Spectralink 84-Series Wireless Telephone

Installation and Configuration Tool (SLIC)

Administration Guide

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Copyright Notice

Notice

Warranty

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

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Contents

About This Guide

This document explains how to install and use the Spectralink 84-Series Installation & Configuration (“SLIC”) Tool.

Product Support

Spectralink wants you to have a successful installation. If you have questions please contact the Customer Support Hotline at 1-800-775-5330.

The hotline is open Monday through Friday, 6 a.m. to 6 p.m. Mountain time.

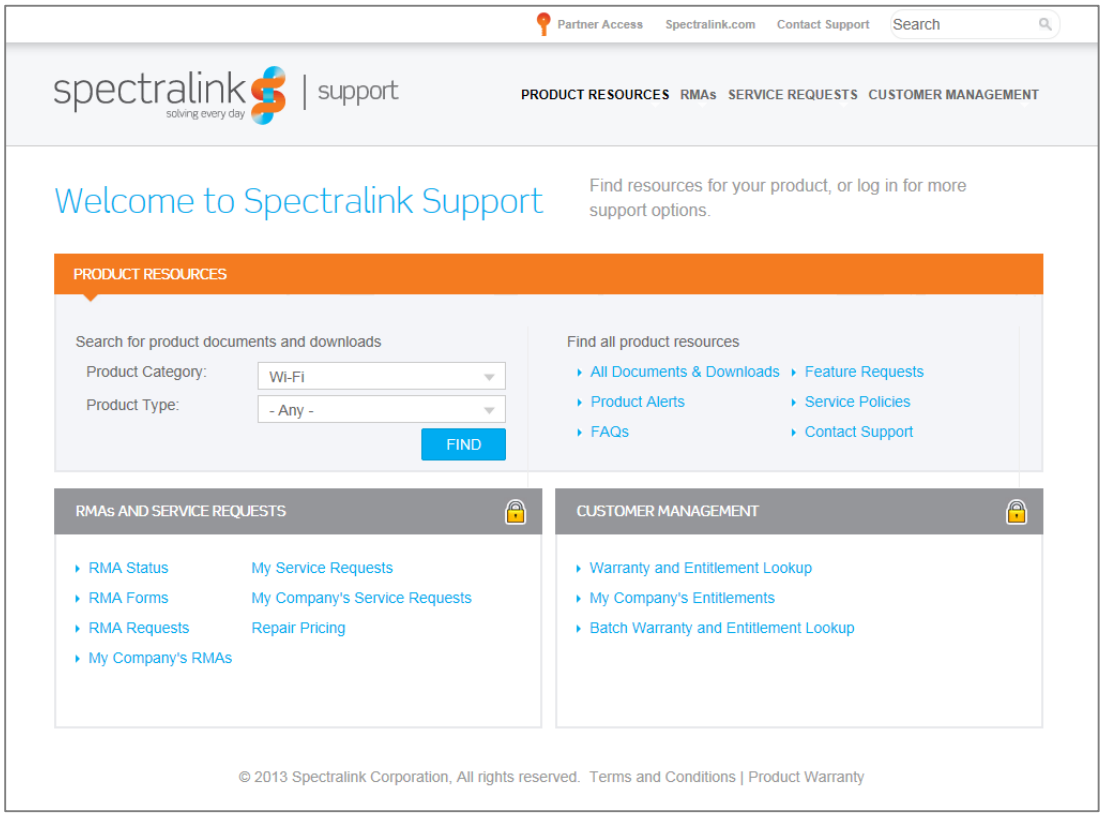
For Technical Support: mailto:technicalsupport@spectralink.com

For Knowledge Base: http://support.spectralink.com

For Return Material Authorization: mailto:nalarma@spectralink.com

Spectralink References

All Spectralink documents are available at http://support.spectralink.com.



To go to a specific product page:

Select the Product Category and Product Type from the dropdown lists and then select the product from the next page. All resources for that particular product are displayed by default under the All tab. Documents, downloads and other resources are sorted by the date they were created so the most recently created resource is at the top of the list. You can further sort the list by the tabs across the top of the list to find exactly what you are looking for. Click the title to open the link.

Specific Documents

The following list of documents is a list of corresponding references that will assist your understanding of the configuration process.

Spectralink Deploying Enterprise-Grade Wi-Fi Telephony This document covers the security, coverage, capacity and QoS considerations necessary for ensuring excellent voice quality within enterprise Wi-Fi networks.

Best Practices Guide to Network Design Considerations for Spectralink Wireless Telephones This document provides recommendations for ensuring that a network environment is adequately optimized for use with Spectralink Wireless Telephones. It provides detailed information on wireless LAN layout, network infrastructure, QoS, security and subnets and identifies issues and solutions based on Spectralink's extensive experience in enterprise-class Wi-Fi telephony. This document has a brief discussion about wireless security.

Understanding Wireless Security on Your Spectralink 84-Series Wireless Telephones Provides more information and assistance in determining which security method to use.

The *Spectralink 84-Series Wireless Telephone Deployment Guide* is your essential reference for provisioning and deploying Spectralink 84-Series handsets in any environment.

The *Spectralink 84-Series Wireless Telephone Microsoft® Lync® Server 2010 Interoperability Guide* provides information on base profile parameters.

The *Spectralink 84-Series Wireless Telephone Administration Guide* provides a comprehensive list of every parameter available on Spectralink 84-Series handsets.

The *Spectralink 84-Series Wireless Telephone User Guide* can give you user-level information.

Quick Barcode Connector Administration Guide provides instruction for implementation of the barcode application.

Release Notes accompany every Spectralink software release. These describe the new and changed features and fixed problems in the latest version of the software.

The VIEW Certified webpage lists products that have been rigorously tested for compliance with Spectralink products and provides setup instructions. You will need to refer to this page when setting up a wireless test environment.

Conventions Used In This Document

Icons

Icons indicate extra information about nearby text.

Note

The Note icon highlights information of interest or important information that will help you be successful in accomplishing a procedure or understanding a concept.

