

Overview of Linux GUI, Basic Setup & Commands

Linux GUI:



CentOS Stream 9 with GNOME Desktop – Overview

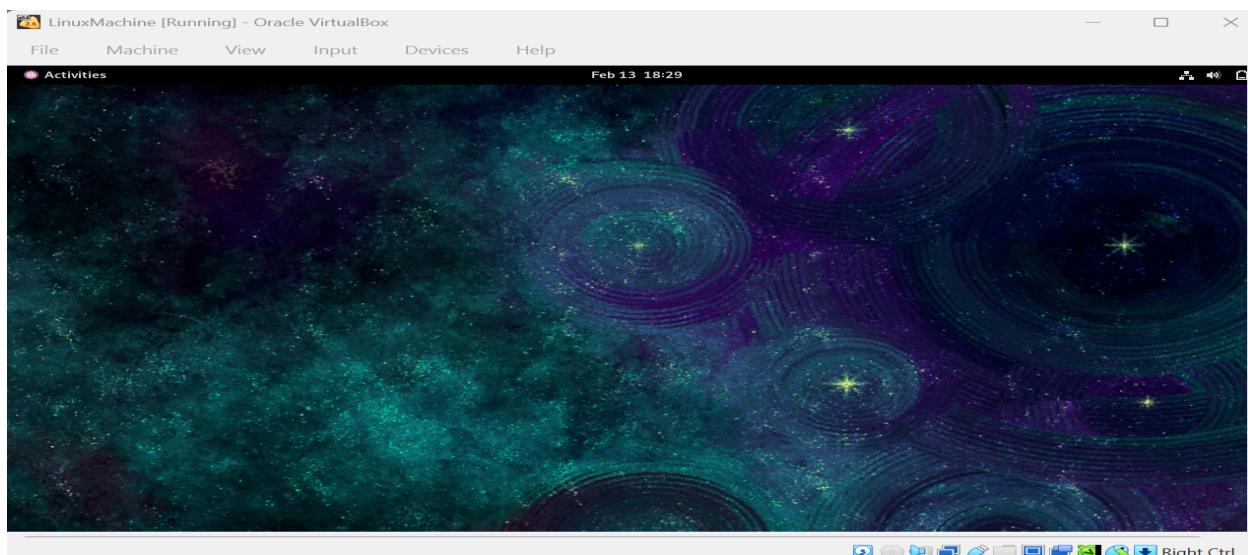
CentOS Stream 9 is a modern Linux distribution that serves as a continuously updated development platform closely aligned with **RHEL 9**. It can be used both as a server or as a **desktop system** with a graphical user interface.

When installed with the **Workstation (GNOME)** desktop, you get a **user-friendly graphical environment** based on the **GNOME Shell** interface (GNOME 40 series). This provides a visually intuitive desktop with activities overview, dock, system menus, and graphical applications.

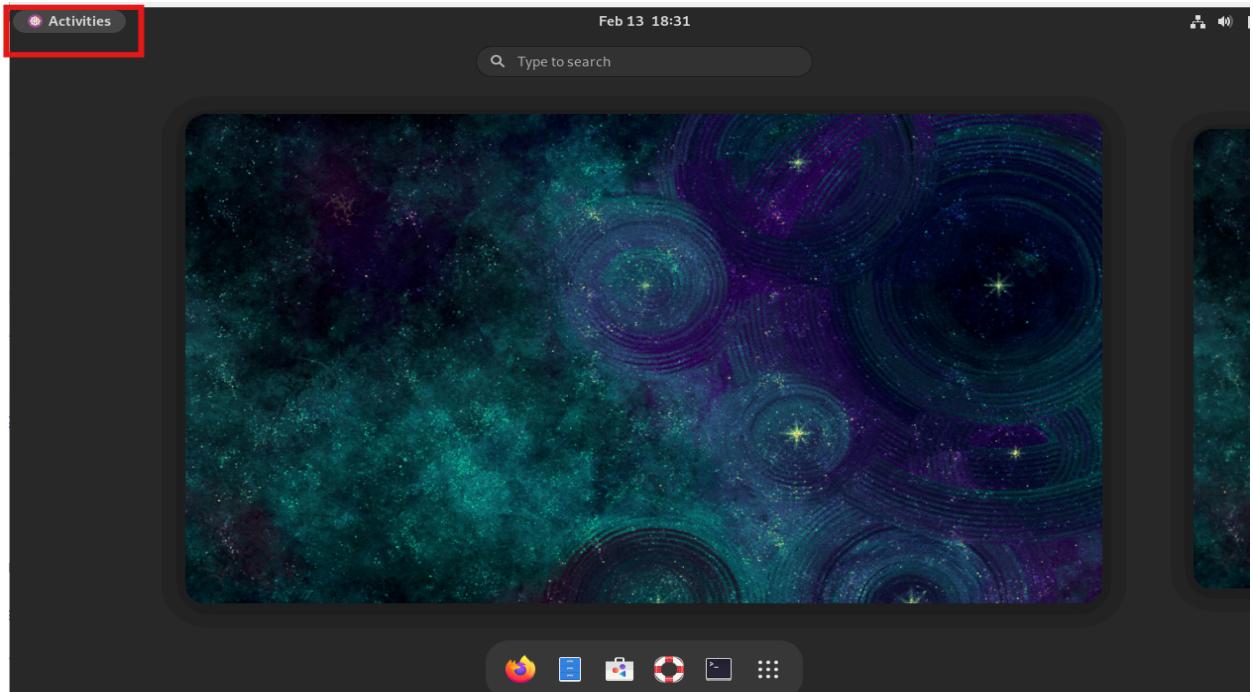
This shows the **GNOME desktop interface** with the activities overview and application icons displayed.

The visuals demonstrate windows, icons, and menu access typical for a user-friendly desktop experience.

