

Assignment - 06

COSA

Date:-04/11/2022

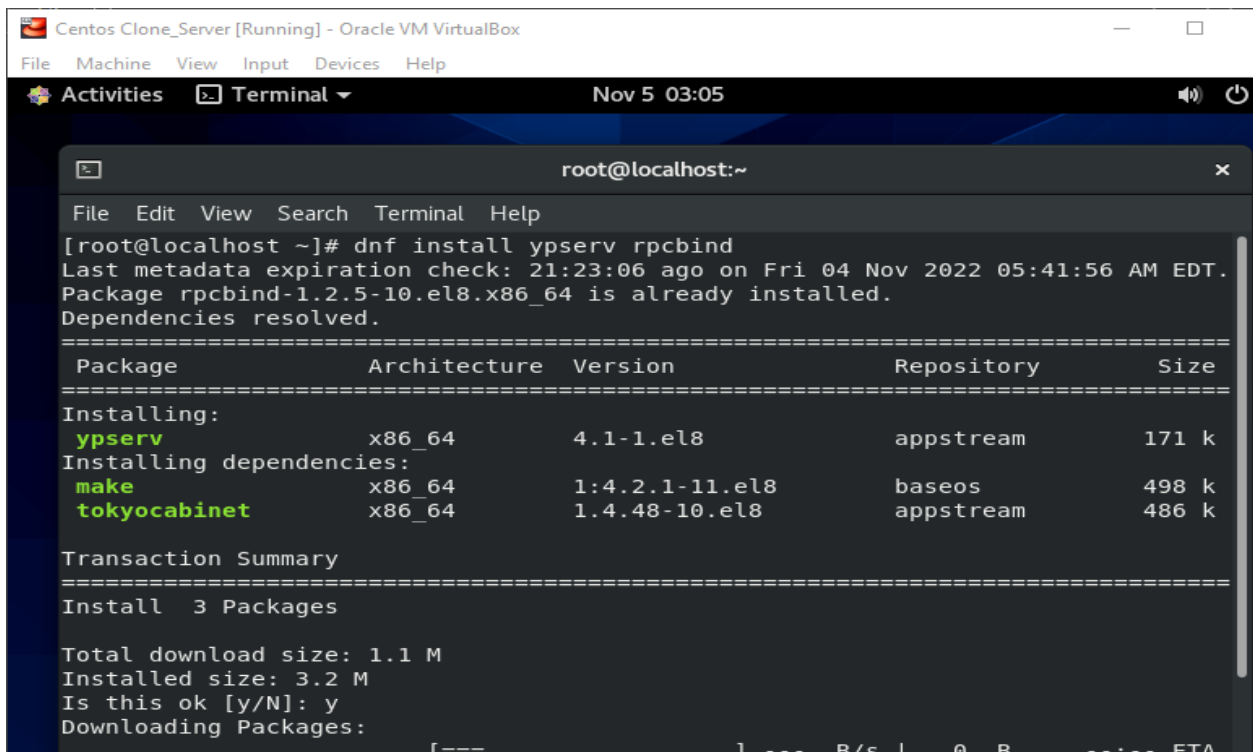
Name :- Prithviraj Nikam

1. Install and configure NIS server on your system with following: Nis domain: Your Name Add a user "sanjay" with password "sanjay123" whose home directory will be "/home/cdac". This user should be able to login to NIS clients in the network.

INSTALL THE NIS SERVER

Step-1 :- NIs installation

Cmd:- #dnf install ypserv rpcbind



```
Centos Clone_Server [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 5 03:05

root@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# dnf install ypserv rpcbind
Last metadata expiration check: 21:23:06 ago on Fri 04 Nov 2022 05:41:56 AM EDT.
Package rpcbind-1.2.5-10.el8.x86_64 is already installed.
Dependencies resolved.
=====
Package Architecture Version Repository Size
=====
Installing:
ypserv x86_64 4.1-1.el8 appstream 171 k
Installing dependencies:
make x86_64 1:4.2.1-11.el8 baseos 498 k
tokyocabinet x86_64 1.4.48-10.el8 appstream 486 k
Transaction Summary
=====
Install 3 Packages

Total download size: 1.1 M
Installed size: 3.2 M
Is this ok [y/N]: y
Downloading Packages:
[=====] 1 -- B/s | 0 B -- ETA
```

Step-2:- set NIS domain name

Cmd:- #ypdomainname prithviraj

#vi /etc/sysconfig/network

NISDOMAIN = "prithviraj"

