DEPLOYMENT GUIDE

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Polycom® UC Software with Skype for Business and Microsoft® Lync® Server

For Polycom® RealPresence® Trio™ 8800 and Polycom® RealPresence® Trio™ Visual+ Solution

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Contents

Conventions Used in Polycom Guides

Polycom guides contain terms, graphical elements, and a few typographic conventions. Familiarizing yourself with these terms, elements, and conventions will help you successfully perform tasks.

Information Elements

Polycom guides may include any of the following icons to alert you to important information.

Icons Used in Polycom Guide

Name	Icon	Description
Note		The Note icon highlights information of interest or important information needed to be successful in accomplishing a procedure or to understand a concept.
Important		Important highlights information of interest or important information needed to be successful in accomplishing a procedure or to understand a concept.
Caution		The Caution icon highlights information you need to know to avoid a hazard that could potentially impact device performance, application functionality, or successful feature configuration.
Warning		The Warning icon highlights an action you must perform (or avoid) to prevent issues that may cause you to lose information or your configuration setup, and/or affect phone or network performance.
Web Info		The Web Info icon highlights supplementary information available online such as documents or downloads on support.polycom.com or other locations.

Typographic Conventions

A few typographic conventions, listed next, are used in Polycom guides to distinguish types of in-text information.

Typographic Conventions

Convention	Description
Bold	Highlights interface items such as menus, menu selections, window and dialog names, soft keys, file names, and directory names when they are involved in a procedure or user action. Also used to highlight text to be entered or typed.
Italics	Used to emphasize text, to show example values or inputs (in this form: <*example*>), and to show titles of reference documents available from the Polycom Support Web site and other reference sites.
Blue Text	Used for cross references to other sections within this document and for hyperlinks to external sites and documents.
`Courier`	Used for code fragments, parameter names and permitted values.

Get Started

Polycom introduces the Polycom® RealPresence Trio™ 8800 conference phone and Polycom® RealPresence Trio™ Visual+ content and video accessory in the first release for Microsoft® Lync 2013 environments. RealPresence Trio 8800 is an innovative conference phone added to the Polycom conference phones family that, when deployed with RealPresence Trio Visual+, provides video and content sharing. This guide shows you how to deploy Unified Communications (UC) software for the RealPresence Trio 8800 in a Microsoft Lync 2013 environment.

The RealPresence Trio 8800 conference phone supports audio-only conference calls in a Microsoft Lync Server 2013 environment. Together with the RealPresence Trio Visual+ accessory, the RealPresence Trio 8800 also supports video calls between SIP endpoints, multipoint control units (MCUs), and Lync Server 2013.

Note: Polycom phones support one registered line

Currently, Polycom phones deployed with Microsoft Lync Server and Skype for Business support one registered line.

Microsoft Compatibility

The RealPresence Trio 8800 solution supports:

- Skype for Business 2015 on-premise and Online
- Lync Server 2013 and 2010 on-premise
- Audio-only calls using Lync 2010 client

Microsoft-Qualified Phones

Polycom offers the RealPresence Trio 8800 with an Open SIP or a Lync base profile (a Lync SKU). Polycom devices shipped with a Lync base profile include Lync-qualified UC Software with a feature license included and enable you to start up the phone and register to a Lync Server with default settings.

Feature Licenses

Polycom devices purchased and shipped with a Lync Server or Skype for Business SKU include a feature license. If you do not purchase devices with a configured Lync Server or Skype for Business SKU, you must purchase a feature license from a Polycom reseller or Polycom sales representative. For information about the license, log in to Licensing & Product Registration. You can use Polycom phones in a Lync environment for trial purposes, without purchasing a license, for a maximum of 30 days.

Microsoft Skype for Business Online Interoperability

This feature enables integration with Microsoft Skype for Business Online (Microsoft Skype for Business Cloud PBX in Microsoft Office 365). This feature also supports the migration of users from the Skype for Business on-premises solution to the Office 365 solution.

The RealPresence Trio solution supports integration with Office 365, Skype for Business on-premise, Microsoft Exchange on-premise 2013 and 2010, Exchange Online services, Lync Server 2013 and Lync Server 2010 (audio only) on-premise deployments.

Office 365 and Skype for Business Provisioning and Manageability

The RealPresence Trio solution supports integration with Office 365, Skype for Business on-premise, Microsoft Exchange on-premise 2013 and 2010, Exchange Online services, Lync Server 2013 and Lync Server 2010 (audio only) on-premise deployments.

UC Software File Formats

Polycom releases UC Software 5.x.x in two file formats:

- **Cabinet (CAB) file**. As of September 2013, Polycom offers UC Software in CAB file format. This Microsoft Windows archive file format, recommended by Microsoft for customer premises equipment (CPE), safely compresses data and embeds digital certificates. UC Software in CAB file format is available from Polycom UC Software for Microsoft Deployments and enables you to receive automatic software updates from Lync Server and Skype for Business Server.
- **sip.ld**. Polycom offers all UC Software as a combined file for all phone models or as a split file for specific phone models.

Lync Server Features for RealPresence Trio Solution

This section lists the Lync Server and Polycom features available with the RealPresence Trio 8800.

Note that access to the Web Configuration Utility is disabled by default as a security precaution. To enable access to the Web Configuration Utility, refer to the section Enable Access to the Web Configuration Utility.

Lync Server Features Available with RealPresence Trio 8800

Feature	Function
Root certificate download	Available using DHCP Option 43
DHCP Option 43 override	Deploy phones without DHCP Option 43
Root Cert Download – LDAP	Root Certificate Chain download via LDAP
PIN Authentication	Support for Lync authentication available on all Lync-enabled Polycom phones

Lync Server Features Available with RealPresence Trio 8800

Remote Pin Auth Sign-in	Sign in with Active Directory credentials or Pin Auth from the Web Configuration Utility
Narrowband audio	G.711
Call transfer, hold, mute	Flexible user phone functions
Full-duplex echo cancellation	
Wideband audio	G.722-1
Media encryption	SRTP, SSRTP
Direct SIP registration to Lync Server	Microsoft SIP, TLS for SIP Signaling, SRTP, SSRTP
Peer-to-peer audio calling	Initiate and receive two-party calls
Message Waiting Indicator (MWI)	Illumination of MWI lamp indicates new messages
Voice mail retrieval	One-touch call to voice mail attendant
Presence publication	Indicates the status of your s
Presence state control	Choose from a menu of presence states
Enhanced Presence	Presence displays in a call and in a meeting
Calls logs	Local call history for missed, received, and outgoing calls; nonvolatile for all platforms except VxWorks phones
Log access	Local phone access to diagnostic logging
Device updates	Centralized phone updates from an out-of-band server
VLAN assignment	LLDP-MED VLAN assignment
Device sign-in	Out-of-the-box user sign-in and sign-out
Remote worker scenarios	Edge Server registration for off-location users
Firewall traversal	A/V Edge Server support using the ICE, STUN, and TURN protocols
Federation	Connect people across organizations and domains
In-band provisioning	Support for in-band provisioning from Lync Server
Lync monitoring	QoE monitoring
Reporting	Device inventory reports
Call Admission Control (CAC)	Support for in-band bandwidth policy
Media bypass	Bypass the Lync mediation server to send media directly to a PSTN gateway
Dial plans	Support for Lync Server Regex normalization patterns passed via an in-band provisioning to the endpoint; limited to regular expression support; option for server-side normalization
Call forwarding to s	Forward calls to another

Lync Server Features Available with RealPresence Trio 8800

Call forwarding to voicemail	Forward calls directly to voicemail
Response Groups	The phone can join a response group or IVR
Team-Call	The phone supports team calling
Delegates	The phone can act as a delegate phone
Private Lines	Alternate call-forwarding identity for a Lync user's secondary DID
Branch Office Survivability	Maintain SBA/SBS registration during WAN outage, automatic recovery
E911	Supports in-band provisioning information for Emergency 911
E911 Conferencing	Conference security desk with the phone calling E911
E911 dial plan priority	E911 dial plan priority over regular dial plan
Location Services	Extended Link Layer Discovery Protocol (LLDP)-MED location-based information support
Lync Autodiscovery	Lync Auto Discovery using DNS SRV records
Exchange Autodiscover	Autodiscover Exchange web services
Exchange Call Logs	Use Exchange to store call logs
Address Book Service (ABS)	Access and search s in the Lync address book
Outlook Search	Lync search will support ABS and outlook s
Local Directory	Display Lync s and their current presence status
Groups	Display and expand groups in the Lync user's list
Web Ticket Authentication	Used to gain access to a web service; support for web tickets obtained using NTLM, PIN, or a client certificate used as authentication credentials Lync Authentication: NTLM SIP Registration: TLS-DSK User Sign In: NTLM Credentials, PIN authentication NTLMv2 Authentication
Client Certificate Provisioning	Automatic provisioning using a web ticket
TCP Media	RTP Media and ICE negotiation supported over TCP when UDP is unavailable
Lync Status Screen	Lync diagnostic screen in the Web Configuration Utility
Music on Hold	Play music when a caller is put on hold
Native Lync Conferencing (CCCP)	Complete Lync Centralized Conference Control Protocol
Calendar Conference Join	Calendar reminder with one touch Lync meeting join
USB Headset Support	Support for HID compliant Headsets
LDAP Directory Support	LDAP v3 Support (sorting, unsorting, VLV)

Lync Server Features Available with RealPresence Trio 8800

Custom+66 Option	DHCP Options used for locating a provisioning server
HTTP(S)/FTP(S)/TFTP	Provisioning server protocol
Application Logging	Detailed module logging used for troubleshooting
Syslog	Send module logging to a syslog server
Screen Capture	Capture the screen using the Web Configuration Utility or boot server
Streaming Capture	Stream packets to a remote Wireshark interface
Screen Customization	Load background image
Custom Ringtones	Customize ring tones and alerts
Enhance Feature Key Mapping	Use EFK to customize key functions
CDP & STATIC VLAN Discovery	Cisco VLAN discovery and Static VLAN assignment
802.1x	Ethernet Port Security (multiple supplicants including EAP-TLS)
Idle Screen s Keys	Keys with Extended Presence on Idle Screen
Web Configuration Utility Pin Auth	Pin Authentication login from the Web Configuration Utility
Web Configuration Utility AD login	AD authentication login from the Web Configuration Utility
Custom Idle Screen	Soft keys, Background, Columns, Translucent Keys
Customizable Power Save	Customize business hours for off hours power save

Polycom with Skype for Business Online Support

The following table indicates Polycom support for Skype for Business Online features:

- Polycom supported and not Microsoft-qualified features
- Supported Microsoft-qualified features

Polycom with Skype for Business Online Feature Support

Skype for Business Online Feature	Polycom with Skype for Business On-Premises	Polycom with Skype for Business Online
Not Microsoft Qualified		
Single-stream video receive	✓	✓
Point-to-point video calls	✓	✓
Multiparty video calls	✓	✓
Active speaker only video (Gallery View not supported)	✓	✓

Polycom with Skype for Business Online Feature Support

Gallery View	×	×
Remote Desktop Protocol (RDP) content receive	✓	✓
Present Desktop (single display)	✓	✓
Present Programs (single display)	✓	✓
Present PowerPoint Files	×	×
Present Whiteboard	×	×
Microsoft Qualified		
Resiliency - Branch Office	✓	×
Resiliency - Data Center Outage	✓	×
Device Update	✓	✓
In-band Provisioning	✓	✓
PIN Authentication	✓	×
Call Handling	✓	✓
Call Forward	✓	✓
Call Transfer	✓	✓
Conference Calls	✓	✓
Local Call Logs	✓	✓
Exchange Call Logs	✓	✓
Federated Calls	✓	✓
Simultaneous Ring	✓	✓
Attendant Console	✓	×
Cross Pool	✓	×
Dual Tone Multi Frequency	✓	✓
Emergency 911	✓	✓
Media Bypass	✓	×
Monitoring (Device Inventory)	✓	✓
Private Line	✓	×

Polycom with Skype for Business Online Feature Support

Response Groups	✓	×
Message Waiting Indicator	✓	✓
Call Park	✓	×
Shared Line Appearance	✓	×
Exchange Contact Integration	✓	✓
Exchange Calendar	✓	✓
Extended Presence	✓	✓
Visual Voicemail	✓	✓

Frequently Asked Questions

Refer to the frequently asked questions (FAQs) to help answer questions you may have about deploying Polycom phones with Lync Server before you begin.

What is the Base Profile?

The Base Profile is a provisioning option available on Lync-enabled Polycom devices that simplifies the process of registering your devices with Lync Server. The Base Profile displays in the phone's menu system and has two options: Generic and Lync. When set to Lync, the Base Profile automates registration with a default set of configuration parameters and settings; you cannot modify or customize the Base Profile or feature settings. Because you can provision only a single phone at a time with the Base Profile, Polycom recommends using the Base Profile for deployments of fewer than 20 devices requiring only default Lync settings.

What are CAB files?

You can choose to download UC Software in CAB file format. CAB file format is a Microsoft Windows archive file that supports lossless data compression and embedded digital certificates that maintain archive integrity. Polycom offers UC Software in CAB file format so that you can deploy UC Software from Lync Server or Skype for Business Server and enable the automatic software update feature.

Get Help

For more information about installing, configuring, and administering Polycom products, refer to Documents and Downloads at Polycom Support.

The Polycom Community

The Polycom Community gives you access to the latest developer and support information. Participate in discussion forums to share ideas and solve problems with your colleagues. To register with the Polycom Community, simply create a Polycom online account. When logged in, you can access Polycom support personnel and participate in developer and support forums to find the latest information on hardware, software, and partner solutions topics.

Deploy Polycom Phones with Microsoft Lync Server

Polycom provides several methods to register RealPresence Trio 8800 with Lync Server 2013. Regardless of the method you choose, complete four major tasks to register your phones correctly:

- Power the RealPresence Trio 8800 Solution
- Set Up the Network
- Set Up Polycom UC Software
- Provision the Phones

Settings: Lync SKU

Polycom phones ordered with the Lync SKU are shipped with Lync-qualified software that enables you to start up the phone and register with Lync Server with default settings. If you are using Polycom phones shipped with Lync-qualified UC Software and want to keep default settings with no change, you need to complete only the task Set Up the Network. If you want to customize default settings, complete all tasks.

Power the RealPresence Trio 8800 Solution

You can power the RealPresence Trio 8800 with PoE or PoE+ (IEEE 802.3at Type 2). When RealPresence Trio 8800 is booting up, an on-screen message indicates the available power supply type.

By default, the phones display an End User License Agreement (EULA) at boot time that must be accepted on each phone. To automatically accept the EULA, set `prov.eula.accepted` to 1.

Note that PoE+ provides RealPresence Trio 8800 with full functionality. The following features are not available on RealPresence Trio 8800 when using PoE:

- The RealPresence Trio 8800 LAN OUT port out does not provide PoE+ power and cannot be used to power the RealPresence Trio Visual+.
- No USB charging is provided to devices (mobile phones, tablets) connected to the RealPresence Trio 8800 USB port.
- Maximum peak power to the loudspeaker is limited.

Power with the Optional Power Injector

If your building is not equipped with PoE+ you can use the optional power injector to provide PoE+ and full functionality to RealPresence Trio 8800.

When using the power injector to power the RealPresence Trio 8800, you must connect cables in the following sequence:

1. Plug the AC power cord of the power injector into the wall and use a network cable to connect the power injector to the RealPresence Trio 8800.

2 Connect the power injector to the network with a CAT-5E or CAT-6 Ethernet cable.

The power adapter LED is green when the RealPresence Trio 8800 is correctly powered. If the LED is yellow or not on, the RealPresence Trio 8800 is not receiving PoE+ power.

Troubleshooting: RealPresence Trio Visual+ loses power

If the RealPresence Trio Visual+ loses power after a RealPresence Trio 8800 reboot, unplug both devices and repeat steps 1 and 2.

Power the RealPresence Trio Visual+ Solution

How you power the RealPresence Trio Visual+ can depend on the power options your building is equipped with. Consider the following setup points:

- If you are using PoE+ or the optional power injector, you can power the RealPresence Trio Visual+ directly from the RealPresence Trio 8800 using an Ethernet cable. In this scenario, you do not need to pair the RealPresence Trio 8800 with the RealPresence Trio Visual+.
- If you are using PoE, you must power the RealPresence Trio Visual+ separately using an Ethernet cable or use the optional power injector. In this scenario, you must pair the RealPresence Trio 8800 with the RealPresence Trio Visual+. For pairing instructions, refer to Pair RealPresence Trio Visual+ with RealPresence Trio 8800.
- If you use PoE+, you have the option to power the RealPresence Trio 8800 and RealPresence Trio Visual+ separately and pair. When powering separately, you do not need to connect the RealPresence Trio 8800 directly to RealPresence Trio Visual+.

Set Up the Network

To set up a network to connect your Polycom devices complete the following procedure.

To set up your network:

1 Set up or verify Domain Name System (DNS) service (SRV) records to allow the devices to discover Lync Server and Skype for Business Server automatically. For information on creating and verifying DNS SRV records, see Required DNS Records for Automatic Client Sign-In on Microsoft TechNet.

2 Obtain a root certificate authority (CA) security certificate using one of the following ways:

- Polycom devices running UC Software 5.3.0 or later that you are registering with Lync Server 2010 or 2013, or Skype for Business automatically fetch the root certificate using a Lightweight Directory Access Protocol (LDAP) Domain Name System (DNS) query. Phones you register with Lync Server or Skype for Business are enabled with this feature by default and no additional configuration is required.
- When provisioning phones from within an enterprise, you can use Dynamic Host Configuration Protocol (DHCP) Option 43 to download a private CA root security certificate used by Lync Server or Skype for Business. The security certificate is required to support secure HTTPS and TLS connections. For a list of DHCP options and sub-options supported by RealPresence Trio solution, refer to Supported DHCP Options and Sub-Options. In conjunction with DHCP Option 43, ensure that your devices can access Lync Server Certificate Provisioning Web service over HTTP (TCP 80) and HTTPS (TCP 443).

Note: DHCP Option 43 displays the PIN Authentication menu to users
If you configure DHCP Option 43 in on-premise Skype for Business deployments, the phone displays the PIN Authentication menu to users. For Skype for Business Online, the PIN Auth menu is not available.

- To troubleshoot for missing or misconfigured DHCP Option 43 or when using older DHCP systems with a limited field length, you can use an STS URI (Lync certificate server URL) to override DHCP Option 43.

  You can also set up PIN Authentication in a test environment without the need to fully deploy Lync DHCP and to verify that your DHCP server is set up correctly. For more information on configuring DHCP Option 43, refer to Set Up DHCP for Devices on Microsoft TechNet.
- If you need to install a security certificate manually on your Microsoft Edge Server, the signing CA that issued this certificate must be listed on the Polycom Trusted Certificate Authority List in the Polycom UC Software 4.1.0 Administrator's Guide. You must use Base64 format. For instructions on manually installing a certificate, refer to Toggle Between Audio-only or Audio-Video Calls.

3 (Optional) If you are using a provisioning, or boot server, configure DHCP Option 66 if available. If not available, set DHCP options using one of the following methods:

- If you are using a Polycom phone with a Lync SKU, use Option 161 with the address (URL or IP address) of the provisioning server. You can set the provisioning server address or URL through the device menu.
- If you are using a Polycom phone with an Open SIP SKU, use Option 160 with the address (URL or IP address) of the provisioning server. You can set the provisioning server address or URL through the device menu or refer to the section Set the Base Profile Using the Web Configuration Utility.

4 Ensure that you set up each user with a Lync account and credentials that can be used on the phone to sign in.

Supported DHCP Options and Sub-Options

The following table lists the individual options and sub-options for DHCP Option 43 supported on RealPresence Trio solution.

DHCP Options and Sub-Options

Option	*Result*
Option 1- Subnet mask	The phone parses the value from Option 43
Option 2 - Time offset	The phone parses the value.
Option 3 - Router	The phone parses the value.
Option 4 - Time server	The phone parses the value.
Option 6 - Domain Name Server	The phone parses the value.
Option 7 - Domain Log server	The phone parses the value.
Option 15 - Domain Name	The phone parses the value.

DHCP Options and Sub-Options

Option 42 - Network Time Protocol server	The phone parses the value.
Option 66 - TFTP Server Name	The phone parses the value.
Sub-options configured in Option 43	
Options 1, 2, 3, 4, 5, 6, 7, 15, 42, and 66	The phone parses the value.

DHCP Options for Skype for Business

The following table lists the Skype for Business options and sub-options for DHCP Option 43 supported on RealPresence Trio solution. For more detailed information on sub-options and URL format, see Setting Up DHCP for Devices on Microsoft TechNet.

DHCP Options and Sub-Options

Option	*Result*
Option 1- Subnet mask	The phone parses the value from Option 43
Option 2 - Time offset	The phone parses the value.
Option 3 - Router	The phone parses the value.
Option 4 - Time server	The phone parses the value.
Option 6 - Domain Name Server	The phone parses the value.
Option 7 - Domain Log server	The phone parses the value.
Option 15 - Domain Name	The phone parses the value.
Option 42 - Network Time Protocol server	The phone parses the value.
Option 66 - TFTP Server Name	The phone parses the value.
Sub-options configured in Option 43	
Sub-option 1 - UC Identifier	
Sub-option 2 - URL Scheme	
Sub-option 3 - Web Server FQDN	
Sub-option 4 - Port	
Sub-option 5 - Relative Path for Certificate Provisioning Web Service.	
Example URL: `https://lyncsvrWebPoolFQDN:443/CertProv/CertProvisioningService.svc`	

Set Up Polycom UC Software

The latest UC Software for Microsoft deployments is available at Polycom UC Software for Microsoft Deployments. All UC Software versions are available on the Polycom UC Software Support Center.

If you are setting up your own provisioning server or want to customize feature settings, Polycom provides template configuration files you can use to provision your Polycom phones for use with Lync Server or Skype for Business. You can find the Lync configuration files in your UC Software download, or you can use the template configuration files in the PartnerConfig > Microsoft directory of the UC Software download.

Caution: Provision phones from one server only

Do not provision phones with UC Software from both a Microsoft server and your own provisioning server. This places the phones in a reboot cycle.

To set up Polycom UC Software:

1. Set up a provisioning server on your computer and create a root directory to hold all of the required UC Software, configuration files, and subdirectories. Name the directory to identify it as containing the Polycom UC Software release.

   To set up your own provisioning server, you need an XML editor, such as XML Notepad, installed on your computer. Your provisioning, or boot server must support one of the FTP, FTPS, TFTP, HTTP, or HTTPS protocols, FTP being the most common. FileZilla Server is a free FTP solution.

2. Decide if you are provisioning your phones from Lync Server, Skype for Business Server, or using your own provisioning server.

   Deploying UC Software in CAB file format provisions the phones and enables default feature functionality, including the automatic software update feature. However, if you want to change or customize default functionality of the phone features, you need to set up and edit Polycom UC Software configuration files on your own provisioning server and send the custom settings to the phones.

   - To use Lync Server or Skype for Business Server to push software to the phones, complete the steps in the section Deploy UC Software from Lync Server.
   - To use your own provisioning server to push software to the phones, complete the steps in the section Deploy UC Software from a Provisioning Server.

3. Download, save, and extract UC Software to the root directory you created. Polycom provides Lync-specific template configuration files in the PartnerConfig > Microsoft directory of the UC Software download.

   - If you are deploying UC Software from Lync Server or Skype for Business Server, download the CAB file version of Polycom UC Software.
   - If you are deploying phones from your own provisioning server, download the split or combined version of Polycom UC Software in XML format.

4. After the UC Software directory is extracted, open the folder in your root directory.
5. Configure a Call Park Orbit Policy. You must configure a call park orbit policy to enable the call park feature. See Configuring Call Park on the Microsoft Lync web site.

Provision the Phones

Polycom provides manual per-phone provisioning methods and centralized provisioning methods. The method labeled device.set is an advanced method for users familiar with Polycom configuration files and uses centralized provisioning to set the Base Profile for multiple phones. For complete information on provisioning with Polycom UC Software, see the *Polycom UC Software Administrator Guide* on Polycom UC Software for Microsoft Deployments.

Note: Web Configuration Utility is disabled

If you are using Polycom UC Software 5.1.1 or later, the Web Configuration Utility is disabled by default and you cannot register phones with the Web Configuration Utility. If you want to use a phone's Web Configuration Utility after the phone is registered with Lync Server or Skype for Business Server, refer to the section Enable Access to the Web Configuration Utility.

Manual Provisioning Methods

Polycom provides five per-phone manual methods you can use to register Polycom devices with Lync Server or Skype for Business. All manual provisioning methods set the Base Profile of a phone to Lync. The Base Profile is a feature on each Polycom phone that, when set to Lync, automatically provisions the phone with the default parameters required to work with Lync Server and Skype for Business. For details on all of the default parameters and values, refer to UC Software Parameters for Microsoft Deployments.

You can set the Base Profile of a phone to Lync in the following ways:

- Set the Base Profile from the Settings Menu. Set the Base Profile to Lync from the phone's Settings menu during normal phone functioning.
- Set the Base Profile Using the Web Configuration Utility. Use the Polycom Web Configuration Utility to set the Base Profile from a web browser. This is particularly useful when working remotely. Not available when using Polycom UC Software 5.1.1.

Note: Use configuration files or set the base profile to Lync - not both

When you use configuration files to provision the phones with Lync Server 2013, the phone Base Profile stays set to Generic. You do not need to set the Base Profile feature on the phones to Lync when provisioning with configuration files.

Manually Reboot the Phone

When you change the Base Profile using any of these methods, the phone reboots. If the phone does not reboot, you can manually reboot by powering off/on the phone or manually rebooting the phone from the Settings menu.

To manually reboot the phone:

1. Go to **Menu/Home key > Settings > Advanced**.
2. Enter the password (default 456).
3. Press **Enter**.
4. Choose **Reboot Phone**.

   When the phone completes the reboot cycle, the Sign In screen displays.

Set the Base Profile from the Settings Menu

You can set the Base Profile to Lync from the phone Settings menu.

