8. Software Management.

→ Download package from internet.

For CentOS

To install Tree

curl https://rpmfind.net/linux/centos/7.9.2009/os/x86_64/Packages/tree-1.6.0-10.el7.x86_64.rpm -o tree-1.6.0-10.el7.x86_64.rpm

rpm -ivh tree-1.6.0-10.el7.x86 64.rpm

To install httpd

 $\begin{tabular}{ll} \# curl $$ $https://rpmfind.net/linux/centos/7.9.2009/os/x86_64/Packages/httpd-2.4.6-95.el7.centos.x86_64.rpm -o $$ $httpd-2.4.6-95.el7.centos.x86_64.rpm -o $$ $httpd-2.4.6-95.$

rpm -ivh httpd-2.4.6-95.el7.centos.x86 64.rpm

Due to Dependencies its failing and it will be installed one we install all the dependencies. But what if we have Hundreds of dependencies, And that can be solved easily by other package managers like YUM.

repos.	d/ director	ry. It reads	each YUM	Repository	configuration	file to get	the informatio	n required to

download and install new software, resolves software dependencies and installs the required RPM package files. YUM Repository configuration files must: be located in /etc/yum.repos.d

ls /etc/yum.repos.d/

```
[root@Imran ~]#
[root@Imran ~]# ls /etc/yum.repos.d/
CentOs-Base.repo CentOS-CR.repo CentOS-Debuginfo.repo CentOS-fasttrack.repo CentOS-Media.repo CentOS-Sources.repo CentOS-Vault.repo
```

Shows the usage of YUM Command with options

yum -help

To Update all your packages

yum update

```
[root@Imran ~]# yum update
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile

* base: download.cf.centos.org

* extras: download.cf.centos.org

* updates: download.cf.centos.org

Resolving Dependencies
--> Running transaction check
--> Package acl.x86.64 0:2.2.51-14.el7 will be updated
--> Package acl.x86.64 0:2.2.51-15.el7 will be an update
--> Package acl.x86.64 0:2.2.51-15.el7 will be an update
--> Package bash.x86.64 0:4.2.46-33.el7 will be updated
--> Package bash.x86.64 0:4.2.46-34.el7 will be an update
--> Package bind-export-libs.x86.64 32:9.11.4-9.P2.el7 will be an update
--> Package bind-export-libs.x86.64 32:9.11.4-9.P2.el7 will be an update
--> Package bind-export-libs.x86.64 0:2.9.7-41.base.el7_7.2 will be updated
--> Package binutils.x86.64 0:2.2.7-44.base.el7_7.2 will be updated
--> Package binutils.x86.64 0:2.2.7-44.base.el7_7.2 will be updated
--> Package ca-certificates.noarch 0:2019.2.32-76.el7_7 will be updated
--> Package cacertificates.noarch 0:2012.2.50-72.el7_9 will be an update
--> Package cacertificates.noarch 0:2012.5.50-72.el7_9 will be an update
--> Package centos-release.x86.64 0:7-7.1908.0.el7.centos will be updated
--> Package chtos-fig.x86.64 0:1.7.4-1.el7 will be updated
--> Package chtos-fig.x86.64 0:1.7.4-1.el7 will be updated
--> Package chtos-fig.x86.64 0:1.7.6-1.el7 will be updated
--> Package cloud-init.x86.64 0:1.8.5-3.el7.centos will be updated
```

To install httpd

To remove httpd

yum remove httpd -y

```
[root@Imran ~]# yum remove httpd -y
Loaded plugins: fastestmirror
Resolving Dependencies
--> Running transaction check
---> Package httpd.x86_64 0:2.4.6-97.e17.centos will be erased
--> Finished Dependency Resolution
 Dependencies Resolved
                                                                                                                                                                                                                                                   Repository
  Package
                                                                                                                                               Version
                                                                                                                                                                                                                                                                                                                                  Size
                                                                                                                                                                                                                                                   @updates
                                                                        x86_64
                                                                                                                                               2.4.6-97.el7.centos
                                                                                                                                                                                                                                                                                                                                9.4 M
 Transaction Summary
 Remove 1 Package
 Installed size: 9.4 M
Installed size: 9.4 M
Downloading packages:
Running transaction check
Running transaction test
Transaction test
Transaction test succeeded
Running transaction
Erasing : httpd-2.4.6-97.e17.centos.x86_64
Verifying : httpd-2.4.6-97.e17.centos.x86_64
  emoved:
httpd.x86_64 0:2.4.6-97.el7.centos
   omplete!
```

