



Spectralink 84-Series Wireless Telephone

# Release Notes

84-Series Software 5.6.3

## Copyright Notice

© 2012-2018 Spectralink Corporation All rights reserved. Spectralink™, the Spectralink logo and the names and marks associated with Spectralink's products are trademarks and/or service marks of Spectralink Corporation and are common law marks in the United States and various other countries. All other trademarks are property of their respective owners. No portion hereof may be reproduced or transmitted in any form or by any means, for any purpose other than the recipient's personal use, without the express written permission of Spectralink.

All rights reserved under the International and pan-American Copyright Conventions. No part of this manual, or the software described herein, may be reproduced or transmitted in any form or by any means, or translated into another language or format, in whole or in part, without the express written permission of Spectralink Corporation.

Do not remove (or allow any third party to remove) any product identification, copyright or other notices.

## Notice

Spectralink Corporation has prepared this document for use by Spectralink personnel and customers. The drawings and specifications contained herein are the property of Spectralink and shall be neither reproduced in whole or in part without the prior written approval of Spectralink, nor be implied to grant any license to make, use, or sell equipment manufactured in accordance herewith.

Spectralink reserves the right to make changes in specifications and other information contained in this document without prior notice, and the reader should in all cases consult Spectralink to determine whether any such changes have been made.

NO REPRESENTATION OR OTHER AFFIRMATION OF FACT CONTAINED IN THIS DOCUMENT INCLUDING BUT NOT LIMITED TO STATEMENTS REGARDING CAPACITY, RESPONSE-TIME PERFORMANCE, SUITABILITY FOR USE, OR PERFORMANCE OF PRODUCTS DESCRIBED HEREIN SHALL BE DEEMED TO BE A WARRANTY BY SPECTRALINK FOR ANY PURPOSE, OR GIVE RISE TO ANY LIABILITY OF SPECTRALINK WHATSOEVER.

## Warranty

The *Product Warranty and Software License and Warranty* and other support documents are available at <http://support.spectralink.com>.

## Contact Information

### US Location

+1 800-775-5330

Spectralink Corporation  
2560 55th Street  
Boulder, CO 80301  
USA

[info@spectralink.com](mailto:info@spectralink.com)

### Denmark Location

+45 7560 2850

Spectralink Europe ApS  
Bygholm Soepark 21 E Stuen  
8700 Horsens  
Denmark

[infoemea@spectralink.com](mailto:infoemea@spectralink.com)

### UK Location

+44 (0) 20 3284 1536

Spectralink Europe UK  
329 Bracknell, Doncastle Road  
Bracknell, Berkshire, RG12 8PE  
United Kingdom

[infoemea@spectralink.com](mailto:infoemea@spectralink.com)

# Contents

<b>Chapter 1: General .....</b>	<b>8</b>
<b>Important Upgrade Notes and Considerations in Spectralink 84-Series Software .....</b>	<b>8</b>
<b>Chapter 2: Introducing 84-Series Software 5.6.x.....</b>	<b>9</b>
<i>Lync/non-Lync version control in general release versions .....</i>	<i>9</i>
<i>Understanding Updates to Spectralink Software 5.6. ....</i>	<i>9</i>
Music on Hold.....	9
Presence and Messaging are now independent of each other .....	10
Camp on for presence (Skype for Business).....	10
Global Address List-Search feature (GALS) .....	11
<i>Change log for Spectralink Software 5.6.x.....</i>	<i>12</i>
Fixes and minor enhancements. ....	12
<b>Chapter 3: Introducing 84-Series Software 5.4.4.x167 .....</b>	<b>13</b>
<i>Lync/non-Lync version control in general release versions .....</i>	<i>13</i>
<i>Understanding Updates to Spectralink Software 5.4.4.x167 .....</i>	<i>13</i>
KRACK – WPA2 Security Vulnerability .....	13
<i>Change log for Spectralink Software 5.4.4.x167.....</i>	<i>14</i>
<b>Chapter 4: Introducing 84-Series Software 5.4.x.....</b>	<b>15</b>
<i>Lync/non-Lync version control in general release versions .....</i>	<i>15</i>
<i>Understanding Updates to Spectralink Software 5.4. ....</i>	<i>15</i>
Ability to delete IMs .....	15
EAP-FAST connectivity improvement .....	15
Contact card viewing improvement (Skype for Business).....	16
<i>Change log for Spectralink Software 5.4.x.....</i>	<i>16</i>
<b>Chapter 5: Spectralink 84-Series Software 5.3.x .....</b>	<b>17</b>
<i>Lync/non-Lync version control in general release versions .....</i>	<i>17</i>
<i>Understanding Updates to Spectralink Software 5.3.x .....</i>	<i>17</i>
Phone Lock.....	17
Quality of Experience (QoE).....	18
Far Mute .....	19
802.11n is disabled by default.....	19
Notification to reregister.....	20
<i>Known Issues .....</i>	<i>21</i>
<i>Change log for Spectralink Software 5.3.x.....</i>	<i>21</i>