To set the Base Profile to Lync from the Settings Menu:

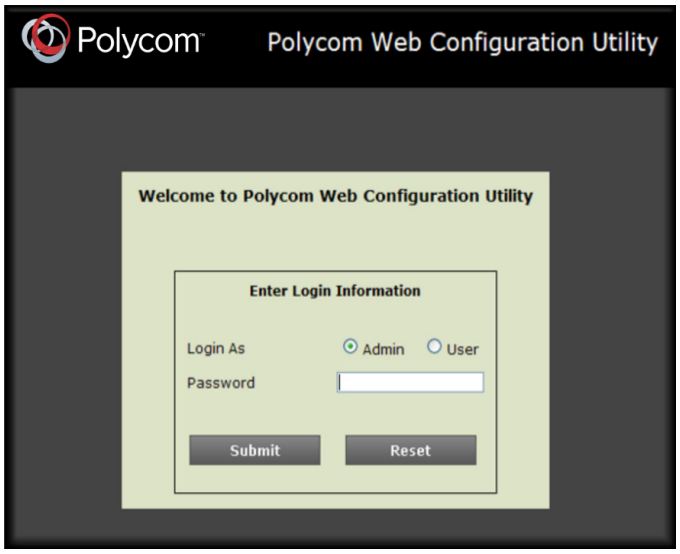
1. Press the **Home/Menu** key.
2. From the idle screen, choose **Settings > Advanced > Administration Settings > Network Configuration**, and set Base Profile to **Lync**.
3. Select **Back > Save Configuration**. The phone automatically restarts and displays the Sign In screen. Users can now Sign In Methods.

Set the Base Profile Using the Web Configuration Utility

If your phone is not shipped with the Base Profile set to Lync (applies also to Skype for Business), you can use the Web Configuration Utility to manually set a phone's Base Profile to Lync. As part of a UC Software security update, phone access to the Web Configuration Utility is disabled by default when the phone registers with Lync Server or Skype for Business Server. To enable access, refer to Enable Access to the Web Configuration Utility. Note you cannot configure sign-in credentials using the Polycom Web Configuration Utility.

To set the Base Profile to Lync using the Web Configuration Utility:

1. Provide power to your phones and allow the phones to complete the power-up process.
2. Obtain the IP address of each phone in your deployment by pressing the **Menu/Home** key and choosing **Settings > Status > Platform > Phone**. The IP address displays in the IP: field.
3. Enter the phone's IP address in the address bar of a web browser and press **Enter** on your PC keyboard. The Web Configuration Utility login screen displays, as shown next.



4. Choose **Admin** to log in as an administrator, and then enter the administrator password (default 456) and click Submit.
5. In the Home page, navigate to the **Simple Setup** menu.

6 From the Base Profile drop-down, choose **Lync**, and click **Save** at the bottom of the page.

7 In the confirmation dialog, choose **Yes**. The phone automatically restarts.

Users can now Sign In Methods.

Centralized Provisioning

Polycom strongly recommends using a central provisioning server when provisioning multiple phones to:

- Configure multiple devices automatically
- Facilitate automated software updates
- Receive automatic log files
- Add, remove, or manage features and settings to multiple phones simultaneously
- Create phone groups and modify features and settings for each phone group

After you set up a provisioning server, you can provide default settings to all your devices using Microsoft-specific template configuration files in the PartnerConfig > Microsoft directory of the UC Software download. If you require further help setting up a provisioning server or using Polycom configuration files effectively, see the *Polycom UC Software Administrator Guide* on Polycom UC Software for Microsoft Deployments.

Caution: Do not use an Existing Microsoft deployment

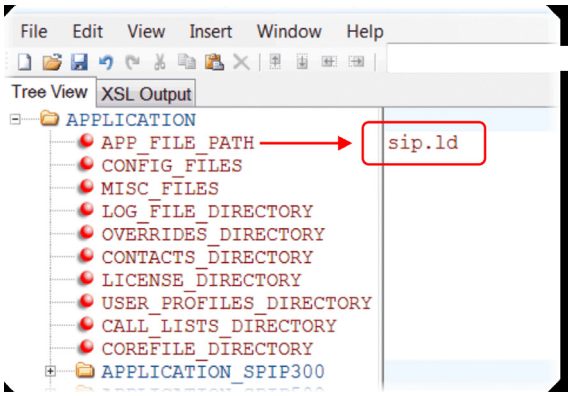
Using an existing server to deploy your provisioning server can affect performance of your Lync deployment. Misconfiguration or nonstandard deployment of the Microsoft Internet Information Services (IIS) web server may affect your ability to obtain accurate Microsoft support.

Centralized Provisioning Methods

Use one of the following methods to centrally deploy multiple devices:

- Deploy UC Software from Lync Server. Download UC Software in CAB file format and place the software on Lync Server. Default feature settings are applied to all your phones.
- Deploy UC Software from a Provisioning Server. This method requires you to set up your own provisioning server. Setting up your own provisioning server enables you to customize feature settings using the template configuration files included in the UC Software download. With this method, users can sign in with their credentials from the phone's interface.

If you are deploying UC Software from Lync Server or Skype for Business Server and customizing features using Polycom configuration files, delete the default `sip.ld` value from the `APP_FILE_PATH` field in your master configuration file, as shown in the figure Delete `sip.ld`. Deleting the sip.ld value ensures that you do not deploy UC Software from a Microsoft Server and your own provisioning server, which sends your phones into a reboot cycle.



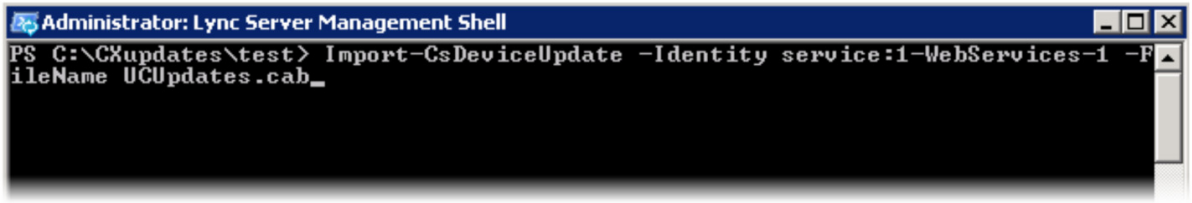
Deploy UC Software from Lync Server

If you downloaded UC Software files in CAB format, complete the following procedure to deploy UC Software from Lync Server.

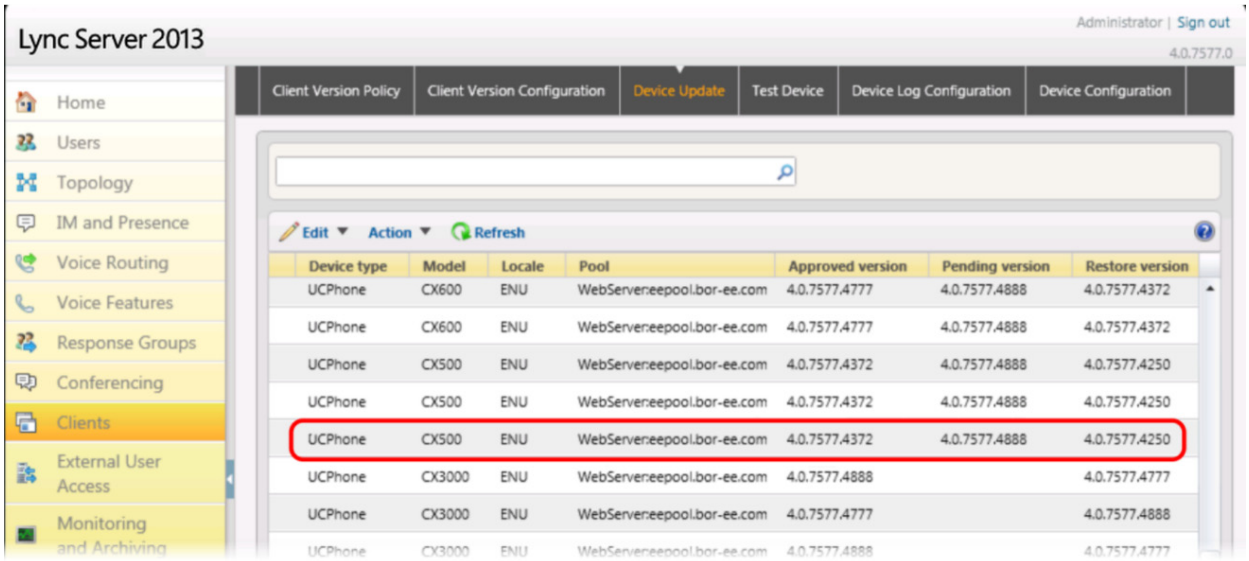
To deploy UC Software from Lync Server:

1. Download and save UC Software in CAB file format to your computer. You can obtain all Microsoft-compatible UC Software from UC Software for Microsoft Deployments.
2. Go to Lync Server and copy the CAB file to a C: drive directory.
3. Use the Lync Server Management Shell to go to a particular directory.
4. In the Lync Server Management Shell, run the following import command:

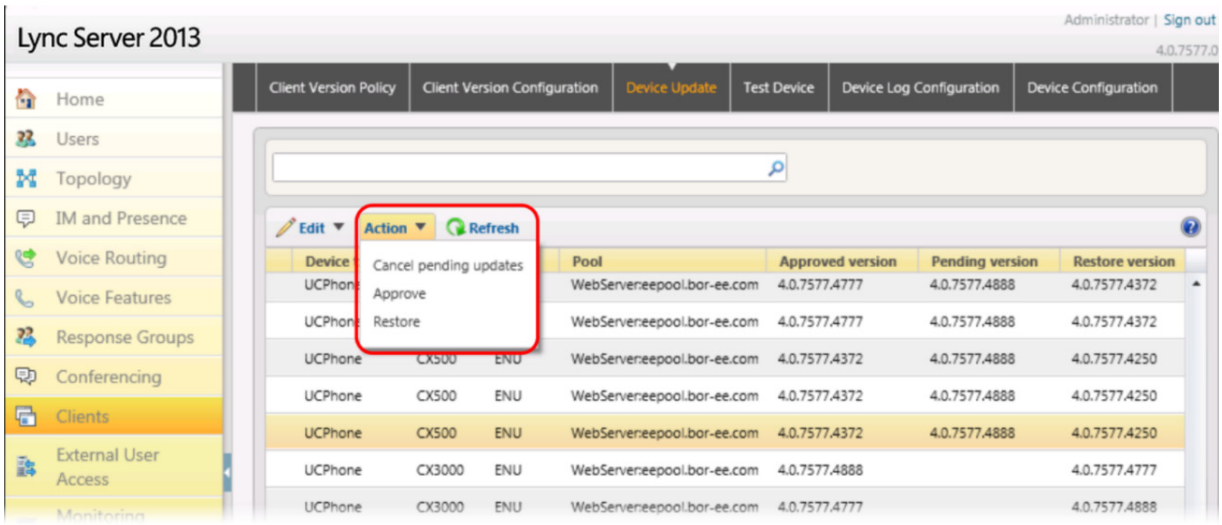
```
Import-CsDeviceUpdate -Identity service:1-WebServices-1 -FileName
UCUpdates.cab
```



5 In the Lync Control Panel, go to **Clients > Device Updates** to view UC Software versions available on Lync Server.



6 Go to **Clients > Action > Approve** to approve the UC Software.



You have successfully configured UC Software on Lync Server.

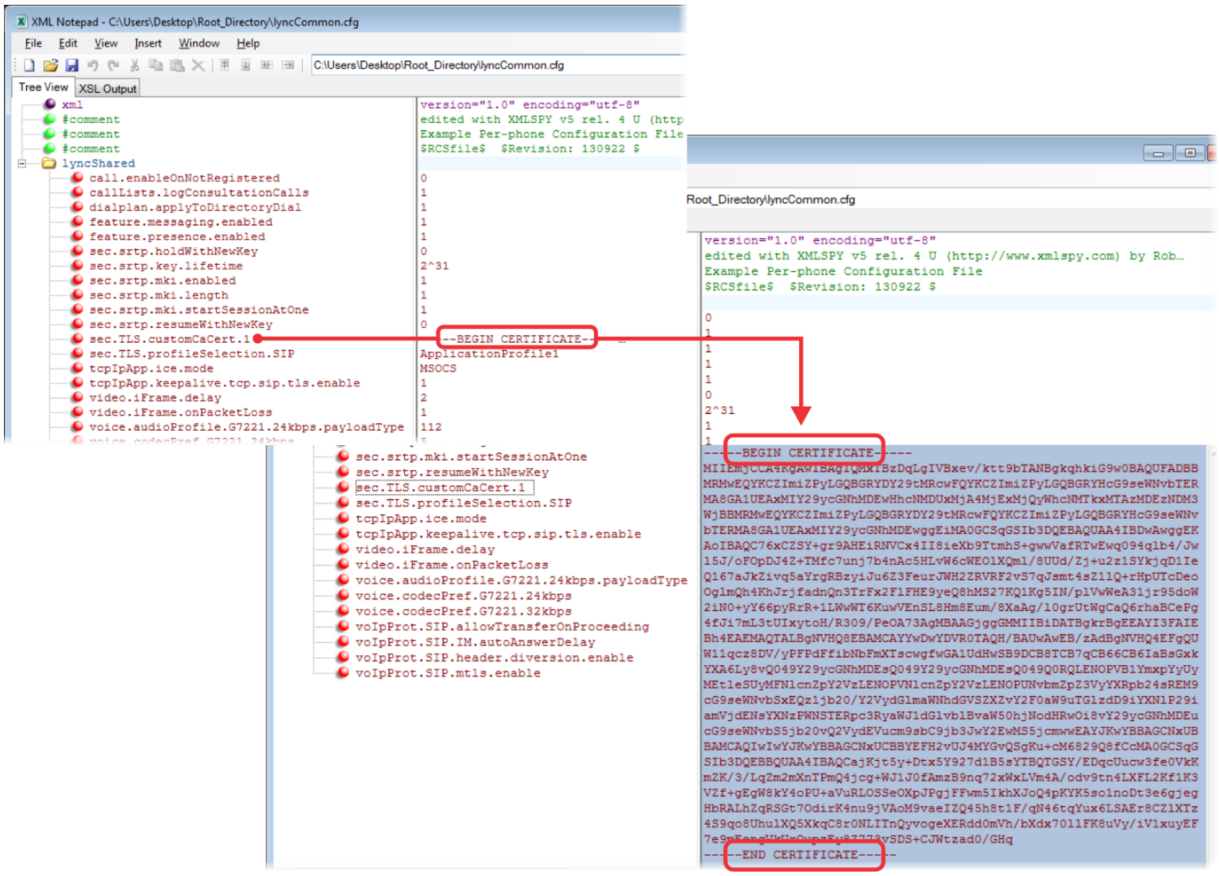
Deploy UC Software from a Provisioning Server

Setting up your own provisioning server enables you to customize feature settings using the template configuration files included in the UC Software download. All configuration files are saved in compressed ZIP file format and you must unzip (extract) the files before use. Polycom provides the UC Software download in two file formats:

- **Split files**. Enable you to choose UC Software for specific phone models. The split files are smaller in size with faster update times, and they reduce internal network traffic during reboots and updates.
- **Combined file**. A large directory that contain software files for all Polycom phone models.

To deploy UC Software from a provisioning server:

1. Locate the following three Lync configuration files in your UC Software download in the folder PartnerConfig > Microsoft:
   - `lyncSharedExample.cfg`. This file contains all of the parameters for settings that are shared by all the phones in your deployment.
   - `lyncSharedLCExample.cfg`. This is a per-phone file. Use this file to display the Sign In screen and enable users to enter sign-in credentials on the phone. Because users enter their credentials on the device, this is a secure way to provision with Lync Server.
   - `000000000000.cfg`. This is the master configuration file. In the CONFIG_FILES field, enter the names of all the configuration files containing settings you want to apply to the phones.
2. Place these configuration files in your root provisioning directory, create a copy of each file, and rename them keeping the suffix `.cfg`. Using edited copies of the template files ensures that you have unedited template files containing the default values.
3. If you are manually installing a root CA security certificate, go to step 4. If not, go to step 5.
4. Open your renamed file `lyncSharedExample.cfg` - this example uses the name `lyncCommon.cfg`. If you are manually configuring a root CA certificate, configure the following two parameters:
   - Enter the root CA certificate, in Base64 format, in `sec.TLS.customCaCert.1`.
   - Set the application profile in `sec.TLS.profileSelection.SIP`.



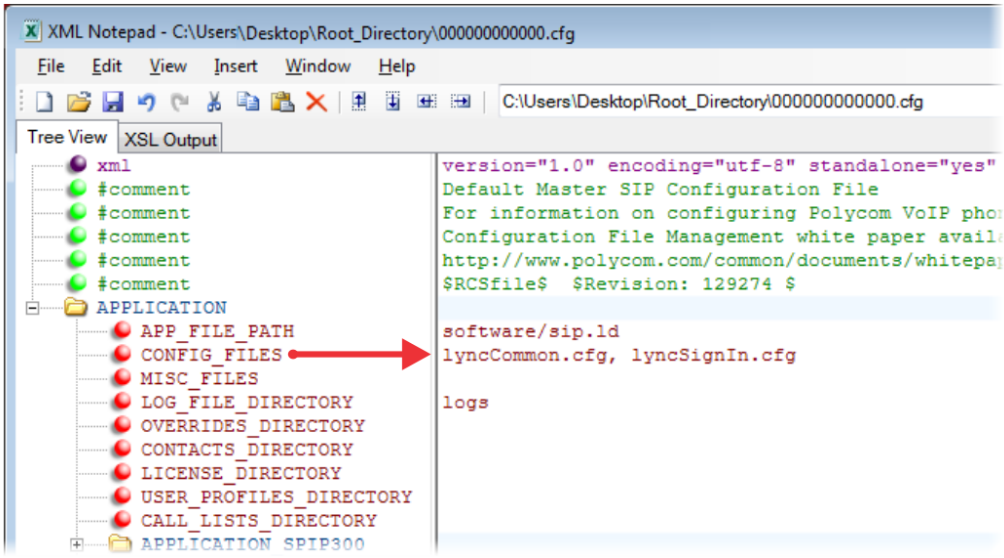
5 Open the master configuration file `000000000000.cfg`. In the CONFIG_FILES field, enter the name(s) of your two Lync configuration files and save.

Configuration files you enter in the CONFIG_FILES field are read left to right. If you have configured the same setting in two configuration files, the setting listed first (left) is applied. Ensure that you do not have the same parameter in more than one configuration file.

If you do not want to use the Microsoft Autodiscover service, use the following parameters to disable the feature and manually set the Lync server address and SIP signaling port using:

- Disable Autodiscover: `reg.1.serverAutoDiscovery=0`
- Server: `reg.1.server.1.address=<server_address>`
- Port: `reg.1.server.1.port=<port_number>`

The following example shows `lyncCommon.cfg` and `lyncSignIn.cfg`. You must list the names of every file you want to apply to your phones in the `CONFIG_FILES` field of the master configuration file, separated by a comma, as shown next.



6 Power on your phones. Your phones display the Lync Sign In screen and users can Sign In Methods of the phone.

Note: Configuring files in different directories

You can store your two Lync configuration files and the master configuration file in different directories; however, you must specify the file location path of the two Lync files in the CONFIG_FILES field of the master configuration file, for example:

- `directory/lyncCommon.cfg`
- `directory/lyncSigIn.cfg`

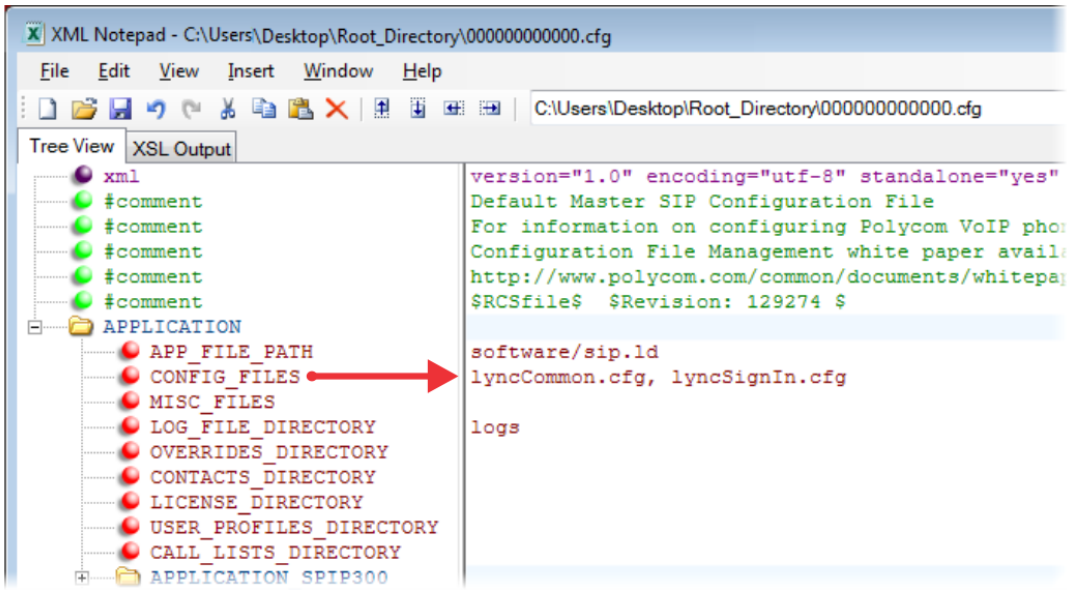
Set the Base Profile with device.set Parameters

Use a provisioning server and configuration files to set the Base Profile of multiple phones to Lync. This is a power provisioning method for administrators familiar with centralized provisioning and configuration files.

This section shows you how to provision devices using parameters in the device.cfg template configuration file included in your UC Software download. Polycom recommends using this method only if you are familiar with centralized provisioning and Polycom configuration files.

To set the Base Profile using device.set parameters:

1. Locate the `device.cfg` template configuration file.
2. Place the `device.cfg` file on your provisioning server.
3. Locate and change the values of the three parameters to the values shown in the following illustration:



4. Rename and save the file.
5. Power on the phones.
6. Once boot-up is complete, remove device.set from the template configuration file and save the file without `device.set`.
7. Verify that the device Base Profile is set to **Lync**. Press **Home/Menu** and go to **Settings > Advanced**.
8. Enter the password (default 456) and press **Enter**.
9. Go to **Administration Settings > Network Configuration**, and set the **Base Profile** field to **Lync.**

   Users can now Sign In Methods.

Provision and Update with a USB Device

You can store configuration files and settings on a USB flash memory device and provision or update RealPresence Trio 8800 or RealPresence Trio Visual+ during normal functioning or in recovery mode. Recovery mode enables you to recover the RealPresence Trio 8800 or RealPresence Trio Visual+ to a normal provisioning state when other methods are not working or not available.

The RealPresence Trio 8800 system automatically provisions and updates a connected and paired RealPresence Trio Visual+ system. You can, however, provision and update the RealPresence Trio Visual+ separately, for example, if you need to support IEEE 802.1x or provision on networks without DHCP.

RealPresence Trio 8800 supports only File Allocation Table (FAT) file systems and Polycom recommends using FAT32.

If other USB devices are attached to RealPresence Trio 8800, you must remove them and ensure that RealPresence Trio 8800 correctly recognizes the USB device you want to install from.

If you use a USB device to provision while centralized provisioning server is in use, the USB configuration files override server settings. When you remove the USB device, the device returns to settings you configured on the server. Note, however, that the original server settings are subject to direct.set changes initiated by the USB device. The direct.set changes can alter parameters on the provisioning server and change basic provisioning settings.

When you attach a USB device, you are prompted for the administrator password (default 456). RealPresence Trio 8800 downloads and installs the configuration files and you can remove the USB when complete.

Provision or Update Software Manually with a USB Device

You can manually provision RealPresence Trio 8800, one at a time, with a USB during normal phone functioning.

To provision or update software manually with a USB device:

1. Format a USB flash drive as FAT32. Polycom recommends that you use a USB 2.0 flash drive.

   If you are using a drive that is already formatted, ensure that previous files are deleted from the flash drive.
2. Download the UC Software from RealPresence Trio on Polycom Support.
3. Copy the configuration files you want to use to the root of the USB device. The minimum required configuration files are as follows:
   - Master configuration file: `000000000000.cfg`
   - RealPresence Trio 8800: `3111-65290-001.sip.ld`

   If you are using the RealPresence Trio Visual+, do one of the following:
   - Rename the RealPresence Trio 8800 `sip.ld` file to use the RealPresence Trio Visual+ part number: `3111-66420-001.sip.ld`.
   - Rename the RealPresence Trio 8800 `3111-65290-001.sip.ld` file to "`sip.ld`" (delete "*`3111-65290-001.`*") to use the same file for the RealPresence Trio 8800 and Visual+ systems.
4. Insert the USB to the RealPresence Trio 8800 or RealPresence Trio Visual+, follow the prompt for the Administrator password, and power cycle the device. Allow time for the devices to reboot.

Place RealPresence Trio 8800 into Recovery Mode

You can place the RealPresence Trio 8800 into recovery mode when you want to provision with a USB and the provisioning process is not working during normal phone functioning.

To place RealPresence Trio 8800 into recovery mode:

1. Ensure that the phone is powered off.
2. Plug in a USB device.

3. Power up the phone.
4. When the Polycom logo displays, press and hold with four fingers the four corners of the LCD screen until the LEDs blink. (Blinking rotates between orange/red/green/off).
5. Remove fingers from the LCD screen. Recovery process is complete when the device reboots.

Place RealPresence Trio Visual+ into Recovery Mode

You can place the RealPresence Trio Visual+ into recovery mode when you want to provision with a USB and the provisioning process is not working during normal phone functioning.

To place the RealPresence Trio Visual+ into recovery mode:

1. Ensure that the phone is powered off.
2. Plug in a USB device.
3. Power up the phone.
4. When the LED initially turns from on to off, press and hold the pairing button until the pairing LED turns orange and release the button. The pairing LED blinks. (Blinking rotates between orange/red/green/off).

   Recovery process is complete when the device reboots.

Configure Features for Skype for Business and Lync Server

This section details a number of features and functions available on Polycom phones registered with Lync Server or Skype for Business Server.

Forward Error Correction

RealPresence Trio systems support Forward Error Correction (FEC) DV0 and DV1 in Lync 2013, Skype for Business Server 2015, and Skype for Business 2015 client environments for H.264 SVC. The scheme introduces recovery packets on the transmitter which recover lost video packets on the receiver.

