Spectralink 84-Series Wireless Telephone

Release Notes

84-Series Software 6.4.2.x480

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Contact Information

US Location	Denmark Location	UK Location
+1 800-775-5330	+45 7560 2850	+44 1344 206591
Spectralink Corporation	Spectralink Europe ApS	Spectralink Europe Aps—UK branch
2560 55th Street	Bygholm Soepark 21 E Stuen	Suite B1, The Lightbox
Boulder, CO 80301	8700 Horsens	Bracknell, Berkshire, RG12 8FB
USA	Denmark	United Kingdom
info@spectralink.com	infoemea@spectralink.com	infoemea@spectralink.com

Contents

Chapter 1: General

These release notes include references to several previous Spectralink and Polycom UC Software versions to assist administrators who are updating to their Spectralink 84-Series handsets from an earlier software release.

For more details on configuring phones and software features, refer to the *Spectralink 84-Series Wireless Telephone Administration Guide*. Newer features that may not be documented yet in the Admin Guide are described in these release notes.

Important Upgrade Notes and Considerations in Spectralink 84-Series Software

Note: 84-Series Software 4.2.0 and above is limited to the Spectralink 84-Series product line

As of September 2012, starting with software release 84-Series Software 4.2.0, Spectralink 84-Series handset software became independent from Polycom UCS software. Spectralink 84-Series software releases are named 84-Series Software X.Y.Z and only support Spectralink 84-Series handsets, not other Polycom devices.

Releases after Polycom UCS 4.1.0 no longer support Spectralink 84-Series handsets. However Polycom UCS releases prior to September 2012, i.e. Polycom UCS 4.1.0 and earlier, are compatible with the Spectralink 84-Series handsets.

Microsoft® Skype for Business® Interoperability

For additional information about deploying Skype for Business (formerly known as Microsoft Lync®) in your phone environment, see *Spectralink 84-Series Interoperability Guide for Microsoft Skype for Business.*

Spectralink 8450/ 8452/ 8453 Quick Barcode Connector (QBC)

Using the Spectralink Quick Barcode Connector (QBC) with 8450/ 8452/ 8453 phones running UCS 4.3.0/4.4.0 and above requires QBC version 1.20.x or later. Previous versions of QBC will not operate properly.

Bluetooth Headset Support

Only Bluetooth headsets that support EDR and ESCO protocols are recommended for use with the Spectralink 84-Series. Bluetooth headset use is not recommended with phones and other peripheral devices that have the 2.4GHz Wi-Fi band enabled.

Chapter 2: Introducing 84 Series Software 6.4.2.x480

Spectralink Software 6.4.2.x480 is based on Spectralink Software 6.4.1.x275

For use with the following versions:

- CMS Version 3.1.0 and above
- QNC Version: 2.1.0.55 and above

Note
Spectralink 84-Series phone models are no longer supported in AMIE

AMIE management of 84-series phones is no longer supported.

Enhancement

Key	Summary
ESCWIRE-1728	Added additional key exchange ciphers, and the ability to configure a custom cipher, for improved security.

Fixed Issues

Key	Summary
ESCWIRE-1575	Fixed an issue where in certain cases an incoming IM caused the phone to reboot.
ESCWIRE-1720	Fixed an issue where in some cases upgraded phones would not heartbeat with CMS.
ESCWIRE-1724	Fixed an issue where in certain cases Web API didn't play WAV files after multiple API pushes were performed.
ESCWIRE-1806	Fixed an issue where the phone would sometimes fail to connect to a WLAN.
PHNX-6560	Fixed an issue where the phone would sometimes crash when a user tried to select a previously-dialed number from the call list.
PHNX-6563	Fixed an issue where in some cases the phone would fail to shut down properly during a low battery alert.

Chapter 3: Introducing 84 Series Software 6.4.1.x275

Spectralink Software 6.4.1.x275 is based on Spectralink Software 6.4.0.x258.

For use with the following versions:

- CMS Version 3.1.0.x and above
- QNC Version: 2.1.0.55 and above
- AMIE (any current version above 2.x)

Lync/non-Lync version control in general release versions

The first digit in the final four numbers in the release build is reserved for the Lync/non Lync indication. For Lync (used with Skype for Business) releases the digit is set to 1. For non-Lync (SIP) releases, the digit is set to 2.

- 6.4.1.1258 (Lync)
- 6.4.1.2258 (non-Lync)

Updated RAM models

Spectralink 84-Series phone models that are built with the new RAM chip are provisioned with 6.0 software at the factory. The label contains the hardware ID and revision for the new chip:

8400	3111-36150-001;Revision=I	Basic model. No accelerometer. No scanner
8441	3111-67360-001;Revision=D	Basic model with accelerometer. No scanner
8452	3111-36154-001;Revision=F	Scanner model. No accelerometer
8453	3111-67361-001;Revision=D	Scanner model with accelerometer

Caution: Updated hardware cannot run downrev software

Spectralink 84-Series phone models that have the new RAM chip cannot run earlier code versions. They must run 6.0 and above.

In a mixed phone environment, all phones will need to be updated to R6.0 or phones will need to be sequestered into two different groups accessing different update server addresses.

Enhancements

Device Info Fields

Four Device Info fields are provided to allow the administrator to further identify this device, especially useful for identifying the device location. These fields appear on the AMIE console.

Parameter	*Permitted Values*	*Default*
device.info x	**[text field]**	**none**
Four fields are provided. “x” can be 1, 2, 3, and/or 4. Example: `device.info1="Joe"`		

Support for Post Pause Dialing

A post pause dial string is recognized as a plain and simple DTMF phone number (not a URL) that includes a suffix of post dialing DTMF digits and pause symbols. Post-dialed DTMF digits are pulsed out on call connect with a 1 second pause between digits where specified.

Although the post pause digits are embedded in the dial string, they are not included in the outbound INVITE SIP signaling to allow proper routing for the call. However, they are included in the call list on the phone, and the provisioning server. This allows subsequent post pause dialing using the call list.

To initially use a post pause dial string, it must be created manually and directly within a contact menu entry and then saved. Once a call is placed, it can be also re-dialed using the various dialing methods.

The following rules are followed to activate DTMF dialing with post dialed digits:

1. The dial string must start with a digit.
2. Dialed digits are separated by post-dialed digits by first occurrence of a lowercase 'p'.
3. Lowercase 'p' translates to a 1 second pause. Multiple pause characters are supported.
4. All post dialed characters (after the first 'p') must be exclusively from the set of: {0-9, #, *, p}.
5. The dial string must not end with a 'p'.

For example, dialing out a PSTN number 123-456-7890 with DTMF pulse on call connect: ‘123’ followed by a 2 second pause, followed by ‘456’ would be added to a contact list entry as “1234567890p123pp456”

Add AMIE/Spectralink Root CA certificate

AMIE/Spectralink Root CA certificate is added to the certificate trust chain inside the 84 Series. This eliminates the need to copy the cert from AMIE and eliminates the need to add the cert to the 84 Series xml config file.

Fixed Issues

Key	Summary
P-6540	Limits RTP stats when reporting to AMIE to avoid system overwhelm.
E-1028	Support for Early Media enabled.
P-6552	Software now provides additional battery metrics to support these fields in AMIE: Remaining Capacity, Degradation, Last Full Charge, and Last Full Charge Date. Additionally, calculations for the current battery level have been adjusted to support Last Full Charge field.

Chapter 4: Introducing 84 Series Software 6.4.0.x258

Spectralink Software 6.4.0.x258 is based on Spectralink Software 6.3.1.x252.

For use with the following versions:

- QNC Version: 2.1.0.49 and above
- SLIC Version: 3.51 and above

Lync/non-Lync version control in general release versions

The first digit in the final four numbers in the release build is reserved for the Lync/nonLync indication. For Lync (used with Skype for Business) releases the digit is set to 1. For non-Lync (SIP) releases, the digit is set to 2.

- 6.4.1.1258 (Lync)
- 6.4.1.2258 (non-Lync)

Updated RAM models

Spectralink 84-Series phone models that are built with the new RAM chip are provisioned with 6.0 software at the factory. The label contains the hardware ID and revision for the new chip:

8400	3111-36150-001;Revision=I	Basic model. No accelerometer. No scanner
8441	3111-67360-001;Revision=D	Basic model with accelerometer. No scanner
8452	3111-36154-001;Revision=F	Scanner model. No accelerometer
8453	3111-67361-001;Revision=D	Scanner model with accelerometer

Caution: Updated hardware cannot run downrev software

Spectralink 84-Series phone models that have the new RAM chip cannot run earlier code versions. They must run 6.0 and above.

In a mixed phone environment, all phones will need to be updated to R6.0 or phones will need to be sequestered into two different groups accessing different update server addresses.

Enhancements

AMIE Connection

AMIE stands for Advanced Mobile Intelligence for Enterprise, an analytics tool developed by Spectralink to support Spectralink devices within the Wi-Fi infrastructure.

Two new configuration parameters support AMIE on 84 Series feature phones.

Parameter	*Permitted Values*	*Default*
device.amie.heartbeat.URL		**none**
AMIE Server IP address or FQDN. See below if using a secure server (https)/		
device.amie.heartbeat.timeoutSeconds	**60 to 3600**	**900**
AMIE Heartbeat Interval. In seconds. The http port for the AMIE Gateway is 30090. The https port for the AMIE Gateway is 30091.		

See the *AMIE Administration Guide* for more information.

Chapter 5: Introducing 84-Series Software 6.3.1.x252

Spectralink Software 6.3.1.x252 is based on Spectralink Software 6.2 and supports the new RAM chip introduced with R6.0.

For use with the following versions:

- QNC Version: 2.1.0.49
- SLIC Version: 3.51

Lync/non-Lync version control in general release versions

The complete version format for the 6.x.x GA (generally available) release is 6.x.x.xyyy. The xyyy denotes the build ID. For Lync (used with Skype for Business) releases the x is set to 1. For non-Lync (SIP) releases, the x is set to 2.

- Lync: 6.3.1.1yyy
- SIP: 6.3.1.2yyy

Updated RAM models

Spectralink 84-Series phone models that are built with the new RAM chip are provisioned with 6.0 software at the factory. The label contains the hardware ID and revision for the new chip:

8400	3111-36150-001;Revision=I	Basic model. No accelerometer. No scanner
8441	3111-67360-001;Revision=D	Basic model with accelerometer. No scanner
8452	3111-36154-001;Revision=F	Scanner model. No accelerometer
8453	3111-67361-001;Revision=D	Scanner model with accelerometer

Caution: Updated hardware cannot run downrev software

Spectralink 84-Series phone models that have the new RAM chip cannot run earlier code versions. They must run 6.0 and above.

In a mixed phone environment, all phones will need to be updated to R6.0 or phones will need to be sequestered into two different groups accessing different update server addresses.

Enhancements

Keypad lock feature

The user is now able to enable/disable keypad lock and adjust keypad timeout settings via a new menu option for Keypad lock which has been added to Settings> Feature settings>. Two options--Keypad lock and Idle timeout--are available. When set by the user, the settings override the settings in the config files. (E-1424)

Fixes and minor enhancements.

Key	Summary
E-1458	Modify GRUU to display MAC address in the sip instance. The last 12 digits are typically the value that is used for session identification in SIP communication. The software is modified so that these 12 digits are always the phone's MAC address instead of a derived value.
E-1435	Fixed a core dump event during call transfer from remote PBX
E-1425	Change default setting for Handset Polling to Disable
E-1424	Modify keypad lock feature to allow user level changes

Chapter 6: Introducing 84-Series Software 6.2.0.x221

Spectralink Software 6.2.0.x221 is based on Spectralink Software 6.1 and supports the new RAM chip introduced with R6.0.

For use with the following versions:

- QNC Version: 2.1.0.49
- SLIC Version: 3.51

Lync/non-Lync version control in general release versions

The complete version format for the 6.x.x GA (generally available) release is 6.x.x.xyyy. The xyyy denotes the build ID. For Lync (used with Skype for Business) releases the x is set to 1. For non-Lync (SIP) releases, the x is set to 2.

- Lync: 6.2.0.1xxx
- SIP: 6.2.0.2xxx

Updated RAM models

Spectralink 84-Series phone models that are built with the new RAM chip are provisioned with 6.0 software at the factory. The label contains the hardware ID and revision for the new chip:

8400	3111-36150-001;Revision=I	Basic model. No accelerometer. No scanner
8441	3111-67360-001;Revision=D	Basic model with accelerometer. No scanner
8452	3111-36154-001;Revision=F	Scanner model. No accelerometer
8453	3111-67361-001;Revision=D	Scanner model with accelerometer

Caution: Updated hardware cannot run downrev software

Spectralink 84-Series phone models that have the new RAM chip cannot run earlier code versions. They must run 6.0 and above.

In a mixed phone environment, all phones will need to be updated to R6.0 or phones will need to be sequestered into two different groups accessing different update server addresses.

Understanding Updates to Spectralink Software 6.2.0.x221

Minimum ringer volume

In certain situations, the user can set the minimum ring volume so low that the phone cannot be heard at all. The minimum ringer volume configuration parameters allow the administrator to set a minimum ring volume so that a user can only lower the volume to this level. All 4 profiles—normal, meeting silent and custom1—can be set.

New Parameter Name	*Permitted Values*	*Default*
np.[profile].ringing.toneVolume.chassis.minimum	**1-17**	**1**
The attribute is set (on adjusting ring volume) when ringing termination is Chassis and [profile name] profile is active. Max ring volume is 17, minimum ring volume is 1. This parameter allows the administrator to set a minimum ring volume to a higher level so effectively, the ring can always be heard.		

Update retries

If for any reason, the first update attempt fails, the phone will try again. If the update fails repeatedly, check the provisioning server. It may not be working or the expected files may not be loaded. Occasionally, system anomalies can cause an update to fail. Repeated tries usually correct this type of failure. After 10 automatic retries, the phone will boot up using the last successful configuration. Use the Reboot softkey if you want to continue retrying

Fixes and minor enhancements.

Key	Summary
E-1339	Handset fails to download configuration from provisioning server--fixed
E-1321	Intermittent reboots—fixed
E-1018	“
E-1003	“
E-1317	Failover to 2nd PBX not working--fixed
E-1315	Random coredumps--fixed
E-1086	“
E-1288	Heartbeat limit of 65535sec is truncated to 120sec by UI--fixed
E-1234	Instant Msg still works even if it is turned off--fixed
E-1173	Issue forwarding contact center call, "Refer faulty"--fixed
E-965	Hunt group calls display incorrect caller ID--fixed

Chapter 7: Introducing 84-Series Software 6.1.0.xxxx

Spectralink Software 6.1.0.x203 is based on Spectralink Software 6.0 and supports the new RAM chip introduced with R6.0.

For use with the following versions:

- QNC Version: 2.1.0.18
- SLIC Version: 3.51

Lync/non-Lync version control in general release versions

The complete version format for the 6.x.x GA (generally available) release is 6.x.x.xyyy. The xyyy denotes the build ID. For Lync (used with Skype for Business) releases the x is set to 1. For non-Lync (SIP) releases, the x is set to 2.

- Lync: 6.1.0.1xxx
- SIP: 6.1.0.2xxx

Updated RAM models

Spectralink 84-Series phone models that are built with the new RAM chip are provisioned with 6.0 software at the factory. The label contains the hardware ID and revision for the new chip:

8400	3111-36150-001;Revision=I	Basic model. No accelerometer. No scanner
8441	3111-67360-001;Revision=D	Basic model with accelerometer. No scanner
8452	3111-36154-001;Revision=F	Scanner model. No accelerometer
8453	3111-67361-001;Revision=D	Scanner model with accelerometer

Caution: Updated hardware cannot run downrev software

Spectralink 84-Series phone models that have the new RAM chip cannot run earlier code versions. They must run 6.0 and above.

In a mixed phone environment, all phones will need to be updated to R6.0 or phones will need to be sequestered into two different groups accessing different update server addresses.

Contact your Spectralink representative for implementation guidance.

Change log for 84-Series Software 6.1.0

Fixes and minor enhancements.

Key	Summary
ESCWIRE-965	Phone now displays SIP address when a call is received from a response group.
ESCWIRE-1173	Fix to correct incorrectly formatted SIP Refer message when forwarding.

Chapter 8: Introducing 84-Series Software 6.0.0.x193

Spectralink Software 6.0.0.x193 is based on Spectralink Software 5.5.x but it supports a major hardware enhancement—a new RAM chip. .

For use with the following versions:

- QNC Version: 2.1.0.18
- SLIC Version: 3.51

Lync/non-Lync version control in general release versions

The complete version format for the 6.x.x GA (generally available) release is 6.x.x.xyyy. The xyyy denotes the build ID. For Lync (used with Skype for Business) releases the x is set to 1. For non-Lync (SIP) releases, the x is set to 2.

- Lync: 6.0.0.1xxx
- SIP: 6.0.0.2xxx

Affected phone models

Spectralink 84-Series phone models that are built the new RAM chip are provisioned with 6.0 software at the factory. The label contains the hardware ID and revision for the new chip:

8440	3111-36150-001;Revision=I	Basic model. No accelerometer. No scanner
8441	3111-67360-001;Revision=D	Basic model with accelerometer. No scanner
8452	3111-36154-001;Revision=F	Scanner model. No accelerometer
8453	3111-67361-001;Revision=D	Scanner model with accelerometer

Caution: Updated hardware cannot run downrev software

Spectralink 84-Series phone models that have the new RAM chip cannot run earlier code versions.

In a mixed phone environment, all phones will need to be updated to R6.0 or phones will need to be sequestered into two different groups accessing different update server addresses.

Contact your Spectralink representative for implementation guidance.

Chapter 9: Introducing 84-Series Software 5.6.1.x185

Spectralink Software 5.6.1.x185 is based on Spectralink Software 5.4.x and includes bug-fixes and enhancements.

For use with the following versions:

- QNC Version: 2.1.0.18
- SLIC Version: 3.51

Lync/non-Lync version control in general release versions

The complete version format for the 5.x.x GA (generally available) release is 5.x.x.xyyy. The xyyy denotes the build ID. For Lync (used with Skype for Business) releases the x is set to 1. For non-Lync (SIP) releases, the x is set to 2.

- Lync: 5.6.1.1185
- SIP: 5.6.1.2185

Understanding Updates to Spectralink Software 5.6.1.x185

Music on Hold

The Music on Hold feature allows the administrator to download either the default .wav file or a custom music .wav file from the provisioning server to play on the handset when a call is on hold. Tones are downloaded to the device at startup and stored in volatile memory.

A custom .wav file can be uploaded to the provisioning server. Files will be truncated to a maximum size of 300 kilobytes. Two WAVE (.wav) file formats are supported:

- mono 8 kHz G.711 u-Law
- G.711 A-Law

The music plays only for the first call placed on hold. It will not play during conference calls or for the second or third call placed on hold.

New Parameter Name	*Permitted Values*	*Default*
feature.moh.enabled[1]	**0 or 1**	**0**
Enables/Disables the Music on hold feature. For best music quality: • The highest priority is given to G711 Mu codec. • If G711 Mu codec is disabled <voice.codecPref.G711_Mu="0">, priority will be given to G711A codec (if not disabled <voice.codecPref.G711_Mu="0">).		

New Parameter Name	*Permitted Values*	*Default*
NOTE: G711Mu and G711A are preferred for music audio quality. If these are unavailable audio quality may be impaired when other codecs are used.		
feature.moh.filename[1]	**string - max number of characters 256**	**"Spectralink_hold_team.wav"**
The default file is provided by the software starting with R5.6. If desired, the filename can include a path to the file but must be within the 256-character limitation. A custom file can be used per the parameters specified below. If set, the device will attempt to download the specified .wav file from the provisioning server at startup. A custom file must use the format mono 8 kHz G.711 u-Law file.		

1 Change causes handset to restart or reboot.

Presence and Messaging are now independent of each other

Formerly, an admin had to enable both presence and messaging in order to have either work properly. These two features have been disconnected and now one can be enabled without the other. In other words, one can now keep presence but disable IM or, disable presence but keep IM, a less likely situation.

Affected parameters

Parameter	*Used to:*
feature.presence.enabled	Turn the presence feature on or off
feature.messaging.enabled	Turn the messaging (IM) feature on or off

Camp on for presence (Skype for Business)

Camp on for presence allows a user to tag any contact from the SfB Contacts list or Corporate Directory (when presence is shown) for a notification when the contact's presence changes. An audible beep can be turned on or off by the administrator.

The "Tag" softkey appears in the Contact info screen when the feature is enabled. The Tag softkey opens a screen where this feature can be turned on or off for this contact.

When the tag is on and the contact's presence changes, the phone may beep and displays a popup message. The offline-to-online message is **[Contact] is now available** and an IM softkey appears allowing the user to initiate an IM session immediately. The online-to-offline message is **[Contact] is now offline**.

New Parameter Name	*Permitted Values*	*Default*
feature.lyncContactTag.enabled	**0 or 1**	**0**
Enables/Disables the camp on for presence feature.		
feature.lyncContactTag.playTone	**0 or 1**	**0**
Enable to play a tone on notification updates, 0 to disable.		

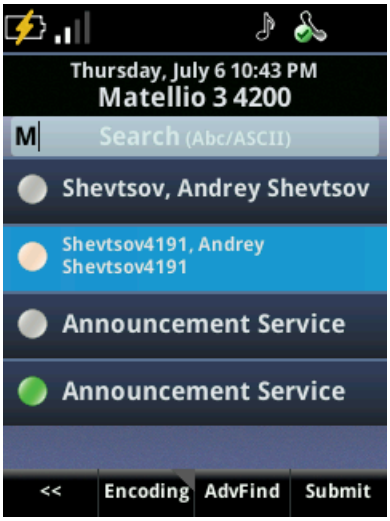
Global Address List-Search feature (GALS)

The global address list search feature works in conjunction with the corporate directory and presence to provide a searchable function for both the active directory environment and SfB resources such as common area phones.

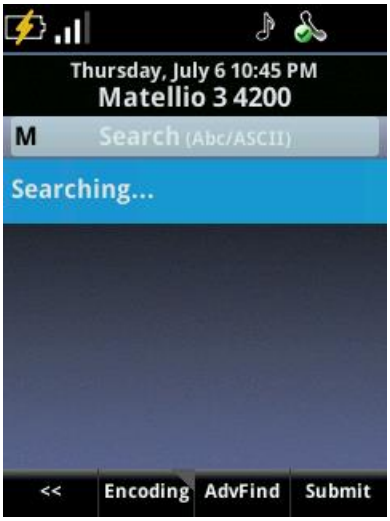
Note that GALS replaces LDAP. Either one or the other is the usable search function. To disable the GALS feature and to use LDAP instead, the dir.corp.galsEnable parameter must be set to 0 or removed.

New Parameter Name	*Permitted Values*	*Default*
dir.corp.galsEnable	**0 or 1**	**0**
Enables/Disables the Global Address List search feature. Note that the corporate directory and presence must also be enabled.		

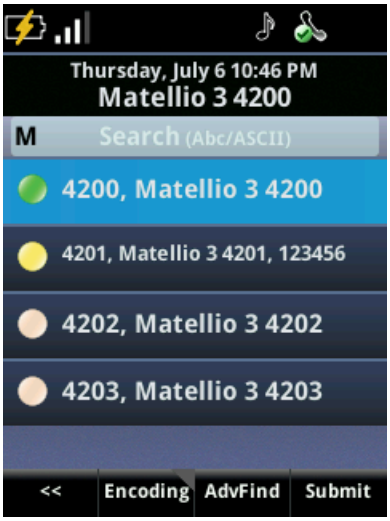
Search text entered



Submit softkey pressed



Results displayed



- Search key(s) may be entered using the keypad. The search begins when the user starts entering text.
- Press the submit softkey to complete the search
- The list is sorted alphabetically by default
- Results are displayed in order. GALS search, queries on all supported contact attributes (first name, last name, email, SIP URI etc.)
- MAX number of Entries returned is set to 256 and it is not configurable as of now.
- If desired contact is not returned in the search result, you need to refine your search string.

