

# Poly Edge B Series IP Phones

**Administrator Guide** 

PVOS Lite 1.1.0 | June 2023 | 3725-49314-002A

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# Before You Begin

This guide describes how to administer, configure, and provision Poly Edge B Series IP phones.

This guide focuses on the following Poly devices:

- Poly Edge B10
- Poly Edge B20
- Poly Edge B30

# **Related Poly and Partner Resources**

See the following sites for information related to this product.

- Poly Support is the entry point to online product, service, and solution support information. Find product-specific
  information such as Knowledge Base articles, Support Videos, Guide & Manuals, and Software Releases on the
  Products page, download software for desktop and mobile platforms from Downloads & Apps, and access additional
  services.
- The <u>Poly Documentation Library</u> 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 <u>Poly Community</u> 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 <u>Poly Partner Network</u> is a program where resellers, distributors, solutions providers, and unified communications providers deliver high-value business solutions that meet critical customer needs, making it easy for you to communicate face-to-face using the applications and devices you use every day.
- <u>Poly Services</u> help your business succeed and get the most out of your investment through the benefits of
  collaboration. Enhance collaboration for your employees by accessing Poly service solutions, including Support
  Services, Managed Services, Professional Services, and Training Services.
- With <u>Poly+</u> you get exclusive premium features, insights and management tools necessary to keep employee devices up, running, and ready for action.
- <u>Poly Lens</u> enables better collaboration for every user in every workspace. It is designed to spotlight the health and efficiency of your spaces and devices by providing actionable insights and simplifying device management.

# **Privacy Policy**

Poly complies with applicable data privacy and protection laws and regulations.

Poly products and services process customer data in a manner consistent with the <u>Poly Privacy Policy</u>. Please direct comments or questions to <u>privacy@poly.com</u>.

# Trunks, Endpoints, and Terminals Usage

The phone and the auto attendant are considered **endpoints** where calls can terminate, and **trunks** rely on the corresponding service providers to terminate the call.

Like the trunks, each endpoint is represented by a two-letter abbreviation and an instance identifier equal to 1:

- PH = phone
- AA = auto attendant

Unless stated otherwise, abbreviated endpoint names are case insensitive.

A trunk or an endpoint is also referred to as a terminal in this document.

# **ITSP Profiles/SP Services**

Configure as many as six SIP/SP service accounts for your phones.

In this document and in the system web interface, internet telephony service provider (ITSP) is used generically to describe the logical entity providing the SIP trunk service to your phone. When your phone is used with an IP PBX, ITSP refers to the IP PBX.

Each ITSP configuration is grouped as an ITSP profile. There are six ITSP profiles available: ITSP profile A, B, C, D, E, and F. SP service account specifics are grouped under the heading SPn service, where n = 1 to 6.

ITSP profiles include the following parameters:

- ProxyServer
- OutboundProxy
- DigitMap

Note: ITSP profiles don't include account-specific parameters.

SP services include the following account-specific parameters:

- AuthUserName (usually, but not necessarily, the same as the phone number of the account)
- AuthPassword
- CallerIDName

You must set the following parameters to enable the phone to the SPn service using ITSP profile X, where X = A to F and n = 1 to 6:

- ITSP Profile X SIP::ProxyServer = <value>
- SPn Service::Enabled = true (or selected in the system web interface)
- SPn Service::AuthUsername = <value>

**Note:** If you don't set these parameters, your phone considers the service disabled.

If two SP services use the same ITSP, you may be able to refer both SP services to the same ITSP profile. However, if abstraction of an ITSP profile isn't sufficient to cover a specified ITSP, configure multiple ITSP profiles for the same ITSP and have each individual SP service using that ITSP to point to a different ITSP profile.

# **Getting Started**

Poly Edge B Series IP phones with Poly Voice Software Lite (PVOS Lite) are monochromatic desktop phones that support **Home** screen paging, the OPUS codec, Acoustic Fence, five-way audio conferencing, and cloud management.

Manage and configure Poly Edge IP phones from the phone's local interface, the system web interface, Poly Device Management Service for Service Providers (PDMS-SP), or Poly Lens.

## **Phone Overview**

Poly Edge B Series IP phones support the following features and functionalities.

- Two line keys on Poly Edge B10 and B20 phones and four line keys on Poly Edge B30 phones
- Three additional virtual line key pages, expanding the number of line keys on Poly Edge B10 and B20 phones to 8 and Poly Edge B30 phones to 16
- Suited for all service provider and enterprise deployment environments, regardless of size
- Ideal for self-service installations—home users, small business owners, or corporate IT departments
- Support for standard SIP-based IP PBX and ITSPs/VSPs
- Six SIP accounts with universal inter- and intraservice two-way call bridging among the six accounts and the PDMS-SPservice
- Cloud management enabled via the PDMS-SP service with both a user portal and an ITSP partner portal
- Recursive digit maps and associated call routing (outbound and inbound)
- VoIP network management for endpoint devices and applications
- High-quality voice encoding using G.711, G.722, G.729, iLBC, and Opus codecs
- Background firmware updates and remote device management
- Fully programmable line keys and softkeys
- Programmable feature keys with preassigned functions and labels

# **Configuration Options**

Configure and manage your Edge B Series IP phones using either the phone's local interface, the system web interface, or the PDMS-SP portal.

Choose the method that best suits your deployment scenario.

# Find the Phone's IP Address

To access the device local interface and system web interface, you must have the IP address of your phone.

Each phone must have a valid IPv4 address to connect to the network and communicate with other devices or cloud-based services.

# Task

- » Do one of the following:
  - Press Home , then go to Product Info.
  - Press Home , then go to Settings > Network.
  - Dial \*\*\*, then select option 1 to enter the **Voice Admin** menu.

# Access the Phone's Local Interface

Access and configure Edge B Series IP phones using the phone's local interface.

- 1 Press the **Home** key , then go to **Settings**.
- 2 Configure and make changes to your device as necessary.

**Note:** Use the same administrator password you use for the system web interface to access the **Voice Services** and **Device Administration** options in the phone's local interface.

# **Access the System Web Interface**

All Poly phones have a system web interface that you can access from a standard web browser.

You must first obtain your phone's IP address to access system web interface.

The system web interface offers configurable options and status information organized into a number of web pages. There are many configurable parameters available on the phone, organized into a number of device configuration web pages. By browsing through the web pages, view all the parameters that you can configure and read or set their values.

The phone's system web interface will prompt you to change the admin password on initial boot up or factory reset, if it's not automatically changed via Zero-Touch Provisioning (ZTP), PDMS-SP, or ITSP provisioning.

**Note:** You must submit changes made on each configuration page before moving to another page. Otherwise, you lose any changes you made when you navigate to another page. Most changes require a restart of the phone to take effect.

#### Task

- 1 Enter your phone's IP address into a web browser.
- When prompted, enter the username and password.

  The default username is admin, and the default password is admin.

#### **Access the PDMS-SP Portal**

PDMS-SP is a device management portal website that serves Poly customers and service providers deploying Poly devices.

PDMS-SP uses remote provisioning to manage Poly devices. It stores or dynamically generates on demand a configuration file for each managed device and periodically checks in with the PDMS-SP server for configuration updates.

Register your phones on PDMS-SP, which enables you to access all your phones without having to enter the URL http:// Device-IP-Address/ for each phone. Once you add your devices on PDMS-SP, you can manage them on the PDMS-SP portal. The appearance between the PDMS-SP portal and the system web interface is different, but administrators have identical access to settings.

#### Task

- 1 In a web browser, enter the URL https://www1.obitalk.com.
- 2 Enter your username and password.
- 3 Select Sign in.

# Registering the System with Poly Lens

Poly Lens provides cloud-based management and insights for your system.

You can register your system with Poly Lens during system setup or on the Poly Lens registration page. For more information, see <u>Poly Lens Help</u>.

# Register Using the PIN Code

Register your phone to Poly Lens using a PIN code.

- 1 In the Poly Edge B system web interface, go to **Status > System Status**.
- 2 Under Product Information, take note of the OnboardingCode value in PolyLensStatus.
- 3 Go to <a href="https://lens.poly.com/go">https://lens.poly.com/go</a> on your web browser.
- 4 Sign in to your Poly Lens account.
- 5 Enter the **OnboardingCode** value for **Device PIN** on the Poly Lens device registration page.
- 6 Complete the other fields in the Poly Lens device registration page.

# 7 Select Register Device.

# Register Using Provisioning

You can also register Poly Edge B phones to Poly Lens using provisioning.

#### Task

- 1 In the Poly Edge B system web interface, go to System Management > Auto Provisioning.
- 2 Under ITSP Provisioning, enter the Poly Lens device provisioning URL for the UCSServer, field using the following format: https://<ServerUser>:<ServerPassword>@<ProvisioningServerAddress>
  - Find the ServerUser, ServerPassword, and ProvisioningServerAddress details in your Poly Lens account.
- 3 Select Submit.
- 4 Reboot your system.

# Enable Network and SIP Service Reports to Poly Lens

Configure your phone to report network and SIP service information to Poly Lens.

#### Task

- 1 In the system web interface, go to **System Management > Device Admin**.
- 2 Under Poly Cloud, in the Value column, enter one or more of the following values to DataTypesToUpload:
  - all = both network information and SIP service information
  - service = SIP service information
  - ni = Network information
- 3 Select Submit.
- 4 Reboot your system when you complete your changes.

# Apply Web Proxy Configuration for Poly Lens Communication

Configure Edge B to communicate with Poly Lens through the configured web proxy server.

#### Task

- 1 In the system web interface, go to **System Management > Device Admin**.
- 2 Under Poly Cloud, in the Value column, check the box for ApplyProxyServerCfg.
- 3 Select Submit.
- 4 Reboot your system when you complete your changes.

# Poly Edge B Series IP Phones Key Layout

The following figure and table show the available phone key functions.

IDs that have no function are described as n/a.

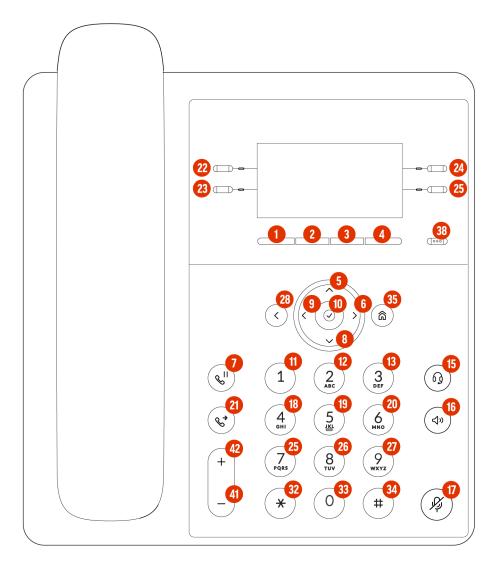


Figure 1: Poly Edge B Series IP Phones Key Layout

# Poly Edge B Series IP Phones Default Key Functions

Function	KEY ID	Function	KEYID	Function
SoftKey1	15	Headset	29	
SoftKey2	16	Handsfree	30	
SoftKey3	17	MicMute	31	
SoftKey4	18	Dialpad4	32	DialpadStar
ArrowUp	19	Dialpad5	33	Dialpad0
ArrowRight	20	Dialpad6	34	DialpadPound
Hold	21	Transfer	35	Home
	SoftKey1 SoftKey2 SoftKey3 SoftKey4 ArrowUp ArrowRight	SoftKey1       15         SoftKey2       16         SoftKey3       17         SoftKey4       18         ArrowUp       19         ArrowRight       20	SoftKey1 15 Headset  SoftKey2 16 Handsfree  SoftKey3 17 MicMute  SoftKey4 18 Dialpad4  ArrowUp 19 Dialpad5  ArrowRight 20 Dialpad6	SoftKey1       15       Headset       29         SoftKey2       16       Handsfree       30         SoftKey3       17       MicMute       31         SoftKey4       18       Dialpad4       32         ArrowUp       19       Dialpad5       33         ArrowRight       20       Dialpad6       34

KEY ID	Function	KEYID	Function	KEYID	Function
8	ArrowDown	22	Line1	36	n/a
9	ArrowLeft	23	Line2	37	n/a
10	Select	24	Line3	38	Page
11	Dialpad1	25	Line4	39	
12	Dialpad2	26	Dialpad8	41	VolDown
13	Dialpad3	27	Dialpad9	42	VolUp
14		28	Back		

# Setting Up the Phone

After you set up and power on your phone, configure its features.

For more information about setting up your phone, see your product's setup documentation at the <u>Poly Online Support Center</u>.

# **Power Your Phone**

Power your phone using the provided AC power adapter or using Power over Ethernet (PoE).

#### Task

- » Do one of the following:
  - Plug a PoE cable to the phone's **SW** Ethernet switch port.
    - Edge B10 doesn't support PoE.
  - Plug your phone's AC power adapter into a power source.

Note: Use either the AC power adapter or the PoE cable as a power source, but not both.

# **Configure the Primary Line**

Configure the primary line as the default service used to make calls when users aren't using an explicit access code prefix.

Substitute the reserved name *pli*, which is found in the phone DigitMap and OutboundCallRoute parameters, by the corresponding name of the primary line:

Primary Line	Parameter Value
SP1	sp1
SP2	sp2
SP3	sp3
SP4	sp4
SP5	sp5
SP6	sp6
PDMS-SP	рр
Trunk Group 1	tg1
Trunk Group 2	tg2

### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 In the Value column for the PrimaryLine parameter, select the service you want to set as the primary line.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Set the Line Capacity**

Set the line capacity to configure the maximum number of simultaneous calls that can be active per line. Some of the calls may be on hold.

- 1 In the system web interface, go to Voice Services > SPN Service > Calling Features.
- 2 In the **Default** column, clear the checkbox for MaxSessions.
- 3 In the **Value** column for the MaxSessions parameter, enter the maximum number of simultaneous calls to allow on the service. This includes the maximum number of simultaneous sessions that the endpoint can conference with.

**Note:** Set the number equal to or less than what the underlying service provider can support. The default value is 4 for all SPx Service lines and 2 for the PDMS-SP service. For the PDMS-SP service, the maximum value is 4.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Set Service Account Credentials**

All SP services require credentials. You must configure a username for SP service accounts.

#### Task

- 1 In the system web interface, go to **Voice Services > SPn Service > Credentials** (where n = 1 to 6 services).
- 2 In the Value column, configure the following parameters:

Parameter	Description
AuthUserName	Enter a username to authenticate the connection to the server.
AuthPassword	(Optional) Enter a password to authenticate the connection to the server
URI	Set a username if the username for SIP authentication is different from the account username.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure SIP Login**

Enable SIP Login for a particular SIP line so that users can log in to their phone extensions from the phone UI. The phone performs SIP registration for the SIP line based on the extension and the password entered by the user.

- 1 In the system web interface, go to Voice Services > SPn Service > Credentials.
- 2 In the Value column, configure the following parameters:

Parameter	Description
AuthUserName	Optional: Enter a default user name to use when the user is not logged in.
	If configured, the phone registers to the default AuthUserName when executing the SIP logout of the current user.
AuthPassword	Optional: Enter a default password to use when the user is not logged in.
	If configured, the phone registers to the default AuthPassword when executing the SIP logout of the current user.
URI	Ensure that this parameter is not configured when enabling SIP Login.
X_SIPLoginEnable	Enable SIP Login for the line.
	You can enable SIP Login for multiple lines.

Parameter	Description
X_SIPLoginExpires	Optional: Enter the duration time in seconds for the length of time that the phone remains idle before the current SIP Login user is logged out.
	The idle state is defined as the period during which there is no key input or phone call.
X_CallFeaturePreferenceMenu	Optional: Enable the user to view the line information in the <b>User Preferences</b> menu.

- 3 To show the SIP Login softkey on the **Home** screen, complete the following steps:
  - A Go to IP Phone > Phone Settings > User Preferences Settings.
  - **B** In the **Value** column, configure the following parameter:

Parameter	Description
SIPLoginFeatureProvider	Select the corresponding SIP line for the <b>Home</b> screen login softkey.
	The <b>Home</b> screen login softkey applies to one SIP line only.

- C Go to IP Phone > Soft Keys > Soft Key Sets.
- **D** In the **Value** column, configure the following parameter:

Parameter	Description
Home	Enter the keyword $siplogin$ in the list of softkeys that are available on the <b>Home</b> screen.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# UC Software Configuration on Poly Edge B Series IP Phones

You can use your UC Software provisioning server and configuration files to provision and configure features on Edge B series IP phones.

Using UC Software configuration files, you can provision and configure your phones, and you can include a mix of UC Software parameters and OBi Edition parameters within the configuration file.

# **Creating Configuration Files**

Create a configuration file that includes a mixture of UC Software and OBi parameters.

Use a small subset of UC Software parameters to configure your phones, mainly for registering the phone with a SIP service. Then use OBi parameters in UC Software parameter syntax to configure any additional features you want to include on your phone.

**Important:** Define OBi parameters using the UC Software parameter syntax when using the UC Software configuration file.

The following code is an example configuration with both UC Software parameters in standard XML format and OBi parameters in the same format as UC Software parameters.

```
<?xml version="1.0" encoding="utf-8" standalone="yes"?>
<PHONE CONFIG>
<config
tcpIpApp.sntp.address="ntp.poly.com"
reg.1.server.1.address="server.poly.com"
reg.1.address="0123456789"
reg.1.auth.userId="0123456789"
reg.1.auth.password="poly"
reg.1.broadsoft.userId="0123456789@server.polycom.com"
reg.1.server.1.transport="TCPOnly"
</config>
<OBiParameterList
VoiceService.1.VoiceProfile.6.SIP.ProxyServer="i3.voip.polycom.com"
VoiceService.1.VoiceProfile.6.SIP.ProxyServerPort="5066"
VoiceService.1.VoiceProfile.6.SIP.ProxyServerTransport="TLS"
VoiceService.1.VoiceProfile.1.Line.6.X_LineName="i3"
VoiceService.1.VoiceProfile.1.Line.6.X ServProvProfile="F"
</OBiParameterList>
</PHONE CONFIG>
```

# **Configure the UC Software Provisioning Server Address**

Configure the Edge B to request and download a UC Software configuration file. It first requests the MAC.cfg or 0000000000.cfg (if it doesn't find MAC.cfg on the server) primary configuration file at the configured provisioning server address. Then it requests any configuration files listed in the CONFIG\_FILES attribute.

- 1 In the system web interface, go to **System Management > Auto Provisioning**.
- 2 Under ITSP Provisioning, clear the check boxes in the Default column for the following settings:
  - ProvisioningOption
  - UCSServer
- 3 In the Value column, configure the following settings:

Parameter Name	Value
ProvisioningOption	UCSServer
UCSServer	The URL of the path to the primary configuration file on the provisioning server. For example, <a href="https://provisioning.example.com/poly/edge-b">https://provisioning.example.com/poly/edge-b</a>

#### 4 Select Submit.

# Add Poly Edge B Series IP Phones to Your Primary Configuration File

Add Edge B Series IP phones to your UC Software primary configuration file to fetch the latest firmware and configuration files on your provisioning server.

Add the phone firmware and configuration files to your provisioning server.

#### Task

1 In your primary configuration file (MAC.cfg or 00000000000.cfg), enter the following parameters and values:

```
APP_FILE_PATH_EdgeB10="<Edge B10 firmware file name>.fw"

CONFIG_FILES_EdgeB10="<Name of Edge B10 configuration file>.cfg"

APP_FILE_PATH_EdgeB20="<Edge B20 firmware file name>.fw"

CONFIG_FILES_EdgeB20="<Name of Edge B20 configuration file>.cfg"

APP_FILE_PATH_EdgeB30="<Edge B30 firmware file name>.fw"

CONFIG_FILES_EdgeB30="<Name of Edge B30 configuration file>.cfg"
```

2 Save the configuration file.

# **Supported UC Software Parameters**

Poly Edge B series IP phones support a small list of UC Software parameters.

**Note:** For the reg.x.server.y.\* parameters, Poly Edge B series phones only support configuring the system to only one server, so use reg.1.server.1. for all related parameters.

# call.directedCallPickupMethod

Specifies how the phone performs a directed call pick-up from a BLF contact.

legacy - Indicates that the phone uses the method specified in the call.directedCallPickupString parameter.

native - Indicates that the phone uses a native protocol method (in this case SIP INVITE with the Replaces header.

#### call.directedCallPickupString

The star code to initiate a directed call pickup.

\*97

**Note:** The default value supports the BroadWorks calls server only. You must change the value if your organization uses a different call server.

# call.parkedCallRetrieveMethod

The method the phone uses to retrieve a BLF resource's call that has dialog state confirmed.

legacy (default) - Indicates that the phone uses the method specified in call.parkedCallRetrieveString.

native - Indicates that the phone uses a native protocol method (in this case, SIP INVITE with the Replaces header).

# call.parkedCallRetrieveString

The star code that initiates retrieval of a parked call.

Null

Permitted values are star codes.

# call.parkedCallString

The star code to initiate the call park.

String

\*68

Change causes system to restart or reboot.

# device.dns.altSrvAddress

Sets the secondary server where the phone directs DNS queries.

Server Address

Change causes system to restart or reboot.

# device.dns.serverAddress

Sets the primary server where the phone directs DNS queries.

Server Address

Change causes system to restart or reboot.

# device.prov.serverName

IP address

Domain name string

URL

If you modify this parameter, the phone provisions again. The phone also reboots if the configuration on the provisioning server changes.

# device.sntp.serverName

Enter the SNTP server where the phone obtains the current time.

IP address

Domain name string

# feature.directedCallPickup.enabled

0 (default) - Disables the directed call pickup feature.

1 - Enables the directed call pickup feature.

Change causes system to restart or reboot.

# 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.

Null (default)

String address

# reg.x.broadsoft.userId

Enter the BroadSoft user ID to authenticate with the BroadSoft XSP service interface.

Null

string

# reg.x.displayName

The display name used in SIP signaling and the label that displays on the phone key line.

Null

UTF-8 encoded string

# reg.x.label

The text label that displays next to the line key for registration x.

Null

UTF-8 encoded string

# reg.x.outboundProxy.address

The IP address or hostname of the SIP server where the phone sends all requests.

Null

IP address or hostname

# reg.x.outboundProxy.port

The port of the SIP server where the phone sends all requests.

0

1 to 65535

# reg.x.outboundProxy.transport

The transport method the phone uses to communicate with the SIP server.

**DNSnaptr** 

DNSnaptr, TCPpreferred, UDPOnly, TLS, TCPOnly

# reg.x.server.1.address

If this parameter is set, it takes precedence even if the DHCP server is available.

IP address or hostname - SIP server that accepts registrations.

## reg.x.server.1.expires

The phone's requested registration period in seconds. The period negotiated with the server may be different. The phone attempts to reregister at the beginning of the overlap period.

3600 (default)

Positive integer, minimum 10

# reg.x.server.1.port

Null (default) - The port of the SIP server doesn't specify registrations.

1 to 65535 - The port of the SIP server that specifies registrations.

# reg.x.server.1.transport

The transport method the phone uses to communicate with the SIP server.

TCPpreferred - When TCPpreferred is used, Poly Edge B only uses TCP for the transport.

**UDPOnly** 

TLS

**TCPOnly** 

# reg.x.srtp.enable

1 (default) - The registration accepts SRTP offers.

0 - The registration always declines SRTP offers.

Change causes system to restart or reboot.

# reg.x.srtp.require

0 (default) - Secure media streams are not required.

1 - The registration is only allowed to use secure media streams.

Change causes system to restart or reboot.

# reg.x.type

private (default) - Use standard call signaling.

shared - Use augment call signaling with call state subscriptions and notifications and use access control for outgoing calls.

# tcpIpApp.sntp.address

Specifies the SNTP server address.

**NULL** (default)

Valid hostname or IP address.

# tcpIpApp.sntp.gmtOffsetcityID

NULL (Default)

0 to 127

# tcpIpApp.sntp.gmtOffset

Specifies the offset in seconds of the local time zone from GMT.

0 (Default) - GMT

3600 seconds = 1 hour

-3600 seconds = -1 hour

Positive or negative integer

# Configuring Network Settings

Control how your Poly phones access the web and your network. You also can register your system with SIP for calling.

# **DHCP Options**

# **Configure Additional DHCP Options**

The additional options that the phone tries to extract from the DHCP offer is a comma-separated list of option numbers. The phone doesn't recognize any other option numbers.

