

commands miscellanea		commands miscellanea (cont)		commands miscellanea (cont)		commands miscellanea (cont)	
the ps command,	which shows the status of running processes	clear	cleans the screen	kill	terminates a process	ip addr	shows ip address and related information
vimtutor	tutorial for vim	man	manual	mount	it mounts file	expr	allows to perform some mathematical operations
rmdir	erases directory	du	estimates the file memory usage	ifconfig	view the network interface	env	permit to see the current environment variables
whoami	tells what kind of user you are	free	displays the amount of free and used memory in the system	whereis	find the address of a specific command	history	shows the last one hundred commands execute in the system
passwd	set up password or change the one you have	df	report file system disk space usage	uptime	show the running time of the system	iwlist	displays wireless devices plus configuration files
xemacs	calls text editor	lsblk	command used to report info about block devices as follows	hostname	displays the system hostname	locate	find files by name
".bashrc"		fdisk	manipulate disk partition table	cal	show the month calendar	lshw	display some basic information about the machine
cat	scan docs. from conCATenate	uname	print system info	bg	sends a process to the background	lsusb	display information about usb
ln	let you make links between files	cat /proc/cpuinfo	cpu info	df	shows file system disk space	nice	nice - run a program with modified scheduling priority
stty "-funtion key"	lets you set up the function keys	lscpu	cpu info	diff	serves to find differences between to files	pidof	find the process ID of a running program.
stty -a	show the current function key	sudo	gets root authority	lspci	serves to visualize P.C.I. devices	split	serves to split large files in to smaller ones
stty sane	fix the shell	grep	search for a string in a file	top	used to manage top processes	sum	checksum and count the blocks in a file
ls ["range"].["range"]	looks for combinations that satisfy specification	tar	creates, view or extracts from archive	ping host	send echo message to the host		
tail -"#"	displays the last # of lines of a text file	find	find files with a pattern	dig domain	show the dns specification for the domain		
head -"#"	displays the first #of lines of a text file	ssh	remotely login	scp	allows to remotely copy files from one machine to another machine		
less	show less of a text file	awk	controls output				
awk	organize data in in columns and rows	gzip	creates a *.gz compressed file				
sort	sort lines of text files	shutdown	turn off the machine				



commands miscellanea (cont)	setting NFS tutorial (cont)	setting NFS tutorial (cont)	File modification
<p>watch execute a program periodically, showing output fullscreen</p>	<p>\$ sudo systemctl restart nfs-server</p>	<p>\$ sudo yum install nfs-utils nfs-utils-lib</p>	<p>chown USER FILE changes the user ownership of a file to the specified user</p>
<p><b>setting NFS tutorial</b></p> <p>sudo yum install nfs-utils nfs-utils-lib install NFS</p>	<p>\$ sudo firewall-cmd --permanent --add-port=111/tcp; \$ sudo firewall-cmd --permanent --add-port=875/tcp; \$ sudo firewall-cmd --permanent --add-port=2049/tcp; \$ sudo firewall-cmd --permanent --add-port=20048/tcp; \$ sudo firewall-cmd --permanent --add-port=4295-5/tcp; \$ sudo firewall-cmd --permanent --add-port=46666/tcp; \$ sudo firewall-cmd --permanent --add-port=5430-2/tcp; \$ sudo firewall-cmd --reload</p>	<p>\$ sudo systemctl enable rpcbind; \$ sudo systemctl start rpcbind; \$ sudo systemctl enable nfs-server; \$ sudo systemctl start nfs-server; \$ sudo systemctl start nfs-lock; \$ sudo systemctl start nfs-idmap</p> <p>\$ sudo mkdir /NFSsharedFolder; \$ sudo chmod -R 0755 /NFSsharedFolder</p> <p>\$ sudo nano /etc/export</p>	<p>chown USER:GROUP FILE changes the user and the group to the specified user</p>
<p>sudo systemctl enable rpcbind; \$ sudo systemctl start rpcbind; \$ sudo systemctl enable nfs-server; \$ sudo systemctl start nfs-server; \$ sudo systemctl start nfs-lock; \$ sudo systemctl start nfs-idmap</p>	<p>commands to open and configure appropriate ports</p>	<p>\$ sudo systemctl enable rpcbind \$ sudo systemctl start rpcbind \$ sudo systemctl enable nfs-server \$ sudo systemctl start nfs-server \$ sudo systemctl start nfs-lock \$ sudo systemctl start nfs-idmap</p>	<p>chown USER:GROUP FILE changes the user, and group ownership of the file to the specified user and group respectively</p>
<p>\$ sudo mkdir /NFSsharedFolder; \$ sudo chmod -R 0755 /NFSsharedFolder</p>	<p>commands to create and prepared a folder</p>	<p>\$ sudo mkdir /NFSfolder \$ sudo chmod -R 755 /NFSfolder</p>	<p>chown :GROUP FILE changes the group ownership of the file to the specified group</p>
<p>\$ sudo nano /etc/export</p>	<p>open nano to modify the export file</p>	<p>\$ sudo nano /etc/fstab</p>	<p>chgrp GROUP FILE changes the group ownership of the file to the specified group</p>
<p>/NFSsharedFolder 172.25.0.0/16(rw, sync, no_root_squash, no_all_squash)</p>	<p>add this line to the export line</p>	<p>172.25.22.10:/NFSsharedFolder/NFSfolder nfs4 defaults 0 0</p>	<p>chgrp GROUP FILE changes the group ownership of the file to the specified group</p>
	<p>move to the client to continue the configuration</p>	<p>\$ sudo mount</p>	<p>chmod [0,1,2,4,7][0,1,2,4,7] changes readability, writability, and executability of a file to owner, group owner, and everyone respectively</p>
		<p>also need to install nfs in the client side of the relationship</p>	
		<p>commands to start appropriate services</p>	
		<p>create and set up share folder</p>	
		<p>open nano to edit fstab folder</p>	
		<p>add this line to the fstab folder</p>	
		<p>use this command to check what was mounted in the specified NFS server</p>	



