Rocky Enterprise Linux 9.2 Manual Pages on command 'chronyd.8'

$ man chronyd.8

CHRONYD(8) System Administration CHRONYD(8)

NAME

chronyd - chrony daemon

SYNOPSIS

chronyd [OPTION]... [DIRECTIVE]...

DESCRIPTION

chronyd is a daemon for synchronisation of the system clock. It can synchronise the clock with NTP servers, reference clocks (e.g. a GPS receiver), and manual input using wristwatch and keyboard via chronyc. It can also operate as an NTPv4 (RFC 5905) server and peer to provide a time service to other computers in the network.

If no configuration directives are specified on the command line, chronyd will read them from a configuration file. The compiled-in default location of the file is /etc/chrony.conf.

Informational messages, warnings, and errors will be logged to syslog.

OPTIONS

-4

With this option hostnames will be resolved only to IPv4 addresses

and only IPv4 sockets will be created.

-6

With this option hostnames will be resolved only to IPv6 addresses and only IPv6 sockets will be created.

-f file

This option can be used to specify an alternate location for the configuration file. The compiled-in default value is /etc/chrony.conf.

-n

When run in this mode, the program will not detach itself from the terminal.

-d

When run in this mode, the program will not detach itself from the terminal, and all messages will be written to the terminal instead of syslog. If chronyd was compiled with enabled support for debugging, this option can be used twice to enable debug messages.

-l file

This option enables writing of log messages to a file instead of syslog or the terminal.

-L level

This option specifies the minimum severity level of messages to be written to the log file, syslog, or terminal. The following levels can be specified: 0 (informational), 1 (warning), 2 (non-fatal error), and 3 (fatal error). The default value is 0.

-p

When run in this mode, chronyd will print the configuration and exit. It will not detach from the terminal. This option can be used to verify the syntax of the configuration and get the whole configuration, even if it is split into multiple files and read by the include or confdir directive.

-q

When run in this mode, chronyd will set the system clock once and exit. It will not detach from the terminal.

-Q

This option is similar to the -q option, except it only prints the offset without making any corrections of the clock and it allows chronyd to be started without root privileges.

-r

This option will try to reload and then delete files containing sample histories for each of the servers and reference clocks being used. The files are expected to be in the directory specified by the dumpdir directive in the configuration file. This option is useful if you want to stop and restart chronyd briefly for any reason, e.g. to install a new version. However, it should be used only on systems where the kernel can maintain clock compensation whilst not under chronyd's control (i.e. Linux, FreeBSD, NetBSD, illumos, and macOS 10.13 or later).

-R

When this option is used, the initstepslew directive and the makestep directive used with a positive limit will be ignored. This option is useful when restarting chronyd and can be used in conjunction with the -r option.

-s

This option will set the system clock from the computer?s real-time clock (RTC) or to the last modification time of the file specified by the driftfile directive. Real-time clocks are supported only on Linux.

If used in conjunction with the -r flag, chronyd will attempt to preserve the old samples after setting the system clock from the RTC. This can be used to allow chronyd to perform long term averaging of the gain or loss rate across system reboots, and is useful for systems with intermittent access to network that are shut down when not in use. For this to work well, it relies on chronyd having been able to determine accurate statistics for the difference between the RTC and system clock last time the computer was on.

If the last modification time of the drift file is later than both the current time and the RTC time, the system time will be set to it to restore the time when chronyd was previously stopped. This is useful on computers that have no RTC or the RTC is broken (e.g. it has no battery).

-t timeout

This option sets a timeout (in seconds) after which chronyd will exit. If the clock is not synchronised, it will exit with a non-zero status. This is useful with the -q or -Q option to shorten the maximum time waiting for measurements, or with the -r option to limit the time when chronyd is running, but still allow it to adjust the frequency of the system clock.

-u user

This option sets the name of the system user to which chronyd will switch after start in order to drop root privileges. It overrides the user directive. The compiled-in default value is chrony.
On Linux, chronyd needs to be compiled with support for the libcap library. On macOS, FreeBSD, NetBSD, and illumos chronyd forks into two processes. The child process retains root privileges, but can only perform a very limited range of privileged system calls on behalf of the parent.

-U

This option disables a check for root privileges to allow chronyd to be started under a non-root user, assuming the process will have all capabilities (e.g. provided by the service manager) and access to all files, directories, and devices, needed to operate correctly in the specified configuration. Note that different capabilities might be needed with different configurations and different Linux kernel versions. Starting chronyd under a non-root user is not recommended when the configuration is not known, or at least limited to specific directives.

-F level

This option configures system call filters loaded by chronyd

processes if it was compiled with support for the Linux secure computing (seccomp) facility. Three levels are defined: 0, 1, 2. The filters are disabled at level 0. At levels 1 and 2, chronyd will be killed if it makes a system call which is blocked by the filters. The level can be specified as a negative number to trigger the SIGSYS signal instead of SIGKILL, which can be useful for debugging. The default value is 0.

At level 1, the filters allow only selected system calls that are normally expected to be made by chronyd. Other system calls are blocked. This level is recommended only if it is known to work on the version of the system where chrony is installed. The filters need to allow also system calls made by libraries that chronyd is using (e.g. libc), but different versions or implementations of the libraries might make different system calls. If the filters are missing a system call, chronyd could be killed even in normal operation.

At level 2, the filters block only a small number of specific system calls (e.g. fork and exec). This approach should avoid false positives, but the protection of the system against a compromised chronyd process is much more limited.

The filters cannot be enabled with the mailonchange directive.

-P priority

On Linux, FreeBSD, NetBSD, and illumos this option will select the SCHED_FIFO real-time scheduler at the specified priority (which must be between 0 and 100). On macOS, this option must have either a value of 0 to disable the thread time constraint policy or 1 for the policy to be enabled. Other systems do not support this option. The default value is 0.

-m

This option will lock chronyd into RAM so that it will never be paged out. This mode is only supported on Linux, FreeBSD, NetBSD, and illumos.

-x

This option disables the control of the system clock. chronyd will not try to make any adjustments of the clock. It will assume the clock is free running and still track its offset and frequency relative to the estimated true time. This option allows chronyd to be started without the capability to adjust or set the system clock (e.g. in some containers) to operate as an NTP server.

-v, --version

With this option chronyd will print version number to the terminal and exit.

-h, --help

With this option chronyd will print a help message to the terminal and exit.

FILES

/etc/chrony.conf

SEE ALSO

chronyc(1), chrony.conf(5)

BUGS

For instructions on how to report bugs, please visit https://chrony.tuxfamily.org/.

AUTHORS

chrony was written by Richard Curnow, Miroslav Lichvar, and others.