**Chapter 6: Introducing 84-Series Software 5.2.2..... 22**

<i>Lync/non-Lync version control in general release versions</i> .....	22
<i>Understanding Updates to Spectralink Software 5.2.2</i> .....	22
DND can be removed from menus .....	22
<i>Known Issues</i> .....	22
<i>Change log for Spectralink Software 5.2.2</i> .....	22

**Chapter 7: Spectralink 84-Series Software 5.1.x..... 24**

<i>Lync/non-Lync version control in general release versions</i> .....	24
<i>Known Issues</i> .....	24
<i>Change log for Spectralink Software 5.1.x</i> .....	24
Fixes and minor enhancements. ....	24

**Chapter 8: Spectralink 84-Series Software 5.0.0 ..... 25**

<i>Understanding Updates to Spectralink Software 5.0.0</i> .....	25
Turning the backlight off when phone is in the charger.....	25
Identifying batteries nearing end of useful life .....	25
<i>Known Issues</i> .....	26
<i>Change log for Spectralink Software 5.0.0</i> .....	26
Fixes and minor enhancements. ....	26

**Chapter 9: Spectralink 84-Series Software 4.x Releases..... 27**

<b>Understanding Updates to 84-Series Software 4.14.0.....</b>	<b>27</b>
<i>Lync/non-Lync version control in general release versions</i> .....	27
<i>Understanding Updates to 84-Series Software 4.14.0</i> .....	27
Push logs from the phone.....	27
Suppress Ignore Softkey .....	27
Corporate Directory Entries Include Presence Information .....	28
<i>Known Issues</i> .....	28
<i>Change log for 84-Series Software 4.14.0</i> .....	28
Fixes and minor enhancements. ....	28
<b>Understanding Updates to 84-Series Software 4.13.0.....</b>	<b>29</b>
<i>Lync/non-Lync version control in general release versions</i> .....	29
<i>Understanding Updates to 84-Series Software 4.13.0</i> .....	29
Contact Directory Enhancements.....	29
New OAI Key Repeat Parameter.....	30
Heartbeat for the Spectralink Configuration Management System (CMS) .....	30
<i>Known Issues</i> .....	32
<i>Change log for 84-Series Software 4.13.0</i> .....	32
Fixes and minor enhancements .....	32
<b>Understanding Updates to 84-Series Software 4.12.0.....</b>	<b>32</b>
<i>Lync/non-Lync version control in general release versions</i> .....	33
<i>Understanding Updates to 84-Series Software 4.12.0</i> .....	33

