

## Polycom® UC Software 5.9.0

# Applies to Polycom<sup>®</sup> VVX<sup>®</sup> Business Media Phones, Polycom<sup>®</sup> VVX<sup>®</sup> Business IP Phones, and Polycom<sup>®</sup> SoundStructure<sup>®</sup> VoIP Interface Phones

Polycom announces the release of Polycom® Unified Communications (UC) Software, version 5.9.0. This document provides the latest information about this release.

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## What's New

Polycom Unified Communications (UC) Software 5.9.0 is a release for Open SIP and Skype for Business deployments. These release notes provide important information on software updates, phone features, and known issues.

## Future Feature Releases For VVX Business Media Phones

With the end of sale of some models of VVX business media phones, the following phone models will no longer receive new features:

- VVX 300/310
- VVX 400/410
- VVX 500
- VVX 600
- VVX 1500

As a result, UC Software 5.9.0 will be the last release to contain significant feature development for these models. Future major feature releases will not include images to support these models. In line with the Polycom End of Life policy, Polycom will continue to provide bug fixes in maintenance and patch releases on the UC Software 5.9.x stream. For details, see the Polycom End of Life Policy.

The following VVX phone models will continue to receive feature releases:

- VVX 101/201
- VVX 150
- VVX 250
- VVX 301/311
- VVX 350
- VVX 401/411
- VVX 450
- VVX 501
- VVX 601

## UC Software 5.9.0 Support

Polycom UC Software 5.9.0 supports the following Polycom endpoints.



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

#### **Phone Support**

	Skype for Business	Skype for Business	
Phone Model	On-Premises	Online	Open SIP
VVX 101 business media phone	No	No	Yes
VVX 201 business media phone	Yes	Yes	Yes
VVX 300/301/310/311 business media phones	Yes	Yes	Yes
VVX 400/401/410/411 business media phones	Yes	Yes	Yes
VVX 500/501 business media phones	Yes	Yes	Yes
VVX 600/601 business media phones	Yes	Yes	Yes
VVX 1500 business media phone	No	No	Yes
VVX 150 business IP phone	No	No	Yes
VVX 250 business IP phone	Yes	No	Yes
VVX 350 business IP phone	Yes	No	Yes
VVX 450 business IP phone	Yes	No	Yes
VVX D60 Wireless Handset and Base Station	No	No	Yes
SoundStructure VoIP Interface Phone	Yes	Yes	Yes

Polycom UC Software 5.9.0 supports the following Polycom accessories.

#### **Accessories Support**

Accessories	Skype for Business	Open SIP
Polycom® VVX® Camera	No	Yes
Polycom® VVX® Color Expansion Module	Yes	Yes
Polycom® VVX® Expansion Module	No	Yes
Polycom <sup>®</sup> EagleEye <sup>™</sup> Mini Camera	Yes	Yes
Polycom® VVX® EM 50 Expansion Module	Yes	Yes

Plantronics headsets are compatible on VVX phones. To know compatibility list, refer to the Plantronics Compatibility Guide.

Polycom UC Software 5.9.0 includes the following new features and enhancements:

- Session Traversal Utilities for NAT (STUN)
- Device Analytics Support for PDMS-SP
- <u>Multilevel Precedence and Preemption (MLPP) for Assured Services Session Initiation Protocol</u> (AS-SIP) On Shared Lines
- Support for H.264 Packetization Mode 1 and H.264 Constrained Baseline Profile

- Enhanced Busy Lamp Field (BLF)
- Busy Lamp Field Hold Alerting
- Busy Lamp Field(BLF) Spontaneous Call Appearance on Per BLF Basis
- Enhanced Feature Key Macro Actions
- Retrieve Logs from Support Information Package Page in the Web Configuration Utility
- Simple Certificate Enrollment Protocol
- Privacy for Call Logs and Contacts
- Enhancement to Wireless Network Connectivity
- Call Hold Timer
- GZIP Encoding of SIP INFO Messages
- Enhanced Boss-Admin for VVX Phones
- Web Sign In for Skype for Business On-Premise Deployment

## Session Traversal Utilities for NAT (STUN)

Polycom UC Software supports Session Traversal Utilities for NAT (STUN), a network protocol used in NAT traversal for real-time IP communications, such as voice, video, and messaging. STUN service is provided using UDP. STUN using TCP or TLS is not available.

You can configure the phone to act as a STUN client to send a request to STUN server to discover the public IP and port(s). You can also configure the phone to send keep-alive messages to refresh NAT bindings.

## Device Analytics Support for PDMS-SP

Polycom introduces device analytics to enable and configure your phone to provide details on many aspects of the phone's system and usage such as network stats, feature usage, memory and CPU, SIP service state, and connected peripherals.

A Polycom Cloud Services account is required to access these analytics. For more information, refer to <a href="https://console.plcm.cloud">https://console.plcm.cloud</a>.

## Multilevel Precedence and Preemption (MLPP) for Assured Services - Session Initiation Protocol (AS-SIP) On Shared Lines

Multilevel Precedence and Preemption (MLPP) enables you to configure a precedence level for outgoing calls. Polycom implements MLPP in accordance with the standards set by Assured Services for Session Initiation Protocol (AS-SIP).

Higher precedence calls preempt – and thereby end - active calls with a lower precedence level. When an active call is preempted, the phone plays a preemption tone and displays a preemption screen. Polycom now provides the capability for shared lines when operating in a Ribbon environment.

## Support for H.264 Packetization Mode 1 and H.264 Constrained Baseline Profile

VVX business media phones support H.264 Packetization Mode 1 for incoming and outgoing video calls. Packetization Mode 1 enables high resolution video by allowing media packets to be fragmented during transport.

VVX business media phones also support H.264 constrained base Profile which enables to send and receive calls to IR94 capable devices.

## Enhanced Busy Lamp Field (BLF)

VVX phones supporting Broadworks Enhanced Busy Lamp Field (BLF) are now able to enable and configure new short and long key press behaviors when touching the line key for a monitored BLF user. New actions are 1-touch blind transfer or 1-touch park and retrieve.