#### Task

- 1 In the system web interface, go to System Management > WAN Settings > DHCP Client Settings.
- 2 Under DHCP Client Setting, clear the check box in the Default column for the ExtraOptions.
- 3 In the Value column, enter the extra DHCP options in a comma-separated list.

  If you use DHCP options 66, 150, 159, 160 or 161 for ITSP provisioning server redirect, make sure that these values are included in ExtraOptions.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Set the URL for the Configuration File

Set the URL that the system uses for the ITSP provisioning server to get the phone's configuration file.

You can use the following macros to refer to the values of these options in any of the configuration parameters, if they are specified in the **ExtraOptions** parameter:

- \$DHCPOPT66
- \$DHCPOPT150
- \$DHCPOPT159
- \$DHCPOPT160
- \$DHCPOPT161

#### Task

- 1 In the system web interface, go to System Management > Auto Provisioning > ITSP Provisioning.
- 2 In the **Default** column, clear the check box for ConfigURL, then enter the URL of the configuration file in the **Value** column

The default value for ConfigURL is tftp://\$DHCPOPT66/\$DM.xml;\$DHCPOPT66.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **PVOS-Lite Supported Ports**

The following table lists the ports used by Poly PVOS-Lite Software.

# **PVOS-Lite Supported Ports**

Port Number	Protocol	Outgoing	Incoming	UDP or TCP	Configurable?
53	DNS	Server		UDP	No
67	DHCP	Server		UDP	No
68	DHCP		Client	UDP	No

Port Number	Protocol	Outgoing	Incoming	UDP or TCP	Configurable?
69	TFTP	Provisioning		UDP	Yes
80	НТТР	Provisioning, File downloads like ring tones and local phone book, BroadSoft XSI, Action URLs	Web Interface, Phone XML App	TCP	Yes
123	NTP	Server		UDP	No
389	LDAP	Server		TCP	Yes
443	HTTPS	Provisioning, File downloads like ring tones and local phone book, BroadSoft XSI, Action URLs, Poly Lens	Web Interface, Phone XML App	ТСР	Yes (Poly Lens ports are not configurable)
514	Syslog	Server		UDP	Yes
636	LDAPS	Server		TCP	Yes
2002	RPCAP		Remote PCAP	TCP	Yes
16600-16798	RTP	Media	Media	UDP	Yes
16600-16798	RTCP	Media Statistics	Media Statistics	UDP	Yes
5060	SIP	SIP Signaling	SIP Signaling	UDP, TCP	Yes
5061	SIP over TLS	Secure Signaling		TCP	Yes

# **Network Connectivity**

Poly Edge B Series IP phones offers an interface for networking: Ethernet (indicated as **WAN** in the local interface and system web interface).

# **Configure the Ethernet Ports**

Configure the two Ethernet ports from the system web interface.

- 1 In the system web interface, go to **System Management > WAN Settings**.
- 2 Configure the following settings:

Parameter	Values
Switch Port > Speed	
·	• Auto
	• 100 Full
	• 100 Half
	• 10 Full
	• 10 Half
	Poly recommends using Auto.
PC Port > Speed	
Terore specu	Auto
	• 100 Full
	• 100 Half
	• 10 Full
	• 10 Half
	Poly recommends using Auto.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure the WAN Interface**

The WAN interface on the phone refers to the internal Ethernet switch port connected directly to the phone processor.

- 1 In the system web interface, go to **System Management > WAN Settings**.
- 2 Configure the following settings:

Setting Group	Description		
VLAN	The phones support VLAN tagging in compliance with 802.1p/q. If you enable VLANEnable, the phone tags outbound traffic according to the VLANID and VLANPriority parameters. The phones ignore inbound traffic that doesn't belong to the same VLAN.		
	To enable VLAN discovery using DHCP, set <b>VLANDiscovery</b> to <b>Fixed</b> (to use the standard DHCP options for VLAN discovery - 128, 144, 157, 191) or <b>Custom</b> . If set to <b>Custom</b> , set <b>VLANDiscoveryOption</b> to the desired custom DHCP Option.		
LLDP	The phones support LLDP-MED to automatically discover network policy (VLAN and DSCP) settings and perform other related handshake functions.		
IP Address Assignment	The phones support different methods of acquiring an IP address assigned to its WAN interface. Configure the method using the AddressingType parameter, which can have one of the following values:		
	DHCP: Request address assignment from a DHCP server.		
	<ul> <li>Static: Use the statically assigned IP address, subnet mask, and default gateway from the IPAddress, SubnetMask and DefaultGateway parameters, respectively.</li> </ul>		
DNS Servers	Specify up to two DNS servers to use with the WAN interface using DNSServer1 and DNSServer2.		
	<b>Note:</b> If the DHCP offer includes DNS servers, the phone takes as many as 16 servers from the list and uses them together with the explicitly configured servers.		

Description	
The phones support CDP for automated network setting discovery. Common values included in CDP broadcast messages are:	
Device Type and Model Duplex/Speed Setting VLAN Setting PoE Class (Power Draw)	

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **DNS Lookup**

The following DNS behavior applies to the WAN network interface.

# **Configure Lookup Order**

When your phones obtain DNS servers from both DHCP and statically configured values, the phone queries all the servers of one type before moving to the other type. Configure the phone to control the order the phone queries the server types.

#### Task

- 1 In the system web interface, go to **System Management > WAN Settings**.
- 2 Under DNS Control, clear the check box in the Default column for DNSQueryOrder.
- 3 In the **Value** column, select the available DNS servers for the parameter in the order you want them to be queried by the phone.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configure DNS Query Delay**

When there are multiple DNS servers available, the phone queries as many DNS servers as necessary to resolve a domain name. Configure the phone to insert a short delay between each query to stop once the phone receives a positive response.

## Task

- 1 In the system web interface, go to System Management > WAN Settings.
- 2 Under DNS Control, clear the check box in the Default column for DNSQueryDelay.
- 3 In the Value column, select a value from the drop-down menu to set a delay.
  The query order follows the DNSQueryOrder setting. If you set the delay to 0, the phone queries all the DNS servers at the same time.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Define Local DNS Records**

Define as many as 32 local DNS records in the phone configuration.

Once you define the DNS records, enable the phone to search through these records before hitting the external DNS services when attempting to resolve a domain name. These records can be A or SRV records.

To define a local DNS A record, use the following format:

Name=IP1, IP2, ...

#### Where:

- Name is the FQDN.
- IP is the IP address that the FQDN resolves to.

#### For example:

```
sbc.example.com=192.168.15.118,192.168.15.108
```

# To define a local DNS SRV record, using the following format:

```
_service._proto.name={host1:port1,priority1,weight1}, {host2:port2,priority2,weight2},...
```

#### Where:

- service is the name of the service (for example, sip).
- proto is the transport protocol of the service (for example, udp).
- name is the domain name for the record.
- host is the hostname of the machine providing the service (for example, sbc.example.com).
- port is the port where the service is found (for example, 5060).
- priority is the priority of the target host.
- weight is the relative weight for records with the same priority

Note: The only way to provide a list of redundant servers to the phone is through the use of DNS A or DNS SRV records.

#### Task

- 1 In the system web interface, go to System Management > WAN Settings.
- 2 Under Local DNS Records, clear the check box in the Default column for each Local DNS Record you want to configure.
- 3 In the **Value** column, enter a local DNS record for each parameter.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configure the Local DNS Record Mode**

Select the record mode to configure local DNS record handling.

#### Task

- 1 In the system web interface, go to System Management > WAN Settings.
- 2 In the Value column for the LocalDNSRecordMode parameter, select one of the following:

Mode	Description
Persistent Cache	The local configuration is used and no query to external DNS servers is attempted.
Backup Record	The local configuration is used only when the queries to external DNS servers fail.

3 **Optional:** To configure the default TTL for each local record in the **Backup Record** mode, enter the duration in seconds for the Local DNSRecord TTL parameter.

Choose a value between 60 seconds and 604,800 seconds (one week). The default value is 120 seconds. After the time elapses, the phone resends the DNS requests to the external DNS servers.

4 Select Submit.

5 Restart your system when you complete your changes.

# **NTP Servers and Local Time**

The phone keeps track of the current time by querying NTP servers (using SNTP).

# **Configure NTP Servers**

Configure up to two NTP servers.

#### Task

- 1 In the system web interface, go to **System Management > WAN Settings**.
- 2 Under Time Service Settings, clear the check box in the Default column for NTPServer1 and NTPServer2.
- 3 In the Value column, enter the host names or IP addresses of the NTP servers.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Disable SNTP Discovery**

By default, the phone discovers the SNTP server using DHCP option 42 and discovered servers take precedence. Disable SNTP discovery in DHCP and use the configured SNTP servers instead.

#### Task

- 1 In the system web interface, go to System Management > WAN Settings.
- 2 Under DHCP Client Settings, clear the check box in the Default column for ExtraOptions.
- 3 In the Value column, delete option 42 from the extra options list for ExtraOptions.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Set the Local Time Zone**

The phone queries the NTP servers once per hour to update the current time, and the phone uses its own local clock in between NTP refreshes. Configure the local time zone to ensure the phones display the correct time.

#### Task

- 1 In the system web interface, go to **System Management > WAN Settings**.
- 2 Under Time Service Settings, clear the check box in the Default column for LocalTimeZome.
- 3 In the Value column, select your local time zone from the drop-down menu for the LocalTimeZone parameter.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Enable Daylight Saving Time**

Enable daylight saving time to enable the phones to automatically adjust when daylight saving time starts and ends.

#### Task

- 1 In the system web interface, go to **System Management > WAN Settings**.
- 2 Under Time Service Settings, clear the check box in the Default column for DaylightSavingTimeEnable.
- 3 In the Value column, select the check box to enable daylight saving time.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Specify Start and End Rules for Daylight Saving Time

Set the start and end rules so the phone automatically adjusts for daylight saving time.

- 1 In the system web interface, go to System Management > WAN Settings.
- 2 Under **Time Service Settings**, clear the check box in the **Default** column for DaylightSavingTimeStart and DaylightSavingTimeEnd.
- 3 In the Value column, enter the start and end dates for DaylightSavingTimeStart and DaylightSavingTimeEnd.

  The format for the date is mon/day/weekday/h:m:s using the following values:

Variable	Value	
mon	1 to 12	
day	1 to 31 or -1 to -31 (if counting from the end of the month)	
weekday	0 for the exact day	
	1 = Monday	
	2 = Tuesday	
	3 = Wednesday	
	4 = Thursday	
	5 = Friday	
	6 = Saturday	
	7 = Sunday	
h:m:s	hour, minute, second	

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Configure Amount of Time to Adjust for Daylight Saving Time

Configure the amount of time to adjust when daylight saving time is in effect.

# Task

- 1 In the system web interface, go to System Management > WAN Settings.
- 2 Under Time Service Settings, clear the check box in the Default column for DaylightSavingTimeDiff.
- 3 In the Value column for DaylightSavingTimeDiff, enter the amount of time to adjust for when daylight saving time takes effect.

The format is h:m:s or -h:m:s.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Enable SIP Signaling to Provide the Time**

Enable the phone to use SIP signaling to provide the time.

When the phone renews registration with a SIP proxy server, the server may include a Date header in the response to the phone that indicates the current GMT time.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Under **Time Service Settings**, clear the check box in the **Default** column for X\_ProcessDateHeader.
- 3 In the Value column for X\_ProcessDateHeader, select the check box.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **SIP Server DNS Settings**

Configure the SIP server DNS lookup settings for your phones.

# Configure the SIP Server DNS Lookup

When sending out SIP requests to the server, your phone looks up the IP address of the server using a DNS query if the server is specified as a domain name instead of an IP address.

If you configure an outbound proxy server, your phone uses it instead of the SIP proxy server or SIP registration server.

You can enable the X\_DnsSrvAutoPrefix parameter to prepend the service prefix for the domain name DNS query, using the following values:

- UDP: \_sip.\_udp.
- TCP: \_sip.\_tcp.
- TLS: \_sip.\_tls, or \_sips.\_tcp.

If the result from the DNS query is an SRV record, the phone takes the server port from that record and ignores the server port value configured on your phone. Otherwise, the phone takes the server port from the configured value. If no value is specified, the phone uses 5060.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for X\_DnsSrv parameter, select the check box.
- 3 If you require the phone to use \_sips.\_tcp. prefix for TLS transport, in the Value column for X\_DnsSrvSipsTcpPrefix, select the check box.
- 4 In the Value column for the X\_DnsSrvAutoPrefix parameter, select the check box.
- 5 Select Submit.
- 6 Restart your system when you complete your changes.

#### **Enable DNS NAPTR**

Enable DNS Name Authority Pointer (NAPTR) for each ITSP profile.

If enabled, the phone only attempts NAPTR lookup of the domain name specified in the OutboundProxy parameter (if configured). Otherwise, the phone uses the ProxyServer parameter.

With NAPTR lookup, your phone can discover the hosts to access the SIP service for a given domain; the SIP transport, preference, and order of each host; and what types of DNS records to use for each listed host (SRV or A record). This feature complies with RFC 2915.

For more information about DNS NAPTR support, see the *Poly OBi Device Technical Reference* at the <u>Poly Online Support Center</u>.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for the X\_DnsNAPTR parameter, select the check box.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Web Proxy Server

Configure Poly Edge B to send outbound requests through a web proxy.

# **Configure Web Proxy Server**

Configure the web proxy server settings.

- 1 In the system web interface, go to **System Management > Device Admin**.
- 2 Under HTTP Client, configure the following parameters:

Parameter	Description
ProxyServer	Enter FQDN or IP address of the web proxy
ProxyServerPort	Enter the port to connect to the web proxy
ProxyAuthUsername	Enter the username to authenticate with the web proxy
ProxyAuthPassword	Enter the password to authenticate with the web proxy
BypassProxyServerForLocalAddresses	Enable to bypass the web proxy for local addresses
BypassProxyForSubnets	Enter a comma-separate list of internal subnets to bypass the web proxy, for example, 10.10.0/24, 192.168.0.0/16

- 3 Select Submit.
- 4 Reboot your system when you complete your changes.

#### **NAT Traversal**

If your phone sits behind a NAT router, it can discover the mapped external address corresponding to its local SIP contact address.

The server uses the following options:

- The received and rport parameters of the VIA header of the REGISTER response sent by the server, which tell your phone its mapped IP address and port number. The server uses this method if you enable periodic registration on your phone.
- The response to a STUN binding request your phone sent to a STUN server. Keep alive messages are sent to the same server where the phone sends a REGISTER request.

For more information on NAT Traversal considerations, see the *Poly OBi Device Technical Reference* at the <u>Poly Online</u> Support Center.

# **Configure Keep Alive Messages**

 $Keep \ the \ NAT \ pinhole \ open \ by \ configuring \ your \ phone \ to \ send \ out \ periodic \ keep \ alive \ messages \ on \ the \ same \ network \ path.$ 

Poly recommends that you send the keep alive messages to the same proxy server responsible for registration.

**Note**: The server may drop the keep alive messages before processing them. If you use STUN binding requests as keep alive messages, Poly recommends that the server return a valid STUN binding response to each request.

- 1 In the system web interface, go to **Voice Services > SPN Service > Calling Features**.
- 2 Configure the following parameters:

Parameter Group	Parameter	Description
SPn Service	X_KeepAliveEnable	Enable sending of keep alive message. If enabled, your phone sends periodic keep-alive messages to the destination specified in <b>X_KeepAliveServer</b> and <b>X_KeepAliveServerPort</b> at the interval specified in <b>X_KeepAliveExpires</b> . The content of this message is the ASCII string keep-alive\r\n

Parameter Group	Parameter	Description			
SPn Service	X_KeepAliveExpiresFollowServer	Follow the keep alive expires value from the server in the <b>Via</b> header keep parameter.			
SPn Service	X_KeepAliveExpires	The keep alive period in seconds.			
SPn Service	X_KeepAliveMsgType	The type of keep-alive messages to send out periodically if keep-alive is enabled. Use one of the following:			
		<ul> <li>keep-alive: The string keep-alive for SIP transport over UDP or CRLF (for example, carriage return and line feed characters) for SIP transport over TCP or TLS.</li> <li>empty: A blank line.</li> <li>stun: A standard STUN binding request. Your phone uses the binding response to form its contact address for REGISTRATION.</li> <li>custom: Use the value of X_CustomeKeepAliveMsg.</li> <li>options: A valid SIP OPTIONS request. No response to this request from the server triggers a proxy failover if proxy redundancy is enabled.</li> <li>notify: A valid SIP NOTIFY request. No response to this request from the server triggers a proxy failover if proxy redundancy is enabled.</li> </ul>			
SPn Service	X_CustomKeepAliveMsg	Defines the custom message to use when X_KeepAliveMsgType is custom. The value has the following format:  mtd=NOTIFY; event={whatever}; user={anyone} Where  • NOTIFY may be replaced by any other SIP method, such as PING. The event parameter is optional and is only applicable if the method is NOTIFY.  • If the event isn't specified, the keep-alive event is used with NOTIFY.  • The user parameter is optional.  If the user isn't specified, the request-uri doesn't have a user ID, and the TO header field uses the same user ID as the FROM header, which is the local account user ID.  If the user is specified, it's used as the user ID in the Request-URI and TO header.  SIP messages for keep-alive are sent only once without retransmission. Responses to the SIP messages are ignored by the phone.			

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **STUN and ICE**

Your device supports standard STUN based on RFC3489 and RFC5389 for passing inbound RTP packets to devices sitting behind NATs.

For more information about STUN and ICE, see the Poly OBi Device Technical Reference at the Poly Online Support Center.

# Configure the STUN Feature

Enable the STUN feature, configure the IP address or domain name of the external STUN server, and add the destination listening UDP port to connect to the STUN server.

- 1 In the system web interface, go to **Service Providers > ITSP Profile X > General** (where X = the ITSP profile for the service provider).
- 2 In the Value column, configure the following parameters:

Parameter	Description
STUNEnable	Select the check box to enable the STUN feature (default is NO or FALSE).
STUNServer	Enter the IP address or domain name of the external STUN server to use.
X_STUNServerPort	Enter the destination port to connect to the STUN server.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Enable the ICE Feature

Configure the ICE feature on your phone. ICE is done on a per-call basis for automatically discovering which peer address is the best route for sending RTP packets.

Note: ICE is effective if STUN is also enabled; however, STUN isn't a requirement for using ICE on your phone.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP Profile N.
- 2 In the Value column for the X\_ICEEnable parameter, select the check box.
- 3 In the Value column for the X\_EarlyICEEnable parameter, select the check box if you require the phone to start ICE upon receiving a 18X response for outbound calls.
- 4 In the Value column for the X\_EarlyICEEnableIn parameter, select the check box if you require the phone to send a 183 with SDP response and start ICE upon receiving an INVITE for inbound calls.
- 5 Select Submit.
- 6 Restart your system when you complete your changes.

# **Discover the External IP Address and Port**

Configure your phone to use the discovered external IP address and port to replace its private address and port. This enables your phone to use the public address and port as the SIP contact address.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for the X Discover Public Address parameter, select the check box.

**Note:** Enabling the X\_UsePublicIPAddressVia parameter also substitutes the Via address, but this usually isn't necessary.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Set the 802.1X Authentication Mode

All Poly phones support 802.1X authentication.

- 1 In the system web interface, go to System Management > WAN Settings > Internet Settings.
- 2 In the **Default** column, clear the check box for **802\_1XMode**, then select one of the following modes from the drop-down menu:
  - Disable

- MD5
- TLS
- TTLS/MSCHAPv2
- PEAP-MSCHAPv2 (optional for all parameters)
- 3 Depending on selected mode, configure the following additional authentication parameters:

Parameter	Description	(EAP) MD5	(EAP) TLS (1.0)	TTLS/ MSCHAPv2
802_1XIdentity	The username. If you don't need a username, set the value as an empty string.	Required	Required	Required
802_1XPassword	The password or passphrase. If you don't need a password or passphrase, set the value as an empty string.	Required	Required	Required
802_1XAnonymousID	When empty, the phone doesn't use anonymous identity in authentication.		Required	Required
802_1XTLSSecurityProfile	Security profile for the 802.1X authentication.		Required	

# 4 Select Submit.

5 Restart your system when you complete your changes.

# Securing the System

Download and add custom certificates to your Poly phones.

All certificates must be in DER or PEM format. When using (EAP) TLS, the client certificate file must also include the private key (PEM) file appended to the client certificate.

# **Load Custom Device Certificates**

Load custom device certificates in the system web interface.

## Task

- 1 In the system web interface, go to **System Management > Device Admin**.
- 2 Under Custom Device Certificaten, enter the URL of the certificate to download in the **Value** column for the DownloadURL parameter.
- 3 Under TLSPlatform Profilen, select the custom device certificate for DeviceCert in the Value column.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Load Custom Platform CA Certificates**

Load custom platform CA certificates using the system web interface

#### Task

- 1 In the system web interface, go to System Management > Device Admin.
- 2 Under **Platform CA n**, enter the URL of the root CA certificate to download in the **Value** column for the **DownloadURL** parameter.
- 3 Under TLSPlatform Profilen, select the appropriate value in the Value column for CACertList.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Use TLS Platform Profile with ITSP Provisioning**

If secure ITSP provisioning requires a custom platform CA certificate, the ConfigURL string can include a tls-profile parameter to indicate which TLS Platform Profile to use.

Note: This method doesn't work for the UCSServer provisioning method.

#### Task

- 1 In the system web interface, go to **System Management > Auto Provisioning**.
- 2 Under ITSP Provisioning, enter the full URL for the ITSP provisioning string followed by , tls-profile=n (n = TLS Platform Profile index) for ConfigURL. For example, https://prov.sp.com/\$MAC.xml,tls-profile=1
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Set Port Number for the Management Web Server**

Set the port number value for the management web server.

- 1 In the system web interface, go to **System Management > Device Admin**.
- 2 Under **Web Server**, in the **Value** column for the Port parameter, enter a number for the port web server (for HTTPS, enter 443 as the value).
- 3 Select Submit.

4 Restart your system when you complete your changes.

## **Enable or Disable the PC Port**

The PC port can be enabled or disabled to allow or deny another device from connecting to the network through the Poly Edge B's PC port.

#### Task

- 1 In the system web interface, go to **System Management > Device Admin**.
- 2 Under External Port Security, select the PCPort parameter and do one of the following:
  - Check (to enable)
  - Uncheck (to disable)
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configuring Passwords**

Change the administrator and user passwords.

Poly recommends that you change the default administrator and user passwords at your earliest convenience.

## Controlling User Access to the System Web Interface

Protect access to the system web interface by configuring two passwords on the phone: an administrator password and a user password.

The system only prompts for a user password if you configure one in the system.

Unlike configuration parameters, you can't control the functions under **System Management/Device Update** via provisioning. For these functions, the following restrictions always apply when the current login is the user:

- Firmware Update: Removed so that users can't update firmware or AA prompts.
- Backup AA User Prompts: Same as admin login.
- Backup Configuration: Backup parameters set with user read-only or read-write permission only.
- Restore Configuration: Restore parameters set with user read-write permission only.
- Reset Configuration: Reset parameters set with user read-write permission only.

## **Change the Default Password**

The system web interface prompts for a new administrator password when the phone is powered on for the first time or if the phone is factory reset.

**Important:** You must change the default password before you can access the system web interface.

#### Task

- 1 Enter http://<*PhoneIPAddress>* to load the system web interface.
- 2 Enter the default admin Username and Password (admin/admin).
- 3 Enter the default password (admin) for Old Password.
- 4 Enter and re-enter the new password in New Password and Confirm New Password.
- 5 Select Submit.
- 6 Select OK.

## Set Passwords in the System Web Interface

Set both admin and user passwords in the system web interface.

## **Task**

1 In the system web interface, go to **System Management > Device Admin**.

- 2 Configure the following settings:
  - For **AdminPassword**, enter an administrator login password.
  - For UserPassword, enter a user login password. To choose the default value, select the check box under Default.

## Set Passwords in the Phone's Local Interface

Set system passwords in the phone's local interface.

#### Task

- 1 Press the Home key and go to Settings > Device Administration.
- 2 Configure the following settings:

Parameter	Description
Port	The web server listen port. Default is 80, the standard HTTP port.  Note: Setting this value to 0 disables all web server access.
AdminPassword	Admin login password. Default is admin.
UserPassword	User login password. Default is user.

## Set the Minimum Password Length

Determine the minimum length for passwords that users and admins can create.

