

## Day 12

### Service management

#### Definition:

Service management to linux refers to the process of controlling and monitoring various services that run in the background provide specific functionality are futures to the system.

#### To Check Running of service

##### 1.usind to list of service command is Systemctl list -units - -type=service

```
[root@localhost ~]# systemctl list-units --type=service
```

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
accounts-daemon.service	loaded	active	running	Accounts Service
alsa-state.service	loaded	active	running	Manage Sound Card State (restore and store)
atd.service	loaded	active	running	Deferred execution scheduler
auditd.service	loaded	active	running	Security Auditing Service
avahi-daemon.service	loaded	active	running	Avahi mDNS/DNS-SD Stack
chronyd.service	loaded	active	running	NTP client/server
colord.service	loaded	active	running	Manage, Install and Generate Color Profiles
crond.service	loaded	active	running	Command Scheduler
cups.service	loaded	active	running	CUPS Scheduler
dbus-broker.service	loaded	active	running	D-Bus System Message Bus
dracut-shutdown.service	loaded	active	exited	Restore /run/initramfs on shutdown
firewalld.service	loaded	active	running	firewalld - dynamic firewall daemon
gdm.service	loaded	active	running	GNOME Display Manager
geoclue.service	loaded	active	running	Location Lookup Service
httpd.service	loaded	active	running	The Apache HTTP Server
irqbalance.service	loaded	active	running	irqbalance daemon
kdump.service	loaded	active	exited	Crash recovery kernel arming
kmod-static-nodes.service	loaded	active	exited	Create List of Static Device Nodes
libstoragemgmt.service	loaded	active	running	libstoragemgmt plug-in server daemon
lvm2-monitor.service	loaded	active	exited	Monitoring of LVM2 mirrors, snapshots etc. u
mcelog.service	loaded	active	running	Machine Check Exception Logging Daemon
ModemManager.service	loaded	active	running	Modem Manager
NetworkManager-wait-online.service	loaded	active	exited	Network Manager Wait Online
NetworkManager.service	loaded	active	running	Network Manager
nis-domainname.service	loaded	active	exited	Read and set NIS domainname from /etc/syscon
packagekit.service	loaded	active	running	PackageKit Daemon

##### 2.Using to install the command and packagename is yum install firewalld

```
[root@localhost ~]# yum install firewalld
Last metadata expiration check: 3:02:43 ago on Friday 17 May 2024 09:31:00 AM.
Dependencies resolved.
```

