

comment installer le serveur-vnc sur-debian-12

Virtual Network Computing (VNC) is a desktop-sharing protocol that allows you to control a computer remotely using the VNC client software. VNC is working on GUI (Graphical User Interface) environments, it transmits movements of your mouse and keyboard input over the network using the Remote Frame Buffer (RFB) protocol.

Commonly, VNC is used for technicians to control client desktops or used by someone who needs to access their Desktop in the office from their home. VNC can be used securely through the VPN network or using the SSH tunneling connection.

In this guide, I'll show you step-by-step how to install VNC Server on the Debian 12 server.

Prerequisites

To proceed with this guide, you'll need the following:

- A Debian 12 server.
- A non-root user with administrator privileges.

Installing Desktop Environment

To start the tutorial, you will be installing the Desktop Environment to your Debian server. This can be done manually via APT or using a helper tool such as `tasksel`. `tasksel` is a command line tool that helps you install a group of packages such as Desktop Environments and Web Server via interactive shell.

First, update your Debian repository before installing packages using the command below.

```
sudo apt update
```

Now run the following command to install `tasksel`.

```
sudo apt install tasksel
```

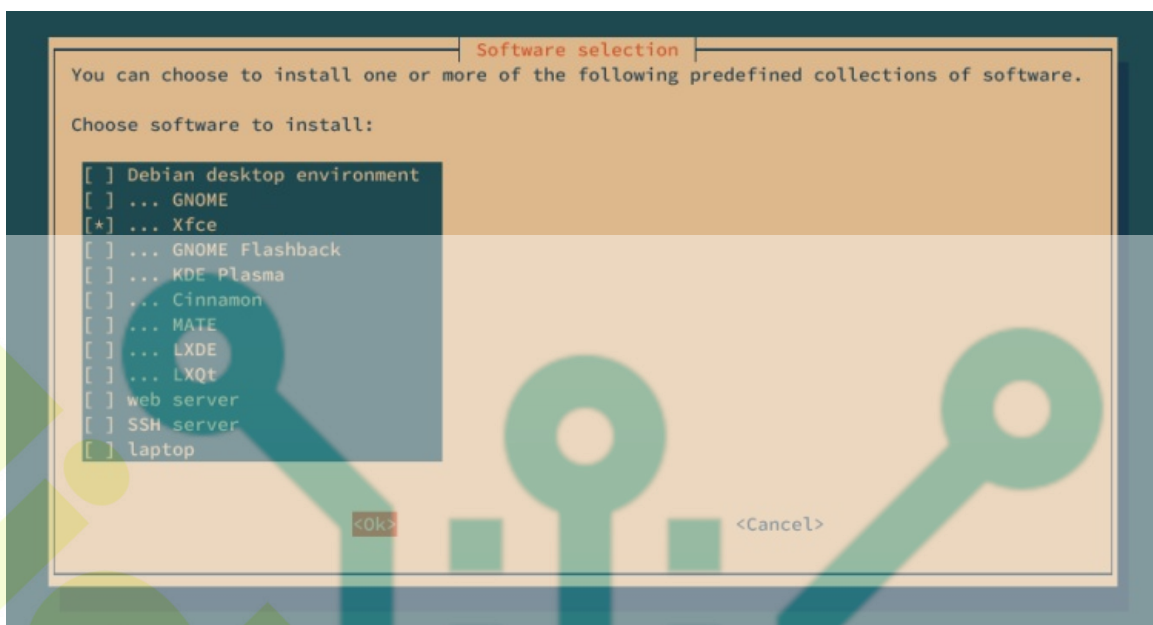
Type `y` to confirm with the installation.

```
root@bookworm64:~#  
root@bookworm64:~# sudo apt install tasksel  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
tasksel is already the newest version (3.73).  
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.  
root@bookworm64:~#
```

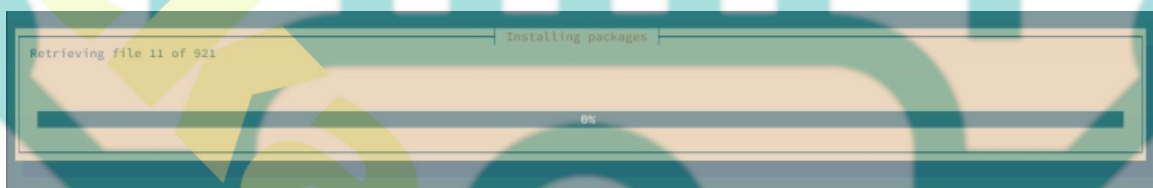
After you've installed `tasksel`, execute the `tasksel` command below to install a Desktop Environment for your VNC Server.

```
sudo tasksel
```

Select your preferred Desktop Environment, move to OK to confirm, and press ENTER to start the installation. The following example will be using XFCE as the default DE for the VNC Server.



