Cisco BroadWorks

Partner Configuration Guide

Poly Edge B Phones

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Cisco® Guide

Notification

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Document Revision History

Version	Reason for Change
1.1	Introduced document for Poly Edge B Phone 1.0.1 version validation with Cisco BroadWorks Release 22.0.
1.2	Edited changes and published document.

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1 Overview

This guide describes the configuration procedures required for the Poly Edge B Phone for interoperability with Cisco BroadWorks.

The Poly Edge B Phone are IP phones that uses the Session Initiation Protocol (SIP) to communicate with Cisco BroadWorks for call control.

This guide describes the specific configuration items that are important for use with Cisco BroadWorks. It does not describe the purpose and use of all configuration items on the Poly Edge B Phone. For those details, see the configuration guide called *Poly® Edge B® IP Phones, Admin Guide* [1] supplied by Poly.

Poly phone models:

- Edge B10 Phone
- Edge B20 Phone
- Edge B30 Phone

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2 Interoperability Status

This section provides the known interoperability status of the Poly Edge B Phone with Cisco BroadWorks. This includes the version(s) tested, the capabilities supported, and known issues.

Interoperability testing validates that the device interfaces properly with Cisco BroadWorks via the SIP interface. Qualitative aspects of the device or device capabilities not affecting the SIP interface such as display features, performance, and audio qualities are not covered by interoperability testing. Requests for information and/or issues regarding these aspects should be directed to Poly.

2.1 Verified Versions

The following table identifies the verified Poly Edge B Phone and Cisco BroadWorks versions and the month/year the testing occurred. If the device has undergone more than one test cycle, versions for each test cycle are listed, with the most recent listed first.

Compatible Versions in the following table identify specific Poly Edge B Phone versions that the partner has identified as compatible so should interface properly with Cisco BroadWorks. Generally, maintenance releases of the validated version are considered compatible and may not be specifically listed here. For any questions concerning maintenance and compatible releases, please contact Poly.

NOTE: Interoperability testing is usually performed with the latest generally available (GA) device firmware/software and the latest GA Cisco BroadWorks release and service pack at the time the testing occurs. If there is a need to use a non-verified mix of Cisco BroadWorks and device software versions, customers can mitigate their risk by self-testing the combination themselves using the *Cisco BroadWorks SIP Phone Interoperability Test Plan* [5].

Verified Versions

Date (mm/yyyy)	Cisco BroadWorks Release	Poly Verified Version	Poly Compatible Versions
07/2022	Release 22.0	1.0.1 (Build: 5585)	1.0.x maintenance revisions of the verified version.

2.2 Interface Capabilities Supported

This section identifies interface capabilities that have been verified through testing as supported by Poly Edge B Phone.

The *Supported* column in the tables in this section identifies the Poly Edge B Phone' support for each of the items covered in the test plan, with the following designations:

- Yes Test item is supported
- No Test item is not supported
- NA Test item is not applicable to the device type
- NT Test item was not tested

Caveats and clarifications are identified in the *Comments* column.

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2.2.1 SIP Interface Capabilities

The Poly Edge B Phone has completed interoperability testing with Cisco BroadWorks using the *Cisco BroadWorks SIP Phone Interoperability Test Plan* [5]. The results are summarized in the following table.

The Cisco BroadWorks test plan is composed of packages, each covering distinct interoperability areas, such as "Basic" call scenarios and "Redundancy" scenarios. Each package is composed of one or more test items, which in turn are composed of one or more test cases. The test plan exercises the SIP interface between the device and Cisco BroadWorks with the intent to ensure interoperability sufficient to support the Cisco BroadWorks feature set.

NOTE: *DUT* in the following table refers to the *Device Under Test*, which in this case is the Poly Rove Phone.

Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	**Test Plan Package Items**	**Supported**	**Comments**
Basic	Call Origination	Yes	
	Call Termination	Yes	
	Session Audit	Yes	
	Session Timer	Yes	
	Ringback	Yes	
	Forked Dialog	Yes	
	181 Call Being Forwarded	Yes	
	Dial Plan	Yes	
	DTMF – Inband	Yes	
	DTMF – RFC 2833	Yes	
	DTMF – DTMF Relay	Yes	
	Codec Negotiation	Yes	
	Codec Renegotiation	Yes	
Cisco BroadWorks Services	Third-Party Call Control – Basic	No	
	Third-Party Call Control – Advanced	Yes	
	Voice Message Deposit/Retrieval	Yes	
	Message Waiting Indicator – Unsolicited	Yes	
	Message Waiting Indicator – Solicited	Yes	
	Message Waiting Indicator – Detail	Yes	
	Voice Portal Outcall	Yes	
	Advanced Alerting – Ringing	Yes	
	Advanced Alerting – Call Waiting	Yes	
	Advanced Alerting – Ring Splash	Yes	

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Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	**Test Plan Package Items**	**Supported**	**Comments**
	Advanced Alerting – Silent Alerting	Yes	
	Calling Line ID	Yes	
	Calling Line ID with Unicode Characters	Yes	
	Connected Line ID	Yes	
	Connected Line ID with Unicode Characters	Yes	
	Connected Line ID on UPDATE	Yes	
	Connected Line ID on Re-INVITE	Yes	
	Diversion Header	Yes	
	History-Info Header	Yes	
	Advice of Charge	No	
	Meet-Me Conferencing	Yes	
	Meet-Me Conferencing – G722	Yes	
	Meet-Me Conferencing – AMR-WB	No	
	Meet-Me Conferencing – Opus	Yes	
	Collaborate – Audio	Yes	
	Collaborate – Audio – G722	Yes	
	Collaborate – Audio – Opus	No	
	Call Decline Policy	Yes	
DUT Services – Call Control Services	Call Waiting	Yes	
	Call Hold	Yes	
	Call Transfer	Yes	
	Three-Way Calling	Yes	
	Network-Based Conference	Yes	
DUT Services – Registration and Authentication	Register Authentication	Yes	
	Maximum Registration	Yes	
	Minimum Registration	Yes	
	Invite Authentication	Yes	
	Re-Invite/Update Authentication	Yes	
	Refer Authentication	Yes	
	Device Authenticating Cisco BroadWorks INVITE	No	
DUT Services – Emergency Call	Emergency Call	No	
	Emergency Call with Ringback	No	
	REGISTER with P-Access-Network-Info Header	No	

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Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	**Test Plan Package Items**	**Supported**	**Comments**
DUT Services – P-Access-Network-Info Header	INVITE with P-Access-Network-Info Header	No	
DUT Services – Miscellaneous	Do Not Disturb	Yes	
	Call Forwarding Always	Yes	
	Call Forwarding Always Diversion Inhibitor	Yes	
	Anonymous Call	Yes	
	Anonymous Call Block	Yes	
	Remote Restart Via Notify	Yes	
Advanced Phone Services – Busy Lamp Field	Busy Lamp Field	Yes	
	Call Park Notification	Yes	
Advanced Phone Services – Feature Key Synchronization, Private Line	Do Not Disturb	Yes	Activate DND from phone Multi-line is not supported.
	Do Not Disturb Ring Splash	Yes	
	Call Forwarding	Yes	
	Call Forwarding Always Ring Splash	Yes	
	Call Forwarding Always Diversion Inhibitor	Yes	
	Call Center Agent Logon/Logoff	Yes	
	Call Center Agent Unavailable Code	Yes	
	Executive – Call Filtering	Yes	
	Executive-Assistant – Call Filtering	Yes	
	Executive-Assistant – Diversion	Yes	
	Call Recording	Yes	
	Security Classification	Yes	
Advanced Phone Services – Feature Key Synchronization, Shared Line	Do Not Disturb	Yes	
	Do Not Disturb Ring Splash	Yes	
	Call Forwarding	Yes	
	Call Forwarding Always Ring Splash	Yes	
	Call Forwarding Always Diversion Inhibitor	Yes	
	Security Classification	Yes	
Advanced Phone Services – Missed Calls Display Synchronization	Missed Calls Display Sync	Yes	
	Line-Seize	Yes	

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Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	**Test Plan Package Items**	**Supported**	**Comments**
Advanced Phone Services – Shared Call Appearance using Call Info	Call-Info/Lamp Management	Yes	
	Public Hold	Yes	
	Private Hold	Yes	
	Hybrid Key System	Yes	
	Multiple Call Arrangement	Yes	
	Bridge Active Line	Yes	
	Bridge Active Line – Silent Monitor	No	
	Call Park Notification	Yes	
Advanced Phone Services – Call Park Notification	Call Park Notification	Yes	
Advanced Phone Services – Call Center	Hold Reminder	Yes	
	Call Information	Yes	
	Hoteling Event	Yes	
	Status Event	Yes	
	Disposition Code	Yes	
	Emergency Escalation	Yes	
	Customer Originated Trace	Yes	
Advanced Phone Services – Call Recording Controls	Pause/Resume	Yes	
	Start/Stop	Yes	"Call Recording: DUT Originator; Mid-Call Start Recording after Placing Ca on Hold" is not supported.
	Record Local Conference	Yes	
	Record Network Conference	Yes	
Advanced Phone Services – Call Recording Video	Basic Call	No	
	Record Local Conference	No	
	Record Network Conference	No	
Advanced Phone Services – Security Classification	Security Classification	Yes	
Advanced Phone Services – Conference Event	Network-Based Conference Creator	No	
	Network-Based Conference Participant	No	
	Meet-Me Conference Participant	No	
Redundancy	DNS SRV Lookup	Yes	
Test Plan Package	Register Failover/Failback	Yes	
	Invite Failover/Failback	Yes	

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Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	**Test Plan Package Items**	**Supported**	**Comments**
	Bye Failover	No	
SBC/ALG – Basic	Register	Yes	
	Outgoing Invite	Yes	
	Incoming Invite	Yes	
SBC/ALG – Failover/Failback	Register Failover/Failback	Yes	
	Invite Failover/Failback	Yes	
Video – Basic Video Calls	Call Origination	No	
	Call Termination	No	
	Call Hold	No	
	Call Waiting	No	
	Call Transfer	No	
Video – Cisco BroadWorks Video Services	Auto Attendant	No	
	Auto Attendant – HD	No	
	Voice Messaging	No	
	Voice Messaging – HD	No	
	Custom Ringback	No	
Video – Cisco BroadWorks Video Conference	Network-based Conference	No	
	Network-based Conference – HD	No	
	Collaborate – Video	No	
	Collaborate – Video – HD	No	
Video – Cisco BroadWorks WebRTC Client	Call from WebRTC Client	No	
	Call to WebRTC Client	No	
TCP	Register	Yes	
	Outgoing Invite	Yes	
	Incoming Invite	Yes	
IPV6	Call Origination	No	
	Call Termination	No	
	Session Audit	No	
	Ringback	No	
	Codec Negotiation/Renegotiation	No	
	Voice Message Deposit/Retrieval	No	
	Call Control	No	
	Registration with Authentication	No	

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Cisco BroadWorks SIP Phone Interoperability Test Plan Support Table			
Test Plan Package	**Test Plan Package Items**	**Supported**	**Comments**
	Busy Lamp Field	No	
	Redundancy	No	
	SBC	No	
	Video	No	
	Dual Stack with Alternate Connectivity	No	

2.2.2 Other Interface Capabilities

This section identifies whether the Poly Edge B Phone has implemented support for the following:

- Cisco BroadWorks Xtended Services Interface (Xsi)
- Extensible Messaging and Presence Protocol (XMPP) (BroadCloud/Cisco BroadWorks Collaborate Instant Messaging and Presence [IM&P])

Support for these interfaces is demonstrated by completing the *Cisco BroadWorks SIP Phone Xsi and XMPP Test Plan* [6]. Support for these interfaces is summarized in the following table.

Cisco BroadWorks Xtended Services Interface (Xsi) and BroadCloud IM&P Support Table			
Interface	**Feature**	**Supported**	**Comments**
Xsi Features – Authentication	Authenticate with SIP Credentials	Yes	
	Authenticate with Cisco BroadWorks User Login Credentials	No	
	Authenticate with Cisco BroadWorks User Directory Number	No	
	Reuse Authorization Header	No	
Xsi Features – User Service Configuration	Remote Office	Yes	
	Cisco BroadWorks Anywhere	Yes	
	Simultaneous Ringing	Yes	
	Caller ID Blocking	Yes	
	Call Forwarding Always	Yes	
	Call Forwarding Busy	Yes	
	Call Forwarding No Answer	Yes	
	Do Not Disturb	Yes	
Xsi Features – Directories	Enterprise Directory	Yes	
	Enterprise Common Phone List	Yes	
	Group Directory	Yes	Exact Match doesn't support
	Group Common Phone List	Yes	
	Personal Phone List	Yes	

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Cisco BroadWorks Xtended Services Interface (Xsi) and BroadCloud IM&P Support Table			
Interface	**Feature**	**Supported**	**Comments**
	Search All Directories	Yes	Exact Match doesn't supported
	Search Enterprise Directories	Yes	Exact Match, Starts With doesn't supported.
Xsi Features – Call Logs	Placed Calls	Yes	
	Received Calls	Yes	
	Missed Calls	Yes	
	All Calls	Yes	
	Sort by Name	Yes	
Xsi Features – Visual Voice Mail	View Messages	Yes	
	Listen to Audio Message	Yes	
	Watch Video Message	No	
	Mark Message Read/Unread	Yes	
	Delete Message	Yes	
	Mark All Messages Read/Unread	Yes	
Xsi Features – Push Notification	Register/Deregister for Push Notifications	No	
	Incoming Call via Push Notification	No	
	Call Update via Push Notification	No	
	Incoming Call via Push Notification; Second Incoming Call	No	
	MWI via Push Notification	No	
	Ring Splash via Push Notification	No	
Xsi Features – Call Recording Configurations	Call Record Mode Get	No	
	Set Record Mode	No	
	Set Play Call Recording to Start and Stop Announcement	No	
	Set Record Voice Messaging	No	
	Set Pause and Resume Notification	No	
	Set Recording Notification	No	
Xsi Features – Call Recording Controls	Record Mode set to Never	No	
	Record Mode set to Always	No	
	Record Mode set to Always with Pause/Resume	No	
	Start Recording Mid-Call with Record Mode set to On Demand	No	
	Start Recording During Call Setup with Record Mode set to On Demand	No	

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Cisco BroadWorks Xtended Services Interface (Xsi) and BroadCloud IM&P Support Table			
Interface	**Feature**	**Supported**	**Comments**
	Perform User Initiated Start with Record Mode set to On Demand	No	
	Perform Mid-Call Start Recording after Placing Call on Hold	No	
	Perform Mid-Call Change to Call Recording Mode	No	
	Record Local Three-Way Call	No	
	Record Network Three-Way Call	No	
XMPP Features – Contact/Buddy List	Contacts	NT	NT due to test environment issue. Will test in future maintenance release
	Favorites	NT	NT due to test environment issue. Will test in future maintenance release
	Groups	NT	NT due to test environment issue. Will test in future maintenance relase
	Non-XMPP Contacts	NT	NT due to test environment issue. Will test in future maintenance release
	Conferences	NT	NT due to test environment issue. Will test in future maintenance release
XMPP Features – Presence	Login Invisible	NT	NT due to test environment issue. Will test in future maintenance release
	Presence State	NT	NT due to test environment issue. Will test in future maintenance release
	Presence Status	NT	NT due to test environment issue. Will test in future maintenance release
	Contact's Presence State	NT	NT due to test environment issue. Will test in future maintenance release

2.3 Known Issues

This section lists the known interoperability issues between Cisco BroadWorks and specific partner release(s). Issues identified during interoperability testing and known issues identified in the field are listed.

The following table provides a description of each issue and, where possible, identifies a workaround. The verified partner device versions are listed with an "X" indicating that the issue occurs in the specific release. The issues identified are device deficiencies or bugs, and are typically not Cisco BroadWorks release dependent.

The *Issue Number* is a tracking number for the issue. If it is a Poly issue, the issue number is from Poly's tracking system. If it is a Cisco BroadWorks issue, the issue number is from BroadSoft's tracking system.

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For more information on any issues related to the particular partner device release, see the partner release notes.

Issue Number	Issue Description	Partner Version			
	None.	1.0.1 (Build: 5585)			

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3 Cisco BroadWorks Configuration

This section identifies the required Cisco BroadWorks device profile type for the Poly Edge B Phone as well as any other unique Cisco BroadWorks configuration required for interoperability with the Poly Edge B Phone.

3.1 Cisco BroadWorks Device Profile Type Configuration

This section identifies the device profile type settings to use when deploying the Poly Edge B Phone with Cisco BroadWorks.

Create a device profile type for the Poly Edge B Phone with settings as shown in the following example. A separate device profile type should be created for each Poly Edge B Phone model. The settings shown are recommended for use when deploying the Poly Edge B Phone with Cisco BroadWorks. For an explanation of the profile parameters, see the *Cisco BroadWorks Device Management Configuration Guide* [2].

The device profile type shown provides the *Number of Ports* (number of SIP lines) setting for Poly Edge B Phone. For other Poly Edge B Phone models, create a new device profile type and set the *Number of Ports* to match the available number of SIP lines per model according to the following table.

Model	Number of Lines	Video Capable
Edge B10	2	Un-checked.
Edge B20	2	Un-checked.
Edge B30	4	Un-checked.