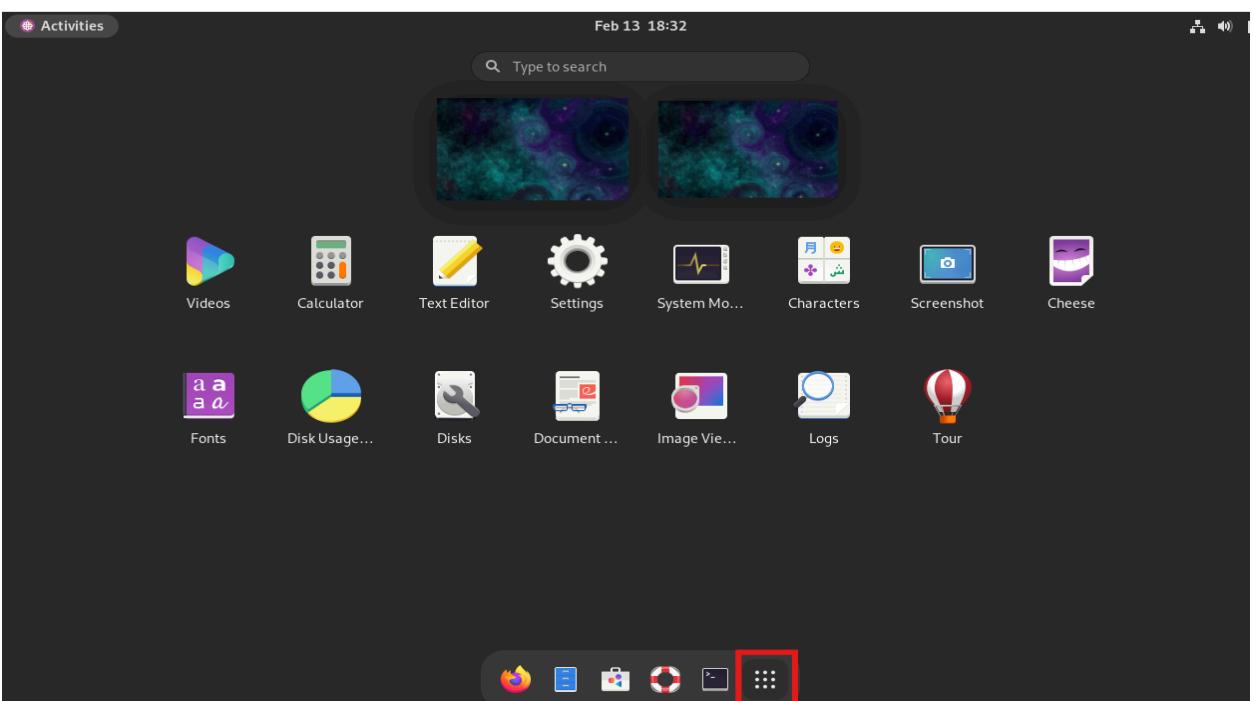
Your GUI will look like this after the successful installation of CentOS Stream 9



If you click on Activities, You will get a screen like below



To get more applications listed we can click on 9 dots icon, you can select any application you wanted to interact with



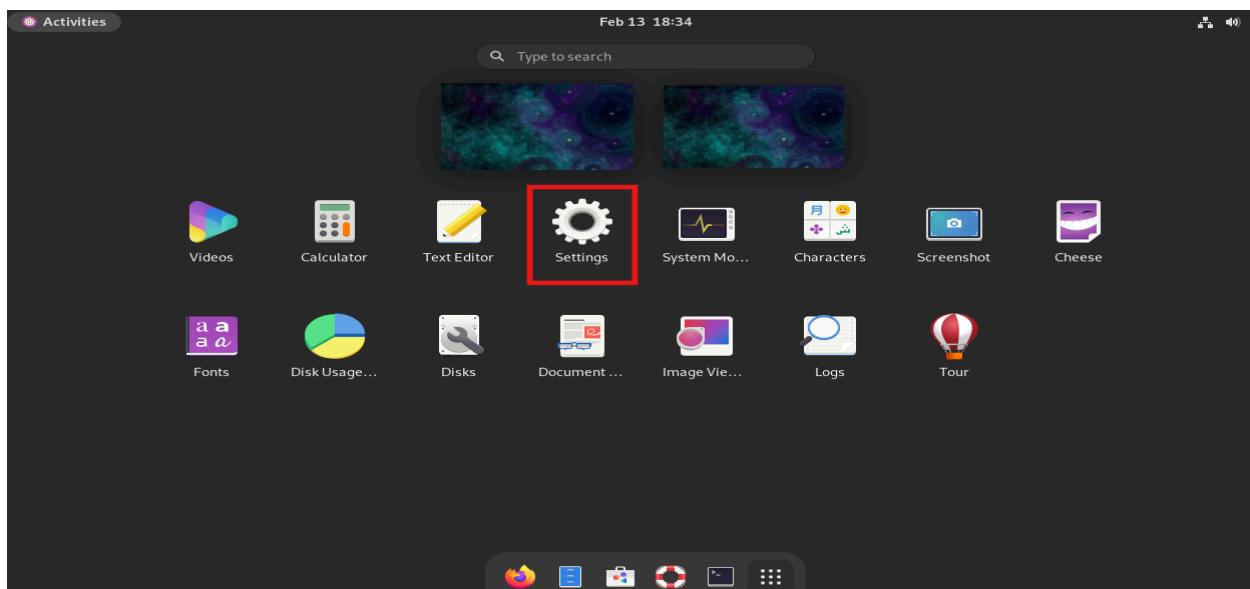
Linux Basic Setup:

Basic system configuration is the process of **setting up and preparing a Linux system** after installation so it is ready for users and services.

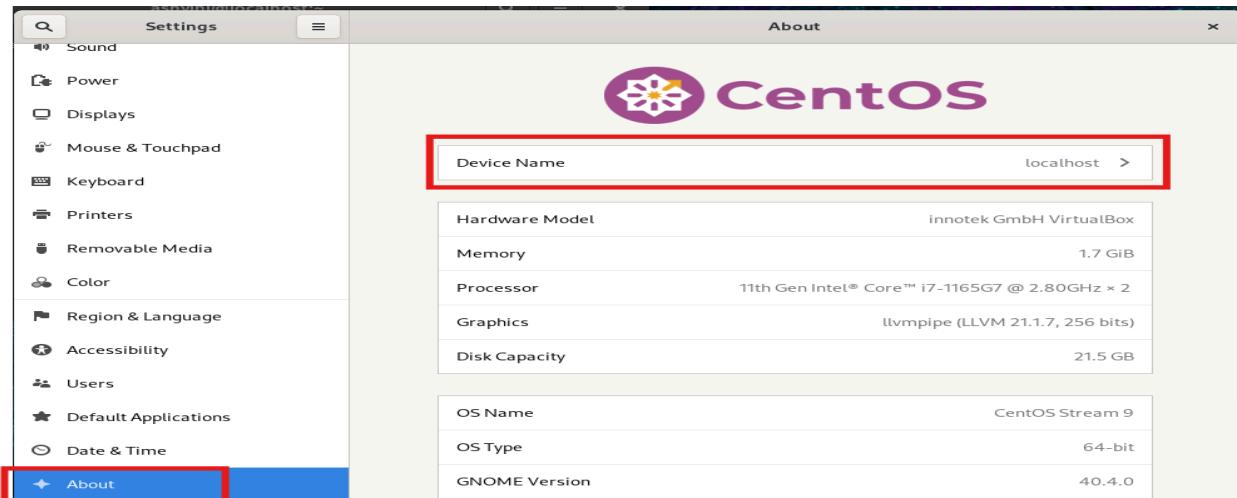
1. Setting Hostname

The hostname uniquely identifies a system on a network.

