Poly Trio C60 in Microsoft Environments

Getting Help

For more information about installing, configuring, and administering Poly/Polycom products or services, go to Polycom Support.

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Before You Begin

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This guide describes how to configure and administer Poly Trio C60 in Microsoft Environment.

The information in this guide applies to Poly Trio C60 except where noted.

Audience, Purpose, and Required Skills

This guide is written for a technical audience.

You must be familiar with the following concepts before beginning:

- Current telecommunications practices, protocols, and principles
- Telecommunication basics, video teleconferencing, and voice or data equipment
- Open SIP networks and VoIP endpoint environments

Related Poly and Partner Resources

See the following sites for information related to this product.

- The [Poly Online Support Center](#) is the entry point to online product, service, and solution support information including Video Tutorials, Documents & Software, Knowledge Base, Community Discussions, Poly University, and additional services.
- The [Polycom Document Library](#) provides support documentation for active products, services, and solutions. The documentation displays in responsive HTML5 format so that you can easily access and view installation, configuration, or administration content from any online device.
- The [Polycom Community](#) provides access to the latest developer and support information. Create an account to access Poly support personnel and participate in developer and support forums. You can find the latest information on hardware, software, and partner solutions topics, share ideas, and solve problems with your colleagues.
- The [Polycom Partner Network](#) are industry leaders who natively integrate the Poly standards-based RealPresence Platform with their customers' current UC infrastructures, making it easy for you to communicate face-to-face with the applications and devices you use every day.
- The [Polycom Collaboration Services](#) help your business succeed and get the most out of your investment through the benefits of collaboration.

Getting Started

Topics:

This guide provides general guidance on installing and provisioning with Polycom UC Software and shows you how to deploy Poly devices in Microsoft environments.

Support for Lync 2010 is limited to testing of basic call scenarios. Microsoft support of Lync and Skype for Business is documented on Microsoft's website. Microsoft does not currently support IP phones on Lync 2010. For information, see IP Phones on Microsoft Support.

Product Overview of Poly Trio C60 Systems

Poly Trio C60 systems support audio-only conference calls with Microsoft Teams voice platforms or Skype for Business 2013/2015 Server environments along with point-to-point and bridge calls.

Trio C60 systems support the following features in slightly different sets depending on the platform you enable:

- Placing, answering, and managing audio calls
- Switching call applications on the fly
- Initiating, joining, and managing audio conference calls
- Recording audio calls with USB flash drives
- Viewing and joining scheduled calendar meetings
- Managing contacts, call lists, and directories
- Adjusting call and phone settings
- Checking voicemail messages
- Connecting to computers over USB
- Pairing with Bluetooth–enabled devices
- Connecting to wireless networks

Microsoft Qualified Phones

Poly offers Poly Trio systems already configured for use with Skype for Business on-premise deployments or Skype for Business Online. Poly Trio systems include Microsoft-qualified UC Software with a Poly feature license that enable you to start up and register with default Microsoft settings.

Feature Licenses

Poly devices purchased and shipped with a Skype or Lync Base Profile include a Poly feature license to register with Skype for Business, Lync Server, and Office 365.

If you do not purchase devices with a configured Skype or Lync Base Profile, you can use Poly phones in a Skype for Business, Lync Server, or Office 365 environment for trial purposes, without purchasing a license, for a maximum of 30 days.

For information about purchasing a Poly feature license, talk to your reseller or sales representative.

Skype for Business Topologies

Poly support for a Skype for Business topology varies by environment.

Supported Skype for Business Topologies

The following table lists Poly support for each Skype for Business topology.

Poly-Supported Skype for Business Topologies

Topology	Active Directory	Skype for Business	Exchange
On-premises	On-premises	On-premises	On-premises
Hybrid Voice/Cloud Connector Edition	On-premises	Online	Online
Office 365 Multi-tenant (O365MT)	Online	Online	Online
Hybrid (Split-Domain)	On-premises	On-premises	Online
	On-premises	Online	Online
	On-premises	Online	On-premises

Unsupported Skype for Business Topologies

The following table lists Skype for Business topologies that Poly doesn't support.

Unsupported Skype for Business Topologies

Topology	Active Directory	Skype for Business	Exchange
Unsupported Hybrid (Split-Domain)	On-premises	Online	On-premises

Poly Trio C60 System Interoperability with Microsoft

Poly Trio C60 systems support integration with several Microsoft products.

- Skype for Business on-premises
- Skype for Business Online including Microsoft Skype for Business Cloud PBX in Microsoft Office 365
- The migration of users from Skype for Business on-premises to Office 365
- Microsoft Exchange on-premises 2013 and 2010
- Exchange Online services
- Lync Server 2013 and Lync Server 2010 (audio only) for on-premise deployments

For full lists of supported Microsoft environments, features, client versions, and products tested, see the *Poly Trio C60 - Release Notes* on Polycom Support.

Prerequisites - On-Premises Deployments

You need to modify some settings of Skype for Business before you set up Poly devices for an on-premises Skype for Business deployment.

Ensure that you complete the following tasks:

- Set the server log levels to capture only low-level events. For information on setting logging levels, see Set-CsUCPhoneConfiguration on Microsoft Docs.
- Disable automatic device update by setting:
    - `Set-CsIPPhonePolicy -EnableDeviceUpdate $False`

      For more information see Set-CsIPPhonePolicy on Microsoft TechNet.
    - `device.prov.lyncDeviceUpdateEnabled.set="1"`
    - `device.prov.lyncDeviceUpdateEnabled="0"`

UC Software File Formats for Skype for Business

Poly offers UC Software for Skype for Business in two file formats:

- Combined or Split `sip.ld`.

- Poly 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.

This deployment guide refers to two configuration file templates:

- `SkypeTrioSharedExample.cfg`. This template file for the Poly Trio system provides you with all required parameters and default settings to register with Skype for Business Server.

- `000000000000.cfg`. Use this master configuration file to load `SkypeTrioSharedExample.cfg` and all other configuration files containing settings you want to load to devices from a central provisioning server. For details on using template and master configuration files, see the Poly Trio C60 - Administrator Guide.

> **Note:** All template files, Polycom UC Software, and supporting documentation is available on Polycom Support Site.

Setting the Base Profile

Set the correct base profile to enable the platform you need.

Setting the Base Profile for the First Time

When you power on the Poly Trio system for the first time, or following a factory restore, the system displays a setup wizard.

The setup wizard helps you set up your administrator password, choose the system language, and choose a base profile. You can choose from Microsoft Teams, Skype for Business, and Microsoft USB Optimized base profiles for your system.

After you set up your system with the initial setup wizard, the system boots to the **Home** screen when it powers on after each restart. If your system accesses and applies configurations through a centralized provisioning server, the setup wizard doesn't display.

Set the Base Profile Using the Web Configuration Utility

You can use the Web Configuration Utility to manually set a phone's Base Profile to **Skype for Business** or **Microsoft Teams**.

The Web Configuration Utility is disabled by default when the phone registers with Skype for Business Server. You must manually enable the Web Configuration Utility to configure phone settings. You cannot configure sign-in credentials using the Web Configuration Utility.

Procedure

1. Power on your phones and allow them to complete the power-up process.
2. Get the IP address of each phone in your deployment by going to **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.

   The Web Configuration Utility login screen displays.
4. Choose **Admin** to log in as an administrator, and then enter the administrator password and click **Submit**.

5. On the Home page, navigate to the **Simple Setup** menu.
6. From the **Base Profile** drop-down list, choose **Skype for Business** or **Microsoft Teams**, and click **Save** at the bottom of the page.
7. In the confirmation dialog, choose **Yes**.

The phone automatically restarts, and users can now sign in.

Related Links
Accessing the Web Configuration Utility on page 126

Change the Base Profile from the Settings Menu

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

Note: The setting location differs on a Poly phone with Microsoft Teams.

Procedure
1. Go to **Settings** > **Advanced** > **Administration Settings** > **Network Configuration** > **Base Profile** and select **Skype for Business**.
2. Select **Back** > **Save Configuration**.

   The phone automatically restarts and displays the **Sign In** screen. Users can now sign in.

Related Links
Change the Base Profile from Poly Trio C60 with Microsoft Teams on page 11

Change the Base Profile from Poly Trio C60 with Microsoft Teams

You can access the Base Profile from the Poly Trio system with Microsoft Teams.

Note: The setting location differs on a Poly phone with Skype for Business.

Procedure
1. On the Poly Trio system screen, press the menu icon at top left.
2. Press **Settings** > **Device Settings**.
3. On the **Device Settings** screen, select **Advanced** and enter the administrator password.
4. Go to **Administrator Settings** > **Network Configuration** > **Base Profile**, and select a Base Profile.

Related Links
Change the Base Profile from the Settings Menu on page 11

Set the Base Profile with `device.*` Parameters

This section shows you how to provision multiple devices using parameters in the `device.cfg` template configuration file included in your UC Software download.

Poly recommends using `device.*` parameters to configure multiple devices and only if you're familiar with centralized provisioning and configuration files.

The parameter values correspond to the options in the phone menu or the system web interface as follows:

- `Skype`—**Skype for Business**

Procedure

1. Locate the `device.cfg` template configuration file and place the `device.cfg` file on your provisioning server.
2. Locate and change the values of the following parameters:
   - `device.baseProfile=` *`<Base Profile value>`*
   - `device.set=1`
   - `device.baseProfile.set=1`
3. Rename and save the file.
4. Power on the phones.
5. Once bootup is complete, remove `device.set` from the template configuration file and save the file again after removing `device.set`.

Microsoft Exchange Integration

Topics:

- [Integrating with Microsoft Exchange](#)
- [Poly Trio Solution with Skype for Business](#)
- [Private Meetings in Microsoft Exchange](#)
- [Configuring the Microsoft Exchange Server](#)
- [Join a Meeting with a SIP URI](#)
- [Microsoft Exchange Advanced Login](#)
- [Troubleshooting Microsoft Exchange](#)

If you have a Skype for Business, Office 365, or Lync Server 2013 deployment, you can integrate with Microsoft Exchange Server.

You can set up visual voicemail, call log synchronization, Outlook contact search, and Skype for Business Address Book Service (ABS) adaptive search. Each of these features is enabled by default on Poly phones registered with Skype for Business.

After you connect phones with the Exchange Server, you can do the following:

- Verify the status of Exchange Server services on each phone
- View the status of each service in the system web interface

Integrating with Microsoft Exchange

You can integrate with Microsoft Exchange using one of the following methods:

- Exchange Server auto-discover
- Provision the phone with the Microsoft Exchange address
- System web interface

Note: If you enter the Skype for Business credentials in the configuration file, phone users must enter credentials on the phone **Sign In** screen.

Provision the Microsoft Exchange Calendar

You can provision your Trio C60 systems with the Microsoft Exchange calendar.

When you connect a Poly Trio system to Skype for Business, a Calendar icon displays on the phone **Home** screen that enables users to access features. Users can view and join Outlook calendar events directly from the Poly Trio system that displays the day and meeting view for scheduled events. Users can't schedule calendar events or view email from the phone.

Procedure

» Add the following parameters to one of your configuration files:

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

Enable Microsoft Exchange Calendar Using the System Web Interface

You can use the system web interface to manually enable your phones with the Microsoft Exchange calendar. This option is useful for troubleshooting faulty auto-discovery.

Enable the access to the system web interface (the Web Configuration Utility) on the phone registered with Skype for Business.

You can enable the Microsoft Exchange calendar through the system web interface for only one phone at a time.

Procedure

1. Log in to the system web interface using admin credentials.
2. Go to **Settings** > **Applications** > **Exchange Applications**.
3. In the **Exchange Calendar** field, select **Enable**.
4. Enter the exchange web services URL using a Microsoft Exchange Server URL.

    For example `https://<mail.com>/ews/exchange.asmx`.

5. Select **Save**.
6. Select **Yes**.

    The Calendar icon displays on your phone screen.

Related Links

Calendar Meeting Details

You can use the `exchange.meeting.show*` parameters to show or hide the following meeting details from the calendar display on the Poly Trio system screen:

- Subject
- Location
- Invitee(s)
- Agenda/Notes - When you hide Agenda/Notes, a message indicates the meeting is private.
- Meeting Organizer - The organizer doesn't display for meetings displayed on the monitor.
- Show More Actions - If users can dial multiple numbers to join a meeting, the **Show More Actions** option displays in **Meeting Details** to enable users to choose the dial-in number.

Calendar Meeting Details Parameters

Use the following parameters to configure calendar meeting details.

exchange.meeting.showAttendees

   1 (default) - Show the names of the meeting invitees.

   0 - Hide the names of the meeting invitees.

`exchange.meeting.showDescription`

1 (default) - Show Agenda/Notes in Meeting Details that display after you tap a scheduled meeting on the Poly Trio system calendar.

0 - Hide the meeting Agenda/Notes.

`exchange.meeting.showLocation`

1 (default) - Show the meeting location.

0 - Hide the meeting location.

`exchange.meeting.showMoreActions`

1 (default) - Show More Actions in Meeting Details to allow users to choose a dial-in number.

0 - Hide More Actions in Meeting Details.

`exchange.meeting.showOnlyCurrentOrNext`

0 (default) - Disable the limitation to display only the current or next meeting on the Calendar.

1 - Display only the current or next meeting on the Calendar.

`exchange.meeting.showOrganizer`

1 (default) - Show the meeting organizer in the meeting invite.

0 - Hide the meeting organizer in the meeting invite.

`exchange.meeting.showSubject`

1 (default) - Show the meeting Subject.

0 - Hide the meeting Subject.

`exchange.meeting.showTomorrow`

1 (default) - Show meetings scheduled for tomorrow as well as for today.

0 - Show only meetings scheduled for today.

Meeting Reminder Messages

Poly Trio systems display several meeting reminder messages.

A meeting reminder displays on the Trio C60 system screen at 5 minutes and 1 minute before the start of a meeting. The five-minute reminder disappears after 30 seconds if you don't dismiss it. If you don't dismiss the one-minute reminder, the reminder message displays on the Poly Trio system **Home** screen during the duration of the meeting. The one-minute reminder disappears when the meeting ends or when the next meeting reminder pops up, whichever comes first.

When a time slot contains multiple meetings due to scheduling overlap, the meeting reminder message displays all available meetings. Users can select the message to display the calendar day view and choose which meeting to join.

You can also show or hide all-day events, configure the maximum number of future meetings, or configure a user requirement to enter the Skype for Business conference ID when a meeting organizer marks a meeting as Private. When meeting organizers mark a meeting invitation as Private in Outlook, the Poly Trio system displays the meeting invite on the Poly Trio system calendar with `Private Meeting` in the subject line and a lock icon. Users can find the conference ID in the Outlook invitation.

Verify the Microsoft Exchange Integration

Verify that all of the Exchange services work properly.

Procedure

» Do one of the following:

- On the phone's local interface, go to **Settings** > **Status** > **Diagnostics** > **Warnings**.
- On the system web interface, go to **Diagnostics** > **Skype for Business Status** > **Exchange Client**.

Poly Trio Solution with Skype for Business

You can deploy a Poly Trio system with Skype for Business Online, Skype for Business 2013, and Lync 2010 on-premises.

For a list of available features and instructions on deploying Poly Trio solution with Skype for Business and Lync Server, see the latest *Poly Trio Solution with Skype for Business Provisioning Guide* at Poly Trio Support.

When you register a Poly Trio system with Skype for Business, a Calendar icon displays on the phone **Home** screen that enables users to access features. Users can view and join Outlook calendar events directly from the Poly Trio system. This displays the day and meeting view for scheduled events; the month view isn't currently available. Users can't schedule calendar events or view email from the phone.

Private Meetings in Microsoft Exchange

When you set a Skype for Business meeting to **Private**, you can choose which meeting information to show or hide.

Skype for Business Private Meeting Parameters

Use the following parameters to configure Skype for Business private meetings.

`exchange.meeting.private.showAttendees`

0 (default) - Meetings marked as private in Outlook don't show the list of meeting attendees and invitees on the Poly Trio calendar.

1 - Meetings marked as private in Outlook show the list of meeting attendees and invitees on the Poly Trio calendar.

`exchange.meeting.private.showDescription`

0 (default) - Meetings marked as private in Outlook don't display a meeting description on the Poly Trio calendar.

1 - Meetings marked as private in Outlook display a meeting description on Poly Trio calendar.

`exchange.meeting.private.showLocation`

0 (default) - Meetings marked as private in Outlook don't display the meeting location on the Poly Trio calendar.

1 - Meetings marked as private in Outlook display the meeting location on the Poly Trio calendar.

`exchange.meeting.private.showSubject`

0 (default) - Meetings marked as private in Outlook don't display a subject line on Poly Trio calendar.

1 - Meetings marked as private in Outlook display a subject line on Poly Trio calendar.

`exchange.meeting.private.showMoreActions`

1 (default) - Meetings marked as private in Outlook display the **More Actions** button, when applicable.

0 - Meetings marked as private in Outlook don't display the **More Actions** button.

`exchange.meeting.private.showOrganizer`

1 (default) - Meetings marked as private in Outlook display the name of the meeting organizer on the Poly Trio calendar.

0 - Meetings marked as private in Outlook display the name of the meeting organizer on the Poly Trio calendar.

`exchange.meeting.private.enabled`

1 (default) - The Poly Trio system considers the private meeting flag for meetings marked as private in Outlook.

0 - Treat meetings marked as private in Outlook the same as other meetings.

`exchange.meeting.private.promptForPIN`

0 (default) - Disable the Skype for Business Conference ID prompt that allows users to join meetings marked as private.

1 - Enable the Skype for Business Conference ID prompt that allows users to join meetings marked as private.

Configuring the Microsoft Exchange Server

You can configure the following settings to use Microsoft Exchange services on your phones.

Note: 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.

Visual Voicemail

On the Exchange 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 Skype for Business Voice mail menus display the message: Skype for Business Server only plays voicemail and you cannot download voicemails or play locally on the phone.

Synchronizing Call Logs

On the Exchange Server, you can enable the option to save calls logs to each user's conversation history in Outlook.

ABS Adaptive Search

You can enable the Address Book Service (ABS) on the Exchange server.

There are three possible configurations.

- Outlook and ABS are both enabled by default. When both are enabled, the phone displays the Skype for Business Directory.
- If you disable Outlook and enable only ABS, the phone displays the Skype for Business Directory.
- If you enable Outlook and disable ABS, the Outlook Contact Search displays in Directories.

Phones registered with Skype for Business server display a one-touch **Join** button that allows you to join a Skype for Business conference in a federated environment, even if you haven't configured Transport Neutral Encapsulation Format (TNEF).

Microsoft Exchange Parameters

The following parameters configure Microsoft Exchange integration.

`exchange.meeting.alert.followOfficeHours`

1 (default) - Enable audible calendar alerts during business hours.

0 - Disable audible calendar alerts.

`exchange.meeting.alert.tonePattern`

positiveConfirm (default) - Set the tone pattern of the reminder alerts using any tone specified by `se.pat.*`.

exchange.meeting.alert.toneVolume

10 (default) - Set the volume level of reminder alert tones.

0 - 17

exchange.meeting.allowScrollingToPast

0 (default) - Do not allow scrolling up in the Day calendar view to see recently past meetings.

1 - Allow scrolling up in the Day calendar view to see recently past meetings.

exchange.meeting.hideAllDayNotification

0 (default) - All-day and multi-day meeting notifications display on the **Calendar** screen.

exchange.meeting.parseOption

Select a meeting invite field to fetch a VMR or meeting number from.

All (default)

Location

LocationAndSubject

Description

Change causes a reboot.

exchange.meeting.parseWhen

NonSkypeMeeting (default) - Disable number-searching on the Calendar for additional numbers to dial while in Skype Meetings.

Always - Enable number-searching on the Calendar for additional numbers to dial while in Skype Meetings.

exchange.meeting.phonePattern

NULL (default)

string

The pattern used to identify phone numbers in meeting descriptions, where "x" is a digit or an asterisk(*) and "|" separates alternative patterns (for example, xxx-xxx-xxxx|604.xxx.xxxx).

exchange.meeting.realConnectProcessing.outboundRegistration

Choose a line number to use to make calls on Polycom RealConnect technology.

2 (default)

1 - 34

Change causes system to restart or reboot.

exchange.meeting.realConnectProcessing.prefix.domain

Define the One-Touch Dial meeting invite prefix domain. Example: "mypolycom.com"

`exchange.meeting.realConnectProcessing.prefix.value`

Define the One-Touch Dial meeting invite prefix value.

`exchange.meeting.realConnectProcessing.skype.enabled`

0 (default) – Disable the Skype for Business meeting on Polycom RealConnect technology.

1 - Enable the Skype for Business meeting on Polycom RealConnect technology.

Change causes system to restart or reboot.

`exchange.meeting.reminderEnabled`

1 (default) - Meeting reminders are enabled.

0 - Meeting reminders are disabled.

`exchange.meeting.reminderInterval`

300 seconds (default)

60 - 900 seconds

Set the interval at which phones display reminder messages.