FEC performance and quality improvements with this release may vary depending on network conditions.

Use the parameter `video.codecPref.XUlpFecUC` to set the forward error correction codec priority.

Forward Error Correction Parameters

Parameter	Permitted Values
`video.codecPref.XUlpFecUC`	Set the forward error correction (FEC) codec priority. `5` (default) `0 – 7`

Time and Date Wizard

Users signing into Skype for Business on the RealPresence Trio 8800 system for the first time are prompted to set the time zone, time format, and date format before they start using the system. This feature is enabled by default.

Use the following parameters to enable or disable the Time and Date Wizard.

Configure Time and Date Wizard Parameters

Parameter	Permitted Values
`device.set`	`0` (default) - Do not use any `device.xxx` fields to set any parameters. `1` - Use the `device.xxx` fields that have `device.xxx.set=1`. Set this to 1 only for the initial installation and set back to 0 after the initial installation.

Configure Time and Date Wizard Parameters

Parameter	Permitted Values
device.lync.timeZone.set	0 (default) - Do not use the device.xxx value. 1 - Use the device.xxx value. For example, if device.lync.timeZone.set=1, then use the value set for device.lync.timeZone.
device.lync.timeZone	1 (default) - Lync Time Zone Control is enabled. 0 - Lync Time Zone Control is disabled.

Set Time Zone Location Description

The following two parameters configure a time zone location description for their associated GMT offset:

- device.sntp.gmtOffsetcityID

  If you are not provisioning phones manually from the phone menu or Web Configuration Utility and you are setting the device.sntp.gmtOffset parameter, then you must configure device.sntp.gmtOffsetcityID to ensure that the correct time zone location description displays on the phone menu and Web Configuration Utility. The time zone location description is set automatically if you set the device.sntp.gmtOffset parameter manually using the phone menu or Web Configuration Utility.

- tcpIpApp.sntp.gmtOffsetcityID

  If you are not provisioning phones manually from the Web Configuration Utility and you are setting the tcpIpApp.sntp.gmtOffset parameter, then you must configure tcpIpApp.sntp.gmtOffsetcityID to ensure that the correct time zone location description displays on the Web Configuration Utility. The time zone location description is set automatically if you set the tcpIpApp.sntp.gmtOffset parameter manually using the Web Configuration Utility.

Use the values in the following table to set the time zone location description.

Permitted Values		Default
0	(GMT -12:00) Eniwetok,Kwajalein	NULL
1	(GMT -11:00) Midway Island	
2	(GMT -10:00) Hawaii	
3	(GMT -9:00) Alaska	
4	(GMT -8:00) Pacific Time (US & Canada)	
5	(GMT -8:00) Baja California	
6	(GMT -7:00) Mountain Time (US & Canada)	
7	(GMT -7:00) Chihuahua,La Paz	
8	(GMT -7:00) Mazatlan	
9	(GMT -7:00) Arizona	
10	(GMT -6:00) Central Time (US & Canada)	
11	(GMT -6:00) Mexico City	
12	(GMT -6:00) Saskatchewan	
13	(GMT -6:00) Guadalajara	
14	(GMT -6:00) Monterrey	
15	(GMT -6:00) Central America	
16	(GMT -5:00) Eastern Time (US & Canada)	
17	(GMT -5:00) Indiana (East)	
18	(GMT -5:00) Bogota,Lima	
19	(GMT -5:00) Quito	
20	(GMT -4:30) Caracas	
21	(GMT -4:00) Atlantic Time (Canada)	
22	(GMT -4:00) San Juan	
23	(GMT -4:00) Manaus,La Paz	
24	(GMT -4:00) Asuncion,Cuiaba	
25	(GMT -4:00) Georgetown	
26	(GMT -3:30) Newfoundland	
27	(GMT -3:00) Brasilia	
28	(GMT -3:00) Buenos Aires	
29	(GMT -3:00) Greenland	
30	(GMT -3:00) Cayenne,Fortaleza	
31	(GMT -3:00) Montevideo	
32	(GMT -3:00) Salvador	
33	(GMT -3:00) Santiago	
34	(GMT -2:00) Mid-Atlantic	
35	(GMT -1:00) Azores	
36	(GMT -1:00) Cape Verde Islands	
37	(GMT 0:00) Western Europe Time	
38	(GMT 0:00) London,Lisbon	
39	(GMT 0:00) Casablanca	
40	(GMT 0:00) Dublin	

Permitted Values		Default
41	(GMT 0:00) Edinburgh	
42	(GMT 0:00) Monrovia	
43	(GMT 0:00) Reykjavik	
44	(GMT +1:00) Belgrade	
45	(GMT +1:00) Bratislava	
46	(GMT +1:00) Budapest	
47	(GMT +1:00) Ljubljana	
48	(GMT +1:00) Prague	
49	(GMT +1:00) Sarajevo,Skopje	
50	(GMT +1:00) Warsaw,Zagreb	
51	(GMT +1:00) Brussels	
52	(GMT +1:00) Copenhagen	
53	(GMT +1:00) Madrid,Paris	
54	(GMT +1:00) Amsterdam,Berlin	
55	(GMT +1:00) Bern,Rome	
56	(GMT +1:00) Stockholm,Vienna	
57	(GMT +1:00) West Central Africa	
58	(GMT +1:00) Windhoek	
59	(GMT +2:00) Bucharest,Cairo	
60	(GMT +2:00) Amman,Beirut	
61	(GMT +2:00) Helsinki,Kyiv	
62	(GMT +2:00) Riga,Sofia	
63	(GMT +2:00) Tallinn,Vilnius	
64	(GMT +2:00) Athens,Istanbul	
65	(GMT +2:00) Damascus	
66	(GMT +2:00) E.Europe	
67	(GMT +2:00) Harare,Pretoria	
68	(GMT +2:00) Jerusalem	
69	(GMT +2:00) Kaliningrad (RTZ 1)	
70	(GMT +2:00) Tripoli	
71	(GMT +3:00) Moscow	
72	(GMT +3:00) St.Petersburg	
73	(GMT +3:00) Volgograd (RTZ 2)	
74	(GMT +3:00) Kuwait,Riyadh	
75	(GMT +3:00) Nairobi	
78	(GMT +3:00) Baghdad	
76	(GMT +3:00) Minsk	
77	(GMT +3:30) Tehran	
79	(GMT +4:00) Abu Dhabi,Muscat	
80	(GMT +4:00) Baku,Tbilisi	

Permitted Values		Default
81	(GMT +4:00) Izhevsk,Samara (RTZ 3)	
82	(GMT +4:00) Port Louis	
83	(GMT +4:00) Yerevan	
84	(GMT +4:30) Kabul	
85	(GMT +5:00) Ekaterinburg (RTZ 4)	
86	(GMT +5:00) Islamabad	
87	(GMT +5:00) Karachi	
88	(GMT +5:00) Tashkent	
89	(GMT +5:30) Mumbai,Chennai	
90	(GMT +5:30) Kolkata,New Delhi	
91	(GMT +5:30) Sri Jayawardenepura	
92	(GMT +5:45) Kathmandu	
93	(GMT +6:00) Astana,Dhaka	
94	(GMT +6:00) Almaty	
95	(GMT +6:00) Novosibirsk (RTZ 5)	
96	(GMT +6:30) Yangon (Rangoon)	
97	(GMT +7:00) Bangkok,Hanoi	
98	(GMT +7:00) Jakarta	
99	(GMT +7:00) Krasnoyarsk (RTZ 6)	
100	(GMT +8:00) Beijing,Chongqing	
101	(GMT +8:00) Hong Kong,Urumqi	
102	(GMT +8:00) Kuala Lumpur	
103	(GMT +8:00) Singapore	
104	(GMT +8:00) Taipei,Perth	
105	(GMT +8:00) Irkutsk (RTZ 7)	
106	(GMT +8:00) Ulaanbaatar	
107	(GMT +9:00) Tokyo,Seoul,Osaka	
108	(GMT +9:00) Sapporo,Yakutsk (RTZ 8)	
109	(GMT +9:30) Adelaide,Darwin	
110	(GMT +10:00) Canberra	

Permitted Values		Default
111	(GMT +10:00) Magadan (RTZ 9)	
112	(GMT +10:00) Melbourne	
113	(GMT +10:00) Sydney,Brisbane	
114	(GMT +10:00) Hobart	
115	(GMT +10:00) Vladivostok	
116	(GMT +10:00) Guam,Port Moresby	
117	(GMT +11:00) Solomon Islands	
118	(GMT +11:00) New Caledonia	
119	(GMT +11:00) Chokurdakh (RTZ 10)	
120	(GMT +12:00) Fiji Islands	
121	(GMT +12:00) Auckland,Anadyr	
122	(GMT +12:00) Petropavlovsk-Kamchatsky (RTZ 11)	
123	(GMT +12:00) Wellington	
124	(GMT +12:00) Marshall Islands	
125	(GMT +13:00) Nuku'alofa	
126	(GMT +13:00) Samoa	

Smart Login

Smart Login, available with the RealPresence Trio solution, determines if a network environment is capable of PIN Authentication. If the STS-URI is not configured via DHCP Option43 or manually through configuration files, then PIN Authentication will not be enabled for the phone or in the Web Configuration Utility for a Skype for Business sign in.

Sign In Methods

Users can sign in or out of the phone in one of the following methods:

- **Login Credentials**. Use this to sign in with user credentials on the Sign In screen. You cannot configure login credentials using the Polycom Web Configuration Utility.
- **PIN Authentication**. Use this to sign in on the phone or from the Web Configuration Utility. As of UC Software 5.1.1, this sign in method is available on the SoundStructure VoIP Interface. This option is available in on-premise Skype for Business deployments when you configure DCHP Option 43, and is not available for online deployments.

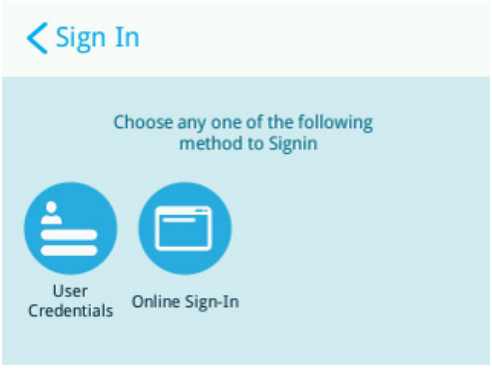
Note: Web Configuration Utility and login credentials
You cannot configure login credentials using the Polycom Web Configuration Utility.

Sign In Using Login Credentials

After you set the phone Base Profile to Lync, you can sign in from the phone using your login credentials.

To sign in from the phone:

1. After the phone reboots, exit the PIN authentication screen that displays on the phone. If you enabled more than one authentication method on the phones, the following screen displays to allow users to choose a sign-in method.



2. Press **Home/Menu** and go to **Settings > Features > Microsoft Lync > Sign In/Sign Out**.

   The Sign In screen displays.

3. Enter your sign-in credentials:
   - Sign In Address. This is your Lync SIP URI address, not the user name for the Active Directory account. For example, `username@domain.com`.
   - Domain. By default, use the NetBIOS domain name.
   - User. Enter a user name.
   - Password. Enter a password.

4. Select **Sign In**. You can begin using Lync features directly from the phone.

Sign In Using PIN Authentication

You can sign in to Lync Server or Skype for Business Server using PIN authentication. To use PIN authentication, you must enable the Web Configuration Utility, which is disabled by default. Refer to the section Enable Access to the Web Configuration Utility. After you enable the Web Configuration Utility, you can enable or disable PIN authentication using `reg.1.auth.usePinCredentials`.

Note: DHCP Option 43 displays the PIN Authentication menu to users

If you configure DHCP Option 43 in on-premise Skype for Business deployments, the phone displays the PIN Authentication menu to users. The PIN Auth menu does not display and is not available for Skype for Business Online.

To sign in using PIN authentication:

1. Set the phone's Base Profile to **Lync**.

   The phone reboots and displays a PIN Authentication screen.

2. Enter the phone's extension and your PIN, and press **Sign In**. Press the **Exit** soft key to sign out and return to the Home screen.

Disable the Sign-In and Sign-Out Soft Keys

If your RealPresence Trio solution is being used as a shared device, you can remove the sign-out soft key to prevent users from signing others out. Or, you can remove both the sign-in and sign-out soft keys.

Use the following parameters to remove the sign-out soft key, or the sign-in and sign-out keys.

Sign-In and Sign-Out Soft Key Parameters

Parameter Template	Permitted Values
feature.lync.hideSignOut	0 (default) - The sign-out soft key displays on the Home screen and phone menus. 1 - The sign-out soft key is removed from the Home screen and phone menus.
feature.lync.hideSignInSignOut	0 (default) - The sign-in and sign-out soft keys display on the Home screen and phone menus. 1 - The sign-in and sign-out soft keys are removed from the Home screen and phone menus.

Create Conference Room Accounts for Lync Server

The RealPresence Trio 8800 enables you to use Remote Desktop Protocol (RDP) with Lync 2013 clients, which enables both application and desktop sharing. To maximize the benefits of RDP content sharing, Polycom recommends creating a Lync Room System or CsMeetingRoom account to allow sharing from in-room clients. When you create a conference room account, the Lync Room System prompts content presenters to mute the microphone and speaker to avoid audio feedback.

Create a Lync Room System Account

To create a Lync Room System account, complete the following procedure and update your account name and server details on your Exchange Server Management Shell.

To create a Lync Room System account:

1. Within your Exchange Management Shell, set the following:
   - `New-Mailbox -Name 'Trio Room01' -Alias 'Trio.Room01' -UserPrincipalName 'Trio.Room01@domain.com' -SamAccountName 'Trio.Room01' -FirstName 'Trio' -Initials '' -LastName 'Room01' -Room`
   - `Set-CalendarProcessing -Identity Trio.Room01 -AutomateProcessing AutoAccept -AddOrganizerToSubject $false -RemovePrivateProperty $false -DeleteSubject $false`
   - `Set-Mailbox -Identity Trio.Room01@domain.com -MailTip "This room is equipped with a Polycom RealPresence Trio 8800, please make it a Lync Meeting to take advantage of the enhanced meeting experience."`
   - `Set-ADAccountPassword -Identity Trio.Room01`
   - `Enable-ADAccount -Identity Trio.Room01`

2 Within your Lync Management Shell, set:

- `Enable-CsMeetingRoom -SipAddress "sip:Trio.Room01@domain" -domaincontroller dc.domain.local -RegistrarPool pool01.domain.local -Identity Trio.Room01`

Skype for Business Exchange Calendar Integration

This feature enables set up of visual voicemail, call log synchronization, Outlook contact search, and Microsoft Lync Address Book Service (ABS) adaptive search. Each of these features is enabled by default on Polycom phones registered with Lync Server.

When you register a RealPresence Trio 8800 with Lync Server, a Calendar icon displays on the phone Home screen that enables users to access each of these features. Users can view and join Outlook calendar events directly from RealPresence Trio 8800 which displays the day and meeting view for scheduled events; the month view is not currently available. Note you cannot schedule calendar events or view email from the phone.

When you pair RealPresence Trio 8800 with RealPresence Trio Visual+, administrators can configure whether or not users receive reminder notifications on the display monitor and whether or not an alert sound accompanies reminder notifications.

Connect RealPresence Trio to Microsoft Exchange Server mail server using a Microsoft Exchange Server URL, for example `https://<mail.com>/ews/exchange.asmx`. In this example, the URL part `<mail.com>` is specific to an organization.

As you set up calendar features, note the following diagnostic points:

- Verify which Exchange Server services are not working on each phone by going to Status > Diagnostics > Warnings.
- View the status of each service in the Web Configuration Utility.
- You cannot download voicemail messages to the phone.

Settings: Accessing Exchange integration

If you enter sign-in credentials to the configuration file, phone users must enter credentials to the phone Sign In screen.

Enable Exchange Calendar from a Provisioning Server

Exchange calendar autodiscovery is enabled by default. You have the option to enable Skype for Business Exchange calendar using the following parameters on your central provisioning server. Note that the parameters are not included in the template configuration files and you must enter the parameter manually to one of your existing configuration files.

To enable the exchange calendar from a provisioning server:

1 Add the following parameter to one of your configuration files:

- `feature.exchangeCalendar.enabled=1`
- `exchange.server.url=https://<example URL>`

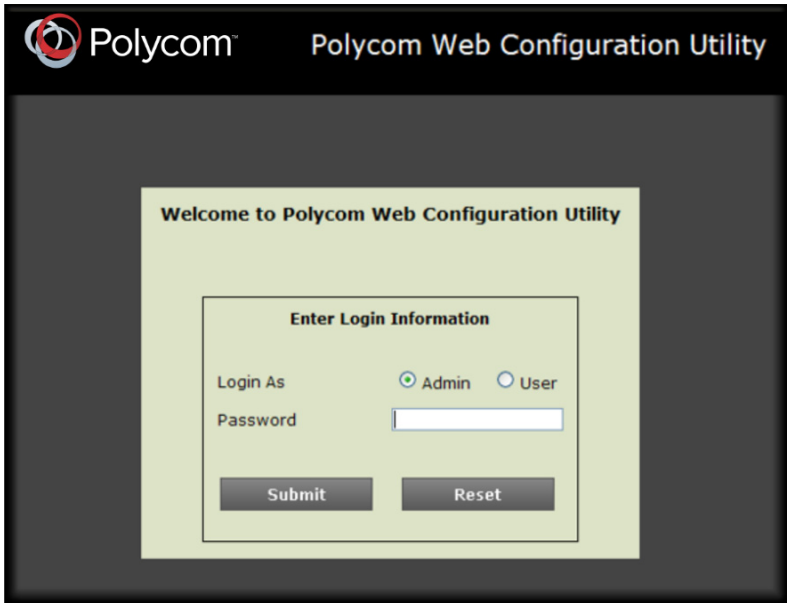
(Optional) Enable the Exchange Calendar Manually

Exchange calendar autodiscovery is enabled by default. You have the option to use the Web Configuration Utility to manually enable Skye for Business Exchange Calendar. This is useful for troubleshooting if autodiscovery is not working or misconfigured. This method applies only to a single phone at a time.

To enable the exchange calendar manually:

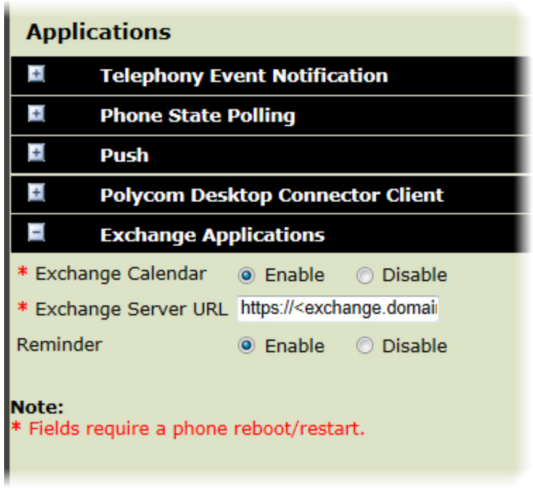
1. Ensure that you Enable Access to the Web Configuration Utility.
2. Enter the IP address of your phone in the address bar of a web browser. You can find the phone's IP address by going to **Menu/Home > Settings > Basic > Platform > Phone**. The IP address displays in the IP field labeled.

   The Web Configuration Utility login screen displays, shown next.



3. Choose **Admin**, enter the Password (default 456), and click **Submit**.

4 In the Home page, navigate to **Settings > Applications > Exchange Applications**, and expand Exchange Applications, as shown next.



5 In the Exchange Calendar field, select **Enable**.

6 Enter the exchange web services URL using a Microsoft Exchange Server URL, for example `https://<mail.com>/ews/exchange.asmx`. In this example, the URL part `<mail.com>` is specific to an organization

7 At the bottom of the browser page, click **Save**.

8 When the confirmation dialog displays, click **Yes**.

Your Exchange Calendar is successfully configured and the Calendar icon displays on your phone screen.

Skype for Business User Profiles

Administrators can enable users to access their personal settings from any phone in the organization registered to Skype for Business. For example, users can access their contact directory and speed dials, as well as other phone settings, even if they temporarily change work areas. This feature is particularly useful for remote and mobile workers who do not use a dedicated work space and conduct business in multiple locations. The user profile feature is also useful if an office has a common conference phone from which multiple users need to access their personal settings.

Administrators must decide whether to require users to always log in to a phone or not. If you do not require users to log in, users have the option to use the phone as is-without access to their personal settings-or they can log in to display their personal settings. You can also specify if, after the device restarts or reboots, a user is automatically logged out.

You can choose to define default credentials. If you specify a default user ID and password, the phone automatically logs itself in each time an actual user logs out or the device restarts or reboots. When the device logs itself in using the default login credentials, a default profile displays, and users retain the option to log in and view their personal settings.

You can configure the phones so that anyone can call authorized and emergency numbers when not logged in to a phone using the parameter dialplan.routing.emergency.outboundIdentity.

Polycom recommends that you create a single default user password for all users. You can reset a user's password by removing the password parameter from the override file. This causes the phone to use the default password in the <user>.cfg file.

Tip: Converting a phone-based deployment to a user-based deployment
To convert a phone-based deployment to a user-based deployment, copy the `<MACaddress>-phone.cfg` file to `<user>-phone.cfg` and copy `phoneConfig<MACaddress>.cfg` to `<user>.cfg`.

To set up the user profile feature, you must:

- Create a phone configuration file or update an existing file to enable the feature's settings, and configure attributes for the feature.
- Create a user configuration file in the format `<user>.cfg` to specify each user's password and registration and other user-specific settings that you want to define.

Create a User Profile Configuration File

Create a configuration file if you want to add or edit user login or feature settings for multiple phones.

To create phone configuration file:

1. Create a configuration file for the phone and place it on the provisioning server.

   You can create your own or base this file on the sample configuration template in the UC Software, for example, `site.cfg`. To find the file, navigate to `<provisioning server location>/Config/site.cfg`.
2. In `site.cfg`, open the `<prov.login/>` attribute, and then add and set values for the user login parameters.
3. Copy these attributes for each user and enter user-specific values.

Create a User Configuration File

Create a user-specific configuration file that stores user names, passwords, and registrations.

To create a user configuration file:

1. On the provisioning server, create a user configuration file for each user to log in to the phone. The name of the file is the user's ID to log in to the phone. For example, if the user's login ID is `user100`, the name of the user's configuration file is `user100.cfg`.
2. In each `<user>.cfg` file, you can add and set values for the user's login password (optional).
3. Add and set values for any user-specific parameters, such as:
   - Registration details (for example, the number of lines the profile displays and line labels).
   - Feature settings (for example, browser settings).

Caution: Adding user-specific parameters
If you add optional user-specific parameters to <user>.cfg, add only those parameters that will not cause the phone to restart or reboot when the parameter is updated. For information on which parameters cause the phone to restart or reboot, see the reference section Configuration Parameters.

After a user logs in, with their user ID and password (The default password is 123.), users can:

- Log in to a phone to access their personal phone settings.
- Log out of a phone after they finish using it.
- Place a call to an authorized number from a phone that is in the logged out state.
- Change their user password.

If a user changes any settings while logged in, the settings save and display the next time the user logs in. When a user logs out, the user's personal phone settings no longer display.

Stored User Settings

If a user updates their password or other user-specific settings using the Main Menu on the phone, the updates are stored in `<user>-phone.cfg`, not `<MACaddress>-phone.cfg`.

If a user updates their contact directory while logged in to a phone, the updates are stored in `<user>-directory.xml`. Directory updates display each time the user logs in to a phone. Configuration parameter precedence (from first to last) for a phone that has the user profile feature enabled is:

- `<user>-phone.cfg`
- Web Configuration Utility (through a browser)
- Configuration files listed in the master configuration file (including <user>.cfg)
- Default values

Configure Presence

The Lync presence feature enables users to monitor the status of remote contacts from their phone. Users can monitor changes in the status of up to 200 remote contacts in real time when they add them as Favorites on the VVX phone and expansion module. Note that contacts can block others from monitoring their phones.

Presence Parameters

The following section lists parameters that configure presence settings for Microsoft servers.

When you enable the `pres.idleSoftkeys` parameter, the My Status and Contacts soft keys display on the phone's home screen. The `pres.reg` parameter uses the address of phone line 1 for the presence feature. Press the Contacts soft key to display your Contacts list.

Presence Parameters

Parameter Template	Permitted Values
`feature.presence.enabled` lyncSharedExample.cfg	`1` (default) - Enable the presence feature to manage your buddy list and display the status of your contacts. `0` - Disable the presence feature.

Presence Parameters

Parameter Template	Permitted Values
pres.idleSoftkeys features.cfg	1 (default) - The MyStat and Buddies presence idle soft keys display. 0 - The MyStat and Buddies presence idle soft keys not do display.
pres.reg features.cfg	1 (default) - The valid line/registration number used for presence. This registration sends a SUBSCRIBE for presence. If the value is not a valid registration, this parameter is ignored. 1 – 34 - The valid line/registration number used for presence.

The following table describes the presence icons that display on phones registered with Microsoft servers.

Presence Icons

Icon	Description
	Available
	Busy, In a Call, In a Meeting, In a Conference Call
	Away, Be Right Back, Inactive, Off Work
	Do Not Disturb, Presenting, In Presentation
	Offline
	Unknown
	Blocked

Customize the RealPresence Trio 8800 System Interface

You can customize which setting icons and features you want to display on the RealPresence Trio 8800 system interface. The following table lists parameters you can use to hide or display icons and features.

Interface Element	Configuration Parameter	Permitted Values
Place a call	na	na
Contacts	`homeScreen.directories.enable`	`1` (default) - Enable display of the Directories menu icon on the phone Home screen. `0` - Enable display of the Directories menu icon on the phone Home screen.
Contacts	`feature.contacts.enabled`	`1` (default) - Enable display of the Contacts icon displays on the Home screen, the global menu, and in the dialer. `0` - Disable display of the Contacts icon displays on the Home screen, the global menu, and in the dialer. Requires UCS 5.4.2 RevAA or higher.
Local Directory	`feature.directory.enabled`	`1` (default) - The local directory is enabled. `0` - The local contact directory is disabled.
Corporate Directory	`feature.corporateDirectory.enabled`	`0` (default) - The corporate directory feature is disabled and the icon hidden. `1` (default) - The corporate directory is enabled and the icon displays.
Global Address Book	`feature.corporateDirectory.alt.enabled`	`0` (disable) - The global address book service is disabled. `1` - The global address book service is disabled.

