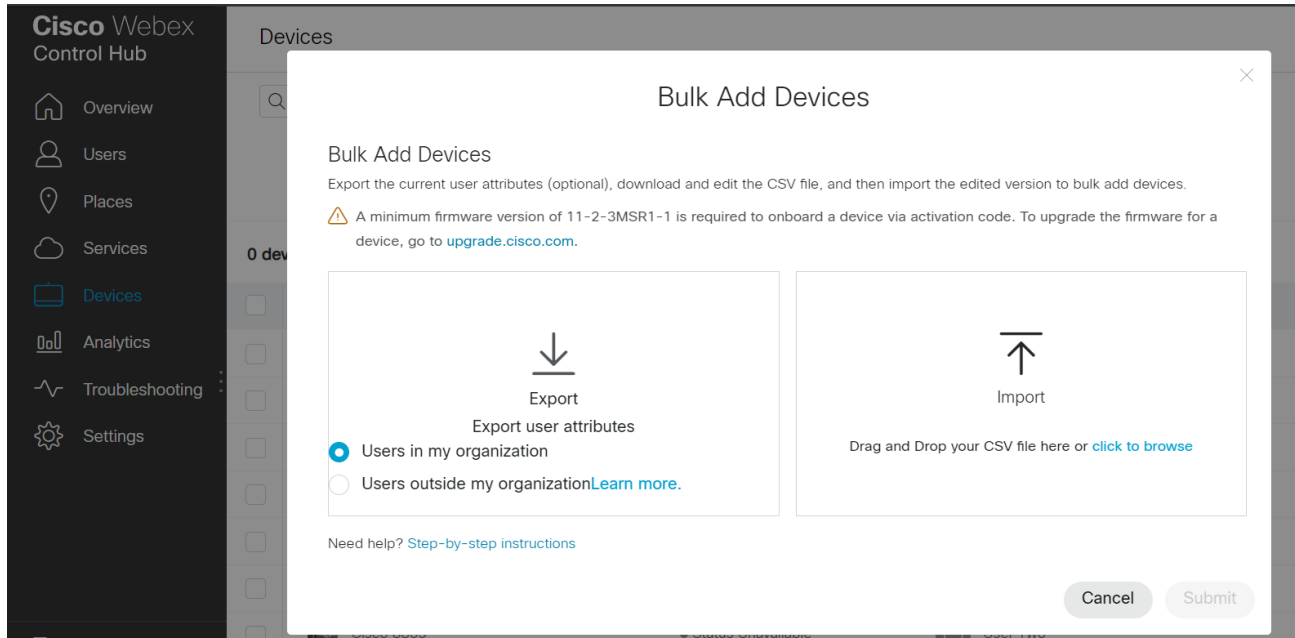
[Continue](#)



[Settings](#)

Webex Calling – Bulk Add

- As an administrator, you can assign devices to Users or Places in Webex Control Hub. You have the choice of providing the MAC address of a device or generating an activation code that must then be manually entered on the device itself.
- https://help.webex.com/en-us/n9r1aac/Configure-and-Manage-Webex-Calling-Devices#id_118912



The screenshot displays the Cisco Webex Control Hub interface. On the left is a dark sidebar with navigation icons and labels: Overview, Users, Places, Services, Devices (highlighted in blue), Analytics, Troubleshooting, and Settings. The main content area is titled 'Devices' and shows a list of devices, currently empty. A modal dialog box titled 'Bulk Add Devices' is open in the foreground. The dialog has a close button (X) in the top right corner. The title 'Bulk Add Devices' is centered at the top of the dialog. Below the title, the text reads: 'Bulk Add Devices' followed by 'Export the current user attributes (optional), download and edit the CSV file, and then import the edited version to bulk add devices.' A warning icon (triangle with exclamation mark) is followed by the text: 'A minimum firmware version of 11-2-3MSR1-1 is required to onboard a device via activation code. To upgrade the firmware for a device, go to [upgrade.cisco.com](https://www.cisco.com/upgrade).' The dialog is divided into two main sections. The left section is titled 'Export' and features a downward arrow icon. Below the icon, it says 'Export user attributes' and has two radio button options: 'Users in my organization' (which is selected) and 'Users outside my organization [Learn more.](#)'. The right section is titled 'Import' and features an upward arrow icon. Below the icon, it says 'Drag and Drop your CSV file here or [click to browse](#)'. At the bottom left of the dialog, there is a link: 'Need help? [Step-by-step instructions](#)'. At the bottom right, there are two buttons: 'Cancel' and 'Submit'.