Access to Corporate Directory during a transfer .....	33
"Contains" search on the Auto Complete List presented during a transfer .....	33
"Contains" search on Corporate Directory searches .....	34
<i>Change log for 84-Series Software 4.12.0</i> .....	34
Fixes and minor enhancements .....	34
<b>Understanding Updates to 84-Series Software 4.11.0</b> .....	<b>36</b>
<i>Lync/non-Lync version control in general release versions</i> .....	36
<i>URI: Play alert tone volume while in call</i> .....	36
Transmit Only to PTT and Paging Groups .....	36
<i>Change log for 84-Series Software 4.11.0</i> .....	37
Fixes and minor enhancements .....	37
<i>Known issues</i> .....	39
<b>Understanding Updates to 84-Series Software 4.10.0</b> .....	<b>39</b>
<i>Lock Settings Menus</i> .....	39
<i>Lock Logoff for User Profiles</i> .....	40
<i>XML notification that phone is in charger</i> .....	40
<i>WPA-Enterprise Identity Field</i> .....	40
<i>Change log for 84-Series Software 4.10.0</i> .....	41
Fixes and minor enhancements .....	41
Known issues .....	41
<b>Understanding Updates to 84-Series Software 4.9.0</b> .....	<b>42</b>
<i>Security Vulnerabilities</i> .....	42
<i>EAP-TLS</i> .....	42
<i>New loud ring tone</i> .....	42
<i>Insert DTMF tones into voice path</i> .....	43
<i>Activate barcode scanner via push command</i> .....	43
<i>Change log for 84-Series Software 4.9.0</i> .....	45
Fixes and minor enhancements .....	45
Known issues .....	46
<b>Understanding Updates to 84-Series Software 4.8.0</b> .....	<b>46</b>
<i>Hide browser</i> .....	47
<i>Call handling when out of range</i> .....	47
<i>Band steering</i> .....	47
<i>Change log for 84-Series Software 4.8.0</i> .....	49
Fixes and minor enhancements .....	49
<b>Understanding Updates to 84-Series Software 4.7.0</b> .....	<b>50</b>
<i>New Version Information</i> .....	50
<i>Pin Auth</i> .....	50
<i>Scanning in standby</i> .....	50
<i>"Heartbeat" Feature</i> .....	51
<i>Other 4.7.0 enhancements</i> .....	51
<i>Change log for 84-Series Software 4.7.0</i> .....	52
Fixes and enhancements .....	52
<b>Understanding Updates to 84-Series Software 4.6.0 and 4.6.1</b> .....	<b>54</b>

<i>84-Series support for MS Lync</i> .....	54
<i>New filenames</i> .....	55
<i>Other 4.6.x enhancements</i> .....	56
<i>Change log for 84-Series Software 4.6.1</i> .....	56
<i>Fixes and enhancements</i> .....	56
<i>Change log for 84-Series Software 4.6.0</i> .....	56
<i>Fixes and enhancements</i> .....	56
<b>Understanding Updates to 84-Series Software 4.5.0</b> .....	<b>57</b>
<i>Scanning in standby</i> .....	57
<i>New filenames</i> .....	57
<i>Other 4.5.0 enhancements</i> .....	58
<i>Change log for 84-Series Software 4.5.0</i> .....	59
<i>Fixes and enhancements</i> .....	59
<b>Introducing 84-Series Software 4.3.0/4.4.0</b> .....	<b>61</b>
<i>Lync support</i> .....	61
Microsoft Lync compatibility.....	61
Personal Alarms feature .....	62
New filenames .....	62
<i>Other enhancements</i> .....	63
<i>Change log for 84-Series Software 4.3.0/4.4.0</i> .....	63
<i>Fixes and enhancements</i> .....	63
<i>Configuration file changes</i> .....	65

## **Chapter 10: Polycom-branded Releases** ..... 68

<b>Understanding Updates to UCS 4.2.1</b> .....	<b>68</b>
<i>Fixes and enhancements</i> .....	68
<b>Understanding Updates to UCS 4.2.0</b> .....	<b>68</b>
<i>New or enhanced features</i> .....	68
<i>Features no longer available</i> .....	68
<i>Fixes and enhancements</i> .....	69
<b>Understanding Updates to UCS 4.1.0</b> .....	<b>69</b>
<i>New or enhanced features</i> .....	69
<i>Enhanced capabilities</i> .....	70
<i>Configuration File Enhancements</i> .....	72
<b>Understanding Updates to UCS 4.0.2 Rev B</b> .....	<b>74</b>
<i>New or enhanced features</i> .....	74
<i>Enhanced capabilities</i> .....	75
<i>Configuration file enhancements</i> .....	76
<b>Understanding Updates to UCS 4.0.2 (Limited Release)</b> .....	<b>77</b>
<i>New or enhanced Features</i> .....	77
<i>Enhanced capabilities</i> .....	77
<i>Configuration file enhancements</i> .....	79
<b>Understanding Updates to UCS 4.0.1B</b> .....	<b>79</b>

<b>Understanding Updates to UCS 4.0.1 .....</b>	<b>79</b>
<i>New or enhanced features.....</i>	79
<i>Enhanced capabilities.....</i>	82
<i>Configuration file enhancements .....</i>	83
<b>Understanding Updates to UCS 4.0.0 .....</b>	<b>85</b>
<i>New or enhanced features.....</i>	85
<i>Enhanced capabilities.....</i>	88
<i>Configuration file enhancements .....</i>	92
<b>Chapter 11: Polycom-branded Known Issues and Suggested Workarounds .....</b>	<b>105</b>
<b>Chapter 12: Reference Documents .....</b>	<b>110</b>
<b>Spectralink References .....</b>	<b>110</b>
<b>Polycom UC Software Administrators' Guide.....</b>	<b>111</b>