Outlook Contacts	`feature.exchangeContacts.enabled`
	`feature.lync.abs.enabled`
		The Outlook Search feature allows you to search and view Outlook Contacts and displays in the Contacts menu when the parameters are set as follows:
		`feature.exchangeContacts.enabled="1"`
		`feature.lync.abs.enabled="0"`

Interface Element	Configuration Parameter	Permitted Values
Call Lists	`feature.callList.enabled`	`1` (default) - Allows you to enable the missed, placed, and received call lists on all phone menus including the Home screen and dial pad. `0` - Disables all call lists. Hiding call lists from the Home screen and dial pad requires UCS 5.4.2 RevAA or higher.
Missed Calls	`feature.callListMissed.enabled`	`1` (default) - Missed calls are added to the Missed Calls call list. `0` - Missed calls are not added to the Missed Calls list and you cannot clear existing entries.
Placed Calls	`feature.callListPlaced.enabled`	`1` (default) - Placed calls are added to the Placed Calls call list. `0` - Placed calls are not added to the Placed Calls list and you cannot clear existing entries.
Received Calls	`feature.callListReceived.enabled`	`1` (default) - Received calls are added to the Received Calls call list. `0` - Received calls are not added to the Received Calls list and you cannot clear existing entries.
Calendar	`feature.exchangeCalendar.enabled`	`1` (default) - The calendaring feature is enabled. `0` - The calendaring feature is disabled. You must enable this parameter if you also enable `feature.exchangeCallLog.enabled`. If you disable `feature.exchangeCalendar.enabled`, also disable `feature.exchangeCallLog.enabled` to ensure call log functionality.
	`homeScreen.calendar.enable`	`1` (default) - The Calendar icon on the Home screen displays. `0` - The Calendar icon does not display on the Home screen and is accessible from the dial pad.

Interface Element	Configuration Parameter	Permitted Values
Voice Mail	`up.oneTouchVoiceMail`	`0` (default) - The phone displays a summary page with message counts. Press the Connect soft key to dial the voicemail server. `1` - The phone dials voicemail services directly, if available on the call server, and does not display the voicemail summary page.
Bluetooth	`feature.bluetooth.enabled`	`1` (default) - Bluetooth connection is enabled and the Bluetooth menu displays. `0` - Bluetooth connection is disabled.
Settings	`homeScreen.settings.enable`	`1` (default) - The Settings menu icon displays on the Home screen and global menu. `0` - The Settings menu icon does not display on the Home screen and global menu. You require UC Software 5.4.2 RevAA or higher to hide the Settings icon from the global menu
Basic Settings	`up.basicSettingsPasswordEnabled`	`0` (default) - No password is required to access the Basic settings menu. `1` - A password is required to access the Basic settings menu.
Advanced Settings		
Phone Lock	`phoneLock.enabled`	`0` (default) - The phone lock feature is disabled. `1` - The phone lock feature is enabled. Note: To unlock the phone remotely or to delete or modify the overrides files, disable and re-enable this parameter.
Date and Time	`up.localClockEnabled`	`1` (default) - The date and time display. `0` - The date and time do not display.

Configure Shared Line Appearance (SLA) for Skype for Business

Shared Line Appearance (SLA) feature enables user to share a single line with other contacts as a member of a group. Each shared line can receive only one incoming call at a time, and users cannot make outgoing calls from the shared line, including 911 emergency calls.

An incoming call to the shared line is received by all phones sharing the line. Any SLA group member can place, answer, hold, or resume calls on the line, and all group members can view the status of a call on the shared line on their phones.

The following features are not supported on SLA lines:

- BToE
- Conference class
- Call Park

Administrators must install the Shared line Application on the Microsoft Front End server and configure SLA groups in Windows PowerShell.

Administrators can configure a ring tone type, and users can set a ring type from the phone menu system at **Settings > Basic > RingType > SLA Ring type**.

SLA for Skype for Business Parameters

Parameter Template	Permitted Values
up.SLA.ringType	Set the ring type for the share line so that users can distinguish between incoming calls to a private, primary line and the group SLA line. Note that users can set this ring type from the phone menu system which overrides the value you set here. 1 (default) 0 - 25

Wireless Network Connectivity (Wi-Fi)

You can wirelessly connect the RealPresence Trio 8800 to your network using Wi-Fi. Wi-Fi is disabled by default; when you enable Wi-Fi the phone reboots. Enabling Wi-Fi disables the Ethernet port - you cannot use Wi-Fi and Ethernet simultaneously to connect RealPresence Trio 8800 to your network. When you connect RealPresence Trio 8800 to your network over Wi-Fi, only audio-only calls are available. Note that RealPresence Trio 8800 does not support Wi-Fi captive portals or WiDi.

The parameters you configure depend on the security mode of your organization and whether or not you enable DHCP. RealPresence Trio 8800 solution is shipped with a security-restrictive worldwide safe Wi-Fi country code setting. To ensure best performance in your location, set a proper country code with parameter device.wifi.country before enabling Wi-Fi.

Note: You cannot use RealPresence Trio Visual+ when connected to your network using Wi-Fi

You cannot use RealPresence Trio Visual+ for video calls when you connect RealPresence Trio 8800 to your network using Wi-Fi. The RealPresence Trio 8800 and RealPresence Trio Visual+ do not pair when the RealPresence Trio 8800 is connected to your network using Wi-Fi.

Enable Wireless Network Connectivity (Wi-Fi)

You can enable Wi-Fi on the phone menu.

To enable Wi-Fi:

1. Go to **Settings > Advanced > Administration Settings > Network Configuration > Network Interfaces > Wi-Fi Menu**, and turn **Wi-Fi On**.

   The phone restarts.
2. When the phone completes restart, go to **Settings > Advanced > Administration Settings > Network Configuration > Network Interfaces > Wi-Fi Menu** to view available networks.
3. Select a network you want to connect to and press **Connect**.

Supported Wireless Modes

The RealPresence Trio 8800 supports various wireless modes, security options, radio controls, and Quality of Service monitoring. To connect to the Internet wirelessly, you must choose a country code.

The RealPresence Trio solution supports the following wireless modes:

- 2.4 GHz / 5 GHz operation
- IEEE 802.11a radio transmission standard
- IEEE 802.11b radio transmission standard
- IEEE 802.11g radio transmission standard
- IEEE 802.11n radio transmission standard

The RealPresence Trio solution supports the following Wi-Fi security modes:

- WEP
- WPA PSK
- WPA2 PSK
- WPA2 Enterprise

Wi-Fi Network Connection Parameters

Use the parameters in this section to configure connection to the Wi-Fi Network.

Wi-Fi Network Connection Parameters

Parameter Template	Permitted Values
`device.wifi.enabled` device.cfg, wireless.cfg	`0` (default) - the Wi-Fi radio is disabled. `1` - The Wi-Fi radio is enabled.
`device.wifi.country` device.cfg, wireless.cfg	NULL (default) Enter the two-letter code for the country in which you are operating RealPresence Trio 8800 solution with Wi-Fi enabled.
`device.wifi.dhcpEnabled` device.cfg, wireless.cfg	`0` (default) - Disable DHCP for Wi-Fi. `1` - Enable DHCP for Wi-Fi.
`device.wifi.dhcpBootServer` device.cfg, wireless.cfg	

Wi-Fi Network Connection Parameters

Parameter Template	Permitted Values
device.wifi.ipAddress device.cfg	NULL (default) The IP address of the wireless device if not using DHCP.
device.wifi.subnetMask device.cfg, site.cfg	255.0.0 (default) string The network mask address of the wireless device if not using DHCP.
device.wifi.ipGateway device.cfg, site.cfg	0.0.0.0 (default) string The IP gateway address for the wireless interface (if not using DHCP).
device.wifi.ssid device.cfg, wireless.cfg	SSID1 (default) string The Service Set Identifier (SSID) of the wireless network.
device.wifi.securityMode device.cfg, wireless.cfg	NULL (default) None, WEP, WPA-PSK, WPA2-PSK, WPA2-Enterprise Specify the wireless security mode.
device.wifi.wep.key1 device.cfg, wireless.cfg	0xFF (default) string The hexadecimal key or ASCII passphrase.
device.wifi.wpa2Ent.caCert.name	NULL (default) string (0 - 128 characters) Specify the CA certificate alias for Wi-Fi enterprise (EAP) level security. To use the default certificate, set the value to Polycom 802.1X Device Certificate.
device.wifi.wpa2Ent.clientCert.name	NULL (default) string (0 - 128 characters) Specify the user or device certificate alias for Wi-Fi enterprise (EAP) level security. To use the default certificate, set the value to Polycom 802.1X Device Certificate.
device.wifi.wpa2Ent.method device.cfg, wireless.cfg	NULL (default) EAP-PEAPv0/MSCHAPv2, EAP-FAST, EAP-TLS, EAP-PEAPv0-GTC, EAP-TTLS-MSCHAPv2, EAP-TTLS-GTC, EAP-PEAPv0-NONE, EAP-TTLS-NONE, EAP-PWD The Extensible Authentication Protocol (EAP) to use for 802.1X authentication.

Wi-Fi Network Connection Parameters

Parameter Template	Permitted Values
device.wifi.wpa2Ent.user device.cfg, wireless.cfg	NULL (default) string The WPA2-Enterprise user name.
device.wifi.wpa2Ent.password device.cfg, wireless.cfg	NULL (default) string The WPA2-Enterprise password.
device.wifi.radio.band4GHz.enable	0 (default) - 1 -
device.wifi.radio.band5GHz.enable	0 (default) - 1 -

Display System Information on the RealPresence Trio Visual+ Monitor

You can configure the monitor connected to the RealPresence Trio Visual+ to display the system's name, IP address, and extension.

To configure display of system information:

» In the RealPresence Trio system's Web Configuration Utility, log in as Administrator, and configure the following settings.

Field Name	*Description*
System Name	The system name displays at the top left corner of the monitor, and at the top of the Global menu of the RealPresence Trio 8800 system. Specify a system name with the system.name parameter, or in the Web Configuration Utility at **Simple Setup > System Name**. Enter a system name that helps user identify the system, for example, 'Conference Room' or 'Joe's Phone'. If the system.name parameter is not specified, the system name is specified as follows: • If the phone has a registered line: The line label specified by reg.1.label is used first as the system name, and if not specified, the phone uses reg.1.displayName or reg.1.address. • If the phone does not have a registered line: The system name displays as 'RealPresence Trio 8800 (xxxxxx)' where (xxxxxx) is the last six digits of the phone's MAC address.

Field Name	*Description*
IP Address	The RealPresence Trio 8800 IP address displays at bottom left of the monitor. You can configure a static IP address in the Web Configuration Utility at **Settings > Network > Ethernet**.
Extension	The extension displays at the bottom center of the monitor. Extension displays the registered line number of the RealPresence Trio 8800. The monitor does not display an extension until the phone registers with a line. For all registered lines (except Microsoft), configure the extension in the Web Configuration Utility at **Simple Setup > SIP Line Identification > Address**. For lines registered with Microsoft, you must configure the extension on the Microsoft server you are using.

Pair RealPresence Trio Visual+ with RealPresence Trio 8800

Pair the RealPresence Trio Visual+ with RealPresence Trio 8800 to add video to calls and to enable content sharing. You can pair only one RealPresence Trio Visual+ at a time. Polycom recommends you plug both devices into a local gigabit switch. To pair, the RealPresence Trio 8800 and RealPresence Trio Visual+ must be connected to the same subnet and you must unblock:

- Multicast address 224.0.0.200
- Port 2000

Note: You cannot use RealPresence Trio Visual+ when connected to your network using Wi-Fi
You cannot use RealPresence Trio Visual+ for video calls when you connect RealPresence Trio 8800 to your network using Wi-Fi. The RealPresence Trio 8800 and RealPresence Trio Visual+ do not pair when the RealPresence Trio 8800 is connected to your network using Wi-Fi.

You can pair using configuration files or from the RealPresence Trio 8800 menu system. To pair using configuration files, enter the MAC address of your RealPresence Trio Visual+ as the value for the parameter mr.pair.uid.1. The MAC address value can be in either of the following formats: `00e0d::B09128D` or `00E0DB09128D`.

You can manually pair at any time from the RealPresence Trio 8800 menu. If you are using multiple RealPresence Trio 8800s and are not sure which RealPresence Trio Visual+ it is paired with, you can identify paired devices on the RealPresence Trio 8800 or pass the RealPresence Trio Visual+ devices through pairing recovery mode if you encounter a problem pairing.

Manually Pair RealPresence Trio Visual+ with Trio 8800

You can manually pair the RealPresence Trio Visual+ with RealPresence Trio 8800.

To manually pair RealPresence Trio Visual+ with Trio 8800:

1. Set up RealPresence Trio Visual+. For instructions, refer to the RealPresence Trio 8800 Setup Sheet that comes in the packaging box, also available under *Setup & Maintenance Documents* at RealPresence Trio.

   The Welcome screen displays on your monitor and indicates steps to pair with RealPresence Trio 8800.
2. Tap the **Pair** button on RealPresence Trio Visual+ to broadcast discovery to the RealPresence Trio 8800.
3. On the RealPresence Trio 8800, go to **Settings > Advanced > Networked Devices**, and ensure that **Notification of New Devices** is **On**.
4. Choose one:
   - If you have not paired the device before, tap **Pair with New Device**, tap the device you want to pair from the **Discovered Devices** list, and in the **Details** screen tap **Pair**. (All currently paired devices display under Paired Devices.)

     OR
   - If the device has been paired before, select the device from the **Available Devices** list and tap **Pair**.
5. In the popup message prompting you to complete pairing:
   - Tap **Complete**.

     OR
   - Tap the **Pair** button on the RealPresence Visual+.

   If pairing was successful, a success message displays on the monitor along with a self-view window, the LED light on the RealPresence Trio Visual+ device is continuously green, and a paired icon displays on the phone.

   If pairing was not successful, a message displays on the monitor that the devices could not pair.

   After successful pairing, if devices become disconnected for 60 seconds, a message displays that the devices have temporarily lost connection.

Identify Paired Devices

You can identify paired and unpaired RealPresence Trio Visual+ devices from the RealPresence Trio 8800.

To identify paired devices:

1. On the RealPresence Trio 8800, go to **Settings > Advanced > Networked Devices**, and ensure that **Notification of New Devices** is **On**.
2. Select a device that displays under **Paired Devices** or **Available Devices**.
3. Tap **Identify** to flash the LED of the device you selected.

Cycle RealPresence Trio Visual+ Recovery Mode

Pass the RealPresence Trio Visual+ through recovery mode if you encounter a difficulty pairing devices.

To cycle the device through pairing recovery mode:

1. Power up the RealPresence Trio Visual+ device.
2. Wait for the initial LED on state to turn off.
3. Press and hold the pairing button until the LED turns orange.
4. Release the pairing button. The LED blinks.
5. Wait for the device to reboot.
   The paired Pod LED is steady green.

LED States on the RealPresence Trio 8800 and Visual+ Systems

The RealPresence Trio 8800 and Visual+ systems use LED lights to indicate various functional states.

LED States on the RealPresence Trio 8800 System

The following table describes each of the RealPresence Trio 8800 system LED states.

RealPresence Trio 8800 LED States

LED State	Description
Off	Device is in idle state or powered off.
Green	In a call with audio unmuted.
Red	Microphones are muted. Device is in a call or in idle state.
Yellow	Power on LED diagnostic.
Amber/Red/Green/Off Repeating	Recovery in progress.

LED States on the RealPresence Trio Visual+ System

The following table describes each of the RealPresence Trio Visual+ system LED states.

RealPresence Trio Visual+ LED States

LED State	Description
Off	Device is not powered on
Flashing red	Device is booting up or pairing
Flashing green	Device update is in progress
Steady green	Device is powered on and paired with the RealPresence Trio 8800
Amber	Device is in a low power, standby state
Alternating orange/red/green/off flashes	Device is in recovery mode
Flashing red	The pairing button has been pressed
Alternating red and green flashes	Device is in pairing diagnostics mode

RealPresence Trio 8800 and Visual+ Pairing Parameters

The following table lists parameters that configure pairing between the RealPresence Trio 8800 and RealPresence Trio Visual+.

Pairing Parameters

Parameter Template	Permitted Values
mr.audio.srtp.require	0 (default) - SRTP is not used to encrypt and authenticate audio signals sent between RealPresence Trio 8800 and RealPresence Trio Visual+. 1 - SRTP is used to encrypt and authenticate audio signals sent between RealPresence Trio 8800 and RealPresence Trio Visual+.
mr.bg.selection features.cfg	Set the background image for the paired RealPresence Trio Visual+ TV display. 0 (default) - Automatically cycles through all background images 1 - Blue Gradient 2 - Hallstatter See Lake 3 - Bavarian Alps 4 - Forget me Not Pond
mr.pair.tls.enabled	0 (default) - TLS is not used for communications between RealPresence Trio 8800 solution and RealPresence Trio Visual+. 1 - Use TLS for communications between RealPresence Trio 8800 solution and RealPresence Trio Visual+.
mr.pair.uid.1 new.cfg	NULL (default) string Enter the MAC address (Serial Number [S/N]) of the RealPresence Trio Visual+ you want to pair with.
mr.pairButton.notification	0 (default) - The RealPresence Trio 8800 is not notified when you press the Pair button on the RealPresence Trio Visual+ and the pairing icon does not display on the status bar of the RealPresence Trio 8800 LCD. 1 - The RealPresence Trio 8800 is notified when you press the Pair button on the RealPresence Trio Visual+, and the pairing icon displays on the status bar of the RealPresence Trio 8800 LCD.
mr.pairing.port	8000 (default) positive 16-it integer
mr.video.camera.focus.range	0 (default) 0 – 255 millimeters Specify the distance to the camera's optimally-focused target.

Pairing Parameters

Parameter Template	Permitted Values
mr.video.camera.focus.auto	0 (default) - The camera's automatic focus is disabled. Automatic focus is not recommended for group call settings. 1 - The camera's automatic focus is enabled.
mr.video.iFrame.minPeriod new.cfg	2 seconds (default) 1 - 60 seconds Choose the minimum time in seconds between transmitted video i-Frames or transmitted i-Frame requests.

Configure Content Sharing

When RealPresence Trio Visual+ is paired with a RealPresence Trio 8800 registered to Lync Server or Skype for Business, users can share content as follows. For details on sharing content in call scenarios, see the *Polycom RealPresence Trio Solution - User Guide* on Polycom UC Software for Microsoft Deployments.

Locally

- You can show content locally in-room from a Lync / Skype for Business client.

Point-to-point

- You can show content from a Lync / Skype for Business client in a call with RealPresence Trio solution.
- Share content from a Lync / Skype for Business client in calls with another RealPresence Trio 8800 solution or Lync / Skype for Business client.

In a Lync or Skype for Business call

- When in an active call, add your own Lync / Skype for Business client as a call participant.
- When registered to Lync Server, RealPresence Trio supports CCCP, SVC, and remote desktop protocol (RDP) to receive content from a remote participant also registered with Lync.
- You can use the following Lync client options to share content in point-to-point and multiparty calls:
  - Present Desktop
  - Present Programs

Troubleshooting: PowerPoint and Whiteboard sharing not supported

RealPresence Trio solution does not support:

- PowerPoint sharing
- Whiteboard sharing

Show Content with Polycom People + Content IP over USB and over IP

UC Software 5.4.2 RevAA enables you to use Polycom® People + Content® IP to share your desktop when your Windows® or Mac® computer is connected by USB to the RealPresence Trio 8800 system when in or out of a call.

Sharing content with Polycom People + Content IP from a computer connected over IP supports 720p resolution with five frames per second (FPS) on the RealPresence Visual+ monitor. The computer and RealPresence Trio solution must be able to communicate on the same IP network.

When RealPresence Trio is registered with Microsoft Skype for Business or Lync, you can share content with Polycom People + Content IP only to a local monitor. You cannot share content with Polycom People + Content IP over a Lync or Skype for Business call. For instructions, see the *Polycom RealPresence Trio - User Guide* at RealPresence Trio on Polycom Support.

Keep the following points in mind:

- Showing content with People+Content IP on a computer connected by USB to RealPresence Trio provides video-only content to a maximum of 1080p resolution on a Windows computer and 720p on a Mac computer at 5fps; audio content is not shared.
- Video and data sent from People + Content is sent over USB, and no network connection is needed. This is useful for environments where guest IP access is not allowed.
- When used with Skype for Business, People + Content IP over USB works only with local content sharing, and does not work with peer-to-peer or with Lync conferencing (AVMCU).

This following table lists parameters that configure the People + Content over USB feature.

Polycom People + Content over IP Content Sharing

Parameter	Permitted Values
`feature.usb.device.content`	`0` (default) - USB content sharing using the People + Content IP application is disabled. `1` - USB content sharing using the People + Content IP application is enabled.

RealPresence Trio Solution Content Sharing Parameters

The following table lists parameters that configure content sharing using the RealPresence Trio Visual+.

Configure Content Sharing

Parameter Template	Permitted Values
`content.autoAccept.rdp`	`0` (default) - Incoming Lync content is not accepted automatically. Users must manually accept content. `1` - Incoming Lync content is accepted automatically if content is not currently streaming to the display.
`content.bfcp.port`	`15000` `0 - 65535`
`content.bfcp.transport`	`UDP` `UDP, TCP`
`content.ppcipServer.enabled`	`1` (default) - `0` -

Configure Content Sharing

Parameter Template	Permitted Values
content.ppcipServer.meetingPassword	NULL string (0 - 256 characters)
smartPairing.mode	disabled (default) - Users cannot use SmartPairing to pair with the conference phone. manual - Users must enter the IP address of the conference phone to pair with it.
smartPairing.volume	5 (default) 0 - 10 The relative volume to use for the SmartPairing ultrasonic beacon.

NFC-Assisted Bluetooth

The RealPresence Trio 8800 supports NFC (near field communication)-assisted Bluetooth pairing. This feature is disabled by default. When Bluetooth is enabled, you can connect one mobile phone or tablet at a time, place calls on their mobile phone, and use the conference phone as a speaker and microphone for the call. The RealPresence Trio 8800 conference phone can remember up to 10 previously paired devices. Note you cannot connect via Bluetooth during an active call.

Enable NFC-Assisted Bluetooth

You can enable or disable NFC Mode using configuration parameters or from the phone menu.

To enable/disable NFC Mode:

1. Go to **Settings > Advanced > Administrator Settings > NFC Mode**.
2. Press the NFC sensor to the left of the RealPresence Trio 8800 screen.

   The phone prompts you to confirm pairing.

When you enable NFC and pair the RealPresence Trio 8800 with a device, the NFC logo displays on the screen and users can use the phone to play audio from media, such as music or videos, from their mobile phone.

Bluetooth and NFC Parameters

The following table lists parameters that configure Bluetooth and NFC.

Bluetooth and NFC Parameters

Parameter Template	Permitted Values
bluetooth.devName new.cfg, sip-interop.cfg	NULL (default) UTF-8 string Enter the name of the device that broadcasts over Bluetooth to other devices.
bluetooth.discoverableTimeout new.cfg, features.cfg	0 (default) - Other devices can always discover this device over Bluetooth. 0 – 3600 seconds Set the time in seconds after which other devices can discover this device over Bluetooth.
bluetooth.radioOn features.cfg	0 (default) - The Bluetooth radio (transmitter/receiver) is off. 1 - The Bluetooth radio is on. The Bluetooth radio must be turned on before other devices can connect to this device over Bluetooth.
feature.bluetooth.enabled features.cfg	For high security environments. 1 (default)- The Bluetooth feature is enabled. 0 - The Bluetooth feature is disabled.
feature.nfc.enabled features.cfg	0 - The NFC pairing feature is disabled. 1 - The NFC pairing is enabled and users can pair NFC-capable devices to the RealPresence Trio 8800 solution.

Lync Local and Centralized Real-Time Audio and Video Calling

You can set up ad hoc 'Meet Now' or scheduled, local, or centralized calls on RealPresence Trio 8800 registered with Lync Server or Skype for Business. To enable video calls, you must pair RealPresence Trio 8800 to RealPresence Visual+ and connect RealPresence Trio Visual+ to a display screen and a Logitech Webcam C930e USB camera. When the devices are successfully paired, the display screen shows a small self-view window.

Related topics:

- For instructions on pairing, refer to Pair RealPresence Trio Visual+ with RealPresence Trio 8800.
- For details on supported video codecs, refer to Supported Video Codecs.

After you pair RealPresence Trio 8800 with RealPresence Visual+, you can set up local or centralized calls with video, and share content using the Lync / Skype for Business client. Note the following details and limitations of video calls and content sharing in a Microsoft environment.

In a Skype for Business or Lync Server call, RealPresence Trio solution supports single-stream video. When multipoint video calls are hosted on the Microsoft server, RealPresence Trio displays the active speaker and

video switches to the current active speaker; other participants are audio-only. Locally-hosted multipoint audio/video calls are not supported in Microsoft environments. Gallery view is not supported.

Note limitations when using RealPresence Trio solution for mutiparty video calls and content sharing:

- For details on video limitations, refer to Maximum Participants in Microsoft Client Calls.
- For details on content sharing limitations, refer to Configure Content Sharing.

Microsoft Client Calling with RealPresence Trio 8800

When you attach RealPresence Trio 8800 as a peripheral to a computer or device via USB, you can use RealPresence Trio 8800 as the audio device for calls you make from the computer. Note that you cannot use the RealPresence Trio 8800 conference phone with the Polycom Better Together over Ethernet (BToE) feature.

You can add participants to an existing call or schedule calls from your Outlook calendar. When you set up an Exchange Room Account, you can schedule meetings over Outlook directly to a RealPresence Trio 8800. For instructions on setting up an Exchange Room Account, refer to Create a Lync Room System Account.

Note that Microsoft now supports multiple clients:

- Lync 2013 / Skype for Business 2015 (v15.x)
- Skype for Business 2016 (v16.x)

When you place calls from the Microsoft client, you can use RealPresence Trio 8800 for the following call control functions:

- Volume control
- Mute | Unmute control
- Answer | End call
- Call Hold | Resume
- Toggle active call with a call on hold

The following table lists the maximum number of participants for each call scenario.