`exchange.meeting.reminderSound.enabled`

1 (default) - The phone makes an alert sound when users receive reminder notifications of calendar events. Note that when enabled, alert sounds take effect only if `exchange.meeting.reminderEnabled` is also enabled.

0 - The phone does not make an alert sound when users receive reminder notifications of calendar events.

`exchange.meeting.reminderType`

Customize the calendar reminder and tone.

2 (default) - The reminder is always audible and visual.

1 - The first reminder is audible and visual reminders are silent.

0 - All reminders are silent.

`exchange.meeting.reminderWake.enabled`

1 (default) - The phone wakes from low power mode after receiving a calendar notification.

0 - The phone stays in low power mode after receiving a calendar notification.

`exchange.meeting.showAttendees`

1 (default) - Show the names of the meeting invitees.

0 - Hide the names of the meeting invitees.

exchange.meeting.showDescription

1 (default) - Show Agenda/Notes in Meeting Details that display after you tap a scheduled meeting on the Poly Trio system calendar.

0 - Hide the meeting Agenda/Notes.

exchange.meeting.showLocation

1 (default) - Show the meeting location.

0 - Hide the meeting location.

exchange.meeting.showMoreActions

1 (default) - Show More Actions in Meeting Details to allow users to choose a dial-in number.

0 - Hide More Actions in Meeting Details.

exchange.meeting.showOnlyCurrentOrNext

0 (default) - Disable the limitation to display only the current or next meeting on the Calendar.

1 - Display only the current or next meeting on the Calendar.

exchange.meeting.showOrganizer

1 (default) - Show the meeting organizer in the meeting invite.

0 - Hide the meeting organizer in the meeting invite.

exchange.meeting.showSubject

1 (default) - Show the meeting Subject.

0 - Hide the meeting Subject.

exchange.meeting.showTomorrow

1 (default) - Show meetings scheduled for tomorrow as well as for today.

0 - Show only meetings scheduled for today.

exchange.menu.location

Features (default) - Displays the Calendar in the global menu under **Settings** > **Features**.

Administrator - Displays the Calendar in the **Admin** menu at **Settings** > **Advanced** > **Administration Settings**.

exchange.pollInterval

The interval, in milliseconds, to poll the Exchange server for new meetings.

30000 (default)

4000 minimum

60000 maximum

exchange.reconnectOnError

1 (default) - The phone attempts to reconnect to the Exchange server after an error.

0 - The phone does not attempt to reconnect to the Exchange server after an error.

exchange.server.url

NULL (default)

string

The Microsoft Exchange server address.

feature.EWSAutodiscover.enabled

If you configure exchange.server.url and set this parameter to 1, preference is given to the value of exchange.server.url.

1 (default) - Exchange autodiscovery is enabled and the phone automatically discovers the Exchange server using the email address information.

0 - Exchange autodiscovery is disabled on the phone and you must manually configure the Exchange server address.

feature.exchangeCalendar.enabled

Lync Base Profile default is 1.

Generic Base Profile default is 0.

0 - The calendaring feature is disabled.

1 - The calendaring feature is enabled.

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.

exchange.multipleCalendarEvents.enabled

1 (default) - Multiple calendar events display if at least two events begin within 15 minutes of each other.

0 - Only the next calendar event displays.

feature.exchangeContacts.enabled

Lync Base Profile default is 1.

Generic Base Profile default is 0.

1 - The Exchange call log feature is enabled and users can retrieve the call log histories for missed, received, and outgoing calls.

0 - The Exchange call log feature is disabled and users cannot retrieve call logs histories.

You must also enable the parameter feature.exchangeCallLog.enabled to use the Exchange call log feature.

feature.exchangeVoiceMail.enabled

Lync Base Profile default is 1.

Generic Base Profile default is 0.

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 contact feature.

feature.exchangeVoiceMail.skipPin.enabled

0 (default) - Enable PIN authentication for Exchange Voicemail. Users are required to enter their PIN before accessing Exchange Voicemail.

1 - Disable PIN authentication for Exchange Voicemail. Users are not required to enter their PIN before accessing Exchange Voicemail.

feature.exchange2019.interop.enabled

0 (default) - Disabled

1 - The device sends a read notification for voicemail after playing to mark the voicemail has been read on the server.

feature.lync.abs.enabled

Lync Base Profile default is 1.

Generic Base Profile default is 0.

1 - Enable comprehensive contact search in the Skype for Business address book service.

0 - Disable comprehensive contact search in the Skype for Business address book service.

feature.lync.abs.maxResult

Define the maximum number of contacts to display in a Skype for Business address book service contact search.

12 (default)

5 - 50

feature.wad.enabled

Do not disable this parameter if you are using Skype Online or Web Sign-In.

1 (default) – The phone attempts to use Web auto-discovery and if no FQDN is available, falls back to DNS.

0 - The phone uses DNS to locate the server FQDN and does not use Web auto-discovery. Do not disable this parameter when using Skype for Business Online and Web Sign In.

`feature.contacts.readonly`

0 (default) - Skype for Business Contacts are editable.

1 - Skype for Business are read-only.

`up.oneTouchVoiceMail1`

Lync Base Profile default is 1.

Generic Base Profile default is 0.

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.

Join a Meeting with a SIP URI

When you set up a meeting in the Calendar, the Poly Trio system displays a meeting reminder pop up.

If a dial-in number is available for the meeting, the reminder pop-up presents a **Join** button that joins you to the meeting. If a meeting lists multiple dial-in numbers or URIs for the meeting, by default the **Join** button automatically dials the first number.

The following list includes dial-in options that present a **Join** button in meeting reminders:

- SIP URI
- Tel URI
- PSTN number
- IP dial

Meeting SIP URI Parameters

The following table lists the parameters that configure dial-in information.

`exchange.meeting.join.promptWithList`

Specifies the behavior of the Join button on meeting reminder pop-ups.

0 (default) - Tapping Join on a meeting reminder should show a list of numbers to dial rather than immediately dialing the first one.

1 - A meeting reminder does not show a list of numbers to dial.

`exchange.meeting.parseWhen`

Specifies when to scan the meeting's subject, location, and description fields for dialable numbers.

NonSkypeMeeting (default)

Always

Never

`exchange.meeting.parseOption`

Select a meeting invite field to fetch a VMR or meeting number from.

All (default)

Location

LocationAndSubject

Description

Change causes a reboot.

`exchange.meeting.parseEmailsAsSipUris`

List instances of text like user@domain or user@ipaddress in the meeting description or subject under the More Actions pane as dialable SIP URIs.

0 (default) - it does not list the text as a dialable SIP URI

1 - it treats user@domain

`exchange.meeting.parseAllowedSipUriDomains`

List of comma-separated domains that will be permitted to be interpreted as SIP URIs

Null (default)

String (maximum of 255 characters)

Microsoft Exchange Advanced Login

You can configure your phone to support the Advanced Login feature which enables a dual sign-in mode for users to make calls and join meetings separately.

When you enable the Advanced Login feature, users can log in to multiple phones using one account to access the Exchange calendar and another account for making calls.

Microsoft Exchange Advanced Login Parameters

Use the following parameters to configure Microsoft Exchange Advanced Login.

`exchange.showSeparateAuth`

0 (default) - Phone disables the dual user sign-in mode.

1 - Phone enables the dual user sign-in mode.

`exchange.auth.email`

This parameter configures the email address of the Exchange account.

NULL (default)

String (maximum of 255 characters)

`device.loginAltCred.domain`

This parameter configures the domain of the Exchange account.

NULL (default)

String (maximum of 255 characters)

`device.loginAltCred.user`

This parameter configures the User ID of Exchange account.

NULL (default)

String (maximum of 255 characters)

`device.loginAltCred.password`

This parameter configures the password of Exchange Account.

NULL (default)

String (maximum of 32 characters)

`device.loginAltCred.domain.set`

This parameter overrides the value set for `device.loginAltCred.domain` using other configuration methods like the phone menu or the Web Configuration Utility.

0 (default)

`device.loginAltCred.user.set`

This parameter overrides the value set for `device.loginAltCred.user` using other configuration methods like the phone menu or the Web Configuration Utility.

0 (default)

`device.loginAltCred.password.set`

This parameter overrides the value set for `device.loginAltCred.password` using other configuration methods like the phone menu or the Web Configuration Utility.

0 (default)

Troubleshooting Microsoft Exchange

If you experience issues with Microsoft Exchange integration, try the following solutions to resolve certain issues.

No Voicemail Audio with G.722 Configuration

Symptom:

Your Poly phones are configured with G.722 and you don't hear audio when retrieving voicemail from the Microsoft Skype for Business Server.

Workaround:

Procedure

» Change the following parameters:

- Change `voice.codecPref.G7221.24kbps` from `0` to `5`.

- Change `voice.codecPref.G7221.32kbps` from `5` to `0`.

- Add `voice.audioProfile.G7221.24kbps.payloadType` and set it to `112`.

Microsoft Teams for Poly Trio Systems

Topics:

- [Microsoft Teams for Poly Trio Parameters](#)
- [Change the Base Profile from Poly Trio C60 with Microsoft Teams](#)
- [Access Poly Trio System Settings in Microsoft Teams](#)
- [Microsoft Teams Support for Poly Trio System Feature Settings](#)

You can configure the Poly Trio system to run Microsoft Teams in Shared mode with the integrated Microsoft Teams user interface. In Shared mode, users can initiate and join audio-only Teams calls and meetings.

You can set the Poly Trio system's Base Profile to Microsoft Teams from the system's **Settings** menu or by setting the parameter `device.baseProfile` to `MSTeams`.

Note: When you set the Poly Trio system's base profile to `MSTeams`, Microsoft controls the Microsoft Teams software experience and performance on the Poly Trio system. Send all feedback and queries to Microsoft.

Keep in mind that Microsoft's Teams IP Phone policies has the default, or Global, policy configured for "Personal Mode." Make sure you enable your Office 365 tenant and assign a **Shared Mode** policy to all accounts used on Poly Trio systems. Refer to documentation provided by Microsoft for details on setting IP Phone policies.

Limitations on Poly Trio with Microsoft Teams

The following features aren't available on Poly Trio with Microsoft Teams:

- Microsoft Teams isn't supported in on-premises deployments.
- Poly Trio doesn't support Microsoft Teams in Personal mode.

Microsoft Teams for Poly Trio Parameters

Use the following parameters to set the base profile to Microsoft Teams for the Poly Trio system.

For details on using Poly device parameters, see the *Poly Trio C60 - Administrator Guide* on Polycom Support.

`device.baseProfile`

NULL (default)

Generic —Sets the base profile to Generic for Open SIP environments.

Lync —Sets this base profile for Skype for Business deployments.

SkypeUSB —Sets the base profile for connecting the Poly Trio solution to a Microsoft Room System or a Microsoft Surface Hub.

MSTeams —Sets the base profile for Microsoft Teams deployments.

tcpIpApp.sntp.address

Specifies the SNTP server address.

NULL (default)

time.windows.com (default when the base profile is set to Microsoft Teams)

Valid hostname or IP address.

exchange.meeting.ignorePhoneNumbersForTeams

Set to determine whether the Poly Trio system looks for phone numbers in a meeting invite.

0 (default) - The system looks for phone numbers in the meeting invite.

1 - The system ignores phone numbers listed in the meeting invite.

Change the Base Profile from Poly Trio C60 with Microsoft Teams

You can access the Base Profile from the Poly Trio system with Microsoft Teams.

Note: The setting location differs on a Poly phone with Skype for Business.

Procedure

1. On the Poly Trio system screen, press the menu icon at top left.
2. Press **Settings** > **Device Settings**.
3. On the **Device Settings** screen, select **Advanced** and enter the administrator password.
4. Go to **Administrator Settings** > **Network Configuration** > **Base Profile**, and select a Base Profile.

Access Poly Trio System Settings in Microsoft Teams

After you set the Poly Trio system base profile to Microsoft Teams, you can access and modify device settings from the Microsoft Teams Portal or from the phone menu. The Poly Trio system offers a subset of settings when in Microsoft Teams Base Profile.

See [Manage your devices in Microsoft Teams](#) on Microsoft Office Support for more information.

Procedure

1. On the Poly Trio system screen, tap the menu icon at top left.
2. Go to **Settings** > **Device Settings**.
3. Choose a Poly Trio system setting to configure.

Microsoft Teams Support for Poly Trio System Feature Settings

The Microsoft Teams Administrator Portal enables you to configure settings for some Poly Trio system features. The table in this section lists the supported Poly Trio features, with configuration notes where applicable.

General Settings

Feature	Supported?
Device Lock	No
Device Lock Timeout	No
Device Lock PIN	No
Language	Yes
Time zone	Yes The Poly Trio system converts the GMT offset (Timezone) to the closest Olson Time Zone ID, which the system uses to configure the device time zone.
Date format	No
Time format	Yes

Device Settings

Feature	Supported?
Display backlight brightness	Yes The value for this setting maps to the Poly Trio system's three discrete brightness levels.
Display backlight timeout	Yes Poly Trio systems support a minimum timeout of 60 seconds.
Display high contrast	Yes
Silent mode	No
Office hours	Yes Control how quickly the system display screen turns off after no user activity, as set by the display backlight timeout value. Outside of office hours, the display screen turns off after one minute.

Feature	Supported?
Power saving	Yes Control whether the display backlight turns off as set by the office hours.
Screen capture	Yes If enabled, the **Screen Capture** menu displays on the Poly Trio system at **Device Settings** > **Basic** > **Preferences** > **Screen Capture**.

Network Settings

Feature	Supported?
DHCP enabled	Yes
Logging enabled	Yes
Host name	Yes
Domain name	Yes
IP address	Yes
Subnet mask	Yes
Default gateway	Yes
Primary DNS	Yes
Secondary DNS	Yes
Device default admin password	Yes
Network PC port	Yes

Microsoft USB Audio with Poly Trio Systems

Topics:

- [Connect a Poly Trio System to a Microsoft Teams or Skype Room System](#)
- [Connect a Poly Trio System to a Microsoft Surface Hub](#)
- [Microsoft USB Audio Parameters](#)

You can configure the Trio C60 system to connect to a Mac or Windows computer or a Microsoft Surface Hub via USB and enable users to use the system as a microphone and speaker for the Microsoft Teams client, Skype for Business client, Skype Rooms, or Microsoft Teams Rooms.

When you set the Poly Trio system to the MSTeams or SkypeUSB Base Profile, the Poly Trio system is automatically set as the audio device for a USB-connected device running Microsoft Teams or Skype for Business. You can use the Poly Trio system as a speaker and microphone with a Skype Room System, Microsoft Teams Room System, or Microsoft Surface Hub to answer and end calls, mute and unmute the microphones, and adjust the call volume for the USB-connected device.

Note: When you run the Skype for Business client and the Microsoft Teams client at the same time on the connected computer, the Poly Trio system cannot control call functions. For more information, refer to [Microsoft Office Support](#).

Feature Limitations

When you set the base profile to `MSTeams`, users can control the mics and volume from the Poly Trio system. However, the following features and functions are not available on the Poly Trio system:

- Answer a call
- Call Appearance
- Call Hold
- Mute/unmute

When you set the Base Profile to `SkypeUSB`, the following features and functions are not available on the Poly Trio system:

- Dial a number
- Contacts
- Meetings
- Recent Calls
- Meet Now
- Automatic Gain Control (AGC)
- Bluetooth

The Polycom Acoustic Echo Cancellation (AEC) feature is not available when the Poly Trio system is connected to Microsoft Surface Hub.

Connect a Poly Trio System to a Microsoft Teams or Skype Room System

Complete the following steps before connecting a Poly Trio system to a Skype Room System or Microsoft Teams Room system:

- Update to the latest version of UC Software.

Procedure

1. Power the Poly Trio system.
2. Set the Poly Trio system's Base Profile to `SkypeUSB`.
3. Connect the Poly Trio system to a Room System via USB cable.

   When you connect the USB cable while the Room System is in a call, both systems go on hold until you rejoin the call from either system.
4. On the Room System, configure the Poly Trio system as the audio device - microphone and speaker.

Related Links
Accessing the Web Configuration Utility on page 126

Connect a Poly Trio System to a Microsoft Surface Hub

Complete the following steps before connecting a Poly Trio system to a Microsoft Surface Hub:

- Ensure the Microsoft Surface Hub has the latest software version.
- Update to the latest version of UC Software.

Procedure

1. Power the Poly Trio system.
2. Set the Poly Trio system's Base Profile to `SkypeUSB`.
3. Connect the Poly Trio system to the Microsoft Surface Hub via USB cable.

   When you connect the USB cable while the Microsoft Surface Hub is in a call, both systems go on hold until you rejoin the call from either system.
4. On the Microsoft Surface Hub, configure the Poly Trio system as the audio device - microphone and speaker.

Related Links
Accessing the Web Configuration Utility on page 126

Microsoft USB Audio Parameters

Use the following parameters to configure the Poly Trio system with Skype Room System, Microsoft Teams Room System, or Microsoft Surface Hub.

device.baseProfile

Generic (default) - Disables the Skype for Business graphic interface.

Skype - Use this Base Profile for Skype for Business deployments.

SkypeUSB - Use this Base Profile when you want to connect Poly Trio to a Skype Room System, Microsoft Teams Room system, or Surface Hub.

MSTeams - Use this Base Profile for Microsoft Teams deployments.

voice.usb.holdResume.enable

This parameter applies only when the Poly Trio system Base Profile is set to **SkypeUSB**.

0 (default) - The Hold and Resume buttons do not display during USB calls.

1 - The Hold and Resume buttons display during USB calls.

Deploying Poly Trio Systems with Skype for Business

Topics:

If you're using Poly phones shipped with Skype for Business-qualified UC Software and want to keep default settings with no change, you need only to configure the network. Otherwise, you need to set up the Polycom UC Software before the network configuration.

Following the UC Software setup and network configuration, you can set up numerous settings for your Skype for Business deployment.

Note: Poly phones shipped with the Skype or Lync Base Profile include Skype for Business-qualified software. This software allows you to start up the phone and register with Skype for Business Server with default settings.

Sign In Methods

You can configure users to sign in or out of the phone using one of the following methods:

- **User ID** - Enable users to sign in with their user credentials on the Sign In screen. You cannot configure login credentials using the Web Configuration Utility.
- **PIN Authentication** - Use this to sign in on the phone or from the Web Configuration Utility. This option is available in on-premises Skype for Business deployments when you configure DHCP Option 43 and is not available for online deployments.
- **Web Sign In for Skype for Business** - This method enables secure sign-in from a browser on your computer or mobile device. The phone generates a unique pairing code used to sign in on a secure Office 365 website.
- **Single Sign-On Solutions (SSO)** - Allows you to use the same login credentials across multiple cloud-based applications such as Microsoft Exchange and Skype for Business.

When you change the active directory password, the phone de-registers from the Skype for Business server with a registration expiry value.

The maximum length of the user name or sign in address (Name + Domain) is limited to 45 characters.

While signing in to the phone, the phone displays sign-in progress messages such as **Discovering Skype for Business Server** or **Authentication in progress**.

Skype for Business Sign-in and Credential Parameters

The following parameters configure the type of sign in on the phones and user credentials.

reg.1.auth.loginCredentialType

Configure a login type and user credentials. You cannot log in to the phone with Microsoft credentials if the parameter `reg.1.auth.loginCredentialType` is set to the default value.

LoginCredentialNone (default)

usernameAndPassword - Set credentials to sign-in address, user name, domain, and password in the required format.

extensionAndPIN - Set credentials to extension and PIN.

reg.1.auth.useLoginCredentials

You can use this method in the configuration file to automatically sign in users after the phone powers up.

1 (default) - SSI Login credentials, BToE Sign in, and Web Sign types are available for authentication with the server.

0 - SSI Login credentials, BToE Sign in, and Web Sign types are not available for authentication with the server.

reg.1.auth.usePinCredentials

You can use this method in the configuration file to automatically sign in users after the phone powers up.

To use this sign-in method, you must enable DHCP Option 43 or `dhcp.option43.override.stsUri`.

1 (default) - PIN authentication sign in method is available for authentication on the server.

0 - PIN authentication sign in method is not available for authentication on the server.

auth.unblock.period

If the authentication request attempts fail due to a server error, further authentication attempts are blocked for a defined number of minutes before reattempting.

30 minutes (default)

0 - 30

feature.lync.hideSigningInProgress

Set to determine if the sign-in and confirmation dialogs display when the phone is signing into Skype for Business.

0 (default) - The phone displays the dialog messages for when the phone is signing in and has successfully signed in. Users cannot exit the dialogs or navigate to other phone screens until the phone is successfully signed in.

1 - No dialog message displays while the phone is signing in, and a message doesn't display after the phone has successfully signed in.

`feature.lync.hideSignOut`

0 (default) - Hide the Sign-out option from displaying on your phone.

1 - Show the Sign-out option on the phone.

Example Sign In Configurations

You can set PIN authentication or SSI login credentials in the configuration file to log in users automatically after the phone powers up.