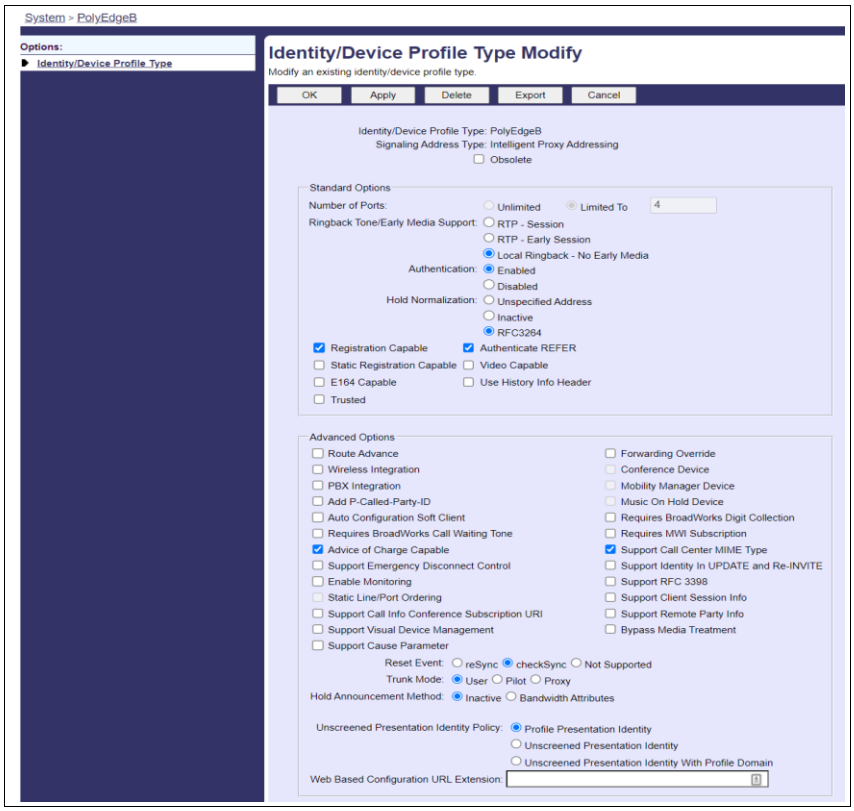

Figure 1 Device Identity/Profile Type

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3.2 Cisco BroadWorks Configuration Steps

No additional Cisco BroadWorks configuration steps are required.

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4 Poly Edge B Phone Configuration

This section describes the configuration settings required for the Poly Edge B Phone integration with Cisco BroadWorks, primarily focusing on the SIP interface configuration. The Poly Edge B Phone configuration settings identified in this section have been derived and verified through interoperability testing with Cisco BroadWorks. For configuration details not covered in this section, see the *Poly® Edge B® IP Phones* [1].

4.1 Configuration Method

Poly Edge B Phone can be configured through a web browser, OBitalk portal (www.obitalk.com) or configuration files. Poly Edge B Phone can be provisioned with the configuration files through HTTP/HTTPS or TFTP. Poly Edge B Phone does not support FTP. The configuration files are written in Extensible Markup Language (XML). Poly Edge B phone supports two different style of master configuration file - UCS-style master configuration file and Obihai-style master configuration file. The master configuration file then redirects to additional resources to complete the phone provisioning. Poly Edge B Phone comes with the default ITSP ProvisioningOption = “UCSServer and ConfigURL” in which it tries the UCSServer URL first before the ConfigURL option.

Default UCSServer URL:

- $DHCPOPT160;$DHCPOPT66

Default ConfigURL URL:

- tftp://$DHCPOPT66/$DM.xml;$DHCPOPT66

By default, after the Poly Edge B Phone boots up, it will insert the server address from the DHCP server and attemp to download the <MAC Address>.cfg file. If it fails to download the file, it will try ConfigURL URL (ex: http://xsp.server.com/PolyEdgeB/$DM.xml). $DM.xml resolves to either PolyEdgeB10.xml or PolyEdgeB20.xml or PolyEdgeB30.xml.

You may configure ProvisioningOption to either “UCSServer” or “ConfigURL” to stick to the method that you choose. If you prefer the UCS-style provisioning, you may choose the UCSServer option and configure the <MAC Address>.cfg master configuraton file accordingly. And if you prefer the Obihai-style provisioning, you may choose the ConfigURL option and configure the $DM.xml master configuration file accordingly.

Note: If UCSServer is chosen, then the configuration that the MAC.cfg / 000000000000.cfg points to must follow a specific XML syntax. This detail can be found in the Poly Edge B Admin Guide under the section - *UC Software Configuration on Poly Edge B*.

Note: The support for the UCSServer option is limited in this release and we’ll be adding additional support around the feature in the subsequent releases. Pleas refer to the Admin Guide for the specifics of the support. At this time Poly recommends the ConfigURL method over the UCSServer option. In this Config Guide, when the UCSServer provisioning is selected, the example <MAC Address>.cfg switches the the provisioning style back to ConfigURL option and points to the $DM.xml file for the remainder of the provisioning flow.

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The following configuration files serve different purposes.

Configuration Files

Poly Edge B Phone Configuration Files	Level	Description
PolyEdgeB-1-0-1-5585-2021-11-2.fw	System	Contains the firmware load.
<MAC Address>.cfg	Subscriber	This is the default master configuration file for the phone if UCS-style option is chosen. The file must be renamed with the MAC address for the individual device (for example, 0004f200059e.cfg). The master configuration file for the phone identifies the file names for the application firmware, the system level, and the phone-specific configuration files. The listed order of the configuration files is significant. The files are processed in the order listed (from left to right).
PolyEdgeB10.xml PolyEdgeB20.xml PolyEdgeB30.xml	System	Initial Configuration file with ObiStyle ConfigURL is used and $DM.xml macro is used for the file name
PolyEdgeB-%BWMACADDRESS%.xml	Subscriber	Contains configurable parameters that apply to an individual device in a deployment.

4.2 System Level Configuration

This section describes system-wide configuration items that are generally required for each Poly Edge B Phone to work with Cisco BroadWorks. Subscriber-specific settings are described in the next section.

4.2.1 Configure Network Settings

Step	Command	Description
Step 1	Set DHCP to enable. Web: System Management WAN Setting Internet Settings AddressingType: DHCP XML: <O> <N>DeviceInfo.WAN.</N> <P> <N>AddressingType</N> <V>DHCP</V> </P> </O>	Edge B phone comes with DHCP as default network setting.

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Step	Command	Description
Step 2	Set Static IP, DNS. Web: System Management WAN Settings IPV4 Settings AddressingType = Static IPAddress = 192.168.15.81 SubnetMask = 255.255.255.0 DefaultGateway = 192.168.15.1 DNSServer1 = 4.2.2.2 DNSServer2 = 8.8.8.8 XML: <O> <N>DeviceInfo.WAN.</N> <P> <N>AddressingType</N> <V>Static</V> </P> <P> <N>IPAddress</N> <V>192.168.15.81</V> </P> <P> <N>SubnetMask</N> <V>255.255.255.0</V> </P> <P> <N>DefaultGateway</N> <V>192.168.15.1</V> </P> <P> <N>DNSServer1</N> <V>4.2.2.2</V> </P> <P> <N>DNSServer2</N> <V>8.8.8.8</V> </P> </O>	Example of Static DNS server address setting.

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Step	Command	Description
Step 3	Set NTP Server. Web: System Management WAN Settings Time Service Settings NTPServer1 = ntp.polycom.com XML: <O> <N>DeviceInfo.Time.</N> <P> <N>NTPServer1</N> <V>ntp.polycom.com</V> </P> </O>	Default NTP server is ntp.polycom.com.

4.2.2 Configure SIP Interface Settings

Step	Command	Description
Step 1	Set SIP proxy. Web: Service Providers ITSP Profile A SIP ProxyServer = as.iop1.Cisco BroadWorks.net ProxyServerPort = 5060 ProxyServerTransport = UDP RegistrationPeriod = 3600 XML: <O> <N>VoiceService.1.VoiceProfile.1.SIP.</N> <P> <N>ProxyServer</N> <V>as.iop1.Cisco BroadWorks.net</V> </P> <P> <N>ProxyServerPort</N> <V>5060</V> </P> <P> <N>ProxyServerTransport</N> <V>UDP</V> </P> <P> <N>RegistrationPeriod</N> <V>3600</V> </P> <P> </O>	Edge B can be configured up to 10 ITSP profiles, A, B, C, D, E, F, G, H, I and J. The corresponding name tag will be: VoiceService.1.VoiceProfile.1.SIP To: VoiceService.1.VoiceProfile.10.SIP

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Step	Command	Description
Step 2	Set Outbound Proxy. Web: Service Providers ITSP Profile A SIP OutboundProxy = sbc1.iop1.Cisco BroadWorks.net OutboundProxyPort = 5060 XML: <O> <N>VoiceService.1.VoiceProfile.1.SIP.</N> <P> <N>OutboundProxy</N> <V>sbc1.iop1.Cisco BroadWorks.net</V> </P> <P> <N>OutboundProxyPort</N> <V>5060</V> </P> </O>	If Outbound proxy is needed and this can be group with Step 1.
Step 3	SIP Timer Configuration. Web: Service Providers ITSP Profile A SIP TimerB = 4000 TimerF = 4000 RegisterRetryInterval = 30 *XML:* <O> <N>VoiceService.1.VoiceProfile.1.SIP.</N> <P> <N>TimerB</N> <V>32000</V> </P> <P> <N>TimerF</N> <V>32000</V> </P> <P> <N>RegisterRetryInterval</N> <V>30</V> </P> </O>	These are the preferred timer settings. User can adjust the value accordingly.

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Step	Command	Description
Step 4	SIP related feature settings Web: ITSP Profile A SIP X_UseRefer = True X_ReferAOR = True X_User302ToCallForward = True X_Support100rel = True X DiscoverPublicAddress = False XML: <O> <N>VoiceService.1.VoiceProfile.1.SIP.</N> <P> <N>X_UseRefer</N> <V>true</V> </P> <P> <N>X_ReferAOR</N> <V>true</V> </P> <P> <N>X_Use302ToCallForward</N> <V>true</V> </P> <P> <N>X_Support100rel</N> <V>true</V> </P> <P> <N>X_DiscoverPublicAddress</N> <V>false</V> </P> </O>	

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Step	Command	Description
Step 5	SIP DNS SRV(optional) Web: ITSP Profile A SIP X_DnsSrvAutoPrefix = True X_ProxyServerRedundancy = True X_SecondaryRegistration = False X CheckPrimarFallbackInterval = 1 XML: <O> <N>VoiceService.1.VoiceProfile.1.SIP.</N> <P> <N>X_DnsSrv</N> <V>true</V> </P> <P> <N>X_DnsSrvAutoPrefix</N> <V>true</V> </P> <P> <N>X_ProxyServerRedundancy</N> <V>true</V> </P> <P> <N>X_SecondaryRegistration</N> <V>false</V> </P> <P> <N>X CheckPrimaryFallbackInterval</N> <V>1</V> </P> </O>	

4.2.3 Configure Service Settings

Step	Command	Description
Step 1	Digit Map settings Web: ITSP Profile A General DigitMap = (*xx.|*xx*|1xxxxxxxxxx|<1>[2-9]xxxxxxxxx|011xx.|xx.|(Mipd)) IP Phone Phone Settings StarcodeProfile = None	The DigitMap is showing the default setting with additional star code feature. Please check the Edge B Admin Guide for more detail Edge B phone comes with two identical Start Code profile, it contains multiple internal star code features. If user wants to use the BroadWorks star code, the internal star code should be disabled and add the star code in the DigitMap accordingly.

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Step	Command	Description
	UseExternalConferenceBridge = true XML: <O> <N>VoiceService.1.VoiceProfile.1.</N> <P> <N>DigitMap</N> <V>(*xx.|*xx*|1xxxxxxxxxx|<1>[2-9]xxxxxxxxx|011xx.|xx.|(Mipd))</V> </P> </O> <O> <N>VoiceService.1.Phone.CallingFeatures.</N> <P> <N>StarCodeProfile</N> <V>None</V> </P> </O>	
Step 2	Feature Codes Settings: Web: Service Providers ITSP Profile A SIP Feature Codes Park = *68 CallPickup = *88 DirectedCallPickup = *97 Barge-In = *33 XML: <O> <N>VoiceService.1.VoiceProfile.1.X_FeatureCode.</N> <P> <N>Park</N> <V X_UD="Y" X_DV="*68"/> </P> <P> <N>CallPickup</N> <V X_UD="Y" X_DV="*88"/> </P> <P> <N>DirectedCallPickup</N> <V X_UD="Y" X_DV="*97"/> </P> <P> <N>BargeIn</N>	Edge B comes with preset feature codes for the BroadWorks services. Map these parameters to your feature codes that are set for the matching services.

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Step	Command	Description
	<V X_UD="Y" X_DV="*33"/> </P> </O>	
Step 3	(Optional) Configure Network-managed Conference URI Web: IP Phone Phone Settings UseExternalConferenceBridge = true Voice Services SP1 Service Calling Features X_ConferenceBridge = conf@as.broadsoft.com XML: <O> <N>VoiceService.1.Phone.CallingFeatures.</N> <P> <N>UseExternalConferenceBridge</N> <V>true</V> </P> </O> <O> <N>VoiceService.1.VoiceProfile.1.Line.1.CallingFeatures.</N> <P> <N>X_ConferenceBridge</N> <V>conf@as.broadsoft.com</V> </P> </O>	(Optional) Configure the conferencing unit to allow network-based conference to be established from Poly Edge B Phone

4.3 Subscriber Level Configuration

This section identifies the device-specific parameters, including registration and authentication. These settings must be unique across devices to be matched with the settings for a Cisco BroadWorks SIP trunk or subscriber. SIP Registration requires that a unique address of record (AoR) be provisioned on Cisco BroadWorks and the device.

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Step	Command	Description
Step 1	Enable service for each line. Web: Voice Services SP1 Service Enable = true X_ServProvProfile = A Voice Services SP2 Service Enable = true X_ServProvProfile = A XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.</N> <P> <N>Enable</N> <V>true</> </P> <P> <N>X_ServProvProfile</N> <V>A</> </P> </O> <O> <N>VoiceService.1.VoiceProfile.1.Line.2.</N> <P> <N>Enable</N> <V>true</V> </P> <P> <N>X_ServProvProfile</N> <V>A</V> </P> </O>	This example shows both voice service is using the same ServProvProfile A, that is ITSP Profile A. Two Voice service, SP1 and SP2, value is set to Enable (default is Enable). Edge B phone can be configured with 6 Voice Service, SP1/2/3/4/5/6. They can be set to the same X_ServProvProfile or set to the corresponding one. e.g. SP1 X_ServProvProfile = A SP2 X_ServProvProfile = B …etc.

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Step	Command	Description
Step 2	Set AOR for each service. Web: Voice Service SP1 Service URI = 2408889000@as.broadsoft.com AuthUserName = user9000 AuthPassword = welcome SP2 Service URI = 2408889001@as.broadsoft.com AuthUserName = user9001 AuthPassword = welcome XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>URI</N> <V>2408889000@as.broadsoft.com</V> </P> <P> <N>AuthUserName</N> <V>user9000</V> </P> <P> <N>AuthPassword</N> <V>welcome</V> </P> </O> <O> <N>VoiceService.1.VoiceProfile.1.Line.2.SIP.</N> <P> <N>URI</N> <V>2408889001@as.broadsoft.com</V> </P> <P> <N>AuthUserName</N> <V>user9001</V> </P> <P> <N>AuthPassword</N> <V>welcome</V> </P> </O>	Shown with the user authentication enabled.

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4.4 SIP Advanced Feature Configuration

This section provides configuration instructions for advanced SIP features supported by the phone including but not limited to Shared Call Appearance, Feature Key Synchronization, One-Touch Call Park/Retrieve and Monitor.

4.4.1 Shared Call Appearance Configuration

The Shared Call Appearance (SCA) feature allows the administrator to add multiple locations to a given line. Any of the locations can be used to originate or receive calls.

When a call comes in to an idle line, all the provisioned locations for that line are alerted. The first location to answer the call is connected to the originator. If the line is already active in a call, only the active location is alerted.

A subscriber can originate calls from any of the configured locations. All other locations are unable to originate calls until all calls are released.

It is recommended to use the phone number plus an index (<phoneNumber>_<index>) when provisioning the unique AoR for each shared line, for example: 2405551111_2. If a phone number does not exist, use the Media Access Control (MAC) address plus an index (<macAddress>_<index>).

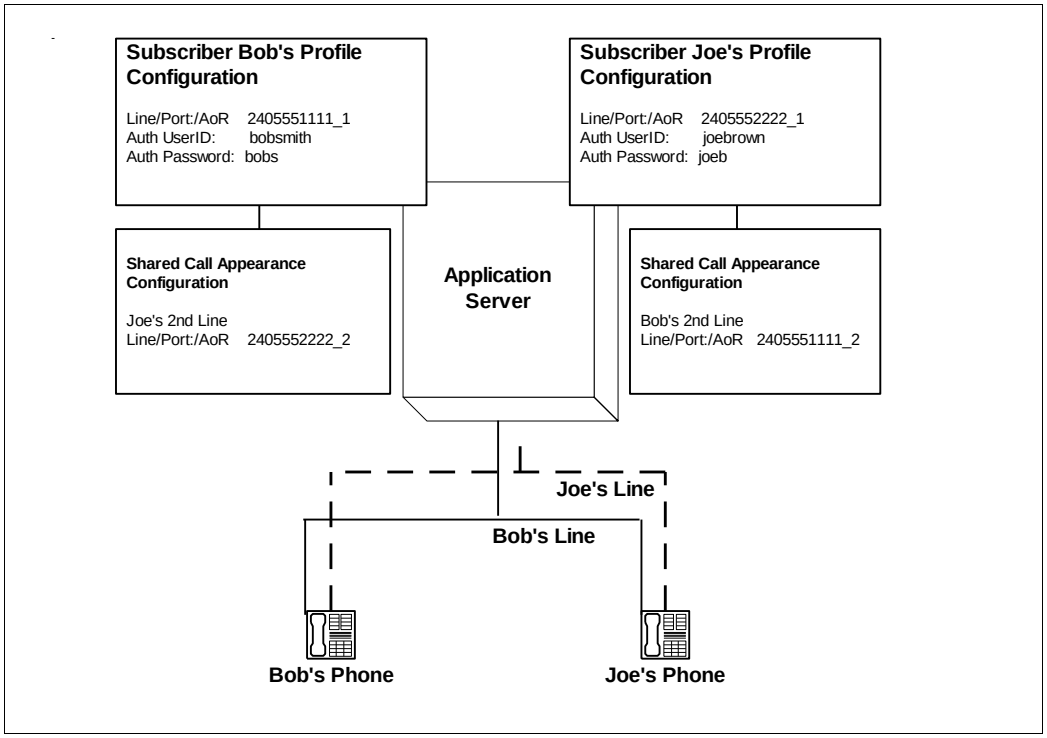

Figure 2 Shared Call Appearance Configuration

Figure 2 shows that Bob and Joe each have two lines and that Bob shares a line with Joe and Joe shares a line with Bob. The figure also shows the applicable Subscriber Profile and Shared Call Appearance configuration data for subscribers Bob and Joe.

When Bob (2405551111) is called, Bob's first line and Joe's second line ring. When Joe (2405552222) is called, Joe's first line and Bob's second line ring.

The following steps show how to configure both phones for this Shared Call Appearance configuration.

