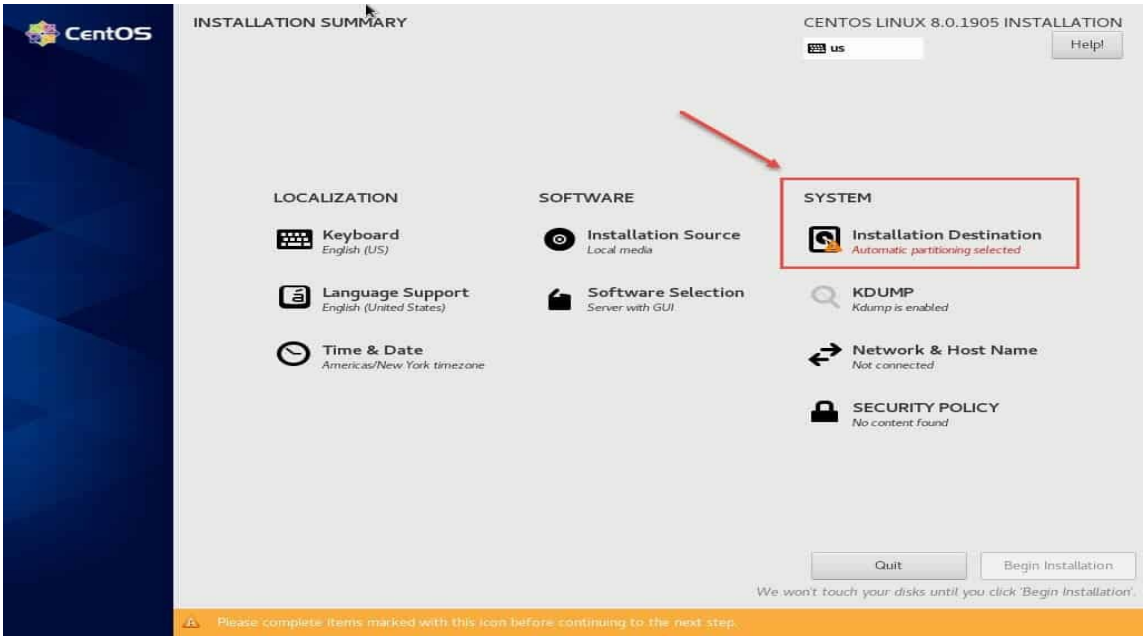
(1.) Create LVM during installation CentOS-8

STEP:1 Download ISO Image file

First i donwload **Centos-8 ISO** Images files on https://www.centos.org/download/

STEP:2 Select “Installtion Destination”:-

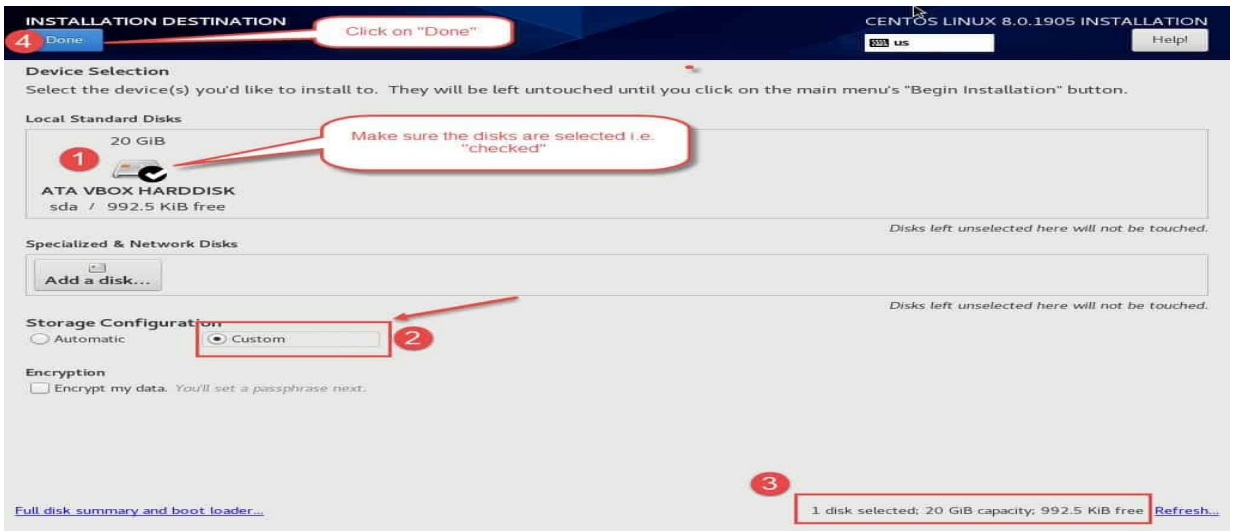
Here by defualt selected as Automatic partitioning,but i want to select custom option.



I am using KVM with 20 GB space Size Assigned for installtion.

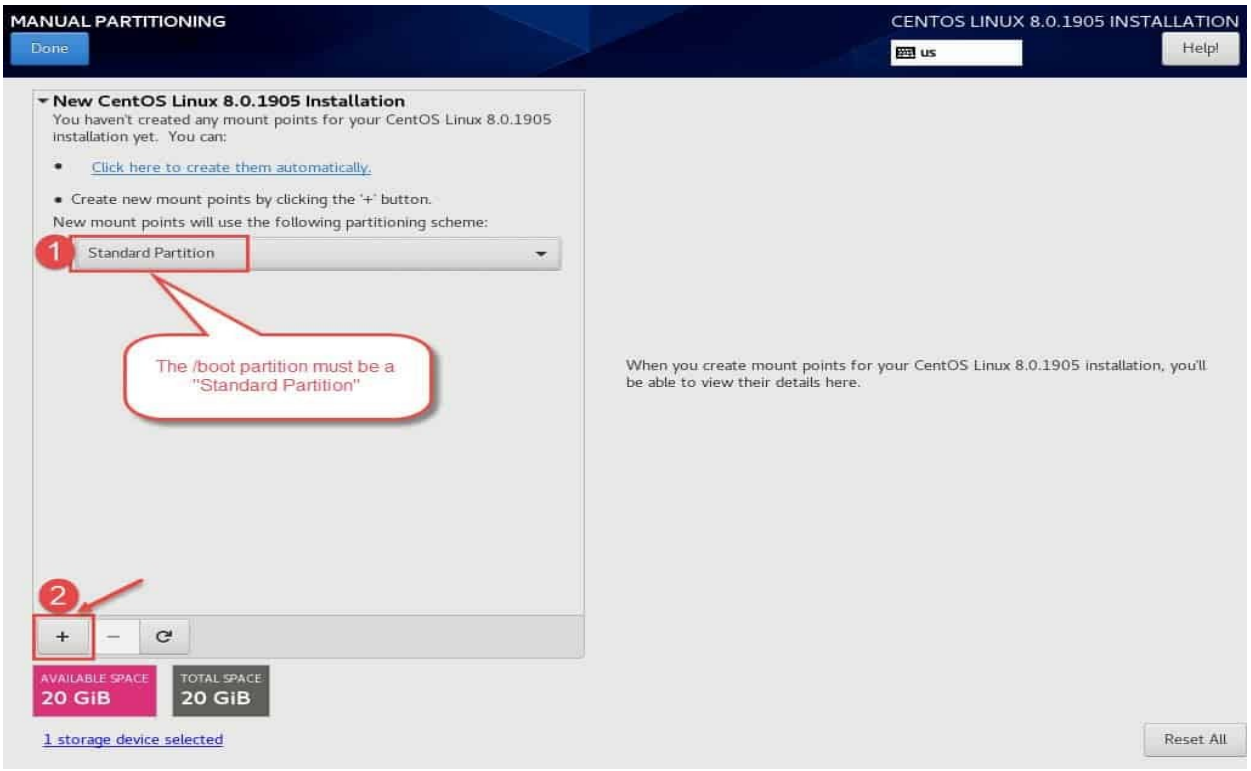
STEP:3 Create Sytem and Data Partition:-

