

# Package MANAGEMENT



### Topics we will discuss

- What is rpm
- What is yum
- Diff b/w yum and rpm
- yum configuration
- troubleshooting



- A RedHat Package Manager (RPM) package is a container of files. A typical RedHat Package Manager (RPM) package includes the group of files associated with a specific program or application, which normally includes binary installation scripts as well as configuration and documentation files. It also includes instructions on how and where these files should be installed and uninstalled.
- A proper RedHat Package Manager (RPM) file should follow a specific naming convention:
  - <packagename>-<version>-<release>.<arch>.rpm

## How to query RedHat Package Manager (RPM) Database



- shows all installed packagesrpm -qa
- shows the number of packagesrpm -qa | wc -l



### Redhat package manager

- Primary functions :
  - 1. install/remove
  - 2.query
  - 3.verify
  - 4.build

## RPM options

- install --- —i
- upgrade --- -u
- freshern --- -f
- erase/delete --- -e
  - **Output Options**
- -v verbos
- -h human readable



- To install a package rpm –ivh filename.rpm
- To remove package rpm –e filename.rpm
- To know uninstalled package information rpm –qip packagename.rpm
   rpm –qlp packagename.rpm

4

To query the information
 rpm –qa – list of installed packages
 rpm – qf filename – shows owning package
 rpm –qi filename – shows general info
 rpm – ql filename – lists files in package

# 4

- Rpm verification
  rpm –V package name
  rpm –Va package name
  rpm –Vp package name
- Verify signature before installing package
  rpm - checksig filename.rpm



- To check updates /usr/sbin/up2date
- To know digital signature information /etc/sysconfig/rhn/systemid
- Install a package without dependency
  rpm –ivh - nodeps filename.rpm
- To remove a package without depedency
- rpm –e filename - nodeps --force

## Yellow Dog Update Modifier

- YUM stands for "Yellow dog Updater, Modified" because it is based on YUP, the Yellow Dog Updater (Yellow Dog is an RPM-based version of Linux for the Power Architecture hardware).
- by using yum we can install packages with out dependency.



#### Some of the advantages of YUM include

- Automatic resolution of software dependencies.
- Command-line and graphical versions. YUM can install or upgrade software by using either the command-line version (yum command) or one of two graphical programs:
- Package updater that only shows software updates available from RHN.

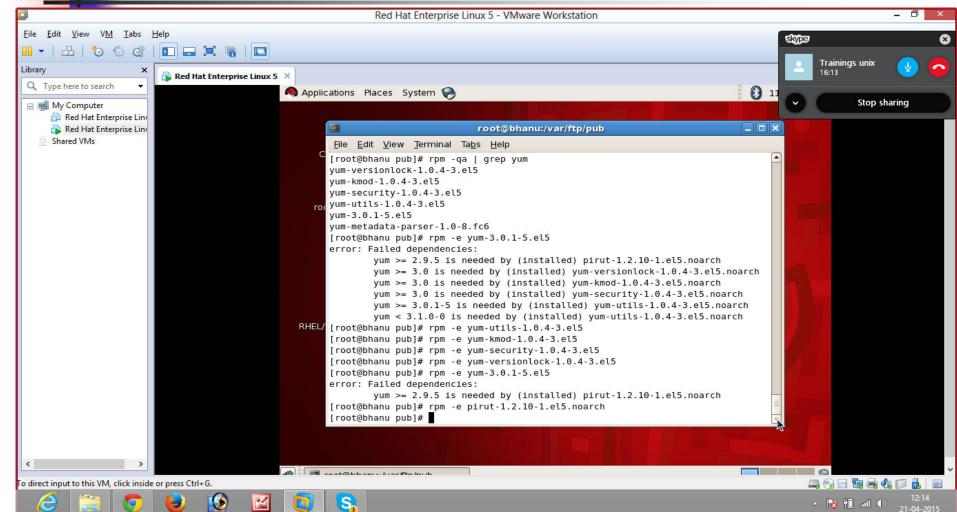
## Yum server configuration

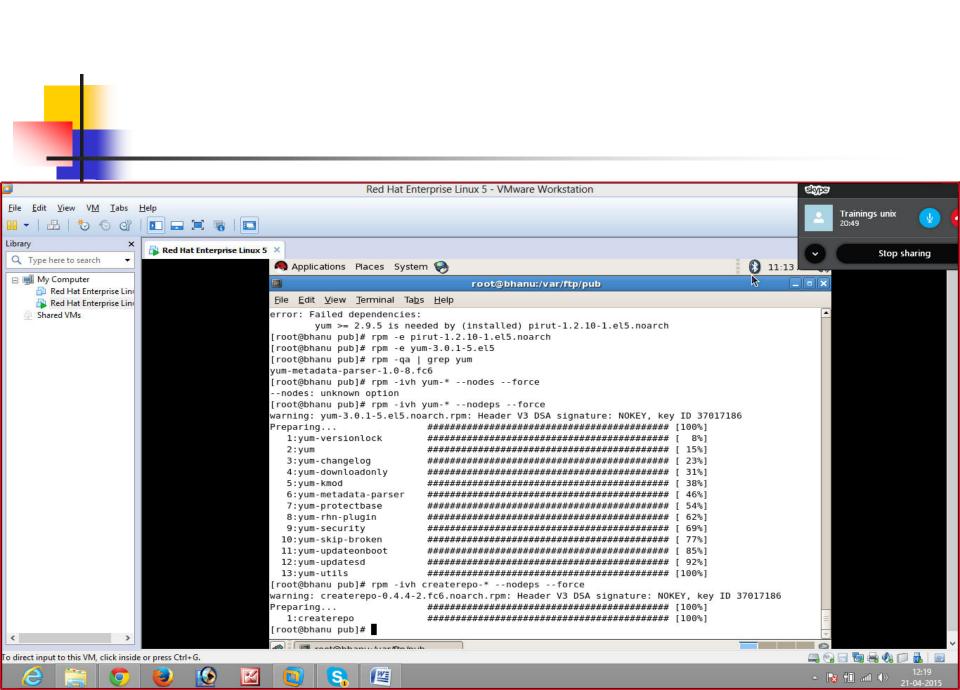
- make a directorymkdir –p /mnt/cdrom
- mount -t iso9660 /dev/cdrom /mnt/cdrom
- mkdir -p /var/ftp/pub
- copy the packages from /mnt/cdrom to /var/ftp/pub
   cd /mnt/cdrom
   cp -rf \* /var/ftp/pub/