A new preferences option in the basic settings is available when configured allowing the phone user to choose their preferred default key press action.

## **Busy Lamp Field Hold Alerting**

VVX phones now supports the Busy Lamp Field (BLF) sip.rendering state. For call control platforms that also support or allow this dialog attribute to be used. VVX phones can add display information when the monitored user places a call on hold with accompanying changes to LED behavior, key press action precedence, and an optional ringtone.

## Busy Lamp Field (BLF) Spontaneous Call Appearance on Per BLF Basis

VVX phone supports Spontaneous Call Appearance property for an incoming call and incoming ringtone per Busy Lamp Field (BLF).

## Enhanced Feature Key Macro Actions

A new macro \$Tconsult\$ is added to execute the consultative transfer functionality irrespective of default transfer type (Consultative/Blind) set on the phone.

## Retrieve Logs from Support Information Package Page in the Web Configuration Utility

You can export Support Information Package (.tar file) using Web Configuration Utility.

The support information package includes the following log files:

. pbu file

- app log file
- boot log file
- audit log file

## Simple Certificate Enrollment Protocol

The Simple Certificate Enrollment Protocol (SCEP) is a protocol that enables you to automatically enroll devices to retrieve new digital certificates or re-enroll to renew expired or expiring certificates.

This feature applies to all phones except VVX 1500 business media phones.

## Privacy for Call Logs and Contacts

Your call logs and contacts you save are stored on the phone and a server. You can clear your personal history of stored call logs and contacts from the phone. You can also restrict the phone from uploading your call logs and contacts to the server.

## Enhancement to Wireless Network Connectivity

You can configure the phone so that users can view the Wi-Fi menu under Basic settings. This allows users to also add a Wi-Fi network manually. Additionally, you can also configure the phone to display the Wi-Fi icon on the phone's status bar and home screen.

You can manually add a new wireless network on VVX phone from the **Basic** menu.

## **Call Hold Timer**

Polycom VVX phones will now display the timer when an active call is put on hold. The active call timer will resume when the user retrieves the call.

up.holdTimerDisplay.enable parameter is used to enable or disable the hold timer display on the VVX phone.

## GZIP Encoding of SIP INFO Messages

Polycom VVX phone sends notifications for various activities to the server in gzip format saving network bandwidth.

You can configure this feature by <code>volpProt.SIP.gzipEncoding.enable</code> parameter that is set to 0 by default.

## Enhanced Boss-Admin for VVX Phones

When using Skype for Business you can configure Enhanced Boss-Admin feature on allowing users to add and edit delegates from the phone's user interface using the contacts list.

Users can also set Call Forward or Simultaneous Call Ringing option from the phone's user interface. When Enhanced Boss-Admin delegation occurs, you can view the delegate key icon on the phone's screen.

## Web Sign In for Skype for Business On-Premise Deployment

Polycom UC Software 5.9.0 allows users to sign in to Skype for Business client on VVX phones. Web Sign In enables users to securely log in to Skype for Business from the phone using a computer web browser or mobile device browser. Users can sign in concurrently to a maximum of eight devices by default. When users are signed in to multiple devices and sign out from one device, users remain signed in to all other devices.



Web Sign In for Skype for Business server support requires Hybrid Modern Authentication (HMA) to be enabled. To use the capability of HMA with Skype for Business On-premise AD should be federated with Azure AD. For more information about Hybrid Modern Authentication (HMA), refer to Hybrid Modern Authentication for Skype for Business.

Common Area phone (CAP) feature is not supported for Web Sign In for Skype for Business On-Premises.



Polycom VVX 250, 350, and 450 business IP phones support on-premises deployments only.

## Configuration File Enhancements

The following table lists configuration file enhancements that include new or changed parameters for the Polycom UC Software 5.9.0 release. For more information on using configuration parameters to enable or disable features, see the latest *Polycom UC Software Administrator Guide* for your release, available on Latest Polycom UC Software Release.

#### Configuration File Enhancements for UC Software 5.9.0

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
firewall-nat.cfg	feature.nat.stun.ena bled	0 (default) - Disable the STUN feature on the phones.	Yes
		1 - Enable the STUN feature on all registered Open SIP lines on a phone.	

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
firewall-nat.cfg	nat.stun.server	Enter a STUN server IP address or domain name. Null (default)	Yes
firewall-nat.cfg	nat.stun.port	Set the server port number for all Open SIP- registered phones. 3478 (default)1 to 65535	Yes
firewall-nat.cfg	reg.x.nat.traversal. mode	Enable or disable NAT traversal mode with STUN for signaling and media on the basis of the phone-level STUN feature.	No
		Auto (default) - Apply NAT configuration to both media and signaling per registration.	
		Disabled - The phone does not use STUN for NAT traversal for this registration.	
		For example, if feature.nat.stun.e nabled is set to 1, and reg.x.nat.traversa 1.mode is set as Auto, the STUN feature is enabled for signaling and media for the registered line.	
firewall-nat.cfg	nat.refresh.interval	Set the time interval for the phone to send NAT keep-alive packets that keep the NAT port open and the phone reachable.	No
		30 seconds (default) - The phone sends NAT keep-alive packets that keeps the NAT port open and the phone reachable.	
		5 - 3600 seconds	
applications.cfg	calendar.monthView.e nabled	0 (default) - Disables the <b>Month View</b> soft key.	No
		1 - Enables the <b>Month</b> View soft key.	

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
device.cfg	device.da.enabled.se t	0 (default) - Do not use the device.da.enabled value.	No
		1 - Use the device.da.enabled value.	
device.cfg	device.da.enabled	0 (default) – Disable the device analytics feature.	Yes
		<ol> <li>Enable the device analytics feature.</li> </ol>	
features.cfg	feature.obitalk.enab led	0 (default) - Disable the connection to the OBiTalk cloud.	Yes
		1 - Enable the connection to the OBiTalk cloud.	
features.cfg	obitalk.accountcode	Specifies the account code provided to the service provider during registration.	Yes
		Null (default)	
		String (maximum of 256 characters).	