i am created three partition here first is **root,boot** and **swap** partition.as you can see our screenshot.

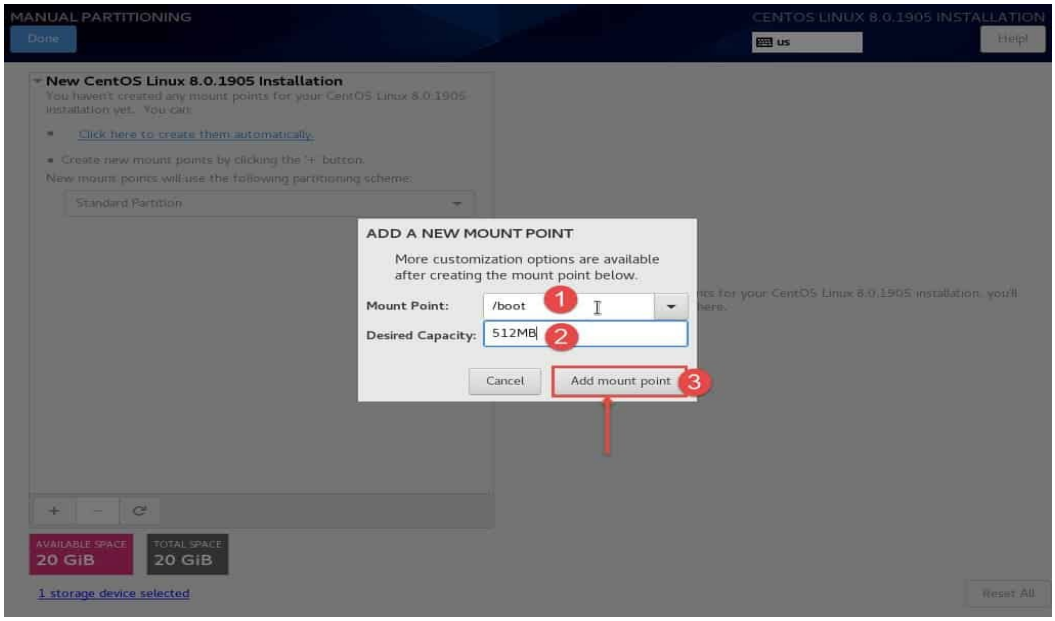


(A) Create /boot partition:-

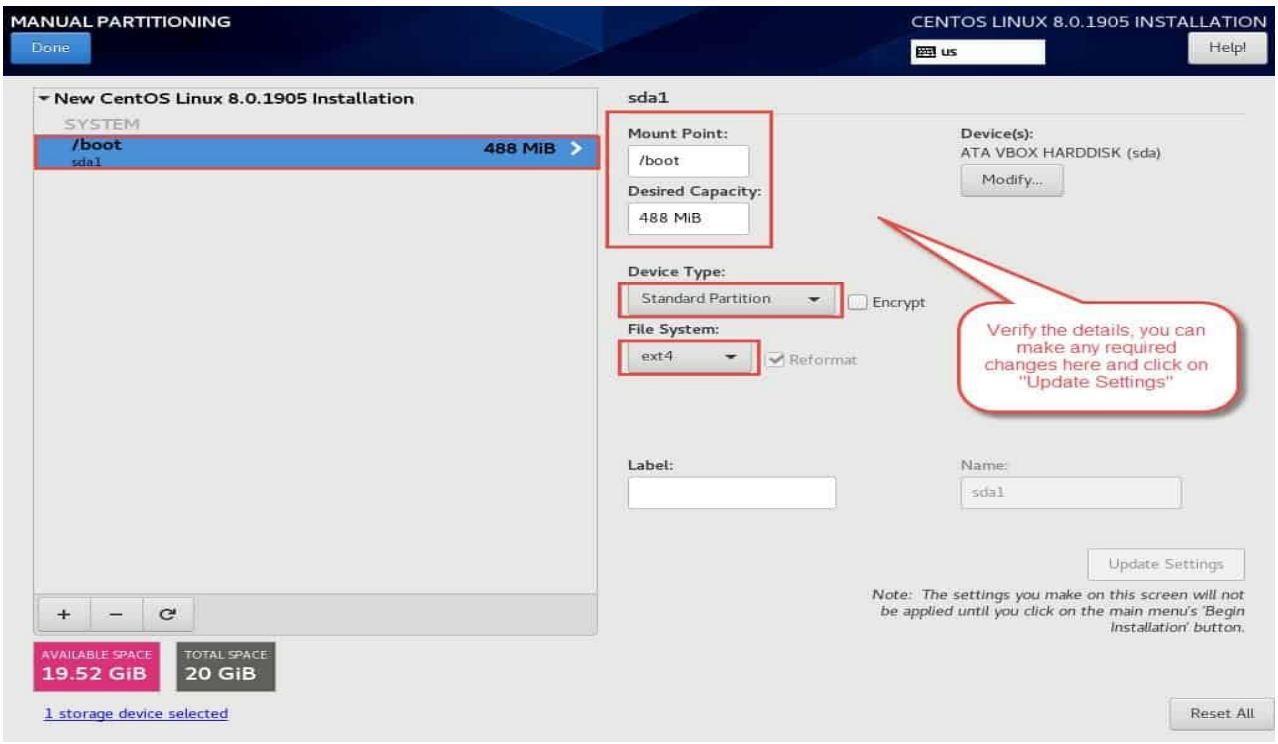
/boot Pratition always be a standard partition as it can not be an LVM.Here i am select **“Standard partition”** and click on (+) icon**.**



Next add a new mount point small window is open and select **/boot** after that given size is 512 MB.Also you can install multiple kernal in which caes you can choose the size 1**024 MB**.after that you can click on **Add Mount Point** as per screenshot given below.

