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CENTOS/REDHAT

Create Local YUM repository on CentOS 7 / RHEL 7 using DVD



By Raj

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YUM is the package management tool that helps you to install or update the package through the network or local, at the same time it provides an easy method to install a package with its dependent packages.

Repository sources can be created either using the **createrepo** package or mounting the DVD on the **directory**. Mounting the DVD/CD ROM will lead to saving the space on HDD used by being copied to HDD.

Local YUM with DVD

Create Source

Mount the CD/DVD ROM on any directory of your wish. For testing, mount it on /cdrom.

```
# mkdir /cdrom
# mount /dev/cdrom /cdrom
```

Create Repo file

Before creating a repo file, move your existing repo files present in /etc/yum.repos.d directory, if not required.

```
mv /etc/yum.repos.d/*.repo /tmp/
```

Create the new repo file called **cdrom.repo** under /etc/repos.d directory.

```
# vi /etc/yum.repos.d/local.repo
```

Add the following details.

```
[LocalRepo]
name=LocalRepository
baseurl=file:///cdrom
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7
```

Where,

[LocalRepo] – Name of the Section.

name = Name of the repository

baseurl = Location of the package

Enabled = Enable repository

gpgcheck= Enable secure installation

gpgkey = Location of the key

gpgcheck is optional (If you set gpgcheck=0, there is no need to mention gpgkey)

Install Package from Local DVD YUM repository

Clear the repository cache by issuing the following command.

```
# yum clean all
```

Let's install the vsftpd package from the local repository.

```
# yum install vsftpd
```

The output will be like below; it will try to cache the package information. When you give yes to download the package, it will prompt you to accept gpg signing key.

Loaded plugins: fastestmirror

LocalRepo	3.6 kB	00:00
(1/2): LocalRepo/group_gz	157 kB	00:00
(2/2): LocalRepo/primary_db	2.7 MB	00:00

Determining fastest mirrors

Resolving Dependencies

--> Running transaction check

---> Package vsftpd.x86_64 0:3.0.2-9.el7 will be installed

--> Finished Dependency Resolution

Dependencies Resolved

```

=====
Package            Arch             Version           Repository        Size
=====
Installing:
vsftpd             x86_64           3.0.2-9.el7       LocalRepo         165 k

```

Transaction Summary

```

=====
Install 1 Package

```

Total download size: 165 k

Installed size: 343 k

Is this ok [y/d/N]: y

Downloading packages:

warning: /cdrom/Packages/vsftpd-3.0.2-9.el7.x86_64.rpm: Header V3 RSA/SHA256 Signature, key ID
Public key for vsftpd-3.0.2-9.el7.x86_64.rpm is not installed

Retrieving key from file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7

Importing GPG key 0xF4A80EB5:

Userid : "CentOS-7 Key (CentOS 7 Official Signing Key) <security@centos.org>"

Fingerprint: 6341 ab27 53d7 8a78 a7c2 7bb1 24c6 a8a7 f4a8 0eb5

Package : centos-release-7-0.1406.el7.centos.2.3.x86_64 (@anaconda)

From : /etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7

Is this ok [y/N]: y

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

Installing : vsftpd-3.0.2-9.el7.x86_64 1/1

Verifying : vsftpd-3.0.2-9.el7.x86_64 1/1

Installed:

vsftpd.x86_64 0:3.0.2-9.el7

Complete!</security@centos.org>

You have successfully configured the local repository on the machine, but it is limited to a single machine where the CD or DVD is mounted.

Local YUM with FTP or HTTP

If you have quite number machines and all of them connected over intranet, then this is the best option for you.

Host RPM Packages

Normally YUM server uses FTP or Apache as the medium to transfer packages. So, install either FTP or Apache on your yum server.

You can use either FTP or Apache, not both.

Mount the DVD on /cdrom.

```
mkdir /cdrom;mount /dev/cdrom /cdrom
```

Copy packages from DVDROM to /var/ftp or /var/www/html receptively for FTP and Apache.

FTP

Copy the packages from the DVD-ROM to FTP folder.

```
cp -a /cdrom/Packages/* /var/ftp
```

Apache

Copy packages from the DVD-ROM to Apache home directory.

```
cp -a /cdrom/Packages/* /var/www/html/
```

Edit Apache configuration file to enable the indexes.

```
vi /etc/httpd/conf/httpd.conf
```

From

```
Options Indexes FollowSymLinks
```

To

```
Options All Indexes FollowSymLinks
```

Remove the welcome page.

```
rm -rf /etc/httpd/conf.d/welcome.conf
```

Restart service.

```
### FTP ###  
  
systemctl restart vsftpd  
  
### Apache ###  
  
systemctl restart httpd
```

Firewall

You need to allow FTP and HTTP port on the firewall so that client machines can able to get packages from YUM server.

```
### For HTTP ###  
  
firewall-cmd --permanent --add-port=80/tcp  
firewall-cmd --reload  
  
### For FTP ###  
  
firewall-cmd --permanent --add-port=21/tcp  
firewall-cmd --reload
```

SELinux

Consider **disabling SELinux on CentOS / RHEL**.

