How to Open and Close a Port in Ubuntu?

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The previous article explained how to open and close ports in RockyLinux/AlmaLinux/CentOS. This article will explain how to open and close a port in Ubuntu.

Problem

How to open and close a port in Ubuntu?

Solution

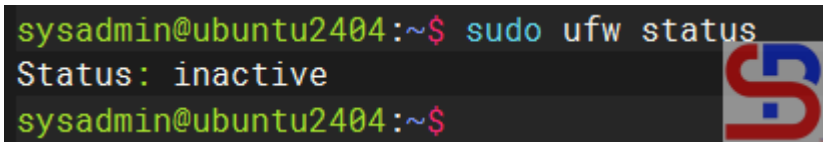
A. Check the firewall

By default, Ubuntu and Debian use the UFW or Uncomplicated Firewall application as the default firewall, and it is installed automatically when you install Ubuntu/Debian. If the firewall is not installed on your Ubuntu/Debian distro, use the command below:

```
sudo apt install ufw
```

To see whether ufw is running or not, use the command below:

```
sudo ufw status
```



Check status ufw

From the image above, you can see that the application is not yet active. To enable it, type the command below:

```
sudo ufw enable
```

```
sysadmin@ubuntu2404:~$ sudo ufw enable
Command may disrupt existing ssh connections. Proceed with operation (y|n)? y
Firewall is active and enabled on system startup
sysadmin@ubuntu2404:~$
sysadmin@ubuntu2404:~$ sudo ufw status
Status: active
sysadmin@ubuntu2404:~$
```

Enable ufw

If you want to see the complete current status of the firewall, use the command below:

```
sudo ufw status verbose
```

```
sysadmin@ubuntu2404:~$ sudo ufw status verbose
Status: active
Logging: on (low)
Default: deny (incoming), allow (outgoing), deny (routed)
New profiles: skip
sysadmin@ubuntu2404:~$
```

Display the complete current status of the firewall

By default, the firewall only opens the OpenSSH service, which you can view by using the command below:

```
sudo ufw app list
```

```
sysadmin@ubuntu2404:~$ sudo ufw app list
Available applications:
  OpenSSH
sysadmin@ubuntu2404:~$
```

Display the service that is open in the firewall

B. Open the port

To open a port, for example, port 43210, use the command below:

```
sudo ufw allow 43210
```

```
sysadmin@ubuntu2404:~$ sudo ufw allow 43210
Rule added
Rule added (v6)
sysadmin@ubuntu2404:~$
sysadmin@ubuntu2404:~$ sudo ufw status verbose
Status: active
Logging: on (low)
Default: deny (incoming), allow (outgoing), disabled (routed)
New profiles: skip

To                         Action      From
--                         ------      ----
43210                      ALLOW IN    Anywhere
43210 (v6)                 ALLOW IN    Anywhere (v6)

sysadmin@ubuntu2404:~$
```

Open the port

WARNING

If you open the port using the command above, it means you will open the port for both TCP and UDP.

To open a port range, for example, from port numbers 45000 to 45010 with the TCP protocol, use the command below:

```
sudo ufw allow 45000:45010/tcp
```

```
sysadmin@ubuntu2404:~$ sudo ufw allow 45000:45010/tcp
Rule added
Rule added (v6)
sysadmin@ubuntu2404:~$
sysadmin@ubuntu2404:~$ sudo ufw status
Status: active

To                         Action      From
--                         ------      ----
43210                      ALLOW       Anywhere
25/tcp                     ALLOW       Anywhere
22                         ALLOW       192.168.56.1
45000:45010/tcp            ALLOW       Anywhere
43210 (v6)                 ALLOW       Anywhere (v6)
25/tcp (v6)                ALLOW       Anywhere (v6)
45000:45010/tcp (v6)       ALLOW       Anywhere (v6)

sysadmin@ubuntu2404:~$
```

Open the range ports

C. Open the service

You can see from the image above that port 43210 has been opened on your Ubuntu server. You can also use the service name when opening a port. For example, if you want to open the SMTP service on your Ubuntu server, then use the command below:

```
sudo ufw allow smtp
```