Change log for Spectralink Software 5.6.1.x185

Fixes and minor enhancements.

Key	Summary
E-862	SfB contact list now shows both SIP URI and contact phone number providing user both options to call contact
E-878	Fixed LDAP Search query issue. (Fixed in 5.4.x)
E-888	Software appropriately tags wireless packets with DSCP tag
E-891	Software has lowered volume on in-call alerts
E-892	Fixed a 6 second delay on some incoming calls
E-900	Fixed lockup when switching between lines
E-906	GALS implementation fixed problems with global address book
E-907	Fixed Internal call fails to show Missed Call notification
E-914	Fixed call drop from incoming call from external network without RTCP
E-916	Fixed Federated and Edge server traversal calls have delayed audio
E-917	Calls from SfB RGS no longer fail
E-918	Now supports Avaya Session Manager 7.1
E-922	Can now use EFK (Enhanced Function Key) for speed dial
E-931	Fixed SfB calls over Federated and Edge server traversal fail after ~17 secs
E-938	Same fix as E-922
E-940	Same fix as E-922

Chapter 10: Introducing 84-Series Software 5.4.4.x167

Spectralink recommends: Update software immediately if…
Spectralink recommends that you immediately update to release 5.4.4.x167 if you are using WPA2.
This intermediate software release addresses a significant security vulnerability that exploits a flaw in the Wi-Fi Protected Access II (WPA2) Wi-Fi encryption protocol.
Please see Technical Bulletin CS-17-07 for complete information. Direct link: http://support.spectralink.com/sites/default/files/resource_files/CS-17-07%20KRACK%20-%20WPA2%20Security%20Vulnerability.pdf.

Spectralink Software 5.4.4.x167 is based on Spectralink Software 5.4.4.x156 and includes a key security enhancement.

Lync/non-Lync version control in general release versions

The complete version format for the 5.x.x GA (generally available) release is 5.x.x.xyyy. The xyyy denotes the build ID. For Lync (used with Skype for Business) releases the x is set to 1. For non-Lync (SIP) releases, the x is set to 2.

- Lync: 5.4.4.1167
- SIP: 5.4.4.2167

Understanding Updates to Spectralink Software 5.4.4.x167

KRACK – WPA2 Security Vulnerability

Warning: This software release fixes KRACK – WPA2 Security Vulnerability

The Key Reinstallation AttACK (KRACK) vulnerability exploits a flaw in the Wi-Fi Protected Access II (WPA2) Wi-Fi encryption protocol. This vulnerability affects many different devices running Android, iOS, Linux, and Windows operating systems. And the vulnerability applies to both Personal (PSK) and Enterprise (802.1X) modes.

Please see Technical Bulletin CS-17-07 for complete information.

Change log for Spectralink Software 5.4.4.x167

Key	Summary
E-918	Avaya Aura Session Manager 7.1 and later. Failure in some call flows. See Avaya Product Support Notice PSN005085u. Fixed.

Chapter 11: Introducing 84-Series Software 5.4.x

Spectralink Software 5.4.4.x156 is based on Spectralink Software 5.3.x and includes bug-fixes and enhancements.

For use with the following versions:

- QNC Version: 2.1.0.18
- SLIC Version: 3.51

Lync/non-Lync version control in general release versions

The complete version format for the 5.x.x GA (generally available) release is 5.x.x.xyyy. The xyyy denotes the build ID. For Lync (used with Skype for Business) releases the x is set to 1. For non-Lync (SIP) releases, the x is set to 2.

- Lync: 5.4.4.1156
- SIP: 5.4.4.2156

Understanding Updates to Spectralink Software 5.4.

Ability to delete IMs

User can delete IMs from IM History List.

EAP-FAST connectivity improvement

When using EAP-FAST security method, the handset will seamlessly re-connect to the WLAN after a reboot, change of battery or power up, ensuring smooth transition at beginning of shift.

Contact card viewing improvement (Skype for Business)

New **Edit** softkey to view user details when browsing through **Contacts/Call Lists> SfB Contacts..>Groups**. (P-2346)

Change log for Spectralink Software 5.4.x

Key	Summary
E-889	First entry in call list cannot be selected after scrolling. Fixed.
E-881	Significant delay in LDAP query. Fixed.
E-876	Browser occasionally displays white page. Fixed.
E-869	Handset does not create new LDAP connection on reboot. Fixed.
E-866	Phone vibrates instead of returning call waiting tone. Fixed.
E-819	Call server software sees transmission line of SIP as busy when idle. Fixed
E-810	Special characters are supported in WPA2-PSK passphrase as hex keys To use special characters in WPA2-PSK, the passkey must be converted to hex key using external WPA calculator. (eg: https://www.wireshark.org/tools/wpa-psk.html). Set parameter device.wifi.psk.keyType="0" to use hex key instead of ASCII passphrase.
P-2457	Phone when signed in with PIN auth automatically signs back in when brought back in range after going out of Wi-Fi range. (Lync)
P-2397	Wireless.cfg file parameters corrected.
P-2281	Phone reboot no longer causes tech support info dump. (TSID)

Chapter 12: Spectralink 84-Series Software 5.3.x

Spectralink Software 5.3.x is based on Spectralink Software 5.2.x and includes bug-fixes and enhancements.

For use with the following versions:

- QNC Version: 2.0.0
- SLIC Version: 3.51

Lync/non-Lync version control in general release versions

The complete version format for the 5.x.x GA (generally available) release is 5.x.x.xyyy. The xyyy denotes the build ID. For Lync releases the x is set to 1. For non-Lync (SIP) releases, the x is set to 2.

- Lync: **5.3.7.1145**
- SIP: **5.3.7.2145**

Understanding Updates to Spectralink Software 5.3.x

Phone Lock

Phone lock is a security feature to prevent intentional, unauthorized activity. It is now available on Microsoft Skype for Business (Lync) protocol.

A configurable parameter enables/disables SFB Pin Lock. If Phone Lock is enabled a PIN is requested at bootup or after a specified period of time. the PIN must be set up by the user the first time he uses the phone.

A new parameter will allow the phone to play a tone when it prompts for a new Pin Lock PIN.

Parameter Name	*Permitted Values*	*Default*
reg.x.auth.lyncPhoneLockTone	**0 or 1**	**1**
If reg.x.auth.lyncPhoneLockTone="0", lyncPhoneLockTone will not be played during PhoneLockPinEntry Menu. If reg.x.auth.lyncPhoneLockTone="1", lyncPhoneLockTone will be true and whenever PhoneLockPinEntry Menu is displayed Misc tone will be played honoring the global ringer volume. Admin can reset this variable, if user is not interested in playing the tone.		
reg.x.auth.lyncPhoneLockPinEnable	**0 or 1**	**0**
If reg.x.auth.lyncPhoneLockPinEnable="0", SFB Pin Lock aka Phone Lock is disabled. If reg.x.auth.lyncPhoneLockPinEnable="1", SFB Pin Lock aka Phone Lock is enabled.		

Set up PIN

Locked state

Enter PIN

PIN entry timeout

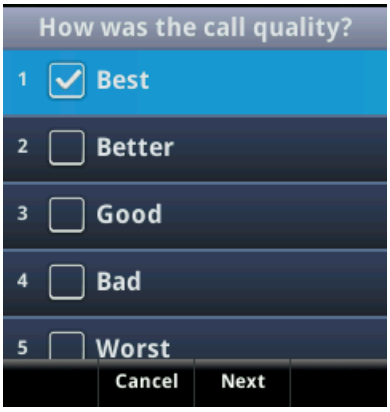
Quality of Experience (QoE)

QoE is a Microsoft Skype for Business user feedback feature. Two multiple choice questions will appear after call termination to collect user's experience about the last call. A report will be prepared with format "ms-cqf+xml" and set to SfB QoE server. A config parameter controls the frequency of menu popup (after x number of calls).

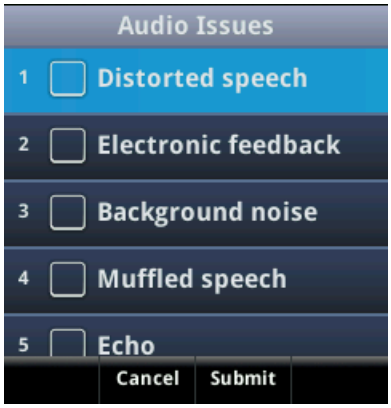
The report is sent as 'vq-rtcpxr+xml' format after each evaluated call is terminated.

Parameter Name	*Permitted Values*	*Default*
call.qoefeedback.frequency	**0 to 20**	**0**
Controls the frequency of menu popup. 0 will disable the feature.		

Question 1



Question 2



Far Mute

Far Mute is a Microsoft Skype for Business feature. when the host of a conference call mutes the entire audience, the members will see a popup “A presenter muted you” When the presenter unmutes the audience the members will see a popup “A presenter unmuted the audience” and can select their local UnMute softkey to be heard by the rest of the audience. The mute icon in the status bar will change accordingly.

Audience is muted

Audience is unmuted

802.11n is disabled by default

Although previously enabled by default, by popular request, it is now disabled.

However phones in inventory will not reflect this change. Therefore, it may not be implemented in the customer’s current phone and they should review their configuration if they are unsure of the state of 802.11n.

The value can be changed by modifying the device.wifi.dot11n.enabled parameter.

A value of 1 indicates that 802.11n is enabled, whereas a value of 0 indicates that 802.11n has been disabled.

Notification to reregister

Reregister notification is offered for installations that require more than the maximum of registrations allowed by Microsoft Skype for Business. When the maximum number of allowed registrations is reached and the phone loses registration, a continuous warning beep with vibrate will occur and a warning message will display. In silent mode, the phone will not beep and vibrate. The user can press OK to stop the notification.

If the phone registered with Autologin, it must be restarted before calling can resume.

If the phone was registered as manual login, it must sign in to re-register before calling can resume.

Known Issues

Key	Summary
E-797	FIPS error in logging followed by handset TSID reboot. TSID changed to core dump to help with failure analysis.
E-810	Special characters are not supported in WPA2-PSK passphrase.

Change log for Spectralink Software 5.3.x

Key	Summary
E-860	Incorrect translations are fixed in R5.3.
E-857	Handset doesn't display incoming call on SfB shared line. Fixed in R5.3.
E-850	Phone now supports “Replaces” in SIP header.
E-848	The phone will now send out the correct subnetTag on emergency calls as provided to the phone by the call server during registration.
E-819	Call Server software sees the TN of the SIP Line set as Busy, but the set itself appears to be Idle. Fixed in R5.3.
E-813	Multiple critical XML-API alerts cause active call to lose audio. Fixed in R5.3.

Chapter 13: Introducing 84-Series Software 5.2.2

Spectralink Software 5.2.x is based on Spectralink Software 5.1.x and includes bug-fixes and enhancements.

For use with the following versions:

- QNC Version: 2.0.0
- SLIC Version: 3.51

Lync/non-Lync version control in general release versions

The complete version format for the 5.2.2 GA (generally available) release is 5.2.2.xyyy. The xyyy denotes the build ID. For Lync releases the x is set to 1. For non-Lync (SIP) releases, the x is set to 2.

- Lync: **5.2.2.1128**
- SIP: **5.2.2.2128**

Understanding Updates to Spectralink Software 5.2.2

DND can be removed from menus

The administrator can now remove DND from all menus.

Parameter	*Modification*	*Default*
feature.dnd.enabled	**Added**	**1**
If 1 Do Not Disturb (DND) will appear on the phone menus and prompts. If 0 Do Not Disturb (DND) will not appear on any menu or prompt.		

Known Issues

Key	Summary
ESCWIRE-797	FIPS error in logging followed by handset TSID reboot. TSID changed to core dump to help with failure analysis.

Change log for Spectralink Software 5.2.2

Key	Summary
PHNX-2350	Update Digital Certificate PKI list in Admin Guide

PHNX-2345 [SfB] User Profile template parameter `reg.1.server.1.specialInterop` default changed to `SkypeforBusiness`

PHNX-2312 Dial plans should automatically add a + preceding the E-9-1-1 dial string. User does not manually enter the “+”

PHNX-2310,PHNX-2311 All phones honor numbers in the E9-1-1 dial masks field as alternate Emergency Numbers and translate them into the E9-1-1 dial string automatically.

PHNX-2309 Phones honor the Conference URI and Conference Mode settings and include these values in Emergency Call PIDF information.

PHNX-2308 Phones honor the NotificationURI setting and notify entities in this field when an Emergency Call is dialed

PHNX-2297 Implement new alternative ICE stack into 84xx replacing previous implementation with confirmed equivalent functionality between ICE stacks.

PHNX-2248 Add ability to remove DND from all menus

PHNX-2207 Corporate Directory Refresh corrected when Contacts entries update their Presence

PHNX-2185 [SfB] updated to clarify Contact/Call List menu options. Now available are
-Local Contacts
-SfB Contacts
-Corporate Directory
-Call Lists

ESCWIRE-815 SoftKey options are not visible when an external call is answered, corrected.

Chapter 14: Spectralink 84-Series Software 5.1.x

Spectralink Software 5.1.x is based on Spectralink Software 5.0.0 and includes bug-fixes and enhancements.

Lync/non-Lync version control in general release versions

The complete version format for the 5.1.x GA (generally available) release is 5.1.1.xyyy. The xyyy denotes the build ID. For Lync releases the x is set to 1. For non-Lync (SIP) releases, the x is set to 2.

- Lync: **5.1.1.1111**
- SIP: **5.1.1.2111**

Known Issues

Key	Summary
ESCWIRE-733	84-Series produce core dumps. Running s/w version 4.13.0.1067

Change log for Spectralink Software 5.1.x

Fixes and minor enhancements.

Key	Summary
ESCWIRE-720	SimRing to PSTN prevents call transfer
ESCWIRE-765	SRTP/RTP No Audio when have SimRing enabled
ESCWIRE-768	Line shows unregistered under Feature fly out menu
PHNX-2281	Reboot can cause a TSID (Tech Support Info Dump) and shouldn't
PHNX-2236	Affirmation is added for log upload success/failed, using callback between utilLogServer and appHybrid
PHNX-2276	Add Special Interop SkypeforBusiness to the config options
PHNX-2277	Coredump caused by attempting to dial when in empty Contacts list menu

Chapter 15: Spectralink 84-Series Software 5.0.0

Version: 5.0.0.x079

Spectralink Software 5.0.0 is based on Spectralink Software 4.14.x and includes bug-fixes and enhancements.

Understanding Updates to Spectralink Software 5.0.0

Turning the backlight off when phone is in the charger

Added the ability to turn off the backlight of the display when the phone is in the charger. This is a new configuration parameter in the everything.cfg file.

Parameter	*Modification*	*Default*
up.backlight.onAcCharger.enabled	**Added**	**1**
If 1 after an idle timeout display backlight is always ON to low intensity. If 0 after an idle timeout display backlight will be OFF.		

Identifying batteries nearing end of useful life

Added the ability to determine if a battery is worn out and nearing the end of its useful life.

When a battery degrades through normal use, it will eventually not last as long between charges. When a worn out battery is detected at power up a warning message will appear on the display which the user can clear. A warning alert icon will remain in the status bar until it is manually cleared. However, unless the battery is replaced the message will reappear at next power up.

These are new configuration parameters in the everything.cfg file.

Parameter	*Modification*	*Min*	*Max*	*Default*
battery.check.fullCapacity1100Min	**Added**	**0**	**9999**	**0**
battery.check.fullCapacity1750Min	**Added**	**0**	**9999**	**0**
If the customer decides to screen batteries, these are the recommended settings: For 1100 (standard batteries) the recommended value is 1010. For 1750 (extended batteries) the recommended value is 1600. If set above the recommended value, perfectly functional batteries might be detected as worn out. If set below the recommended setting, worn out batteries might not be detected at all. The default of 0 ensures that batteries will not be screened at all. When a worn out battery is detected a warning message will appear on the display and a warning alert icon will remain in the status bar until the battery is replaced.				

Known Issues

No new issues.

Change log for Spectralink Software 5.0.0

Fixes and minor enhancements.

Key	Summary
ESCWIRE-740	No call to series-connected RGS Workflows
PHNX-2177	Eliminate coredumps in CAdhocListSubscription::onEvContactPresenceUpdate
PHNX-2178	Move the Upload Logs option out of the Admin Settings Menu
PHNX-2179	Phone reboot after selecting "Upload Logs" with incorrect provisioning server address
PHNX-2230	Disabling retain search in corp directory is not working
PHNX-2252	Implement battery tests in phone code to identify batteries that are reaching the useful end of life.
PHNX-2261	Ability to turn off backlight of display when in charger
PHNX-2265	Phone refuses to connect if Cisco neighbor list support is checked
PHNX-2270	Coredumps in memcpy()
PHNX-2272	Inconsistency in Basic search filter in the corp directory when sticky field is set

Chapter 16: Spectralink 84-Series Software 4.x Releases

Understanding Updates to 84-Series Software 4.14.0

Version: 4.14.0.x071

84-Series Software 4.14.0 is based on 84-Series Software 4.13.x and includes bug-fixes and enhancements.

Lync/non-Lync version control in general release versions

This software release is for Lync or non-Lync 84-Series handsets in software versions as described below.

The complete version number for the 4.14.0 GA (generally available) release is 4.14.0.x071. The xyyy denotes the build ID. For Lync releases the x is set to 1. For non-Lync releases, the x is set to 2.

- Lync – 4.14.0.1071
- non-Lync – 4.14.0.2071

The first digit of the build ID will always identify the type of firmware based on the description above.

Understanding Updates to 84-Series Software 4.14.0

Push logs from the phone

A new feature has been added under Settings> Advanced Settings> Administration settings> Logging> Upload Logs that allows an administrator to flush logs from the phone to the provisioning server. If logging is setup to periodically update to the provisioning server, and the logs have recently been flushed, then this option may not do anything until new logs have been queued.

Suppress Ignore Softkey

This enhancement provides a configuration option to remove the "Ignore" soft key from the handset when an incoming call is presented.

Parameter	*Modification*	*Min*	*Max*	*Default*
call.suppressIgnoreSoftkey	**Added**	**0**	**1**	**0**
If this parameter is 1, the "Ignore" softkey will not show up on the incoming call screen. Instead, the softkey will be blank. If the value is 0, the “Ignore” softkey will display as normal. The default is 0. Changes to this parameter will cause a restart of the phone.				

Corporate Directory Entries Include Presence Information

Beginning with release 4.14, presence status is available in the Corporate Directory. A refresh interval is provided but should not be changed from the default unless specifically recommended by Customer Support.

Parameter	*Modification*	*Min*	*Max*	*Default*
dir.corp.presence.refreshSeconds	**Added**	**5**	**60**	**10**
This parameter is the refresh interval for the presence information of items displayed on a page in the Corporate Directory. Any presence changes in items that are in the Skype for Business Contact List will be updated immediately. This interval is for items that are not in the Skype for Business Contact List because the phone is required to poll for their presence from the Skype for Business server. Setting this value too low may result in heavy loads of traffic on the wireless network as phones try to update the presence information of the directory. Note that the polling only occurs when the user is in the Corporate Directory, so lower values would only cause a problem when many users are in the Corporate Directory at once. Setting the value too high may result in delays in receiving the current status of directory entries. This parameter only applies to Lync phones that have presence enabled. Changing this parameter will cause the application to restart				

Known Issues

None

Change log for 84-Series Software 4.14.0

Fixes and minor enhancements.

Key	Summary
ESCWIRE-694	Call list doesn't reflect call history
ESCWIRE-710	Handset Not Normalizing Dialed Extensions Beginning with 3 and 4
ESCWIRE-711	Icon experiencing failure with msg.mwi.1.callBack Parameter
PHNX-1981	Lync Data Center- Contacts available even though it does not get the complete status

PHNX-2061	Add presence info to Corporate Directory
PHNX-2107	Give user option to upload logs to server
PHNX-2125	Lync v4 - make contact list available during transfer
PHNX-2128	Phone does not sign-in using pin auth to public network
PHNX-2130	Lync v4 - Not all contacts are unavailable when in BOR outage mode and they should be
PHNX-2164	Fix susceptibility of 8400 phones to DROWN openSSL attack
PHNX-2167	Orchard Supply - Ability to remove "Ignore" soft key on incoming call screen
PHNX-2175	Eliminate coredumps in SRTP library
PHNX-2176	Eliminate coredumps in soWebTicket

Understanding Updates to 84-Series Software 4.13.0

84-Series Software 4.13.0 is based on 84-Series Software 4.12.x and includes bug-fixes and enhancements.

Lync/non-Lync version control in general release versions

This software release is for Lync or non-Lync 84-Series handsets in software versions as described below.

The complete version number for the 4.13.0 GA (generally available) release is 4.13.0.xyyy. The xyyy denotes the build ID. For Lync releases the x is set to 1. For non-Lync releases, the x is set to 2.

- Lync – 4.13.0.1067
- non-Lync – 4.13.0.2067

The first digit of the build ID will always identify the type of firmware based on the description above.

Understanding Updates to 84-Series Software 4.13.0

Contact Directory Enhancements

Contact Directory entries, which are local contacts that are defined in the config files and stored locally on the phone, have been extended to include multiple contact fields. Up to five fields can be entered, for example a home, mobile and work number.

These additional fields are available in the Corporate Directory using the dir.corporate.attribute.x.y parameters. Therefore the fields that are available on the LDAP server and displayed in the Corporate Directory can be saved to the Contact Directory.

The field labels in the Contact Directory are configurable by the administrator in the config files. Defaults are Primary, Contact 2, Contact 3, Contact 4 and Contact 5.

Parameter	*Modification*	*Min*	*Max*	*Default*
dir.contact.attribute.x.label	**Added**	**-**	**-**	**Primary, Contact 2, Contact 3, Contact 4, Contact 5**
Sets the label for a contact field in the Contacts Directory. If x is 1, the default is Primary. If x is greater than 1, the default is Contact x. Note that the Primary contact number is used when setting a Speed Dial number to a contact or for default dialing.				

The seed directory can also be populated with values for these additional contact numbers.

Field labels are only configurable by the admin through the config files, they cannot be modified by the user. All contact fields are editable by the user.

New OAI Key Repeat Parameter

The 84-Series handsets support key repeat of the up and down arrow keys. If either key is held down in most OAI application menus, the phone will generate OAI key up and OAI key down events. These events are sent to the OAI server and from there to the OAI application. By default, as the key is held down longer, accelerated scrolling can flood the application with too many events.

The new parameter allows you to disable the key acceleration behavior.

Parameter	*Modification*	*Min*	*Max*	*Default*
oai.keyRepeatAcceleration.enabled	**Added**	**0**	**1**	**1**
Allows you to disable key repeat acceleration for OAI sessions only. When this parameter is set to 0, the acceleration behavior is disabled but the phone still scrolls at a brisk pace. If set to 1, the phone will repeat a held key press using normal acceleration behavior. The default is 1 (enabled).				

Heartbeat for the Spectralink Configuration Management System (CMS)

Two parameters have been added to support integration with future CMS support for the 84-Series. Both of these must be set to non-null values for the heartbeat to be enabled. Consult the CMS Administrator's Guide for information how to populate these parameters.

Parameter	*Modification*	*Min*	*Max*	*Default*
cms.heartbeat.URL	**Added**	**-**	**-**	**NULL**
The URL to which the phone sends the heartbeats. It must be HTTPS. The format is a string of 0-256 characters and the default is NULL.				

Parameter	*Modification*	*Min*	*Max*	*Default*
cms.heartbeat.accountKey	**Added**	**-**	**-**	**NULL**
A unique id for the CMS account. The format is a string of 0-100 characters and the default is NULL.				

Known Issues

PHNX-2122 Web UI for 8400 not working from Internet Explorer 11

Intermittent issues exist with logging into the Web UI from Internet Explorer 11. Spectralink recommends using Chrome or Firefox if this problem occurs.

