

LAB Systemd

1. Convert a SystemV init script to systemd.

Login to your machine as centos-xx, sudo to root and list the contents of /etc/init.d

```
[centos@centos11 ~]$ sudo bash
[sudo] password for centos:
[root@centos11 centos]# cd /etc/init.d
```

Create an oldschool init script exactly like this.

Mind the **chkconfig** line. It is very important, as is the rest of course.

```
[root@centos11 init.d]# cat sleep
#!/bin/bash
#
# chkconfig: 2345 10 90
case $1 in
start) /usr/bin/sleep 10000& ;;
stop) /usr/bin/pkill sleep ;;
*) echo "usage: sleep {start/stop}" ;;
esac
```

Make the script executable, start it and check whether sleep runs.

```
[root@centos11 init.d]# chmod +x sleep
[root@centos11 init.d]#
[root@centos11 init.d]# ./sleep start
[root@centos11 init.d]# pgrep sleep
3186
```

Stop sleep.

```
[root@centos11 init.d]# ./sleep stop
Terminated
```

Run the following oldschool commands which will not only manage your sleep Script, but also generate a *systemd* service.

```
[root@centos11 init.d]# chkconfig sleep --add
[root@centos11 init.d]# chkconfig sleep on
[root@centos11 init.d]# service sleep start
[root@centos11 init.d]# pgrep sleep
3247
```

```
[root@centos11 init.d]# service sleep stop
/sbin/service: line 91: 3257 Terminated
```

The service file is created in the following directory.

```
[root@centos11 init.d]# ls /run/systemd/generator.late/sleep.service
/run/systemd/generator.late/sleep.service
```

Copy this file to the systemd service directory.

```
[root@centos11 init.d]# cp /run/systemd/generator.late/sleep.service \
/etc/systemd/system/
```

Now you can use `systemctl` to start the sleep service.

```
[root@centos11 init.d]# systemctl start sleep
[root@centos11 init.d]# pgrep sleep
3300
```

Query the sleep service status.

```
[root@centos11 init.d]# systemctl status sleep
● sleep.service - (null)
   Loaded: loaded (/etc/rc.d/init.d/sleep; bad; vendor preset:
disabled)
   Active: active (running) since Tue 2021-04-27 14:02:04 CEST; 1min
45s ago
     Docs: man:systemd-sysv-generator(8)
   Process: 3299 ExecStart=/etc/rc.d/init.d/sleep start (code=exited,
status=0/SUCCESS)
   CGroup: /system.slice/sleep.service
```

```
└─3300 /usr/bin/sleep 10000
```

Stop the sleep service and list its status.

```
[root@centos11 init.d]# systemctl stop sleep
```

```
[root@centos11 init.d]# systemctl status sleep
```

```
● sleep.service - (null)
   Loaded: loaded (/etc/rc.d/init.d/sleep; bad; vendor preset:
disabled)
   Active: inactive (dead) since Tue 2021-04-27 14:06:09 CEST; 19s
ago
```

2. Working with *systemctl*

List all targets.

```
[root@centos11 init.d]# systemctl list-units --type target
```

```
UNIT                                LOAD    ACTIVE SUB    DESCRIPTION
(snipped)
multi-user.target                  loaded active active Multi-User System
network-online.target             loaded active active Network is Online
network.target                    loaded active active Network
(snipped)
```

Get the default target.

```
[centos@centos11 ~]$ systemctl get-default
```

```
multi-user.target
```

Set the default target.

```
[root@centos11 centos]# systemctl set-default graphical.target
```

```
Removed symlink /etc/systemd/system/default.target.
```

To change to another target, you can use the isolate argument.

Prove to me that you do this lab by running the following :) :

```
[root@centos11 init.d]# systemctl isolate poweroff.target
```

I was just kidding, sorry!

3. Example Systemd Service.

Create this script in */home/centos* and make it executable.

```
[root@centos11 centos]# cat annoying
#!/usr/bin/bash

while :
do
wall "I am a pain in the butt!"
sleep 10
done
```

```
[root@centos11 centos]# chmod +x annoying
```

Change to */etc/systemd/system*

```
[root@centos11 centos]# cd /etc/systemd/system
```

Create the following service file.

```
[root@centos11 system]# cat annoying.service
[Unit]
Description=ANNOYING

[Service]
Type=simple
Restart=no
PIDFile=/tmp/annoying
ExecStart=/home/centos/annoying
ExecStop=/bin/kill -s QUIT $MAINPID

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

Enable the service.

```
[root@centos11 system]# systemctl enable annoying.service  
Created symlink from  
/etc/systemd/system/multi-user.target.wants/annoying.service to  
/etc/systemd/system/annoying.service.
```

Start the service

```
[root@centos11 system]# systemctl start annoying.service
```

And if you are tired of it...

```
systemctl stop annoying.service
```