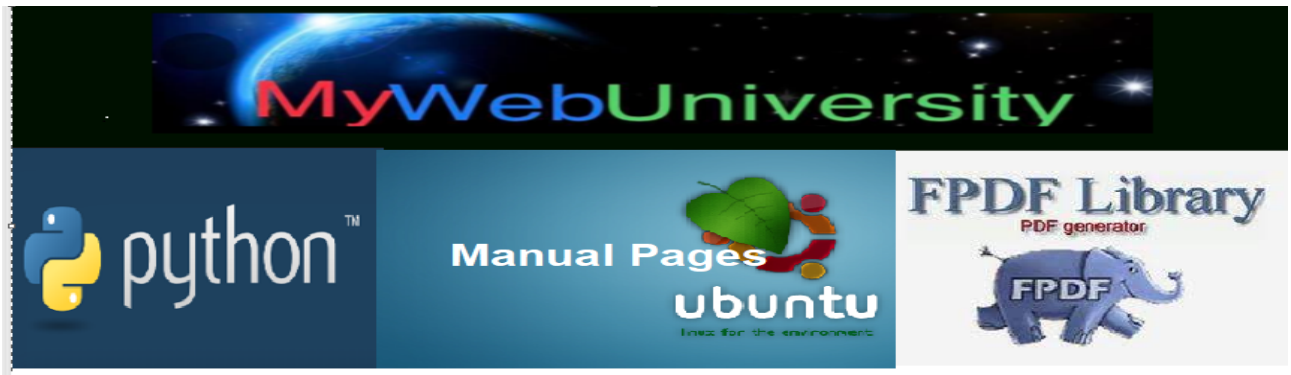

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Linux Ubuntu 26.04 Manual Pages on command 'timedatectl.1'

$ man timedatectl.1

TIMEDATECTL(1) timedatectl TIMEDATECTL(1)

NAME

timedatectl - Control the system time and date

SYNOPSIS

timedatectl [OPTIONS...] {COMMAND}

DESCRIPTION

timedatectl may be used to query and change the system clock and its settings, and enable or disable time synchronization services.

Use systemd-firstboot(1) to initialize the system time zone for mounted (but not booted) system images.

timedatectl may be used to show the current status of time synchronization services, for example systemd-timesyncd.service(8).

COMMANDS

The following commands are understood:

status

Show current settings of the system clock and RTC, including whether network time synchronization is active. If no command is specified, this is the implied default.

Added in version 195.

show

Show the same information as status, but in machine readable form. This command is intended to be used whenever computer-parsable output is required. Use status if you are looking for formatted human-readable output.

By default, empty properties are suppressed. Use --all to show those too. To select

specific properties to show, use --property=.

Added in version 239.

set-time [TIME]

Set the system clock to the specified timestamp. This will also update the RTC time accordingly. The timestamp may be specified in the format "2012-10-30 18:17:16". See systemd.time(7) for more details about acceptable timestamp format.

Added in version 195.

set-timezone [TIMEZONE]

Set the system time zone to the specified value. Available timezones can be listed with list-timezones. If the RTC is configured to be in the local time, this will also update the RTC time. This call will alter the /etc/localtime symlink. See localtime(5) for more information.

Added in version 195.

list-timezones

List available time zones, one per line. Entries from the list can be set as the system timezone with set-timezone.

Added in version 195.

set-local-rtc [BOOL]

Takes a boolean argument. If "0", the system is configured to maintain the RTC in universal time. If "1", it will maintain the RTC in local time instead. Note that maintaining the RTC in the local timezone is not fully supported and will create various problems with time zone changes and daylight saving adjustments. If at all possible, keep the RTC in UTC mode. Note that invoking this will also synchronize the RTC from the system clock, unless --adjust-system-clock is passed (see above). This command will change the 3rd line of /etc/adjtime, as documented in hwclock(8).

