

# Firewall configuration using iptables or firewalld

Topics : [Centos Server](#)

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Configuring a firewall is crucial for securing your CentOS system by controlling incoming and outgoing network traffic. There are two main firewall management tools available in CentOS: iptables and firewalld. Here's an overview of how to configure a firewall using both tools:

## 1. iptables:

### Installation:

- Ensure that iptables is installed on your CentOS system. If not, you can install it using the following command:

```
sudo yum install iptables
```

### Basic Configuration:

- List the current firewall rules:

```
sudo iptables -L
```

- By default, the iptables ruleset is empty.

### Adding Rules:

- Add rules to allow or deny traffic based on specific criteria (e.g., IP addresses, ports, protocols).
- For example, to allow incoming traffic on port 22 (SSH), use the following command:

```
sudo iptables -A INPUT -p tcp --dport 22 -j ACCEPT
```

- Similarly, you can add rules to allow or deny traffic for other services and ports.

### Saving Rules:

- To save the iptables rules so they persist across reboots, use the following command:

```
sudo service iptables save
```

## 2. firewalld:

## Installation:

- firewalld is installed by default on CentOS systems. If not, you can install it using the following command:

```
sudo yum install firewalld
```

## Basic Configuration:

- Enable and start the firewalld service:

```
sudo systemctl enable firewalld  
sudo systemctl start firewalld
```

- Check the status of the firewalld service:

```
sudo systemctl status firewalld
```

## Adding Rules:

- Use the firewall-cmd command to add rules to the firewall.
- For example, to allow incoming traffic on port 80 (HTTP), use the following command:

```
sudo firewall-cmd --zone=public --add-port=80/tcp --permanent
```

- Similarly, you can add rules to allow or deny traffic for other services and ports.

## Reloading Rules:

- After adding or modifying rules, reload the firewall to apply the changes:

```
sudo firewall-cmd --reload
```

## Managing Zones:

- firewalld uses zones to group network interfaces and apply firewall rules to them.
- Use the firewall-cmd command to manage zones, such as adding or removing interfaces from zones.

## Using GUI Tools:

- CentOS also provides GUI tools like firewall-config and firewall-applet for managing firewalld settings.