The installation of the Desktop Environment should be started.



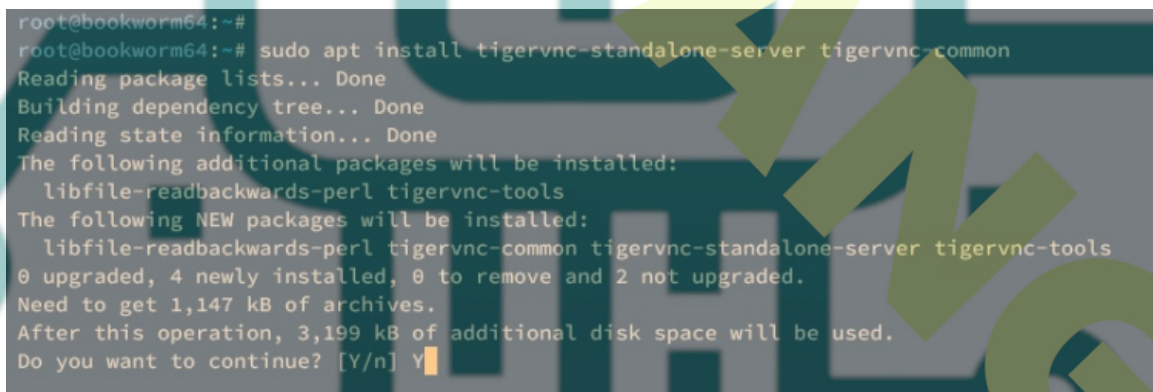
Installing TigerVNC Server

After you've installed the Desktop Environment, you're ready to install the VNC Server packages. On Debian, you can use TigerVNC to create a VNC Server.

Execute the command below to install the `tigervnc-standalone-server` package to your Debian system.

```
sudo apt install tigervnc-standalone-server tigervnc-common
```

Input `y` and press `ENTER` to proceed with the installation.



Once the TigerVNC Server installation is finished, take a look at some important TigerVNC configurations:

- A directory `/etc/tigervnc/`: The main configuration directory for TigerVNC Server. In this directory, you should see the file `vncserver.users` for storing users, and the `vncserver-config-mandatory` file as the main TigerVNC configuration that will be loaded automatically.
- Service file `tigervncserver@.service`: The TigerVNC Server provides a systemd service file that allows you to run VNC Server desktops with ease.

Initializing VNC server

Now that you've installed TigerVNC, it's time to create your first VNC Server with TigerVNC. Before you begin, ensure that you have your non-root user ready.

Execute the command below to log in to your user.

```
su - username
```

Initialize the VNC Server by executing the following command. Through this, you will set up the VNC Server password and the view-only password (optional).

```
vncserver
```

Input the new password for your VNC Server and repeat when asked. Then, type n to disable the view-only password, or y to enable the view-only password.

Now that you've initialized VNC Server, the VNC Server should be running on '**hostname:x**'. The hostname is a system hostname, and x is the desktop number. In this example, the VNC Server is running on **bookworm64:1**.

```
root@bookworm64:~#
root@bookworm64:~# su - bob
bob@bookworm64:~$
bob@bookworm64:~$ vncserver

You will require a password to access your desktops.

Password:
Verify:
Would you like to enter a view-only password (y/n)? n
A view-only password is not used
/usr/bin/xauth: file /home/bob/.Xauthority does not exist

New Xtigervnc server 'bookworm64:1 (bob)' on port 5901 for display :1.
Use xtigervncviewer -SecurityTypes VncAuth -passwd /tmp/tigervnc.u2ghrk/passwd :1 to connect to the VNC server.
```

Configuring VNC Server and Desktop Environment

At this point, you've configured the VNC Server and its password. Moving on, you will configure VNC Server and set up the default Desktop Environment.

