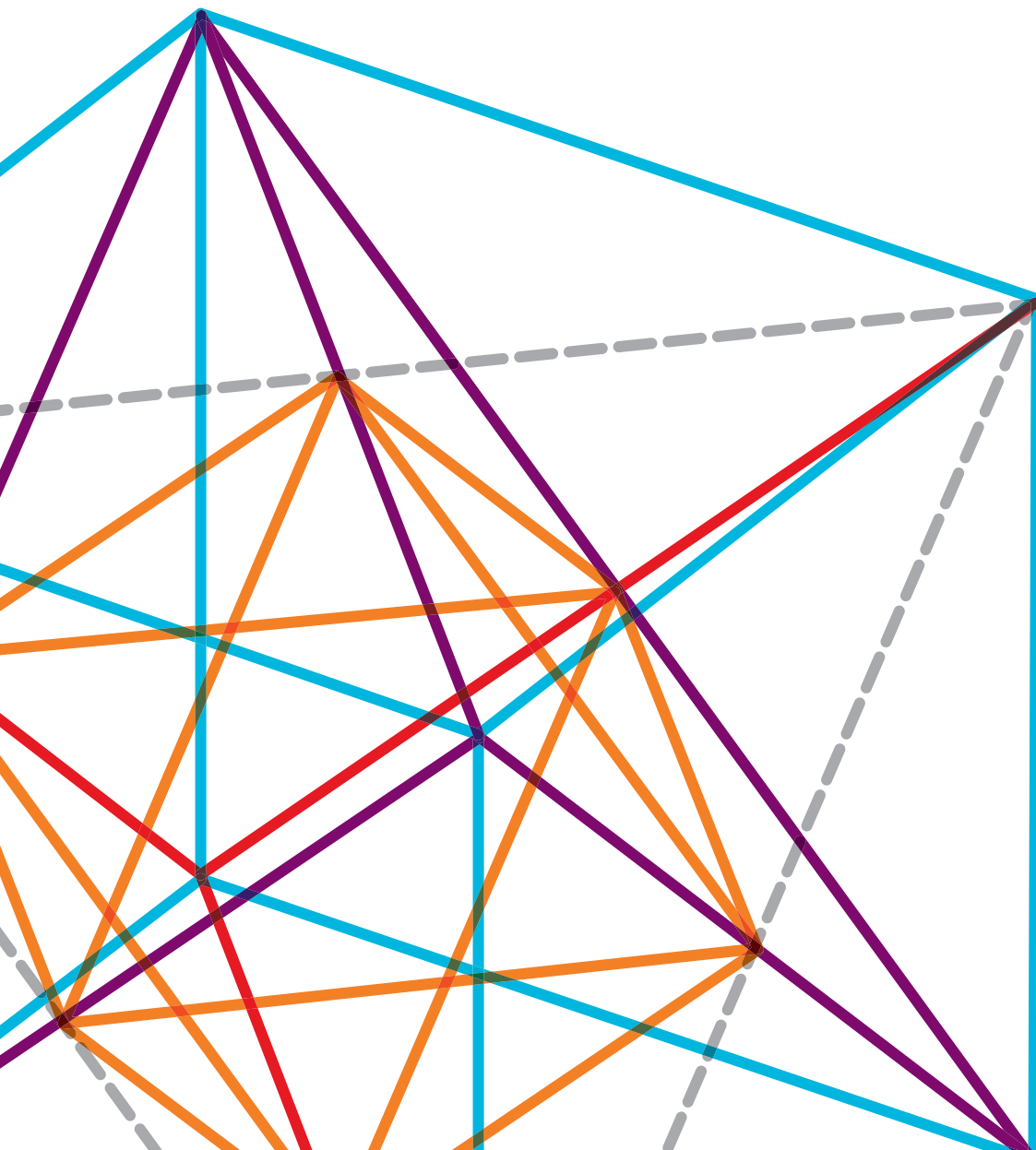


Link-OS® Printer Operating System Syslog
AppNote 2456935.546169
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INTRODUCTION

Syslog is an industry standard device management system for message logging.

For a general understanding of syslog, use the reference Wikipedia: <http://en.wikipedia.org/wiki/Syslog>

LINK-OS PRINTER SYSLOG FEATURE

Zebra Link-OS-enabled printers have supported syslog since VXX.19.7Z firmware. This allows the printers to fit seamlessly within a customer's existing device management solution.