Added in version 195.

set-ntp [BOOL]

Takes a boolean argument. Controls whether network time synchronization is active and enabled (if available). If the argument is true, this enables and starts the first existing network synchronization service. If the argument is false, then this disables and stops the known network synchronization services. The way that the list of services is built is described in systemd-timedated.service(8).

Added in version 195.

systemd-timesyncd Commands

The following commands are specific to systemd-timesyncd.service(8).

timesync-status

Show current status of systemd-timesyncd.service(8). If --monitor is specified, then this will monitor the status updates.

Added in version 239.

show-timesync

Show the same information as timesync-status, but in machine readable form. This command is intended to be used whenever computer-parsable output is required. Use timesync-status if you are looking for formatted human-readable output.

By default, empty properties are suppressed. Use --all to show those too. To select specific properties to show, use --property=.

Added in version 239.

ntp-servers INTERFACE SERVER...

Set the interface specific NTP servers. This command can be used only when the interface is managed by systemd-networkd.

Added in version 243.

revert INTERFACE

Revert the interface specific NTP servers. This command can be used only when the interface is managed by systemd-networkd.

Added in version 243.

OPTIONS

The following options are understood:

--adjust-system-clock

If set-local-rtc is invoked and this option is passed, the system clock is synchronized from the RTC again, taking the new setting into account. Otherwise, the RTC is synchronized from the system clock.

Added in version 195.

--monitor

If timesync-status is invoked and this option is passed, then timedatectl monitors the status of systemd-timesyncd.service(8) and updates the outputs. Use Ctrl+C to terminate the monitoring.

Added in version 239.

-a, --all

When showing properties of systemd-timesyncd.service(8), show all properties regardless of whether they are set or not.

Added in version 239.

-p, --property=

When showing properties of systemd-timesyncd.service(8), limit display to certain properties as specified as argument. If not specified, all set properties are shown. The argument should be a property name, such as "ServerName". If specified more than once, all properties with the specified names are shown.

Added in version 239.

--value

When printing properties with show-timesync, only print the value, and skip the property name and "=".

Added in version 239.

-P

Equivalent to --value --property=, i.e. shows the value of the property without the property name or "=". Note that using -P once will also affect all properties listed with -p/--property=.

Added in version 256.

-H, --host=

Execute the operation remotely. Specify a hostname, or a username and hostname separated by "@", to connect to. The hostname may optionally be suffixed by a port ssh is listening on, separated by ":", and then a container name, separated by "/", which connects directly to a specific container on the specified host. This will use SSH to talk to the remote machine manager instance. Container names may be enumerated with machinectl -H HOST. Put IPv6 addresses in brackets.

-M, --machine=

Execute operation on a local container. Specify a container name to connect to, optionally prefixed by a user name to connect as and a separating "@" character. If the special string ".host" is used in place of the container name, a connection to the local system is made (which is useful to connect to a specific user's user bus: "--user --machine=lennart@.host"). If the "@" syntax is not used, the connection is made as root user. If the "@" syntax is used either the left hand side or the right hand side may be

omitted (but not both) in which case the local user name and ".host" are implied.

--no-ask-password

Do not query the user for authentication for privileged operations.

-h, --help

Print a short help text and exit.

--version

Print a short version string and exit.

--no-pager

Do not pipe output into a pager.

EXIT STATUS

On success, 0 is returned, a non-zero failure code otherwise.

ENVIRONMENT

$SYSTEMD_LOG_LEVEL

The maximum log level of emitted messages (messages with a higher log level, i.e. less important ones, will be suppressed). Takes a comma-separated list of values. A value may be either one of (in order of decreasing importance) emerg, alert, crit, err, warning, notice, info, debug, or an integer in the range 0...7. See syslog(3) for more information. Each value may optionally be prefixed with one of console, syslog, kmsg or journal followed by a colon to set the maximum log level for that specific log target (e.g. SYSTEMD_LOG_LEVEL=debug,console:info specifies to log at debug level except when logging to the console which should be at info level). Note that the global maximum log level takes priority over any per target maximum log levels.

$SYSTEMD_LOG_COLOR

A boolean. If true, messages written to the tty will be colored according to priority.

