

Firewall Configuration (ufw):

Objective:

- Configure and test basic firewall rules to allow or block traffic.

Environment & Prerequisites:

- Ubuntu/Debian-based Linux with sudo access
- UFW preinstalled in Ubuntu

Commands:

- Check UFW status:
→ `Sudo ufw status verbose`
- Enable UFW:
→ `Sudo ufw enable`
- Block Telnet:
→ `Sudo ufw deny 23/tcp`
- Test the block:
→ `Telnet localhost 23` #Expected unable to connect or connection refused
- Allow SSH port:
→ `Sudo ufw allow 22/tcp`
- Remove the test rule:
→ By number: `sudo ufw delete 1`
→ By specification : `sudo ufw delete deny 23/tcp`
- Disable UFW to restore original state:
→ `Sudo ufw disable`

```
whitedragon@whitedragon-VirtualBox:~$ sudo ufw delete 1
Deleting:
  deny 23/tcp
Proceed with operation (y|n)? y
Rule deleted
whitedragon@whitedragon-VirtualBox:~$ sudo ufw disable
[sudo] password for whitedragon:
Sorry, try again.
[sudo] password for whitedragon:
Firewall stopped and disabled on system startup
whitedragon@whitedragon-VirtualBox:~$
```

```

whitedragon@whitedragon-VirtualBox:~$ sudo ufw status verbose
[sudo] password for whitedragon:
Status: inactive
whitedragon@whitedragon-VirtualBox:~$ sudo ufw active
ERROR: Invalid syntax

Usage: ufw COMMAND

Commands:
enable                enables the firewall
disable              disables the firewall
default ARG          set default policy
logging LEVEL        set logging to LEVEL
allow ARGS           add allow rule
deny ARGS            add deny rule
reject ARGS          add reject rule
limit ARGS           add limit rule
delete RULE|NUM      delete RULE
insert NUM RULE      insert RULE at NUM
prepend RULE         prepend RULE
route RULE           add route RULE
route delete RULE|NUM delete route RULE
route insert NUM RULE insert route RULE at NUM
reload              reload firewall

reset                reset firewall
status              show firewall status
status numbered     show firewall status as numbered list of RULES
status verbose      show verbose firewall status
show ARG            show firewall report
version             display version information

Application profile commands:
app list            list application profiles
app info PROFILE    show information on PROFILE
app update PROFILE  update PROFILE
app default ARG     set default application policy

whitedragon@whitedragon-VirtualBox:~$ sudo ufw enable
Firewall is active and enabled on system startup
whitedragon@whitedragon-VirtualBox:~$ sudo ufw status numbered
Status: active
whitedragon@whitedragon-VirtualBox:~$ sudo ufw deny 23/tcp
Rule added
Rule added (v6)
whitedragon@whitedragon-VirtualBox:~$ sudo ufw status numbered
Status: active

```

```
whitedragon@whitedragon-VirtualBox:~$ sudo ufw status numbered
Status: active
```

	To	Action	From
	--	-----	----
[1]	23/tcp	DENY IN	Anywhere
[2]	23/tcp (v6)	DENY IN	Anywhere (v6)

```
whitedragon@whitedragon-VirtualBox:~$ telnet localhost 23
Trying 127.0.0.1:
telnet: Unable to connect to remote host: Connection refused
```

```
whitedragon@whitedragon-VirtualBox:~$ sudo ufw allow 22/tcp
Rule added
Rule added (v6)
```

```
whitedragon@whitedragon-VirtualBox:~$ sudo ufw status numbered
Status: active
```

	To	Action	From
	--	-----	----
[1]	23/tcp	DENY IN	Anywhere
[2]	22/tcp	ALLOW IN	Anywhere
[3]	23/tcp (v6)	DENY IN	Anywhere (v6)
[4]	22/tcp (v6)	ALLOW IN	Anywhere (v6)

```
whitedragon@whitedragon-VirtualBox:~$ sudo ufw status numbered
Status: active
```

	To	Action	From
	--	-----	----
[1]	23/tcp	DENY IN	Anywhere
[2]	22/tcp	ALLOW IN	Anywhere
[3]	23/tcp (v6)	DENY IN	Anywhere (v6)
[4]	22/tcp (v6)	ALLOW IN	Anywhere (v6)

```
whitedragon@whitedragon-VirtualBox:~$ sudo ufw delete 3
```

```
Deleting:
deny 23/tcp
Proceed with operation (y|n)? y
Rule deleted (v6)
```

```
whitedragon@whitedragon-VirtualBox:~$ sudo ufw status numbered
Status: active
```

	To	Action	From
	--	-----	----
[1]	23/tcp	DENY IN	Anywhere
[2]	22/tcp	ALLOW IN	Anywhere
[3]	22/tcp (v6)	ALLOW IN	Anywhere (v6)