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| **[ Final Project ]** |
| How to install Fedora |
| In Virtual Machine |

IT Data Analytics

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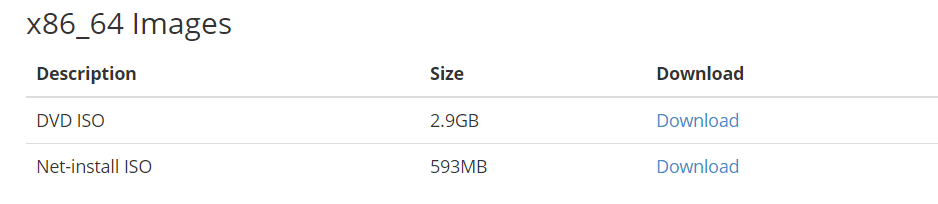
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**[ How to install and Set Fedora in Virtual Machine ]**

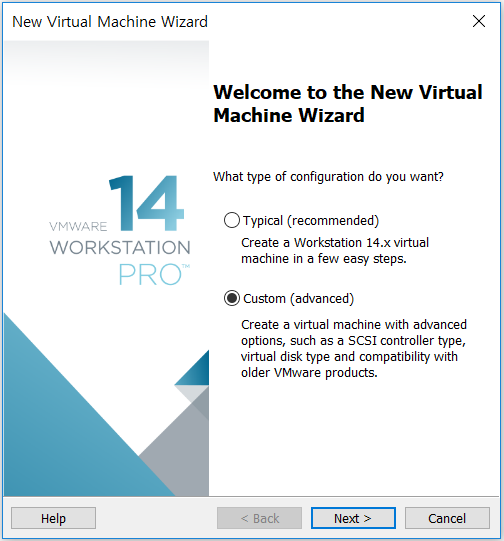
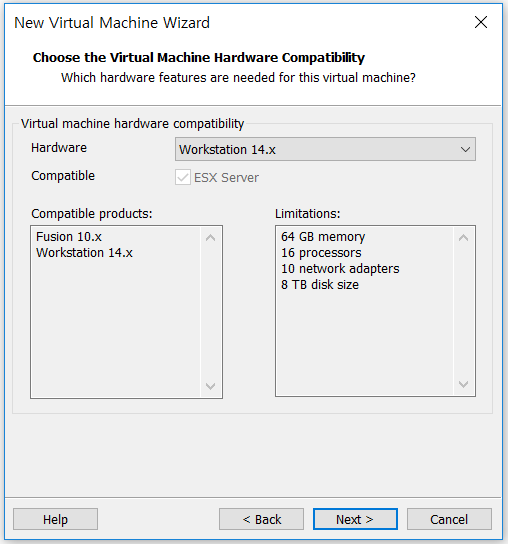
1. **Download Fedora image file from website**

* <https://getfedora.org/en/server/>
* Choose Net-install ISO

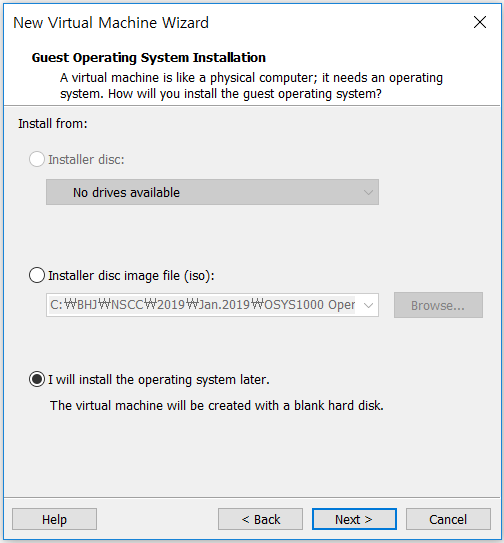
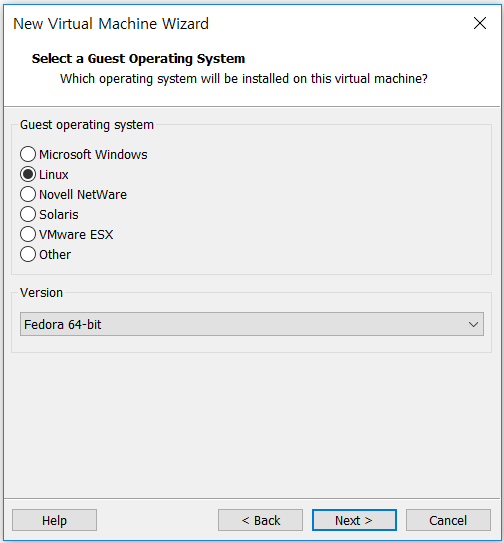


1. **Installing Fedora in Virtual Machine**

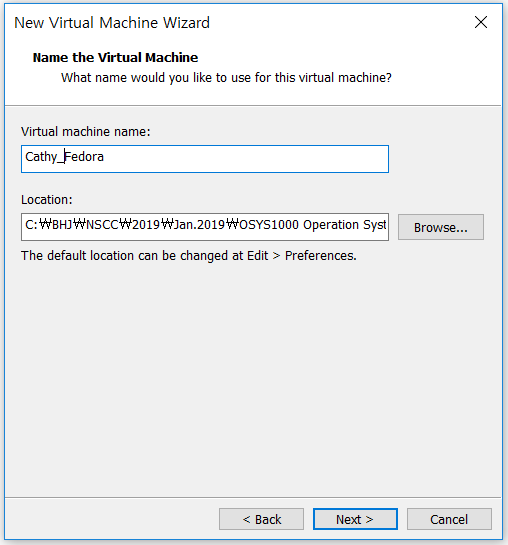
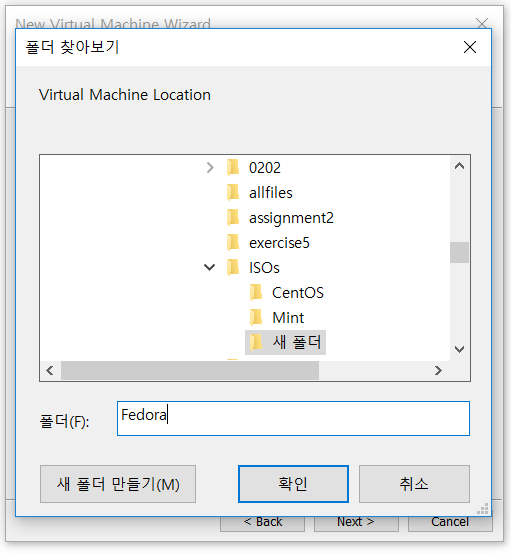
* Open your Virtual Machine and choose New Virtual Machine, click Custom