Package	Architecture	Version	Repository	Size
Installing:				
firewalld	noarch	1.3.4-1.el9	baseos	532 k
Upgrading:				
nftables	x86_64	1:1.0.9-1.el9	baseos	424 k
Installing dependencies:				
firewalld-filesystem	noarch	1.3.4-1.el9	baseos	9.3 k
ipset	x86_64	7.11-8.el9	baseos	43 k
ipset-libs	x86_64	7.11-8.el9	baseos	70 k
python3-firewall	noarch	1.3.4-1.el9	baseos	387 k
python3-nftables	x86_64	1:1.0.9-1.el9	baseos	23 k
Installing weak dependencies:				
libcap-ng-python3	x86_64	0.8.2-7.el9	appstream	30 k
Transaction Summary				
Install 7 Packages				
Upgrade 1 Package				
Total download size: 1.5 M				
Is this ok [y/N]: y				
Downloading Packages:				
(1/8): firewalld-filesystem-1.3.4-1.el9.noarch.rpm				
27 kB/s   9.3 kB 00:00				

```

(2/8): ipset-7.11-8.el9.x86_64.rpm                74 kB/s | 43 kB    00:00
(3/8): ipset-libs-7.11-8.el9.x86_64.rpm           163 kB/s | 70 kB   00:00
(4/8): python3-nftables-1.0.9-1.el9.x86_64.rpm     72 kB/s | 23 kB    00:00
(5/8): python3-firewall-1.3.4-1.el9.noarch.rpm      324 kB/s | 387 kB   00:01
(6/8): firewalld-1.3.4-1.el9.noarch.rpm            254 kB/s | 532 kB   00:02
(7/8): nftables-1.0.9-1.el9.x86_64.rpm            335 kB/s | 424 kB   00:01
(8/8): libcap-ng-python3-0.8.2-7.el9.x86_64.rpm     5.0 kB/s | 30 kB    00:06
-----
Total                                           170 kB/s | 1.5 MB   00:08
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Running scriptlet: firewalld-1.3.4-1.el9.noarch 1/1
  Preparing :                                     1/1
  Upgrading  : nftables-1:1.0.9-1.el9.x86_64      1/9
  Running scriptlet: nftables-1:1.0.9-1.el9.x86_64 1/9
  Installing : python3-nftables-1:1.0.9-1.el9.x86_64 2/9
  Installing : python3-firewall-1.3.4-1.el9.noarch 3/9
  Installing : libcap-ng-python3-0.8.2-7.el9.x86_64 4/9
  Installing : ipset-libs-7.11-8.el9.x86_64        5/9
  Installing : ipset-7.11-8.el9.x86_64             6/9
  Installing : firewalld-filesystem-1.3.4-1.el9.noarch 7/9
  Installing : firewalld-1.3.4-1.el9.noarch         8/9
  Running scriptlet: firewalld-1.3.4-1.el9.noarch 8/9
Created symlink /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service → /usr/lib/systemd/system/firewalld.service.
Created symlink /etc/systemd/system/multi-user.target.wants/firewalld.service → /usr/lib/systemd/system/firewalld.service.

  Running scriptlet: nftables-1:1.0.4-2.el9.x86_64 9/9
  Cleanup : nftables-1:1.0.4-2.el9.x86_64          9/9
  Running scriptlet: nftables-1:1.0.4-2.el9.x86_64 9/9
  Verifying : firewalld-1.3.4-1.el9.noarch          1/9
  Verifying : firewalld-filesystem-1.3.4-1.el9.noarch 2/9
  Verifying : ipset-7.11-8.el9.x86_64               3/9
  Verifying : ipset-libs-7.11-8.el9.x86_64          4/9
  Verifying : python3-firewall-1.3.4-1.el9.noarch    5/9
  Verifying : python3-nftables-1:1.0.9-1.el9.x86_64 6/9
  Verifying : libcap-ng-python3-0.8.2-7.el9.x86_64 7/9
  Verifying : nftables-1:1.0.9-1.el9.x86_64         8/9
  Verifying : nftables-1:1.0.4-2.el9.x86_64         9/9

Upgraded:
nftables-1:1.0.9-1.el9.x86_64
Installed:
firewalld-1.3.4-1.el9.noarch      firewalld-filesystem-1.3.4-1.el9.noarch
ipset-7.11-8.el9.x86_64          ipset-libs-7.11-8.el9.x86_64
libcap-ng-python3-0.8.2-7.el9.x86_64 python3-firewall-1.3.4-1.el9.noarch
python3-nftables-1:1.0.9-1.el9.x86_64

Complete!

```

**3.using to start the service command is `systemctl start firewalld.service` and status also viewed command is `systemctl status firewalld.service`**

```

[root@localhost ~]# systemctl start firewalld.service
[root@localhost ~]# systemctl status firewalld.service
● firewalld.service - firewalld - dynamic firewall daemon
   Loaded: loaded (/usr/lib/systemd/system/firewalld.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2024-05-17 12:53:51 IST; 49s ago
     Docs: man:firewalld(1)
   Main PID: 39972 (firewalld)
    Tasks: 2 (limit: 10457)
   Memory: 27.2M
      CPU: 551ms
   CGroup: /system.slice/firewalld.service
           └─39972 /usr/bin/python3 -s /usr/sbin/firewalld --nofork --nopid

May 17 12:53:51 localhost.localdomain systemd[1]: Starting firewalld - dynamic firewall daemon...
May 17 12:53:51 localhost.localdomain systemd[1]: Started firewalld - dynamic firewall daemon.

