## YUM

- → The Yellow dog Updater Modified (YUM) is a package management application for computers running Linux operating systems.
- → With yum we can install, update, remove the packages
- → Yum resolves the dependencies.
- → Yum uses a configuration file at /etc/yum.conf

To configure a YUM server the steps are.

- → Make sure that vsftpd package is installed, if not install it.
- → Copy entire RHEL6 DVD to "/var/ftp/pub/rhel6" directory, where rhel6 dir is to made by us only it is not default dir.
- → Make a repo file as "yallareddy-rhel6.repo"in /etc/yum.repos.d directory
- → Clean the yum cache and check the package list using yum command

Checking the vsftpd package is installed or not.

```
root@master-server:~
[root@master-server ~]# rpm -qa vsftpd
[root@master-server ~]# []
```

If it is not installed, then go to dvd's mount point and navigate to "Packages" directory and install it as shown below.

```
root@master-server:~
[root@master-server ~]# df -h
Filesystem               Size  Used Avail Use% Mounted on
/dev/mapper/vg_masterserver-lv_root
                          16G  2.5G   13G  18% /
tmpfs                    997M  100K  997M   1% /dev/shm
/dev/sda1                485M   32M  429M   7% /boot
/dev/sr0                 3.4G  3.4G     0 100% /media/RHEL_6.1 x86_64 Disc 1
[root@master-server ~]# 
```

As we know the mount point of dvd is /media/RHEL_6, move to its location and enter into Packages directory.

```
[root@master-server ~]# cd /media/RHEL_6.1\ x86_64\ Disc\ 1/
[root@master-server RHEL_6.1 x86_64 Disc 1]# ls
EFI                RELEASE-NOTES-as-IN.html  RELEASE-NOTES-kn-IN.html  RELEASE-NOTES-te-IN.html
EULA               RELEASE-NOTES-bn-IN.html  RELEASE-NOTES-ko-KR.html  RELEASE-NOTES-zh-CN.html
GPL                RELEASE-NOTES-de-DE.html  RELEASE-NOTES-ml-IN.html  RELEASE-NOTES-zh-TW.html
HighAvailability   RELEASE-NOTES-en-US.html  RELEASE-NOTES-mr-IN.html  repodata
images             RELEASE-NOTES-es-ES.html  RELEASE-NOTES-or-IN.html  ResilientStorage
isolinux           RELEASE-NOTES-fr-FR.html  RELEASE-NOTES-pa-IN.html  RPM-GPG-KEY-redhat-beta
LoadBalancer       RELEASE-NOTES-gu-IN.html  RELEASE-NOTES-pt-BR.html  RPM-GPG-KEY-redhat-release
media.repo         RELEASE-NOTES-hi-IN.html  RELEASE-NOTES-ru-RU.html  ScalableFileSystem
Packages           RELEASE-NOTES-it-IT.html  RELEASE-NOTES-si-LK.html  Server
README             RELEASE-NOTES-ja-JP.html  RELEASE-NOTES-ta-IN.html  TRANS.TBL
[root@master-server RHEL_6.1 x86_64 Disc 1]# cd Packages/
[root@master-server Packages]# pwd
/media/RHEL_6.1 x86_64 Disc 1/Packages
[root@master-server Packages]#
```

Now install the "vsftpd" package.

```
[root@master-server Packages]# ls | grep vsftpd
vsftpd-2.2.2-6.el6_0.1.x86_64.rpm
[root@master-server Packages]# pwd
/media/RHEL_6.1 x86_64 Disc 1/Packages
[root@master-server Packages]#
[root@master-server Packages]# rpm -ivh vsftpd-2.2.2-6.el6_0.1.x86_64.rpm
warning: vsftpd-2.2.2-6.el6_0.1.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID fd431d51: NOKEY
Preparing...               ########################################### [100%]
   1:vsftpd                 ########################################### [100%]
[root@master-server Packages]#
[root@master-server Packages]# rpm -qa vsftpd-2.2.2-6.el6_0.1.x86_64.rpm
[root@master-server Packages]# rpm -qa vsftpd
vsftpd-2.2.2-6.el6_0.1.x86_64
[root@master-server Packages]#
```

```
[root@master-server Packages]# rpm -qi vsftpd | grep Install
Install Date: Fri 09 May 2025 12:12:06 PM IST    Build Host: hs20-bc2-3.build.redhat.com
[root@master-server Packages]#
```