Before configuring VNC Server, stop the current VNC Server process by executing the command below. In the following example, we'll stop the VNC Server **bookworm64:1**.

```
vncserver -kill bookworm64:1
```

```
bob@bookworm64:~$ vncserver -kill bookworm64:1
Killing Xtigervnc process ID 2861... success!
bob@bookworm64:~$
```

Now, run the following command to check the available Desktop Environment on your system.

```
ls /usr/share/xsessions/
```

In the following output, the `xfce.desktop` confirms that XFCE is available.

```
bob@bookworm64:~$
bob@bookworm64:~$ ls /usr/share/xsessions/
lightdm-xsession.desktop  xfce.desktop
bob@bookworm64:~$
bob@bookworm64:~$ nano ~/.vnc/config
bob@bookworm64:~$
bob@bookworm64:~$ cat ~/.vnc/config
session=xfce
geometry=1200x720
localhost
alwaysshared
bob@bookworm64:~$
bob@bookworm64:~$
```

Next, create a new VNC Server configuration `~/.vnc/config` using the following nano editor command. This is a per-user configuration, which means each user can have different configurations.

```
nano ~/.vnc/config
```

Input the following configuration to the file.

```
session=xfce
geometry=1200x720
localhost
```

alwaysshared

Save and close the file when you're done.

In this example, you'll configure VNC Server with the following:

- `session=xfce`: Configure the default session to XFCE.
- `geometry=1200x720`: Configure the display to 1200x720.
- `localhost`: Running VNC Server only in localhost.
- `alwaysshared`: Always treat incoming connections as shared.

Adding User for TigerVNC Server

Now that you've configured the default Desktop Environment and VNC Server, the next task is to add your user to the VNC Server.

Run the following nano editor command to open file `/etc/tigervnc/vncserver.users` for TigerVNC.

```
sudo nano /etc/tigervnc/vncserver.users
```

Add the following line to the file. Using this, you will configure the VNC Server `:1` to the user username. This list can go on, depending on the available VNC users and desktops that you will be creating.

```
:1=username
```

Save and close the file when finished.

Next, run the `systemctl` command below to start and enable `tigervncserver@:1.service`. The service file `tigervncserver@:1.service` means that you will start VNC Server desktop `:1`.

```
sudo systemctl start tigervncserver@:1.service
sudo systemctl enable tigervncserver@:1.service
```

```
alice@bookworm64:~$
alice@bookworm64:~$ nano ~/.vnc/xstartup
alice@bookworm64:~$
alice@bookworm64:~$ chmod +x ~/.vnc/xstartup
alice@bookworm64:~$
alice@bookworm64:~$ sudo nano /etc/tigervnc/vncserver.users
[sudo] password for alice:
alice@bookworm64:~$
alice@bookworm64:~$ sudo systemctl start tigervncserver@:1.service
alice@bookworm64:~$ sudo systemctl enable tigervncserver@:1.service
Created symlink /etc/systemd/system/multi-user.target.wants/tigervncserver@:1.service →
alice@bookworm64:~$
alice@bookworm64:~$
```

Lastly, ensure the `tigervncserver@:1.service` is running by executing the command below.

```
sudo systemctl status tigervncserver@:1.service
```

In the following example, you can see the `tigervncserver@:1.service` is running.

```
bob@bookworm64:~$
bob@bookworm64:~$ sudo systemctl status tigervncserver@:1.service
• tigervncserver@:1.service - Remote desktop service (VNC)
  Loaded: loaded (/lib/systemd/system/tigervncserver@.service; enabled; preset: enabled)
  Active: active (running) since
  Main PID: 3959 (tigervncsession)
  Tasks: 0 (limit: 9338)
  Memory: 424.0K
  CPU: 31ms
  CGroup: /system.slice/system-tigervncserver.slice/tigervncserver@:1.service
          └─ 3959 /usr/sbin/tigervncsession bob :1
```

At this point, you've finished the VNC Server installation using TigerVNC and XFCE as the default Desktop Environment. Moving forward, you will connect to VNC Server securely via SSH tunneling.

Connecting to VNC Server via SSH Tunneling

Before you connect to VNC Server, ensure the SSH client and VNC Viewer are installed on your local machine.

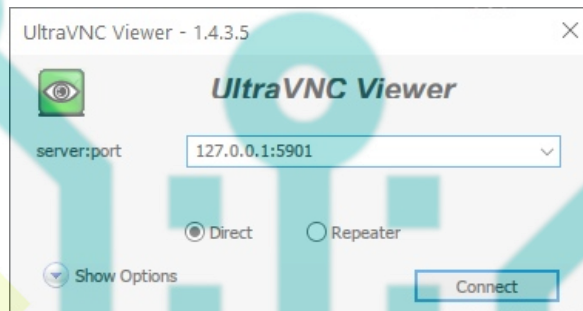
For Windows users: You can use PowerShell with SSH client installed and UltraVNC for VNC client.

For Linux users: Use terminal and Remmina remote desktop application.