```

**4.using to stop the service command is `systemctl stop firewalld.service` and status also viewed command is `systemctl status firewalld.service`**

```
[root@localhost ~]# systemctl stop firewalld.service
[root@localhost ~]# systemctl status firewalld.service
○ firewalld.service - firewalld - dynamic firewall daemon
   Loaded: loaded (/usr/lib/systemd/system/firewalld.service; enabled; vendor preset: enabled)
   Active: inactive (dead) since Fri 2024-05-17 12:59:52 IST; 3s ago
     Duration: 6min 515ms
       Docs: man:firewalld(1)
    Process: 39972 ExecStart=/usr/sbin/firewalld --nofork --nopid $FIREWALLD_ARGS (code=exited, status=0/SUCCESS)
   Main PID: 39972 (code=exited, status=0/SUCCESS)
      CPU: 616ms

May 17 12:53:51 localhost.localdomain systemd[1]: Starting firewalld - dynamic firewall daemon...
May 17 12:53:51 localhost.localdomain systemd[1]: Started firewalld - dynamic firewall daemon.
May 17 12:59:52 localhost.localdomain systemd[1]: Stopping firewalld - dynamic firewall daemon...
May 17 12:59:52 localhost.localdomain systemd[1]: firewalld.service: Deactivated successfully.
May 17 12:59:52 localhost.localdomain systemd[1]: Stopped firewalld - dynamic firewall daemon.
```

**5.using to enable the service command is systemctl enable firewalld.service and status also viewed command is systemctl is-enabled firewalld.service**

```
[root@localhost ~]# systemctl enable firewalld.service
[root@localhost ~]# systemctl is-enabled firewalld.service
enabled
```

**6.using to disable the service command is systemctl disable firewalld.service and status also viewed command is systemctl is-enabled firewalld.service**

```
[root@localhost ~]# systemctl disable firewalld.service
Removed /etc/systemd/system/multi-user.target.wants/firewalld.service.
Removed /etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service.
[root@localhost ~]# systemctl is-enabled firewalld.service
disabled
```

**7.using to restart the service command is systemctl restart firewalld.service and status also viewed command is systemctl status firewalld.service**

```
[root@localhost ~]# systemctl restart firewalld.service
[root@localhost ~]# systemctl status firewalld.service
● firewalld.service - firewalld - dynamic firewall daemon
   Loaded: loaded (/usr/lib/systemd/system/firewalld.service; disabled; vendor preset: enabled)
   Active: active (running) since Fri 2024-05-17 13:17:30 IST; 6s ago
     Docs: man:firewalld(1)
    Main PID: 40253 (firewalld)
       Tasks: 2 (limit: 10457)
      Memory: 22.9M
         CPU: 937ms
    CGroup: /system.slice/firewalld.service
            └─40253 /usr/bin/python3 -s /usr/sbin/firewalld --nofork --nopid

May 17 13:17:30 localhost.localdomain systemd[1]: Starting firewalld - dynamic firewall daemon...
May 17 13:17:30 localhost.localdomain systemd[1]: Started firewalld - dynamic firewall daemon.
```