Maximum Participants in Microsoft Client Calls

The following table lists the maximum number of participants that can participate in Microsoft client calls.

Maximum Number of Participants in Client Calls

Call Type	Maximum Number of Participants
Local Conference	
Audio-only	Five
Video	Not supported
Centralized conferences	

Maximum Number of Participants in Client Calls

Call Type	Maximum Number of Participants
Audio-only	Varies by server
Video	RealPresence Trio solution supports single-stream video in Microsoft client calls. In mutiparty client calls, the active speaker displays and video switches to the current active speaker. Additional participants are audio-only. Gallery view is not supported.

Configure Audio Routing Options

RealPresence Trio 8800 offers audio output and routing options.

By default, audio is played on the RealPresence Trio 8800 in audio-only calls and through the monitor connected to RealPresence Trio Visual+ in audio/video calls. You can choose which output to use with the parameter `networkedDevicePlayout`.

You can also use RealPresence Trio 8800 as an audio device for your tablet or laptop. Connect your laptop to the RealPresence Trio 8800 using the USB-Micro USB cable supplied in the box with the RealPresence Trio 8800 conference phone. When the RealPresence Trio 8800 system is connected to a computer over USB, users can mute, hold, or end audio calls placed or answered in the Skype for Business and Lync 2013 clients on the system.

Users cannot make outgoing calls on a locked system, and Conference calling, Call Park, and Call Transfer are not available until a user unlocks the system.

You can choose the following audio routing options:

- RealPresence Trio 8800 speaker only
- Polycom® RealPresence Trio™ Expansion Microphones
- RealPresence Trio Visual+ using HDMI, USB audio device, or 3.5mm analog output
- Any combination of RealPresence Trio 8800 and RealPresence Trio Visual+

Polycom offers the Polycom® RealPresence Trio™ Expansion Microphones. The expansion microphones include a 2.1 m | 7 ft cable that you can attach directly to the RealPresence Trio 8800 to broaden its audio range to a total of 70 ft.

Audio Routing Parameters

The following table lists parameters that configure audio output.

Audio Output Parameters

Parameter Template	Permitted Values
`up.audio.networkedDevicePlayout`	`PhoneOnly` (default) - Audio is played on the conference phone only. `TvOnly` - Audio is played on the paired RealPresence Trio Visual+. `PhoneAndTv` - Audio is played on the conference phone and on the paired RealPresence Trio Visual+ simultaneously. `Auto` - The audio playout location is based on the call type.

Polycom NoiseBlock™

Polycom NoiseBlock technology automatically mutes the microphone during video calls when a user stops speaking, silencing noises, such as paper shuffling, food wrappers, and keyboard typing that interrupt conversations. When a user speaks, the microphone is automatically unmuted.

Polycom NoiseBlock™ Parameters

The following parameters configure the Polycom NoiseBlock feature.

Polycom NoiseBlock Parameters

Parameter Template	Permitted Values
`voice.ns.hf.blocker` new.cfg	`0` (default) - Polycom NoiseBlock technology is disabled. `1` - Polycom NoiseBlock technology is enabled.

Centralized Conference Control Protocol (CCCP)

CCCP is enabled by default when the phone Base Profile is set to 'Lync' and phones with a Lync Server or Skype for Business SKU. CCCP enables you to initiate conference calls with your Lync contacts from your phone, manage conference participants, enable announcements, and lock a conference. You can manage a maximum of 24 Lync conference calls at a time on your phone. However, you can have only one active conference call in progress on your phone.

Centralized Conference Control Protocol (CCCP) Parameters

The following parameters configure CCCP.

CCCP Parameters

Parameter Template	Permitted Values
`feature.cccp.enabled` lyncSharedLCExample.cfg, lyncSharedExample.cfg	`1` (enabled) - Enable use of CCCP. `0` - Disable use of CCCP.

Enable Lync and Skype for Business Exchange Integration

This feature enables set up of visual voicemail, call log synchronization, Outlook contact search, and Microsoft Lync Address Book Service (ABS) adaptive search. Each of these features is enabled by default on Polycom phones registered with Lync Server.

Connect RealPresence Trio to Microsoft Exchange Server mail server using a Microsoft Exchange Server URL, for example `https://<mail.com>/ews/exchange.asmx`. In this example, the URL part <mail.com> is specific to an organization.

When you register a RealPresence Trio 8800 with Lync Server, a Calendar icon displays on the phone Home screen that enables users to access each of these features. Users can view and join Outlook calendar events directly from RealPresence Trio 8800 which displays the day and meeting view for scheduled events; the month view is not currently available. Note you cannot schedule calendar events or view email from the phone.

When you pair RealPresence Trio 8800 with RealPresence Trio Visual+, administrators can configure whether or not users receive reminder notifications on the display monitor and whether or not an alert sound accompanies reminder notifications.

Note the following enhancements:

- Verify which Exchange Server services are not working on each phone by going to **Status > Diagnostics > Warnings** on the phone.
- View the status of each service in the Web Configuration Utility.
- The phone receives voicemails from Lync Server and messages play on the phone. You cannot download voicemail messages to the phone.

Set Up Calendar Features

- Connect the phone to the Exchange Server using one of two available methods.
  - Method one. By default this is enabled. Install and run the autodiscovery service on the Microsoft Server to get an exchange server URL automatically.
  - Method two. (Optional) Configure the Exchange Server URL. Using this method, the URL takes precedence over the default autodiscovery service.
- Visual voicemail. On the server, enable unified messaging and enable messages to play on the phone for each user. If you disable `feature.exchangeVoiceMail.enabled`, the Message Center and Lync Voice mail menus display the message. Lync Server only plays voicemail and you cannot download voicemails or play locally on the phone.
- Call log synchronization: On the server, enable the option to save calls logs to each user's conversation history in Outlook.
- ABS adaptive search. On the server, enable the ABS service. There are three possible configurations.
  - Outlook and ABS are both enabled by default. When both are enabled, the phone displays the Lync Directory.
  - If you disable Outlook and enable only ABS, the phone displays the Lync Directory.
  - If you enable Outlook and disable ABS, the Outlook Contact Search displays in Directories.

Web Info: Configuring Lync Server

For help with Lync Server 2010, refer to Microsoft Configure Exchange Services for the Autodiscover Service.

For help with Lync Server 2013, refer to Microsoft Configuring Unified Messaging on Microsoft Exchange Server to work with Lync Server 2013.

Microsoft Exchange Integration Parameters

The following table lists parameters that configure Microsoft Exchange integration.

Exchange Integration Parameters

Parameter Template	Permitted Values
exchange.meeting.alert.followOfficeHours	1 - Audible alerts occur during business hours. 0 - Audible alerts occur at all times.
exchange.meeting.alert.tonePattern	positiveConfirm (default) - Set the tone pattern of the reminder alerts using any tone specified by se.pat.*. See section Customize Audio Sound Effects in the UC Software Administrator Guide.
exchange.meeting.alert.toneVolume	10 (default) - Set the volume level of reminder alert tones. 0 - 17
exchange.meeting.phonePattern	NULL (default) string The pattern used to identify phone numbers in meeting descriptions, where "x" denotes any digit and "|" separates alternative patterns (for example, xxx-xxx-xxxx|604.xxx.xxxx).
exchange.meeting.reminderEnabled	1 (default) - Meeting reminders are enabled. 0 - Meeting reminders are disabled.
exchange.meeting.reminderInterval	300 seconds (defaut) 60 - 900 seconds Set the interval at which phones display reminder messages.
exchange.meeting.reminderSound.enabled	1 - The phone makes an alert sound when users receive reminder notifications of calendar events. 0 - The phone does not make an alert sound when users receives reminder notifications of calendar events. Note that when enabled, alert sounds take effect only if exchange.meeting.reminderEnabled is also enabled.
exchange.meeting.reminderType	Customize the calendar reminder and tone. 2 (default) - Reminder is always audible and visual. 1 - The first reminder is audible and visual reminders are silent. 0 - All reminders are silent.
exchange.server.url1	NULL (default) string The Microsoft Exchange server address.

Exchange Integration Parameters

Parameter Template	Permitted Values
feature.exchangeCalendar.enabled	0 - Exchange calendar service is disabled. 1 - The Exchange calendar feature is enabled and users can view meeting notifications on the phone.
feature.exchangeCallLog.enabled	1 (default) 0
feature.exchangeContacts.enabled	1 (default) 0
feature.EWSAutodiscover.enabled	1 - Exchange autodiscovery is enabled and the phone automatically discovers the Exchange server using the email address or SIP URI information. 0 - Exchange autodiscovery is disabled on the phone and you must manually configure the Exchange server address.
feature.exchangeVoiceMail.enabled	1 (default) 0
feature.lync.abs.enabled	1 - Enable comprehensive contact search in the Lync Server address book service. 0 - Disable comprehensive contact search in the Lync Server address book service.
feature.lync.abs.maxResult	12 (default) 5 – 50 The value for this parameter defines the maximum number of contacts to display in a Lync Server address book service contact search.
up.oneTouchDirectory	1 - The Lync Search icon displays on the Home screen. 0 - The Lync Search icon does not display on the Home screen.
up.oneTouchVoiceMail[1]	0 - The phone displays a summary page with message counts. The user must press the Connect soft key to dial the voicemail server. 1 - The phone dials voicemail services directly (if available on the call server) without displaying the voicemail summary.

[1] Change causes phone to restart or reboot.

Set Up Consumer Electronics Controls (CEC) over HDMI

Consumer Electronics Control (CEC) enables system standby on RealPresence Trio systems when using the RealPresence Trio Visual+ system to connect to HDMI monitors that support the CEC protocol. CEC is disabled by default and you can enable CEC using the Web Configuration Utility or centralized provisioning. When you enable CEC, connected CEC-capable monitors switch to standby mode to save power when the RealPresence Trio system enters system standby. When the system wakes, the monitors are powered up before displaying RealPresence Trio system video.

Use of system standby requires CEC-capable monitors. Note that not all HDMI monitors support CEC.

To verify that your monitor supports CEC or to enable CEC, navigate to CEC feature settings and sub-settings on your monitor.

Enable all CEC features on all monitors

CEC features can vary by the brand of monitor. Specifically, some monitors have sub-feature settings under the main CEC setting that control whether or not the monitor responds to CEC commands. Ensure that you enable all CEC features and sub-features on all monitors connected to the RealPresence Trio systems.

Configure Consumer Electronics Control (CEC) using the Web Configuration Utility

You can enable or disable CEC on RealPresence Trio systems using the Web Configuration Utility.

To enable CEC using the Web Configuration Utility:

1. Enter the IP address of the RealPresence Trio system you are using to a web browser.
2. Log into the Web Configuration Utility as an administrator.
3. Go to **Settings > Networked Devices > Power Saving Settings**.
4. Beside **Consumer Electronic Control**, select **Enable** or **Disable**.

Consumer Electronics Controls (CEC) over HDMI Parameters

The following parameters configure CEC when using HDMI.

CEC Power-Saving Parameters

Parameter Template	Permitted Values
`powerSaving.cecEnable` new.cfg	`0` (default) - The RealPresence Trio Visual+ display behavior is controlled only by the value set for `powerSaving.tvStandbyMode`. `1` - When the RealPresence Trio 8800 enters power-saving mode, the RealPresence Trio Visual+ display switches to standby mode and powers up when the RealPresence Trio 8800 exits power-saving mode.
`powerSaving.tvStandbyMode` new.cfg	`black` (default) - places a black screen on the RealPresence Trio Visual+ display. `noSignal` - Power-saving mode turns off the HDMI signal going to the RealPresence Trio Visual+ display.

Update Polycom UC Software

You can update the phones to Polycom UC Software manually on a per-phone basis. Or, you can use the automatic software update feature to update your phone's software. All UC Software releases compatible with Microsoft are available at Polycom UC Software for Microsoft Deployments.

You can update the RealPresence Trio solution with a USB flash drive.

Update Software with a USB Flash Drive

You can use an USB flash drive to update the software on the RealPresence Trio solution or to provision and configure the system.

When you configure the system using a USB drive, the configuration on the USB overrides all previous configurations. However, when the USB drive is removed, the system returns to the previous configuration.

To update or provision the RealPresence Trio 8800 using an USB flash drive:

1. Format a USB flash drive as FAT32. Polycom recommends that you use a USB 2.0 flash drive.

   If you are using a drive that is already formatted, ensure that previous files are deleted from the flash drive.
2. From Polycom Voice Support, download the software package.
3. Place the 3111-65290-001.sip.ld file in the root directory of the flash drive. If provisioning the system, place the 000000000000.cfg or <MAC>.cfg file and any configuration files in the root directory as well.
4. Connect the USB flash drive to the USB port on the system.
5. Enter the administrator password.

   The system detects the flash drive and starts the update within 30 seconds. The mute keys' indicator lights begin to flash, indicating that the update has started.

   The system reboots several times during the update. The update is complete when the indicator lights stop flashing and the Home screen displays.

Update UC Software Manually

This update procedure applies to phones running UC Software 4.1.x or UC Software 5.x.x.

To update UC Software manually:

1. Download and unzip UC Software to a directory on your provisioning server.
2. On the phone, go to **Home > Settings > Advanced**, enter the password (default 456)
3. Go to **Network Configuration > Provisioning Server > DHCP Menu > Boot Server**.
4. In the Boot Server menu, choose **Static** if you are testing or provisioning a few phones, or choose **Option 66** if you are provisioning in a large environment and want phones to use a boot server defined in DHCP. If you choose Option 66, skip step 5 and go to step 6.
5. Go back to **Provisioning Server** and do the following:
   - Choose a server type in the **Server Type** field.
   - Enter the server address, for example, `http://server.domain.com/41X or ftp://ftp.domain.com/41X`.
   - Enter your server user name and server password, if required.
6. Press **Back** until you are prompted to save your settings. Choose **Save Configuration** to save your settings and the phone reboots.

Note: Updating your phone software

You can use the Web Configuration Utility to update your Polycom UC Software. For details on how to update the phone software using the Web Configuration Utility, see Feature Profile 67993: Using the Software Upgrade Option in the Web Configuration Utility.

UC Software Automatic Updates

By default, when a software update is available, an Information pop-up displays on your phone. The Information pop-up provides three options:

- Press **Reboot** to restart the phone and automatically update the phone's software.
- Press **Cancel** to cancel the automatic software update. When you press Cancel, a DevUpdt soft key displays on the phone's home screen. Press **Dev Updt** at any time to update your phone's software.
- Press **Details** to view information about current and available software.

When the phone is inactive for a long period of time, the phone automatically reboots and updates the phone's software.

If you want to change the default behavior of the software update any of these parameters, you must configure the parameters in the following table. Note these parameters are not included in the sample configuration files Polycom provides in the Microsoft directory of the UC Software download.

Automatic Software Update Parameters

The following table lists parameters that configure automatic software updates.

Configure Automatic Software Updates

Parameter Template	Permitted Values
device.prov.lyncDeviceUpdateEnabled	0 (default) - The automatic device update is disabled and the phone does not receive software updates from the server. Changing the value of this parameter reboots the phone. 1 (default) - The automatic device update is enabled on the phone and the phone receives software updates from the server.
device.prov.lyncDeviceUpdateEnabled.set	0 (default) - Disable automatic device update for all devices 1 - Enable automatic device update for all devices and use of device.prov.lyncDeviceUpdateEnabled.
lync.deviceUpdate.popUpSK.enabled	0 (disable) - disable the Information popup that indicates when a software update is available for automatic update. 1 - Enable the Information popup that indicates when a software update is available for automatic update.
lync.deviceUpdate.serverPollInterval	7200 seconds (default) - The time interval in seconds that the phone sends a software update request to Lync Server. min=1800 seconds max=28800 seconds
lync.deviceUpdate.userInactivityTimeout	900 seconds [15 minutes] (default) - Sets the user inactivity timeout period after which the phone's software is automatically updated. Min=300 seconds Max=1800 seconds

Reset the Phone to Default Settings and Factory Default

If the device has already been in use, you can reset settings applied to the phone, or to factory default settings. Before resetting a device, verify that you do not need to keep parameters such as a provisioning server address or credentials.

Polycom devices store settings in up to three locations on a provisioning server that correspond to ways you can apply settings:

- In configuration files stored on the provisioning server
- In a per-device file uploaded to the provisioning server when settings are made using the Web Configuration Utility
- Locally on the phone's memory system

Settings: Restore settings all three sources
Ensure that you restore default settings from all three configuration sources. Settings that you do not reset to factory defaults may override any new settings you apply.

Restore default settings from each source. You can perform all resets directly from the phone.

Reset RealPresence Trio 8800 to Factory Defaults During Startup

You can reset the RealPresence Trio 8800 to factory default settings during startup.

To reset RealPresence Trio 8800 to factory defaults during startup:

1. Power on the RealPresence Trio 8800.
2. When the Polycom logo shows on the screen, press and hold the four corners of the LCD display screen.
3. Let go when the Mute light begins flashing.

Reset RealPresence Trio Visual+ to Factory Defaults During Startup

You can reset the RealPresence Trio Visual+ to factory defaults during startup.

To reset RealPresence Trio Visual+ to factory defaults at power up:

1. Power on the RealPresence Trio Visual+.
2. When the pairing button light turns on, press and hold the pair button.
3. Let go of the pair button when the light begins flashing.

Reset Local Phone Settings

You can reset the phone settings users make locally from the phone.

To reset local phone settings:

1. On your phone, go to **Settings > Advanced**.
2. Enter the password (default 456).
3. Go to **Administration Settings > Reset to Defaults > Reset Local Configuration**. At the prompt **'Are you sure?'**, tap **Yes**.

Reset Web Settings

You can reset phone settings made from the phone Web Configuration Utility.

To reset web settings:

1. On your phone, go to **Settings > Advanced**.
2. Enter the password (default 456).

3 Go to **Administration Settings > Reset to Defaults > Reset Web Configuration**. At the prompt **'Are you sure?'**, tap **Yes**.

The phone may reboot, depending on the parameters set using the Web Configuration Utility.

Manually Reset the Phone to Factory Default Settings

You can reset the phone to factory default settings.

To manually reset the phone to factory default settings:

1 On your phone, go to **Settings > Advanced**.

2 Enter the password (default 456), and press **Enter**.

3 Go to **Administration Settings > Reset to Defaults**, and select **Reset to Factory**. At the prompt **'Are you sure?'**, tap **Yes**. The phone reboots to factory default settings.

Lock Phone Ports and Interface

You can make the phone more secure by disabling Wi-Fi, Bluetooth and NFC, USB host, and USB device ports.The following table lists parameters that lock ports and disable features.

Phone Port Lock and Interface Parameters

The following parameters lock the phone ports and disable phone interface features.

Lock Phone Ports and Disable Features

Parameter Template	Permitted Values
feature.usb.host.enabled	Use the host port for memory sticks, mouse, keyboards, and charging your devices. 1 (default) - The USB host port is enabled. 0 - The USB host port is disabled. Use the host port for memory sticks, mouse, keyboards, and charging your devices.
feature.usb.device.enabled	The device port allows you to use RealPresence Trio 8800 as an audio device for your laptop. 1 (default) - The USB device port is enabled. 0 - The USB device port is disabled.
feature.bluetooth.enabled	1 (default) - The Bluetooth feature is enabled. When enabled, the Bluetooth menu shows in the RealPresence Trio 8800 user interface. 0 - The Bluetooth feature is disabled.
feature.nfc.enabled	1 (default) - Use NFC for Bluetooth pairing. 0 - NFC for Bluetooth pairing is disabled.
device.wifi.enabled	0 - Wi-Fi is disabled. 1 - Wi-Fi is used instead of wired Ethernet for VoIP calls. You cannot use RealPresence Trio Visual+ for video when using Wi-Fi.

Manage Power Usage

Power available to the RealPresence Trio 8800 is limited and you can choose which features to enable or disable.

Power Management Parameters

The following parameters can be used to manage the power usage of the RealPresence Trio 8800.

Power Management Parameters

Parameter Template	Permitted Values
poe.pse.class	Specify the LAN OUT PoE class. 0 (default) 0 - 3
poe.pse.enabled	1 (default) - The RealPresence Trio 8800 LAN OUT interface provides PoE power to a connected device. 0 - No PoE power is provided by the LAN OUT port.
usb.charging.enabled	0 (default) - You cannot charge USB connected devices from the USB charging port. 1 - Allows up to 7.5W of power to charge devices connected the USB port. I

Change the Default Password

As of UC Software 5.1.0, when you set the Base Profile to Lync or update your phones to UC Software 5.x.x or later, the phones display a message prompting you to change the default administrator password (456). Polycom strongly recommends that administrators change the default password. This password is not the Lync user Sign In password. The default administrator password enables administrators to access advanced settings menu on the phone menu and to log in to a phone's Web Configuration Utility as an administrator.

You can change the default password using any of the following methods:

- The popup prompt when phone firsts registers
- Phone menu system
- Web Configuration Utility
- Use the parameter `reg.1.auth.password` in the template configuration file `lyncPerPhoneExample.cfg`.

Enable Access to the Web Configuration Utility

As of UC Software 5.1.1, access to the Web Configuration Utility for phones registered with Lync Server or Skype for Business Server is disabled by default. Administrators must enable access to a phone's Web Configuration Utility from the phone menu system or using configuration parameters.

On the SoundStructure VoIP Interface, you must enable the Web Configuration Utility using configuration files on a provisioning server before you set the Base Profile to Lync. If you do not enable the Web Configuration Utility before setting the Base Profile to Lync, the Web Configuration Utility will not be available and you will need to reset the SoundStructure VoIP Interface to factory default settings.

If you set the Base Profile of a phone to Lync or use the centralized provisioning method to enter user credentials to the configuration files, the phone displays a screen prompting an administrator to change the default Admin password (456). Polycom strongly recommends that administrators change the default password. This password is not the Lync Sign In password. The password you enter here is the same password administrators use to access the advanced settings on the phone menu and to log in to a phone's Web Configuration Utility as an administrator.

After you successfully access the phone, you can enable access to the Web Configuration Utility from the phone menu system or using the parameters listed in the table Enable Web Configuration Utility. After you successfully enable the Web Configuration Utility for the SoundStructure VoIP Interface, you can use the Web Configuration Utility to change the administrator password.

Enable Access to the Web Configuration Utility From the Phone Menu

When the phone's Base Profile is set to Lync, you can enable access to a phone's Web Configuration Utility form the phone's menu system.

To enable access to the Web Configuration Utility from the phone menu:

1. On the phone's menu system, navigate to **Settings > Advanced**, enter the password (default 456), and go to **Administration Settings > Web Server Configuration**.

   Web Server and Web Config Mode display.
2. Set **Web Server** to **Enabled**.
3. Set **Web Config Mode** to **HTTP Only**, **HTTPS Only**, or **HTTP/HTTPS**.

Web Configuration Utility Parameters

The security update for Microsoft Lync Server with Polycom UC Software 5.1.1 includes a new device parameter and a corresponding device.set parameter. Polycom recommends using <device/> parameters only if you are familiar with the centralized provisioning method and with Polycom UC Software. The parameter values listed.

Use the following parameters to enable and configure the Web Configuration Utility.

Web Configuration Utility Parameters

Parameter Template	Permitted Values
device.sec.coreDumpEncryption .enabled device.cfg, site.cfg	0 (default) - 1 -
device.sec.coreDumpEncryption .enabled.set device.cfg, site.cfg	0 (default) 1

Web Configuration Utility Parameters

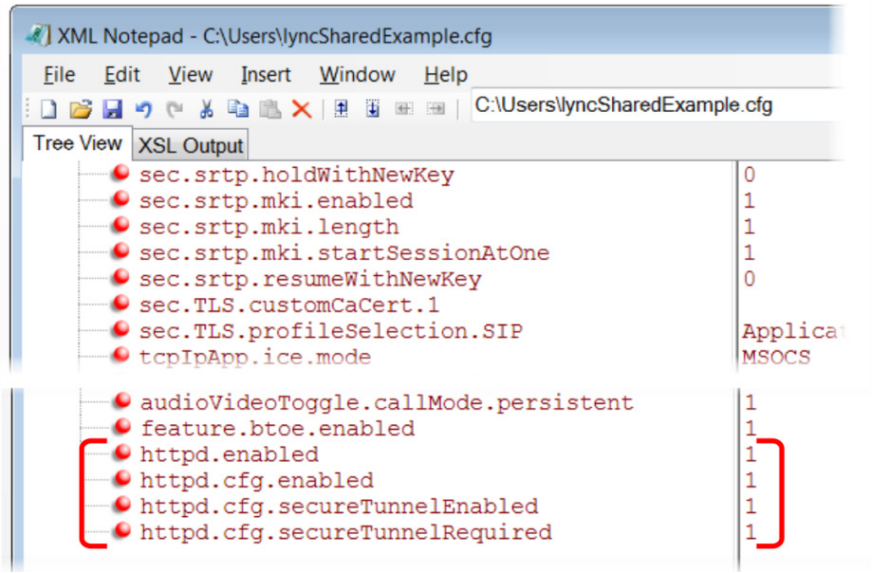
Parameter Template	Permitted Values
`httpd.cfg.enabled` lyncSharedExample.cfg, lyncSharedLCExample.cfg	`0` (default) - The Web Configuration Utility is disabled. `1` - The Web Configuration Utility is enabled.
`httpd.cfg.secureTunnelEnabled` lyncSharedExample.cfg, lyncSharedLCExample.cfg	`1` - The web server connects through a secure tunnel. `0` - The web server does not use a secure tunnel. I
`httpd.cfg.secureTunnelRequired` lyncSharedExample.cfg, lyncSharedLCExample.cfg	`1` (default) - Only the phone's HTTPS web server is accessible and requires a secure tunnel. `0` - The phone's HTTP web server is also accessible through a secure tunnel. If this parameter is enabled and `httpd.cfg.secureTunnelEnabled` is enabled, then non-secure HTTP service is disabled.
`httpd.enabled` lyncSharedExample.cfg, lyncSharedLCExample.cfg	`0` - The HTTP server and access to the Web Configuration Utility is disabled. `1` - The server and access to the Web Configuration Utility is enabled.

Example Microsoft Lync 2013 Security Update Configuration

This section provides an example configuration for the Microsoft Lync 2013 security update. When the phone registers, the Web Configuration Utility is disabled. This example configuration illustrates how to enable access to a phone's Web Configuration Utility when phones are registered with Lync Server 2013.

