Creating Users, Groups

useradd -s /bin/zsh -c 'my user' -m anna	Create user anna with default shell (-s) and home dir (-m)
id user	Show user info
groupadd sales	Create 'sales' group
usermod -aG sales anna	Add anna to supplementary group 'sales'
useradd -D	Display default value of user
/etc/default/useradd	Configuration file for default value
/etc/login.defs	Additional configuration value
/etc/skel	Content in skel will be copied to new user home dir

Resource Access Restrictions

yum groups install 'Directory Client'	Install the Utility
yum install authconfig-gtk	Install graphic interface of auth
/etc/security/limits.conf	Limit configuration file:nproc, hard limit, soft limit

Access Control List

setfacl -R -m d:g:sales:rx account	Set ACL so 'sales' group can read, execute on account dir and all sub-dir on default
getfacl	Display all access control list permissions (+ symbol)

System-Wide Environment Profile

```
env (environment variable)
export var (store variable)
unset var (reset variable)
env -i bash (change environment)
vim /etc/environment (set new
variable)
LINUX="/home/long"
source /etc/environement (source
new variable w/o reboot)
```

Manage Template User Environment

```
vim /etc/skel/.bashrc (file for
setting)
/etc/skel (putting new file here
will make it default for new user
only)
```

Permissions

Read	4, Read on File, Ls on Di
Write	2, Modify on File, Create/Del on Dir
Execute	1, Run on File, Cd into Dir
chgrp account account	Change group owner of account dir to 'account' group
chown anna account	Change anna to owner of 'account' dir
chown linda.sales sales	Change user and group owner of 'sales' dir to linda, sales
chmod g+w account	Make members of 'account' group have write permissions on account dir
chmod 770 sales	Make user, group have read, write, execute permission; others none

Extended Attributes

chattr +i file1	Make file1 has "immutable" attribute

Managing Quota on Ext4

yum install -y quota	Install quota package
vim /etc/fstab	Config file for mounting file system automatically
mount -o remount /quota	Make sure the file system mounted with right options
quotacheck -mavug	Scan the file system
quota -vu lisa	Display quota on user lisa
quotaon -a	Activating quota
edquota -u lisa	Edit quota limit on user lisa; soft to 10; hard to 10
edquota -b lisa linda	Copy the quota limit from lisa to linda
dd if=/dev/zero of=/quota/bigfile bs=1M count=3	if input file; of output file; bs block size; write 3 times
repquota -aug	Display quota overview

Password Properties

echo password | passwd -stdin brenda	Echo password to change brenda's password
chage brenda	Interactive change

User,Group Configuration File

cat /etc/group	Group config file
sales:x:1004:anna	GroupName:Password:GroupID:GroupMembers
cat /etc/passwd	User config file
cat /etc/shadow	User Config file
vipw -s	vi passwd consistently

Advanced Permissions

suio	4; run as owner on file
sgio	2; run as group owner on file; inherit dir group owner
sticky	1; delete only if owner on dir
chmod u+s playme	Set UserID bit on playme
chmod g+s *	Set GroupID bit on *
chmod +t *	Apply StickyBit, other users cannot delete file created by owner

Finding files w/ special permissions

find -perm 0600	Find file with read,write for users only
find / -perm /4000 -exec ls -l {} \;	Find files in root dir with userID bit and list it