

Lab Creating a Virtual Install of Fedora Server Using VirtualBox

Upon completion of this lab the student will be able to:

- Install and Configure Fedora Server
- Install a GNOME Desktop Environment

Overview

In this lab, students will create a virtual install of Fedora Server 25. Fedora Server is a powerful, flexible operating system which includes the best and latest data center technologies. The only real differences between a workstation and server are, a server provides networking services such as DNS, DHCP and others.

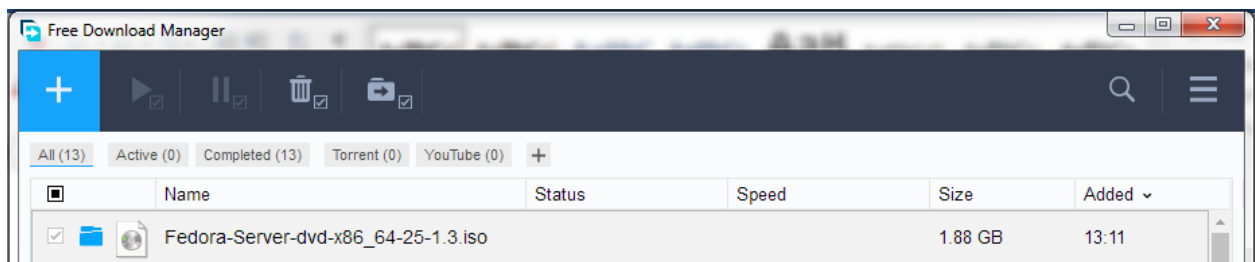
We Use the same steps taken in Lab 1 to download and create an install of Fedora Server. We begin by downloading an ISO image of Fedora Server.

If you do not have an install of Free Download Manager, you can download it [here](#).

Once the download manager is installed, we can use it to download the ISO image of Fedora Server quickly.

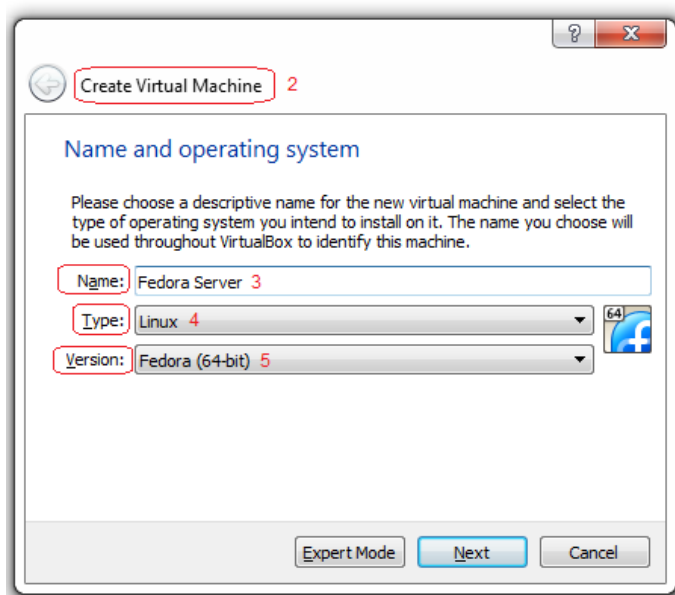
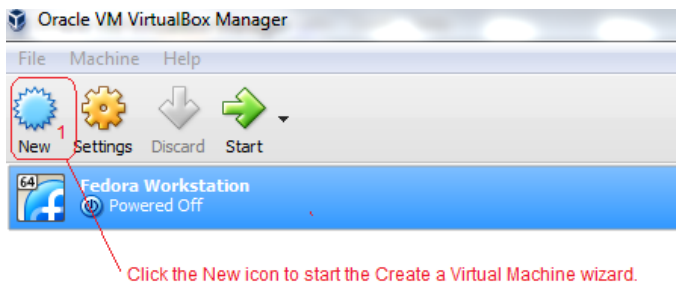
Download Fedora Server [here](#).

When the download is complete, you should see the following:



Next, open VirtualBox and click on the icon marked (1) New. This starts the (2) Create Virtual Machine Wizard.

3. Give the VM a user-friendly name
4. For the type, select Linux
5. for the version, select Fedora (64-bit)

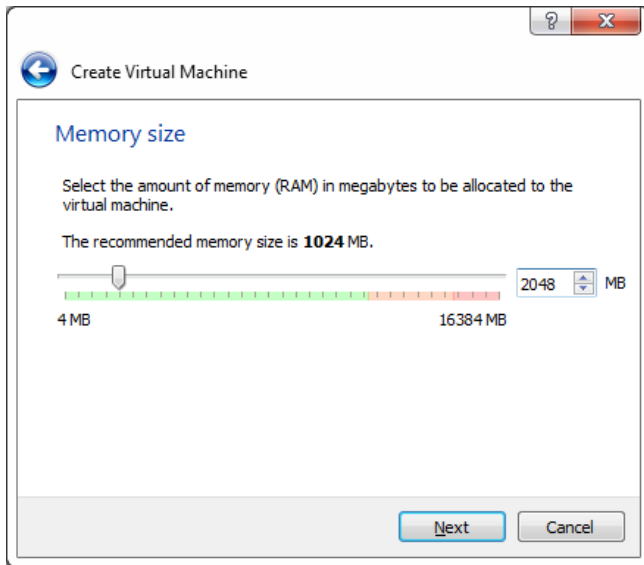


click Next.

Browse to your Fedora Server ISO download, and click Next.