Verify Services

Verify the accessibility using the web browser by visiting respective service.

FTP:

👉 <ftp://ip-address>

Apache:

👉 <http://ip-address>

Creating Repository

After hosting the packages, we need to create the repository of packages that we have copied from the disc. **createrepo** is the tool that helps you to create the XML based rpm meta-structure repository, like an index file that points to rpm files.

```
cd /cdrom/Packages  
rpm -ivh createrepo-*el7.noarch.rpm libxml2-python-*.x86_64.rpm deltarpm-*.el7.x86_64.rpm pyth
```

FTP

```
createrepo /var/ftp
```

Apache

```
createrepo /var/www/html
```

Create Repo File

Once created the repository, just go on to the client machine and add the repository file under the **/etc/yum.repos.d** directory.

Before creating a repo file, **move the existing repo files present in /etc/yum.repos.d directory, if not required.**

```
mv /etc/yum.repos.d/*.repo /tmp/
```

Create remote.repo file.

```
vi /etc/yum.repos.d/remote.repo
```

Create a repo entry like below, depends on the protocol you are using. Change ipaddress to your server ip address.

FTP

```
[remote]  
name=RHEL FTP  
baseurl=ftp://192.168.1.10  
enabled=1  
gpgcheck=0
```

Apache

```
[remote]
name=RHEL Apache
baseurl=http://192.168.1.10
enabled=1
gpgcheck=0
```

Install Package from Local YUM repository

Now you can install packages using the yum command.

```
yum install mysql-server
```

That's All.



10 Comments

ITzGeek

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Ev Liddle • 9 months ago

FTP works well only if there is some expert to support it. Binfer is an easier way to transfer files.

^ | v • Reply • Share ›



pklausner • 3 years ago

Does YUM really need to mount the CD / ISO? The openSUSE packaging takes an ISO location as repository

^ | v • Reply • Share ›



DV • 4 years ago

Following are the steps to create a local repo .

1) Copy the *.iso image of OS on the server using winscp or ftp.

2) Mount the Image on server to access its file

```
#mount -o loop CentOS-6.5-x86_64-bin-DVD1.iso /mnt/.
```

```
#df -h
```

```
Filesystem Size Used Avail Use% Mounted on
```

```
/dev/mapper/vg_nagiosbbops-lv_root 78G 7.3G 66G 10% /
```

```
tmpfs 3.9G 0 3.9G 0% /dev/shm
```

```
/dev/cciss/c0d0p1 485M 40M 420M 9% /boot
```

```
/dev/mapper/vg_nagiosbbops-lv_home 50G 180M 47G 1% /home
```

```
/root/CentOS-6.5-x86_64-bin-DVD1to2/CentOS-6.5-x86_64-bin-DVD1.iso 4.2G 4.2G 0 100%
```

```
/mnt
```

3) Copy the package file in following directory, if destination directory does not exist then creates one.

[see more](#)

^ | v • Reply • Share ›



Kapil Madaan → DV • 3 years ago

Thanks.

^ | v • Reply • Share ›



Amril • 4 years ago

Hi,

I have write such as your instruction.

come to directory :

```
cd /etc/yum.repos.d/
```

create file :

```
touch local.repo
```

run the local.repo file

```
vi local.repo
```

after it, run ..

I still get error such as "no more mirrors bla blabla"

I run this CentOS 7 in virtualbox, and also have success mount of ISO to CentOS 7

Please help me

^ | v • Reply • Share ›



Amril → Amril • 4 years ago

Hi,

Solved.. I just disable all of online repository.
anyway thank you so much.

^ | v • Reply • Share ›



Narayan → Amril • 4 years ago

How would you disable only online repository ??

^ | v • Reply • Share ›



Raj → Narayan • 4 years ago

Sorry for the late reply, you can just move unwanted (online) .repo file out of /etc/yum.repos.d directory. once done, execute yum clean all

^ | v • Reply • Share ›



djinn • 4 years ago

The local repository local.repo should be in the directory /etc/yum.repos.d/ not /etc/repos.d/

^ | v • Reply • Share ›



Raj → djinn • 4 years ago

That is typo, thanks for notifying

^ | v • Reply • Share ›

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Moises Hernandez Hernandez — thanks!

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Anil Koshy — The above step didn't work for me. Made a slight change in hdd partition setting. In /boot step, use as EFI Partion with

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clod — I like to use Codelobster IDE much more: <http://www.codelobsteride.com>