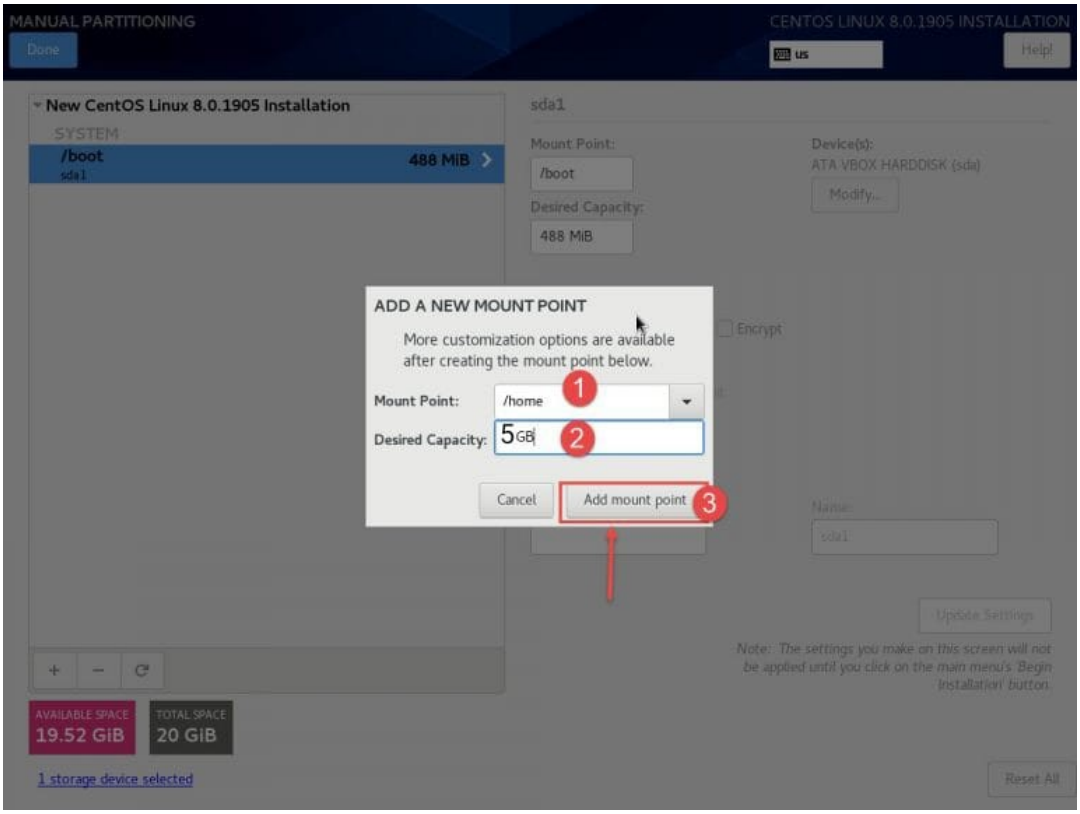


After that you can verify partition details like **Mount Point is /boot,Desired size 488MB,**Device Type **Standard Partition** and filnaly check File Syatem that is **ext4** and click **Update Setting.**



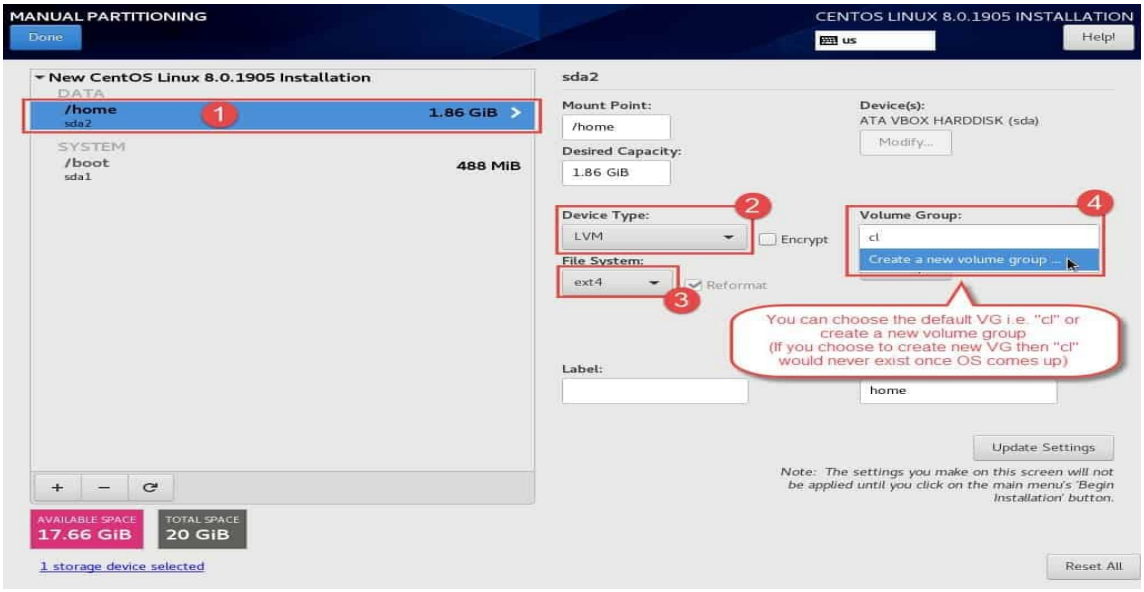
(B) Create home (/home) partition:-

To create additional partitions, you can again click on **plus** (+) sign and then provide the **Mount Point** details along with the **Desired Capacity** for the respective Mount Point. Click on "**Add mount point**" once done.

