

Creating your own linux software update repository

This article will cover the steps involved to create your own satellite update server for the following distributions:

- Redhat Enterprise 4
- Ubuntu 9.10/10.10

Redhat Enterprise 4

1. Pre-requisite: You must have at least 1 valid Redhat Network entitlement. Using this one entitlement, you can use a machine with Redhat Enterprise 4 installed to distribute updates to as many other Redhat Enterprise 4 servers on your network as you like.
2. Run `rhn_register`. This will register your RHEL4 machine with the Redhat Network. Redhat will verify that you have a free entitlement available. If there is one available, it will assign your machine the appropriate update channel (i.e. AS or ES or WS for your architecture)
3. Create a directory to store the updates. (/updates in this example)
4. Create a shell script that fetches all packages from Redhat for the subscribed channel. See appendix I.
5. Add the shell script to cron to run nightly.
6. Setup Apache to share the directory containing the updates.

```
Alias /up2date /updates
```

```
<Directory "/updates">  
    #Options +Indexes  
    AllowOverride None  
    Order allow,deny  
    Allow from all  
</Directory>
```

Client configuration:

1. Ensure that the following packages are installed:
 - a. `python-elementtree-1.2.6-7.el4.rf.i386.rpm`
 - b. `python-urlgrabber-2.9.7-1.2.el4.rf.noarch.rpm`
 - c. `yum-2.6.1-1.noarch.rpm`
 - d. `python-sqlite-1.0.1-1.2.el4.rf.i386.rpm`
 - e. `sqlite-2.8.16-1.2.el4.rf.i386.rpm`

2. Replace `/etc/yum.conf` with the following:

```
[main]  
cachedir=/var/cache/yum  
keepcache=1  
debuglevel=2  
logfile=/var/log/yum.log  
pkgpolicy=newest
```



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```
distroverpkg=redhat-release
tolerant=1
exactarch=1
obsoletes=1

[base]
name=Red Hat Enterprises Linux $releasever - $basearch -
Base
baseurl=http://machine.example.com/up2date/rhel-$basearch-
as-4
```

Ubuntu 9.10/10.10

1. Install apt-mirror (apt-get install apt-mirror)
2. Modify /etc/apt/mirror.list and specify a location to hold the updates. Note – the Karmic release is fairly large, so expect to have several gigs of disk space free. See Appendix II.
3. Setup a cronjob to call apt-mirror as the apt-mirror user nightly
4. Setup apache to point to the download directory:
 - a. <http://machine.example.com/ubuntu> -> /apt/ubuntu-karmic/mirror/archive.ubuntu.com/ubuntu

Client Configuration:

1. Modify /etc/apt/sources.list. See Appendix III
2. apt-get update
3. apt-get upgrade

Appendix I

get_packages_example.bash:

```
#!/bin/bash
```

```
channel=rhel-x86_64-as-4
```

```
# Use the following directory to store all packages downloaded
repos=/updates/$channel
```

```
up2date --showall | xargs up2date -k $repos --get >
/usr/local/repo/up2date.log 2>&1
```

```
if [ $? -ne 0 ]; then
```

```
    cat /usr/local/repo/up2date.log | mail -s "up2date error on
`hostname`" spk@spkaa.com
```

```
fi
```

```
find /var/spool/up2date -type l -print0 | xargs -0 rm -f
```



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```
find /var/spool/up2date -type f -iname '*.rpm' -exec mv {} $repos \;

createrepo $repos

# Mail the log if there's something there.
if [[ -s /usr/local/repo/up2date.log ]] ; then
    cat /usr/local/repo/up2date.log | mail -s "RHEL4 x86_64
Updates" spk@spkaa.com
fi
```

Appendix II

Sample mirror.list:

```
##### config #####
#
# Specify a place to store updates with lots of free space
set base_path /apt/ubuntu-karmic
#
# if you change the base path you must create the directories below
with write privileges
#
# set mirror_path $base_path/mirror
# set skel_path $base_path/skel
# set var_path $base_path/var
# set cleanscript $var_path/clean.sh
# set defaultarch <running host architecture>
# set postmirror_script $var_path/postmirror.sh
set run_postmirror 0
set nthreads 2
set _tilde 0
#
##### end config #####

deb http://archive.ubuntu.com/ubuntu karmic main restricted universe
multiverse
deb http://archive.ubuntu.com/ubuntu karmic-security main restricted
universe multiverse
deb http://archive.ubuntu.com/ubuntu karmic-updates main restricted
universe multiverse
#deb http://archive.ubuntu.com/ubuntu karmic-proposed main restricted
universe multiverse
#deb http://archive.ubuntu.com/ubuntu karmic-backports main restricted
universe multiverse

deb-src http://archive.ubuntu.com/ubuntu karmic main restricted
universe multiverse
deb-src http://archive.ubuntu.com/ubuntu karmic-security main
restricted universe multiverse
```



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```
deb-src http://archive.ubuntu.com/ubuntu karmic-updates main restricted
universe multiverse
#deb-src http://archive.ubuntu.com/ubuntu karmic-proposed main
restricted universe multiverse
#deb-src http://archive.ubuntu.com/ubuntu karmic-backports main
restricted universe multiverse

clean http://archive.ubuntu.com/ubuntu
```

Appendix III

Sample /etc/apt/sources.list:

```
deb http://machine.example.com/ubuntu karmic main restricted universe
multiverse
deb http://machine.example.com/ubuntu karmic-security main restricted
universe multiverse
deb http://machine.example.com/ubuntu karmic-updates main restricted
universe multiverse

deb-src http://machine.example.com/ubuntu karmic main restricted
universe multiverse
deb-src http://machine.example.com/ubuntu karmic-security main
restricted universe multiverse
deb-src http://machine.example.com/ubuntu karmic-updates main
restricted universe multiverse
```