### File modification (cont)

chmod [u(user),-g(group),o(others),a(all)][+,-][r(read),-w(write),x(execute),t(write to not delete)] File adds or removes permission to r,w,x from u,g,o or a

### tutorial on how to setup Samba

\$ sudo cp /etc/samba/smb.conf /etc/samba/smb.conf.backup creates backup file in case you mess it up

sudo mkdir /SharedFolder/ create folder to be shared

\$ sudo chmod -R 755 /SharedFolder/ set right permissions

\$ sudo firewall-cmd --permanent --zone=public --add-service=samba set firewall

\$ sudo firewall-cmd --reload set firewall

\$ sudo nano /etc/samba/smb.conf open nano to start the file configuration

follow instruction in comment then come back to this line and keep inputting the commands

\$ sudo smbpasswd -a user1 set up password for user1

### tutorial on how to setup Samba (cont)

\$ sudo systemctl enable smb.service; \$ sudo systemctl start smb.service; \$ sudo systemctl start nmb.service; commands to enter testing phase

Move to the client side and continue  
smb://server\_ip\_address type in the server connection screen

the configuration file should look like this:

```
[Shared Folder]
path = /SharedFolder
read only = no
guest ok = yes
browsable = yes
writable = yes
create mask = 0755
directory mask = 0755
workgroup = WORKGROUP
```

then save and create user1.

### user and groups creations and modifaciton

groupadd GROUP creates new group

groupmod -n NewGroupName changes the group name

useradd USER creates new user

### user and groups creations and modifaciton (cont)

useradd -d /path/to/home/dir/ creates a user with specified home directory

useradd -u USERID USER allows to create user with personalized ID

useradd -G GROUP1, GROUP2... USER allows to create user with multiples groups

cat /etc/passwd lists all user and displays relevant information

### most used commands

pwd outputs the present working directory

sudo + other command(s) allows to gain root privileges

root access root user and its privileges

cd + specific address access a specific address

cd move to home directory

cd .. go back to parent directory

ls outputs information of present directory

ls + specific address shows files in the specific directory

### most used commands (cont)

ls -a option a allows to show hidden files

ls -l show deeper description of showed files

ls -h shows files in human readable format

touch "fileName" creates file with the specified fileName

echo > "insert desired text" allows to write text to a file(if any, erase old text in file)

echo >> "insert text here" allows to append text to a file

cp "file" "directory" copy files to new address

mv "file" "directory" cut files to new address

mkdir "name" creates a new directory inside the present directory

mkdir /path/to/directory/"name" creates directory with a specific path

rm "file" removes files from the system

### most used commands (cont)

`rm -r` removes recursively the "directories" specified directory from the system

### service related commands

`journalctl` prompts the user with the active services in the system

`systemctl` Control the systemd system and service manager

### commands miscellanea 2

`flock` manage locks from shell scripts

`lockf` apply, test or remove a POSIX lock on an open file

`fcntl` manipulate file descriptor

`statd` NSM service daemon

`stat` display file or file system status

`samba` A Windows AD and SMB/CIFS fileserver for UNIX

`smbpasswd` The Samba encrypted password file

`sssd` System Security Services Daemon

`setgid` set group identity

`mktemp` create a temporary file or directory

`true` do nothing, successfully

### commands miscellanea 2 (cont)

`false` do nothing, unsuccessfully

`if` "use" a Perl module if a condition holds

`test` check file types and compare values

`exit` self explanatory

`w` displays who is logged in and what are they doing

`fg` brings the most recent background job to the foreground

`sleep` delay for a specified amount of time

`tac` concatenate and print files in reverse

`wall` write a message to all users

`whatis` display basic information about a command passed as parameter

`yes "-string"` infinitely outputs a string pass as parameter to the command