Admin Tip

This tip advises the administrator of a smarter, more productive or alternative method of performing an administrator-level task or procedure.

Typography

A few typographic conventions, listed next, are used in this guide to distinguish types of in-text information.

Convention	*Description*
Bold	Highlights interface items such as menus, soft keys, file names, and directories. Also used to represent menu selections and text entry to the handset.
Italics	Used to emphasize text, to show example values or inputs, and to show titles of reference documents available from the Spectralink Support Web site and other reference sites.
Underlined blue	Used for URL links to external Web pages or documents. If you click on text in this style, you will be linked to an external document or Web page.
Bright orange text	Used for cross references to other sections within this document. If you click on text in this style, you will be taken to another part of this document.
Fixed-width-font	Used for code fragments and parameter names.

This guide also uses a few writing conventions to distinguish conditional information.

Convention	*Description*
<MACaddress>	Indicates that you must enter information specific to your installation, handset, or network. For example, when you see <*MACaddress*>, enter your handset's 12-digit MAC address. If you see <*installed-directory*>, enter the path to your installation directory.
>	Indicates that you need to select an item from a menu. For example, **Settings** > **Basic** indicates that you need to select **Basic** from the **Settings** menu.

Chapter 1: Introducing the SLIC Platform

The Spectralink Installation & Configuration (“SLIC”) Platform utilizes a customized version of a commercially available embedded Linux Server to simplify the provisioning of your Spectralink 84-Series handsets. When connected to a PC, the SLIC platform provides Spectralink software wizards that walks you through configuration parameters and produces the .cfg files that can then be loaded on the handsets.

The SLIC platform offers three different tools to assist the configuration of the Spectralink 84-Series handsets.

The Wireless Wizard – to configure the parameters that allow the handset to associate with the wireless network

The SIP and Feature Wizard – to quickly configure the most frequently-used configuration options.

The initial provisioning server – a usb connection between SLIC and a handset loads the wireless parameters into the handset. These parameters allow the handset to connect to the central provisioning server where it gets the configuration files produced by the SIP/Feature wizard.

Configuration Sequence

The SLIC platform is designed to simplify the configuration of Spectralink 84-Series handsets. The usual sequence is as follows:

1. Reset handsets to factory default if any menu options have been changed manually.
2. Run the Wireless Wizard.
3. Use SLIC as an initial provisioning server to load the wireless configuration into each handset.
4. Run the SIP / Feature Wizard.
5. Load the SIP / Feature files onto the central provisioning server and allow the handsets to download them.
6. Test the handsets.

Box Contents

The following components are included in the SLIC package:

- The SLIC unit
- US, Uk and Euro power adapters
- A USB cable to connect SLIC to the handset
- An Ethernet network cable for the network connection between SLIC and your PC/laptop
- A USB extension cable
- A USB flash drive for updating software
- Spectralink Product Warranty and EULA
- Regulatory information.

Connecting to SLIC

Your SLIC setup requires that you adjust your PC/laptop settings to create a private LAN.

Set up the hardware

SLIC is pre-loaded with Wizard software. Spectralink strongly advises updating the software. See Appendix A: Updating SLIC Software.

1. Connect the correct power adapter to SLIC. The power adapter slides onto the prongs on the back of the unit. You will need to remove the rubber legs if you use the wide Uk adapter.
2. Plug the provided USB flash drive into SLIC if updating software.
3. Plug the provided network cable into the Ethernet port of SLIC and connect the other end to your PC/laptop.
4. Ensure that the USB flash drive is plugged in and plug in/apply power to SLIC. It takes about 30 seconds to boot. It is fully booted when all three green LEDs on top are lit (9, 12, and 3 o'clock positions. (The two side LEDs are more yellowish-green.)

Configure your PC/Laptop

These instructions are generic in nature and may need to be adjusted to accommodate the existing configuration of you PC/laptop. The general idea is that you are disconnecting from any existing LAN and setting up a private LAN so that PC/laptop and SLIC can talk to each other without interference.

1. If necessary, install Mozilla Firefox or Google's Chrome browser on your PC/laptop. IE may work but is prone to interference and not recommended.

2 Disable DHCP for the network port on the PC/laptop you plugged the Ethernet cable into.

3 Set the PC/laptop Ethernet interface to use static IP **192.168.0.50**.

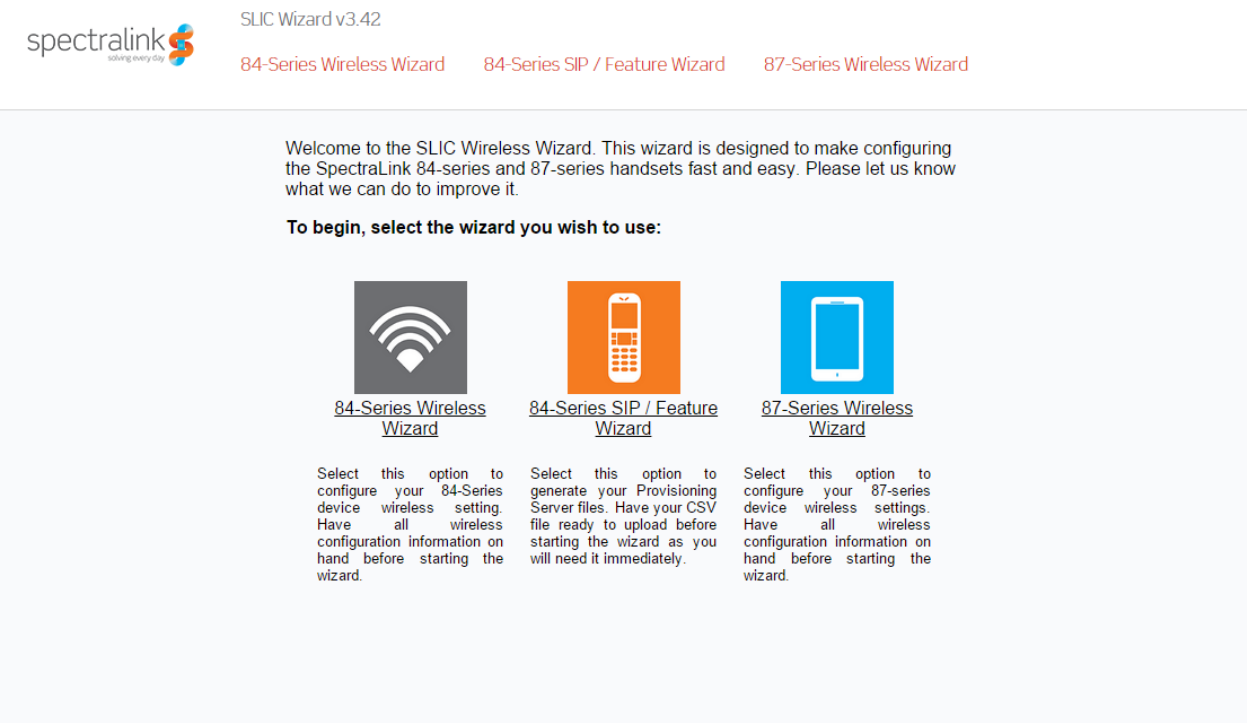
4 Open Chrome/Firefox and browse to **192.168.0.1**. The wizard screen will appear.