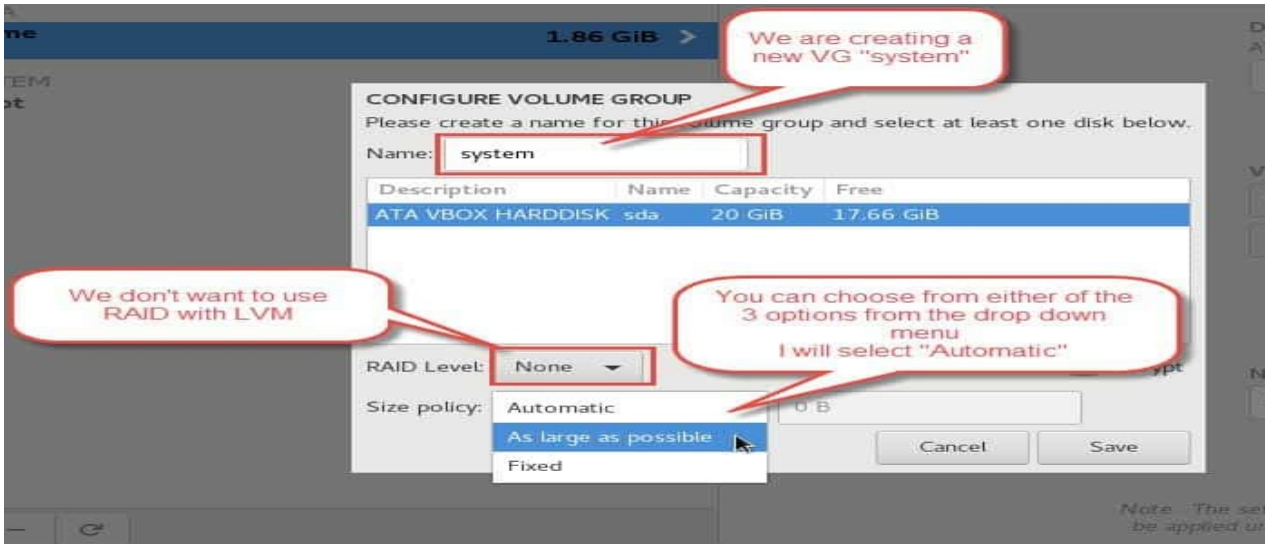


This is the part where we will create LVM during installation stage.Select the partition which you want to have LVM as backend. Select **Device Type** as "**LVM**".

Create a new volume group under **Volume Group** section which will bring up a pop up console for further configuration options.

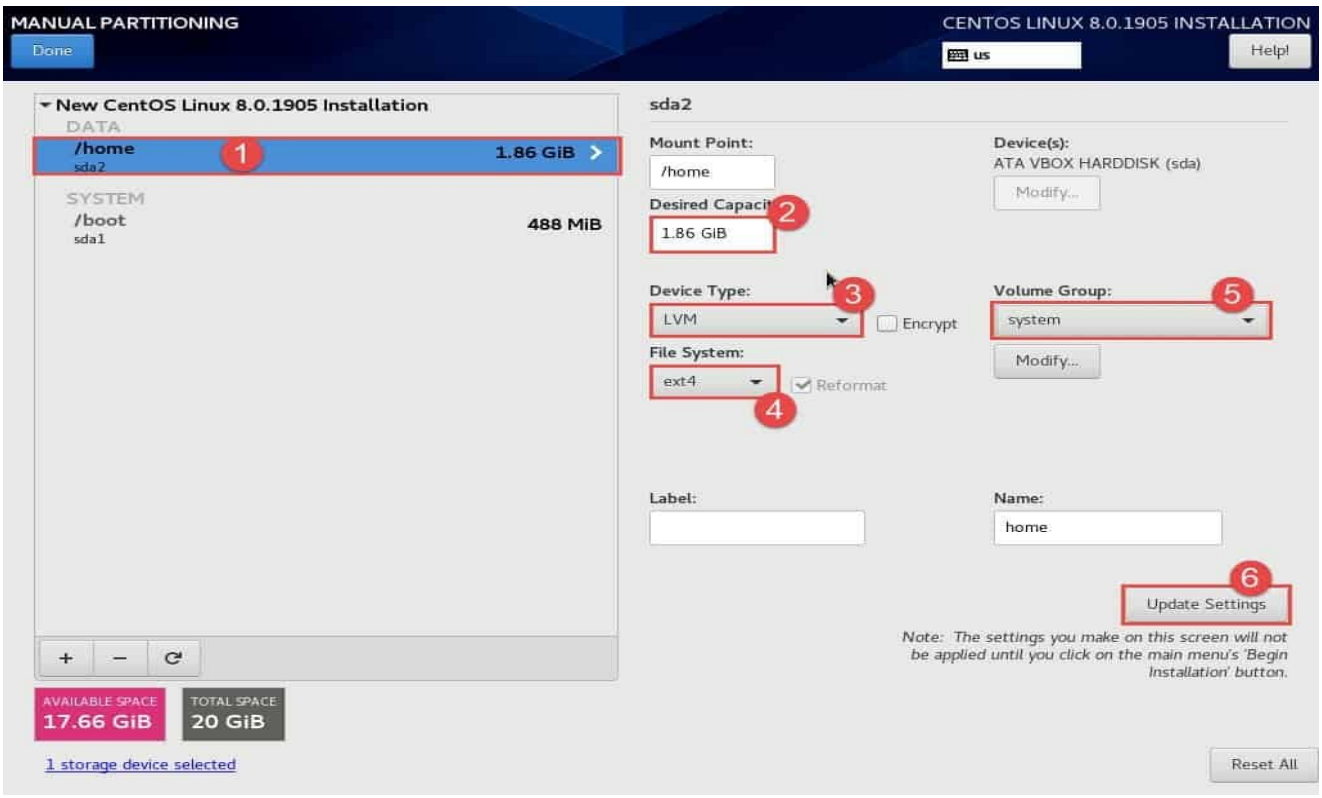


Provide the preferred name for Volume Group, in this example my VG name will be "**system**" as per your choice.and Select "**Automatic**" as the Size Policy for the Volume group,finally click on **“Save”** to save the configuration.



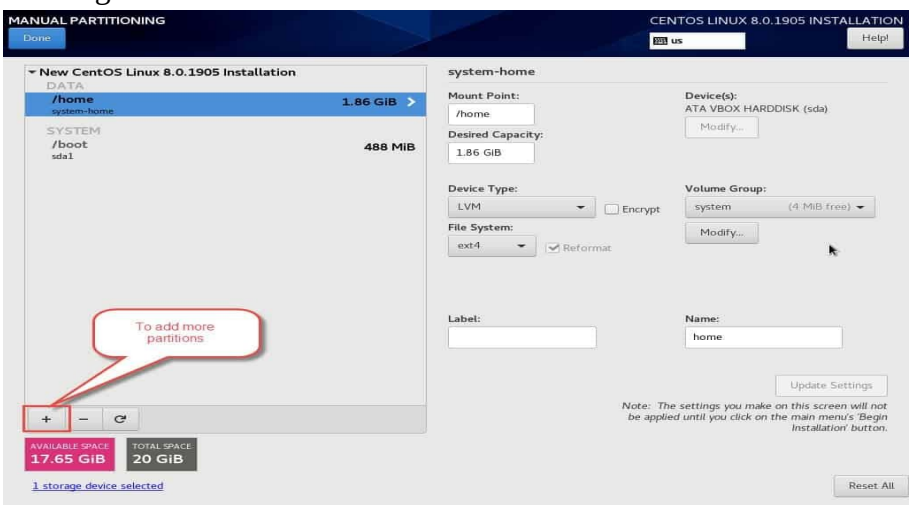
Now you can verify your final configuration here and click on **"Update Settings"** to save the changes.

In our case i am using VG name is **“system”** created and now you can create LVM using this Volume Group or you may create more then one Volume Groups as per your requirement.you can see screenshot given below.