9. Deploy MPP 11.3.1 features

MPP 11.3.1 Features

Remote SDK API

- WebSockets with Json

Security

- On Device Firewall
- Cipher Configuration
- Hostname verification over TLS
- Client Initiated Mediasec

Provisioning

- DNS SRV for HTTP Provisioning
- Short Activation Code
- Auto Start Wi-Fi Scan

Configuration

- Line Key LED Behaviour customization
- 10 Multicast Paging Config

Serviceability Messages

- Enhanced Serviceability Status Messages and Wi-Fi Status Messages
- Unique Device Identifier in Settings app

Call Quality Reports

- End of Call Stats in BYE & re-INVITE & SIP Session ID Support
- Customize SIP Publish Message

In-Call Enhancements

- One-button Call Park
- OPUS Narrowband
- RTP start before Ack for 200 OK
- DTMF RFC 4733 Support
- PSK with DTMF

Security – On-Device Firewall

Allows Admin to control incoming traffic responses

Stateful Firewall on Device

- Allows admin to better control device responses
- By default, existing functions are allowed
- All other incoming traffic is blocked



CISCO *Live!*

Cipher Configuration

Control which cipher suites are negotiated, disallow others

Hostname Verification over TLS

Certification verification can include Subject Alternative Name (SAN) & Common Name (CN) in all TLS connections

Client Initiated Mediasec

- Default supports Server Initiated Mode
- Follows RFC 3329 & Draft RFC “Security Mechanism Names for Media”
- Configuration to chose only over TLS

Firewall Configuration

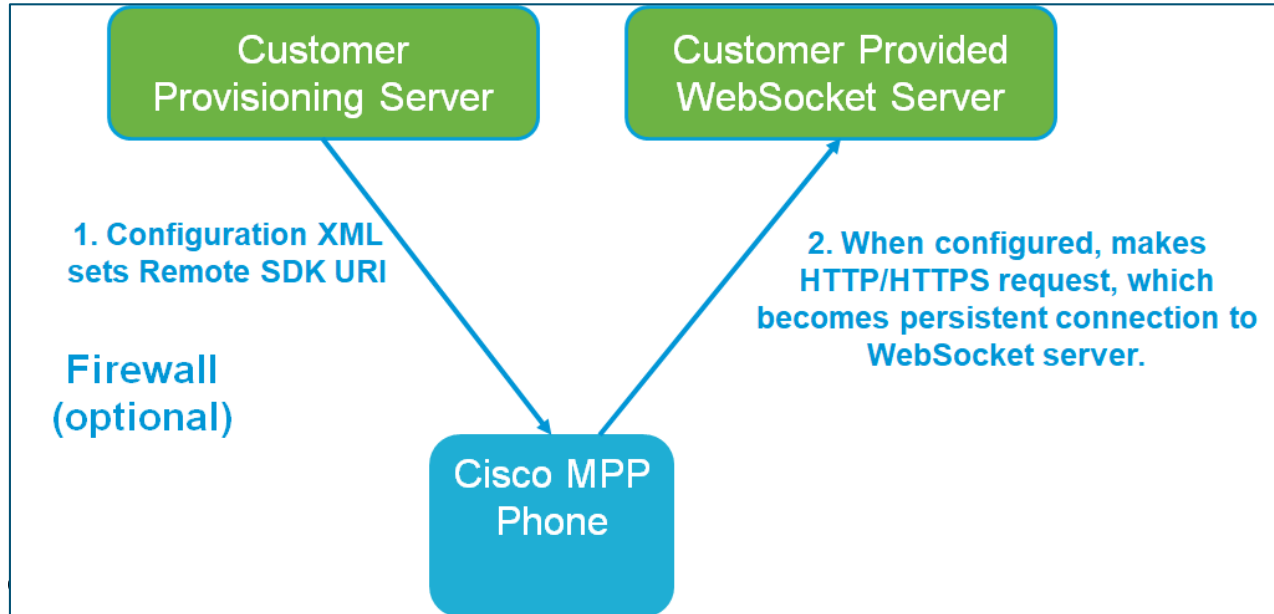
- Configuration via web interface (*Admin/Advanced* settings):
 - Voice → System → Security Settings → Firewall (Enabled/Disabled)
 - Voice → System → Security Settings → Firewall Options (...list...)
- Default configuration (firewall enabled, no extra options).
- Modified configuration with extra options. Example shows a comma separated list of 3 options:

The screenshot displays the Cisco IP Phone for 3rd Party Call Control CP-8851-3PCC Configuration Utility web interface. The top navigation bar includes the Cisco logo, the product name, and a 'User Login' section with 'basic' and 'advanced' options. Below the navigation bar, there are tabs for 'Info', 'Voice', 'Call History', and 'Personal Directory'. The 'Voice' tab is active, and within it, the 'System' sub-tab is selected. The 'Security Settings' section is visible, showing the following configuration:

TLS Cipher List:	<input type="text"/>
Firewall:	Enabled
Firewall Options:	NO_ICMP_PING,TCP:12000,UDP:8000:8010

Remote SDK in MPP Firmware 11.3.1

- Automate MPP phones for certification
- Qualify phone hardware faster
- Remotely monitor phone events
- Improves serviceability for deployed phones
- Cisco TAC can perform remote tests



Remote SDK Configuration

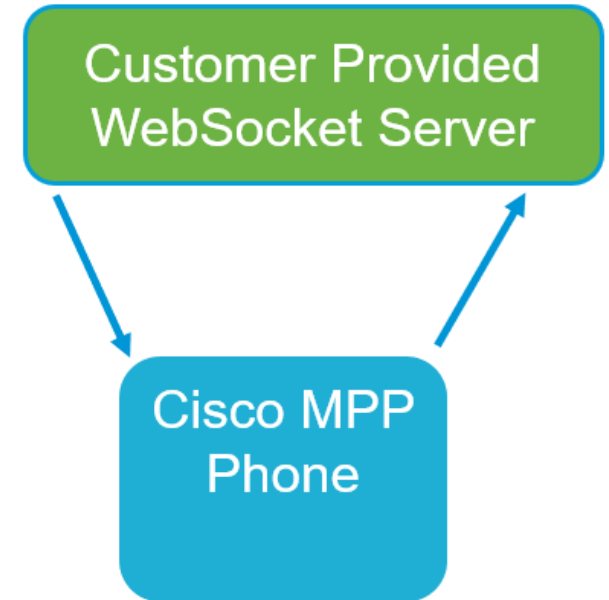
1. Server makes WebSocket request by sending JSON payload
2. Phone runs API
3. Result flows back as JSON payload

The screenshot shows the configuration page for a Cisco MPP Phone. The 'Phone' tab is selected, and the 'WebSocket API' section is highlighted with an orange border. The 'Broadsoft XMPP' section includes the following settings:

XMPP Enable:	No
Port:	5222
Password:	
Retry Intvl:	30

The 'WebSocket API' section includes the following settings:










Control Server URL:	
Allowed APIs:	.*



MPP Custom LEDs

Line Key LED Behavior Customization

- Full customization per state is possible
- Preset 1 matches Enterprise (CUCM)
- Default is current MPP behavior
- Voice -> Phone -> Line Key LED Pattern

	MPP (Default)	Enterprise (CUCM)	MPP LED CUSTOM (Profile 1)
Idle			
In a call			
Local Ring	 Flashing	 Flashing	 Flashing

Line Key LED Pattern

Custom LED Type:	Preset 1 ▾	Disabled LED:	c=0
Idle LED:	c=0	Remote Undefined LED:	c=0
Local Seized LED:	c=g	Remote Seized LED:	c=r
Local Progressing LED:	c=g	Remote Progressing LED:	c=r
Local Ringing LED:	c=a;p=b	Remote Ringing LED:	c=a;p=b
Local Active LED:	c=g	Remote Active LED:	c=r
Local Held LED:	c=g;p=b	Remote Held LED:	c=r;p=b
Register Failed LED:	c=0	Registering LED:	c=0