5 The software version is shown in the upper left. Ensure that you have the latest version of software by checking the Support website. If necessary, see Appendix A: Updating SLIC Software.

Chapter 2: The Wizards

The Spectralink 84-Series Installation & Configuration Tool provides two wizards to help you configure handset parameters.

- The Wireless Wizard configures the .cfg file the handsets require to be able to associate with the wireless LAN.
- The SIP / Feature Wizard configures the central provisioning server files.



Tip: How to start over

The Wizards permit forward steps only, there is no “Back” button or option.

If you make an error, use the navigation links at the top of the screen.

To start at the beginning you may need to open a new browser tab and browse to SLIC.

Be aware that any files already on the flash drive will be overwritten when you start over.

The SLIC Wireless Wizard

The Wireless Wizard uses wizard technology to walk you through the essential configuration parameters necessary for associating the handsets to the wireless LAN. By connecting the handset to SLIC through a USB connection, the wireless parameters can be loaded onto each handset. In this way, SLIC is a self-contained initial provisioning server, both generating and serving the wireless device configuration information to 84-Series handsets through a USB connection. After the correct wireless settings are loaded on the handsets, the handsets will be able to immediately associate with the wireless LAN and obtain SIP and feature parameters from the provisioning server.

See Appendix C: Wireless Parameters for a complete list of the parameters that the Wireless Wizard can configure.

Admin Tip: Loading files onto a flash drive

If a flash drive is plugged into SLIC, the wireless wizard will load the configuration files both on the flash drive and on the SLIC server. If you want to save them to a flash drive, ensure you have a flash drive plugged into SLIC before you begin the wizard.

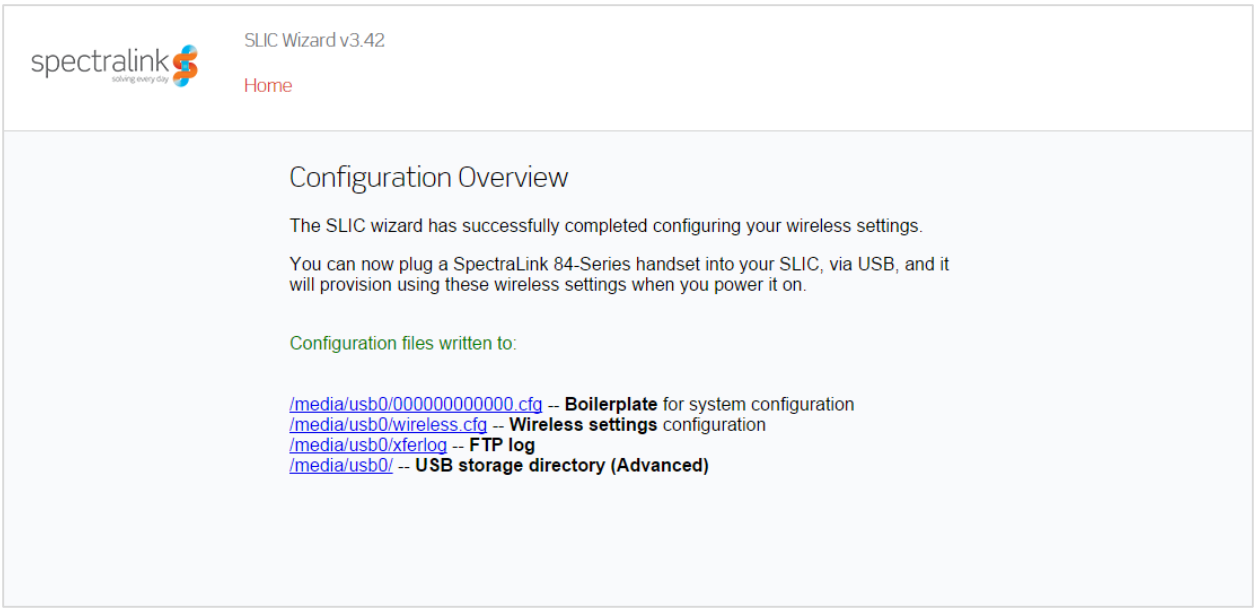
Run the wizard.

1. Use the *Spectralink 84-Series Wireless Telephone Deployment Guide* for additional information about the options presented by the wizard.
   You will be asked about the following parameters:
   - **a** Admin password
   - **b** Provisioning server settings
   - **c** DHCP or Static Entry
   - **d** DNS settings
   - **e** SNTP settings
   - **f** SSID
   - **g** Wireless Security
   - **h** Regulatory domain
   - **i** Radio settings
2. Upon completion of the wizard you will see the Configuration Overview page which displays links to the files the wizard created. Double click the link to open the file in the browser.

   These files are also saved to the USB flash drive if one is plugged into SLIC.

