NAME

daemon - run detached from the controlling terminal

SYNOPSIS

daemon [**-cfHrS**] [**-p** *child_pidfile*] [**-P** *supervisor_pidfile*] [**-t** *title*] [**-u** *user*] [**-m** *output_mask*]
      [**-o** *output_file*] [**-s** *syslog_priority*] [**-T** *syslog_tag*] [**-l** *syslog_facility*]
      [**-R** *restart_delay_seconds*] *command arguments ...*

DESCRIPTION

The **daemon** utility detaches itself from the controlling terminal and executes the program specified by its arguments. Privileges may be lowered to the specified user. The output of the daemonized process may be redirected to syslog and to a log file.

The options are as follows:

-c, **--change-dir**

> Change the current working directory to the root ("/").

-f, **--close-fds**

> Redirect standard input, standard output and standard error to */dev/null*. When this option is used together with any of the options related to file or syslog output, the standard file descriptors are first redirected to */dev/null*, then stdout and/or stderr is redirected to a file or to syslog as specified by the other options.

-H, **--sighup**

> Close *output_file* and re-open it when signal SIGHUP is received, for interoperability with newsyslog(1) and similar log rotation / archival mechanisms. If **--output-file** is not specified, this flag is ignored.

-S, **--syslog**

> Enable syslog output. This is implicitly applied if other syslog parameters are provided. The default values are daemon, notice, and daemon for facility, priority, and tag, respectively.

-o, **--output-file** *output_file*

> Append output from the daemonized process to *output_file*. If the file does not exist, it is created with permissions 0600. When this option is used together with options **--change-dir** and **--sighup** the absolute path needs to be provided to ensure **daemon** can re-open the file after a SIGHUP.

-m, **--output-mask** *output_mask*

> Redirect output from the child process stdout (1), stderr (2), or both (3). This value specifies

what is sent to syslog and the log file. The default is 3.

-p, **--child-pidfile** *child_pidfile*
> Write the ID of the created process into the *child_pidfile* using the pidfile(3) functionality. The program is executed in a spawned child process while the **daemon** waits until it terminates to keep the *child_pidfile* locked and removes it after the process exits. The *child_pidfile* owner is the user who runs the **daemon** regardless of whether the **--user** option is used or not.

-P, **--supervisor-pidfile** *supervisor_pidfile*
> Write the ID of the **daemon** process into the *supervisor_pidfile* using the pidfile(3) functionality. The program is executed in a spawned child process while the **daemon** waits until it terminates to keep the *supervisor_pidfile* locked and removes it after the process exits. The *supervisor_pidfile* owner is the user who runs the **daemon** regardless of whether the **--user** option is used or not.

-r, **--restart**
> Supervise and restart the program after a one-second delay if it has been terminated.

-R, **--restart-delay** *restart_delay_seconds*
> Supervise and restart the program after the specified delay if it has been terminated.

-t, **--title** *title*
> Set the title for the daemon process. The default is the daemonized invocation.

-u, **--user** *user*
> Login name of the user to execute the program under. Requires adequate superuser privileges.

-s, **--syslog-priority** *syslog_priority*
> These priorities are accepted: emerg, alert, crit, err, warning, notice, info, and debug. The default is notice.

-l, **--syslog-facility** *syslog_facility*
> These facilities are accepted: auth, authpriv, console, cron, daemon, ftp, kern, lpr, mail, news, ntp, security, syslog, user, uucp, and local0, ..., local7. The default is daemon.

-T, **--syslog-tag** *syslog_tag*
> Set the tag which is appended to all syslog messages. The default is daemon.

If any of the options **--child-pidfile**, **--output-mask**, **--restart**, **--restart-delay**, **--supervisor-pidfile**, **--syslog**, **--syslog-facility --syslog-priority**, **--syslog-tag**, or **--output**, are specified, the program is executed in a spawned child process. The **daemon** waits until it terminates to keep the pid file(s) locked

and removes them after the process exits or restarts the program. In this case if the monitoring **daemon** receives software termination signal (SIGTERM) it forwards it to the spawned process. Normally it will cause the child to exit, remove the pidfile(s) and then terminate.

If neither file or syslog output are selected, all output is redirected to the **daemon** process and written to stdout. The **--close-fds** option may be used to suppress the stdout output completely.

The **--supervisor-pidfile** option is useful combined with the **--restart** option as *supervisor_pidfile* contains the ID of the supervisor not the child. This is especially important if you use **--restart** in an rc script as the **--child-pidfile** option will give you the child's ID to signal when you attempt to stop the service, causing **daemon** to restart the child.

EXIT STATUS

The **daemon** utility exits 1 if an error is returned by the daemon(3) library routine, 2 if *child_pidfile* or *supervisor_pidfile* is requested, but cannot be opened, 3 if process is already running (pidfile exists and is locked), 4 if *syslog_priority* is not accepted, 5 if *syslog_facility* is not accepted, 6 if *output_mask* is not within the accepted range, 7 if *output_file* cannot be opened for appending, and otherwise 0.

DIAGNOSTICS

If the command cannot be executed, an error message is printed to standard error. The exact behavior depends on the logging parameters and the **--close-fds** flag.

SEE ALSO

nohup(1), setregid(2), setreuid(2), daemon(3), exec(3), pidfile(3), termios(4), tty(4)

HISTORY

The **daemon** utility first appeared in FreeBSD 4.7.