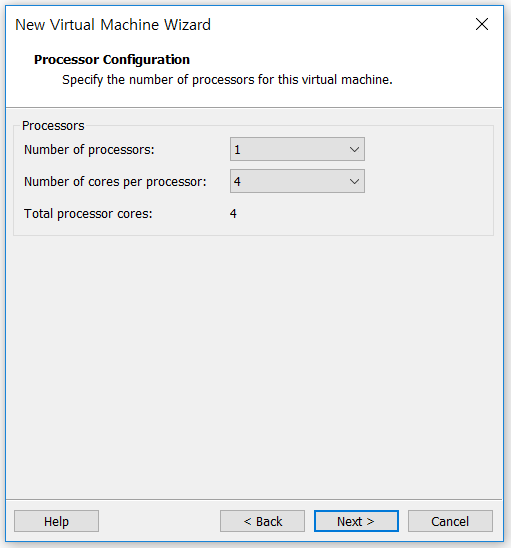
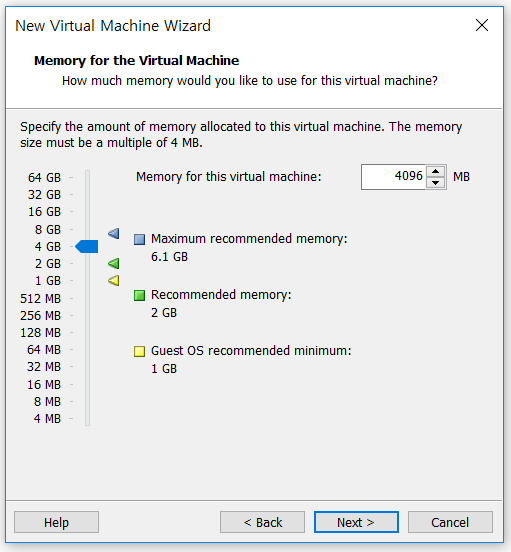
* Choose installing the operating system later and Fedora version

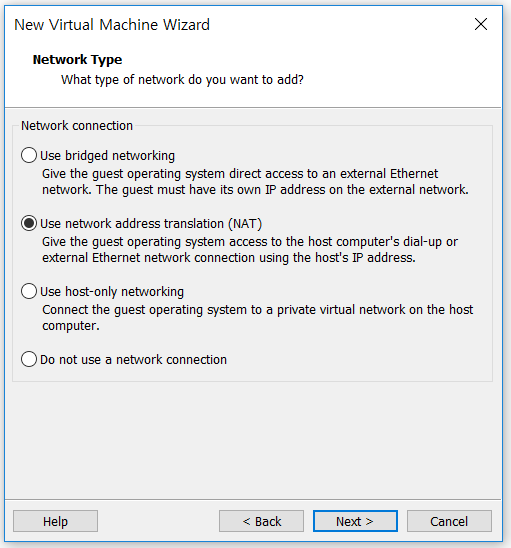
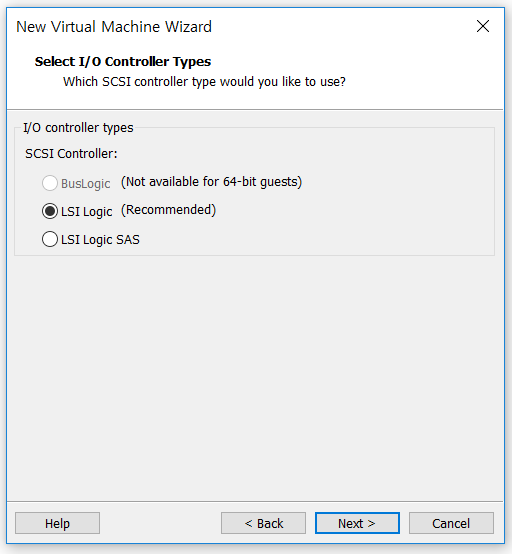
* Change the name of your Virtual Machine and your folder to save

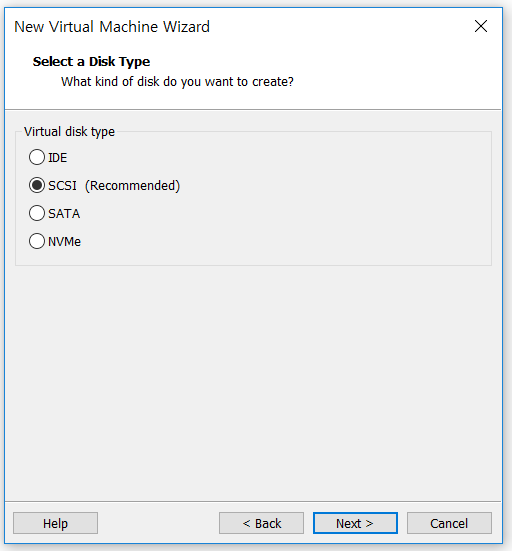
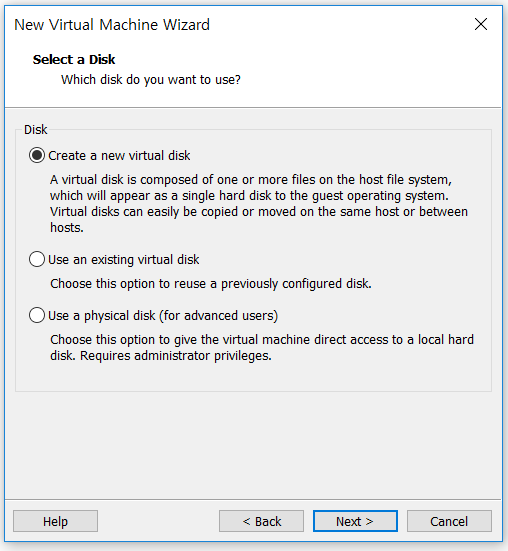
* Change process configuration and memory
* Suggestion - Number of Cores : 4, Memory : 4GB

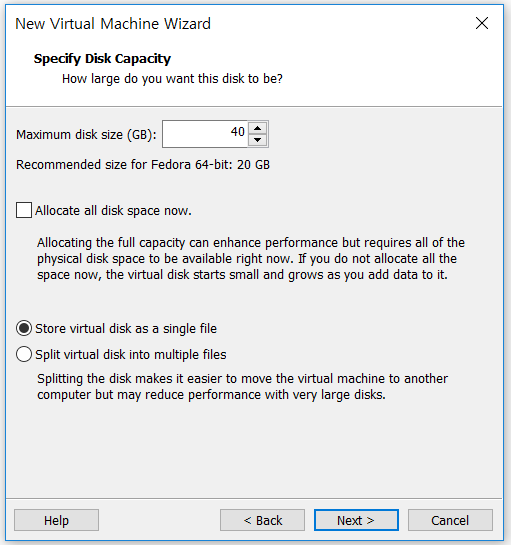
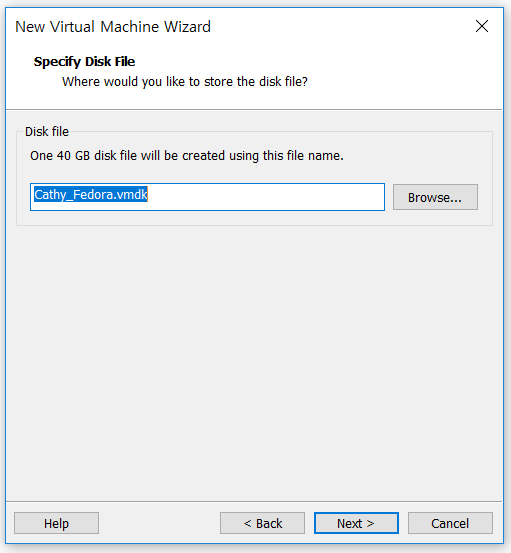
* Choose network type and I/O controller types
* Suggestion - Network Type : NAT, I/O controller types : LSI Logics