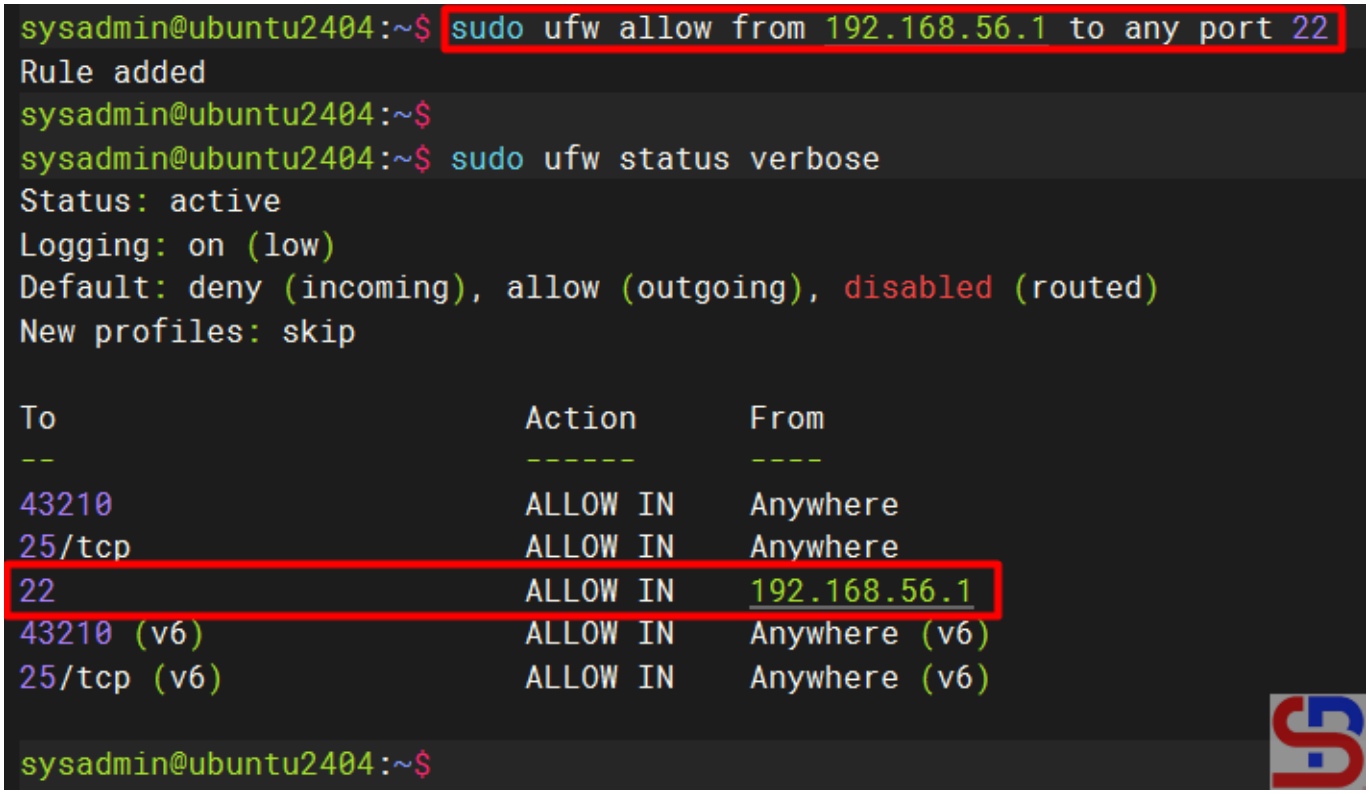
```
sysadmin@ubuntu2404:~$ sudo ufw allow smtp
Rule added
Rule added (v6)
sysadmin@ubuntu2404:~$
sysadmin@ubuntu2404:~$ sudo ufw status
Status: active

To                         Action      From
--                         ------      ----
43210                      ALLOW       Anywhere
25/tcp                     ALLOW       Anywhere
43210 (v6)                 ALLOW       Anywhere (v6)
25/tcp (v6)                ALLOW       Anywhere (v6)

sysadmin@ubuntu2404:~$
```

