**Yum utility :-**

To install packages or rpm

# yum install rpm\_name

To install supported rpm

# yum groupinstall rpm\_name

To update installed rpm or update version

# yum update packages\_name

To remove the rpm

# yum remove rpm\_name

To search install rpm

# yum search rpm\_name

To list the all installed rpm

# yum list all

To list one particular rpm which that already installed

# yum list rpm\_name

To check software or rpm version or more information about software

# yum info rpm\_name

To check group packages infor..

# yum groupinfo packages\_groupname

To verify installed kernel

# yum list kernel\* {show the list of all kernel installed}

--To reinstall the installed packages

# yum reinstall package\_name

To update the kernel version

# yum install new\_kernel\_version

# yum update kernel-version

Note:- go for /etc/grub.conf set the kernel defaults.

# yum list kernel

**Rpm : Installation & Removal**

To install the rpm through rpm commands

# rpm -ivh packages\_name

To remove rpm

# rpm –e rpm\_name

Four basic types of queries

To check installed all rpm

# rpm -qa

To check installed a particular rpm.

# rpm -q rpm\_name

To check version

# rpm -qi rpm\_name

**Kernel Services**

* Tips

Kernel Modules

A kernel module is an optional portion of kernel code that may be loaded after the kernel has been initialized.

1} Kernels always installed under the /boot directory

2} Kernel load into the /lib/module directory.

To check kernel release-version

# uname -r

To check all information about kernel

# uname -a

Kernel Module Utilities

* **Lsmod** provides a list of loaded modules
* **Modprobe** can load and unload modules
* **Modinfo** displays information about any available module
* **/etc/modprobe.con**f used for module configuration

**GN :-** Modules may be loaded or unloaded using the modprobe utility insmod, modprobe will automatically load dependencies locating the required modules on the file systems.

Example:-

To load module

# modprobe usb\_storage { usb\_storage it’s module name}

To check loaded modules

# lsmod -a { show list of all loaded modules }

# lsmod |grep usb\_storage {show list of one loaded modules}

To remove loaded modules

# modprobe -r usb\_storage

To check any modules information

# modinfo usb\_storage

**/proc Examples**

# cat /proc/cmdline {To check boot time options}

# cat /proc/cpuinfo {To check processor information}

# cat /proc/mdstat {To raid software information “mdstat”}

# cat /proc/meminfo {To check system memory usage “free & vmstat”}

# cat /proc/swaps {To check system memory usage “free & vmstat”}

# cat /proc/modules {dynamecallly loaded modules “lsmod”}

# cat /proc/net {network activity & configuration “ifconfig & netstat”}

# cat /proc/partitions {block device known to the kernel}

# cat /proc/version {To check kernel version “uname”}

# cat /proc/sys/net/ipv4/ip\_forward {To check ip-forwarding on & off }

# cat /proc/sys/vm/drop\_caches {writing a fores the kernel to free up some memory from caches}

**Sysctl: Persistent kernel configuration**

….Kernel parameters provide a mechanism to adjust the functioning of the linux kernel.

….The sysctl command can be used to view and set kernel parameters.

# sysctl -a

To set a parameters .net.ipv4.tcp\_syncookies=1

# sysctl -w .net.ipv4.tcp\_syncookies=1

….To make this settings permanents , we would to add the perameters to /etc/sysctl.conf

Once this done the new configuration file could be synchronized with the kernel by using

# sysctl -p

**Exploring Hardware Devices**

To check list all devices in text mode

# hal-device

To check list all devices on a graphical window

# yum install hal\* -y

# hal-device-manager

To check list of devices connected to the PCi and USB

# lspci {for PCI list}

# lsusb {for usb port list}

**Monitoring Processes and Resources**

Check Memory command’s

To check free memory

# free

To check free & uses memory

# vmstat

To check swap memory size & used & priority.

# swapon -s

Check Processes command’s

To check top high process

# ps

To check all processes list

# top

To check processes by graphically mode

# gnome-system-monitor

Kernel State

To check os name

# uname

To check os release-version

# uname -r

To check all information aboute os or kernel

# uname -a

# uptime {Tell how long the system has been running.}

**Modifying /Deleting user accounts**

--To change the comment field .this is often the users full name

# usermod -c comment\_name

# cat /etc/passwd {for check applied comment on bheem user}

--To set date on which the account will expire and disable.

# usermod -e date\_like\_11/07/2012 user\_name

# chage -l bheem {for check permission}

--To change the user login name

# usermod -l new\_username old\_username

# su -u new\_username {for check}

--To change the login shell

# usermod -s shell\_name user\_name

--To chege the login id

# usermod -u uid\_number

--To lock the password of any user’s

# usermod -L user\_name

--To unloack the user password

# usermod -U user\_name

--To delete any user’s without his home directory

# userdel user\_name

# ls /home {check his home directory into /home directory}

--To delete any user’s with his home directory

# userdel -r user\_name

**Password Aging Policies**

Note:- By defult user password do not expire & we can use /etc/login.defs file for all bellow permission’s

--To set minium days between password chage

# chage -m 2 user\_name {password will be expire ofter two days}

# chage -l user\_name {To check password validity}

--To maximum days between password changes

# chage -M user\_name

# chage -l user\_name {To check password validity}

--To Expire the account on this date {yyyy/mm/dd}

# chage -E 2012/07/13 amrita

# chage -l user\_name {To check password validity}

--To number of days before a required chage to start warnings

# chage -W 2 user\_name

# chage -l user\_name {To check password validity}

**Network Configuration**

--To see the address assigned to each interface & we can see here by this command.

# ip addr show eth0\_name

--To show all Ethernet hardware/mac address which that configure in /etc/sysconfig/nework-script/\*

# grep ‘HWADDR’ /etc/sysconfig/network-scripts/ifcfg-eth\*

--To the speed and duplex setting for the card can be viewed and/changed with /sbin/ethool

# ifdown eth\_name

# ethtool -s eth\_name autoneg off speed 100 duplex full

# ifup eth\_name

--To apply change

# ifdown eth\_name; ifup eth\_name

--To check the routing table

# ip route

--To configure route for the network

# ip route add 192.168.0.0/24 via 10.53.0.253

# cat /etc/sysconfig/network-scripts/route-eth1 {To check add route}

--To check ip connectivity status

# ping -c 4 ip\_addresses {ping only four time}

--Traceroute - print the route packets trace to network host or display network path to a destination

# traceroute

--combiness the functionality of traceroute and ping in a single tool

#mtr