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
new.cfg	da.supported.service s	Specify the Device Analytics service to enable.	Yes
		all (default)	
		Comma seperated list of below strings need to be configured (maximum of 2048 characters)	
		sdi	
		ni	
		service	
		tsid	
		pcap	
		log	
		config	
		core	
		vqmon	
		cdr	
		uptimeanalytics	
		hardwareanalytics	
		uianalytics	
		blf	
		sca	
		restart	
		reboot	
		resettofactory	
features.cfg	attendant.callAction	Specify the call action behavior for an Active call.	No
		Dial-Pick up (default) – An active call goes on hold and dials to monitor line when you short press the monitored line keys	
		Blind – Blind transfer an active call on the	
		monitored line keys	
		Park – Parks an active	
		call on the monitored line keys. If there is already a	
		parked call on monitored	
		line then it will retrieve the parked call.	

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
features.cfg	attendant.callAction Menu.enabled	This parameter is configured to get the Attendant Call Action menu on the phone when dynamic BLF is configured on the phone.	No
		0 (default) – Attendant Call Action menu will not appear on the phone.	
		1 - Attendant Call Action menu will appear on the phone.	
features.cfg	attendant.displayHol dState.enable=1	Specifies the control of the display on the phone for BLF hold state.	No
		0 (default) –The phone displays a busy state.	
		<ul><li>1 – The phone displays a hold state.</li></ul>	
		Note: This parameter is only applicable to static BLF.	
features.cfg	attendant.resourceLi st.NUM_REPLACE_1.hol d.ringer	The ringtone that plays on the phone when BLF is in a hold state.	No
		The parameter depends on the value set for the parameter	
		attendant.displayH oldState.enabled.lf the parameter	
		attendant.displayH oldState.enable is set to 1, use the	
		<pre>parameter attendant.resource List.NUM_REPLACE_1 .hold.ringer</pre>	
		Triplet (default) – Specifies the ringtone name for the parameter ringer11.	
		Ringtone for BLF Hold should play for only 10 sec.	

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
feature.cfg	<pre>ind.pattern.blfHold. step.1.state</pre>	0 – Turns off the LED indicator for BLF Hold.	Yes
		1 (default) – Turns on the LED indicator for BLF Hold.	
feature.cfg	<pre>ind.pattern.blfHold. step.1.duration</pre>	Specify the duration of the LED indicator for the pattern when BLF is in a hold state.	Yes
		1000 (default)	
		0- 32767	
fetaure.cfg	<pre>ind.pattern.blfHold. step.1.color</pre>	Set the color of the LED indicator for the pattern when BLF is in a hold state.	Yes
		Red (default) – LED indicator turns to red when the BLF is in a hold state.	
		Green – LED indicator turns green when the BLF is in hold state.	
feature.cfg	<pre>ind.pattern.blfHold. step.2.state</pre>	0 (default) – Turns off the LED indicator for BLF Hold.	Yes
		1– Turns on the LED indicator for BLF Hold.	
feature.cfg	<pre>ind.pattern.blfHold. step.2.duration</pre>	Specify the duration of the LED indicator for the pattern when BLF is in a hold state.	Yes
		1000 (default) 0 – 32767	
Sachus a Sa	in december on the Street		V
feature.cfg	<pre>ind.pattern.blfHold. step.2.color</pre>	Set the color of the LED indicator for the pattern when BLF is in a hold state.	Yes
		Red (default) – LED indicator turns to red when the BLF is in a hold state.	
		Green – LED indicator turns green when the BLF is in hold state.	

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
features.cfg	attendant.resourceLi st.NUM_REPLACE_1.dis play.spontaneousCall Appearances	This parameter is applicable to Static BLF.  Specifies spontaneous call appearance property for an incoming call.  This parameter will override the phone level configuration parameters attendant.behavior s.display.spontane ousCallAppearances.normal and attendant.behavior s.display.spontane ousCallAppearances.automata to show or hide the call appearance property for BLF incoming call based on the resource type.  Auto (default) – This value will use phonelevel configuration depending on the BLF resource type.  Show – This value will override phone-level configuration and show the call appearance.  Hide – This value will override phone-level configuration and hide the call appearance.  Note: Existing BLF ringtone will not stop, if new BLF call comes.	No

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
features.cfg	attendant.resourceLi st.NUM_REPLACE_1.rin	This parameter is applicable to Static BLF.	No
	gType	Specifies incoming ringtone for each static BLF line	
		defaultAll (default) – Specifies the ringtone type ring for the ringtone name.	
		ringer1 - ringer 24.	
		If no ringtone is configured for any static BLF line, then phone level incoming ringtone defined with attendant.ringType parameter will be played.	
features.cfg	SCEP.CAFingerprint	Configure the CA certificate fingerprint to confirm the authenticity of the CA response during enrollment.	No
		null (default)	
		0 - 255 characters	
features.cfg	SCEP.certPoll.retryCount	Specify the number of times to poll the SCEP server when the SCEP server returns a Certificate Enrollment Response Message with pkiStatus set to 'pending'.	No
		12 (default)	
		1 – 24	
features.cfg	SCEP.certPoll.retryInterval	Specify the number of seconds to wait between poll attempts when the SCEP server returns a Certificate Enrollment Response Message with pkiStatus set to 'pending'.	No
		300 seconds (default)	
		300 - 3600 seconds	

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
features.cfg	SCEP.certRenewalRetr yInterval	Specify the time interval to retry certificate renewal.  86400 seconds (default)  28800 - 259200 seconds	No
features.cfg	SCEP.certRenewalThre shold	Specify the percentage of the certificate validity interval to initiate a renewal.  80 (default)  50 – 100	No
features.cfg	SCEP.challengePasswo rd	Specify the challenge password to send with the Certificate Signing Request (CSR) when requesting a certificate. null (default)  0 - 255 characters	No
features.cfg	SCEP.csr.commonName	Specify the common name to use for CSR generation. null (default) 0 – 64	No
features.cfg	SCEP.csr.country	Specify the country name to use for CSR generation. null (default) 0 – 2	No
features.cfg	SCEP.csr.email	Specify the email address to use for CSR generation. null (default) 0 – 64	No
features.cfg	SCEP.csr.organizatio n	Specify the organization name to use for CSR generation. null (default) 0 – 64	No