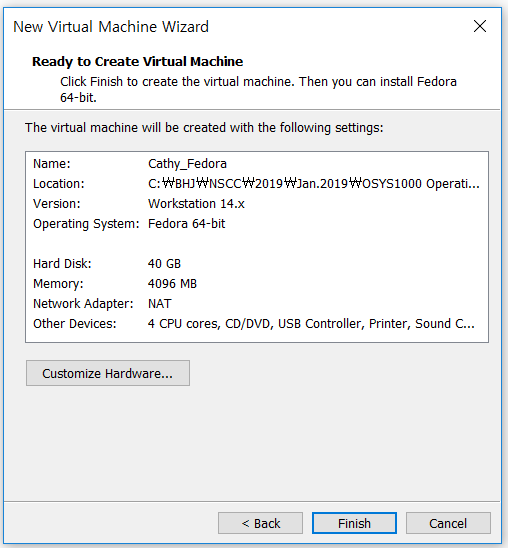
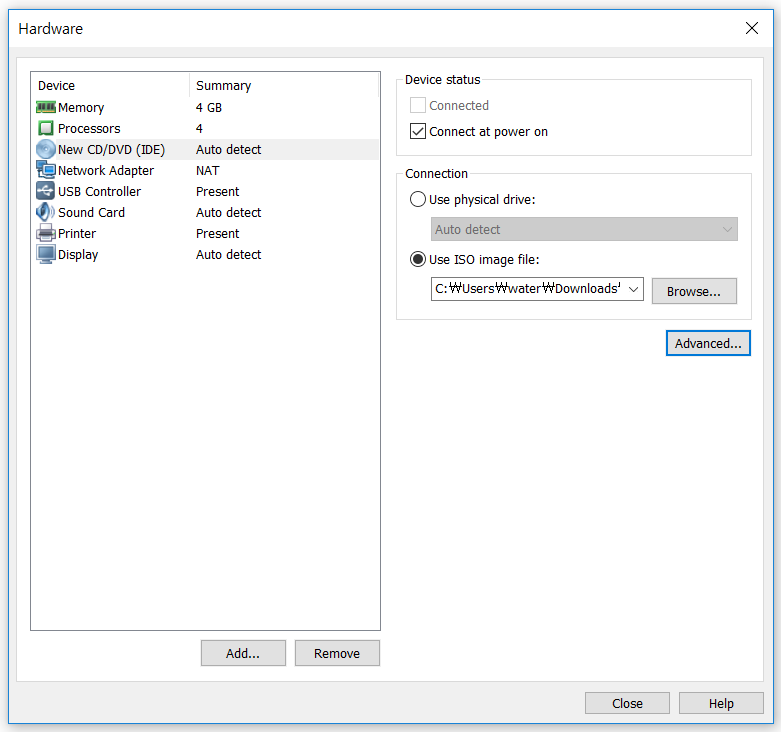
* Select Disk Type and a Disk
* Suggestion – Disk Type : SCSI, Disk : Create a new virtual disk

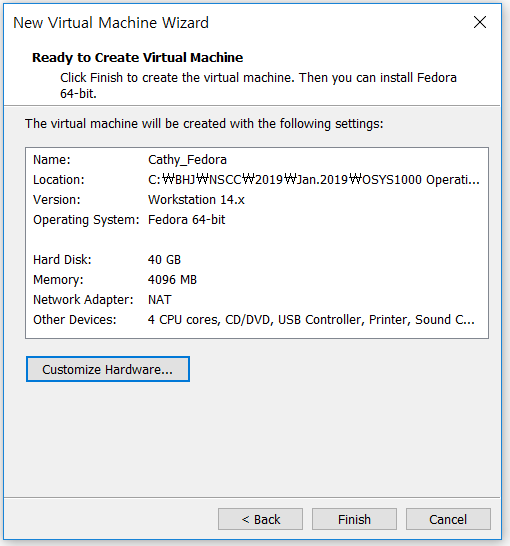
* Specify Disk Capacity and Disk File
* Suggestion – Disk Capacity : 40

* Click Finish, Choose New CD/DVD and select your Use ISO image file

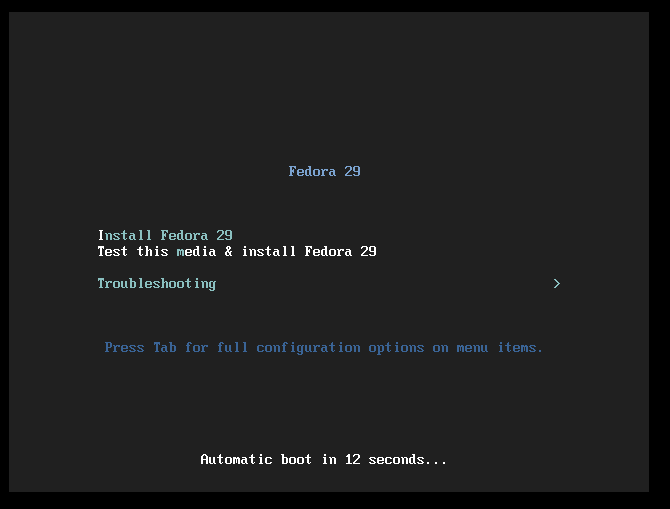
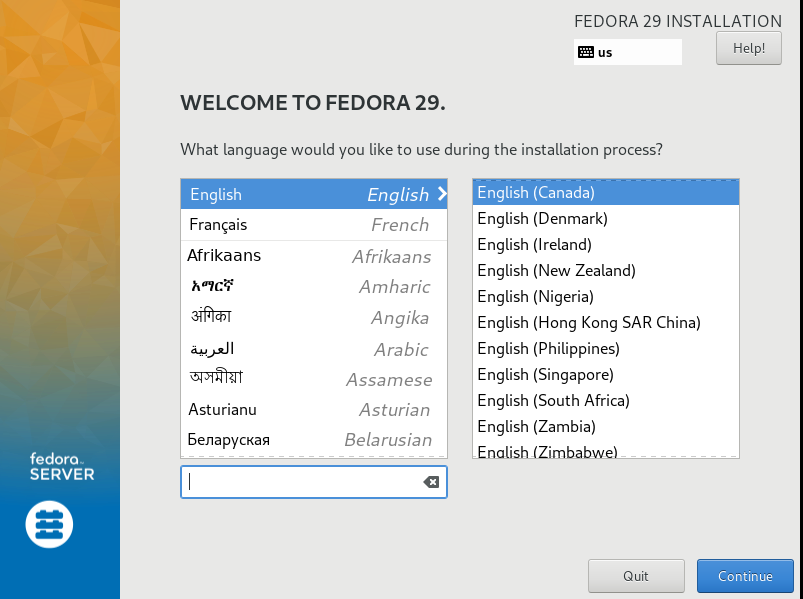
 

* Now, you finished Second step!