The user can select the severity level (and above) on which to view messages. The syslog severities, shown here in priority order using the "Severity Abbreviations," are:

EMERG	system is unusable
ALERT	action must be taken immediately
CRIT	critical conditions
ERR	error conditions
WARNING	warning conditions
NOTICE	normal but significant condition
INFO	informational (noise, most syslog messages)
DEBUG	Zebra debug-level messages

Syslog messages from Zebra Link-OS printers are formatted in the following way:

[Feature] **[Severity Abbreviation]** **[Message Code]** Message

- The **Feature** is a brief description of from where the syslog entry is originating.
- The **Severity Abbreviation** is defined above and corresponds to the severity of the message.
- The **Message Code** is a unique hexadecimal value that identifies the particular message.

Sometimes, different messages can use the same message code if they pertain to a similar area. The message is a text field in English that further describes the syslog entry. This format allows for more advanced systems administrators to filter particular messages of interest.

SYSLOG SGDS

There are several SetGetDo commands that control the syslog system.

device.syslog.enable

Purpose: Enables syslog and all its features
Range: on, off
Default: off
Example: `! U1 setvar "device.syslog.enable" "on"`

NOTE: The command must be followed by a carriage return/line feed or a space character.

device.syslog.configuration

Purpose: Configures the syslog feature
Range: Supports a list of configuration entries, limited to 1000 characters.
Default: ""
Example: `! U1 setvar "device.syslog.configuration" "alert,local"`

NOTE: The command must be followed by a carriage return/line feed or a space character. This command enables syslog messages to be stored on the printer or remotely. The messages that will be logged are determined by the severity level chosen by the user. Entries must be in the form of "severity,destination" and then delimited with semi-colon. Example values:

```
"emer,128.168.0.1;debug,192.168.0.2;crit,local;"
```

The first 'local' entry is used. Duplicates are ignored. See the "Configuring Syslog" section later in this document for examples.

device.syslog.entries

Purpose: Displays the contents of local syslog
Range: N/A
Default: N/A
Example: `! U1 getvar "device.syslog.entries"`

NOTE: The command must be followed by a carriage return/line feed or a space character. This is a getvar only command. It does not have a setvar implementation.

device.syslog.clear_log

Purpose: Clears the syslog entries
Range: This is a do command only
Default: N/A
Example: `! U1 do "device.syslog.clear_log" ""`

NOTE: The command must be followed by a carriage return/line feed or a space character. This is a do command only. It does not have a `setvar` or `getvar` implementation.

device.syslog.save_local_file

Purpose: Configures the printer to save syslog entries to a file on the printer
Range: yes, no
Default: no
Example: `! U1 setvar "device.syslog.save_local_file" "yes"`

NOTE: The command must be followed by a carriage return/line feed or a space character. The user can set the printer to save the syslog messages to a file on the E: drive, named SYSLOG.TXT, by setting this SGD to "yes".

device.syslog.log_max_file_size

Purpose: Sets the maximum file size of SYSLOG.TXT in bytes
Range: 10000 to 400000
Default: 10000
Example: `! U1 setvar "device.syslog.log_max_file_size" "40000"`

NOTE: The command must be followed by a carriage return/line feed or a space character.

CONFIGURING SYSLOG

The following examples show how to configure the syslog system.

Local Syslog Messaging

This example shows how to set the printer to log all messages from NOTICE-level severities and above to E:SYSLOG.TXT:

```
! U1 setvar "device.syslog.enable" "on"  
! U1 setvar "device.syslog.configuration" "NOTICE,LOCAL"  
! U1 setvar "device.syslog.save_local_file" "yes"  
! U1 setvar "device.restart" "now"
```

NOTE: The commands must be followed by a carriage return/line feed or a space character.

This example shows how to set the printer to log all messages from DEBUG-level severities and above (maximum verbosity) so that the data can be retrieved using the `device.syslog.entries` command

```
! U1 setvar "device.syslog.enable" "on"  
! U1 setvar "device.syslog.configuration" "DEBUG,LOCAL"  
! U1 setvar "device.restart" "now"
```

NOTE: The commands must be followed by a carriage return/line feed or a space character.

REMOTE SYSLOG MESSAGING

To configure remote syslog messages you will first need a server application to accept them. You can load a syslog server (viewer) on your PC by using one of the following products:

- <http://www.snmpsoft.com/syslogwatcher/syslog-server.html>
- <http://sourceforge.net/projects/syslog-server/>
- <http://www.solarwinds.com/products/freetools/free-kiwi-syslog-server.aspx>

Most of these applications have the limitation of allowing up to 5 different sources (printer IP addresses in this case), while commercial versions allow more sources.