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4.4.1.1 Bob's Phone Configuration – Poly_Edge B-%BWMACADDRESS%.xml

The following steps are used to configure line 1 for Bob's phone. This line rings when Bob is called, and it has Bob's authentication information.

Step	Command	Purpose
Step 1	Configure the line as shared. Web: Voice Service SP1 Service X_ShareLine = true XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>X_ShareLine</N> <V>true</V> </P> </O>	Configure the line as "shared" (as opposed to "private"). In this example, the SP1 service is configured as a Share Line.
Step 2	**Set AOR for each service** Web: Voice Service SP1 Service URI = 2405551111_1 XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>URI</N> <V>2405551111_1</V> </P> </O>	The register user ID must correspond with the line/port setting on Cisco BroadWorks.
Step 3	Configure Display Label (Optional). Web: Voice Service SP1 Service X_DisplayNumber = 2405551111_1 XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.</N> <P> <N>X_DisplayNumber</N> <V>2405551111_1</V> </P> </O>	Customized the line key label.

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Step	Command	Purpose
Step 4	Enable SIP Authentication. Web: Voice Services SP1 Service AuthUserName = bobsmith AuthPassword = bobs XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>AuthUserName</N> <V>bobsmith</V> </P> <P> <N>AuthPassword</N> <V>bobs</V> </P> </O>	If the Authentication service is configured on Cisco BroadWorks, these parameters must be configured to match the Cisco BroadWorks settings.
Step 5	Configure the display name. Web: Left Line Keys Key 1 Function = Call Appearance Service = SP1 XML: <O> <N>VoiceService.1.Phone.LeftLineKey.1.</N> <P> <N>Function</N> <V>Call Appearance</V> </P> <P> <N>Service</N> <V>SP1</V> </P> </O>	Configure the name to be displayed on the device for this line.

The following steps are used to configure line 2 for Bob's phone. This line rings when Joe is called and it has Joe's authentication information.

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Step	Command	Purpose
Step 1	Configure the line as shared. Web: Voice Service SP2 Service X_ShareLine = true XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.2.SIP.</N> <P> <N>X_ShareLine</N> <V>true</V> </P> </O>	Configure the line as “shared” (as opposed to “private”).
Step 2	**Set AOR for each service** Web: Voice Service SP2 Service URI = 2405551111_2 XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.2.SIP.</N> <P> <N>URI</N> <V>2405551111_2</V> </P> </O>	The register user ID must correspond with the line/port setting on Cisco BroadWorks.
Step 3	Configure Display Label (Optional). Web: Voice Service SP2 Service X_DisplayNumber = 2405551111_2 XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.2.</N> <P> <N>X_DisplayNumber</N> <V>2405551111_2</V> </P> </O>	Customized the line key label.

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Step	Command	Purpose
Step 4	Enable SIP Authentication. Web: Voice Service SP2 Service AuthUserName = joebrown AuthPassword = joeb XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.2.SIP.</N> <P> <N>AuthUserName</N> <V>joebrown</V> </P> <P> <N>AuthPassword</N> <V>joeb</V> </P> </O>	If the Authentication service is configured on Cisco BroadWorks, these parameters must be configured to match the Cisco BroadWorks settings.
Step 5	Configure the display name. Web: Left Line Keys Key 2 Function = Call Appearance Service = SP2 XML: <O> <N>VoiceService.1.Phone.LeftLineKey.2.</N> <P> <N>Function</N> <V>Call Appearance</V> </P> <P> <N>Service</N> <V>SP2</V> </P> </O>	Configure the name to be displayed on the device for this line.

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Step	Command	Purpose
Step 6	Enable Shareline optional features Web: Voice Service SP1 Service X_ShareLineBargeIn = true X_ShareLineMonitor = true X_ShareLineCallPickup = true XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>X_ShareLineBargeIn</N> <V>true</V> </P> <P> <N>X_ShareLineMonitor</N> <V>true</V> </P> <P> <N>X_ShareLineCallPickup</N> <V>true</V> </P> </O>	

4.4.1.2 Joe's Phone Configuration – Poly_Edge B-%BWMACADDRESS%.xml

The following steps are used to configure line 1 for Joe's phone. This line rings when Joe is called, and it has Joe's authentication information.

Step	Command	Purpose
Step 1	Configure the line as shared. Web: Voice Service SP1 Service X_ShareLine = true XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>X_ShareLine</N> <V>true</V> </P> </O>	Configure the line as "shared" (as opposed to "private").

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Step	Command	Purpose
Step 2	**Set AOR for service** Web: Voice Service SP1 Service URI = 2405552222_1 XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>URI</N> <V>2405552222_1</V> </P> </O>	The register user ID must correspond with the line/port setting on Cisco BroadWorks.
Step 3	Enable SIP Authentication. Web: Voice Services SP1 Service AuthUserName = joebrown AuthPassword = joeb XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>AuthUserName</N> <V>joebrown</V> </P> <P> <N>AuthPassword</N> <V>joeb</V> </P> </O>	If the Authentication service is configured on Cisco BroadWorks, these parameters must be configured to match the Cisco BroadWorks settings. This line rings when Joe is called, and it has Joe's authentication information.
Step 4	Configure Display label (optional). Web: Voice Service SP1 Service X_DisplayNumber = 2405552222_1 XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.</N> <P> <N>X_DisplayNumber</N> <V>2405552222_1</V> </P> </O>	Customize line key label.

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Step	Command	Purpose
Step 5	Configure the display name. Web: Left Line Keys Key 1 Function = Call Appearance Service = SP1 XML: <O> <N>VoiceService.1.Phone.LeftLineKey.1.</N> <P> <N>Function</N> <V>Call Appearance</V> </P> <P> <N>Service</N> <V>SP1</V> </P> </O>	Configure the name to be displayed on the device for this line.

The following steps are used to configure line 2 for Joe's phone. This line rings when Bob is called, and it has Bob's authentication information.

Step	Command	Purpose
Step 1	Configure the line as shared. Web: Voice Service SP2 Service X_ShareLine = true XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.2.SIP.</N> <P> <N>X_ShareLine</N> <V>true</V> </P> </O>	Configure the line as "shared" (as opposed to "private").

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Step	Command	Purpose
Step 2	**Set AOR for service** Web: Voice Service SP1 Service URI = 2405552222_2 XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.2.SIP.</N> <P> <N>URI</N> <V>2405552222_2</V> </P> </O>	The register user ID must correspond with the line/port setting on Cisco BroadWorks.
Step 3	Enable SIP Authentication. Web: Voice Services SP2 Service AuthUserName = bobsmith AuthPassword = bobs XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.2.SIP.</N> <P> <N>AuthUserName</N> <V>bobsmith</V> </P> <P> <N>AuthPassword</N> <V>bobs</V> </P> </O>	If the Authentication service is configured on Cisco BroadWorks, these parameters must be configured to match the Cisco BroadWorks settings. This line rings when Bob is called, and it has Bob's authentication information.
Step 4	Configure Display Label (optional). Web: Voice Service SP2 Service X_DisplayNumber = 2405552222_2 XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.2.</N> <P> <N>X_DisplayNumber</N> <V>2405552222_2</V> </P> </O>	Customize line key label.

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Step	Command	Purpose
Step 5	Configure the display name. Web: Left Line Keys Key 2 Function = Call Appearance Service = SP2 XML: <O> <N>VoiceService.1.Phone.LeftLineKey.2.</N> <P> <N>Function</N> <V>Call Appearance</V> </P> <P> <N>Service</N> <V>SP2</V> </P> </O>	Configure the name to be displayed on the device for this line.
Step 6	Enable Shareline feature (Optional) Web: Voice Service SP2 Service X_ShareLineBargeIn = true X_ShareLineMonitor = true X_ShareLineCallPickup = true XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.2.SIP.</N> <P> <N>X_ShareLineBargeIn</N> <V>true</V> </P> <P> <N>X_ShareLineMonitor</N> <V>true</V> </P> <P> <N>X_ShareLineCallPickup</N> <V>true</V> </P> </O>	

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4.4.1.3 Hybrid Key System Configuration

Hybrid Key System emulation requires the phone to support assignment of multiple line keys to a single registering line on the phone. It also requires the phone to limit each line key to a single call appearance or provide the configurability to roll a new call over to the next free line key. Any of the locations can be used to originate or receive calls.

Step	Command	Purpose

Step 1	Configure User account
	Web:
	`Voice Service`
	`SP1 Service`
	`URI = 2405552222`
	
	XML:
	`<O>`
	
	`<N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N>`
	`<P>`
	`<N>URI</N>`
	`<V>2405552222</V>`
	`</P>`
	`</O>`
		Single Register, refer to section 4.2.2 for detail

Step 2	Enable SIP Authentication
	Web:
	`Voice Services`
	`SP1 Service`
	`AuthUserName = bobsmith`
	`AuthPassword = bobs`
	
	XML:
	`<O>`
	
	`<N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N>`
	`<P>`
	`<N>AuthUserName</N>`
	`<V>bobsmith</V>`
	`</P>`
	`<P>`
	`<N>AuthPassword</N>`
	`<V>bobs</V>`
	`</P>`
	`</O>`	

Step 3	Configure line key
	Web:
	`Left Line Keys`
	`Key 1`
	`Function = Call Appearance`
	`Service = SP1`
	`Key 2`
		The example is configuring three Left Line Key with “Call Appearance” function. Number of calls per key can be configured with MaxCalls, default value = 1.
		Each key can be used to make and receive call.

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Step	Command	Purpose
	Function = Call Appearance Service = SP1 Key 3 Function = Call Appearance Service = SP1 *XML:* <O> <N>VoiceService.1.Phone.LeftLineKey.1.</N> <P> <N>Function</N> <V>Call Appearance</V> </P> <P> <N>Service</N> <V>SP1</V> </P> </O> <O> <N>VoiceService.1.Phone.LeftLineKey.2.</N> <P> <N>Function</N> <V>Call Appearance</V> </P> <P> <N>Service</N> <V>SP1</V> </P> </O> <O> <N>VoiceService.1.Phone.LeftLineKey.3.</N> <P> <N>Function</N> <V>Call Appearance</V> </P> <P> <N>Service</N> <V>SP1</V> </P> </O>	

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4.4.2 Busy Lamp Field Configuration

The Busy Lamp Field implementation provides an attendant console function. Configuration of the phone to enable Busy Lamp Field is described as follows.

Step	Command	Purpose
Step 1	Enable BLF optional feature *Web:* Voice Service SP1 Service X_BlfBargeIn = true X_BlfCallPickup = true X_BlfDirectedCallPickup = true *XML:* <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>X_BlfBargeIn</N> <V>true</V> </P> <P> <N>X_BlfCallPickup</N> <V>true</V> </P> <P> <N>X_BlfDirectedCallPickup</N> <V>true</V> </P> </O>	
Step 2	Configure the key for BLF *Web:* Left Line Keys Key 2 Function = Busy Lamp Field Service = SP1 Number = BLF_Group/ *XML:* <O> <N>VoiceService.1.Phone.LeftLineKey.2.</N> <P> <N>Function</N> <V>Busy Lamp Field</V> </P> <P> <N>Service</N> <V>SP1</V>	BLF_Group is the group of extensions that the DUT can monitor. When there are more than one extension in the group, more keys are required to change the Function to Busy Lamp Field plus Service and Number. The monitoring extension will be provisioned sequentially.

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Step	Command	Purpose
	</P> <P> <N>Number</N> <V>BLF_Group/</V> </P> </O>	

4.4.3 Feature Key Synchronization Configuration

The Feature Key Synchronization provides synchronization of phone services, such as Call Forwarding and Do Not Disturb, with the settings on Cisco BroadWorks for the analogous services. Configuration of the phone to enable Feature Key Synchronization is described as follows.

Step	Command	Purpose
Step 1	Enable Feature Key Synchronization. Web: Voice Service SP1 Service X_ASFeatureEventSubscribe = %ASFEATURE% XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.CallingFeatures.</N> <P> <N>X_ASFeatureEventSubscribe</N> <V>%ASFEATURE%</V> </P> </O>	The feature can be enabled per service. Tags: %ASFEATURE% true - enable false – disable (default) When the tag's set to true: Call FWD and DND services are synchronized with the server. When the tag's set to false: Call FWD and DND services are not synchronized with the server, and they are locally set.

4.4.4 Call Center Feature Configuration

This section provides configuration instructions to configure the phone to enable integration with BroadWorks Call Center features through Hoteling Feature and Automatic Call Distribution (ACD) including but not limited to call information, status, and disposition codes.

Step	Command	Purpose
Step 1	Enable Feature Key Synchronization *Web:* Voice Service SP1 Service X_ASFeatureEventSubscribe = true *XML:*	The feature can be enabled per service.

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Step	Command	Purpose
	<O> <N>VoiceService.1.VoiceProfile.1.Line.1.CallingFeatures.</N> <P> <N>X_ASFeatureEventSubscribe</N> <V>true</V> </P> </O>	
Step 2	Enable Hoteling feature *Web:* Voice Services SP1 Service Network Provided Service ACDAgent = true *XML:* <O> <N>VoiceService.1.VoiceProfile.1.Line.1.X_NetServices.</N> <P> <N>ACDAgent</N> <V>true</V> </P> </O>	
Step 3	Add ACD Agent Sing On/Off Line Key *Web:* Left Line Keys Key 2 Function = ACD Agent Sign On/Off Service = SP1 *XML:* <O> <N>VoiceService.1.Phone.LeftLineKey.2.</N> <P> <N>Function</N> <V>ACD Agent Sign On/Off</V> </P> <P> <N>Service</N> <V>SP1</V> </P> </O>	

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4.4.5 Hoteling Feature Configuration

This section provides configuration instructions to configure the phone to enable integration with BroadWorks Hoteling feature. The BroadWorks Hoteling feature has specific host-guest association signaling requirement where the device must support the SIP Subscribe and Notify “x-broadworks-hoteling” event package. This feature can be configured along with the ACD feature in the Call Center Feature application.

Step	Command	Purpose
Step 1	Enable Feature Key Synchronization *Web:* Voice Service SP1 Service X ASFeatureEventSubscribe = true *XML:* <O> <N>VoiceService.1.VoiceProfile.1.Line.1.CallingFeatures.</N> <P> <N>X_ASFeatureEventSubscribe</N> <V>true</V> </P> </O>	The feature can be enabled per service.
Step 2	Enable Hoteling feature *Web:* Voice Services SP1 Service Network Provided Service Hoteling = true *XML:* <O> <N>VoiceService.1.VoiceProfile.1.Line.1.X_NetServices.</N> <P> <N>Hoteling</N> <V>true</V> </P> </O>	
Step 3	Add Hoteling Line Key *Web:* Left Line Keys Key 2 Function = Hoteling Service = SP1 *XML:* <O>	

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Step	Command	Purpose
	<N>VoiceService.1.Phone.LeftLineKey.2.</N> <P> <N>Function</N> <V>Hoteling</V> </P> <P> <N>Service</N> <V>SP1</V> </P> </O>	

4.4.6 Call Recording Feature Configuration

This section provides configuration instructions to configure the phone to enable integration with BroadWorks Call Recording features including but not limited to call recording controls.

Step	Command	Purpose
Step 1	Enable Feature Key Synchronization *Web:* Voice Service SP1 Service X_ASFeatureEventSubscribe = true *XML:* <O> <N>VoiceService.1.VoiceProfile.1.Line.1.CallingFeatures.</N> <P> <N>X_ASFeatureEventSubscribe</N> <V>true</V> </P> </O>	The feature can be enabled per service.
Step 2	Enable Call Recording feature *Web:* Voice Services SP1 Service Network Provided Services CallRecording = true *XML:* <O> <N>VoiceService.1.VoiceProfile.1.Line.1.X_NetServices.</N> <P> <N>CallRecording</N>	

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Step	Command	Purpose
	<V>true</V> </P> </O>	

4.4.7 Security Classification Feature Configuration

This section provides configuration instructions to configure the phone to enable integration with the BroadWorks Security Classification feature.

Step	Command	Purpose
Step 1	Enable Feature Key Synchronization *Web:* Voice Service SP1 Service X_ASFeatureEventSubscribe = true *XML:* <O> <N>VoiceService.1.VoiceProfile.1.Line.1.CallingFeatures.</N> <P> <N>X_ASFeatureEventSubscribe</N> <V>true</V> </P> </O>	The feature can be enabled per service.
Step 2	Enable Call Recording feature *Web:* Voice Services SP1 Service Network Provided Services SecurityClass = true *XML:* <O> <N>VoiceService.1.VoiceProfile.1.Line.1.X_NetServices.</N> <P> <N>SecurityClass</N> <V>true</V> </P> </O>	

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4.4.8 Emergency Call Configuration

This section provides configuration instructions to configure the device to enable emergency call headers and ringback after hang up.

Step	Command	Purpose
Step 1	Configure Emergency Call *Web:* Phone Settings DigitMap = {(<EM#>911|other rules..)} OutboundCallRoute = {(911):sp1}, other rules *XML:* <O> <N>VoiceService.1.Phone.</N> <P> <N>DigitMap</N> <V>{(<EM#>911|other rules..)}</V> </P> <P> <N>OutboundCallRoute</N> <V>{(911):sp1}, other rules..</V> </P> </O>	The example is assuming SP1 is configured with service.

4.4.9 Advice of Charge Configuration

Edge B phones will display Advice of Charge whenever SIP-INFO is provided, no configuration.

4.5 Xtended Services Interface (Xsi) Feature Configuration

Poly Edge B Phone XSI feature can be enabled by adding the XSI server, authentication credential (SIP auth or XSP auth) and required XSI service.

4.5.1 Xsi Authentication Methods

The phone must authenticate with the Xsi interface to access the available features. This section identifies the authentication method(s) supported by the phone and the configurations required.

XSI User credential configuration using SIP Auth Credentials.