Change log for 84-Series Software 4.13.0

Fixes and minor enhancements

Key	Summary
ESCWIRE-616	No call progress tone on 8400, when users have to several lync endpoints + simultaneous ring to an PSTN endpoint
ESCWIRE-655	DFS channels in Stand-by vs In-Call
ESCWIRE-657	Handsets failing to register from remote branch site
ESCWIRE-662	Handsets failing to register to Lync on specific versions of handset code.
ESCWIRE-682	Contact Directory access causing reboots and lock up's
ESCWIRE-697	Call Park feature does not function on 8400
ESCWIRE-700	AHUS - 8440 - OAI overloading nurse call app
PHNX-1927	Contacts entries incorrectly show presence info during data center outage
PHNX-1947	Phone in Failover state may lose registration
PHNX-1984	Lync - Calls to PSTN exhibit overlapped ringback - perhaps an Early Media Issue
PHNX-2033	Lync - Pin auth phone with failed user cert continually attempts renewals
PHNX-2041	Corp directory is available via softkey when call is on hold but does not display the dir
PHNX-2052	Lync - in outage mode, auto-complete list is reset every 5 seconds
PHNX-2055	Null pointer InCall in wireless driver
PHNX-2063	Add additional contact entries to phone Contact Directory
PHNX-2070	Modify the EFK state machine and engine to prevent EFK from using NULL or invalid call block pointers

Understanding Updates to 84-Series Software 4.12.0

84-Series Software 4.12.0 is based on 84-Series Software 4.11.x and includes bug-fixes and enhancements.

Lync/non-Lync version control in general release versions

This software release is for Lync or non-Lync 84-Series handsets in software versions as described below.

The complete version number for the 4.12.0 GA (generally available) release is 4.12.0.xyyy. The xyyy denotes the build ID. For Lync releases the x is set to 1. For non-Lync releases, the x is set to 2.

- Lync – 4.12.0.1053
- non-Lync – 4.12.0.2053

The first digit of the build ID will always identify the type of firmware based on the description above.

Understanding Updates to 84-Series Software 4.12.0

Access to Corporate Directory during a transfer

During a transfer, a new entry has been added to the Features softkey named "Corp Directory".

When you press the Transfer softkey, the phone normally shows the Auto Complete List where you can type in a destination or choose one from Call History or Contacts.

If you select Features> Corp Directory instead, you will get the full Corporate Directory. You can search and highlight an item. The "Dial" softkey may be used to make a call for the transfer. Pressing END takes you back to the Auto Complete List.

"Contains" search on the Auto Complete List presented during a transfer

A new feature has been added to allow a "contains" search on the list of contacts presented during a transfer. A "contains" search means the phone shall look for the search string anywhere in the searchable fields instead of just matching from the start of the field.

The following parameter has been added to support this new feature.

Parameter	*Modification*	*Min*	*Max*	*Default*
autoComplete.useContainsSearch	**Added**	**0**	**1**	**0**
When set to 0, the search will compare the entered characters against the starting characters of each field searched. This is the default and current behavior. When set to 1, the search will look for the entered characters anywhere inside each field searched.				

This parameter governs search behavior when in the Auto Complete List. It has no effect on search behavior inside the Call List or the Contact Directory.

Note that the handset limits the search to a certain period of time (otherwise it can interfere with entering letters in the search field) so not all possible matches may be shown in the list after the user enters a single letter or number. This is especially true when using a “contains” search. The user might need to enter 2 or 3 characters to narrow down the search enough for the

handset to show all the possible matches. This should only be necessary when very large lists are present.

"Contains" search on Corporate Directory searches

A new feature has been added to allow a "contains" search on the Corporate Directory. A "contains" search means the phone shall look for the search string anywhere in the searchable fields instead of just matching from the start of the field.

The following parameter has been added to support this new feature.

Parameter	*Modification*	*Min*	*Max*	*Default*
dir.corp.useContainsSearch	**Added**	**0**	**1**	**0**
When set to 0, the search will compare the entered characters against the starting characters of each field searched. This is the default and current behavior. When set to 1, the phone will perform a "contains" search in the Corporate Directory.				

Change log for 84-Series Software 4.12.0

Fixes and minor enhancements

Key	Summary
ESCWIRE-599	Forward button (transfer) missing on external calls to response groups
ESCWIRE-607	Problem with phone de-registration because the certificate renewal process does not work (Extension/PIN-Authentication)
ESCWIRE-615	84-Series Loud Ringer option is no longer available after restart or phone reboot.
ESCWIRE-630	Customer is having problem with the green button is not responding to key presses, when trying to dial out.
ESCWIRE-633	Dropped calls and loss of audio
ESCWIRE-643	Lync phones disconnect/deregister intermittently
ESCWIRE-646	Lync registration and De-authentication issues with handsets.
ESCWIRE-667	8440 receiving "Insufficient Bandwidth" only on 2.4GHz
PHNX-1624	Dialplan preprocessing routing has the potential to overrun the dialplan buffer
PHNX-1907	Lync template files inconsistent for .dnd and .cf
PHNX-1909	Fallback issues encountered on Avaya Aura
PHNX-1966	Remove unused parameters from everything.cfg file
PHNX-1975	Phone is not using TLS-DSK to complete or renew registration when using full AD credentials

PHNX-1976	Phone receiving 503 loses registration while in failover and does not failback
PHNX-1982	Lync Web Ticket Certificate Expiry and Renewal
PHNX-1986	Lync - Phone using Pin Auth Lost registration
PHNX-1999	Add ability to do a "contains" search on list of items presented during a transfer
PHNX-2003	Add ability to do a "contains" search on the Corp Dir and ability to access this directory during a transfer
PHNX-2004	Trusted certificate list is out of date
PHNX-2008	Full Corporate Directory only displays the first time after a reboot if not using persistent view
PHNX-2014	Lync - Security Association log messages are incorrect and misleading
PHNX-2019	Generate CSR uses a 512-bit key (should be 2048)

Understanding Updates to 84-Series Software 4.11.0

84-Series Software 4.11.0 is based on 84-Series Software 4.10.x and includes bug-fixes and enhancements.

Lync/non-Lync version control in general release versions

This software release is for Lync or non-Lync 84-Series handsets in software versions as described below.

The complete version number for the 4.11.0 GA (generally available) release is 4.11.0.xyyy. The xyyy denotes the build ID. For Lync releases the x is set to 1. For non-Lync releases, the x is set to 2.

- Lync – 4.11.0.1030
- non-Lync – 4.11.0.2030

The first digit of the build ID will always identify the type of firmware based on the description above.

URI: Play alert tone volume while in call

In-ear alert tone volumes using the “play:” URI while the phone is in-call can be set separately from the in-ear voice volume. This allows the user to avoid audio shock from an incoming custom alert when the handset is held to the ear during a call.

Only handset mode is affected. Speakerphone and headset modes are not affected.

Parameter	*Modification*	*Values*	*Default*
apps.push.play.incall.volume.scaling	Added	-36 to 0 (dB)	0

apps.push.play.incall.volume.scaling

Attenuates the in-ear (handset) volume of custom wav files sent to the phone using the “play:” URI while the phone is in-call. The value is -36 dB to 0 dB. 0 dB means no attenuation and the alert wav file will play at the same volume as call audio. -36 dB is maximum attenuation of the alert wav file.

Transmit Only to PTT and Paging Groups

PTT and Paging groups have been enhanced to prevent receiving to the group. When configured this way, a user in the group can only transmit into the group, they cannot receive from others in the group. This is on a per channel basis.

The following two new configuration items apply to this feature.

Parameter	*Modification*	*Values*	*Default*
ptt.channel.x.allowReceive	Added	0 or 1	1

Parameter	*Modification*	*Values*	*Default*
ptt.pageMode.group.x.allowReceive	Added	0 or 1	1

ptt.channel.x.allowReceive

Similar to the allowTransmit parameter that already exists for PTT. When set to 0, the user cannot receive on PTT channel x. When set to 1, the user can receive on PTT channel x.

ptt.pageMode.group.x.allowReceive

Similar to the allowTransmit parameter that already exists for Paging. When set to 0, the user cannot receive Pages in group x. When set to 1, the user can receive pages in group x.

Change log for 84-Series Software 4.11.0

Fixes and minor enhancements

ESCWIRE-647 Local contact directory search lags when directory.xml file is large

ESCWIRE-635 8440 fails to pull emergency dial list on 4.7-4.10 firmware

ESCWIRE-630 Lync, Customer is having problem with the green button is not responding to key presses, when trying to dial out.

ESCWIRE-628 8400 Lync 8400 Lync Phone does not display caller information on forwarded calls from colleges Lync client

ESCWIRE-624 Spectralink 8400 (4.10.0.1005) - Lync - Handset subsequently rebooting when attempting to register to Lync and core dumping

ESCWIRE-613 Call Log cannot be cleared when no provisioning server is configured

ESCWIRE-612 Spectralink 8400 (4.9.0.2013) - UPMC East - Handset Producing Core Dumps

ESCWIRE-603 Lync reboot/coredump due to size of dial plan

ESCWIRE-600 8400 LYNC setup with 154 dialing rules still reboots handset on 4.9 software

ESCWIRE-596 8400 with PIN Auth does not populate location information from Lync

ESCWIRE-592 8400 (Lync) 4.9.0.1005 after a Lync pool switch, they can't call from the phone.

PHNX-1979 Lync - Phone core dumps when transferring to a phone with Call Admission Control enabled

PHNX-1975 Lync - Phone is not using TLS-DSK to complete or renew registration when using full AD credentials

PHNX-1972 PIN Auth screen appearing when it should not

PHNX-1965 Lync - Data Center Outage - After Failover, A Lync Sign in has failed message remains posted to the UI

PHNX-1964 Lync - Incorrect pin error message does not match MS Test case 2.59.1

PHNX-1961	[Lync] Forward to Voicemail option doesn't work
PHNX-1960	[Lync] Phone Core Dumped
PHNX-1948	Add channels 132 and 165 to Australian reg domain
PHNX-1946	Phone using AudioCodes that places call while in Failover using Static DNS cache values becomes unregistered
PHNX-1938	The xsi:schemaLocation in the <MAC>-calls.xml file still points to Polycom website
PHNX-1930	Add band provisioning parameters to wireless.cfg file
PHNX-1929	Fix problems in everything.cfg file
PHNX-1925	Lync Data Center Outage Issues
PHNX-1924	Add configuration option to disable core dumps
PHNX-1917	hideBrowser() is not working on 4.9 or 4.10
PHNX-1914	Remove "\n" in all our translated strings
PHNX-1910	User certificate renewal (Lync) retry logic is wrong, and may waste battery life
PHNX-1908	Fix indentation and formatting problems in the config file templates
PHNX-1906	Basic/Feature Settings passwords fail when at max length of 32 chars
PHNX-1905	Translated phrases for Basic/Feature Settings Password are too long
PHNX-1902	Update sample config files for XML notification parameters
PHNX-1895	Add ability to paging to transmit to a group but block receiving
PHNX-1881	Keypad locked message hijacks text of man down alarm
PHNX-1875	New Aruba OUIs should be added to Aruba reduced rates implementation
PHNX-1865	Customer would like to have DHCP Option 120 support added to 84-Series
PHNX-1859	If cancel out of User Profile logout then back out of the menus, the phone reboots and dumps.
PHNX-1849	Alert tone volume while in call
PHNX-1846	84-Series Admin Guide states 802.11n is disabled by default but it is not
PHNX-1844	GNU glibc CVE-2015-0235 Remote Heap Buffer Overflow Vulnerability
PHNX-1825	Cisco - Hold behavior in conference may result in one way audio
PHNX-1823	Cisco - Issue resuming a hold when you are held
PHNX-1746	Phone transmitting PTT reports 99.6% or 100.2% for dropped count of each AThresh syslog message

PHNX-1624 Dialplan preprocessing routing has the potential to overrun the dialplan buffer - needs rewrite

PHNX-1559 User setting of PTT channel subscriptions wrong if lower channels are set to unavailable

Known issues

PHNX-1980 [Lync] 8400 not sending ICE keepalives

PHNX-1927 Contacts entries incorrectly show presence info during data center outage

PHNX-1982 Lync Web Ticket Certificate Expiry and Renewal

PHNX-1968 [Lync] Audio failed on Federated call

Understanding Updates to 84-Series Software 4.10.0

Lock Settings Menus

Functionality is added to lock the Basic and/or Features Settings Menu via configuration items. The following configuration parameters are now available.

Parameter	*Modification*	*Values*	*Default*
settingsLock.basicSettingsPassword	Added	null Valid string from 1 to 32 characters long	Null
settingsLock.featureSettingsPassword	Added	null Valid string from 1 to 32 characters long	Null
settingsLock.disallowProfileSoftkey	Added	0 or 1	0

settingsLock.basicSettingsPassword

If set, the indicated password is required to enter the Basic Settings menu. Also causes the Edit item to be removed from the Profiles softkey flyout menu. This allows user to change which profile is current, but not modify the settings for each profile. Defaults to Null which means no password required.

settingsLock.featureSettingsPassword

If set, the indicated password is required to enter the Feature Settings menu. Also causes the Forward item to be removed from the Features softkey flyout menu. Defaults to Null which means no password required. Note that the Feature Settings menu has DND, Forward and also the Microsoft Lync Sign-n/Sign-out menus, for Lync enabled phones. However, the Lync Sign-in/Sign-out items can be configured to be on the Features softkey flyout menu so one can always sign in and sign out.

settingsLock.disallowProfileSoftkey

If 1, the Profile softkey will not be shown at all. The default is 0, which is current behavior.

Lock Logoff for User Profiles

Capability is added to prevent a user from logging off when User Profiles are enabled. Functionality is controlled by a new configuration parameter.

Parameter	*Modification*	*Values*	*Default*
settingsLock.userProfileLogoutPassword	Added	null Valid string from 1 to 32 characters long	Null

When null, the phone maintains current behavior.

When set, and the phone is configured for User Profiles, the phone:

- requires a password to access the following menu item: Settings > Feature Settings > User Login > Logout
- This means when the user selects "Logout" they will be prompted for the password set in the above config item.
- the Logout item on the Feature softkey will be greyed out and unusable, it will not prompt for a password

This feature does not lock the "Login" item which appears in both places when the phone is logged out.

Note that when the phone is not configured for User Profiles, both the Feature softkey item and the User Login menu are not present.

XML notification that phone is in charger

If properly configured, the phone shall send an XML notification that it is in a charger.

The following two new configuration items apply to this feature.

Parameter	*Modification*	*Values*	*Default*
apps.telNotification.InChargerEvent	Added	0 or 1	0
apps.telNotification.OutChargerEvent	Added	0 or 1	0

WPA-Enterprise Identity Field

The behavior of the Identify field for WPA-Enterprise security methods has changed. If a null value is entered in the config file or via the Spectralink Initial Configuration tool (SLIC), for the identity in PEAP, EAP-FAST or EAP-TLS, then the identity shall default to the MAC address of the phone. The format is AABBCCXXYYZZ (i.e. no colons).

Change log for 84-Series Software 4.10.0

Fixes and minor enhancements

ESCWIRE-473	Handset immediately terminates call when answering an external call from the Lync Hunt Group/Response Group.
ESCWIRE-539	Handset immediately terminates call when answering the call from a Lync Hunt Group/Response Group.
ESCWIRE-552	Call from 8400 handset oneway speech or no audio from handset to PSTN/IP phones, (RTP seems to jump +500 ports when call is connected)
PHNX-1717	Implement fixes to allow Microsoft load balancer to work properly in Lync deployments
PHNX-1759	callLists.grouping parameter does not adhere to its Default value of "Unified"
PHNX-1760	Add ability to lock Basic Settings menus
PHNX-1806	Add missing config items to everything.cfg and log.cfg and fix AG and Web Dev Guide
PHNX-1809	Handsets not staying powered off when shutting down via the red on-hook key
PHNX-1821	Template files cause unnecessary subscribe messages
PHNX-1822	Add keypad lock while in call
PHNX-1829	Add ability to send XML notification that phone is in charger
PHNX-1841	Network Time Protocol Vulnerabilities (Advisory (ICSA-14-353-01C) Update C)
PHNX-1850	Set EAP-TLS Identity to MAC address of phone if null value entered in config file
PHNX-1852	Do not display domain info on in-call screen and also in call lists based on new config item
PHNX-1853	Add config item to lock the ability to logoff from user profiles so you have to have a password to do it
PHNX-1856	RAM issues cause coredumps and reboots

Known issues

WUCS-1844	GNU glibc CVE-2015-0235 Remote Heap Buffer Overflow Vulnerability

Understanding Updates to 84-Series Software 4.9.0

Security Vulnerabilities

Spectralink has confirmed that the recently exposed Network Time Protocol Vulnerabilities (Advisory (ICSA-14-353-01C) Update C) does not affect the 8400 platform.

EAP-TLS

EAP-TLS is now available as a wireless authentication type.

The following parameter(s) have been modified to support EAP-TLS.

EAP-TLS parameters

Parameter	*Modification*	*Values*	*Default*
device.wifi.wpa2Ent.method	**Modified**	**EAP-PEAPv0/MSCHAPv2, EAP-FAST, EAP_TLS[1]**	**PEAPv0/MSCHAPv2**

[1] New value

EAP-TLS uses the **device.wifi.wpa2Ent.user** or the **User ID** field under **Network Interfaces> Wi-Fi Menu> WPA2-Enterprise** for the answer to the EAP "Identity" request. This is the same parameter that is used for EAP-PEAP, but the password (**device.wifi.wpa2Ent.password**) used in EAP-PEAP is not used in EAP-TLS.

The value that is set in the **User ID** field should match the identity the RADIUS server will accept, which may vary from one RADIUS server to another. If it is necessary for the identity to match the common name from the factory installed certificate, then **User ID** should be set to the MAC address with lower case letters and no punctuation, for example "00907a0cd9fd".

New loud ring tone

LoudRing.wav is a ringtone designed to have a cadence and frequency response to maximize volume gains. In the past this ringtone could be downloaded to the phone from a provisioning server, but using that mechanism would cause the ring tone to be erased when the phone is rebooted. In circumstances where the provisioning server is not available, the ringtone could not be accessed.

This ringtone is now added to the phone so it does not need to be downloaded. In order to avoid removing an existing standard ring tone, the LoudRing.wav is not loaded as a default in the ringtone menus. In order to add LoudRing.wav to the ringtone menus, the following parameter must be added to a cfg file:

```
<saf saf.x=”LoudRing.wav” />
```

where “x” is the ringtone slot number you want the LoudRing.wav file to appear in.

This is the same process used to download a wav file to the phone. However, for the LoudRing.wav it is not necessary to have the file on the provisioning server since it is already on the phone. Specifying the saf.x parameter simply tells the phone to make the ringtone available in the ringtone menu list at the specified slot. Per the normal use of the saf parameter, the 'x' is an offset from the end of the default menu (slot 12). So saf.1 points to slot 13, etc…

Once this configuration option is loaded on the phone the LoudRing.wav will be available even if the phone cannot connect to the provisioning server.

Note: The tone loaded into saf.1 becomes the welcome tone that is played at startup.

The welcome tone is programmed to saf.1 which is menu slot 15. You can program this slot to a different welcome tone by programming saf.1 via Normal→Alerts→Welcome→Alert Tone or through the configuration files. Slots 15 through 22 are available for custom tones.

Insert DTMF tones into voice path

A new Spectralink internal URI is provided to allow insertion of DTMF tones into the active voice call path.

The Action Type is `injectDtmf` and the Action is `dtmfString`. The DTMF string comprises the characters to be played using DTMF signaling. The supported DTMF string must be at least one character, and may be up to 10 characters. 6. Supported DTMF characters are: 0 (zero) through 9 (nine), "*" (asterisk/star), "#" (pound).

Like all internal URI's, this can be sent to the phone using PolyUri.pushUri in JavaScript.

Example:

```
PolyUri.pushUri("injectDTMF:1234");
```

Per standard HTTP transport signaling, the 84-series device returns an appropriate HTTP status return code, e.g. 200 OK for the internal URI. No specific error code is provided for notification of success/failure for the DTMF internal URI, other than the HTTP status code.

The DTMF internal URI uses the existing 84-series configuration parameters defined for DTMF signaling, e.g. tone.dtmf.rfc2833Control. To clarify this means the DTMF internal URI uses inband or RFC 2833 signaling based on configuration parameters. Note that the DTMF tones will not be echoed back to the user – that is, the user will not hear the tones that the phone is sending for the DTMF internal URI.

Activate barcode scanner via push command

A new Spectralink internal URI is provided to allow an application to activate the barcode scanner via a "push".

The Scan Barcode internal URI includes a timeout value to control the duration the scanner is active and detecting a barcode. The accepted duration is 1 (one) to 60 (sixty) seconds.

Note

This internal URI is similar to a user pressing the barcode scanner button for `timeOut` number of seconds or until a barcode is correctly read by the module.

The Action Type shall be `scanBarcode` and the Action will be `timeout`.

Like all internal URI's, this can be sent to the phone using PolyUri.pushUri in JavaScript.

Example:

```
PolyUri.pushUri("scanBarcode:60");
```

The Scan Barcode internal URI complies with the other applicable 84-series barcode configuration parameters.

The scanned barcode data is returned within a new Telephony Notification event, called `ScanBarcodeEvent`. A new configuration parameter is used to activate the event: `apps.telNotification.scanBarcodeEvent`. This parameter behaves like the other telephony event enable/disable parameters, i.e. if 0, event notification is disabled. If 1, notification is enabled.

The new `ScanBarcodeEvent` event has the syntax shown below (with example data):

```
<PolycomIPPhone>
<ScanBarcodeEvent>
<PhoneIP>172.29.71.157</PhoneIP>
<MACAddress>00907a0e4459</MACAddress>
<BarcodeData>04900004086</BarcodeData>
<TimeStamp>2012-12-10T08:11:25-07:00</TimeStamp>
</ScanBarcodeEvent>
</PolycomIPPhone>
```

If enabled, the `ScanBarcodeEvent` event signals to an application in the same manner as other Telephony Notification events (e.g. to the URL provided in the configurations parameters.

If enabled, the `ScanBarcodeEvent` event sends data to an application (i.e. to the URL specified) upon the barcode scanner correctly scanning data (and per configuration parameters settings) whether a user manually presses the barcode scanner button or the Scan Barcode internal URI is used.The scanned barcode data sent in the `ScanBarcodeEvent` will be post-processed using the existing barcode configuration parameters (e.g. the data may have symbology header stripped if applicable).

Note

The above post-processing of data behavior is just like the existing implementation when the barcode button is pressed manually.

If a second Scan Barcode internal URI is called/received while the barcode scanner is active as a result of a previous internal URI instantiation then the timeout will reset to the value in the second instantiation. If the user manually presses the barcode button and a Scan Barcode internal URI is received, the Scan Barcode internal URI instantiation is "dropped", if possible.

- If a Scan Barcode internal URI is in process and the user manually presses the barcode button the scan will continue. The scan will complete when the user releases the barcode button or when the timeout from the Scan Barcode internal URI is over, whichever happens first.
- If as a result of a Scan Barcode internal URI instantiation, the scanner module correctly detects barcode data, then the barcode scanner shall deactivate, i.e. become ready for another Scan Barcode internal URI instantiation or manual button press.

Note

The above behavior is the same as the current operation when a user presses the barcode button and data is correctly scanned.

The `ScanBarcodeEvent` event is always generated upon reception of barcode data, even if the browser is open, and even if a barcode handler is attached.

Note

In the case a barcodehandler is attached, the application would receive the handler callback and `ScanBarcodeEvent` event.

