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What is systemctl ? - Linux Command

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Do you know Systemctl command ?

Sytemctl is a linux command to control the systemd system and service manager . In Fedora 16 linux "systemctl" command is used to Enable, Start, Restart, Reload, Stop and to check the status of system services like SSHD (Secure Shell) , HTTPD (Apache Web server), MySqld (MySql Database) etc.

How to use systemctl ?

NAME
systemctl - Control the systemd system and service manager

SYNOPSIS
systemctl [OPTIONS...] {COMMAND} [NAME...]

DESCRIPTION
systemctl may be used to introspect and control the state of the systemd(1) system and service manager.

OPTIONS
The following options are understood:

--help, -h
Prints a short help text and exits.

--version
Prints a short version string and exits.

--type=, -t
When listing units, limit display to certain unit types. If not specified units of all types will be shown. The argument should be a unit type name such as service, socket and similar.

--property=, -p
When showing unit/job/manager properties, 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 MainPID. If specified more than once all properties with the specified names are shown.

--all, -a
When listing units, show all units, regardless of their state, including inactive units. When showing unit/job/manager properties, show all properties regardless
whether they are set or not.

--failed
When listing units, show only failed units. Do not confuse with --fail.

--full
Do not ellipsize unit names and truncate unit descriptions in the output of list-units and list-jobs.

--fail
If the requested operation conflicts with a pending unfinished job, fail the

command. If this is not specified the requested operation will replace the pending
job, if necessary. Do not confuse with --failed.

--ignore-dependencies
When enqueuing a new job ignore all its dependencies and execute it immediately. If passed no required units of the unit passed will be pulled in, and no
ordering dependencies will be honoured. This is mostly a debugging and rescue tool for the administrator and should not be used by applications.

--quiet, -q
Suppress output to STDOUT in snapshot, is-active, enable and disable.

--no-block
Do not synchronously wait for the requested operation to finish. If this is not specified the job will be verified, enqueued and systemctl will wait until it is completed. By passing this argument it is only verified and enqueued.

--no-pager
Do not pipe output into a pager.

--system
Talk to the systemd system manager. (Default)

--user
Talk to the systemd manager of the calling user.

--order, --require
When used in conjunction with the dot command (see below), selects which dependencies are shown in the dependency graph. If --order is passed only dependencies
of type After= or Before= are shown. If --require is passed only dependencies of type Requires=, RequiresOverridable=, Requisite=, RequisiteOverridable=, Wants=
and Conflicts= are shown. If neither is passed, shows dependencies of all these types.

--no-wall
Don't send wall message before halt, power-off, reboot.

--global
When used with enable and disable, operate on the global user configuration directory, thus enabling or disabling a unit file globally for all future logins of all users.

--no-reload

When used with enable and disable, do not implicitly reload daemon configuration after executing the changes.

--no-ask-password
When used with start and related commands, disables asking for passwords. Background services may require input of a password or passphrase string, for example
to unlock system hard disks or cryptographic certificates. Unless this option is specified and the command is invoked from a terminal systemctl will query the
user on the terminal for the necessary secrets. Use this option to switch this behavior off. In this case the password must be supplied by some other means (for
example graphical password agents) or the service might fail.

--kill-who=
When used with kill, choose which processes to kill. Must be one of main, control or all to select whether to kill only the main process of the unit, the control
process or all processes of the unit. If omitted defaults to all.

--signal=, -s
When used with kill, choose which signal to send to selected processes. Must be one of the well known signal specifiers such as SIGTERM, SIGINT or SIGSTOP. If
omitted defaults to SIGTERM.

--force, -f
When used with enable, override any existing conflicting symlinks. When used with halt, poweroff, reboot or kexec execute selected operation without shutting
down all units. However, all processes will be killed forcibly and all file systems are unmounted or remounted read-only. This is hence a drastic but relatively
safe option to request an immediate reboot.

--root=
When used with enable/disable/is-enabled (and related commands), use alternative root path when looking for unit files.

--runtime
When used with enable/disable/is-enabled (and related commands), make changes only temporarily, so that they are dropped on the next reboot. This will have the
effect that changes are not made in subdirectories of /etc but in /run, with identical immediate effects, however, since the latter is lost on reboot, the changes are lost too.

-H, --host
Execute operation remotely. Specify a hostname, or username and hostname separated by @, to connect to. This will use SSH to talk to the remote systemd instance.

-P, --privileged
Acquire privileges via PolicyKit before executing the operation.

The following commands are understood:

list-units
List known units.

start [NAME...]
Start (activate) one or more units specified on the command line.

stop [NAME...]
Stop (deactivate) one or more units specified on the command line.

reload [NAME...]
Asks all units listed on the command line to reload their configuration. Note that this will reload the service-specific configuration, not the unit configuration file of systemd. If you want systemd to reload the configuration file of a unit use the daemon-reload command. In other words: for the example case
of Apache, this will reload Apache's httpd.conf in the web server, not the apache.service systemd unit file.