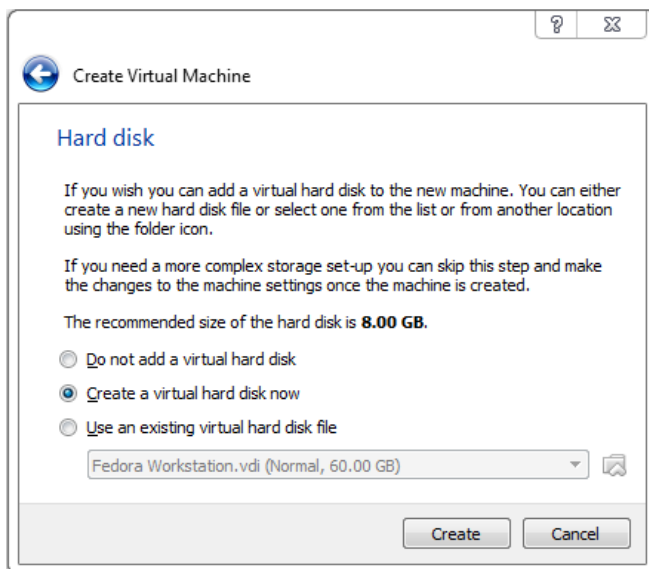
Memory Size

Change the default memory size to 2048 MB, if you have the memory. If not, accept the default size of 1024 and click next.



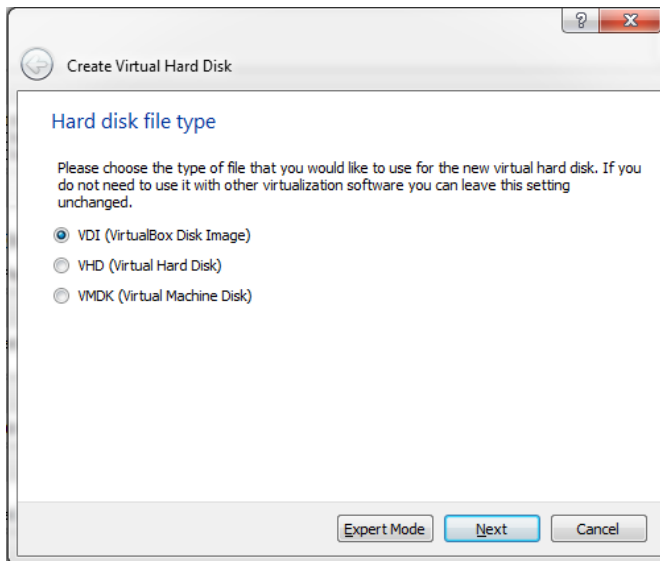
Hard Disk

Accept the default to 'Create a virtual hard disk now.' Click Create.



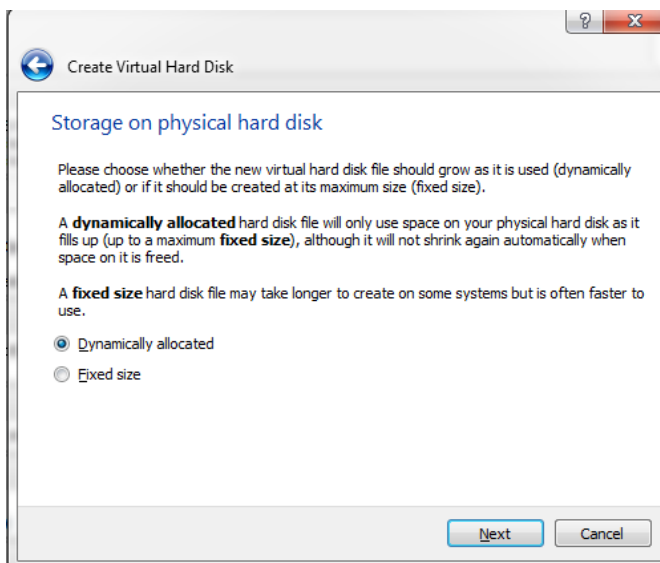
Hard File Type

Accept the default hard disk file type. Click next.



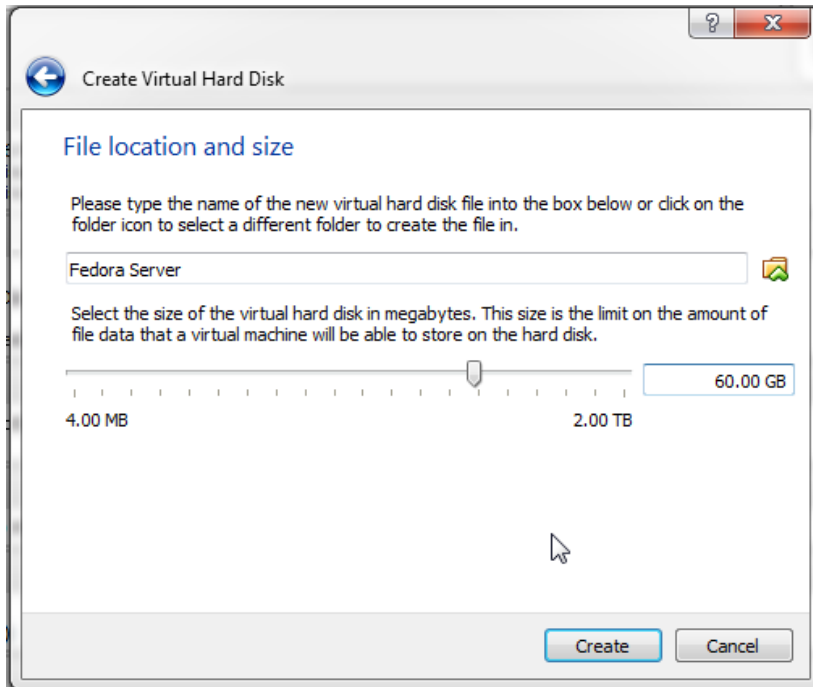
Storage on Physical Disk Size

Accept the default of dynamically allocated and click next.