# 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 5.6.x

Spectralink Software 5.6.3.x192 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 5.6.2 GA (generally available) release is 5.6.3.x192. 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: 5.6.3.1192
- SIP: 5.6.3.2192

## Understanding Updates to Spectralink Software 5.6.

### 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.

<i>New Parameter Name</i>	<i>Permitted Values</i>	<i>Default</i>
<b>feature.moh.enabled<sup>1</sup></b>	<b>0 or 1</b>	<b>0</b>

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">`).

<i>New Parameter Name</i>	<i>Permitted Values</i>	<i>Default</i>
NOTE: G711Mu and G711A are preferred for music audio quality. If these are unavailable audio quality may be impaired when other codecs are used.		
<b>feature.moh.filename<sup>1</sup></b>	<b>string - max number of characters 256</b>	<b>"Spectralink_hold_team.wav"</b>
The default file is provided by the software starting with R5.5. 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.		

<sup>1</sup> 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

<i>Parameter</i>	<i>Used to:</i>
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**.

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

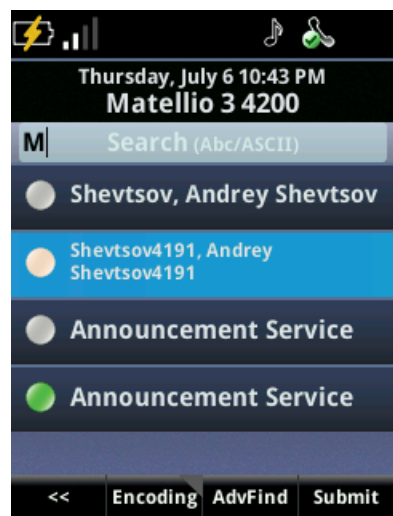
## Global Address List-Search feature (GALS)

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.

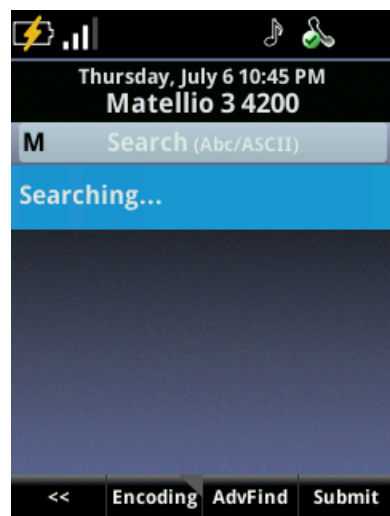
Note that GALS replaces LDAP. Either one or the other is the usable search function. To disable the GALS feature and to use LDAP instead, the `dir.corp.galsEnable` parameter must be set to 0 or removed.

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

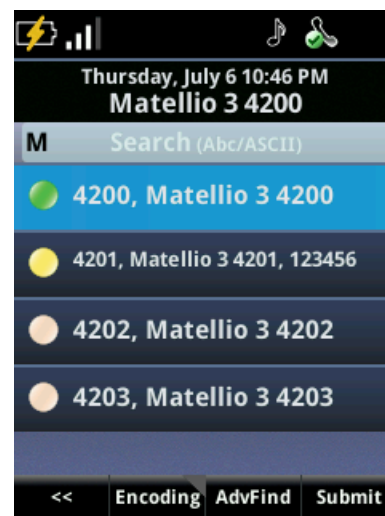
Search text entered



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.x

Fixes and minor enhancements.

<b>Key</b>	<b>Summary</b>
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-914	Fixed call drop from incoming call from external network without RTCP
E-917	Calls from SfB RGS no longer fail
E-918	Now supports Avaya Session Manager 7.1
E-922	Can now use EFK for speed dial
E-953	Phone may reboot and generate core dump when answering RGS call with SfB
E-995	Poor audio quality cause by CMS heartbeats

# Chapter 3: 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](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

<b>Key</b>	<b>Summary</b>
------------	----------------

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

# Chapter 4: 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

<b>Key</b>	<b>Summary</b>
------------	----------------

- |        |  |
|--------|--|
| 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: <a href="https://www.wireshark.org/tools/wpa-psk.html">https://www.wireshark.org/tools/wpa-psk.html</a> ). 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 5: 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.