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
features.cfg	SCEP.csr.state	Specify the state name to use for CSR generation.	No
		null (default)	
		0 - 128 characters	
features.cfg	SCEP.enable	0 (default) - Disable the SCEP feature.	No
		1 - Enable the SCEP feature.	
features.cfg	SCEP.enrollment.retr yCount	Specify the number of times to retry the enrolment process in case of enrolment failure.	No
		12 (default)	
		1 – 24	
features.cfg	SCEP.enrollment.retr yInterval	Specify the time interval to retry the enrolment process.	No
		300 seconds (default)	
		300 - 3600 seconds	
features.cfg	SCEP.http.password	Specify the password that authenticates with the SCEP server.	No
		null (default)	
		string, max 255 characters	
features.cfg	SCEP.http.username	Specify the user name that authenticates with the SCEP server.	No
		null (default)	
		string, max 255 characters	
features.cfg	SCEP.url	Specify the URL of the SCEP server.	No
		null (default)	
		0 - 255 characters	
features.cfg	<pre>feature.wifi.basicme nu.enable</pre>	1 (default) – The phone displays Wi-Fi menu under <b>Basic</b> settings.	No
		0 – The phone does not display the Wi-Fi menu.	

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
features.cfg	status.wifi.icon.ena ble	1 (default) – Display the Wi-Fi icon on the status bar of the phone's screen. Users can access Wi-Fi settings by selecting the Wi-Fi icon.  0 – Does not display the	No
		Wi-Fi icon on the status bar.	
features.cfg	homeScreen.wifi.enab le	1 (default) – Display the Wi-Fi icon on the phone's Home screen.	No
		0 – Does not display Wi- Fi icon on the phone's Home screen.	

video.cfg

video.profile.H264
.packetizationMode

Set to control the H.264 encoding and decoding capabilities on supported VVX business media phones.

No

0 (default) - Supports Single NAL unit mode.

For Incoming calls:

- If the remote endpoint supports only Non-Interleaved mode, the VVX business media phones reject the video with m line 0.
- If the remote endpoint supports Single NAL Unit mode, then the VVX business media phones answer the incoming call with Single NAL mode.

#### For Outgoing calls:

- In all outgoing calls, the VVX business media phones send packetizationmode=0 in the offer.
- 1 Supports both Single NAL Unit mode and Non-Interleaved mode.

#### For Incoming calls:

The VVX
 business media
 phone answers
 both Single NAL

 Unit mode and
 Non-Interleaved

#### For Outgoing calls:

The VVX business media phones send

Template	Parameter	Permitted Values	Change Causes Restart or Reboot
		packetization- mode=0 and packetization- mode=1 in the offer.	
feature.cfg	up.enhancedbossadm in	0 (default) - Disables the Enhanced Boss-Admin feature. 1- Enables the Enhanced Boss-Admin feature.	Yes
features.cfg	up.phoneBootStatu sPopupEnabled	(default) - Phone displays the Popups after reboot.      O – Phone does not display any popup after reboot.	No
sip-interop.cfg	voIpProt.SIP.gzipE ncoding.enable	0 (default) – Disable the Gzip encoding. Notifications will not be sent to server in gzip format  1 – Enable the Gzip encoding. Notifications will be sent to server in gzip format	No
features.cfg	up.holdTimerDispla y.enable	0 (default) – Hold Timer will not display 1 – Hold Timer will display	No

## Install

Consider the following information when installing or updating to Polycom UC Software 5.9.0:

BToE 3.8.0 or above is a must for use with UC Software 5.9.0. Polycom recommends you upgrade
existing BToE and PDC desktop applications to the latest version starting with Polycom UC
Software 5.9.0. If you update the BToE or PDC application without updating to UC Software 5.9.0
or vice versa, the applications will not work with your Polycom phone. See Updating to the Latest
Versions Polycom BToE and Polycom Desktop Connector (PDC) Desktop Applications (EA 318) for
additional information.

 Before updating your VVX 1500 phone to UC Software 5.9.0, make sure that the phone is updated to BootBlock 3.0.4. For more information see Technical Bulletin 695: Upgrading the Polycom VVX 1500 Business Media Phone to UC Software 5.2.0.

### Download the Distribution Files

To download UC Software 5.9.0, you can choose the combined UC Software package or the split UC Software package, both in ZIP file format. The combined version contains all files for all phone models. The split software package is smaller, downloads more quickly, and contains sip.ld files for each phone model, enabling you to choose provisioning software for your phone model and maintain software versions for each model in the same root directory.

For general use, Polycom recommends using the split resource file that corresponds to the phone models for your deployment. To match the correct UC software resource file to your phone model, see the table Understand the Combined ZIP and Split ZIP Files. If you are provisioning your phones centrally using configuration files, download the corresponding resource file and extract the configuration files to the provisioning server, maintaining the folder hierarchy in the ZIP file.

The current build ID for the sip.ld and resource files is UCS 5.9.0.9373 RTS142.

## Understand the Combined and Split ZIP Files

To understand the files distributed in the combined ZIP file, refer to the following table.