**Note:** The service provider may specify the minimum length of the password. Check with your service provider for any password requirements.

## Task

- 1 In the system web interface, go to **System Management > Device Admin > Web Server**.
- 2 In the Value column for the PasswordMinimumLength parameter, enter the minimum length for the password.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## Lock the System Web Interface

Lock the system web interface for a specified time period after a specified number of failed attempts.

#### Task

- 1 In the system web interface, go to System Management Device > Admin Web Server.
- 2 Select the check box to enable the Web Server Lockout feature.
- 3 Set the period of time, in seconds, that the user is locked out of the web server. Enter a value between 60 and 300.

```
LockOutPeriod="<value>"
```

4 Set the maximum number of failed login attempts before the user is locked out. Enter a value between 3 and 20.

```
LockOutInvalidAttempts="<value>"
```

5 Set the length of time, in seconds, that the user is locked out. Enter a value between 60 and 300.

```
LockOutInvalidAttemptsDuration="<value>"
```

- 6 Select Submit.
- 7 Restart your system when you complete your changes.

# Call Routing

Call routing is the process your system uses to set up an endpoint call based on information such as the trunk on which the call originates, the caller's number, and the called number.

# **Set Up Digit Maps**

A digit map is a succinct way of describing a set of number patterns. Configure the digit map to determine the set of number patterns that users can dial.

Use the (Mname) syntax to refer to digit maps by name. For example, the default DigitMap parameter refers to digit maps defined for SP1, SP2, SP3, SP4, and PDM-SPservices with the reserved names (Msp1), (Msp2), (Msp3), (Msp4), and (Mpp) respectively:

```
([1-9]x?*(Mpli)|[1-9]S9|[1-9][0-9]S9|***|**0||**1(Msp1)|**2(Msp2)|**3(Msp3)|**4(Msp4)|
**9(Mpp)|(Mpli))
```

This way, the digit map is more readable and organized.

**Note:** (Mpli) refers to the digit map of the primary line.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 In the **Default** column, clear the check box for DigitMap.
- 3 In the Value column for DigitMap, enter a digit map to set the number patterns users can dial.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configure Inbound Call Rules**

Incoming calls come to the phone via any configured line. You can configure the inbound call routes all incoming calls and on a per-line basis.

How the phone routes the incoming call is based on the rules defined in the InboundCallRoute parameter of each line. The typical way to route an incoming call is to ring the phone, so the default InboundCallRoute value for all services is ph.

## Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 In **Default** column, clear the check box for InboundCallRoute.
- 3 In the Value column for InboundCallRoute, enter the routing rule for inbound calls.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **Configure Outbound Call Rules**

After a user dials a complete number, the phone determines which service to use for the call by applying the call routing rules you define in the OutboundCallRoute parameter.

This parameter may refer to named digit maps defined elsewhere in the phone configuration.

The default value refers to (Msp1), (Msp2), (Msp3), (Msp4), and (Mpp), which are digit maps defined for SP1, SP2, SP3, SP4, and PDMS-SP services, respectively:

```
\{([1-9]x?*(Mpli)):pp\}, \{**0:aa\}, \{***:aa2\}, \{(<**1:>(Msp1)):sp1\}, \{(<**2:>(Msp2)):sp2\}, \{(<**3:>(Msp3)):sp3\}, \{(<**4:>(Msp4)):sp4\}, \{(<**9:>(Mpp)):pp\}, \{(Mpli):pli\}
```

**Note:** pli refers to the primary line.

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 In the **Default** column, clear the check box for OutboundCallRoute.
- 3 In the **Value** column for the OutboundCallRoute parameter, enter the routing rule for outbound calls made from the phone.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Customize Service Route Access Codes**

If necessary, modify the service route access codes with the DigitMap and OutboundCallRoute parameters. Customizing the service route access codes help when you prefer to not use the default service route access code for SP1 (\*\*1), SP2 (\*\*2), ..., SP6 (\*\*6) and want to change it to something else.

**Note:** The phone handles the **PrimaryLine** setting by substituting internally all occurrences of pli with the abbreviated name of the trunk named as the primary line in the DigitMap and OutboundCallRoute parameters of the same parameter group.

Note: \*\*5 is a reserved internal star code, so \*\*5 can't be used as a service route access codec.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 In the **Default** column, clear the check boxes for DigitMap and OutboundCallRoute.
- 3 In the Value column, configure the following parameters:

Parameter	Value
DigitMap	Modify the digit map to limit the numbers that you can dial or modify the service route access codes. For example, to change the service route access code to SP2 from **2 to **7, replace **2 (Msp2) with **7 (Msp2).
OutboundCallRoute	Modify the routing rule for outbound calls made from the phone. For example, after changing the service route access code to SP2 from **2 to **7, replace the entry { (<**2:> (Msp2) ):sp2} to with { (<**7:> (Msp2) ):sp2}.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **Auto Attendant**

Your phone has an auto attendant (AA) feature that you configure by including aa as the destination of the inbound call routing rules of a trunk (such as SP1 or ) and have incoming calls matching those rules on that trunk routed to the auto attendant.

**Note:** In the phone configuration, the auto attendant as described here is referred to as AA1 or Auto Attendant 1. Throughout this document and the phone configuration, AA is the same as AA1. AA2 on the other hand refers to the IVR system that is used for basic phone configuration.

#### **Enable Auto Attendant**

You must enable the Auto Attendant feature on the phone to use it.

- 1 In the system web interface, go to Voice Services > Auto Attendant.
- 2 Under Auto Attendant 1, in the Default column, clear the check box for Enable.
- 3 In the Value column, select the check box for Enable.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configure the Auto Attendant Callback Service**

Your phone offers two methods for the Auto Attendant to call you back at the calling number or a number that you pick.

Statically configure the routing rule for inbound calls on a trunk with the InboundCallRoute parameter. The outbound service to be used for the AA to call back is determined according to the OutboundCallRoute parameter.

The CallbackAnswerDelay parameter controls the number of milliseconds before AA answers when a callback number is specified.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 In the **Default** column, clear the check box for **X\_InboundCallRoute**.
- 3 In the **Value** column, enter a routing rule for X\_InboundCallRoute to direct an auto attendant to call back the caller's or another number if the caller hangs up before auto attendant answers.
- 4 Go to Voice Services > Auto Attendant.
- 5 Clear the check box for the following parameters in the **Default** column, then configure them in the **Value** column.
  - OuboundCallRoute: Enter a routing rule for outbound calls made via this AA.
  - CallbackAnswerDelay: Enter the number of milliseconds before AA answers when a callback number is specified.
- 6 Select Submit.
- 7 Restart your system when you complete your changes.

#### **Customize Service Route Access Codes for the Auto Attendant**

Customize the service route access codes, including the outbound call rate and digit map, for calling via the Auto Attendant.

#### Task

- 1 In the system web interface, go to Voice Services > Auto Attendant.
- 2 Under Auto Attendant 1, in the Default column, clear the check boxes for DigitMap and OutboundCallRoute.
- 3 In the Value column, enter the rules for the auto attendant for DigitMap and OutboundCallRoute.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configuring Proxy Server Settings**

Configure the proxy server for the correct settings you need for your deployment.

For TCP/TLS, your phone must start a TCP/TLS connection with the ProxyServer and use the same connection to exchange all subsequent SIP messages. If you specify an OutboundProxy, your phone starts the TCP/TLS connection with the OutboundProxy instead. With the OutboundProxyTransport parameter, it's possible to choose a different transport to use with the OutboundProxy and ProxyServer parameters.

## Configure the Proxy Server for SIP/SP Services

For SIP/SP services that don't use TCP/TLS, configure the proxy server as needed for your deployment.

ProxyServer is a required parameter that you must configure on your phone. You rarely need the RegistrarServer and RegistrarServerPort parameters. These parameters are assumed to be the same as the ProxyServer and ProxyServerPort parameters if not specified in the configuration.

**Note:** If the server isn't listening at the standard port, configure the correct port value in ProxyServerPort (and RegistrarServerPort as needed).

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the **Default** column, clear the check boxes for ProxyServer and ProxyServerPort.
- 3 In the Value column, configure the following settings:

Parameter	Description
ProxyServer	Enter the host name or IP address of the SIP proxy server.
ProxyServerPort	Configure the destination port to connect to the SIP server if the listening port is nonstandard.

## **Configure the Transport Protocol for SIP Messages**

Set the transport protocol for SIP messages using UDP, TCP, and TLS protocols.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the **Default** column, clear the check box for ProxyServerTransport.
- 3 In the Value column for ProxyServerTransport, select the transport protocol to connect to the SIP server.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **Configure Local Contact Port for SIP UDP Messages**

Configure the local contact port for sending and receiving SIP over UDP messages.

The SPn services for n = 1 to 6 each use a different local contact port for sending and receiving SIP messages. The defaults are 5060, 5061, 5062, 5063, 5064, and 5065 respectively.

## Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 In **Default** column, clear the check box for X\_UserAgentPort.
- 3 In the Value column for X\_UserAgentPort, enter the local contact UDP port for sending and receiving SIP messages on the phone.

**Important:** ProxyServer and RegistrarServer must use the same transport protocol for SIP messages that you set in the ProxyServerTransport parameter.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **SIP Outbound Proxy Server**

Configure an outbound proxy server on your phone, so that all outbound requests are sent via the outbound proxy server instead of directly to the SIP proxy server or registration server.

Use an outbound proxy when the device-facing server is a session border controller (SBC). Configure the outbound proxy destination port if the outbound proxy isn't listening at the standard port.

# Configure the Port for Connecting to the Outbound Proxy Server

If the outbound proxy server is listening at a nonstandard port, you must specify the correct port value.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for the OutboundProxy parameter, enter the host name or IP address of the outbound proxy.
- 3 In the **Value** column for the OutboundProxyPort parameter, enter the destination port you want to use when connecting to the outbound proxy.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## Configure the Transport Protocol for the Outbound Proxy Server

Configure the transport protocol for the outbound proxy server, which may use a different transport protocol from the proxy server.

If the OutboundProxyTransport protocol is set to TCP or TLS, your phone initiates a TCP or TLS connection only with the outbound proxy. All subsequent messages exchanged between your phone and the servers must use the same connection. If for any reason the connection is closed, your phone attempts to re-establish the connection with the outbound proxy following an exponential back-off retry pattern.

**Note:** Even though your phone only exchanges messages directly with the outbound proxy server, the ProxyServer, ProxyServerPort, and ProxyServerTransport parameters are still very important since the SIP requests sent by your phone to the server are formed based on these values, not the **OutboundProxy** value. Never configure your phone to include the **OutboundProxy** value in the SIP requests generated by your phone, unless the **OutboundProxy** has the same value as the **ProxyServer**.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for the X\_OutboundProxyTransport parameter, select the transport protocol to connect to the outbound proxy server.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## Bypass the Outbound Proxy Server After Initial Call Setup

Some server implementations include the outbound proxy server in a Record-Route header so that your phone doesn't respect the locally configured OutboundProxy value after the initial INVITE is sent for a new call.

You can achieve this behavior by enabling the X\_BypassOutboundProxyInCall parameter. However, this option has no effect when the **OutboundProxyTransport** is TCP or TLS, as your phone always uses the same connection to send messages to the server.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for the X BypassOutboundProxyInCall parameter, select the check box.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## Configure the Phone to Use SIP/TLS

When setting ProxyServerTransport to TLS, the phone uses sips as the SIP scheme when registering to the SIP server. If the SIP server doesn't accept sips, the registration fails.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP
- 2 In the Value column, configure the following settings:

Setting	Description
ProxyServer	Enter the host name or IP address of the SIP proxy server.
ProxyServerTransport	Set to <b>UDP</b> or leave the default setting if the default value is UDP.

Setting	Description
OutboundProxy	Enter the host name or IP address of the outbound proxy server.
OutboundProxyPort	Enter the destination port to connect to the outbound proxy.
X_OutboundProxyTransport	Set to <b>TLS</b> .
X_UserAgentContactFollowProxyServerTransport	Select the check box.

#### 3 Select Submit.

4 Restart your system when you complete your changes.

# Configure the Phone to Use SIP/TLS When Not Using an Outbound Proxy

If you aren't using an outbound proxy, and the phone is on firmware 1.0.2, you can configure the phone not to use the sips protocol.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP Profile N > SIP.
- 2 In the Value column, check the box for X\_NoSIPS.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## SIP Proxy Server Redundancy and Dual Registration

You must enable device registration to use the server redundancy feature.

Other SIP requests, such as INVITE or SUBSCRIBE, are sent to the same server that your phone is currently registered to. Server redundancy specifically refers to your phone's capability to do the following:

- Look for a working server to register to from a list of candidates
- Switch to another server once the server that it currently registers to becomes unresponsive

For more information on SIP proxy server redundancy and dual registration, see the *Poly OBi Device Technical Reference* at the *Poly Online Support Center*.

## Configure the Proxy Failover Response Codes

Configure the SIP response codes, in digit map format, that trigger proxy failover. You can configure two maps (use a comma as the separator), where the first map is for REGISTER response codes and the second map is for INVITE response codes. If the second map isn't specified, REGISTER and INVITE response codes follows the first map.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP Profile N > SIP.
- 2 In the Value column, enter the digit map(s) of SIP response codes that trigger the proxy failover in X ProxyFailoverResponseCodes.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## Configure Server Redundancy

If your phone uses an outbound proxy server, configure the phone to apply server redundancy to the outbound proxy server instead of the registration server.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for the X\_ProxyServerRedundancy parameter, select the check box.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Enable Secondary Registration**

Configure your phone to maintain a secondary registration with a server that has lower or equal priority than the primary server.

If you disable the X\_ProxyServerRedundancy, the X\_SecondaryRegistration parameter doesn't have any effect. Your phone resolves only one IP address from the server's domain name and doesn't attempt to try other IP addresses if the server isn't responding.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for the X\_SecondaryRegistration parameter, select the check box.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## Enable the Interval for Checking Primary and Secondary Fallback Lists

Configure the interval for checking the primary and secondary fallback lists for higher priority proxy servers, which you can use as the primary and secondary proxy servers.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for X\_CheckPrimaryFallbackInterval and X\_CheckSecondaryFallbackInterval, enter the interval (in seconds) for checking the fallback lists.
  - Setting the value to 0 disables this periodic check.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Define Additional Backup Proxy Servers**

In the case of internet connectivity issues, you can define a secondary proxy server for an ITSP profile.

When performing DNS failover, the phone creates a list of servers for failover using the primary and secondary server FQDN. The secondary server defines the Local Survivability Gateway (LSG) for failover. The phone uses DNS to resolve the host associated with the secondary server FQDN, and adds it to the end of the list of servers resolved from the primary server.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for X\_BackupProxyServers, enter the list of servers to add to the server redundancy candidates using the following parameter syntax: [<transport>]<domain-uri-or-ip>[:<port-number>].
  - <transport> and <port-number> are optional.
  - For <transport>, use sip. udp., sip. tcp., sip. tls., or sips. tcp..

Note:  $\_sip.\_tls.$  and  $\_sips.\_tcp.$  indicate your preference when forming the prefix in the DNS query. The backup servers have lower priority than the primary server regardless of the value of the DNS SRV responses.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Voice Services

A voice service, also known as a line or trunk, is an individual user account with an ITSP.

You can configure the following voice services on your phone's IP port:

- SP1
- SP2
- SP3
- SP4
- SP5
- SP6
- PDMS-SP

An SPn service can be a generic SIP voice service. SIP/SP services include an extension from a PBX or a subscriber account with a service provider.

PDMS-SP is a built-in service that Poly provides for customers to manage their devices and use for technical support and device-to-device calling among supporting Polydevices.

No matter what technology the service provider equipment uses, you must provision it into your phone configuration as a domain name or an IP address along with a port number if the server isn't listening at the standard port (5060). Since PDMS-SP servers are known by your phone, there's no need to configure the server domains for this service.

## **ITSP Profiles**

The configuration of an SP service comprises two parts: a service provider and a service subscriber.

The service provider comprises parameters that are common to all service subscriber accounts from that service provider. Each service provider part is an ITSP profile that has its own parameter groups. You can configure as many as six ITSP Profiles (A through F) in a phone configuration.

The service subscriber comprises parameters that may vary for each specific subscriber account from the service provider. The service subscriber, known as an SP service, includes the X\_ServProvProfile parameter that binds the SP service with an ITSP Profile. Every SP service user account requires a username and usually a password for authentication. The service provider assigns an extension number or DID number to the user account. The assigned number may be the same as the user name of the account.

#### Configure A Digit Map for the Service Provider

You can configure a digit map to define the numbers allowed or disallowed to be dialed through the service provider and transform the dialed digits.

## Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > General.
- 2 In the Value column, enter the digit map of allowed numbers to dial in DigitMap.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

#### Select a Service Provider Profile

By default, the X\_ServProvProfile parameter for all SP services points to ITSP Profile A. If you want to use two different service providers with your phone, configure the settings for them in ITSP Profile A and ITSP Profile B respectively.

**Tip:** To avoid a common mistake, set the X\_ServProvProfile parameter correctly to point to the corresponding ITSP profile.

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 In the **Default** column, clear the check box for **X\_ServProv\_Profile**.
- 3 In the Value column, select a service provider profile from the drop-down menu for X\_ServProv\_Profile.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## Set the DTMF Method

You can set the phone to use a specific DTMF transmission method for each service provider profile.

The phone supports the following DTMF methods:

- RFC2833
- SIP INFO
- Inband
- Auto
- sipinfo+rfc2833

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > General.
- 2 In the Value column, select the desired DTMF transmission method for DTMFMethod.
- 3 If using inband DTMF, select the desired DTMF tone volume for InbandDTMFVolume.
- 4 If using RFC2833 DTMF, and you want the phone to send a fixed duration (150 ms), check the box for X\_UseFixedDurationRFC2833DTMF.
- 5 Select Submit.
- 6 Restart your system when you complete your changes.

## **Configure the Local RTP Port Range**

You can configure the phone to use different local RTP ports for each service provider profile.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > RTP.
- 2 In the Value column, set the minimum port value for this ITSP profile for LocalPortMin.
- 3 In the Value column, set the maximum port value for this ITSP profile for LocalPortMax.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Enable RTP Keep Alive**

You can configure the phone to send RTP keep alive packets for each service provider profile.

## Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > RTP.
- 2 In the **Value** column, enter the interval in seconds to send RTP keep alive packets for this ITSP profile for KeepAliveInterval. Enter 0 to disable sending RTP keep alive packets.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## Configure the DSCP Value for Outgoing RTP Packets

You can configure the phone to use a DSCP value on outgoing RTP packets for each service provider profile.

#### Task

1 In the system web interface, go to Service Providers > ITSP ProfileN > RTP.

- 2 In the Value column, enter the DSCP value in decimal format for this ITSP profile for DSCPMark.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Configure the SIP Timers**

You can configure the various SIP timers that are described in RFC 3261.

- T1 Round-trip time estimate
- T2 Maximum retransmission interval for non-INVITE requests and INVITE responses
- T4 Maximum duration that a message can remain in the network
- Timer A INVITE request retransmission interval, for UDP Only
- Timer B INVITE transaction timeout timer
- Timer C Proxy INVITE transaction timeout
- Timer D Wait time for response transmissions
- Timer E Non-INVITE request retransmission interval, UDP only
- Timer F Non-INVITE transaction timeout timer
- Timer G INVITE response retransmission interval
- Timer H Wait time for ACK receipt
- Timer I Wait time for ACK retransmissions
- Timer J Wait time for retransmissions of non-INVITE requests
- Timer K Wait time for response retransmissions

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column, enter the desired time value in milliseconds for the different TimerXX values.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Select the TLS Platform Profile to Use for SIP/TLS Signaling

Set the TLS Platform Profile if your call server or SBC uses a custom root CA certificate for SIP/TLS signaling.

## Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column, select the desired TLS Platform Profile for X\_TLSSecurityProfile.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Configure the DSCP Value for Outgoing SIP Signaling Packets

You can configure the phone to use a DSCP value on outgoing SIP signaling packets for each service provider profile. Enter the context of your task here (optional).

## Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column, enter the DSCP value in decimal format for this ITSP profile for DSCPMark.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure SIP Session Timers**

You can configure the phone to signal SIP session timers.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column, configure the following:
  - Check the box for X\_SessionRefresh
  - Enter the desired session expires value for X\_SessionExpires
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Configure Various Expires Values**

You can configure the phone to signal different Expires values for different SIP events, if your call server supports it.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the **Value** column, configure the following:
  - Enter the desired expires value for INVITE messages in InviteExpires
  - Enter the desired expires value for re-INVITE messages in ReInviteExpires
  - Enter the desired minimum expires value in RegisterMinExpires
  - If your call server supports the reg event package, check the box for X\_RegSubscribe and enter the desired expires value for X\_RegSubscribeExpires
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

#### **Enable P-Access-Network-Info SIP Header**

You can configure the phone to insert the P-Access-Network-Info SIP header in REGISTER and INVITE requests.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column, check the box for X\_InsertPAccessNetworkInfo.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Enable Support for GRUU**

Enable the phone to support Globally Routable User Agent URIs (GRUU).

When enabled, the phone adds the sip-instance parameter into the Contact header for SIP REGISTER messages to that SIP server.

## Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for the X\_SupportGRUU parameter, select the check box.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Voice Quality Reporting**

Poly phones provide reports on multiple statistics and functions. Configure the phone to enable or disable reports in the system web interface.

# Send Call Quality Metrics to PDMS-SP

Configure your phone to send call quality metrics to PDMS-SP, so that you can view them in the PDMS-SP portal.

#### Task

1 In the system web interface, go to System Management > Auto Provisioning.

- 2 In the Value column, under Statistics Reporting, check the box for SyncCQM.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## Enable the X-RTP-Stat Feature

Enable the X-RTP-Stat feature to enable your phone to collect the RTP statistics for calls.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the **Default** column, clear the check box for **X InsertRTPStats**.
- 3 In the Value column, select the check box for X\_InsertRTPStats.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## RTP Statistics - the X-RTP-Stat Header

When ending an established call, your device can include a summary of the RTP statistics collected during the call in the SIP BYE request or the 200 response to the SIP BYE request sent by the peer device.

The summary is carried in an X-RTP-Stat header in the form of a comma-separated list of fields. The following table lists the reported fields.

For example: X-RTP-Stat: PS=1234, OS=34560, PR=1236, OR=24720, JI=1, DU=1230, PL=0, EN=G711U, DE=G711U

Field	Description
PS	Number of Packets Sent
PR	Number of Packets Received
OS	Number of bytes sent
OR	Number of bytes received
PL	Number of packets lost
ال	Jitter in milliseconds
LA	Decode latency or jitter buffer size in milliseconds
DU	Call duration in seconds
EN	Last Encoder Used
DE	Last Decoder Used

## **RTCP Reports**

Your phone supports Real-time Transport Control Protocol (RTCP), which is defined in RFC 3550.

RTCP sends control packets to participants in a call. Real-time Transport Control Protocol Extended Reports (RTCP-XR), which are defined in RFC 3611, are also supported. RTCP-XR transmits VQ reports for a call.

# Enable RTCP and RTCP-XR

Configure RTCP and RTCP-XR to enable the phone to send VQ reports to the proxy server.

- 1 In the system web interface, go to **Service Providers > ITSP Profile X > RTP** (where X = the ITSP profile for the service provider).
- 2 In the Value column, select the check box for Enable.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## Enable Voice Quality Reporting using SIP PUBLISH

Configure the phone to send voice quality reports using SIP PUBLISH. The phone can be configured to send the voice quality report periodically during a call and at the end of the call.

#### Task

- 1 In the system web interface, go to Service Providers > > ITSP Profile X > RTP.
- 2 Under RTCP, in the Value column, select the check box for X\_VqPublishEnable.
- 3 In the Value column, enter the username or SIP URI to send the voice quality report to.
- 4 To have the phone send voice quality reports periodically while on a call, in the **Value** column, enter the interval in seconds for X\_VqPublishInterval. To have the phone send voice quality reports at the end of the call only, set X\_VqPublishInterval to 0.
- 5 Select Submit.
- 6 Restart your system when you complete your changes.

## SIP Privacy

Your phone observes inbound caller privacy and decodes the caller's name and number from SIP INVITE requests.

The phone checks the following message headers (all these headers can carry caller's name and number information):

- FROM
- P-Asserted-Identity (PAID)
- Remote-Party-ID (RPID)

For more information on SIP privacy, see the Poly OBi Device Technical Reference at the Poly Online Support Center.