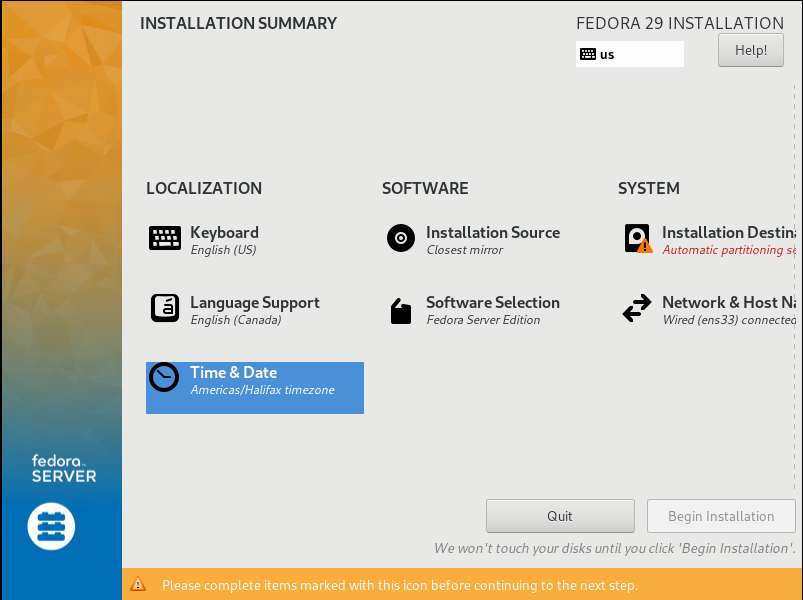
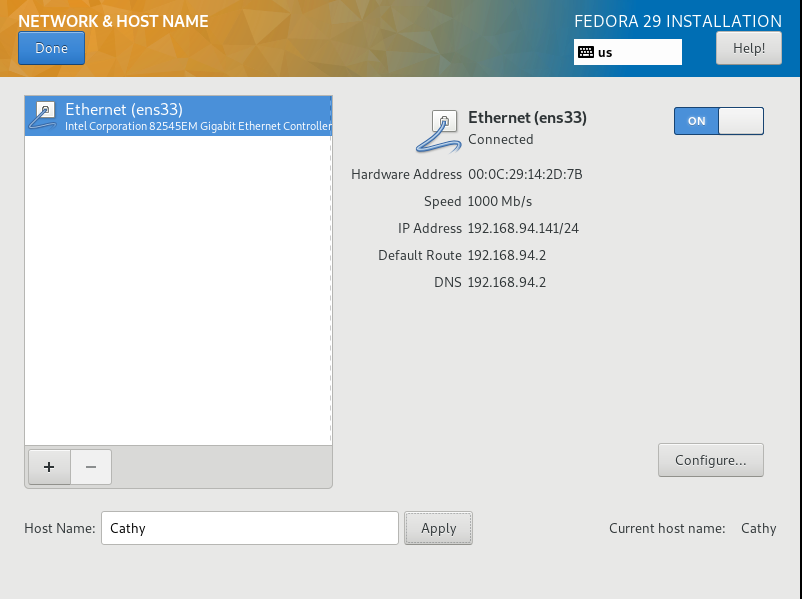


1. **Setup Fedora**

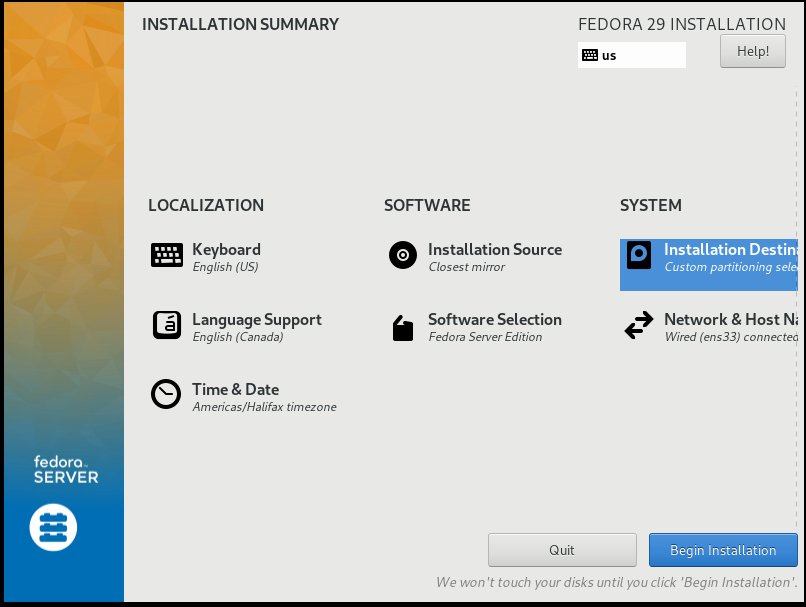
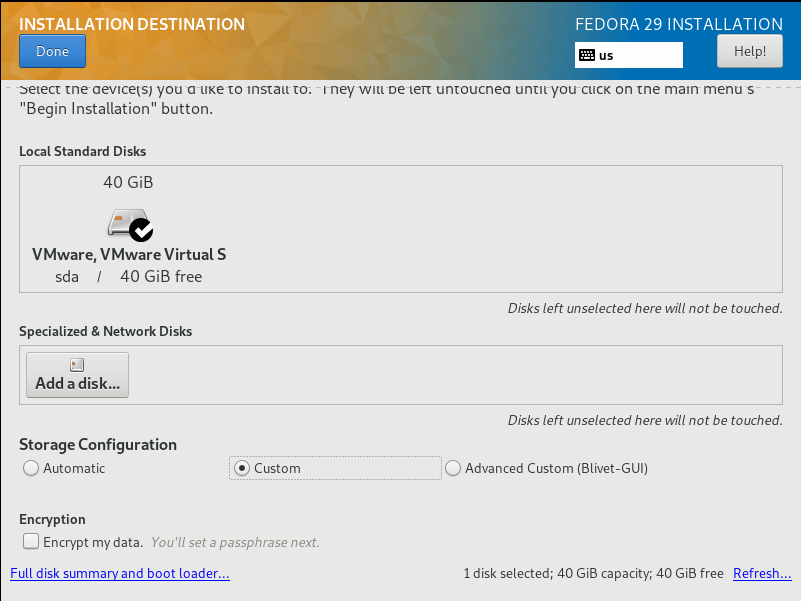
* Click Fedora and start it. Choose language

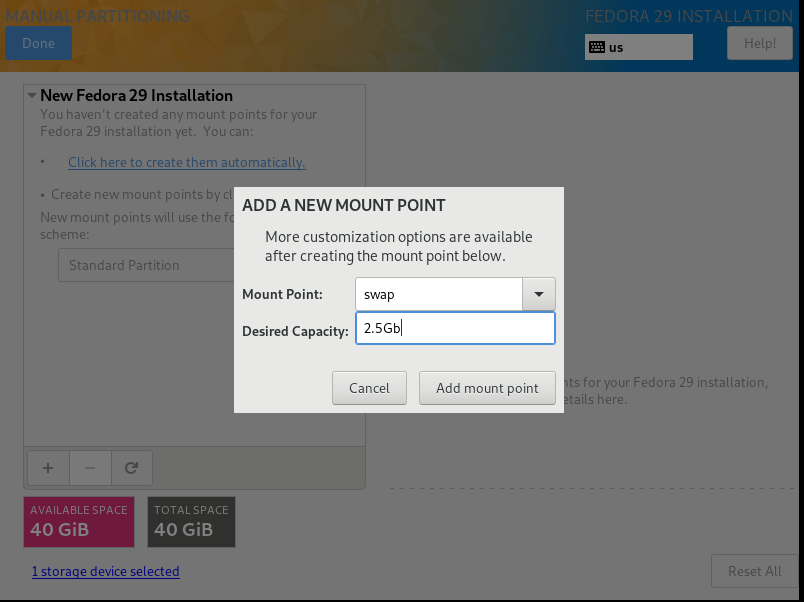
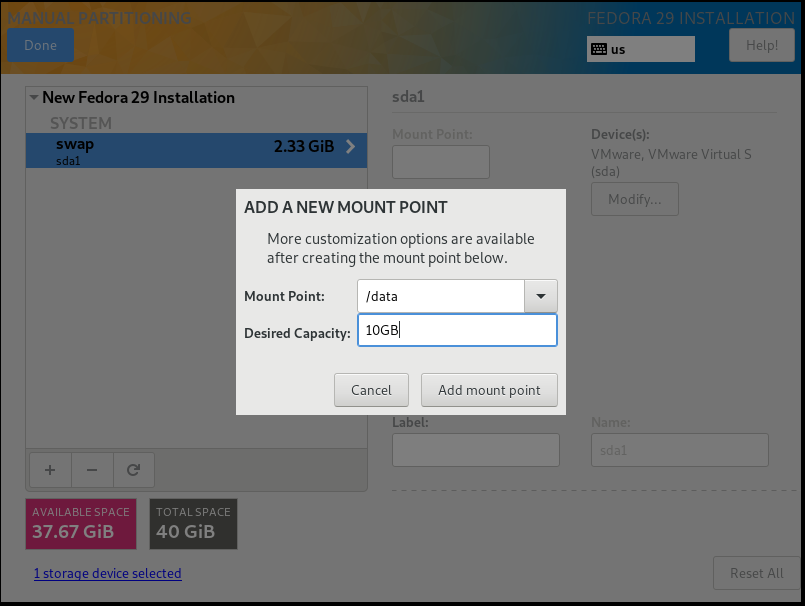
 

