1. Install the Apache package.

**# Sudo yum install httpd**

1. Extend the existing xfs file system to a total size of 200MB and add a label called myFS.

Afou prosthesw xoro ston disko kanw ena partition neo px sda3

fdisk /dev/sda

**Tou kanw extend sto idi iparxon VG to centos sth prokimenh periptosh**

*vgextend centos /dev/sda3*

**To kanw episis kai sto Logical volume**

**# lvextend -L +200M /dev/centos/root**

**To dinw olo ton xoro sto File system mas tou logical volume**

**# xfs\_growfs /dev/centos/root**

Tou vazw ena label

# xfs\_io -c "label -s myFS" /

Elegxos an egine mount

**# xfs\_admin -l /dev/centos/root**

1. Create two **users**: john with uid/gid equal to 2000, password 12345678 and davis with uid/gid equal to 3000, password 87654321. Make davis account validity stopping in one month**.**

**# groupadd -g 2000 users1**

**# groupadd -g 3000 users2**

**# useradd john -u 2000 -g 2000**

**# passwd john**

**Password 12345678**

**# gpasswd -a john users1**

**# useradd davis -u 3000 -g 3000**

**# passwd davis**

**Password 87654321**

**# gpasswd -a davis users2**

**# usermod --expiredate $(date -d "30 days" "+%Y-%m-%d") davis**

1. Allow davis (and only davis) to get full access to john‘s home directory.

**# chown :users2 /home/john/**

**# chmod 770 /home/john**

1. Create a directory named /common. Allow john and davis to share documents in the /common directory using a group called team. Both of them can read, write and remove documents from the other in this directory but any user not member of the group can’t.

**# mkdir common**

**# groupadd team**

**# usermod -a -G team davis**

**# usermod -a -G team john**

**# chown root:team /common**

**# chmod 770 /common**

1. Validate the SELinux status and configure it temporarily to Permissive if not**.**

**# sestatus**

**# setenforce Permissive**

1. Make SElinux status permanent across reboot to Permissive.

**# vim /etc/selinux/config**

**SELINUX=**permissive

**# shutdown -r now**

**# sestatus**

1. Create a xfs file system on a new logical volume of 100MB called lv\_xfs. Mount it permanently with uuid under /xfs.

**New Logical Volume lv\_xfs 100MB**

**# lvcreate -L 100M -n lv\_xfs /dev/vol\_grp1/ pou na to dimiourgisei apo to group**

**#** **mkfs.xfs /dev/vol\_grp1/lv\_xfs**

**# mkdir /xfs**

**# mount /dev/sda1 /xfs**

**#**  **blkid /dev/vol\_grp1/lv\_xfs**

**UUID=41c22818-fbad-4da6-8196-c816df0b7aa8**

**# vim /etc/fstab**

**We add the following line**

**UUID=41c22818-fbad-4da6-8196-c816df0b7aa8 /dev/vol\_grp1/lv\_xfs xfs defaults 0 0**

1. Write a Bash script called prog.sh in the /root directory that creates 40 files of 2MB each with the fallocate command in the mounted /xfs directory. Each file has got a name as follows: .file\_N where N is a number from 1 to 40.

#yum install util-linux (gia to fallocate)

# cd /root/

# vim prog.sh

#!/bin/bash

for ((i=1; i<=40; i++))

do

fallocate -l 1m /xfs/file\_"$i"

echo "$i"

done

# chmod u+x prog.sh

1. Create a logical volume of 200MB called lv\_swap2 and add it permanently to the current swap space.

# fdisk /dev/sdb

# pvcreate /dev/sdb3

# vgextend centos /dev/sdb3

# lvcreate -L 200M –n my\_lv\_swap centos

# sudo mkswap /dev/centos/my\_lv\_swap

# blkid

# vim /etc/fstab

we add the following entry

/dev/mapper/centos-my\_lv\_swap swap swap defaults 0 0

Enable swap partition

# swapon -va

1. Create a cron job running as root, starting at 11PM every day and writing a report on daily system resource consumption in the /var/log/consumption.log file.

**# vim /etc/crontab**

0 23 \* \* \* root free >> /var/log/consumption.log ; df -h >> **/var/log/consumption.log**

1. Set the default target to boot into X Window level (previously level 5).

**#** **systemctl set-default graphical.target**

**# systemctl get-default**

graphical.target

1. Change the hostname to example.vodafone.com

**# hostnamectl set-hostname example.vodafone.com**

**# hostnamectl status**

1. Synchronize time with NTP source pool.ntp.org

# yum install ntp ntpdate

# systemctl start ntpd (network time protocol deamon)

# systemctl enable ntpd

# systemctl status ntpd

# ntpdate -u -s 0.centos.pool.ntp.org 1.centos.pool.ntp.org

2.centos.pool.ntp.org

# systemctl restart ntpd

# timedatectl

# hwclock -w (accept te time)

1. Install NFS and export directory /nfs/exports to client 192.168.1.10

**yum install nfs-utils**

**mkdir /var/nfsshare**

**chmod -R 755 /var/nfsshare**

**systemctl enable rpcbind (sentd program to port)**

**systemctl enable nfs-server**

**systemctl enable nfs-lock**

**systemctl enable nfs-idmap**

**systemctl start rpcbind**

**systemctl start nfs-server**

**systemctl start nfs-lock**

**systemctl start nfs-idmap**

**vazoume ton server pou theloume na kanei shearing**

**vim /etc/exports**

**/var/nfsshare 192.168.0.101(rw,sync,no\_root\_squash,no\_all\_squash)**

**H**

**/home 192.168.0.101(rw,sync,no\_root\_squash,no\_all\_squash)**

**systemctl restart nfs-server**

**firewall-cmd --permanent --zone=public --add-service=nfs**

**firewall-cmd --permanent --zone=public --add-service=mountd**

**firewall-cmd --permanent --zone=public --add-service=rpc-bind**

**firewall-cmd --reload**

**#######################################################################################**

**Client**

**-------------**

**yum install nfs-utils**

**mkdir -p /mnt/nfs/home**

**mkdir -p /mnt/nfs/var/nfsshare**

**Vazoume tou server NFS thn IP**

**mount -t nfs 192.168.0.100:/home /mnt/nfs/home/**

**H**

**mount -t nfs 192.168.0.100:/var/nfsshare /mnt/nfs/var/nfsshare/**

**df -kh**

**Permanent Mount**

**vim /etc/fstab**

**192.168.0.100:/home /mnt/nfs/home nfs defaults 0 0**

**192.168.0.100:/var/nfsshare /mnt/nfs/var/nfsshare nfs defaults 0 0**

**Check if it works**

**------------------**

**touch /mnt/nfs/var/nfsshare/test\_nfs**

1. Create an Ansible playbook to install nginx and configure home page to a custom index.html page.

**# vim playbook1.yml**

---

- name: Install nginx

hosts: **192.168.17.133 h na valw to localhost h to servers**

become: true

tasks:

- name: Add epel-release repo

yum:

name: epel-release

state: present

- name: Install nginx

yum:

name: nginx

state: present

- name: Insert Index Page

template:

src: index.html

dest: /usr/share/nginx/html/index.html

- name: Start NGiNX

service:

name: nginx

state: started

**vim /etc/asnable/host**

**add**

**192.168.17.133 ansible\_ssh\_pass=root ansible\_ssh\_user=root**

**Endolh einai h eksis**

**# ansible-playbook playbook1.yml**