Open the SMTP service

D. Open the port from a certain IP

If you want to open a port from a certain IP, for example, you only allow IP 192.168.56.1 to access port 22 on this server, then use the command below:

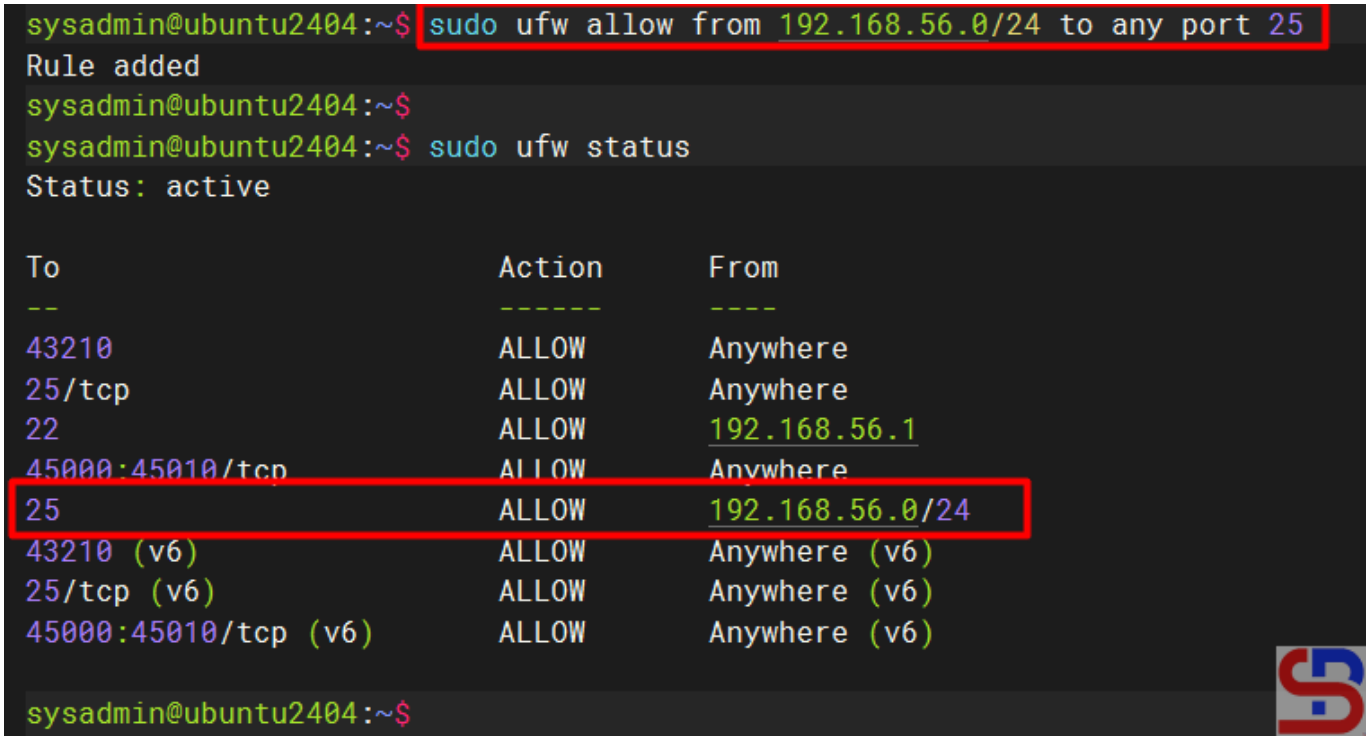
```
sudo ufw allow from 192.168.56.1 to any port 22
```



Allow the IP to a certain port

To allow the 192.168.56.0 subnet to the SMTP service, use the command below:

```
sudo ufw allow from 192.168.56.0/24 to any port 25
```

