

Server Setup continued - Installation section

CENTOS

First update the repositories using “**sudo yum update**” and it will ask if it is okay after telling you the size, say yes. Wait until you see this message

```
Complete!
```

```
gabrielmor@localhost:~$ █
```

After to install Tmux use the “**sudo dnf install tmux**” command, confirm by typing y and wait until this message (type tmux after the complete message to confirm if you wish)

```
Complete!
```

```
gabrielmor@localhost:~$ █
```

After to install Emacs use the “**sudo dnf install emacs**” confirm by typing y and wait until you see this message (type emacs after the complete message to confirm if you wish)

```
Complete!
```

```
gabrielmor@localhost:~$ █
```

Installing Fail2Ban is a little more complex, it is not available in the centOS repo, so you have to instal the extra packages with the “**sudo yum install epel-release**”

```
gabrielmor@localhost:~$ sudo yum install epel-release
[sudo] password for gabrielmor:
Last metadata expiration check: 1:55:08 ago on Sun 26 Oct 2025 15:05:20 EDT.
Dependencies resolved.
=====
Package                        Architecture      Version           Repository        Size
=====
Installing:
  epel-release                  noarch            10-5.el10s       extras-common     18 k
=====
Transaction Summary
=====
Install 1 Package

Total download size: 18 k
Installed size: 25 k
Is this ok [y/N]: y█
```

After that wait until the complete message

```
Complete!
```

```
gabrielmor@localhost:~$ █
```

After this install fail2ban by “**sudo yum install fail2ban**”

```
gabrielmor@localhost:~$ sudo yum install fail2ban
Extra Packages for Enterprise Linux 10 - x86_64                    5.1 MB/s | 5.7 MB      00:01
Last metadata expiration check: 0:00:01 ago on Sun 26 Oct 2025 17:03:51 EDT.
Dependencies resolved.
=====
Package                        Architecture      Version                                Repository          Size
=====
Installing:
fail2ban                       noarch            1.1.0-6.el10_0                       epel                 9.4 k
Installing dependencies:
exim                           x86_64            4.98.2-2.el10_1                       epel                 1.5 M
fail2ban-firewalld             noarch            1.1.0-6.el10_0                       epel                 9.6 k
fail2ban-selinux               noarch            1.1.0-6.el10_0                       epel                 31 k
fail2ban-sendmail              noarch            1.1.0-6.el10_0                       epel                 12 k
fail2ban-server                noarch            1.1.0-6.el10_0                       epel                 561 k
libdb                          x86_64            5.3.28-64.el10_0                     epel                 763 k
libgsasl                       x86_64            1.10.0-12.el10_1                     epel                 154 k
libidn                         x86_64            1.42-4.el10_0                        epel                 198 k
libnsl2                        x86_64            2.0.1-1.el10_0                       epel                 30 k
libntlm                        x86_64            1.8-1.el10_0                         epel                 32 k
libopendmarc                   x86_64            1.4.2-33.el10_2                      epel                 31 k
libspf2                        x86_64            1.2.11-16.20210922git4915c308.el10_0 epel                 68 k
Installing weak dependencies:
publicsuffix-list              noarch            20240107-5.el10                      appstream            88 k

Transaction Summary
=====
Install 14 Packages

Total download size: 3.4 M
Installed size: 10 M
Is this ok [y/N]:
```

After that wait until the Complete! Message

```
Complete!
gabrielmor@localhost:~$ █
```

To enable fail2ban run the command “**sudo systemctl enable --now fail2ban**”

```
gabrielmor@localhost:~$ sudo systemctl enable --now fail2ban
Created symlink '/etc/systemd/system/multi-user.target.wants/fail2ban.service' → '/usr/lib/systemd/system/fail2ban.service'.
```

To open fail2ban and inspect fail2ban run the “**sudo nano /etc/fail2ban/jail.conf**” command

```
#
# WARNING: heavily refactored in 0.9.0 release. Please review and
#         customize settings for your setup.
#
# Changes:  in most of the cases you should not modify this
#           file, but provide customizations in jail.local file,
#           or separate .conf files under jail.d/ directory, e.g.:
#
# HOW TO ACTIVATE JAILS:
#
# YOU SHOULD NOT MODIFY THIS FILE.
#
# It will probably be overwritten or improved in a distribution update.
#
# Provide customizations in a jail.local file or a jail.d/customisation.local.
# For example to change the default bantime for all jails and to enable the
# ssh-iptables jail the following (uncommented) would appear in the .local file.
# See man 5 jail.conf for details.
#
# [DEFAULT]
# bantime = 1h
#
# [sshd]
# enabled = true
#
# See jail.conf(5) man page for more information

# Comments: use '#' for comment lines and ';' (following a space) for inline comments
```