# 4

- umount /mnt/cdrom
- While installing yum server make sure whether yum server installed or not if yum server already installed then do
  - Yum remove yum
- if no yum in your server then
- Install yum package rpm -ivh yum-\* --nodeps --force

## Troubleshooting in yum install







- Install createrepo package
  rpm -ivh createrepo-\* --nodeps --force
- Now create repo file createrepo -v .
   createrepo -v Server

Createrepo files stored in the form of xml files.



- If we get error like this Could not remove old metadata dir: .olddata Error was [Errno 39] Directory not empty: '/var/ftp/pub/.olddata' Please clean up this directory manually.
- remove it rm -rf /var/ftp/pub/.olddata/

- 4
  - cd /etc/yum.repos.d/
  - copy the sample repo information to new repo file.
    - cp -rf rhel-debuginfo.repo testing.repo
  - vi testing.repo ###modify the entries baseurl=file:///var/ftp/pub/ enabled=1 gpgcheck=0

check the vsftpd package installed or not? rpm -qa | grep -i vsftpd if installed remove it yum remove vsftpd After install it yum install vsftpd it will ask for option to download give yes ##Total download size: 137 k ##Is this ok [y/N]: y ##Installed: vsftpd.i386 0:2.0.5-10.el5 Complete!



now check package rpm -qa | grep vsftpd vsftpd-2.0.5-10.el5

#### YUM Configuration file in detail (/etc/yum.conf)

- [main] The first line in YUM configuration file, "/etc/yum.conf" shows that it's the main configuration file.
- cachedir=/var/cache/yum The cachedir directive in YUM configuration file, "/etc/yum.conf" specifies the directory where yum downloads are stored:
- keepcache=0 The keepcache setting in YUM configuration file, "/etc/yum.conf", allows you to save the downloaded RPMs in "/var/cache/yum" subdirectory.
- debuglevel=2 The debuglevel directive in YUM configuration file, "/etc/yum.conf" specifies the level of messages specified in the file associated with the logfile directive.
- logfile=/var/log/yum.log The logfile directive in YUM configuration file, "/etc/yum.conf" specifies the yum log file.
- pkgpolicy=newest The pkgpolicy directive in YUM configuration file,
  "/etc/yum.conf" specifies that yum uses the latest package version.



- •distroverpkg=redhat-release The distroverpkg directive in YUM configuration file, "/etc/yum.conf" shown takes the version number from the /etc/redhat-release file:
- tolerant=1 The tolerant directive in YUM configuration file,
  "/etc/yum.conf" allows yum to work even with minor errors.
- exactarch=1 The exactarch directive makes sure that yum downloads correspond to your CPU architecture:
- obsoletes=1 The obsoletes directive in YUM configuration file,
  "/etc/yum.conf" checks for and uninstalls any obsolete packages.
- gpgcheck=1 The gpgcheck directive in YUM configuration file,
  "/etc/yum.conf" enables a gpc check.



- plugins=1 The plugins directive in YUM configuration file,
  "/etc/yum.conf" includes plug-ins as defined in the
  /etc/yum/pluginconf.d/ and /usr/lib/yum-plugins/ directories as part of
  the yum configuration:
- metadata\_expire=1800 The metadata\_expire directive in YUM configuration file, "/etc/yum.conf" defines the lifetime for headers. This means, if you haven't used the yum command in 30 minutes (1800 seconds), the next use of the yum command downloads the latest header information.
- The /etc/yum.repos.d directory shown in the in YUM configuration file, "/etc/yum.conf" is the default location for third-party repository configuration files.
- The baseurl=http://192.168.1.101/server in YUM configuration file,
  "/etc/yum.conf" shows the yum repository location.

#### **REDHAT 6-YUM CONFIGURATION**

- [root@localhost /]# mkdir -p /mnt/cdrom
- [root@localhost /]# mount /dev/cdrom /mnt/cdrom mount: block device /dev/sr0 is write-protected, mounting read-only
- [root@localhost /]# df -hFilesystem Size Used Avail Use% Mounted on

/dev/mapper/VolGroup-lv\_root

19G 754M 17G 5% /

tmpfs 246M 0 246M 0% /dev/shm

/dev/sda1 485M 32M 428M 7% /boot

/dev/sr0 3.5G 3.5G 0 100% /mnt/cdrom



- Copy to /var/ftp/pub/RHEL6/ directorycp -R \* /var/ftp/pub/RHEL6/
- we