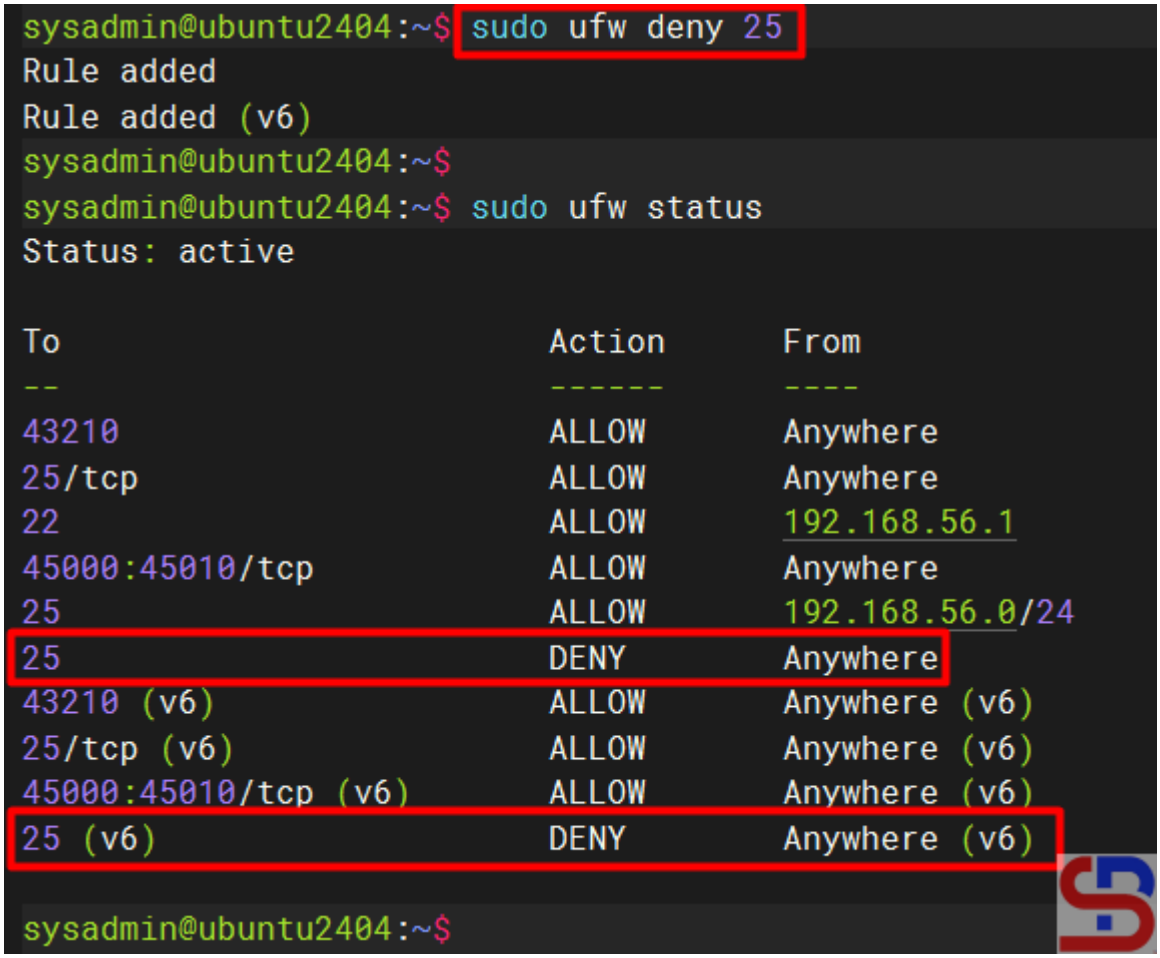


Allow the subnet to a certain port

E. Close the port

To close port 25, use the command below:

```
sudo ufw deny 25
```



Close the port

F. Delete the port

You can also close a port and delete the port that has been opened, for example, port 43210, using the syntax below:

```
sudo ufw delete number
```

```
sysadmin@ubuntu2404:~$ sudo ufw status numbered
Status: active

     To                         Action      From
     --                         ------      ----
[ 1] 43210                      ALLOW IN    Anywhere
[ 2] 25/tcp                     ALLOW IN    Anywhere
[ 3] 22                         ALLOW IN    192.168.56.1
[ 4] 45000:45010/tcp            ALLOW IN    Anywhere
[ 5] 25                         ALLOW IN    192.168.56.0/24
[ 6] 25                         DENY IN     Anywhere
[ 7] 43210 (v6)                 ALLOW IN    Anywhere (v6)
[ 8] 25/tcp (v6)                ALLOW IN    Anywhere (v6)
[ 9] 45000:45010/tcp (v6)       ALLOW IN    Anywhere (v6)
[10] 25 (v6)                    DENY IN     Anywhere (v6)

sysadmin@ubuntu2404:~$ sudo ufw delete 1
Deleting:
 allow 43210
Proceed with operation (y|n)? y
Rule deleted
sysadmin@ubuntu2404:~$
```

Close and delete the port

WARNING

You don’t need to run **sudo ufw reload** after each rule change using ufw commands (such as ufw allow or ufw deny). However, you will need to run **sudo ufw reload** if you are editing the ufw configuration file manually (such as /etc/ufw/before.rules or /etc/ufw/after.rules), or if you want to make sure all the latest rules and settings are loaded.

Note

You can remove all the rules in ufw by using the command below:

sudo ufw reset

After that, enable the ufw by using the command below:

sudo ufw enable

```
sysadmin@Ubuntu2404:~$ sudo ufw reset
Resetting all rules to installed defaults. This may disrupt existing ssh
connections. Proceed with operation (y|n)? y