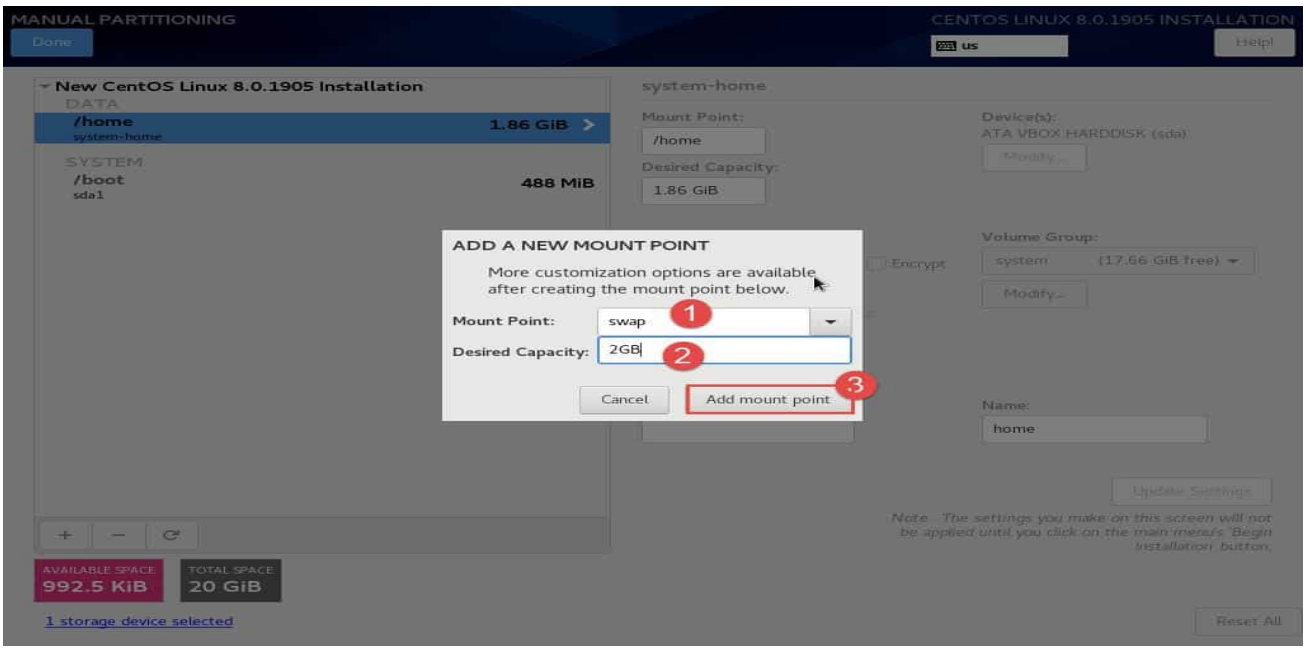


(C) Create (swap) partition:-

Here i want to create new swap partition. Click on **(+)** icon to add more ‘partition.You can see screenshot given bellow.

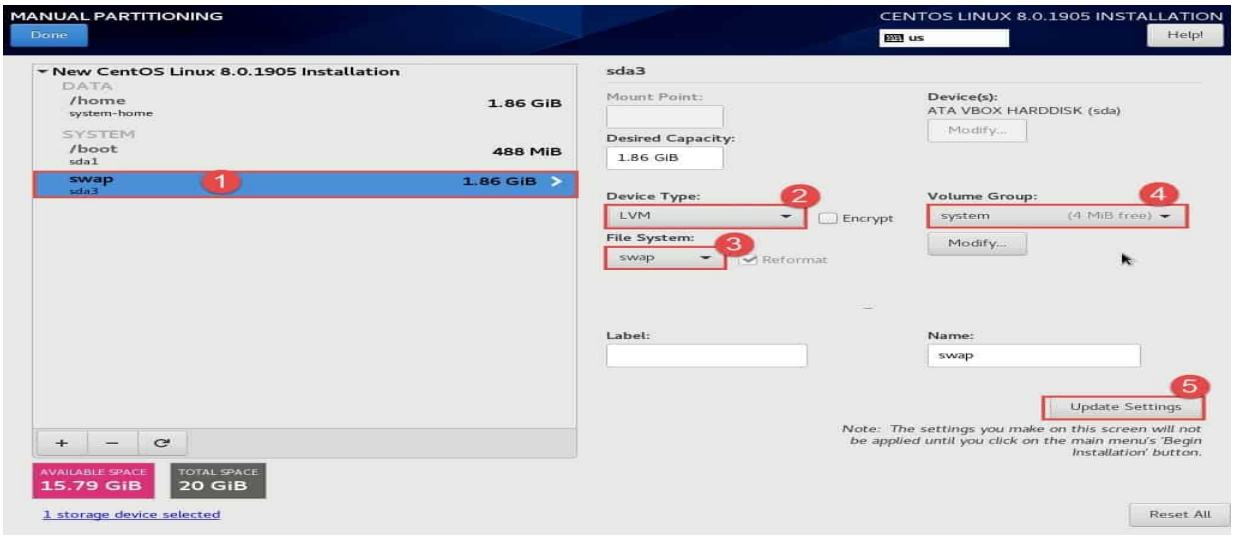


Provide the **"Mount Point"** as swap and add desired capacity.i want to choose **2GB.**if your memory is more than 4 GB then you can limit the swap memory also to 4GB.as per you choice not mandary.

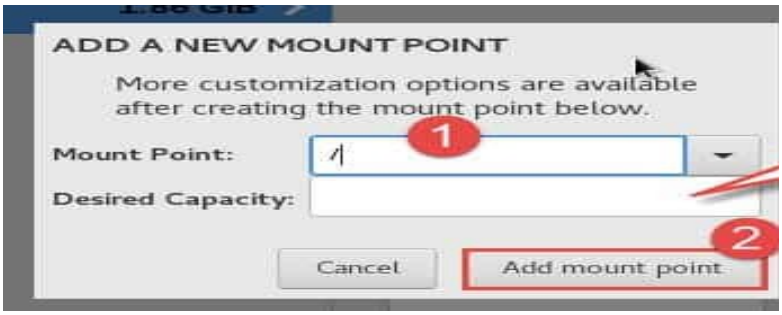


By default swap partition will be added as **"Standard Partition"** which you can change to **"LVM"** and assign the Volume Group which we just select **system** also created before step. Click on **"Update Settings"** to save the changes.