This setting is only useful when messages are written directly to the terminal, because journalctl(1) and other tools that display logs will color messages based on the log level on their own.

$SYSTEMD_LOG_TIME

A boolean. If true, console log messages will be prefixed with a timestamp.

This setting is only useful when messages are written directly to the terminal or a file, because journalctl(1) and other tools that display logs will attach timestamps based on the entry metadata on their own.

$SYSTEMD_LOG_LOCATION

A boolean. If true, messages will be prefixed with a filename and line number in the source code where the message originates.

Note that the log location is often attached as metadata to journal entries anyway. Including it directly in the message text can nevertheless be convenient when debugging programs.

$SYSTEMD_LOG_TID

A boolean. If true, messages will be prefixed with the current numerical thread ID (TID).

Note that the this information is attached as metadata to journal entries anyway. Including it directly in the message text can nevertheless be convenient when debugging programs.

$SYSTEMD_LOG_TARGET

The destination for log messages. One of console (log to the attached tty), console-prefixed (log to the attached tty but with prefixes encoding the log level and "facility", see syslog(3), kmsg (log to the kernel circular log buffer), journal (log to the journal), journal-or-kmsg (log to the journal if available, and to kmsg otherwise), auto (determine the appropriate log target automatically, the default), null (disable log output).

$SYSTEMD_LOG_RATELIMIT_KMSG

Whether to ratelimit kmsg or not. Takes a boolean. Defaults to "true". If disabled, systemd will not ratelimit messages written to kmsg.

$SYSTEMD_PAGER, $PAGER

Pager to use when --no-pager is not given. $SYSTEMD_PAGER is used if set; otherwise $PAGER is used. If neither $SYSTEMD_PAGER nor $PAGER are set, a set of well-known pager implementations is tried in turn, including less(1) and more(1), until one is found. If no pager implementation is discovered, no pager is invoked. Setting those environment variables to an empty string or the value "cat" is equivalent to passing --no-pager.

Note: if $SYSTEMD_PAGERSECURE is not set, $SYSTEMD_PAGER and $PAGER can only be used to disable the pager (with "cat" or ""), and are otherwise ignored.

$SYSTEMD_LESS

Override the options passed to less (by default "FRSXMK").

Users might want to change two options in particular:

K

This option instructs the pager to exit immediately when Ctrl+C is pressed. To allow less to handle Ctrl+C itself to switch back to the pager command prompt, unset this option.

If the value of $SYSTEMD_LESS does not include "K", and the pager that is invoked is less, Ctrl+C will be ignored by the executable, and needs to be handled by the pager.

X

This option instructs the pager to not send termcap initialization and deinitialization strings to the terminal. It is set by default to allow command output to remain visible in the terminal even after the pager exits. Nevertheless, this prevents some pager functionality from working, in particular paged output cannot be scrolled with the mouse.

Note that setting the regular $LESS environment variable has no effect for less invocations by systemd tools.

See less(1) for more discussion.

$SYSTEMD_LESSCHARSET

Override the charset passed to less (by default "utf-8", if the invoking terminal is determined to be UTF-8 compatible).

Note that setting the regular $LESSCHARSET environment variable has no effect for less invocations by systemd tools.

$SYSTEMD_PAGERSECURE

Common pager commands like less(1), in addition to "paging", i.e. scrolling through the output, support opening of or writing to other files and running arbitrary shell commands. When commands are invoked with elevated privileges, for example under sudo(8) or pkexec(1), the pager becomes a security boundary. Care must be taken that only programs with strictly limited functionality are used as pagers, and unintended interactive features like opening or creation of new files or starting of subprocesses are not allowed. "Secure mode" for the pager may be enabled as described below, if the pager supports that (most pagers are not written in a way that takes this into consideration). It is recommended to either explicitly enable "secure mode" or to completely disable the pager using --no-pager or PAGER=cat when allowing untrusted users to execute commands with elevated privileges.