Click the links to the .cfg files to view their contents.

Right click each link to save in a different location using “Save as”.



Admin Tip: Where are the files created by the Wireless Wizard?

Upon completion of the wizard, two.cfg files are automatically loaded on the USB flash drive if one is plugged into the Spectralink 84-Series Installation & Configuration Tool. The files are also on the SLIC server and may be viewed in the browser by double clicking the link. These are the files that are downloaded to the handset when it is connected to SLIC.

Wireless Wizard Configuration Files

For a complete discussion of the files created, please consult the *Spectralink 84-Series Wireless Telephone Deployment Guide*.

- 000000000000.cfg is the master configuration file that gives the handset its directions to other configuration files that contain parameters. Note that this “zeros” file is different from the zeros file produced by the SIP/Feature wizard. This file is used to set the wireless parameters only by directing the handset to use the parameters set in the wireless.cfg file.

  Once the handset associates with the wireless LAN, it obtains a different master configuration file from the central provisioning server that directs the handset to other configuration files containing SIP and Feature parameters.
- wireless.cfg is the configuration file that contains the parameters needed in order for the handset to associate with the wireless LAN.

- Xfer.log is the FTP log
- USB storage directory

Check the .cfg files

View the .cfg files in the browser or with an .xml editor to ensure the parameters are as desired.

Load Wireless Parameters into the Handsets

To load the configuration into the handsets

1. Apply power to 84xx handset.
2. (Conditional) If the handset has been modified from out of the box configuration, perform a Reset to Factory. [Navigate to **Settings > Advanced Settings > Default Password is 456 > Administration Settings > Reset To Defaults > Reset To Factory**.]
3. Connect micro-USB cable between the 84xx handset and SLIC.
4. The handset will download the wireless configuration and then reboot making a “tweedle” sound. If handsets do not immediately (within 10 seconds) download and reboot after plugging the USB into them, you can manually force the configuration download by navigating to the Settings menu on the handset: **Settings> (1)Basic Settings> (6)Update Configuration > Yes**. If you use this option, **Updating…** remains on the display until it is finished.
5. Disconnect the USB cable from 84xx handset. The handset will download the rest of its configuration files from the provisioning server.
6. Test the first few handsets to be sure your configuration is working as desired and then use the Optimizations pointers below if deploying a quantity of handsets.

Admin Tip: How long does it take for the handsets to download the rest of the configuration files?

When handsets connect to the WLAN, they will seek the rest of the Config files that are located on the provisioning server. The handsets may take 5-10 minutes to fully configure and be ready for end user functionality.

Optimization Pointers for Quantity Deployment

Once you have proven that one handset can download the Config files and come up on your network, speed up the deployment of the rest of the handsets by following these pointers:

- Ensure you have a fully charged battery for each handset.
- All handsets must be in factory default state. If handsets have been modified, return them to the factory default state.

- Install batteries and power up all handsets.
- One at a time, plug in each handset. The handset will download the Config file and reboot. Unplug the handset and repeat with next handset.

The SLIC SIP / Feature Wizard

We are following the “80% rule” for the options presented by the SIP / Feature Wizard. You may need to configure additional options directly in the .cfg files using an xml editor or use an editor to adjust the settings produced by the wizard.

This wizard configures both user profiles and MACaddress specific parameters for handset deployment. Usually only one or the other type of configuration is deployed in any one facility, but the wizard can produce either or both. User profiles and/or mac address parameters are specified in a csv file that must be created. Consult the *Spectralink 84-Series Wireless Telephone Deployment Guide* for complete information about the different types of deployment scenarios to help you determine which is most appropriate for your facility.

Consult the *Spectralink 84-Series Wireless Telephone Deployment Guide* and the *Administration Guide* for more information on the parameters mentioned in this document and for further information about additional parameters you might need to deploy.

Admin Tip: Configuring Group Deployment

The SIP/Feature Wizard assists you in setting up a “Flat” or “User Profiles” deployment. If you are interested in setting up a “Group” deployment, you will need to use and xml editor to edit the wizard files and add additional files to set up the groups. Consult the *Deployment Guide* for further information.

Setting up the csv file:

1. Download/obtain the template **SLIC SIP Configuration Template.csv**. This template is in a spreadsheet that can be opened and edited in Excel. There are explanatory notes at the top of the file that define the fields. See Appendix B: .csv File Information in this document for field explanations.
2. Compile the information for your facility and complete the csv file. See the Appendix for more information about this file.
3. Load the file to an accessible location.

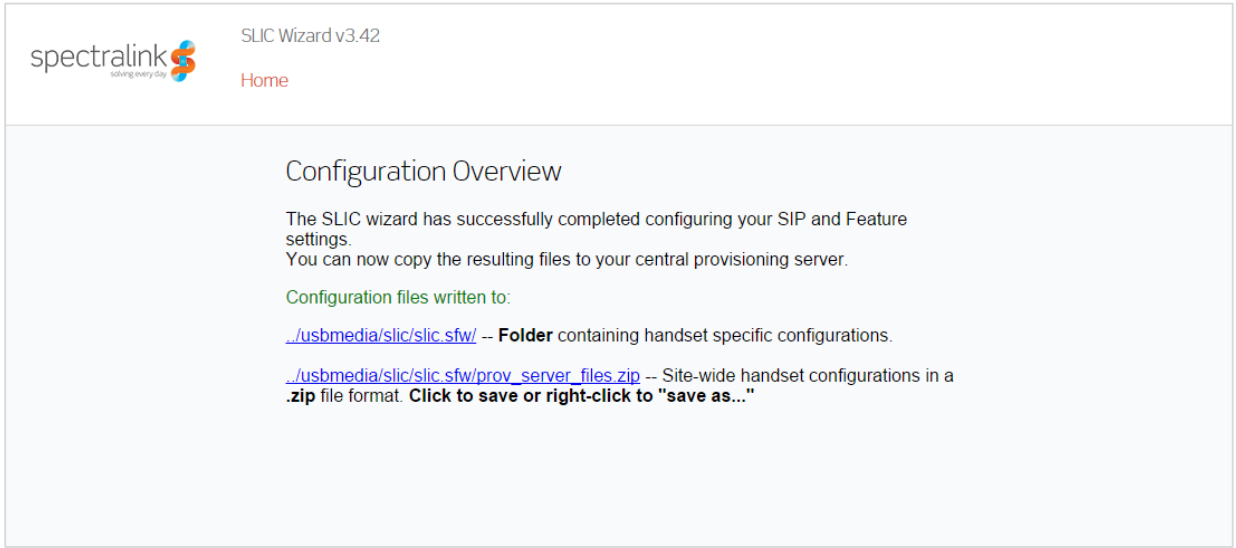
Run the SLIC Feature Wizard

1. [Conditional] If you have not used the Wireless Wizard, follow the Set up and Start steps to open the browser window.