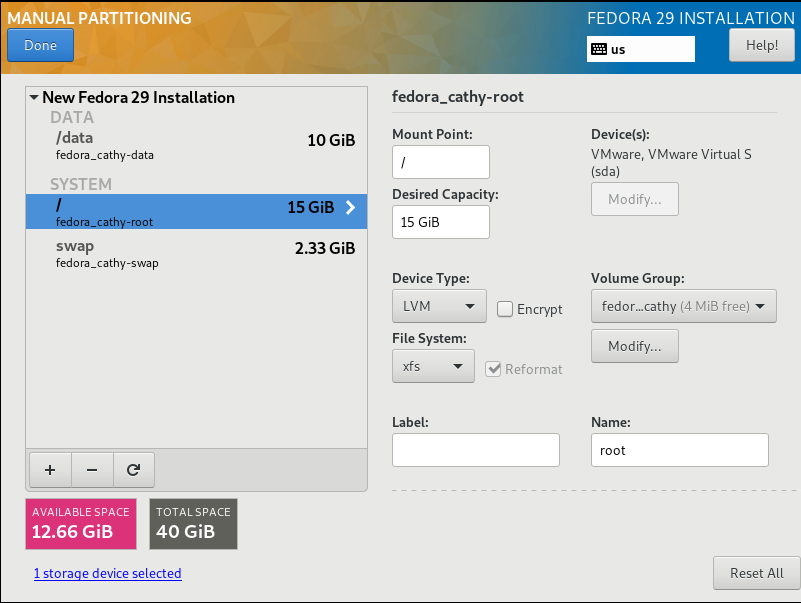
* Set Time & Date, Network & Host name
* Suggestion : Host Name with your first name

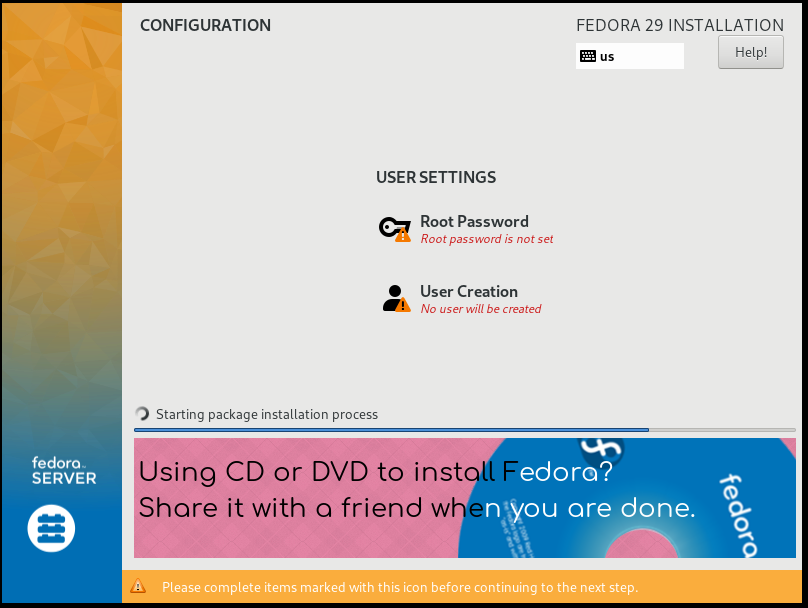
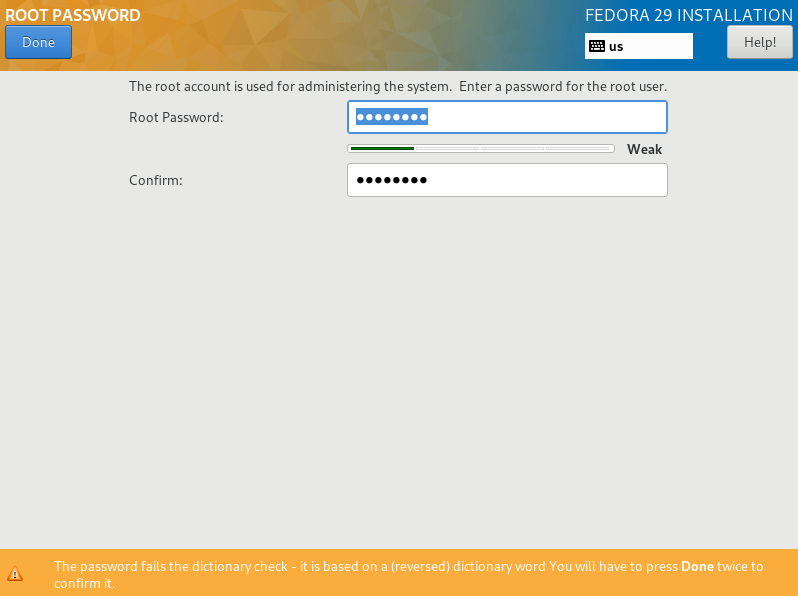
* Choose Storage Configuration with Custom, set partition
* Suggestion : swap -> 2.5 Gb, /data -> 10 Gb

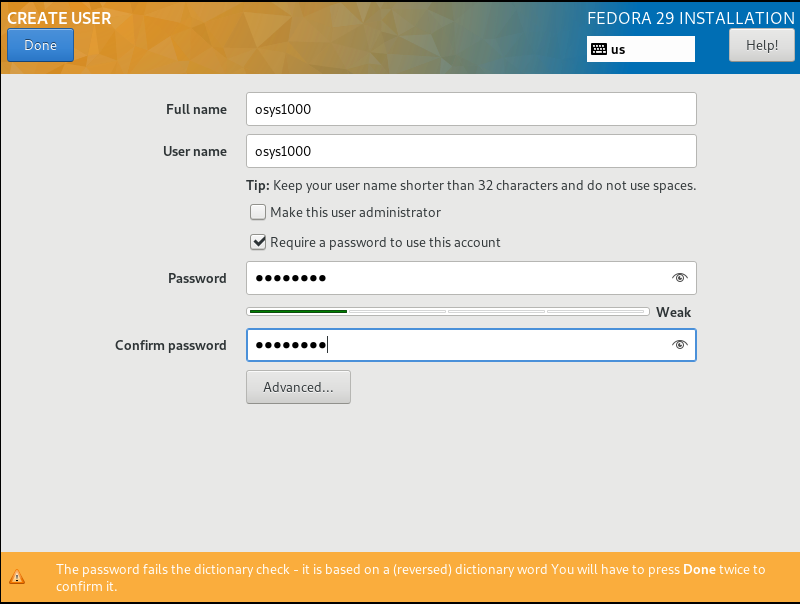
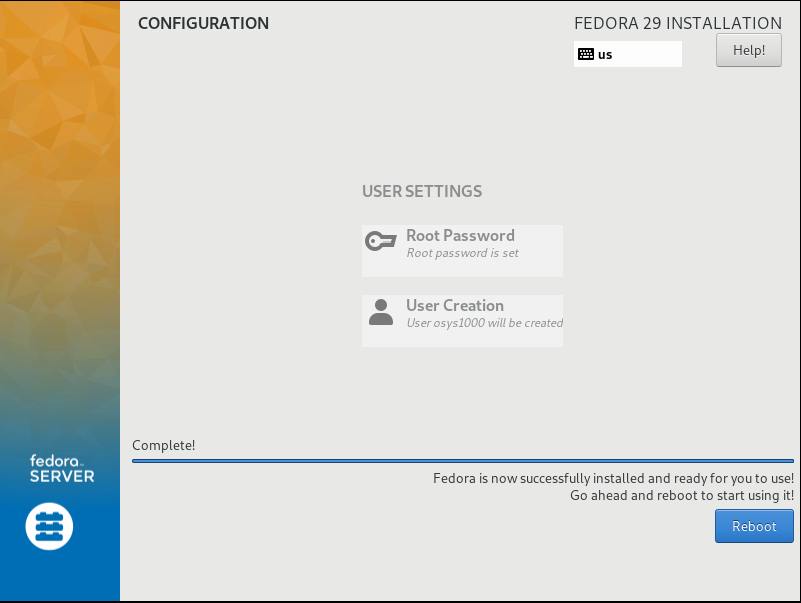
 