The following example sets PIN authentication user credentials in the configuration file:

- `reg.1.auth.usePinCredentials="1"`
- `reg.1.auth.loginCredentialType="extensionAndPIN"`
- `device.set="1"`
- `device.logincred.extension.set="1"`
- `device.logincred.extension="xxxx"`
- `device.logincred.pin.set="1"`
- `device.logincred.pin="xxxx"`

The following example sets SSI login credentials in the configuration file:

- `reg.1.auth.loginCredentialType="usernameAndPassword"`
- `reg.1.address="xxxx@domain.com"`
- `device.set="1"`
- `device.logincred.user.set="1"`
- `device.logincred.user="xxxx"`
- `device.logincred.password.set="1"`
- `device.logincred.password="xxxxx"`
- `device.logincred.domain.set="1"`
- `device.logincred.domain="domain"`

PIN Authentication

You can enable users to sign in to Skype for Business using PIN authentication.

To use PIN authentication, you must enable the Web Configuration Utility, which is disabled by default. For information on enabling the Web Configuration Utility, see Accessing the Web Configuration Utility. After you enable the Web Configuration Utility, you can enable PIN authentication using `reg.1.auth.usePinCredentials`.

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

Related Links

PIN Authentication Parameters

The following parameters configure PIN Authentication.

`device.logincred.extension`

NULL (default) - The phones will not trigger registration.

0 to 32 - Enter a user phone extension number or string to a maximum of 32 characters. The phone reads this extension when you configure PIN-Auth as the phone registration method.

`device.logincred.pin`

NULL (default) - If the default value is set, the phones will not trigger registration.

0 to 32 -Enter a user phone PIN to a maximum of 32 characters. The phone reads this PIN when you configure PIN-Auth as the phone registration method.

`reg.1.auth.useLoginCredentials`

You can use this method in the configuration file to automatically sign in users after the phone powers up.

1 (default) - SSI Login credentials, BToE Sign in, and Web Sign types are available for authentication with the server.

0 - SSI Login credentials, BToE Sign in, and Web Sign types are not available for authentication with the server.

Web Sign In for Skype for Business

Web Sign In is enabled by default on phones registered with the Skype for Business server and is available for Skype for Business Online and On-Premise deployments.

Web Sign In enables users to securely login to Skype for Business on their phone from a computer or a mobile web browser. It provides users with a way to authenticate their Skype for Business credentials without entering their credentials on the phone. The phone displays on-screen instructions to help users proceed through the process. With the Web Sign In method, a user can sign in concurrently to a maximum of eight phones. If a user signs in on multiple phones and signs out from one phone, the user remains signed in on the remaining phones.

Users authenticate their accounts using a pairing code that is generated on the phone. The pairing code that the Web Sign In method generates expires within a few minutes after the Skype for Business server sends the code to the phone. Users must sign in before the pairing code expires.

Web Sign In supports Multi-Factor Authentication (MFA) on phones. If you're using MFA, you must use Web Sign In as the user sign-in method with phones. For more information on configuring MFA for Office 365, refer to Microsoft's Configure Azure Multi-Factor Authentication Settings.

Web Sign In for Skype for Business server is supported only when the Hybrid Modern Authentication (HMA) environment is enabled. To use the capability of HMA with Skype for Business On-Premise, Active Directory should be federated with Azure Active Directory (AAD). For more information to configure HMA in your environment, refer to Hybrid Modern Authentication for Skype for Business.

Web Sign In for Skype for Business Parameters

The following parameters configure Web Sign In for Skype for Business Online and On-Premises deployments.

`feature.webSignIn.enabled`

> 1 (default) - In Skype for Business Base Profile, the web sign in option is displayed on the phone for the user.

> 0 - In Skype for Business Base Profile, the web sign in option is not displayed on the phone for the user.

`reg.1.auth.loginCredentialType`

> Specify the credential type the user must provide to log in. You cannot log in to the phone with Microsoft credentials if `reg.1.auth.loginCredentialType` is set to the default value.

> `LoginCredentialNone` (default)

> `onlineDeviceAuth` - Enables users to sign in to the phone using Web Sign In.

> `usernameAndPassword` - Provide description of this value.

Sign In Remotely using Web Sign-In for Skype for Business

You can sign in to Skype for Business remotely using the phone's Web Configuration Utility.

Procedure

1. Enter your phone's IP address into a web browser on your computer.
2. Select **Admin** as the login type, enter the administrator password, and select **Submit**.
3. Select **Settings** > **Sign In**.
4. Select **Web Sign-In** from **Authentication Type**.
5. Select **Sign In**.

   A URL and a sign-in code display.
6. Enter the URL into a web browser on your computer.
7. Enter the sign-in code and select **Continue**.

   The Skype for Business Authentication website displays.
8. Enter your Skype for Business login information.

   A confirmation message displays when the phone successfully signs in to Skype for Business.

Modern Authentication Supported Topologies

The following table lists supported Modern Authentication topologies.

Modern Authentication Supported Topologies

Technology Name	Skype for Business	Modern Authentication on Skype for Business	Microsoft Exchange	Modern Authentication on Microsoft Exchange	Supported?
Cloud Only	Online	On	Online	On	Yes
On Prem Only	On-Premise	On	On-Premise	On	Yes
Mixed 1	On-Premise	Off	Online	On	Yes
Mixed 2	Online	On	On-Premise	Off	Yes

Audio Features

After you set up your phones on the network, users can send and receive calls using the default configuration. You can configure modifications that optimize the audio quality of your network.

Poly phones support audio sound quality features and options you can configure to optimize the conditions of your organization's phone network system.

Poly Trio System Audio Codec Support with Skype for Business

The following tables detail Poly Trio system audio codec support and priority when registered with Skype for Business.

Supported Audio Codecs

Algorithm	Reference	Raw Bit Rate	Maximum IP Bit Rate	Sample Rate	Default Payload Size	Effective Audio Bandwidth
SILK	SILK	6 to 20 Kbps	36 Kbps	8 ksps	20 ms	3.5 kHz
		7 to 25 Kbps	41 Kbps	12 ksps		5.2 kHz
		8 to 30 Kbps	46 Kbps	16 ksps		7 kHz
		12 to 40 Kbps	56 Kbps	24 ksps		11 kHz
Siren 7	SIREN7	16 Kbps	32 Kbps	16 ksps	20 ms	7 kHz
G.722.1	RFC 3047	24 Kbps	40 Kbps	16 ksps	20 ms	7 kHz
G.722 [1]	RFC 3551	64 Kbps	80 Kbps	16 ksps	20 ms	7 kHz
G.711 μ-law	RFC 1890	64 Kbps	80 Kbps	8 ksps	20 ms	3.5 kHz
G.711 A-law	RFC 1890	64 Kbps	80 Kbps	8 ksps	20 ms	3.5 kHz

[1] Per RFC 3551. Even though the actual sampling rate for G.722 audio is 16,000 Hz (16 ksps), the RTP clock rate advertised for the G.722 payload format is 8000 Hz because that value was erroneously assigned in RFC 1890 and must remain unchanged for backward compatibility.

Audio Codec Priority

Algorithm	Priority
SILK	0
Siren 7 (16 Kbps)	0
G.722.1 (24 Kbps)	0
G.722	4
G.711 μ-law	6
G.711 A-law	7

Audio Codec Parameters

You can configure a set of codec properties to improve consistency and reduce workload on the phones.

Use the following parameters to specify audio codec priority on your phones.

- Permitted values to set audio codec priority are 1 - 27
- A value of 1 is the highest priority, 27 the lowest.
- If 0 or Null, the codec is disabled.
- A change to the default value does not cause a phone to restart or reboot

If a phone does not support a codec, the phone treats the value as 0, does not offer or accept calls using that codec, and continues to the codec next in priority.

voice.codecPref.G711_A

   7 (default)

voice.codecPref.G711_Mu

   6 (default)

voice.codecPref.G719.32kbps

   0 (default)

voice.codecPref.G719.48kbps

   0 (default)

voice.codecPref.G719.64kbps

   0 (default)

`voice.codecPref.G722`

    4 (default)

`voice.codecPref.G7221.24kbps`

    0 (default)

`voice.codecPref.G7221_C.24kbps`

    0 (default)

`voice.codecPref.G7221.32kbps`

    5 (default)

`voice.codecPref.G7221_C.48kbps`

    2 (default)

`voice.codecPref.G729_AB`

    8 (default)

`voice.codecPref.iLBC.13_33kbps`

    0 (default)

`voice.codecPref.iLBC.15_2kbps`

    0 (default)

`voice.codecPref.Lin16.8ksps`

    0 (default)

`voice.codecPref.Lin16.16ksps`

    0 (default)

`voice.codecPref.Lin16.32ksps`

    0 (default)

`voice.codecPref.Lin16.44_1ksps`

    0 (default)

`voice.codecPref.Lin16.48ksps`

    0 (default)

voice.codecPref.Siren7.16kbps

    0 (default)

voice.codecPref.Siren7.24kbps

    0 (default)

voice.codecPref.Siren7.32kbps

    0 (default)

voice.codecPref.Siren14.24kbps

    0 (default)

voice.codecPref.Siren14.32kbps

    0 (default)

voice.codecPref.Siren14.48kbps

    3 (default)

voice.codecPref.Siren22.32kbps

    0 (default)

voice.codecPref.Siren22.48kbps

    0 (default)

voice.codecPref.Siren22.64kbps

    1 (default)

voice.codecPref.SILK.8ksps

    0 (default)

voice.codecPref.SILK.12ksps

    0 (default)

voice.codecPref.SILK.16ksps

    0 (default)

voice.codecPref.SILK.24ksps

    0 (default)

Poly NoiseBlock

Poly NoiseBlock technology works to suppress and eliminate unwanted background noise that can reduce call quality.

NoiseBlock automatically mutes the microphone when a user stops speaking. NoiseBlockAI can suppress background noise while a call participant actively speaks. Both systems work to reduce interruptions caused by common office sounds (keyboard tapping, shuffling papers, etc.) and background chatter. Call recipients hear only the intended speaker's voice.

Poly NoiseBlock Parameter

Use the following parameter to configure NoiseBlock:

`voice.ns.hf.block`

1 - Enables NoiseBlock. The system automatically mutes the microphones when it detects that the user has stopped speaking. When it detects that the user starts speaking again, the microphones unmute.

2 (default) - Enables NoiseBlockAI. The system works to mute unwanted background noise while users speak.

0 - Disables both NoiseBlock and NoiseBlock AI.

Microphone Mute

All phones have a microphone mute button.

By default, when you activate microphone mute, a red LED glows or a mute icon displays on the phone screen, depending on the phone model you are using.

You cannot configure the microphone mute feature.

However, you can configure Poly Trio systems to play an audible tone when the mute status of the device is changed either from any of the mute buttons of the system (device and any connected devices) or far-end system (remote mute). This allows you to know if the system microphones are in a mute or un-mute state. In addition, you can set a periodic reminder which plays a tone periodically when the phone is in the mute state. The time interval can be set using configuration parameter and the value must not be less than 5 seconds.

Microphone Mute Parameters

The following parameters configure microphone mute status alert tones.

`se.touchFeedback.enabled`

0 - Does not play an alert tone when the mute status is changed on the Poly Trio system.

1 - An alert tone is played when the mute status is changed either from the Poly Trio or far-end system.

`call.mute.reminder.period`

The time interval in seconds to play an alert tone periodically when the Poly Trio system is in the mute state.

5 (default)

5 - 3600

Audio Output Options

By default, audio plays out of the Poly Trio speakers.

You can use the `up.audio.networkedDevicePlayout` parameter to configure the Poly Trio system speakers.

Audio Output Options Parameters

The following table includes the parameters you can use to set the audio routing options for the Poly Trio solution.

`up.audio.networkedDevicePlayout`

PhoneOnly (default) - Use the Poly Trio system speakers.

`feature.usb.device.hostOs`

Specify the operating system of the computer you are connecting by USB when using Poly Trio as an audio output device.

Windows (default) - The computer connected by USB to the Poly Trio uses a Windows operating system.

Other—The operating system of the computer connected via USB to the Poly Trio system is other than Windows or Mac.

Mac—The computer connected by USB to the Poly Trio uses a Mac operating system.

Confirm—The user is prompted to confirm the computer's operating system each time a USB cable is used to connect to the Poly Trio system.

USB Audio Calls

You can enable Poly Trio systems as an audio device for a tablet or laptop when connected to the Poly Trio system with the USB cable supplied in the box.

When a Microsoft Windows computer is connected to the Poly Trio solution using a USB cable, users can control the volume of audio and video calls from the computer or the Poly Trio solution, and the volume is synchronized on both devices.

Poly Trio systems supports Mac computers running the latest software versions when connected by USB and used as an audio speakerphone.

USB Audio Call Parameters

The following table includes the parameters you can use to configure USB audio calls for connected devices.

`feature.usb.device.audio`

0 – Disables the ability to use Trio as a USB speakerphone.

1 (default) – Enables the ability to use Poly Trio as a USB speakerphone.

Requires restart

device.baseProfile

NULL (default)

Generic - Disables the Skype for Business graphic interface.

Lync - Use this Base Profile for Skype for Business deployments.

SkypeUSB - Use this Base Profile when you want to connect Poly Trio to a Microsoft Room System or a Microsoft Surface Hub.

voice.usb.holdResume.enable

0 (default) - The Hold and Resume buttons do not display during USB calls.

1 - The Hold and Resume buttons display during USB calls.

This parameter applies only when Poly Trio Base Profile is set to `SkypeUSB`.

Poly Trio System Audio Codec Support with Skype for Business

The following tables detail Poly Trio system audio codec support and priority when registered with Skype for Business.

Supported Audio Codecs

Algorithm	Reference	Raw Bit Rate	Maximum IP Bit Rate	Sample Rate	Default Payload Size	Effective Audio Bandwidth
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		8 to 30 Kbps	46 Kbps	16 ksps		7 kHz
		12 to 40 Kbps	56 Kbps	24 ksps		11 kHz
Siren 7	SIREN7	16 Kbps	32 Kbps	16 ksps	20 ms	7 kHz
G.722.1	RFC 3047	24 Kbps	40 Kbps	16 ksps	20 ms	7 kHz
G.722 [1]	RFC 3551	64 Kbps	80 Kbps	16 ksps	20 ms	7 kHz
G.711 μ-law	RFC 1890	64 Kbps	80 Kbps	8 ksps	20 ms	3.5 kHz
G.711 A-law	RFC 1890	64 Kbps	80 Kbps	8 ksps	20 ms	3.5 kHz

[1] Per RFC 3551. Even though the actual sampling rate for G.722 audio is 16,000 Hz (16 ksps), the RTP clock rate advertised for the G.722 payload format is 8000 Hz because that value was erroneously assigned in RFC 1890 and must remain unchanged for backward compatibility.

Audio Codec Priority

Algorithm	Priority
SILK	0
Siren 7 (16 Kbps)	0
G.722.1 (24 Kbps)	0
G.722	4
G.711 µ-law	6
G.711 A-law	7

Digital Gain Parameters

Use the following parameters configure the gain applied to microphones.

`voice.handset.txdg`

Digital gain applied to the wired handset mic.

0 (Default)

-90 to 90

`voice.handsfree.txdg`

Digital gain applied to the built-in hands free mic.

0 (Default)

5 (default for Teams)

-90 to 90

`voice.headset.txdg`

Digital gain applied to the wired headset mic.

0 (Default)

-90 to 90

`voice.usb.headset.txdg`

Digital gain applied to the USB headset mic.

0 (Default)

-90 to 90

`voice.bt.headset.txdg`

Digital gain applied to the Bluetooth headset mic.

0 (Default)

-90 to 90

Call Controls

This chapter shows you how to configure call control features.

Call Forwarding with Skype for Business

The Skype for Business server automatically sends call forwarding functionality in-band to the phones.

When Call Forwarding is enabled on the Skype for Business server, you can override Microsoft settings from a provisioning server using the Poly parameters in the following table or from the Web Configuration Utility.

If call forwarding is disabled on the Microsoft server then call forwarding is also disabled on the phone. To disable call forwarding sent in-band from the Microsoft server, disable the settings for call forwarding and simultaneous ring on the Microsoft server.

`feature.forward.enable`

1 (default) - Enables call forwarding from the phone menu.

0 - Disables call forwarding from the main menu.

`homeScreen.forward.enable`

1 (default) - Displays the Forward icon on the Home screen.

0 - Removes the Forward icon from the Home screen.

`softkey.feature.forward`

1 (default) - Displays the Forward soft key.

0 - The Forward soft key does not display.

To configure the `softkey.feature.forward` parameter, you must configure `feature.enhancedFeatureKeys.enabled="1"` .

Skype for Business Local and Centralized Real-Time Audio Calling on Poly Trio Systems

You can set up MeetNow, local or centralized Skype for Business calls with audio-only, and share content using the Skype for Business client.

Skype for Business Audio Calling Parameters

The following parameters set up Skype for Business calls on Poly Trio systems.

`softkey.feature.MeetNow`

1- The Meet Now soft key displays.

0 - The Meet Now soft key does not display.

1 (default) - Skype Base Profile

0 (default) - Open SIP Base Profile

Using an API to Join a Skype for Business Meeting on Poly Trio Systems

This feature allows third-party application developers to join the Poly Trio system to a scheduled Skype for Business meeting using an API.

The third-party application requires independent access to the Skype for Business meeting information.

The following example API illustrates how you can use a third-party application on your computer or mobile device to join the Poly Trio system to a Skype for Business meeting.

REST API Command: WebCallControl.Dial

Structure

```
{
"data":api/v1/callctrl/dial
{
"data":
{
"Dest": "<SIP URI of meeting organizer>;gruu;opaque=app:conf:focus:id:<SfB
Meeting Focus ID>",
"Line": "1",
"Type":"SIP"
}
```

Configure Your Meeting Invite for One Touch Dial with Polycom RealConnect Technology

Customize your meeting invitation to include the dialing information meeting participants need to join using One Touch Dial.

Procedure

1. In the **Skype for Business 2015 Control Panel**, go to **Conferencing** > **Meeting Configuration**.
2. In the **Custom footer text** field, type the following text: "`To join this meeting from a video conferencing device, use the numeric 'Conference ID' provided in this invitation`".
3. Additionally, on the next line, type the following text based on your environment:
   - Format for Polycom RealConnect Hybrid: `Dial <TenantKey>.<ConferenceID>@h.plcm.vc`

     Replace *<TenantKey>* and *<ConferenceID>* with your tenant key and Conference ID. For example, `222222.12345@h.plcm.vc`.
   - Format for Polycom RealConnect for Clariti: `Dial <ConferenceID>@customerdomain.com`

Replace *<ConferenceID>* with your Conference ID. For example,
`12345@customerdomain.com`.

Poly Trio System Hybrid Line Registration

Poly Trio systems support hybrid line registration, which enables you to register one line with the Skype for Business server and another line with an OpenSIP server. You can also use hybrid line registration to register lines on the phone with two different OpenSIP servers. If you plan to configure and register Skype for Business on one line, you must register Line 1 with the Skype for Business server. You can't register two Skype for Business lines simultaneously.

Line Switching for Hybrid Registrations

When you configure hybrid line registration on Poly Trio, you can also configure the line switching feature, which enables any number dialed on Poly Trio to automatically switch to the corresponding line based on the dial plan set when the phone is on-hook. You can configure line switching based on the dial plan when the phone is off-hook. By default, line switching for on-hook and off-hook dialing are disabled.

For dial plan-based line switching, when all the lines are registered to an OpenSIP server, the value defined in the global parameter for a dial plan takes the priority. If the line is registered to Skype for Business, the value defined in the per-registration dial plan parameter takes priority over general dial plan parameter.

Examples of global parameters for dial plans are:

- `dialplan.impossibleMatchHandling`
- `dialplan.conflictMatchHandling`

Examples of per-registration dial plan parameters are:

- `dialplan.1.conflictMatchHandling`
- `dialplan.1.impossibleMatchHandling`

When multiple digit maps are matched to the dialed number (resulting in a conflict match) and the `dialplan.conflictMatchHandling` parameter is disabled, the first matching digit map starting from left to right takes priority. However, if the `dialplan.conflictMatchHandling` parameter is enabled, the matching digit map having the lowest timeout value takes priority. For more information on dial plan parameters, see Local Digit Maps Parameters.

Related Links
[Local Digit Maps Parameters](#) on page 57

Hybrid Line Registration Limitations

The Hybrid Registration feature include the following limitations:

- Merging of local conference is only supported with open SIP registrations and not supported with Skype for Business (bridging a Skype for Business with an open SIP line is not supported).
- Local merging of two point-to-point calls made using two different lines between two Poly Trio systems is not supported.
- Only call transfers between different SIP registrations with the same SIP call servers is supported. Call transfer between SIP registrations on different SIP call servers is not supported.
- Transport Layer Security (TLS) encryption of Real-time Transport Protocol (RTP) media for secure communication in hybrid Open SIP registrations is not supported.

Presence Status Indicators for Hybrid Line Registration

The Presence feature is available only on the Skype for Business line and will display the Device status.

The following table list the Presence status for specific environment.