Change log for 84-Series Software 4.9.0

Fixes and minor enhancements

ESCWIRE-495	Barcode scanner stops working (Barcode data stops showing up in Browser pages)
ESCWIRE-557	Lync 2013 - Unable to answer calls transferred from Exchange UM
ESCWIRE-558	Handsets will reboot when downloading a Lync dial plan containing over 102 translation rules.
ESCWIRE-570	Calls from Voicemail (Exchange) can't be answered on handset
ESCWIRE-572	Call Forward Timer
ESCWIRE-577	Customer experiencing core dumps after OAI alerts
WUCS-1530	Very low battery, shutdown initiated for battery change and handset restarts automatically

WUCS-1738	Displayed PTT settings not effective settings when edited from screen
WUCS-1742	Certificate Signing Request is rejected by both Tomcat and Apache 2.4 HTTP servers
WUCS-1744	Backlight Maximum Intensity indicator bar does not update properly
WUCS-1759	callLists.grouping parameter does not adhere to its Default value of "Unified"
WUCS-1788	Modify default power settings for EU reg domain to match the new ETSI regulations
WUCS-1789	Implement EAP-TLS
WUCS-1800	Add LoudRing.wav as a permanent selection on the phone
WUCS-1801	Create new Spectralink internal URI to allow an application to activate the barcode scanner via a "push".
WUCS-1802	Create a new Spectralink internal URI to allow insertion of DTMF tones into the active voice call path
WUCS-1807	Phone getting "Barcode Update in progress" messages when should not
WUCS-1808	Add signing authority (CA) name to Status->Platform->Phone display for factory installed certificates

Known issues

ESCWIRE-473	Spectralink 84-Series (4.6.1.0011) Handset immediately terminates call when answering an external call from the Lync Hunt Group/Response Group.
WUCS-1844	GNU glibc CVE-2015-0235 Remote Heap Buffer Overflow Vulnerability

Understanding Updates to 84-Series Software 4.8.0

84-Series Software 4.8.0 is based on 84-Series Software 4.7.x and includes bug-fixes and minor enhancements.

This software release is for Lync or non-Lync 84-Series handsets in software versions as described below.

The complete version number for the 4.8.0 GA (generally available) release is 4.8.0.xyyy. The xyyy denotes the build ID. For non-Lync releases, the x is set to 2. For Lync releases the x is set to 1.

- Lync – 4.8.0.1004
- non-Lync – 4.8.0.2004

The first digit of the build ID will always identify the type of firmware based on the description above.

Hide browser

Adds a new XML API primitive to allow an application to terminate the browser remotely.

Call handling when out of range

This load enables the handset to drop a call when the user goes out of range for 60 seconds.

When the phone is taken out of range, the call will be dropped after 60 seconds. This prevents the case where the user comes back into range but forgets to hang up the call and the phone is stuck in an incomplete call state, preventing the user from hearing the phone ring on new calls. This enhancement is not configurable.

Band steering

Band steering is a feature that allows you to configure the handsets to use a preferred band during roaming.

If this preference is not configured, the 84-Series handset performs inter band roaming between the 2.4GHz and 5GHz bands if both bands are enabled without any preference to one band over the other. The band of the access point with the strongest signal strength, as measured by the handset, is used.

Band steering is the use of a preferred band when selecting an AP. The handset uses the preferred band as long as telephone performance is not degraded by staying on the preferred band instead of using the non-preferred band.

The handset has three new configuration parameters:

- preferredBandRoaming.band: selects the preferred interband roaming mode. Allowable values are *noPreference* (the default value), *prefer2_4GHz*, or *prefer5GHz*. For interband roaming to function, both 2.4GHz and 5GHz bands must be enabled using existing device.wifi.radio parameters.
- preferredBandRoaming.threshold: sets the roaming threshold. The threshold may be configured for RSSI signal strengths from -65dB to -40dB.
- preferredBandRoaming.bias: used in conjunction with the threshold to strengthen the preferred band criteria.

The handset makes band selections based on signal strength for three different conditions; strong signal strength, moderate signal strength, and low signal strength.

If the measured signal strength on a channel in the preferred band is above preferredBandRoaming.threshold (+ 10dB), the handset stays on the preferred band regardless of how much better the signal strength on the non-preferred band may be. There is no degradation in performance as long as the signal strength is strong so there is no reason to roam to the non-preferred band. The handset may still roam between APs on the preferred band.

While the default is -65dB, Spectralink recommends that users experiment with values between -65dB and -55dB. The +10dB that is added the threshold is an artifact of the hysteresis built into the phone to prevent it from ping-ponging between two APs.

On the other end of the signal strength range is the point where signal strength is so low the wireless performance is impacted. Below this threshold, the handset uses the access point with the best signal strength regardless of which band is available (i.e. uses the rules that existed prior to adding the band steering feature). Any user configured preference is ignored. This threshold is -75dB and is not configurable.

When the signal strength on the preferred band is moderate, between -75dB and preferredBandRoaming.threshold + 10dB, the handset MAY use the preferred band. The handset uses the non-preferred band if the signal strength is significantly better than the preferred band. If the signal strength on the non-preferred band is only slightly better than on the preferred band, the handset uses the preferred band. The handset software has a 10dB hysteresis built into the roaming algorithm to prevent the telephone from constantly switching between two APs with similar signal strength.

The handset will switch from a non-preferred band AP to a preferred band AP if the preferred band AP signal strength is greater than the signal strength of the non-preferred band AP. But to switch back to the non-preferred band AP, the non-preferred band AP must be at least 10db better than the preferred band AP. This amount can be increased up to 20db by using the bias parameter, thus strengthening the preferred band criteria. The preferredBandRoaming.bias is added to the preferred band signal strength before comparing it to the non-preferred band AP.

Band roaming parameters

Parameter	*Modification*	*Values*	*Default*
preferredBandRoaming.band	Added	noPreference prefer2_4GHz prefer5GHz	noPreference
preferredBandRoaming.threshold	Added	-65 to -40 dB	-65
preferredBandRoaming.bias	Added	0 to 10 dB	0

As an example, imagine the following scenario:

- The **threshold** is set to -60
- The **bias** is set to 5
- The **band** is set to prefer 5GHz (a-band)

In this case, the following would be true:

- If there is a channel on the a-band that is at -50 or greater then the phone will always use the a-band and will never roam to the b-band. The value of -50 is the **threshold** + 10 or -60 + 10 = -50.

- If the phone is on an AP on the a-band and the RSSI is less than -75, the phone will use the old rules to roam to a new AP. If it finds a new a band AP with sufficient signal strength it will use that AP, but may also roam to the b-band. At this point, it is just looking for the best AP it can find.
- If the phone is on the a-band and the candidate to roam to is also on the a-band, then normal roaming rules will apply.
- If the phone is on the a-band and the candidate to roam to is on the b-band, then the phone shall add the **bias** value into the hysteresis rules. The higher the **bias** the more it will try to stay on the preferred band (the a-band in this case) even if there are APs on the b-band that have better signal strength.

No other changes are made to the handset's roaming behavior. Setting preferredBandRoaming.band to *noPreference* results in the same roaming behavior as in previous versions of software. The handset still does not actively roam in standby (to preserve battery life) but will use the inter band roaming rules if the handset loses the network and must reacquire the network.

Change log for 84-Series Software 4.8.0

Fixes and minor enhancements

WUCS-1437 Adding a second line registration breaks the Ring Pattern menu

WUCS-1474 TSPEC Teardown is not transmitting TSPEC Information Element

WUCS-1627 Phone waiting too long to roam

WUCS-1647 Cost Plus - Push Messages sent as "Critical" not displaying

WUCS-1724 Phoenix handset needs to support new LM-3509 LCD/Keypad backlight driver

WUCS-1748 Need to change the maximum power allowed on Phoenix for the ETSI regulatory domains

WUCS-1754 Lync Phone associated with Pin Auth does not report extension to a polling request

WUCS-1767 Session list does not correctly reflect active sessions when a call is initiated and browser is closed using HideBrowser() JS

WUCS-1770 Phone changed from non-Lync PBX to Lync coredumps on sign-in

WUCS-1772 Lync parameter for auto signin (reg.x.auth.loginCredentialType) missing from config files

Understanding Updates to 84-Series Software 4.7.0

84-Series Software 4.7.0 is based on 84-Series Software 4.5.0 and 4.6.1. This release merges the non-Lync (4.5.0) and Lync (4.6.1) release branches back into one release train.

Please refer to the *Spectralink 84-Series Wireless Telephones with Microsoft Lync Server 2013 Integration Guide* application note for supported features and special configuration instructions. Bug fixes and minor enhancement are listed on the following pages.

This software release is for non-Lync and MS Lync 84-Series handset models.

New Version Information

The 4.7.0 release includes firmware to support both the non-Lync and MS Lync 84-Series handset models. There are different firmware images for each model.

- the non-Lync firmware file is named **slnk84xx.sip.ld**.
- the Lync firmware file is named **slnk84xx.lync.ld**.

It is possible (though not recommended) to run non-Lync code on a Lync enabled phone. To easily tell the difference between the firmware versions, the build id of the version number is structured to indicate the firmware type.

The complete version number for the 4.7.0 GA release is 4.7.0.x327. For non-Lync releases, the x is set to 2. For Lync releases the x is set to 1.

- Lync – 4.7.0.1327
- non-Lync – 4.7.0.2327

The first digit of the build id will always identify the type of firmware based on the description above.

Pin Auth

Pin Auth for MS Lync is a new feature for this release. See the latest Microsoft Lync Server 2013 Interoperability Guide for information on how to configure and use the Pin Auth feature.

Scanning in standby

This feature was originally implemented in the 4.5.0 non-Lync release but was not available to Lync users in the 4.6.1 release. This feature is now available for both Lync and non-Lync phones.

This load implements a new feature that allows scanning in standby if the current AP RSSI is lower than a configured threshold (per the parameter device.wifi.noBkgScanRssi.) In addition, a scan will be performed immediately if the current AP RSSI drops to 5 dB below the programmed threshold, and a scan has not been performed in the last cycle.

Enabling scanning in standby will lead to reduced battery life and is not recommended unless specific issues with roaming are present.

Parameter	*Modification*	*Min*	*Max*	*Default*
device.wifi.noBkgScanRssi	Added	-100 (disabled)	0	-100

"Heartbeat" Feature

A "heartbeat" feature has been added that can be configured for various times. This heartbeat can be used by applications to detect that a phone is no longer in range or is turned off.

Parameter	*Modification*	*Min*	*Max*	*Default*
apps.telNotification.heartbeatTimeoutSeconds	Added	0 (disabled)	65,535	0

Other 4.7.0 enhancements

The following minor enhancements or modifications were introduced in 4.7.0:

- Method added to close the Web Browser on 8400s via the application/server.
- When the phone is taken out of range, the call will now be dropped after 60 seconds. This prevents the case where the user comes back into range but forgets to hang up the call and the phone is stuck in a incomplete call state, preventing the user from hearing the phone ring on new calls. This enhancement is not configurable.
- Fixes for OpenSSL Heartbleeder security vulnerability. This was released for non-Lync models in 4.5.0. For Lync models it was released as a hot patch from 4.6.1. This is the first GA release for the Lync models with this fix.

Change log for 84-Series Software 4.7.0

The following section lists changes in 84-Series Software 4.7.0 from 84-Series Software 4.6.1 and 4.5.0. Some of these issues are duplicated from the non-Lync 4.5.0 release because they were not previously available in a Lync release.

Fixes and enhancements

ESCWIRE-405	Blue-Sky Wireless. Push issue with web page that references two style sheet
ESCWIRE-413	Missing XML nurse call alerts on 8400
ESCWIRE-434	Browser randomly fails
ESCWIRE-453	Wrong OAI softkeys displayed on 8400.
ESCWIRE-454	WPA2-PSK passphrase displayed in clear text when exporting config file from WebUI
ESCWIRE-462	Application causes phone browser to crash
ESCWIRE-467	The phone intermittently shows unregistered in-call and standby with Lync.
ESCWIRE-474	GS1 DataMatrix codes AIM identifier is transmitted when the paramter barcode.symbologyIdTransmission is set to "0".
ESCWIRE-476	Lync Server 2010/2013 Standard delegates are not able to sign Lync meetings
ESCWIRE-486	When the user powers the phone back on and logs in, push notifications do not work.
ESCWIRE-487	Can't identify registration state
ESCWIRE-493	RTP Audio delay on Initial Call Setup
ESCWIRE-495	Barcode scanner stops working (Barcode data stops showing up in Browser pages)
\ESCWIRE-511	8400 continually reboots when sent check-sync after toggling one of the persistent parameters.
ESCWIRE-514	Duress alarm shown 2 or 3 times on the phone
ESCWIRE-520	Unable to set Vibrate in notification profiles
ESCWIRE-530	Spectralink 8400 Wi-Fi handset does not allow for dialing numbers starting with a Star (“*”)
ESCWIRE-545	DND re-enables after an 8400 reboot
WUCS-1185	Phone status menu still shows "License" submenu
WUCS-1315	Allow 8400 to "prefer" a band (2.4 GHz or 5 GHz) when enabled for band roaming

WUCS-1400	Missing certificate file causes TLS to fail
WUCS-1510	Increase maximum file size for local contact directory files
WUCS-1538	Translate new and modified phrases
WUCS-1551	PTT fails to free CCBs when call is disconnected
WUCS-1569	Add new JavaScript functions to allow forwards compatibility with SL8700.
WUCS-1577	Browser randomly fails
WUCS-1584	Issues when the 8440 calls a hunt group number and the call is answered with Shoretel Communicator
WUCS-1608	Two ptt.emergencyDial.* parameters still say templates="new" in cfgParamDef.xml file
WUCS-1619	Modify reg domain 10 (Australia) to include uni-band 4 frequencies
WUCS-1621	Missing French translation in 4.3.0.0166
WUCS-1635	Phone sends directed probes in standby when assocaited to an Aruba AP in 2.4GHz
WUCS-1636	Turn off the dimming via the API
WUCS-1637	WPA2-PSK passphrase displayed in clear text when exporting config file from WebUI
WUCS-1643	All UDP packets in Phoenix have an IP ID field of zero
WUCS-1646	Add and implement parameter apps.telNotification.heartbeatTimeoutSeconds.
WUCS-1649	Freezes on Save Config from Multiple Handset Menus
WUCS-1655	Barcode scanner becomes completely unresponsive
WUCS-1662	Enable scanning in standby when signal level is low
WUCS-1676	Fix security vulnerability CVE-2014-0160 (aka Heartbleeder)
WUCS-1674	Implement MS Lync pin authorization (Pin Auth)
WUCS-1683	Checking for Lync2013 option
WUCS-1698	Setting xfer on conference end puts phone in reboot loop when Login Persistent = 1
WUCS-1718	Setting your location from the "Set your location" pop-up causes a reboot and coredump
WUCS-1724	Handset needs to support new LCD/Keypad backlight driver
WUCS-1735	Web Application partners need a way to close the Web Browser on 8400s via their application/server.

Understanding Updates to 84-Series Software 4.6.0 and 4.6.1

Note: Spectralink 4.6.0 and 4.6.1 are Lync only

The Spectralink 4.6.0 and 4.6.1 releases pertain to Lync installations only.

84-Series Software 4.6.1 is based on 84-Series Software 4.6.0. The 4.6.1 and 4.6.0 releases are almost identical except 4.6.1 has an additional menu item for ease of configuring Microsoft Lync 2013. The 4.6.1 release includes all the 4.6.0 fixes and enhancements.

84-Series Software 4.6.0 is based on 84-Series Software 4.4.0 and included support for Microsoft Lync 2013, as well as bug-fixes and minor enhancements. The 4.6.0 release was qualified by Microsoft for Lync 2013 interoperability. After qualification, a potentially confusing menu item was identified and version 4.6.1 was created to minimize deployment confusion. Version 4.6.1 and 4.6.0 is identical from a SIP interoperability and call-control perspective.

Please refer to the *Spectralink 84-Series Wireless Telephones with Microsoft Lync Server 2013 Integration Guide* application note for supported features and special configuration instructions. Bug fixes and minor enhancement are listed on the following pages.

This software release is for those 84-Series handset models that support MS Lync. Non-Lync 84-Series handsets should not use the 4.6.x software releases and use the non-Lync releases (e.g. 4.3.x).

84-Series support for MS Lync

On August 1st 2013, all Spectralink 84-Series handsets were made available for sale in two variants, SIP, and SIP with Microsoft Lync. The standard SIP version supports direct integration with all call-servers listed in this Guide (except Microsoft), and SIP with Lync will additionally support Microsoft Lync. The handset's supported version will be identifiable via product ID & label markings.

84-Series Product IDs with Microsoft Lync Support

Model	
8440:	2200-37149-001, 2200-37150-001 2200-37174-101, 2200-37175-101
8441:	2200-37290-001, 2200-37290-101
8450:	2200-37152-001, 2200-37153-001 2200-37176-101, 2200-37177-101
8452:	2200-37172-001, 2200-37173-001 2200-37198-101, 2200-37199-101
8453:	2200-37294-001, 2200-37294-101

Label example

All 8440/8450/8452 handsets manufactured before August 1, 2013 are the SIP with Lync variant, and will interoperate with Lync providing they operate with a Lync software release (4.4.x or 4.6.x). If they are upgraded to a SIP only release (4.3.x) they will work with all listed call-server except Microsoft Lync.

After August 1, 2013 8440/8450/8452 models are available for sale with SIP or SIP with Lync. Those handsets that have not been factory-enabled to run Microsoft Lync will not run Lync software releases. Lync handsets support Lync or non-Lync code, however 8441/8453 will not support 4.2.x or earlier.

As a result, starting with the 4.3.x & 4.4.x releases, Spectralink has made available two different software release streams that support SIP (4.3.x), or SIP with Lync (4.4.x and 4.6.x). These software releases shall clearly identify if they support Lync or not.

The new Spectralink 8441/8453 models were launched with SIP or SIP with Lync variants. These models can only run 4.3.x software or later.

New filenames

The firmware files included in the release zip package changed with version 4.4.0. Filenames are no longer based on the hardware id of the 84-Series product. Instead a unified software file is deployed that is applicable for all hardware models (the 8440, 8441, 8450, 8452, and 8453 models).

The 3111-36150-001.sip.ld, 3111-36152-001.sip.ld and 3111-36154-001.sip.ld files are no longer included. The unified file is named **slnk84xx.lync.ld** for the 4.4.x and 4.6.x SIP with Lync variant.

When a phone running 4.4.0 or above software boots, it will automatically look for the slnk84xx.lync.ld file. This is a hardcoded filename that is not dependent on the APP_FILE_PATH parameter in the config files. However, if the APP_FILE_PATH parameter is not specified, then the phone shall not look for the slnk84xx.lync.ld file either. This is current behavior.

If the phone cannot find the slnk84xx.lync.ld file it will look for a filename using the same algorithm as currently existing software. For example, an 8440 phone will look for a file named 3111-36150-001 pre-pended to the value of APP_FILE_PATH. If that file can’t be found, then it looks for APP_FILE_PATH as a standalone file.

The introduction of the slnk84xx.lync.ld software requires a transition step when updating software from releases previous to 4.4.0, because the previous releases do not know about the new filename.

There are two ways to update from older software:

- Rename the slnk84xx.lync.ld to the hardware model of the phones installed at your site. The following list indicates how to rename the files based on your phone model. If your site contains a mixed environment of phones, you can copy the slnk84xx.lync.ld file and rename it to multiple file names.

- 8440 - rename to 3111-36150-001.sip.ld
- 8450 - rename to 3111-36152-001.sip.ld
- 8452 - rename to 3111-36154-001.sip.ld

    - Change the value of the APP_FILE_PATH parameter in the config files to slnk84xx.lync.ld. See the Admin Guide for instructions on modifying the config files.

If you are already running 4.4.x then the above steps are not necessary and you can upgrade directly to the slnk84xx.lync.ld load.

Other 4.6.x enhancements

The following enhancements were introduced in 4.6.x and worthy of noting:

- The OAI Rich Multiline Display command now allows to set different size fonts properly.
- Enhancements to make the phone roam to a new AP a bit faster.
- General improvements to PTT functionality.

Change log for 84-Series Software 4.6.1

The following section lists changes in 84-Series Software 4.6.1 from 84-Series Software 4.6.0.

Fixes and enhancements

WUCS-1614 **Update menus and config files to have Lync2013 option**

Change log for 84-Series Software 4.6.0

The following section lists changes in 84-Series Software 4.6.0 from 84-Series Software 4.3.0/4.4.0.

Fixes and enhancements

ESCWIRE-434 Browser randomly fails

WUCS-789 Frequent handset failures require phone reboot.

WUCS-1165 Phone reboots after taken out of range in call

WUCS-1176 Emergency Call is enabled / viewable without logging in to a User Profile, but does not work

WUCS-1251 Firmware reset will sometimes cause one way audio

WUCS-1290 The word "CallAction" in a data push causes the phone to reboot

WUCS-1389 call.callsPerLineKey Needs to Cause a Reboot

WUCS-1398 Second Incoming PTT Call has no audio when made the active PTT call

WUCS-1494 84-Series phones slow to hand off in standby

WUCS-1555 Phone refuses to attempt ftp download of top level provisioning files

WUCS-1576 Pressing and Navigating the Soft Keys when phone is configured for autolock results in Locking while navigating favorites

WUCS-1580 Unable to get font size of OpCode 21 (Rich Text) messages to change.

Understanding Updates to 84-Series Software 4.5.0

Note: Spectralink 4.5.0 is non-Lync only

The Spectralink 4.5.0 release pertains to non-Lync installations only.

84-Series Software 4.5.0 is based on 84-Series Software 4.3.1 and includes bug-fixes and minor enhancements. Bug fixes and minor enhancement are listed on the following pages.

This software release is for those 84-Series handset models that are non-Lync. This software will not load on Lync enabled 84-Series handset models.

Scanning in standby

This load implements a new feature that allows scanning in standby if the current AP RSSI is lower than a configured threshold (per the parameter device.wifi.noBkgScanRssi.) In addition, a scan will be performed immediately if the current AP RSSI drops to 5 dB below the programmed threshold, and a scan has not been performed in the last cycle.

Enabling scanning in standby will lead to reduced battery life and is not recommended unless specific issues with roaming are present.

Parameter	*Modification*	*Min*	*Max*	*Default*
device.wifi.noBkgScanRssi	Added	-100 (disabled)	0	-100

New filenames

Note

If you are already running 4.3.x or above then the steps below are not necessary and you can upgrade directly to the slnk84xx.sip.ld load.

The firmware files included in the release zip package changed with version 4.3.0. Filenames are no longer based on the hardware id of the 84-Series product. Instead a unified software file is deployed that is applicable for all hardware models (the 8440, 8441, 8450, 8452, and 8453 models).

The 3111-36150-001.sip.ld, 3111-36152-001.sip.ld and 3111-36154-001.sip.ld files are no longer included. The unified file is named **slnk84xx.sip.ld** for the 4.3.x and 4.5.x SIP variant.

When a phone running 4.3.0 or above software boots, it will automatically look for the slnk84xx.sip.ld file. This is a hardcoded filename that is not dependent on the APP_FILE_PATH parameter in the config files. However, if the APP_FILE_PATH parameter is not specified, then the phone shall not look for the slnk84xx.sip.ld file either. This is current behavior.

If the phone cannot find the slnk84xx.sip.ld file it will look for a filename using the same algorithm as currently existing software. For example, an 8440 phone will look for a file named 3111-36150-001 pre-pended to the value of APP_FILE_PATH. If that file can't be found, then it looks for APP_FILE_PATH as a standalone file.

The introduction of the slnk84xx.sip.ld software requires a transition step when updating software from releases previous to 4.3.0, because the previous releases do not know about the new filename.