The screenshot shows a CentOS VM window titled "Centos Clone_Server [Running] - Oracle VM VirtualBox". The terminal window is titled "root@localhost:~" and displays the following output:

```
Installed:
  make-1:4.2.1-11.el8.x86_64          tokyocabinet-1.4.48-10.el8.x86_64
  ypserv-4.1-1.el8.x86_64

Complete!
[root@localhost ~]# ypdomainname prithviraj
[root@localhost ~]# vi /etc/sysconfig/network
[root@localhost ~]# systemctl start ypserv.service
[root@localhost ~]# systemctl status ypserv.service
● ypserv.service - NIS/YP (Network Information Service) Server
   Loaded: loaded (/usr/lib/systemd/system/ypserv.service; disabled; vendor pre>
   Active: active (running) since Sat 2022-11-05 03:19:09 EDT; 15s ago
     Main PID: 13686 (ypserv)
      Status: "Processing requests..."
        Tasks: 1 (limit: 11222)
      Memory: 13.0M
      CGroup: /system.slice/ypserv.service
              └─13686 /usr/sbin/ypserv -f

Nov 05 03:19:09 localhost.localdomain systemd[1]: Starting NIS/YP (Network Info>
Nov 05 03:19:09 localhost.localdomain ypserv[13686]: WARNING: no /var/yp/secure>
Nov 05 03:19:09 localhost.localdomain systemd[1]: Started NIS/YP (Network Infor>
lines 1-13/13 (END)
```

Step-4:- Initialize NIS domain master

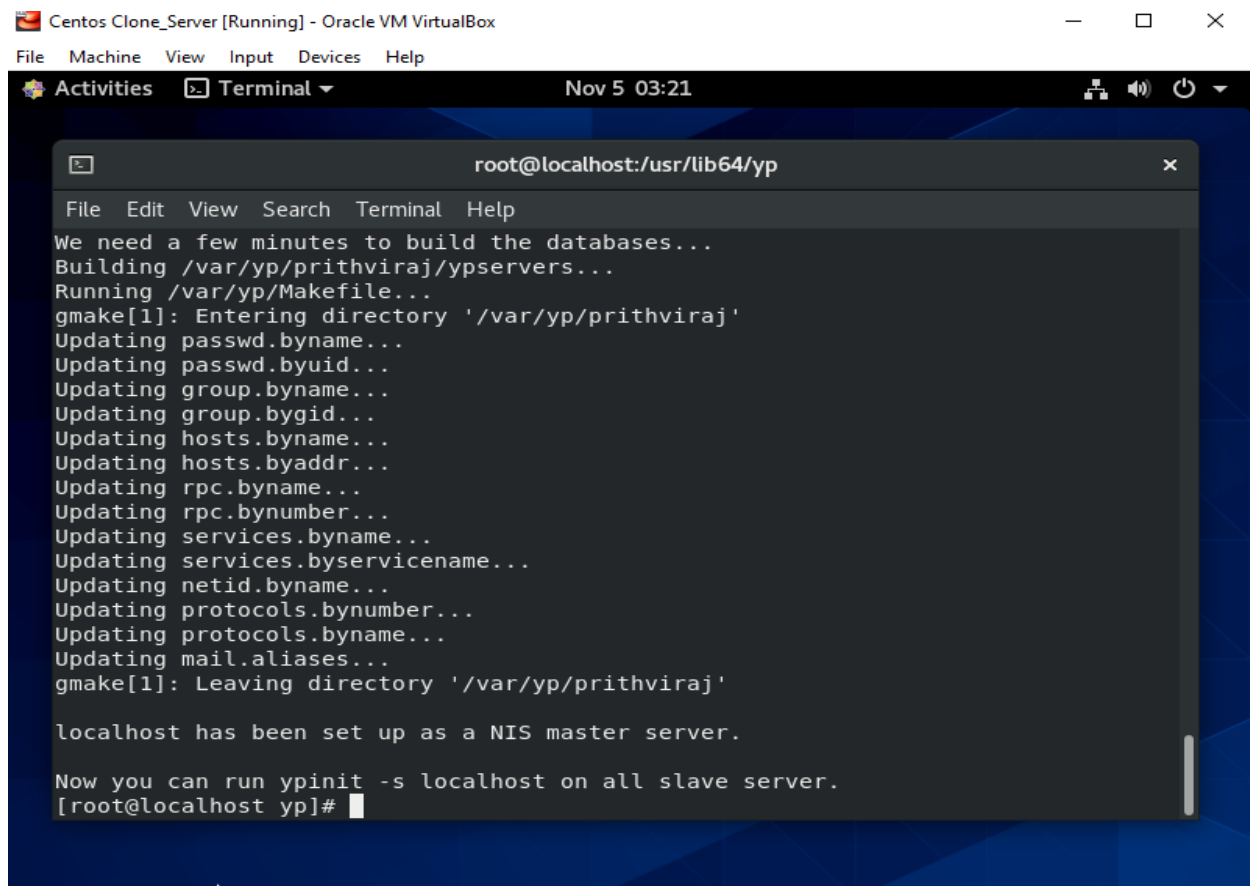
Cmd :- # cd /usr/lib64/yp
./ypinit -m



```
root@localhost:/usr/lib64/yp
File Edit View Search Terminal Help
[root@localhost ~]# systemctl start ypserv.service
[root@localhost ~]# systemctl status ypserv.service
● ypserv.service - NIS/YP (Network Information Service) Server
   Loaded: loaded (/usr/lib/systemd/system/ypserv.service; disabled; vendor pre
   Active: active (running) since Sat 2022-11-05 03:19:09 EDT; 15s ago
     Main PID: 13686 (ypserv)
    Status: "Processing requests..."
       Tasks: 1 (limit: 11222)
      Memory: 13.0M
    CGroup: /system.slice/ypserv.service
            └─13686 /usr/sbin/ypserv -f

Nov 05 03:19:09 localhost.localdomain systemd[1]: Starting NIS/YP (Network Info
Nov 05 03:19:09 localhost.localdomain ypserv[13686]: WARNING: no /var/yp/secure
Nov 05 03:19:09 localhost.localdomain systemd[1]: Started NIS/YP (Network Infor
[root@localhost ~]# cd /usr/lib64/yp
[root@localhost yp]# ./ypinit -m

At this point, we have to construct a list of the hosts which will run NIS
servers. localhost is in the list of NIS server hosts. Please continue to add
the names for the other hosts, one per line. When you are done with the
list, type a <control D>.
    next host to add: localhost
    next host to add: 
```