2 Run the Feature Wizard. It will ask you about the following parameters:

- **a** For .csv information, see the Appendix.
- **b** User Profiles: Will they be used?
- **c** Do you want to use either PTT or Emergency Dial. These are mutually exclusive so you can use one or the other but not both.
- **d** If you want to use PTT, do you want to customize the settings?
- **e** OAI Gateway IP Address
- **f** Know how/if you are using QBC
- **g** Syslog server IP address
- **h** Calling Features Do Not Disturb and Call Forwarding
- **i** Do you want to use Microsoft Lync IM and Presence? If so, you'll need your Microsoft OCS/Lync server information.
- **j** Do you have any applications to configure? If so you'll need the URL of the applications / Application Server.
- **k** Do you want to use Microsoft Exchange Calendar Integration? If so, you'll need your Exchange Server URL.
- **l** Do you want to enable Corporate Directory? If so you'll need your LDAP information.
- **m** Do you want to use Voicemail?

3 Upon completion of the wizard you will see the Configuration Overview page which displays links to the files the wizard created. These files are located on the USB flash drive plugged into SLIC.



Admin Tip: Where are the files created by the SIP / Feature Wizard?

Upon completion of the wizard, the files it produces are automatically loaded on the USB flash drive plugged into SLIC.

As shown in the screen above, the SIP / Feature Wizard creates two files:

- A .sfw folder that contains the .cfg files. This folder resides on the flash drive and allows you to view the files in the browser without having to unzip them. It will open a browser window when you click it.
- A .zip file that contains site-wide files required by the central provisioning server. You can right-click this file and save it to another location, if you desire.

Example files:

[MACaddress].cfg

```
<APPLICATION
 APP_FILE_PATH="sip.ld"
 CONFIG_FILES="00907a0cb978-config.cfg,site.cfg"
 MISC_FILES=""
 LOG_FILE_DIRECTORY=""
 OVERRIDES_DIRECTORY=""
 CONTACTS_DIRECTORY=""
 LICENSE_DIRECTORY="">
</APPLICATION>
```

The data in the .csv file is used to create a MACaddress.cfg file that points the handset to two config files: the MACaddress.cfg file for this particular handset's settings and the site.cfg file for universal site-wide settings.

[MACaddress]-config.cfg

```
<reg
 call.callsPerLineKey="24">
 <reg.1
  reg.1.displayName="Steve Smith"
  reg.1.label="Smith-7001"
  reg.1.auth.domain="None"
  reg.1.auth.useLoginCredentials="1"
 />
 <reg.2
  reg.2.displayName="Steve Smith"
  reg.2.label="Smith-OCS"
  reg.2.auth.domain="None"
  reg.2.auth.useLoginCredentials="1"
 />
</reg>
```

The MACaddress-config.cfg file contains user-specific information.

Site.cfg

```
<app
 apps.1.url=""
 apps.1.label=""
 apps.2.url=""
 apps.2.label=""
 apps.3.url=""
 apps.3.label=""
 apps.4.url=""
 apps.4.label=""
 apps.5.url=""
 apps.5.label=""
 apps.6.url=""
 apps.6.label=""
 feature.exchangeCalendar.enabled="0"
 exchange.server.url=""
 exchange.meeting.reminderEnabled="0"
/>
<dialplan
 dialplan.removeEndOfDial="0"
 dialplan.digitmap="x.T"
/>
<dir
 feature.corporateDirectory.enabled="0"
/>
<im
 feature.messaging.enabled="0"
/>
<log
 log.render.file.upload.period="3600"
 log.render.file.size="128"
 log.render.file.upload.append.sizeLimit="10000"
 log.level.change.wlan="3"
 log.level.change.sip="3"
/>
<oai
 oai.gateway.address=""
/>
<ptt
 ptt.pageMode.enable="0"
/>
<qbc
 qbc.operating.mode="disabled"
/>
<syslog
 device.syslog.serverName=""
 device.syslog.serverName.set="1"
/>
<voIpProt
 voIpProt.SIP.serverFeatureControl.dnd="1"
 voIpProt.SIP.serverFeatureControl.cf="1"
/>
```

The site.cfg file contains Parameters that apply to every handset.

Load the configuration into the central provisioning server

1 Extract the zip file to the provisioning directory of your central provisioning server.

Admin Tip: What type of provisioning server do you have?

When you ran the Wireless Wizard, you selected the type of provisioning server. FTP is the default type.

2 Ensure that the files are in the same directory as the firmware version you want the handsets to run.

Load the SIP / Feature parameters into the handsets:

The handsets will automatically download the files from the provisioning server when they are turned on and associate with the wireless LAN.

Chapter 3: Using SLIC for Manual Configuration

When configuring small numbers of handsets in a test or other limited installment, you can manually configure (or edit) the .cfg files and use the SLIC server to load them into each handset. Obviously this can be labor intensive for any large number of handsets, but it can be very useful when you are deploying only a few.