Backing up 'user.rules' to '/etc/ufw/user.rules.20250515_081802'
Backing up 'before.rules' to '/etc/ufw/before.rules.20250515_081802'
Backing up 'after.rules' to '/etc/ufw/after.rules.20250515_081802'
Backing up 'user6.rules' to '/etc/ufw/user6.rules.20250515_081802'
Backing up 'before6.rules' to '/etc/ufw/before6.rules.20250515_081802'
Backing up 'after6.rules' to '/etc/ufw/after6.rules.20250515_081802'

sysadmin@Ubuntu2404:~$ sudo ufw status
Status: inactive
sysadmin@Ubuntu2404:~$ sudo ufw enable
Command may disrupt existing ssh connections. Proceed with operation (y|n)? y
Firewall is active and enabled on system startup
sysadmin@Ubuntu2404:~$
```

Reset ufw

By default, if you open a port, it will automatically open in IPv4 and IPv6, and likewise, if you close the port. To see the UFW settings, open the **/etc/default/ufw** file.

```
sysadmin@ubuntu2404:~$ cat /etc/default/ufw
# /etc/default/ufw
#

# Set to yes to apply rules to support IPv6 (no means only IPv6 on loopback
# accepted). You will need to 'disable' and then 'enable' the firewall for
# the changes to take affect.
IPV6=yes

# Set the default input policy to ACCEPT, DROP, or REJECT. Please note that if
# you change this you will most likely want to adjust your rules.
DEFAULT_INPUT_POLICY="DROP"

# Set the default output policy to ACCEPT, DROP, or REJECT. Please note that if
# you change this you will most likely want to adjust your rules.
DEFAULT_OUTPUT_POLICY="ACCEPT"

# Set the default forward policy to ACCEPT, DROP or REJECT.  Please note that
# if you change this you will most likely want to adjust your rules
DEFAULT_FORWARD_POLICY="DROP"

# Set the default application policy to ACCEPT, DROP, REJECT or SKIP. Please
# note that setting this to ACCEPT may be a security risk. See 'man ufw' for
# details
DEFAULT_APPLICATION_POLICY="SKIP"
```

Configuration of ufw

References

cyberciti.biz
phoenixnap.com
digitalocean.com
help.ubuntu.com
askubuntu.com