

Instructions on how to do Installs, Updates and Test Apps on CentOS

Installs

To install apps, use the following command **sudo apt install** followed by the app that you want to install. I'll provide some examples of recent apps that were installed and the times just for reference.

TMUX

Run **sudo yum install tmux** to start the install as shown below..

```
efelix@192.168.68.76:~$ sudo yum install tmux
[sudo] password for efelix:
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use "rhc"
or "subscription-manager" to register.

Last metadata expiration check: 0:00:22 ago on Mon 14 Oct 2024 08:07:59 AM E
DT.
Dependencies resolved.
=====
Package           Architecture Version                    Repository      Size
=====
Installing:
tmux               x86_64      3.2a-5.el9               baseos          474 k
Transaction Summary
=====
Install 1 Package

Total download size: 474 k
Installed size: 1.1 M
```

I'm going to take note that I installed TMUX on 10/14/2024 8:09am

EMACS

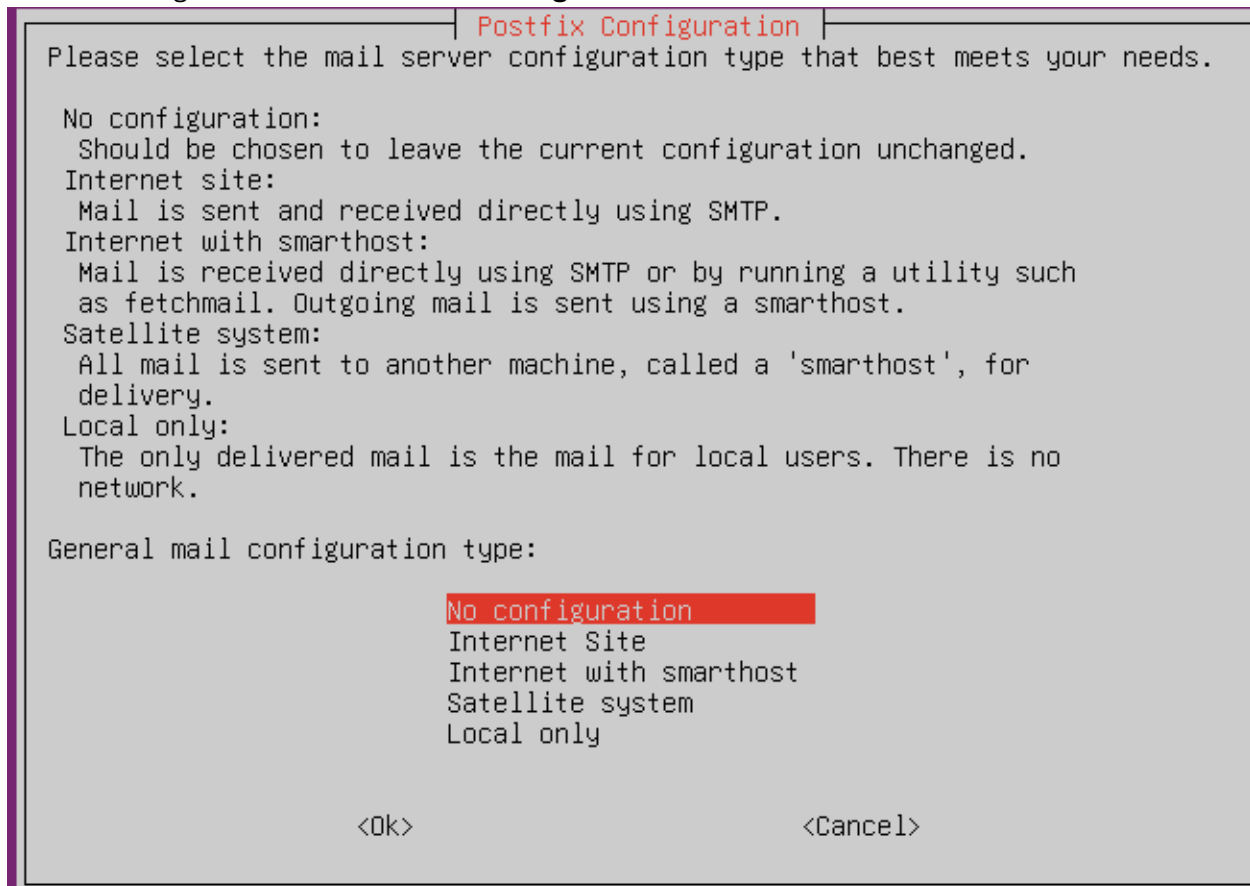
Run **sudo yum install emacs**

I'm going to take note that I installed EMACS on 10/14/2024 8:10am

FAIL2BAN

Run **sudo yum install fail2ban**

During installation I chose **No Configuration**.