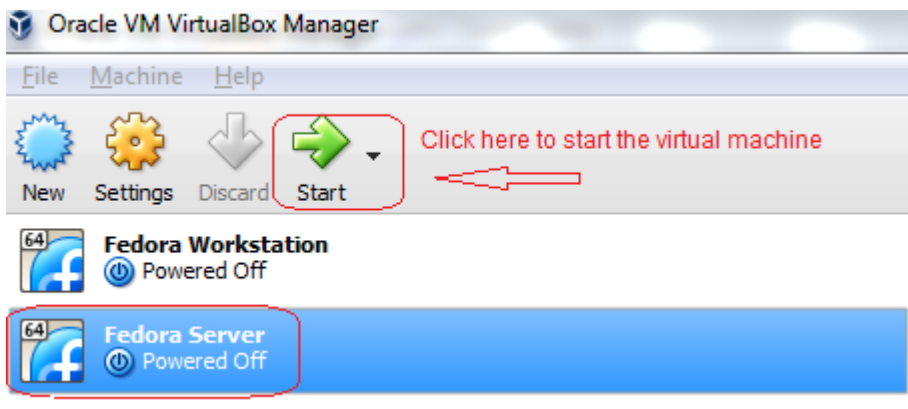


File location and size.

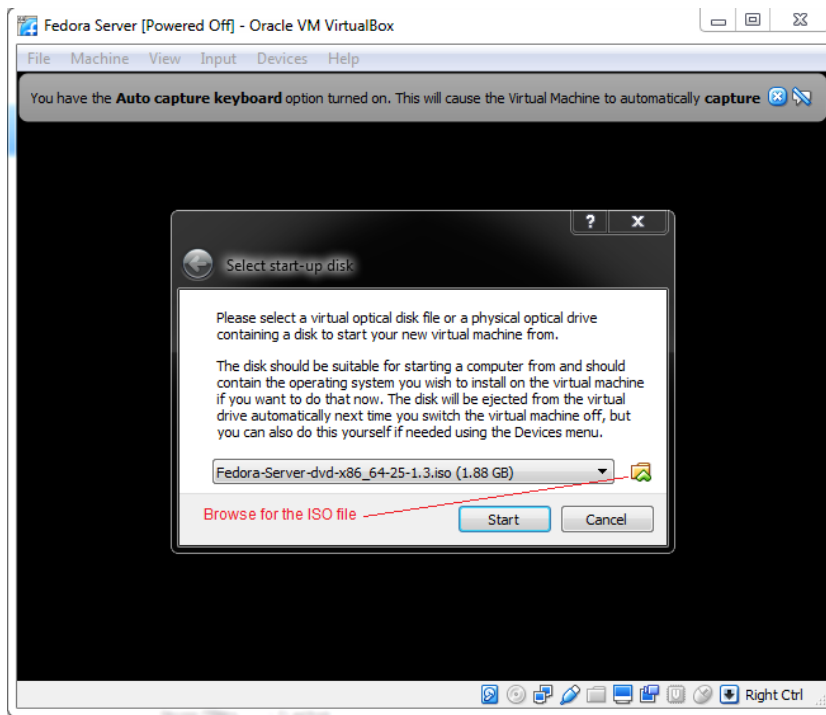
Change the default size of 8 GB to 60 GB. Click create.



The virtual machine Fedora Server appears in the left Window pane. Ensure the Fedora Server VM is highlighted, and from the overhead taskbar, click on the green start button.

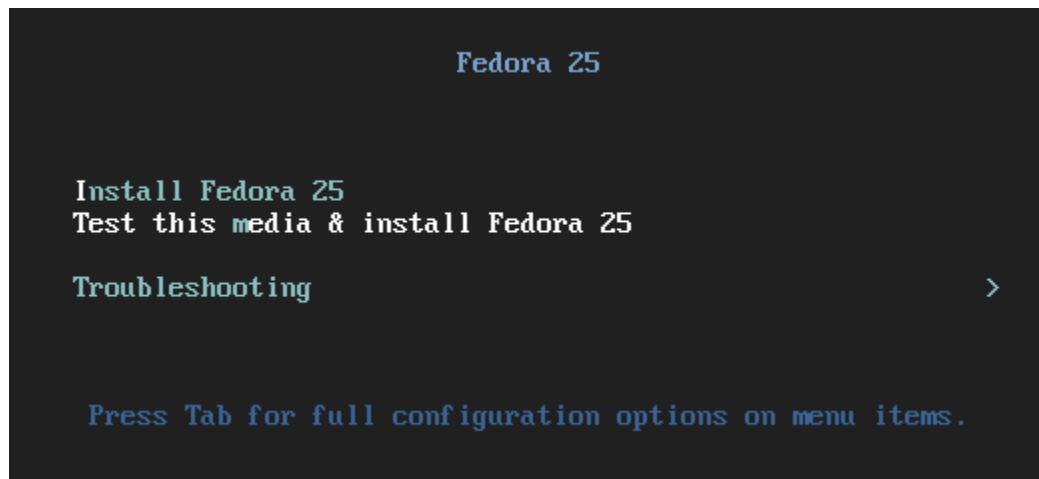


You must now click on the folder icon and browse to the location of the downloaded ISO image for Fedora Server. Double click the iso image and the path is loaded into the windows for Select start-up disk.