1. Click on **Applications** and then select **More Applications** (the 9-dots icon).

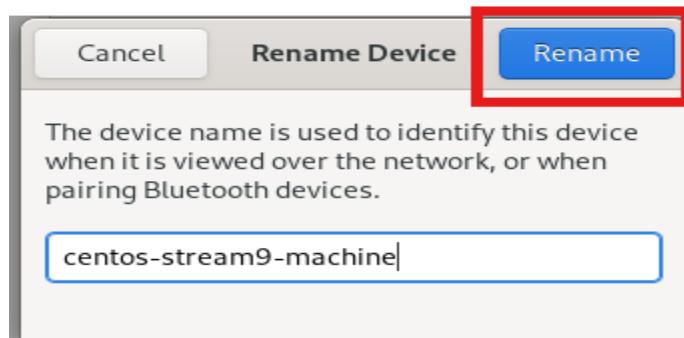


2. Open **Settings**.
3. Scroll down and click on **About**.



4. Click on **Device Name**.

5. Enter a **new hostname** (machine name) of your choice.



6. Click on **Rename**.

7. The updated hostname will now be displayed as the **new device name**.

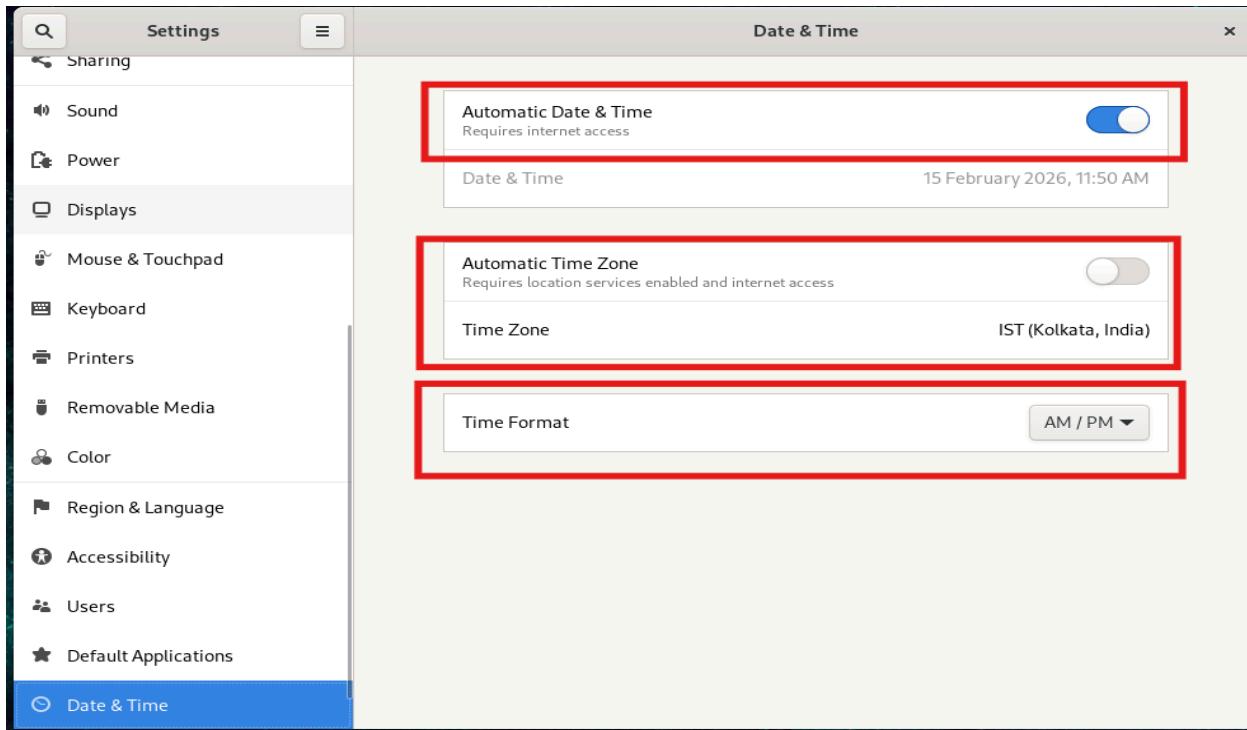


-
-  The system hostname has been successfully updated.
-

2. Date, Time, and Time Zone Configuration

Correct time is important for logs, security, and troubleshooting.

1. Open **Settings** from the Applications menu.
2. Click on **Date & Time**.
3. To configure date and time:
 - Enable **Automatic Date & Time** to sync with internet time servers
OR
 - Disable it and set the **date and time manually**.
4. To configure time zone:
 - Enable **Automatic Time Zone** to detect location automatically
OR
 - Disable it and select the **Time Zone manually** from the map.
5. For time format:
 - Choose between **24-hour format**
OR
 - **AM/PM format.**

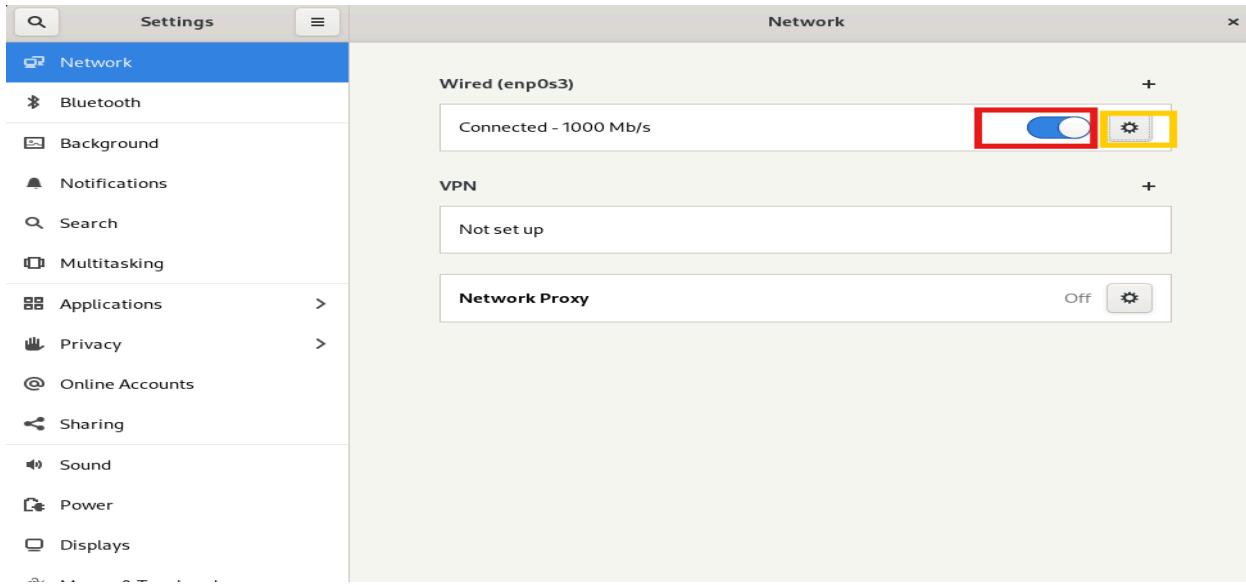


✓ Date, time, and time zone are now properly configured.

3. Network Configuration

Networking allows the system to communicate with other systems.

1. Open **Settings** from the Applications menu.
2. Select **Network**.
3. Under **Wired**, enable the toggle button to activate the network interface.
4. Click on the **Settings (⚙)** icon next to the wired connection to configure network options.