The screenshot shows a terminal window titled "Centos Clone_Server [Running] - Oracle VM VirtualBox". The terminal is running as root at localhost in the directory /usr/lib64/yp. It displays the output of a make command, which builds the NIS databases. The output includes messages like "We need a few minutes to build the databases...", "Building /var/yp/prithviraj/ypservers...", "Running /var/yp/Makefile...", and a list of files being updated: passwd.byname, passwd.byuid, group.byname, group.bygid, hosts.byname, hosts.byaddr, rpc.byname, rpc.bynumber, services.byname, services.byservicename, netid.byname, protocols.bynumber, protocols.byname, and mail.aliases. It concludes with "localhost has been set up as a NIS master server." and "Now you can run ypinitt -s localhost on all slave server."

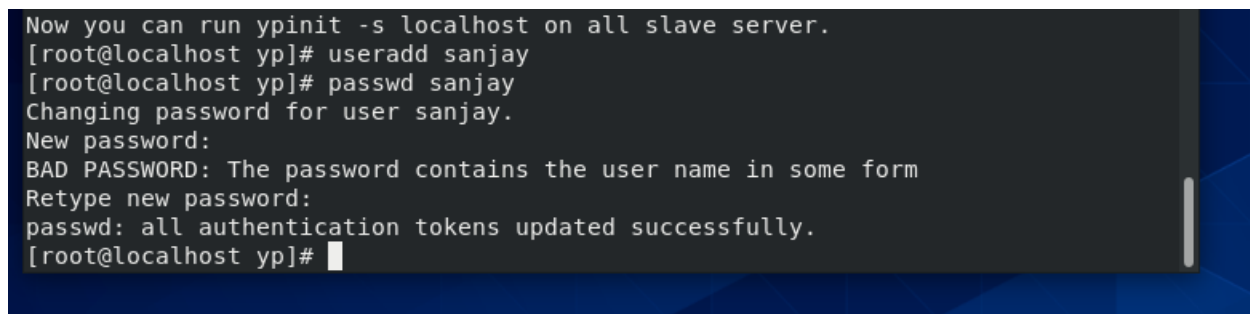
```
root@localhost:/usr/lib64/yp
File Edit View Search Terminal Help
We need a few minutes to build the databases...
Building /var/yp/prithviraj/ypservers...
Running /var/yp/Makefile...
gmake[1]: Entering directory '/var/yp/prithviraj'
Updating passwd.byname...
Updating passwd.byuid...
Updating group.byname...
Updating group.bygid...
Updating hosts.byname...
Updating hosts.byaddr...
Updating rpc.byname...
Updating rpc.bynumber...
Updating services.byname...
Updating services.byservicename...
Updating netid.byname...
Updating protocols.bynumber...
Updating protocols.byname...
Updating mail.aliases...
gmake[1]: Leaving directory '/var/yp/prithviraj'

localhost has been set up as a NIS master server.

Now you can run ypinitt -s localhost on all slave server.
[root@localhost yp]#
```