The installation process begins.

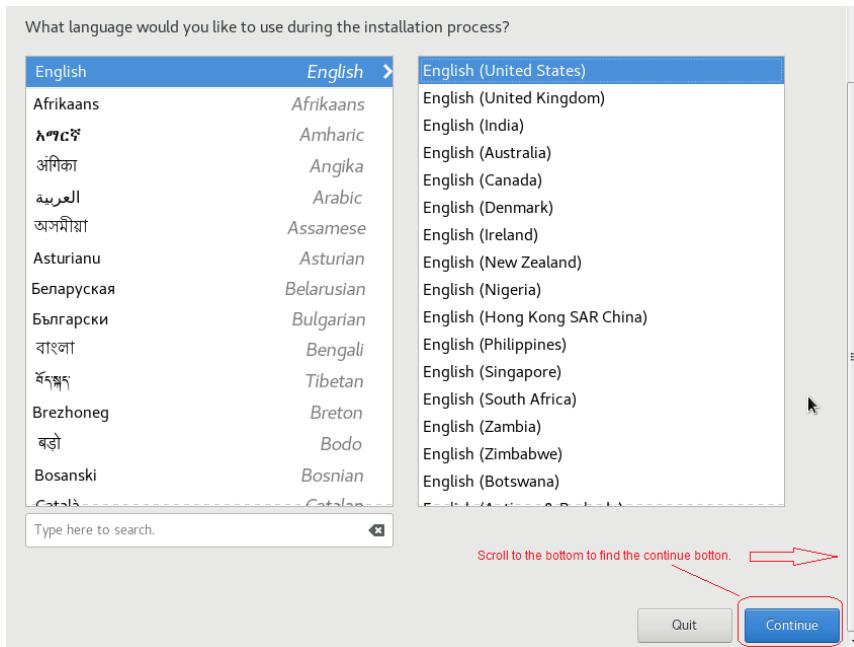
At the first window, just hit enter to start the installation.



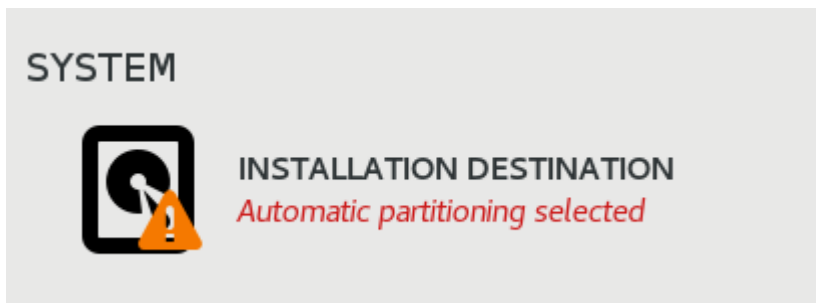
The install will continue through the configuration phase uninterrupted.

Hit escape canceling the media check. The installation continues.

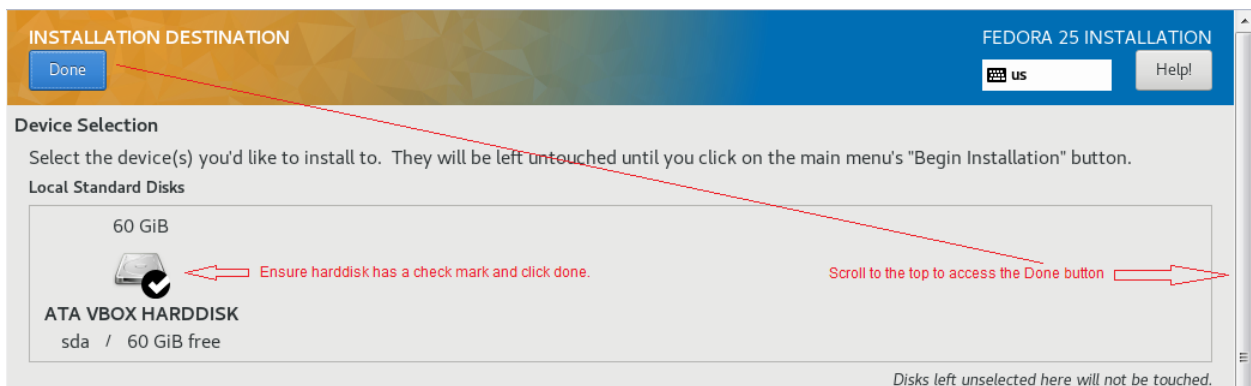
On the first windows of the GUI, select your language. Scroll to the bottom of the window to continue.



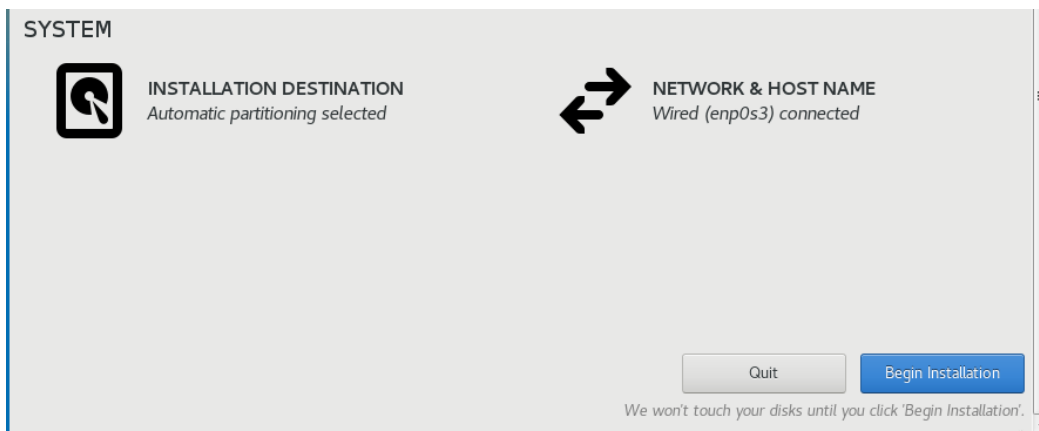
On the next window, click on the orange triangle to enter installation destination.