There are two ways to update from older software:

- Rename the slnk84xx.sip.ld to the hardware model of the phones installed at your site. The following list indicates how to rename the files based on your phone model. If your site contains a mixed environment of phones, you can copy the slnk84xx.sip.ld file and rename it to multiple file names.
  - 8440 - rename to 3111-36150-001.sip.ld
  - 8450 - rename to 3111-36152-001.sip.ld
  - 8452 - rename to 3111-36154-001.sip.ld
- Change the value of the APP_FILE_PATH parameter in the config files to slnk84xx.sip.ld. See the Admin Guide for instructions on modifying the config files.

Other 4.5.0 enhancements

The following enhancements were introduced in 4.5.0 and worthy of noting:

- The OAI Rich Multiline Display command now allows to set different size fonts properly.
- Enhancements to make the phone roam to a new AP faster.
- General improvements to PTT functionality.
- When the phone is taken out of range, the call will now be dropped after 60 seconds. This prevents the case where the user comes back into range but forgets to hang up the call and the phone is stuck in a incomplete call state, preventing the user from hearing the phone ring on new calls. This enhancement is not configurable.
- Fixes for OpenSSL Heartbleeder security vulnerability
- For Reg Domain 10 (Australia), uni-band 4 frequencies have been added

Change log for 84-Series Software 4.5.0

The following section lists changes in 84-Series Software 4.5.0 from 84-Series Software 4.3.1.

Fixes and enhancements

ESCWIRE-374 Soft keys executing custom java script functions multiple times

ESCWIRE-405 Blue-Sky Wireless. Push issue with web page that references two style sheet

ESCWIRE-413 Missing XML nurse call alerts on 8400

ESCWIRE-434 Browser randomly fails

ESCWIRE-452 PTT vibrate doesn't work

ESCWIRE-453 Wrong OAI softkeys displayed on 8400.

ESCWIRE-454 WPA2-PSK passphrase displayed in clear text when exporting config file from WebUI

ESCWIRE-462 Application causes phone browser to crash

ESCWIRE-474 GS1 DataMatrix codes AIM identifier is transmitted when the paramter barcode.symbologyIdTransmission is set to "0".

ESCWIRE-486 When the user powers the phone back on and logs in, push notifications do not work.

ESCWIRE-487 Can't identify registration state

ESCWIRE-493 RTP Audio delay on Initial Call Setup

ESCWIRE-495 Barcode scanner stops working (Barcode data stops showing up in Browser pages)

ESCWIRE-514 Duress alarm shown 2 or 3 times on the phone

ESCWIRE-520 Unable to set Vibrate in notification profiles

WUCS-789 Frequent handset failures require phone reboot.

WUCS-1165 Phone reboots after taken out of range in call

WUCS-1176 Emergency Call is enabled / viewable without logging in to a User Profile, but does not work

WUCS-1251 Firmware reset will sometimes cause one way audio

WUCS-1290 The word "CallAction" in a data push causes the phone to reboot

WUCS-1389 call.callsPerLineKey Needs to Cause a Reboot

WUCS-1398 Second Incoming PTT Call has no audio when made the active PTT call

WUCS-1400 Missing certificate file causes TLS to fail

WUCS-1494	8400 phones slow to hand off in standby
WUCS-1510	Increase maximum file size for local contact directory files
WUCS-1538	Translate new and modified phrases
WUCS-1551	PTT fails to free CCBs when call is disconnected
WUCS-1555	Phone refuses to attempt ftp download of top level provisioning files
WUCS-1569	Add new JavaScript functions to allow forwards compatibility with SL8700.
WUCS-1576	Pressing and Navigating the Soft Keys when phone is configured for autolock results in Locking while navigating favorites
WUCS-1577	Browser randomly fails
WUCS-1580	Customer is unable to get font size of OpCode 21 (Rich Text) messages to change.
WUCS-1584	Issues when the 8440 calls a hunt group number and the call is answered with Shoretel Communicator
WUCS-1608	Two ptt.emergencyDial.* parameters still say templates="new" in cfgParamDef.xml file
WUCS-1619	Modify reg domain 10 (Australia) to include uni-band 4 frequencies
WUCS-1621	Missing French translation in 4.3.0.0166
WUCS-1635	Phone sends directed probes in standby when assocaited to an Aruba AP in 2.4GHz
WUCS-1636	Turn off the dimming via the API
WUCS-1637	WPA2-PSK passphrase displayed in clear text when exporting config file from WebUI
WUCS-1643	All UDP packets in Phoenix have an IP ID field of zero
WUCS-1646	Add and implement parameter apps.telNotification.heartbeatTimeoutSeconds.
WUCS-1649	Freezes on Save Config from Multiple Handset Menus
WUCS-1655	Barcode scanner becomes completely unresponsive
WUCS-1662	Enable scanning in standby when signal level is low
WUCS-1676	Fix security vulnerability CVE-2014-0160 (aka Heartbleeder)

Introducing 84-Series Software 4.3.0/4.4.0

Note: Compatibility with Polycom UC Software

84-Series Software 4.3.0/4.4.0 is based on Polycom UC Software 4.1.0 and remains compatible with provisioning and upgrade methods available under existing Polycom releases.

84-Series Software 4.3.0/4.4.0 is based on 84-Series Software 4.2.1. This is a major release that introduces personal alarms and duress button features. It also provides separate code streams for SIP-basic (4.3.x) and SIP-with-Lync (4.4.x) deployments.

84-Series Software 4.3.0/4.4.0 is a unified release that is targeted to the Spectralink 84-Series product line. It is compatible with all previously supported open SIP call servers.

84-Series Software 4.3.0/4.4.0 also introduces a number of bug fixes and enhancements described in the next sections.

Lync support

Microsoft Lync compatibility

On May 1st 2013, Spectralink announced the intention that Spectralink 8400 handsets will be made available for sale in two variants, SIP, and SIP with Microsoft Lync. The standard SIP version supports direct integration with all call-servers listed in the *Spectralink 8400 Call Server Interoperability Guide* except Microsoft, and SIP with Lync will additionally support Microsoft Lync. A handset's Lync support (or not) will be identifiable via label markings.

Starting with the 4.3.x and 4.4.x releases, Spectralink shall make available two different software release streams. 4.3.x supports SIP, and 4.4.x supports SIP with Lync. These software releases shall clearly identify if they support Lync or not.

The new Spectralink 8441/ 8453 models shall be launched with SIP or SIP with Lync variants. These models can only run 4.3.x or 4.4.x software or later.

All 8440/ 8450/ 8452 handsets manufactured before August 1, 2013 are the SIP with Lync variant, and will interoperate with Lync providing they operate with a Lync software release. If they are upgraded to a SIP only release they will work with all listed call-servers except Microsoft Lync. After August 1, 2013 all 8440/ 8450/ 8452 models shall be available for sale with SIP or SIP with Lync. Those handsets that have not been factory-enabled to run Microsoft Lync will not run Lync software releases. Lync handsets support Lync or non-Lync code, however 8441/ 8453 will not support 4.2.x or earlier.

The two code variants for 84-Series Software release 4.3.x and 4.4.x are clearly marked as Lync or non-Lync and are additionally differentiated as Lync or non-Lync by their filenames when the zip file is extracted:

4.4.x Lync compatible: sl84xx.lync.ld

4.3.x Non-Lync	sl84xx.sip.ld

You can download either code stream from the website but the Lync code is compatible only as detailed above.

Personal Alarms feature

Workers can be at risk during security breaches or if personal incidents require immediate attention. Spectralink 8441 and 8453 handsets offer personal monitoring and duress call functionality, including “man down” alarms, “running” alarms and duress calls to an emergency number. Coupled with a security alarm application program, real time location information from the alarming phone can be displayed on security monitors and sent to other Spectralink 8400 handsets for mobile response. The existing functionality of Location Services allows an alarming phone’s location to be pinpointed so that aid can be directed to the exact scene. When deployed in conjunction with a security alarm application, Spectralink Personal Alarms provide unparalleled support for isolated workers or other at-risk personnel in potentially threatening situations.

Duress call alarms can also be deployed within the functionality of the 8440 and 8452 models. The emergency dial feature can be programmed to sound a local alarm through the built-in speakerphone when an emergency call is dialed. Coupled with a security alarm application, this duress alarm can be used to identify the phone, the user and the location of the alarming phone.

New filenames

The firmware files included in the release zip package have changed. Filenames are no longer based on the hardware id of the 8400 product. Instead a unified software file is deployed that is applicable for all hardware models (the 8440, 8441, 8450, 8452, and 8453 models).

The 3111-36150-001.sip.ld, 3111-36152-001.sip.ld and 3111-36154-001.sip.ld files are no longer included. The unified file is named **slnk84xx.sip.ld** for the 4.3.0 SIP variant and **slnk84xx.lync.ld** for the 4.4.0 SIP with Lync variant.

When a phone running 4.3.0/4.4.0 or above software boots, it will automatically look for the slnk84xx.sip.ld/ slnk84xx.lync.ld file. This is a hardcoded filename that is not dependent on the APP_FILE_PATH parameter in the config files. However, if the APP_FILE_PATH parameter is not specified, then the phone shall not look for the slnk84xx.sip.ld/ slnk84xx.lync.ld file either. This is current behavior.

If the phone cannot find the slnk84xx.sip.ld/ slnk84xx.lync.ld file it will look for a filename using the same algorithm as currently existing software. For example, an 8440 phone will look for a file named 3111-36150-001 pre-pended to the value of APP_FILE_PATH. If that file can’t be found, then it looks for APP_FILE_PATH as a standalone file.

The introduction of the slnk84xx.sip.ld/ slnk84xx.lync.ld requires a transition step when updating software from previous releases, because the previous releases do not know about the new filename.

There are two ways to update existing phones:

- Rename the slnk84xx.sip.ld/ slnk84xx.lync.ld to the hardware model of the phones installed at your site. The following list indicates how to rename the files based on your phone model. If your site contains a mixed environment of phones, you can copy the slnk84xx.sip.ld/ slnk84xx.lync.ld file and rename it to multiple file names.
  - 8440 - rename to 3111-36150-001.sip.ld
  - 8450 - rename to 3111-36152-001.sip.ld
  - 8452 - rename to 3111-36154-001.sip.ld
- Change the value of the APP_FILE_PATH parameter in the config files to slnk84xx.sip.ld/ slnk84xx.lync.ld. See the Admin Guide for instructions on modifying the config files.

Other enhancements

The following indicates minor new features and enhancements that are important enough to bring attention to:

- The max allowed value for qbc.inactivity.timout is increased.
- Added wifi.rtls.ekahau.txIntervalSeconds parameter to specify sub-minute RTLS intervals.

See the section Configuration File Changes below for details on these new and modified parameters.

Change log for 84-Series Software 4.3.0/4.4.0

The following section lists changes in 84-Series Software 4.3.0/4.4.0 from 84-Series Software 4.2.1.

Items listed in this section may be covered in more details in the section entitled What's new in 84-Series Software 4.3.0/4.4.0?

Fixes and enhancements

ESCWIRE-374 Soft keys executing custom java script functions multiple times

ESCWIRE-385 Ring types configured with delay sound distorted.

ESCWIRE-387 No "Unlock" soft key displays to unlock the key pad

ESCWIRE-421 8400 no audio

WUCS-720 Remove Polycom branding from the phone

WUCS-817 Add additional RTLS locations transmission rate choices

WUCS-1023 Phone Sends POST messages twice if Default Only user is set to "1"

WUCS-1024 Suspicious "so" logs seen when establish call.

WUCS-1054 In call forwarding, DUT adds "sip:" part to a username which makes forwarding doesn't work

WUCS-1084 Priority calls (channel 24) interrupt Emergency PTT (channel 25) on sending phone only

WUCS-1105 Emergency Dial can still stack calls when in the macro (EFK) mode

WUCS-1120 Add configurable Alert settings for XML API Push

WUCS-1149 Unable to resume an IM conversation after a call is answered

WUCS-1208 PTT tweedle and second line ring

WUCS-1214 prov.polling.enabled should be enabled by default

WUCS-1236 Failure of screen to DIM, keypad backlights off

WUCS-1243 Notes in flat template file MACaddress-ext.cfg - provided as part of 4.2.0 release incorrectly name the file

WUCS-1248 Change voip.prot parameters to reg.1 parameters in template files provided with release

WUCS-1249 Move IM section out of the openSIP section of the flat deployment template

WUCS-1266 Scheduled logs battery status sometimes fails

WUCS-1278 Modify PTT emergency call to be a speakerphone call

WUCS-1279 Modify PTT Emergency call to send XML alarm notification

WUCS-1280 Add IP address for single point QBC deployment to per-phone, per-user files

WUCS-1287 New/ Unknown part number causes polyapp to watchdog and reboot

WUCS-1289 Emergency dial doesn't work if phone in call with callsPerLineKey=1

WUCS-1296 Add channel 25 to ptt.cfg

WUCS-1300 tel: URI execution pops up confirmation "Call" "Cancel" softkeys

WUCS-1304 Migrate Polycom Upgrade Server option to Spectralink

WUCS-1307 Add seed directory

WUCS-1350 Force speakerphone for emergency dial leaves audio termination set to chassis

WUCS-1359 Increase timeout period for qbc.inactivity.timeout

WUCS-1360 Backlight turning off when phone is in charger

WUCS-1362 Change "hit" to "press" in the phrase "Warning detected, hit Cancel to prevent Alarm"

WUCS-1365 Warning dialog and local notification does not refresh when phone is in existing call

WUCS-1367 Change Duress behavior so emergency call is optional

WUCS-1377 Cannot add certificate using PolyApp menus or Updater

WUCS-1378 Backlight dims-to-off when phone is in charger, only the first time a new battery is used in a phone

WUCS-1386 While editing details of the contact directory, back key is not working

WUCS-1413 User Profile Configuration Template does not include reg.2.server.1.address in IM section of login.cfg, or in IM section of site.cfg in Flat and Group templates

WUCS-1416 Add PTT parameter for Duress Button to Personal Alarms cfg file

WUCS-1417 Buttons on dock (Volume and Speaker) do not work after a reboot

WUCS-1418 device.set="1" is missing from the syslog section of site.cfg in both Flat_Deployment and User_Profiles_Deployment directories

WUCS-1432 Getting battery fault messages in logs

WUCS-1436 Getting boot log message "No compatible BootL1 found" on all man down phones

WUCS-1467 With the keypad Locked on a handset which initiates a Duress button call - at times the calling handset sticks in a state where the Unlock key is unavailable

WUCS-1486 Change default Realm to something brand neutral

WUCS-1490 Change default provisioning server username so is not PlcmSpIp

WUCS-1496 Change firmware filenames

Configuration file changes

Refer to the following table for a list of all enhancements made to the UC Software 4.0.2 Rev B configuration file parameters.

Web Info: Find detailed descriptions of parameters and values
You can find descriptions of all parameters in the *Spectralink 84-Series Wireless Telephone Administration Guide*.

Table 1: Configuration Changes for 84-Series Software 4.3.0/4.4.0

Parameter	*Modification*	*Description (Min/ Max/ Default)*		
apps.push.alertSound	Removed			
apps.telNotification.alarmEvent	Added	FALSE	TRUE	FALSE
log.level.change.accl	Added	0	6	4
log.level.change.accl2	Added	0	6	4

Parameter	*Modification*	*Description (Min/ Max/ Default)*		
log.level.change.batt	Added	0	6	4
log.level.change.fips	Added	0	6	4
log.render.stdout	Modified	FALSE	TRUE	FALSE
mb.main.toolbar.autoHide.enabled	Modified	FALSE	TRUE	FALSE
ptt.emergencyDial.emergencyDialEnable	Added	FALSE	TRUE	TRUE
ptt.emergencyDial.notificationEnable	Added	FALSE	TRUE	FALSE
ptt.tonesInCall.enable	Added	FALSE	TRUE	TRUE
qbc.inactivity.timout	Modified	30,000 (in ms, 5 mins)	1,800,000 (in ms, 30 min)	60,000 (in ms, 10 min)
qos.ethernet.callControl.user_priority	Modified	0	7	4
qos.ethernet.other.user_priority	Modified	0	7	0
qos.ethernet.rtp.user_priority	Modified	0	7	6
qos.ethernet.rtp.video.user_priority	Modified	0	7	6
sec.TLS.profile.1.deviceCert	Modified	"Factory" "Platform1" "Platform2" "Application1" "Application2" "Application3" "Application4" "Application5" "Application6" Default: "Factory"		
up.backlight.idleIntensity	Modified	0	3	0
up.backlight.timeout	Modified	5	60	10
up.PersonalAlarm.emerDialForceSpeakerPhone	Added	FALSE	TRUE	TRUE
up.PersonalAlarm.emergencyDialEnable	Added	FALSE	TRUE	FALSE
up.PersonalAlarm.notificationEnable	Added	FALSE	TRUE	TRUE
up.PersonalAlarm.running.sensitivity	Added	0	7	0
up.PersonalAlarm.running.timeout	Added	5	60	7
up.PersonalAlarm.still.sensitivity	Added	0	7	0
up.PersonalAlarm.still.timeout	Added	5	300	7
up.PersonalAlarm.suspendMonitoring	Added	0	300	0
up.PersonalAlarm.tilt.sensitivity	Added	0	7	0

Parameter	*Modification*	*Description (Min/ Max/ Default)*		
up.PersonalAlarm.tilt.timeout	Added	5	300	7
up.PersonalAlarm.warningTimeout	Added	5	60	10
upgrade.plcm.server.url	Modified	http:/ / downloads.spectralink.com/ software/ upgrade/		
voIpProt.SIP.requestValidation.digest.realm	Modified	wirelessIpPhone		
webutility.language.plcmServerUrl	Modified			
wifi.rtls.ekahau.txIntervalSeconds	Added	10	600	60

Chapter 17: Polycom-branded Releases

Understanding Updates to UCS 4.2.1

The following section lists changes in 84-Series Software 4.2.1 from 84-Series Software 4.2.0.

Fixes and enhancements

WUCS-565 [ESCWIRE-343] Handsets will not always reconnect to the network.

WUCS-1053 Cannot scroll from AP to AP in Site Survey

WUCS-1137 Many Pop-up messages corrupted

Understanding Updates to UCS 4.2.0

The following section lists changes in 84-Series Software 4.2.0 from Polycom UC Software 4.1.0.

New or enhanced features

WUCS-85 Improved wireless maximum power selection settings and menus

WUCS-368 Features that used the same credentials as Lync (Calendar for example) are now logged off when the Lync user logs out.

WUCS-730 The 8400 Handset now reports its vendor ID as “spectralink” in the Ms-Device-Info header

WUCS-759 The 8400 Handset now identifies itself as a “spectralink” device in DHCOP options 12 and 60

WUCS-793 Added Emergency Dial feature as an alternate use of the Push-To-Talk button

WUCS-793 Renamed URL dial to name dial

Features no longer available

As part of its focus on wireless solutions, 84-Series Software 4.2.0 removes a number of features that complicate or confuse the deployment of wireless-only products.

WUCS-591 Removed references to ZTP (Zero Touch Provisioning) which is not supported on the Spectralink 84-Series product line.

WUCS-593 Removed the “Quick Setup” option which did not cover wireless network acquisition.

WUCS-602 Removed support for Telchemy VQMON.

Fixes and enhancements

74901 When the lock feature is enabled, after phone reboot, the emergency/ authorized call list is now properly displayed when the user tries to place a call using headset/ speaker key

75591 In Lync environment the phone does now properly logs out all other user login credential dependent applications.

77192 Adding a '+' sign to the Line Identification address via the phone's Web Configuration Utility is now properly displayed.

78269 Changing the phone lock from Alert to DND work from the UI.

78361 During the phone state polling when an http request is passed the callstatehandler is now properly returning call line information for all the lines.

79797 Message Waiting Indicator no longer blinking when the user signs out of the phone.

79955 Deleting CA or Device certificate from the UI now works as intended.

80519 Inviting a Spectralink 84-Series to an Instant Messaging group is now ignored, the phone no longer rings indefinitely.

80613 Backlight no longer stays on after a firmware update is downloaded.

80614 Low and Critical battery alerts now work in all cases.

WUCS-395 Push-To-Talk start of conversation tone now plays properly

WUCS-421 Handset now properly displays the idle screen when locked

Understanding Updates to UCS 4.1.0

This UCS 4.1.0 release is a software upgrade for SIP phones that are qualified to deliver direct interoperability for Lync. Supported platforms for this limited release include the VVX 500 and Spectralink 8440, 8450 and 8452.

New or enhanced features

42163 Added support for Simplified best-effort SRTP.

66597 Added support for Microsoft STUN/ TURN/ ICE.

68649 Added support for Lync Certificate Provisioning using MS Web Ticket.

68652 Added support for Microsoft E911.

68653 Added support for Lync Call admission control.

68802 Added support for Lync In-band provisioning.

68803 Added support for Lync server address discovery.

68654 Added support for Lync Media bypass.

69089 Added support for Lync Private incoming line.

69094 Added support to switch over to local ring when early media fails.

69096 Added support for Lync dial plans.

69106 Added support for Branch office resiliency (BOR) feature.

70673 Added support for alternative call forwarding identities.

74216 Added support for video synchronization with Lync client.

74567 Added support for Microsoft Web Ticket Client Protocol.

74510 Added ability to route all outbound requests via Outbound Proxy Server with different callee and caller URI domains.

74557 Added support for a manual configuration re-sync with the Lync provisioning server.

74616 Added support for extension-based dialing.

74894 Added ability to retrieve Lync server root certificate automatically using DHCP Option 43.

75141 Added Base profile menu option for easy out-of-the-box experience.

77281 Added support for Lync mode on phones (Lync Base profile).

Enhanced capabilities

79321 Significant improvement is done on the batter threshold levels (*applies to Spectralink 84-Series*)

78107 Phone now displays a warning message upon reaching the maximum number of buddies.

78100 On the phone Presence - Idle timeout settings, changing the “office hours” timeout value keeps “Off hours” timeout unchanged.

78087 When a call is made from the Spectralink 84-Series phone, the receiving phone displays complete number of the caller.

77089 In Lync environment, any changes to the buddy presence state are immediately reflected on the presence icons and status.

76981 Phone displays call forwarding icon and forwards calls correctly when the function is enabled from the phone web user interface.

76446 Calls to PSTN network work appropriately even when Media Bypass is enabled on PSTN gateway.

76261 The phone password field for Lync configuration remains empty when there is no password set, thereby allowing the user to set a new password.

76194 An incoming call first displays as pop up before getting minimized to call appearance/ filter view on the phone.

75872 Resolved the issue with phone ringer when attaching/ detaching a USB headset during an incoming call.

75743 Addressed the usage of configured outbound proxy server address for Voice quality monitoring feature on phone.

75715 Local directory can now save contacts searched from the phone's corporate directory even when the local directory is disabled.

75694 Adding/ removing of USB headset no longer affects the phones configured with EHS headsets (Jabra, Plantronics or Sennheiser).

75674 URL dialing is now possible between unregistered phones.

75643 Issue of displaying the call list on phone when the configuration parameter `feature.callList.enabled="0"` is now fixed.

75605 Corrected the display of contacts which has long information fields (first name, last name, etc) in detail view on the phone.

75431 PTT and Paging feature has been now enhanced to user iLBC codec.

75355 Improved the synchronization of contacts addition/ deletion between the Lync MOC client on PC and the Phone IM.

75245 Fixed the issue on buddy presence status not getting updated when the phone is disconnected from network.

74901 When the lock feature is enabled, after phone reboot, the emergency/ authorized call list is displayed when user tries to place a call using headset/ speaker key.

74888 Fixed the issue with respect to the host status display "In a call" during a multiparty Lync conference call.

74175 When the phone presence state is set to "Be Right Back", it will no longer change to "Offline" when the phone is left idle for a long period of time.

73797 The caller details are now displayed properly for the participants in the Lync consultative transfer.call.

72518 On the Lync soft client, only mobile platforms are categorized as mobile.

70723 The phone now fetches the correct available software from the Polycom provisioning server when the parameter `upgrade.plcm.server.url` is set correctly.