For Ubuntu

wget http://archive.ubuntu.com/ubuntu/pool/universe/t/tree/tree_1.7.0-3_amd64.deb -o tree_1.7.0-3_amd64.deb

```
| TootSimran:-# | TootSimran:-
```

We have seen YUM Like that for Ubuntu we have a package manager 'apt'.

The **sources. list** file is a key factor in adding or upgrading applications to your Ubuntu installation. This is also used by your system for system updates. The file is basically the roadmap for your system to know where it may download programs for installation or upgrade.

cat /etc/apt/sources.list

```
poot@Imran: ≠ cd /etc/apt/
poot@Imran: /etc/apt# | Sa
apt.conf.d auth.conf.d preferences.d sources.list sources.list.d trusted.gpg.d
poot@Imran: /etc/apt# cat /etc/apt/Sources.list
## Note, this file is written by cloud-init on first boot of an instance
## modifications made here will not survive a re-bundle.
## if you wish to make changes you can:
## a.) add 'apt_preserve_sources_list: true' to /etc/cloud/cloud.cfg
## or of the same in user-data
## b.) add sources in /etc/apt/sources.list.d
## b.) add sources in /etc/apt/sources.list.d
## c.) make changes to template file /etc/cloud/templates/sources.list.tmpl

# See http://help.ubuntu.com/community/UpgradeNotes for how to upgrade to
# newer versions of the distribution.

## Major bug fix updates produced after the final release of the
## Major bug fix updates produced after the final release of the
## distribution.

## histribution.

## N.B. software from this repository is ENTIRELY UNSUPPORTED by the Ubuntu
## team. Also, please note that software in universe WILL NOT receive any
## review or updates from the Ubuntu security team.

## histrib://us-east-1.ec2.archive.ubuntu.com/ubuntu/ focal universe
## edes-src http://us-east-1.ec2.archive.ubuntu.com/ubuntu/ focal-updates universe
## edes-src http://us-east-1.ec2.archive.ubuntu.com/ubuntu/ focal-updates universe
## histrib://us-east-1.ec2.archive.ubuntu.com/ubuntu/ focal-updates universe
## edes-src http://us-east-1.ec2.archive.ubuntu.com/ubuntu/ focal-updates universe
## edes-src http://us-east-1.ec2.archive.ubuntu.com/ubuntu/ focal multiverse
## security team.

## wour rights to use the software. Also, please note that software in
## wour rights to use the software.
```

```
root@Imman:-# apt --help
apt 2.0.6 (amd64)
Usage: apt [options] command

apt is a commandline package manager and provides commands for
searching and managing as well as querying information about packages.
It provides the same functionality as the specialized APT tools,
like apt-get and apt-cache, but enables options more suitable for
interactive use by default.

Most used commands:
list - list packages based on package names
search - search in package descriptions
show - show package details
install - install packages
reinstall - reinstall packages
remove - remove packages
autoremove - Remove automatically all unused packages
updrade - upgrade the system by installing/upgrading packages
full-upgrade - upgrade the system by installing/upgrading packages
edit-sources - edit the source information file
satisfy - satisfy dependency strings

See apt(8) for more information about the available commands.
Configuration options and syntax is detailed in apt.conf(5).
Package and version choices can be expressed via apt_preferences(5).

Security details are available in apt-secure(8).

This APT has Super Cow Powers.
```

To update all your package lists

#apt update

```
root@Imran:~# apt update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://secast-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu focal-security InRelease
Reading package lists... Done
Building dependency tree
Reading state information... Done
27 packages can be upgraded. Run 'apt list --upgradable' to see them.
```