10 Multicast Paging Groups

- Up to 10 groups now available
- Each group must use a unique even numbered port between 1000 and 65534
- Set the paging priority

Priority

0 = Paging takes precedent over phone call

1 = Paging mixing audio with phone call

2 = Paging alerts, but active call must be put on hold or ended to answer page

3 = Paging is ignore when on an active call

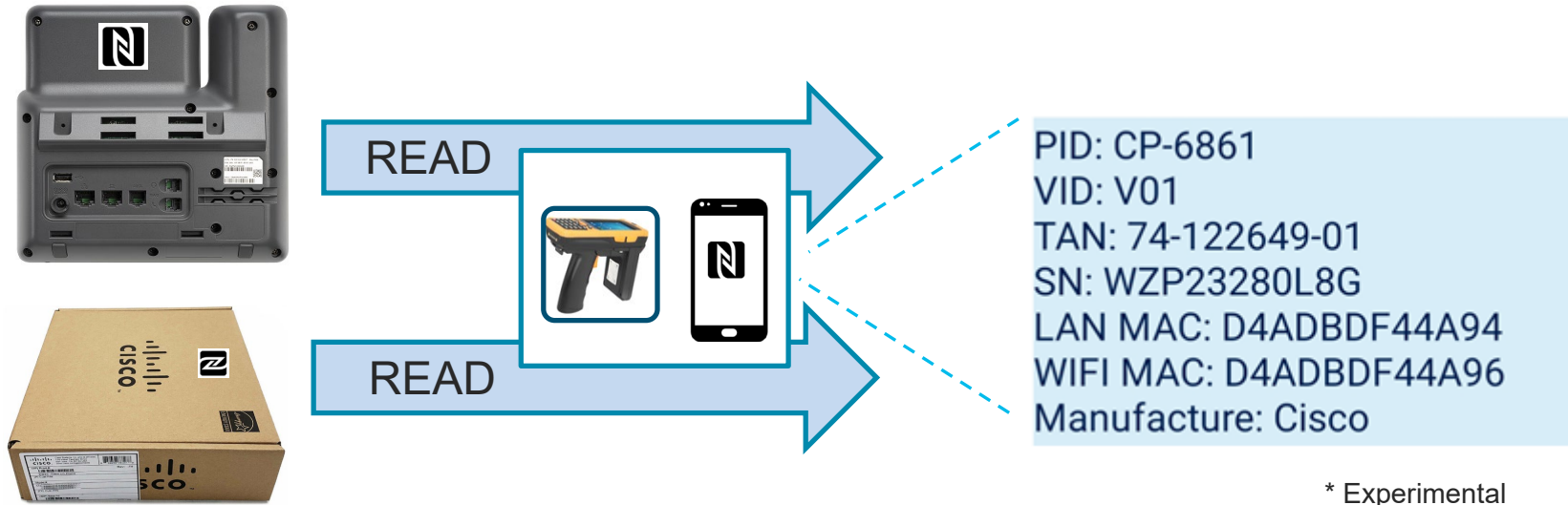
Multiple Paging Group Parameters

Group 1 Paging Script:	<code>pggrp=224.168.168.168:34560;name=Group_1;num=800;listen=yes;pri=1;codec=g722</code>
Group 2 Paging Script:	<code>pggrp=224.168.168.168:34558;name=Group_2;num=801;listen=yes;pri=1;codec=g722</code>
Group 3 Paging Script:	<code>pggrp=224.168.168.168:34556;name=Group_3;num=803;listen=yes;pri=1;codec=g722</code>
Group 4 Paging Script:	<code>pggrp=224.168.168.168:34554;name=Group_4;num=804;listen=yes;pri=1;codec=g722</code>
Group 5 Paging Script:	<code>pggrp=224.168.168.168:34552;name=Group_5;num=805;listen=yes;pri=1;codec=g722</code>
Group 6 Paging Script:	<code>pggrp=224.168.168.168:34550;name=Group_6;num=806;listen=yes;pri=1;codec=g722</code>
Group 7 Paging Script:	<code>pggrp=224.168.168.168:34548;name=Group_7;num=807;listen=yes;pri=1;codec=g722</code>
Group 8 Paging Script:	<code>pggrp=224.168.168.168:34546;name=Group_8;num=808;listen=yes;pri=1;codec=g722</code>
Group 9 Paging Script:	<code>pggrp=224.168.168.168:34544;name=Group_9;num=809;listen=yes;pri=1;codec=g722</code>
Group 10 Paging Script:	<code>pggrp=224.168.168.168:34542;name=Group_10;num=810;listen=yes;pri=1;codec=g722</code>