Step-5:- add user for the NIS domain

Cmd:- #useradd sanjay
passwd sanjay



The screenshot shows a terminal window with the following commands and output: "Now you can run ypinitt -s localhost on all slave server.", "[root@localhost yp]# useradd sanjay", "[root@localhost yp]# passwd sanjay", "Changing password for user sanjay.", "New password:", "BAD PASSWORD: The password contains the user name in some form", "Retype new password:", "passwd: all authentication tokens updated successfully.", and "[root@localhost yp]#".

```
Now you can run ypinitt -s localhost on all slave server.
[root@localhost yp]# useradd sanjay
[root@localhost yp]# passwd sanjay
Changing password for user sanjay.
New password:
BAD PASSWORD: The password contains the user name in some form
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost yp]#
```

Step- 6 :- Build the NIS database again

Cmd:- # cd /var/yp
#ls
#make

```
passwd: all authentication tokens updated successfully.
[root@localhost yp]# cd /var/yp
[root@localhost yp]# ls
Makefile  prithviraj  ypservers
[root@localhost yp]# make
gmake[1]: Entering directory '/var/yp/prithviraj'
Updating passwd.byname...
Updating passwd.byuid...
Updating group.byname...
Updating group.bygid...
Updating netid.byname...
gmake[1]: Leaving directory '/var/yp/prithviraj'
[root@localhost yp]#
```

Step-7:- disable firewall and selinux

Cmd:- # systemctl stop firewalld.service

#iptables -F

#vi /etc/selinux/config

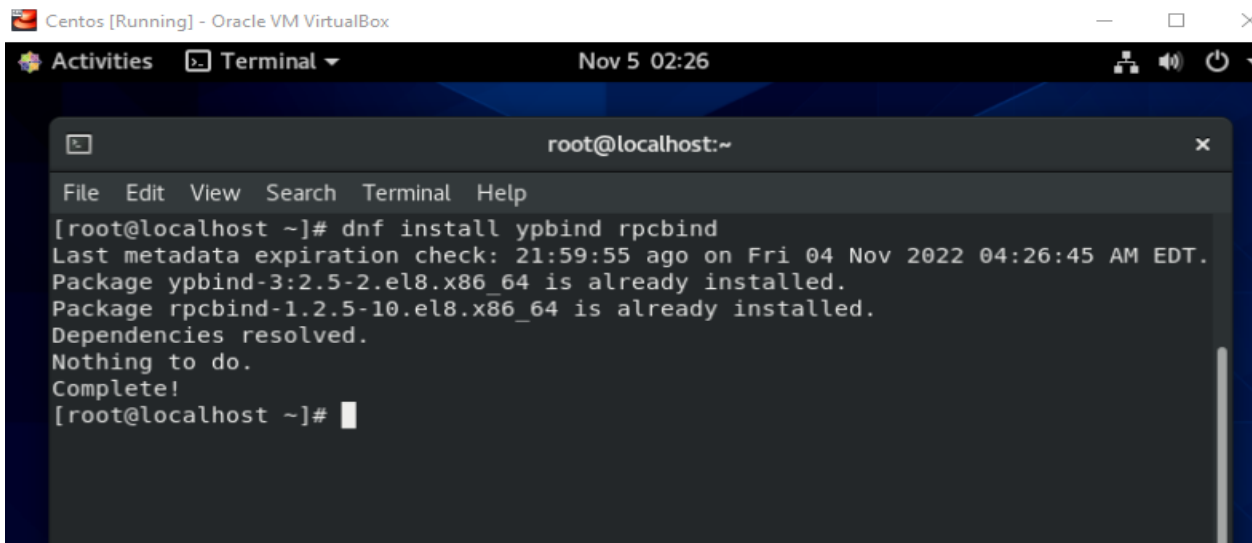
SELINUX = disabled

```
[root@localhost yp]# vi /etc/selinux/config
[root@localhost yp]# systemctl stop firewalld
[root@localhost yp]# iptables -F
[root@localhost yp]#
```