Distributed Files	File Purpose and Application		Combined Split
3111-40250-001.sip.ld	SIP application executable for VVX 101	x	✓
3111-40450-001.sip.ld	SIP application executable for VVX 201	x	✓
3111-46135-002.sip.ld	SIP application executable for VVX 300	х	✓
3111-48300-001.sip.ld	SIP application executable for VVX 301	х	✓
3111-46161-001.sip.ld	SIP application executable for VVX 310	х	✓
3111-48350-001.sip.ld	SIP application executable for VVX 311	х	✓
3111-46157-002.sip.ld	SIP application executable for VVX 400	х	✓
3111-48400-001.sip.ld	SIP application executable for VVX 401	х	✓
3111-46162-001.sip.ld	SIP application executable for VVX 410	х	✓
3111-48450-001.sip.ld	SIP application executable for VVX 411	х	✓
3111-44500-001.sip.ld	SIP application executable for VVX 500	х	✓
3111-48500-001.sip	SIP application executable for VVX 501	х	✓
3111-44600-001.sip.ld	SIP application executable for VVX 600	х	✓
3111-48600-001.sip	SIP application executable for VVX 601	х	✓
2345-17960-001.sip.ld	SIP application executable for VVX 1500	x	✓
3111-48810-001.sip.ld	SIP application executable for VVX 150	X	✓
3111-48820-001.sip.ld	SIP application executable for VVX 250	х	✓

Distributed Files File Purpose and Application			Combined	Split
3111-48830-001.sip.ld	SIP application executable for VVX 350	P application executable for VVX 350 x ✓		✓
3111-48840-001.sip.ld	SIP application executable for VVX 450	х	✓	
3111-33215-001.sip.ld	SIP application executable for SoundStructure VolF Interface	X	<b>√</b>	
3111-17823-001.dect.ld	SIP application executable for VVX D60 Wireless Handset and Base Station	x		✓
sip.ld	Concatenated SIP application executable.	✓		х
dect.ver	Text file detailing build-identification(s) for the VVX D60.	✓		✓
sip.ver	Text file detailing build-identification(s) for the release.	✓		✓
000000000000.cfg	Master configuration template file.	✓		✓
000000000000-director y~.xml	Local contact directory template file. To apply for each phone, replace the (zeroes) with the MAC address of	✓		✓
	the phone and remove the ~ (tilde) from the file name.			
applications.cfg	Configuration parameters for microbrowser and   √ browser applications.			✓
device.cfg	Configuration parameters for basic device configuration.	✓	<b>√</b>	
features.cfg	Configuration parameters for telephony features.	✓	✓	
firewall-nat.cfg	Contains configuration parameters for telephony features.	✓	✓	
H323.cfg	Configuration parameters for the H.323 signaling protocol.	✓		✓
lync.cfg	Contains Lync specific configuration parameters.	✓		✓
pstn.cfg	Contains parameters for PSTN use.	✓		✓
reg-advanced.cfg	Contains configuration parameters for the line and call registration and advanced phone feature settings.	✓	<b>✓</b>	
reg-basic.cfg	Configuration parameters for line and call registration and basic phone settings.	✓	<b>√</b>	
region.cfg	Configuration parameters for regional and localization settings such as time and date and language.	✓	✓	
sip-basic.cfg Configuration parameters for the VoIP server and $\checkmark$ softswitch registration.		<b>√</b>		

Distributed Files	File Purpose and Application		Combined Split	
sip-interop.cfg	Configuration parameters for the VoIP server, softswitch registration, and interoperability configuration.		✓	
site.cfg	Configuration parameters that are set for each site.	✓	✓	
video.cfg	Configuration parameters for video connectivity.	✓	✓	
video-integration.cfg	Configuration parameters for SoundStation IP 7000 ✓ ✓ and Polycom HDX system integration.			
Welcome.wav	Startup welcome sound effect.	✓	✓	
LoudRing.wav	Sample loud ringer sound effect. ✓ ✓			
Polycom-hold.wav	Sample ringer sound effect. ✓		✓	
Warble.wav	Sample ringer sound effect. ✓ ✓		✓	
polycomConfig.xsd	vcomConfig.xsd Master configuration file that contains the  parameters and its values.  ✓		✓	

## **Version History**

This following table lists the release history of Polycom Unified Communications (UC) Software.

#### **Version History**

Release	Release Date	Features
5.9.0	December 2018	This release includes important field fixes and support for following features:
		<ul> <li>Session Traversal Utilities for NAT (STUN)</li> </ul>
		<ul> <li>Device Analytics Support for PDMS-SP</li> </ul>
		<ul> <li>Multilevel Precedence and Preemption (MLPP) for Assured Services - Session Initiation Protocol (AS-SIP)</li> </ul>
		<ul> <li>Support for H.264 Packetization Mode</li> </ul>
		<ul> <li>Enhanced Busy Lamp Field (BLF)</li> </ul>
		Busy Lamp Field Hold Alerting
		<ul> <li>Busy Lamp Field (BLF) Spontaneous Call Appearance on Per BLF Basis</li> </ul>
		Enhanced Feature Key Macro Actions
		<ul> <li>Retrieve Logs from Support Information Package Page in the Web Configuration Utility</li> </ul>
		Simple Certificate Enrollment Protocol
		<ul> <li>Privacy for Call Logs and Contacts</li> </ul>
		<ul> <li>Enhancement to Wireless Network Connectivity</li> </ul>
		Call Hold Timer
		<ul> <li>GZIP Encoding of SIP INFO Messages</li> </ul>
		<ul> <li>Enhanced Boss-Admin for VVX Phones</li> </ul>
		<ul> <li>Web Sign In for Skype for Business On-Premise Deployment</li> </ul>

Release	Release Date	Features
5.8.2	November 2018	This release includes important field fixes.
5.7.4	November 2018	This release includes important field fixes.
5.6.4	October 2018	This release includes important field fixes.
5.8.1	September 2018	<ul> <li>This release includes important field fixes and support for following features:</li> <li>Polycom EagleEye Mini Camera Support</li> <li>Forward Error Correction</li> <li>Simulcast Video</li> <li>Centralized Conference Control Protocol (CCCP) Conference View Support</li> <li>Quality of Service (QoS) for Skype for Business Video Calls</li> <li>Toggling Between Audio-only or Audio-Video Calls</li> </ul>
5.7.3	September 2018	This release includes important field fixes.
5.6.3	June 2018	This release includes important field fixes and enhancement to include the following new directives to upload and download the certificate and CSV files  CERTIFICATE_DIRECTORY  FLK_DIRECTORY
5.8.0	June 2018	This release includes support for the following features:  Introducing Polycom VVX Business IP Phones  Open SIP Enhancements  Enhanced IPv4 ICMP Management  Wireless Network Connectivity  Support for REST API  Uploading Logs to a USB Flash Drive  uaCSTA Lines  Enhancements to Check Sync Event  Early Media Call Handling Support  Voice Quality Monitoring Support for the OPUS Codec  BroadSoft Aggregated Self-Presence  Skype for Business Enhancements  Hybrid Line Registration  Support for PSTN Gateway on Failover  Reverse Name Lookup
5.7.2	May 2018	This release includes important field fixes.
5.6.2	April 2018	This release includes important field fixes.
5.7.1	March 2018	This release includes important field fixes and enhancement for Direct Inward Dialing number on VVX business media phones.