(D) Create /root partition:-

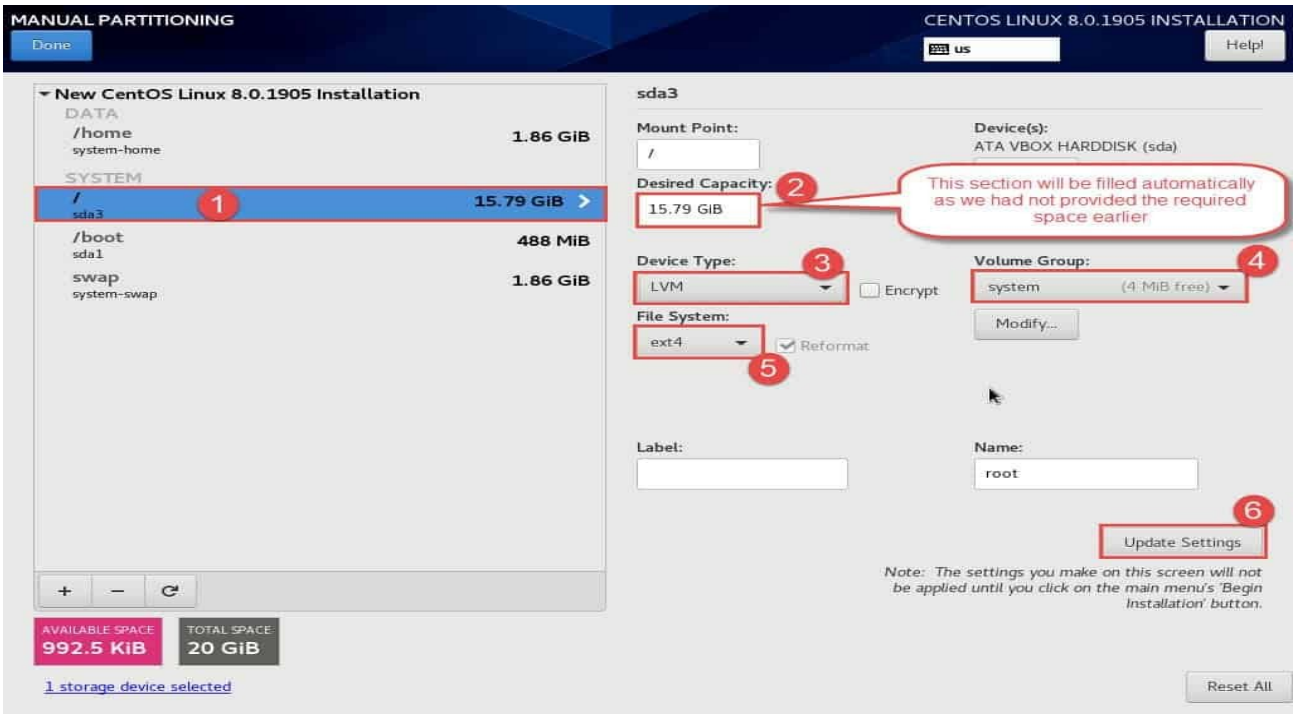


/root partition is very important it is similler to **c drive** in window where all the sytem files.here i am not choose any size you can leave empty.you can see our screenshot.



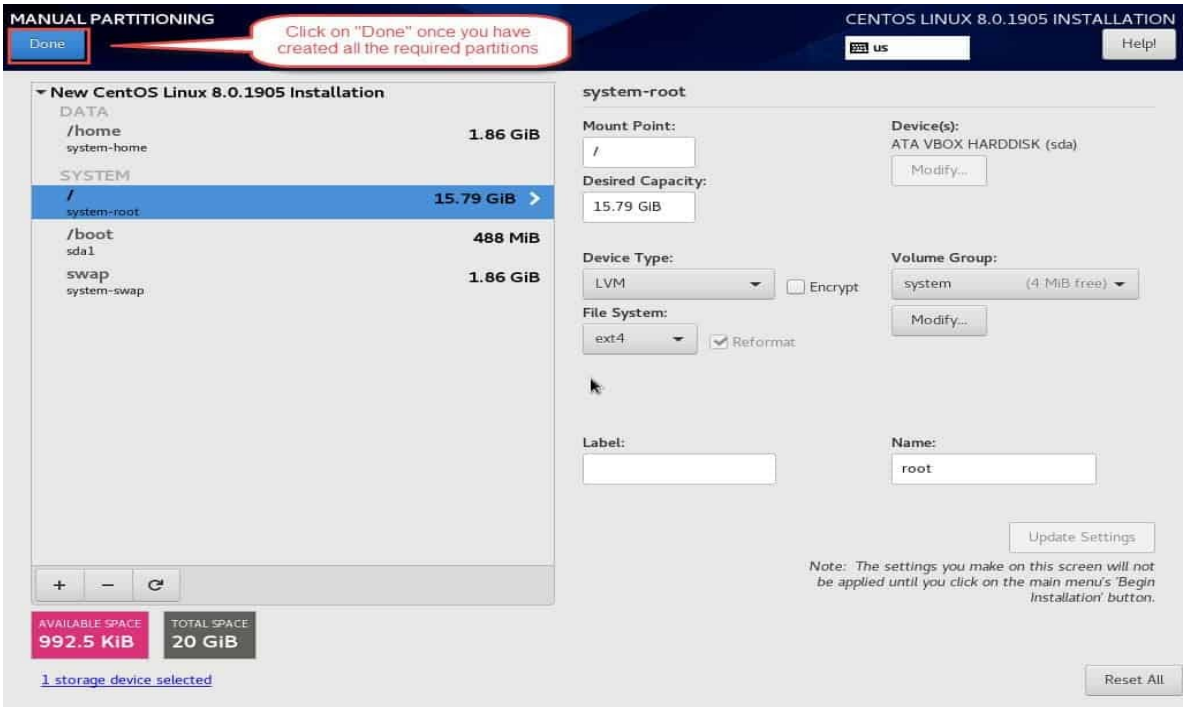
Next you can click on **Add mount point,**and you can verify all the details like

"Device Type" as LVM and select the Volume Group. You can also modify your File System, we will use **ext4** for our example. Click on **"Update Settings"** to finalize the changes.