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Step	Command	Purpose
Step 1	XSI User credential configuration using SIP Auth Credentials. Voice Service SP1 Service AuthUserName = %BWAUTHUSER-1% AuthPassword = %BWAUTHPASSWORD-1% X_XsiUserName = %BWLOGIN-ID-1% XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>AuthUserName</N> <V>%BWAUTHUSER-1%</V> </P> <P> <N>AuthPassword</N> <V>%BWAUTHPASSWORD-1%</V> </P> <P> <N>X_XsiUserName</N> <V>%BWLOGIN-ID-1%</V> </P> </O>	The example is assuming SP1 is configured with service with SIP Auth Credentials
Step 2	XSI server configuration(optional). Web: Service Providers Common Settings Object: VoiceService.1.VoiceProfile.XSI. X_XsiServer = %XSP_ADDRESS_XSI_ACTIONS% X_XsiServerPort = %XSP_PORT% XML: <O> <N>VoiceService.1.VoiceProfile.XSI.</N> <P> <N>X_XsiServer</N> <V>%XSP_ADDRESS_XSI_ACTIONS%</V> </P> <P> <N>X_XsiServerPort</N> <V>%XSP_PORT%</V> </P> </O>	Tags: %XSP_ADDRESS_XSI_ACTIONS% Address of XSP server: ex: http://xsp.iop.bw.com

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XSI User credential configuration using XSP Auth credentials.

Step	Command	Purpose
Step 1	XSI User credential configuration using XSI Auth credentials. Voice Service SP1 Service X_XsiUserName = %BWLOGIN-ID-1% X_XsiPassword = %XSP_Password% XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N> <P> <N>X_XsiUserName</N> <V>%BWLOGIN-ID-1%</V> </P> <P> <N>X_XsiPassword</N> <V>%XSP_Password%</V> </P> </O>	The example is assuming SP1 is configured with service using XSI auth credentials.
Step 2	XSI server configuration(optional). Web: Service Providers Common Settings Object: VoiceService.1.VoiceProfile.XSI. X_XsiServer = %XSP_ADDRESS_XSI_ACTIONS% X_XsiServerPort = %XSP_PORT% XML: <O> <N>VoiceService.1.VoiceProfile.XSI.</N> <P> <N>X_XsiServer</N> <V>%XSP_ADDRESS_XSI_ACTIONS%</V> </P> <P> <N>X_XsiServerPort</N> <V>%XSP_PORT%</V> </P> </O>	Tags: %XSP_ADDRESS_XSI_ACTIONS% Address of XSP server %XSP_PORT% XSP server port

4.5.2 Cisco BroadWorks Directory Configuration

Integration with the Cisco BroadWorks Xtended Services Interface for Directories enables the phone to download Enterprise Directories from Cisco BroadWorks and make them available to a user via the phone UI. You can selectively enable or disable the directories that are available to the enterprise, and also rename the directory labels to your own custom labels. To enable this feature, follow these instructions.

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Step	Command	Purpose
Step 1	XSI Service configuration. Web: Service Providers Directory Service - Directory Service o Enable Master Service o XSI Server configured - XSI Directory Settings o Enable/Disable directories XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.X_NetServices.</N> <P> <N>Directory</N> <V>true</V> </P> </O> <O> <N>X_DeviceManagement.Directory.Xsi.</N> <P> <N>EnableEnterprise</N> <V>true</V> <N>EnableEnterpriseCommon</N> <V>true</V> <N>EnableGroup</N> <V>true</V> <N>EnableGroupCommon</N> <V>true</V> <N>EnablePersonal</N> <V>true</V> </P> </O>	List the Edge B phone XSI supported feature list.

4.5.3 BroadWorks Call Logs Configuration

Integration with the BroadWorks Xtended Services Interface for Call Logs enables the phone to get call log history (missed, placed, and received calls) from BroadWorks and make them available to a user via the phone menus.

Step	Command	Purpose
Step 1	XSI Service configuration Web: Voice Service SP1 Service Network Provided Service CallLogs = true	List the Edge B phone XSI supported feature list.

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Step	Command	Purpose
	XML: <O> <N>VoiceService.1.VoiceProfile.1.Line.1.X NetServices.</N> <P> <N>CallLogs</N> <V>true</V> </P> </O>	

4.5.4 BroadWorks User Service Configuration

Integration with the BroadWorks Xtended Services Interface for User Service Configuration enables the phone to display and configure BroadWorks user services such as Remote Office, BroadWorks Anywhere, Call Forwarding, and Simultaneous Ringing. To enable user service configuration, follow these instructions.

Step	Command	Purpose
Step 1	XSI Service configuration Web: Voice Service SP1 Service Network Provided Service RemoteOffice = true BroadWorksAnywhere = true SimultaneousRing = true AnonymousCall = true CallForwardAlways = true CallForwardBusy = true CallForwardNoAnswer = true DoNotDisturb = true *XML:* <O> <N>VoiceService.1.VoiceProfile.1.Line.1.X_NetServices.</N> <P> <N>RemoteOffice</N> <V>true</V> </P> <P> <N>BroadWorksAnywhere</N> <V>true</V> </P> <P> <N>SimultaneousRing</N> <V>true</V> </P> <P>	List the Edge B phone XSI supported feature list.

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Step	Command	Purpose
	<N>AnonymousCall</N> <V>true</V> </P> <P> <N>CallForwardAlways</N> <V>true</V> </P> <P> <N>CallForwardBusy</N> <V>true</V> </P> <P> <N>CallForwardNoAnswer</N> <V>true</V> </P> <P> <N>DoNotDisturb</N> <V>true</V> </P> </O>	

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5 Device Management

The Cisco BroadWorks Device Management feature provides the capability to automate generation of device configuration files to support mass deployment of devices. This section identifies the Device Management capabilities supported by the Poly Edge B phones and the configuration steps required. For Device Management configuration details not covered here, see the *Cisco BroadWorks Device Management Configuration Guide* [2] and the *Cisco BroadWorks CPE Kit Usage Guide* [8].

5.1 Device Management Capabilities Supported

The Poly Edge B phone has completed Device Management interoperability testing with Cisco BroadWorks using the *Cisco BroadWorks Device Management Interoperability Test Plan* [7]. The results are summarized in the following table.

The Cisco BroadWorks test plan is composed of packages, each covering distinct interoperability areas. Each package is composed of one or more test items, which in turn, are composed of one or more test cases. The test plan exercises the Device Management interface between the device and Cisco BroadWorks with the intent to ensure interoperability.

The *Supported* column in the following table identifies the Poly Edge B Phone's support for each of the items covered in the test plan packages, with the following designations:

- Yes Test item is supported
- No Test item is not supported
- NA Test item is not applicable
- NT Test item was not tested

Caveats and clarifications are identified in the *Comments* column.

NOTE: *DUT* in the following table refers to the *Device Under Test*, which in this case is the Poly Edge B Phone.

Cisco BroadWorks Device Management Interoperability Test Plan Support Table

Test Plan Package	Test Plan Package Items	Supported	Comments
HTTP File Download	HTTP Download Using XSP IP Address	Yes	
	HTTP Download Using XSP FQDN	Yes	
	HTTP Download Using XSP Cluster FQDN	Yes	
	HTTP Download With Double Slash	Yes	
HTTPS File Download	HTTPS Download Using XSP FQDN	Yes	
	HTTPS Download Using XSP Cluster FQDN	Yes	
HTTPS File Download with Client Authentication	HTTPS Download with Client Authentication Using XSP FQDN	Yes	
	HTTPS Download with Client Authentication Using XSP Cluster FQDN	Yes	

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Cisco BroadWorks Device Management Interoperability Test Plan Support Table			
Test Plan Package	**Test Plan Package Items**	**Supported**	**Comments**
Time Zone Mapping	Inspect Time Zone Setting	Yes	
Language Mapping	Inspect Language Setting	Yes	
File Inspection	Inspect System Config File	Yes	
	Inspect Device-Specific Config File	Yes	
	Inspect Other Config Files	Yes	
	Inspect Static Files	Yes	
Device Inspection	Inspect SIP Settings	Yes	
	Inspect Line Settings	Yes	
	Inspect Service Settings	Yes	
HTTP File Upload	HTTP Upload Using XSP IP Address	No	
	HTTP Upload Using XSP FQDN	No	
	HTTP Upload Using XSP Cluster FQDN	No	
Call Processing Sanity Tests	Register with Authentication	Yes	
	Call Origination	Yes	
	Call Termination	Yes	
	Remote Restart	Yes	
	Shared Line Origination	Yes	
	Shared Line Termination	Yes	
	Shared Line Status	Yes	
	Busy Lamp Field	Yes	
	Network-Based Conference	Yes	
Flexible Seating	Association via Voice Portal	No	
	Association via Phone	No	
No Touch Provisioning	Provision via DHCP Options Field	Yes	
	No Touch Provision via DM redirect	Yes	
	No Touch Provision via Vendor redirect	Yes	

5.2 Device Management Configuration

This section identifies the steps required to enable the Poly Edge B phone for device management. For Device Management configuration details not covered here, see the *Cisco BroadWorks Device Management Configuration Guide* [2] and the *Cisco BroadWorks CPE Kit Usage Guide* [8].

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5.2.1 Configure Cisco BroadWorks Tags

The template files in Device Management use tags to represent the data stored on Cisco BroadWorks. When a configuration changes for a user, Device Management parses the template files and replaces the Device Management tags with the associated data stored on Cisco BroadWorks. There are default tags defined in the Device Management software and there are custom tags that the service provider can create and define via the web portal for use by Device Management. There are two types of custom tags that can be defined: system-default tags that are common to all devices on the system and device type-specific tags that are common to Poly device models only.

The Poly Edge B phone makes use of custom tags which can be configured by a Cisco BroadWorks administrator as either system default or device type-specific tags. This section identifies the required tags.

5.2.1.1 Create System Default Tags

Browse to *System → Resources → Device Management Tag Sets* and select the *System Default* tag set. The Poly configuration templates make use of the tags in the following table. Add the tags if they do not already exist.

The Poly system configuration file also uses the *%BWASCLUSTERFQDN%,* which is a pre-defined tag. For this tag to resolve properly, make sure that the following command line interface (CLI) parameter is set to the Application Server cluster address as follows:

```
AS_CLI/System/Device/IpDeviceMgmt> set deviceAccessAppServerClusterName
<AS-Cluster-FQDN>
```

Tag Name	Valid Settings	Description
%SBC_ADDRESS%	IP address or FQDN	This is the SBC SIP address.
%XSP_ADDRESS_XSI_ACTIONS%	IP address or FQDN Example: xsp1.iop1.Cisco BroadWorks.net	This is the Cisco BroadWorks Xtended Services Platform (Xsp) server address, which provides the Xsi-Actions web services.
%DNS_SERVER_1%	IP address	IP address of the DNS server
%DNS_SERVER_2%	IP address	IP address of the alternate DNS server
%NTPSERVER_ADDRESS%	IP address or FQDN	IP address of the NTP server

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Example System Default Tag Settings

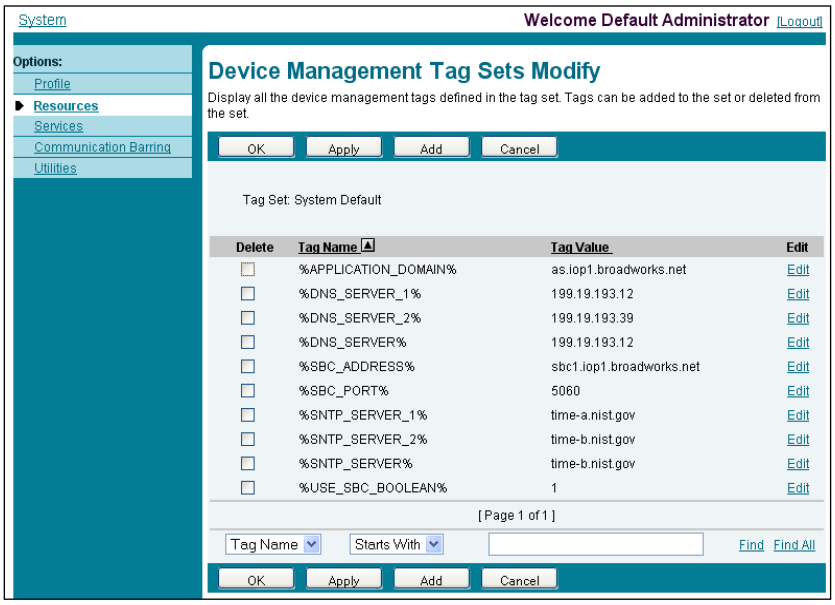

Figure 3 System Default Tag Settings

5.2.1.2 Create Device Type-specific Tags

Browse to *System → Resources → Device Management Tag Sets* and then click **Add** to add a new tag set. Configure the tag set name using the device name appended by *Tags*: *Edge B Tags*. Add the device type specific tags in the following table to the device tag set. If the tag set already exists, make sure the following tags are defined.

Tag Name	Valid Settings	Description
%ASFEATURE%	true/false	Enable or disable the AS Feature Sync feature.
%DigitMap%	(*xx|*xx*|1xxxxxxxxx|<1>[2-9]xxxxxxxxx|011xx.|xx.|(Mipd))	This is the dial plan for the U.S.
%NETSERV_ACDAGENT%	true/false	Enable or disable ACD Agent
%NETSERV_ACDAGENTCODE%	true/false	Enable or disable ACD Agent Code
%NETSERV_CALLCENTER%	true/false	Enable or disable Call Center
%NETSERV_CFWD_ALWAYS%	true/false	Enable or disable Call Forward Always.
%NETSERV_CFWD_BUSY%	true/false	Enable or disable Call Forward Busy.
%NETSERV_CFWD_NOANSWER%	true/false	Enable or disable Call Forward No Answer.
%NETSERV_CALLLOGS%	true/false	Enable or disable Call Log.
%NETSERV_CALLPARK%	true/false	Enable or disable Call Park.
%NETSERV_CALLPARKSTATUS%	true/false	Enable or disable Call Park Status.

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%NETSERV_CALLPICKUP%	true/false	Enable or disable Call Pickup
%NETSERV_CALLRECORDING%	true/false	Enable or disable Call Recording
%NETSERV_CALLTRACE%	true/false	Enable or disable Call Trace
%NETSERV_CALLWAITING%	true/false	Enable or disable Call Waiting
%NETSERV_DIRECTORY%	true/false	Enable or disable Directory
%NETSERV_DISPOSITIONCODE%	true/false	Enable or disable Disposition Code.
%NETSERV_DND%	true/false	Enable or disable Do Not Disturb.
%NETSERV_ESCALATION%	true/false	Enable or disable Escalation.
%NETSERV_HOTELING%	true/false	Enable or disable Hoteling.
%NETSERV_SECURITYCLASS%	true/false	Enable or disable Security Class.
%EDGEB_FWVERSION%	PolyEdgeB-1-0-1-5585-2021-11-2.fw	This is set to the currently supported version of the Edge B firmware. Filename must not be renamed.

Example Device Type-specific Tag Settings

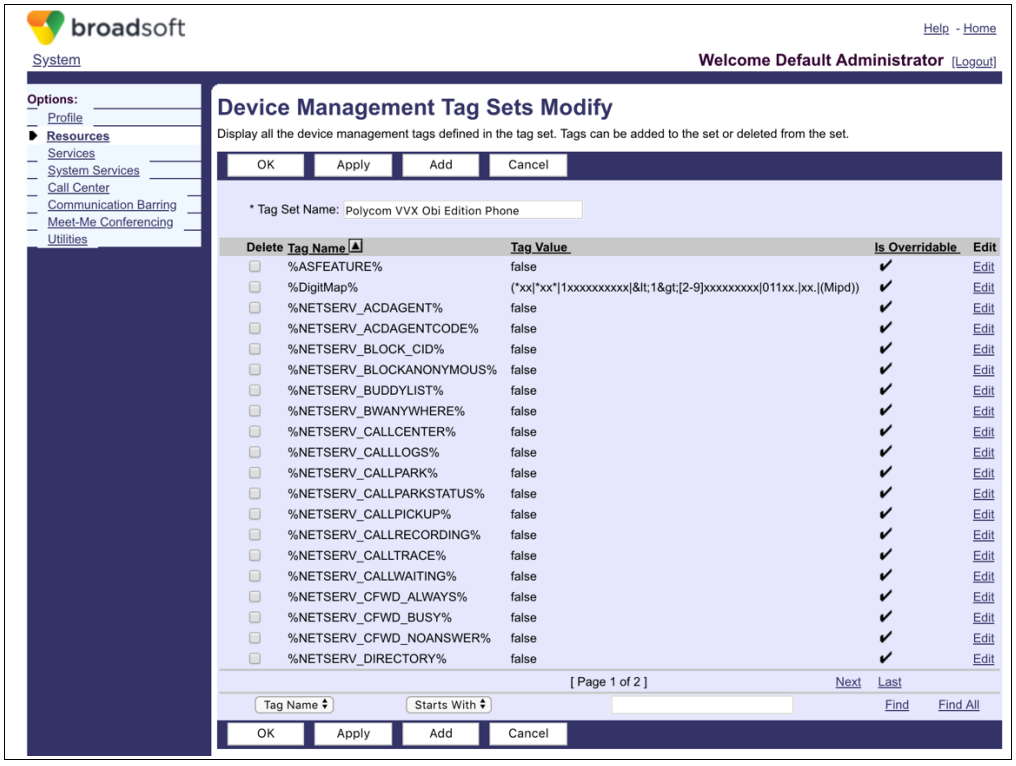

Figure 4 Device Type-specific Tag Settings

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5.2.2 Configure Cisco BroadWorks Device Profile Type

The device profile type is a system-level structure that defines how the device interfaces with Cisco BroadWorks. It also identifies the default configuration files and other files, such as firmware, which are required for the device to operate correctly. The device profile type is created by the system administrator. Group administrators use the device profile type to create a device profile. The device profile is an instance of the device profile type that is associated with a physical device.

There are two Cisco BroadWorks device profile configuration methods described: import and manual. The import method takes a DTAF as input and builds the Cisco BroadWorks device profile type(s) automatically. The manual method takes the administrator through the steps to manually add and configure the device profile type(s).

The import method should be used if all of the following prerequisites are met:

- The Cisco BroadWorks Release is 21.0 or later.
- The device profile type(s) being imported do not already exist on the system. (If either a previous import or manual configuration was done, then the import fails.)
- There is a DTAF file available for import with a Cisco BroadWorks release level that is the same as or prior to the release to which it is being imported. If the DTAF file is at a release level later than the release being imported to, then the import can fail.

Otherwise, use the manual method.

For more detailed instructions, refer to the *Cisco BroadWorks CPE Kit Usage Guide* [8] and the *Cisco BroadWorks Device Management Configuration Guide* [2].

5.2.2.1 Configuration Method 1: Import

This section identifies the steps necessary to make use of the Device Management import feature to configure Cisco BroadWorks to add the Poly Edge B Phone as a Device Management-enabled device type. Also, see the *Cisco BroadWorks CPE Kit Usage Guide* [8].