Release	Release Date	Features
5.5.4	January 2018	This release includes important field fixes.
5.7.0	December 2017	This release includes support for the following features:
		Open SIP Enhancements
		This release introduced support for BroadSoft User Interface theme, Executive-Assistant Enhancements, Custom BroadSoft Executive-Assistant Enhanced Feature Keys, Client-Side Sorting for Open LDAP servers, Securely Store LDAP Credentials on VVX phones, Voice over Secure IP, Hide the MAC Address, Enhanced E.911, DNS Cache Override, Assured Services - Session Initiation Protocol (AS-SIP), Custom URL Location for Installing LDAP server certificates, Emergency Instant Messages - GENBAND, Default Off-Hook Phone screen, Enhanced Feature Keys Enhancements, Bluetooth Support for VVX Business Media Phones, Reset Phone without Admin Password, Prevent Call Park on Busy Orbits, View Phone Memory Usage Alert.
		Skype for Business Enhancements
		This release introduced support for Direct Inward Dialing Number on VVX Platforms, Web Proxy Auto-Discovery (WPAD), Skype for Business SILK Audio Codec, Hot Desking, Common Area Phone User, BToE Widget, Enhancements to Manual Pairing of Phone using BToE.
5.6.1	December 2017	This release includes important field fixes.
5.6.0	July 2017	This release includes support for the following features:
		Open SIP Enhancements
		This release introduced support for FIPS 140-2 Compliance Support, Two-Way Active Measurement Protocol support, Caller ID Display from the SIP Invite, BroadSoft Server-Based Call Waiting, Call Line Identification, BroadSoft Server-Based Redial, Remote Party Disconnect Alert Tone, Support for Siren 7 Audio Codec.
		The BroadSoft Directory now includes the following new directories:
		Group and Group Common Directory
		Enterprise Common Directory
		Personal Directory
		Skype for Business Enhancements
		This release introduced support for Dial Plan Normalization, Multiple Emergency Number Dial Plan, Skype for Business User Interface Enhancements, Skype for Business Conference Enhancements, Device Lock Enhancements, Profile Picture on Device Lock Screen, Secure Single Sign-On With Third-Party Supporting Solutions, Safe Transfer for Boss-Admin Enhancements, and Busy Options for Incoming Calls.
		VVX D60 Enhancements
		This release introduced support for FLK Support in VVX Business Media Phone with VVX D60, Maximum Number of Handset Registrations, VVX D60 Base Station Pairing Permissions, Mac Address Pairing with VVX D60 Base Station, Continuous Attempt to Re-pair with a VVX D60 Base Station, and VVX D60 Call Handoff.

Release	Release Date	Features
5.5.3	September 2017	This release includes important field fixes.
5.5.2	May 2017	This release includes the following features and field fixes:
		Enterprise Directory Default Search
		Registration Line Address in Status Bar
		<ul> <li>BroadWorks Anywhere EFK for Soft Keys</li> </ul>
		<ul> <li>Hide Contact Directory and Favorites</li> </ul>
		Personal Directory
		BSFT Server Based Call Logs
		New Call Forwarding Icons
		Updated Do Not Disturb Icon
		<ul> <li>Expanded Support for USB Headsets</li> </ul>
		<ul> <li>Support Added for CDP in VVX D60 Base Station</li> </ul>
		<ul> <li>ALLOW Header in 18x Provisional Responses</li> </ul>
		Improved BToE device lock
5.5.1	September 2016	This release adds enhancements for the distribution list, QoE, device lock, Polycom BToE manual pairing, user log upload, updated UI for VVX 500 and 600, unified contact store, web sign-in for online deployments.
5.5.0	June 2016	This release introduced support for BroadSoft Executive Assistant and Flexible Seating, TR-069, the 3GPP Technical Specification, the IPV6 protocol, Off-hook Call Status control, ability to lock the web configuration utility after failed login attempts, and user interface enhancements.
5.4.3	February 2016	This release introduced the Polycom VVX D60 Wireless Handset and VVX D60 Base Station.
5.4.1	December 2015	This release includes support for the following features:
		<ul> <li>Introduced the Polycom VVX 301/311, 401/411, 501, and 601 business media phones.</li> </ul>
		<ul> <li>Flexible line key customization for Skype for Business (EFLK)</li> </ul>
		<ul> <li>Master Key Identifiers (MKI)</li> </ul>
		Shared Line appearance on Lync
		BToE for Windows 10
		Smart Search for Lync ABS
		<ul> <li>Support for simplified Chinese font on VVX 101</li> </ul>
5.4.0A	September 2015	This release includes support for the following features:
		Microsoft Office 365 and Skype for Business Online
		Office365 and Skype for Business Provisioning and Manageability
		Time and Date Initial Setup

Release	Release Date	Features
5.4.0	May 2015	Added support for Alcatel-Lucent CTS features including:
		Advanced Conference
		<ul> <li>Shared Call Appearance with Bridge In</li> </ul>
		Visitor Desk Phone
		<ul> <li>This release also includes support for the following features:</li> </ul>
		Barge In on Busy Lamp Field Lines
		DTMF Relay
		SIP Instance
		Comfort Noise
		Opus Codec
		<ul> <li>DNS Server Address Override</li> </ul>
		Global Directory Synchronization
		Basic Menu Lock
		<ul> <li>Additional features including user interface improvements and resolved known issues.</li> </ul>
5.3.0	March 2015	Includes support for several Lync, BroadSoft, and Open SIP features.