Use Case 1: Near-Field Communication (NFC)

- There is an NFC chip inside the 6861 and 6871
- You can **READ** the NFC chip with any NFC reader
- No need to take the phone out of the box

Use Case 1: Read Product Label Information & MIC with 1 NFC Reader

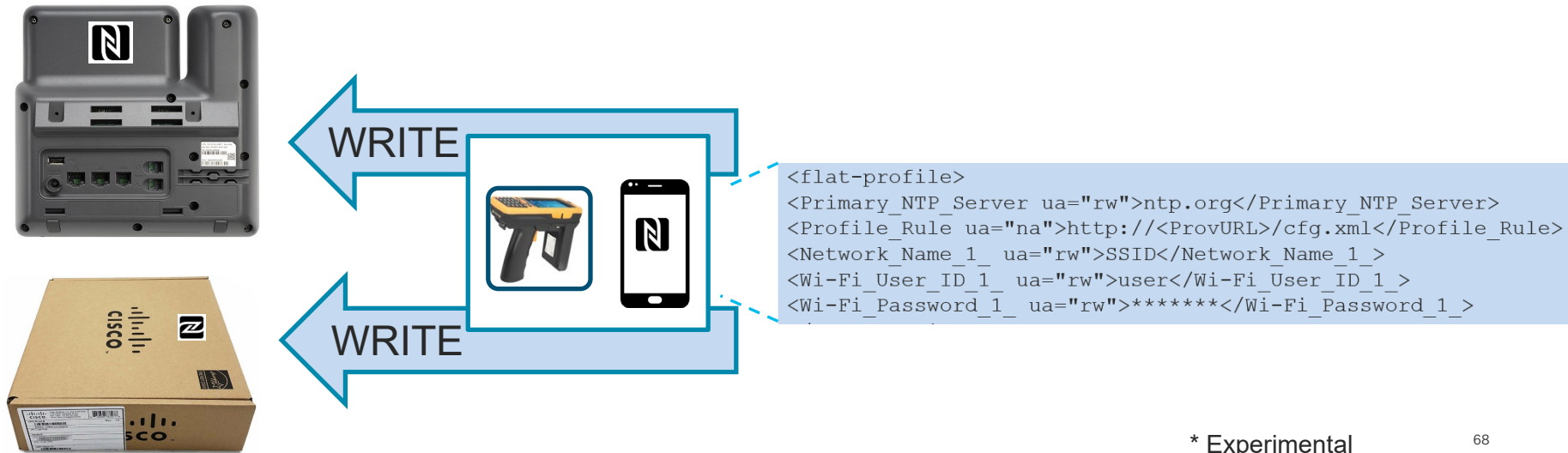


* Experimental

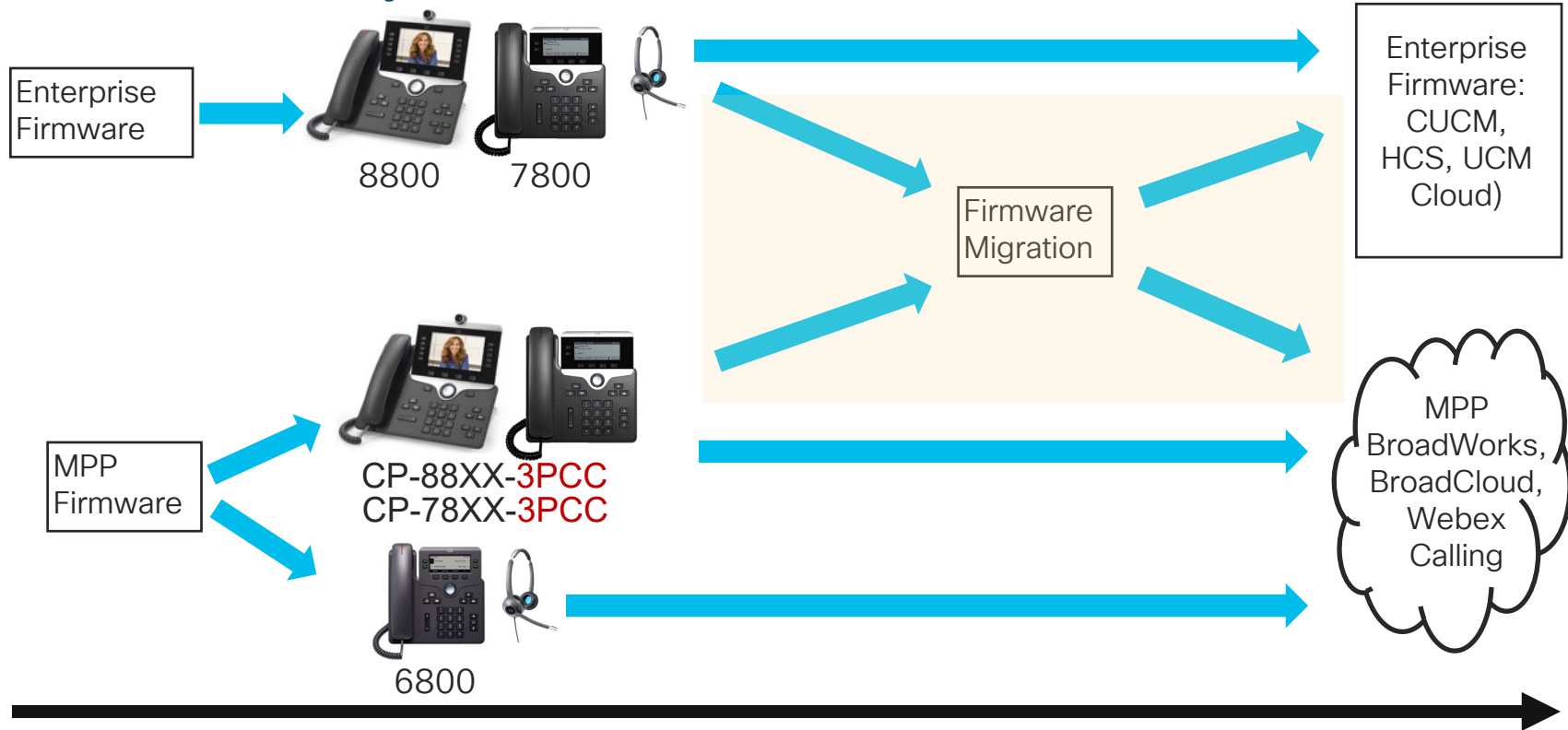
Use Case 2: Near-Field Communication (NFC)

- There is an NFC chip inside the 6861 and 6871
- You can **WRITE** a provisioning profile to the NFC chip
- No need to take the phone out of the box

Use Case 2: Write bootstrap provisioning with 1 write



A Short History of Cisco IP Phones



2020

Call to Action

- Head down to the World of Solutions and see these Multiplatform Phones in action
- Evaluate 11.3.1 on 68xx/78xx/88xx
- Evaluate EDA/EDOS and Activation Codes
- Continue to Post questions to the Webex Teams room
- Attend or view other Cisco Live sessions on demand at ciscolive.com:
 - Cisco Webex Calling Overview - BRKCOL-1793
 - Deploying Local Gateway for Webex Calling - LABCOL-1187
 - Cisco Webex Calling Design and Deployment - BRKCOL-2792
 - Demystifying Cisco UCM Cloud, A Brand-new Offer in Cisco's Cloud Calling Portfolio - BRKCOL-2762

Complete your online session survey



- Please complete your session survey after each session. Your feedback is very important.
- Complete a minimum of 4 session surveys and the Overall Conference survey (starting on Thursday) to receive your Cisco Live t-shirt.
- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Content Catalog on ciscolive.com/emea.

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Thank you





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