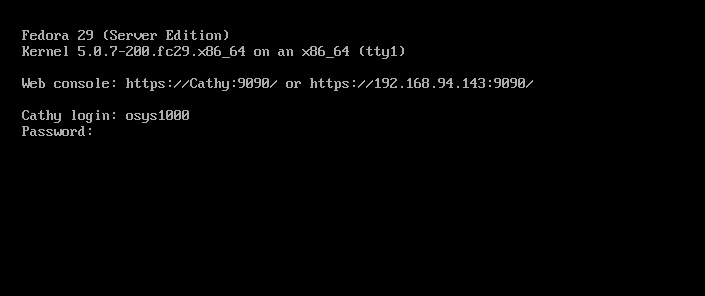
* Change User Setting and Reboot.

1. **Installing other services**
2. **Open VM Tools**

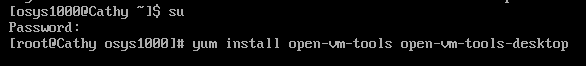
- Login in your terminal



- Change user as root and type command as below

$ su

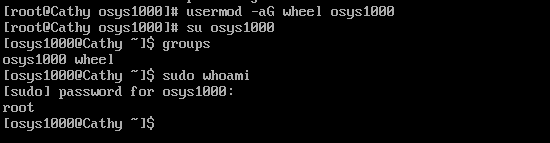
$ yum install open-vm-tools open-vm-tools-desktop



- Change usermod

$ usermod -gG wheel osys1000

$ sudo osys1000

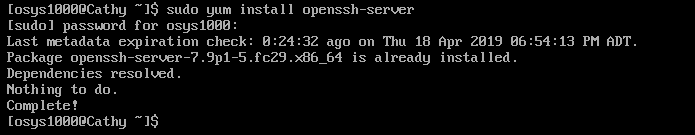


1. **SSH**

(ref: <https://linuxconfig.org/how-to-install-start-and-connect-to-ssh-server-on-fedora-linux>)

- Install SSH server

$ sudo yum install openssh-server



- We need to start it up, and make it enable

$ sudo systemctl start sshd

$ netstat -ant | grep 22 (for checking)



- Check SSH status

$ sudo systemctl status sshd (for checking)



1. **SAMBA**

(ref:<https://www.hiroom2.com/2016/06/26/fedora-24-install-samba-and-share-with-windows-10/>)

- Install Samba

$ sudo yum install -y samba



- Start it up, and make it enable

$ sudo systemctl enable smb nmb

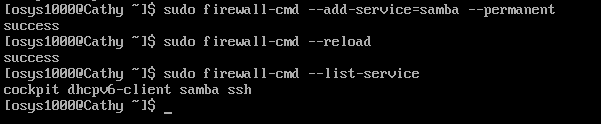


- Add service with firewall-cmd

$ sudo firewall-cmd --add-service=samba --permanent

$ sudo firewall-cmd --reload

$ sudo firewall-cmd --list-service

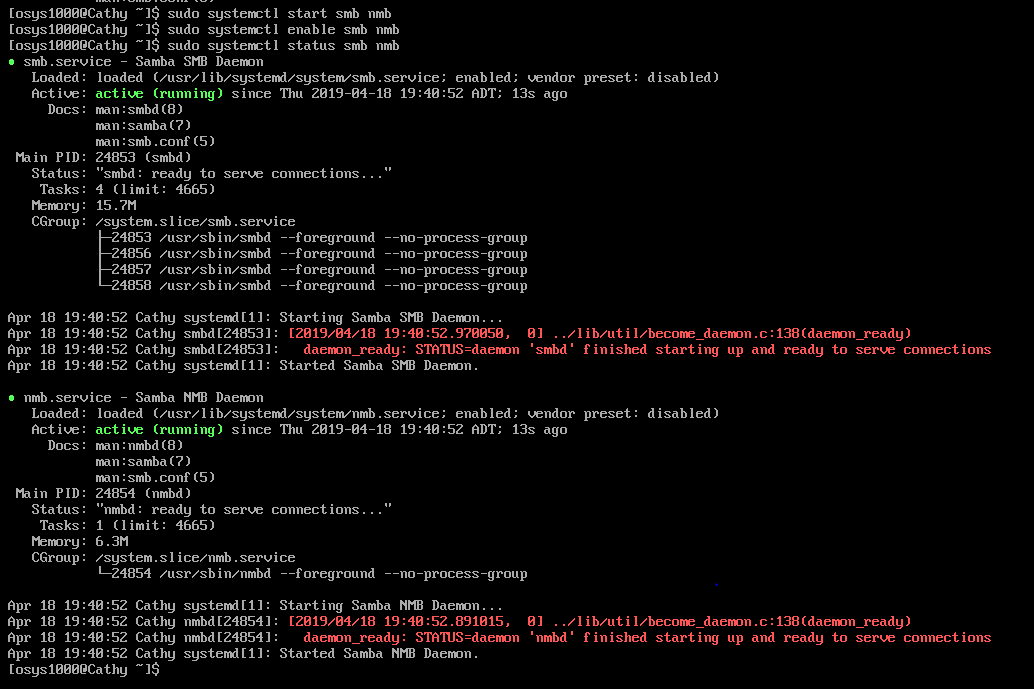


* Check status

$ sudo systemctl start smb nmb

$ sudo systemctl enable smb nmb

$ sudo systemctl status smb nmb (for checking)

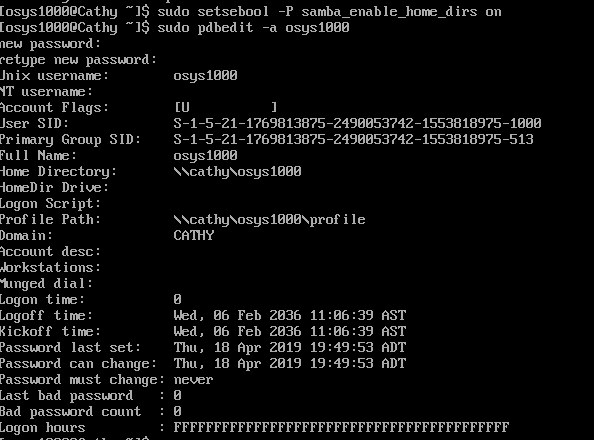


- Enable access to home directory

- Add user access to samba with pdbedit.