## **Language Support**

The VVX phone user interface includes native support for the following languages:

- Arabic, UAE
- Chinese, Traditional
- Chinese, Simplified
- Danish, Denmark
- Dutch, Netherlands
- English, Canada
- English, United Kingdom
- English, United States
- French, Canada
- French, France
- German, Germany
- Italian, Italy
- Japanese, Japan
- Korean, Korea
- Norwegian, Norway
- · Polish, Poland
- Portuguese, Brazil
- Russian, Russia

- Slovenian, Slovenia
- · Spanish, Spain
- Swedish, Sweden

## **Security Updates**

Please refer to the Polycom Security Center for information about known and resolved security vulnerabilities.

The following table contains the security updates in UC Software 5.9.0.

#### **Security Updates**

Category	Issue ID	Release	Description
Security	EN-103735	5.9.0	Don't use basic authentication on VVX phones due to security issues.

## **Resolved Issues**

The following table lists the resolved issues in UC Software 5.9.0

#### **Resolved Issues**

Category	Issue ID	Description	
Application	EN-112576	The phone crashed during a reboot.	
Application	EN-104339	VVX business media phone reboots while processing Reverse Name Lookup (RNL).	
Application	EN-104422	Once you disable KeepAlive you cannot enable until you restart the phone.	
Audio	EN-105156	Audio quality is bad when using the handset.	
Audio	EN-111048	When audio and video is streamed from VVX phones to far end through BTO application, the audio is choppy due to a shortage of CPU cycles.	
Audio	EN-29792	In a Lync environment, the far-end occasionally hears distorted music for Music on Hold (MOH) when the call is established via TCP.	
Audio	EN-94188	In a GENBAND environment, Music on Hold (MOH) doesn't play to the far end because the phone doesn't send the full codec list when holding the call.	
Audio	EN-88372	There is a 5-second audio delay on the VVX phone when you resume the remote held call on the shared phone.	
Calling	EN-105254	When you set the feature.persistentMute.enabled parameter to 1, the active call audio splits to the speaker along the handset after a PTT/Paging call.	
Calling	EN-104607	DUT is sending binding request to STUN during hold and resume calls.	

Category	Issue ID	Description	
Calling	EN-99796	When making a point-to-point call between a VVX 1500 business media phone and an HDX system with media encryption enabled, the VVX 1500 business media phone doesn't receive audio.	
Calling	EN-97739	In an intercom call between the two VVX D60 handsets, when the first handset answers an incoming call, the second VVX D60 handset is unable to resume the on-hold intercom call.	
Calling	EN-97737	In a certain environment, the VVX business media phone is not able to retrieve the parked call using the BLF line key.	
Calling	EN-95752	When server-based Automatic Call Distribution feature is enabled on the phone and the agent is in a call, pressing the EFK configured Unavailable soft key doesn't change the agent's state.	
Calling	EN-97753	When you configure the Busy Lamp Field feature on the VVX business media phones and search for a directory via the directory soft-key, the phone returns to the Home screen.	
Calling	EN-101429	VVX phone is unable to resume the held call during call transfer when off-hooked.	
Calling	EN-97737	In certain environment, the VVX business media phone is not able to retrieve the parked call using the BLF line key.	
Call Management	EN-110627	VVX phones failed to accept the finalized peer-reflexive ICE candidates published by the far end.	
Call Management	EN-108200	The VVX phone doesn't pick up the Busy Lamp Field (BLF) incoming call when the line key is pressed while the phone is off-hook.	
Certificate Management	EN-107069	DUT is disclosing certificate private key and sending insecure HTTP message.	
Configuration	EN-104784	VVX phones fail to open the Web Configuration Utility in the browser in Chinese due to an insufficient size of the buffer to hold the Chinese Language file. The buffer size was increased to 256MB to hold large files.	
Configuration	EN-101931	The SRTP status shows incorrect details on VVX 411 and 501 business media phones.	
Configuration	EN-96691	Default value of parameter callLists.logConsultationCalls should be changed to 1.	
Configuration	EN-76181	The dialplan.routing.emergency.x.value parameter considers value only up to 255 characters.	
Configuration	EN-111457	VVX phone displays Speed Dial Keys configuration even if the phone doesn's support the feature. This is applicable to all VVX business media phones except the VVX 1500 business media phones.	
Configuration	EN-98530	The SwitchingFunctionDevices event sends incorrect registration line details when registration address contains domain name along with registration number.	

Category	Issue ID	Description	
Directories/Add ress Books	EN-109289	The VVX expansion modules don't refresh the speed dial list after a favorite is added or removed from the phone keys.	
Directories/Add ress Books	EN-98753	When you configure the Busy Lamp Field feature on the VVX business media phones and search for a directory via the directory soft-key, the phone returns to the Home screen.	
General	EN-109713	Polycom terminates NOTIFY line to seize Bridged Line Appearance (BLA) dialog event after it gets a 500-internal error with a retry-after 3 seconds from UAS. The parameter volpProt.SIP.blaGlareHonorRetryAfter was introduced to control this issue.	
General	EN-108308	A 3-second timer is applied to 911 calls on VVX phones when "[2-9]11" is not at the beginning of the digit map.	
General	EN-101084	Removed up.onHookDialingEnabled parameter from the code as this parameter is applicable only for Spectralink wireless phones.	
General	EN-95586	VVX business media phone continues to display the Message Waiting Indicator (MWI) after reboot / de-registration even though no voicemail is available on phone.	
General	EN-107207 EN-92897	Intermittently, a VVX phone don't register with the backup server after an outage.	
General	EN-92078	VVX business media phones receive a 400-missing contact error from session border controllers (SBC) even when sending the contact header in a 200 OK for NOTIFY.	
General	EN-76384	When entering the PIN code to a conference bridge, some digit plays a long tone as if it gets stuck.	
General	EN-97274	VVX business media phones intermittently display LDAP error on corporate directory screen during search operations at times of peak load.	
General	EN-94806	Polycom UC software upgrade fails on VVX phones while upgrading from UC software version 5.4.5 and 5.5.1 due to "Bad Image Checksum" error.	
General	EN-103385	In Skype for Business environment, RGB color for VVX phones is low in UC Software 5.7.x version.	
Interoperability	EN-98487	When processing SIP URLs for a Record-Route header, VVX business media phones incorrectly prepend SIP in the URL.	
Localization	EN-111652	VVX phones are not translating the Inactive string to other languages other than default language.	
Localization	EN-105378	DUT sending En-Us as default language when inviting far-end PSTN users into a conference.	
Logs	EN-95299	In a Skype for Business environment, the username and password for the Skype for Business account display in plain text in the <b>app</b> logs and sys logs.	