Download the Poly Edge B Phone CPE kit from Poly via solutionpartner.cisco.com. Extract the DTAF file(s) from the CPE kit. These are the import files. Repeat the following steps for each model you wish to import.

1) Log in to Cisco BroadWorks as an administrator.
2) Browse to *System → Resources → Identity/Device Profile Types* and then click **Import**.
3) Select *Browse* to find the extracted DTAF file for the model and then click **OK** to start the import.

   After the import finishes, complete the following post-import configuration steps:

4) Browse to *System → Resources → Identity/Device Profile Types.*
5) Perform a search to find the imported Poly device profile type, for example Poly_Edge B_B2 Phone.
6) Browse to the *Profile* page and change the Device Management Device Access FQDN to your Xtended Services Platform (XSP) or XSP cluster address.

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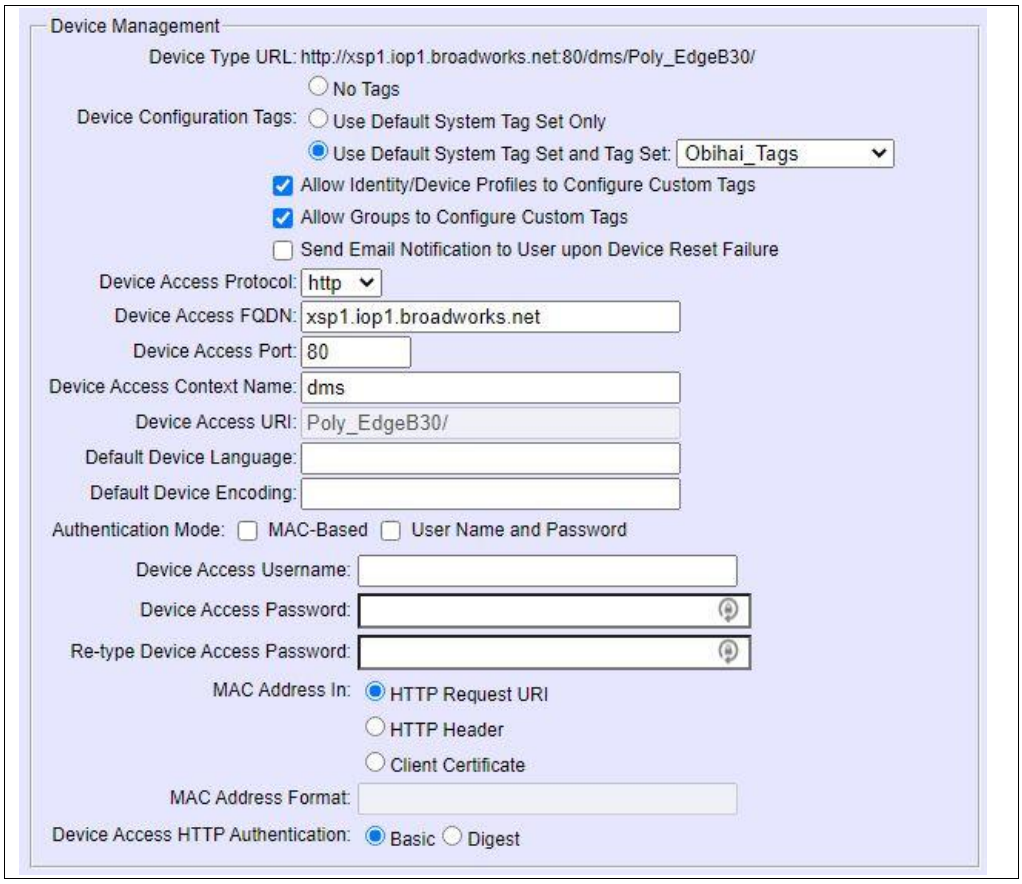

Figure 5 Device Access FQDN

7) Click the **Files and Authentication** link and then select the option to rebuild all the system files.

   Firmware files must be obtained from Poly. These files are not included in the import. Complete the steps in section *5.2.2.2.2 Define Device Profile Type Files* to define the static firmware files and to upload the firmware.

> **NOTE**: The non-firmware static files in section *5.2.2.2.2 Define Device Profile Type Files* are normally included in the import.

8) After importing the DTAFs, restart the Application Server to load the *TimeZoneAlias* files.

5.2.2.2 Configuration Method 2: Manual

This section identifies the basic steps necessary for an administrator to manually configure Cisco BroadWorks to add the Poly Edge B Phone as a Device Management-enabled device type. This method should not be used except in special cases as described in the opening to section *5.2.2 Configure Cisco BroadWorks Device Profile Type*.

For more detailed instruction on manual configuration, see the *Cisco BroadWorks CPE Kit Usage Guide* [8] and the *Cisco BroadWorks Device Management Configuration Guide* [2].

The steps in this section can also be followed to update previously imported or configured device profile type(s) with new configuration files and firmware.

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If there are DTAFs for more than one device model, these steps must be completed for each model.

5.2.2.2.1 Create or Modify Device Profile Type

This section identifies the Cisco BroadWorks device profile type settings relevant to Device Management for the Poly Edge B Phone.

Browse to *System → Resources → Identity/Device Profile Types* and perform a search to find the Poly device profile type(s) created in section *3.1 Cisco BroadWorks Device Profile Type Configuration* or add the device profile type for each model using the settings from section *3.1 Cisco BroadWorks Device Profile Type Configuration* if they do not exist.

Configure the device profile type *Signaling Address Type*, *Standard* and *Advanced* options settings to match the settings in section *3.1 Cisco BroadWorks Device Profile Type Configuration*.

Configure the device profile type *Device Management* options as shown in section *5.2.2.1 Configuration Method 1: Import*.

The following subsections identify the required settings specific to Device Management.

5.2.2.2.2 Define Device Profile Type Files

This section describes the Cisco BroadWorks Device Management configuration necessary to identify the configuration files and other files that the Poly Edge B Phone downloads.

Configuration templates, firmware, and other files the Poly Edge B Phone uses must be uploaded to Cisco BroadWorks. Download the Poly Edge B Phone CPE kit from Poly via solutionpartner.cisco.com. Extract the configuration files from the *Configuration Files* folder of CPE kit. Obtain the firmware files directly from Poly.

The following table identifies the Poly configuration files distributed with the CPE kit.

File Name	CPE Kit Template File Name	File Type	Description
Examples			
PolyEdgeB-<MAC Address>.xml	PolyEdgeB-%BWMACADDRESS%.xml.template	Device-specific	This file contains all the configuration and firmware files that the device needs to load.
<MAC Address>.cfg	<MAC Address>.cfg.template	Device-specific	If UCSServer URL is used, this initial template file specifies the URI of the subsequent configuration files to be loaded.
000000000000.cfg	000000000000.cfg.template	System-level	If UCSServer URL is used, this is the default initial template file when <MAC Address>.cfg is not present.
PolyEdgeB10.xml PolyEdgeB20.xml PolyEdgeB30.xml	PolyEdgeB10.xml.template PolyEdgeB20.xml.template PolyEdgeB30.xml.temlate	System-level	With ConfigURL pointing to $DM.xml, this is the default initial template file that specifies the

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File Name	CPE Kit Template File Name	File Type	Description
			URI of the subsequent configuration files to be loaded.
TimeZoneAliasLabels_Poly_EdgeB.properties	TimeZoneAliasLabels_Poly_EdgeB.properties	Time Zone Alias	The time zone alias file is a Cisco BroadWorks Device Management file used to map time zone identifiers between Cisco BroadWorks and Poly devices. A time zone alias file is required for each model.

The following table identifies other files that the Poly Edge B Phone downloads from the server or uploads to the server. These files are not provided in the CPE kit and must be obtained from Poly.

File Name	File Type	Description
PolyEdgeB-1-0-1-5585-2021-11-2.fw	Static	The file is the application firmware image for Edge B

Browse to *System → Resources → Identity/Device Profile Types → Files and Authentication* to add the files as described in the following subsections.

5.2.2.2.2.1 System Files

This Section identifies the system-level files used by Poly Edge B Phone and provides instructions for defining and uploading the files for Device Management.

The Poly Edge B Phone downloads either of these system file, named as follows:

- *PolyEdgeB10.xml / PolyEdgeB20.xml / PolyEdgeB30.xml*
- *000000000000.cfg*

PolyEdgeB10.xml / PolyEdgeB20.xml / PolyEdgeB30.xml

This is the default master configuration file that the phone requests from the Device Management when the ConfigURL is used and MACADDRESS.xml is not available in the repository. This redirect file points the phone to additional config and additional configuration files.

Add a Cisco BroadWorks device profile type file to the Poly Edge B device profile for the system file using the settings described in the following table.

Parameters not identified in the following table can usually be left with their default values.

Parameter	Value	Description
Device Access File Format	PolyEdgeBx0.xml	This is the file name, which the phone uses to request the file.

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Parameter	Value	Description
Repository File Format	PolyEdgeBx0-%BWTIMESTAMP%.xml	This is the file name as stored in the Device Management repository. If group customization of the system file is required, then the repository file name must contain the *timestamp* tag.
File Category	Dynamic Per-Type	This is the system file that applies to the device type.
File Customization	Administrator	This identifies who can customize the system file template.
Enable Caching	Not set	Caching is optional for a system file.
Assign File	Custom	
Authentication Mode	User name and password	This must be set based on what the device supports. If group customization of the system file is required, then Authentication must be set to the user name and password.
Device Access HTTP Authentication	Digest	

After defining the system file type, upload the corresponding system file template downloaded from Poly. Click the **Browse** button on the file definition screen and click the **Apply** button after uploading the file.

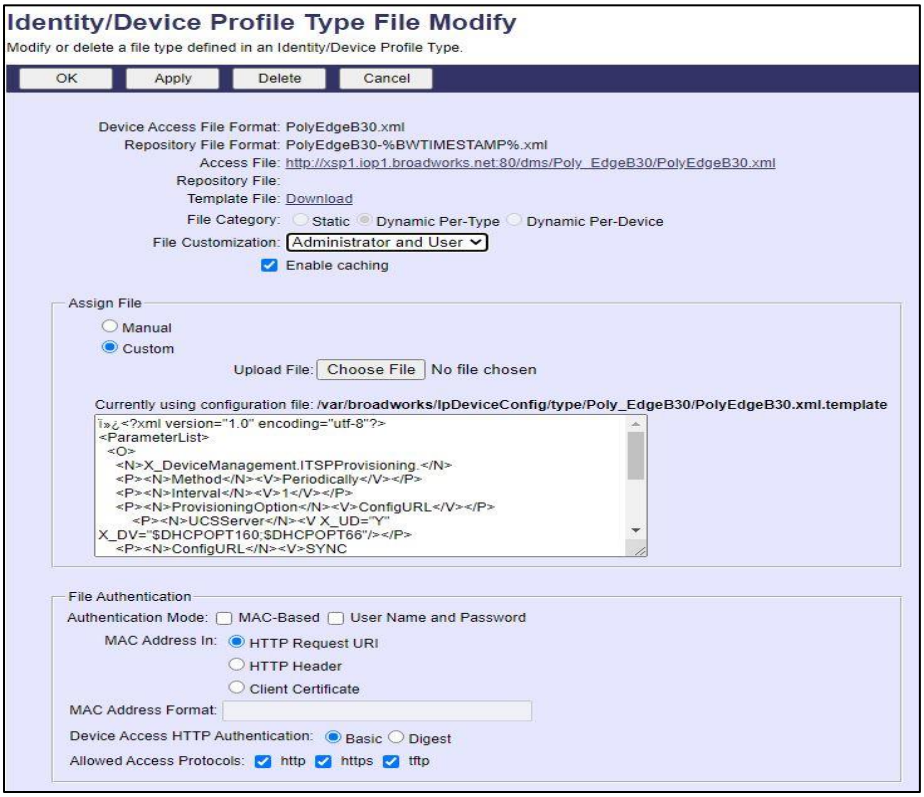

Figure 6 PolyEdgeBx0.xml file

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000000000000.cfg

This is the master configuration file that the phone requests from the Device Management when the UCSServer URL is used and MACADDRESS.cfg is not available in the repository. This redirect file points the phone to additional config and additional configuration files.

Add a Cisco BroadWorks device profile type file to the Poly Edge B device profile for the system file using the settings described in the following table.

Parameters not identified in the following table can usually be left with their default values.

Parameter	Value	Description
Device Access File Format	000000000000.cfg	This is the file name, which the phone uses to request the file.
Repository File Format	000000000000_%BWTIMESTAMP%.cfg	This is the file name as stored in the Device Management repository. If group customization of the system file is required, then the repository file name must contain the *timestamp* tag.
File Category	Dynamic Per-Type	This is the system file that applies to the device type.
File Customization	Administrator	This identifies who can customize the system file template.
Enable Caching	Not set	Caching is optional for a system file.
Assign File	Custom	
Authentication Mode	User name and password	This must be set based on what the device supports. If group customization of the system file is required, then Authentication must be set to the user name and password.
Device Access HTTP Authentication	Digest	

After defining the system file type, upload the corresponding system file template downloaded from Poly. Click the **Browse** button on the file definition screen and click the **Apply** button after uploading the file.

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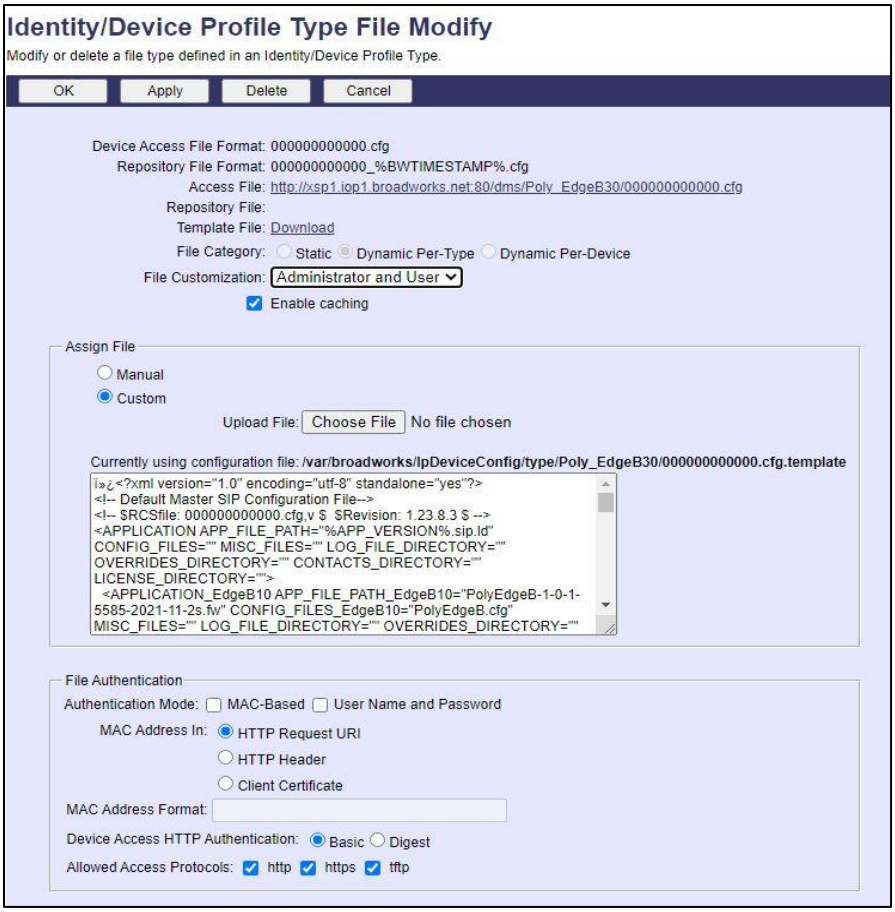

Figure 7 000000000000.cfg file

5.2.2.2.2.2 Device-Specific Files

This section identifies the device-specific files used by Poly Edge B phone and provides instructions for defining the files and uploading for Device Management.

The Poly Edge B phone downloads the following device-specific file, named as follows:

- *BWMACADDRESS.cfg*
- *PolyEdgeB-BWMACADDRESS.xml*

BWMACADDRESS.cfg

This is the file that the phone requests from the Device Management when the UCS Style Provisioning is chosen. This file defines the firmware file to load, the configuration files to load,

Add a BroadWorks device profile type file to the Poly Edge B device profile for the BWMACADDRESS.cfg file using the settings described in the following table.

Parameters not identified in the following table can usually be left with their default values.

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Parameter	Value	Description
Device Access File Format	%BWMACADDRESS%.cfg	This is the file name that the phone uses when requesting the file.
Repository File Format	*%BWFQDEVICEID%.cfg*	This is the file name as stored in the Device Management repository.
File Category	Dynamic Per-Device	This file is unique per device.
File Customization	Administrator and User	This identifies who can customize this file template.
Enable Caching	Not set.	Caching should not be enabled for device-specific files.
Assign File	Custom	
Authentication Mode	User name and password	This must be set based on what the device supports. If group customization of the system file is required, then Authentication must be set to the user name and password.
Device Access HTTP Authentication	Digest	

After defining the system file type, upload the corresponding system file template downloaded from Poly. Click the **Browse** button on the file definition screen and click the **Apply** button after uploading the file.