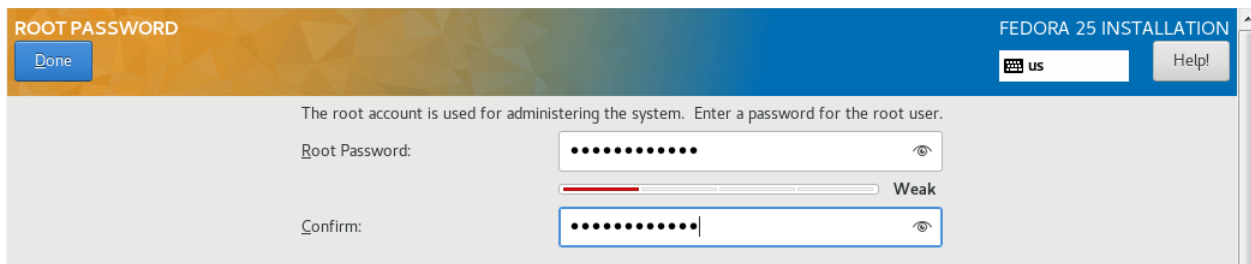
On the next screen, ensure the 60 GB hard disk has a check mark. Scroll to the top of the page and click Done.



On the return screen, scroll to the bottom and click begin the installation.

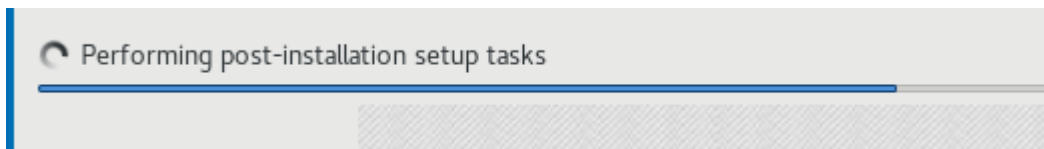


On the next window, under User settings, click Root password and set your root password for the server.

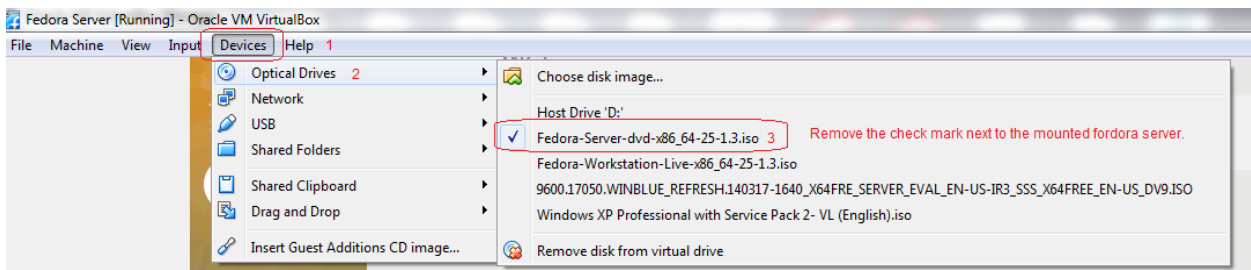


Click on Done to return to the previous screen.

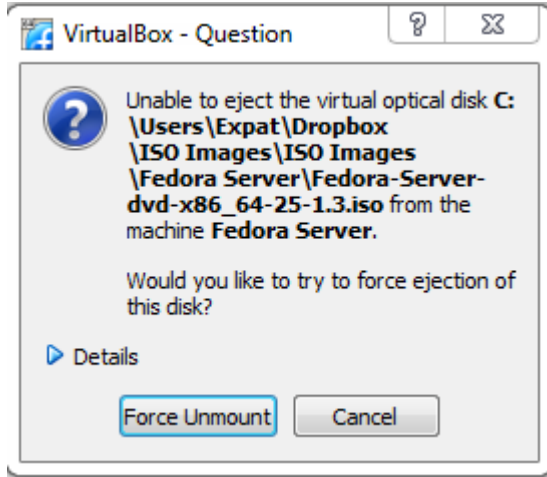
The installation continues.



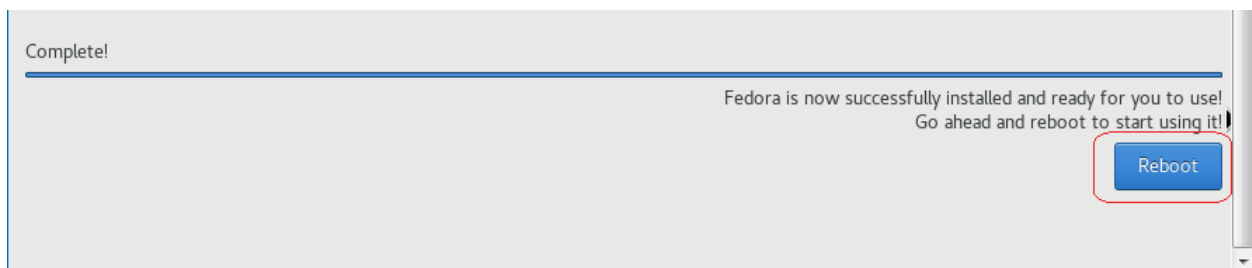
Once the installation has completed, go to the taskbar and click on Devices and then Optical Drives. Remove the check mark next to your Fedora Server DVD iso image.



