Sudo apt-get update – Update the packages

Sudo apt-get upgrade – Install the updated packages

Process Management

PS

ps -f → Process runnin with full information

KILL

kill pid → kill process with process id

TOP

top → all information about process memory usage statistics

Memory Usage Commands

free

/proc/meminfo

vmstat

top

Free command

free -m -- is the most simple and easy to use command to check memory usage on linux.

/proc/meminfo

cat /proc/meminfo -- virtual files that contain dynamic information about the kernel and the system.

Vmstat

vmstat -s -- lays out memory information in statistics.

Top command

top -- memory usage and cpu usage

DF

Amount of disk space available on the file system.

DU

Amount of disk space available on the file system.

du -a -h -c * -- print sizes in -a -> all files, -h -> human readable, -c -> with total size

CHMOD command

Update permission to a file or directory.

Command:

chmod [reference] [operator] [mode] file

Reference	Operator	Mode
u – user	+ - add these mode	rwx
g – group	- - remove these modes	r- read
o – others	= - assign similar mode	w - write
a – all		x - execute

Find Command

Command operations	**man find**
To find all files and directories under the current directory	**find .**
To find all directories and file below a directory	**find <directory_name>**
To find all directories and subdirectories in the current directory	**find . -type d**
To find all files under the current directory	**find . -type f**
To find a specific file under the current directory	**find . -type f -name "filename.txt"**

To find a file whose name is partially known	**find . type f -name “partiallyknownname*”**
case insensitive:	**find . type f -iname “partiallyknownname*”**
To find a files with certain extension	**find . type f -iname “*.txt”**
To find files that were modified minutes ago	**find . -type f -mmin -<minutes>**
to find files that were modified more than 10 mins ago	**find . -type f -mmin +10**
file modifies more than 1 min ago but less than 5 mins	**find . type f -mmin +1 -mmin -5**
to find files that were modified certain days ago	**find . type -f -mtime -20**
To find files over a certain memory Below 5MB	**find . -type f -size -5M k-KB , G-GB**
To find all files that are empty	**find . -empty**
Find all files with certain permission To find files with all permissions	**find . -perm 777**

GREP Command

Searches for a pattern and outputs all lines matching the pattern.

grep [options] pattern [files]

example:

grep “search_string” <filename.txt> -- Results will be listed out, even if the search string is a substring

grep -w “search_string” <filename.txt> -- Only exact words will be listed

grep -wi “search_string” <filename.txt> -- Case insensitive

grep -n “search_string” <filename.txt> -- Line numbers

grep -n -B4 “search_string” <filename.txt> -- displays 4 lines before match. A for after

grep -irnw “search pattern” * -- Searches for pattern recursively in directories and sub dir

grep -irnw -m1 “search patter” * -- same as above,but checks only for 1st match in all files.

Sed Command

sed -e ‘nd’ <filename> -- deletes nth line of the file.

sed -e ‘a,bd’ <filename> -- deletes over a file range from a to b

sed -e ‘n,$d’ <filename> -- delete from nth line to last line of the file.

sed ‘s/text1/text2/g’ filename -- searches for all occurrence of text1 and replaces with text2
if specials character there then add a \ before every special char
if g not specified replaces only first occurrence. Nth occurrence can be mentioned instead of g.

sed ‘1,3 s/unix/linux/’ <filename> -- replaces over 1 2 and 3rd line.

AWK Command

Manipulating data and generating reports

awk ‘{print}’ <filename> -- Print all lines in the file

awk ‘/<pattern>/ {print}’ <filename> -- Print all lines matching the pattern.

awk ‘{print $1,$4}’ <filename>	-- print first word and 4th word of every line
awk ‘{print NR,$0}’ <filename>	-- Print all lines with line number
awk ‘{print $1,$NF}’ <filename>	-- Print first and last field
awk ‘NR==3, NR==6 {print NR,$0}’ <filename>	-- Print form line 3 to line 6
awk ‘END { print NR }’ <filename>	-- Print No of line in the file

LS command

List all files

ls -a | wc -l	-- count of all files present

WGET

To download a file from the internet

Downloading by passing credentials

wget --user <username> --password <password> <URL including https>

SSH command

ssh username@<ip-address> -i private_key

without paraphrase: ssh-keygen -f ubuntu -t rsa -N ''

with supplied paraphrase: ssh-keygen -f ubuntu -t rsa -N '12345'

IFCONFIG

Check the ip address and configuration assigned to the system.

Traceroute

Displays the routers the packet passes on its path to the destination.

DIG command

Returns the answers returned by DNS records

```
jeevan@jeevan-VirtualBox:~$ dig google.com

; <<>> DiG 9.9.5-3ubuntu0.18-Ubuntu <<>> google.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 12259
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;google.com.                    IN      A

;; ANSWER SECTION:
google.com.             42      IN      A       216.58.194.174

;; Query time: 40 msec
;; SERVER: 127.0.1.1#53(127.0.1.1)
;; WHEN: Mon Feb 04 13:23:54 PST 2019
;; MSG SIZE  rcvd: 55
```

Telnet

To check connectivity between two hosts.

telnet hostname portno

NSLOOKUP

To find entries on the DNS servers

```
jeevan@jeevan-VirtualBox:~$ nslookup google.com
Server:         127.0.1.1
Address:        127.0.1.1#53

Non-authoritative answer:
Name:   google.com
Address: 172.217.6.78

jeevan@jeevan-VirtualBox:~$
```

