File Commands Cont.

cp file1 file2 - used to copy the contents of one file into another file

mv - used to rename files and directories

cat filename - it allows us to create, view and concatenate files

head filename - prints the first 10 lines of a file

tail filename - prints the last 10 lines of a file

sort - will sort the contents of a text file line by line

more/less - two similar commands that both show info a page at a time, less is faster more allows user to scroll

Systems Related

systemctl cat - views the content of a unit file

systemctl status - shows the status of a system

Systemctl list-units --type=service --state=running - will list active services

Sudo systemctl start - this will start the service

Sudo systemctl stop - this will stop the service

Sudo systemctl reload - reloads the unit files for the service

FILE COMPRESSION

tar xzf file.tar.gz - Extracts a tar using Gzip

To Downlaod a File

wget file non-interactive network downloader which is used to download files from the server even when the user has not logged on to the system and it can work in the background without hindering the current process

Misc SSH Commands

ssh-keygen - creates a key pair for public key authentication

ssh-copy-id - configures a public key as authorized on a server

ssh-agent - agent to hold private key for single sign-on

ssh-add - tool to add a key to the agent

scp - file transfer client with RCP-like command interface

sftp - file transfer client with FTP-like command interface

sshd - OpenSSH server

File Commands

ls - lists the content of a directory

cd - command is used to change directories

pwd - displays the present working directory you are currently in

mkdir - will create a new directory so long as it does not already exist

rm filename - used to delete a file

rm -r dir - used to delete a directory recursively along with its contents

Other ls commands

-a -lists all files even hidden

-R -Recursively list subdirectories encountered

-r - lists reverse order

-S - sorts list by file size

-t - sorts by last modified

-1 - lists one file per line

-l - lists in long listing format

SSH

SSH -Secure Shell or Secure Socket Shell, is a network protocol that gives users, particularly system administrators, a secure way to access a computer over an unsecured network

ssh user@host connects the user to host

Variables

env
Show environment variables
echo $NAME
Output value of $NAME variable
export NAME=value
Set $NAME to value
$PATH
Executable search path
$HOME
Home directory
$SHELL
Current shell

Kernel Information

uname - When the uname command is used the kernel name is returned.
uname -r- The uname -r command will display the release number of the kernel
uname -v - The uname -v will display the version number of the kernel

Notable Directories

/bin - Holds essential Unix commands
/sbin- holds commands for superuser, useful for system administration
/boot- Location where the kernel and other boot files are stored
/etc -files used by subsystems, ie. networking and mail, usually network services or disks to mount on
/dev - Contains device files for the interface between the file system and hardware
/proc - the interface between the filesystem and running processes

Disk and System Info

du-this command is used to track the files and directories which are consuming space on the hard disk drive
free - Displays the total amount of free space available on the system
df - Displays information related to file systems about total space and available space
lsblk - Lists information about all of the specified block devices
cat/proc/cpuinfo - This is a short read-only text file that contains information about the CPUs

Network Tools

ifconfig <interface> <address> [up] : start the interface
ifconfig <interface> [down|delete] : stop the interface
netstat –w [seconds] –l [interface] : display network settings and statistics
udpmt –p [port] –s [bytes] target_host : it creates UDP traffic
udptarget –p [port] : it's able to receive UDP traffic
tcpmt –p [port] –s [bytes] target_host : it creates TCP traffic
tcptarget –p [port]** it's able to receive TCP traffic

Search Commands

grep pattern file - searches for a pattern in files
Grep
-r - will search recusively
-v - performs inverted search
- i - performs insensitive search
-o - shows a matched part of the file\
find /dir/ -name " "* - finds files with " " in directory
find /dir/-user " " -finds files owned by " " in directory
whereis " " - will find binary source
locate " " - finds file searched by a system index

Shortcuts Continued

!abc
Run last command starting with abc
!abc:p
Print last command starting with abc
!$
Last argument of previous command
ALT-.
Last argument of previous command
!*
All arguments of previous command

Working with Users

useradd -used to create a new user
passwd - used to set a password for a new user
userdel - to remove a user
whoami- this will show the user information
su "user" passwd - allows the user to change their password

Package Management

dnf check-update - this will show a list of packages that are available but it will not perform any updates

dnf upgrade- update the system and all of its packages

dnf search "software"- to search for new software

dnf install "software"- installs new software packages

dnf remove - to remove a package from the system

Alias Command

Alias - The command allows you to define your own commands or command shortcuts

File permissions

chmod octal file - Changes the permissions of file to octal, this can be found seperately for user, group, and world.

4- read (r)

2- write (w)

1- execute (x)

chmod 777 - allows all users to read, write and execute

chmod 755 - example, lets owner read write and execute while the group and the world can read and execute

Help And Useful Shortcuts

MAN PAGES

man "command" - a user manual the is built into the terminal shows configuration files, system calls, library routines.

ctrl c-stop current command

ctrl z - stop the current command, resume with fg in the foreground or bg in the background

ctrl d - log out of current session

ctrl w - will erase one word on the line

ctrl u - erases whole line

ctrl r - brings up a recent command

!! - repeat last cmd

exit - log out of session

Networking

ifconfig -a - Displays network interfaces and ip address

ifconfig eth0 - displays eth0 address and details

ethtool eth0 - Query or control network driver and hardware settings

ping host - Send ICMP echo request to host

whois domain - Display whois info for domain

dig domain - Display DNS info for domain

Networking Cont'd

dig -x IP_ADDRESS - Reverse lookup of IP_ADDRESS

host domain - Display DNS ip address for domain

hostname -I - Display all local ip addresses

hostname -i - Display the network address of the host name

netstat -nutlp - Display listening tcp and udp ports and programs

Nano Commands

Ctrl-R
Read file

Ctrl-O
Save file

Ctrl-X
Close file
Cut and Paste

ALT-A
Start marking text

CTRL-K
Cut marked text or line

CTRL-U
Paste text
Navigate File

ALT-/
End of file

CTRL-A
Beginning of line

CTRL-E
End of line

CTRL-C
Show line number

CTRL-_
Go to line number
Search File

CTRL-W
Find

ALT-W
Find next
CTRL-
Search and replace

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Page 3 of 3.

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