On the next window, click Force Unmount.



Lastly, click on reboot.



The machine will automatically reboot. If the machine hangs, power off the machine using the power off option with VirtualBox.

Be patient as the install completes. When the install completes, you'll be prompted for your login and password.

Use root as your login and type in the password you created during the install phase. You will not see the password as you type it in. This is the default behavior of Linux.

Installing the Fedora Workstation Desktop

```
Fedora 25 (Server Edition)
Kernel 4.8.6-300.fc25.x86_64 on an x86_64 (tty1)

Admin Console: https://192.168.145.158:9090/ or https://[fe80::818c:1bdd:1138:bb71]:9090/

localhost login: root
Password:
[root@localhost ~]# _
```

This brings you to the root prompt. This is how Fedora Server installs, with no GUI Desktop Environment. This is referred to as the minimal install.

We first need to update the system. At the prompt, type: **dnf update**

You may have to scroll to the bottom of the window to see click Y for yes for the install will continue. Watch the screen; you will be prompted more than once to continue.

After the update, type **reboot** at the prompt.

We can install the GNOME Desktop Environment by typing: **r**

re

```
localhost login: root
Password:
[root@localhost ~]# dnf -y groupinstall "Fedora Workstation" _
```

The Fedora Workstation packages begin to download and install. Be patient! The install takes some time. This is Linux; it does not get easier. Anything you want Linux to do must be downloaded and installed.

Once the install completes, remove the unneeded packages using the

dnf clean packages.

reboot

```
[root@localhost ~]# dnf clean packages
140 files removed
[root@localhost ~]#
```

After the cleanup, type **reboot** at the prompt.

If the reboot halts at the command prompt, login as root and type the two following commands at the prompt to start the GNOME Desktop Environment.

```
echo "exec /usr/bin/gnome-session" >> ~/.xinitrc
```

startx

```
[root@localhost ~]# echo "exec /usr/bin/gnome-session" >> ~/.xinitrc
[root@localhost ~]# startx
```

The machine boots into the GUI desktop, and you are prompted to create your root profile. In the upper right corner, click Next to step through the screens.

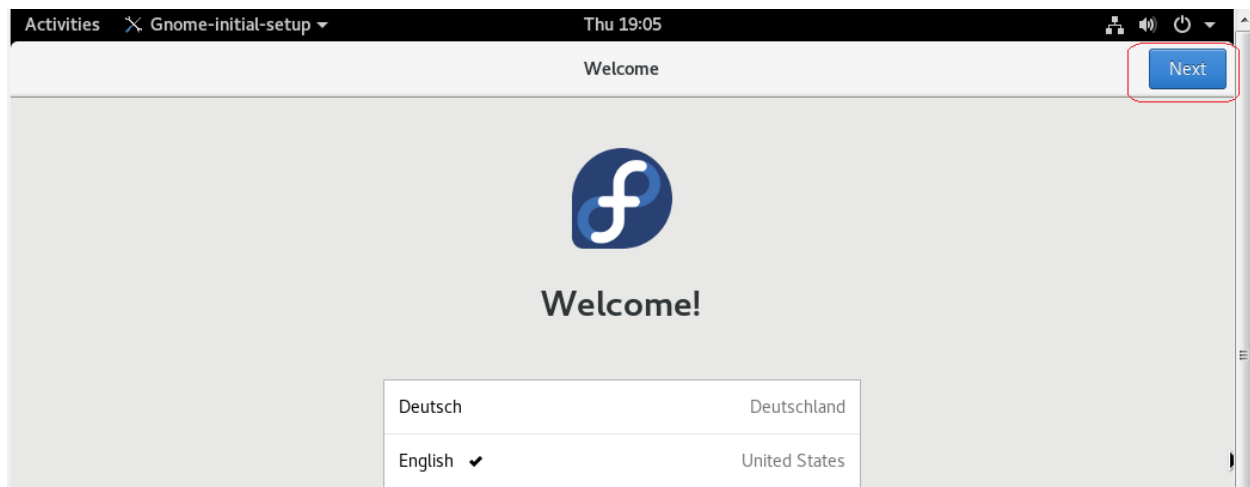
Troubleshooting

If the server does not boot to the desktop without the startx command, type the following at the terminal to make it permanent.