CONFIGURE NIS CLIENT

Step-1:- install NIS client

Cmd:- #dnf install ypbind rpcbind

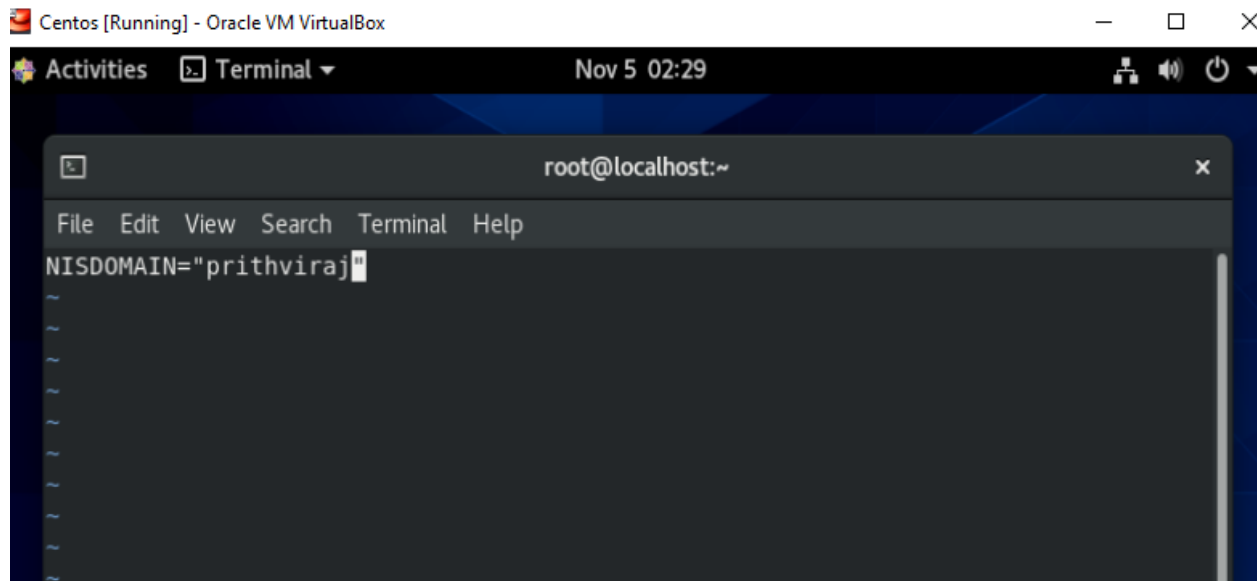


The screenshot shows a terminal window titled "Centos [Running] - Oracle VM VirtualBox" with a date and time of "Nov 5 02:26". The terminal output shows the command `dnf install ypbind rpcbind` being executed. The output indicates that the packages `ypbind-3:2.5-2.el8.x86_64` and `rpcbind-1.2.5-10.el8.x86_64` are already installed, dependencies are resolved, and the installation is complete.

```
Centos [Running] - Oracle VM VirtualBox
Nov 5 02:26
Activities Terminal
root@localhost:~
File Edit View Search Terminal Help
[root@localhost ~]# dnf install ypbind rpcbind
Last metadata expiration check: 21:59:55 ago on Fri 04 Nov 2022 04:26:45 AM EDT.
Package ypbind-3:2.5-2.el8.x86_64 is already installed.
Package rpcbind-1.2.5-10.el8.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@localhost ~]#
```

Step -2:- set NIS domain

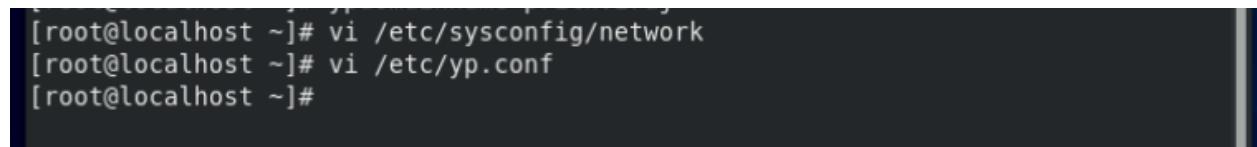
Cmd:- #ypdomainname prithviraj
#vi /etc/sysconfig/network
NISDOMAIN="prithviraj"



The screenshot shows a terminal window titled "Centos [Running] - Oracle VM VirtualBox". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The prompt is "root@localhost:~". The command "NISDOMAIN='prithviraj'" has been entered and is followed by a cursor. Below the command, there are several tilde characters (~) indicating the terminal's scrollback history.