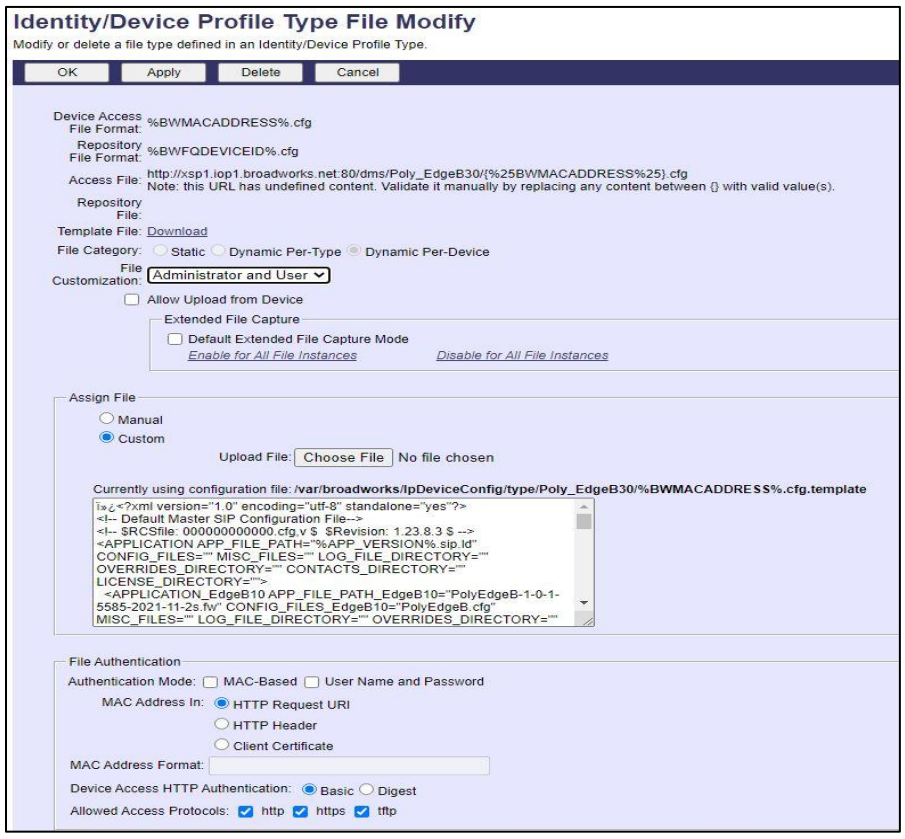

Figure 8 BWMACADDRESS.cfg

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PolyEdgeB-BWMACADDRESS.xml

The PolyEdgeB-BWMACADDRESS.xml template file in the Poly Edge B CPE kit provides the subscriber's services configuration. It may be necessary or desirable for the service provider to customize this file. Note that this file contains the baseline configuration for Edge B phone and to enable configuration for more services, additional line configuration items must be added to the file.

Add a BroadWorks device profile type file to the Poly Edge B device profile for the BWMACADDRESS.xml file using the settings described in the following table.

Parameters not identified in the following table can usually be left with their default values.

Parameter	Value	Description
Device Access File Format	PolyEdgeB-%BWMACADDRESS%.xml	This is the file name that the phone uses when requesting the file.
Repository File Format	*PolyEdgeB-%BWFQDEVICEID%.xml*	This is the file name as stored in the Device Management repository.
File Category	Dynamic Per-Device	This file is unique per device.
File Customization	Administrator and User	This identifies who can customize this file template.
Enable Caching	Not set.	Caching should not be enabled for device-specific files.
Assign File	Custom	
Authentication Mode	User name and password	This must be set based on what the device supports. If group customization of the system file is required, then Authentication must be set to the user name and password.
Device Access HTTP Authentication	Digest	

After defining the system file type, upload the corresponding system file template downloaded from Poly. Click the **Browse** button on the file definition screen and click the **Apply** button after uploading the file.

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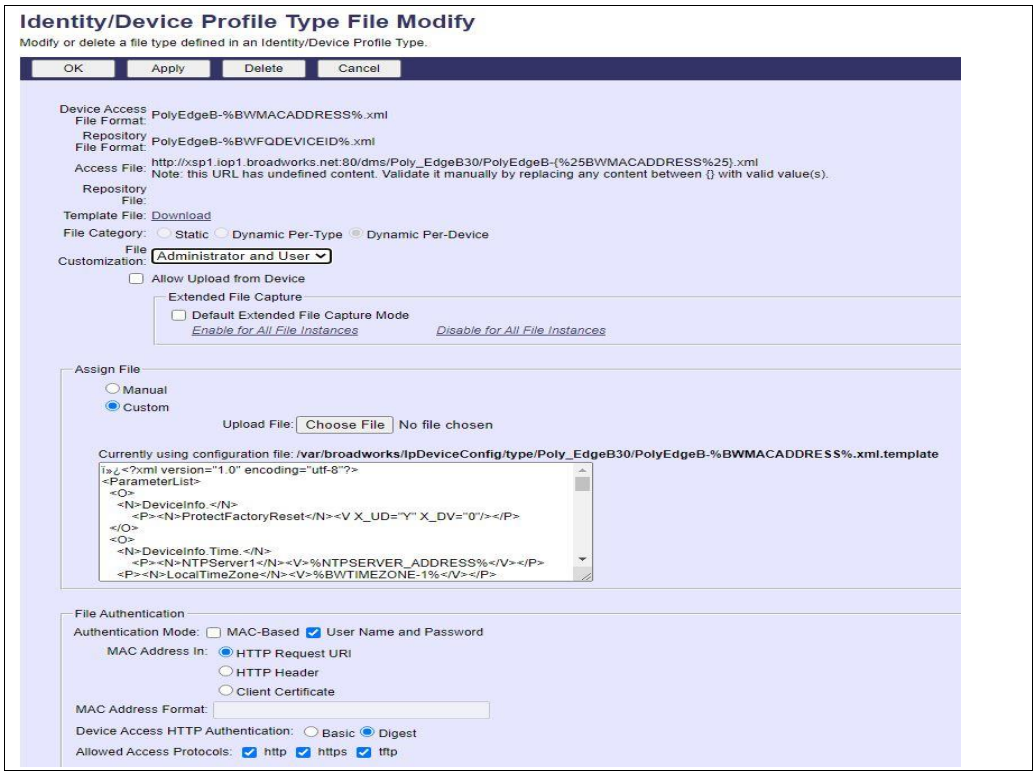

Figure 9 Device-specific File

5.2.2.2.2.3 *Application Firmware*

The static application firmware and medial files are not configurable and/or do not make use of the dynamic Cisco BroadWorks Device Management tags.

The Poly Edge B Phone with 1.0.1 firmware release requires static files in the following format:

- *PolyEdgeB-<FW version>.fw*

Example:

- *PolyEdgeB-1-0-1-5585-2021-11-2.fw*

Add a Cisco BroadWorks device profile type file to the Poly Edge B device profile for the application file using the settings described in the following table.

Parameters not identified in the following table can usually be left with their default values.

Parameter	Value	Description
Device Access File Format	PolyEdgeB-<FW version>.fw Example: *PolyEdgeB-1-0-1-5585-2021-11-2.fw*	This is the file name, which the phone uses to request the file.
Repository File Format	PolyEdgeB-<FW version>.fw Example: *PolyEdgeB-1-0-1-5585-2021-11-2.fw*	This is the file name stored in the Device Management repository. Use the same name as the actual file name.
File Category	Static	This is a static file. There are no dynamic tags in the file.

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Parameter	Value	Description
File Customization	Disallow	This file must not be modified.
Enable Caching	Selected	Caching is recommended for static files.
Assign File	Custom	
Authentication Mode	Not set	The static files are not authenticated so do not select either of the options.

After defining the application firmware file type, upload the corresponding application firmware file. Application firmware files are not included in the CPE kit and must be obtained from Poly. Click the **Browse** button on the file definition screen and click the **Apply** button after uploading the file.

Example application firmware file settings:

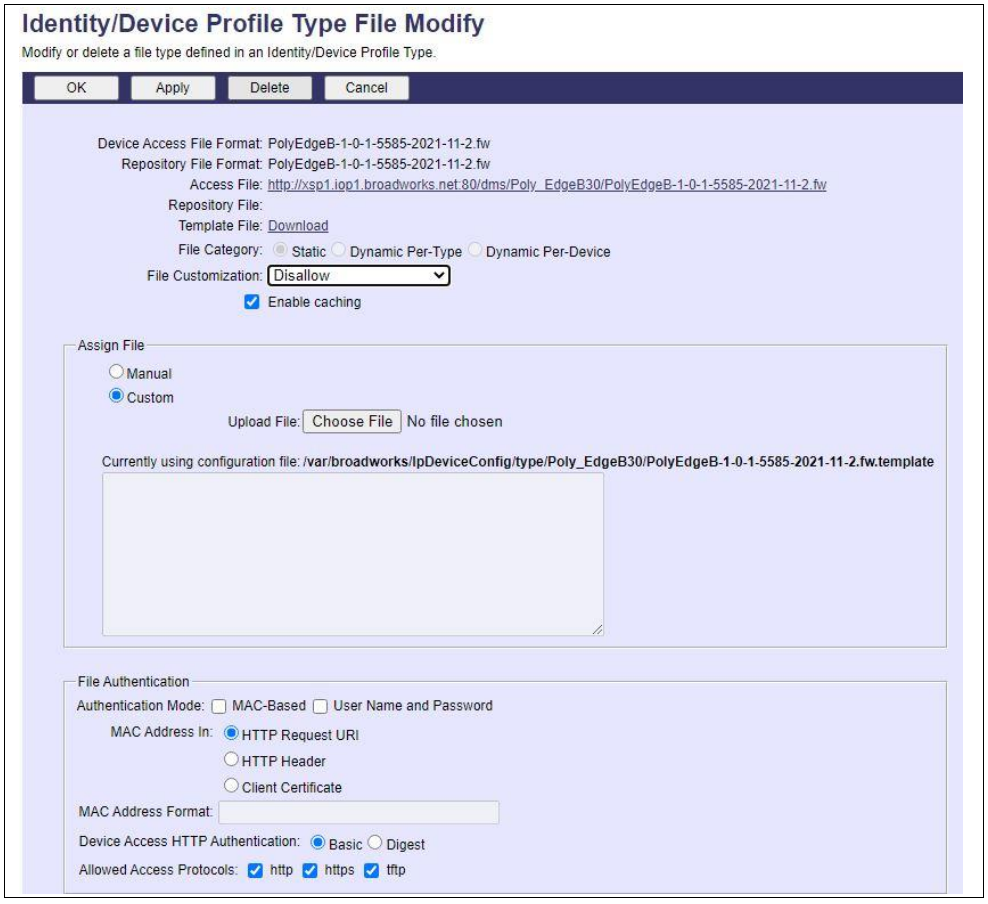

Figure 10 Application Firmware File Settings

5.2.2.2.2.4 *Time Zone Mapping*

To map a Cisco BroadWorks configured user time zone properly to the Poly Edge B device setting, a mapping file must be created on the Cisco BroadWorks system. This file maps the Cisco BroadWorks user time zone settings to the phone's time zone settings. Time zone mapping for the device profile type is documented in the *Cisco BroadWorks Device Management Configuration Guide* [2].

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This time zone mapping file must be added to the */usr/local/Cisco BroadWorks/bw_base/conf/dms* directory on the Application Server using the following file name format: *TimeZoneAliasLabels_<Device_Type_Name>.properties*.

For example, if the device type name is Poly_EdgeB30, the time zone mapping file name must be *TimeZoneAliasLabels_ Poly_EdgeB30.properties*. If a space exists in the device name, the space character must be converted to a "+" in the file name. A separate TimeZoneAlias file must be provided for each device profile type, corresponding to each Poly_Edge<model number> model.

US_HAWAII=GMT-10:00(Hawaii)
US_ALASKA=GMT-09:00(Alaska)
BROADSOFT PARTNER CONFIGURATION GUIDE – OBIHAI OBI10XX SERIES 20-BD5463-00 ©2017 BROADSOFT INC. PAGE 79 OF 194
CANADA_PACIFIC_TIME=GMT-08:00(Pacific Time)
MEXICO_PACIFIC_TIME=GMT-08:00(Pacific Time)
US_PACIFIC_TIME=GMT-08:00(Pacific Time)
US_ARIZONA=GMT-07:00(Mountain Time)
CANADA_MOUNTAIN_TIME=GMT-07:00(Mountain Time)
MEXICO_MOUNTAIN_TIME=GMT-07:00(Mountain Time)
US_MOUNTAIN_TIME=GMT-07:00(Mountain Time)
CANADA_CENTRAL_TIME=GMT-06:00(Central Time)
US_CENTRAL_TIME=GMT-06:00(Central Time)
US_INDIANA=GMT-05:00(Eastern Time)
CANADA_EASTERN_TIME=GMT-05:00(Eastern Time)
US_EASTERN_TIME=GMT-05:00(Eastern Time)
CANADA_ALTANTIC_TIME=GMT-04:00(Atlantic Time)
CANADA_NEWFOUNDLAND=GMT-03:30(Newfoundland)
VENEZUELA_TIME=GMT-04:30(Caracas)
CHILE_TIME=GMT-03:00(Buenos Aires,Greenland)
ARGENTINA_TIME=GMT-03:00(Buenos Aires,Greenland)
GREENWICH_MEAN_TIME=GMT+00:00(London,Lisbon)
CENTRAL_EUROPEAN_TIME=GMT+01:00(Rome,Paris,Madrid)
EASTERN_EUROPEAN_TIME=GMT+02:00(Athens,Cairo)
EAST_AFRICAN_TIME=GMT+03:00(Moscow,Baghdad)
IRAN_TIME=GMT+03:30(Tehran)
AZERBAIJAN_TIME=GMT+04:00(Abu Dhabi)
AFGHANISTAN_TIME=GMT+04:30(Kabul)
PAKISTAN_TIME=GMT+05:00(Islamabad,Karachi)
INDIA_TIME=GMT+05:30(New Delhi)
EASTERN_KAZAKHSTAN_TIME=GMT+06:00
MYANMAR_TIME=GMT+06:30(Yangon)
THAILAND_TIME=GMT+07:00(Bangkok,Jakarta)
CHINA_TIME=GMT+08:00(Beijing,HK,Singapore)
JAPAN_TIME=GMT+09:00(Tokyo,Seoul)
AUSTRALIAN_CENTRAL_STANDARD_TIME=GMT+09:30(Adelaide)
AUSTRALIAN_EASTERN_STANDARD_TIME=GMT+10:00(Sydney,Guam)
NEWZEALAND_TIME=GMT+12:00(Fiji,Auckland)

This file must contain all the time zones supported by the service provider's Cisco BroadWorks system. You must restart the Application Server to load this file.

5.2.3 Create Device Profile Instance

The previous sections defined the device profile type such that the system is ready to mass deploy device profiles. A device profile is an instance of the device profile type and defines the Cisco BroadWorks interface to an individual Poly device.

Browse to the Cisco BroadWorks <*group*> → *Resources* → *Identity/Device Profiles* page and then select **Add** to add a new Poly Edge B Phone device profile. Configure the device profile as shown in the *Figure 11* example.

Parameters not identified in the following table can usually be left with their default values.

Parameter	Value	Description
Identity/Device Profile Name	<device-profile-name> Example: EdgeB10user1	The device profile name is a unique identifier for the device profile instance.
Identity/Device Profile Type	<device profile type> Example: Poly_Edge10	From the drop-down menu, select the Poly Edge B device profile type (created in the previous section).
Authentication	Use custom credentials	Set a unique login ID and password for each phone.
Device Access User Name	<phone-login-name> Example: User1	This is the user name to log in from the phone. The phone login user naming convention must be determined by the service provider.
Device Access Password	<phone-login-password> Example: 654321	This is the password to log in from the phone.
MAC Address (Optional)	<MAC Address of the phone>	Populate this field only if the device is using MAC address authentication.

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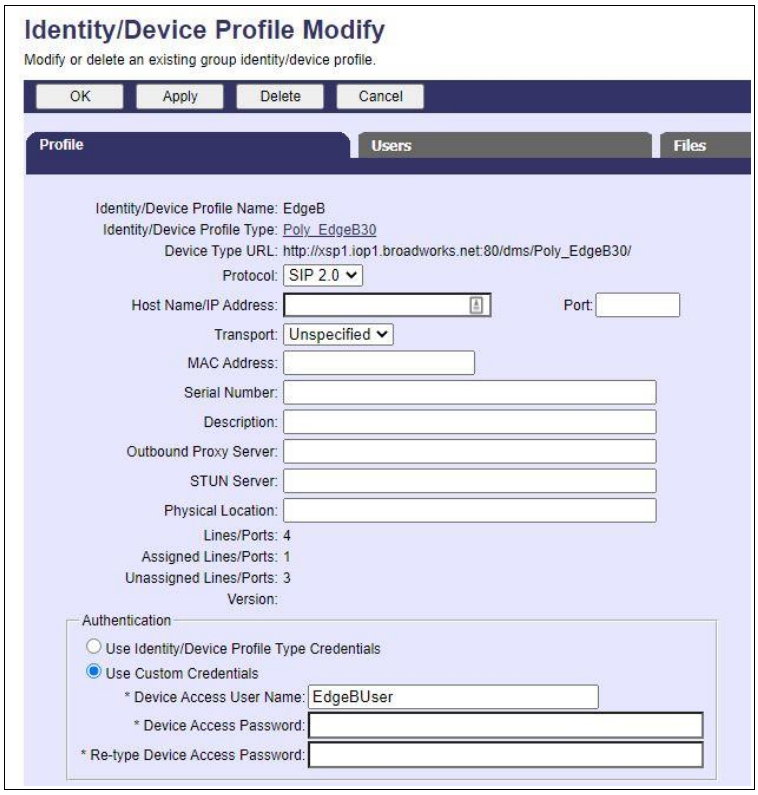

Figure 11 Device Profile Instance

5.2.4 Configure Cisco BroadWorks User

Configure the user with the desired Cisco BroadWorks configuration and services. Any services that require a specific configuration on the device are managed via Device Management and are defined in the device configuration files, if the template files are created with the correct Device Management tags.

The device profile created in the previous section must be assigned to the Cisco BroadWorks user. Assigning the device profile to the user automatically causes the Device Management feature to generate the device configuration files for this user's device.

To assign the device profile to the user, browse to the Cisco BroadWorks *<user>* → *Addresses.*

5.2.5 Customize Tags

This section identifies custom tags used by the Poly Edge B Phone that may need to be customized at the group or device profile. Customizing a tag at the group level overrides the setting on the device profile type for the device profiles created within the group. Customizing a tag at the device profile level overrides the setting at the device profile type and/or group level for the individual device profile.

5.2.5.1 SBC Address Customization for Edge Device

In many deployments, an edge device, such as an enterprise SBC or application layer gateway, is deployed on the enterprise edge. The edge device's SIP server or outbound proxy setting is configured with the service provider's SBC IP address or FQDN. If there is no edge device, the following customization does not apply.

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To integrate the edge device with Device Management, the SBC address tag (%SBC_ADDRESS%) defined in section *5.2.1.1 Create System Default Tags* must be overridden at the group level with the LAN address of the edge device. To do so, perform that following steps.

1) At the *Group → Utilities → Configure Device* page, select the Poly device profile (for example, *Poly_Edge BB2*).
2) Click on the *Custom Tags* tab.
3) Click **Add**.
4) For the tag, enter "SBC_ADDRESS".
5) For the value, enter the edge device LAN IP address.
6) To save the tag data, click **OK**.