5. Go to the **Details** tab:

- Here you can view:
 - **IPv4 Address**
 - **IPv6 Address**
 - **Default Route**
 - **DNS Information**
 - **MAC Address**
 - Link Speed and other network details

6. Click on the **IPv4** tab.

7. You can choose one of the following methods:

- **Automatic (DHCP)** – IP address is assigned automatically by the router/server.
- **Manual** – You must enter:
 - IP Address

- Subnet Mask
- Gateway
- DNS Server

8. For now, select **Automatic (DHCP)**.

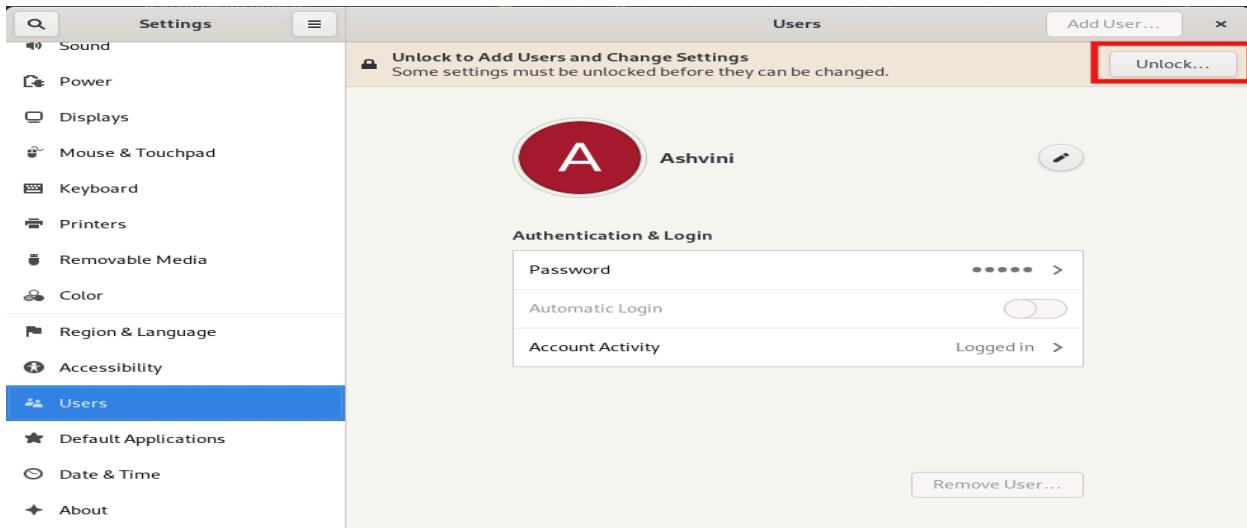
9. Click **Apply** to save the changes.

Network configuration is now completed.

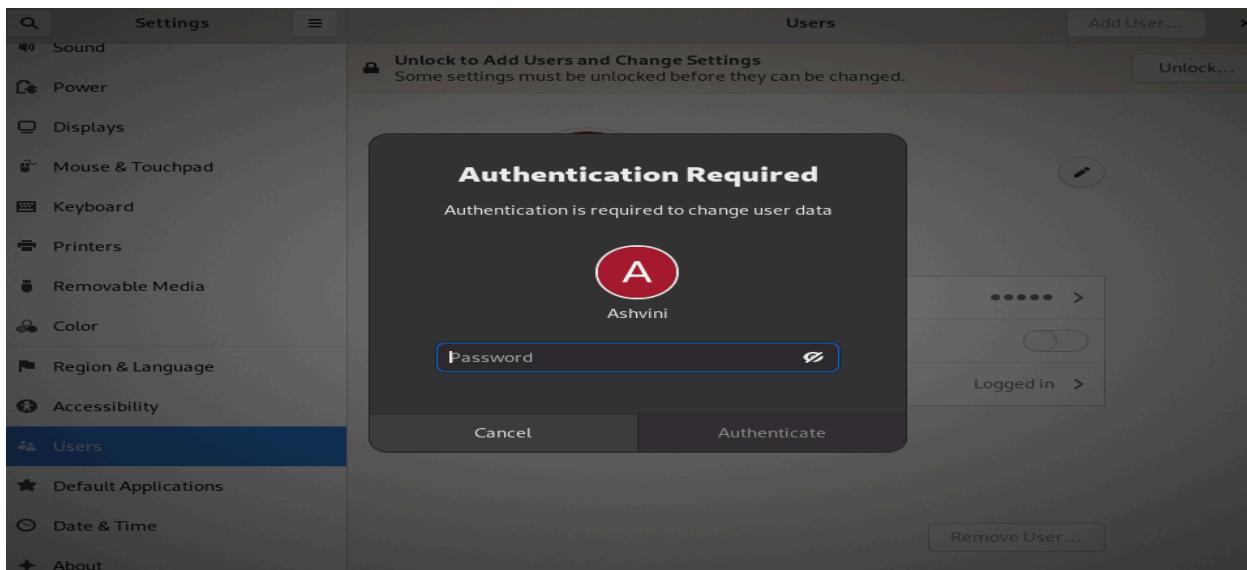
4. User and Password Configuration

Linux supports multiple users.

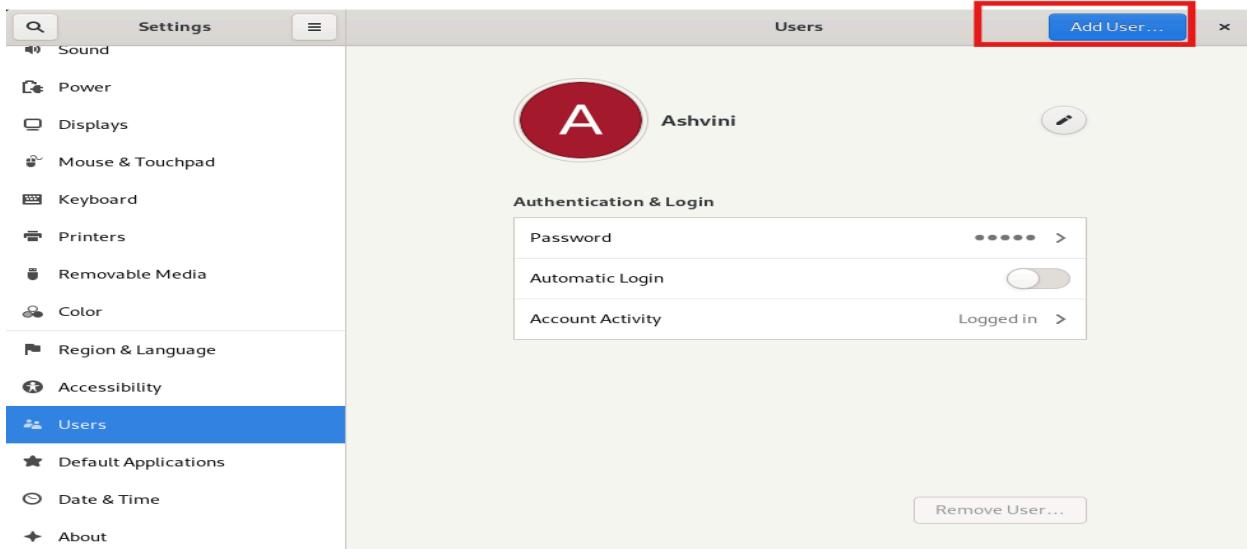
1. Open **Settings** from the Applications menu.
2. Select **Users**.
3. Click on the **Unlock** button (top-right corner).