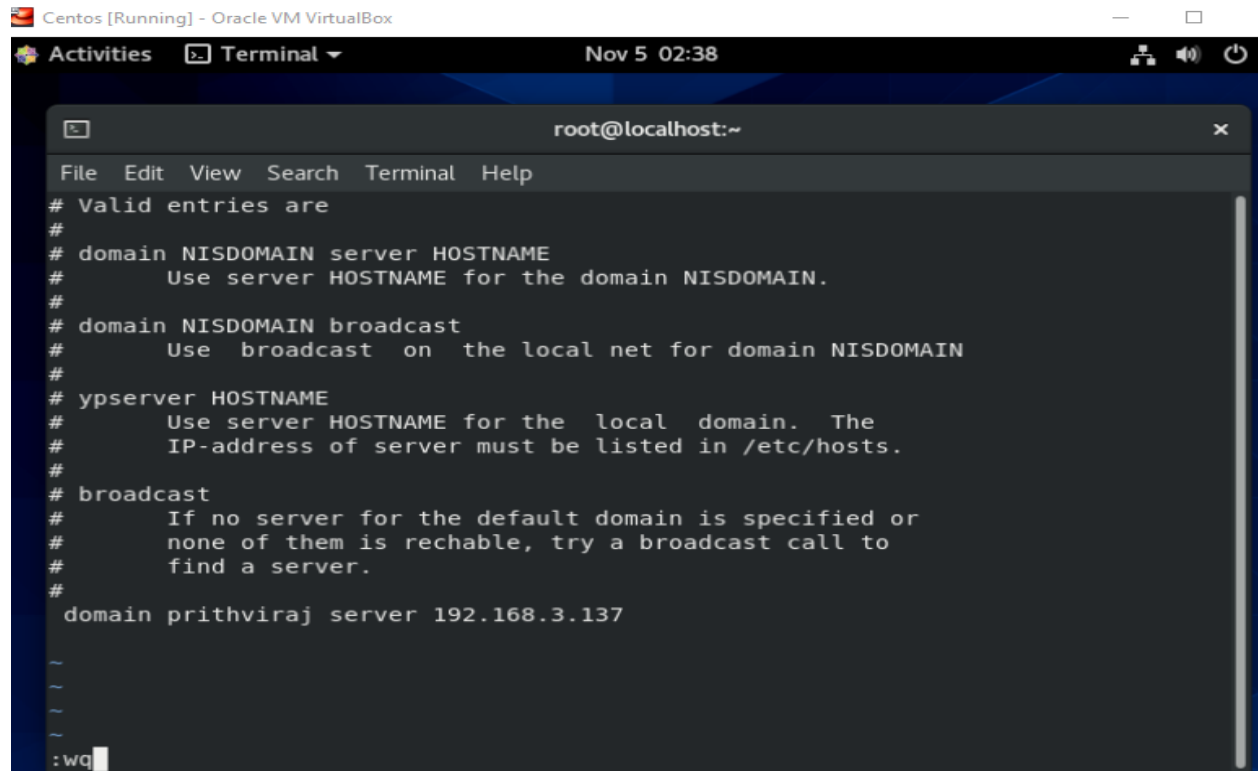
Step-3:- configure NIS client to connect NIS Server for Authentication.

Cmd:- # vi /etc/yp.conf
domain prithviraj server 192.168.3.137



The screenshot shows a terminal window with the following commands and prompts:

```
[root@localhost ~]# vi /etc/sysconfig/network
[root@localhost ~]# vi /etc/yp.conf
[root@localhost ~]#
```