To manually load .cfg files to a handset:

1. Create/Modify 000000000000.cfg and wireless.cfg files to match your wireless network and central provisioning server access. Use the *Spectralink 84-Series Wireless Telephone Deployment Guide* for reference on configuring the files.
2. Load the 000000000000.cfg and wireless.cfg files onto the USB flash drive. Ensure the 000000000000.cfg file points to the wireless.cfg file.
3. Plug the USB flash drive into SLIC.
4. Ensuring that the USB flash drive is plugged in, apply power to SLIC. It takes about 30 seconds to boot.

Note: What the LED indicator lights on the Spectralink 84-Series Installation & Configuration Tool mean

The green LED at the top of the circle will light to indicate that power is applied).

Two yellowish-green LEDs on the side of the circle will light when SLIC is ready.

5. Apply power to 84xx handset.
6. (Conditional) If the handset has been modified from out of the box configuration, perform a Reset to Factory. [Navigate to **Settings > Advanced Settings > Default Password is 456 > Administration Settings > Reset To Defaults > Reset To Factory**.]
7. Connect micro-USB cable between the 84xx handset and SLIC.
8. The handset will download the wireless configuration and then reboot making a “tweedle” sound. If handsets do not immediately (within 10 seconds) download and reboot after plugging the USB into them, you can manually force the Configuration download by navigating to the Settings menu on the handset: **Settings> (1)Basic Settings> (6)Update Configuration > Yes**. If you use this option, **Updating…** remains on the display until it is finished.

9 Disconnect USB cable from the 84xx handset. Test the first few handsets to be sure your configuration is working as desired and then use the Optimizations steps at Optimization Pointers for Quantity Deployment if deploying a quantity of handsets.

Admin Tip: Viewing the FTP log

The FTP log is saved to the USB flash drive as ‘xferlog’. Remove the flash drive and view on PC.

Appendix A: Updating SLIC Software

The software version currently being run on SLIC is noted in the browser page header when you bring it up. To determine if a later version is available, go to the Spectralink Support site and browse to the 84-Series handset page. The SLIC software is located under the Downloads tab with the version included in the link title. If a later version is listed, click the link and download the software.

Note: Deploying both 84-Series and 87-Series handsets?

If you are deploying both 84-Series and 87-Series handsets, SLIC version 3.23 (and later) supports both product families. Version 2.25 only supports the 84-Series handsets.

To upgrade the Spectralink 84-Series Installation & Configuration Tool:

1. Download the new version from the Spectralink support website for SLIC. Extract the files from the zip to a convenient location.
2. The .img file will have the version number as part of the filename. Rename the image file to SLIC.img" (upper case).
3. Copy the SLIC.img file into the root directory of a USB flash drive.
4. Insert the USB flash with the SLIC.img file into SLIC.
5. Power-cycle the unit.
6. SLIC will boot, then go through the upgrade process (blinking LED left, than right), then reboot again.
7. Verify the upgrade was successful by starting the browser and viewing the version number in the page header.

Appendix B: .csv File Information

Each field of the CSV file identifies specific information that is used by the 84-Series handset or the SLIC tool to create configurations that will allow handsets to register with SIP call servers and handle other features. Fields are defined below and include some additional help context and explanation of how they will be used by the SLIC tool or phone.

Definitions

Heading	*Parameter*	*Description*
MAC or User	No parameter. Identifier or the User Profile user ID that will be used for the user profile configuration file name.	Phone's MAC Address This field must not contain colons between the numbers.
Type	No parameter. Identifier to tell SLIC what options to offer.	Telephony, OCS or Lync (represents server type line appearance will register against.)
Address	reg.x.server.x.address	Call server IP Address or Fully Qualified Domain Name
Port	reg.x.server.x.port	SIP Call server port number (Default is 5060 if not specified)
Extension	reg.x.address	SIP device extension *** If your SIP domain is programmed on the call server for the handsets you must include the domain with the Extension*** (do not include @sipdomain for AudioCodes) ie. extension@sipdomain
UserID	reg.x.auth.userId	SIP Extension user ID
Password	reg.x.auth.password	SIP extension authentication password (Required for digest authentication) (Leave blank for AudioCodes)
Display Name	reg.x.displayName	SIP Extension Caller-ID display information
Line Label	reg.x.label	SIP Extension label that appears on the handset display
Profile Pwd	prov.login.localPassword	User Profiles default password
VM Pilot Number	[msg.mwi.x.callBack	For Nortel and Avaya Call Servers you may want to provide the VM pilot number
Subscribe To MWI	msg.mwi.x.subscribe	Some Call Servers require an extension to subscribe to get MWI (Avaya, for example). Enter the phone extension here if this is required.
QBC Target	qbc.connect.ipAddress-hostname.SL8452 qbc.connect.ipAddress-hostname.SL8450	If using phone in single end-point mode, this is the PC host name or static IP address the phone will connect to
OAI Virtual MAC	oai.userId	If using User Profiles or as desired, the Virtual MAC to use as the OAI UserID

Example .csv file

Note: columns are too wide and numerous to display across a single page. Therefore, for display purposes only, the .csv columns have been separated.

Admin Tip: How to edit the .csv file.

Open the .csv template in Excel and edit it with your own MAC numbers and/or Users data. Then save it as a .csv file in an accessible location for easy retrieval when you start the SIP/Feature Wizard.

When you edit the .csv file delete any explanatory rows but keep the header titles in the file, do not delete the header row. Every column does not need to be populated but do not delete columns that you do not need. Null values will be entered for fields left blank.