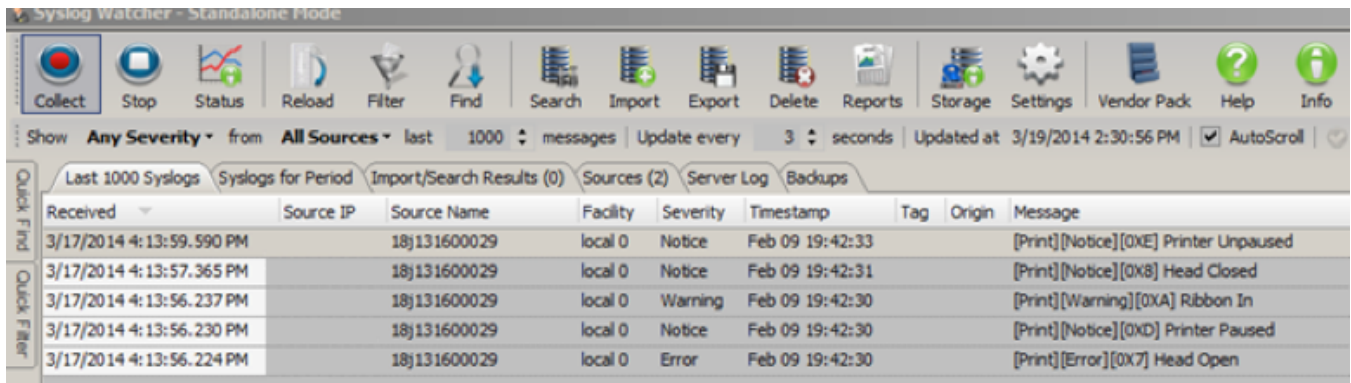
Once one of the programs is installed and running, you will need to get the server IP address to which the printer will send the syslog event.

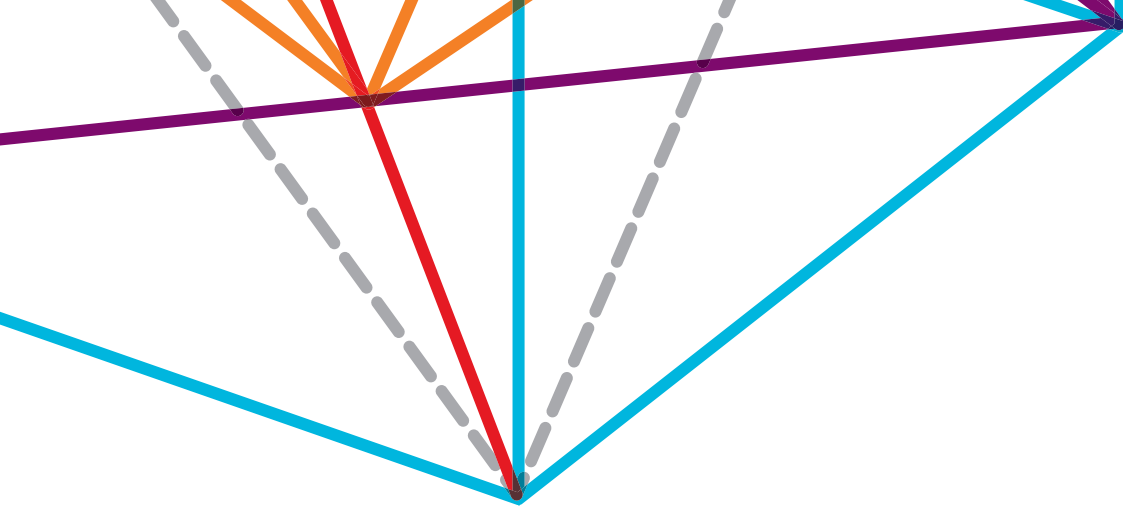
To configure remote syslog messages, select your severity and server IP address, then set the configuration setting (where 10.14.204.13 is your server):

```
! U1 setvar "device.syslog.configuration" "INFO,10.14.204.13"  
! U1 setvar "device.restart" "now"
```

NOTE: The commands must be followed by a carriage return/line feed or a space character.

After the printer gets an IP address, open and close the print head to verify that the syslog message gets sent to your remote server. As events are logged, the software should look similar to this:





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