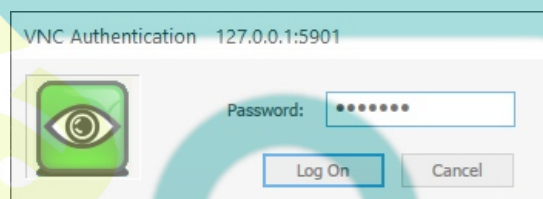
Open your terminal and execute the ssh command below to create SSH tunneling to the VNC Server. Input your password when asked. In this example, we'll create SSH tunneling to the VNC Server **192.168.5.15** with port **5901** and user **bob**.

```
ssh -L 5901:127.0.0.1:5901 -N -f -l bob 192.168.5.15
```

Now open the VNC Viewer application and connect to localhost or **127.0.0.1** with port **5901**. In this example, we'll be using UltraVNC, click **Connect** to continue.



Input the VNC Server password when asked and click Log On.



If you have the correct password, you should be able to log in to VNC Server with XFCE Desktop like the following.



Installing Graphical Application to VNC Server

Now that you've connected to the VNC Server, you can install a Desktop application to your VNC Server.

Click on the **Applications** menu and select **Terminal Emulator**.

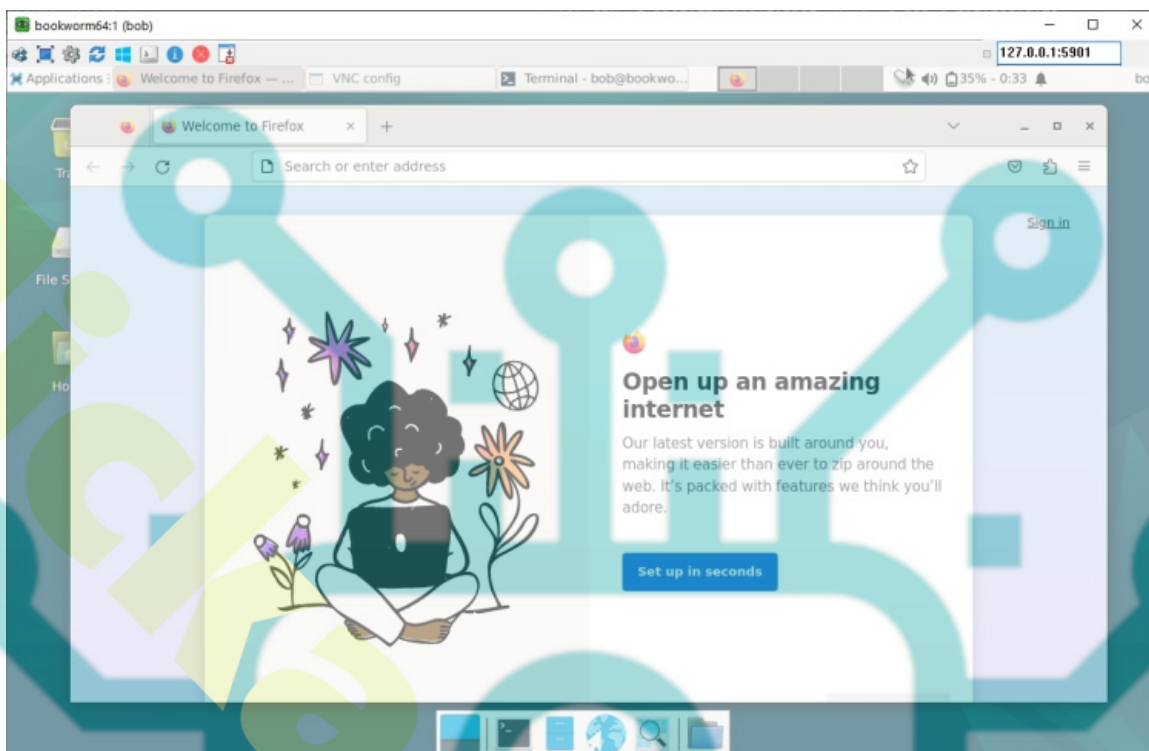
Now run the following command to get the root privileges and update your Debian package repository.

```
sudo su  
sudo apt update
```

For this example, you can install Firefox ESR to your VNC Server using the apt command below.

```
sudo apt install firefox-esr -y
```

Once the installation is finished, open the Firefox ESR from the application menu. If everything goes well, you should see the Firefox ESR running on VNC Server like the following.



Conclusion

To wrap up, you have finished the installation of the VNC Server on the Debian 12 server with TigerVNC Server and XFCE Desktop environment. You've also learned how to connect to the VNC Server securely via SSH Tunneling and installed graphical application Firefox ESR to your Debian server.

From now on, you can use and manage your server with GUI (Graphical User Interface). Further reading, you may want to adopt security on TigerVNC with TLS certificates.