Presence Status Indicators for Hybrid Line Registration

Use Cases	Presence State on SfB Line	Presence String	Presence State on Open SIP Line
Non-Skype line in a call	Busy	In a call	Not Supported
Skype line in a call	Busy	In a call	Not Supported
Content shared over PPCIP	Busy	In a call	Not Supported
Non-Skype line in conference	Busy	In a conference	Not Supported
Skype line in conference	Busy	In a conference	Not Supported
DND on Skype line	DND	Do Not Disturb	Not Supported
DND on Open SIP line	Available	Available	Not Supported

Hybrid Line Registration Parameters

The following table lists the parameters to configure dial plan and line switching for Hybrid Registration.

dialplan.digitmap.lineSwitching.enable

0 (default) - Disable the line switching in dial plan to switch the call to the dial plan matched line.

1 - Enable the line switching in dial plan to switch the call to the dial plan matched line.

This is not applicable for off-hook dialing.

reg.limit

Specify the maximum number of lines to use for registration.

1 (default)

- 3 is the maximum of registered lines.
- 12 is the maximum of unregistered lines. For all unregistered lines, make sure to set `reg.x.server.y.register` to `0`.
- Only one H.323 line, registered or unregistered, is supported

`reg.1.mergeServerDigitMapLocally`

1 (default) - Allows the dialplans from `dialplan.1.digitmap` to append on top of the dialplans received from the server.

0 - Does not allow the dial plans from `dialplan.1.digitmap` to append on top of the dialplans received from the server.

Configure Hybrid Line Registration using the Web Configuration Utility

You can configure the phone to support the Hybrid (Skype for Business/ Open SIP) Registration from phone's Web Configuration Utility page after enabling the feature using configuration parameter.

Make sure to set the Base profile as Skype for Business on the Poly Trio system.

Procedure

1. Sign in to the Poly Trio system's Web Configuration Utility page using Admin account.

   If configuring Skype for Business on Line 1, sign in to the Web Configuration Utility as Skype for Business user.
2. On the Web Configuration Utility page, navigate to **Settings** > **Line**.

   The number of lines enabled to configure is displayed.
3. Configure the Skype for Business registration on Line 1.
4. Configure the Open SIP registration on Line 2.

   You can configure other lines with Open SIP registration.

Dial Plans

This section on dial plans includes information on dial plan normalization, multiple emergency number dial plans, parameters you can configure on your provisioning server, and examples of supported and unsupported dial plans.

Dial Plan Normalization

Dial Plan Normalization enables you to configure dial plans on the Skype for Business server or on your provisioning server.

For more information on regular expressions used on Skype for Business server, see .NET Framework Regular Expressions on Microsoft Developer Network.

Multiple Emergency Number Dial Plan

When registering phones with Skype for Business, you can configure multiple emergency numbers on the Skype for Business server.

When you correctly configure the multiple emergency numbers on the Skype for Business server, users can make calls to the emergency numbers from the Skype for Business client or from a phone, even when the phone is locked.

Phones receive emergency numbers through in-band provisioning and can conflict with the emergency dial string and mask. When a phone receives both multiple emergency numbers and emergency dial string and mask, the client and phone use multiple emergency numbers.

For instructions on creating a multiple emergency number dial plan, see Configure Multiple Emergency Numbers in Skype for Business 2015 on Microsoft TechNet.

Poly Trio System SIP URI Dialing

When making a URI call, Poly Trio systems allow dial plan matching for SIP URI calls to append strings to the dialed number.

SIP URI dial plan can also be used with auto line switching in Hybrid registration scenarios to automatically select the line based on dial plan.

The following examples illustrate the semantics of the syntax:

- `sip\:764xxxxxRR@registrar.polycomcsn.comR` - appends `@registrar.polycomcsn.com` to any URI calls matching with "764xxxxx".

  For example, if you make a SIP URI call with 76412345 then `@registrar.polycomcsn.com` is appended to the string such that the SIP URI call INVITE becomes `sip::76412345@vc.polycom.com`. Here, `@domain` string is required only for SIP URI calls from unregistered lines.

- `sip\:xxxx\@registrar\.polycomcsn\.com` - This will match with any four digit URI calls having the domain `@registrar.polycomcsn.com`.

  For example, if you configure three lines and enable dial plan-based line switching, and the third line's dial plan is `sip\:xxxx\@registrar\.polycomcsn\.com` then calls will be initiated from the third line if you dial `1234@registrar.polycomcsn.com` because it matches the third line's dial plan.

Dial Plan, Dial Plan Normalization, and Digit Map Parameters

Poly does not support all regular expression dial plans.

The following parameters configure supported dial plans with Skype for Business Server.

dialplan.x.digitmap

x.T

In the above expression, enter the phone number for "x". Enter the timeout in seconds for "T".

Specify the digit map used for the dial plan using a string compatible with the digit map feature of MGCP described in 2.1.5 of RFC 3435. This parameter enables the phone to automatically initiate calls to numbers that match a digit map pattern.

The string is limited to 2560 bytes and 100 segments of 64 bytes, and the following characters are allowed in the digit map.

- A comma (,), which turns dial tone back on.
- A plus sign (+) is allowed as a valid digit.
- The extension letter 'R' indicates replaced string.
- The extension letter 'Pn' indicates precedence, where 'n' range is 1-9.

  1—Low precedence

  9—High precedence

dialplan.x.digitmap.mode

Specify whether a dial plan uses Poly digitmap rules or regular expressions (regex) to manage line switching.

digitmap (default) - The dial plan uses a digitmap defined in `dialplan.x.digitmap` to manage line switching.

regex - The dial plan uses regular expression rules defined in `dialplan.x.digitmap` to manage line switching.

Note: Poly Trio systems don't support dial-string manipulation using regex at this time.

`dialplan.x.digitmap.timeOut`

Specify a timeout in seconds for each segment of digit map. After you press a key, the phone waits the number of seconds you specify to match the digits to a dial plan and dial 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.x.lyncDigitmap.timeOut`

This parameter applies to lines registered with Skype for Business or Lync Server.

Specify a timeout in seconds for each segment of a digit map. After you press a key, the phone waits the number of seconds you specify to match the digits to a dial plan and dial 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 is used.

`dialplan.userDial.timeOut`

Specify the time in seconds that the phone waits before dialing a number you enter while the phone is on hook. This parameter applies only when its value is lower than `up.IdleTimeOut.`

4 seconds (default)

0 to 99 seconds

`reg.x.applyServerDigitMapLocally`

Skype Base Profile: 1(default)

1 - Enable dial plan normalization. Dial plan normalization rules are downloaded from the Microsoft Server and processed on the phone.

0 - Disable dial plan normalization. Dial plan rules are processed by the Microsoft Server.

`up.IdleTimeOut`

Set the number of seconds that the phone is idle for before automatically leaving a menu and showing the idle display.

During a call, the phone returns to the Call screen after the idle timeout.

40 seconds (default)

0 to 65535 seconds

Change causes system to restart or reboot.

Supported Dial Plans

Poly phones support Skype for Business 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(+)	
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)

Number	Element	Meaning	Example	Description of Example
9	$	The match must occur at the end of the string	^(123)$	Match exactly digits 123 (and not 1234)

Unsupported Dial Plans on Poly Trio Systems

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

Local Digit Map

The local digit map feature allows the phone to automatically call a dialed number you configure.

Dial plans apply on-hook when no Skype for Business line is registered or when line switching is enabled and at least one line has a non-empty dial plan.

Digit maps are defined by a single string or a list of strings. If a dialed number matches any string of a digit map, the call is automatically placed. If a dialed number matches no string—an impossible match—you can specify the phone's behavior. If a number ends with #, you can specify the phone's behavior, called trailing # behavior. You can also specify the digit map timeout, the period of time after you dial a number that the call is placed. The configuration syntax of the digit map is based on recommendations in section 2.1.5 of RFC 3435.

Local Digit Maps Parameters

Use the following parameters to configure the local digit map.

dialplan.applyToCallListDial

Choose whether the dial plan applies to numbers dialed from the received call list or missed call list, including sub-menus.

1 (default) - Enabled

0 - Disabled

Change causes system to restart or reboot.

dialplan.applyToDirectoryDial

Lync Base Profile – 1 (default)

Generic Base Profile – 0 (default)

0 - The dial plan is not applied to numbers dialed from the directory or speed dial, including auto-call contact numbers.

1 - The dial plan is applied to numbers dialed from the directory or speed dial, including auto-call contact numbers.

Change causes system to restart or reboot.

dialplan.applyToForward

Lync Base Profile – 1 (default)

Generic Base Profile – 0 (default)

0 - The dial plan does not apply to forwarded calls.

1 - The dial plan applies to forwarded calls.

Change causes system to restart or reboot.

dialplan.applyToTelUriDial

Choose whether the dial plan applies to URI dialing.

1 (default) - Enabled

0 - Disabled

Change causes system to restart or reboot.

dialplan.applyToUserDial

Choose whether the dial plan applies to calls placed when the user presses Dial.

1 (default) - Enabled

0 - Disabled

Change causes system to restart or reboot.

dialplan.applyToUserSend

Choose whether the dial plan applies to calls placed when the user presses Send.

1 (default) - Enabled

0 - Disabled

Change causes system to restart or reboot.

dialplan.conflictMatchHandling

Selects the dialplan based on more than one match with the least timeout.

0 (default for Generic Profile) - Disabled

1 (default for Skype Profile)

- Enabled

dialplan.digitmap.timeOut

Specify a timeout in seconds for each segment of the digit map using a string of positive integers separated by a vertical bar (|). After a user presses a key, the phone waits this many seconds before matching the digits to a dial plan and dialing the call.

(Default) `3 | 3 | 3 | 3 | 3| 3`

If there are more digit maps than timeout values, the default value 3 is used. If there are more timeout values than digit maps, the extra timeout values are ignored.

Change causes system to restart or reboot.

dialplan.digitmap

Specify the digit map used for the dial plan using a string compatible with the digit map feature of MGCP described in 2.1.5 of RFC 3435. This parameter enables the phone to automatically initiate calls to numbers that match a digit map pattern.

Lync Base Profile (default) – NULL

`[2-9]11|0T|+011xxx.T|0[2-9]xxxxxxxxx|+1[2-9]xxxxxxxx|[2-9]xxxxxxxxx|[2-9]xxxT` (default)

The string is limited to 2560 bytes and 100 segments of 64 bytes, and the following characters are allowed in the digit map.

- A comma (,), which turns dial tone back on.
- A plus sign (+) is allowed as a valid digit.
- The extension letter 'R' indicates replaced string.
- The extension letter 'Pn' indicates precedence, where 'n' range is 1-9.

    1 - Low precedence

    9 - High precedence

Change causes system to restart or reboot.

dialplan.filterNonDigitUriUsers

Determine whether to filter out (+) from the dial plan.

0 (default) - Disabled

1 - Enabled

Change causes system to restart or reboot.

dialplan.impossibleMatchHandling

0 —The digits entered up to and including the point an impossible match occurred are sent to the server immediately.

1—The phone gives a reorder tone.

2 —Users can accumulate digits and dispatch the call manually by pressing Send.

3 (default) (Skype for Business) — No digits are sent to the call server until the timeout is configured by `dialplan.impossibleMatchHandling.timeout` parameter.

If a call orbit number begins with a pound (#) or asterisk (*), you need to set the value to 2 to retrieve the call using off-hook dialing.

Change causes system to restart or reboot.

dialplan.removeEndOfDial

Sets if the trailing # is stripped from the digits sent out.

1 (default) - Enabled

0 - Disabled

Change causes system to restart or reboot.

dialplan.routing.emergency.outboundIdentity

Choose how your phone is identified when you place an emergency call.

NULL (default)

10-25 digit number

SIP

TEL URI

If using a URI, the full URI is included verbatim in the P-A-I header. For example:

- `dialplan.routing.emergency.outboundIdentity = 5551238000`
- `dialplan.routing.emergency.outboundIdentity= sip:john@emergency.com`
- `dialplan.routing.emergency.outboundIdentity = tel:+16045558000`

dialplan.routing.emergency.preferredSource

Set the precedence of the source of emergency outbound identities.

ELIN (default)— the outbound identity used in the SIP P-Asserted-Identity header is taken from the network using an LLDP-MED Emergency Location Identifier Number (ELIN).

Config— the parameter `dialplan.routing.emergency.outboundIdentity` has priority when enabled, and the LLDP-MED ELIN value is used if `dialplan.routing.emergency.outboundIdentity` is NULL.

`dialplan.routing.emergency.x.description`

Set the label or description for the emergency contact address.

x=1: Emergency, Others: NULL (default)

string

x is the index of the emergency entry description where x must use sequential numbering starting at 1.

Change causes system to restart or reboot.

`dialplan.routing.emergency.x.server.y`

Set the emergency server to use for emergency routing (`dialplan.routing.server.x.address` where x is the index).

x=1: 1, Others: Null (default)

positive integer

x is the index of the emergency entry and y is the index of the server associated with emergency entry x. For each emergency entry (x), one or more server entries (x,y) can be configured. x and y must both use sequential numbering starting at 1.

Change causes system to restart or reboot.

`dialplan.routing.emergency.x.value`

Set the emergency URL values that should be watched for. When the user dials one of the URLs, the call is directed to the emergency server defined by `dialplan.routing.server.x.address`.

x=15: 911, others: Null (default)

SIP URL (single entry)

x is the index of the emergency entry description where x must use sequential numbering starting at 15.

`dialplan.routing.server.x.address`

Set the IP address or hostname of a SIP server to use for routing calls. Multiple servers can be listed starting with x=1 to 3 for fault tolerance.

Null (default)

IP address

hostname

Blind transfer for 911 or other emergency calls may not work if registration and emergency servers are different entities.

Change causes system to restart or reboot.

`dialplan.routing.server.x.port`

Set the port of a SIP server to use for routing calls.

5060 (default)

1 to 65535

Change causes system to restart or reboot.

`dialplan.routing.server.x.transport`

Set the DNS lookup of the first server to use and dialed if there is a conflict with other servers.

DNSnaptr (default)

TCPpreferred

UDPOnly

TLS

TCPOnly

For example, if `dialplan.routing.server.1.transport` = "UDPOnly" and `dialplan.routing.server.2.transport` = "TLS", then UDPOnly is used.

Change causes system to restart or reboot.

`dialplan.userDial.timeOut`

Specify the time in seconds that the phone waits before dialing a number entered while the phone is on hook.

Lync Base Profile (default) – 4

0-99 seconds

You can apply `dialplan.userDial.timeOut` only when its value is lower than `up.IdleTimeOut`.

Related Links

OpenSIP Digit Map

If you are using a list of strings, each string in the list can be specified as a set of digits or timers, or as an expression which the gateway uses to find the shortest possible match.

In addition, the digit map feature allows SIP URI dialing to match the URIs based on dial plan.

The following is a list of digit map string rules for open SIP environments.

- The following letters are case sensitive: x, T, R, S, and H.
- You must use only *, #, +, or 0-9 between the second and third R.
- If a digit map does not comply, it is not included in the digit plan as a valid map. That is, no match is made.
- There is no limit to the number of R triplet sets in a digit map. However, a digit map that contains less than a full number of triplet sets (for example, a total of 2 Rs or 5 Rs) is considered an invalid digit map.
- Digit map extension letter R indicates that certain matched strings are replaced. Using an RRR syntax, you can replace the digits between the first two Rs with the digits between the last two Rs. For example, *R555R604R* would replace 555 with 604. Digit map timer letter T indicates a timer expiry. Digit map protocol letters S and H indicate the protocol to use when placing a call.
- If you use T in the left part of RRR's syntax, the digit map will not work. For example, R0TR322R will not work.

The following examples illustrate the semantics of the syntax:

- R9R604Rxxxxxxx-Replaces 9 with 604.
- xxR601R600Rxx-When applied to 1160122 gives 1160022.
- R9RRxxxxxxx-Remove 9 at the beginning of the dialed number (replace 9 with nothing).
  - For example, if you dial 914539400, the first 9 is removed when the call is placed.
- RR604Rxxxxxxx-Prepend 604 to all seven-digit numbers (replace nothing with 604).
  - For example, if you dial 4539400, 604 is added to the front of the number, so a call to 6044539400 is placed.
- xR60xR600Rxxxxxxx-Replace any 60x with 600 in the middle of the dialed number that matches.

  For example, if you dial 16092345678, a call is placed to 16002345678.

- 911xxx.T-A period (.) that matches an arbitrary number, including zero, of occurrences of the preceding construct. For example:
  - 911123 with waiting time to comply with T is a match
  - 9111234 with waiting time to comply with T is a match
  - 91112345 with waiting time to comply with T is a match and the number can grow indefinitely given that pressing the next digit takes less than T.
- `sip\:764xxxxxRR@registrar.polycomcsn.comR` - appends `@registrar.polycomcsn.com` to any URI calls matching with "764xxxxx".

  For example, if you make a SIP URI call with 76412345 then `@registrar.polycomcsn.com` is appended to the string such that the SIP URI call INVITE becomes `sip::76412345@vc.polycom.com`. Here, `@domain` string is required only for SIP URI calls from unregistered lines.

- `sip\:xxxx\@registrar\.polycomcsn\.com` - This will match with any four digit URI calls having the domain `@registrar.polycomcsn.com`.

  For example, if you configure three lines and has dial plan based line switching enabled. Now, if the third line's dial plan has `sip\:xxxx\@registrar\.polycomcsn\.com` then call will be initiated from the third line if user dial `1234@registrar.polycomcsn.com` because it matches with the third line's dial plan.

Generating Secondary Dial Tone with Digit Maps

You can regenerate a custom secondary dial tone by adding a comma (",") to the digit map.

You can dial seven-digit numbers after dialing "8" as shown next in the example rule `8,[2-9]xxxxxxT`:

```
[2-9]11|0T|011xxx.T|[0-1][2-9]xxxxxxxxx|8,[2-9]xxxxxxT|[2-9]xx.T
```

By adding the digit "8", the dial tone plays again, and users can complete the remaining seven-digit number. In this example, if users also have a 4-digit extension that begins with "8", then users will hear dial tone after the first "8" was dialed because "8" matches the "8" in the digit map.

If you want to generate a secondary dial tone without the need to send the "8", replace one string with another using the special character "R" as shown next in the rule, "`R8RR`". In the following example, replace "8" with an empty string to dial the seven-digit number:

```
[2-9]11|0T|011xxx.T|[0-1][2-9]xxxxxxxxx|R8RR,[2-9]xxxxxxT|[2-9]xx.T
```

The following example illustrates how to create a secondary dial tone that sounds like the dial tone used in Ireland. An explanation of the code follows the example.

```
<secondaryDialTone
se.pat.callProg.secondaryDialTone.name="Irish secondary dial"
se.pat.callProg.secondaryDialTone.inst.1.type="chord"
se.pat.callProg.secondaryDialTone.inst.1.value="spare1"
>
<tone.chord.callProg.spare1
tone.chord.callProg.spare1.offDur="0"
tone.chord.callProg.spare1.onDur="0"
tone.chord.callProg.spare1.repeat="0"
/>
<tone.chord.callProg.spare1.freq
tone.chord.callProg.spare1.freq.1="425"
tone.chord.callProg.spare1.freq.2="450"
/>
<tone.chord.callProg.spare1.level
tone.chord.callProg.spare1.level.1="-12"
tone.chord.callProg.spare1.level.2="-12"
/>
</secondaryDialTone>
```

First, `secondaryDialTone` call progress pattern calls the `spare1` chord. Poly provides `spare1` through `spare6` for the creation of customized chords.

Then, the `tone.chord.callProg.spare1.freq` and `tone.chord.callProg.spare1.level` parameters define the `spare1` custom chord consisting of the frequencies and volume levels needed to reproduce the sound of the Irish secondary dialtone.

With these settings in place, the appearance of a comma (",") in a digit map rule triggers the phone to play the secondary dial tone you configured instead of the phone's default dial tone.

Configure Poly Trio to Use Regular Expressions in Dial Plans

Poly Trio systems support regular expressions (regex) on a per-registration basis for matching.

Note: Global dial plans don't support regular expressions.

Procedure

1. Set the following parameter:

    `dialplan.x.digitmap.mode = regex`

2. Set the `regex` notation in the `dialplan.x.digitmap` parameter. For example:

    `dialplan.1.digitmap = "^. +@.*bjn\.vc$"`

Join a Meeting with a SIP URI

When you set up a meeting in the Calendar, the Poly Trio system displays a meeting reminder pop up.

If a dial-in number is available for the meeting, the reminder pop-up presents a **Join** button that joins you to the meeting. If a meeting lists multiple dial-in numbers or URIs for the meeting, by default the **Join** button automatically dials the first number.

The following list includes dial-in options that present a **Join** button in meeting reminders:

- SIP URI
- Tel URI
- PSTN number
- IP dial

Meeting SIP URI Parameters

The following table lists the parameters that configure dial-in information.

exchange.meeting.join.promptWithList

Specifies the behavior of the Join button on meeting reminder pop-ups.

0 (default) - Tapping Join on a meeting reminder should show a list of numbers to dial rather than immediately dialing the first one.