Copy entire RHEL6 DVD to **"/var/ftp/pub/yalla-rhel6"** directory, Where rhel6 dir is to be made by user only it is not a default dir

First make an directory "yalla-rhel6" under /var/ftp/pub

#mkdir /var/ftp/pub/yalla-rhel6

```
[root@master-server ~]# mkdir -p /var/ftp/pub/yalla-rhel6
[root@master-server ~]# ls -ld /var/ftp/pub/yalla-rhel6/
drwxr-xr-x. 2 root root 4096 May  9 12:15 /var/ftp/pub/yalla-rhel6/
[root@master-server ~]#
```

Now copy the RHEL6 DVD to /var/ftp/pub/rhel6 directory with its default permission

#cp –rvfp /media/RHEL_6.0\I386\Disc\1/* /var/ftp/pub/ yalla-rhel6

```
[root@master-server ~]# mkdir -p /var/ftp/pub/yalla-rhel6
[root@master-server ~]# ls -ld /var/ftp/pub/yalla-rhel6/
drwxr-xr-x. 2 root root 4096 May  9 12:15 /var/ftp/pub/yalla-rhel6/
[root@master-server ~]# cp -rfp /media/RHEL_6.1\ x86_64\ Disc\ 1/* /var/ftp/pub/yalla-rhel6/
```

Check the directory after copying is finished.

```
[root@master-server ~]# cd /var/ftp/pub/yalla-rhel6/
[root@master-server yalla-rhel6]# ls
EFI              RELEASE-NOTES-as-IN.html  RELEASE-NOTES-kn-IN.html  RELEASE-NOTES-te-IN.html
EULA             RELEASE-NOTES-bn-IN.html  RELEASE-NOTES-ko-KR.html  RELEASE-NOTES-zh-CN.html
GPL              RELEASE-NOTES-de-DE.html  RELEASE-NOTES-ml-IN.html  RELEASE-NOTES-zh-TW.html
HighAvailability RELEASE-NOTES-en-US.html  RELEASE-NOTES-mr-IN.html  repodata
images           RELEASE-NOTES-es-ES.html  RELEASE-NOTES-or-IN.html  ResilientStorage
isolinux         RELEASE-NOTES-fr-FR.html  RELEASE-NOTES-pa-IN.html  RPM-GPG-KEY-redhat-beta
LoadBalancer     RELEASE-NOTES-gu-IN.html  RELEASE-NOTES-pt-BR.html  RPM-GPG-KEY-redhat-release
media.repo       RELEASE-NOTES-hi-IN.html  RELEASE-NOTES-ru-RU.html  ScalableFileSystem
Packages         RELEASE-NOTES-it-IT.html  RELEASE-NOTES-si-LK.html  Server
README           RELEASE-NOTES-ja-JP.html  RELEASE-NOTES-ta-IN.html  TRANS.TBL
[root@master-server yalla-rhel6]# pwd
/var/ftp/pub/yalla-rhel6
[root@master-server yalla-rhel6]#
```

Make a repo file as "yallareddy-rhel6.repo"in /etc/yum.repos.d directory

The file which we make inside /etc/yum.reops.d, will be functioning as the repository address and configuration file. Create the file with following details.

 #vim /etc/yum.reops.d/ yallareddy-rhel6.repo

```
[root@master-server yum.repos.d]# cat yallareddy-rhel6.repo
[yallareddy-rhel6.repo]
name= RHEL6 Repo
baseurl=file:///var/ftp/pub/yalla-rhel6
enabled=1
gpgcheck=0
[root@master-server yum.repos.d]# pwd
/etc/yum.repos.d
[root@master-server yum.repos.d]#
```

**[yallareddy-rhel6.repo]** - short name given to the repository

**name** is the complete name for the repository.

**baseurl** is the location of the dvd dump we have made.

**enabled** is to enable or disable the repository. The possible value for it is 0 and 1, where 0 means disable and 1 means enabled.