<i>Parameter Name</i>	<i>Permitted Values</i>	<i>Default</i>
<b>reg.x.auth.lyncPhoneLockTone</b>	<b>0 or 1</b>	<b>1</b>
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.		
<b>reg.x.auth.lyncPhoneLockPinEnable</b>	<b>0 or 1</b>	<b>0</b>
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).

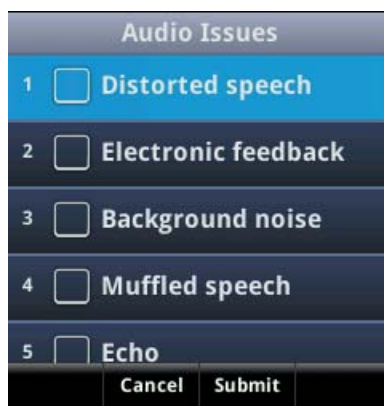
The report is sent as 'vq-rtcpxr+xml' format after each evaluated call is terminated.

<i>Parameter Name</i>	<i>Permitted Values</i>	<i>Default</i>
<b>call.qoefeedback.frequency</b>	<b>0 to 20</b>	<b>0</b>
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.

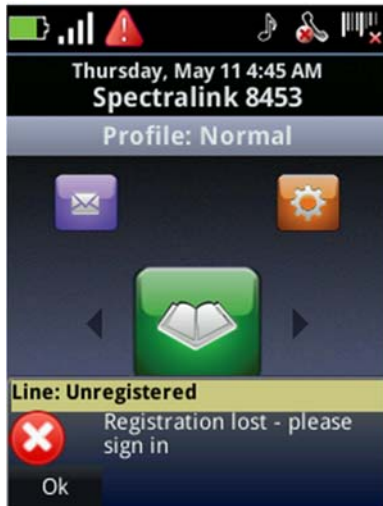
## Notification to reregister

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

<b>Key</b>	<b>Summary</b>
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

<b>Key</b>	<b>Summary</b>
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 6: 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.

<i>Parameter</i>	<i>Modification</i>	<i>Default</i>
<b>feature.dnd.enabled</b>	<b>Added</b>	<b>1</b>

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

<b>Key</b>	<b>Summary</b>
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

<b>Key</b>	<b>Summary</b>
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 7: 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

<b>Key</b>	<b>Summary</b>
------------	----------------

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.

<b>Key</b>	<b>Summary</b>
------------	----------------

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 8: 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.

<i>Parameter</i>	<i>Modification</i>	<i>Default</i>
<b>up.backlight.onAcCharger.enabled</b>	<b>Added</b>	<b>1</b>
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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
<b>battery.check.fullCapacity1100Min</b>	<b>Added</b>	<b>0</b>	<b>9999</b>	<b>0</b>
<b>battery.check.fullCapacity1750Min</b>	<b>Added</b>	<b>0</b>	<b>9999</b>	<b>0</b>

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.

<b>Key</b>	<b>Summary</b>
ESCWIRE-740	No call to series-connected RGS Workflows
PHNX-2177	Eliminate coredumps in CAAdhocListSubscription::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 9: 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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
<b>call.suppressIgnoreSoftkey</b>	<b>Added</b>	<b>0</b>	<b>1</b>	<b>0</b>

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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
<b>dir.corp.presence.refreshSeconds</b>	<b>Added</b>	<b>5</b>	<b>60</b>	<b>10</b>

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.

<b>Key</b>	<b>Summary</b>
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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
<b>dir.contact.attribute.x.label</b>	<b>Added</b>	-	-	<b>Primary, Contact 2, Contact 3, Contact 4, Contact 5</b>

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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
<b>oai.keyRepeatAcceleration.enabled</b>	<b>Added</b>	<b>0</b>	<b>1</b>	<b>1</b>

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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
<b>cms.heartbeat.URL</b>	<b>Added</b>	-	-	<b>NULL</b>

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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
<b>cms.heartbeat.accountKey</b>	<b>Added</b>	-	-	<b>NULL</b>

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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
<b>autoComplete.useContainsSearch</b>	<b>Added</b>	<b>0</b>	<b>1</b>	<b>0</b>

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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
<b>dir.corp.useContainsSearch</b>	<b>Added</b>	<b>0</b>	<b>1</b>	<b>0</b>

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

<b>Key</b>	<b>Summary</b>
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.