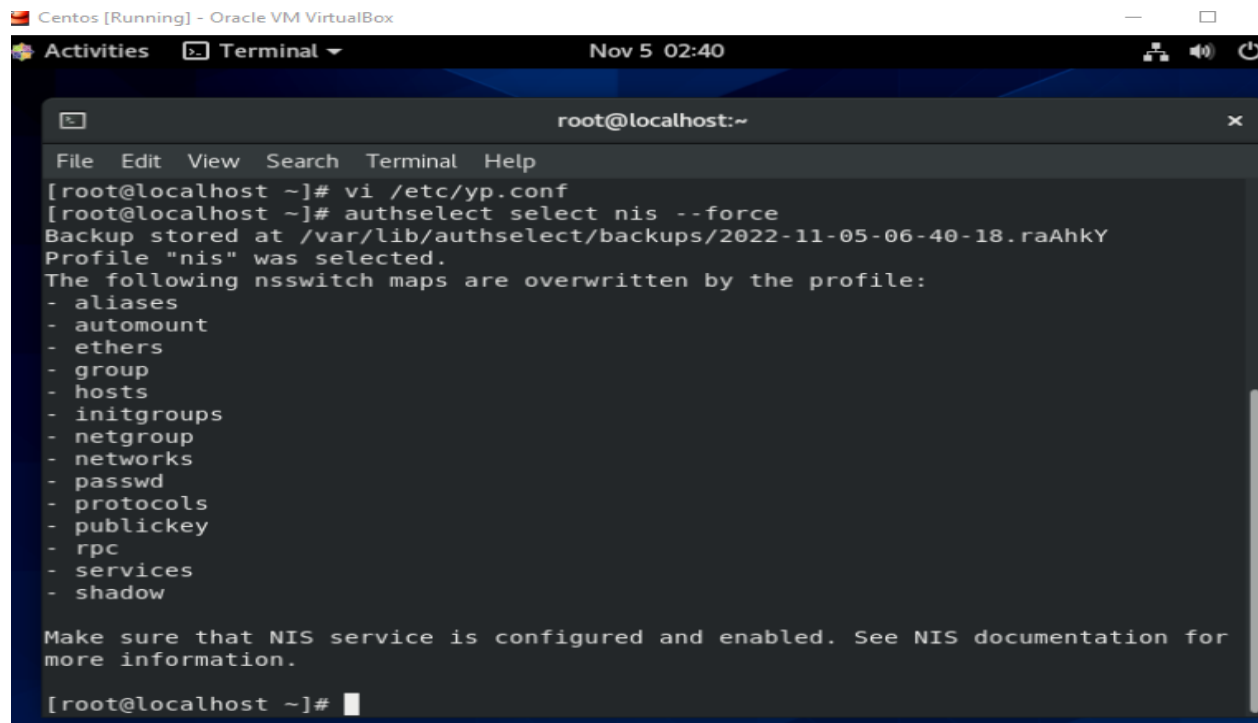


A terminal window titled "Centos [Running] - Oracle VM VirtualBox" with a date and time of "Nov 5 02:38". The terminal shows the root user at localhost editing the file /etc/yp.conf. The file contains several commented-out lines explaining valid entries for domain, broadcast, ypserv, and broadcast. The final line in the file is "domain prithviraj server 192.168.3.137". The terminal prompt is root@localhost:~ and the cursor is at the end of the line.

```
root@localhost:~  
File Edit View Search Terminal Help  
# Valid entries are  
#  
# domain NISDOMAIN server HOSTNAME  
#     Use server HOSTNAME for the domain NISDOMAIN.  
#  
# domain NISDOMAIN broadcast  
#     Use broadcast on the local net for domain NISDOMAIN  
#  
# ypserv HOSTNAME  
#     Use server HOSTNAME for the local domain. The  
#     IP-address of server must be listed in /etc/hosts.  
#  
# broadcast  
#     If no server for the default domain is specified or  
#     none of them is reachable, try a broadcast call to  
#     find a server.  
#  
domain prithviraj server 192.168.3.137  
~  
~  
~  
~  
:WQ
```

Step-4:- forcefully Authenticate NIS server

Cmd:- # authselect select nis --force



A terminal window titled "Centos [Running] - Oracle VM VirtualBox" with a date and time of "Nov 5 02:40". The terminal shows the root user at localhost running the command "authselect select nis --force". The output indicates that a backup of the current configuration was stored and the "nis" profile was selected. A list of nsswitch maps that will be overwritten is shown. The terminal prompt is root@localhost:~ and the cursor is at the end of the line.

```
root@localhost:~  
File Edit View Search Terminal Help  
[root@localhost ~]# vi /etc/yp.conf  
[root@localhost ~]# authselect select nis --force  
Backup stored at /var/lib/authselect/backups/2022-11-05-06-40-18.raAhkY  
Profile "nis" was selected.  
The following nsswitch maps are overwritten by the profile:  
- aliases  
- automount  
- ethers  
- group  
- hosts  
- initgroups  
- netgroup  
- networks  
- passwd  
- protocols  
- publickey  
- rpc  
- services  
- shadow  
  
Make sure that NIS service is configured and enabled. See NIS documentation for  
more information.  
[root@localhost ~]#
```