I'm going to take note that I installed FAIL2BAN on 10/13/2024 8:49am

COWSAY

Run **sudo yum install cowsay**

I'm going to take note that I installed COWSAY on 10/13/2024 8:50am

LOLCAT

Run **sudo snap install lolcat**

I'm going to take note that I installed LOLCAT on 10/13/2024 8:51am

Repository

Checking Repository

To check the repository for our server by typing **sudo yum repolist** Results are as follows...
You see six repositories.

```
[efelix@localhost ~]$ sudo yum repolist
Updating Subscription Management repositories.
repo id           repo name
appstream          CentOS Stream 9 - AppStream
baseos             CentOS Stream 9 - BaseOS
epel               Extra Packages for Enterprise Linux 9 - x86_64
epel-cisco-openh264 Extra Packages for Enterprise Linux 9 openh264 (From Cisco)
- x86_64
epel-next          Extra Packages for Enterprise Linux 9 - Next - x86_64
extras-common      CentOS Stream 9 - Extras packages
```

To make sure that it is up-to-date I typed in the following **sudo yum update**

```
[efelix@localhost ~]$ sudo yum update
Updating Subscription Management repositories.
Last metadata expiration check: 0:20:10 ago on Mon 14 Oct 2024 09:36:49 AM EDT.
Dependencies resolved.
=====
Package                Architecture  Version      Repository    Size
=====
Upgrading:
  epel-next-release      noarch       9-8.el9      epel          7.8 k
  epel-release           noarch       9-8.el9      epel          18 k

Transaction Summary
=====
Upgrade  2 Packages

Total download size: 26 k
```

Will take note of the time and date above for when the repository was updated.

Add/Modifying Repository

To modify a repository you will have to know the location of where they sit. In CentOS they are located at `/etc/yum.repos.d/` So when I ran **`ls /etc/yum.repos.d/`** I see my six repositories.

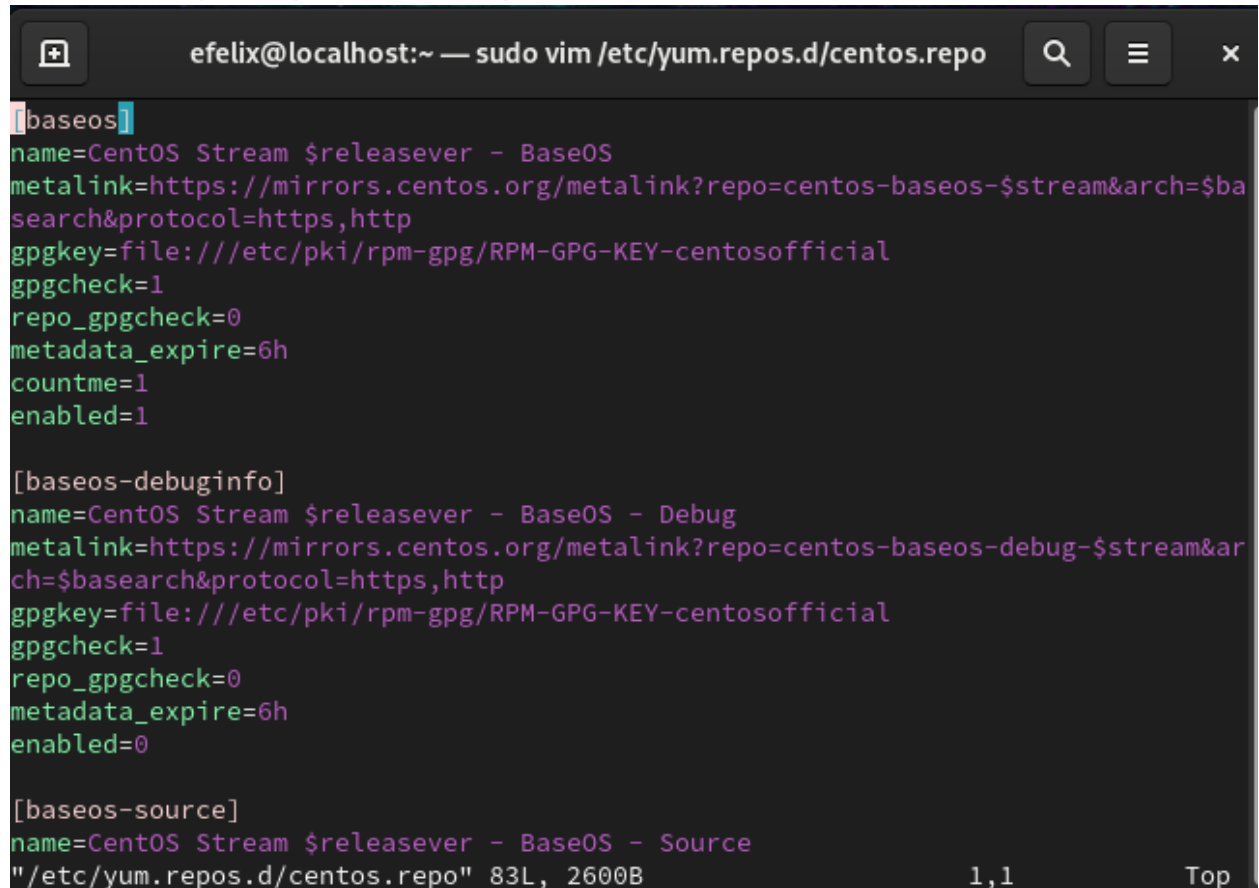
To view a repository you replace the listing command (`ls`) with (`cat`) to view the file **`cat /etc/yum.repos.d/`**

```
[efelix@localhost ~]$ ls /etc/yum.repos.d/
centos-addons.repo      epel-next.repo          epel-testing.repo
centos.repo             epel-next-testing.repo  redhat.repo
epel-cisco-openh264.repo epel.repo

[efelix@localhost ~]$ cat /etc/yum.repos.d/centos.repo
[baseos]
name=CentOS Stream $releasever - BaseOS
metalink=https://mirrors.centos.org/metalink?repo=centos-baseos-$stream&arch=$ba
search&protocol=https,http
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-centosofficial
gpgcheck=1
repo_gpgcheck=0
metadata_expire=6h
countme=1
enabled=1
```