<i>Parameter</i>	<i>Modification</i>	<i>Values</i>	<i>Default</i>
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.

<i>Parameter</i>	<i>Modification</i>	<i>Values</i>	<i>Default</i>
ptt.channel.x.allowReceive	Added	0 or 1	1

<i>Parameter</i>	<i>Modification</i>	<i>Values</i>	<i>Default</i>
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.

<i>Parameter</i>	<i>Modification</i>	<i>Values</i>	<i>Default</i>
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.

<i>Parameter</i>	<i>Modification</i>	<i>Values</i>	<i>Default</i>
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.

<i>Parameter</i>	<i>Modification</i>	<i>Values</i>	<i>Default</i>
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 AABBCXYYZZ (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 core dumps 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
<code>device.wifi.wpa2Ent.method</code>	Modified	EAP-PEAPv0/MSCHAPv2, EAP-FAST, EAP_TLS <sup>1</sup>	PEAPv0/MSCHAPv2

<sup>1</sup> 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. 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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
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 associated 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.

<i>Parameter</i>	<i>Modification</i>	<i>Min</i>	<i>Max</i>	<i>Default</i>
<code>device.wifi.noBkgScanRssi</code>	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 associated 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.timeout 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 PlcmSplp
- 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**

<i>Parameter</i>	<i>Modification</i>	<i>Description (Min/ Max/ Default)</i>		
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

<i>Parameter</i>	<i>Modification</i>	<i>Description (Min/ Max/ Default)</i>		
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.timeout	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

<i>Parameter</i>	<i>Modification</i>	<i>Description (Min/ Max/ Default)</i>		
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/		
volpProt.SIP.requestValidation.digest.realm	Modified	wirelessIpPhone		
webutility.language.plcmServerUrl	Modified			
wifi.rtls.ekahau.txIntervalSeconds	Added	10	600	60

# Chapter 10: 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



<i>File</i>	<i>Modification</i>	<i>Parameter</i>
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	tcplpApp.ice.mode
feature	Added	tcplpApp.ice.password
feature	Added	tcplpApp.ice.realm

File	Modification	Parameter
feature	Added	tcplpApp.ice.username
feature	Added	tcplpApp.ice.stun.passwordServer
feature	Added	tcplpApp.ice.stun.server
feature	Added	tcplpApp.ice.stun.udpPort
feature	Added	tcplpApp.ice.tcp.enabled
feature	Added	tcplpApp.ice.turn.server
feature	Added	tcplpApp.ice.turn.tcpPort
feature	Added	tcplpApp.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 volpProt.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**

<i>File</i>	<i>Modification</i>	<i>Parameter</i>	<i>Modification Description</i>
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]xxxxxxxxxx|[2-9]xxxxxxxxxx|[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]xxxxxxxxxx|RR+R[2-9]xxxxxxxxxx|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]xxxxxxxxxx|RR+R[2-9]xxxxxxxxxx|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](mailto: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

<i>File</i>	<i>Modification</i>	<i>Parameter</i>	<i>Modification Description</i>
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 SS RTP.
- 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

<i>File</i>	<i>Modification</i>	<i>Parameter</i>	<i>Modification Description</i>
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.padRtpToFourByte Alignment	Security parameter
reg-advanced, site	Added	up.headset.phoneVolumeControl	User preferences parameter
debug	Added	up.headset.AlwaysUseIntrinsic Ringer	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.usb Headset	Audio parameter
sip-interop	Added	voIpProt.SIP.conference. parallelRefer	Call feature parameter
site	Added	webutility.language.plcm ServerUrl	Web Configuration Utility parameter
techsupport	Removed	voice.gain.rx.digital.headset. IP_330	Audio parameter

<i>File</i>	<i>Modification</i>	<i>Parameter</i>	<i>Modification Description</i>
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 <i>auto</i> .
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.failoverOn503 Response	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=xxxxxxx` (default null)  
`dialplan.routing.emergency.outboundIdentity.lldp=xxxxxxx` (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

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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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.pcforgelanlinkreset	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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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.drvtb	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



<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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 qos.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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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

<i>Modification</i>	<i>Configuration Parameter</i>	<i>Description</i>
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 11: 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 parameter `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 from 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 parameters (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 12: 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](#)