- You will be prompted to enter your password.
- Enter your current user password.
- **Click Authenticate.**



4. Click on the **Add User** button.



5. Enter the required user details:

- **Full Name**
- **Username**

6. Select the **Account Type**:

- **Standard** – For normal users (recommended for regular usage)
- **Administrator** – For users who require administrative privileges

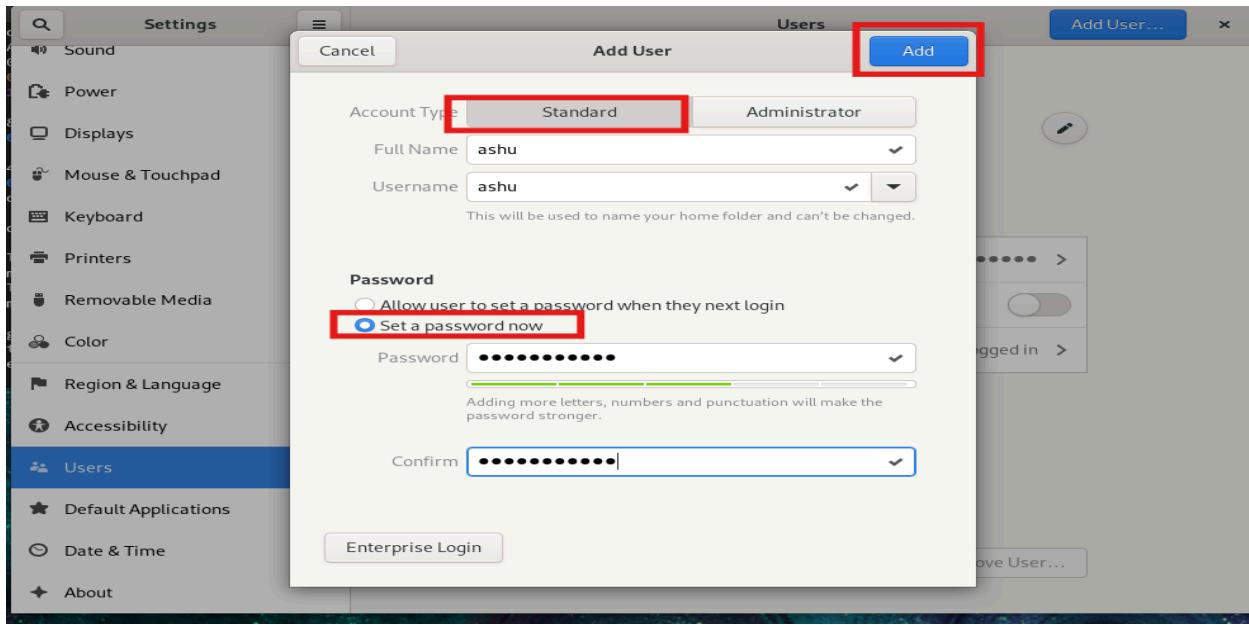
7. → Select **Standard** to create a normal user.

8. Set the password:

- Option 1: Select “**Allow user to set password at next login**”
- Option 2: Select “**Set a password now**” and manually enter the password

9. → For now, choose “**Set a password now**” and enter the password.

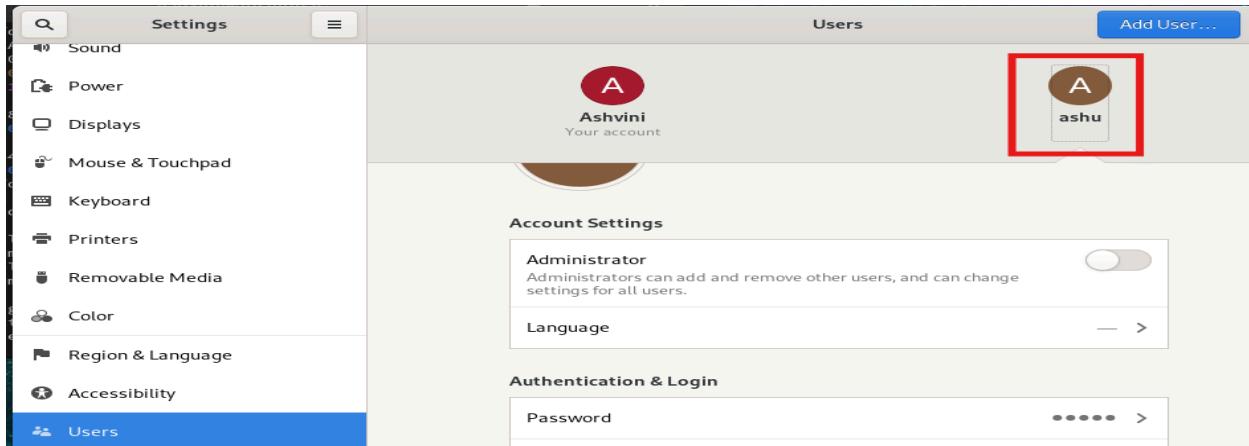
10. Click **Add**.



11. You may be prompted again for authentication.

- Enter your password.
- Click **Authenticate**.