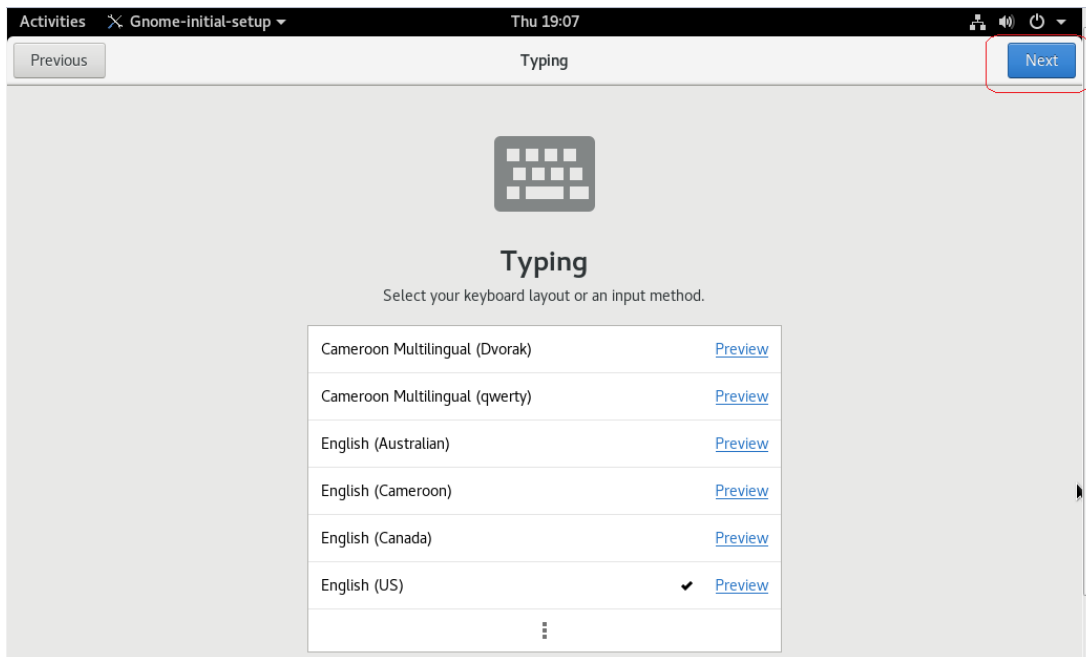
```
systemctl set-default graphical.target
```

Configure your default user account

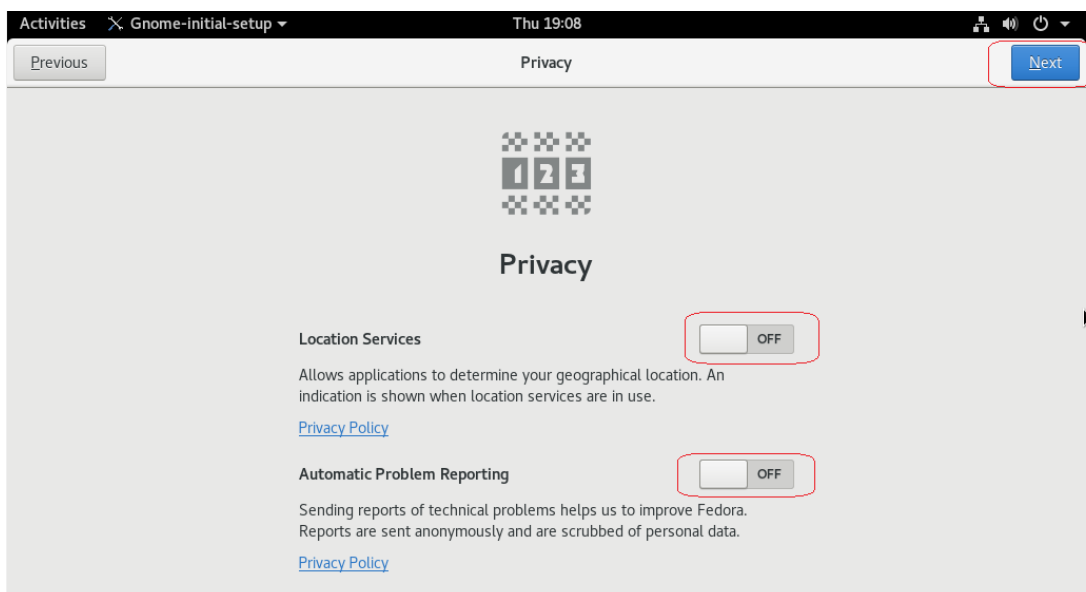
On the Welcome screen, select your language and click next.



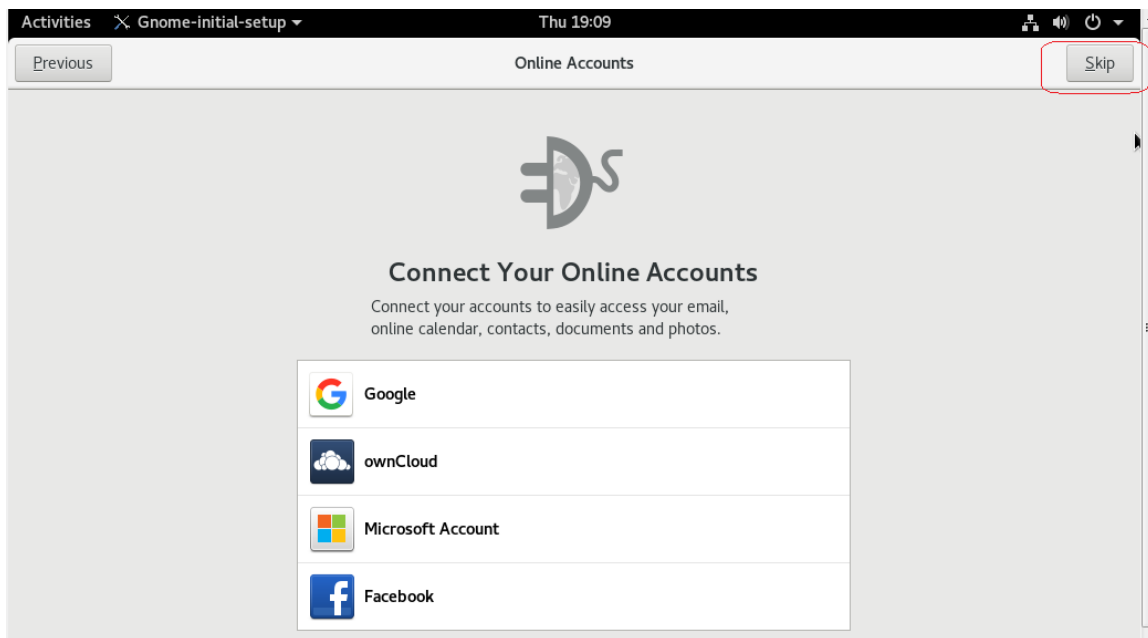
On the typing page, select your keyboard layout.