By default, a pop-up message displays on phones registered with Lync Server 2013. This message prompts administrators to change the default password use to access the phone's Web Configuration Utility as an administrator.

After you change the default password, enable access to the Web Configuration Utility using the parameters shown in the following figure.



Extended Link Layer Discovery Protocol (LLDP)

The Link Layer Discovery Protocol (LLDP) is used by network devices to advertise their identity, capabilities, and neighbors on an IEEE 802 local area network, principally wired Ethernet. LLDP is enabled by default.

Media Endpoint Discover (MED) capabilities include:

- Network policy discover
- Endpoint location identification discovery
- Extender power discovery required for endpoint

LLDP Fast Start Count Parameters

Fast start count enables a device to initially advertise itself over the network at a fast rate for a limited time when an LLDP-MED endpoint has been newly detected or connected to the network.

LLDP Parameters

Parameter Template	Permitted Values
device.net.lldpFastStartCount	Configure the fast-start LLDP packets that the phone sends when booting up or when the network comes up. 5 (default) 3 - 10 If fast-start packet count is configured > 10 the, the value resets to 10. If the fast-start packet count is < 3, the value resets to 3. If you configure an invalid value-for example, a negative value, string, or character-the value resets to default 5.

International Dialing Prefix

Enter a '+' symbol before you dial an international phone numbers to identify to the switch that the phone number you are dialing is international.

International Dialing Prefix Parameters

The following parameters configure the international dialing prefix.

International Dialing Prefix Parameters

Parameter Template	Permitted Values
call.international Dialing.enabled	1 (default) - Disable the key tap timer that converts a double tap of the asterisk "*" symbol to the "+" symbol to indicate an international call. By default, this parameter is enabled so that a quick double tap of "*" converts immediately to "+". To enter a double asterisk "**", tap "*" once and wait for the key tap timer to expire to enter a second "*". 0 - When you disable this parameter, you cannot dial"+" and you must enter the international exit code of the country you are calling from to make international calls. This parameter applies to all numeric dial pads on the phone, including for example, the contact directory. Changes you make to this parameter cause a restart or reboot.
call.international Prefix.key	The phone supports international call prefix (+) with both '0' and '*'. 0 (default) - Set the international prefix with *. 1 - Set the international prefix with 0.

Comfort Noise

The phone sends background noise to near-end users. When enabled, the Comfort Noise payload type is negotiated in SDP with a default of 13 for 8 KHz codecs and a configurable value between 96 and 127 for 16 KHz codecs.

Comfort Noise Parameters

The following table lists the parameters you can use to configure Comfort Noise Control.

Comfort Noise Parameters

Parameter Template	Permitted Values
voice.CN16KPayload	Set the dynamic payload type to be used for Comfort Noise RTP packets. 122 (default) 96 - 127
voice.CNControl	0 (default) - Comfort noise payloads are not published in the SDP body of the INVITE message. 1 - Comfort noise payloads are published in the SDP body of the INVITE message by including the supported. Comfort noise uses payload type 13 for an 8 KHz sample rate codec and dynamic payload type 16k Hz codec.

Available Dial Plans

Polycom does not support all regular expression dial plans. The following tables list supported and unsupported dial plans with Lync Server and Skype for Business Server. The tables are followed by examples of supported and unsupported dial plans.

Polycom phones support Lync External Access Prefix functionality.

Examples of supported dial plans include the following:

- Support for multiple combination of braces (): ^91(727|813)([2-9]\d{6})$@+9$1$2@0
- Support for 'ext': ^64(\d{2})$@+86411845933$1;ext=64$1@0

Supported Dial Plans

Number	Element	Meaning	Example	Description of Example
1	^	Match at beginning of string	^123	Match the digits 123 at the beginning of the string
2	()	Captures the matched subexpression	(456)	Capture what is between the parentheses into a numbered variable, starting at 1 which can be accessed as $n, for example, $1
3		Specifies zero or more matches	\d(*)	
4	+	Specifies one or more matches	\d(+)	
5	?	Specifies zero or one matches	\d(+)	

Supported Dial Plans

Number	Element	Meaning	Example	Description of Example
6	{n}	Specifies exactly n matches	\d {4}	Match 4 digits
7	Vertical Bar (Pipe)	Matches any one of the terms separated by the (vertical bar) character when all characters are surrounded by brackets or square brackets	(1|2|3) or [1|2|3]	Match either 1, 2, or 3.
8	\d	Matches any decimal digit	^\d	Match any decimal digit (at the beginning of a string)
9	$	The match must occur at the end of the string	^(123)$	Match exactly digits 123 (and not 1234)

Examples of dial plans not supported include the following:

- Braces within the braces with pipes: ^56(12(3|4))((4|5)6)@+1$2$1@0
- Non-sequential $ values in translation patters: ^1(45)(89)@+123$2$1@0

Unsupported Dial Plans

Number	Element	Meaning	Example	Description of Example
1	{,m}	Specifies at most m matches	\d {,6}	Match at most 6 digits
2	{n,}	Specifies at least n matches	\d {3,}	Match at least 3 digits (with no limit to number of digits matched)
3	{n,m}	Specifies at least n, but no more than m, matches	\d {3,6}	Match at least 3 digits but no more than 6 digits
4	$	The match must end at ‘$’	^(123$\|125$)	Match either the string 123 or the string 125

Use Master Key Identifier (MKI) to Secure Audio

For secure audio communications, Polycom phones offer support for the crypto header with and without MKI in the offer SDP. The master key identifier (MKI) is an optional parameter to include the crypto header in the

SDP that uniquely identifies the SRTP stream within an SRTP session. The far end can choose to include a crypto with or without MKI.

Parameter Template	Permitted Values
sec.srtp.mki.enabled	1 (default) - The Polycom phone offers two cryptos in the SDP offer: one without an MKI, and one with a four-byte MKI parameter in the SDP message of the SIP INVITE / 200 OK. 0 - Polycom phone offers only one non-MKI crypto in the SDL offer.

Toggle Between Audio-only or Audio-Video Calls

When this feature is enabled on the RealPresence Trio 8800 system using RealPresence Trio Visual+ video capabilities, a soft key displays to toggle calls between audio-only or audio-video.

Note that this feature applies only to outbound calls from your phone; incoming video calls to your phone are answered using video even when you set the feature to use audio-only.

When you enable this feature using f`eature.audioVideoToggle.enabled`, calls are audio-only by default, and you must toggle the call to use audio-video before the call begins. After a video call has ended, the phone returns to audio-only.

If you want a call mode setting to persist until users manually change the call mode, also enable `audioVideoToggle.callMode.persistent`. Use the following table to locate available parameters.

Audio and Video Toggle Parameters

Parameter Function	**template** > parameter
Enable or disable the audio/video toggle feature.	**features.cfg** > feature.audioVideoToggle.enabled
Enable or disable the last call mode set by the user.	**video.cfg** > audioVideoToggle.callMode.persistent
Allow the user to select the call mode to use when using SIP protocol only.	**video.cfg** > video.callMode.default
Begin video to the far side when you start a call.	video.autoStartVideoTx
Select the outbound call mode. To use this parameter, you must enable `feature.audioVideoToggle.enabled`.	video.callMode.default

Manually Install a Certificate

If you need to set up a remote worker, you must manually enter a certificate to the phone. You can add the certificate using two parameters included in the `lyncSharedExample.cfg` and `lyncSharedLCExample.cfg` files. You also have the option to create your own XML configuration file and

upload it to a phone using the Web Configuration Utility after you Enable Access to the Web Configuration Utility.

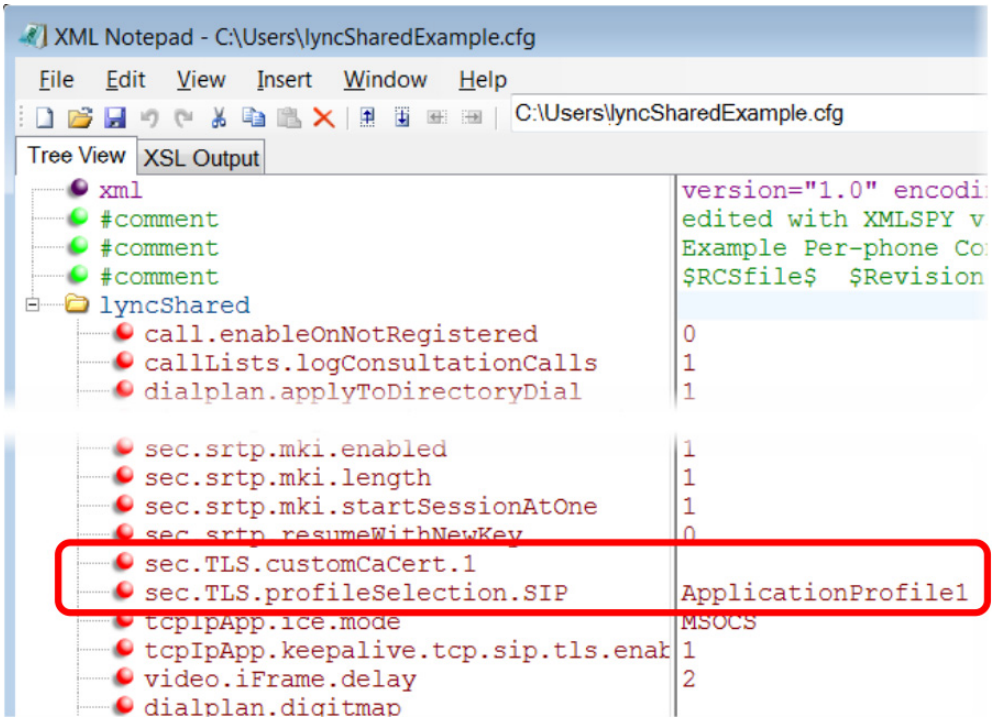
You can manually install certificates on a per-phone basis only. You must use Base64 format.

Manually Install a Certificate Using Configuration Files

You can manually install a certificate using configuration parameters in the template files available with UC Software.

To manually install a certificate using configuration files:

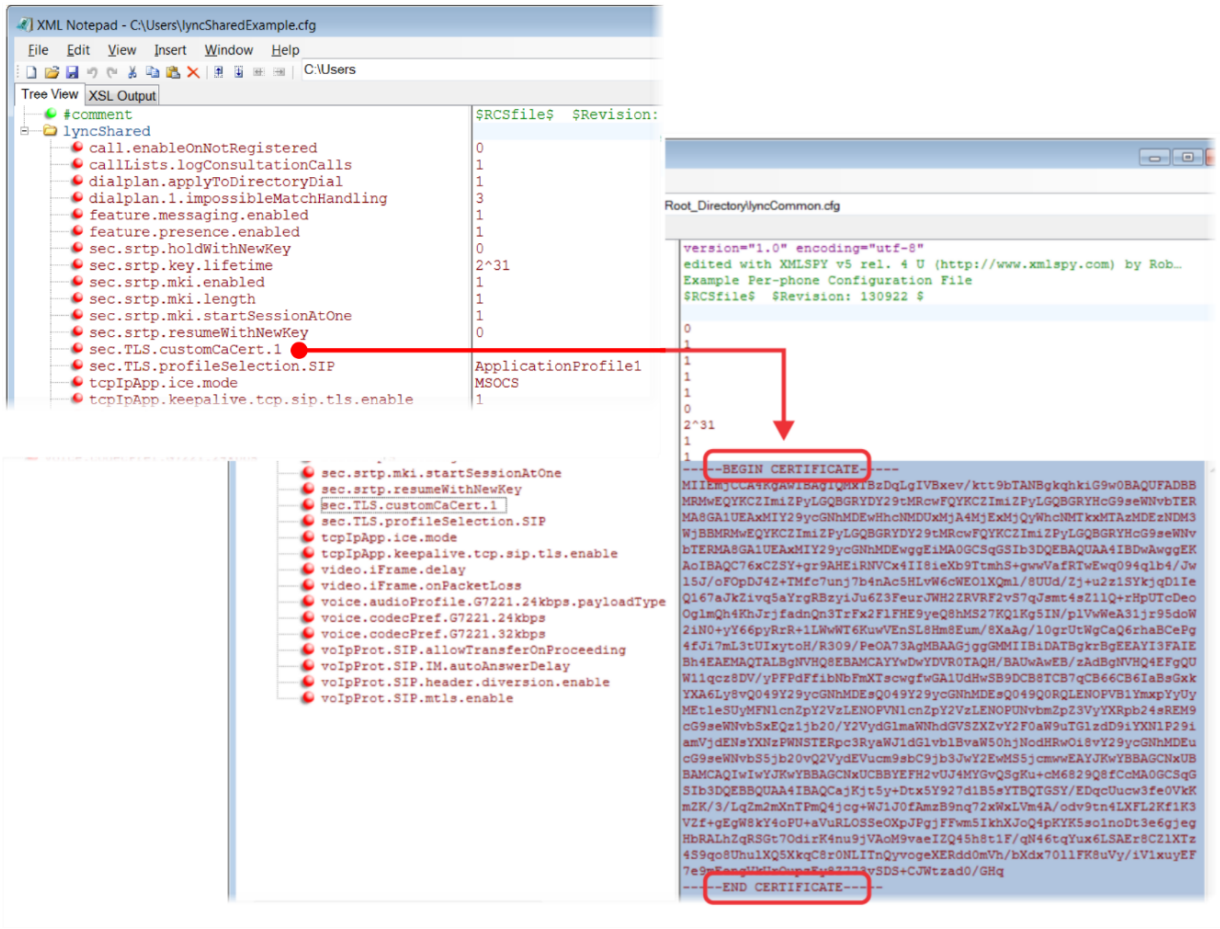
1. Locate the `lyncSharedExample.cfg` and `lyncSharedLCExample.cfg` configuration files in the PartnerConfig > Microsoft directory of the UC Software download.
2. Place the configuration file in a location in your Lync directory.
3. Enter the certificate and application profile to the following two parameters:
   - `sec.TLS.customCaCert.1=<enter the certificate>`
   - `sec.TLS.profileSelection.SIP=<ApplicationProfile1>`



You can also enter the certificate by doing one of the following:

- Add the two parameters in an XML file you create with an XML editor.
- Add the two parameters to an existing configuration file you are using.

4 Enter the root CA certificate, in Base64 format, in `sec.TLS.customCaCert.1` and set the application profile in `sec.TLS.profileSelection.SIP`.



You have successfully installed a security certificate.

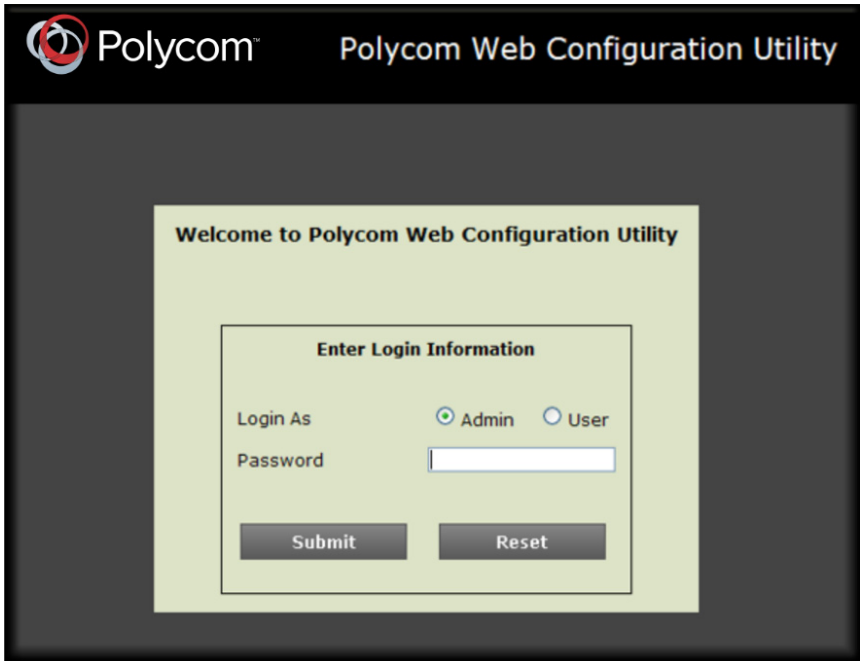
Manually Install a Certificate with the Web Configuration Utility

You can use the Web Configuration Utility to install a certificate manually after you Enable Access to the Web Configuration Utility.

To install a certificate with the Web Configuration Utility:

1 In the address bar of a web browser, enter the phone IP address. You can find the IP address by going to **Menu > Settings > Basic > Platform > Phone > IP**.

The Web Configuration Utility login screen displays.



2. Choose **Admin**, enter the password (default 456), and click **Submit**.
3. From the Home page, navigate to **Utilities > Import & Export Configuration**.
4. Under **Import Configuration**, click **Choose File**.
5. In the dialog, choose the XML configuration file you created and click **Import**.

   The XML configuration file is successfully loaded to the phone.
6. To verify that the file is loaded, go to **Menu > Settings > Status > Platform > Configuration**.

Data Center Resiliency

Data Center Resiliency ensures that minimum basic call functions remain available in the event of a server shutdown or Wide area network (WAN) outage. This features is available with RealPresence Trio solution, VVX business media phones 300/310, 400/410, 500, 600, 1500, and the SoundStructure VoIP Interface using Polycom UC Software 5.1.1 or later. Phones you register with Lync Server are enabled with this feature by default and no additional configuration is required. Data Center Resiliency is not supported with Skype for Business.

In the event of an unplanned server shutdown or outage, phone behavior changes to the following:

- The phone displays a scrolling banner message 'Limited functionality due to outage'.
- Your presence status displays as 'Unknown'.
- The presence status of your contacts displays as 'Unknown'.
- You cannot change your presence status.
- You cannot add or delete MS Lync contacts.
- Phones in the locked state display a message on the Sign In menu 'Limited functionality due to outage'.

- You can access current Call Forwarding settings in read-only mode.

Supported Video Codecs

Use the optional RealPresence Trio Visual+ and Logitech C930E USB webcam to add video to your RealPresence Trio 8800 calls. Polycom supports the following video standards and codecs:

- H.264 advanced video coding (AVC) Baseline Profile and High Profile
- Lync 2013 and Skype for Business H.264 scalable video coding (SVC) (X-H264UC)

The following table lists video codec parameters you can configure for RealPresence Trio solution registered with Skype for Business or Lync Server 2013.

Video Codec Parameters

Parameter Template	Permitted Values
video.codecPref.H264HP	Set the H.264 High Profile video codec preference priority. 1 (default) - Indicates the codec is the most preferred and has highest priority. 0 - The codec is disabled.
video.codecPref.Xdata	0 (default) - The codec is disabled. 0 - 5 Set the Remote Desktop Protocol (RDP) codec preference priority. 1 indicates the codec is the most preferred and has highest priority. The value is 4 for Lync Base Profile.
video.codecPref.XH264UC	Set the Microsoft H.264 UC video codec preference priority. 3 (default) 1 - Indicates the codec is the most preferred and has highest priority. If 0, the codec is disabled.
video.codecPref.XUlpFecUC	Set the forward error correction (FEC) codec priority. 5 (default) 0 - 7
video.conf.profile	Configure the video profile request sent to the video conference server for video media you want to display. 3 (default) - Identifies the 540p profile. 2 - 7
video.profile.H264HP.jitterBufferMax	2000 (default) 533 - 2500
video.profile.H264HP.jitterBufferMin	150 (default) 33 - 1000
video.profile.H264HP.jitterBufferShrink	70 (default) 33 - 1000

Video Codec Parameters

Parameter Template	Permitted Values
video.profile.H264HP.payloadType	Specify the RTP payload format type for H264/90000 MIME type (High Profile). 100 (default) 0 - 127
video.profile.H264HP.profileLevel	4.1 (default) String (1 - 5 characters)
video.profile.Xdata.payloadType	Specify the RTP payload format type for x-data/90000 MIME type. This parameter is for Remote Desktop Protocol (RDP) content sharing. 127 (default) 0 - 127
video.profile.XH264UC.jitterBufferMax	The largest jitter buffer depth to support. Jitter above this size always causes lost packets. This parameter should be set to the smallest possible value that supports the expected network jitter. 2000 (default) 533 - 2500
video.profile.XH264UC.jitterBufferMin	The smallest jitter buffer depth that must be achieved before play out begins for the first time. After this depth has been achieved initially, the depth may fall below this point and play out still continues. This parameter should be set to the smallest possible value which is at least two packet payloads, and larger than the expected short term average jitter. 150 (default) 33 - 1000
video.profile.XH264UC.jitterBufferShrink	70 (default) 33 - 1000
video.profile.XH264UC.jitterBufferShrink	The minimum duration (in milliseconds) of Real-time Transport Protocol (RTP) packet Rx with no packet loss that will trigger jitter buffer size shrinks. Use smaller values to minimize the delay on known good networks. 70 (default) 33 - 1000
video.profile.XH264UC.mstMode	Specify the multi-session transmission packetization mode. The value of NI-TC identifies non-interleaved combined timestamp and CS-DON mode. This value should not be modified for interoperation with other Lync devices. NI-TC (default) string

Video Codec Parameters

Parameter Template	Permitted Values
video.profile.XH264UC.payloadType	Specify the RTP payload format type for X-H264UC/90000 MIME type. 122 (default) 0 - 127
video.profile.XH264UC.payloadType	RTP payload format type for H.264 MIME type. 122 (default) 0 - 127
video.quality	The optimal quality for video that you send in a call or a conference. Note: If motion is not selected, moderate to heavy motion can cause some frames to be dropped. NULL (default) - Use sharpness or Null if your outgoing video has little or no movement. motion - Use motion if your outgoing video has motion or movement. sharpness - Use sharpness or Null if your outgoing video has little or no movement.
video.rtcpbandwidthdetect.enable	0 (default) 1 - RealPresence Trio 8800 uses an estimated bandwidth value from the RTCP message to control Tx/Rx video bps.

Polycom Experimental Features

Polycom offers experimental features for the RealPresence Trio solution that you can enable and evaluate in a non-production environment. If you decide to try out these features, be aware that they are neither tested nor supported. These features may, or may not, become official features in a future release.

Enable Experimental Features in the Web Configuration Utility

You can enable experimental features in the Polycom Web Configuration Utility.

To enable experimental features:

1. In the Web Configuration Utility, click **Settings > Polycom Labs**.
2. Select and configure the desired Polycom Lab feature.

Polycom Experience Cloud

The Polycom Experience Cloud (PEC) service is an experimental feature enabling you to view basic diagnostic and phone usage data including start and stop events, call quality information, packet statistics, call duration, and call logs.

Experience Cloud Parameters

Parameter Template	Permitted Values
log.level.change.apps	Initial logging level for the Apps log module. 4 (default) 0 - 6
log.level.change.bfcp	Initial logging level for the BFCP content log module. 4 (default) 0 - 6
log.level.change.pec	Initial logging level for the Polycom Experience Cloud (PEC) log 4 (default) 0 - 6
log.level.change.mr	Initial logging level for the Networked Devices log module. 4 (default) 0 - 6
log.level.change.mraud	Initial logging level for the Networked Devices Audio log module. 4 (default) 0 - 6
log.level.change.mrcam	Initial logging level for the Networked Devices Camera log module. 4 (default) 0 - 6
log.level.change.mrcon	Initial logging level for the Networked Devices Connection log module. 4 (default) 0 - 6
log.level.change.mrdis	Initial logging level for the Networked Devices Display log module. 4 (default) 0 - 6
log.level.change.mrmgr	Initial logging level for the Networked Devices Manager log module. 4 (default) 0 - 6
log.level.change.ppcip	Initial logging level for the Polycom People+Content IP log module. 4 (default) 0 - 6
log.level.change.prox	Initial logging level for the Proximity log module. 4 (default) 0 - 6
log.level.change.ptp	Initial logging level for the Precision Time Protocol log module. 4 (default) 0 - 6

UC Software Parameters for Microsoft Deployments

Polycom provides several template files for Microsoft deployments:

Lync Base Profile

The following table lists the Lync Base Profile parameters.

Lync Base Profile

Parameter Template	Permitted Values
call.DefaultTransferType	blind (default) - Pressing the Transfer soft key immediately transfers the call to another party. consultative - Pressing the Transfer soft key puts the call on hold while placing a new call to the other party.
call.enableOnNotRegistered	0 (default) - Calls are not permitted without registration. 1 - Users can make calls when the phone is not registered.
callLists.collapseDuplicates	0 (default - Duplicate entries from multiple call lists are displayed separately. 1 - Duplicate entries from multiple call lists collapse into a single entry indicating the total number of entries.

Lyc Base Profile

Parameter Template	Permitted Values
callLists.logConsultationCalls	1 (default) - All consultation calls are logged. (Calls made to a third party—while the original party is on hold—when settings up a conference call are called consultation calls.) 0 - Consultation calls are not logged.
device.lync.timeZone	0 (default) - Lync Time Zone Control is disabled. 1 - Lync Time Zone Control is enabled.
dialplan.1.applyToForward	1 (default) - The dial plan applies to forwarded calls. 0 - The dial plan does not apply to forwarded calls.
dialplan.1.conflictMatchHandling	1 (default), - When the digits entered are matching more n one digit map, timeout is considered before dialing the digits. 0 - When the digits entered match a digit map the digits are dialed immediately even though there are conflicting digit maps.
dialplan.1.digitmap.timeOut	Specify a timeout in seconds for each segment of digit map. After you press a key, the phone will wait this many seconds before matching the digits to a dial plan and dialing the call. 4 seconds (default) string of positive integers separated by |, for example 3 | 3 | 3 | 3 | 3 | 3 Note: If there are more digit maps than timeout values, the default value is used. If there are more timeout values than digit maps, the extra timeout values are ignored.
dialplan.1.impossibleMatchHandling	This parameter applies to digits you enter in dial mode, the dial mode when you pick up the handset, headset, or press the New Call key. The phone is not in dial mode when you are hot dialing, dialing, or call list dialing. 0 (default) - The digits entered up to and including the point an impossible match occurred are sent to the server immediately. 1 - Give reorder tone. 2 - Allow users to accumulate digits and dispatch call manually with the Send soft key. If a call orbit number begins with # or *, you need to set this parameter to 2 to retrieve the call using off-hook dialing.

