Technical Bulletin CS-14-20

Syslog on Spectralink 84-Series Handsets

Syslog is a standard for logging data and forwarding log messages in an IP network. You can use syslog to manage and secure devices, and to generate informational, analytic, or debugging messages. You can send syslog messages using UDP, TCP, or TLS. The data is sent in clear text.

Because syslog is supported by many devices and receivers, you can use syslog to integrate log data into a central repository.

You can configure syslog settings for your Spectralink handsets. Syslog settings enable you to specify syslog details such as IP address or host name, server type, facility, and the severity level of events you want to log. You can also choose to prepend the handset's MAC address to log messages.

> **Information on Syslog**
>
> For more information on syslog, see RFC 5424.

You can choose the severity level of events you want to log using the `log.render.level` parameter. Note that when you choose a log level, you are including all events of a greater severity level and excluding events of a lower severity level. The logging level you choose determines the lowest severity of events that will be logged. The following list indicates the severity level of events you can log:

- 0 -> SeverityDebug (7)
- 1 -> SeverityDebug (7)
- 2 -> SeverityInformational (6)
- 3 -> SeverityInformational (6)
- 4 -> SeverityError (3)
- 5 -> SeverityCritical (2)
- 6 -> SeverityEmergency (0)

See the following table for a summary of handsets models compatible with syslog, dependencies, and available documentation.

Table 1: Syslog at a Glance

Released:	December 2006	Interoperability issues:	None

Applies to models:	**SpectraLink 84-Series**	Limitations:	**Users will need handsets administrator's password**
Applicable Software version(s):	**4.x and later**	Maintenance:	**One time setup**
Main business size:	**All businesses**	Available documentation:	**RFC 5424** **Spectralink 84-Series Admin Guide**
Primary users:	**Administrators**	Required resources:	**XML editor**

Configuring your Syslog Settings

This section shows you how to configure your syslog settings. You can configure syslog settings in three ways: using centralized provisioning, using the Web Configuration Utility, or using your local handsets user interface.

Configuring your Syslog Settings Using Centralized Provisioning

You can configure syslog settings using centralized provisioning, which requires you to configure the parameters found in the Spectralink Software configuration files.

> **Note: Create Separate Configuration Files for Easier Maintenance**
>
> If you are configuring parameter settings, create a new configuration file from the parameters you use; do not add parameters to your existing template files or custom configuration files. You can use this new configuration file for all of your handsets and to simplify maintenance. Spectralink recommends that you test your new configuration files on two handsets before using them for all of your handsets.

The following table lists the most common syslog configuration parameters:

Table 2: Syslog Configuration Parameters

Name	Possible Values	Description
`device.syslog.serverName`	dotted-decimal IP address OR domain name string	The syslog server IP address or domain name string. The default value is NULL.

Name	Possible Values	Description
`device.syslog.transport`	**None**=**0**, **UDP**=**1**, **TCP**=**2**, **TLS**=**3**	The protocol that the handsets will use to write to the syslog server. If set to **None** or **0**, transmission is turned off, but the server address is preserved.
`device.syslog.facility`	**0** to **23**	A description of what generated the log message. For more information on the syslog protocol, see RFC 5424. The default value is **16**, which maps to local 0.
`device.syslog.renderLevel`	**0** to **6**	This specifies the lowest class of event that will be rendered to syslog and is based on the `log.render.level` parameter.
`device.syslog.prependMac`	**Enabled**, **Disabled**	If enabled, the handset's MAC address is prepended to the log message sent to the syslog server.

Configuring your Syslog Settings Using the Web Configuration Utility

This section shows you how to access the Web Configuration Utility and configure syslog settings.

> **Web Info: Using the Web Configuration Utility**
>
> For an introduction to the Web Configuration Utility and a list of compatible Web browsers, see the Spectralink 84-Series Wireless Telephone Admin Guide.

To log in to the Web Configuration Utility and access your syslog settings, you'll need your handset's IP address and your administrator credentials. After you access the Web Configuration Utility, you can refer to Table 3: Syslog Configuration Settings for a description and the value of each setting.

To access the Web Configuration Utility:

1 Launch a compatible Web browser from your PC and enter your handset's IP address into the address bar.

   To find out your handset's IP address, on your handsets, press **Menu > Status > Platform > Handsets**.

Your handset's IP address will display.

2 After entering your handset's IP address into your browser's address bar, press the **Enter** key.

The Web Configuration Utility login screen displays.

3 Choose to log in as Administrator, enter the password (default 456), then click the **Submit** button.

The Web Configuration Utility *Home* screen displays.

4 Navigate to **Settings > Syslog**.

The syslog configuration options display.

To configure syslog settings, refer to the following table for a description of each setting and possible values:

Table 3: Syslog Configuration Settings

Name	Possible Values	Description
Server Address	dotted-decimal IP address OR domain name string	The syslog server IP address or host name. The default value is NULL.
Server Type	**None**, **UDP**, **TCP**, **TLS**	The protocol that the handsets will use to write to the syslog server. If set to **None**, transmission is turned off, but the server address is preserved.
Facility	**0** to **23**	A description of what generated the log message. For more information, see RFC 5424. The default value is **16**, which maps to local 0.
Render Level	**Debug, Event 1, Event 2, Event 3, Minor Error, Major Error, Fatal Error**	This specifies the lowest class of event that will be rendered to syslog and is based on the `log.render.level` parameter.
Prepend MAC Address	**Enable**, **Disable**	If enabled, the handset's MAC address is prepended to the log message sent to the syslog server.

Configuring your Syslog Settings Using your Local Handsets User Interface

This section shows you how to access the **Syslog Menu** and configure syslog settings on your handsets. After you access the syslog settings from your handset's menu system, you can refer to Table 4: Syslog Configuration Settings for a description and the value of each setting.

To access the Syslog Menu:

1 On your handsets, navigate to **Menu > Settings > Advanced** and enter the handset's
   administrative password (default 456), then press the **Enter** soft key.

2 Navigate to **Admin Settings > Network Configuration**.

3 Scroll down to **Syslog Menu** and press the **Select** soft key.

   The **Syslog Menu** displays.

To configure syslog settings, refer to the following table for a description of each setting and possible
values:

Table 4: Syslog Configuration Settings

Name	Possible Values	Description
Server Address	dotted-decimal IP address OR domain name string	The syslog server IP address or host name. The default value is NULL.
Server Type	**None**, **UDP**, **TCP**, **TLS**	The protocol that the handsets will use to write to the syslog server. If set to **None**, transmission is turned off, but the server address is preserved.
Facility	**0** to **23**	A description of what generated the log message. For more information, see RFC 5424. The default value is **16**, which maps to local 0.
Render Level	**0** to **6**	This specifies the lowest class of event that will be rendered to syslog and is based on the `log.render.level` parameter.
Prepend MAC Address	**Enabled**, **Disabled**	If enabled, the handset's MAC address is prepended to the log message sent to the syslog server.

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