NETSTAT

Summary of all ports connected and their status

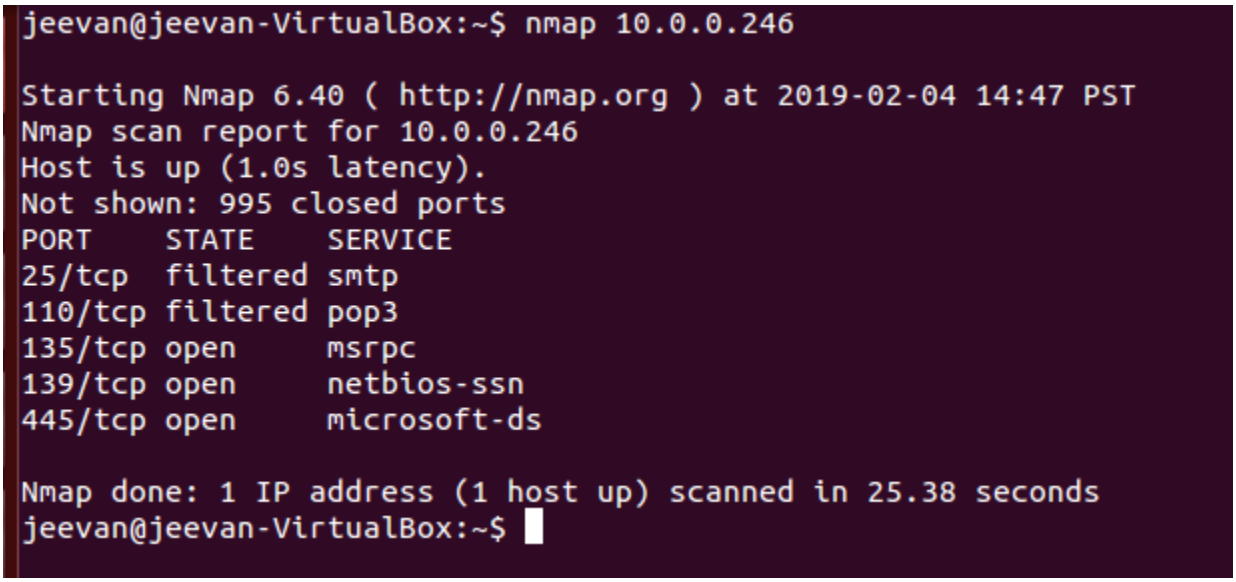
W

Summary of current activity on the host

```
jeevan@jeevan-VirtualBox:~$ w
 14:31:41 up  1:21,  2 users,  load average: 0.20, 0.16, 0.11
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
jeevan   :0       :0               13:11   ?xdm?   9:03   0.90s init --user
jeevan   pts/13   :0               13:12    5.00s  0.41s  0.02s w
jeevan@jeevan-VirtualBox:~$
```

NMAP

Checks the open ports on the server



https://www.tecmint.com/nmap-command-examples/

IFUP / IFDOWN

To enable or disable a network interface.

Example

Ifup eth0

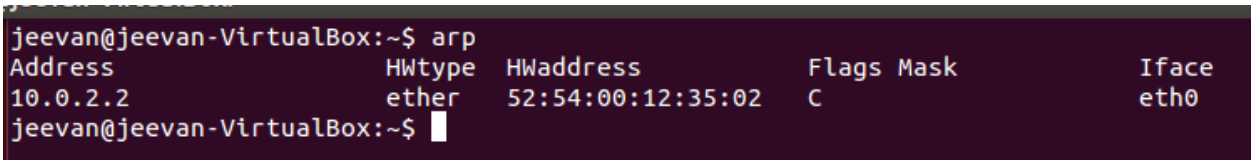
Ifdown eth0

SCP

Secure copy files from other hosts in the network

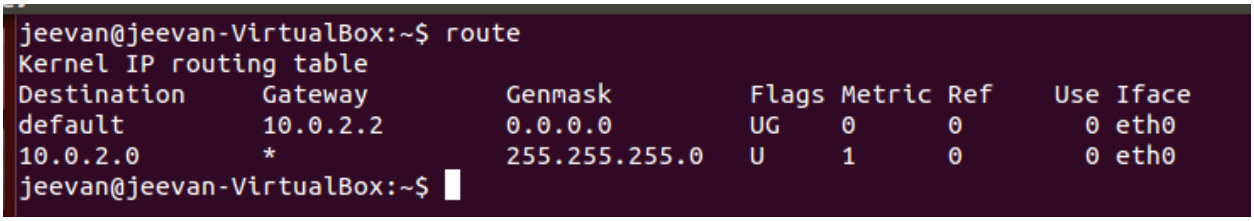
ARP command

ARP table on the host machine



Route Command

Routing table on the host machine



Adding a default gateway

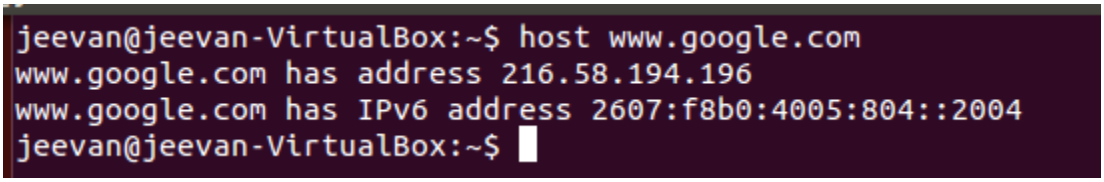
route add -net <ipaddress> gw <gateway ipaddress>

default gateway

route add default gw <gateway ip address>

HOST Command

Name to ip and Ip to name



Security commands

Checksum – used to validate integrity of our files

Command: cksum <filename.txt>

Output → checksum , size in bytes, filename