Lyc Base Profile

Parameter Template	Permitted Values
dialplan.1.lyncDigitmap.timeOut	Use this parameter for lines registered with Lync Server or Skype for Business Server. Specify a timeout in seconds for each segment of a digit map. After you press a key, the phone will wait this many seconds before matching the digits to a dial plan and dialing the call. 4 seconds (default) 0 to 99 seconds Note: If there are more digit maps than timeout values, the default value is used. If there are more timeout values than digit maps, the extra timeout values are ignored. Note also that if you configure a value outside of the permitted range, the default value of three seconds is used. Changes to the value of this parameter cause the phone to restart.
dialplan.applyToDirectoryDial	1 (default) - The dial plan is applied to numbers dialed from the directory or speed dial, including auto-call numbers. 0 - The dial plan is not applied to numbers dialed from the directory or speed dial list.
dialplan.digitmap	The digit map used for the dial plan. The string is limited to 2560 bytes and 100 segments of 64 bytes; a comma is also allowed; a comma will turn dial tone back on;'+' is allowed as a valid digit; extension letter 'R' is used as defined above. This parameter enables the phone to automatically initiate calls to numbers that match a digit map pattern. NULL (default) string
dialplan.1.digitmap	x.T (default) string
dialplan.userDial.timeOut	Specifies the time in seconds that the phone waits before dialing a number you enter while the phone is on hook. You can apply dialplan.userDial.timeOut only when its value is lower than up.IdleTimeOut. 4 seconds (default) 0 to 99 seconds
exchange.meeting.parseOption	Determine from which field in the meeting invite the VMR or meeting number should be fetched. Location (default) All LocationAndSubject Description Enum
feature.audioVideoToggle.enabled	0 (default) - The audio/video toggle feature is disabled. 1 - The audio/video toggle feature is enabled.

Lyc Base Profile

Parameter Template	Permitted Values
feature.btoe.enabled	1 (default) - BToE is enabled on the phone and the phone can pair with a computer. 0 - BToE is disabled on the phone and cannot pair with a computer.
feature.exchange2007.interop.enabled	0 (default) - Interoperability with Microsoft Lync Server 2007 is disabled. 1 - Interoperability with Microsoft Lync Server 2007 is enabled.
feature.exchangeCalendar.enabled	1 (default) - The Exchange calendar feature is enabled on the phone and users can view meeting notifications on the phone. 0 - Exchange calendar is disabled.
feature.exchangeCallLog.enabled	0 (default) - The Exchange call log feature is disabled and the user call logs history cannot be retrieved from the Exchange server. You must also enable the parameter feature.exchangeCalendar.enabled to use the Exchange call log feature. 1 - The Exchange call log feature is enabled and the user call log history of Missed, Received, and outgoing calls can be retrieved on the phone.
feature.EWSAutodiscover.enabled	1 (default) - Exchange autodiscovery is enabled and the phone automatically discovers the Exchange server using the email address or SIP URI information. 0 - Exchange autodiscovery is disabled on the phone and you must manually configure the Exchange server address.
feature.exchanges.enabled	1 (default) - The Exchange call log feature is enabled and the user call log history of Missed, Received, and outgoing calls can be retrieved on the phone. 0 - The Exchange call log feature is disabled and the user call logs history cannot be retrieved from the Exchange server. You must also enable the parameter feature.exchangeCallLog.enabled to use the Exchange call log feature.
feature.exchangeVoiceMail.enabled	1 - The Exchange voicemail feature is enabled and users can retrieve voicemails stored on the Exchange server from the phone. 0 - The Exchange voicemail feature is disabled and users cannot retrieve voicemails from Exchange Server on the phone. You must also enable feature.exchangeCalendar.enabled to use the Exchange feature.
feature.lync.abs.enabled	1 (default) - Users can search for contacts on the phone's global address book. 0 - The global address book search is disabled on the phone.

Lyc Base Profile

Parameter Template	Permitted Values
feature.LyncCCCP.enabled	1 (default) - Use of CCCP is enabled. 0 - Use of CCCP is disabled.
feature.LyncCCCP2010AudioWorkaround.enabled	1 (default) - When using Lync Server 2013 with an AVMCU server version Lync 2010 or earlier, the Hold/Resume soft key response is delayed 1.5 - 2 seconds. 0 - The soft keys respond without a delay.
feature.LyncCCCPDominantSpeakerDetection.enabled	0 (default) - In CCCP calls the phone does not display a handset icon beside the active speaker. 1 - In CCCP calls the phone displays a handset icon beside the active speaker.
feature.lyncSafeTransfer.enabled	1 (default) - Enable the safe transfer feature and display of the Safe Transfer soft key. 0 - Disable the safe transfer feature and display of the Safe Transfer soft key.
feature.messaging.enabled	1 (default) 0
feature.moh.enabled	1 (default) - Enable the music on hold feature. 0 - Disable the music on hold feature.
feature.presence.enabled	1 (default) - Enable the presence feature to manage your buddy list and display the status of your s. 0 - Disable the presence feature to manage your buddy list and display the status of your s.
feature.usb.device.audio	1 (default) - Use the RealPresence Trio system as an audio speaker when connected to a computer with a USB cable. 0 - Use of RealPresence Trio system as an audio speaker for a computer is disabled.
feature.usb.device.content	0 (default) - USB content sharing with People + Content IP application is disabled. 1 - USB content sharing with People + Content IP application is enabled.
httpd.cfg.enabled	0 (default) - The Web Configuration Utility is disabled. 1 - The Web Configuration Utility is enabled.
httpd.cfg.secureTunnelRequired	1 (default) - Only the phone's HTTPS web server is accessible and requires a secure tunnel. 0 - The phone's HTTP web server is also accessible through a secure tunnel. If this parameter is enabled and httpd.cfg.secureTunnelEnabled is enabled, then non-secure HTTP service is disabled.

Lync Base Profile

Parameter Template	Permitted Values
`httpd.enabled`	`0` (default) - The HTTP server is disabled and the Web Configuration Utility is not accessible. `1` - The HTTP server is enabled and the Web Configuration Utility is accessible.
`locInfo.source`	This parameter specifies the phone's source location information which you can use to locate a phone in environments that have multiple sources of location information. `MS_E911_LIS` (default) - Location information sent from Lync Server is used as the current location. `LLDP` - Location information sent from the network switch is used as the current location. `CONFIG` - You can manually configure location information as the current location. If location information is not available from a specified default or configured source, the fallback priority is as follows: Generic profile: LLDP > CONFIG > MS_E911_LIS Lync profile : MS_E911_LIS > CONFIG > LLDP
`audioVideoToggle.callMode.persistent`	`0` (default) - The user setting to choose audio only or video calls by default is not retained after a phone restart or reboot. `1` - The user setting to choose audio only or video calls as the default is retained after a phone restart or reboot.
`feature.exchangeVoiceMail.enabled`	`0` (default) - The Exchange voicemail feature is disabled and users cannot retrieve voicemails from Exchange Server on the phone. You must also enable f`eature.exchangeCalendar.enabled` to use the Exchange feature. `1` - The Exchange voicemail feature is enabled and users can retrieve voicemails stored on the Exchange server from the phone.
`lync.provisionDeviceParams.enabled`	`1` (default) - Provisioning device parameters from Lync Server. is enabled `0` - Provisioning device parameters from Lync Server is disabled.
`phoneLock.Allow.AnswerOnLock`	`0` (default) - Users can answer incoming calls without entering a password. `1` - Users must enter a password to answer incoming calls.
`prov.quickSetup.limitServerDetails`	`0` (default) - The Zero Touch provisioning server level details is disabled. `1` - The Zero Touch provisioning server level details is enabled.
`reg.1.applyServerDigitMapLocally`	`0` (default) - Dialplan rules are processed by Lync Server. `1` - Dialplan normalization rules are downloaded from the Lync Server and processed on the phone.

Lync Base Profile

Parameter Template	Permitted Values
reg.1.auth.useLoginCredentials	1 (default) - Enable the Sign In screen on the phone. 0 - Disable the Sign In screen on the phone.
reg.1.auth.usePinCredentials	1 (default) - Enable the PIN authentication sign in method. 0 - Disable the PIN authentication sign in method.
reg.1.offerFullCodecListUponResume	0 (default) - Only the audio codec negotiated during call establishment is sent when a held call is resumed. 1 - All supported codes are sent when a held call is resumed.
reg.1.server.1.registerRetry.baseTimeout	The base time period to wait before a registration retry. Used in conjunction with reg.x.server.y.registerRetry.maxTimeOut to determine how long to wait. The algorithm is defined in RFC 5626. 10 seconds (default) 10 - 120 seconds
reg.1.server.1.registerRetry.maxTimeout	Set the maximum period of time in seconds that the phone tries to register. 180 seconds (default) 60 to 1800 seconds
reg.1.server.1.specialInterop	Identifies the SIP signaling as Microsoft Lync Server and enables Lync Server features. This parameter supports Lync Server 2010 and 2013. lync2010 (default) lync2010, lcs2005, ocs2007r2
reg.1.server.1.transport	The transport method the phone uses to communicate with the SIP server. TLS (default)
reg.1.serverFeatureControl.signalingMethod	Controls the method used to perform call forwarding requests to the server. serviceMsForward (default)
reg.1.useteluriAsLineLabel	0 (default) - The line key label displays the Lync TelURI, or line address. 1 - The line key label displays the Lync account user name.
roaming_buddies.reg	Set the line index number for the registered line you want to enable Presence and Instant Messaging. For Microsoft deployments, the value is always 1. 1 (default) 0 to 34
sec.srtp.holdWithNewKey	0 (default) - A new key is not provided when holding a call. 1 - A new key is provided when holding a call.

Lync Base Profile

Parameter Template	Permitted Values
sec.srtp.key.lifetime	The lifetime of the master key used for the cryptographic parameter in SDP. The value specified is the number of SRTP packets. 2^31 (default) 0 - The master key lifetime is not set. If set to a valid value (at least 1024, or a power such as 210), the master key lifetime is set. When the lifetime is set, a re-invite with a new key will be sent when the number or SRTP packets sent for an outgoing call exceeds half the value of the master key lifetime. Note: Setting this parameter to a non-zero value may affect the performance of the phone.
sec.srtp.mki.enabled	The master key identifier (MKI) is an optional parameter for the cryptographic parameter in the SDP that uniquely identifies the SRTP stream within an SRTP session. MKI is expressed as a pair of decimal numbers in the form |mki:mki_length|, where mki is the MKI value and mki_length its length in bytes. 1 (default) - A 4-byte MKI parameter is sent within the SDP message of the SIP INVITE / 200 OK. 0 - The MKI parameter is not sent.
sec.srtp.mki.length	The length of the master key identifier (MKI), in bytes. Microsoft Lync offers 1-byte MKIs. 1 (default) 1 – 4
sec.srtp.mki.startSessionAtOne	1 (default) - Use an MKI value of 1 at the start of an SDP session. 0 - The MKI value increments for each new crypto key.
sec.srtp.resumeWithNewKey	0 (default) - A key is not provided when resuming a call. 1 - A key is provided when resuming a call.
sec.TLS.profileSelection.SIP	Set the TLS application profile used to store the CA certificate. ApplicationProfile1 (default)
softkey.feature.MeetNow	1 (default) - The Meet Now soft key displays on the idle screen. 0 - The Meet Now soft key does not display on the idle screen.
softkey.feature.simplifiedSignIn	1 (default) - If 1 and the value for voIpProt.server.x.specialInterop is lync2010, the Sign In soft key is displayed. 0 - The Sign In soft key is not displayed.
tcpIpApp.ice.mode	Specify that ICE and TURN work with Microsoft Lync Server. MSOCS (default)
tcpIpApp.keepalive.tcp.sip.tls.enable	1 (default) - Enable keepalive packets and keep the TLS profile from timing out. 0 - Disable keepalive packets.

Lync Base Profile

Parameter Template	Permitted Values
tcpIpApp.port.rtp.videoPortRange.enable	1 (default) - Video ports are chosen from the range specified by tcpIpApp.port.rtp.videoPortRangeStart and tcpIpApp.port.rtp.videoPortRangeEnd. 0 - Video ports are also chosen within the range specified by tcpIpApp.port.rtp.mediaPortRangeStart and tcpIpApp.port.rtp.mediaPortRangeEnd.
tcpIpApp.sntp.address	Specify the address of an SNTP server. NULL (default)
tone.dtmf.rfc2833Payload	101 (default)
up.hideSystemIpAddress	0 (default) - The RealPresence Trio 8800 system IP address does not display on the monitor. 1 - The RealPresence Trio 8800 system IP address displays on the monitor.
up.oneTouchDirectory	1 (default) - The Lync Search icon displays on the Home screen. 0 - The Lync Search icon does not display on the Home screen.
up.oneTouchVoiceMail	1 (default) - The phone dials voicemail services directly (if available on the call server) without displaying the voicemail summary. 0 - The phone displays a summary page with message counts. The user must press the Connect soft key to dial the voicemail server.
video.autoStartVideoTx	1 (default) - 0 -
video.callMode.default	Audio (default) - Video -
video.enable	0 (default) - Video is not enabled and all calls—both sent and received—are audio-only. 1 - Video is sent in outgoing calls and received in incoming calls if the other device supports video.
video.iFrame.delay	Configure a time delay in seconds from the start of video until the I-frame is sent. When nonzero, an extra I-frame is transmitted after video starts. Use a value of 2 seconds if you are using this parameter in a Microsoft Lync environment. 2 (default) 0 – 10
video.iFrame.onPacketLoss	1 (default) - An I-frame is transmitted to the far end when a received RTCP report indicates that video RTP packet loss has occurred. 0 - No An I-frame is transmitted to the far end when a received RTCP report indicates that video RTP packet loss has occurred.

Lync Base Profile

Parameter Template	Permitted Values
voice.audioProfile.G7221.24kbps.payloadType	The payload type for the G.722.1 24kbps codec. 112 (default) 0 - 127
voice.codecPref.G7221.24kbps	The priority of the G.722.1 24kbps codec. If 0 or Null, the codec is disabled. A value of 1 is the highest priority. 5 (default) 0 - 27
voice.codecPref.G7221.32kbps	The priority of the G.722.1 32kbps codec. If 0 or Null, the codec is disabled. A value of 1 is the highest priority. 0 (default) 0 - 27
voIpProt.SIP.allowTransferOnProceeding	0 (default) A transfer is not allowed during the proceeding state of a consultation call. 1 - A transfer can be completed during the proceeding state of a consultation call.
voIpProt.SIP.failoverOn503Response	0 (default) 1
voIpProt.SIP.header.diversion.enable	0 (default) - The diversion header is not displayed. 1 - The diversion header is displayed if received.
voIpProt.SIP.IM.autoAnswerDelay	The time interval in seconds from receipt of the instant message invitation to accepting the invitation automatically. 40 (default) 0 - 40
voIpProt.SIP.mtls.enable	0 (default) - Diable Mutual TLS. 1 - Disable Mutual TLS.
voIpProt.SIP.serverFeatureControl.cf	This parameter overrides voIpProt.SIP.serverFeatureControl.dnd. 1 (default) - Server-based DND is enabled and the call server has control of DND. 0 - Server-based do-not-disturb (DND) is not enabled.
voIpProt.SIP.serverFeatureControl.dnd	This parameter overrides voIpProt.SIP.serverFeatureControl.dnd. 1 (default) - Server-based DND is enabled and the call server has control of DND. 0 - Server-based do-not-disturb (DND) is not enabled.

Lync Base Profile

Parameter Template	Permitted Values
voIpProt.SIP.serverFeatureControl.localProcessing.cf	This parameter overrides voIpProt.SIP.serverFeatureControl.localProcessing.cf. 0 (default) - If 0 and reg.x.serverFeatureControl.cf is set to 1, the phone does not perform local Call Forward behavior. 1 - If 1 phone performs local Call Forward behavior on all calls received.
voIpProt.SIP.serverFeatureControl.localProcessing.dnd	This parameter overrides voIpProt.SIP.serverFeatureControl.localProcessing.cf. 0 (default) - If 0 and reg.x.serverFeatureControl.cf is set to 1, the phone does not perform local Call Forward behavior. 1 - The phone performs local Call Forward behavior on all calls received.
voIpProt.SIP.useInactiveHold	0 (default)
voIpProt.SIP.useSendonlyHold	1 (default) - The phone sends the “a=sendonly’ in the ‘Hold’ invite request. 0 - The phone does not send the “a=sendonly’ in the ‘Hold’ invite request.

Skype for Business Online Parameters

The following table lists the UC Software parameters for the RealPresence Trio solution that correspond with the Skype for Business online parameters.

UC Software Parameters Supported with Skype for Business Online - RealPresence Trio Solution

UC Software Parameter Name	Skype for Business Online Parameter Name
dialplan.userDial.timeOut	UserDialTimeoutMS
feature.exchangeCalendar.enabled	EnableExchangeCalendaring
device.prov.lyncDeviceUpdateEnabled device.prov.lyncDeviceUpdateEnabled.set	EnableDeviceUpdate
powerSaving.enable	EnablePowerSaveMode
powerSaving.idleTimeout.officeHours	PowerSaveDuringOfficeHoursTimeoutMS
powerSaving.idleTimeout.offHours	PowerSavePostOfficeHoursTimeoutMS
up.oneTouchVoiceMail	EnableOneTouchVoicemail
device.prov.user device.prov.user.set	LocalProvisioningServerUser

UC Software Parameters Supported with Skype for Business Online - RealPresence Trio Solution

device.prov.serverType device.prov.serverType.set	LocalProvisioningServerType
device.prov.password device.prov.password.set	LocalProvisioningServerpassword
device.prov.serverName device.prov.serverName.set	LocalProvisioningServerAddress

Lync Shared LC Example

The next table lists parameters and values in the `lyncSharedLCExample.cfg` template.

Lync Shared LC Example Parameters

Parameter	Permitted Values
audioVideoToggle.callMode.persistent	0 (default) - The user setting to choose audio only or video calls by default is not retained after a phone restart or reboot. 1 - The user setting to choose audio only or video calls as the default is retained after a phone restart or reboot.
call.enableOnNotRegistered	0 (default) - Calls are not permitted without registration. 1 - Users can make calls when the phone is not registered.
callLists.logConsultationCalls	1 (default) - All consultation calls are logged. (Consultation calls are calls made to a third party while the original party is on hold.) 0 - Consultation calls are not logged.
device.set	A global parameter that allows you to install software and change device parameters. 1 (default) 0 or 1
device.prov.lyncDeviceUpdateEnabled	1 (default) - The automatic device update is enabled on the phone and the phone receives software updates from the server. 0 - The automatic device update is disabled and the phone does not receive software updates from the server. Changing the value of this parameter reboots the phone.
dialplan.applyToDirectoryDial	1 (default) - The dial plan is applied to numbers dialed from the directory or speed dial, including auto-call numbers. 0 - The dial plan is not applied to numbers dialed from the directory or speed dial list.
dialplan.1.applyToForward	1 (default) - The dial plan applies to forwarded calls. 0 - Tthe dial plan does not apply to forwarded calls.
feature.audioVideoToggle.enabled	0 (default) - The audio/video toggle feature is disabled. 1 - The audio/video toggle feature is enabled.

Lync Shared LC Example Parameters

feature.btoe.enabled	1 (default) - The Better Together over Ethernet feature is enabled. 0 - The Better Together over Ethernet feature is disabled.
feature.cccp.enabled	1 (default) - Enable CCCP. 0 - Disable CCCP.
feature.lyncbtoe.autosignin.signoff.enabled	0 (default) - When the BToE app is unpaired, the credentials cached on the phone when the user signs in from the BToE application are erased. 1 - When the BToE app is unpaired, the credentials cached on the phone when the user signs in from the BToE application are stored.
feature.presence.enabled	1 (default) - Enable the presence feature to manage your buddy list and display the status of your s. 0 - Disable presence.
httpd.enabled	0 (default) - The HTTP server is disabled and the Web Configuration Utility is not accessible. 1 - The HTTP server is enabled and the Web Configuration Utility is accessible.
httpd.cfg.enabled	0 (default) - The Web Configuration Utility is disabled. 1 - The Web Configuration Utility is enabled.
httpd.cfg.secureTunnelEnabled	1 (default) - Only the phone's HTTPS web server is accessible and requires a secure tunnel. 0 - The phone's HTTP web server is also accessible through a secure tunnel. If this parameter is enabled and httpd.cfg.secureTunnelEnabled is enabled, then non-secure HTTP service is disabled.
httpd.cfg.secureTunnelRequired	1 (default) - Only the phone's HTTPS web server is accessible and requires a secure tunnel. 0 - The phone's HTTP web server is also accessible through a secure tunnel. If this parameter is enabled and httpd.cfg.secureTunnelEnabled is enabled, then non-secure HTTP service is disabled.
reg.1.applyServerDigitMapLocally	1 (default) - Dialplan normalization rules are downloaded from the Lync Server and processed on the phone. 0 - Dialplan rules are processed by Lync Server.
reg.1.auth.useLoginCredentials	1 (default) - Enable the Sign In screen on the phone. 0 - Disable the Sign In screen on the phone.
reg.1.auth.usePinCredentials	0 (default) - Disable PIN authentication sign in method. 1 - Enable PIN Authentication method.
reg.1.serverFeatureControl.cf	1 (default) - Server based call forwarding is enabled for this line. 0 - Server-based call forwarding is disabled for this line.

Lync Shared LC Example Parameters

reg.1.serverFeatureControl.localProcessing.cf	0 (default) - If 0 and and reg.1.serverFeatureControl.cf is set to 1, the phone does not perform local Call Forward behavior. 1 - The phone performs local Call Forward behavior on all calls received.
reg.1.serverFeatureControl.dnd	This parameter overrides voIpProt.SIP.serverFeatureControl.dnd. 1 (default) - Server-based DND is enabled and the call server has control of DND. 0 - Server-based do-not-disturb (DND) is not enabled.
reg.1.serverFeatureControl.localProcessing.dnd	This parameter overrides voIpProt.SIP.serverFeatureControl.localProcessing.cf. 0 (default) - If 0 and reg.x.serverFeatureControl.cf is set to 1, the phone does not perform local Call Forward behavior. 1 - The phone will perform local Call Forward behavior on all calls received.
reg.1.serverFeatureControl.signalingMethod	Controls the method used to perform call forwarding requests to the server. serviceMsForward
reg.1.server.1.registerRetry.baseTimeOut	The base time period in seconds to wait before a registration retry. Used in conjunction with reg.x.server.y.registerRetry.maxTimeOut to determine how long to wait. The algorithm is defined in RFC 5626. 10 seconds (default) 10 to 120 seconds
reg.1.server.1.registerRetry.maxTimeout	Set the maximum period of time in seconds that the phone tries to register. 180 seconds (default) 60 to 1800 seconds
reg.1.server.1.specialInterop	Identifies the SIP signaling as Microsoft Lync Server and enables Lync Server features. This parameter supports Lync Server 2010 and 2013. NULL (default) lync2010, lcs2005, ocs2007r2
reg.1.server.1.transport	The transport method the phone uses to communicate with the SIP server. TLS (default)
reg.1.useteluriAsLineLabel	0 (default) - The line key label displays the Lync TelURI, or line address. 1 - The line key label displays the Lync account user name.

Lync Shared LC Example Parameters

`roaming_buddies.reg`	Set the line index number for the registered line you want to enable Presence and Instant Messaging. `1` (default) `0` to `34`
`sec.srtp.holdWithNewKey`	`0` (default) - A new key is not provided when holding a call. `1` - A new key is provided when holding a call.
`sec.srtp.key.lifetime`	The lifetime of the master key used for the cryptographic parameter in SDP. The value specified is the number of SRTP packets. 2^{31} (default) `0` - The master key lifetime is not set. positive integer minimum 1024 or power of 2 notation If set to a valid value (at least 1024, or a power such as 2^{10}), the master key lifetime is set. When the lifetime is set, a re-invite with a new key will be sent when the number or SRTP packets sent for an outgoing call exceeds half the value of the master key lifetime. Note: Setting this parameter to a nonzero value may affect the performance of the phone.
`sec.srtp.mki.enabled`	The master key identifier (MKI) is an optional parameter for the cryptographic parameter in the SDP that uniquely identifies the SRTP stream within an SRTP session. MKI is expressed as a pair of decimal numbers in the form `|mki:mki_length|`, where `mki` is the MKI value and `mki_length` its length in bytes. `1` (default) - A 4-byte MKI parameter is sent within the SDP message of the SIP INVITE / 200 OK. `0` - The MKI parameter is not sent.
`sec.srtp.mki.length`	The length of the master key identifier (MKI), in bytes. Microsoft Lync offers 1-byte MKIs. `1` (default) `1` to `4`
`sec.srtp.mki.startSessionAtOne`	`1` (default) - Use an MKI value of 1 at the start of an SDP session. `0` - The MKI value increments for each new crypto key.
`sec.srtp.resumeWithNewKey`	`0` (default) - A key is not provided when resuming a call. `1` - A key is provided when resuming a call.
`sec.TLS.customCaCert.1`	The custom certificate for TLS Application Profile. NULL (default)
`sec.TLS.profileSelection.SIP`	Enter the TLS platform profile or TLS application profile. `ApplicationProfile1` (default)
`softkey.feature.simplifiedSignIn`	`1` (default) - If 1 and `voIpProt.server.x.specialInterop` is `lync2010`, the SignIn soft key is displayed. `0` - The SignIn soft key is not displayed.