1 - A meeting reminder does not show a list of numbers to dial.

exchange.meeting.parseWhen

Specifies when to scan the meeting's subject, location, and description fields for dialable numbers.

NonSkypeMeeting (default)

Always

Never

exchange.meeting.parseOption

Select a meeting invite field to fetch a VMR or meeting number from.

All (default)

Location

LocationAndSubject

Description

Change causes a reboot.

exchange.meeting.parseEmailsAsSipUris

List instances of text like user@domain or user@ipaddress in the meeting description or subject under the More Actions pane as dialable SIP URIs.

0 (default) - it does not list the text as a dialable SIP URI

1 - it treats user@domain

exchange.meeting.parseAllowedSipUriDomains

List of comma-separated domains that will be permitted to be interpreted as SIP URIs

Null (default)

String (maximum of 255 characters)

Local Call Recording

Local call recording enables you to record audio calls to a USB device connected to the phone.

You can play back recorded audio on the phone or using an audio application on the computer. To use this feature, you must enable USB port.

Audio calls are recorded in .wav format and include a date/time stamp. The phone displays the recording time remaining on the attached USB device, and users can browse all recorded files using the phone's menu.

Note: Federal, state, and/or local laws may legally require that you notify some or all of the call parties when a call recording is in progress.

Local Call Recording Parameter

Use the following parameter to configure local call recording.

feature.callRecording.enabled

> 0 (default) - Disable audio call recording.
>
> 1 - Enable audio call recording.
>
> Change causes system to restart or reboot.

International Dialing Prefix

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

International Dialing Prefix Parameters

The following parameters configure the international dialing prefixes.

call.internationalDialing.enabled

> 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.
>
> 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.
>
> Change causes system to restart or reboot.

call.internationalPrefix.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".

Centralized Conference Control Protocol (CCCP)

CCCP is enabled by default when the Poly Trio's Base Profile is set to Skype.

CCCP enables users to initiate conference calls with Skype for Business contacts from their phone, manage conference participants, enable announcements, and lock a conference. Users can manage a maximum of 24 Skype for Business conference calls at a time on their phone. However, users can have only one active conference call in progress on their phone.

Centralized Conference Control Protocol (CCCP) Parameters

The following parameters configure CCCP on the Poly Trio system.

feature.cccp.enabled

1 (enabled) - Enable use of CCCP.

0 - Disable use of CCCP.

Enhanced 911 (E.911)

This E.911 feature allows you to configure one of three sources the phone obtains location information from:

- LLDP-MED
- DHCP via option 99
- LIS compliant with RFC 5985

Configuring the source of location information allows the phone to share its location details in the invite sent when a 911 call is made to ensure the 911 operator dispatches emergency services to the correct address.

Enhanced 911 (E.911) Parameters

Use the following parameters to configure E.911.

feature.E911.locationInfoSchema

HYBRID (default) - SIP invites use an XML schema as per the RFC4119 and RFC5139 standards.

RFC 4119 - SIP invites use an XML schema as per the RFC4119 standards.

RFC5139 - SIP invites use an XML schema as per the RFC5139 standards.

feature.E911.HELD.server

NULL (default)

Set the IP address or hostname of the Location Information Server (LIS) address. For example, host.domain.com or https://xxx.xxx.xxx.xxx.

0 - 255

feature.E911.HELD.username

NULL (default)

Set the user name used to authenticate to the LIS.

feature.E911.HELD.password

NULL (default)

Set the password used to authenticate to the Location Information Server.

0 - 255

feature.E911.HELD.identity

Set the vendor-specific element to include in a location request message. For example, 'companyID'.

NULL (default)

String 255 character max

feature.E911.HELD.identityValue

Set the value for the vendor-specific element to include in a location request message.

NULL (default)

String 255 character max

feature.E911.locationRetryTimer

Specify the retry timeout value in seconds for the location request sent to the Location Information Server (LIS).

The phone does not retry after receiving location information received through the LIS.

60 seconds (default)

60 - 86400 seconds

feature.E911.HELD.nai.enable

0 (default) – The NAI is omitted as a device identity in the location request sent to the LIS.

1 - The NAI is included as a device identity in the location request sent to the LIS.

locInfo.source

Specify the source of phone location information. This parameter is useful for locating a phone in environments that have multiple sources of location information.

LLDP (default for Generic Base Profile) – Use the network switch as the source of location information.

MS_E911_LIS (default for Lync Base Profile) – Use the Skype for Business Server as the source of location information.

CONFIG – You can manually configure the source of location information for Skype for Business.

LIS – Use the location information server as the source of location information. Generic Base Profile only.

DHCP – Use DHCP as the source of location information. Generic Base Profile only.

If location information is not available from a default or configured source, the fallback priority is as follows:

Generic Base Profile: No fallback supported for Generic Base Profile

Lync Base Profile: MS_E911_LIS > CONFIG > LLDP

locInfo.x.label

Enter a label for the location.

Null (default)

locInfo.x.country

Enter the country where the phone is located.

Null (default)

locInfo.x.A1

Enter the national subdivision where the phone is located. For example, a state or province.

Null (default)

locInfo.x.A3

Enter the city where the phone is located.

Null (default)

locInfo.x.PRD

Enter the leading direction of the street location.

Null (default)

locInfo.x.RD

Enter the name of road or street where the phone is located.

Null (default)

locInfo.x.STS

Enter the suffix of the name used in `locInfo.x.RD`. For example, street or avenue.

Null (default)

locInfo.x.POD

Enter the trailing street direction. For example, southwest.

Null (default)

locInfo.x.HNO

Enter the street address number of the phone's location.

Null (default)

locInfo.x.HNS

Enter a suffix for the street address used in `locInfo.x.HNS`. For example, A or ½.

Null (default)

locInfo.x.LOC

Enter any additional information that identifies the location.

Null (default)

locInfo.x.NAM

Enter a proper name to associate with the location.

Null (default)

locInfo.x.PC

Enter the ZIP or postal code of the phone's location.

Null (default)

feature.E911.enabled

0 (default) - Disable the E.911 feature.

1 - Enable the E.911 feature.

The INVITE sent for emergency calls from the phone includes the geolocation header defined in RFC 6442 and PIDF presence element as specified in RFC3863 with a GEOPRIV location object specified in RFC4119 for in Open SIP environments.

This parameter is mutually exclusive of the Ribbon Communications E.911 feature and if this parameter and `feature.genband.E911.enabled` are enabled, this parameter takes precedence.

feature.E911.HELD.requestType

Any (default) - Send a request to the Location Information Server (LIS) to return either 'Location by Reference' or 'Location by Value'. Note this is not the 'Any' value referred to in RFC 5985.

Civic - Send a request to the LIS to return a location by value in the form of a civic address for the device as defined in RFC 5985.

RefID - Send a request to the LIS to return a set of Location URIs for the device as defined in RFC 5985.

voIpProt.SIP.header.priority.enable

0 (default) – Do not include a priority header in the E.911 INVITE message.

1 - Include a priority header in the E.911 INVITE message.

voIpProt.SIP.header.geolocation-routing.enable

0 (default) – Do not include the geolocation-routing header in the E.911 INVITE message.

1 - Include the geolocation-routing header in the E.911 INVITE message.

feature.E911.HELD.secondary.server

Set the IP address or hostname of the secondary Location Information Server (LIS) address. For example, host.domain.com or https://xxx.xxx.xxx.xxx.

NULL (default)

0-255

Dotted-decimal IP address

Hostname

Fully-qualified domain name (FQDN)

feature.E911.HELD.secondary.username

Set a user name to authenticate to the secondary Location information Server (LIS).

NULL (default)

String

0-255

feature.E911.HELD.secondary.password

Set a password to authenticate to the secondary LIS.

NULL (default)

String

feature.E911.usagerule.retransmission

0 (default) - The recipient of this location object is not permitted to share the enclosed location information, or the object as a whole, with other parties.

1 - Distributing this location is permitted.

lync.E911.notificationUri.expansion.enabled

0 (default) - Disables expansion of distribution lists.

1 - Enables users to expand distribution lists received as part of the notification URI.

Change causes a restart or reboot.

lync.E911.notificationUri.maxUrls

Set the limit for the number of URLs in the notification URI.

30 (default)

1 - 100

voIpProt.SIP.releaseOnSipFrag100Trying.enable

> 0 (default)
>
> 1 - DUT sends the BYE on SIPFrag100 trying NOTIFY.

PSTN Gateway on Failover

When a phone becomes unregistered due to an outage and can't reach the Skype for Business server for a specified time interval, the phone fails over to an alternate PSTN gateway server.

You can view the PSTN failover details in the Web Configuration Utility.

When you enable this feature, calls switch to the configured PSTN gateway in the event of an outage. However, if the phone fails over, only basic call-related functions and soft keys are available.

Make sure the value of `call.enableOnNotRegistered` and `reg.x.srtp.simplifiedBestEffort` parameter is set to `1`.

___

Note: The failover feature does not work if you enable the hybrid line registration feature.

___

Ensure the Direct Inward Dialing number registered on the Skype for Business server and the number used for the PSTN gateway are same.

PSTN Gateway Failover Parameters

The following parameters configure phones to fail over to an alternate PSTN gateway in the event of an outage or if the phones can't reach the Skype for Business server.

feature.sfbPstnFailover.enabled

> Enable or disable for phones to fail over to a PSTN gateway during an outage.
>
> 0 (default) - Disabled
>
> 1 - Enabled
>
> Change causes system to restart or reboot.

reg.x.server.y.address

> If this parameter is set, it takes precedence even if the DHCP server is available.
>
> Null (default) - SIP server does not accepts registrations.
>
> IP address or hostname - SIP server that accepts registrations.
>
> This parameter is only applicable during a failover to PSTN gateway in Skype for Business deployments.

reg.x.server.y.pstnServerAuth.userId

> Specify the user identification for the PSTN gateway.
>
> Null (default)
>
> String (maximum of 255 characters)

reg.x.server.y.pstnServerAuth.password

Specify the PSTN user's password.

Null (default)

String (maximum of 255 characters)

DMA Record Route Parameter

When Poly Trio is registered with the Polycom RealPresence Distributed Media Application (DMA) some call issues may arise due to the route-set on a UPDATE response.

If there are any call issues with a Poly Trio system registered to DMA, disable the following parameter to resolve the issues.

feature.updateRecordRoute.enabled

1 (default) - The system does not update the route-set on SIP UPDATE response.

0 - The system updates the route-set on SIP UPDATE response

Change causes system to restart or reboot.

Switching Call Applications

Users can switch between the Generic OpenSIP base profile and the Microsoft Teams call application, giving the Trio C60 system additional flexibility in Modular Room Hub Mode.

The Trio C60 supports up to three (3) OpenSIP voice line registrations.

Note: Poly Trio systems don't support call application switching while in USB mode.

Call Application Switching Parameters

Use the following parameters to configure call application switching.

apps.android.appSwitcher.enabled

0 (default) – Call application switching is disabled.

1 – App Switcher icon appears on the on the Nav bar, allowing users to switch call applications.

Note: The `device.baseProfile` must be set to `Generic` to enable this parameter.

Change causes the system to restart or reboot.

apps.android.appSwitcher.MSTeams.enabled

0 (default) – Microsoft Teams is not accessible via app switching.

1 – Microsoft Teams is accessible via app switching.

apps.android.statusBar.enabled

1 (default) - Enables the Poly Control Panel.

0 - Disables the Poly Control Panel.

`apps.android.statusBar.Bluetooth.enabled`

With the `feature.bluetooth.enabled` parameter set to `1`, enable this parameter to allow users to toggle Bluetooth functionality on and off from the Poly Control Panel.

0 (default) - Bluetooth doesn't appear in the Poly Control Panel.

1 - Users can toggle Bluetooth on and off from the Poly Control Panel while the system is in Hub mode.

`apps.android.statusBar.UCS.enabled`

1 (default) - Enables the Poly App icon in the Poly Control Panel.

0 - Disables the Poly App icon in the Poly Control Panel.

Certificates

If you need to set up a remote worker, you must manually install a certificate to the phone. You can add the certificate using parameters included in the `SkypeTrioSharedExample.cfg` file. You also have the option to create your own XML configuration file and upload it to a phone using the Web Configuration Utility.

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

When phones are signed in and the software is downgraded, the phones will be in the signed-in state until the User Certificates are valid.

If you are setting up your network and you want more information on certificate options see Configure the Network.

Related Links
Accessing the Web Configuration Utility on page 126
Configure the Network

Install a Certificate for Poly Trio Systems Using Configuration Files

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

Procedure
1. Locate the `SkypeTrioSharedLCExample.cfg` configuration file template on Polycom Support Site.
2. Place the configuration file in a location in your Skype for Business 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>`
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.

Procedure

1. Enter your phone's IP address into a web browser.
2. Select **Admin** as the login type, enter the administrator password, and select **Submit**.
3. Go 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**.

Poly Trio System Contact Directories

When the Poly Trio system Base Profile is set to Skype, you can access contacts using the Skype for Business contact list and set the contact list to be editable or read-only.

The local contact directory is disabled by default when the Poly Trio system Base Profile is set to Skype and you can enable it using the parameter `feature.directory.enabled`. You can protect the local contact directory with user credentials and set contacts to be read-only or editable. If the Poly Trio system Base Profile is set to `SkypeUSB`, no local contact directory is available and you can access the Skype for Business contact list.

The maximum number of contacts you can configure is 3000 and the maximum file size of the local Contact Directory is 4MB. To reduce use of phone memory, use the parameter `dir.local.contacts.maxNum` to set a lower maximum number of contacts.

Unified Contact Store

Administrators can unify users' contacts with Microsoft Exchange Server to enable users to access and manage contacts from any application or device synchronized with the Exchange Server including Poly phones, Skype for Business client, Outlook, or Outlook Web Application from a mobile device.

For example, if a user deletes a contact from a phone, the contact is also deleted on the Skype for Business client. Note users can manage (move, copy) contacts across Groups only on the Skype for Business client and Group contacts on the phone stay unified.

When an administrator enables Unified Contact Store, users can:

- Add a contact
- Delete a contact
- Add and delete a Distribution List (DL) group
- Manage contacts or groups

To set up this feature, administrators must use a PowerShell command using the instructions on the Microsoft TechNet web site Planning and deploying unified contact store in Lync Server 2013.

Call Lists

The phone records and maintains user phone events to a call list, which contains call information such as remote party identification, time and date of the call, and call duration.

The list is stored on the provisioning server as an XML file named *<MACaddress>*-calls.xml. If you want to route the call list to another server, use the CALL_LISTS_DIRECTORY field in the master configuration file. All call lists are enabled by default.

The phone maintains all the calls in three separate user accessible call lists: Missed Calls, Received Calls, and Placed Calls. Users can clear lists manually on their phones, or delete individual records or all records in a group (for example, all missed calls).

Call List Parameters

Use the following parameters to configure call lists.

callLists.collapseDuplicates

Lync Base Profile - 0 (default)

Generic Base Profile - 1 (default)

1 - Consecutive incomplete calls to/from the same party and in the same direction are collapsed into one record in the calls list. The collapsed entry displays the number of consecutive calls.

0 - Each call is listed individually in the calls list.

callLists.logConsultationCalls

Lync Base Profile - 1 (default)

Generic Base Profile - 1 (default)

0 - Consultation calls not joined into a conference call aren't listed as separate calls in the calls list.

1 - Each consultation call is listed individually in the calls list.

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.

feature.callListMissed.enabled

0 (Default) - The missed call list is disabled.

1 - The missed call list is enabled.

To enable the missed, placed, or received call lists, feature.callList.enabled must be enabled.

feature.callListPlaced.enabled

0 (Default) - The placed call list is disabled.

1 - The placed call list is enabled.

To enable the missed, placed, or received call lists, `feature.callList.enabled` must be enabled.

`feature.callListReceived.enabled`

0 (Default) - The received call list is disabled.

1 - The received call list is enabled.

To enable the missed, placed, or received call lists, `feature.callList.enabled` must be enabled.

`feature.exchangeCallLog.enabled`

If Base Profile is:

Generic - 0 (default)

Skype for Business - 1 (default)

1 - The Exchange call log feature is enabled, user call logs are synchronized with the server, and the user call history of Missed, Received, and outgoing calls can be retrieved on the phone.

You must also enable the parameter `feature.callList.enabled` to use the Exchange call log feature.

0 - The Exchange call log feature is disabled, the user call log history can't be retrieved from the Exchange server, and the phone generates call logs locally.

Local Contact Directory Parameters

The following parameters configure the local contact directory.

`dir.local.contacts.maxNum`

Set the maximum number of contacts that can be stored in the Local Contact Directory. The maximum number varies by phone model, refer to section 'Maximum Capacity of the Local Contact Directory'.

- 2000 (default)
- Maximum 3000 contacts

Change causes system to restart or reboot.

`dir.local.readonly`

0 (default) - Disable read only protection of the local Contact Directory.

1 - Enable read-only protection of the local Contact Directory.

`feature.directory.enabled`

0 - The local contact directory is disabled when the Base Profile is set to Lync.

1 (default)- The local directory is enabled when the Base Profile is set to Lync.

0 - The local contact directory is disabled.

1 (default) - The local contact directory is enabled.

`dir.search.field`

Specify whether to sort contact directory searches by first name or last name.

0 (default) - Last name.

1 - First name.

`voIpProt.SIP.specialEvent.checkSync.downloadDirectory`

0 (default) - The phone downloads updated directory files after receiving a checksync NOTIFY message.

1 - The phone downloads the updated directory files along with any software and configuration updates after receiving a checksync NOTIFY message. The files are downloaded when the phone restarts, reboots, or when the phone downloads any software or configuration updates.

Note: The parameter `hotelingMode.type` set to `2` or `3` overrides this parameter.

`feature.pauseAndWaitDigitEntryControl.enabled`

1 (default) - Enable processing of control characters in the contact phone number field. When enabled, "," or "p" control characters cause a one second pause.

For example, "," or "p" control characters cause a one second pause. ";" or "w" control character cause a user prompt that allows a user-controlled wait. Subsequent digits entered to the contact field are dialed automatically.

0 - Disable processing of control characters.

`up.regOnPhone`

0 (default) - Contacts you assign to a line key display on the phone in the position assigned.

1 - Contacts you assign to a line key are pushed to the attached expansion module.

Change causes system to restart or reboot.

Outlook Contact Photo Integration

You can configure the phone to display profile photos for the registered line and all Skype for Business contacts, if a photo is set for the Skype for Business or Microsoft Exchange account.

When enabled, a profile photo shows for contacts on all contact-related screens, including the Call, Recent Calls, and Directory search screens, as space permits. Set the parameter `feature.contactPhotoIntegration.enabled` = 1 to enable outlook photos to display on the phone.

Contact Photo Integration Limitations

The following are limitations on the phone with the Outlook Photo Integration feature:

- The phone cannot access contact photos for non-federated accounts, from image URLs, or imported from Active Directory.

Outlook Contact Photo Parameters

Use the following parameters to configure Skype for Business or Microsoft Exchange profile photos to display on the phone for contacts on supported contact screens.

feature.contactPhotoIntegration.enabled

Set to retrieve and display Outlook profile photos for contacts on the phone.

1 (default) - Retrieves profile photos from Outlook and displays the photos for contacts.

0 - Does not show Outlook contact photos.

contactPhotoIntegration.videoMute

Set to display the profile photo for the signed-in user's video mute icon.

1 (default) - Shows the signed-in user's profile photo when on video mute.

0 - Shows the generic video mute icon.

Network Configuration with Skype for Business

You can configure network options when registered with Skype for Business.

Web Proxy Auto Discovery (WPAD)

The Web Proxy Auto-Discovery Protocol (WPAD) feature enables Poly phones to locate the URL of a Proxy Auto-Configuration (PAC) file you configure.

You can configure WPAD using configuration parameters on your provisioning server, DHCP Option 252, or the DNS-A protocol mechanism to discover the PAC file location. When using a provisioning server or DHCP, the phone looks for the file name you specify. If using DNS-A, the phone looks only for the `wpad.dat` file.

PAC File Search Priority

Poly phones search for PAC files in the following priority order:

- Provisioning server. Example: `feature.wpad.curl="http://server.domain.com/proxy.pac`
- DHCP Option 252. For instructions, see *Creating an Option 252 entry in DHCP* on Microsoft TechNet: https://technet.microsoft.com/en-us/library/cc995090.aspx
- DNS-A. For instructions, see *Creating a WPAD entry in DNS* on Microsoft TechNet: https://technet.microsoft.com/en-us/library/cc995062.aspx

Note: If the proxies you configure in the PAC file or configuration file are either invalid or unreachable with a working fallback proxy, the time to register with Skype for Business is delayed and the responsiveness of features that support WPAD degrade.