To use fail2ban to protect against a ssh log in run “**sudo nano /etc/fail2ban/jail.local**” and enter this for after 10 unsuccessful password entries to ban the user for 5 mins.

```
[sshd]
enabled = true
port = ssh
filter = sshd
logpath = /var/log/secure
maxretry = 10
bantime = 300
```

To download cowsay use ther “**sudo yum install cowsay -y**” command

```
gabrielmor@localhost:~$ sudo yum install cowsay -y
Last metadata expiration check: 0:11:25 ago on Sun 26 Oct 2025 17:03:51 EDT.
Dependencies resolved.
=====
Package                Architecture          Version               Repository            Size
=====
Installing:
cowsay                 noarch                3.8.4-3.el10_2       epel                  45 k
=====

Transaction Summary
=====
Install 1 Package

Total download size: 45 k
Installed size: 80 k
Downloading Packages:
cowsay-3.8.4-3.el10_2.noarch.rpm                8.3 kB/s | 45 kB      00:05
-----
Total                                            7.5 kB/s | 45 kB      00:06
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :                                1/1
  Installing     : cowsay-3.8.4-3.el10_2.noarch  1/1
  Running scriptlet: cowsay-3.8.4-3.el10_2.noarch 1/1

Installed:
  cowsay-3.8.4-3.el10_2.noarch

Complete!
```

To download lolcat you will need to install snapd since it is a part of that package, to do so use the “**sudo dnf install snapd**”

```
gabrielmor@localhost:~$ sudo dnf install snapd
Last metadata expiration check: 0:23:19 ago on Sun 26 Oct 2025 17:03:51 EDT.
Dependencies resolved.
=====
Package                                Architecture      Version           Repository        Size
=====
Installing:
snapd                                  x86_64            2.71-0.el10_2    epel              18 M
Installing dependencies:
snap-confine                          x86_64            2.71-0.el10_2    epel              3.0 M
snapd-selinux                         noarch            2.71-0.el10_2    epel              97 k
xdelta                                x86_64            3.1.0-22.el10_0  epel              92 k
=====
Transaction Summary
=====
Install 4 Packages

Total download size: 21 M
Installed size: 69 M
Is this ok [y/N]: █
```

After that enable it with “**sudo systemctl enable --now snapd.socket**” and then “**sudo ln -s /var/lib/snapd/snap /snap**”

After that install lolcat with the “**sudo snap install lolcat**”

```
gabrielmor@localhost:~$ sudo snap install lolcat
2025-10-26T17:29:23-04:00 INFO Waiting for automatic snapd restart...
lolcat 100.0.1 from moe (busyloop) installed
```

And then test both by using **cowsay “MOO” | lolcat** and you should get this

```
gabrielmor@localhost:~$ cowsay "MOO" | lolcat
```

```
-----
< MOO >
-----
      ^__^
      (oo)\_______
      (_____)\\\  )\\
              ||----w |
              ||     ||
              .-.-.
              █
```

Now to update Vi to Vim run “**sudo dnf update -y**”

```
gabrielmor@localhost:~$ sudo dnf update -y
[sudo] password for gabrielmor:
Last metadata expiration check: 0:38:12 ago on Sun 26 Oct 2025 17:03:51 EDT.
Dependencies resolved.
=====
Package                                Architecture      Version           Repository        Size
=====
Upgrading:
  epel-release                          noarch            10-6.el10_0      epel              18 k
=====
Transaction Summary
=====
Upgrade 1 Package

Total download size: 18 k
Downloading Packages:
epel-release-10-6.el10_0.noarch.rpm    40 kB/s | 18 kB    00:00
-----
Total                                  22 kB/s | 18 kB    00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :                                1/1
  Upgrading      : epel-release-10-6.el10_0.noarch 1/2
  Running scriptlet: epel-release-10-6.el10_0.noarch 1/2
  Cleanup        : epel-release-10-5.el10s.noarch 2/2
  Running scriptlet: epel-release-10-5.el10s.noarch 2/2

Upgraded:
  epel-release-10-6.el10_0.noarch

Complete!
```

After install vim using “**sudo install vim**”

Verify the download by typing **vim** and getting this screen

```

      VIM - Vi IMproved
            version 9.1.83
      by Bram Moolenaar et al.
  Modified by <bugzilla@redhat.com>
  Vim is open source and freely distributable

  Help poor children in Uganda!
type  :help iccf<Enter>      for information

type  :q<Enter>              to exit
type  :help<Enter> or <F1>   for on-line help
type  :help version9<Enter> for version info
```