TO search for a <package> apache2

apt search apache2

```
root@Imran:-# apt search apache2
Sorting... Done
Full Text Search... Done
apache2/focal-updates,now 2.4.41-4ubuntu3.4 amd64 [installed]
Apache HTTP Server

apache2-bin/focal-updates,now 2.4.41-4ubuntu3.4 amd64 [installed,automatic]
Apache HTTP Server (modules and other binary files)

apache2-data/focal-updates,now 2.4.41-4ubuntu3.4 all [installed,automatic]
Apache HTTP Server (common files)

apache2-dev/focal-updates 2.4.41-4ubuntu3.4 amd64
Apache HTTP Server (development headers)

apache2-doc/focal-updates 2.4.41-4ubuntu3.4 all
Apache HTTP Server (on-site documentation)

apache2-ssl-dev/focal-updates 2.4.41-4ubuntu3.4 amd64
Apache HTTP Server (mod_ssl development headers)

apache2-suexec-custom/focal-updates 2.4.41-4ubuntu3.4 amd64
Apache HTTP Server configurable suexec program for mod_suexec

apache2-suexec-pristine/focal-updates 2.4.41-4ubuntu3.4 amd64
Apache HTTP Server standard suexec program for mod_suexec

apache2-suexec-pristine/focal-updates 2.4.41-4ubuntu3.4 amd64
Apache HTTP Server standard suexec program for mod_suexec

apache2-utils/focal-updates,now 2.4.41-4ubuntu3.4 amd64 [installed,automatic]
Apache HTTP Server (utility programs for web servers)
```

To install apache2

apt install apache2 -y

```
root@Imran:~# apt install apache2 -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
    apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser
The following NEW packages will be installed:
    apache2
    upgraded, 1 newly installed, 0 to remove and 27 not upgraded.
Need to get 95.5 kB of archives.
After this operation, 542 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates/main amd64 apache2 amd64 2.4.41-4ubuntu3.4 [95.5 kB]
Fetched 95.5 kB in 0s (5456 kB/s)
Selecting previously unselected package apache2.
(Reading database ... 64421 files and directories currently installed.)
Preparing to unpack .../apache2.2.4.41-4ubuntu3.4) ...
Setting up apache2 (2.4.41-4ubuntu3.4) ...
Setting up apache2 (2.4.41-4ubuntu3.4) ...
Setting up apache2 (2.4.41-4ubuntu3.4) ...
Setting up apache3 (2.4.41-4ubuntu3.4) ...
Processing triggers for systemd (245.4-4ubuntu3.11) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for ufw (0.36-6) ...
root@Imran:~#
```

To remove apache2

apt remove apache2 -y

```
root@Imran:~# apt remove apache2 -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
    apache2-bin apache2-data apache2-utils libapr1 libaprutill libaprutill-dbd-sqlite3 libaprutil1-ldap libjansson4 liblua5.2-0 ssl-cert
Use 'apt autoremove' to remove them.
The following packages will be REMOVED:
    apache2
    o upgraded, 0 newly installed, 1 to remove and 27 not upgraded.
After this operation, 542 kB disk space will be freed.
(Reading database ... 64471 files and directories currently installed.)
Removing apache2 (2.4.41-4ubuntu3.4) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for ufw (0.36-6) ...
root@Imran:~#
```