MAC or User	***Type***	***Address***	***Port***	***Extension***	***UserID***
# 00907a0cb978	telephony	172.29.1.2	5060	7001@avaya.com	7001-A
# 00907a0cb978	OCS	172.29.24.2	5061		ssmith@company.com
# ssmith	telephony	172.29.1.2	5060	7001@avaya.com	7001-A
# ssmith	OCS	172.29.24.2	5061		ssmith@company.com
# 00907a0cb534	telephony	172.29.1.8	5060	7077	7077
# 00907a0c5622	telephony	172.29.1.7	5060	8008@nortel.com	8008

Password	***Display Name***	***Line Label***	*Profile Pwd*
Xfqudk2H	Steve Smith	Smith-7001	
Fab33wr2s	Steve Smith	Smith-OCS	
Xfqudk2H	Steve Smith	Smith-7001	7652
Fab33wr2s	Steve Smith	Smith-OCS	7652
7077	Bob on Asterisk	Bob	
8008	Jimmy on Nortel	Jimmy	

VM Pilot Number	*Subscribe To MWI*	***QBC Target***	***OAI Virtual MAC***
4999	7001		
		bad.apple.com	
4999	7001	green.apple.com	1

VM Pilot Number	*Subscribe To MWI*	***QBC Target***	***OAI Virtual MAC***
5999		192.168.5.48	

Appendix C: Wireless Parameters

Wireless parameters are just those settings that are required by the handset to associate with the wireless LAN. These parameters are discussed and defined in the *Spectralink 84-Series Wireless Telephone Deployment Guide* and white papers listed in Specific Documents.

Wireless Parameters in Order of Presentation

Screen	*Parameter*	*Default if any*
Admin Security Settings	device.auth.localAdminPassword	456
Provisioning Server Settings	device.prov.serverType device.sec.TLS.profileSelection.provisioning	FTP
(con't) Use DHCP/Static Entry?	device.dhcp.bootSrvUseOpt	DHCP
Server Address (if static)	device.prov.serverName	
Provisioning Username	device.prov.user	administrator
Provisioning Password	device.prov.password	admin123
Provisioning authentication	device.sec.TLS.profileSelection.provisioning	admin123
DNS Settings (required if using static IP addressing)		
Domain	device.dns.domain	(use IP address of the provisioning server)
DNS Server IP Address	device.dns.serverAddress	
Alt. DNS Server IP Address	device.dns.altSrvAddress	
SNTP Settings (optional if these settings are configured in DHCP)		
Server Server	device.sntp.serverName	
Local GMT Offset	device.sntp;.gmtOffset	
WiFi Settings		
SSID	device.wifi.ssid	
Wireless Security Type	device.wifi.securityMode	Open Network
WEP	device.wifi.wep.authType device.wifi.wep.defaultKey device.wifi.wep.encryptionEnabled device.wifi.wep.key1	

Screen	*Parameter*	*Default if any*
	device.wifi.wep.key2 device.wifi.wep.key3 device.wifi.wep.key4 device.wifi.wep.keyLength	
WPA-PSK and WPA2-PSK	device.wifi.psk.keyType device.wifi.psk.key	
WPA2-Enterprise	device.wifi.wpa2Ent.method device.wifi.wpa2Ent.roaming device.wifi.wpa2Ent.user device.wifi.wpa2Ent.password device.wifi.wpa2Ent.peap device.wifi.wpa2Ent.eapFast device.wifi.wpa2Ent.EAP-TLS device.sec.TLS.customCaCert1 device.sec.TLS.customCaCert2 device.sec.TLS.profileSelection.dot1x device.sec.TLS.profile.caCertList1 device.sec.TLS.profile.caCertList2 device.wifi.wpa2Ent.eapFast.inBandProv	
Radio Settings		
Regulatory Domain	device.wifi.radio.regulatoryDomain	
2.4	device.wifi.radio.band2_4GHz.enable	
	device.wifi.radio.band2_4GHz.txPower	Auto for all txPower parameters. (acts as maximum value which is 7 in domains 1 and 10, or 4 in domain 2)
5	device.wifi.radio.band5GHz.enable	
Sub bands and tx power	device.wifi.radio.band5GHz.subBand1.enable device.wifi.radio.band5GHz.subBand1.txPower device.wifi.radio.band5GHz.subBand2.enable device.wifi.radio.band5GHz.subBand2.txPower device.wifi.radio.band5GHz.subBand3.enable device.wifi.radio.band5GHz.subBand3.txPower device.wifi.radio.band5GHz.subBand4.enable device.wifi.radio.band5GHz.subBand4.txPower	

Appendix D: Site and Feature Parameters

The Wizards set various parameters that are written to .cfg files. These parameters are more completely defined in the *Spectralink 84-Series Wireless Telephone Administration Guide*. Wireless parameters are more completely explained in the *Deployment Guide*. Please refer to those documents if you have any questions about how to set these parameters.

Admin Tip: What .cfg files are produced?

System and feature parameters are found in the site.cfg file. User profile parameters are found in the profile.cfg file. Both types of master configuration files can be produced—both the zeros file and MAC address-specific files—depending on how the .csv file is populated. A per-phone MAC address is produced for registration information. If User Profiles are used, a per user file is produced. See the *Deployment Guide* for more information about which files are used when.

Parameters in Order of Presentation

Screen	*Parameter (="x" is default)*	*Presented Default if any*
Call Server Selection	dummy.CallServerSelection.switch SLIC uses this setting to present the options that are appropriate to the selected server.	Lync Telephony
Csv file	dummy.csv SLIC uses the selected .csv file to present options that are appropriate to the parameters set in the csv file.	Use your csv file
Implement User Profiles (profile.cfg)		
	prov.login.enabled="0"	disabled
If enabled	prov.login.enabled="1" prov.login.required="1" prov.login.defaultOnly="0" prov.login.persistent="0" prov.login.automaticLogout="0"	
Calling Features: PTT or Emergency Dial (site.cfg)		
	ptt.pttMode.enable="0" Note: if a Lync Telephony server is selected, PTT options will not be presented. See note below for workaround.	Both disabled
Enable PTT	ptt.pttMode.enable="1" ptt.address="224.0.1.116"	