**gpgcheck** With the gpgcheck option, all packages must be signed, and yum must be able to verify the signatures on packages from red hat . If gpgcheck=0, there will be no package signing by red hat and signature verification.

**Clean the yum cache and check the package list using yum command**

To clear the cache use the following command

#yum clean all

```
root@master-server:/etc/yum.repos.d
[root@master-server yum.repos.d]# yum clean all
Loaded plugins: product-id, refresh-packagekit, subscription-manager
Updating Red Hat repositories.
Cleaning repos: InstallMedia yallareddy-rhel6.repo
Cleaning up Everything
[root@master-server yum.repos.d]#
```

If the configuration is correct, then the following output will be displayed, otherwise there will be some errors displayed.

Now let's check whether our repository is functioning properly or not.

**#yum list** (to list all the packages in repository)

```
root@master-server:/etc/yum.repos.d
eclipse-oprofile.x86_64           0.6.1-1.el6          yallareddy-rhel6.repo
eclipse-pde.x86_64                1:3.6.1-6.13.el6     yallareddy-rhel6.repo
eclipse-platform.x86_64           1:3.6.1-6.13.el6     yallareddy-rhel6.repo
eclipse-rcp.x86_64                1:3.6.1-6.13.el6     yallareddy-rhel6.repo
eclipse-rpm-editor.x86_64         0.5.0-2.el6          yallareddy-rhel6.repo
eclipse-rse.x86_64                3.2-1.el6            yallareddy-rhel6.repo
eclipse-subclipse.x86_64          1.6.5-6.el6          yallareddy-rhel6.repo
eclipse-subclipse-graph.x86_64    1.6.5-6.el6          yallareddy-rhel6.repo
eclipse-svnkit.x86_64             1.3.0-3.el6          yallareddy-rhel6.repo
```

<mark>**YUM Client configuration**</mark>

Configure the yum client and check whether yum server is responding to it.

Yum server IP: 192.168.111.135 (which we configured yum)

Yum client IP: 192.168.111.139

Configuring a yum client is very simple with just three steps.

- ➔ Install ftp package , so that packages can be accessed from client
- ➔ Make a repo file /etc/yum.repo.d/ as "yalla-client.repo"
- ➔ Clean the cache and check whether yum server is responding or not

Install ftp package, so that packages can be accessed from client

Install the ftp package from rhel dvd in Packages directory.

Execute the commands from the yum client server only 192.168.111.139

```
root@master-server:/media/RHEL_6.1 x86_64 Disc 1/Packages
[root@master-server Packages]# pwd
/media/RHEL_6.1 x86_64 Disc 1/Packages
[root@master-server Packages]# rpm -ivh ftp-0.17-51.1.el6.x86_64.rpm
warning: ftp-0.17-51.1.el6.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID fd
431d51: NOKEY
Preparing...                ########################################### [100%]
   1:ftp                    ########################################### [100%]
[root@master-server Packages]# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 16436 qdisc noqueue state UNKNOWN
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: eth1: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP ql
en 1000
    link/ether 00:0c:29:7c:af:53 brd ff:ff:ff:ff:ff:ff
    inet 192.168.111.139/24 brd 192.168.111.255 scope global eth1
    inet6 fe80::20c:29ff:fe7c:af53/64 scope link
       valid_lft forever preferred_lft forever
[root@master-server Packages]#
```

- ➔ Make a repo file /etc/yum.repo.d/ as "yalla-client.repo"

```
root@master-server:/etc/yum.repos.d
[root@master-server yum.repos.d]# cat yalla-client.repo
[yalla-client.repo]
name=rhel6client
baseurl=ftp://192.168.111.135/pub/yalla-rhel6
enabled=1
gpgcheck=0
[root@master-server yum.repos.d]# pwd
/etc/yum.repos.d
[root@master-server yum.repos.d]#
```

Note:- baseurl =ftp:// 192.168.111.135/pub/rhel6 refers to the server's ftp address.

