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How to automatically execute shell script at startup boot on systemd Linux

9 June 2018 by Admin

The following config will discuss a basic example on how to execute shell script during a boot time on systemd Linux. There maybe various reason why you might want to execute shell script during Linux startup like for example to start a particular custom service, check disk space, create a backup etc.

The following example below will serve as a basic template to be later modified to suit your specific needs. In the example below we will check a disk space of a `/home/` directory during a boot time and write a report to `/root/` directory.

Systemd service unit

First, we need to create a systemd startup script eg. `disk-space-check.service` and place it into `/etc/systemd/system/` directory. You can find the example of suc systemd startup script below:

```
[Unit]
After=mysql.service

[Service]
ExecStart=/usr/local/bin/disk-space-check.sh

[Install]
WantedBy=default.target
```

- After: Instructs systemd on when the script should be run. In our case the script will run after mysql database has started. Other example could be `network.target` etc.
- ExecStart: This field provides a full path the actual script to be execute
- WantedBy: Into what boot target the systemd unit should be installed

The above is an absolute minimum that our systemd service unit should contain in order to execute our script at the boot time. For more information and options to be used see `systemd.service` manual page:

```
$ man systemd.service
```

Startup shell script

Next, we create our custom shell script to be executed during systemd startup. The location and script name is already defined by service unit as `/usr/local/bin/disk-space-check.sh` . The content of the script can be simple as:

```
#!/bin/bash

date > /root/disk_space_report.txt
du -sh /home/ >> /root/disk_space_report.txt
```

Configure and Install

Before we reboot our system we need to make our script executable:

```
# chmod 744 /usr/local/bin/disk-space-check.sh
```

Next, install systemd service unit and enable it so it will be executed at the boot time:

```
# chmod 664 /etc/systemd/system/disk-space-check.service
# systemctl daemon-reload
# systemctl enable disk-space-check.service
Created symlink from /etc/systemd/system/default.target.wants/disk-space
```

If you wish to test your script before you reboot run:

```
# systemctl start disk-space-check.service
# cat /root/disk_space_report.txt
Thursday 7 July  11:30:25 AEST 2016
1.5G    /home/
```

All ready. After rebooting your Linux system the above systemd unit will invoke shell script to be executed during the boot time.

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BrunoBronosky -> Guest

Linux works by having specific text in files in specific locations. There is no clicky
graphic interface. The file system is the Registry™. Lot's of projects have built GUI
interfaces to run on Linux. But Linux is not GUI.

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Corey Drew Bruce -> Guest

Yes there is, in Xubuntu for example you just go to session and startup to see your startup applications or add your own to enable or disable. Different desktop environments will have there own applications for this.

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Gaurav Mittal

Hi,

I have exactly did the above steps. and when I execute the start of the service I see in status that the script gets executed. But when I check the process, nothing is there. The only difference is i am executing the script as a different user.

```
[dmsadmin@DMS-Admin system]$ cat DMSStartup.service
[Unit]
Description = Starting the DMS Weblogic Server

[Service]
User=dmsadmin
Group=dmsgroup
ExecStart = /opt/dms/domains/DMSDomain/bin/dmsAutoSrv.sh

[Install]
WantedBy = multi-user.target
[dmsadmin@DMS-Admin system]$
```

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Mayur

Sir, am just a beginner in linux , can you please provide how to make systemctl service to start and also stop during reboot.
I have script in example/test which start and stop , /example/test/script start or stop , I want to execute this during reboot, please can u give all the details so just copy it from here, am stuck

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Jorge

Thank you very much for this post, really usefull!

AutoPublisher   Jul '18

Jameson Pugh

Should probably include Type=OneShot

[1 reply](#)

AutoPublisher   ▶ AutoPublisher   Jul '18

Gerard -> Jameson Pugh

I think oneshot has to be lower case (at least on Ubuntu 16)

AutoPublisher   Jul '18

Edward Crosby

For some reason I was not able to enable the service. I was testing within Fedora 24. I receive the following error:

```
# systemctl enable disk-space-check.service
Failed to enable unit: No such file or directory
```

UPDATE:
Never mind on this. I was able to complete the steps as root. It may be best in your article to mention that at the beginning.

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reader

Please delete my previous comment and use this but without this line as I made an error.
After doing some research, I figured out what the problem was. I was missing the "Type" parameter in the [Service] section. I now created two services and I successfully enabled them. I no longer get the error.

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reader

I followed your instructions but upon running "systemctl enable disk-space-

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