#### Enable an RPID Header

For outbound calls, the phone can state the caller's preferred privacy setting in an RPID header of the outbound INVITE request.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the **Value** column for the X\_InsertRemotePartyID parameter, select the check box (the default value of this parameter).
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

#### **Block Outbound Caller ID**

Instruct your phone to block outbound caller ID.

The phone uses sip:anonymous@localhost in the FROM header to block outbound caller ID when you configure these settings.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column for the X\_UseAnonymousFROM parameter, select the check box.

  Your phone also includes a Privacy: id header if the X\_InsertPrivacyHdr parameter is enabled.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## The PDMS-SP Service

PDMS-SP is a proprietary protocol for communications among Poly Edge B Series IP phones and PDMS-SP device management servers.

The protocol is intended for two main purposes:

- Peer-to-peer calling between Poly Edge B Series devices
- Device management by PDMS-SP servers

Every Poly Edge B Series phone comes with one instance of the PDMS-SP service with the (fixed) factory-assigned 9-digit device OBi number as the user ID of the service. Poly Edge B Series devices can call each other by dialing the other party's OBi number.

The PDMS-SP service also enables you to view and change the settings of your phones from the PDMS-SP portal. If you disable the PDMS-SP service in your phone's configuration, you can't place PDMS-SP voice calls or manage device features through the PDMS-SP portal.

#### **Enable the PDMS-SP Service**

The PDMS-SP service is enabled by default, unless disabled through Zero Touch Provisioning.

## Task

- 1 In the system web interface, go to Voice Services > OBiTALK Service.
- 2 Under OBiTALK Service Settings, clear the check box in the Default column for Enable.
- 3 In the Value column, select the check box for Enable.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **Limit PDMS-SP Calls**

Limit OBiTALK calls to just the OBihai echo server.

A simple way to disable PDMS-SPvoice calls completely is by setting MaxSessions="0". If you do, however, you can't perform an echo test.

#### Task

- 1 In the system web interface, go to Voice Services > OBiTALK Service.
- 2 In the **Default** column, clear the check box for **DigitMap**.
- 3 In the Value column for DigitMap, enter a value of (<ob>222222222 | ob22222222). You can change or add more OBi numbers to this digit map by following the same pattern.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Voice Service Bridges

Your phone is also a voice service bridge (VSB) that can bridge calls across multiple supported voice services.

A call bridge connects two calls on the same or different voice services. Your phone allows four concurrent independent call bridges.

#### **Trunks**

Each supported voice service on your phone is referred to as a trunk, a physical wire or wires that deliver phone services to homes or businesses.

Each trunk is represented with 2-letter abbreviation and a 1-based instance identifier:

- SP1 = the SP1 Voice Service (with ITSP A, B, C, D, E, or F)
- SP2 = the SP2 Voice Service (with ITSP A, B, C, D, E, or F)

- SP3 = the SP3 Voice Service (with ITSP A, B, C, D, E, or F)
- SP4 = the SP4 Voice Service (with ITSP A, B, C, D, E, or F)
- SP5 = the SP5 Voice Service (with ITSP A, B, C, D, E, or F)
- SP6 = the SP6 Voice Service (with ITSP A, B, C, D, E, or F)
- PP1 = the PDMS-SP Service

When configuring your phones, you can omit the instance identifier if it's equal to 1. For example, PP is equivalent to PP1. You use these short-hand notations heavily when configuring your phone, as they're found in call routes, call forward numbers, and speed dials parameters. Unless stated otherwise, the abbreviated trunk names are case insensitive.

## **Trunk Groups**

If a call is routed to a trunk group, your phone picks one of the available trunks from the group to make the call.

Availability of a trunk is based on the following criteria:

- Whether the trunk's digit map allows the number to call
- Whether the trunk has capacity to make one more call

You can configure as many as four trunk groups on your phone.

## Configure a Trunk Group

Reference a trunk group and its associated digit map using the short name TGn and (Mtgn) and reference them in other digit maps and call routing rules so that the system can route calls to a particular trunk group.

Only trunks can be added to a trunk group. These include: PP, SP1 - SP6, VG1, VG2, ..., VG8, TG1, TG2, TG3, and TG4.

**Note:** A trunk group can include another trunk group (it can be recursive). However, you must make sure this doesn't result in infinite recursion.

#### Task

- 1 In the system web interface, go to Voice Services > Trunk Groups.
- 2 In the **Default** column, clear the check boxes for the following settings, then configure them in the **Value** column.

Parameter	Value
Enable	Select the check box to enable the use of the trunk group.
Name	Enter a user-friendly name to describe the trunk group.
TrunkList	Enter a comma-separated list of trunks to include in this group.
DigitMap	Enter a digit map to direct calls to use this trunk group.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Voice Gateways**

A gateway is another phone that enables two stage dialing.

Incoming PDMS-SP callers call the gateway first with a normal PDMS-SP call, get the auto attendant, and then dial the target number. For authentication, the auto attendant may ask the user to enter a PIN before establishing the second call.

A gateway is conceptually a trunk with its own digit map, and you can specify as many as eight gateways. Address each gateway using its factory-assigned PDMS-SP number and refer to a gateway and its associated digit map with the short trunk name VGn and (Mvgn). You can use VGn and (Mvgn) in call routing rules and digit maps just like other real trunks.

For more information on voice gateways, see the *Poly OBi Device Technical Reference* at the *Poly Online Support Center*.

# **Configure a Gateway for Direct Dialing**

Configure a gateway with one-stage or direct dialing so that the caller can dial the target number directly without going through the auto attendant.

Because a user can't enter a PIN when direct dialing, you can configure an optional user ID and password so the device can automatically authenticate with the gateway.

- 1 In the system web interface, go to Voice Services > Trunk Groups.
- 2 In the **Default** column, clear the check boxes for **AuthUserID** and **AuthPassword**.
- 3 In the Value column, enter the values for AuthUserID and AuthPassword.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# SIP Registration

The main purpose of SIP registration is to create and maintain a dynamic binding of the SIP/SP account to your phone's local contact address. Service providers can also rely on this periodic message to see if your phone is online and functional.

# **Enable Registration with the RegistrarServer**

Set up your phones to periodically register to the RegistrarServer. See .

ProxyServer is a required parameter that you must configure on your phone. You rarely need the RegistrarServer and RegistrarServerPort parameters. These parameters are assumed to be the same as the ProxyServer and ProxyServerPort parameters if not specified in the configuration.

**Note:** If the server isn't listening at the standard port, configure the correct port value in ProxyServerPort (and RegistrarServerPort as needed).

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the Value column, enter the host name or IP address for the RegistrarServer parameter.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure Third-Party Registration**

Configure a third-party registration to register the system for an Address of Record (AOR) that isn't the same as the account user-id.

The user-id in the TO header of the SIP REGISTER request is different from that in the FROM header, which always carries the account user-id.

## Task

- 1 In the system web interface, go to **Voice Services > SPn Service > Share Line Features** (where n = 1 to 6 services).
- 2 In the Value column for the X\_ShareLineUserID parameter, enter the third-party user-id to register to for the shared line.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure the Registration Period**

Configure the nominal registration Expires header value (implemented as a Contact header parameter value in seconds) used by your phone in REGISTER requests.

For more information about the registration period, see the *Poly OBi Device Technical Reference* at the <u>Poly Online Support Center</u>.

## Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the **Value** column for the RegistrationPeriod parameter, enter the nominal interval between device registration, in seconds.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure the Registration Margin**

Your phone computes the next renewal time by subtracting a percentage of the Expires value derived from the 2xx response returned by the server. Configure your phone to control how the margin to subtract is computed.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the **Value** column for the X\_RegistrationMargin parameter, enter the number of seconds before registration the registration expiration time when the phone should re-register.
  - If X\_RegistrationMargin is set to a fraction value, then the phone will re-register at the number of seconds, calculated by X\_RegistrationMargin \* registration expires time, before the registration expires.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure Local Contact Ports for SIP TCP Messages**

Configure additional local contact ports for receiving SIP over TCP messages. This is available in firmware 1.0.2.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 In the **Default** column, clear the check box for **X\_TcpUserAgentPorts**. In the **Value** column for **X\_TcpUserAgentPorts**, enter the additional TCP ports in a comma-separate list, for receiving SIP messages over TCP.
- 3 In the Default column, clear the check box for X\_TcpSendHoldToSameTcpPort. In the Value column for X\_TcpSendHoldToSameTcpPort, select the check box if the phone uses the same TCP connection for accepting, holding, resuming, and ending calls.
- 4 Select Submit.
- 5 Reboot your system when you complete your changes.

# **Configure Local Contact Port for SIP UDP Messages**

Configure the local contact port for sending and receiving SIP over UDP messages.

The SPn services for n = 1 to 6 each use a different local contact port for sending and receiving SIP messages. The defaults are 5060, 5061, 5062, 5063, 5064, and 5065 respectively.

## Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 In **Default** column, clear the check box for X\_UserAgentPort.
- 3 In the **Value** column for X\_UserAgentPort, enter the local contact UDP port for sending and receiving SIP messages on the phone.

**Important:** ProxyServer and RegistrarServer must use the same transport protocol for SIP messages that you set in the ProxyServerTransport parameter.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **Disable the SIP-Instance Parameter**

Your phone includes the sip-instance parameter in the contact header that specifies your phone's MAC address in the UUID. Suppress this parameter by disabling the X\_RegisterIncludeInstance option.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Clear the check box for X\_RegisterIncludeInstance in the Default.
- 3 In the Value column, clear the check box X\_RegisterIncludeInstance.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **List Alternative UDP Ports**

In some cases, your phone may not receive any response to its REGISTER from the server if an upstream router blocks the outgoing message sent by it. Configure your phone to try other SIP user agent ports for sending and receiving SIP packets.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Clear the check box for X\_UserAgentPorts in the Default column.
- 3 In the Value column, enter as many as 10 alternative SIP UDP ports for X\_UserAgentPorts. You must separate each SIP user agent port by a comma.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

Your phone cycles through these ports to retry REGISTER until it receives a response from the server.

# **Configure REGISTER Rules on Error Code**

Configure REGISTER rules on the actual error code.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Clear the check box for X\_RegisterRetryResponseCodes in the Default column.
- 3 In the **Value** column for the X\_RegisterRetryResponseCodes parameter, enter the error codes you want your phone to retry.

The format of this parameter is the same as a digit map:

```
(<40[17]:w120>|<40[34]:w120>|<99[01]:w120-200>|[4-9]xx)
```

Each rule is a substitution where a certain error code or error code pattern is mapped to the number of seconds to wait. With this example, your phone waits for 120 seconds for 401 and 407 error codes, 120 seconds for 403 and 404 error codes, randomly between 120 and 200 seconds for 990 and 991 error codes, and a fixed default value for all other error codes.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Configure REGISTER Retry Value

Configure the REGISTER retry value with the RegisterRetryInterval parameter.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Clear the check box for RegisterRetryInterval in the Default column.
- 3 In the Value column, enter the number of seconds for RegisterRetryInterval before your phone retries registration.

  The syntax w{a}-{b} specifies a random range of between {a} seconds and {b} seconds. Error codes not covered by these rules cause your phone not to retry registration after the error.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configuring Call Settings**

Determine the call settings that are available to users when they place and answer calls.

# **Disable URL Dialing**

Disable URL dialing on a specific registration so as to send all SIP calls for that line to the SIP server or outbound proxy.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Calling Features, in the Value column, clear the boxes for the following parameters:
  - X\_UrlDialingIPAddress
  - X\_UrlDialingDomainName
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

#### Call Hold

The Edge B Series IP phones support call hold and resume.

## **Configure Call Hold Signaling Method**

Configure whether the phone should signal call hold using RFC2543 or RFC3264.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Select the check box for X\_EnableRFC2543CallHold to use RFC 2543 call hold behavior. Otherwise, the phone follows RFC 3264 call hold behavior.

# **Configuring Secure RTP**

Configure your phone to use secure RTP for encrypted audio.

## **Enable Secure RTP**

Enable secure RTP for encrypted audio.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Calling Features, in the Value column, select the desired value for X SRTP:
  - Disable SRTP = No encryption
  - Use SRTP Only = Require SRTP
  - Use SRTP When Possible = SRTP is optional
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Configure the Cryptographic Parameters for Secure RTP**

Configure the cryptographic parameters for the secure RTP stream.

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under **Calling Features**, in the Value column, enter the desired cryptographic parameters in a comma-separate list for X\_SRTPCryptos:
  - AES CM 128 HMAC SHA1 32

- AES\_CM\_128\_HMAC\_SHA1\_80
- AES\_CM\_192\_HMAC\_SHA1\_32
- AES\_CM\_192\_HMAC\_SHA1\_80
- AES\_CM\_256\_HMAC\_SHA1\_32
- AES\_CM\_256\_HMAC\_SHA1\_80
- AES\_192\_CM\_HMAC\_SHA1\_32
- AES\_192\_CM\_HMAC\_SHA1\_80
- AES\_256\_CM\_HMAC\_SHA1\_32
- AES\_256\_CM\_HMAC\_SHA1\_80
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Call Transfer**

Edge B Series IP supports attended and blind call transfer.

Edge B Series IP also can bridge a transferred call if the call server doesn't support SIP REFER. The default behavior is to use SIP REFER to transfer.

# **Enable Bridging for Call Transfer**

Configure Edge B Series IP to bridge the transferee and transfer target locally on call transfer.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP Profile N.
- 2 In the Value column, clear the check box for X\_UseRefer.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Limitations of Transfer by Internal Bridging**

The phone acts as a proxy of RTP packets sent by each peer of the bridge, without any transcoding.

While the phone tries to negotiate the codec to use with each call peer that is acceptable by the other peer, you must understand this limitation and configure the codec profiles accordingly. For example, if you use SIP service 1, then a call transfer involving a SIP service 1 call leg must make sure that the other call leg supports the G711U codec.

#### Conference Calls

The Edge B Series IP phones support users joining two or more parties into a conference call.

The phones support two methods of conference calls:

- Local mixing or bridging
- External conference bridge

## **Local Mixing or Bridging**

After starting a three-way conference, users can see the two remote parties both in the Connected state.

Note: The Opus audio codec doesn't support three-way calling when both legs of the call bridge are using Opus.

With locally mixed *N*-way calls, users can see individual call items on the screen, one for each call-leg of the *N*-way call. Hence, you can also individually control each call-leg, such as holding or ending any one of them.

# **Enable Transfer on Hang Up Conference**

Configure the phone to automatically connect the other conference parties together, in a local conference, after the phone hangs up.

**Note:** This only applies to when the phone is configured for three-way conference calls and when MergeConfereeCalls is enabled.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under Calling Features, in the Value column, check the boxes for MergeConfereeCalls and TransferOnHangUpConference.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Enable an External Conference Bridge**

Configure the conference bridge to enable call participants on the same SP service or using the same ITSP profile as the conference bridge to be added to conference calls.

When using an external conference bridge, the bridge limits the conference size. Check with your service provider on the conference size limit.

For participants that are transferable, your system keeps them in the conference using local mixing. They're then subject to the local mixing limit.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Calling Features, clear the check box for X\_ConferenceBridge.
- 3 In the Value column, enter the user ID or (SIP) URL of the external conference bridge for X\_ConferenceBridge.
- 4 Select Submit.
- 5 Go to IP Phone > Phone Settings
- 6 Under Calling Features, clear the check box in the Default column for UseExternalConferenceBridge.
- 7 In the Value column for UseExternalConferenceBridge, select the check box.
- 8 Select Submit.
- 9 Restart your system when you complete your changes.

The phone assumes that only conferees that are on the same SP service or using the same ITSP profile as the conference bridge can be referred to the bridge. For conference participants that are referable, the phone keeps them in the conference using local mixing and are subject to the local mixing limit.

For example, if you have a conference participant who is connected through the PDMS-SP service, the phone keeps the call with that participant in the Connected state, as well as the call to the conference bridge in the Connected state, and applies local mixing to the two calls.

## **Configure Conferencing Capacity**

By default, your Poly Edge B series devices support 3-way conferencing. You can change the capacity to 4-way or 5-way.

The least value of MaxSessions (in Voice Services > SPN Service > Calling Features) and LocalConferenceLimit (in IP Phone > Phone Settings > Calling Features) determines the maximum number of participants allowed in a conference. For example:

- MaxSessions = 2, LocalConferenceLimit = 4: The maximum participant number is 3 (Two simultaneous remote sessions besides your local session).
- MaxSessions = 4, LocalConferenceLimit = 2: The maximum participants number is 2.

- 1 In the system web interface, go to IP Phone > Phone Settings > Calling Features.
- 2 Select a value for the **LocalConferenceLimit** drop-down menu.

## **Phone Number Formats**

There are places within your configuration that specify a target phone number, such as a speed dial number or a call forwarding number.

The following two formats specify a target phone number:

- Short number: The number itself, such as 3231234
- Full number: The number and the service to use with the number, such as sp3 (14089993312) Use the case-insensitive service names for each service in the full number per the following:
  - sp n for SPn Service for n = 1 to 6
  - pp for the PDMS-SP Service

When you only specify a short number, your phone determines the service to use, where necessary, by going through normal digit map and call routing processing. With a specified full number, your phone uses the number and service as specified without any modification.

# **Configuring Auto-Answer**

Your phone supports two methods to auto-answer a call:

- Call-Info: The phone inserts an answer-after=0 parameter in a Call-Info header in the INVITE request.
- Alert-Info: The phone inserts info=alert-autoanswer; delay=0 parameters in an Alert-Info header in the INVITE request.

For more information on auto-answer and intercom, see the *Poly OBi Device Technical Reference* at the <u>Poly Online Support</u> Center.

# **Auto-Answer Incoming Calls Based on Inbound Call Routing Rules**

Enable the phone auto-answer certain incoming calls based on inbound call routing rules by specifying a rule that routes the call to ph (autoans).

For example:

```
{someid:ph(autoans;nobeep)},{(@.4089991234):ph(antoans;delay=2)},{ph}
```

The autoans syntax supports two attributes:

- nobeep: Don't play a beep tone on answering. The default is to play the beep according to the user preference settings.
- delay={value in seconds}: The number of seconds to ring before auto-answering the call. The default is 0.

## Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Clear the check box in the **Default** column for **X InboundCallRoute**.
- 3 In the Value column, enter a rule that routes the inbound call to ph (autoans).
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **Configure Incoming Page Alert Tone for Auto-Answer**

Enable the incoming page alert tone for auto-answer calls.

- 1 In the system web interface, go to User Settings > User Preferences.
- 2 Select the check box AutoAnswerAutoMute.
- 3 Select Submit.

4 Restart your system when you complete your changes.

#### **Disable Auto-Answer When on the Phone**

Disable auto-answer when on the phone. The phone presents the intercom call as a normal call.

#### Task

- 1 In the system web interface, go to User Settings > User Preferences.
- 2 Select the check box AutoAnswerOffWhenBusy.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Configure Auto-Answer Settings**

Choose the signaling method the phone uses to automatically answer incoming calls.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Under Feature Configuration, in the Default column, clear the check box for X\_AutoAnswerMethod.
- 3 In the Value column, select the signaling method from the drop-down menu for X\_AutoAnswerMethod.
- 4 Select Submit.
- 5 Go to IP Phone > Phone Settings, under Calling Features, in the Value column, check the box for AutoAnswer Enable.
- 6 Select Submit.
- 7 Restart your system when you complete your changes.

## **Caller ID**

During a call, the caller's name and number displays on the screen when available.

## **View More Caller Information**

The SIP server may send a Call-Info header with an Action URL to provide additional information about the caller. For example:

Specify an Action URL in the Call-Info header to show caller information when a user presses the ciurl softkey (you must include this key in one of the applicable softkey sets). For example: Call-Info: <a href="https://abc.com/user/info.php?user=john.j.smith">https://abc.com/user/info.php?user=john.j.smith</a>; purpose=info

## Task

- 1 In the system web interface, go to IP Phone > Soft Keys.
- 2 Under Soft Key Sets, clear the check box for the call state in which you want the ciurl softkey to appear, like Ringing or CallConnected.
- 3 In the Value column, insert ciurl to the desired position.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configure a Caller ID Display Name**

Configure the name that displays when a user places a call.

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Calling Features, clear the check box for CallerIDName in the Default column.
- 3 In the Value column, enter a name in CallerIDName that displays on the screen during a call.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Insert P-Preferred-Identity SIP Header

Configure the phone to send a P-Preferred-Identity SIP header on outbound calls.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP Profile N.
- **2** Select the check box for X\_InserPPreferredIdentity.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Blocking Caller ID**

Blocking caller ID (or anonymous call) enables users to prevent their name and number information from appearing when they make an outgoing call.

Enable this as a feature for all calls on the phone or only for calls on a specific service. For calls that apply to an SP service, the feature may be offered locally by the phone or by the softswitch serving that SP service on the phone.

#### Block Caller ID for All Calls

Block caller ID for all calls on the phone.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under Calling Features, clear the check box in the Default column for Anonymous Call Enable, then select the check box in the Value column.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

#### Block Caller ID for Calls on an SP Service

Set the phones to automatically block the caller ID for all calls on an SP service.

#### Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under Calling Features, clear the check box in the Default column for Anonymous CallEnable, then select the check box in the Value column.
- 3 Under Network Provided Services, clear the check box for AnonymousCall in the Default column, then select the check box in the Value column.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## Enable Block Caller ID on a Line Key

Enable Block Caller ID on a line key.

**Note:** This service requires ITSP support.

#### Task

- 1 In the system web interface, go to IP Phone, then select Right Line Keys or Left Line Keys.
- 2 Under Key N, clear the check box for Function in the Default column.
- 3 In the Value column, select Block Caller ID from the drop-down menu for Function.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## Enable the Block Anonymous Calls Feature Key

Enable a feature key to block incoming calls that don't have an identifying caller ID number.

Incoming calls receive a busy signal or busy call treatment (such as **Call Forward On Busy**). This feature has both phone versions and line versions.

## Task

- 1 In the system web interface, go to IP Phone, then select Right Line Keys or Left Line Keys.
- 2 Under Key N, clear the check box for Function in the Default column.
- 3 In the Value column, select Block Anonymous Call from the drop-down menu for Function.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Call Forwarding**

Call forwarding enables users to send incoming calls to another number.

Users can forward calls to a landline, VoIP, or PDMS-SP number. Each line has one set of call forward settings, and there's one additional set at the phone level. Incoming calls on a particular line are processed by the call forwarding rules at that line level first, then at the phone level, whichever is applicable.

Configure signaling options for call forwarding. If you don't use signaling, the phone tries to bridge the caller and forward to the target internally.

# **Configure Call Forwarding Settings**

Configure call forwarding settings in the system web interface.

Poly Edge B Series IP phones support three types of call forwarding:

- Call forward unconditional/Call forward all
- Call forward on busy
- Call forward on no answer

- 1 In the system web interface, go to Voice Services > SPN Service > Calling Features.
- 2 In the Value column, configure the following parameters.

Parameter	Description
CallForwardUnconditionalEnable	Select the check box to enable the Call Forward Unconditional feature on this line.
CallForwardUnconditionalNumber	Enter directory number to forward all incoming calls on this line.
CallForwardOnBusyEnable	Select the check box to enable call forwarding-on-busy on this device.
CallForwardOnBusyNumber	Enter a directory number to forward all incoming calls on this line when busy.
CallForwardOnNoAnswerEnable	Select the check box to enable call forwarding-on-no-answer on this device.
CallForwardOnNoAnswerNumber	Enter a directory number to forward all incoming calls on this line when no answer.
CallForwardOnNoAnswerRingCount	Enter number of rings to be considered as no answer.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure Call Forward Signaling**

Configure call forwarding using signaling options.

When using signaling for call forwarding, the phone attempts to forward the caller by replying a 302 response to the INVITE request with the forward target's SIP URL in a Contact header.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP Profile X > General.
- 2 In the Value column for the Signaling Protocol parameter, select SIP.
- 3 Select Submit.
- 4 Go to Service Providers > ITSP Profile X > SIP.
- 5 In the **Value** column for the X\_Use302ToCallForward parameter, select the check box to enable the use of the 302 response to INVITE for call forward.
- 6 Select Submit.
- 7 Restart your system when you complete your changes.