57864 Changing the SRTP parameters will now take effect immediately without rebooting the phone.

Configuration File Enhancements

Refer to the following table for a list of all enhancements made to the UC Software 4.0.2 Rev B configuration file parameters.

Web Info: Find detailed descriptions of parameters and values
You can find descriptions of all parameters in the *Spectralink 84-Series Wireless Telephone Administration Guide*.

Table 2: Configuration File Enhancements for UCS 4.1.0

File	*Modification*	*Parameter*
feature	Added	apps.telNotification.appInitializationEvent
feature	Added	apps.telNotification.networkUpEvent
feature	Added	apps.telNotification.uiInitializationEvent
feature	Added	apps.telNotification.taInitializationEvent
feature	Added	apps.telNotification.uiInitializationEvent
feature	Added	device.baseProfile device.baseProfile.set
feature	Added	dialplan.applyToForward
feature	Added	dialplan.x.applyToForward
feature	Added	locInfo.x.A1
feature	Added	locInfo.x.A3
feature	Added	locInfo.x.country
feature	Added	locInfo.x.HNO
feature	Added	locInfo.x.HNS
feature	Added	locInfo.x.label
feature	Added	locInfo.x.LOC
feature	Added	locInfo.x.NAM
feature	Added	locInfo.x.PC
feature	Added	locInfo.x.POD
feature	Added	locInfo.x.PRD
feature	Added	locInfo.x.RD

File	Modification	Parameter
feature	Added	locInfo.x.STS
feature	Added	log.level.change.afe
feature	Added	log.level.change.ice
feature	Added	log.level.change.loc
feature	Added	log.level.change.tickt
feature	Added	log.level.change.xml
feature	Added	np.custom1.ringing.privateLine.tonePattern
feature	Added	np.custom1.ringing.privateLine.vibration
feature	Added	np.meeting.ringing.privateLine.tonePattern
feature	Added	np.meeting.ringing.privateLine.vibration
feature	Added	np.normal.ringing.privateLine.tonePattern
feature	Added	np.normal.ringing.privateLine.vibration
feature	Added	np.silent.ringing.privateLine.tonePattern
feature	Added	np.silent.ringing.privateLine.vibration
feature	Added	prov.login.lcCache.domain
feature	Added	prov.login.lcCache.user
feature	Added	reg.x.dialPlanName
feature	Added	reg.x.lisdisclaimer
feature	Added	reg.x.lync.autoProvisionCertLocation
feature	Added	reg.x.ringType.privateLine
feature	Added	reg.x.serverAutoDiscovery
feature	Added	reg.x.srtp.simplifiedBestEffort
feature	Added	sec.srtp.simplifiedBestEffort
feature	Added	softkey.feature.simplifiedSignIn
feature	Added	tcpIpApp.ice.mode
feature	Added	tcpIpApp.ice.password
feature	Added	tcpIpApp.ice.realm

File	Modification	Parameter
feature	Added	tcpIpApp.ice.username
feature	Added	tcpIpApp.ice.stun.passwordServer
feature	Added	tcpIpApp.ice.stun.server
feature	Added	tcpIpApp.ice.stun.udpPort
feature	Added	tcpIpApp.ice.tcp.enabled
feature	Added	tcpIpApp.ice.turn.server
feature	Added	tcpIpApp.ice.turn.tcpPort
feature	Added	tcpIpApp.ice.turn.udpPort
feature	Added	voice.page.handsfree.rxag
feature	Added	voice.ptt.handsfree.rxag

Understanding Updates to UCS 4.0.2 Rev B

New or enhanced features

72403 Added support for DHCP renew after loss and recovery of WiFi LAN connection (*applies to Spectralink 84-Series*).

76730 Enhanced the digitmap by removing the prepending '+' to the outbound calls and giving the option of configuring the "+" in the dial plan *(applies to Lync mode only).*
Note: For more information on digitmap refer to the

Note: 84-Series Software 4.2.0 and above is limited to the Spectralink 84-Series product line

As of September 2012, starting with software release 84-Series Software 4.2.0, Spectralink 84-Series handset software became independent from Polycom UCS software. Spectralink 84-Series software releases are named 84-Series Software X.Y.Z and only support Spectralink 84-Series handsets, not other Polycom devices.

Releases after Polycom UCS 4.1.0 no longer support Spectralink 84-Series handsets. However Polycom UCS releases prior to September 2012, i.e. Polycom UCS 4.1.0 and earlier, are compatible with the Spectralink 84-Series handsets.

Microsoft® Skype for Business® Interoperability *section.*

77038 Added support for early media followed by local ring back.

Enhanced capabilities

73667 The syslog counter on the Spectralink 84-Series phones are updated accordingly when audio packets are received.

75557 On the web interface of the phone, the logging module parameter WiFi Manager log value is updated in the field help section when the mouse is over parameter name as well as its value as (*applies to Spectralink 84-Series*).

76057 When a phone is registered with a single shared line, the Join soft key is no longer displayed inappropriately when the monitored phone puts the call on hold.

76084 In a shared BLF line scenario, the monitoring phone no longer resumes the call from the monitored phone without playing any busy tone.

76321/ 76515 The phone does not reboot when multiple URI's are pushed to the phone in frequent intervals. *(Customer issue ID VESC-1635, VESC-1650).*

76591 Phones display the correct Asian language fonts for the Lync contacts.

76679 Unauthorized request for configuration files using phone web interface is now restricted.

76754 The Filtered call view of a BLF monitored line is shown properly when the phone is in off-hook state.

76862 During an active BLF call session, frequent pressing of the BLF key on the origination phone no longer causes the caller ID information to be blanked out.

76889 The PPT key can now be configured as a Speed dial key on the Spectralink 84-Series phones.

76911 The dialer screen UI on the phone is refreshed when an incoming ringing call is terminated.

76934 On-hook dialing work as expected when the phone has an incoming call and the remote party ends the call.

76940 Incorrect soft key options no longer displayed on the BLF monitoring phone when there is an incoming call in certain scenarios.

76944 Auto Answer now works correctly when alert information header carrying the string within the angle brackets '< >' is received.

76946 The phone current draw is optimized as per its state (*applies to Spectralink 84-Series*).

76947 The audio/ sound effect termination is always on the dock station when there is an active call on the phone (*applies to Spectralink 84-Series*).

76949 The browser application on the phone times out as expected (*applies to Spectralink 84-Series*).

76976 The phone no longer inadvertently goes off-hook on line1 instead of line2 when the user presses the second line key while lifting the handset with call hold on line1.

77135 Addressed some Directed call pickup failures in certain situations.

77173 Turning the backlight OFF on the phone no longer sends the browser to the session list (*applies to Spectralink 84-Series*).

77226 When the phone is registered to a Lync line and another call server, the Lync contact presence subscription is now correctly sent through the Lync registered line.

77396 Addressed a phone reboot issue in a certain ACD/ call center configuration (*Found in UCS 3.3.2*).

77549 Addressed an issue relating to use of the 'Join' key which was displayed even when only one call was in progress (*applies to SoundPoint IP 33x, SoundStation Duo and Spectralink 84-Series models*).

77626 Two way audio between the phones is now working as expected after resuming the call from MOH when voIpProt.SIP.musicOnHold.uri or reg.X.musicOnHold.uri is used for the address of the MoH server.

77749 The registration failing issue with Lync server front end due to error in Subject Alternative Name (SAN) validation implementation is addressed.

Configuration file enhancements

Refer to the following table for a list of all enhancements made to the UC Software 4.0.2 Rev B configuration file parameters.

Table 3: Configuration File Enhancements for USC 4.0.2B

File	*Modification*	*Parameter*	*Modification Description*
Wireless	Added	`device.dhcp.releaseOnLinkRecovery`	1 Phone performs a DHCP release on network link recovery (Default) 0 Phone does NOT perform a DHCP release on network link

Note: Also refer to configuration parameter changes in the UCS 4.0.2

Admin Tip: Ensuring digitmap compatibility between UCS 4.0.1 and UCS 4.0.2 Rev B
The existing digitmap `dialplan.digitmap = [2-9]11|0T|011xxx.T|[0-1][2-9]xxxxxxxxx|[2-9]xxxxxxxxx|[2-9]xxxT` in the UCS 4.0.1 release where the phones were automatically pre-pending a + to outbound calls is now removed in UCS 4.0.2 Rev B.
For UCS 4.0.2 Rev B to be backwards compatible to UCS 4.0.1, the digitmap should be `dialplan.digitmap=RR+R[2-9]11|0T|RR+R011xxx.T|RR+R[0-1][2-9]xxxxxxxxx|RR+R[2-9]xxxxxxxxx|RR+R[2-9]xxxT`, or if the digitmap is to apply for a certain line, use `dialplan.1.digitmap=RR+R[2-9]11|0T|RR+R011xxx.T|RR+R[0-1][2-9]xxxxxxxxx|RR+R[2-9]xxxxxxxxx|RR+R[2-9]xxxT`.

Understanding Updates to UCS 4.0.2 (Limited Release)

This section list the additions and changes, removals, enhancements and configuration file parameter changes to the UC Software 4.0.2

Note: UC Software 4.0.2 is a limited release that was distributed only to select partners and customers. The build-ID for this release was UCS 4.0.2.8017.

New or enhanced Features

52485/ 66494 Added support for BroadSoft Hoteling Event Package.

57167/ 66494/ 76023 Added support for BroadSoft Call Center Status Event Package.

54576 Added support for the Spectralink 8452 Wi-Fi handset with 2D barcode reader.

Enhanced capabilities

69469 The display name with special character < or > causes phones to respond with a bad request.

73946 On the Trapeze/ Juniper infrastructure, when multiple Spectralink 84-Series phones are involved in a call, one or more phones may lose wireless connectivity.

74292 The Bluetooth radio can now be activated on Spectralink 84-Series phones.

74427 On a redirected call, the phone now sends a PRACK (acknowledgement) message.

75419 The ADHOC conference call now works when there is a + sign, for example, (SIP:voip+world@voipworld.com) in the Sip URI contact header.

75726/ 75716 The phone numbers dialed using the auto complete remembers the line info on which the calls are placed earlier *(applies to Spectralink 84-Series, VVX500 and VVX1500).*

75811 Reassigning the line keys preserves the presence information.

75888 A scrolling status message is now displayed when a line is unregistered on the phone.

75945 When the phone is off hook, auto dialing remember the line information *(applies to Spectralink 84-Series, VVX500 and VVX1500).*

76171 The phone no longer continuously reboots on reassignment of the line keys.

76229 A break down observed on the phone monitoring a BLF contact is now fixed. *(Customer issue ID VESC-1670)*

76315 The popup message *Error Line: Unregistered* will no longer appear as a result of an absence of a register request.

76379 Double quotes appended to the calling party display name on a shared line are now removed.

76408 Shared lines will continue to ring when another phone with the same shared line answers an incoming call on another line appearance.

76420 After reboot, the phone will correctly display incoming calls of a monitored BLF contact even on the first call.

76422 All the incoming call appearances on a BLF monitored phone are displayed when the monitoring phone cancels the call to the BLF contact.

76423 In a BLF monitored scenario, multiple calls to a monitored phone display the incoming call appearance and call counter appropriately.

76428 The phone will properly display incoming call appearance after terminating a call on phone using the End Call soft key.

76600 The blank call appearance on the monitoring BLF enabled phone is set.

76601/ 76685 In a multi-party BLF enabled call, the widget displaying the call appearance, counter, icons, and the indicator is updated with the appropriate incoming and outgoing call status.

76690 The phone now functions normally with the call appearance of the monitored BLF contacts.

76694 The phone will no longer crash when a monitored line ends the call that is associated with the remote call appearance screen.

76875 The phone now picks up the call forwarding settings from the override file after a reboot.

Configuration file enhancements

Refer to the following table for a list of new parameters. Note that these configuration parameters are detailed in *Feature Profile 76179: Hoteling and ACD*, which will be made available on Polycom Profiled UC Software Features.

Table 4: UC Software Configuration File Enhancements for UCS 4.0.2

File	*Modification*	*Parameter*	*Modification Description*
feature	Added	feature.callCenterStatus.enabled	Call feature parameter
feature	Added	feature.hoteling.enabled	Call feature parameter
feature	Added	hoteling.reg	Call feature parameters
wireless	Added	barcode.X.Y	Parameters used to configure the 2D barcode scanner*

*For a detailed description of new parameters specific to the Spectralink 84-Series product family, their properties and values, refer to the Spectralink 84-Series Wireless Telephone Deployment Guide.

Understanding Updates to UCS 4.0.1B

There are no functional differences between Polycom UC Software 4.0.1B and Polycom UC Software 4.0.1.

Understanding Updates to UCS 4.0.1

This section lists additions and changes, removals, enhancements, and configuration file parameter changes to the UC Software 4.0.1 beside their respective Polycom tracking identification number.

New or enhanced features

48734 In a server-based, centralized conference, the phone can now send parallel REFERs without waiting for a 202 Accepted.

67081/ 70634 Added support for phones to interoperate with a limited set of Microsoft® Lync™ server features (applies to SoundPoint IP 321, 331, 335, 450, 550, 560, 650, 670, VVX 500, 1500, SoundStation IP 5000, SoundStation Duo, and Spectralink 84-Series).

67090 Syslog now includes the ability to identify multiple audio streams (*applies to Spectralink 84-Series*).

67594 Added interoperability between the Message Waiting Indicator (MWI) and Microsoft Lync.

68500 The Spectralink 84-Series handsets now display the X-Loader version information in the Phone menu (Menu > Settings > Status > Platform > Phone).

68602 Added support for SSRTP.

68798 Added support for Microsoft SRTP extensions.

69962/ 70924 Added Microsoft OCS/ Lync Presence functionality to phones (applies to SoundPoint IP 321, 331, 335, 450, 550, 560, 650, 670, VVX 500, 1500, SoundStation IP 5000, SoundStation Duo, and Spectralink 84-Series).

70122 Phones now display the Away presence status after a period of user inactivity specified by the following parameters: `pres.idleTimeout.offHours.period`, `pres.idleTimeout.officeHours.period`, `pres.idleTimeout.offHours.enabled`, and `pres.idleTimeout.officeHours.enabled`.

70232 Added a parameter `call.transfer.blindPreferred` to control whether the Transfer soft key on the Spectralink 84-Series should be a consultative transfer or blind transfer.

70614 Added support for Microsoft 2008 Radius (802.1X).

71025 Added new per-registration configuration options for several SRTP parameters: `reg.x.srtp.enable`, `reg.x.srtp.offer`, `reg.x.srtp.require`.

71183 Added missing barcode symbologies (*applies to Spectralink 84-Series*).

71198 Added an option in the Web Configuration Utility for SIP and Provisioning TLS applications to make the Common Name of Subject test configurable.

71424 Updated the presence icon on the phones to be consistent with the Microsoft Lync/ OCS style (*applies to Spectralink 84-Series*).

71439 Not including the parameter `oai.userID` in the configuration file or setting the value to NULL both result in the phone using its MAC address to check in into the OAI server (*applies to Spectralink 84-Series*).

71660 Enhanced the Reset to Default option in the Updater to match the option in the application software.

71774 The call forward status on the status bar now displays when Forward – No Answer or Forward –Busy is enabled (*applies to Spectralink 84-Series*).

71997 Added full support for RFC2782 (DNS load balancing).

72074 In the Web Configuration Utility, the Country Code field has been renamed to Regulatory Domain (*applies to Spectralink 84-Series*).

72193 In the phone menu, the Country Code field has been renamed to Regulatory Domain (*applies to Spectralink 84-Series*).

72304 The default value for the configuration parameter `up.useDirectoryNames` is now 1 (enabled).

72310/ 74129 The Spectralink 84-Series handsets can now display the BootL1 version information in Phone menu (Menu > Status > Platform > Phone).

72319 The phone displays a warning icon when the WLAN Network Manager detects an invalid Regulatory Domain request (*applies to Spectralink 84-Series*).

72320 The phone displays a warning triangle when the WLAN Network Manager detects an invalid Regulatory Domain limit setting (*applies to Spectralink 84-Series*).

72367 The phone automatically publishes an Inactive (Idle) presence status after 5 minutes of user inactivity.

72554 Added the ability to configure the `pres.idleTimeout` parameters through the phone menus.

72555 Added the ability to configure the `pres.idleTimeout` parameters through the Web Configuration Utility.

72654 The Exchange Calendaring feature on the Spectralink 84-Series handsets has been improved with the following enhancements:

The Calendar icon is shown in the main menu once the calendar is authorized.

The phone displays a Calendar: synchronizing scrolling message in the status bar.

72823 In the media player, the Exit soft key has been renamed to Back.

72824 Playback automatically starts when selecting an audio element from the browser.

73500 The ‘Connect/ disconnect from the server’ option has been moved to the Calendar menu (Features > Calendar) in the Spectralink 84-Series handsets.

73510 The Web Configuration Utility language now supports multiple default language labels and help text in English, with the option to add/ access other languages.

73669 Updated the 2048-bit Trusted CA Root Certificate List from VeriSign.

73670 Added new VeriSign Intermediate CA certificates.

73671 Added RSA 2048 V3 Root Certificate to Root Store to all phones.

73907/ 74289 Added the ability to automatically upgrade the BootL1 and BootBlock (*applies to Spectralink 84-Series*).

74247 In the Web Configuration Utility, the default available utility languages depend on the platform.

74417 The Updater (BootROM) now supports Basic Authentication with HTTP/ HTTPS.

75308 Added the ability to upload encrypted call lists to the provisioning server (*applies to Spectralink 84-Series*).

75469 The volume of PTT audio has been increased and setting the parameter `voice.handsfree.rxag.SL8440=10`, then updating the phone using Update Configuration does not cause the phone to restart (*applies to Spectralink 84-Series*).

Enhanced capabilities

68501 When using Exchange Calendaring, the passcode now enters automatically (*applies to Spectralink 84-Series*).

69540 A call dropped by the other party no longer displays as a held call.

70542 The registered line icon and BLF icon are no longer corrupted in the Spectralink 84-Series handsets.

71041 Phones can now play audio from the Lync voicemail system (*applies to Spectralink 84-Series*).

71368 Remote shared line activity no longer affects local phone presence.

71433 Phones crash after loading `se.pat.callProg.dialTone` parameters and pressing the New Call button (*applies to SoundPoint IP 450, 650, and Spectralink 84-Series*).

71604 The configuration parameter `sec.TLS.SIP.strictCertCommonNameValidation` can be updated without requiring a phone reboot.

71616 The conference feature can now properly handle a 480 response to a BroadSoft SCA line seize SUBSCRIBE.

71910 The text ‘Enter password’ in the Advanced menu is now translated when switching phone languages.

72113 The Spectralink Quick Barcode Connector icon now appears and disappears for both multiple and single endpoint modes (*applies to Spectralink 84-Series*).

72250 The phone no longer reboots when queued messages are accessed on the phone (*applies to Spectralink 84-Series*).

72368 URL Dialing from the call list is now fully disabled when `feature.urlDialing.enabled`=0 (*applies to Spectralink 84-Series*).

72469 When `feature.urlDialing.enabled` is set to 0, the phone accepts contact entries with a contact number longer than 10 digits (*applies to Spectralink 84-Series*).

72800 Lines registered to a Microsoft Lync 2010 server now display in the Ring Type menu (Menu > Settings > Basic > Ring Type).

72822 Phone no longer gets into a bad state (which required an auto-reboot) upon receiving two consecutive 401 to a line-seize SUBSCRIBE during conference initiation.

72996 A conference call between three parties now successfully connect all parties after there is a no response to line seize SUBSCRIBE.

73145 Regulatory Domain Error when radio set to 802.11a and band1 is set to P6 (*applies to Spectralink 84-Series*).

73195 The bootloader menu for WEP has the correct spelling of Encryption (*applies to Spectralink 84-Series*).

73247/ 74912 In the Quick Setup menu, user entry fields are now set to numeric as default.

73264 A phantom call appearance no longer displays when there is an active BLF monitored call and the phone has another call appearance.

73401/ 74688 With intercom configured, the handset now rings once and incoming calls are answered automatically (*applies to Spectralink 84-Series*).

73409 In the Web Configuration Utility, all instances of the text ‘extension module’ have been replaced with ‘expansion module’.

73527 If barge-in is enabled on a shared line, remote active calls will not appear.

74060 OAI PT Select Connections are now accepted by phone before an OAI call is answered by the Start key (*applies to Spectralink 84-Series*).

74167 In the Web Configuration Utility, the authentication password can no longer be seen in clear text when opening the line page source code.

75151 Audio files are now directly downloaded to the ramdisk.

75194 The phones now use an outbound proxy when an outgoing call’s URI domain is different from the caller’s domain.

75334 Fail over on a 503 response can now be disabled.

75458 The maximum values for the DNS TTL parameters in the static cache have changed to 2147483647.

75485 The default input type for the Unavailable Code field is now numeric.

75743 The Voice Quality monitoring feature now uses an outbound proxy server address for a SIP Publish.

75600 The call appearance for an outgoing call no longer displays the *transport* string.

75618 Users can now place a call from the Placed Calls call list when the original call was placed using a Click-To-Dial Refer message with Refer-To: header as sip:*number* ext. *number @IPaddress*; transport=TCP (*applies to Spectralink 84-Series*).

Configuration file enhancements

Refer to Table 5: Software Version 4.0.1 – Configuration File Parameter Enhancements for a list of enhancements made to the UC Software 4.0.1 configuration file parameters.

Web Info: Find detailed descriptions of parameters and values
You can find descriptions of all parameters in the *Spectralink 84-Series Wireless Telephone Administration Guide*.

Table 5: Software Version 4.0.1 – Configuration File Parameter Enhancements

File	*Modification*	*Parameter*	*Modification Description*
sip-interop	Added	`call.transfer.blindPreferred`	Call feature parameter
debug	Added	`feature.lyncDebug`	Call feature parameter

site	Added	`reg.x.srtp.enable`
		`reg.x.srtp.offer`
		`reg.x.srtp.require`
			Call feature parameters

wireless	Added	`np.custom1.ringing.toneVolume.usbHeadset`	Notification profiles parameter
wireless	Added	`np.meeting.ringing.toneVolume.usbHeadset`	Notification profiles parameter
wireless	Added	`np.normal.ringing.toneVolume.usbHeadset`	Notification profiles parameter
wireless	Added	`np.silent.ringing.toneVolume.usbHeadset`	Notification profiles parameter
site	Added	`sec.encryption.upload.callLists`	Security parameter
sip-interop	Added	`sec.srtp.mki.length`	Security parameter
sip-interop	Added	`sec.srtp.padRtpToFourByteAlignment`	Security parameter
reg-advanced, site	Added	`up.headset.phoneVolumeControl`	User preferences parameter
debug	Added	`up.headset.AlwaysUseIntrinsicRinger`	User preferences parameter
reg-advanced, site	Added	`up.idleStateView`	User preferences parameter
video	Added	`video.iFrame.delay`	Video parameter
debug	Added	`video.iFrame.period`	Video parameter
techsupport	Added	`voice.usb.headset.rxdg`	Audio parameter
techsupport	Added	`voice.usb.headset.txdg`	Audio parameter
site	Added	`voice.volume.persist.usbHeadset`	Audio parameter
sip-interop	Added	`voIpProt.SIP.conference.parallelRefer`	Call feature parameter
site	Added	`webutility.language.plcmServerUrl`	Web Configuration Utility parameter
techsupport	Removed	`voice.gain.rx.digital.headset.IP_330`	Audio parameter

File	*Modification*	*Parameter*	*Modification Description*
techsupport	Removed	`voice.gain.rx.digital.headset.IP_335`	Audio parameter

site	Changed	`dns.cache.NAPTR.x.ttl`
		`dns.cache.SRV.x.ttl`
		`dns.cache.A.x.ttl`
			The maximum value increased from 65535 to 2147483647

reg-advanced, site	Changed	`up.useDirectoryNames`	The default value changed from 0 (disabled) to 1 (enabled).
pstn	Changed	`up.operMode`	The default value changed from 0 to *auto*.
techsupport	Changed	`voice.headset.rxag.adjust.IP_335`	The default value changed from -11 to 4 and the maximum value changed from -11 to 90.
techsupport	Changed	`voice.headset.rxag.adjust.IP_330`	The default value changed from -5 to 4 and the maximum value changed from -5 back to 90.
sip-interop	Changed	`VoIpProt.SIP.failoverOn503Response`	The default value changed from 1 (enabled) to 0 (disabled).