Lync Shared LC Example Parameters

tcpIpApp.ice.mode	Specifies that ICE and TURN work with Microsoft Lync Server. MSOCS
tcpIpApp.keepalive.tcp.sip.tls.enable	1 (default) - Enable keepalive packets and keep the TLS profile from timing out. 0 - Disable keepalive packets.
video.iFrame.delay	Configure a time delay in seconds from the start of video until the I-frame is sent. When nonzero, an extra I-frame is transmitted after video starts. Use a value of 2 seconds if you are using this parameter in a Microsoft Lync environment. 2 (default) 0 – 10
video.iFrame.onPacketLoss	1 (default) - An I-frame is transmitted to the far end when a received RTCP report indicates that video RTP packet loss has occurred. 0 - No An I-frame is transmitted to the far end when a received RTCP report indicates that video RTP packet loss has occurred.
voice.audioProfile.G7221.24kbps.payloadType	The payload type for the G.722.1 24kbps codec. 112 (default) 0 – 127
voice.codecPref.G7221.24kbps	The priority of the G.722.1 24kbps codec. If 0 or Null, the codec is disabled. A value of 1 is the highest priority. 5 (default) 0 – 27
voice.codecPref.G7221.32kbps	The priority of the G.722.1 32kbps codec. If 0 or Null, the codec is disabled. A value of 1 is the highest priority. 0 (default) 0 – 27
voIpProt.SIP.allowTransferOnProceeding	0 (default) A transfer is not allowed during the proceeding state of a consultation call. 1 - A transfer can be completed during the proceeding state of a consultation call.
voIpProt.SIP.IM.autoAnswerDelay	The time interval in seconds from receipt of the instant message invitation to accepting the invitation automatically. 40 (default) 0 – 40
voIpProt.SIP.header.diversion.enable	0 (default) - The diversion header is not displayed. 1 - The diversion header is displayed if received.
voIpProt.SIP.mtls.enable	0 (default) - Diable Mutual TLS. 1 - Disable Mutual TLS.

Lync Shared Example

The next table describes parameters and values in the `lyncSharedExample.cfg` template.

Lync Shared Example

Parameter	Permitted Values
`audioVideoToggle.callMode.persistent`	`0` (default) - The user setting to choose audio only or video calls by default is not retained after a phone restart or reboot. `1` - The user setting to choose audio only or video calls as the default is retained after a phone restart or reboot.
`call.enableOnNotRegistered`	`0` (default) - Calls are not permitted without registration. `1` - Users can make calls when the phone is not registered.
`callLists.logConsultationCalls`	`1` (default) - All consultation calls are logged. (Calls made to a third party—while the original party is on hold—when settings up a conference call are called consultation calls.) `0` - Consultation calls are not logged.
`device.set`	A global parameter that allows you to install software and change device parameters. `1` (default) `0` or `1`
`device.prov.lyncDeviceUpdateEnabled.set`	`0` (default) - Disable automatic updates for all devices. `1` - Enable automatic device update for all devices and use of `device.prov.lyncDeviceUpdateEnabled`.
`device.prov.lyncDeviceUpdateEnabled`	`1` (default) - The automatic device update is enabled on the phone and the phone receives software updates from the server. `0` - The automatic device update is disabled and the phone does not receive software updates from the server. Changing the value of this parameter reboots the phone.
`dialplan.applyToDirectoryDial`	`1` (default) - The dial plan is applied to numbers dialed from the directory or speed dial, including auto-call numbers. `0` - The dial plan is not applied to numbers dialed from the directory or speed dial list.
`dialplan.digitmap`	NULL (default) The digit map used for the dial plan. The string is limited to 2560 bytes and 100 segments of 64 bytes; a comma is also allowed; a comma will turn dial tone back on;'+' is allowed as a valid digit; extension letter 'R' is used as defined above. This parameter enables the phone to automatically initiate calls to numbers that match a digit map pattern.

Lyc Shared Example

dialplan.1.impossibleMatchHandling[1]	This parameter applies to digits you enter in dial mode, the dial mode when you pick up the handset, headset, or press the New Call key. The phone is not in dial mode when you are hot dialing, dialing, or call list dialing. 0 (default) - The digits entered up to and including the point an impossible match occurred are sent to the server immediately. 1 - Give reorder tone. 2 - Allow user to accumulate digits and dispatch call manually with the Send soft key. If a call orbit number begins with # or *, you need to set this parameter to 2 to retrieve the call using off-hook dialing.
feature.audioVideoToggle.enabled	0 (default) - The audio/video toggle feature is disabled. 1 - The audio/video toggle feature is enabled.
feature.btoe.enabled	1 (default) - BToE is enabled on the phone and the phone can pair with a computer. 0 - BToE is disabled on the phone and cannot pair with a computer.
feature.cccp.enabled	1 (default) - Enable CCCP. 0 - Disable CCCP.
feature.lyncbtoe.autosignin.signoff.enabled	0 (default) - When the BToE app is unpaired, the credentials cached on the phone when the user signs in from the BToE application are erased. 1 - When the BToE app is unpaired, the credentials cached on the phone when the user signs in from the BToE application are stored.
feature.presence.enabled	1 (default) - Enable the presence feature to manage your buddy list and display the status of your s. 0 - Disable the presence feature to manage your buddy list and display the status of your s.
httpd.enabled	0 (default) - The HTTP server is disabled and the Web Configuration Utility is not accessible. 1 - The HTTP server is enabled and the Web Configuration Utility is accessible.
httpd.cfg.enabled	0 (default) - The Web Configuration Utility is disabled. 1 - The Web Configuration Utility is enabled.
httpd.cfg.secureTunnelEnabled	1 (default) - Only the phone's HTTPS web server is accessible and requires a secure tunnel. 0 - The phone's HTTP web server is also accessible through a secure tunnel. If this parameter is enabled and httpd.cfg.secureTunnelEnabled is enabled, then non-secure HTTP service is disabled.

Lyc Shared Example

`httpd.cfg.secureTunnelRequired`	`1` (default) - Only the phone's HTTPS web server is accessible and requires a secure tunnel. `0` - The phone's HTTP web server is also accessible through a secure tunnel. If this parameter is enabled and `httpd.cfg.secureTunnelEnabled` is enabled, then non-secure HTTP service is disabled.
`reg.1.offerFullCodecListUponResume`	`0` (default) - Only the audio codec negotiated during call establishment is sent when a held call is resumed. `1` - All supported codes are sent when a held call is resumed.
`sec.srtp.holdWithNewKey`	`0` (default) - A new key is not provided when holding a call. `1` - A new key is provided when holding a call.
`sec.srtp.key.lifetime`	The lifetime of the master key used for the cryptographic parameter in SDP. The value specified is the number of SRTP packets. `2^31` (default) `0` - The master key lifetime is not set. If set to a valid value (at least 1024, or a power such as 210), the master key lifetime is set. When the lifetime is set, a re-invite with a new key will be sent when the number or SRTP packets sent for an outgoing call exceeds half the value of the master key lifetime. Note: Setting this parameter to a non-zero value may affect the performance of the phone.
`sec.srtp.mki.enabled`	The master key identifier (MKI) is an optional parameter for the cryptographic parameter in the SDP that uniquely identifies the SRTP stream within an SRTP session. MKI is expressed as a pair of decimal numbers in the form |mki:mki_length|, where mki is the MKI value and mki_length its length in bytes. `1` (default) - A 4-byte MKI parameter is sent within the SDP message of the SIP INVITE / 200 OK. `0` - The MKI parameter is not sent.
`sec.srtp.mki.length`	The length of the master key identifier (MKI), in bytes. Microsoft Lyc offers 1-byte MKIs. `1` (default) `1 – 4`.
`sec.srtp.mki.startSessionAtOne`	`1` (default) - Use an MKI value of 1 at the start of an SDP session. `0` - The MKI value increments for each new crypto key.
`sec.srtp.resumeWithNewKey`	`0` (default) - A key is not provided when resuming a call. `1` - A key is provided when resuming a call.
`sec.TLS.customCaCert.1`	The custom certificate for TLS Application Profile. NULL (default)
`sec.TLS.profileSelection.SIP`	Set the TLS application profile used to store the CA certificate. `ApplicationProfile1` (default)

Lync Shared Example

tcpIpApp.ice.mode	Specify that ICE and TURN work with Microsoft Lync Server. MSOCS (default)
tcpIpApp.keepalive.tcp.sip.tls.enable	1 (default) - Enable keepalive packets and keep the TLS profile from timing out. 0 - Disable keepalive packets.
video.iFrame.delay	Configure a time delay in seconds from the start of video until the I-frame is sent. When nonzero, an extra I-frame is transmitted after video starts. Use a value of 2 seconds if you are using this parameter in a Microsoft Lync environment. 2 (default) 0 - 10
video.iFrame.onPacketLoss	1 (default) - An I-frame is transmitted to the far end when a received RTCP report indicates that video RTP packet loss has occurred. 0 - No An I-frame is transmitted to the far end when a received RTCP report indicates that video RTP packet loss has occurred.
voice.audioProfile.G7221.24kbps.payloadType	The payload type for the G.722.1 24kbps codec. 112 (default) 0 - 127
voice.codecPref.G7221.24kbps	The priority of the G.722.1 24kbps codec. If 0 or Null, the codec is disabled. A value of 1 is the highest priority. 5 (default) 0 - 27
voice.codecPref.G7221.32kbps	The priority of the G.722.1 32kbps codec. If 0 or Null, the codec is disabled. A value of 1 is the highest priority. 0 (default) 0 - 27
voIpProt.SIP.allowTransferOnProceeding	0 (default) A transfer is not allowed during the proceeding state of a consultation call. 1 - A transfer can be completed during the proceeding state of a consultation call.
voIpProt.SIP.IM.autoAnswerDelay	The time interval in seconds from receipt of the instant message invitation to accepting the invitation automatically. 40 (default) 0 - 40
voIpProt.SIP.header.diversion.enable	0 (default) - The diversion header is not displayed. 1 - The diversion header is displayed if received.
voIpProt.SIP.mtls.enable	0 (default) - Diable Mutual TLS. 1 - Disable Mutual TLS.

Lync Per Phone Example

The following table lists parameters in the template file `lyncPerPhoneExample.cfg`.

Lync Per Phone Example

Parameter	Permitted Values
`device.set`	A global parameter that you enable to make changes to <device> parameters. Use this parameter to change only <device> parameter values. Once you have made your changes, remove this parameter from the configuration file. `0` (default) `0 or 1`
`device.prov.lyncDeviceUpdateEnabled.set`	`0` (default) - Disable automatic updates for all devices. `1` - Enable automatic device update for all devices and use of `device.prov.lyncDeviceUpdateEnabled`.
`device.prov.lyncDeviceUpdateEnabled`	`1` (default) - The automatic device update is enabled on the phone and the phone receives software updates from the server. `0` - The automatic device update is disabled and the phone does not receive software updates from the server. Changing the value of this parameter reboots the phone.
`dialplan.1.applyToForward`	`1` (default) - The dial plan applies to forwarded calls. `0` - The dial plan does not apply to forwarded calls.
`httpd.enabled`	`0` (default) - The HTTP server is disabled and the Web Configuration Utility is not accessible. `1` - The HTTP server is enabled and the Web Configuration Utility is accessible.
`httpd.cfg.enabled`	`0` (default) - The Web Configuration Utility is disabled. `1` - The Web Configuration Utility is enabled.
`httpd.cfg.secureTunnelEnabled`	`1` (default) - Only the phone's HTTPS web server is accessible and requires a secure tunnel. `0` - The phone's HTTP web server is also accessible through a secure tunnel. If this parameter is enabled and `httpd.cfg.secureTunnelEnabled` is enabled, then non-secure HTTP service is disabled.
`httpd.cfg.secureTunnelRequired`	`1` (default) - Only the phone's HTTPS web server is accessible and requires a secure tunnel. `0` - The phone's HTTP web server is also accessible through a secure tunnel. If this parameter is enabled and `httpd.cfg.secureTunnelEnabled` is enabled, then non-secure HTTP service is disabled.
`reg.1.address`	Specify the line registration. For example: `user1@example.com` NULL (default)

Lync Per Phone Example

reg.1.applyServerDigitMapLocally	0 (default) - Dialplan rules are processed by Lync Server. 1 - Dialplan normalization rules are downloaded from the Lync Server and processed on the phone.
reg.1.auth.domain	The domain of the authorization server that is used to check the user names and passwords. For example, example.com. NULL (default)
reg.1.auth.password	The user Sign In password for authentication challenges for this registration. Login credentials you enter to the configuration file override Active Directory login credentials and disable use of PIN authentication on the phone interface at Settings > Authentication. NULL (default)
reg.1.auth.userId	User ID to be used for authentication challenges for this registration. If the User ID is non-Null, it will override the user parameter entered into the Authentication submenu on the Settings menu of the phone. Login credentials you enter to the configuration file override Active Directory login credentials and disable use of PIN authentication on the phone interface at Settings > Authentication. user1 (default)
reg.1.auth.usePinCredentials	1 (default) - Enable the PIN authentication sign in method. 0 - Disable the PIN authentication sign in method.
reg.1.auth.loginCredentialType	Specify the credential type the user must provide to log in. You can choose the username/password or extension/PIN. LoginCredentialNone (default) You cannot log in to the phone with Microsoft credentials if the parameter reg.1.auth.loginCredentialType is set to the default value. You must manually set parameter reg.1.auth.loginCredentialType to the value usernameAndPassword.
reg.1.server.1.registerRetry.baseTimeout	The base time period to wait before a registration retry. Used in conjunction with reg.x.server.y.registerRetry.maxTimeOut to determine how long to wait. The algorithm is defined in RFC 5626. 10 seconds (default) 10 - 120 seconds
reg.1.server.1.registerRetry.maxTimeout	Set the maximum period of time in seconds that the phone tries to register. 180 seconds (default) 60 to 1800 seconds

Lync Per Phone Example

reg.1.server.1.specialInterop	Identifies the SIP signaling as Microsoft Lync Server and enables Lync Server features. This parameter supports Lync Server 2010 and 2013. lync2010 (default) lync2010, lcs2005, ocs2007r2
reg.1.server.1.transport	The transport method the phone uses to communicate with the SIP server. TLS (default)
reg.1.serverFeatureControl.cf	1 (default) - Server based call forwarding is enabled for this line. 0 - Server-based call forwarding is disabled for this line.
reg.1.serverFeatureControl.dnd	This parameter overrides voIpProt.SIP.serverFeatureControl.dnd. 1 (default) - Server-based DND is enabled and the call server has control of DND. 0 - Server-based do-not-disturb (DND) is not enabled.
reg.1.serverFeatureControl.localProcessing.cf	0 (default) - If 0 and and reg.1.serverFeatureControl.cf is set to 1, the phone does not perform local Call Forward behavior. 1 - The phone performs local Call Forward behavior on all calls received.
reg.1.serverFeatureControl.localProcessing.dnd	This parameter overrides voIpProt.SIP.serverFeatureControl.localProcessing.cf. 0 (default) - If 0 and reg.x.serverFeatureControl.cf is set to 1, the phone does not perform local Call Forward behavior. 1 - The phone will perform local Call Forward behavior on all calls received.
reg.1.serverFeatureControl.signalingMethod	Controls the method used to perform call forwarding requests to the server. serviceMsForward (default)
reg.1.offerFullCodecListUponResume	0 (default) - Only the audio codec negotiated during call establishment is sent when a held call is resumed. 1 - All supported codes are sent when a held call is resumed.
reg.1.useteluriAsLineLabel	0 (default) - The line key label displays the Lync TelURI, or line address. 1 - The line key label displays the Lync account user name.

Lync Per Phone Example

roaming_buddies.reg	Set the line index number for the registered line you want to enable Presence and Instant Messaging. For Microsoft deployments, the value is always 1. 1 (default) 0 to 34
softkey.feature.simplifiedSignIn	1 (default) - If 1 and the value for voIpProt.server.x.specialInterop is lync2010, the Sign In soft key is displayed. 0 - The Sign In soft key is not displayed.

Lync.cfg

This template file is located in the Config folder of the UC Software download.

Lync.cfg Parameters

Parameter	Permitted Values
dhcp.option43.override.stsUri	
dir.stopTogglePage	1 (default)
feature.certRenewBackOff.enabled	1 (default)
feature.lync.abs.enabled	0 (default)
feature.lync.abs.maxResult	12 (default)
feature.lyncbtoe.autosignin.signoff.enabled	0 (default)
locInfo.1.A1	
locInfo.1.A3	
locInfo.1.country	
locInfo.1.HNO	
locInfo.1.HNS	
locInfo.1.label	
locInfo.1.LOC	
locInfo.1.NAM	
locInfo.1.PC	
locInfo.1.POD	
locInfo.1.PRD	
locInfo.1.RD	

Lync.cfg Parameters

Parameter	Permitted Values
locInfo.1.STS	
prov.login.lcCache.domain	
prov.login.lcCache.user	
reg.1.dialPlanName	
reg.1.lisdisclaimer	
reg.1.lync.autoProvisionCertLocation	6 (default)
reg.1.ringType.privateLine	default (default)
reg.1.serverAutoDiscovery	1 (default)
softkey.feature.simplifiedSignIn	0
up.SLA.ringType	ringer1 (default)

Base Profile device.set

The following parameters are located in the `device.cfg` folder of the UC Software download.

Base Profile device.set Parameters

Parameter	Permitted Values
device.baseProfile[1]	This parameter sets the value for the device Base Profile. Set this parameter to Lync. NULL (default) Lync
device.baseProfile.set[1]	This parameter sets the value for the device Base Profile. Set this parameter to Lync. NULL Lync
device.set[1]	A global parameter that you enable to make changes to <device> parameters. Use this parameter to change only <device> parameter values. Once you have made your changes, remove this parameter from the configuration file. 0 (default) 0 or 1

[1] Change causes phone to restart or reboot.

In-Band Provisioning Parameters

When you are signed in to Microsoft on your phone, the Microsoft server automatically retrieves provisioning parameters you need to operate Microsoft features. You can view the in-band provisioning parameters from your phone or using the Web Configuration Utility. This section shows you how to view in-band provisioning parameters and provides a description of the parameters.

View In-Band Provisioning Parameters from the Phone

You can view In-band provisioning parameters from the phone menu.

To view in-band provisioning parameters from the phone menu:

1. On your phone, go to **Menu > Settings > Advanced**, enter the password (default 456), and press **Enter**.
2. Go to **Administration Settings > Upload Configuration**.
3. Scroll down and select **SIP**.
4. Press the **Upload** soft key.

   The phone uploads `MAC-upload-CallServer.cfg` to your boot server.
5. Open `MAC-upload-CallServer.cfg` to view the in-band provisioning parameters.

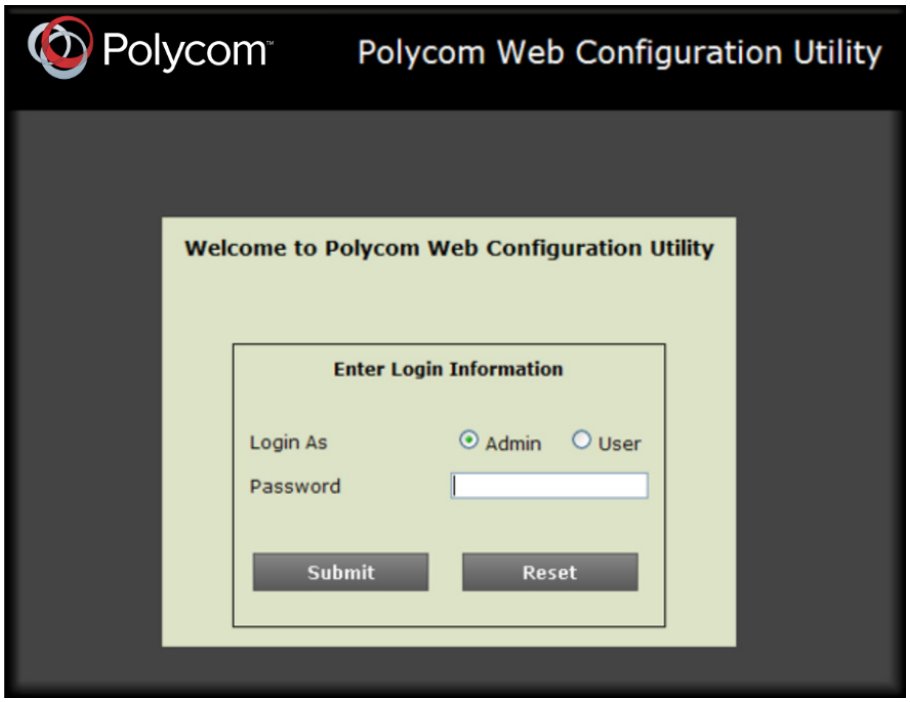
View In-Band Provisioning Parameters with the Web Configuration Utility

You can view in-band provisioning parameters by exporting from the phone's Web Configuration Utility.

To view in-band provisioning parameters with the Web Configuration Utility:

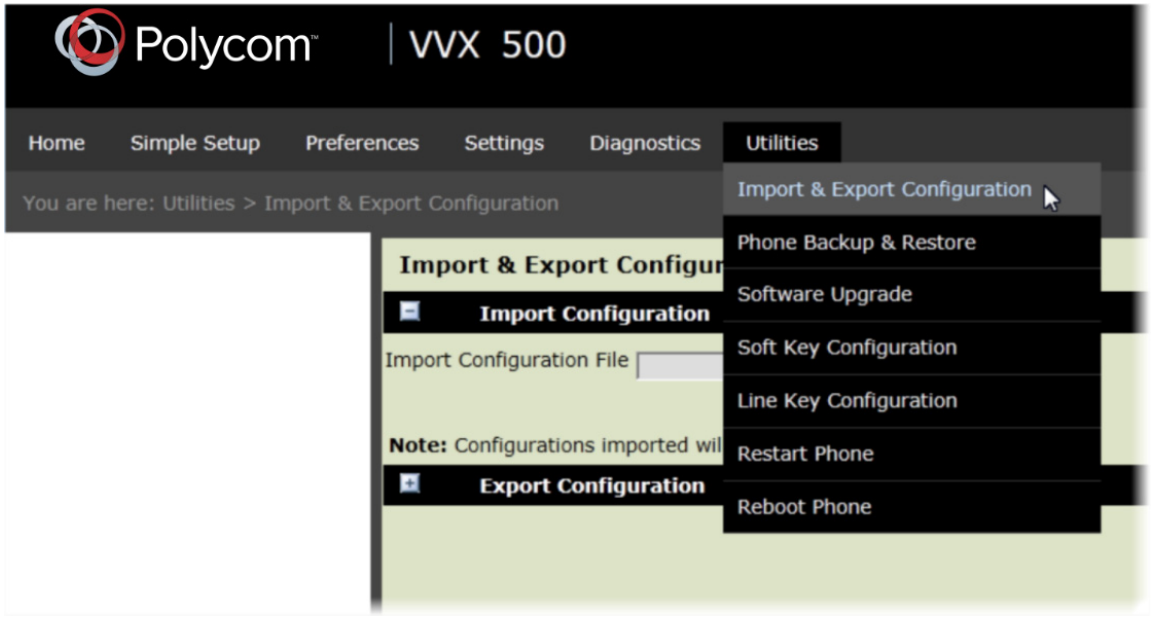
1. Obtain the IP address of the phone by pressing the **Menu/Home** key and going to S**ettings > Status > Platform > Phone**. The IP address displays in the IP field.
2. In the address bar of a web browser, enter the phone's IP address and press **Enter** on your keyboard.

   The Web Configuration Utility login screen displays, shown next.



3 Choose **Admin**, enter the Password (default 456), and click **Submit**.

4 From the Home page, navigate to **Utilities > Import & Export Configuration**, shown next.



5 Expand **Export Configuration**, click the **Export Configuration File** drop-down menu, choose **Lync**, and click **Export**.

6 Save the XML file to your computer.

In-Band Provisioning Parameters

The following table lists parameters that the Microsoft server automatically uses to provision phones.

In-Band Provisioning Parameters

Parameter	Permitted Values
dialplan.1.e911dialmask	112 100
dialplan.1.e911dialstring	911
dialplan.1.originaldigitmap	Default value depends on how the Lync Server is configured.
dialplan.routing.emergency.1.value	911
msg.mwi.1.callBack	The to call when retrieving messages for this registration if msg.mwi.x.callBackMode is set to . Default value depends on how the Lync Server is configured.
msg.mwi.1.callBackMode	The message retrieval mode and notification for registration x. The value indicates that a call is placed to the specified by msg.mwi.x.callback. (default)
reg.1.ice.turn.callAdmissionControl.enabled	1 (default)
reg.1.lisdisclaimer	Default value depends on how the Lync Server is configured.
reg.x.srtp.enable	1 (default) - SRTP for incoming SIP calls is enabled for a given line x. 0 - SRTP offered SIP calls are declined.
reg.1.srtp.offer	This parameter applies to the registration initiating (offering) a phone call. 1 (default) - The registration includes a secure media stream description along with the usual non-secure media description in the SDP of a SIP INVITE. 0 - No secure media stream is included in SDP of a SIP invite.

In-Band Provisioning Parameters

`reg.1.srtp.require`	`1` (default) - The registration is only allowed to use secure media streams. Any offered SIP INVITEs must include a secure media description in the SDP or the call will be rejected. For outgoing calls, only a secure media stream description is included in the SDP of the SIP INVITE, meaning that the non-secure media description is not included. If this parameter set to `1`, `reg.x.srtp.offer` is also be set to `1`, regardless of the value in the configuration file. `0` - Secure media streams are not required.
`tcpIpApp.ice.turn.callAdmissionControl.enabled`	`1` (default)
`tcpIpApp.ice.username`	Default value depends on how the Lync Server is configured. This unique value is created for each registration and changes every eight minutes.
`tcpIpApp.ice.password`	Default value depends on how the Lync Server is configured
`tcpIpApp.ice.turn.server`	Default value depends on how the Lync Server is configured
`tcpIpApp.ice.turn.tcpPort`	`443` (default)
`tcpIpApp.ice.turn.udpPort`	`3478` (default)

Logging Parameters

The following table lists logging parameters for the RealPresence Trio system registered with Lync Server or Skype for Business.

RealPresence Trio System Microsoft Logging Parameters

log.level.change.flk	Set the log level for the Flexible Line Keys feature on phones registered with Microsoft servers. `4` (default) `1 - 6`
log.level.change.fur	Set the log level for video display fast update requests. `4` (default) `1 - 6`
log.level.change.mcu	Set the log level call conference servers. `4` (default) `1 - 6`

RealPresence Trio System Microsoft Logging Parameters

log.level.change.mrlib	Set the log level for modular room library calls. 4 (default) 1 - 6
log.level.change.pcon	Set the log level for modular room calls. 4 (default) 1 - 6
log.level.change.pkt	Set the log level for RTP packets. 4 (default) 1 - 6
log.level.change.vsr	Set the log level for RTCP Video Source Requests used with the H.264 video codec in Microsoft environments. 4 (default) 1 - 6
log.level.change.bsdir	Set the log level for the BroadSoft Directory. 4 (default) 1 - 6