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Rocky Enterprise Linux 9.2 Manual Pages on command 'syslog.3'

\$ man syslog.3

SYSLOG(3) Linux Programmer's Manual SYSLOG(3)

NAME

closelog, openlog, syslog, vsyslog - send messages to the system logger

SYNOPSIS

```
#include <syslog.h>
```

```
void openlog(const char *ident, int option, int facility);
```

```
void syslog(int priority, const char *format, ...);
```

```
void closelog(void);
```

```
void vsyslog(int priority, const char *format, va_list ap);
```

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

vsyslog():

Since glibc 2.19:

```
  _DEFAULT_SOURCE
```

Glibc 2.19 and earlier:

```
  _BSD_SOURCE
```

DESCRIPTION

openlog()

openlog() opens a connection to the system logger for a program.

The string pointed to by `ident` is prepended to every message, and is typically set to the program name. If `ident` is `NULL`, the program name is used. (POSIX.1-2008 does not specify the behavior when `ident` is `NULL`.)

The option argument specifies flags which control the operation of `openlog()` and subsequent calls to `syslog()`. The facility argument establishes a default to be used if none is specified in subsequent calls to `syslog()`. The values that may be specified for option and facility are described below.

The use of `openlog()` is optional; it will automatically be called by `syslog()` if necessary, in which case `ident` will default to `NULL`.

`syslog()` and `vsyslog()`

`syslog()` generates a log message, which will be distributed by `syslogd(8)`.

The priority argument is formed by ORing together a facility value and a level value (described below). If no facility value is ORed into priority, then the default value set by `openlog()` is used, or, if there was no preceding `openlog()` call, a default of `LOG_USER` is employed.

The remaining arguments are a format, as in `printf(3)`, and any arguments required by the format, except that the two-character sequence `%m` will be replaced by the error message string `strerror(errno)`. The format string need not include a terminating newline character.

The function `vsyslog()` performs the same task as `syslog()` with the difference that it takes a set of arguments which have been obtained using the `stdarg(3)` variable argument list macros.

`closelog()`

`closelog()` closes the file descriptor being used to write to the system logger. The use of `closelog()` is optional.

Values for option

The option argument to `openlog()` is a bit mask constructed by ORing together any of the following values:

`LOG_CONS` Write directly to the system console if there is an error while sending to the system logger.

LOG_NDELAY Open the connection immediately (normally, the connection is opened when the first message is logged). This may be useful, for example, if a subsequent `chroot(2)` would make the pathname used internally by the logging facility unreachable.

LOG_NOWAIT Don't wait for child processes that may have been created while logging the message. (The GNU C library does not create a child process, so this option has no effect on Linux.)

LOG_ODELAY The converse of **LOG_NDELAY**; opening of the connection is delayed until `syslog()` is called. (This is the default, and need not be specified.)

LOG_PERROR (Not in POSIX.1-2001 or POSIX.1-2008.) Also log the message to `stderr`.

LOG_PID Include the caller's PID with each message.

Values for facility

The `facility` argument is used to specify what type of program is logging the message. This lets the configuration file specify that messages from different facilities will be handled differently.

LOG_AUTH security/authorization messages

LOG_AUTHPRIV security/authorization messages (private)

LOG_CRON clock daemon (cron and at)

LOG_DAEMON system daemons without separate facility value

LOG_FTP ftp daemon

LOG_KERN kernel messages (these can't be generated from user processes)

LOG_LOCAL0 through **LOG_LOCAL7**
reserved for local use

LOG_LPR line printer subsystem

LOG_MAIL mail subsystem

LOG_NEWS USENET news subsystem

LOG_SYSLOG messages generated internally by `syslogd(8)`

LOG_USER (default)

generic user-level messages

LOG_UUCP UUCP subsystem

Values for level

This determines the importance of the message. The levels are, in order of decreasing importance:

LOG_EMERG system is unusable

LOG_ALERT action must be taken immediately

LOG_CRIT critical conditions

LOG_ERR error conditions

LOG_WARNING warning conditions

LOG_NOTICE normal, but significant, condition

LOG_INFO informational message

LOG_DEBUG debug-level message

The function setlogmask(3) can be used to restrict logging to specified levels only.

ATTRIBUTES

For an explanation of the terms used in this section, see attributes(7).

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?Interface ? Attribute ? Value ?

??

?openlog(), closelog() ? Thread safety ? MT-Safe ?

??

?syslog(), vsyslog() ? Thread safety ? MT-Safe env locale ?

??

CONFORMING TO

The functions openlog(), closelog(), and syslog() (but not vsyslog()) are specified in SUSv2, POSIX.1-2001, and POSIX.1-2008.

POSIX.1-2001 specifies only the LOG_USER and LOG_LOCAL* values for facility. However, with the exception of LOG_AUTHPRIV and LOG_FTP, the other facility values appear on most UNIX systems.

The LOG_PERROR value for option is not specified by POSIX.1-2001 or POSIX.1-2008, but is available in most versions of UNIX.

NOTES

The argument `ident` in the call of `openlog()` is probably stored as-is.

Thus, if the string it points to is changed, `syslog()` may start prepending the changed string, and if the string it points to ceases to exist, the results are undefined. Most portable is to use a string constant.

Never pass a string with user-supplied data as a format, use the following instead:

```
syslog(priority, "%s", string);
```

SEE ALSO

`journalctl(1)`, `logger(1)`, `setlogmask(3)`, `syslog.conf(5)`, `syslogd(8)`

COLOPHON

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