Understanding Updates to UCS 4.0.0

This section lists additions and changes, removals, enhancements, and configuration file parameter changes to UC Software 4.0.0 beside their respective Polycom tracking identification number.

New or enhanced features

26549 Enhanced the local missed call feature for shared line appearances. This feature supports RFC 3326 Reason Header.

28514 Enhanced the method of selecting a ring type on the menu screen.

29056 Enhanced the method of notifying the user of unregistered lines.

30251 Added support for non-volatile call lists (*applies to Spectralink 84-Series).*

30887 Added support for 802.1X authentication. Authentication methods include MD-5, EAP-PEAP, EAP-FAST, EAP-TLS, and EAP-TTLS.

32169 The user is now notified with a confirmation when deleting contact information.

33546 Added a host name field to the DHCP registration.

35170 Added support for User Profiles. Users may log into and out of the phone using a server-independent, configuration file-based, authentication method. When successfully authenticated, the user's personal configuration files are applied as well as the user's personal local contact directory and call lists.

35171 Updated most configuration parameters to be updated without the need of a reboot. Only a select number of configuration parameters require a reboot in order to be invoked.

36166 Added the option for the user to allow ringer volume levels to persist after the phone reboots.

38201 The Web-based configuration utility no longer requires the user to submit changes along with a reboot after each page has been modified.

44258 Enhanced the API by enhancing the HTTP Push capability by supporting mutual TLS.

44699 Added a Reset to Factory capability.

45777 Added user accessible diagnostic functions ping and traceroute.

47766 The Trusted CA Pool Management capability has been enhanced. The number of supported customer certificates has been increased to six.

48714 Added ability for the phone to mute the microphone when auto-answering a call.

48750 The Web-based configuration utility now enables the user to configure outbound proxies on a per-line basis.

48757 Contacts added to the list are now highlighted and displayed without the need to scroll up or down to view the addition.

50258 Enhanced the method of notifying the user of error and warning indications.

51101 Added the ability to use an Emergency Location Identification Number (ELIN) from LLDP-MED to add a P-Asserted-Identity when using emergency routing:
`dialplan.routing.emergency.preferredSource`=[ELIN|Config] (default ELIN)
`dialplan.routing.emergency.outboundIdentity`=xxxxxxxx (default null)
`dialplan.routing.emergency.outboundIdentity.lldp`=xxxxxxxx (default null).

51471 Added a configuration option to disable the test of subject's CommonName against the registration address (associated with CA management).

52844 Added certificate validation for 802.1X.

53128 Added a configuration option to modify the Backlight timeout duration.

53360 Added the ability to display the phones current ARP table in the diagnostic menu (*applies to Spectralink 84-Series).*

53908 The Web-based configuration utility now offers the ability to configure soft keys and line-keys.

54301 The timestamp is now displayed alongside the caller in the Call Lists.

54648 Added HTTPS support in the Updater that was previously called BootROM.

54680 Introduced the ability to import and export local and global configuration files using a PC browser.

54683 The browser-based SW Upgrade button that enables user to upgrade phones with one of multiple compatible software versions is available on the Polycom provisioning server.

54730 Noticeable enhancement from the time the phone is powered up and when it is ready for use.

56150 Added Data Link Layer L2 Discovery between phones and PC.

56187 Added ToID and FromID in SIP Publish packets for VQMon reports.

56274 Added multicast group paging based on the Spectralink 84-Series PTT solution.

56942 Configuring Soft key (EFK) settings no longer require a reboot in order to take effect.

57981 Added support for custom device certificates.

58007 Added the ability to revoke certificates used in SSL transactions by using OCSP.

58336 Added SHOULD SDP answer behavior as per RFC 3264.

58507 Enhanced the Web-based configuration and provisioning utility.

60297 Added the ability of random distribution of polling to check for software upgrades.

60907 Added the ability to disable Call Waiting while still allowing further outgoing calls.

61138 Added support for incoming TLS connections on the Web server.

61343 Added the ability to disable authentication verification for received SRTP packets.

62671 Added a time-stamped log event indicating when the phone is ready to be used.

63629 Added Sennheiser EHS configuration menus and options.

64144 The alerting LED and associated line-key animation for second and subsequent incoming calls are now disabled when the Call Waiting feature waiting is disabled.

64243 The API Data push message size limit has been increased to 2048 bytes from 1024 bytes.

64359 Converted the BLA dialog rendering from *No* to *Yes* for user agents that are a remote party to the existing call dialog.

65287 Added the ability to prevent a phone from being provisioned at start-up. Configuration parameter `prov.startupCheck.enabled` [default = 1 (enabled)]

66212 Added support for setting the syslog server address from DHCP.

66323 Added an administrator operations menu in the Updater to the setup menu: Reboot, Reset Settings, Format File System, and Install BootBlock.

66604 The phone reports connectivity event notifications to an 802.1x enabled switch port when a non-authenticated PC disconnects or reconnects to the phone.

67600 Password and other security entry fields now perform a brief echo of entered characters before being obscured from view.

68110 Added control of available telephony features on the Office Communications Server (OCS) using the `reg.x.telephony` configuration parameter.

69225 Added the ability to allow a hard key to be directly assigned an Enhanced Feature Key (EFK) style macro.

71633 The Reset setting in the Updater menu does not erase the CA and Device Certificates.

Enhanced capabilities

31158 Instant messages can now be sent if `msg.bypassInstantMessage=1`. The phone menu will no longer be bypassed after pressing the Messages button.

38407 After reboot, the phones now transmit a TCP message to the outbound proxy address.

40393 The backlight adjustment has been adjusted to work correctly when the incoming call times out.

41897 The sound heard on the phone when attempting to cancel a conference or transfer has been removed.

43822 When there is an active call, the backlight now adjusts properly.

43846 The menu widget now scales to the correct size of the menu (*applies to Spectralink 84-Series*).

43864 The Soft key, line key and status widgets can now be scaled (*applies to Spectralink 84-Series*).

44981 The phone now seizes the correct line for speed dial when `call.stickyAutoLineSeize.onHookDialing=1`.

45806 An unsupported format message no longer appears when trying to play a short WAV file.

46134 The phones now play a default ringtone when the ringtone size is larger than the tone quota or the ringtone is not in the cache.

48153 In the phone menu password settings, deleting a character before the character timeout now clears the last asterisk symbol.

48217 When `ramdisk.nBlocks=0` is set, `ramdisk.nBlocks` no longer consumes extraneous memory.

48753 The XML dictionary download no longer fails when the dictionary file size exceeds the defined size.

50234 The phone no longer crashes while starting a native application (*applies to Spectralink 84-Series*).

50745 Pressing the hookswitch toggle quickly no longer creates a phone and headset mismatch.

51301 A loud ring has been removed from the speaker when canceling a conference call or switching between calls.

51751 When there are multiple calls waiting, dropping one remote party now plays the call waiting ring on the originating phone.

51767 The phone no longer crashes when trying to add a large number of contacts.

52006 The call waiting tone no longer changes to a single beep when a double beep is configured on the phone.

52007 When a call is automatically disconnected at the far end phone after time out, the current active call no longer goes on hold inadvertently.

52270 Backlight values now match the phone menu option and override file parameters.

52380 When the phone lines are configured to call server and presence server respectively, the presence information now displays on the first line as well as the presence line.

52688 Enhanced the `mb.main.idleTimeout` parameter behavior.

52789 The phone settings menu now has an appropriate label for the menu item in Handsfree Mode.

52920 When a custom CA cert URL is unreachable, an appropriate message now displays on the phone.

53101 VQMon values displayed on the SQmediator are now the same as the single SIP-Publish packet values.

53138 Instant messaging strings now have spaces in between words in all instances.

53142 Extra spaces at the beginning and end of the phone labels have been removed.

53235 Extra spaces in the phone exit menu have been removed.

54449 The phone no longer displays an error message when trying to edit a long contact number.

54913 In a BLF scenario, when the monitored phone places a call to another phone, the Dialog Event Package no longer contains repeated remote identity when its INVITE has received an initial 407 or 401 response.

55669 When the phone is configured as TCP only, and the phone receives a REFER in UDP, the phone now sends an INVITE in TCP.

55681 When transport is set to TCP, Refer-Based Click-To-Dial now works when the phone has an active call.

55957 When the BLF feature is enabled, the remote call appearance screen now properly times out and does not wait until the call is ended by the monitored user.

57538 In the phone menus, field names no longer truncate when the user tries to make edits (*applies to Spectralink 84-Series*).

57625 Applications are now loading as per the order specified (*applies to Spectralink 84-Series*).

58860 When the forward feature is enabled, the number of rings set now matches the actual ring cadences.

59086 When the phone is configured to an external server like CMA, the phone clock format (12 hrs – 24hrs) does not get affected until the phone reboots.

59202 When the phone loses an active call on hold, pressing resume no longer drops the call.

59355 The phone no longer logs error messages when it is unable to connect to any of the telephony notification URLs.

59463 When using the phone's Web configuration, the phone no longer restarts when updating telephony notification event or URL.

59478 In the phone digit map, segments longer than 40 characters no longer truncated to 40 when applied.

61100 Added the ability to override complex audio codec instance count definition for each individual codec type.

61553 The phone no longer crashes when trying to split a conference service which is unavailable.

63190 The macro $FServerACDSignIn$ now works when configuring the soft key using EFK to exercise the `ServerACDSignIn` function.

63582 The excessively long boot time resulting from FTP errors and failures has been noticeably decreased (*applies to Spectralink 84-Series*).

64389 Added the ability to set the correct TLS Profile using the Updater and/ or Application UI menus.

64455 There is no longer a delay between the time the Push URL is sent to the phone and the time it takes the browser to execute the fetch URL (*applies to Spectralink 84-Series*).

64464 The phones no longer wait to auth/ re-associate to AP until AP starts the full security exchange (*applies to Spectralink 84-Series*).

64693 The payload settings specified by the phone are now used by the receiving phone.

64932 When the server side Call Forward No Answer (CFNA) is enabled, the user no longer has the option to select the number of rings on the local phone.

65081 The user is now able to navigate on the phone menus having select options available (*applies to Spectralink 84-Series*).

65082 The radio performance has been improved to reduce the reported number of missed packets and high retry rates (*applies to Spectralink 84-Series*).

65255 Selected options on the menus no longer disappear when selected from the phone navigation right hard key (*applies to Spectralink 84-Series*).

65275 When persistence login is enabled for default, the user log out no longer reboots the phone.

65309 Incorrect soft key options no longer show up when certain selections are invoked in the menu/ UI (*applies to Spectralink 84-Series*).

65337 The phones now provision correctly via HTTPS.

66582 In the quick setup menu, the unwanted Ok soft key no longer appears while changing the Boot server options (*applies to Spectralink 84-Series*).

66975 The voicemail icon now displays when there is a voice mail notification on the phone (*applies to Spectralink 84-Series*).

67928 In the phone buddy list, the popup message *Contact already exists* has been resolved.

68345 The phone dial pad keys now wake/ light up when the phone comes back from the power save mode (*applies to Spectralink 84-Series*).

68533 A reboot is no longer necessary to change the parameter `voIpProt.SIP.conference.address` in the configuration files.

69372 During an IM chat session, the phone now displays all messages using the same quick note string (*applies to Spectralink 84-Series*).

69373 When provisioning TLS applications, the CommonName of a server certificate is now configurable with the new configuration option.

69374 User interface changes have been made in the Application menu and BootROM menu for SIP and Provisioning applications respectively to make CommonName configurable.

70258 Resetting the phone to factory settings no longer clears the password (*applies to Spectralink 84-Series*).

70458 Text on the input fields and soft keys are now properly displayed.

70633 The phone no longer mishandles 403 responses to first REFER sent to phone to centralized conference server.

70908 When using user profiles, the phone no longer powers off at the user login prompt (*applies to Spectralink 84-Series*).

71046 When the phone is in a conference call and a roaming attempt is made, the access point no longer rejects the reassociation request (*applies to Spectralink 84-Series*).

71156 When there is an active call between two parties, accepting another call no longer makes the phone vibrate continuously when the mode is set to Ring and Vibrate (*applies to Spectralink 84-Series*).

Configuration file enhancements

Certain groups of configuration parameters have been modified in UC Software 4.0.0. In these cases, instead of listing every parameter, the following table will specify a group of related parameters with an abbreviated XML path name ending with (.*).

For example, suppose the following parameters are modified: `device.wifi.enabled`, `device.wifi.ipAddress`, and `device.wifi.ssid`. Since these parameters all begin with `device.wifi`, Table 6: Software Version 4.0.0 – Configuration File Parameter Enhancements abbreviates these parameters as `device.wifi.*`

Settings: Parameters With .set
Most `device` parameters have identical parameters ending with `.set`. The `.set` parameters are not included in the following table.

Web Info: Find detailed descriptions of parameters and values
You can find descriptions of all parameters in the *Spectralink 84-Series Wireless Telephone Administration Guide*.

Table 6: Software Version 4.0.0 – Configuration File Parameter Enhancements for UCS 4.0.0

Modification	*Configuration Parameter*	*Description*
Discontinued	`apps.x.Label`	Productivity Applications parameter
Discontinued	`apps.x.Url`	Productivity Applications parameter
Discontinued	`apps.ucdesktop.IP`	Productivity Applications parameter
Discontinued	`apps.ucdesktop.name`	Productivity Applications parameter
Discontinued	`apps.ucdesktop.port`	Productivity Applications parameter
Discontinued	`device.auth.*` The parameters `device.auth.localAdminPassword` and `device.auth.localUserPassword` have not been removed	Provisioning parameters
Discontinued	`device.dhcp.offerTimeout`	Provisioning parameter
Discontinued	`device.prov.appProvString`	Provisioning parameter
Discontinued	`device.prof.appProvType`	Provisioning parameter
Discontinued	`device.sec.SSL.*`	Provisioning parameters
Discontinued	`device.sec.deviceCertEnabled`	Provisioning parameter

Modification	*Configuration Parameter*	*Description*
Discontinued	`exchange.server.address`	Productivity Applications parameter
Discontinued	`httpd.lp.port`	Provisioning parameter
Discontinued	`lcl.datetime.date.digitFormatEnable`	User preference parameter
Discontinued	`log.level.change.lp`	Log parameter
Discontinued	`log.level.change.nwmgr`	Log parameter
Discontinued	`log.level.change.sync`	Log parameter
Discontinued	`reg.x.filterReflectedBlaDialogs`	Call feature parameter
Discontinued	`reg.x.server.H323.y.register`	Call feature parameter
Discontinued	`sec.TLS.customDeviceCert.enable`	Security parameter
Discontinued	`sec.dot1x.eapollogoff.pcforcelanlinkreset`	Security parameter
Discontinued	`voIpProt.SDP.useLegacyPayloadType Negotiation`	Call feature parameter
Discontinued	`voIpProt.server.H323.x.register`	Call feature parameter
Discontinued	`voice.aec.hd.*` The parameter `voice.aec.hd.enable` has not been removed	Audio parameters
Discontinued	`voice.aec.hf.*` The parameter `voice.aec.hf.enable` has not been removed	Audio parameters
Discontinued	`voice.aec.hs.*` The parameter `voice.aec.hs.enable` has not been removed	Audio parameters
Discontinued	`voice.aes.hd.duplexBalance`	Audio parameter
Discontinued	`voice.aes.hf.*` The parameter `voice.aes.hf.enable` has not been removed	Audio parameters
Discontinued	`voice.aes.hs.duplexBalance`	Audio parameter
Discontinued	`voice.gain.rx.digital.ringer.*` The parameter `voice.gain.rx.digital.ringer` has also been removed	Audio parameters
Discontinued	`voice.handset.wideband`	Audio parameter
Discontinued	`voice.rxEq.hf.postFilter.*` The parameter `voice.rxEq.hf.postFilter.enable` has not been removed	Audio parameters
Discontinued	`voice.rxEq.hf.preFilter.*` The parameter `voice.rxEq.hf.preFilter.enable` has not been removed	Audio parameters
Discontinued	`voice.rxEq.hs.postFilter.*` The parameter `voice.rxEq.hs.postFilter.enable` has not been removed	Audio parameters
Discontinued	`voice.rxEq.hs.preFilter.*` The parameter `voice.rxEq.hs.preFilter.enable` has not been removed	Audio parameters

Modification	*Configuration Parameter*	*Description*
Added	`apps.x.label`	Productivity Applications parameter
Added	`apps.x.url`	Productivity Applications parameter
Added	`apps.push.secureTunnelEnabled`	Productivity Applications parameter
Added	`apps.push.secureTunnelPort`	Productivity Applications parameter
Added	`apps.push.secureTunnelRequired`	Productivity Applications parameter
Added	`apps.statePolling.responseMode`	Productivity Applications parameter
Added	`apps.telNotification.callStateChangeEvent`	Productivity Applications parameter
Added	`apps.telNotification.userLogInOutEvent`	Productivity Applications parameter
Added	`apps.ucdesktop.*` The parameter `apps.ucdesktop.enabled` has existed in previous versions	Productivity Applications parameters
Added	`bg.color.*`	Background parameter
Added	`bluetooth.radioOn`	Call feature parameter
Added	`call.advancedMissedCalls.*`	Call feature parameters
Added	`call.callWaiting.enable`	Call feature parameter
Added	`call.localConferenceEnabled`	Call feature parameter
Added	`callLists.*`	Call feature parameters
Added	`device.hostname`	Provisioning parameter
Added	`device.net.dhcpBootServer`	Provisioning parameter
Added	`device.net.dot1x.*`	Provisioning parameters
Added	`device.pacfile.*`	Provisioning parameters
Added	`device.prov.upgradeServer`	Provisioning parameter
Added	`device.sec.TLS.*`	Provisioning parameters
Added	`device.usbnet.*`	Provisioning parameters
Added	`device.wifi.*`	Provisioning parameter
Added	`dialplan.applyToPstnDialing`	Call feature parameter
Added	`dialplan.routing.emergency.outboundIdentity`	Call feature parameter
Added	`dialplan.routing.emergency.outboundIdentity.lldp`	Call feature parameter

Modification	*Configuration Parameter*	*Description*
Added	`dialplan.routing.ermgency.preferredSource`	Call feature parameter
Added	`exchange.meeting.*`	Productivity Applications parameter
Added	`exchange.server.url`	Productivity Applications parameter
Added	`feature.audioVideoToggle.enabled`	Call feature parameter
Added	`feature.bluetooth.enabled`	Call feature parameter
Added	`feature.enhancedCallDisplay.enabled`	Call feature parameter
Added	`feature.exchangeCalendar.enabled`	Call feature parameter
Added	`feature.nonVolatileRingerVolume.enabled`	Call feature parameter
Added	`httpd.cfg.secureTunnelEnabled`	Web Configuration Utility parameter
Added	`httpd.cfg.secureTunnelPort`	Web Configuration Utility parameter
Added	`httpd.cfg.secureTunnelRequired`	Web Configuration Utility parameter
Added	`httpd.ta.secureTunnelEnabled`	Web Configuration Utility parameter
Added	`httpd.ta.secureTunnelPort`	Web Configuration Utility parameter
Added	`httpd.ta.secureTunnelRequired`	Web Configuration Utility parameter
Added	`ind.pattern.blink.*`	LED indicator parameter
Added	`ind.pattern.flashSlow2.*`	LED indicator parameter
Added	`lcl.x.pstnCountry`	Multilingual parameter
Added	`lcl.aidt`	Multilingual parameter
Added	`lcl.callerId`	Multilingual parameter
Added	`lcl.callerIdType`	Multilingual parameter
Added	`lcl.country.*` The parameter `lcl.country` has also been added	Multilingual parameters
Added	`lcl.dtmfLevel`	Multilingual parameter
Added	`lcl.dtmfTwist`	Multilingual parameter
Added	`lcl.flashTiming`	Multilingual parameter
Added	`lcl.pstnCountryIndex`	Multilingual parameter
Added	`lineKey.*`	Flexible line key assignment parameters

Modification	*Configuration Parameter*	*Description*
Added	`log.level.change.barcd`	Log parameter
Added	`log.level.change.bluet`	Log parameter
Added	`log.level.change.clist`	Log parameter
Added	`log.level.change.daa`	Log parameter
Added	`log.level.change.dock`	Log parameter
Added	`log.level.change.drvbt`	Log parameter
Added	`log.level.change.oaip`	Log parameter
Added	`log.level.change.ocsp`	Log parameter
Added	`log.level.change.pdc`	Log parameter
Added	`log.level.change.pres`	Log parameter
Added	`log.level.change.pstn`	Log parameter
Added	`log.level.change.ptt`	Log parameter
Added	`log.level.change.rtls`	Log parameter
Added	`log.level.change.tls`	Log parameter
Added	`log.level.change.wifi`	Log parameter
Added	`log.render.stdout.*` The parameter `log.render.stdout` has existed in previous versions	Log parameter
Added	`mb.main.toolbar.autoHide.*` The parameter `mb.main.toolbar.autoHide.enabled` has existed in previous versions	Microbrowser parameters
Added	`messaging.*`	Spectralink 84-Series instant messaging parameters
Added	`np.*`	Spectralink 84-Series notification profiles parameters
Added	`oai.*`	Spectralink 84-Series Open Application Interface parameters
Added	`prov.login.*`	Distributed polling parameters
Added	`prov.loginCredPwdFlushed.enabled`	Distributed polling parameter
Added	`prov.polling.timeRandomEnd`	Distributed polling parameter
Added	`prov.startupCheck.enabled`	Provisioning parameter
Added	`pstn.*`	
Added	`ptt.*`	Paging and push-to-talk parameters

Modification	*Configuration Parameter*	*Description*
Added	`qbc.*`	Spectralink 84-Series quick barcode connector parameters
Added	`qos.ethernet.*` The parameters `qos.ethernet.callControl.user_priority`, `qos.ethernet.other.user_priority`, `qos.ethernet.rtp.user_priority`, and `qos.ethernet.rtp.video.user_priority` existed in previous versions	Spectralink 84-Series QoS parameters
Added	`reg.x.auth.domain`	Call feature parameter
Added	`reg.x.auth.useLoginCredentials`	Call feature parameter
Added	`reg.x.gruu`	Call feature parameter
Added	`reg.x.server.y.specialInterop`	Call feature parameter
Added	`reg.x.server.y.useOutboundProxy`	Call feature parameter
Added	`reg.x.srtp.enable`	Call feature parameter
Added	`reg.x.srtp.offer`	Call feature parameter
Added	`reg.x.srtp.require`	Call feature parameter
Added	`reg.x.telephony`	Call feature parameter
Added	`se.pat.misc.customX.*`	Sound effects parameters
Added	`se.pat.misc.miscX.*`	Sound effects parameters
Added	`se.rt.answerMute.*`	Sound effects parameters
Added	`se.rt.autoAnswer.micMute`	Sound effects parameter
Added	`se.rt.autoAnswer.videoMute`	Sound effects parameter
Added	`se.rt.customX.micMute`	Sound effects parameter
Added	`se.rt.customX.videoMute`	Sound effects parameter
Added	`se.rt.default.micMute`	Sound effects parameter
Added	`se.rt.default.videoMute`	Sound effects parameter
Added	`se.rt.emergency.micMute`	Sound effects parameter
Added	`se.rt.emergency.videoMute`	Sound effects parameter
Added	`se.rt.external.micMute`	Sound effects parameter
Added	`se.rt.external.videoMute`	Sound effects parameter
Added	`se.rt.internal.micMute`	Sound effects parameter
Added	`se.rt.internal.videoMute`	Sound effects parameter
Added	`se.rt.precedence.micMute`	Sound effects parameter
Added	`se.rt.precedence.videoMute`	Sound effects parameter