## **Configure the Call Forward Unconditional Feature Provider**

Select the provider that you use for activating or deactivating call forward unconditional in the User Preferences menu.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 In the Value column for CallForwardUnconditionalFeatureProvider, select the desired provider to activate or deactivate call forward unconditional.
  - Phone = Applied at the phone level
  - SPx = Applied to the SPx Service
  - OBiTALK = Applied to the OBiTALK Service
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

#### Do Not Disturb

Do Not Disturb (DND) allows you to set your phone to immediately forward calls made to it to the number set up as your voicemail number or account. If no voicemail account is set up, your phone returns a busy signal to the caller until you turn off DND.

## **Configure Do Not Disturb Feature Provider**

Configure the provider for the DND feature.

- 1 In the system web interface, go to IP Phone > Phone Settings > Calling Features.
- 2 In the Value column for the DoNotDisturbEnable parameter, select the check box.
- 3 Go to User Preferences Settings.
- 4 In the Value column for the DoNotDisturbFeatureProvider parameter, select the provider for the DND feature to apply when the DND feature is activated or deactivated in the **User Preferences** menu:
  - Phone = Do Not Disturb applies at the phone level.
  - SPx = Do Not Disturb applies at the SPx Service.
  - OBiTALK = Do Not Disturb applies at OBiTALK Service.
- 5 Select Submit.
- 6 Restart your system when you complete your changes.

#### **Enable Do Not Disturb for All Calls**

Configure Do Not Disturb (DND) on the phone to forward calls directly to voicemail.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Calling Features, clear the check box for DoNotDisturbEnable in the Default column.
- 3 In the Value column, select the check box for DoNotDisturbEnable.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Enable Do Not Disturb for Calls On an SP Service**

You can enable Do Not Disturb for calls on an SP Service.

#### Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under Calling Features, clear the check box for DoNotDisturbEnable in the Default column.
- 3 In the Value column for the DoNotDisturbEnable parameter, select the check box.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configuring Do Not Ring**

Enabling Do Not Ring disables the ringer, but the phone screen still indicates when there is an incoming call.

You can also assign a feature key to turn Do Not Ring on or off.

## **Enable Do Not Ring**

Enable Do Not Ring to silence the ringer for all incoming calls to the phone.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under Calling Features, clear the check box in the Default column for DoNotRingEnable.
- 3 In the Value column, select the check box for DoNotRingEnable.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## Configure a Do Not Ring Feature Key

Define a feature key for the Do Not Ring function.

#### Task

- 1 Go to IP Phone, then select Right Line Keys or Left Line Keys.
- 2 Under Key N, clear the check box for Function in the Default column.
- 3 In the Value column for Function, select Do Not Ring.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configure Message Waiting Indicators**

Configure the visual and audio message waiting indicators in the system web interface.

For more information about message waiting indicators, see the *Poly OBi Device Technical Reference* at the <u>Poly Online Support Center</u>.

## Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under Calling Features, clear the check boxes in the **Default** column for the following features, then configure the features in the **Value** column.

Parameter	Description
MWIEnable	Select the check box to enable Message Waiting Indication on the phone for this service.
X_VMWIEnable	Select the check box to enable Visual Message Waiting Indication on the phone for this service.

- 3 Select Submit.
- 4 Go to Service Providers > ITSP Profile N > SIP.
- 5 Clear the check boxes in the **Default** column for the following features, then configure the features in the **Value** column.

Parameter	Description
X_MWISubscribe	Select the check box to enable SUBSCRIBE for MWI.
X_MWISubscribeExpires	Enter an interval (in seconds) for MWI subscription renewal.

- 6 Select Submit.
- 7 Restart your system when you complete your changes.

# **Configure Multicast Page Groups**

Configure the page groups on your phone. Each phone supports two multicast groups and up to 10 page groups.

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under Page Group *n*, clear the check boxes in the **Default** column for the following settings, then configure the settings in the **Value** column.

Parameter	Description
GroupName	A user-friendly name to label the group on the phone UI.
MulticastAddress	This must be a valid IPv4 multicast address. The default is $224.1.1.100\mathrm{for}$ all paging groups.
Emergency	Designate this page group as the emergency group. Pages on this group is auto answered.
Polycast	Use Poly UC Software multicast paging format.
PolycastListen	Enable listening on this Poly UC Software multicast page group.
PolycastGroup	The Poly UC Software multicast paging group to use.

Parameter	Description
MulticastPort	The default is 65322 for page group 1 and 65324 for page group 2.
	65326 for page group 3
	• 65328 for page group 4
	65330 for page group 5
	65332 for page group 6
	65334 for page group 7
	65336 for page group 8
	65338 for page group 9
	65340 for page group 10
	Note: Each group must use a different port number. If Polycast group paging is used, the same port can be used for all Polycast groups.
ПΙ	The TTL value of outgoing (multicast) RTP packets. The default is 2.
ParticipantName	A string value to identify the current user who is paging to the group in outgoing RTCP packets.
AudioCodec	Audio codec to use for outgoing page. Default is G711U.
TxPacketSize	The outgoing RTP packetization in milliseconds. The default is 20.
RTCPTxInterval	The interval, in milliseconds, between sending outgoing RTCP packets when paging. No RTCP packets are sent if the value is 0 (default). Note that an RTCP Bye packet is always sent when ending an outgoing page regardless of this setting.
SilenceSuppression	A Boolean option to control if Silence Suppression is used for outgoing page. The default is false.
PushToTalk	Select the check box to enable PTT.
PlayToneOnIncomingPage	A Boolean option to control whether to play a short Paging Tone before playing a new incoming page. The default is true.
PreferredAudioDevice	Select the preferred audio device to play incoming page. Enter either System, Headset, or Speaker. The default is System to let the phone picks according to other user preferences.
PageTimeout	Limit of the outbound page duration in number of seconds to avoid accidentally jamming the page group channel. The duration is unlimited if the value is 0 (default).
EnableJoinLeaveGroupUserControl	A Boolean option to control whether to enable you to join or leave a page group by pressing the pg1 through pg10 softkeys. The default is <b>true</b> .
	When set to <b>false</b> , users can press the key once to talk and press it again to go back to listen. Although users can't choose the leave the page group, they can still use the <b>AutoAnswerIntercom</b> option from the <b>User Preferences</b> menu not to play any of the incoming pages.
SpeakerVolume	Select the speaker volume when paging. Use 0 to follow the current ringer volume.
Stats	A prepopulated field to show statistics of packets received in the past hour, minute, and 10 seconds. This field is updated every 10 seconds.

# 3 Select Submit.

4 Restart your system when you complete your changes.

# **Configure Music On Hold**

When you enable this setting, this phone plays music to all callers that are on hold.

Note: You can't customize or configure the music that plays.

## Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under Calling Features, clear the check box in the Default column for MOHServiceNumber
- 3 In the Value column, enter the music on hold service number for MOHServiceNumber.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **PTT Mode**

The phone supports push-to-talk (PTT) mode with speed dial, Busy Lamp Field, and page group feature keys.

## **Configure PTT for Page Groups**

Configure PTT mode with the feature key function page groups 1 through 10.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under Page Group *n*, clear the check box in the **Default** column for **PushToTalk**.
- 3 In the Value column, select the check box for PushToTalk.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **Configure PTT for Speed Dial Numbers**

Configure PTT mode on a speed dial by including the ptt flag in the Number parameter of the speed dial.

#### Task

- 1 In the system web interface, do one of the following:
  - Go to IP Phone, then select Right Line Keys or Left Line Keys.
  - Go to IP Phone > Programmable Keys.
- 2 Under Key N, clear the check box for Number in the Default column.
- 3 In the Value column, enter the ptt flag for Number using the following syntax:

```
Number = {target-number};ptt
```

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Busy Lamp Field (BLF)**

Busy Lamp Field (BLF) is a common collaborative feature for users to monitor the extensions of other users from their phone.

When BLF is supported by a specific service provider on your phone, assign the BLF function to a feature key bound to that service to monitor an extension. A feature key assigned to the BLF function is referred to as a BLF key. One BLF key monitors one extension only. Assign as many BLF keys as there are feature keys available.

# Assign BLF to a Feature Key

When a specific SP service on the phone supports BLF, assign the BLF function to a feature key bound to that service.

- 1 Go to IP Phone, then select Right Line Keys or Left Line Keys.
- 2 Under Key N, clear the check box for Function in the Default column.
- 3 In the Value column, select Busy Lamp Field from the drop-down menu for Function.
- 4 Under Key N, clear the check box for Service in the **Default** column.
- 5 In the Value column, enter the SP service that provides this function.
- 6 Under Key N, clear the check box for Number in the **Default** column.
- 7 In the Value column, enter the number or user name for the BLF user that the phone will monitor on this key.
- 8 Under Key N, clear the check box for Name in the **Default** column.
- 9 In the Value column, enter a friendly name for the BLF user.
- 10 Select Submit.
- 11 Restart your system when you complete your changes.

# Configure the Speed Dial Number for BLF

Assign a BLF key to act as a speed dial function key and dial a different number than what is used by the phone to subscribe to the BLF user's state.

When using a BLF key as a speed dial key, your phone determines the number to call based on the following attributes (in order) specified in the Number parameter of the BLF key:

- If the optional spd attribute is specified, call that attribute.
- If the optional ext attribute is specified, call that attribute.
- Call the {userid} attribute, or the number, or user name for the BLF user that the phone subscribes to, which you MUST specify for a BLF key.

#### Task

- 1 Go to IP Phone, then select Right Line Keys or Left Line Keys.
- 2 In the Value column, if the speed dial number for the BLF is different than the configured number or user name for the subscription, add ext=extension or spd=speeddialnumber, separated by semicolons, for Number.
  - For example, if the BLF user's subscription address is PolyUser2 and the extension is 1002, Number would be configured as PolyUser2; ext=1002.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Configure Directed Call Pickup for BLF**

Configure the method for directed call pickup under the ITSP Profile of the SP service that is bound to the BLF key.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Under Feature Configuration, clear the check box for X\_DirectedCallPickupMethod in the Default column.
- 3 In the Value column, select one of the following methods for X DirectedCallPickupMethod.

Parameter	Description
Feature Code	Your phone sends a normal INVITE to the number formed by concatenating the Feature Code with the number of the monitored extension (the ext attribute of the Number parameter (if it exists) or the {userid} attribute).
INVITE   Declare	Used with BroadSoft and FreePBX.
INVITE+Replaces	Your phone sends an INVITE with a Replaces header that identifies to the softswitch the ringing call to pick up from the monitored extension.
	Used with MetaSwitch.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Configure Barge-In for BLF

Configure a barge-in feature code under the ITSP Profile of the SP service that is bound to the BLF key.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Under Feature Codes, clear the check box in the Default column for Bargeln.
- 3 In the Value column, enter a feature code for Bargeln.
- 4 Select Submit.
- 5 Go to Voice Services > SPN Service.
- 6 Under BLF Features, clear the check box in the Default column for X\_BLFBargeIn.
- 7 In the Value column, check the box for X\_BlfBargeIn.
- 8 Select Submit.
- 9 Restart your system when you complete your changes.

# Configure Call Pickup for BLF

Configure a call pickup feature code under the ITSP Profile of the SP service that is bound to the BLF key.

**Note:** The resume operation is intended to resume (and take over) a holding call on the monitored extension. Currently, there's no known softswitch that supports this operation.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Under Feature Codes, clear the check box for CallPickup in the Default column.
- 3 In the Value column, enter a feature code for CallPickup for the ITSP.
- 4 Select Submit.
- 5 Go to Voice Services > SPN Service.
- 6 Under BLF Features, clear the check box in the Default column for X\_BLFCallPickup.
- 7 In the Value column, check the box for X\_CallPickup.
- 8 Select Submit.
- 9 Restart your system when you complete your changes.

## **Configure Floating BLF Key Assignment**

Reserve a block of BLF keys to members of a group of extensions without hard-coding the extension for each reserved key.

#### Task

- 1 Go to IP Phone, then select Right Line Keys or Left Line Keys.
- 2 Under the key that you defined with the **Busy Lamp Field** function, clear the check box in the **Default** column for **Number**.
- 3 In the Value column for Number, assign the number to the group name using one of the following options:
  - Number={group-name}/: Specifies the group that the phone reserves the key for.
  - Number={group-name} / {preferred-extension} ?: Specifies the preferred extension that the phone uses for the key within the group. The phone monitors the extension and uses it if it's returned by the server in a NOTIFY message. If the extension isn't returned, the phone can assign this BLF to another key as needed.

For example: Number = sales-team/1003?

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Configure BLF with the PDMS-SP Service

Configure BLF to work with the PDMS-SP service.

The phone monitors the following statuses:

- Offline
- Idle (no calls)
- Ringing (at least one call ringing)
- Holding (at least one call on hold)
- Connected (at one call connected)

The phone applies the following operations to the monitored OBi number:

- Call (Call the monitored PDMS-SP number)
- (Directed) Pick Up (Pick up the oldest ringing call on the monitored phone)
- Barge-In (Barge in a connected call on the monitored phone)
- Coach (Coach the monitored phone on a connected call)

#### Task

- 1 In the system web interface, go to Voice Services > OBiTALK Service.
- 2 Under Calling Features, clear the check box in the Default column for CallStatusAggregator.
- 3 In the Value column, enter an OBi number for CallStatusAggregator that aggregates the call status for OBi devices.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Call Park and Call Pickup**

Call park and call pickup/call retrieval are similar to call hold and call resume.

However, a user can pick up a call on extensions other than the one that parks (holds) the call.

You can set up a parking lot for calls using the softswitch. A call may be parked at an unoccupied slot from one extension and picked up by the same or another extension from the same slot.

## **Configure Call Park Methods**

Your phone supports both call park and call pickup.

Set the method to use for call park independently for each SP service under the ITSP Profile bound to that SP service.

- 1 In the system web interface, go to Service Providers > ITSP Profile X > SIP > Feature Configuration.
- ${\bf 2} \quad \text{In the {\bf Value} column for the $X$\_CallParkMethod parameter, select one of the following methods:} \\$

Method	Description
Feature Code	You must use this option for Park-Against-An-Extension.
	Specify the call park feature code under the same ITSP Profile, using the ITSP Profile > SIP > Feature Codes::Park parameter.
	In the context of parking a call, the local extension of the SP service is taken from the <b>SPn Service</b> ::X_MyExtension parameter, if it is specified.
REFER	You must use this option for Park-In-An-Orbit.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configuring Call Park Monitor and Call Pickup Methods**

Configure your call park monitor and call pickup methods depending on how the call is parked.

When a call is parked-against-an-extension with a feature code, you can pick it up by dialing the call pickup feature code followed by the extension number the call is parked against. With the park-against-an-extension method, you can define a group of extensions to serve as a more generic parking lot and use BLF keys to monitor the call park status of each key. With the  $\mathtt{spd}$  attribute of the Number parameter, these BLF keys include the call park feature code as a prefix to act as a shortcut to park a call in an empty slot.

Similarly when a call is parked-in-an-orbit and if the softswitch has a way to allow calls to be picked up from an orbit that is equivalent to making a call to a special number, users can make those calls without any special support from the phone. There are scenarios when your phone can monitor if certain extensions have calls parked against them, or if certain park orbits are holding calls.

# Call Park Monitor Feature Keys

For calls parked-in-an-orbit, you can define a **Call Park Monitor** feature key to monitor each orbit (one feature key per orbit).

Your phone treats the Call Park Monitor function like the BLF function. The softswitch provides call park status information, as summarized in the following table.

#### **Call Park Status Information**

Call Park Monitor Status	Description	Available Operation	lcon	LED Pattern
One Call Ringing	A call is parked in this orbit	Pick up the call via Directed Call Pickup	9	Solid green
No Calls	No call parked in this orbit	Park the call in this orbit	0	Off
Offline	Status of the park orbit is unknown	None	9	Off

You configure a Call Park Monitor feature key like a BLF feature key, except that the {userid}, {extension}, and {speed-dial} attributes pertain to a park orbit instead of a real extension, and the ptt flag is not applicable.

When the user presses the **Call Park Monitor** key, one of the following applies:

- If there is no call parked, the highlighted call on the screen is parked.
- If there is a call parked, pick up the call.

#### **Enable Call Park Status**

Enable call park status using the system web interface.

For calls parked-against-an-extension, your phone may monitor call park status by directly (SIP) subscribing to an extension's call park status or indirectly through BLF monitoring of that extension.

**Note:** Your phone supports direct subscription to call park status of the underlying SP's extension, but not an arbitrary extension. If the underlying SP is a shared line, then the direct subscription to call park status of that extension isn't necessary if the softswitch already includes call park status in the notifications of the shared line status to the phone.

# Task

1 In the system web interface, go to Voice Services > SPn Service > Network Provided Services (where n = 1 to 6).

- 2 In the Value column for the CallParkStatus parameter, select the check box.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Enable Call Park Ring**

When you define one or more Call Park Monitor feature keys, you can enable Call Park Ring to play a short ring at regular intervals as an indication that at least one of the monitored call park orbits has a call parked.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings > Calling Features.
- 2 In the Default column of the CallParkRingEnable parameter, clear the check box.
- 3 In the Value column of the CallParkRingEnable parameter, select the check box.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Configure Call Park Short Ringtones

Configure the short ringtones that play to indicate call park status in the system web interface.

#### Task

- 1 In the system web interface, go to User Settings > User Preferences.
- 2 In the Value column for the CallParkRingtone parameter, enter the string value with the following format: {ring-tone-url}, duration={d-value}, interval={i-value}

Attribute	Description
{ring-tone-url}	This value can be ding or blop or an external URL that starts with http://or https://.
	For best results, limit this ringtone to 1 or 2 seconds long.
{d-value}	Duration parameter (optional)
	The total duration in seconds to play the ring, as long as there's a parked call. It must be greater than or equal to $0 (0 = to play indefinitely)$ .
	Default value is 60.
{i-value}	Interval parameter (optional)
	The interval between the ring bursts in seconds. It must be greater than 0.  Default value is 10.
	Default value is 10.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Configure Call Park Ring in the User Preferences Menu

Configure call park ring in the **User Preferences** menu in the system web interface.

**Note:** You can also configure the call park ring option so that the phone users can change the CallParkRingEnable option from **User Preferences** on the local interface of the phone. The default onscreen label for this option is **Call Park Ring**, and users can set the value to either **Enable** or **Disable**.

- 1 In the system web interface, go to IP Phone > Phone Settings > GUI Menus.
- 2 In the Value column for the Preference Menun parameter (where n = 1 to 6), enter cpr in any of the GUI menus.
- 3 Select Submit.

4 Restart your system when you complete your changes.

# **Shared Line and Shared Call Appearances**

(SIP/SP only) A shared line is a service account or extension installed on a group of phones.

All phones on the shared line are notified when a phone uses that extension. There can be multiple simultaneous calls on a shared line.

Each call on a shared line is shared call appearance (SCA), sometimes referred to as a bridged line appearance (BLA).

# **Configure the SCA Method**

There are two common implementations for SCA: the Call-Info method and the SLA/BLA (dialog) method.

Configure the SCA method using the X\_ShareLineMethod parameter.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP Profile X > SIP > Feature Configuration.
- 2 In the Value column for the X\_ShareLineMethod parameter, select one of the following methods:

Method	Description
call-info	This is the method used by BroadSoft. The phone subscribes to the call-info event package with the proxy server to receive notification of share call appearance state updates. This method also uses the line-seize event package for seizing a SCA before making a call.
dialog;sla	This is based on the Bridged Line Appearance draft (draft-anil-sipping-bla-02). The phone accepts subscription to the dialog;sla event package from the state-agent, and also subscribes back the same with the state-agent. The phone and state agent then exchange notifications of share call appearance state updates.
dialog;ma	This is similar to the dialog;sla method, and is based on a more current version of the same draft (draft-anil-sipping-bla-04). The name of the event package name is changed to dialog;ma.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

#### Designate an SP Service as a Shared Line

You can designate an SP service as a shared line with the X\_ShareLine parameter.

You can use shared line when you want to give calling or answering rights to a set of phones under the same SP Line. For example, for businesses like a restaurant, when a customer calls in, all phones tied to that same SP line can answer the incoming call and at the same time, they can make a call using that same line.

#### Task

- 1 In the system web interface, go to Voice Services > SPn Service > Share Line Features.
- 2 In the Value column of the X\_ShareLine parameter, select the check box.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Set Maximum Number of Call Appearances on a Shared Line

Set the maximum number of call appearances on a shared line with the MaxSessions parameter.

# Task

1 In the system web interface, go to Voice Services > SPn Service > Calling Features.

- 2 In the Value column of the MaxSessions parameter, enter the maximum number of simultaneous sessions that the endpoint can conference.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure a Call Appearance Feature Key**

If your phone has a shared line configured as one of the services, you must have as many call keys defined on the phone as are bound to that service.

#### Task

- 1 In the system web interface, go to IP Phone > Line Key Customization > Call Appearance.
- 2 In the Value column for the Enable parameter, select the check box.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure Subscription Expires Values**

SCA implementations are based on subscribe/notify framework.

You can configure the subscription expires value to the call-info and line-seize events.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP Profile X > SIP > Feature Configuration.
- 2 In the Value column, configure the following parameters:

Parameter	Description
X_CallInfoSubscribeExpires	Enter call-info (SCA) subscription renewal (in seconds).
X_LineSeizeSubscribeExpires	Enter line-seize event subscription renewal (in seconds).
X_DialogSubscribesExpires	Enter dialog subscription renewal (in seconds).

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Buddy Lists**

A buddy list is a contact list with presence information incorporated.

Your phone supports buddy lists based on the XMPP standard.

# **Configure a Buddy List Service**

Enable a buddy list service for each SP service independently.

- 1 In the system web interface, go to Voice Services > SPn Service Credentials.
- 2 In the Value column, configure the following parameters:

Parameter	Description	
X_XmppDomain	Enter the XMPP server domain name. The phone resolves this name as DNS A Record only. For example, impliop1.broadsoft.com.	

Parameter	Description	
X_XmppUserName	Enter a user name for authentication to the XMPP server. For example, ${\tt ObihaiTester@impliop1.broadsoft.com} \ .$	
X_XmppPassword	Enter a password for authentication to the XMPP server.	

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure a Presence Monitor Feature Key**

Configure a feature key using the Presence Monitor parameter to monitor the presence of a buddy in a buddy list.

Each presence monitor key monitors only one buddy.

You can configure as many presence monitor keys as you need, but you can't allocate the same buddy to more than one key.

#### Task

- 1 In the system web interface, do one of the following:
  - Go to **IP Phone** > *n* Line Keys (where *n* = Left or Right).
  - Go to IP Phone > Programmable Keys.
- 2 Select a key (for example, **Key 1** or **Key 2**).
- 3 In the Value column, configure the following required parameters:

Parameter	Description	
Function	Select the presence monitor function assigned to this key.	
Service	Select the SP service where the XMPP service is offered, such as SP3.	
Number	Enter the number, extension, or user ID of the buddy you want to monitor.	
	Note: This value typically looks like an email address, such as <u>user.name@somecompany.com</u> .	

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configure Emergency Call Settings**

You can define one or more numbers as emergency numbers by adding the prefix EM# to those numbers using the DigitMap parameter and a corresponding rule with OutboundCallRoute to route those calls to a specific voice service to handle the call.

When the phone determines a call is to an emergency number, note the following:

- Users can't hold or end the call. Only the remote party can end the call.
- Users can start a call with a headset, but they can't switch to use a headset if they start the call using the handset or speakerphone. Users can only switch between the handset and speakerphone during the call.
- Users can't start or resume any other calls.
- Users can't press the **Home** key to get to the **Home** screen to start another app.
- Call waiting is disabled.
- All feature keys are disabled.

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 In the Value column, configure the following parameters:

Parameter	Description	
DigitMap	Enter a digit map by adding the prefix EM# to those numbers. For example, $DigitMap = (\langle EM\# \rangle 911   other rules$	
OutboundCallRoute	Enter the routing rule for outbound calls made from this phone. For example,  OutboundCallRoute = {('EM'#xx.):sp1},{(311):sp2}, other rules	

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Enable User to End Emergency Call**

By default, Poly Edge B does not allow users to end an emergency call. Configure the phone to allow the user to end emergency calls.

#### Task

- 1 In the system web interface, go to **System Management > Device Admin**.
- 2 Under Emergency Geolocation Settings, clear the Default box for BlockEndCallForEmergencyCall.
- 3 Clear the box for BlockEndCallForEmergencyCall.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Enhanced 911 and HTTP-Enabled Location Delivery (HELD)**

Service providers can also provide location-based Enhanced 911 (E911) service to the Poly Edge B Series IP phone users.