Screen	*Parameter (="x" is default)*	*Presented Default if any*
	ptt.compatibilityMode="1" ptt.defaultChannel="1" ptt.payloadSize="30" ptt.priorityChannel="24" ptt.emergencyChannel="25"	
Use default values? If Yes	ptt.channel.x.available="1", ptt.channel.x.subscribed="1", ptt.channel.x.allowTransmit="1" (x=1-4, 24,25)	
	ptt.channel.1.label="All" ptt.channel.2.label="Demo 2" ptt.channel.3.label="Demo 3" ptt.channel.4.label="Demo 4" ptt.channel.24.label="Priority" ptt.channel.25.label="Emergency"	
If no: Set emergency and priority channels	ptt.emergencyChannel="25" ptt.priorityChannel="24"	default=1 for channels 1-4,24,25
Modify the channel 1-4 subscriptions (x=1-4, 24,25)	ptt.channel.x.available ptt.channel.x.subscribed ptt.channel.x.allowTransmit	
channel labels.	ptt.channel.x.label	chan 1 def= "All" chan 2 def = "Group 1" chan 3 def = "Group 2" chan 4 def = "Group 3" chan 24 def="Priority" chan 25 def="Emergency"
Emergency dial		
On screen description	ptt.emergencyDial.description	Emergency Call
Emergency dial phone number or extension	ptt.emergencyDial.number	
OAI (Gateway Address)	oai.gateway.address	
Quick Barcode Connector	qbc.operating.mode	QBC Disabled
	qbc.operating.mode="single" or "multi" qbc.encryption.enabled="1" qbc.connect.passphrase="BcmaTestPassword1" qbc.connection.port="14394" qbc.inactivity.timeout="300000" qbc.keepalive.timeout="30000" qbc.response.timeout="10000" qbc.start.connect.timeout="60000"	
Configure Syslogging		

Screen	*Parameter (="x" is default)*	*Presented Default if any*
Configure Syslog Server	device.syslog.serverName	
Calling Features Selection		
Enable Local DND	voIpProt.SIP.serverFeatureControl.dnd	Enabled
Enable Local Call Forwarding	voIpProt.SIP.serverFeatureControl.cf	Enabled
Instant Messaging and Presence (options are not presented if using Lync server)		
	feature.messaging.enabled	Disabled
Server Type	reg.2.server.1.specialInterop	
Server Address	reg.2.server.1.address	
IM Certificate File	sec.TLS.customCaCert.2	
IM AutoAnswer Configuration	voIp{rpt/SIP.IM.autoAnswerDelay	
Application Configuration		
Application x URL	dummy.apps.x.url	
Application x Label	dummy.apps.x.label	
Application x Barcode Required	dummy.barcode.1	
Microsoft Exchange Calendar Configuration		
	feature.exchangeCalendar.enabled	disabled
Exchange Server URL	exchange.server.url	
Enable Meeting Reminders	exchange.meeting.reminderEnabled	
Corporate Directory		
	feature.corporateDirectory.enabled	disabled
Spectralink Supported Server		(list of supported servers) Microsoft Active Directory 2003 SP2 Sun ONE Directory Server 5.2 p6 Open LDAP Directory Server 2.4.12 Microsoft Active Directory Application Mode 1.0 SP1
	dir.corp.backGroundSync="1" dir.corp.viewPersistence="0" dir.corp.address="" dir.corp.baseDN="" dir.corp.scope="sub"	

Screen	*Parameter (="x" is default)*	*Presented Default if any*
	dir.corp.user="" dir.corp.password=""	
Voicemail (options are not presented if using Lync Telephony)		
If Yes	up.oneTouchVoicemail up.msiVisible	enabled
Select a message retrieval mode	If yes Msg.mwi.1.callBackMode (set to selection)	Registration
Logging parameters (no options presented)		
	log.render.file.upload.period="3600" log.render.file.size="128" log.render.file.upload.append.sizeLimit="10000" log.level.change.wlan="3" log.level.change.sip="3"	

Lync Telephony Parameters

If Lync Telephony is selected as the Call Server, the following parameters will appear in the site.cfg file. These are the base profile settings. See the *Spectralink 84-Series Wireless Telephone Microsoft Lync Server 2013 Interoperability Guide* or *Spectralink 84-Series Wireless Telephone Microsoft Lync Server 2010 Interoperability Guide* for information on these parameters.

Screen	*Parameter*	*Default if any*
	call.enableOnNotRegistered="0" callLists.logConsultationCalls="1" dialplan.applyToDirectoryDial="1" feature.messaging.enabled="1" feature.presence.enabled="1" sec.srtp.holdWithNewKey="0" sec.srtp.key.lifetime="2^31" sec.srtp.mki.enabled="1" sec.srtp.mki.length="1" sec.srtp.mki.startSessionAtOne="1" sec.srtp.resumeWithNewKey="1" sec.TLS.profileSelection.SIP="ApplicationProfile1" tcpIpApp.ice.mode="MSOCS" tcpIpApp.keepalive.tcp.sip.tls.enable="1" video.iFrame.delay="2" voice.audioProfile.G7221.24kbps.payloadType="112" voice.codecPref.G7221.24kbps="5" voice.codecPref.G7221.32kbps="0" voIpProt.SIP.allowTransferOnProceeding="0" voIpProt.SIP.header.diversion.enable="1" voIpProt.SIP.mtls.enable="0" voIpProt.SIP.serverFeatureControl.cf="1"	

Screen	*Parameter*	*Default if any*
	voIpProt.SIP.serverFeatureControl.localProcessing.cf="0" roaming_buddies.reg="1" voIpProt.server.1.transport="TLS" reg.1.serverFeatureControl.signalingMethod="serviceMsForwardContact" reg.1.server.1.specialInterop="lync2010" reg.1.server.1.registerRetry.maxTimeout="180" reg.1.auth.useLoginCredentials="1" reg.1.applyServerDigitMapLocally="1" dialplan.1.applyToForward="1"	

Settings: PTT workaround

The Feature Wizard will not present PTT options if a Lync Telephony server is selected. If you want to deploy PTT, you will have to configure PTT parameters manually or run the Feature Wizard with a different server option and save the resulting files. See the PTT.cfg template for a complete list of ptt parameters.

Nortel CS1k Parameters

When Nortel CS1k is selected as the server type, these additional parameters are set:

Screen	*Parameter*	*Default if any*
	call.transferOnConferenceEnd="0" sec.srtp.offer="0" reg.1.server.1.port="5070"	

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