

# How to set up a firewall in Linux

You should set up a firewall to prevent others from accessing your computer and protecting you from network attacks. In today's article, you will learn how to set up firewalls in Linux and add rules to allow access to other devices on a local network or specific ports.

To keep your computer safe, you should set up a firewall to prevent others from accessing your computer and protecting you from network attacks. However, if you are a new Linux user, you may not know how to configure a firewall in your system.

In today's article, you will learn how to set up firewalls in Linux and add rules to allow access to other devices on the local network or specific ports.

## UFW = Uncomplicated Firewall

You will use UFW to manage the Linux firewall, because it is easy to use and is installed by default in many distributions.

In Ubuntu, ufw is disabled by default. You can check its status with the command:

```
sudo ufw status
```

If it doesn't work and you want to check if turning on ufw makes a difference, use the command:

```
sudo ufw enable
```

To turn off the firewall, use the command:

```
sudo ufw disable
```

## Check out the existing application rules

To view the list of applications for which the firewall has set rules, use the command:

```
sudo ufw app list
```

You can check which ports are open for those rules by:

```
sudo ufw app info APP_NAME
```

```
ducklord@ubuntu: ~  
ducklord@ubuntu:~$ sudo ufw app info CUPS  
Profile: CUPS  
Title: Common UNIX Printing System server  
Description: CUPS is a printing system with support for IPP, samba,  
lpd,  
and other protocols.  
Port:  
631  
ducklord@ubuntu:~$
```

You can check which ports are open for rules

**Note** : You should enter **APP\_NAME** exactly as it appears in the results of the previous command.

## Create new rule

If you want to enable a firewall but only allow access to the PC from other devices on the local network, enter:

```
sudo ufw allow from 192.168.178.0/24
```

Remember to change **192.168.178.0/24** in the example as your local network's IP range.

To grant access only to a specific port, such as port 80, if you are running a local Web server, use:

```
sudo ufw allow from 192.168.178.0/24 to any port 80
```

Of course, you can change port 80 to any other port you want.

To open a series of ports on your computer with a single command, you can enter:

```
sudo ufw allow STARTING_PORT:ENDING_PORT/PROTOCOL
```

For example, to open all ports from **50,000** to **52,000** for both TCP and UDP to use with the torrent client, use:

```
sudo ufw allow 50000:52000/tcp sudo ufw allow 50000:52000/udp
```

Similarly, if you have opened a series of ports, as done here for use with the popular Transmission torrent client and want to close them, change the **allow** to **deny** in the above command, as follows:

```
sudo ufw deny 51413:51500/udp sudo ufw deny 51413:51500/tcp
```

## Disable the rule and reset the firewall

After setting up a new rule, you can reuse the **status** command to see all the rules.

```
sudo ufw status
```

```
ducklord@ubuntu: ~
ducklord@ubuntu:~$ sudo ufw status
Status: active

To Action From
--
Anywhere ALLOW 192.168.178.5
80 ALLOW 192.168.178.0/24
51413:51500/tcp DENY Anywhere
51413:51500/udp DENY Anywhere
51413:51500/tcp (v6) DENY Anywhere (v6)
51413:51500/udp (v6) DENY Anywhere (v6)

ducklord@ubuntu:~$
```

Use the status command to see all the rules  
To be able to delete rules, you must first use this command:

```
sudo ufw status numbered
```

```
51413:51500/udp (v6) DENY Anywhere (v6)
ducklord@ubuntu:~$ sudo ufw status numbered
Status: active

To Action From
--
[ 1] Anywhere ALLOW IN 192.168.178.5
[ 2] 80 ALLOW IN 192.168.178.0/24
[ 3] 51413:51500/tcp DENY IN Anywhere
[ 4] 51413:51500/udp DENY IN Anywhere
[ 5] 51413:51500/tcp (v6) DENY IN Anywhere (v6)
[ 6] 51413:51500/udp (v6) DENY IN Anywhere (v6)

ducklord@ubuntu:~$
```

The list will now have a number next to each item  
The list will now have a number next to each item. To delete a rule, use:

```
sudo UFW delete RULE_NUMBER
```

For example:

```
sudo ufw delete 3
```

If you want to delete all your custom rules and revert the firewall to the original configuration, start by disabling it with the command:

```
sudo ufw disable
```

Then, reset the firewall configuration using:

```
sudo ufw reset
```

## GUPFW = Graphic interface for UFW

If you find the above part a bit complicated, you can use GUPFW to manage your firewall graphically.

1. Install GUW (<http://gufw.org/>) from Package Manager or Software Center of distro.

2. Launch it.



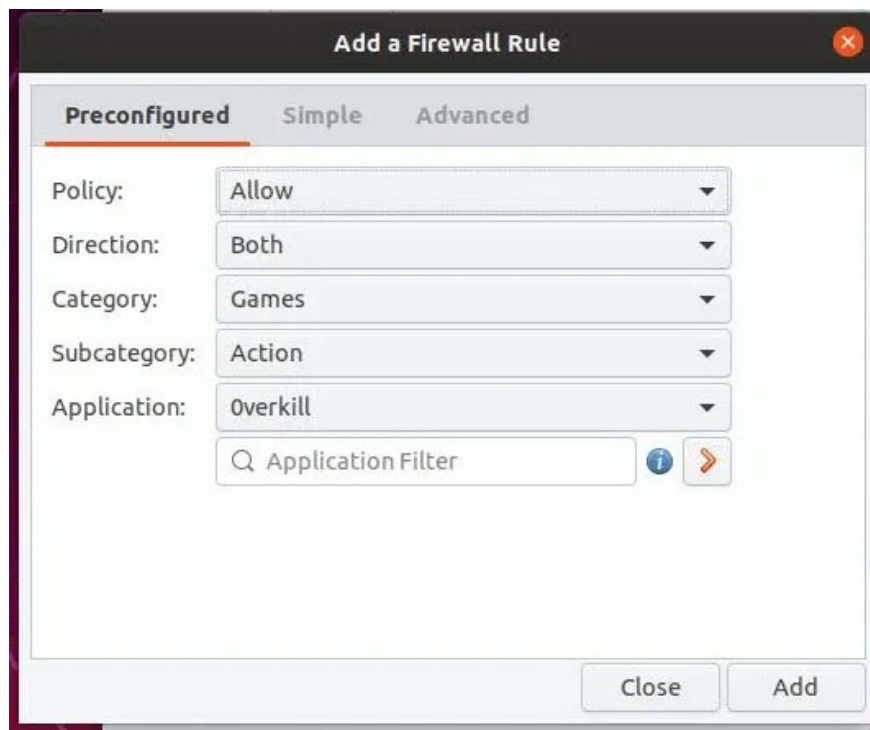
Launch GUW

3. To turn on the firewall, simply click the **Status** switch to activate. The default rule is to block all incoming connections and allow all outgoing connections.



Click the Status switch to activate

4. Click the **Rules** tab and press the + button at the bottom. Here, you can add rules to your firewall.



Click the Rules tab and press the + button to add rules

If you use a PC to access the Internet, you should turn on a firewall, create rules that allow you to use your computer safely, instead of disabling or removing it. If you're really worried, you can also install antivirus software for Linux, to make sure no malware can harm your computer and data.

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