Supported HTTP/HTTPS Web Proxy Services

When the web proxy server is successfully configured and operational, the phones route the following HTTP/HTTPS web proxy services to the web proxy server:

Generic Services

- HTTP/HTTPS Provisioning
- Core File Upload

Skype for Business Services

- Registration Services
- Address Book Service (ABS)
- Location Information Server (LIS)
- Device Update (To ensure reliable software updates, device update is direct in case a proxy is not available.)
- Server Log Upload
- Exchange Web Services

PAC File Search Priority

When using automatic web proxy discovery, you can configure Poly phones to discover the Proxy Auto-Configuration (PAC) file location on your provisioning server (using DHCP Option 252) or using the DNS-A protocol mechanism.

Poly phones search for PAC files in the following priority order.:

1. **Provisioning server**: For example, `feature.wpad.curl="http://server.domain.com/proxy.pac`

2. **DHCP Option 252**: For instructions, see *Creating an Option 252 entry in DHCP* at Microsoft TechNet.

3. **DNS-A**: For instructions, see *Creating a WPAD entry in DNS* at Microsoft TechNet.

Note: If the proxies you configure in the PAC file or configuration file are invalid or unreachable with a working fallback proxy, the time to register with Skype for Business is delayed and the responsiveness of features that support web proxy auto-discovery degrade.

When using a provisioning server or DHCP, the phone looks for the file name you specify. If using DNS-A, the phone looks only for the `wpad.dat` file.

If your configuration includes automatically downloading a PAC file, there must be an expiration associated with the file so the system knows when to download a new one. Make sure your PAC file server includes an `Expires` header in its HTTP response (for example, `Expires: Wed, 30 Oct 2016 09:30:00 GMT`).

Supported HTTP/HTTPS Web Proxy Services

When you successfully configure the web proxy server, Poly phones route specific HTTP and HTTPS services to the web proxy server.

The phones route the following services to the web proxy server:

Generic Services

- HTTP/HTTPS provisioning
- Core file upload

Skype for Business Services

- Registration services

- Address Book Service (ABS)
- Location Information Server (LIS)
- Device update (To ensure reliable software updates, device update is direct in case a proxy is not available.)
- Server log upload
- Exchange web services

Configure Web Proxy Access Manually

Manually configure web proxy access for Poly phones that can't use automatic web proxy discovery.

Procedure

1. Set the parameter `feature.wpad.enabled` to `1`.
2. Enter the web proxy server address for the parameter `feature.wpad.proxy`.

   For Skype for Business environments, you can specify multiple proxies using this parameter by separating each with a semicolon the same way you would specify them in the PAC file.

   ```
   PROXY 0.10.1.1:8080;
   PROXY 10.12.2.1:8080
   ```

Configure Proxy-Specific Credentials for Users

Poly phones support digest and NTLM authentication mechanisms to authenticate with a proxy server. This enables you to manually configure proxy-specific credentials common to all users using basic authentication.

Note: When users sign into Skype for Business accounts, the phone uses the Skype credentials to sign in to the web proxy.

Procedure

» Configure the following parameters on a provisioning server:

- `feature.wpad.proxy.username`
- `feature.wpad.proxy.password`

View Web Proxy Diagnostics on the System Web Interface

When you successfully configure the web proxy server, you can access important diagnostic information from the system web interface (Web Configuration Utility) to track HTTP and HTTPS traffic flowing via the configured web proxy.

From the system web interface, you can download the PAC file and view the following diagnostic information on a per-phone basis:

- PAC file fetch status
- Configured method used to fetch the PAC file and source URLs
- DNS domain, if configured
- PAC file expiry details
- Exchange and upload proxy

Procedure
1. Enter your phone's IP address into a web browser.
2. Select **Admin** as the login type, enter the administrator password, and select **Submit**.
3. Go to **Diagnostics** > **Web Proxy Auto Discovery (WPAD)**.

Web Proxy Configuration Parameters

The following parameters configure web proxy settings.

`feature.wpad.enabled`

Set to enable web proxy.

0 (default) - Disables web proxy.

1 - Enables web proxy. Default for the Skype Base Profile.

Change causes system to restart or reboot.

`feature.wpad.curl`

Enter the PAC file location.

Change causes system to restart or reboot.

`feature.wpad.proxy`

Configure the web proxy server address. If you configure this parameter with a proxy address, the phones don't discover DHCP or DNS-A or fetch the PAC file even if you configure a PAC file location using `feature.wpad.curl`.

0 to 255 characters

For Skype for Business environments, you can specify multiple proxies using this parameter by separating each with a semicolon the same way you would specify them in the PAC file. For example:

```
PROXY 0.10.1.1:8080;
PROXY 10.12.2.1:8080
```

Change causes system to restart or reboot.

`feature.wpad.proxy.username`

Enter the user name to authenticate with the proxy server.

0 to 255 characters

Change causes system to restart or reboot.

`feature.wpad.proxy.password`

Enter the password to authenticate with the proxy server.

The credentials you can use depend on how authentication is enabled on the proxy server. You can use administrator or user credentials. If Skype for Business Active Directory is integrated with the proxy server, you don't need to configure user name or password credentials.

0 to 255 characters

Change causes system to restart or reboot.

Bluetooth for Poly Trio Systems

Poly Trio systems support Bluetooth connection and pairing with a compatible Bluetooth device such as a mobile phone, tablet, laptop, or headset.

When you enable Bluetooth, users can connect a Bluetooth-capable device, such as a mobile phone, tablet, or laptop to the Poly Trio system. You can make calls from the connected device and play audio from calls, video, or music from the Poly Trio system speaker. When your device is connected over Bluetooth during an audio call, you can use the Poly Trio system microphones for audio instead of the microphone(s) of your connected device. The Poly Trio phones can remember up to 10 previously paired devices.

Note that using a Bluetooth headset can affect voice quality on the phone due to inherent limitations with Bluetooth technology. You may not experience the highest voice quality when using a Bluetooth headset while the 2.4 GHz band is enabled or while you are in an environment with many other Bluetooth devices.

Note: The Poly Trio system does not automatically reconnect to paired devices after the device Bluetooth connection is disconnected or after a reboot of the Poly Trio system. If the paired Bluetooth device is disconnected or the Poly Trio system reboots, you must manually reconnect and pair the device to the Trio system.

Bluetooth Parameters

Use the following parameters to configure Bluetooth on Poly Trio systems.

`bluetooth.beacon.ipAddress.enabled`

Set to send the IP address of the system over Bluetooth.

1 (default) - Enables sending the system IP address over Bluetooth. Turns Bluetooth radio on when `feature.bluetooth.enabled = 1`.

0 - Disables sending the system IP address over Bluetooth

Note: Enable the parameter `feature.bluetooth.enabled` to use this feature.

`bluetooth.device.audio.enabled`

Set to enable or disable audio playback through a Bluetooth connection.

0 - Bluetooth device audio is disabled.

1 (default) - Bluetooth device audio is enabled.

Note: This feature can also be controlled from the Poly Trio system user interface.

`bluetooth.device.discoverable`

1 (default) - This device is discoverable for Bluetooth pairing.

0 - This device is not discoverable for Bluetooth pairing.

bluetooth.device.maxPaired

Set the limit for the maximum number of Bluetooth devices that can be paired with a Poly Trio system.

10 (default)

0 - 10

bluetooth.device.name

NULL (default)

UTF-8 string

Enter the name of the device that broadcasts over Bluetooth to other devices.

bluetooth.device.pairedTimeout

Set the timeout limit for automatically unpairing Bluetooth devices when `bluetooth.device.maxPaired` is set to 0.

30 (default)

30 - 1800 (in minutes)

bluetooth.discoverableTimeout

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.pairedDeviceMemorySize

10 (default)

0 - 10

bluetooth.radioOn

0 - The Bluetooth radio (transmitter/receiver) is off.

1 (default) - 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

For high security environments.

1 (default) - Bluetooth connection is enabled and the Bluetooth menu displays.

0 - Bluetooth connection is disabled and the Bluetooth icon does not display.

Wireless Network Connectivity (Wi-Fi)

Poly Trio systems support several wireless modes, security options, radio controls, and Quality of Service monitoring.

To ensure the best performance in your location, set a proper country code with the parameter `device.wifi.country` before enabling Wi-Fi.

You can configure Wi-Fi options to display in the phone's basic settings menu to allow users to manually add a Wi-Fi network. You can also configure the phone to display the Wi-Fi icon on the phone's status bar and home screen.

Enabling Wi-Fi automatically disables the Ethernet port. You can't use Wi-Fi and Ethernet simultaneously to connect phones to your network. When you connect the system to your network over Wi-Fi, only audio-only calls are available. The phones don't support Wi-Fi captive portals or Wireless Display (WiDi).

Note: When you provision via Wi-Fi connection to the network, the phone looks for files on the provisioning server using the LAN MAC address and not the Wi-Fi MAC address.

The following wireless modes are supported:

- 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

Wi-Fi Parameters

Poly Trio C60 systems are shipped with a security-restrictive worldwide safe Wi-Fi country code setting.

Use the following parameters to configure wireless network settings for your organization, which is dependent on the security mode for your organization and whether or not you enable DHCP. Poly Trio systems supports the following Wi-Fi security modes:

- WEP
- WPA PSK
- WPA2 PSK
- WPA2 Enterprise

`device.wifi.country`

    NULL (default)

    Two-letter country code

`device.wifi.dhcpBootServer`

    0 (default)

    1

    2

    V4

V6

Static

device.wifi.dhcpEnabled

Enable or disable DHCP for Wi-Fi.

0 (default) - Disable

1 - Enable

device.wifi.enabled

Enable or disable Wi-Fi.

0 (default) - Disable

1 - Enable

device.wifi.ipAddress

Enter the IP address of the wireless device if you are not using DHCP.

0.0.0.0 (default)

String

device.wifi.ipGateway

Enter the IP gateway address for the wireless interface if not using DHCP.

0.0.0.0 (default)

String

device.wifi.psk.key

Enter the hexadecimal key or ASCII passphrase.

0xFF (default)

String

device.wifi.radio.enable2ghz

device.wifi.radio.enable5ghz

device.wifi.securityMode

Specify the wireless security mode.

NULL (default)

None

WEP

WPA-PSK

WPA2-PSK

WPA2-Enterprise

device.wifi.ssid

Set the Service Set Identifier (SSID) of the wireless network.

SSID1 (default)

SSID

device.wifi.subnetMask

Set the network mask address of the wireless device if not using DHCP.

255.0.0.0 (default)

String

device.wifi.wep.key

Set the length of the hexadecimal WEP key.

0 = 40-bits (default)

1 = 104-bits

device.wifi.wpa2Ent.method

Set the Extensible Authentication Protocol (EAP) to use for 802.1X authentication.

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

device.wifi.wpa2Ent.password

The WPA2-Enterprise password.

device.wifi.wpa2Ent.user

The WPA2-Enterprise user name.

Enable Wi-Fi

You can wirelessly connect phones to your network using Wi-Fi, which is disabled by default.

When you enable Wi-Fi, the system reboots.

Procedure

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

   The phone reboots.
2. After the phone restarts, go to **Settings** > **Advanced** > **Administration Settings** > **Network Configuration** > **Network Interfaces** > **Wi-Fi Menu** to view available networks.
3. Select a network and press **Connect**.

Configure Wireless Network Settings

You can manually configure the phone to connect to a wireless network by selecting an enterprise- based network and EAP method for better security.

Procedure

1. Go to **Settings** > **Advanced** > **Administrator Settings** > **Network Configuration** > **Network Interfaces** > **Wi-Fi Menu**.
2. Turn Wi-Fi to **On**.

   The phone reboots.
3. After the phone reboots, go to **Settings** > **Advanced** > **Administration Settings** > **Network Configuration** > **Network Interfaces** > **Wi-Fi Menu** to view available networks.
4. Configure the following wireless network settings:

   a. Select the SSID name of the wireless network.

   b. Select the security type of the wireless network.

   c. Optional: If you have an enterprise-based network, enter the **User ID** and **Password**.

   d. Select one of the following EAP- Method types for authentication:
      - EAP-TLS
      - EAP-PEAP-MSCHAPv2
      - EAP-PEAP-GTC
      - EAP-TTLS-MSCHAPv2
      - EAP-TTLS-GTC
      - EAP-MD5
      - EAP-FAST
5. Select a network and press **Connect**.

Wi-Fi Settings in Basic Menu Parameter

Use the parameter below to allow access to Wi-Fi settings in the Basic menu.

feature.basicWifiMenu.enabled

Enable to allow access to Wi-fi Menu in Basic settings.

0 (default) - Disabled

1 - Enabled

Related Links

TURN / ICE Parameters

This section lists parameters that configure the following Microsoft network features:

- Traversal Using Relays Around NAT (TURN)
- Interactive Connectivity Establishment (ICE)

tcpIpApp.ice.ConnCheckInetvalPairs

Time interval in milliseconds to serialize first attempt of connectivity check of identified ICE candidate pairs per call.

25 - 100

tcpIpApp.ice.ConnCheckInetvalRetries

Time interval in milliseconds to serialize the retry attempts of connectivity check for identified pairs per call.

25 - 100

tcpIpApp.ice.MaxRetries

The maximum number of retry attempts performed on each ICE connectivity check pair identified in case of a request timeout or failure.

5 (default)

2 - 25

tcpIpApp.ice.mode

MSOCS (default)

Disabled

Standard

tcpIpApp.ice.NetworkMode

TCPUDP (default) – Gathers all the possible UDP and TCP ICE candidates.

TCPOnly – Gathers all the TCP candidates along with UDP host candidates.

UDPOnly - Gathers all the UDP candidates.

tcpIpApp.ice.password

Enter the password to authenticate to the TURN server.

NULL (default)

tcpIpApp.ice.ReflexiveChecksRequired

1 (default) - TCP and UDP reflexive candidates will be collected in candidate gathering process.

0 - TCP and UDP reflexive candidates will not be collected in candidate gathering process.

tcpIpApp.ice.stun.server

Enter the IP address of the STUN server.

NULL (default)

tcpIpApp.ice.stun.udpPort

The UDP port number of the STUN server.

3478 (default)

1 - 65535

tcpIpApp.ice.tcp.enabled

1 (default) - Enable TCP.

0 - Disable TCP.

tcpIpApp.ice.turn.server

Enter the IP address of the TURN server.

NULL (default)

tcpIpApp.ice.turn.tcpPort

443 (default)

1 - 65535

tcpIpApp.ice.turn.udpPort

The UDP port number of the TURN server.

443 (default)

65535

tcpIpApp.ice.username

Enter the user name to authenticate to the TURN server.

NULL (default)

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

Configuring LLDP Fast Start Count

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.

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 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.

Device and Software Support

This section provides information on updating and maintaining your devices and the UC Software.

You can update the UC software running on Poly phones in your organization. The update process varies with the version of Polycom UC Software that is currently running on your phones and the version you want to update to.

If you are not using in-band provisioning to register your device to a Microsoft server, best practices for configuring software updates are outlined in *Technical Notification 275: Software Updates for Devices Registered to Microsoft*.

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.

The phones you register with Skype for Business on-premises are enabled with this feature by default and no additional configuration is required.

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 Skype for Business 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.

Microsoft Quality of Experience Monitoring Server Protocol (MS-QoE)

Microsoft Quality of Experience Monitoring Server Protocol (MS-QoE) enables you to monitor the user's audio quality and troubleshoot audio problems.

QoE reports contain only audio metrics and do not contain video or content sharing metrics. This feature also enables you to query the QoE status of a phone from the Web Configuration Utility.

All parameters for enabling or disabling QoE are included in the in-band provisioning parameters sent from the Skype for Business server.

Note: Poly supports only those elements listed in section Supported Skype for Business QoE Elements.

For a list of all parameters that report QoE data, see Microsoft [MS-QoE] PDF at [MS-QoE]: Quality of Experience Monitoring Server Protocol.

To help deploy QoE, you can enable client media ports and configure unique port ranges on the Skype for Business Server. For details, see Configuring Port Ranges for your Microsoft Lync Clients in Lync Server 2013.

Set QoE Parameters on the Skype for Business Server

Set the following QoE parameters on the Skype for Business Server.

Procedure

» Use the following parameters to set Quality of Experience settings on the Skype for Business server.

EnableQoE

Set to 'True' to enable QoE on the server and automatically assign the URI to which QoE reports are published.

If set to 'False' no QoE reports are published.

Note that the URI maps to the in-band element 'qosUri'. To get the current value of EnableQoE, run the command Get-CsQoEConfiguration in Skype for Business Server Powershell.

EnableInCallQoS

Set to 'True' to enable in-call QoE on the server.

If set to 'False', only end-call QoE reports are sent. EnableInCallQoS maps to the in-band element 'enableInCallQoS'.

InCallQoSIntervalSeconds

Set the time interval in seconds to publish in-call QoE reports only if there is a transition in call quality. If no change in call quality is detected, no report is sent at the interval time you set. `InCallQoSIntervalSeconds` maps to the in-band element `inCallQoSIntervalSeconds`.

voice.qualityMonitoring.rtcpxr.enable

Set to 1 (default) to allow the phone to collect RTCP XR metrics.

The following figure illustrates the QoE parameter values you need to set.

```
PS C:\Users\administrator.COHOWINERY> Get-CsMediaConfiguration | fl


Identity                : Global
EnableQoS               : True
EncryptionLevel         : RequireEncryption
EnableSiren             : False
MaxVideoRateAllowed     : VGA600K
EnableInCallQoS         : True
InCallQoSIntervalSeconds : 35
EnableRtpRtcpMultiplexing : True
```

Enable In-Call QoE within your Skype Environment

When you enable in-call QoE, you do not need to wait until the end of the call to view call quality data.

In-call QoE is off by default and you can enable it on Windows PowerShell using the following command:

```
Set-CsMediaConfiguration -Identity Global -EnableInCallQoS:$TRUE -
InCallQoSIntervalSeconds x (where x is a digit from 1 to 65535)
```

Query QoE Status from the Web Configuration Utility

Users and administrators can query the in-band QoE status, interval, and URI from a phone's Web Configuration Utility.

Procedure

1. Enter the IP address of the phone into a web browser and log in as Administrator or User.
2. Go to **Diagnostics** > **Skype for Business Status** > **Quality of Experience**.

QoE Parameters

Use the following parameters to configure MS-QoE from a provisioning server.

voice.qoe.event.lossrate.threshold.bad

Defines the threshold for the network loss rate. Total packets lost for an interval/total packets expected for the interval *256 as stated in RFC 2611, section 4.7.1.

38 (default) - Approximately a 15% packet loss.

0 to 100

`voice.qoe.event.lossrate.threshold.poor`

Defines the threshold for the network loss rate. Total packets lost for an interval/total packets expected for the interval *256 as stated in RFC 2611, section 4.7.1.

25 ms (default) - Approximately a 10% packet loss.

0 to 100

`voice.qoe.event.networkmos.threshold.bad`

Defines the threshold for Network MOS as follows:

The average of MOS-LQO wideband, as specified by [ITUP.800.1] section 2.1.2, based on the audio codec used and the observed packet loss and inter-arrival packet jitter.

19 (default) - Indicates a MOS score of 1.9.

10 - 50 - Indicates a MOS score between 1 - 5.

networkMOS > 2.9 signifies good quality

networkMOS > 2.9 < 1.9 signifies poor quality

networkMOS < 1.9 signifies bad quality

`voice.qoe.event.networkmos.threshold.poor`

Defines the threshold for Network MOS as follows:

The average of MOS-LQO wideband, as specified by [ITUP.800.1] section 2.1.2, based on the audio codec used and the observed packet loss and inter-arrival packet jitter.

29 (default) - Indicates a MOS score of 2.9.

10 - 50 - Indicates a MOS score between 1 - 5.

networkMOS > 2.9 signifies good quality

networkMOS > 2.9 < 1.9 signifies poor quality

networkMOS < 1.9 signifies bad quality

Supported Skype for Business QoE Elements

This section lists supported Microsoft Quality of Experience (QoE) elements.

For a list of all parameters that report QoE data, see Microsoft [MS-QoE] PDF at [MS-QoE]: Quality of Experience Monitoring Server Protocol.