This option takes a boolean argument. When set to true, the "secure mode" of the pager

is enabled. In "secure mode", LESSSECURE=1 will be set when invoking the pager, which instructs the pager to disable commands that open or create new files or start new subprocesses. Currently only less(1) is known to understand this variable and implement "secure mode".

When set to false, no limitation is placed on the pager. Setting SYSTEMD_PAGERSECURE=0 or not removing it from the inherited environment may allow the user to invoke arbitrary commands.

When $SYSTEMD_PAGERSECURE is not set, systemd tools attempt to automatically figure out if "secure mode" should be enabled and whether the pager supports it. "Secure mode" is enabled if the effective UID is not the same as the owner of the login session, see geteuid(2) and sd_pid_get_owner_uid(3), or when running under sudo(8) or similar tools ($SUDO_UID is set [1]). In those cases, SYSTEMD_PAGERSECURE=1 will be set and pagers which are not known to implement "secure mode" will not be used at all. Note that this autodetection only covers the most common mechanisms to elevate privileges and is intended as convenience. It is recommended to explicitly set $SYSTEMD_PAGERSECURE or disable the pager.

Note that if the $SYSTEMD_PAGER or $PAGER variables are to be honoured, other than to disable the pager, $SYSTEMD_PAGERSECURE must be set too.

$SYSTEMD_COLORS

Takes a boolean argument. When true, systemd and related utilities will use colors in their output, otherwise the output will be monochrome. Additionally, the variable can take one of the following special values: "16", "256" to restrict the use of colors to the base 16 or 256 ANSI colors, respectively. This can be specified to override the automatic decision based on $TERM and what the console is connected to.

$SYSTEMD_URLIFY

The value must be a boolean. Controls whether clickable links should be generated in the output for terminal emulators supporting this. This can be specified to override the decision that systemd makes based on $TERM and other conditions.

EXAMPLES

Show current settings:

```
$ timedatectl
                Local time: Thu 2017-09-21 16:08:56 CEST
            Universal time: Thu 2017-09-21 14:08:56 UTC
```

```
                RTC time: Thu 2017-09-21 14:08:56
               Time zone: Europe/Warsaw (CEST, +0200)
 System clock synchronized: yes
               NTP service: active
           RTC in local TZ: no
```

Enable network time synchronization:

```
 $ timedatectl set-ntp true
 ==== AUTHENTICATING FOR org.freedesktop.timedate1.set-ntp ===
 Authentication is required to control whether network time synchronization shall be enabled.
 Authenticating as: user
 Password: ********
 ==== AUTHENTICATION COMPLETE ===
 $ systemctl status systemd-timesyncd.service
 ? systemd-timesyncd.service - Network Time Synchronization
   Loaded: loaded (/usr/lib/systemd/system/systemd-timesyncd.service; enabled)
   Active: active (running) since Mo 2015-03-30 14:20:38 CEST; 5s ago
     Docs: man:systemd-timesyncd.service(8)
 Main PID: 595 (systemd-timesyn)
   Status: "Using Time Server 216.239.38.15:123 (time4.google.com)."
   CGroup: /system.slice/systemd-timesyncd.service
           ??595 /usr/lib/systemd/systemd-timesyncd
 ...
```

Show current status of systemd-timesyncd.service(8):

```
 $ timedatectl timesync-status
       Server: 216.239.38.15 (time4.google.com)
 Poll interval: 1min 4s (min: 32s; max 34min 8s)
         Leap: normal
      Version: 4
      Stratum: 1
    Reference: GPS
    Precision: 1us (-20)
 Root distance: 335us (max: 5s)
       Offset: +316us
```

Delay: 349us

Jitter: 0

Packet count: 1

Frequency: -8.802ppm

SEE ALSO

systemd(1), hwclock(8), date(1), localtime(5), systemctl(1), systemd-timedated.service(8), systemd-timesyncd.service(8), systemd-firstboot(1)

NOTES

1. It is recommended for other tools to set and check $SUDO_UID as appropriate, treating it is a common interface.