This command should not be confused with the daemon-reload or load commands.

restart [NAME...]
Restart one or more units specified on the command line. If the units are not running yet they will be started.

try-restart [NAME...]
Restart one or more units specified on the command line if the units are running. Do nothing if units are not running. Note that for compatibility with Red Hat
init scripts condrestart is equivalent to this command.

reload-or-restart [NAME...]
Reload one or more units if they support it. If not, restart them instead. If the units are not running yet they will be started.

reload-or-try-restart [NAME...]

Reload one or more units if they support it. If not, restart them instead. Do nothing if the units are not running. Note that for compatibility with SysV init scripts force-reload is equivalent to this command.

isolate [NAME]
Start the unit specified on the command line and its dependencies and stop all others.

This is similar to changing the runlevel in a traditional init system. The isolate command will immediately stop processes that are not enabled in the new unit,
possibly including the graphical environment or terminal you are currently using.

Note that this works only on units where AllowIsolate= is enabled. See systemd.unit(5) for details.

kill [NAME...]
Send a signal to one or more processes of the unit. Use --kill-who= to select which process to kill. Use --kill-mode= to select the kill mode and --signal= to select the signal to send.

is-active [NAME...]
Check whether any of the specified units are active (i.e. running). Returns an exit code 0 if at least one is active, non-zero otherwise. Unless --quiet is specified this will also print the current unit state to STDOUT.

status [NAME...|PID...]
Show terse runtime status information about one or more units. This function is intended to generate human-readable output. If you are looking for computer-parsable output, use show instead. If a PID is passed information about the unit the process of the PID belongs to is shown.

show [NAME...|JOB...]
Show properties of one or more units, jobs or the manager itself. If no argument is specified properties of the manager will be shown. If a unit name is
specified properties of the unit is shown, and if a job id is specified properties of the job is shown. By default, empty properties are suppressed. Use --all to show those too. To select specific properties to show use --property=. This command is intended to be used whenever computer-parsable output is required. Use
status if you are looking for formatted human-readable output.

reset-failed [NAME...]
Reset the 'failed' state of the specified units, or if no unit name is passed of all units. When a unit fails in some way (i.e. process exiting with non-zero

error code, terminating abnormally or timing out) it will automatically enter the 'failed' state and its exit code and status is recorded for introspection by the administrator until the service is restarted or reset with this command.

enable [NAME...]
Enable one or more unit files, as specified on the command line. This will create a number of symlinks as encoded in the [Install] sections of the unit files.
After the symlinks have been created the systemd configuration is reloaded (in a way that is equivalent to daemon-reload) to ensure the changes are taken into
account immediately. Note that this does not have the effect that any of the units enabled are also started at the same time. If this is desired a separate start
command must be invoked for the unit.

This command will print the actions executed. This output may be suppressed by passing --quiet.

Note that this operation creates only the suggested symlinks for the units. While this command is the recommended way to manipulate the unit configuration
directory, the administrator is free to make additional changes manually, by placing or removing symlinks in the directory. This is particularly useful to create
configurations that deviate from the suggested default installation. In this case the administrator must make sure to invoke daemon-reload manually as necessary,
to ensure his changes are taken into account.

Enabling units should not be confused with starting (activating) units, as done by the start command. Enabling and starting units is orthogonal: units may be
enabled without being started and started without being enabled. Enabling simply hooks the unit into various suggested places (for example, so that the unit is
automatically started on boot or when a particular kind of hardware is plugged in). Starting actually spawns the daemon process (in case of service units), or
binds the socket (in case of socket units), and so on.

Depending on whether --system, --user or --global is specified this enables the unit for the system, for the calling user only or for all future logins of all users. Note that in the latter case no systemd daemon configuration is reloaded.

disable [NAME...]

Disables one or more units. This removes all symlinks to the specified unit files from the unit configuration directory, and hence undoes the changes made by
enable. Note however that this removes all symlinks to the unit files (i.e. including manual additions), not just those actually created by enable. This call
implicitly reloads the systemd daemon configuration after completing the disabling of the units. Note that this command does not implicitly stop the units that
is being disabled. If this is desired an additional stopcommand should be executed afterwards.

This command will print the actions executed. This output may be suppressed by passing --quiet.