Note: 192.168.111.135 IP is yum server IP

Clean the cache and check whether yum server is responding or not


root@master-server:/etc/yum.repos.d

```
[root@master-server yum.repos.d]# yum clean all
Loaded plugins: product-id, refresh-packagekit, subscription-manager
Updating Red Hat repositories.
Cleaning repos: yalla-client.repo
Cleaning up Everything
[root@master-server yum.repos.d]#
```

Check whether the server is responding to clients yum request.

#yum list


root@master-server:/etc/yum.repos.d

```
[root@master-server yum.repos.d]# yum list
Loaded plugins: product-id, refresh-packagekit, subscription-manager
Updating Red Hat repositories.
ftp://192.168.111.135/pub/yalla-rhel6/repodata/repomd.xml: [Errno 14] PYCURL ERROR 7 - "couldn't connect to host"
Trying other mirror.
Error: Cannot retrieve repository metadata (repomd.xml) for repository: yalla-client.repo. Please verify its path and try again
[root@master-server yum.repos.d]#
```

To resolve the issue follow the below steps at yum client side

#Install the vsftpd package

#start the vsftpd service

Note: install ftp & vsftpd package at yum server side

Note: start the vsftpd service at yum server side also.


root@master-server:/media/RHEL_6.1 x86_64 Disc 1/Packages

```
[root@master-server Packages]# rpm -ivh vsftpd-2.2.2-6.el6_0.1.x86_64.rpm
warning: vsftpd-2.2.2-6.el6_0.1.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID fd431d51: NOKEY
Preparing...                ########################################### [100%]
   1:vsftpd                 ########################################### [100%]
[root@master-server Packages]#
[root@master-server Packages]# service vsftpd status
vsftpd is stopped
[root@master-server Packages]# service vsftpd start
Starting vsftpd for vsftpd:                                [  OK  ]
[root@master-server Packages]# service vsftpd status
vsftpd (pid 2401) is running...
[root@master-server Packages]#
```

Now again run the command #yum list


root@localhost:~

```
[root@localhost ~]# yum repolist
Loaded plugins: langpacks, product-id, search-disabled-repos, subscription-manager
This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.
repo id                                              repo name                          status
yalla-repo7                                          rhel77                             4,620
repolist: 4,620
[root@localhost ~]#
```

To list all the installed packages in the system.

To view all the installed packages in the system, the syntax is

#yum list installed



To install a package using yum

Installing a package using yum does not requires full package name as in the case of rpm, and it also automatically resolves the dependencies as well.

The syntax for installing a package is

#yum install <packaagename>



To remove the package with yum command

#yum remove <packagename>

#yum remove finger –y

```
[root@localhost ~]# yum remove finger
Loaded plugins: langpacks, product-id, search-disabled-repos, subscription-manager
This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.
Resolving Dependencies
--> Running transaction check
---> Package finger.x86_64 0:0.17-52.el7 will be erased
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================
 Package            Arch            Version            Repository            Size
================================================================================
Removing:
 finger             x86_64          0.17-52.el7        @yalla-repo7          32 k

Transaction Summary
================================================================================
Remove  1 Package

Installed size: 32 k
Is this ok [y/N]:
```

To update the package using yum

#yum update <packagename>

```
[root@localhost ~]# yum update vsftpd
Loaded plugins: langpacks, product-id, search-disabled-repos, subscription-manager
This system is not registered to Red Hat Subscription Management. You can use subscription-manager to register.
No packages marked for update
[root@localhost ~]#
```

The syntax for installing a package locally is

#yum localinstall <packagename>  -y


Note: If you face issue while configuring yum client follow the below steps

RHEL7: solution steps from client machine

telnet 192.168.111.135 21  -> it should be connected only

if not connected follow below steps

sudo firewall-cmd --permanent --add-service=ftp

sudo firewall-cmd –reload

sudo iptables -I INPUT -p tcp --dport 21 -j ACCEPT

sudo systemctl start vsftpd

Solution of RHEL6 at client side:

sudo service iptables status

sudo iptables -L –n

ACCEPT    tcp  --  0.0.0.0/0  0.0.0.0/0  tcp dpt:21

sudo iptables -I INPUT -p tcp --dport 21 -j ACCEPT

sudo service iptables save

sudo service iptables restart

sudo iptables -L -n | grep 21

telnet <yumserverip >21