For more information, see the E911 and HELD Support feature profile.

# **Enable Call Recording Controls**

Enable the call recording feature on a per SP service basis.

During a call, your phone provides the controls for call recording. The softkey options for recording controls options are available only when the call is in the **Connected** or **Holding** state.

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box in the Default column for CallRecording.
- 3 In the Value column, select the check box for CallRecording.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Configuring System Settings

Customize system settings for your phones using applications and various keysets.

# **Tone Patterns**

Tone patterns provide audible tones for different call scenarios.

#### **Set a Custom Tone Pattern**

Create customized tone patterns to provide audible call progress indicators to the user.

**Note:** Tone Profile A default settings use North American telephone standards. Tone Profile B default settings use Australian telephone standards. Download tone profiles for other countries from the OBiTALK forum.

For more information about tone patterns and tone profiles, see the *Poly OBi Device Technical Reference* at the <u>Poly Online Support Center</u>.

#### Task

- 1 In the system web interface, go to **Tone Settings > Tone Profile X**.
- 2 Select a tone pattern.
- 3 In the **Default** column, clear the check box for TonePattern.
- 4 In the Value column, enter the tone pattern you want to use.

  For example tone patterns, see the Poly OBi Device Technical Reference at the Poly Online Support Center.
- 5 Select Submit.
- 6 Restart your system when you complete your changes.

#### Set the Tone Profile to Use

You can select a Tone Profile (A or B) for the phone to play different tones.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings > Calling Features.
- 2 In the Value column for the ToneProfile parameter, choose one of the following tone profiles: A or B
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Ringtones

Ringtones provide audible call progress indicators to the user.

#### **Distinctive Ringtones and Patterns**

Add Alert-Info to the SIP invite header to configure distinctive ringtones based on how you set up incoming call parameters.

In a SIP-based distinctive ring, the RingName is matched against the Alert-Info of the form Alert-Info: <file://data/ringtones/ring-name>, where ring-name is one of the preloaded ringtones file names:

- Alarm.722
- BB.722
- Bell A.wav
- Bell B.wav
- Bell C.dat
- Office A.wav
- Office B.way

- Office C.way
- SMS.722

Alternatively, external ringtone files can be signaled by sending the Alert-Info header with a full URL of the ringtone file. For example, <a href="mailto:khttp://my.example.com/tones/myringtone.wav">http://my.example.com/tones/myringtone.wav</a>.

# **Set the Call Waiting Indicator Tone**

Set a distinctive tone for call waiting using the X\_DefaultRing parameter.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service > Calling Features.
- 2 In the **Value** column for the X\_DefaultRing parameter, select the default ring pattern for the phone to use for call waiting.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Assign a Default Ringtone for an SP Service

Assign a different default ringtone to each trunk on your phone.

#### Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 In the Value column for the X\_RingtoneFile parameter, enter the name of the default ringtone for the phone to use for incoming calls.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configuring Star Codes**

Star codes are short sequences of characters that users enter to perform certain operations.

Each sequence usually starts with the star (\*) key followed by a two-digit code (such as \*69).

A star code script contains a number of predefined variables and actions. Each variable represents one or a group of configuration parameters. An action can be checking or setting a variable's value, collecting a phone number, or calling a certain number.

For more information on star codes, see the Poly OBi Device Technical Reference at the Poly Online Support Center.

#### Set the Star Code Profile

You can select a Star Code Profile (A, B, or None) for interpreting the star codes users enter on the phone.

Select which star code profile to use with the StarCodeProfile parameter.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings > Calling Features.
- 2 In the Value column for the StarCodeProfile parameter, choose one of the following star code profiles:
  - A
  - B
  - None (if you aren't using a star code)

A star code script is defined with the help of a number of predefined variables and actions. Each variable represents one or one group of configuration parameters. An action can be checking or setting the value of a variable, collecting a phone number from the user, or calling a certain number.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Program a Star Code**

Program star codes for any enabled feature in addition to the default star codes available.

# Task

- 1 In the system web interface, go to Star Codes > Star Code Profile N.
- 2 In the **Default** column, clear the check box for a Parameter Name with an empty value column.
- 3 In the Value column, enter a star code script in the following format: code, name, action1
  For example, for Code30, the star code script is \*01, Page Group 1 Talk, pg1tx. Using the star code \*01 sends a page to Group 1.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Customizing Softkey Sets**

The set of softkeys available on the phone screen at any given time is a softkey set. The current app state determines which softkey set displays on the phone. Customize some of the softkey sets by entering a list of softkey specifications as a comma-separated list in the corresponding softkey parameters.

The value of a softkey set parameter uses the following general format: {softkey-spec}[|{softkey-spec}], {softkey-spec}[|{softkey-spec}].

A {softkey-spec} is a softkey specification and the | {softkey-spec} syntax lets you specify an optional alternative softkey to show when the given softkey is hidden. A softkey is hidden when its hidden condition is matched. The hidden condition for each softkey is defined internally.

For more information on softkey specifications, see the *Poly OBi Device Technical Reference* at the <u>Poly Online Support</u> Center.

#### **Assign Softkeys**

Assign softkeys to the configurable soft key sets.

- 1 In the system web interface, go to IP Phone > Soft Keys.
- 2 In the **Default** column, clear the check boxes then assign softkeys in the **Value** column for the following settings.

Parameter	Description	Softkey Examples
Home	This parameter represents the <b>Home</b> screen.	redial,cfa,dnd,missed lines
SCAInUse	SCA is being used by another phone.	sca.barge ,sca.monitor ,sca.whisper ,newcall
CallParked	Call is parked.	pickup,,,newcall
CallConnected	Call is connected.	<pre>end, hold, tousb, tospk, conf, tr ansfer, privhold, park, dispcod e, escalate, trace, rec.start, r ec.stop, rec.pause, rec.resume</pre>
CallHolding	Call is on hold.	end, resume, add2conf, conf, tra nsfer, park, dispcode, escalate , trace, rec. start, rec. stop, re c.pause, rec. resume
Dialtone	Dial tone playing.	redial,phbk,lines,mode
Dialing	Dialing a number. redial, dial, backspace, m	

Parameter	Description	Softkey Examples
OnDialing	Dialing a number while on-hook.	switch.line,dial,backspace,mode
Ringing	Incoming call is ringing.	answer,reject
CallConnecting	Trying outgoing or called party is ringing.	end,,,newcall
ConfTrying	Calling second conference participant.	end
ConfRinging	Second conference participant ringing.	end,,conf.now
ConfConnected	Connected with second conference participant.	end, hold, resume, conf.now
ConfBridgeControl	Connected with an external conference bridge.	end, deaf, mute
Conferencing	Merged conference call item.	end,split,newcall
XferTrying	Calling transfer trying.	end
XferRinging	Transfer target ringing.	end,,xfer.now
XferConnected	Connected with transfer target.	end, hold, resume, xfer.now
NetServices	Network Services top level.	ns.bci,ns.dnd,ns.cfa,ns.bac, ns.acd
BLFCall	BLF call options.	blf.call,blf.answer,blf.pick up,blf.barge,blf.coach,blf.m onitor
Settings	This represents the <b>Settings</b> menu.	reboot, reset, fwupdate

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Feature Keys**

Configure feature keys on your phone to perform predefined functions.

Configure virtual line keys and programmable keys.

Define multiple feature keys with the same function, such as **Call Appearance** and **Speed Dial**. However, don't assign a monitor function to the same entity using more than one key. For example, don't assign more than one BLF key to monitor the same extension or assign more than one **Message Status** key to monitor the same mailbox. The phone can update only one of the keys when the status of the monitored entity changes.

A call feature key or call key is a virtual line key (VLK) with the call function assigned. Each call carried out on the phone must have an assigned call key, and you must have least one call key to make or receive a call. Each call key can hold exactly one call, so Poly recommends that you define at least a few call keys on the phone to handle multiple call scenarios, such as call waiting and conferencing.

# **Preassigned Feature Keys (PFKs)**

Poly Edge B Series IP phones have no dedicated programmable keys. Instead, they have hard keys wired to the most commonly used features with function-specific icons printed on the physical keys.

Theoretically, though not recommended, you can reprogram these hard keys to provide other functions, like the programmable keys on the phones.

The default (and recommended) functions of these hard keys are summarized in the following table.

Name	Default Function	Description
Transfer	Transfer	Two valid alternatives to this behavior are to change <b>Function</b> to <b>Blind Transfer</b> or <b>Blind Transfer 2</b> when pressing the key would provide corresponding behavior, respectively.
Hold	Hold	Hold a call.
Next Tab	Next Tab	Page through different line key pages.

# **Configure Feature Keys**

Configure a feature key to perform various functions.

For more information on the specific values for each feature key, see the *Poly OBi Technical Reference* at the <u>Poly Online</u> Support Center.

#### Task

- 1 In the system web interface, do one of the following:
  - Go to IP Phone, then select Right Line Keys or Left Line Keys.
  - Go to IP Phone > Programmable Keys.
- 2 Under **Key N**, clear the check boxes in the **Default** column for your desired settings, then configure the settings in the **Value** column.
- 3 Under **Key N**, clear the check boxes in the **Default** column for the following settings, then configure the settings in the **Value** column.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Available Feature Key Functions**

You can bind feature keys to the following functions.

Parameter	Description	Notes
Function	Select the function to assign to this feature key.	

Parameter	Description	Notes
Service	The service to bind the key to.	Required for:  ACD Sign On or Off Busy Lamp Field Call Park Monitor Disposition Code Hoteling Exec Filter On or Off Exec Assistant Line Monitor Message Status Presence Monitor Security Class Optional for: Block Anonymous Call Block Caller ID Call Appearance Call Forward Do Not Disturb Transfer Speed Dial
Number	The number, extension, or user ID of the entity associated with the assigned function.	Required for:  BLF Call Park Monitor Presence Monitor Speed Dial Optional for: Transfer Blind Transfer
Name	A nickname used to refer to the entity specified in the Number parameter.	Optional for all functions.
MaxCalls	Maximum number of calls to overload on the key.	This is only applicable if the function is Call Appearance. This parameter isn't available under Programmable Keys and Side Car Keys.
Group	A short name referencing the Line Key Customization Group to use to customize the layout of this Line Key.	

# Feature Key Settings

This table lists available feature key setting options.

Feature Key Function	Description
Call Appearance	Makes or receives one call, and the key is known as a call key in this case. You must have an unused (idle) call key available to make or receive a new call. The phone administrator should allocate as many call keys on the phone as the maximum number of concurrent calls it's expected to handle.
	The VLKW (Virtual Line Key Window) shows nothing but the idle phone icon (shown on the right column) when no active call is assigned to the key. Otherwise, the icon changes to reflect the current call state (Call States and Call State Icons are described in the Section Making and Receiving Calls and VLKW shows call information, if available. VLKW may also change its background color to further reflect the current state.
	A call key may be bound to a voice service and is called a bound call key in that case (otherwise it's known as an unbound call key). A bound call key is used to make/receive calls on the bound voice service only. This is one of the ways for a user to select a specific line to make a call.
	A call key may be bound to a service that is a Shared line. In that case when no call is on that key, the VLKW information reflects the state of the respective Shared Call Appearance (SCA).  Parameters:
	Service: Optional. The service or line with which to bind the key
	MaxCalls: Number of calls managed by this call key
Line Monitor	Monitor a Line (a voice service installed on the phone). The Line events that are monitored include:
	Idle: no calls
	<ul> <li>Ringing: at least one incoming call</li> <li>In Use: at least one active call</li> </ul>
	<ul> <li>Holding: at least one call holding VLKW shows the monitored service name and account username (usually same as the account DID number or extension).</li> </ul>
	This function must be bound to the specific voice service that it monitors.
	Parameters: • Service: Required. The service or line to monitor
Busy Lamp Field	Monitor the call state of another extension. A BLF key must be bound to a service (as configured by the phone administrator). The call events that are monitored include:
	Ringing: at least one incoming call
	Holding: at least one call holding
	Busy: at least one active call
	<ul><li>Idle: no calls</li><li>Call parked (against the monitored extension)</li></ul>
	VLKW shows the bound service name and the monitored extension (or DID number,
	or account username).
	This function must be bound to a specific voice service.
	Parameters:
	<ul> <li>Service: Required. The service that provides the monitoring function</li> <li>Number: Required. The extension (on the specified service) to monitor. It may contain multiple attributes</li> </ul>
	<ul> <li>ptt - (no value). Make the call a Push-to-Talk when calling the monitored extension</li> </ul>
	<ul> <li>spd - An alternative number to call when calling the monitored extension</li> <li>bx - (no value). Enable one-touch blind transfer behavior</li> </ul>

Feature Key Function	Description
Call Park Monitor	Monitor the call park status of a single orbit in a parking lot. Per default LED setting, the key's LED is turned off when no call is parked in that orbit, or otherwise solid red. When the orbit isn't occupied, press the CPM key once to park the highlighted call on screen onto that orbit (the call must be in the Connected or Holding state to be parked). When the orbit is occupied, press the CPM key to retrieve the call as an additional call on the current phone.  Parameters:
	<ul> <li>Service: Required. The service that provides the parking lot orbit: parking and monitoring function</li> <li>Number: Required. The parking lot orbit to park and monitor</li> </ul>
Presence Monitor	Monitor the presence/status of one buddy in a Buddy List. It also serves as speed dial to that buddy.  Parameters:
	<ul> <li>Service: Required. The service that provides the XMPP service for this function</li> <li>Number: Required. The JID of the buddy in the buddy list to monitor. Only the user id portion of the JID is needed. You may specify at the end such that a partial match of the JID is enough. For example, if the JID of the buddy is: abcd-12345@examplecompany.com, you may specify abcd for the Number field to monitor this buddy, provided there's no other JID in the buddy list that starts with abcd.</li> </ul>

# **Feature Key Function** Description Speed dial If a number has not been assigned, VLKW shows no textual information. Otherwise it shows the speed dial number configured and, if the speed dial is bound to a service, the name of the service that it's bound to. If the speed dial has a display name configured, the VLIW shows the display name (such as John Seymour) instead of the assigned Parameters: Service: Optional, The suggested service the make the call with Number: Required, The number to call. It may include the following attributes: ptt (with no value): Make the key a Push-To-Talk key. bx - (with no value). Enable one-touch blind transfer behavior send={digit-codes}: Automatically dial some digits after the call, where {digit-codes} is a sequence of the following case-sensitive codes: 0-9,\*,#,a,b,c,d - The DTMF digit to send to the peer. Each digit is sent with 100 ms on and 100 ms off. S - Pause for 3 seconds. s - Pause for 1 second. U"{prompt}" - Prompt the user to enter one more digit manually on the phone with the given {prompt} shown on the screen, then press **OK** to continue. A - Wait for the called party to answer before continuing. **Note:** The phones starting executing the first code in {digits} when the call receives early media or when the call is answered, whichever happens first. For example: send=Ass1234U"Enter Passcode"5678. It's acceptable to have the send attribute specified in a speed dial without a number (for example, Number=;send=1234#). In this case, the speed dial can be used to send out the list of digits on a connected call. Note: If a voice service is specified for the speed dial either in the Service Field or the given number is a full number (one that includes voice service information), the phone doesn't apply digit map before calling the speed dial. Any \*codes in the number aren't processed and the result may not be desirable. You can include the \*codes that the phone needs to process by enclosing them in a pair of [...] at the beginning of the number field. For example: you may set the number field to [\*96] SP1 (2113); ptt. The phone then interprets \*96 locally (to request auto-answer on the called party) and makes the call to 2113 using SP1 service. Speed dial (continued) Using Speed Dial to store a Feature Access Code prefix In many applications, the Service Provider can perform a function by calling a feature access code prefix followed by a target number. For example, the prefix \*48 followed by the target extension such as 1002 may invoke from the Service Provider the callmonitoring function on extension 1002. You can just dial \*481002 directly. You can also store \*48 in a speed dial and label it as Monitor on the system web interface. To mark the speed dial as a prefix, you append 2 or more dots to the number, such as \*48... When user presses the Monitor speed dial, the phone shows a dial box on screen with \*48 entered. Then you can continue to dial the target extension, or press another speed dial or BLF that is the target extension to monitor. Do Not Disturb Turn the **Do Not Disturb** feature on or off. If the function is bound to a specific voice service, it's applied to incoming calls on that service only. Otherwise, it's applied system wide to all incoming calls no matter which service the calls come from. Parameters: Service: Optional. The service to apply this feature on. If no service is specified, the

feature applies to all calls the phone

Feature Key Function	Description
Do Not Ring	Turn the <b>Do Not Ring</b> feature on or off. When the feature is enabled, incoming calls come through like normally but phone doesn't play audible ring (call waiting tone is played during call waiting).
	This function can't bound to any specific voice service. It's applied system-wide to all incoming calls no matter which service the calls come from.  Parameters: None
Block Anonymous Callers	Turn the <b>Block Anonymous Caller</b> feature on or off. If the function is bound to a specific service, it's applied to incoming calls on that service only. Otherwise, it's applied system wide to all incoming calls no matter which service the calls come from. If this feature is enabled, the phone rejects all incoming calls with Caller ID (name/number) hidden (blocked).
	Parameters:
	<ul> <li>Service: Optional. The service to apply this feature on. If no service is specified, the feature applies to all calls on the phone.</li> </ul>
Block Outgoing Caller ID	Turn the <b>Block Caller ID</b> feature on or off. If the function is bound to a specific service, it's applied to outgoing calls on that service only. Otherwise, it's applied system wide to all outgoing calls no matter which service is used for the calls. If this feature is turned on, the phone attempts to hide user's caller ID on outbound calls so the called party can't see who's calling.
	Parameters:
	<ul> <li>Service: Optional. The service to apply this feature on. If no service is specified, the feature applies to all calls on the phone.</li> </ul>
Call Forward All	Turn the <b>Call Forward All Calls</b> feature on or off. If the function is bound to a specific service, it's applied to incoming calls on that service only. Otherwise, it's applied system wide to all incoming calls no matter which service the calls come from.
	Parameters:
	<ul> <li>Service: Optional. The service to apply this feature on. If no service is specified, the feature applies to all calls on the phone.</li> </ul>
Auto Answer	Turn the <b>Auto Answer (Intercom Calls)</b> feature on or off. Normally this feature is turned on so that incoming intercom calls are answered automatically by the phone on the speakerphone or headset. If this feature is turned off, incoming intercom calls are treated as regular calls and the phone rings normally.
	This function can't be bound to any specific voice service. It's applied system-wide to all incoming calls, no matter which service the calls come from.  Parameters: None
Call Waiting	Turn the <b>Call Waiting</b> feature on or off. Normally, this feature is enabled and you can accept more incoming calls while already on a call. If this feature is turned off, all incoming calls are rejected as busy when you're on a call.
	This function can't be bound to any specific voice service.
	Parameters: None

Description
Monitor the number of messages in a mailbox. The function must be bound to an SP service that has the <b>MWI (Message Waiting Indication)</b> feature enabled. The VLKW shows if and how many new messages are available in the mailbox. Parameters:
<ul> <li>Service: Required. The SP service that provides the voicemail service.</li> <li>Number: Optional. The number to call (to check voicemail). It may include the following attributes:</li> </ul>
<ul> <li>mbox={mailbox-id} where {mailbox-id} is third-party mailbox to monitor, if it isn't the same as the main mailbox for the given SP Service. Don't specify this attribute if you're monitoring the main mailbox for the given SP Service</li> </ul>
Hold all calls that are in the Connected State. VLKW shows how many calls are currently in Holding State. The LED turns red if there's a least one call in the Holding state, or turned off otherwise.
This function can't be bound to any specific voice service. Parameters: None
Add all calls that are in the Holding state to the current conversation. VLKW shows how many calls are in the Holding state. The LED turns red is there is at least one call in the Holding state, or turned off otherwise.
This function can't be bound to any specific voice service. Parameters: None
Join/Leave Page Group 1 to 10. If the user joins the group, then the phone automatically turns on the speaker when anyone in the group starts a page. Users can also start the page by pressing down the feature key. This is known as PTT or Push-to-Talk (otherwise they're just listening). If you enable this feature, users can also "Clamp On" the feature key to talk continuously without needing to hold down the key. This function can't be bound to any specific voice service.  Parameters: None
<ul> <li>Change/monitor an ACD (or Call-Center) Agent State to one of the following values:</li> <li>Available (to take new calls)</li> <li>Unavailable (to take new calls)</li> <li>Signed Off</li> <li>Wrapping Up (the last call) ACD stands for Automated Call Distribution and is the primary way a call-center distributes calls among a number of agents working for the call-center. The ACD controller only sends incoming call to an agent whose state is Available. Note that an agent can't change state to Signed Off or Wrapping Up directly by pressing the feature key. To change to these states, an agent must use the corresponding feature key menu item from the UI (invoked by pressing and holding down the feature key), or some other means provided by the softswitch, such as a web portal. This function must be bound to a specific voice service. The ACD agent handles calls on the bound service only with respect to the underlying call center. The call center isn't aware of calls the agent makes or receives with other voice services installed on the phone. Parameters:</li> <li>Service: Required. The service that provides the ACD Agent function.</li> </ul>

Feature Key Function	Description
Guest User Login/Logout	This feature is also known as Hoteling on some softswitches. The phone may be set up to be used temporarily by a guest, such as a visiting employee or temp worker. The guest can press the key and enter a user-id and password to log in and start using the guest phone with a personal extension temporarily (until the guest logs out or the server logs the user out remotely).  This function must be bound to a specific voice service (that supports this feature).
	Parameters:
	Service: Required. The service that provides the guest login function.
Enter Disposition Code for the last call.	Enter a <b>Disposition Code</b> for the last call. This is used by a call center agent to enter a disposition code for the last customer call.
	This function must be bound to a specific voice service (that supports this feature). Parameters:
	Service: Required. The service that provides the Disposition Code function
Next Tab	Press this key to switch to the next VLK Tab or cycle back to VLK Tab 1. This function can't be bound to any specific voice service. Parameters: None
	<b>Note:</b> You can disable the multiple Line Key Tabs feature also by disabling the option <i>User Preferences:</i> :LineKeyTabs. In that case the Next Tab function does nothing.
Transfer	Invoke the call transfer function on the currently highlighted call on the screen when the Calls App is at the top of the display stack. The call must be in a transferable state, that is, Holding or Connected State.  Parameters:
	Service: Optional. The suggested service to use to make the call to the transfer target, if the Number parameter is also specified
	Number: Optional. The number of the transfer target to call. User aren't prompted to enter the transfer target number if this parameter is specified
Blind Transfer	Invoke the blind call transfer function on the currently highlighted call on the screen when the Calls App is at the top of the display stack. The call must be in a transferable state, that is, Holding or Connected State.
	Parameters:
	<ul> <li>Number: Optional. The number of the transfer target to transfer the call to. Users aren't prompted to enter the transfer target number if this parameter is specified</li> </ul>
Blind Transfer 2	Same as the <b>Transfer</b> function, collecting the target number from the user, but a blind transfer is performed after the target number is collected. In contrast to <b>Blind Transfer</b> , <b>Blind Transfer 2</b> plays dial tone, applies digit map, and times out as user enters the target number.
Action URL	Launch an OBiPhoneXML application at the given URL Parameters:
	<ul> <li>Number: Required. The URL of the OBiPhoneXML application to run</li> <li>Name: A name to identify the application on the phone screen</li> </ul>

# **Set Audio Codec Priority**

Select a codec as the preferred codec for a profile by setting the priority of that codec to be highest among all the enabled codecs in the profile.

Assign each of the SP and PDMS-SP services to a codec profile in its corresponding configuration. For codecs with the same priority setting, the codec that appears first on the codec profile web page has a higher priority.

# Task

- 1 In the system web interface, go to Codecs > Codec Profile X.
- 2 Under the codec you want to set the priority for, clear the check box in the **Default** column for **Priority**.
- 3 In the Value column, enter a priority (1 is the highest) in the Value column.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Disable Line Key Tabs**

By default, the line keys area to the right of the screen has four tabs of virtual line keys (VLKs), and only one tab is visible at any time.

You can disable this feature using the option LineKeyTabs.