Category	Issue ID	Description	
Network	EN-107375	In a Skype for Business environment, the description is missing in Field Help for the server.log.setting.enabled parameter.	
Network	EN-104641	VVX phones fail to get an IP address when they receive two server identifiers (Option 54) in a DHCP offer.	
Network	EN-102127	VVX business media phones use an incorrect TLS version, so TLS v1.2 connections fail.	
Network	EN-98838	The INVITE for Session Description Protocol (SDP) in a conference call does not include SAVP and cryptographic line details.	
Network	EN-92987	When you set the feature. EWSAutodiscover. enabled parameter to 1, VVX business media phones don't send the WPAD PAC file request.	
Network	EN-112091	DUT fails to upgrade in a remote network using NTLM authentication.	
Network	EN-102142	Phone authentication fails for the first time when using the TLS method with Polycom certificates for 802.1x authentication.	
Provisioning	EN-93405	After a factory reset, while provisioning, the VVX business media phone accepts the parameter value of volpProt.SIP.assuredService.namespace as "ets" even though configured as "dsn".	
Provisioning	EN-101878	VVX business media phones restrict uploading Certificate Signing Request (CSR) and CSV files to the provisioning server root directory which causes RealPresence Resource Manager provisioning server failure.	
Shared Lines	EN-104744	In VVX business media phones, the call is being answered on the headset when trying to pick up the held Multiple Appearance Directory Number (MADN) call on the remote shared device using the handset.	
Security	EN-102441	When you enable the Device lock feature for the guest user, the phone asks to set a PIN lock.	
Security	EN-95756	VVX business media phones don't support the NTLM v2 mechanism with the down-level format.	
User Interface	EN-104782	VVX business media phones don't send any error response when the phone is in an idle state and receives an INVITE with replace header.	
User Interface	EN-104591	Headset volume is increasing while switching between headset and handset.	
User Interface	EN-101057	The VVX business media phone web UI help text for the msg.bypassInstantMessage parameter displays incorrect information	
User Interface	EN-100103	While using handsfree, headset or lifting handset to initiate a call, the idle display screensaver continues to stay on VVX business IP phone's screen.	
User Interface	EN-99550	The brightness/ contrast level on Expansion Modules (EMs) connected to VVX 601 business media phone is lower when compared to EMs connected to VVX 600 business media phone.	

Category	Issue ID	Description	
User Interface	EN-93448	VVX business media phone is unable to display Unicode text having Armenian characters.	
User Interface	EN-93031	While inviting a participant to the conference, the Reverse Name Lookup fails to continue with the next source when the display name is not received in SIP signaling.	
User Interface	EN-92639	When "P-Asserted-Identity" in a 200 OK response doesn't have a display name, the phone doesn't display the caller ID details for an incoming call during call pick-up.	
User Interface	EN-79960	When you connect an unsupported USB device to a VVX business IP phone, the phone doesn't display the rear USB port's power alert pop-up.	
User Interface	EN-97749	On VVX business media phones, the call center queue status notification menu doesn't close automatically after 30 seconds.	
User Interface	EN-97248	While playing video on an idle microbrowser, VVX 501 and 601 business media phones doesn't display incoming calls.	
User Interface	EN-96709	During failover/ failback, the phone resets the SIP Open Programmable Interface (SOPI) subscription and phone loses speed dial and directory.	
General	EN-100838	VVX business media phone does not increment the Cseq value in the PRACK message in call forking.	
User Interface	EN-100910	EagleEye Mini Camera does not publish privacy report which causes VVX phones to show wrong LED.	

## **Known Issues**

This section lists the known issues and suggested workarounds for this release and previous releases



These release notes do not provide a complete listing of all known issues that are included in the software. Issues not expected to significantly impact customers with standard voice and video conferencing environments may not be included. In addition, the information in these release notes is provided as-is at the time of release and is subject to change without notice.

#### **Known Issues**

Category	Issue ID	Release	Description	Workaround
Audio	EN-113674	5.9.0	When you place a call from D60 handset to the remote phone, there may be a choppy audio.	No workaround
Calling	EN-100534	5.9.0	VVX media phone is unable to send voicemail to an offline user who has enabled forwarding to PSTN.	Set the ring back timer accordingly.

Category	Issue ID	Release	Description	Workaround
Calling	EN-59245	5.6.1	When you place an outgoing call from the call log, D60 handset always takes default line (1st line).	No workaround
Calling	EN-59872	5.9.0	In an intercom call between the two VVX D60 handsets, when the first handset answers an incoming call, the second VVX D60 handset is unable to resume the on-hold intercom call.	No workaround
Call Management	EN-111696	5.9.0	When a VVX phone is paired with D60 Base station, the number of line keys are changed during the call.	Do not change line keys in an active call.
General	EN-108973	5.9.0	When packet capture command is executed from the cloud, libPcap doesn't begin packet capture occasionally.	Resend the start packet capture command.
General	EN-103119	5.9.0	There are volume control synchronization issues between VVX phones and Plantronics Black wire 5220 USB-A Headset.	When you place a call from D60 handset to the remote phone, there may be a choppy audio.
Network	EN-108646	5.9.0	Polycom VVX 500 and 600 phones does not support video calls on STUN Network.	No workaround

## **Get Help**

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

For information about Polycom partner solutions, see Polycom Global Strategic Partner Solutions.

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