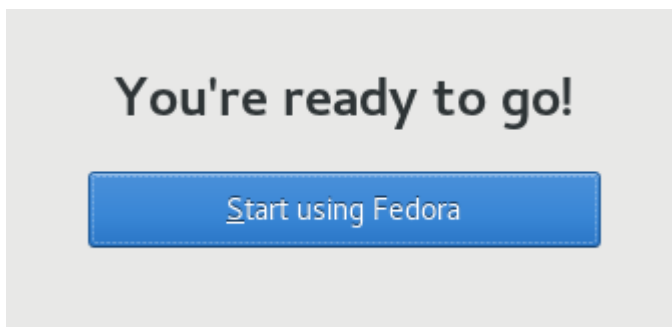
On the next page, turn off location services and problem reporting.



Skip the accounts.



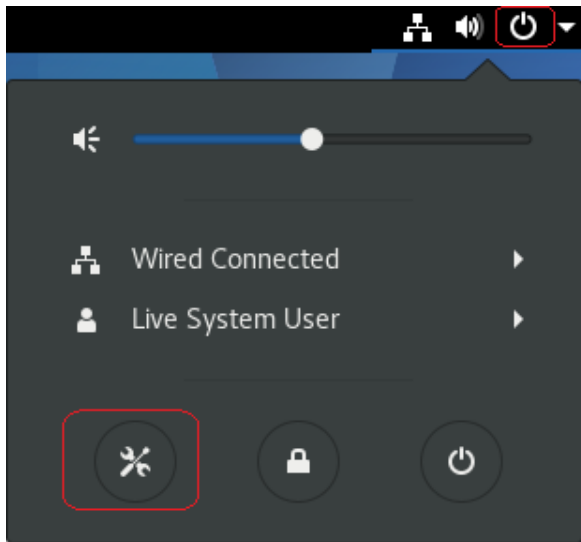
Start Fedora!



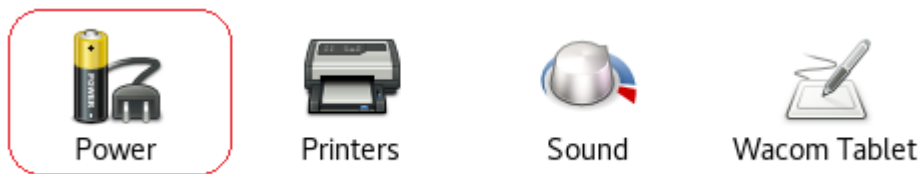
Close out the Getting Started tutorial.

Prevent Fedora from logging you off after 5 minutes of inactivity.

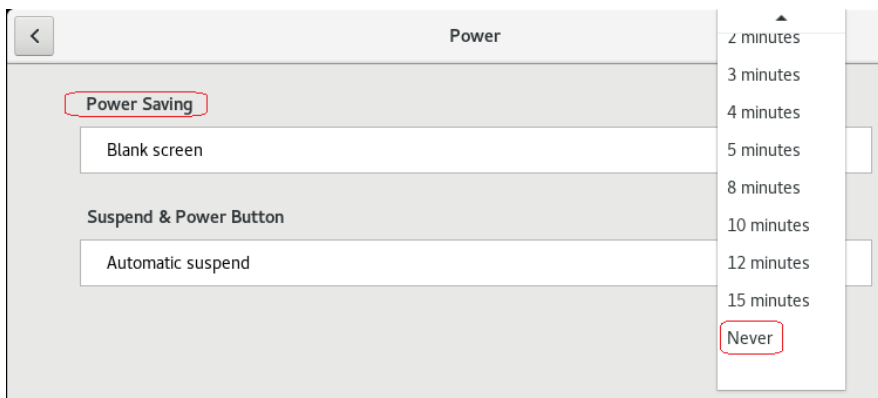
From the Fedora desktop, go to the upper right corner and click on the power button. Now click on the system utility icon in the lower left corner.



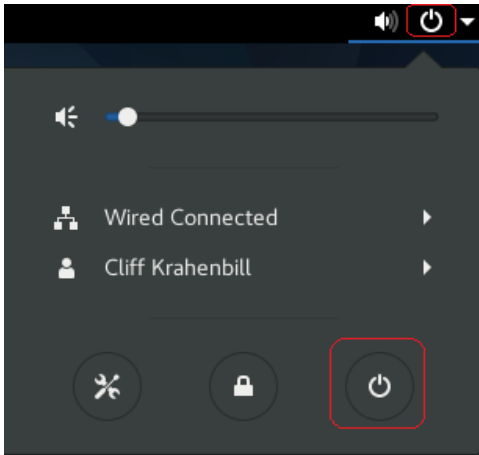
Click on the Power icon.



Click on the pull-down windows to the right of Power Savings. Go to the bottom of the window and select Never. This will keep your session from timing out if you remain idle for 5 minutes. Click on the X in the top right corner. You're welcome!



If you're ready to take a break before proceeding on to your next lab, you can shut down your Fedora Workstation using the control panel in the top right corner to access the power button. This is the only correct option for shutting your virtual machine!



If you would like to keep working, proceed on to the next Lab.

End of End 1ab!