Supported Skype for Business QoE Elements

Parent Element	Child Elements/Attributes
VQReportEvent	VQSessionReport
VQSessionReport	SessionId
	Endpoint
	DialogInfo
	MediaLine

Parent Element	Child Elements/Attributes
Endpoint	Name
	v2:OS
	v2:VirtualizationFlag
	CorrelationID
	FromURI
	ToURI
	Caller
	LocalContactURI
	RemoteContactURI
	LocalUserAgent
	RemoteUserAgent
	LocalPAI
	RemotePAI
	ConfURI
	v2:CallPriority
	v2:MediationServerBypassFlag
	v2:TrunkingPeer
	v2:RegisteredInside
	CallID
	FromTag
	ToTag
	Start
	End
MediaLine	Description
	InboundStream
	OutboundStream
Description	Connectivity
	Security
	Transport
	LocalAddr
	RemoteAddr
	v3:ReflexiveLocalIPAddress
	v3:MidCallReport

Parent Element	Child Elements/Attributes
LocalAddr, RemoteAddr, RelayAddr	IPAddr Port SubnetMask v2:MACAddr
Connectivity	Ice IceWarningFlags (Five flags supported) RelayAddress
InboundStream, OutboundStream	Network Payload QualityEstimates
Network	Jitter PacketLoss BurstGapLoss Delay Utilization
Jitter	InterArrival InterArrivalMax
Packetloss	LossRate LossRateMax
BurstGapLoss	BurstDensity BurstDuration GapDensity GapDuration
Delay	RoundTrip RoundTripMax
Utilization	Packets
Payload	Audio

Parent Element	Child Elements/Attributes
Payload.Audio	PayloadType
	PayloadDescription
	SampleRate
	v4:JitterBufferSizeAvg
	v4:JitterBufferSizeMax
	v4:JitterBufferSizeMin
	v4:NetworkJitterAvg
	v4:NetworkJitterMax
	v4:NetworkJitterMin
Signal	SignalLevel
	NoiseLevel
	InitialSignalLevelRMS
	RecvSignalLevelCh1
	RecvNoiseLevelCh1
	RenderSignalLevel
	RenderNoiseLevel
	RenderLoopbackSignalLevel
	VsEntryCauses
	EchoEventCauses
	EchoPercentMicIn
	EchoPercentSend
	SendSignalLevelCh1
	SendNoiseLevelCh1
QualityEstimates.Audio	RecvListenMOS
	RecvListenMOSMin
	NetworkMOS
NetworkMOS	OverallAvg
	OverallMin
NetworkConnectivityInfo	Traceroute

Quality of Service for Audio Calls

When the Quality of Service (QoS) setting is enabled on the Skype for Business server, Poly Trio systems receive the Differentiated Services Code Point (DSCP) value from the server for Quality of Service (QoS) of audio calls placed or received from phones registered to the Skype for Business server.

Note: If the parameter `lync.provisionDeviceParams.enabled` is set to 0 and DSCP is not set in the Web Configuration Utility, the phone marks IP packets with the DSCP value Expedited Forwarding (EF).

QoS Parameters for Audio Calls

Use the following parameters to configure DSCP for Quality of Service for audio calls.

`qos.ip.rtp.dscp`

> Specify the DSCP of packets. If the value is set to the default NULL the phone uses `quality.ip.rtp.*` parameters.
>
> If the value is not NULL, this parameter overrides `quality.ip.rtp.*` parameters.
>
> - Null (default)
> - 0 to 63
> - EF
> - Any of AF11,AF12, AF13,AF21, AF22,AF23, AF31,AF32, AF33,AF41, AF42,AF43

Updating Polycom UC Software

You can update UC Software on a per-phone basis from the phone's local interface or through the system web interface.

Update UC Software Manually

You can use an USB flash drive to update the software and configure the phone.

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

Procedure

1. Download and unzip UC Software to a directory on your provisioning server.
2. On the phone, go to **Settings** > **Advanced**, enter the administrator 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.
7. Choose **Save Configuration** to save your settings.

   The phone reboots.

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.

Automatic UC Software Updates

By default, the phones poll the Skype for Business Server for software updates and automatically download updated software if it's available. This automatic software update feature is available on all devices registered with Skype for Business Server using UC Software 5.0.0 and later.

An information dialog displays on the phone when a software update becomes available. The dialog provides three options:

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

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

Configuring Automatic Software Updates

The following parameters configure automatic software updates and polling of the provisioning server.

device.prov.lyncDeviceUpdateEnabled

0 - The automatic device update is disabled and the phone does not receive software updates from the server.

1 - The automatic device update is enabled and the phone receives software updates from the server.

Change causes system to restart or reboot.

device.prov.lyncDeviceUpdateEnabled.set

0 (default) - Disable automatic device update for all devices.

1 - Enable automatic device update for all devices and use `device.prov.lyncDeviceUpdateEnabled.`

Change causes system to restart or reboot.

lync.deviceUpdate.popUpSK.enabled

0 (disable) - Disable the Information popup that indicates when an automatic software update is available.

1 - Enable the Information popup that indicates when an automatic software update is available.

Change causes system to restart or reboot.

lync.deviceUpdate.serverPollInterval

7200 seconds (default) - The time interval in seconds that the phone sends a software update request to the Skype for Business Server.

min=1800 seconds

max=28800 seconds

Change causes system to restart or reboot.

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

Change causes system to restart or reboot.

prov.polling.enabled

You can choose to automatically poll the provisioning server for software updates.

1 (default) - the phone automatically polls the server for software updates.

0 - Disable automatic polling.

prov.polling.mode

Choose the polling mode.

abs (default) - The phone polls every day at the time specified by `prov.polling.time`.

rel - The phone polls after the number of seconds specified by `prov.polling.period`.

random - The phone polls at random between a starting time set in `prov.polling.time` and an end time set in `prov.polling.timeRandomEnd`.

Note that if you set the polling period in `prov.polling.period` to a time greater than 86400 seconds (one day) polling occurs on a random day within that polling period (meaning values such as 86401 are over 2 days) and only between the start and end times. The day within that period is determined by the phone MAC addresses and does not change with a reboot. The time within the start and end is calculated again with every reboot.

prov.polling.period

The polling period in seconds.

86400 (default)

integer > 3600

The polling period is rounded up to the nearest number of days in absolute and random mode you set in .

In relative mode, the polling period starts once the phone boots.

If random mode is set to a time greater than 86400 (one day) polling occurs on a random day based on the phone MAC address.

prov.polling.time

Specify the polling start time in absolute or random polling mode you choose with `prov.polling.mode.`

03:00 (default)

hh:mm

prov.polling.timeRandomEnd

The polling stop time when the polling mode is set to random.

NULL (default)

hh:mm

Update Poly Trio System using Windows Update Server

You can use Windows Update Server to update software on the Poly Trio systems connected as a USB device to a Microsoft Surface Pro or to a computer running Windows 10 when you set the Base Profile to **Skype USB Optimized**.

The Windows Update is enabled by default on Poly Trio systems.

Software Update using Windows Update Server Parameters

Use the following parameter to configure the Software update using Windows Update feature.

feature.usb.device.mrSoftwareUpdate

1 (default) - Enable the software update using Windows Update feature.

0 - Disable the software update using Windows Update feature.

Manually Update Poly Trio System Software using Windows Update

You can manually update the software for Poly Trio systems connected to a Windows 10 computer or Microsoft Surface Pro through Windows Upgrade server.

Procedure

1. Connect the Poly Trio system to a computer running Windows 10 operating system.
2. Right-click the system model under **Universal Serial Bus devices** in the Device Manager.
3. Select **Update Driver Software**.
4. In the dialog, choose **Search automatically for updated driver software**.

    If a software update is available the Poly Trio system updates automatically.

Skype for Business User Profiles

You 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.

You 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`.

Poly 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.

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

You can create a configuration file with user-specific profile details and provision multiple phones with that file.

Procedure
1. Create a configuration file for the phone and place it on the provisioning server.
2. Add the `prov.login*` parameters you want to use to your configuration.
3. Copy the `prov.login*` parameters you want to use 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.

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.

Procedure

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).

     Note: 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.

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. An up-to-date call lists history is defined in `<user>-calls.xml`. This list is retained each time the user logs in to their 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
- Configuration files listed in the master configuration file (including `<user>.cfg`)
- Default values

Upload Logs to the Skype for Business Server

To help troubleshoot phone issues for phones registered with Skype for Business, you can allow users to upload logs to the Skype for Business server from the phone or Web Configuration Utility. Users can also set log levels for the phone.

This feature is available on the phones registered with Skype for Business Server On-premises or Online and with Microsoft Lync 2013 or 2010 Server.

Logs are uploaded to the Skype for Business Server at the following location, which you can specify in the Skype for Business topology builder or at initial installation:

```
<LYNC_SERVER_LOG_PATH>\1-WebServices-1\DeviceUpdateLogs\Client\CELog
```

Phones support Core File Uploads to help log phone crashes. The logs are uploaded to the Skype for Business server in `tar.gz` format. The Skype for Business server must support `tar.gz` format to decrypt the log file uploaded to server.

Upload Logs Parameters

Use the following parameters to configure log uploading to the Skype for Business server.

feature.logUpload.enabled

1 (default) - Enable users to upload logs to the Skype for Business server from the phone.

0 - Do not allow users to upload log files to the Skype for Business server.

Log.render.file

When you enable this option, the phone first writes log files directly into its flash memory. The contents of the flash memory upload to a provisioning server after a predetermined period of time or when the flash memory becomes full. Poly recommends not changing this parameter.

1 (default) – Disabled

0 – The phone is prevented from uploading its contents from memory to the server. Disabling the ability to upload log files is recommended only when necessary to reduce data traffic when the phone starts or reboots.

Send Logs from the Phone

To help troubleshoot issues, you can send logs from the phone to the Skype for Business server.

Procedure

» Go to **Settings** > **Basic** > **Diagnostic Logs** > **Upload Logs**.

The files are uploaded to the server as plain text.

Send Diagnostic Logs from the Web Configuration Utility

To help troubleshoot issues, you can send diagnostic logs to the Skype for Business server from the Web Configuration Utility.

This option is available when logged in as Administrator or User.

Procedure

1. Enter the IP address of the phone into a web browser and log in as Administrator or User.
2. Go to **Diagnostics** > **Upload Logs**.

   The files are uploaded to the server as plain text.
3. View uploaded URLs at **Skype for Business Status** > **Skype for Business Parameters** and one of the following locations:
   - Update Server Internal URL for on-premises deployments.
   - Update Server External URL online deployments.

Setting Log Levels

You can set log levels from the phone or Web Configuration Utility. By default, the phone sends log levels set on the server.

Set Log Levels from the Phone

You can set log levels from the phone.

Procedure

 » On the phone, go to **Settings** > **Basic** > **Diagnostic Logs** > **Server Log Level**.

Set Log Levels from the Web Configuration Utility

You can set log levels from the Web Configuration Utility.

Procedure

1. Enter the IP address of the phone into a web browser and log in as Administrator or User.
2. Go to **Settings** > **Logging**.
3. In **Server Log Level**, select a log level.

Hardware and Power for Poly Trio C60 Systems

Topics:

- [Powering Poly Trio C60 Systems](#)
- [Poly Trio System Power Management](#)
- [Power-Saving on Poly Trio Systems](#)
- [Rebooting the Phone at a Scheduled Time](#)

This section provides information on hardware and power for Poly Trio systems and accessories, as well as information on power management.

Related Links

Powering Poly Trio C60 Systems

Read the powering requirements and options carefully to understand powering for your Poly Trio system. For more information, see the Setup Sheet for your Poly Trio system model at [Polycom Support](#).

Powering the Trio C60 System

You can power the Trio C60 system with Power over Ethernet (PoE) or PoE+ (IEEE 802.3 at Type 2). When the system is booting up, an on-screen message indicates the available power supply type.

Note: PoE+ provides Poly Trio systems with full functionality.

The following features aren't available on Trio C60 systems when using PoE:

- The Trio C60 system LAN OUT port doesn't provide PoE+ power.
- You can't charge USB devices (mobile phones, tablets) connected to the Trio C60 system USB port.
- Maximum peak power to the loudspeaker is limited.

Related Links

Power the Poly Trio System with the Optional Power Adapter

If your building isn't equipped with PoE+ you can use the optional power adapter to provide PoE+ and full functionality to your Poly Trio C60 system.

Place the power injector in a clean and dry area out of a walkway, and provide sufficient space around the unit for good ventilation. Do not cover or block airflow to the power injector. Keep the power injector away from heat and humidity and free from vibration and dust.

> **Important:** When using the power adapter to power your system, you must connect the cables in the following sequence.

Procedure

1. Plug the AC power cord of the power adapter into the wall and use a network cable to connect the power adapter to the Poly Trio C60 system.
2. Connect the power adapter to the network with a CAT-5E or CAT-6 Ethernet cable.

   The power adapter LED glows green when the system is correctly powered.

1. If the power adapter LED glows yellow, the adapter is bypassed, and the system is drawing PoE power from the outlet.
3. Optional: Turn off the PoE network port or connect the Poly Trio system in the following sequence:

   a. Power up Poly Trio C60 using the power adapter, but don't plug the devices into the network wall port.

   b. Wait for the system to boot up.

   c. Plug the devices into the network wall port.

   d. Ensure the LED indicator on the power adapter is green.

Poly Trio System Power Management

Power available to Poly Trio systems is limited. You must choose how to power the system and which features to enable or disable.

Power management options vary between Poly Trio system models. Read the power requirements and options carefully to understand power for your Poly Trio system.

The Poly Trio C60 system supports powering the following types of devices:

- USB devices consuming < 2.5 W power
- USB port over current detection

USB Port Power Management

Device charging with the USB port on the Poly Trio C60 system is disabled by default. When disabled, the USB host port provides 100 mA of power for peripheral devices.

To enable USB charging, you must power your Poly Trio system with an IEEE 802.3at Power over Ethernet Plus (PoE+) compliant power source. When you enable USB charging, you can power and charge USB 2.0 compliant devices with a power draw up to 1.500 mA / 7.5 W.

Using POE Class 0 with Poly Trio C60

Powering the Poly Trio C60 system from a PoE Class 0 source provides full core functionality. The only limitation is that the LAN Out port doesn't provide PoE power.

Power-Saving on Poly Trio Systems

Power-saving automatically puts the phone into a low-power state to conserve energy when not in use.

When the phone is in power-saving mode, a steady yellow LED indicator displays. The phone returns to a full-power state after detecting user movement (based on changes in lighting), a button press, screen touch, or incoming call.

You can configure the following power-saving options for Poly Trio systems:

- Power-saving during workdays
- Power-saving during nonworking days
- Idle or inactivity time after which the phone enters power-saving mode

Note: Poly Trio systems can't enter power-saving mode while idle in the **Bluetooth** menu. To ensure the phone can enter power-saving mode, don't leave the phone idle in the **Bluetooth** menu.

You can configure the behavior of the LED indicator (see LED Behavior Patterns).

Power-Saving Parameters

Use the following parameters to configure power-saving features and feature options.

powerSaving.Enable

0 (default) - The paired device does not into power-saving mode.

1 - When the Poly Trio system enters power-saving mode, the paired device display switches to standby mode and powers up when the system exits power-saving mode.

powerSaving.idleTimeout.offHours

The number of idle minutes during off hours after which the phone enters power saving.

1 (default)

1 - 10

powerSaving.idleTimeout.officeHours

The number of idle minutes during office hours after which the phone enters power saving.

30 (default)

1 - 600

powerSaving.idleTimeout.userInputExtension

The number of minutes after the phone is last used after which the phone enters power saving.

10 (default)

1 - 20

`powerSaving.officeHours.duration.x`

Append the day of the week for *x*. For example,
`powerSaving.officeHours.duration.Monday`.

Set the duration of the office working hours by weekday.

Monday - Friday = 12 (default)

Saturday - Sunday = 0

0 - 24

`powerSaving.officeHours.startHour.x`

Specify the starting hour for the day's office working hours.

7 (default)

0 - 23

Set *x* to Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday (see
`powerSaving.officeHours.duration` for an example).

Rebooting the Phone at a Scheduled Time

You can configure Poly phones to reboot at a scheduled time, period, or days. With this feature, you can
schedule phones to reboot daily.

Scheduled Reboot Parameters

Use the following parameters to configure scheduled reboot times for Poly phones.

`prov.scheduledReboot.enabled`

0 (default)— Disables scheduled reboot.

1—Enables scheduled reboot.

`prov.scheduledReboot.periodDays`

Specify the time in days between scheduled reboots.

1 day (default)

1–365 days

`prov.scheduledReboot.time`

Specify a time to reboot the Poly phone. Use the 24 hour time format (hh:mm).

03:00 (default)

`prov.scheduledReboot.timeRandomEnd`

If this parameter is set to a specific time, the scheduled reboot occurs at a random time between the time set for `prov.scheduledReboot.time` and `prov.scheduledReboot.timeRandomEnd`. The time is in 24-hour format.

0–5 hours

hh:mm

Poly Trio System Port Usage with Skype for Business

Topics:

- [Inbound and Outbound Ports for Poly Phones with Skype for Business](#)
- [Real-Time Transport Protocol (RTP) Port Parameters for Skype for Business](#)
- [Client Media Port Ranges for QoE](#)

This section lists ports used by Poly phones and ports you can configure.

Inbound and Outbound Ports for Poly Phones with Skype for Business

This section provides port usage information when configuring network equipment to support Poly phones with Skype for Business.

For more information on port usage, visit the following articles on Microsoft TechNet:

- [Port and protocol requirements for servers](#)
- [Skype for Business Online and Microsoft Teams](#)

Inbound Ports for Poly Phones with Skype for Business

The following table lists the inbound IP ports currently used by Polycom UC Software running on the Poly phones with Skype for Business.

Inbound IP Ports

Inbound Port	Type	Protocol	Function	Default	Configurable Port Number
22	Static	TCP	SSH Administration	Off	No
80	Static	TCP	HTTP Pull Web interface, HTTP Push	Off	Yes
443	Static	TCP	HTTP Pull Web interface, HTTP Push	On	Yes
1023	Static	TCP	Telnet Diagnostics	Off	No
1024 - 65535	Dynamic	TCP/UDP	RTP media packets	On	Yes

Inbound Port	Type	Protocol	Function	Default	Configurable Port Number
1024 - 65535	Dynamic	TCP/UDP	RTCP media packets statistics	On	Yes
5060	Static	TCP/UDP	SIP signaling	On	No
5061	Static	TLS		On	No
8001	Static	TCP	SIP over TLS signaling	On	Yes mr.deviceMgmt. port
8150 - 8153	Static	TCP	Airplay audio control	On	No
8150 - 8153	Static	UDP	Airplay audio data	On	No

Outbound Ports on Poly Phones with Skype for Business

The following table lists the outbound IP ports currently used by Polycom UC Software running on the Poly phones with Skype for Business.

Outbound IP Ports

Outbound Port	Type	Protocol	Function	Default	Configurable Port number
21	Static	TCP	FTP Provisioning, Logs	On	No
22	Static	TCP	SSH	On	No
53	Static	UDP	DNS	On	No
67	Static	UDP	DHCP Server	On	No
68	Static	UDP	DHCP Client		No
69	Static	UDP	TFTP Provisioning, Logs		No
80	Static	TCP	HTTP Provisioning, Logs, Web Interface		No
123	Static	UDP	NTP time server		No

Outbound Port	Type	Protocol	Function	Default	Configurable Port number
389	Static	TCP/UDP	LDAP directory query		No
443	Static	TCP	HTTPS Provisioning, Logs, Web Interface		No
514	Static	UDP	SYSLOG		No
636	Static	TCP/UDP	LDAP directory query		No
1024 - 65535	Dynamic	TCP/UDP	RTP media packets	On	Yes
1024 - 65535	Dynamic	TCP/UDP	RTCP media packets statistics	On	Yes
5060		TCP/UDP	SIP signaling	On	
5061		TCP	SIP over TLS signaling	On	
5222	Static	TCP	Polycom RealPresence Resource Manager: XMPP	On	No
8001	Static	TCP	HTTPS for modular room provisioning	On	Yes mr.deviceMgmt. port
8150 - 8153	Static	TCP	Airplay audio control	On	No

Real-Time Transport Protocol (RTP) Port Parameters for Skype for Business

Use the following parameters to configure RTP packets and ports for the phones registered with Skype for Business.

tcpIpApp.port.rtp.lync.audioPortRangeStart

Determines the start port for the audio port range.

5350 (default)

1024 - 65436

tcpIpApp.port.rtp.lync.audioPortRangeEnd

Determines the end port for the audio port range.

5389 (default)

Min - 1024

Max - 65485

Client Media Port Ranges for QoE

To help deploy QoE, you can enable client media ports and configure unique port ranges on the Skype for Business Server.

Procedure

» Enable client media ports as shown in Configuring Port Ranges for your Microsoft Lync Clients in Lync Server 2013.

Phone Display Features

Topics:

This section explains features you can configure for the phone's screen display and lists parameters you can use to configure these features.

Time and Date Wizard

Users signing into Skype for Business on the phone 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.

Poly Trio System Time and Date Wizard Parameters

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

`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.

`device.lync.timeZone.set`

> 0 (default) - Do not use the `device.xxx` value.

> 1 (default) - 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) - Skype for Business Time Zone Control is enabled.

> 0 - Skype for Business Time Zone Control is disabled.

Setting up the Phone Theme

You can set the phone theme, labels, and colors that display on the user interface.

When the phone's Base Profile is set to Skype, the Skype for Business theme displays by default.

Theme Parameter

The following parameter configures the phone's theme.

up.uiTheme

Specifies the colors and icons used in the phone user interface. By default, the theme changes based on the set base profile. Poly doesn't recommend you change the default themes.

Default (default) - The phone displays the default Poly theme. Available for Generic and Skype for Business base profiles.

SkypeForBusiness - The phone displays the Skype for Business theme. Available for Generic and Skype for Business base profiles.

Poly Trio System Display Name

The system name displays in the Global menu of the Poly Trio systems and on monitor(s) connected to a paired accessory.

The system name also displays on any devices connected with the system wirelessly, such as Bluetooth-enabled or AirPlay-certified devices.