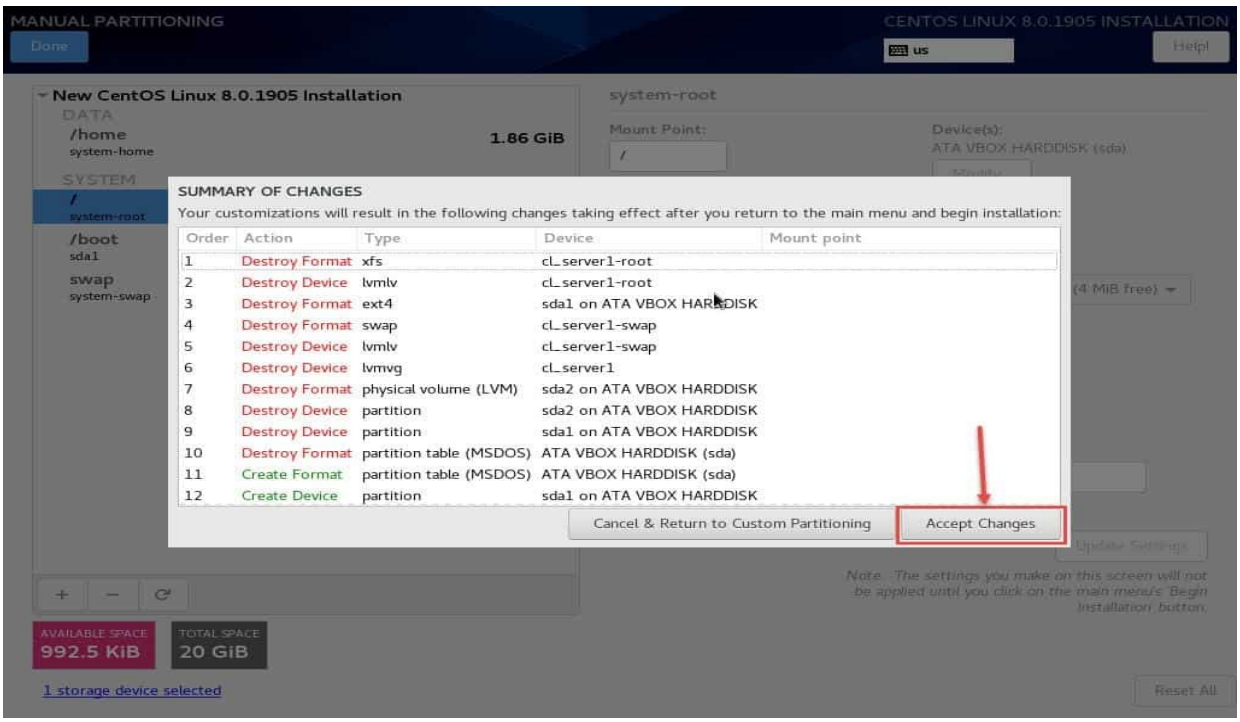


STEP:4 Finalize the Disk Partition Changes

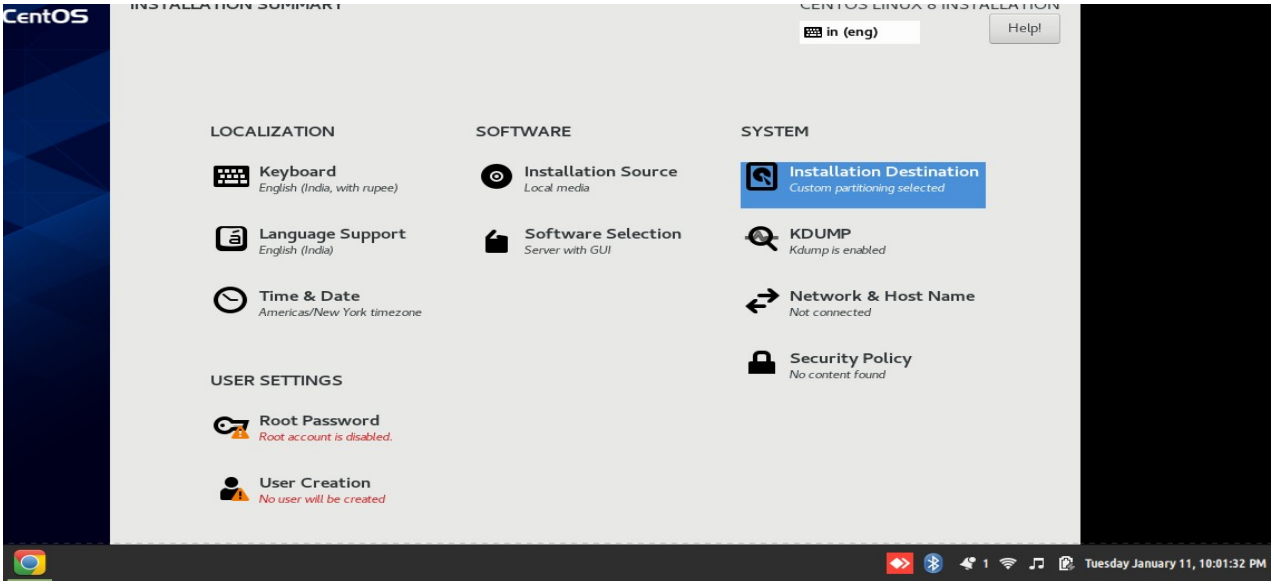
Click on **“Done”** to save all changes**.**



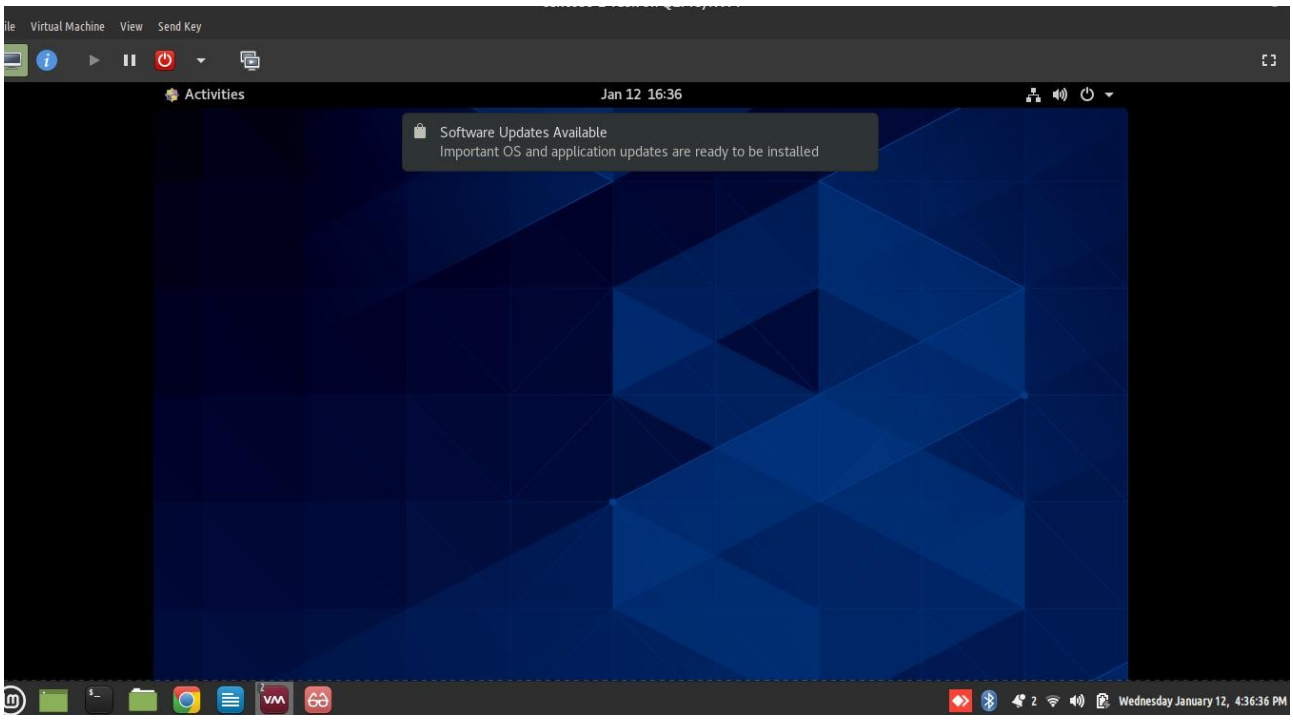
Next you will create a prompt to accept the changes which will be performed based on the partition layout which we have created.