Repeat these steps for each Poly model provisioned in the group.

5.2.6 Configure Poly Edge B Phones

This section describes the steps necessary to configure the Poly Edge B Phone to integrate with Cisco BroadWorks Device Management.

5.2.6.1 Defining Device Management File Access URI

The Poly Edge B Phone uses the provisioning server parameters configured on the phone unless *Option 160 or 66* has been defined on the DHCP server. If the DHCP server returns data set for the *Option 160 or 66* parameter, then the Poly Edge B Phone uses the address defined in this field as the server address to retrieve its configuration data.

To utilize DHCP Options Field, the following value should be configured on the DHCP server for *Option 160 or 66*:

- *<Access Protocol>://<Device Access FQDN>:<Device Access Port>/ <Device Access Context Name>/<Device Access URI>*

Example:

```
option myDevice code 66 = string;

subnet 10.2.0.0 netmask 255.255.255.0 {
option subnet-mask 255.255.255.0;
option domain-name-servers 10.2.0.29;
option routers 10.2.0.1;
option myDevice "http://xsp1.iop1.Cisco
BroadWorks.net:80/dms/myDevice/PolyEdgeB10.xml"
}
```

In this case manual configuration is required, perform the following steps to manually define the Device Management file access URL:

1) Log in to the web user interface (UI) for the device. The default Username and Password is "admin" and "admin" respectively. Browse to the *Auto Provisioning* page and fill in the Device Management server address ConfigURL under ITSP Provisioning. Following is an example of the ConfigURL:

   http://$GPRM0:$GPRM1@xsp1.iop1.Cisco BroadWorks.net/dms/myDevice/PolyEdgeB10.xml

2) Fill in the GRPM0 and GPRM1 with the BroadSoft "Device Access User Name" and "Device Access Password" respectively.
3) Click Submit and then OK to confirm the changes.

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4) Click Reboot to complete. Restart the device and enter the Cisco BroadWorks device access user name and password when prompted.

Example Login Screen

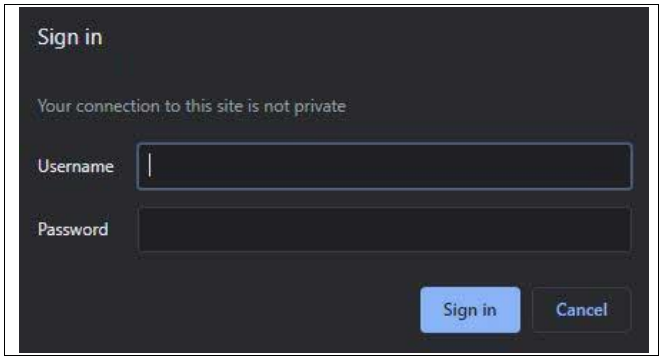

Figure 12 Example Login Screen

Example Provisioning Screen

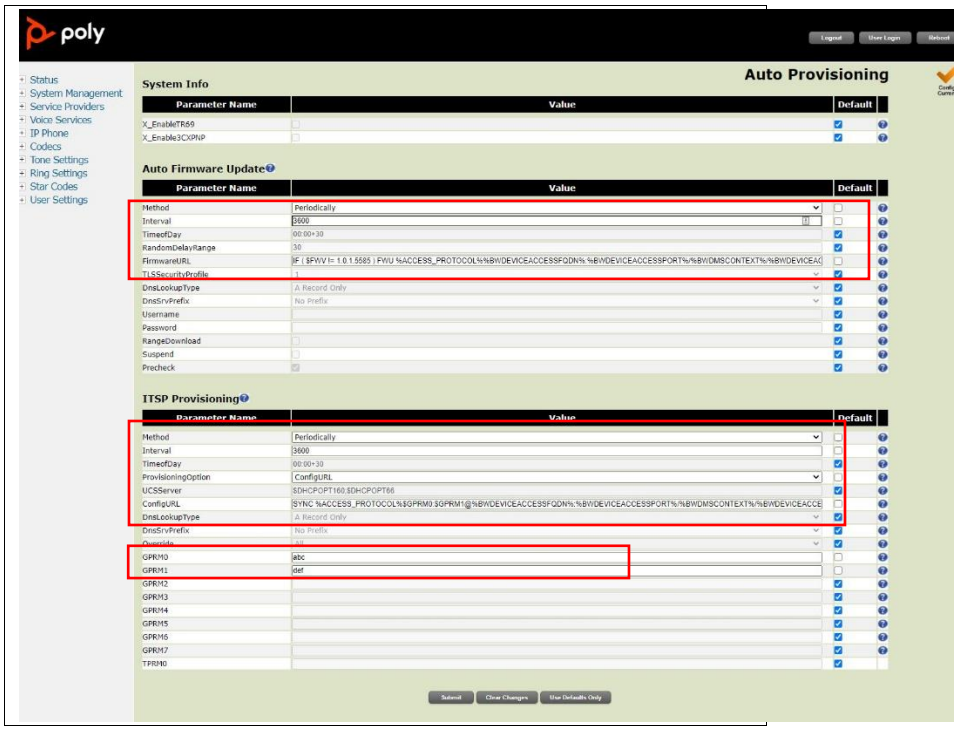

Figure 13 Example Provisioning Screen

5.2.6.2 File Authentication Using MAC Address from Client Certificate

This section describes the steps necessary to configure Cisco BroadWorks to perform device management file authentication using the MAC address obtained from the phone's client certificate. This secure authentication method based on MAC address is a new feature available from Cisco BroadWorks Release 22.0.

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Prior to configuring for the MAC address authentication, mutual HTTPS authentication must be established among the Edge B and Cisco BroadWorks. That is by the implication of client certificate authentication, HTTPS must be enabled on the phones to trust Cisco BroadWorks server certificate. Furthermore, HTTPS client certificates offered by Edge B devices containing the phone's MAC address must also be trusted by Cisco BroadWorks.

From factory, each Poly Edge B Phone is installed with a client certificate that is signed by Poly's certificate authority. The public certificates of Poly's certificate authority can be obtained from Poly. The Poly certificate should be installed on the Device Management deploying Xtended Services Platform.

Caution: Altering the authentication mode from "username/password" to "MAC address in client certificate" for a given device profile type will affect all existing device profile instances on the BroadWorks system. Prepare the authentication mode switch by collecting all MAC addresses of the existing Poly Phones and follow instructions below in the specified order.

1) Create or Modify Device Profile Instance using MAC Address from Client Certificate

When MAC address authentication is chosen as the file authentication mode, every single Edge B phone's MAC address must be added to the corresponding device profile on Cisco BroadWorks. The device MAC address is to be configured for the device profile as shown in the following figure. Further, select or update the *Authentication* method of *Use Custom Credentials* instead of *Use Identity/Device Profile Type Credentials*. If altering the authentication mode, repeat the steps to modify all existing device profiles on the Cisco BroadWorks system.

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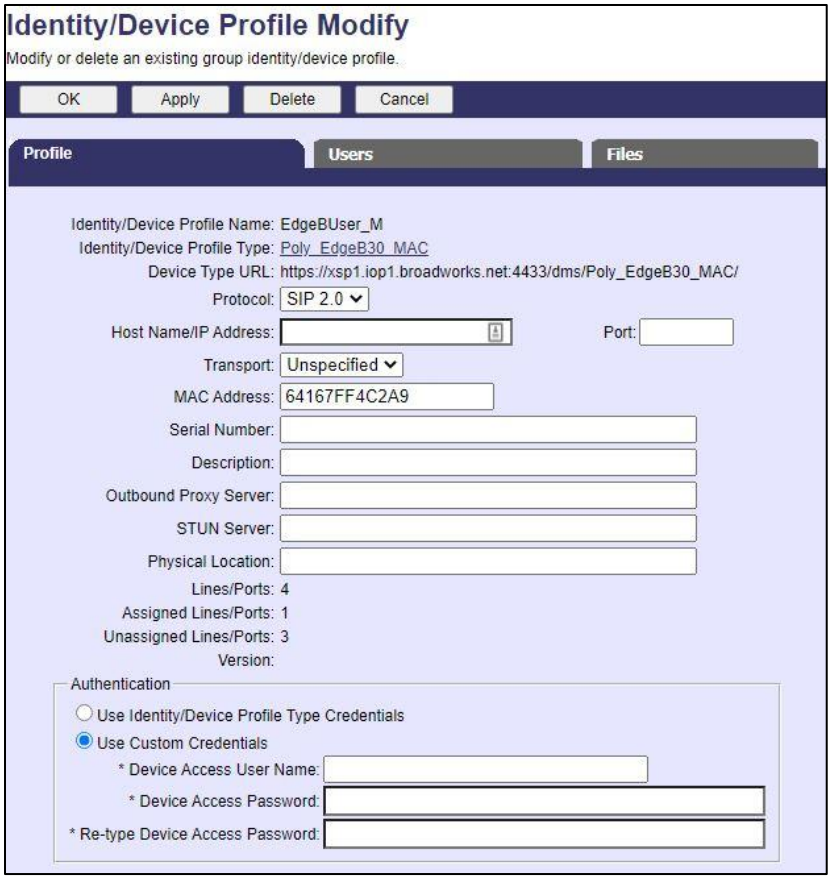

Figure 14 MAC Address Definition for Device Profile Instance

2) Update Device Management Authentication Mode on the Device Profile Type

Instructions in this section are only applicable to updating Cisco BroadWorks systems with existing Poly Edge B device profile types. Perform the changes as shown on the device profile type to be updated with MAC address authentication using Client Certificate.

Parameter	Value	Description
Device Access Protocol	https	HTTPS protocol is a must when using client mutual authentication with signed certificates.
Device Access Port	XSP's listening port of HTTPS mutual authentication.	Enter the corresponding TCP port.
Authentication Mode	MAC-Based checked	MAC-Based authentication method is used
MAC Address in	Client Certificate radio button selected	MAC address used for authentication is to be obtained from the client certificate to compare to the provisioned values on the device profiles.

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MAC Address Format	.*([0-9a-fA-F]{12}).*	Regular expression used to parse the MAC address from the CN field of the client certificate.

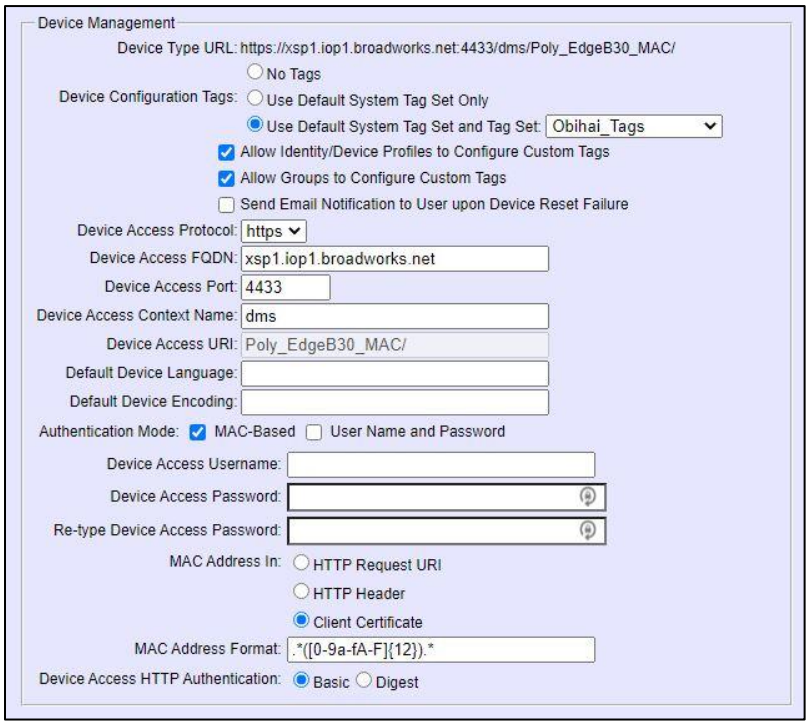

Figure 15 Device Profile Type Update for MAC-Based Auth using Client Certificate

3) Change File Authentication Mode to MAC address in Client Certificate

Instructions in this section are only applicable to updating Cisco BroadWorks systems with existing Poly Edge B device profile types. Perform corresponding changes on the authentication mode of all authenticated files as shown in the following figure. The regular expression used in MAC Address Format is:

.*([0-9a-fA-F]{12}).*

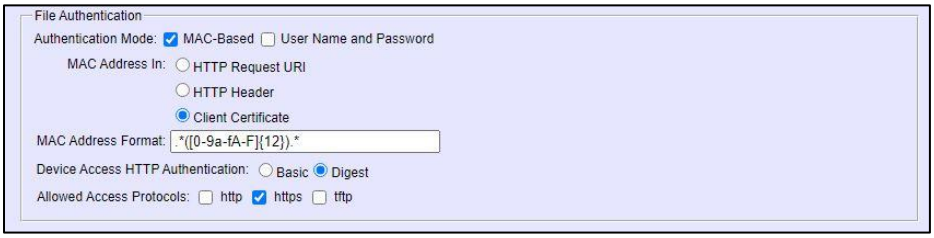

Figure 16 Authentication Mode Set to MAC-Based and Sourced from Client Certificate

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5.2.6.3 Zero-Touch Device Provisioning (ZT)

Using Poly PDMS-SP (PDMS-SP ZT customization), the device can be boot-strapped to automatically connect to the Cisco BroadWorks Device Management server. Poly Edge B Phones leave the factory with their configuration set to pre-defined default values. The configuration is then changed subsequently through local configuration or remote provisioning.

Poly offers a device customization service, known as Zero-Touch or ZT, which lets service provider customers select the default values for Poly Edge B device configuration parameters. A typical parameter default customized to a specific service provider would be the ConfigURL which tells the device where and how to download its configuration profile(s) from the service provider's provisioning system. With the default ConfigURL pointing to their provisioning servers, service providers are in control of their devices the first time they are powered on, and therefore can provide true plug-and-play experience to their users without first preparing the units before shipping. Talk to your Poly sales representative if you would like to incorporate this service with your next order.

While the customized default values cannot be changed after the devices are shipped from the factory, customized parameter values may still be changed by subsequent provisioning, just like any other common parameter. When the device's factory resets all the customized parameters will be restored to the corresponding customized default values.

Poly ZT is a technology (late customization) for service provider customers. Customization is finalized when the unit is first plugged in at the end-user's location. This allows service providers to ship devices in their original packaging to end-users without any pre-configuration.

When a service provider customer places an order with Poly for ZT devices, it must also define a ZT profile (or re-use an existing one previously defined). A ZT profile is just a device configuration profile with a small number of customized device parameter values. The ZT profile must be validated and appEdge Bd by Poly. When ZT units are shipped from the factory, Poly records vital information (such as MAC and Serial#) for each device and links it in a database to the ZT profile already defined for that shipment. ZT enabled devices leave the factory in the "pre-customized" state. While in this state, the device will continuously attempt to complete customization by downloading its ZT profile from the ZT Server at www.oblitalk.com. Its functionality is otherwise very limited in this state, the end-user may change some basic network parameters such as DHCP and IP address, but may not set up a service provider's service for example. A very basic ZT profile would include a ConfigURL that points to a provisioning server managed by the service provider.

When a ZT profile is successfully downloaded and stored, the device operates in the customized state. It is in this state that the device can operate normally under the management of the service provider. The service provider should bear in mind the following points regarding their ZT devices:

As the ZT profile is defined, each parameter specified in the profile may be permanently locked down. No one can change the value of a locked down parameter after the unit is customized.

Factory resetting the device restores all the customized parameters to the values defined in the original ZT profile; other parameters are restored to their corresponding factory default values.

Service Providers are strongly advised to keep good records (MAC and serial# at the minimum) of the device shipment received from Poly and also devices they have shipped out to their end-users. These records would be valuable for example when a device has failed to complete ZT customization at a user's site and would allow Poly support staff to manually force the device to complete the proper ZT customization process.

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For more information on Poly PDMS-SP's ZT service, see https://www.poly.com/us/en/products/services/cloud/polycom-device-management-service-providers

5.3 Upgrade from Previous CPE Kits

The previous configuration sections are primarily structured around importing or manually configuring the Poly device profile types for the first time. Many of the steps are unnecessary when upgrading to a new firmware release or CPE kit version.

For general instructions on upgrading, see the *Cisco BroadWorks CPE Kit Usage Guide* [8].

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Appendix A: Reference Poly Edge B Phone Configuration Files

The following is a reference configuration for the Poly Edge B Phone configured for use with Cisco BroadWorks.

Poly Edge B Phone can be configured through the device web user interface (UI). The default User Name and Password is admin and admin.

Browse to the *Auto Provisioning* page, under ITSP Provisioning section, fill in ConfigURL with the Device Management server address. Here's the example:

http://xsp1.iop1.Cisco BroadWorks.net/dms/myDevice/PolyEdgeB10.xml

or

http://username:password@xsp1.iop1.Cisco BroadWorks.net/dms/myDevice/PolyEdgeB10.xml

Click Submit and then OK to confirm the changes. Then click Reboot to complete.

NOTE: These are example files and they should be used for reference only. DO NOT CUT AND PASTE THESE EXAMPLES TO GENERATE YOUR CONFIGURATION FILES. The Poly configuration files change between releases so be sure to use the configuration files from Poly for the specific release to generate your configuration files.