$ sudo setsebool -P samba\_enable\_home\_dirs on

$ sudo pdbedit -a osys1000



- Reboot smb and nmb after editing smb.conf

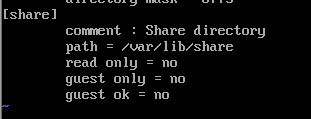
$ sudo systemctl restart smb nmb



- Add comment as below in smb.conf file

$ sudo vi /etc/samba/smb.conf



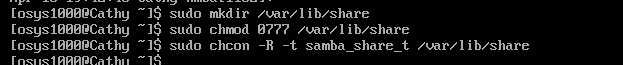


- Change /var/lib/share's permission to 0777. Add samba\_share\_t label to /var/lib/share

$ sudo mkdir /var/lib/share

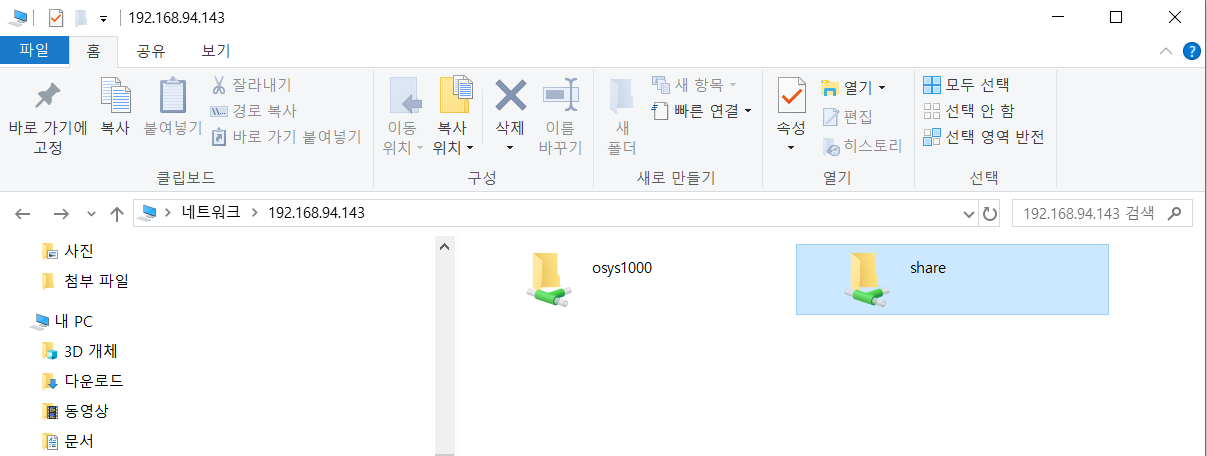
$ sudo chmod 0777 /var/lib/share

$ sudo chcon -R -t samba\_share\_t /var/lib/share

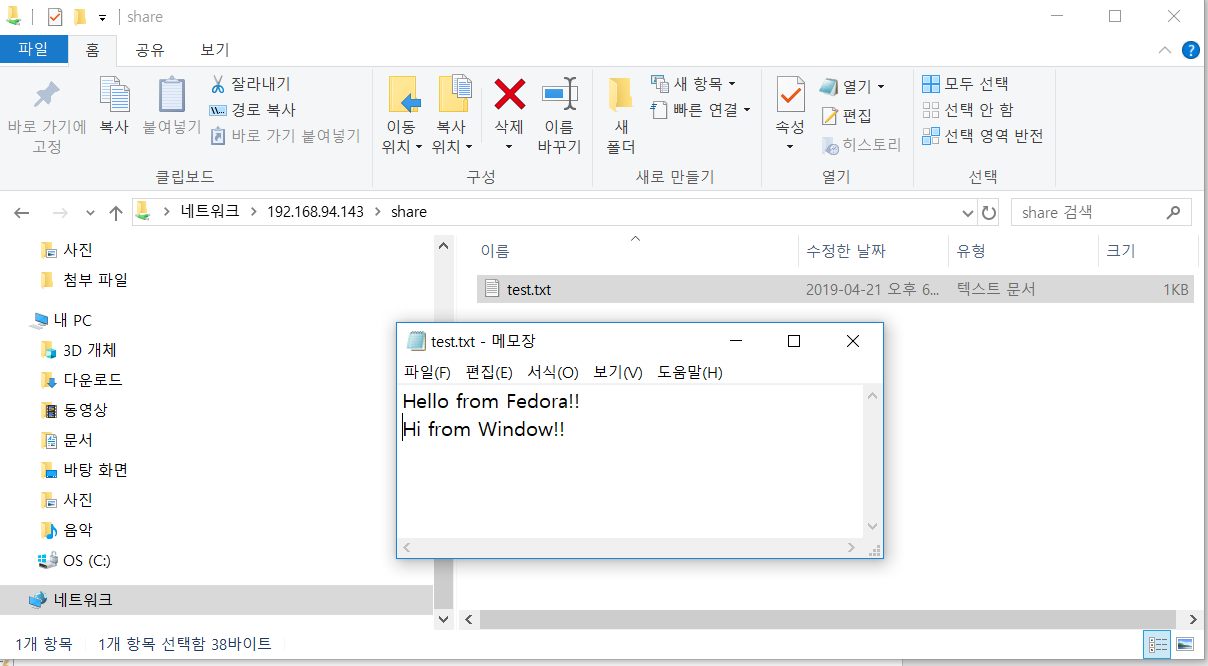


- Access samba from Windows 10

: Check your ip address and access to window



- Create new file in share folder in Fedora and check it in Window. And Vice versa.



1. **NGINX**

(ref:<https://www.godaddy.com/garage/how-to-install-and-configure-nginx-on-fedora/>)

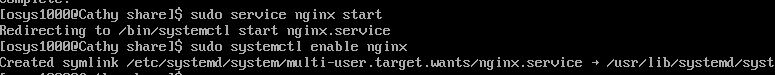
- Install NGINX

$ sudo yum -y install nginx



- Start NGINX and make it enable

$ sudo service nginx start



- Make our DocumentRoot based on the name public\_html

$ sudo mkdir -p /var/www/nginxsite.com/public\_html



- Create index file and type “[www.nginxsite.com](http://www.nginxsite.com)” in index file

$ sudo vi /var/www/nginxsite.com/public\_html/index.html



$ sudo chown 777 /var/www/nginxsite.com/public\_html

$ sudo chown -R osys1000:osys1000 /var/www/nginxsite.com/public\_html

- Give ownership of that directory



- Set up our directories where the server blocks will live

$ sudo mkdir /etc/nginx/sites-available

$ sudo mkdir /etc/nginx/sites-enabled



- Open the global NGINX configuration file

$ sudo vi /etc/nginx/nginx.conf



- Add these lines in conf. file

include /etc/nginx/sites-enabled/\*.conf

server\_names\_hash\_bucket\_size 64;

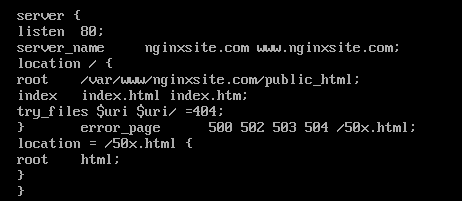


- Create a new file specifically for the server block for your site and open it

$ sudo vi /etc/nignx/sites-available/nginxsite.com.conf



- Paste a new NGINX server block in here

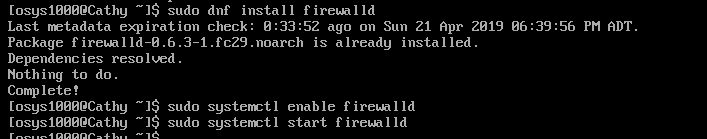


- Install firewall package

$ sudo dnf install firewalld

$ sudo systemctl enable firewalld

$ sudo systemctl start firewalld



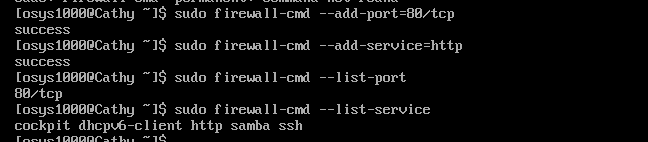
- Add port 80 and http service, Check your work