To modify it use the command on the title bar of the image with the repository you want to edit. I chose centos.repo as that is the one that I have been working on by typing

sudo vim /etc/yum.repos.d/centos.repo



```
[baseos]
name=CentOS Stream $releasever - BaseOS
metalink=https://mirrors.centos.org/metalink?repo=centos-baseos-$stream&arch=$basearch&protocol=https,http
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-centosofficial
gpgcheck=1
repo_gpgcheck=0
metadata_expire=6h
countme=1
enabled=1

[baseos-debuginfo]
name=CentOS Stream $releasever - BaseOS - Debug
metalink=https://mirrors.centos.org/metalink?repo=centos-baseos-debug-$stream&arch=$basearch&protocol=https,http
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-centosofficial
gpgcheck=1
repo_gpgcheck=0
metadata_expire=6h
enabled=0

[baseos-source]
name=CentOS Stream $releasever - BaseOS - Source
" /etc/yum.repos.d/centos.repo" 83L, 2600B 1,1 Top
```

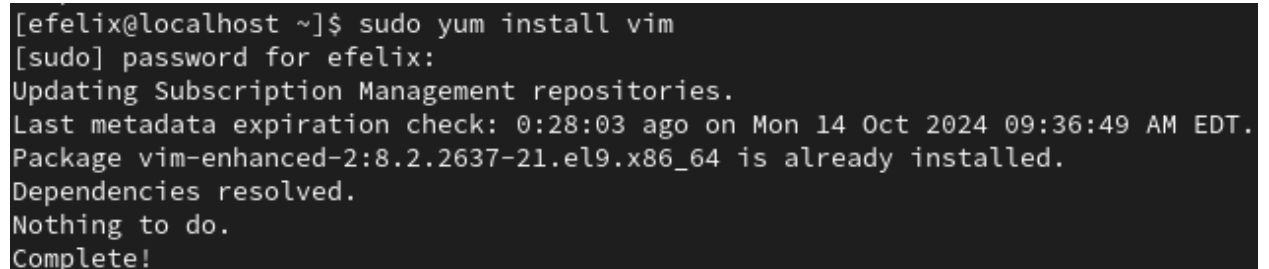
To add a repository it would be the same process as you were doing an app install by typing

sudo yum install epel-release as an example. It could be baseos **sudo yum install baseos**

Testing Apps

Was asked to install VIM to replace VI as an editor but the server already had it after I ran

sudo apt install vim



```
[efelix@localhost ~]$ sudo yum install vim
[sudo] password for efelix:
Updating Subscription Management repositories.
Last metadata expiration check: 0:28:03 ago on Mon 14 Oct 2024 09:36:49 AM EDT.
Package vim-enhanced-2:8.2.2637-21.el9.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
```