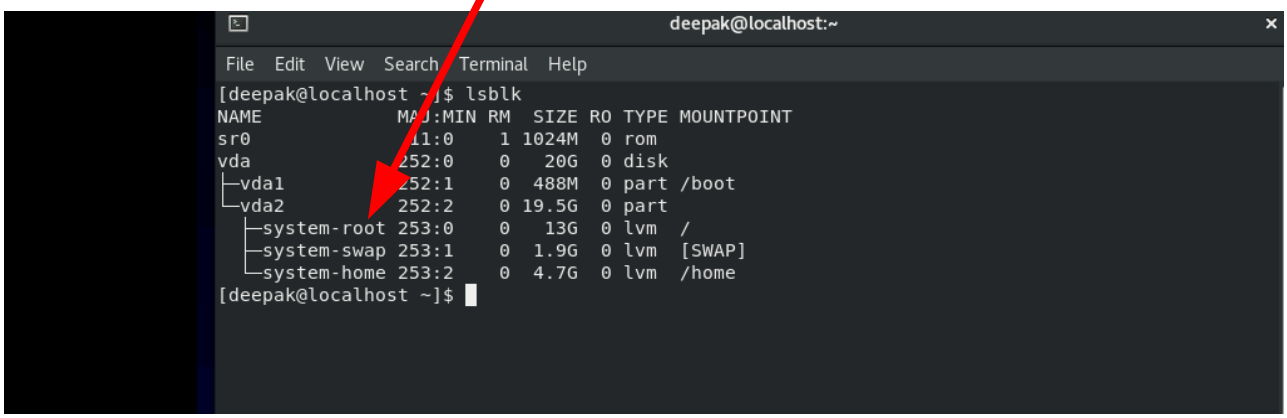
Finally you can check the "Installation Summary" which shows that "Custom partitioning selected" so our LVM configuration was successful.



Next step final installation and click on **user creation** and **root password** set and save configuration button, after that the virtual machine will be successfully installed in our system.



When i run the follwing commands for check partition space and size.Installtion time, i am created three partition **root,swap** and **home** partition.



(2.) Manual Assign IP address to CentOS-8

STEP:1 > Check Current ip address in our Virtual machine **(centos8-11-01-2022 on QEMU/KVM).** Run following commands given below.

First i checked ip address current of vm Machine,which i have displayed below .

[deepak@localhost ~]$ ip a

1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000

link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00

inet 127.0.0.1/8 scope host lo

valid_lft forever preferred_lft forever

inet6 ::1/128 scope host

valid_lft forever preferred_lft forever

Current Ip address

2: enp1s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000

link/ether 52:54:00:26:c4:27 brd ff:ff:ff:ff:ff:ff

inet **192.168.122.125/24** brd 192.168.122.255 scope global dynamic noprefixroute enp1s0

valid_lft 3190sec preferred_lft 3190sec

inet6 fe80::5054:ff:fe26:c427/64 scope link noprefixroute

valid_lft forever preferred_lft forever

3: virbr0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default qlen 1000

link/ether 52:54:00:72:90:01 brd ff:ff:ff:ff:ff:ff

inet 192.168.124.1/24 brd 192.168.124.255 scope global virbr0

valid_lft forever preferred_lft forever

4: virbr0-nic: <BROADCAST,MULTICAST> mtu 1500 qdisc fq_codel master virbr0 state DOWN group default qlen 1000

link/ether 52:54:00:72:90:01 brd ff:ff:ff:ff:ff:ff

STEP:-2 > Find Out network interfacename then run following commands.

[root@localhost ~]# nmcli con

NAME UUID TYPE DEVICE

enp1s0 9b376d7f-98ab-4fba-92e9-b7e8d16ba2fc ethernet enp1s0

virbr0 bb6a22bb-d088-486c-a855-873b5b4f8b9e bridge virbr0

Interface

Run the following commands to editing file simply use vim editor and open file.

[root@localhost ~]# **vim /etc/sysconfig/network-scripts/ifcfg-enp1s0**

TYPE="Ethernet"

BOOTPROTO="none"

NAME="enp1s0"

IPADDR="192.168.20.150" **<-----I changed the ip address**

NETMASK="255.255.255.0"

GATEWAY="192.168.20.1"

DEVICE="enp1s0" **<---- Network Interface name**

ONBOOT="yes"

~

press **:wq** ,**save** and **close** it.

STEP:-3 > After that i restarted **NetworkManager** with help systemctl command.

[root@localhost ~]# systemctl restart NetworkManager

STEP:-4 > In the same way,you can relaod the network interface by using.

[root@localhost ~]# **nmcli con down enp1s0 && nmcli con up enp1s0**

Connection 'enp1s0' successfully deactivated (D-Bus active path: /org/freedesktop/NetworkManager/ActiveConnection/1)

Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkManager/ActiveConnection/4)

STEP:-5 >

Now you can check new ip address using ip commands as show given below.

[root@localhost ~]# ip a show enp1s0

2: enp1s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000

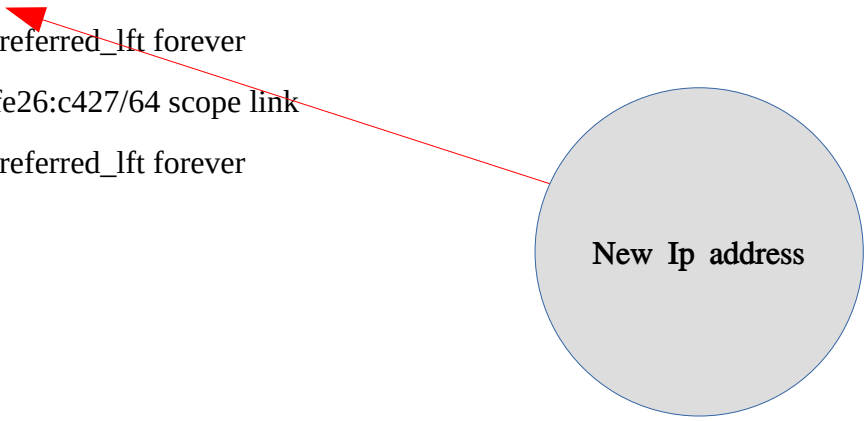
link/ether 52:54:00:26:c4:27 brd ff:ff:ff:ff:ff:ff

inet **192.168.20.150**/24 brd 192.168.20.255 scope global noprefixroute enp1s0

valid_lft forever preferred_lft forever

inet6 fe80::5054:ff:fe26:c427/64 scope link

valid_lft forever preferred_lft forever



Thank you