$ sudo firewall-cmd --add-port=80/tcp

$ sudo firewall-cmd --add-service=http

$ sudo firewall-cmd --list-port

$ sudo firewall-cmd --list-service



- Create a symbolic link between sites-available and sites-enabled

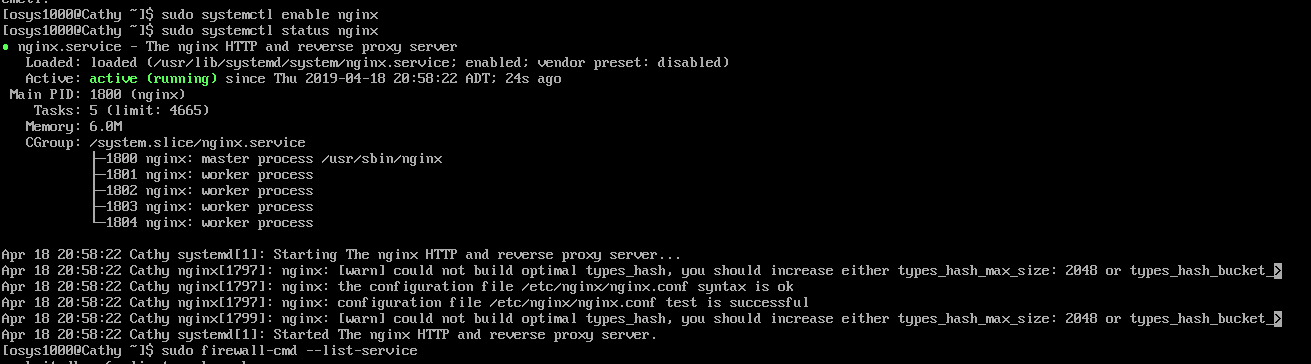
$sudo ln -s /etc/nginx/sites-available/nginxsite.com.conf /etc/nginx/sites-enabled/nginxsite.com.conf



- Make it enable and check the status

$ sudo systemctl enable nginx

$ sudo systemctl status nginx (for checking)



1. **GUI**

- Install GUI

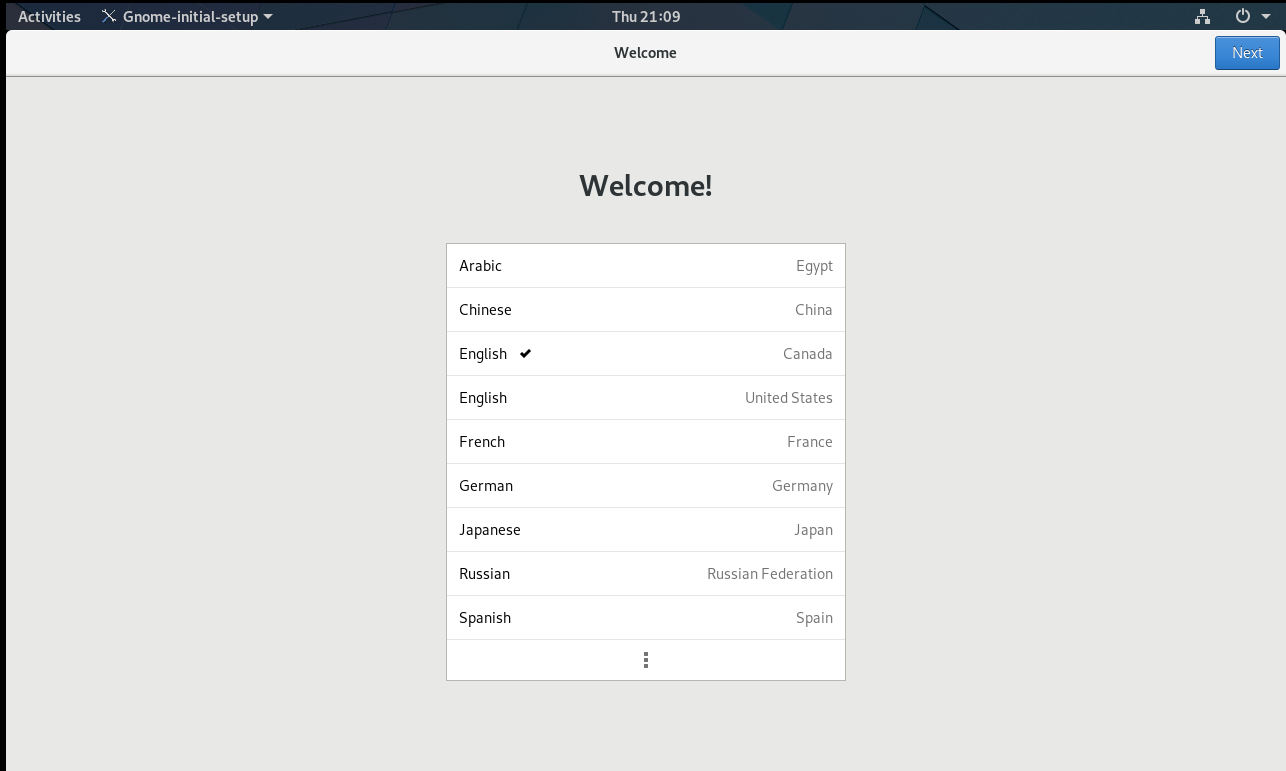
$ sudo inf install @gnome-desktop

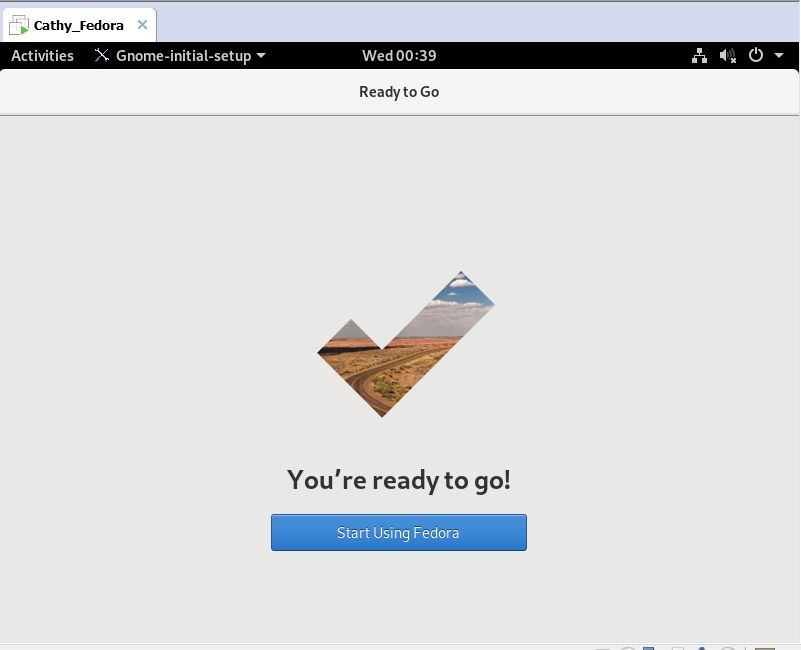


- You can start GUI when you want to use it

$ startx







- You can check internet connectivity