To see all the apps on the server run the command **sudo yum list installed** but since it scrolls the entire list at once we will add **| less** after the command so we could see it a page at a time as shown below

sudo yum list installed | less

```
cowsay/noble,now 3.03+dfsg2-8 all [installed]
cpio/noble,now 2.15+dfsg-1ubuntu2 amd64 [installed,automatic]
cpp-13-x86-64-linux-gnu/noble,now 13.2.0-23ubuntu4 amd64 [installed,automatic]
cpp-13/noble,now 13.2.0-23ubuntu4 amd64 [installed,automatic]
cpp-x86-64-linux-gnu/noble,now 4:13.2.0-7ubuntu1 amd64 [installed,automatic]
cpp/noble,now 4:13.2.0-7ubuntu1 amd64 [installed,automatic]
cron-daemon-common/noble,now 3.0pl1-184ubuntu2 all [installed,automatic]
cron/noble,now 3.0pl1-184ubuntu2 amd64 [installed,automatic]
cryptsetup-bin/noble,now 2:2.7.0-1ubuntu4 amd64 [installed,upgradable to: 2:2.7.0-1ubuntu4.1]

[1]+  Stopped                  sudo apt list --installed | less
```

If you look at the top you see the *EMACS* which we added earlier. Another way to make sure your apps are installed without going thru the whole list is by using **| grep emacs** after the command as we are adding to the command and telling grep to just look for emacs

sudo yum list installed | grep emacs

```
[efelix@localhost ~]$ sudo yum list installed | grep emacs
emacs.x86_64                                1:27.2-10.el9
    @appstream
emacs-common.x86_64                       1:27.2-10.el9
    @appstream
emacs-filesystem.noarch                   1:27.2-10.el9
    @AppStream
```

COWSAY/LOLCAT

Now let's test the apps. We will test COWSAY AND LOLCAT together by using the pipe character.

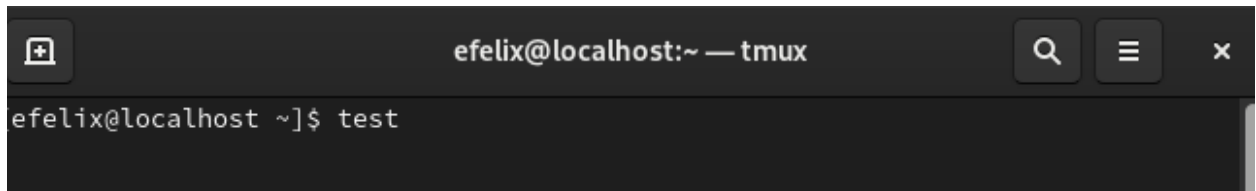
```
[efelix@localhost ~]$ cowsay "Eliud, Testing 1-2-3" | lolcat
-----
< Eliud, Testing 1-2-3 >
-----
      \   ^__^
       (oo)\_______
          (__)\       )\/\
              ||----w |
              ||     ||
```

As you can see, we get the cow and the text from COWSAY. We get the color from LOLCAT

Once you run the command it goes back to the prompt, so it closes automatically.

TMUX

Just type **tmux** on the command line to open the program



To close the app type **tmux kill-session**

To see features watch this YouTube video <https://www.youtube.com/watch?v=Bfbfj04GDjg>

EMACS

Just type **emacs** if you want to use the gui version.

To use the command version either make up a name for a file or modify an existing one by typing the following **sudo emacs /etc/yum.repos.d/centos.repo**

To see features watch this YouTube video
https://youtu.be/48JlgiBpw_I?si=BMmhwPzEDVXslwU5

