

Systemd

Introduction

systemd is a software suite that provides an array of system components for Linux operating systems. Its main aim is to unify service configuration and behavior across Linux distributions; systemd's primary component is a "system and service manager"—an init system used to bootstrap user space and manage user processes.

Documentation

- [systemd.unit](#)
- [systemd.service](#)

Common Parameters

Unit

| Option | Description |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>Description</code> | A short description of the unit. |
| <code>Documentation</code> | A list of URIs referencing documentation. |
| <code>Before</code> , <code>After</code> | The order in which units are started. |
| <code>Requires</code> | If this unit gets activated, the units listed here will be activated as well. If one of the other units gets deactivated or fails, this unit will be deactivated. |
| <code>Wants</code> | Configures weaker dependencies than <code>Requires</code> . If any of the listed units does not start successfully, it has no impact on the unit activation. This is the recommended way to establish custom unit dependencies. |
| <code>Conflicts</code> | If a unit has a <code>Conflicts</code> setting on another unit, starting the former will stop the latter and vice versa. |

Get a complete list of parameters by running `man systemd.unit`

Install

| Option | Description |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alias | A space-separated list of additional names for the unit. Most <code>systemctl</code> commands, excluding <code>systemctl enable</code> , can use aliases instead of the actual unit name. |
| RequiredBy, WantedBy | The current service will be started when the listed services are started. See the description of <code>Wants</code> and <code>Requires</code> in the <code>[Unit]</code> section for details. |
| Also | Specifies a list of units to be enabled or disabled along with this unit when a user runs <code>systemctl enable</code> or <code>systemctl disable</code> . |

Get a complete list of parameters by running `man systemd.unit`

Service

| Option | Description |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type | <p>Configures the process start-up type. One of:</p> <ul style="list-style-type: none"><code>simple</code> (default) – starts the service immediately. It is expected that the main process of the service is defined in <code>ExecStart</code>.<code>forking</code> – considers the service started up once the process forks and the parent has exited.<code>oneshot</code> – similar to <code>simple</code>, but it is expected that the process has to exit before <code>systemd</code> starts follow-up units (useful for scripts that do a single job and then exit). You may want to set <code>RemainAfterExit=yes</code> as well so that <code>systemd</code> still considers the service as active after the process has exited.<code>dbus</code> – similar to <code>simple</code>, but considers the service started up when the main process gains a D-Bus name.<code>notify</code> – similar to <code>simple</code>, but considers the service started up only after it sends a special signal to <code>systemd</code>.<code>idle</code> – similar to <code>simple</code>, but the actual execution of the service binary is delayed until all jobs are finished. |

| Option | Description |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ExecStart | Commands with arguments to execute when the service is started. <code>Type=oneshot</code> enables specifying multiple custom commands that are then executed sequentially. <code>ExecStartPre</code> and <code>ExecStartPost</code> specify custom commands to be executed before and after <code>ExecStart</code> . |
| ExecStop | Commands to execute to stop the service started via <code>ExecStart</code> . |
| ExecReload | Commands to execute to trigger a configuration reload in the service. |
| Restart | With this option enabled, the service shall be restarted when the service process exits, is killed, or a timeout is reached with the exception of a normal stop by the <code>systemctl stop</code> command. |
| RemainAfterExit | If set to <code>True</code> , the service is considered active even when all its processes exited. Useful with <code>Type=oneshot</code> . Default value is <code>False</code> . |

Get a complete list of parameters by running `man systemd.service`

Example

```
[Unit]
Description=The NGINX HTTP and reverse proxy server
After=syslog.target network.target remote-fs.target nss-lookup.target

[Service]
Type=forking
PIDFile=/run/nginx.pid
ExecStartPre=/usr/sbin/nginx -t
ExecStart=/usr/sbin/nginx
ExecReload=/bin/kill -s HUP $MAINPID
ExecStop=/bin/kill -s QUIT $MAINPID
PrivateTmp=true

[Install]
WantedBy=multi-user.target
```

```
[Unit]
Description=The Apache HTTP Server
```

After=network.target remote-fs.target nss-lookup.target

[Service]

Type=notify

EnvironmentFile=/etc/sysconfig/httpd

ExecStart=/usr/sbin/httpd \$OPTIONS -DFOREGROUND

ExecReload=/usr/sbin/httpd \$OPTIONS -k graceful

ExecStop=/bin/kill -WINCH \${MAINPID}

KillSignal=SIGCONT

PrivateTmp=true

[Install]

WantedBy=multi-user.target

[Unit]

Description=Redis persistent key-value database

After=network.target

[Service]

ExecStart=/usr/bin/redis-server /etc/redis.conf --daemonize no

ExecStop=/usr/bin/redis-shutdown

User=redis

Group=redis

[Install]

WantedBy=multi-user.target

source: shellhacks.com

Revision #3

Created 1 March 2021 02:26:49 by dustin@swigg.net

Updated 8 November 2021 13:21:28 by dustin@swigg.net