**8.using to reload the service command is systemctl reload firewalld.service and status also viewed command is systemctl status firewalld.service**



```
[root@localhost ~]# systemctl reload firewalld.service
[root@localhost ~]# systemctl status firewalld.service
● firewalld.service - firewalld - dynamic firewall daemon
   Loaded: loaded (/usr/lib/systemd/system/firewalld.service; disabled; vendor preset: enabled)
   Active: active (running) since Fri 2024-05-17 13:17:30 IST; 5min ago
     Docs: man:firewalld(1)
   Process: 40323 ExecReload=/bin/kill -HUP $MAINPID (code=exited, status=0/SUCCESS)
  Main PID: 40253 (firewalld)
    Tasks: 5 (limit: 10457)
   Memory: 25.8M
      CPU: 1.439s
   CGroup: /system.slice/firewalld.service
           └─40253 /usr/bin/python3 -s /usr/sbin/firewalld --nofork --nopid

May 17 13:17:30 localhost.localdomain systemd[1]: Starting firewalld - dynamic firewall daemon...
May 17 13:17:30 localhost.localdomain systemd[1]: Started firewalld - dynamic firewall daemon.
May 17 13:22:43 localhost.localdomain systemd[1]: Reloading firewalld - dynamic firewall daemon...
May 17 13:22:43 localhost.localdomain systemd[1]: Reloaded firewalld - dynamic firewall daemon.
```

## 9.using to remove the service command is yum remove firewalld

```
[root@localhost ~]# yum remove firewalld
Dependencies resolved.

=====
Package                                Architecture      Version           Repository        Size
=====
Removing:
firewalld                             noarch            1.3.4-1.el9       @baseos           2.0 M
Removing unused dependencies:
firewalld-filesystem                  noarch            1.3.4-1.el9       @baseos           239
ipset                                  x86_64            7.11-8.el9        @baseos           72 k
ipset-libs                            x86_64            7.11-8.el9        @baseos           227 k
libcap-ng-python3                     x86_64            0.8.2-7.el9       @appstream        66 k
python3-firewall                      noarch            1.3.4-1.el9       @baseos           2.0 M
python3-nftables                      x86_64            1:1.0.9-1.el9     @baseos           38 k
=====

Transaction Summary
=====
Remove 7 Packages

Freed space: 4.4 M
Is this ok [y/N]: y
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.

Running transaction
  Preparing                : 1/1
  Running scriptlet: firewalld-1.3.4-1.el9.noarch : 1/7
  Erasing            : firewalld-1.3.4-1.el9.noarch : 1/7
  Running scriptlet: firewalld-1.3.4-1.el9.noarch : 1/7
  Erasing            : python3-firewall-1.3.4-1.el9.noarch : 2/7
  Running scriptlet: ipset-7.11-8.el9.x86_64 : 3/7
  Erasing            : ipset-7.11-8.el9.x86_64 : 3/7
  Erasing            : python3-nftables-1:1.0.9-1.el9.x86_64 : 4/7
  Erasing            : firewalld-filesystem-1.3.4-1.el9.noarch : 5/7
  Erasing            : ipset-libs-7.11-8.el9.x86_64 : 6/7
  Erasing            : libcap-ng-python3-0.8.2-7.el9.x86_64 : 7/7
  Running scriptlet: libcap-ng-python3-0.8.2-7.el9.x86_64 : 7/7
  Verifying          : firewalld-1.3.4-1.el9.noarch : 1/7
  Verifying          : firewalld-filesystem-1.3.4-1.el9.noarch : 2/7
  Verifying          : ipset-7.11-8.el9.x86_64 : 3/7
  Verifying          : ipset-libs-7.11-8.el9.x86_64 : 4/7
  Verifying          : libcap-ng-python3-0.8.2-7.el9.x86_64 : 5/7
  Verifying          : python3-firewall-1.3.4-1.el9.noarch : 6/7
  Verifying          : python3-nftables-1:1.0.9-1.el9.x86_64 : 7/7

Removed:
  firewalld-1.3.4-1.el9.noarch
  ipset-7.11-8.el9.x86_64
  libcap-ng-python3-0.8.2-7.el9.x86_64
  python3-nftables-1:1.0.9-1.el9.x86_64
  firewalld-filesystem-1.3.4-1.el9.noarch
  ipset-libs-7.11-8.el9.x86_64
  python3-firewall-1.3.4-1.el9.noarch

Complete!
```

