

Including Priority Information in System Log Messages

A message's facility and severity level are together referred to as its priority. By default, messages logged in the standard JUNOS format do not include information about priority. To include priority information in standard-format messages directed to a file, include the `explicit-priority` statement at the `[edit system syslog file filename]` hierarchy level:

```
[edit system syslog file filename]  
  facility severity;  
  explicit-priority;
```



NOTE: Messages logged in structured-data format include priority information by default (structured-data format is available in JUNOS Release 8.3 and later and for file destinations only). If you include the `structured-data` statement at the `[edit system syslog file filename]` hierarchy level along with the `explicit-priority` statement, the `explicit-priority` statement is ignored and messages are logged in structured-data format.

For information about the `structured-data` statement, see Logging Messages in Structured-Data Format. For information about the contents of a structured-data message, see Displaying a Log File from a Single-Chassis System.

To include priority information in messages directed to a remote machine or the other Routing Engine, include the `explicit-priority` statement at the `[edit system syslog host (hostname | other-routing-engine)]` hierarchy level:

```
[edit system syslog host (hostname | other-routing-engine)]  
  facility severity;  
  explicit-priority;
```

The priority recorded in a message always indicates the original, local facility name. If the `facility-override` statement is included for messages directed to a remote destination, the JUNOS system logging utility still uses the alternative facility for the messages themselves when directing them to the remote destination. For more information about alternative facilities, see Changing the Alternative Facility Name for Remote Messages.

When the `explicit-priority` statement is included, the JUNOS logging utility prepends codes for the facility name and severity level to the message tag name, if the message has one:

```
FACILITY-severity[-TAG]
```

(The tag is a unique identifier assigned to some JUNOS system log messages; for more information, see Interpreting Messages Generated in Structured-Data Format, Interpreting Messages Generated in Standard Format by Services on a PIC, Interpreting Messages Generated in Standard Format by a JUNOS Process or Library, and Displaying and Interpreting System Log Message Descriptions.)

Table 1 lists the facility codes that can appear in system log messages and maps them to facility names.



NOTE: If the second column in Table 1 does not include the JUNOS facility name for a code, the facility cannot be included in a statement at the [edit system syslog] hierarchy level. The JUNOS Software might use the facilities in Table 1— and others that are not listed—when reporting on internal operations

Table 1: Facility Codes Reported in Priority Information

Code	JUNOS Facility Name	Type of Event or Error
AUTH	authorization	Authentication and authorization attempts
AUTHPRIV		Authentication and authorization attempts that can be viewed by superusers only
CHANGE	change-log	Changes to the JUNOS configuration
CONFLICT	conflict-log	Specified configuration is invalid on the routing platform type
CONSOLE		Messages written to /dev/console by the kernel console output driver
CRON		Actions performed or errors encountered by the cron process
DAEMON	daemon	Actions performed or errors encountered by system processes
DFC	dfc	Actions performed or errors encountered by the dynamic flow capture process
FIREWALL	firewall	Packet filtering actions performed by a firewall filter
FTP	ftp	Actions performed or errors encountered by the FTP process
INTERACT	interactive-commands	Commands issued at the JUNOS CLI prompt or invoked by a client application such as a JUNOScript or NETCONF client

Table 1: Facility Codes Reported in Priority Information *(continued)*

Code	JUNOS Facility Name	Type of Event or Error
KERN	kernel	Actions performed or errors encountered by the JUNOS kernel
NTP		Actions performed or errors encountered by the Network Time Protocol (NTP) process
PFE	pfe	Actions performed or errors encountered by the Packet Forwarding Engine
SYSLOG		Actions performed or errors encountered by the JUNOS system logging utility
USER	user	Actions performed or errors encountered by user-space processes

Table 2 lists the numerical severity codes that can appear in system log messages and maps them to severity levels.

Table 2: Numerical Codes for Severity Levels Reported in Priority Information

Numerical Code	Severity Level	Description
0	emergency	System panic or other condition that causes the routing platform to stop functioning
1	alert	Conditions that require immediate correction, such as a corrupted system database
2	critical	Critical conditions, such as hard drive errors
3	error	Error conditions that generally have less serious consequences than errors in the emergency, alert, and critical levels
4	warning	Conditions that warrant monitoring
5	notice	Conditions that are not errors but might warrant special handling

Table 2: Numerical Codes for Severity Levels Reported in Priority Information (continued)

Numerical Code	Severity Level	Description
6	info	Events or nonerror conditions of interest
7	debug	Software debugging messages (these appear only if a technical support representative has instructed you to configure this severity level)

In the following example, the `CHASSISD_PARSE_COMPLETE` message belongs to the `daemon` facility and is assigned severity `info` (6):

```
Aug 21 12:36:30 router1 chassisd[522]:
```

```
%DAEMON-6-CHASSISD_PARSE_COMPLETE: Using new configuration
```

When the `explicit-priority` statement is not included, the priority does not appear in the message:

```
Aug 21 12:36:30 router1 chassisd[522]: CHASSISD_PARSE_COMPLETE: Using new configuration
```

For more information about message formatting, see [Displaying and Interpreting System Log Message Descriptions](#).

Published: 2010-04-28