When disabled, the phone does the following:

- Displays no line key tabs in the status bar
- Displays only one page of VLKs for supported phones:
- Displays status icons in the right corner

#### Task

- 1 In the system web interface, go to User Settings > User Preferences.
- 2 In the Value column for the LineKeyTabs parameter, clear the check box.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Line Key Customizations**

You can customize the line key labels. You can customize the information shown in **Text Line** 1 and 2.

The following line key functions have specific customization settings:

- Call Appearance
- Busy Lamp Field
- Call Park Monitor
- Speed Dial
- Action URL

You can customize other line key functions not specified above using the additional "Group 1...4" settings.

You can use macros to specify the textual contents for the **Text Line 1** and **Text Line 2** areas. Precede a macro with a \$, such as \$number or \$(number). The enclosing parenthesis is required when a character that is a legal macro character follows the macro. A legal macro character is one of  $\{a-z A-Z . \_0-9\}$ .

# **Configure Line Key Customizations for Predefined Line Keys**

Configure the line key customizations for the desired line key functions.

- 1 In the system web interface, go to IP Phone > Line Key Customization.
- 2 Under the desired line key function, in the Value column, configure the following settings:
  - Enable = true
  - TextLine1 = Enter a string, including macros
  - TextLine 2 = Enter a string, including macros
  - TextLine1InCall = Enter a string, including macros

- TextLine2InCall = Enter a string, including macros
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure Line Key Customizations for Groups**

Configure the line key customizations for a line key group.

#### Task

- 1 In the system web interface, go to IP Phone > Line Key Customization.
- 2 Under the desired line key group, in the Value column, configure the following settings:
  - Enable = true
  - ID = Enter a string to identify the group name
  - TextLine1 = Enter a string, including macros
  - TextLine 2 = Enter a string, including macros
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Assign Group Line Key Customization to a Line Key

Assign the group line key customization to a line key if not using a line key function-specific customization.

- 1 Go to IP Phone, then select Right Line Keys or Left Line Keys.
- 2 Under the desired key, in the Value column, configure the group ID for Group.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# Configuring Your Device to Use with Google Voice

Poly Edge B series telephones, including the Edge B10, B20, and B30, provide full support for Google Voice by Google Workspace. Edge B series telephones are compatible with Google Voice from the factory, immediately ready for Google Voice provisioning.

After the provisioning, you can place and receive audio calls over the internet without dedicated phone lines.

# **Phone Requirements**

For phone requirements, see Google Support page.

# Add Your Edge B Devices to Google Voice

Follow the instructions on Google Support to add your device to Google Voice.

#### Task

- » Follow one of the procedures:
  - Add phones individually

Note: Don't connect your Edge B device to your network until the above procedure completes.

• Add multiple phones at once

Now you can place and receive Google Voice calls using your Poly Edge B phones.

# Configuring BroadSoft Server Features

Configure Poly Edge B Series IP systems with BroadSoft server options.

# **Built-In BroadSoft Phone Applications**

The Net Services and the Net Directory built-in phone apps rely on the BroadSoft/BroadWorks switch.

# **Built-In BroadSoft Phone Applications**

Display Caption (Default)	Action URL	Summary
Net Services	Phone://netsrv	A collection of settings of features the service provider offers. The settings organize on a per SP Service basis. This App is only applicable with a BroadSoft softswitch.
Net Dir	Phone://netdir	A directory service offered by a service provider, either BroadSoft directory or LDAP.

#### **Configure the Net Services Menu**

BroadSoft offers a set of user features that you can access through APIs that correspond to an SP service on the phone.

Find these features under **Network Services per SP** service on the phone, and find the settings under the **Net Services** app on the **Main Menu**.

The top level of the app shows a list of the SP services that have network features enabled and the status of the enabled features:

- DND On or Off
- Call Forward All On or Off
- ACD Agent State
- Anonymous Call On or Off

Configure the softkey set on this screen with multiple options:

- BCI
- DND
- CFA
- ACD

Select the SP service to view or change all the available settings for the SP service.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under GUI Menu, clear the check box in the Default column for NetServicesMenu1.
- 3 In the Value column, enter a comma-separated list of user features for NetServicesMenu1.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **BroadSoft Call Center Features**

This suite of features supports call center applications with a BroadSoft softswitch.

# **Enable Disposition Code**

Enable disposition codes to enable call agents to classify calls during or after a call.

An agent can enter a disposition code for the current call that is still ongoing or for the last call that has just ended. The option only applies to calls on the same SP service. For the first case, the agent selects the **Dispose Code** softkey that is available when the call is in the connected state. The agent then enters the code and submits it while talking to the caller. For the latter case, the agent presses the feature key that has been assigned the **Disposition Code** function right after the call, then it enters and submits the code.

#### Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 In the **Default** column, clear the check box for **DispositionCode**.
- 3 In the Value column, select the check box for DispositionCode.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Customer Originated Call Trace**

The agent can start a call trace during the call by pressing the **Trace** softkey when the call is in the **Connected** state.

The actual call trace function completes on the softswitch after the user launches it from the phone.

# **Enable Customer Originated Call Trace**

Enable phones to use the call trace function for calls on the same SP service.

#### Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under Network Provided Services, clear the check box for CallTrace.
- 3 In the Value column, select the check box for CallTrace.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Define Speed Dial Function Key for Call Trace

Define a speed dial function key for call trace with the following parameters.

#### Task

- 1 In the system web interface, do one of the following:
  - Go to IP Phone, then select Right Line Keys or Left Line Keys.
  - Go to IP Phone > Programmable Keys.
- 2 Under Key N, clear the check boxes in the **Default** column for the following settings, then configure the settings in the **Value** column.

Parameter	Description
Function	Select Speed Dial.
Number	Enter customer-originated-trace.
Service	Select the Voice Service to invoke the Call Trace operation, such as SP3.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

#### **Enable the Escalation Feature**

Enable the escalation feature for calls on the same SP service.

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box for Escalation in the Default column.
- 3 In the Value column, select the check box for Escalation.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Enable the Call Center Feature**

Enable the call center feature to include some basic information about the call center where the call is coming from.

The phone displays the information, if available, with the Ring Alert message for the incoming call. You can't configure this behavior.

The phone displays the following information:

- Call Center name
- Call Center user ID
- Average waiting time
- Number of calls in the queue

The phone subscribes to the status of the call center that an SP service belongs to. Users can view the call center status information at any time on the phone via the **Net Services** app from the phone's main menu.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box for CallCenter in the Default column.
- 3 In the Value column, select the check box for CallCenter.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **BroadSoft Guest Login/Logout (Hoteling)**

Set up the phone for a guest to use it temporarily, such as a visiting employee or temp worker in a hot desk environment.

Consult BroadSoft documentation on how to administer this feature on the server

#### **Enable the Hoteling Feature**

After you enable hoteling and the phone achieves the first successful registration with the SIP proxy server, the phone starts a subscription to the **x-broadworks-hoteling** event package in the context of an SP service.

#### Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under Network Provided Services, clear the check box for Hoteling in the Default column.
- 3 In the Value column, select the check box for Hoteling.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Define a Hoteling Function Key**

Define a feature key with the Hoteling function but with only one hoteling feature key per SP service.

The LED and the icon of the key reflect the current guest login state.

- 1 In the system web interface, do one of the following:
  - Go to IP Phone, then select Right Line Keys or Left Line Keys.

- Go to IP Phone > Programmable Keys.
- 2 Under Key N, clear the check box for Function in the Default column.
- 3 In the Value column, select Hoteling in the drop-down menu for Function.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configure the Expires Value of the Subscription**

Configure the expires value of this subscription for each ITSP profile.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Under Feature Configuration, clear the check box for X\_BWHotelingSubscribeExpires in the Default column.
- 3 In the **Value** column, enter the interval (in seconds) in the **X\_BWHotelingSubscribeExpires** field for when the renewal subscription expires.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **BroadSoft AS-Feature-Event**

The AS-Feature is a collection of features available on a BroadSoft application server.

#### **Activate BroadSoft AS-Features**

Activate the BroadSoft AS-Feature set to access features available from your third-party server.

Activating the BroadSoft AS-Feature lets you configure the following network-provided services:

- Call Park
- Call Forward Always
- Call Forward Busy
- Call Forward No Answer
- Network Directory
- Do Not Disturb

Note: Configure the BroadSoft AS-Feature set on a per-line basis only.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Calling Features, clear the check box in the Default column for X\_ASFeatureEventSubscribe.
- 3 Select the check box in the **Value** column for **X\_ASFeatureEventSubscribe**.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Set the Subscription Renewal Intervals**

The AS-Feature is based on the SIP subscribe and notify framework, so set the expires value of the subscription dialog to initiate the subscription renewal for each SP service feature enabled.

When a setting is changed, the server updates the Edge B Series IP phones with a NOTIFY that specifies the latest settings of the affected features.

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 Under Feature Configuration, in the Default column, clear the check box for X\_ASFeatureEventSubscribeExpires.
- 3 In the Value column, enter the value in seconds.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Enable Call Forwarding for All Calls**

Activate this feature to forward all incoming calls.

The functionality provided by **Call Forward All** is similar to that of the **CallForwardUnconditional** function provided natively by the phone on a per-line basis. Poly recommends that you disable the native version when using the network-provided version to avoid ambiguity.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box in the Default column for CallForwardAlways.
- 3 Select the check box in the Value column for CallForwardAlways.

**Note:** When you specify the number to forward all incoming calls to, these settings are submitted to and stored on the server.

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Enable Call Forwarding for Busy Lines**

Activate call forwarding for calls when the line is busy on your third-party provider.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box for CallForwardBusy in the Default column.
- 3 In the Value column, select the check box for CallForwardBusy.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Enable Call Forwarding on No Answer**

Activate call forwarding for calls that no one answers on your third-party provider.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box for CallForwardNoAnswer in the Default column.
- 3 In the Value column, select the check box for CallForwardNoAnswer.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Enable Do Not Disturb**

Enable Do Not Disturb (DND) on your third-party provider.

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, in the Default column, clear the check box for DoNotDisturb.
- 3 In the Value column, select the check box for DoNotDisturb.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Enable ACD Agent State**

ACD (Automated Call Distribution) is the primary way a call center distributes calls among a number of agents.

Through as-event subscription, your phone enables an agent to sign on, sign off, or change their availability states from the phone's local interface.

For more information on ACD Agent state, see the Poly OBi Device Technical Reference at the Poly Online Support Center.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box for ACDAgent in the Default column.
- 3 In the Value column for ACDAgent, select the check box.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Enable Security Classification**

To enable users to view or set the security levels for the extension from the phone, you must enable the SecurityClass option.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box in the Default column for SecurityClass.
- 3 In the Value column, select the check box for SecurityClass.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Executive Call Filter**

Make the Executive Call Filter option viewable and changeable from the phone.

#### **Enable the Executive Call Filter**

Enable users to view and change the Executive Call Filter option from the phone.

#### Tack

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under Network Provided Services, clear the check box for Executive in the Default column.
- 3 In the Value column, select the check box for Executive.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# Define an Executive Call Filter Feature Key

Define a feature key with the Exec Filter On/Off function as a shortcut to turn this setting on or off.

Note: The LED color also reflects the current on or off status.

- 1 In the system web interface, do one of the following:
  - Go to IP Phone, then select Right Line Keys or Left Line Keys.
  - Go to IP Phone > Programmable Keys.
- 2 Under Key N, clear the check box for Function in the Default column .
- 3 In the Value column, select Exec Filter On/Off in the drop-down menu for Function.
- 4 Select Submit.

5 Restart your system when you complete your changes.

#### **Enable the Executive Assistant Function**

Enable the executive assistant feature on the phone.

By enabling the ExecutiveAssistant parameter, the phone makes the following settings of this feature available to the user:

- From a list of executives currently associated with the assistant, turn the call filtering feature on or off for any of the executives.
- Enable or disable the **Divert** option and set or modify the phone number to divert to.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box for ExecutiveAssistant in the Default column
- 3 In the Value column, select the check box for ExecutiveAssistant.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### Define an Executive Assistant Feature Key

Define a feature key with the function **Exec Assistant** as a shortcut to launch this option.

The LED color also reflects the current **Divert** on or off status.

#### Task

- 1 In the system web interface, do one of the following:
  - Go to IP Phone, then select Right Line Keys or Left Line Keys.
  - Go to IP Phone > Programmable Keys.
- 2 Under **Key N**, clear the check box for **Function** in the **Default** column .
- 3 In the Value column, select Exec Assistant in the drop-down menu for Function.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Enable Call Recording**

Enable call recording to allow the phone to extract the call recording settings from the as-event notifications to help determine which call recording controls to present to the user during a call.

#### Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under Network Provided Services, clear the check box for CallRecording in the Default column.
- 3 In the Value column, select the check box for CallRecording.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Configure the ACD Feature Provider**

Select the provider that you use for the ACD agent sign in and sign out feature via softkey.

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 In the Value column for ACDFeatureProvider, select the desired SPx Service to perform the ACD agent sign in and out.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **BroadSoft XSI Features**

XSI features is a collection of features provided with a BroadSoft XSI application server.

XSI features are available per SP or SIP service, so you can configure independent sets of XSI services per system and one per SP service.

#### **Enable BroadSoft XSI Features**

Enter the SIP credentials for the BroadSoft account to enable XSI features.

#### Task

- 1 In the system web interface, go to Service Providers > ITSP ProfileN > SIP.
- 2 In the **Default** column, clear the check box for the following parameters:
  - X XsiServer
  - X\_XsiServerPort
  - X\_XsiServerScheme
- 3 In the Value column, do the following:
  - A For X\_XsiServer, enter the hostname or IP address.
  - **B** For X\_XsiServerPort, enter the server port.
  - **C** For X\_XsiServerScheme, select **HTTP** or **HTTPS** from the drop-down menu.
- 4 Select Submit.
- 5 In the system web interface, go to Voice Services > SPN Service.
- 6 Under SIP Credentials, in the Default column, clear the check box for the following parameters:
  - X XsiUserName
  - X XsiPassword
- 7 In the Value column, do the following:
  - A For X XsiUserName, enter the user name to authenticate the XSI server.
  - **B** For X\_XsiPassword, enter the password to authenticate the XSI server.
- 8 Select Submit.
- 9 Restart your system when you complete your changes.

#### **Enable Anonymous Call**

Enable users to place calls anonymously from the phone.

This feature is similar to the **AnonymousCall** feature that is available natively on the phone (per service). To use the version provided by the softswitch, disable the corresponding service on the phone.

Use the **Net Services** app to access the feature and define a feature key with the function Block Caller ID. Set the Service parameter of the key to the Service Provider service that provides this feature.

Users can enable or disable this feature from the phone's local interface, and the server stores the feature settings.

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box for Anonymous Call in the Default column.
- 3 In the Value column for Anonymous Call, select the check box.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Enable Simultaneous Ring**

After you enable Simultaneous Ring, users can access the feature from the Net Services application.

You can view and change the following settings of this feature from the phone's local interface:

- Enable or disable this feature by turning the **Active** option on or off
- Turn the Do not ring my Simultaneous Ring Numbers if I'm already on a call option on or off
- Add a location
- Remove a location (you can't remove the last location via XSI)

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box for SimultaneousRing in the Default column.
- 3 In the Value column for SimultaneousRing, select the check box.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Enable Remote Office**

After you enable Remote Office, users can access the feature from the Net Services application.

You can view and change the following settings of this feature from the phone local interface:

- Enable or disable this feature
- Change the Remote Phone Number (you can't remove the last location via XSI)

#### Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under Network Provided Services, clear the check box for RemoteOffice in the Default column.
- 3 In the Value column for the RemoteOffice parameter, select the check box.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.
- Change the **Phone Number** attribute of a location.
- Turn the **Answer confirmation required** option on or off for each location.

#### **Enable BroadWorks Anywhere**

When you enable BroadWorks Anywhere, users can access the feature from the **Net Services** to launch the feature on the phone.

View and change the following settings of this feature from the phone's local interface:

- Turn the Alert all locations for Click-To-Dial Calls option on or off
- Turn the Alert all locations for Group Paging Calls option on or off
- Enable or disable a location
- Add a location
- Remove a location (you can't remove the last location via XSI)
- Edit a location's **Number** or **Description** attributes

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box for BroadWorksAnywhere in the Default column.
- 3 In the Value column, select the check box for BroadWorksAnywhere.
- 4 Select Submit.

5 Restart your system when you complete your changes.

#### **Enable Network Call Logs**

To make the network call logs function available on the phone, you must enable the option CallLogs parameter. There's no specialized app, feature key function, or softkey option to launch network call logs. You can only invoke this function by going through the Net Services app.

The network call logs consist of four logs: All, Missed, Received, and Outgoing. The server stores log data and downloads it to the phone when you invoke this function. Consult BroadSoft on how to manage these call logs on the server side.

If you enable the Buddy List and it's available under the same SP service, the phone displays the presence icon in the network directory.

#### Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under Network Provided Services, clear the check box for CallLogs in the Default.
- 3 In the Value column, select the check box for CallLogs.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Network Directories**

Network Directories are directories hosted by a server somewhere in the network.

The network directory results screen provides four softkeys:

- Call: Call the highlighted entry.
- Search: Enter one or more search fields and press OK or Enter to start the search.
- **Prev Page**: Display the previous page of results.
- Next Page: Display the next page of results.

#### **Enable BroadSoft-Hosted PBX Platform Services**

To access this service from the phone, you must enable the Directory parameter of the corresponding SP service.

Access the network directories on other SP services through the **Net Services** app.

With the BroadSoft BroadWorks platform, the phone supports the following types of network directories:

- Group
- Group Common
- Enterprise
- Enterprise Common
- Personal

Consult your BroadSoft documentation on how to set up and manage these directories on the server side.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Network Provided Services, clear the check box for Directory in the Default column.
- 3 In the Value column, select the check box for Directory.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Configure Voice Service Network Directories Service**

Use the VoiceService parameter to control which SP service's network directories service the phone launches.

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under Network Directory, clear the check box for VoiceService in the Default column.
- 3 In the Value column for the VoiceService parameter, select the SP service that provides this feature.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Enable NetDir on the Phone's Menu**

Enable the phone to launch the network directory service of a specific SP service from the phone using the **Net Dir** app from the **Main Menu** of the phone's local interface.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under GUI Menus, clear the text box for MainMenu1.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Disable the Search Option**

Disable the **Search** option for the network directory.

This configuration replaces the Search softkey with the Refresh softkey, which reloads the results from the URL.

#### Task

- 1 In the system web interface, go to **Voice Services > SPN Service**.
- 2 Under Network Directory Setup, clear the check box for EnableSearch in the Default column.
- 3 In the Value column, clear the check box for EnableSearch.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Configuring Other PBX Platforms**

A service provider can host a group directory similar to the format used in BroadWorks on the network.

Configure the URL to access this directory with the URL parameter. For example: URL = https://mypbx.com/group-dir.php?user=jsmith

In addition, you can append the following optional URL parameters to the URL:

- results: Number of results to return by the server. This is merely a suggestion to the server, which may return a different number of results. The phone doesn't reject the result if the number of results returned is different from the request. It makes a best effort to display all the available results.
- start: The 1-based index of the first result to return by the server. The implied start index is 1 if not specified.

Example: https://mypbx.com/group-dir.php?user=jsmith&start=30&results=20

You may also include user name and password in the URL for authentication to the user, such as: https://jsmith: 4xuIKKl2y@mypbx.com/group-dir.php?user=jsmith

# Setting Up a Directory

Your phone supports a directory search function with an external server using LDAP. To use this function, you must configure an LDAP service on the phone.

Point to the Network Directory option on the main menu of the phone to an LDAP service using LDAP parameters.

# **Configure the LDAP Server**

Configure the LDAP server on the phones to enable users to search LDAP directories.

#### Task

- 1 In the system web interface, go to IP Phone > LDAP > Search Parameters.
- 2 Under Server, clear the check boxes in the **Default** column for the following settings, then configure the settings in the **Value** column.

Parameter	Description
Host	Enter the host name, which can be an IP address or domain name, with an optional Idap:// or Idaps:// scheme prefix. For example, 192.168.15.186, Idap.forums.com or Idap:// Idap.testathon.net are acceptable host name formats.
	Note: If you don't specify the scheme, the phone uses Idap://.
Port	Enter the LDAP server listening (TCP) port. The standard port is 389 for Idap:// and 636 for Idaps://.
	Note: If the port value is 0 or blank, the phone uses the corresponding standard port.
Password	Enter the bind password for simple or SASL authentication.
	Note: This parameter is case-sensitive.
TLSSecurityProfile	Enter the security profile for 802.1X authentication.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure LDAP Search**

Configure LDAP search settings.

- 1 In the system web interface, go to IP Phone > LDAP > Search Parameters.
- 2 Under **Search Parameters**, clear the check boxes in the **Default** column for the following settings, then configure the settings in the **Value** column.

Parameter	Description
BindDN	Enter a distinguished name (DN) that is authorized to use the LDAP service. The BindDN value is usually derived from a username that looks like an email address, such as admin@ldap.example.com. For this example, the corresponding BindDN is: CN=admin, OU=users, DC=example, DC=com.
	If none is specified, the query is regarded as anonymous, which may or may not be acceptable to the server.

Parameter	Description
SearchBase	Use this parameter as the starting point of the LDAP search. Enter a comma-separated list of {object}={value} pairs, where {object} can be any of the following values:  • CN (Common Name)  • OU (Organization Unit)  • (Organization)  • c (Country)  • DC (Domain)  If the value isn't specified, the phone by default derives the search starting point from the value of the LDAP server Host parameter. It's a common convention to use just the last two parts of the service domain as a search base, but it isn't specified.
ProtocolVersion	Select either 3 or 2. 3 is the default.
TLS_ReqCert	Select either never or demand. The default value is never, which means the client doesn't check or verify the server's certificate.
ResultsPerPage	Select from the following values to specify how many results to display on the screen, per page:  20 40 60 80 100 The Default value is 20.
DefaultSearchFilter	Enter a default search filter to append to each search. The default value is <code>(objectclass=*)</code> .  This value must be specified as a complete and valid LDAP search filter, for example: <code>(  (objectclass=contact) (objectclass=person))</code> .
QueryFields	<ul> <li>Enter a comma-separated list of user input LDAP attributes/Display-Name to form the query filter. Each item has three attributes separated by two slashes (/): {ldap-attr}/ {display-name}/{type}, where:</li> <li>{ldap-attr} is the standard ldap-attribute-name, such as sn, givenName, telephoneNumber, cn, This is the only required attribute in each field.</li> <li>{caption} is optional. This is the caption to display on the screen for the input box. If not specified, the {ldap-attr} value is used in its place.</li> <li>{type} is either A or N, for alphanumeric or number type respectively and is case insensitive. If not specified, it's assumed to be A.</li> <li>The default value is givenName/First Name, sn/Last Name, telephoneNumber/Tel, mobile/Mobile, homePhone/Home.</li> </ul>
ResultFields	<ul> <li>Enter a comma-separated list of LDAP fields to display for each entry of the search result. Each field has three attributes separated by two slashes (/): {ldap-attr} / {caption} / {type} where</li> <li>{Idap-attr} is the standard Idap-attribute-name, such as sn, givenName, telephoneNumber, cn, This is the only required attribute in each field.</li> <li>{caption} is optional. This is the caption to display on the screen for the input box. If not specified, the {Idap-attr} value is used in its place.</li> <li>{type} is either s, c, or N, for String, Callable Number, or Picture, respectively. It's case insensitive. If not specified, it's assumed to be s.</li> <li>The default value is cn/Common_Name, sn/Last_Name, givenName/</li> <li>First Name, telephoneNumber/Tel/y, mobile/Mobile/y, homePhone/Home/y.</li> </ul>

Parameter	Description
NameFieldPreference	Enter a comma-separated list of LDAP attributes to be used as the Caller ID Name to display on the screen, ordered by preference. The first nonempty value in the list is used.  The default value is cn, givenName sn.
NumberFieldPreference	Enter a comma-separated list of LDAP attributes to be used as the Number to display on the screen and to call by default, ordered by preference. The first nonempty value in the list is used. The default value is telephoneNumber, mobile, homePhone.
PhotoFieldPreference	Enter a comma-separated list of LDAP attributes to be used as the photo to display on the screen, ordered by preference. The first nonempty value is used.  The default value is thumbnailPhoto.
SortByAttribute	Enter the LDAP attribute to use for sorting the search results by the server. The default value is cn.
Attributes	Enter a comma-separated list of attributes to request from the server.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configure LDAP SASL Authentication**

Configure Simple Authentication and Security Layer (SASL) to send the LDAP server the FQDN of the client and the corresponding password in clear-text.