Commands	Description	
wget link	to download file from link	
curl link	access file from link	
curl link -o outputfile	access file and store o/p to a file	
REDHAT RPM commands		
rpm -ivh {rpm-file}	Install the package	<pre>rpm -ivh mozilla-mail-1.7.5-17 .i586.rpm rpm -ivhtest mozilla- mail-1.7.5-17 .i586.rpm</pre>

rpm -Uvh {rpm-file}	Upgrade package	<pre>rpm -Uvh mozilla-mail-1.7.6-12 .i586.rpm rpm -Uvhtest mozilla- mail-1.7.6-12 .i586.rpm</pre>
---------------------	-----------------	---

rpm -ev {package}	Erase/remove/ an installed package	rpm -ev mozilla-mail
<pre>rpm -evnodeps {package}</pre>	Erase/remove/ an installed package without checking for	rpm -ev nodeps mozilla-mail

	dependencies	
rpm -qa	Display list all installed packages	rpm -qa rpm -qa less
rpm -qi {package}	Display installed information along with package version and short description	rpm -qi mozilla-mail
<pre>rpm -qf {/path/to/file}</pre>	Find out what package a file belongs to i.e. find what package owns the file	rpm -qf /etc/passwd rpm -qf /bin/bash
rpm -qc {pacakge-name}	Display list of configuration file(s) for a package	rpm -qc httpd
<pre>rpm -qcf {/path/to/file}</pre>	Display list of configuration files for a command	rpm -qcf /usr/X11R6/bin/xeyes
rpm -qalast	Display list of all recently installed RPMs	rpm -qalast rpm -qalast less
<pre>rpm -qpR {.rpm-file} rpm -qR {package}</pre>	Find out what dependencies a rpm file has	rpm -qpR mediawiki-1.4rc1-4.i5 86.rpm rpm -qR bash

CentOS_8 Commands		
DNF commands cheatsheet	https:// www.linuxtechi .com/dnf-command- examples-rpm- management- fedora- linux/	
dnfhelp	Show the help	
dnf search PACKAGE	search from available repositories	
dnf install PACKAGE -y	To install the package	
dnf install httpd -y	To Install httpd package	
dnf install vim -y	Installing VIM Editor	
dnf reinstall PACKAGE	To reinstall PACKAGE	
dnf remove PACKAGE	To remove PACKAGE	
dnf update	update all packages	
dnf update PACKAGE	update only a package	
dnf grouplist	List all available Group Packages	
dnf groupinstall "GROUPNAME"	Installs all the packages in a group	
dnf repolist	List Enabled dnf Repositories	
dnf clean all	Clean dnf Cache	

dnf install epel- release	Additional package repository that provides easy access to install packages for commonly used software.	
------------------------------	---	--

dnf history	View History of dnf	
dnf info package name	Shows the information of package like version, size, source, repository etc	
YUM Commands Cheatsheet	h t t p s : / / access.redhat. com/ sites/default/file s/ attachments/rh yum c heatsheet 1214 jcs pr i nt-1.pdf	
yum -help	Shows the help	
yum search PACKAGE	Search from available repositories	
yum install PACKAGE -y	To install the package	
yum install httpd -y	To install httpd package	
yum install vim -y	To install VIM Editor	
yum reinstall PACKAGE	To reinstall the PACKAGE	

Yum remove PACKAGE	To Remove PACKAGE	
yum update	Update all packages	
yum update PACKAGE	To Update specific package	
yum grouplist	List all available Group packages	
yum groupinstall "Group Name"	Install all the packages in a group	
Yum repolist	List Enabled YUM repositories	
yum install epel- release	Additional package repository that provides easy access to install packages for commonly used software.	
yum clean all	Clean yum cache	
yum history	View history of yum	
Yum info PACKAGE NAME	Shows the information of package like version, size, source, repository etc.	
Ubuntu20 Commands		
apt commands cheatshee t	<pre>https://itsfoss.com/ ap t-command-guide/</pre>	
apt search PACKAGE	search from available repositories	
apt install PACKAGE -y	To Install Packages	
apt install apache2	To Install apache2	

-y

apt reinstall PACKAGE	To reinstall PACKAGE	
apt remove PACKAGE	To remove PACKAGE	
apt update	update all packages	
apt update PACKAGE	update only a package	
apt grouplist	List all available Group Packages	
apt groupinstall "GROUPNAME"	Installs all the packages in a group.	
apt repolist	List Enabled apt Repositories	
apt clean all	Clean apt Cache	
apt history	View History of apt	
apt show package name	Shows the information of package like version, size, source, repository etc	