12. The newly created user will now appear in the **Users** list.

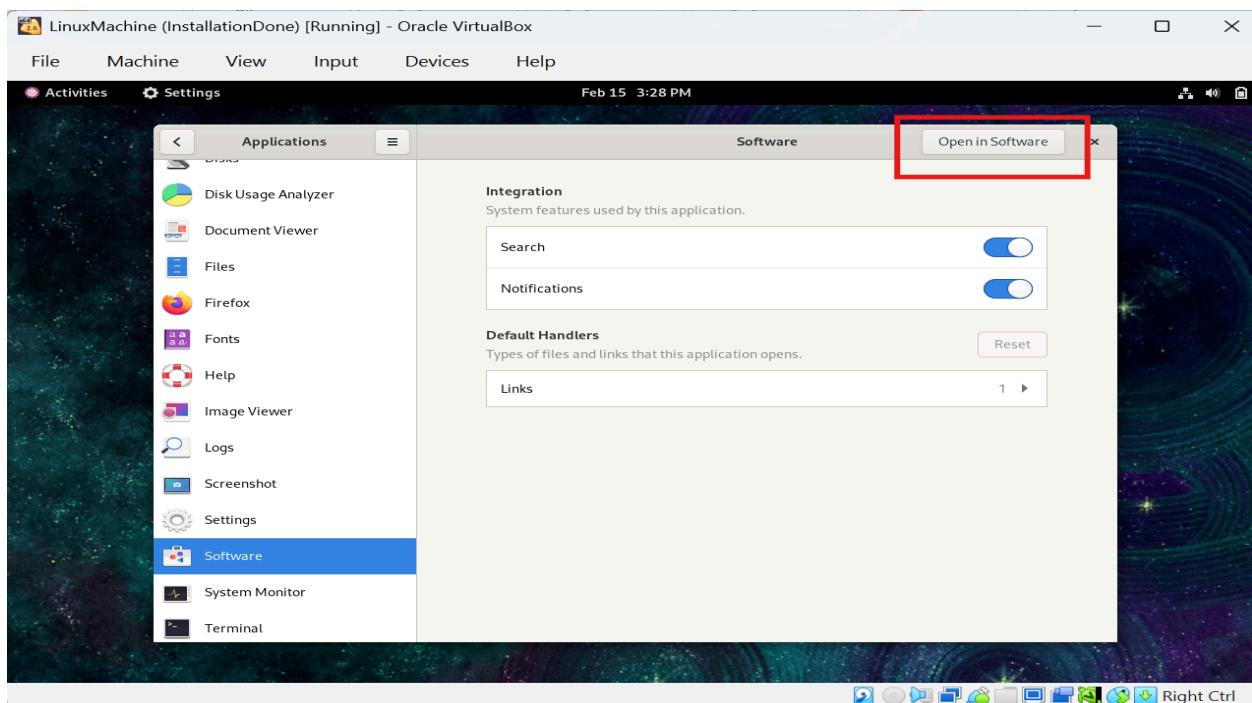


✓ New user account has been successfully created.

5. Update System Packages

Keeping the system updated improves security and stability.

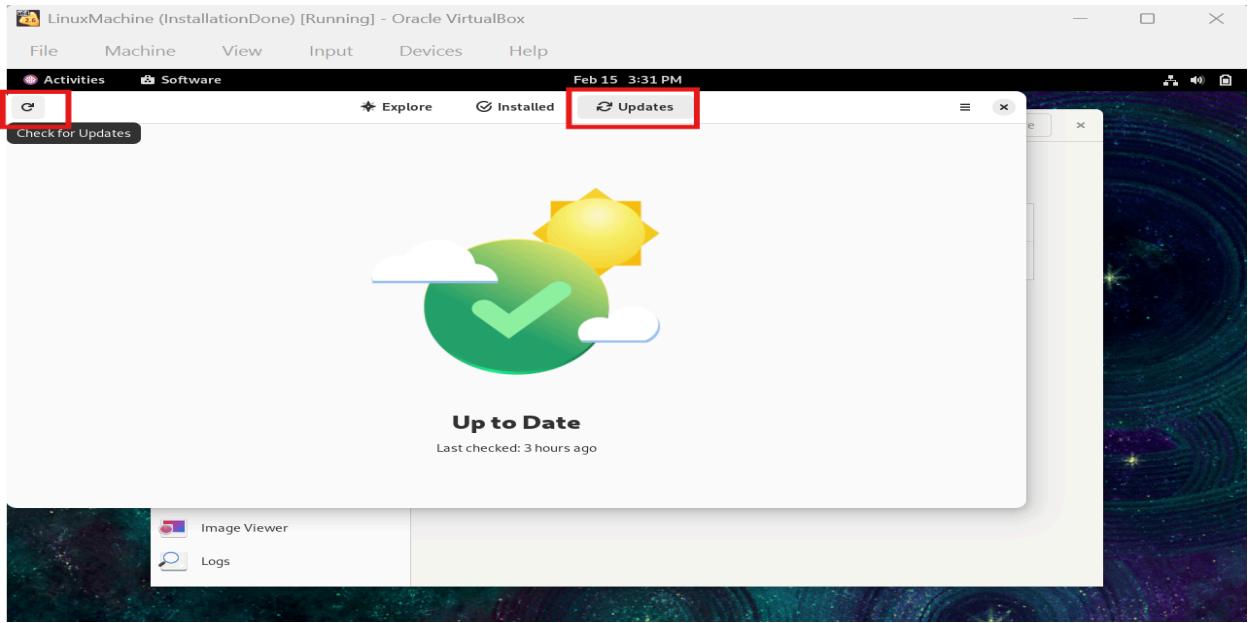
1. Open **Settings**.
2. Go to **Applications**.
3. Select **Software**.
4. Click on **Open in Software**.



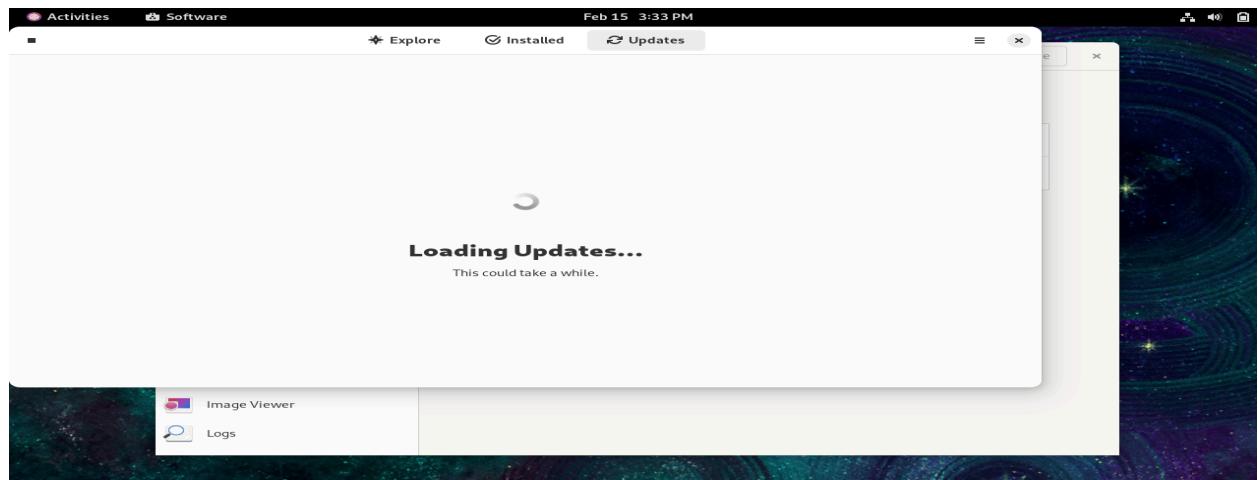
5. The Software application will open. You will see three tabs:

- **Explore**
- **Installed**
- **Updates**

6. Click on the **Updates** tab.
7. Click on the **Refresh (⟳)** button to check for available updates.



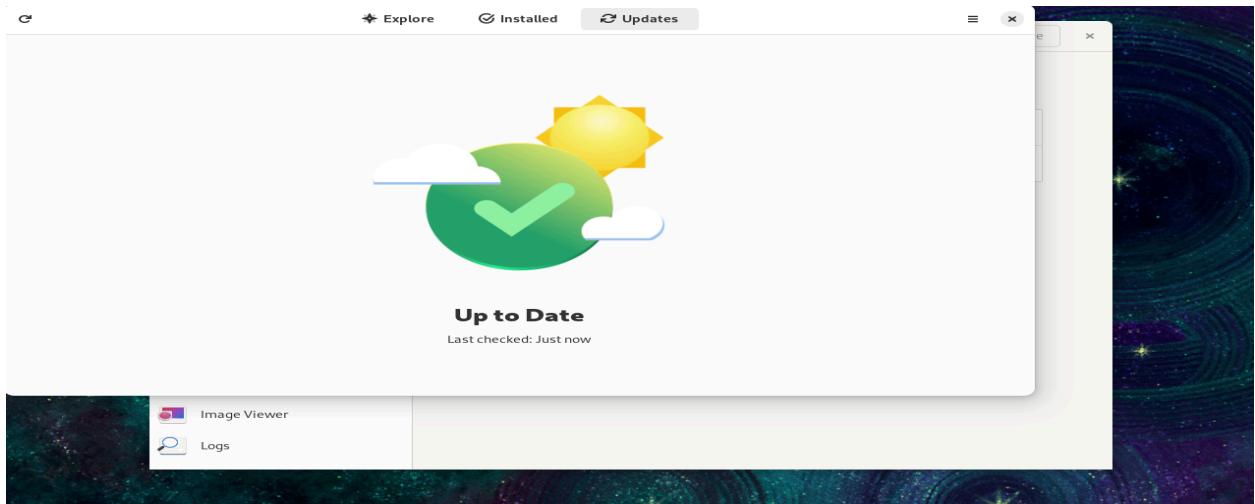
8. The system will start loading and checking for updates.



9. If updates are available:

- Click **Download**.
- After download completes, click **Install** or **Restart & Update** (if prompted).

10. Enter your password when prompted to authenticate.

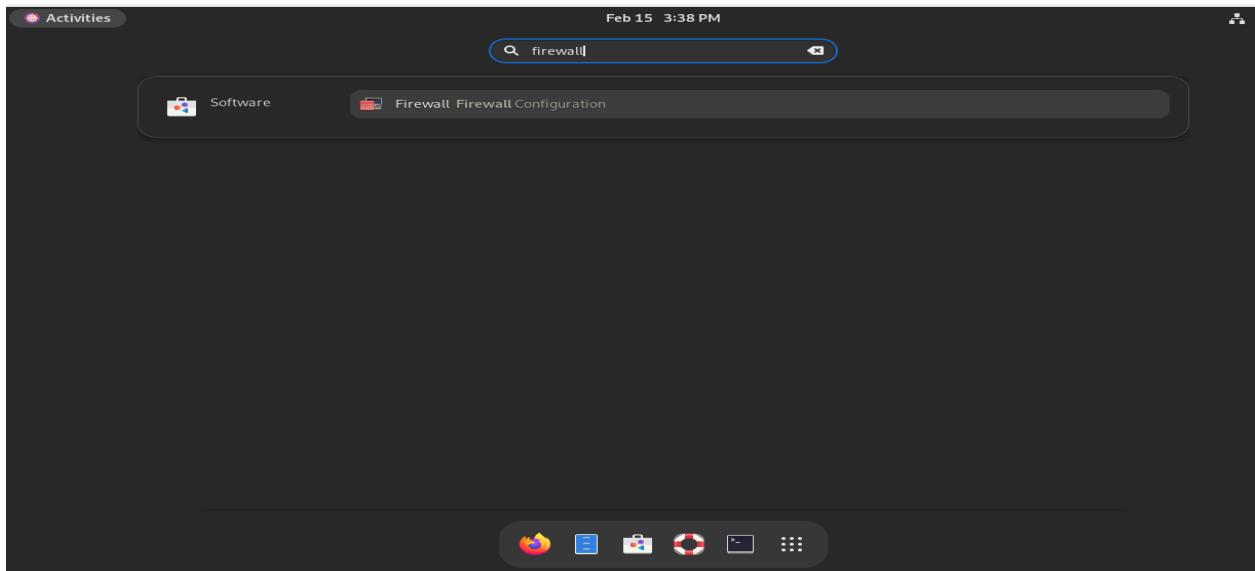


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- The system will begin updating packages.
 - Restart the system if required to complete the update process.
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6. Firewall Configuration

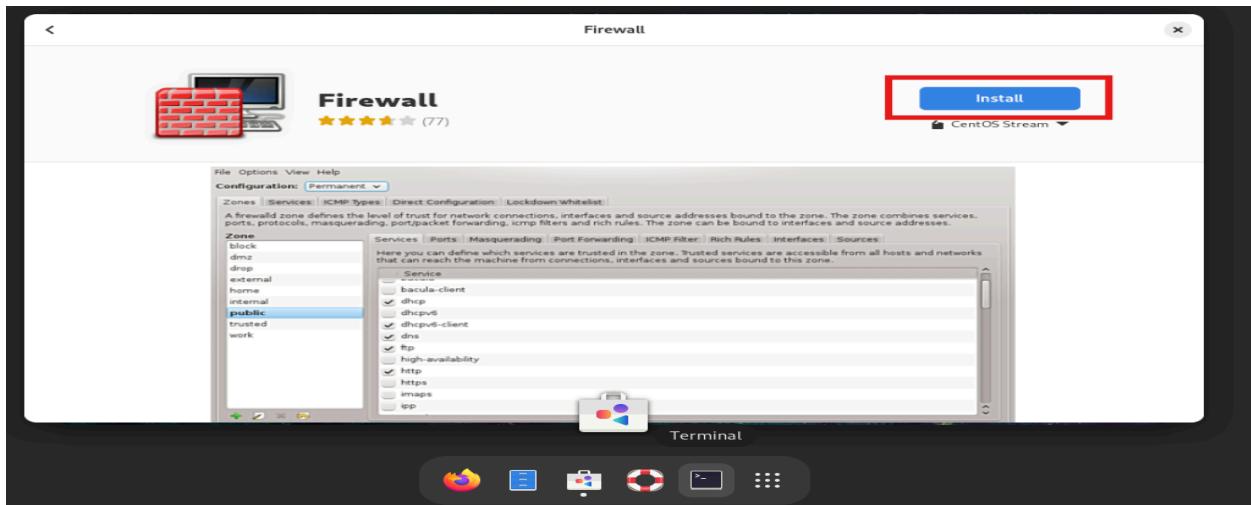
Firewall controls incoming and outgoing traffic.