This method has security issues unless you use Idaps:// or TLS.

**Note:** LDAP v2 supports Idap:// and Idaps:// with simple authentication only. LDAP v3 adds support for TLS and SASL authentication.

For more information on SASL, go to http://www.openldap.org.

- 1 In the system web interface, go to IP Phone > LDAP > Search Parameters.
- 2 Under LDAP SASL Authentication Parameters, clear the check boxes in the Default column for the following settings, then configure the settings in the Value column.

Parameter	Description
SASL_AuthMethod	Select the method to use for SASL authentication using any of the following parameters:  Disabled (Default) Plain MD5
SASL_AuthCID	Enter the authentication ID for SASL authentication. The format of this ID depends on the actual SASL mechanism used.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Configuring LDAP Search Display Options**

After you set up the LDAP server, configure how your phones display LDAP search options.

#### **Specify LDAP Search Fields**

Specify which LDAP search fields your phone displays.

By default, your phone displays the following search fields:

- Last Name (sn)
- First Name (givenName)
- Tel Num (telephoneNumber)
- Mobile Num (mobile)
- Home Num (homePhone)

#### Task

- 1 In the system web interface, go to IP Phone > LDAP > Search Parameters.
- 2 Under Search Parameters, clear the check box for QueryFields in the Default column.
- 3 In the Value column, , enter a comma-separated list of user input LDAP attributes for QueryFields.

```
givenName/First Name, sn/
Last Name=s*,telephoneNumber/Tel,mobile/Mobile,homePhone/Home
```

- 4 Select Submit.
- 5 Restart your system when you complete your changes.

# **Configure the LDAP Attributes for Search Results**

Control the LDAP attributes used for the **Name**, **Number**, and **Picture** display by setting the corresponding parameters. Each of these parameters is a comma-separated list of LDAP attributes arranged in order of preference.

#### Task

- 1 In the system web interface, go to IP Phone > LDAP > Search Parameters.
- 2 Under **Search Parameters**, clear the check boxes in the **Default** column for the following settings, then configure the settings in the **Value** column.

Parameter	Description
NameFieldPreference	Enter a comma-separated list of LDAP attributes to be used as the Name to display on the screen, ordered by preference.
NumberFieldPreference	Enter a comma-separated list of LDAP attributes to be used as the Number to display on the screen, ordered by preference.
PhotoFieldPreference	Enter a comma-separated list of LDAP attributes to be used as the caller photo to display on the screen, ordered by preference.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

# **Customize the LDAP Attribute Display**

Customize the attributes to display on the LDAP Result Details screen with the ResultFields parameter.

#### Task

1 In the system web interface, go to IP Phone > LDAP > Search Parameters.

- 2 Under Search Parameters, clear the check box for ResultFields in the Default column.
- 3 In the **Value** column for the ResultFields parameter, enter a comma-separated list of LDAP attributes to display for each entry of the search result.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### **Customize the Display Name for the LDAP Server**

Customize a display name for the LDAP server in place of what's configured in the Host parameter.

#### Task

- 1 In the system web interface, go to IP Phone > LDAP > Server.
- 2 Under **DisplayName**, in the **Value** column, enter a name for the LDAP server that is not more than 63 characters long.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Configuring LDAP Application Launch Options**

Configure your phones to launch the LDAP application from the Main Menu or with a softkey.

#### Set Up LDAP Application Launch in the Directories List

Configure your phones to launch the LDAP search application from Main Menu > Directories.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under GUI Menus, clear the check box for MainMenu1 in the Default column.
- 3 In the Value column, enter one of the following value strings for MainMenu1:
  - directories: The LDAP sub-menu will appear in the Directories menu.
  - netdir: This menu option launches the LDAP search application when the Network Directory VoiceService = LDAP.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### Set Up LDAP Application Launch Using the Network Directory Service

Configure your phones to launch the LDAP application using the network directory service.

To set up a network directory service on the **Main Menu**, you must set **MainMenu1** to netdir. See <u>Set Up LDAP Application</u> <u>Launch in the Directories List</u> on page 109.

#### Task

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under Network Directory, clear the check boxes in the Default column for Enable and VoiceService.
- 3 In the Value column, configure the following parameters:
  - Enable: Select the check box.
  - VoiceService: Select LDAP.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### Set Up LDAP Application Launch Using a Softkey

To use a softkey to launch the LDAP application, add the LDAP softkey to any of the configurable softkey sets.

#### Task

1 In the system web interface, go to IP Phone > Soft Keys.

- 2 Under **Soft Key Sets**, clear the check box for softkey set you want to modify.
- 3 In the Value column, configure the LDAP value for any configurable softkey set. For the Home softkey set, configure the following value: redial, cfwd, dnd, ldap.
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

## **Local Phone Book**

Your phone supports a local phone book for storing and calling contacts.

The Edge B Series IP supports up to 500 local phone book entries.

## Sample XML of the Phone Book File

This is a sample XML of the phone book file.

```
<?xml version="1.0" encoding="utf-8"?>
<PolyPhoneBook version="1.0">
 <item>
   <name>John Smith</name>
   <number>1234567890</number>
   <service>SP1</service>
   <ringtone>/data/ringtones/Bell A.wav</ringtone>
   <lastname>Smith
   <firstname>John</firstname>
   <mobilenumber>222222222</mobilenumber>
   <homenumber>333333333
   <officenumber>444444444
   <faxnumber>555555555</faxnumber>
   <company>Example Co.</company>
   <group>Customers
   <email>john.smith@example.com</email>
   <address>1 Example Rd, Example, EX, 888888</address>
   <defaultnumber>generic</defaultnumber>
 </item>
</PolyPhoneBook>
```

## Replace the Phone Book with a Network Directory

You can replace the built-in phone book with a network directory. For example, when you press the **phbk** softkey or selects **Contacts** from the **Main Menu**, it launches the network directory.

#### Task

- 1 In the system web interface, go to User Settings > User Preferences.
- 2 Under Phone Book Settings, in the Value column, enter phone: //netdir for the ActionURL parameter.
- 3 Select Submit.
- 4 Go to IP Phone > Phone Settings. Under Network Directory, select the SPn Service or LDAP for the network directory.
- 5 Select Submit.
- 6 Restart your system when you complete your changes.

#### **Configure Contact Directory Automatic Import**

Automatically import a contact directory from the server during startup and update the directory on demand.

- 1 In the system web interface, go to User Settings > User Preferences.
- 2 Under Phone Book Settings, configure the following settings:

ImportURL	Enter a location where a file containing contacts for a phone book can be downloaded either by a user or automatically when the phone is reset. The default is <b>Not specified</b> .

AutoImportMethod	Select <b>System Start</b> to update the phone book content with the contents of the file specified at <b>ImportURL</b> . The default is <b>Disabled</b> .
AutoImportRetries	Specify the number of times that the phone tries to download the phone book if failure is encountered. The value allowed is 0 $\sim$ 8. The default is 5.
AutoImportRemoveLocalEntries	Set this value to <b>Enabled</b> to remove the content of the old phone book when a new phone book file is automatically downloaded. The default is <b>Enabled</b> .
	If this value is set to <b>Disabled</b> , the contents of the old phone book will be kept unless there are duplicate records. If two contacts have the same name (or if no name, the same primary number), they're considered as duplicate records. When using <b>AutoImportMethod</b> enabled to update the phone book, any duplicate record is replaced by the content of <b>ImportURL</b> .

<sup>3</sup> To update the contact directory, on your phone display, go to **Settings > Contacts**, press the **Import** softkey.

## Customizing the Local Interface

There are a number of ways to customize the appearance of Poly Edge B Series IP phones. For example, customizing LED patterns.

#### **Define an LED Pattern**

Customize the LED patterns for each phone state by configuring the LED Settings.

Each customizable pattern has its own parameter as a comma-separated list of  $\{Color\}$  [ $\{Duration\}$ ] pairs, where  $\{Color\}$  = R (for red), G (for green), or X (for off). The optional  $\{Duration\}$  is the number of milliseconds to show the given color. If you don't specify a  $\{Duration\}$ , the LED stays at the given color indefinitely. The entire pattern plays repeatedly from left to right indefinitely until the state changes.

The following are some examples of LED patterns:

- x Steady off
- R Steady red
- R500, X500 500 ms red followed by 500 ms off
- G50, X50, G50, X1000 50 ms green, 50 ms off, 50 ms green, 1s off

#### Task

- 1 Open the configuration file.
- 2 Go to the LED Settings section of the file and make the desired changes.
- 3 Save the configuration file.

#### Customize the Local Interface Menu

Customize some of the menus on your phone's local interface.

Each menu parameter is a comma-separated list of menu items, where each menu item is specified with an item id followed by an optional semicolon and an item display text separated by a semicolon.

For example:

```
menu
= item, item, ..., item
item
= item-id;item-display-text
```

When you specify multiple instances of the same menu parameters, the items are concatenated internally into a single item list. Items are displayed in the specified order. If you don't specifiy display-text for an item, the phone uses the default displayed text.

- 1 In the system web interface, go to IP Phone > Phone Settings.
- 2 Under **GUI Menus**, clear the check boxes in the **Default** column for the following settings, then configure the settings in the **Value** column.

Parameter	Description
MainMenu1	Enter the menu items you want to display on the phone's Main menu. For example: directories, calls, call-histories, all-preferences, settings, prodinfo, messages, buddy

Parameter	Description
PreferencesMenuN	Enter menu items you want to display on each of the Preferences menus. For example: language; Language, timeFormat; Time Format, dateFormat; Date Format
SettingsMenuN	Enter menu items to display on each of the <b>Settings</b> menus. For example: net; Network, flash; Storage, ringfile; Ringtones
ProductInfoMenuN	Enter menu items to display on each of the Product menus. For example: ipaddr, model, obnumber; OBi Number, mac; MAC Address, wfmac; serial; Serial Numberpccstatus; Poly Lens Status
NetServicesMenu1	Enter menu items to display on the NetServices menu. For example: regst, ringtone, acd, bac, bci, bwanw, buddy, ccs, cfa, cfb, cfna, rec, dnd, dispc ode, exec, xass, hotel, clog, dir, rmoff, secClass, simring
NetDirectoryMenu1	Enter menu items to display on the NetDirectory menu. For example: name, firstName, lastName, ext, number, email, groupID, department, mobile, us erID, ImpID, presence
DeviceAdministrationMenu1	Enter menu items to display on the Device Administrator menu. For example: admin.port, admin.adminPassword, admin.userPassword, admin.syslogServer, prov.itsp.Method, prov.itsp.Inteval, prov.itsp.ConfigURL, fwup.Method, fwup.Interval, fwup.FirmwareURL
FactoryResetRequiredAdminP assword	Select the check box to require user to enter a web administrator password to factory reset from the phone.
CustomDictionary	Specify an XML dictionary to replace built-in user interface messages with custom messages. For example:
	<pre><dictionary lang="English"> <item key="Contacts" mode="i" value="Address Book"></item> </dictionary></pre>
	<ul> <li>Where:</li> <li>lang = language</li> <li>key = string to be replaced</li> <li>value = string to replace the string defined in key with</li> <li>mode = i (case-insensitive) or omit for case-sensitive</li> </ul>

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Select User Preferences Settings from Internal Data Storage Paths**

Directly or indirectly select one of several internally stored data files for the phone to perform certain tasks. For example, enable a ringtone.

The data files are organized into three levels, each with its own dedicated internal storage areas:

- OBi Built-in
- ITSP (or Administrator) Customized
- User Customized

- 1 In the system web interface, go to **User Settings > User Preferences**.
- 2 Clear the check boxes in the **Default** column for the following settings, then configure the settings in the **Value** column.

Parameter	Description
Language	Select one of the available languages. The parameter value must match the language attribute of the root element of one of the dictionary XML files found under one of the following internal data storage folders:
	<ul> <li>User customized: /scratch/phone/dict/</li> <li>ITSP customized: /scratch/itsp/dict/</li> <li>Phone built-in: /data/dict/</li> </ul>
	<b>Note:</b> When there is a conflict, the user version has the highest priority; then, the ITSP; then, your phone's version. On each bootup, folders are scanned to create a list of available languages from the lang attributes that users can select.
DefaultRingtone	Enter full internal path name of a wave file stored in phone built-in: / data/ringtones/ If you specify a URL in the value, it must start with http://or https://. The phone downloads and caches the data internally until it's power cycled. All available wave files under these folders are listed under a) the <b>Default Ringtone</b> option of the <b>Preferences</b> menu for users to select as their default ring tone, and b) the <b>Ringtone</b> field of the built-in <b>Phone Book</b> application for users to choose a ring tone for individual contact in phone book.

- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## **Show Call Feature Preferences for a Registration**

The phone can display a preferences menu for enabling and disabling calling features for a specific registration.

- 1 In the system web interface, go to **Voice Services > SPx Service**.
- 2 Under Calling Features, in the Value column, check the box for X\_CallFeaturePreferencesMenu.
- 3 Select Submit.
- 4 Restart your system when you complete your changes.

## Phone Customization Data

Customize some of the data that drives the local interface.

These data are collectively called phone customization data, which includes the data types in the following table:

#### **Phone Customization Data Type**

Customization Data Type	Description	Internal Data Storage Path
Dictionary	Dictionary used to enable a localized user interface.	/dict/

## **Create the Phone Customization Data Package**

Create the phone customization data package.

You must consolidate customizable data into one single . tar data package to upload it onto the phone. The size of the tar file must be no larger than 1 MB.

#### Task

- 1 Create a directory on a Linux machine (for example, /home/test/obiphone-data) that contains the same folder structure as the phone's internal storage:
  - /backgnd
  - /dict
  - /fonts
  - /ringtones
  - /people
- 2 Copy all the data files you want to upload to the phone in the corresponding folders in this directory and issue the following command lines to create the target tar file:

```
% cd /home/test/obiphone-data
% tar -zcvf ../obiphone-data.tar.gz *
```

**Note:** You must issue the tar command inside of the working directory obiphone-data, as the phone can't strip the first level in the .tar file.

3 Optional: Use the following command line to generate the MD5 checksum of the target .tar file after you create it:

```
% md5sum obiphone-data.tar.gz
```

The MD5 checksum is used as the version of the target customization data package. You must configure it on the phones to trigger the phones to download a different version of the package if the currently installed package has a different MD5 checksum from the configured MD5 checksum.

### **Import Custom Dictionary**

Import any custom language dictionary file to your phones.

- 1 In the system web interface, go to System Management > Auto Provisioning > Phone Customization Data Package.
- 2 In the Value column for the following parameters, enter the following information:

Parameter	Description
Method	When the device downloads the dictionary, for example, System Start or Periodically.
DownloadURL	The URL for the phone to load a .tar file containing the dictionary XML file from the sub-folder /dict. For example, http://www.example.com/custom_data.tar.
	Note: The lar me size limit is 1 Mb.
MD5CheckSum	The MD5 checksum value of the tar file.
Username	The authentication username, if needed, for DownloadURL.
Password	Password.

## **Customize Phone Language**

The administrator or the user can customize the phone's current language.

#### Task

- 1 From the system web interface, go to User Settings > User Preferences > Language and select Custom.
- 2 In the Value column for the CustomLanguage parameter, enter the name of the imported language, for example, Hungarian.
- 3 From the phone display, the user can select the custom dictionary by going to the menu item **Preferences > Languages**, pressing **Enter** to cycle to the value **Custom**, and then pressing the **Reboot** softkey.

## **Download the Default English Dictionary File**

Download the default English dictionary file to edit and import to the phone.

- 1 In the system web interface, go to **System Management > Device Update**.
- 2 Under Retrieving English Dictionary, press the Download button. The English dictionary file is downloaded to your local computer.

# System Maintenance

Perform system management and maintenance tasks through the system web interface. You can also use different methods to upgrade the firmware and software on your phones.

## **Updating the Firmware in the Background**

Update your phone's firmware in the background.

After the new firmware copies to the flash memory (and the phone isn't in a call), the phone auto-reboots to use the new firmware version.

#### **Use the Background Firmware Update Feature**

The device only uses a .fw formatted image.

When using auto firmware update during provisioning, you must provide a complete URL, including the firmware file name, in the FirmwareURL parameter. Failure to include the .fw firmware file name results in a 404 or File not found error.

#### Task

- 1 In the system web interface, go to **System Management > Auto Provisioning**.
- 2 Under Auto Firmware Update, clear the check box for Firmware URL in the Default column.
- 3 In the Value column, enter the URL of the firmware package for FirmwareURL.

  The following is an example of a correct URL: http://l92.168.1.1/EdgeB-1-0-0-1234.fw
- 4 Select Submit.
- 5 Restart your system when you complete your changes.

#### Update the Firmware Using the System Web Interface

You can also upload a .fw firmware file using the system web interface to update the phone's software.

#### Task

- 1 In the system web interface, go to **System Management > Device Update**.
- 2 Under Firmware Update, press Choose File and select the Edge B Series IP firmware file from your local computer.
- 3 Press **Update** to begin the firmware upload and update.

#### Capture Your Device's Current Screen

From the system web interface, take a snapshot of the current phone screen and save it as a .bmp file on your host computer.

#### Task

- 1 In the system web interface, go to **System Management > Device Admin > Web Server**.
- 2 In the Value column for the LCDScreenShot parameter, select the check box.
- 3 Go to System Management > Device Update.
- 4 Press Snap.

The .bmp file of your phone's current screen downloads to your host computer.

## **Factory Resetting Your Phone**

Reset all configuration parameters to factory default values or to the customized default values.

#### **Factory Reset Your Phone in the Local Interface**

Reset all phone settings to factory default values from the phone's local interface.

- 1 On the phone, go to **Settings**.
- 2 Press the Factory Reset softkey.
- 3 Enter the admin password.
- 4 Press the **OK** softkey.

## Factory Reset Your Phone in the System Web Interface

Reset the phone user data and voice configuration settings to factory default values in the system web interface.

- 1 In the system web interface, go to **System Management > Device Update > Reset Configuration**.
- 2 Select Reset.

## **Troubleshooting**

Refer to the following topics to help you diagnose and fix issues with your system.

## **System Logs**

Logs contain information about system activities and configurations to help you troubleshoot issues.

#### **Activate Syslog Messaging**

Enable your Poly Edge B Series IP system to send syslog messages for troubleshooting.

#### Task

- 1 In the system web interface, go to System Management > Device Admin > Syslog.
- 2 In the Default column, clear the check boxes for Server, Port, and any Level settings you want to modify.
- 3 In the Value column, enter the hostname, FQDN, or IP address for your syslog server for Server.
- 4 Set the Port to 514.
- 5 Optional: For the LevelX settings, choose options from the drop-down menus for the reporting levels you require.
- 6 Optional: For the **ReportingX** settings, configure the options to enable the system to periodically upload buffered syslog files to a web server.
- 7 Select Submit.
- 8 Optional: To enable SIP messages to be sent to the syslog server, go to Service Providers > Common Settings.
  - A Under SIP, in the Default column, clear the check box for X\_SipDebugOption.
  - B In the Value column, select Log All Messages.
  - C Select Submit.
- 9 Restart your system when you complete your changes.

#### Include Detailed SIP Messages in Syslog Messaging

Include detailed SIP messages in your syslog messages.

#### Task

- 1 In the system web interface, go to Voice Services > SPN Service.
- 2 Under Debug Options, set the X\_SipDebugOption parameter to the reporting level you require.
- 3 In the X\_SipDebugExclusion parameter, enter a list of SIP methods (requests and responses) to exclude from the log. For troubleshooting a call flow, you can exclude methods such as OPTIONS that are used for keep-alive purpose in most cases.

#### **View SPN Service Status Messages**

View the current state of your configured voice services for troubleshooting issues with SIP-based services.

If a problem exists with the registration or authentication of your system with a prescribed service, a SIP 4xx error message displays.

#### Task

» In the system web interface, go to Status > System Status > SPN Service Status. The status for this service displays, including any error messages.

#### SPN Service Status Error Messages

The following table lists some of the SPN Service Status error messages you might encounter when a firmware upgrade fails.

#### **SPn Service Status Error Messages**

Error Message	Description
400 Bad Request	The server can't understand the request.
401 Unauthorized	The request must perform authentication.
402 Payment Required	Indicates that payment is required for further processing of request.
403 Forbidden	Sent when the server understands the request and found the request to be formulated correctly, but isn't servicing the request.
404 Not Found	The server hasn't found the SIP URI indicated by the user.
405 Method Not Allowed	The request contains a list of methods that aren't allowed.
406 Not Acceptable	The request can't be processed due to a requirement in the request message.
407 Proxy Authentication Required	Indicates that the UAC first has to authenticate itself with the proxy before the request can be processed.
408 Request Timeout	The specified time period in the Expires header field of INVITE request has passed.
423 Interval Too Brief	Returned by a registrar that is rejecting a registration request because the requested expiration time on one or more Contacts is too brief.
480 Temporarily Unavailable	Indicates that the request has reached the correct destination, but the called party isn't available for some reason.
481 Dialog/Transaction Does Not Exist	Indicates that a response referencing an existing call or transaction has been received for which the server has no record or state information.
483 Too Many Hops	Indicates that the request has been forwarded the maximum number of times as set by the Max-Forwards header.
486 Busy Here	Indicates that the user agent is busy and can't accept the call.
487 Request Terminated	Sent by a User Agent that has received a CANCEL request for a pending INVITE request.

## **Locate the Serial Number on the Device**

You can find the serial number on the bottom side of the device.

## Task



2 Write down the entire serial number.

## Locate the Serial Number in the System Web Interface.

You can locate the serial number for your voice device in the system web interface.

- 1 Log in to the system web interface.
- 2 Go to Status > System Status.
- 3 Locate the SerialNumber in the Product Information table.

## **Phone Encounters Registration Error**

When registration encounters an error, you can schedule retries based on the type of error. Each recognizable error type uses a three-digit code.

For 3xx class responses with a valid Contact header, your phone follows the given contact to retry registration quickly. If a valid contact isn't found, or if the number of consecutive redirects reaches 5, your phone considers the 300 response an error and performs standard error handling.

For 401 and 407 responses with a valid Proxy-Authenticate or WWW-Authenticate header, your phone retries registration quickly and includes the properly computed Proxy-Authorization or Authorization header. However, if the error response contains no valid Proxy-Authenticate or WWW-Authenticate header, and if the number of consecutive 401/407 responses received has reached 2, your phone considers the 401/407 a true error and performs standard error handling.

For 423 responses with a valid Min-Expires header value, your phone retries registration quickly with a new Expires value that conforms to the Min-Expires value from the server. However, if the Min-Expires header isn't present in the response or the value isn't larger than the current Expires value sent by your phone, your phone considers it an error and performs standard error handling.

For 5xx - 6xx responses with a Retry-After header, your phone schedules a retry after the specified value.

The standard way the phone handles a REGISTER final non-2XX response is by waiting for a certain number of seconds before trying to register again.

Three-Digit Code/Range	Description
300-699	Error response codes returned by the server.
900-999	Indicate other errors.
900	Timeout waiting for a response from the server.
901	Can't resolve the server name or host isn't reachable.

## **Packet Capture**

The phone can perform a local packet capture to help in troubleshooting.

There are two packet capture options:

- Local packet capture
- Remote PCAP server

## Start and Stop a Local Packet Capture

You can start and stop a local packet capture.

- 1 In the system web interface, go to **System Management > Device Admin**.
- 2 Under Packet Capture, check the box in the Value column for On.
- 3 If you need the phone to start a packet capture on reboot, check the box in the **Value** column for RestartCaptureOnReboot.
- 4 Select Submit.
- 5 Reproduce the issue.

- 6 Clear the boxes in the Value column for On and RestartCaptureOnReboot.
- 7 Select Submit.
- 8 Go to System Management > Device Update.
- 9 Under Extracting PCAP Capture Result, select Extract. The PCAP file is downloaded to your local computer.

## **Configure the Remote PCAP Server**

Your phone can stream PCAP data to a Wireshark client running on your local computer.

On the Wireshark client on your local computer, configure a remote interface for the phone using the phone's IP address and port.

- 1 In the system web interface, go to **System Management > Device Admin**.
- 2 Under Remote PCAP Server, check the box in the Value column for Enable.
- 3 If you need to change the port that the phone uses for the PCAP server, enter the port number in the **Value** column for **Port**.
- 4 Select Submit.

# Support

## **NEED MORE HELP?**

poly.com/support

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