This command honors --system, --user, --global in a similar way as enable.

is-enabled [NAME...]
Checks whether any of the specified unit files is enabled (as with enable). Returns an exit code of 0 if at least one is enabled, non-zero otherwise. Prints the
current enable status. To suppress this output use --quiet.

reenable [NAME...]
Reenable one or more unit files, as specified on the command line. This is a combination of disable and enable and is useful to reset the symlinks a unit is enabled with to the defaults configured in the [Install] section of the unit file.

preset [NAME...]
Reset one or more unit files, as specified on the command line, to the defaults configured in a preset file. This has the same effect as disable or enable, depending how the unit is listed in the preset files.

mask [NAME...]
Mask one or more unit files, as specified on the command line. This will link these units to /dev/null, making it impossible to start them. This is a stronger version of disable, since it prohibits all kinds of activation of the unit, including manual activation. Use this option with care.

unmask [NAME...]
Unmask one or more unit files, as specified on the command line. This will undo the effect of mask.

link [NAME...]
Link a unit file that is not in the unit file search paths into the unit file search path. This requires an absolute path to a unit file. The effect of this can be undone with disable. The effect of this command is that a unit file is

available for start and other commands although it isn't installed directly in the unit
search path.

load [NAME...]
Load one or more units specified on the command line. This will simply load their configuration from disk, but not start them. To start them you need to use the
start command which will implicitly load a unit that has not been loaded yet. Note that systemd garbage collects loaded units that are not active or referenced
by an active unit. This means that units loaded this way will usually not stay loaded for long. Also note that this command cannot be used to reload unit configuration. Use the daemon-reload command for that. All in all, this command is of little use except for debugging.

This command should not be confused with the daemon-reload or reload commands.

list-jobs
List jobs that are in progress.

cancel [JOB...]
Cancel one or more jobs specified on the command line by their numeric job IDs. If no job id is specified, cancel all pending jobs.

dump
Dump server status. This will output a (usually very long) human readable manager status dump. Its format is subject to change without notice and should not be
parsed by applications.

dot
Generate textual dependency graph description in dot format for further processing with the GraphViz dot(1) tool. Use a command line like systemctl dot | dot
-Tsvg > systemd.svg to generate a graphical dependency tree. Unless --order or --require is passed the generated graph will show both ordering and requirement
dependencies.

snapshot [NAME]
Create a snapshot. If a snapshot name is specified, the new snapshot will be named after it. If none is specified an automatic snapshot name is generated. In
either case, the snapshot name used is printed to STDOUT, unless --quiet is specified.

A snapshot refers to a saved state of the systemd manager. It is implemented itself as a unit that is generated dynamically with this command and has dependencies on all units active at the time. At a later time the user may return to this state by using the isolate command on the snapshot unit.

Snapshots are only useful for saving and restoring which units are running or are stopped, they do not save/restore any other state. Snapshots are dynamic and
lost on reboot.

delete [NAME...]
Remove a snapshot previously created with snapshot.

daemon-reload
Reload systemd manager configuration. This will reload all unit files and recreate the entire dependency tree. While the daemon is reloaded, all sockets systemd
listens on on behalf of user configuration will stay accessible.

This command should not be confused with the load or reload commands.

daemon-reexec
Reexecute the systemd manager. This will serialize the manager state, reexecute the process and deserialize the state again. This command is of little use except
for debugging and package upgrades. Sometimes it might be helpful as a heavy-weight daemon-reload. While the daemon is reexecuted all sockets systemd listens on
on behalf of user configuration will stay accessible.

show-environment
Dump the systemd manager environment block. The environment block will be dumped in straight-forward form suitable for sourcing into a shell script. This
environment block will be passed to all processes the manager spawns.

set-environment [NAME=VALUE...]
Set one or more systemd manager environment variables, as specified on the command line.

unset-environment [NAME...]
Unset one or more systemd manager environment variables. If only a variable name is specified it will be removed regardless of its value. If a variable and a value are specified the variable is only removed if it has the specified value.

default

Enter default mode. This is mostly equivalent to start default.target.

rescue
Enter rescue mode. This is mostly equivalent to isolate rescue.target but also prints a wall message to all users.

emergency
Enter emergency mode. This is mostly equivalent to isolate emergency.target but also prints a wall message to all users.

halt
Shut down and halt the system. This is mostly equivalent to start halt.target but also prints a wall message to all users. If combined with --force shutdown of
all running services is skipped, however all processes are killed and all file systems are unmounted or mounted read-only, immediately followed by the system
halt.

poweroff
Shut down and power-off the system. This is mostly equivalent to start poweroff.target but also prints a wall message to all users. If combined with --force
shutdown of all running services is skipped, however all processes are killed and all file systems are unmounted or mounted read-only, immediately followed by
the powering off.

reboot
Shut down and reboot the system. This is mostly equivalent to start reboot.target but also prints a wall message to all users. If combined with --force shutdown
of all running services is skipped, however all processes are killed and all file systems are unmounted or mounted read-only, immediately followed by the reboot.

kexec
Shut down and reboot the system via kexec. This is mostly equivalent to start kexec.target but also prints a wall message to all users. If combined with --force
shutdown of all running services is skipped, however all processes are killed and all file systems are unmounted or mounted read-only, immediately followed by
the reboot.

exit
Ask the systemd manager to quit. This is only supported for user service

managers (i.e. in conjunction with the --user option) and will fail otherwise.

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

ENVIRONMENT
$SYSTEMD_PAGER
Pager to use when --no-pager is not given; overrides $PAGER. Setting this to an empty string or the value cat is equivalent to passing --no-pager.

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