System Master File: PolyEdgeBx0.xml

```
<?xml version="1.0" encoding="utf-8"?>
<ParameterList>
  <O>
    <N>X_DeviceManagement.ITSPProvisioning.</N>
    <P><N>Method</N><V>Periodically</V></P>
    <P><N>Interval</N><V>1</V></P>
    <P><N>ProvisioningOption</N><V>ConfigURL</V></P>
    <P><N>ConfigURL</N><V>SYNC
%ACCESS_PROTOCOL%$GPRM0:$GPRM1@%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%
BWDMSCONTEXT%/%BWDEVICEACCESSURI%PolyEdgeB-$MAC.xml</V></P>
  </O>
</ParameterList>
```

System Master File: <MACaddress>.cfg

```
<?xml version="1.0" encoding="utf-8" standalone="yes"?>
<!-- Default Master SIP Configuration File-->
<!-- $RCSfile: 000000000000.cfg,v $  $Revision: 1.23.8.3 $ -->
<APPLICATION APP_FILE_PATH="%APP_VERSION%.sip.ld" CONFIG_FILES=""
MISC_FILES="" LOG_FILE_DIRECTORY="" OVERRIDES_DIRECTORY=""
CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="">
  <APPLICATION_EdgeB10 APP_FILE_PATH_EdgeB10="%EDGEB_FIRMWV%"
CONFIG_FILES_EdgeB10="PolyEdgeB.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY=""
LICENSE_DIRECTORY=""></APPLICATION_EdgeB10>
  <APPLICATION_EdgeB20 APP_FILE_PATH_EdgeB20="%EDGEB_FIRMWV%"
CONFIG_FILES_EdgeB20="PolyEdgeB.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
```


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```
  <APPLICATION_EdgeB30 APP_FILE_PATH_EdgeB30="%EDGEB_FIRMWV%"
CONFIG_FILES_EdgeB30="PolyEdgeB.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX101 APP_FILE_PATH_VVX101="%APP_VERSION_VVX-101-
201%.sip.ld" CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX150 APP_FILE_PATH_VVX150="%APP_VERSION_VVX-150%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX201 APP_FILE_PATH_VVX201="%APP_VERSION_VVX-101-
201%.sip.ld" CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX250 APP_FILE_PATH_VVX250="%APP_VERSION_VVX-250%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX301 APP_FILE_PATH_VVX301="%APP_VERSION_VVX-301-
401%.sip.ld" CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX311 APP_FILE_PATH_VVX311="%APP_VERSION_VVX-311-
411%.sip.ld" CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX350 APP_FILE_PATH_VVX350="%APP_VERSION_VVX-350%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX401 APP_FILE_PATH_VVX401="%APP_VERSION_VVX-301-
401%.sip.ld" CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX411 APP_FILE_PATH_VVX411="%APP_VERSION_VVX-311-
411%.sip.ld" CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX450 APP_FILE_PATH_VVX450="%APP_VERSION_VVX-450%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX501 APP_FILE_PATH_VVX501="%APP_VERSION_VVX-501-
601%.sip.ld" CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_VVX601 APP_FILE_PATH_VVX601="%APP_VERSION_VVX-501-
601%.sip.ld" CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_CCX400 APP_FILE_PATH_CCX400="%APP_VERSION_CCX400%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_CCX500 APP_FILE_PATH_CCX500="%APP_VERSION_CCX500%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_CCX600 APP_FILE_PATH_CCX600="%APP_VERSION_CCX600%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_CCX700 APP_FILE_PATH_CCX700="%APP_VERSION_CCX700%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_Trio8300
APP_FILE_PATH_Trio8300="%APP_VERSION_TRIO8300%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_Trio8500
APP_FILE_PATH_Trio8500="%APP_VERSION_TRIO8500%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
  <APPLICATION_Trio8800
APP_FILE_PATH_Trio8800="%APP_VERSION_TRIO8800%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
```


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```
  <APPLICATION_TrioC60
APP_FILE_PATH_TrioC60="%APP_VERSION_TRIOC60%.sip.ld"
CONFIG_FILES="qsetup.cfg" MISC_FILES="" LOG_FILE_DIRECTORY=""
OVERRIDES_DIRECTORY="" CONTACTS_DIRECTORY="" LICENSE_DIRECTORY="" />
</APPLICATION>
```

Phone-Specific File: PolyEdgeB-%BWMACADDRESS%.xml.template

```
<?xml version="1.0" encoding="utf-8"?>
<ParameterList>
 <O>
    <N>DeviceInfo.</N>
    <P><N>ProtectFactoryReset</N><V X_UD="Y" X_DV="0"/></P>
 </O>
 <O>
    <N>DeviceInfo.Time.</N>
    <P><N>NTPServer1</N><V>%NTPSERVER_ADDRESS%</V></P>
    <P><N>LocalTimeZone</N><V>%BWTIMEZONE-1%</V></P>
  </O>
  <O>
    <N>DeviceInfo.WAN.</N>
    <P><N>DNSServer1</N><V>%DNS_SERVER_1%</V></P>
    <P><N>DNSServer2</N><V>%DNS_SERVER_2%</V></P>
  </O>
  <O>
    <N>X_DeviceManagement.WebServer.</N>
    <P><N>Port</N><V X_UD="Y" X_DV="80"/></P>
    <P><N>AdminPassword</N><V>%WEB_ADMINPASSWORD%</V></P>
    <P><N>UserPassword</N><V>%WEB_USERPASSWORD%</V></P>
  </O>
  <O>
    <N>X_DeviceManagement.ITSPProvisioning.</N>
    <P><N>Method</N><V>Periodically</V></P>
    <P><N>Interval</N><V>3600</V></P>
    <P><N>ProvisioningOption</N><V>ConfigURL</V></P>
    <P><N>UCSServer</N><V X_UD="Y" X_DV="$DHCPOPT160;$DHCPOPT66"/></P>
    <P><N>ConfigURL</N><V>SYNC
%ACCESS_PROTOCOL%$GPRM0:$GPRM1@%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%
BWDMSCONTEXT%/%BWDEVICEACCESSURI%PolyEdgeB-$MAC.xml </V></P>
  </O>
  <O>
    <N>VoiceService.1.VoiceProfile.SIP.</N>
    <P><N>X_RebootOnResync</N><V>true</V></P>
  </O>
  <O>
    <N>X_DeviceManagement.FirmwareUpdate.</N>
    <P><N>Method</N><V>Periodically</V></P>
    <P><N>Interval</N><V>3600</V></P>
    <P><N>FirmwareURL</N><V>IF ( $FWV != 1.0.1.5585 ) FWU
%ACCESS_PROTOCOL%%BWDEVICEACCESSFQDN%:%BWDEVICEACCESSPORT%/%BWDMSCONTEXT%/
%BWDEVICEACCESSURI%%EDGEB_FIRMWV%</V></P>
  </O>
   <O>
    <N>VoiceService.1.VoiceProfile.1.</N>
    <P><N>DTMFMethod</N><V X_UD="Y" X_DV="Auto"/></P>
  </O>
  <O>
    <N>VoiceService.1.VoiceProfile.1.SIP.</N>
    <P><N>ProxyServer</N><V>%BWHOST-1%</V></P>
    <P><N>ProxyServerPort</N><V>5060</V></P>
    <P><N>ProxyServerTransport</N><V><V X_UD="Y" X_DV="UDP"/></V></P>
    <P><N>OutboundProxy</N><V>%SBC_ADDRESS%</V></P>
    <P><N>OutboundProxyPort</N><V>5060</V></P>
    <P><N>X_ProxyServerRedundancy</N><V>true</V></P>
```


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```
    <P><N>RegistrationPeriod</N><V X_UD="Y" X_DV="3600"/></P>
    <P><N>TimerB</N><V X_UD="Y" X_DV="32000"/></P>
    <P><N>TimerF</N><V X_UD="Y" X_DV="32000"/></P>
    <P><N>X_XsiServer</N><V>%XSP_ADDRESS_XSI_ACTIONS%</V></P>
    <P><N>X_XsiServerPort</N><V X_UD="Y" X_DV=""/></P>
    <P><N>X_DnsSrv</N><V>true</V></P>
    <P><N>X_DnsSrvAutoPrefix</N><V>true</V></P>
    <P><N>X_Support100rel</N><V>true</V></P>
    <P><N>X_DiscoverPublicAddress</N><V>true</V></P>
    <P><N>X_ProxyServerRedundancy</N><V>true</V></P>
  </O>
  <O>
    <N>X_DeviceManagement.Directory.Xsi.</N>
    <P><N>EnableEnterprise</N><V X_UD="Y" X_DV="true"/></P>
    <P><N>EnableEnterpriseCommon</N><V X_UD="Y" X_DV="true"/></P>
    <P><N>EnableGroup</N><V X_UD="Y" X_DV="true"/></P>
    <P><N>EnableGroupCommon</N><V X_UD="Y" X_DV="true"/></P>
    <P><N>EnablePersonal</N><V X_UD="Y" X_DV="true"/></P>
  </O>
  <O>
    <N>VoiceService.1.VoiceProfile.1.X_FeatureCode.</N>
    <P><N>DirectedCallPickup</N><V>%BWFAC-DIRECTED-CALL-PICKUP-1%</V></P>
    <P><N>CallPickup</N><V>%BWFAC-CALL-PICKUP-1%</V></P>
    <P><N>BargeIn</N><V>%BWFAC-CALL-BRIDGE-1%</V></P>
    <P><N>Park</N><V>%BWFAC-CALL-PARK-1%</V></P>
  </O>
  <O>
    <N>VoiceService.1.Phone.CallingFeatures.</N>
    <P><N>UseExternalConferenceBridge</N><V>true</V></P>
    <P><N>StarCodeProfile</N><V>None</V></P>
  </O>
  <O>
    <N>VoiceService.1.VoiceProfile.1.Line.1.</N>
    <P><N>Enable</N><V>true</V></P>
    <P><N>X_DisplayLabel</N><V>%BWCLID-1%</V></P>
    <P><N>X_DisplayNumber</N><V>%BWEXTENSION-1%</V></P>
    <P><N>X_ServProvProfile</N><V X_UD="Y" X_DV="A"/></P>
    <P><N>X_KeepAliveEnable</N><V X_UD="Y" X_DV="false"/></P>
  </O>
  <O>
    <N>VoiceService.1.VoiceProfile.1.Line.1.SIP.</N>
    <P><N>AuthUserName</N><V>%BWAUTHUSER-1%</V></P>
    <P><N>AuthPassword</N><V>%BWAUTHPASSWORD-1%</V></P>
    <P><N>URI</N><V>%BWLINEPORT-1%</V></P>
    <P><N>X_MyExtension</N><V>%BWEXTENSION-1%</V></P>
    <P><N>X_XsiUserName</N><V>%BWLOGIN-ID-1%</V></P>
    <P><N>X_XsiPassword</N><V>%BWAUTHPASSWORD-1%</V></P>
    <P><N>X_ShareLine</N><V X_UD="Y" X_DV="false"/></P>
    <P><N>X_ShareLineMonitor</N><V>true</V></P>
    <P><N>X_ShareLineBargeIn</N><V>%BWSCA-BRIDGING-BOOL-1%</V></P>
    <P><N>X_ShareLineCallPickup</N><V>%BWSCA-CALL-RETRIEVE-BOOL-1%</V></P>
    <P><N>X_BlfBargeIn</N><V>true</V></P>
    <P><N>X_BlfCallPickup</N><V>true</V></P>
    <P><N>X_BlfDirectedCallPickup</N><V>true</V></P>
  </O>
  <O>
    <N>VoiceService.1.VoiceProfile.1.Line.1.CallingFeatures.</N>
    <P><N>X_MailboxID</N><V X_UD="Y" X_DV=""/></P>
    <P><N>X_CheckVoiceMailNumber</N><V>%BWEXTENSION-1%</V></P>
    <P><N>X_ASFeatureEventSubscribe</N><V>%ASFEATURE%</V></P>
    <P><N>X_SRTP</N><V X_UD="Y" X_DV="Disable SRTP"/></P>
    <P><N>X_ConferenceBridge</N><V>%BWNETWORK-CONFERENCE-SIPURI-
1%</V></P>
```


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```
</O>

<O>
  <N>VoiceService.1.VoiceProfile.1.Line.1.X_NetServices.</N>
  <P><N>ACDAgent</N><V>%NETSERV_ACDAGENT%</V></P>
  <P><N>ACDAgentUnavailableCodes</N><V>%NETSERV_ACDAGENTCODE%</V></P>
  <P><N>CallCenter</N><V>%NETSERV_CALLCENTER%</V></P>
  <P><N>Directory</N><V>%NETSERV_DIRECTORY%</V></P>
  <P><N>DispositionCode</N><V>%NETSERV_DISPOSITIONCODE%</V></P>
  <P><N>Escalation</N><V>%NETSERV_ESCALATION%</V></P>
  <P><N>CallTrace</N><V>%NETSERV_CALLTRACE%</V></P>
  <P><N>CallRecording</N><V>%NETSERV_CALLRECORDING%</V></P>
  <P><N>CallFowardAlways</N><V>%NETSERV_CFWD_ALWAYS%</V></P>
  <P><N>CallFowardBusy</N><V>%NETSERV_CFWD_BUSY%</V></P>
  <P><N>CallFowardNoAnswer</N><V>%NETSERV_CFWD_NOANSWER%</V></P>
  <P><N>CallLogs</N><V>%NETSERV_CALLLOGS%</V></P>
  <P><N>CallPark</N><V>%NETSERV_CALLPARK%</V></P>
  <P><N>CallParkStatus</N><V>%NETSERV_CALLPARKSTATUS%</V></P>
  <P><N>CallPickup</N><V>%NETSERV_CALLPICKUP%</V></P>
  <P><N>CallWaiting</N><V>%NETSERV_CALLWAITING%</V></P>
  <P><N>DoNotDisturb</N><V>%NETSERV_DND%</V></P>
  <P><N>Hoteling</N><V>%NETSERV_HOTELING%</V></P>
  <P><N>SecurityClass</N><V>%NETSERV_SECURITYCLASS%</V></P>
  <P><N>ConferenceBridgeControl</N><V>%NETSERV_CONFERENCEBRIDGE%</V></P>
</O>
<O>
  <N>VoiceService.1.VoiceProfile.1.Line.2.</N>
  <P><N>Enable</N><V>true</V></P>
  <P><N>X_DisplayLabel</N><V>%BWCLID-2%</V></P>
  <P><N>X_DisplayNumber</N><V>%BWEXTENSION-2%</V></P>
  <P><N>X_ServProvProfile</N><V X_UD="Y" X_DV="A"/></P>
  <P><N>X_KeepAliveEnable</N><V X_UD="Y" X_DV="false"/></P>
</O>
<O>
  <N>VoiceService.1.VoiceProfile.1.Line.2.SIP.</N>
  <P><N>AuthUserName</N><V>%BWAUTHUSER-2%</V></P>
  <P><N>AuthPassword</N><V>%BWAUTHPASSWORD-2%</V></P>
  <P><N>URI</N><V>%BWLINEPORT-2%</V></P>
  <P><N>X_ShareLine</N><V X_UD="Y" X_DV="false"/></P>
  <P><N>X_ShareLineMonitor</N><V>true</V></P>
  <P><N>X_ShareLineBargeIn</N><V>%BWSCA-BRIDGING-BOOL-1%</V></P>
  <P><N>X_ShareLineCallPickup</N><V>%BWSCA-CALL-RETRIEVE-BOOL-1%</V></P>
</O>
<O>
  <N>VoiceService.1.VoiceProfile.1.Line.3.</N>
  <P><N>Enable</N><V>true</V></P>
  <P><N>X_DisplayLabel</N><V>%BWCLID-3%</V></P>
  <P><N>X_DisplayNumber</N><V>%BWEXTENSION-3%</V></P>
  <P><N>X_ServProvProfile</N><V X_UD="Y" X_DV="A"/></P>
  <P><N>X_KeepAliveEnable</N><V X_UD="Y" X_DV="false"/></P>
</O>
<O>
  <N>VoiceService.1.VoiceProfile.1.Line.3.SIP.</N>
  <P><N>AuthUserName</N><V>%BWAUTHUSER-3%</V></P>
  <P><N>AuthPassword</N><V>%BWAUTHPASSWORD-3%</V></P>
  <P><N>URI</N><V>%BWLINEPORT-3%</V></P>
  <P><N>X_ShareLine</N><V X_UD="Y" X_DV="false"/></P>
  <P><N>X_ShareLineMonitor</N><V>true</V></P>
  <P><N>X_ShareLineBargeIn</N><V>%BWSCA-BRIDGING-BOOL-1%</V></P>
  <P><N>X_ShareLineCallPickup</N><V>%BWSCA-CALL-RETRIEVE-BOOL-1%</V></P>
</O>
<O>
  <N>VoiceService.1.VoiceProfile.1.Line.4.</N>
```


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```
    <P><N>Enable</N><V>true</V></P>
    <P><N>X_DisplayLabel</N><V>%BWCLID-4%</V></P>
    <P><N>X_DisplayNumber</N><V>%BWEXTENSION-4%</V></P>
    <P><N>X_ServProvProfile</N><V X_UD="Y" X_DV="A"/></P>
    <P><N>X_KeepAliveEnable</N><V X_UD="Y" X_DV="false"/></P>
  </O>
  <O>
    <N>VoiceService.1.VoiceProfile.1.Line.4.SIP.</N>
    <P><N>AuthUserName</N><V>%BWAUTHUSER-4%</V></P>
    <P><N>AuthPassword</N><V>%BWAUTHPASSWORD-4%</V></P>
    <P><N>URI</N><V>%BWLINEPORT-4%</V></P>
    <P><N>X_ShareLine</N><V X_UD="Y" X_DV="false"/></P>
    <P><N>X_ShareLineMonitor</N><V>true</V></P>
    <P><N>X_ShareLineBargeIn</N><V>%BWSCA-BRIDGING-BOOL-1%</V></P>
    <P><N>X_ShareLineCallPickup</N><V>%BWSCA-CALL-RETRIEVE-BOOL-1%</V></P>
  </O>
  <O>
    <N>VoiceService.1.Phone.LeftLineKey.1.</N>
    <P><N>Function</N><V>Call Appearance</V></P>
    <P><N>Service</N><V>SP1</V></P>
    <P><N>Number</N><V X_UD="Y" X_DV=""/></P>
  </O>
  <O>
    <N>VoiceService.1.Phone.LeftLineKey.2.</N>
    <P><N>Function</N><V>Call Appearance</V></P>
    <P><N>Service</N><V X_UD="Y" X_DV=""/></P>
    <P><N>Number</N><V X_UD="Y" X_DV=""/></P>
  </O>
  <O>
    <N>VoiceService.1.Phone.LineKey.1.</N>
    <P><N>Function</N><V>Call Appearance</V></P>
    <P><N>Service</N><V X_UD="Y" X_DV=""/></P>
    <P><N>Number</N><V X_UD="Y" X_DV=""/></P>
  </O>
  <O>
    <N>VoiceService.1.Phone.LineKey.2.</N>
    <P><N>Function</N><V>Call Appearance</V></P>
    <P><N>Service</N><V X_UD="Y" X_DV=""/></P>
    <P><N>Number</N><V X_UD="Y" X_DV=""/></P>
  </O>
</ParameterList>
```


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References

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[5] Cisco Systems, Inc. 2018. *Cisco BroadWorks SIP Phone Interoperability Test Plan, Release 22.0*. Available from Cisco at solutionpartner.cisco.com.

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