By default, the system name displays as Trio*<model number>*_xxxx where xxxx is the last four digits of the phone's MAC address.

You can configure the name that displays on the system, the connected monitor, and any devices wirelessly connected to the system. The name you configure for the system, using any of the following parameters, displays in the subsequent priority order:

- system.name
- reg.x.displayname
- reg.x.label
- reg.x.address
- Default system name

If you set the system name using the system.name parameter, the value you set displays for the system unless you configure a name to display for a specific feature.

Display Name Parameters

Set the phone name using one or more of following parameters.

bluetooth.device.name

Enter the name of the system that broadcasts over Bluetooth to other devices.

NULL (default)

UTF-8 encoded string

`reg.x.address`

The user part (for example, 1002) or the user and the host part (for example, `1002@poly.com`) of the registration SIP URI or the H.323 ID/extension for registration x.

Null (default)

string address

`reg.x.displayname`

The display name used in SIP signaling and/or the H.323 alias used as the default caller ID for registration x.

Null (default)

UTF-8 encoded string

`reg.x.label`

The text label that displays next to the line key for registration x.

The maximum number of characters for this parameter value is `256`; however, the maximum number of characters that a phone can display on its user interface varies by phone model and by the width of the characters you use. Parameter values that exceed the phone's maximum display length are truncated by ellipses (…). The rules for parameter `up.cfgLabelElide` determine how the label is truncated.

Null (default)

UTF-8 encoded string

`system.name`

The system name that displays at the top left corner of the monitor, and at the top of the Global menu of the phone.

Enter a string, maximum 96 characters.

Number or Custom Label

You can choose to display a number, an extension, or a custom label on the Home Screen below the time and date.

Configure the Number or Label from the System

You can configure the display of the number or label on the Home screen from the system menu.

Procedure
» Navigate to **Settings** > **Advanced** > **Administration Settings** > **Home Screen Label**.

Number and Label Parameters

You can configure display of the phone number or label on the Home screen using centralized provisioning parameters.

homeScreen.placeACall.enable

> 1 (default) - Specify Dial a Number label to display on the home screen.
>
> 0 - Does not display the label on the home screen.

homeScreen.customLabel

> Specify the label to display on the phone's Home screen when `homeScreen.labelType="Custom"`. The label can be 0 to 255 characters.
>
> Null (default)

homeScreen.labelLocation

> Specify where the label displays on the screen.
>
> StatusBar (default) - The phone displays the custom label in the status bar at the top of the screen.
>
> BelowDate - The phone displays the custom label on the Home screen only, just below the time and date.

homeScreen.labelType

> Specify the type of label to display on the phone's Home screen.
>
> PhoneNumber (default)
>
> • When the phone is set to use Lync Base Profile, the phone number is derived from the Skype for Business server.
>
> Custom - Enter an alphanumeric string between 0 and 255 characters into the `homeScreen.customLabel` parameter.
>
> PrimaryPhoneNumber – The status bar displays only the first phone number rather than all of the phone numbers.
>
> None - Don't display a label.

reg.1.useteluriAsLineLabel

> 1 - If `reg.x.label`="Null" the tel URI/phone number/address displays as the label of the line key.
>
> 0 - If `reg.x.label`="Null" the value for `reg.x.displayName`, if available, displays as the label. If `reg.x.displayName` is unavailable, the user part of `reg.x.address` is used.

up.formatPhoneNumbers

> 1 (default) - Enables automatic number formatting.
>
> 0 - Disables automatic number formatting and numbers display separated by "-".

Direct Inward Dialing Number

The Direct Inward Dialing (DID) number assigned to the user on the Skype for Business server displays on the Lock, Home, and Incoming Call screens.

You can configure the format of the DID number to display on phones using parameter. You can also configure the phone to display DID numbers on phone screens of your choice with parameter.

Direct Inward Dialing Number Parameters

Use the following parameters to configure DID number.

`up.DIDFormat`

NumberAndExtension (default) – Display the DID number and extension.

NumberOnly – Display the DID number on the phone screen.

`up.showDID`

AllScreens (default) – Display the DID number on all the screens.

None – Disable DID number on phone.

LockedScreen – Display the DID number on the lockscreen.

StatusScreen – Display the DID number on the Statusscreen/Idle screen.

LockedAndStatusScreen – Display the DID number onthe lock and Status/Idle screen.

Time Zone Location Description

There are two parameters that 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.

Time Zone Location Parameters

The following parameters configure time zone location.

Time Zone Location Parameter Values

Permitted Value	Time Zone Description
0	(GMT -12:00) Eniwetok,Kwajalein
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

Permitted Value	Time Zone Description
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
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

Permitted Value	Time Zone Description
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
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) Yekaterinburg (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

Permitted Value	Time Zone Description
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
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

Permitted Value	Time Zone Description
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

Reverse Name Lookup

You can configure the phone to display incoming caller names, outgoing recipient names, and the source location where the phone obtains names.

The phone displays all Skype for Business participant names for the following functions:

- CCCP conference calls
- Response group calls
- Team calls
- Voicemail
- Placed, Received, and Missed call lists

If the phone cannot match the number of the incoming or outgoing name to a name in your organization, the phone displays the name given in the SIP signaling.

If a user saves a contact to the phone's local contact directory, the call list displays that name regardless of the priority you configure.

Reverse Name Lookup Parameter

The following parameter configure Reverse Name Lookup.

`up.rnl.priority`

Outlook,SIP,ABS,Local (default)

This parameter overrides `up.useDirectoryNames` in the Skype Base Profile.

Enter a comma-separated string, no spaces, for components you want to enable with Reverse Name Lookup. If you misconfigure the string, the parameter value falls back to the default priority order. The string isn't case-sensitive and can include any of the following values, listed here in the default priority order the phone looks for a matching name:

For example, if you configure "ABS,SIP,Outlook,Local", the phone tries to match the incoming number with contact names in the order of components you list.

If you don't configure the value SIP as one of the values, and the phone doesn't obtain the contact name using any one of the others values you configure, the phone uses the name given in the SIP signaling.

If you configure this parameter as disabled to avoid look up from Outlook, ABS, and local sources, then the phone uses the contact name given in the SIP signaling.

Administrator Menu on Poly Trio Systems

On the Poly Trio systems, you can add the **Advanced** menu containing a subset of administrator settings.

The **Advanced** menu item does not require a password but one can be assigned to it.

After enabling this feature, the **Advanced** menu provides access to all administrator features except:

- Line Configuration
- Call Server Configuration
- TLS Security
- Test Automation

Administrator Menu Parameters

Use the following parameters to enable the **Administrator** or **Advanced** menu.

device.auth.localAdvancedPassword.set

> Set a password for the **Advanced** menu.
>
> 0 (default) - You cannot set a password for the **Advanced** menu.
>
> 1 - You can set a password for the **Administrator** menu.

device.auth.localAdvancedPassword

> Enter a password for the **Administrator** menu.
>
> Null (default)
>
> String (0 to 64 characters)

feature.advancedUser.enabled

> 0 (default) - The password-protected **Advanced** menu displays.
>
> 1 - Renames the **Advanced** menu item to **Admin** and adds a menu item **Advanced** that contains a subset of administrator features.
>
> The **Advanced** menu does not require a password, but you have the option to assign one to it.

Poly Trio System Security

Topics:

Polycom UC Software enables you to optimize Microsoft security settings.

Locking Phone Ports and Interface

You can make the Poly phone more secure by disabling Wi-Fi, Bluetooth, USB host, and USB device ports.

Phone Port Lock and Interface Parameters

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

`feature.usb.host.enabled`

Use the host port for USB headset, memory sticks, mouse, keyboards, and charging your devices.

1 (default) - The USB host port is enabled.

0 - The USB host port is disabled.

`feature.usb.device.enabled`

The device port allows you to use the phone as an audio device for your laptop.

1 (default) - The USB device port is enabled.

0 - The USB device port is disabled. When you disable the USB device port, the USB Connections settings do not display on the phone at **Settings** > **Advanced** > **Administration Settings** > **USB Computer Connections**.

`feature.bluetooth.enabled`

1 (default) - The Bluetooth feature is enabled. When enabled, the Bluetooth menu shows in the phone user interface.

0 - The Bluetooth feature is disabled.

`device.wifi.enabled`

> 0 - Wi-Fi is disabled.

> 1 - Wi-Fi is used instead of wired Ethernet for VoIP calls.

Accessing the Web Configuration Utility

When the Base Profile of a phone is set to **Skype for Business** or **SkypeUSB**, access to the Web Configuration Utility is disabled by default.

Administrators must enable access to a phone's Web Configuration Utility from the phone menu system or using configuration parameters.

If a phone Base Profile is set to **Skype for Business** or **SkypeUSB**, or you 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. This password is not the Skype for Business 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.

Related Links

Enable Access to the Web Configuration Utility From the Phone Menu

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

Procedure

1. On the phone, go to **Settings** > **Advanced**.
2. Enter the administrator password .
3. Select **Administration Settings** > **Web Server Configuration**.

   Web Server and Web Config Mode display.
4. Set **Web Server** to **Enabled**.
5. Set **Web Config Mode** to **HTTP Only**, **HTTPS Only**, or **HTTP/HTTPS** and tap the back button..
6. Select **Save Config** to save the web server configuration on the phone.

Configuring the Web Configuration Utility

The security update for Skype for Business includes a device parameter and a corresponding `device.set` parameter.

Poly recommends using `device.*` parameters only if you are familiar with the centralized provisioning method and with Polycom UC Software.

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

device.sec.coreDumpEncryption.enabled

    0 (default)

    1

device.sec.coreDumpEncryption.enabled.set

    0 (default)

    1

httpd.cfg.enabled

    Base Profile = Skype

    0 (default) - The Web Configuration Utility is disabled.

    1 - The Web Configuration Utility is enabled.

httpd.cfg.secureTunnelRequired

    1 (default) - Access to the Web Configuration Utility is allowed only over a secure tunnel (HTTPS) and non-secure (HTTP) is not allowed.

    0 - Access to the Web Configuration Utility is allowed over both a secure tunnel (HTTPS) and non-secure (HTTP).

httpd.enabled

    Base Profile = Skype

    0 (default) - The web server is disabled.

    1 - The web server is enabled.

Device Lock for Skype for Business

You can configure phones to be protected with a lock code that enables users to access personal settings from different phones.

You must enable Device Lock on the Skype for Business server. After you enable Device Lock, you can enable or disable Device Lock and configure options for your phones using Poly parameters. You cannot enable or disable Device Lock using the Web Configuration Utility.

Device Lock is enabled by default for Skype for Business. If you enable Phone Lock and Device Lock for Skype for Business at the same time on a phone with the Base Profile set to Skype, the Device Lock feature takes precedence over Phone Lock.

Administrators can configure phone behavior after six unsuccessful user unlock attempts. If users forget their lock code, they can reset it from the phone when signed in to their Skype for Business account. If users sign in to their Skype for Business account using the Web Sign-In method, they cannot reset their lock code from the phone.

Users must sign into the phone before using Device Lock. If a phone restarts or reboots after a user sets the lock code, the phone is locked after the restart or reboot. Users can lock the phone from the phone screen or Skype for Business client when the phone and computer are connected using BToE. If Device Lock is used in conjunction with BToE, the phone and computer always remain synchronized if either the phone or computer restarts or reboots. If the BToE connection is broken between phone and computer, the phone is locked.

You can also:

- Define authorized outbound emergency numbers from a locked device
- Set up a minimum lock code length on the Skype for Business server

Profile Photo on Device Lock Screen

When a user is signed in to their Skype for Business account, that user's Microsoft Exchange or public website profile photo displays on the Lock screen.

The profile photo appears when the Device Lock feature and the Microsoft Exchange Service are enabled. Profile photos set using Active Directory are not supported and do not display on the phone.

Adding Authorized Emergency Contacts on a Locked Device

You can configure emergency contact numbers that users can call on a locked device in one of two ways.

- Create a policy for emergency numbers on the Skype for Business Server. Note that this method must be supported by a voice routing trunk configuration.
- Create an authorized list for a line by configuring the value of the parameter `phoneLock.authorized.x.value` to a Tel URI or SIP URI, for example, `phoneLock.authorized.1.value="cwi57@cohovineyard.com"`.

When the Base Profile of the phone is set to Skype for Business, you can configure the phone to set the order of display for the authorized emergency numbers when the device is locked.

Device Lock for Skype for Business Parameters

The following parameters configure the Skype for Business Device Lock feature.

`feature.deviceLock.enable`

Enables or disables the Device Lock feature on the phone.

1 (default) - Device Lock is enabled.

0 - Device Lock is disabled.

`phoneLock.authorized.x.value`

Specify a registered line for 'x' and an authorized call list when the device is locked using a Tel URI or SIP URI, for example, `phoneLock.authorized.1.value="cwi57@cohovineyard.com"`.

`up.btoeDeviceLock.timeOut`

Configure a time delay after which the phone locks when the user locks the computer paired with the phone.

10 seconds (default)

0 - 40 seconds

`up.configureDeviceLockAuthList`

EmergencyNumberAtTop (default) - The E911 emergency number will be displayed followed by authorized numbers when the phone is locked.

EmergencyNumberAtBottom - The authorized numbers will be displayed followed by the E911 number when the phone is locked.

EmergencyNumberDisabled - Only the authorized numbers will be displayed when the phone is locked.

`up.deviceLock.createLockTimeout`

Specify the timeout in minutes after which the Create Lock Code screen disappears and the user is signed out.

0 (default) - No timeout for the Create Lock Code prompt.

0 - 3 minutes - If the user does not provide input to the Create Lock Code within the time you specify, the Create Lock Code screen disappears and the user is signed out of the phone.

`up.deviceLock.signOutOnIncorrectAttempts`

Specify whether to sign out the user from the phone after six unsuccessful attempts to unlock the phone.

0 (default) - After six unsuccessful unlock attempts, the phone displays a message indicating a countdown of 60 seconds after which the user can attempt to unlock the phone.

1 - After six unsuccessful unlock attempts, the user is signed out of the phone, must sign in again, and is prompted to create a new lock code.

Smart Login on Poly Phones

Smart Login 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.

Administrator and User Passwords

Administrator and user passwords control two levels of access to certain configuration menus in your Poly Trio system.

The administrator password grants full access to all configuration settings available on your system, and the user password grants limited access to configuration settings.

When you first power on a new Poly Trio system or following a factory reset, the system displays a message prompting you to change the default administrator password. You must change the default administrator password to a unique password to access the Poly Trio local interface and system web interface. You can't use the default administrator password again.

You must have a user or administrator password before you can access certain menu options on the phone and in the system web interface. The default passwords are:

- Administrator password: `456`
- User password: `123`

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

- The pop-up prompt when the phone first registers
- Phone menu
- System web interface (default user password only)
- Use the parameter `reg.1.auth.password`

You can use an administrator password where a user password is required to see all the user options. While you can use the user password where the administrator password is required, the phone displays a limited set of menu options. Note that the system web interface displays different features and options depending on which password you use.

When you set the **Base Profile** to `SkypeUSB`, you can set the keyboard entry mode for the password in the **Advanced** menu on the phone.

Change the Administrator Password on the Phone Menu

If the Poly Trio system uses the default administrator password, you can't use the local interface or the system web interface until you change it.

Procedure

1. On the phone, go to **Settings** > **Advanced** and enter the current administrator password.
2. Select **Change Admin Password**.
3. Enter the current password, enter a new password, and confirm the new password.

   Passwords can contain uppercase and lowercase letters, numerals, and special characters (`!`, `#`, `%`, `$`, etc.).

   Passwords cannot contain non-ASCII characters (Ã, ç, ë, etc.) or chevrons (`<`, `>`).

Change the User Password on the System

You can change the user password at any time from the **Advanced** settings menu.

Procedure

1. On the phone, go to **Settings** > **Advanced**.
2. Enter your user password and select **Enter**.
3. Select **Change User Password**.
4. On the **Change User Password** screen, enter your old and new user password and select **Enter**.

   Passwords can contain uppercase and lowercase letters, numerals, and special characters (`!`, `#`, `%`, `$`, etc.).

   Passwords cannot contain non-ASCII characters (Ã, ç, ë, etc.) or chevrons (`<`, `>`).

Change the Administrator Password in the System Web Interface

You can change the administrator password on a per-phone basis using the system web interface.

If the default administrator password is in use, you can't use the system web interface.

Procedure

1. Enter your phone's IP address into a web browser.
2. Select **Admin** as the login type, enter the administrator password, and click **Submit**.
3. Select **Settings** > **Change Password**.
4. Select **Admin**.
5. Enter the current password into the **Old Password** field.
6. Enter the **New Password** and confirm it.

    Passwords can contain uppercase and lowercase letters, numerals, and special characters (`!`, `#`, `%`, `$`, etc.).

    Passwords cannot contain non-ASCII characters (Ã, ç, ë, etc.) or chevrons (`<`, `>`).

7. Select **Save**.

Change the User Password in the System Web Interface

You can change the user password on a per-phone basis using the system web interface.

Procedure

1. Enter your phone's IP address into a web browser.
2. Select **Admin** as the login type, enter the administrator password, and click **Submit**.
3. Select **Settings** > **Change Password**.
4. Select **User**.
5. Enter the **New Password** and confirm it.

    Passwords can contain uppercase and lowercase letters, numerals, and special characters (`!`, `#`, `%`, `$`, etc.).

    Passwords cannot contain non-ASCII characters (Ã, ç, ë, etc.) or chevrons (`<`, `>`).

6. Select **Save**.

Administrator and User Password Parameters

Use the following parameters to set the administrator and user password and configure password settings.

`sec.pwd.length.admin`

The minimum character length for administrator passwords changed using the phone. Use 0 to allow null passwords.

1 (default)

0 -32

Change causes system to restart or reboot.

sec.pwd.length.user

The minimum character length for user passwords changed using the phone. Use 0 to allow null passwords.

2 (default)

0 -32

Change causes system to restart or reboot.

up.echoPasswordDigits

1 (default) The phone briefly displays password characters before masking them with an asterisk.

0 - The phone displays only asterisks for the password characters.

device.auth.localAdminPassword

Specify a local administrator password.

0 - 32 characters

You must use this parameter with: `device.auth.localAdminPassword.set="1"`

device.auth.localAdminPassword.set

0 (default) - Disables overwriting the local admin password when provisioning using a configuration file.

1 - Enables overwriting the local admin password when provisioning using a configuration file.

Securing Audio Using Master Key Identifier (MKI)

For secure audio communications, phones offer support for the crypto header with or without an MKI in the SDP offer.

The following optional parameter allows you 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.

sec.srtp.mki.enabled

1 (default) - The 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 - The phone offers only one non-MKI crypto in the SDL offer.

SCEP Security Protocol

The Simple Certificate Enrollment Protocol (SCEP) enables you to automatically and securely provision multiple phones with a digital device certificate.

SCEP Parameters

Use the following parameters to configure SCEP.

SCEP.CAFingerprint

Configure the CA certificate fingerprint to confirm the authenticity of the CA response during enrollment.

null (default)

0 - 255 characters

SCEP.certPoll.retryCount

Specify the number of times to poll the SCEP server when the SCEP server returns a Certificate Enrollment Response Message with pkiStatus set to `pending`.

12 (default)

1 - 24

SCEP.certPoll.retryInterval

Specify the number of seconds to wait between poll attempts when the SCEP server returns a Certificate Enrollment Response Message with pkiStatus set to `pending`.

300 (default)

300 - 3600

SCEP.certRenewalRetryInterval

Specify the time interval to retry certificate renewal.

86400 minutes (default)

28800 - 259200 minutes

SCEP.certRenewalThreshold

Specify the percentage of the certificate validity interval to initiate a renewal.

80 (default)

50 - 100

SCEP.challengePassword

Specify the challenge password to send with the Certificate Signing Request (CSR) when requesting a certificate.

null (default)

0 - 255 characters

SCEP.csr.commonName

Specify the common name to use for CSR generation.

null (default)

0 - 64

SCEP.csr.country

Specify the country name to use for CSR generation.

null (default)

0 - 2

SCEP.csr.email

Specify the email address to use for CSR generation.

null (default)

0 - 64

SCEP.csr.organization

Specify the organization name to use for CSR generation.

null (default)

0 - 64

SCEP.csr.state

Specify the state name to use for CSR generation.

null (default)

0 - 128 characters

SCEP.enable

0 (default) - Disable the SCEP feature.

1 - Enable the SCEP feature.

SCEP.enrollment.retryCount

Specify the number of times to retry the enrolment process in case of enrolment failure.

12 (default)

1 - 24

SCEP.enrollment.retryInterval

Specify the time interval to retry the enrolment process.

300 seconds (default)

300 - 3600 seconds

`SCEP.http.password`

Specify the password that authenticates with the SCEP server.

null (default)

string, max 255 characters

`SCEP.http.username`

Specify the user name that authenticates with the SCEP server.

null (default)

string, max 255 characters

`SCEP.url`

Specify the URL address of the SCEP server accepting requests to obtain a certificate.

null (default)

0 - 255 characters