Step-5 :- disable firewall and selinux

Cmd:- # systemctl stop firewalld.service

iptables -F

#vi /etc/selinux/config

SELINUX = disabled

```
[root@localhost ~]# systemctl stop firewalld
[root@localhost ~]# iptables -F
[root@localhost ~]# vi /etc/selinux/config
```

Step -6 :- start NIS Cilent service

Cmd:- # systemctl start ypbind.service

#systemctl status ypbind.service

```
[root@localhost ~]# vi /etc/yp.config
[root@localhost ~]# vi /etc/yp.conf
[root@localhost ~]# systemctl start ypbind
[root@localhost ~]# systemctl status ypbind
● ypbind.service - NIS/YP (Network Information Service) Clients to NIS Domain B
   Loaded: loaded (/usr/lib/systemd/system/ypbind.service; disabled; vendor pre
   Active: active (running) since Sat 2022-11-05 02:48:27 EDT; 19s ago
     Process: 18177 ExecStartPost=/usr/libexec/ypbind-post-waitbind (code=exited,
     Process: 18171 ExecStartPre=/usr/sbin/setsebool allow_ypbind=1 (code=exited,
     Process: 18168 ExecStartPre=/usr/libexec/ypbind-pre-setdomain (code=exited, s
   Main PID: 18173 (ypbind)
     Status: "Processing requests..."
       Tasks: 3 (limit: 11222)
      Memory: 25.2M
      CGroup: /system.slice/ypbind.service
              └─18173 /usr/sbin/ypbind -n

Nov 05 02:48:27 localhost.localdomain systemd[1]: Starting NIS/YP (Network Info
Nov 05 02:48:27 localhost.localdomain setsebool[18171]: Could not change active
Nov 05 02:48:27 localhost.localdomain systemd[1]: Started NIS/YP (Network Infor
lines 1-16/16 (END)
```

Step-7:- who is NIS Server

Cmd:- # ypwhich

Step -8:- show me the NIS server password

Cmd:- #ypcat passwd

```
[root@localhost ~]# ypwhich
192.168.3.137
[root@localhost ~]# ypcat passwd
prithvi:$6$CYaK2lUkbYwv/ict$bBUWMmSZ2wElTAPidsvJ/biD1QE0B5rTz1yxex3P3QXotxAKqkb1
h9rW4ld.AvEZauS.wvjHAGbyyJy5SXoxa.:1000:1000:prithviraj:/home/prithvi:/bin/bash
prithvi1:$6$RR53p3J3o08CIwBw$VfZg1Ttvxe8smen7judFZpLke71C3K/V832PSCFY2mAUz1I.lgu
drw4Y4iXPIlsGhHCuFKurCGWJCvbtBlVx50:1001:1001:./home/prithvi1:/bin/bash
prithvi2:$6$RcIfU2RRA3GQx7uz$vEvizLmtfWLxfs34xEd87Jg0kfMSPbEz0DYghP80w5Xd6f0nE3g
ll/VBSeMljfMsnIY0TgrhBtwKmC5ilE2wU.:1002:1002:./home/prithvi2:/bin/bash
sanjay:$6$cBZA2swlEu1bHuIR$x5VwXu5IefvLM9UCI7Waxr/qRbhUeqSE04n/xfMTA8qVBQX4V/SAh
4bCgpZ0jKf0mW72p6v7CnKQVdXs.VwMU0:1003:1003:./home/sanjay:/bin/bash
```

Step-9:- create home directory

Cmd:- #mkdir /home/sanjay

#ls -ld /home/sanjay

#chown sanjay:sanjay /home/sanjay

```
[root@localhost ~]# mkdir /home/cdac/sanjay
mkdir: cannot create directory '/home/cdac/sanjay': No such file or directory
[root@localhost ~]# mkdir /home/cdac
[root@localhost ~]# mkdir /home/cdac/sanjay
[root@localhost ~]#
```

```
[root@localhost ~]# mkdir /home/cdac
[root@localhost ~]# mkdir /home/cdac/sanjay
[root@localhost ~]# ls -ld /home/cdac/sanjay
drwxr-xr-x 2 root root 6 Nov  5 03:52 /home/cdac/sanjay
[root@localhost ~]# chown sanjay:sanjay /home/cdac/sanjay/
[root@localhost ~]# ls -ld /home/cdac/sanjay
drwxr-xr-x 2 sanjay sanjay 6 Nov  5 03:52 /home/cdac/sanjay
[root@localhost ~]#
```