1. Go to **Activities** in the search bar type **Firewall**.



2. Search for and open Firewall.

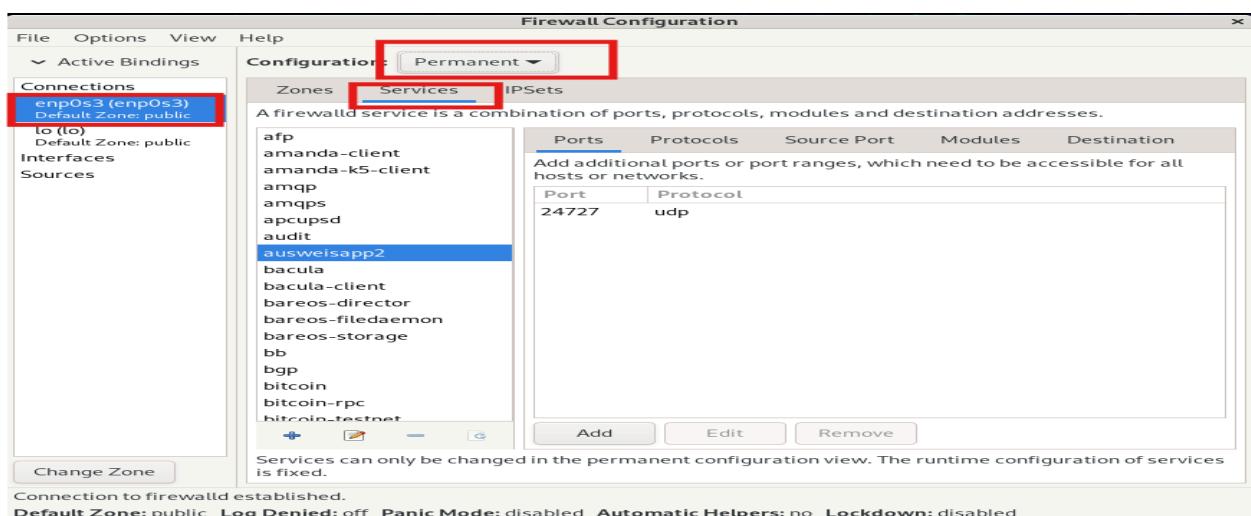
(If the Firewall application is not installed, it may need to be installed first.)



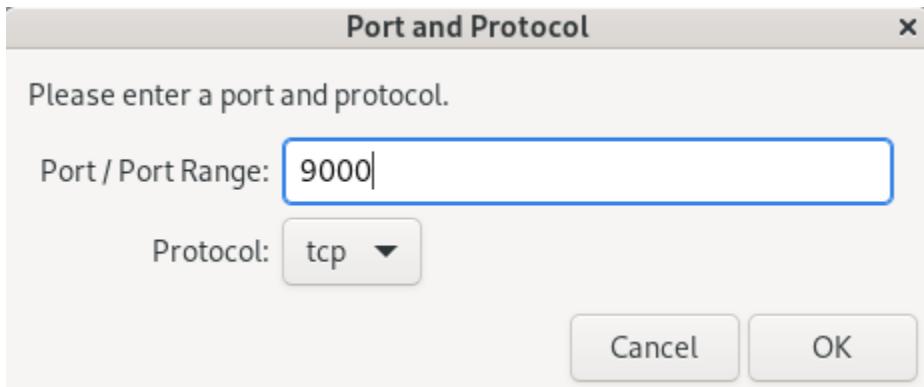
3. Enter your password and click Authenticate.

a. Allowing Services Through Firewall

1. Select your Connection network interface “**enp0s3**”.
2. Go to the **Services** section.
3. Select the **Configuration** type to **Permanent** from Runtime.



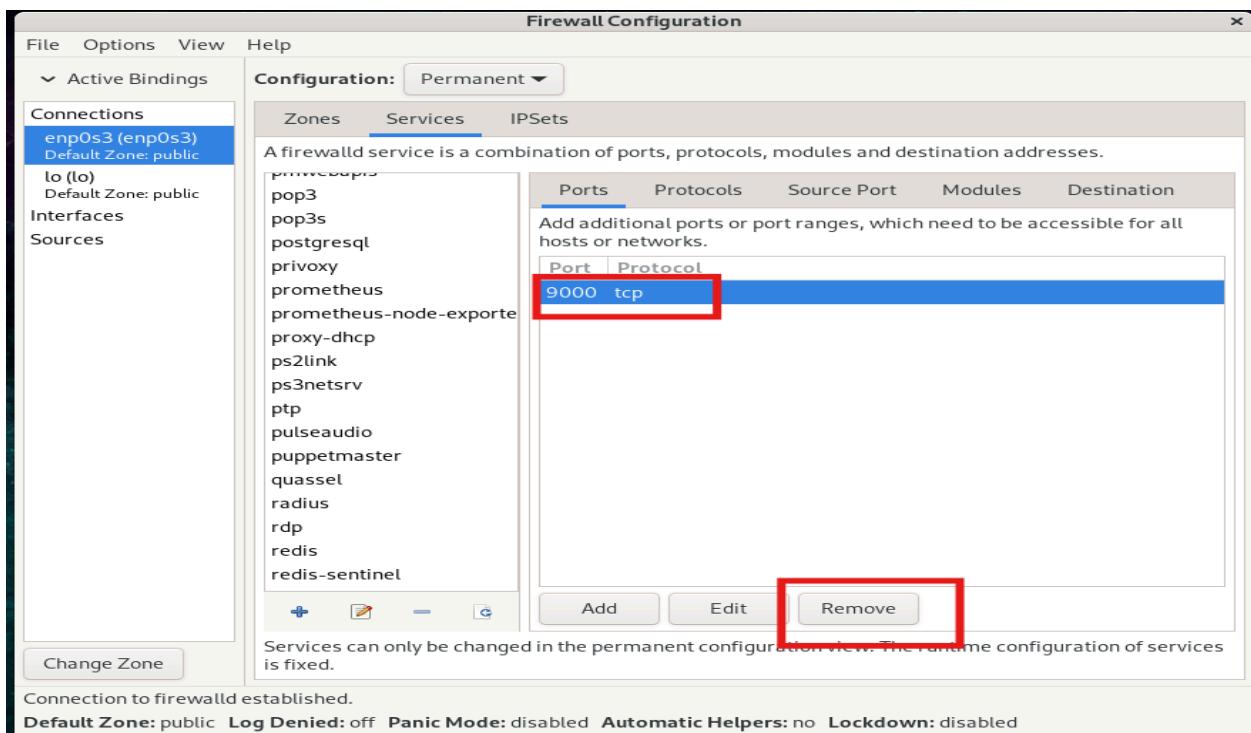
4. Click **Add** to specify the **Port/Range**, select the **Protocol** from dropdown.



b. Removing a Service

11. Select the allowed service from the list.

12. Click **Remove**.



✓ Firewall is now configured successfully.

Linux Terminal Overview:



Linux Terminal Overview

The **Linux Terminal** (also called **Command Line Interface – CLI**) is a text-based interface that allows users to interact directly with the Linux operating system by typing commands.

Instead of clicking buttons like in a GUI, you type commands to perform tasks such as managing files, installing software, configuring the system, and monitoring performance.

◆ Why Use the Linux Terminal?

- Faster than GUI for many tasks
 - Requires fewer system resources
 - Essential for **servers** (most servers don't have GUI)
 - Enables automation using scripts
 - Gives full control over the system
-

◆ Basic Structure of the Terminal

A screenshot of a Linux terminal window. The window has a dark theme with a light-colored title bar. In the title bar, it says "ashvini@localhost:~". Below the title bar is a dark gray input field containing the text "[ashvini@localhost ~]\$". The rest of the window is a dark gray space with a vertical scroll bar on the right side.

- **user** → Logged-in username
- **hostname** → System name

- `~` → Current directory (home directory)
 - `$` → Normal user
 - `#` → Root (administrator) user
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