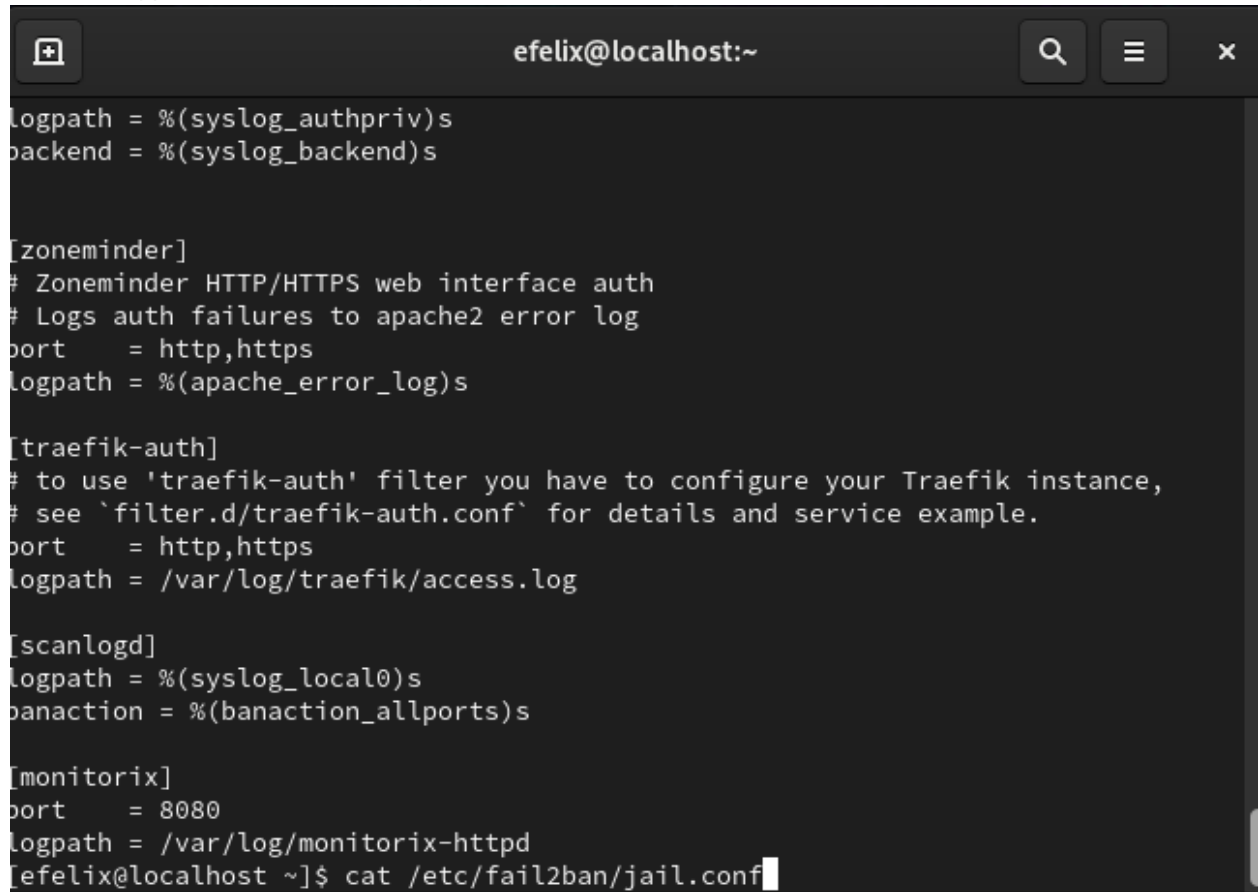
Fail2Ban

Since it's a background service it should be running. You could confirm by typing in the following **sudo systemctl status fail2ban**

If it is not running type **sudo systemctl start fail2ban** to start the service.

Then **sudo systemctl enable fail2ban** to enable the service.

To view it type **cat /etc/fail2ban/jail.conf**

A terminal window titled 'efelix@localhost:~' with search, menu, and close buttons in the title bar. The terminal displays the configuration file /etc/fail2ban/jail.conf. The content includes sections for [zoneminder], [traefik-auth], [scanlogd], and [monitorix], each with settings for logpath, port, and banaction. The terminal ends with the command 'cat /etc/fail2ban/jail.conf' being executed.

```
logpath = %(syslog_authpriv)s
banaction = %(syslog_backend)s

[zoneminder]
# Zoneminder HTTP/HTTPS web interface auth
# Logs auth failures to apache2 error log
port      = http,https
logpath    = %(apache_error_log)s

[traefik-auth]
# to use 'traefik-auth' filter you have to configure your Traefik instance,
# see `filter.d/traefik-auth.conf` for details and service example.
port      = http,https
logpath    = /var/log/traefik/access.log

[scanlogd]
logpath    = %(syslog_local0)s
banaction  = %(banaction_allports)s

[monitorix]
port       = 8080
logpath    = /var/log/monitorix-httpd
[efelix@localhost ~]$ cat /etc/fail2ban/jail.conf
```

To make edits, first we want to copy the default configuration file to a local configuration file by typing the following **sudo cp /etc/fail2ban/jail /etc/fail2ban.jail.local**

We edit it by typing **sudo vim /etc/fail2ban/jail.local** and then close the editor.

To apply the changes type **sudo systemctl restart fail2ban**

To close Fail2ban type **sudo systemctl stop fail2ban**

To see features watch this YouTube video <https://youtu.be/D5PalxvN8Ns>