Modification	*Configuration Parameter*	*Description*
Added	`se.rt.ringAnswerMute.*`	Sound effects parameters
Added	`se.rt.splash.micMute`	Sound effects parameter
Added	`se.rt.splash.videoMute`	Sound effects parameter
Added	`se.rt.visual.micMute`	Sound effects parameter
Added	`se.rt.visual.videoMute`	Sound effects parameter
Added	`sec.TLS.SIP.strictCertCommonNameValidation`	Security parameter
Added	`sec.TLS.customCaCert.*`	Security parameters
Added	`sec.TLS.customDeviceCert.*`	Security parameters
Added	`sec.TLS.customDeviceKey.*`	Security parameters
Added	`sec.TLS.profile.*`	Security parameters
Added	`sec.TLS.profileSelection.*`	Security parameters
Added	`sec.hostMoveDetect.*`	Security parameters
Added	`sec.srtp.holdWithNewKey`	Security parameter
Added	`sec.srtp.mki.length`	Security parameter
Added	`sec.srtp.resumeWithNewKey`	Security parameter
Added	`softkey.x.insert`	Security parameter
Added	`tcpIpApp.fileTransfer.waitForLinkIfDown`	IP parameter
Added	`tone.chord.misc.A3Major.*`	Tone parameters
Added	`tone.chord.misc.C3Major.*`	Tone parameters
Added	`tone.chord.misc.Db3Major.*`	Tone parameters
Added	`tone.chord.misc.E3Major.*`	Tone parameters
Added	`tone.chord.misc.cs12.*`	Tone parameters
Added	`up.25mmRealTime`	User preferences parameter
Added	`up.backlight.timeout.*` The parameter `up.backlight.timeout` has also been added	User preferences parameters
Added	`up.cfgWarningsEnabled`	User preferences parameter
Added	`up.displayOperMode`	User preferences parameter
Added	`up.headsetOnlyAlerting`	User preferences parameter
Added	`up.hearingAidCompatibility.enabled`	User preferences parameter
Added	`up.hideDateTimeWhenNotSet`	User preferences parameter
Added	`up.multiKeyAnswerEnabled`	User preferences parameter
Added	`up.operMode`	User preferences parameter

Modification	*Configuration Parameter*	*Description*
Added	up.pstnSetup	User preferences parameter
Added	up.warningLevel	User preferences parameter
Added	upgrade.*	Provisioning parameter
Added	video.callMode.default	Video parameter
Added	video.debug	Video parameter
Added	voIpProt.SIP.dialog.strictXLineId	Call feature parameter
Added	voIpProt.SIP.IM.autoAnswerDelay	Call feature parameter
Added	voIpProt.SIP.mtls.enable	Call feature parameter
Added	voIpProt.SIP.pingMethod	Call feature parameter
Added	voIpProt.server.x.specialInterop	Call feature parameter
Added	voIpProt.server.x.useOutboundProxy	Call feature parameter
Added	voice.aec.bt.hd.enable	Audio parameter
Added	voice.aec.usb.hf.enable	Audio parameter
Added	voice.aes.bt.hd.enable	Audio parameter
Added	voice.aes.usb.hf.enable	Audio parameter
Added	voice.agc.bt.hd.enable	Audio parameter
Added	voice.agc.usb.hf.enable	Audio parameter
Added	voice.bt.*	Audio parameters
Added	voice.handset.rxag	Audio parameter
Added	voice.handset.rxdg	Audio parameter
Added	voice.handset.st.	Audio parameter
Added	voice.handset.txag	Audio parameter
Added	voice.handset.txdg	Audio parameter
Added	voice.handsfree.*	Audio parameters
Added	voice.headset.rxag	Audio parameter
Added	voice.headset.rxdg	Audio parameter
Added	voice.headset.st	Audio parameter
Added	voice.headset.txag	Audio parameter
Added	voice.headset.txdg	Audio parameter
Added	voice.ns.bt.*	Audio parameters
Added	voice.ns.usb.*	Audio parameters
Added	voice.ringer.rxag	Audio parameter

Modification	*Configuration Parameter*	*Description*
Added	`voice.rxEq.usb.*`	Audio parameters
Added	`voice.rxQos.ptt.*`	Audio parameters
Added	`voice.rxQos.wireless.*`	Audio parameters
Added	`voice.txEq.usb.*`	Audio parameters
Added	`voice.usb.*`	Audio parameters
Added	`voice.volume.persist.bluetooth.headset`	Audio parameter
Added	`voice.volume.persist.usb.handsfree`	Audio parameter
Added	`wifi.*`	Wifi parameters
Changed	`apps.push.messageType`	Productivity Applications parameter
Changed	`apps.uc.desktop.enabled`	Productivity Applications parameter
Changed	`call.autoRouting.preferredProtocol`	Call feature parameter
Changed	`device.auth.*`	Provisioning parameters
Changed	`device.cma.mode`	Provisioning parameter
Changed	`device.dhcp.*` The parameter `device.dhcp.bootSrvOpt` has not been changed	Provisioning parameters
Changed	`device.dns.*`	Provisioning parameters
Changed	`device.em.power`	Provisioning parameter
Changed	`device.line.*`	Provisioning parameters
Changed	`device.net.*` The parameters `device.net.dhcpBootServer`, `device.net.IPgateway`, `device.net.subnetMask`, and `device.net.vlanId` have not been changed	Provisioning parameters
Changed	`device.ntlm.versionMode`	Provisioning parameter
Changed	`device.prov.*` The parameters `device.prov.password`, `device.prov.serverName`, `device.prov.upgradeServer`, and `device.prov.user` have not been changed	Provisioning parameters
Changed	`device.serial.enable`	Provisioning parameter
Changed	`device.sntp.gmtOffset`	Provisioning parameter
Changed	`device.syslog.*` The parameter `device.syslog.serverName` has not been changed	Provisioning parameters
Changed	`dialplan.x.digitmap`	Call feature parameter
Changed	`dialplan.x.routing.server.y.transport`	Call feature parameter
Changed	`dialplan.digitmap`	Call feature parameter

Modification	*Configuration Parameter*	*Description*
Changed	dialplan.digitmap.timeOut	Call feature parameter
Changed	dialplan.impossibleMatchHandling	Call feature parameter
Changed	dialplan.removeEndOfDial	Call feature parameter
Changed	dialplan.routing.server.x.transport	Call feature parameter
Changed	dir.H350.dev.attribute.x.type	Directory parameter
Changed	dir.H350.dev.transport	Directory parameter
Changed	dir.H350.group.attribute.x.type	Directory parameter
Changed	dir.H350.group.transport	Directory parameter
Changed	dir.H350.person.attribute.x.type	Directory parameter
Changed	dir.H350.person.transport	Directory parameter
Changed	dir.corp.attribute.x.type	Directory parameter
Changed	dir.corp.transport	Directory parameter
Changed	dir.local.nonVolatile.maxSize	Directory parameter
Changed	dir.local.volatile.maxSize	Directory parameter
Changed	divert.x.autoOnSpecificCaller	Call feature parameter
Changed	divert.x.contact	Call feature parameter
Changed	divert.x.sharedDisabled	Call feature parameter
Changed	divert.busy.*	Call feature parameters
Changed	divert.dnd.*	Call feature parameters
Changed	divert.fwd.x.enabled	Call feature parameter
Changed	divert.noanswer.*	Call feature parameters
Changed	ind.led.x.index	LED indicator parameter
Changed	keypadLock.*	Phone lock parameters
Changed	lcl.ml.lang.clock.x.format	Multilingual parameter
Changed	lcl.ml.lang.list	Multilingual parameter
Changed	lcl.ml.lang.menu.*	Multilingual parameters
Changed	lcl.ml.lang.tags.*	Multilingual parameters
Changed	log.level.change.slog	Log parameter
Changed	log.render.file.size	Log parameter
Changed	log.render.file.upload.append.limitMode	Log parameter
Changed	log.render.file.upload.period	Log parameter
Changed	log.render.stdout	Log parameter

Modification	*Configuration Parameter*	*Description*
Changed	`log.sched.*`	Log parameters
Changed	`msg.bypassInstantMessage`	Voicemail parameter
Changed	`nat.*` The parameter `nat.keepalive.interval` has not been changed	IP parameters
Changed	`phoneLock.enabled`	Phone lock parameter
Changed	`pnet.remoteCall.dtmfDuration`	Peer networking parameter
Changed	`powerSaving.enable`	Power saving parameter
Changed	`prov.fileSystem.ffs0.minFreeSpace`	Provisioning parameter
Changed	`prov.polling.mode`	Distributed polling parameter
Changed	`prov.polling.time`	Distributed polling parameter
Changed	`qos.ethernet.*`	Quality of Service parameters
Changed	`qos.ip.callControl.*` The parameters `qop.ip.callControl.dscp.*` have not been changed	Quality of Service parameters
Changed	`qos.ip.rtp.*` The parameters `qos.ip.rtp.dscp.*` and `qos.ip.rtp.video.dscp.*` have not been changed	Quality of Service parameters
Changed	`reg.x.callsPerLineKey`	Line registration parameter
Changed	`reg.x.outboundProxy.transport`	Line registration parameter
Changed	`reg.x.ringType`	Line registration parameter
Changed	`reg.x.server.y.transport`	Line registration parameter
Changed	`res.finder.minFree`	Phone memory parameter
Changed	`res.finder.sizeLimit`	Phone memory parameter
Changed	`res.quotas.background`	Phone memory parameter
Changed	`res.quotas.bitmap`	Phone memory parameter
Changed	`res.quotas.cache`	Phone memory parameter
Changed	`res.quotas.font`	Phone memory parameter
Changed	`res.quotas.tone`	Phone memory parameter
Changed	`res.quotas.xmlui`	Phone memory parameter
Changed	`roaming_buddies.reg`	Spectralink 84-Series call feature parameter
Changed	`roaming_privacy.reg`	Spectralink 84-Series call feature parameter
Changed	`se.destination`	Sound effects parameter
Changed	`se.pat.callProg.msgWaiting.name`	Sound effects parameter

Modification	*Configuration Parameter*	*Description*
Changed	se.pat.misc.instantMessage.name	Sound effects parameter
Changed	se.pat.misc.localHoldNotification.name	Sound effects parameter
Changed	se.pat.misc.messageWaiting.name	Sound effects parameter
Changed	se.pat.misc.negativeConfirm.name	Sound effects parameter
Changed	se.pat.misc.positiveConfirm.name	Sound effects parameter
Changed	se.pat.misc.remoteHoldNotification.name	Sound effects parameter
Changed	se.pat.misc.welcome.name	Sound effects parameter
Changed	sec.H235.*	Sound effects parameters
Changed	tcpIpApp.keepalive.*	IP parameters
Changed	tcpIpApp.port.*	IP parameters
Changed	up.25mm	User preferences parameter
Changed	up.analogHeadsetOption	User preferences parameter
Changed	up.backlight.idleIntensity	User preferences parameter
Changed	up.oneTouchVoiceMail	User preferences parameter
Changed	up.useDirectoryNames	User preferences parameter
Changed	up.welcomeSoundEnabled	User preferences parameter
Changed	up.welcomeSoundOnWarmBootEnabled	User preferences parameter
Changed	video.camera.frameRate	Video parameter
Changed	video.localCameraView.fullScreen.mode	Video parameter
Changed	video.maxCallRate	Video parameter
Changed	video.screenMode	Video parameter
Changed	video.screenModeFS	Video parameter
Changed	voIpProt.H323.dtmfViaSignaling	Call feature parameter
Changed	voIpProt.H323.enable	Call feature parameter
Changed	voIpProt.H323.local.port	Call feature parameter
Changed	voIpProt.SIP.local.port	Call feature parameter
Changed	voIpProt.SIP.outboundProxy.transport	Call feature parameter
Changed	voIpProt.SIP.specialEvent.lineSeize.nonStandard	Call feature parameter
Changed	voIpProt.server.x.transport	Call feature parameter
Changed	voIpProt.server.dhcp.option	Call feature parameter
Changed	voice.audioProfile.Lin16.16ksps.payloadSize	Audio parameter

Modification	*Configuration Parameter*	*Description*
Changed	`voice.audioProfile.Lin16.32ksps.payloadSize`	Audio parameter
Changed	`voice.audioProfile.Lin16.44_1ksps.payloadSize`	Audio parameter
Changed	`voice.audioProfile.Lin16.48ksps.payloadSize`	Audio parameter
Changed	`voice.audioProfile.Lin16.8ksps.payloadSize`	Audio parameter
Changed	`voice.codecPref.iLBC.*`	Audio parameters
Changed	`voice.gain.rx.analog.*`	Audio parameters
Changed	`voice.gain.rx.digital.*`	Audio parameters
Changed	`voice.gain.tx.analog.*`	Audio parameters
Changed	`voice.gain.tx.digital.*`	Audio parameters
Changed	`voice.handset.rxag.adjust.*`	Audio parameters
Changed	`voice.handset.sidetone.adjust.*`	Audio parameters
Changed	`voice.handset.txag.adjust.*`	Audio parameters
Changed	`voice.headset.sidetone.adjust.*`	Audio parameters
Changed	`voice.headset.txag.adjust*`	Audio parameters
Changed	`voice.ns.hd.*` The parameter `voice.ns.hd.enable` has not been changed	Audio parameters
Changed	`voice.ns.hf.signalAttn`	Audio parameter
Changed	`voice.ns.hf.silenceAttn`	Audio parameter
Changed	`voice.ns.hs.signalAttn`	Audio parameter
Changed	`voice.ns.hs.silenceAttn`	Audio parameter

Chapter 18: Polycom-branded Known Issues and Suggested Workarounds

The following issues are known to be present in the current release. They will be reviewed for possible fix in a future release if no reasonable work-around is available.

26615 Subnet mask forces all packets through gateway when not using DHCP and when using the wrong subnet mask for the network class in use, for example using 192.168.X.X addresses with a 255.255.0.0 subnet mask. Exists in SIP 1.4.x.

Workaround: Use the correct subnet mask.

26920 Centralized conference fails due to RTP port being slow to open in some cases.

Workaround: No workaround is currently available.

30086 Boot servers running explicit FTPS are not supported.

Workaround: Use implicit FTPS or HTTPS.

30371 Pattern generator for tones does not work well for the case of a single repeating chord.

Workaround: Start the pattern with a short period of silence then the desired initial chord. Loop back to the desired initial chord instead of the initial silence.

37175 If configuration files are used to set the SNTP server address, date validity checking on CA certificates will be ignored for https provisioning.

Workaround: Set the SNTP server address through the phone UI or use DHCP to inform the phone of the SNTP server address.

41993 Scrolling through the Corporate Directory may not return complete results if results contain Unicode character values > 127 (server does not support sorting).

Workaround: Start the search in a different location or avoid use of Unicode characters >127 in directories.

54027 (SRTP) The receiving phone does not re-invite with a new key at the half-life of the key life-time.

Workaround: Ensure that both ends use the same key life time such that the sending phone will initiate a key re-negotiation.

54028 (SRTP) Key changes do not function correctly when multiple crypto suites are enabled.

Workaround: Configure a single crypto suite on the phone.

62482 Server certificate Serial Number is checked against the host name if the outbound proxy is configured.

Workaround: No workaround is currently available.

63527 Phone sends out INVITE and CANCEL if no provisional response is received.

Workaround: No workaround is currently available.

63609 Cannot answer a call using the speaker soft key when DND is enabled and `call.rejectBusyOnDnd` is set to zero

Workaround: No workaround is currently available.

68815 The phone doesn't send a *CallState=CallConference* notification when a conference is established

Workaround: No workaround is currently available.

69552 Music on hold (MOH) call dialog does not get terminated when there is an update from the MOH server.

Workaround: End the call to restore normal state.

71800 Users cannot change the user password using the Web Configuration Utility.

Workaround: Use the phones user interface to change the user password.

72211 An explicitly trusted Intermediate CA fails TLS verification when it is the issuer of a server certificate.

Workaround: No workaround is currently available.

74958 When DND is enabled, the phone is missing the call forward message Fwd:<*number*>

Workaround: No workaround is currently available.

76881 On a shared call reorder tone is not played to the user when Resume attempt fails.

Workaround: No workaround is currently available.

77192 Adding a '+' sign to the Line Identification address via the phone's Web Configuration Utility is displayed incorrectly.

Workaround: Configure the Line Identification address via the phone menu or the configuration file.

77039 When PTT is enabled, sender name/ ID updated through the pararmeter reg.x.displayname does not get updated during the PPT call.

Workaround: No workaround is currently available.

78232 During a remote conference pickup on a shared line the phone does not display the call appearance and call indicator.

Workaround: No workaround is currently available.

78340 Several MWI NOTIFY messages within a few seconds may cause the phone to reset.

Workaround: Avoid sending multiple MWI messages close together.

80330 In a Lync environment, resetting the phone local configurations does not allow the phone to re-register with the Lync server.

Workaround: Perform a reboot.

80212 In a Lync environment, when the corporate directory and parameter dir.corp.sortcontrol are enabled the contact search does not fetch any contacts.

Workaround: Set dir.corp.sortcontrol =0

80144 In a Lync environment, the phone plays a ring tone for the private line even when ring type is set to silent.

Workaround: No workaround is currently available.

79787 In a Lync environment, when the phone is reset to factory default with Lync base profile selection, the phone takes around 20sec - 30sec to come up.

Workaround: Wait for 30 seconds when factory default is selected.

79225 In a Lync environment, the logout for non-default user does not happen as per the set time in the automatic logout parameter.

Workaround: The user needs to logout manually.

79070 In a Lync environment, on phone web UI enabling the login credentials option does not disable the user credentials.

Workaround: Restarting the phone updates phone web UI

WUCS-32 The handset only reads 000000000000-directory.xml once, and subsequently only looks for its MAC specific directory file, preventing updates to 000000000000-directory.xml to be picked up.

Workaround: Replicate 000000000000-directory.xml to one file per Mac address whenever the file changes.

WUCS-504 Removing the PAC file from the handset sometimes fails.

Workaround: Removing the PAC file is rarely needed. Restore to factory defaults and reprovision the handset.

WUCS-652 Registering a handset to an open-SIP line when it was previously registered to a Lync line for voice support may not behave properly.

Workaround: Always perform a restore to defaults when registering to a different telephony server type.

WUCS-723 The handset cannot participate in Instant Messaging conferences.

Workaround: No work around at this time. IM the user to join the conference using a PC when possible.

WUCS-870 Using an invalid password with EAP-FAST fails to generate an error message even though the handset can’t connect.

Workaround: Check/ Re-enter the password

WUCS-960 The handset doesn’t always properly recover when both parties of a call place each other on hold (applicable to the Avaya CS1000 call server only)

Workaround: No work around at this time

WUCS-970 Changing user form the Login Credentials screen doesn't clear call logs from the previous user (Lync call server only)

Workaround: Sign out of the phone rather than changing user from the login credentials screen.

WUCS-984 Line IDs contains the quote (') and double-quote characters (") do not display properly.

Workaround: avoid using quotes in user names

WUCS-1026 Setting "silent ring" for the Lync Private Line doesn't work.

Workaround: No work around at this time

WUCS-1041 A user placed on hold may not hear Music-On-Hold audio when HD audio (e.g. G.722) codec is enabled.

Workaround: Force codec choice to G.711 for all telephony calls if Music-on-Hold is desired

WUCS-1054 (Lync call server) Forwarding to a user in a different domain doesn't work.

Workaround: No work around at this time.

WUCS-1072 When a user is register to an open SIP server (on line1) and a Lync server for IM/ PRsence (on line 2), the Lync "familiar name" for that user sometimes temporarily appears instead of the user name configure for the open SIP line.

Workaround: Make sure the open SIP and Lync familiar names match.

WUCS-1134 Certain factory installed device certificates are reported as Self-Signed.

Workaround: Regardless of what's reported, all Spectralink 84-Series devices have a proper device certificate installed during manufacturing.

WUCS-1105 When the Emergency Dial feature is configured to use EFK macros, more than two presses of the emergency dial key may cause the first emergency call to be placed on hold and a second emergency call to be placed instead.

Workaround: No work around at this time.

WUCS-1108 When line parameters are configured before the user logs into a User Profile, logging out of the profile then back in will not properly re-register with the Lync server, but the user will not be notified or prompted for login credentials.

Workaround: If this happens reboot the phone. To prevent this from happening, make sure that line-specific parmeters (reg.x….) are specified in the logon.cfg user profile, not the generic site.cfg. See templates for the User_profiles_deployment scenario and refer to the Deployment Guide.

WUCS-1157 Handset offers video codec (H.263, H.264) it doesn't support. This could cause the call server to chose those codecs and fail to establish the call.

Workaround: disable video codecs for that extension at the call server

WUCS-1176 When user profiles are used without a default user on a Lync telephony server, you can’t place an emergency (911) call without signing in, even though the handset offers an authorized number popup menu that appears to imply the emergency number can be called without signing in..

Workaround: set up a default Lync user in user profiles so that the emergency call can be made under the default user line registration.

Chapter 19: Reference Documents

This section lists all documents referred to in these release notes as well as other relevant documents.

Spectralink References

All documents listed below are available from the Spectralink Support Website.

To go to a specific product page:

Use the top Documents and Downloads pane and select Voice as the Product Type and then select the product name from the drop down list and click Go.

AP Configuration Guides show you how to correctly configure access points and WLAN controllers (if applicable) and identify the optimal settings that support Spectralink 87-Series handsets. The guides can be found at the View Certified page.

The *Spectralink 84-Series Wireless Telephone Administration Guide* provides a comprehensive list of every parameter available on Spectralink 84-Series Wireless Telephones.

Spectralink 84-Series Wireless Telephone Deployment Guide This document introduces deployment concepts and the methods of provisioning the 84-Series handsets in any type of facility. It is the fundamental text and a prerequisite to this Administration Guide, especially for administrators who are new to the Spectralink 84-Series handsets or who may wish a refresher course.

The *Spectralink 84-Series Barcode Administration Guide* provides information about barcode symbologies and how to configure and implement the barcode feature on the handset. The *Spectralink 84-Series User Guide* also contains information about using the barcode feature.

Quick Barcode Connector Administration Guide Provides instruction for implementation of the barcode application. The *Spectralink 84-Series User Guide* contains information about using the barcode feature.

The *Spectralink 84-Series User Guide* offers comprehensive instructions on using each of the features deployed on the handsets.

White Paper: Best Practices Guide to Deploying Spectralink 84-Series Wireless Telephones This document covers the security, coverage, capacity and QoS considerations necessary for ensuring excellent voice quality within enterprise Wi-Fi networks.

White Paper: Understanding Wireless Security on Your Spectralink 84-Series Wireless Telephones Provides more information and assistance in determining which security method to use.

For information about combining Polycom desksets and Spectralink 84-Series handsets in the same facility, see the Interoperability Guide: *Spectralink 84-Series Coexistence with Polycom Desksets*.

For additional information about deploying Lync in your phone environment, see *Microsoft Lync Server 2013 Interoperability Guide.*

For information on IP PBX and softswitch vendors, see *PIVOT by Spectralink Call Server Interoperability Guide*.

Technical Bulletins and Feature Descriptions explain workarounds to existing issues and provide expanded descriptions and examples.

AP Configuration Guides explain how to correctly configure access points and WLAN controllers (if applicable) and identify the optimal settings that support Spectralink 84-Series handsets. You can find them on the *VIEW Certified* webpage.

Polycom UC Software Administrators' Guide

The Polycom-branded *UC Software Administrators' Guide* might be useful if you need to research software versions prior to 84-Series Software 4.2.x. They are available on the Polycom Support site.

Version 4.1.0

Version 4.0.1

Version 4.0.0