Miles Ogrady

Continue setup

1. Check your repositories that are included by default on both servers, find out how you'd go about adding a repository, (both official and PPA) and make sure you can install programs.

Ubuntu:
Use grep ^deb /etc/apt/sources.list* to show repos

```
miles@server1:~$ grep ^deb /etc/apt/sources.list*
/etc/apt/sources.list:deb http://us.archive.ubuntu.com/ubuntu jammy main restricted
/etc/apt/sources.list:deb http://us.archive.ubuntu.com/ubuntu jammy-updates main restricted
/etc/apt/sources.list:deb http://us.archive.ubuntu.com/ubuntu jammy universe
/etc/apt/sources.list:deb http://us.archive.ubuntu.com/ubuntu jammy-updates universe
/etc/apt/sources.list:deb http://us.archive.ubuntu.com/ubuntu jammy multiverse
/etc/apt/sources.list:deb http://us.archive.ubuntu.com/ubuntu jammy-updates multiverse
/etc/apt/sources.list:deb http://us.archive.ubuntu.com/ubuntu jammy-backports main restricted univer
se multiverse
/etc/apt/sources.list:deb http://us.archive.ubuntu.com/ubuntu jammy-security main restricted
/etc/apt/sources.list:deb http://us.archive.ubuntu.com/ubuntu jammy-security universe
/etc/apt/sources.list:deb http://us.archive.ubuntu.com/ubuntu jammy-security multiverse
/etc/apt/sources.list.curtin.old:deb http://archive.ubuntu.com/ubuntu/ jammy main restricted
/etc/apt/sources.list.curtin.old:deb http://archive.ubuntu.com/ubuntu/ jammy-updates main restricted
/etc/apt/sources.list.curtin.old:deb http://archive.ubuntu.com/ubuntu/ jammy universe
/etc/apt/sources.list.curtin.old:deb http://archive.ubuntu.com/ubuntu/ jammy-updates universe
/etc/apt/sources.list.curtin.old:deb http://archive.ubuntu.com/ubuntu/ jammy multiverse
/etc/apt/sources.list.curtin.old:deb http://archive.ubuntu.com/ubuntu/ jammy-updates multiverse
/etc/apt/sources.list.curtin.old:deb http://archive.ubuntu.com/ubuntu/ jammy-backports main restrict
ed universe multiverse
/etc/apt/sources.list.curtin.old:deb http://security.ubuntu.com/ubuntu/ jammy-security main restrict
ed
/etc/apt/sources.list.curtin.old:deb http://security.ubuntu.com/ubuntu/ jammy-security universe
/etc/apt/sources.list.curtin.old:deb http://security.ubuntu.com/ubuntu/ jammy-security multiverse
grep: /etc/apt/sources.list.d: Is a directory
miles@server1:~$ _
```

centOS:
Use *yum repolist* to show repos.

```
[miles@localhost ~]$ yum repolist
repo id                      repo name
appstream                    CentOS Stream 8 - AppStream
baseos                       CentOS Stream 8 - BaseOS
extras                       CentOS Stream 8 - Extras
extras-common                CentOS Stream 8 - Extras common packages
[miles@localhost ~]$ _
```

2. Install Tmux, emacs, and Fail2Ban. Make sure you look through the Fail2Ban settings as you do the install.

Ubuntu:

Emacs: to install emacs on ubuntu enter *sudo apt-get install emacs*

```
Setting up gsettings-desktop-schemas (42.0-1ubuntu1) ...
Setting up gtk-update-icon-cache (3.24.33-1ubuntu2) ...
Setting up libm17n-0:amd64 (1.8.0-4) ...
Setting up librsvg2-2:amd64 (2.52.5+dfsg-3) ...
Setting up librsvg2-common:amd64 (2.52.5+dfsg-3) ...
Setting up libgdk-pixbuf2.0-bin (2.42.8+dfsg-1ubuntu0.2) ...
Setting up adwaita-icon-theme (41.0-1ubuntu1) ...
update-alternatives: using /usr/share/icons/Adwaita/cursor.theme to provide /usr/share/icons/default
/index.theme (x-cursor-theme) in auto mode
Setting up humanity-icon-theme (0.6.16) ...
Setting up ubuntu-mono (20.10-0ubuntu2) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for install-info (6.8-4build1) ...
Processing triggers for libglib2.0-0:amd64 (2.72.1-1) ...
Setting up libgtk-3-0:amd64 (3.24.33-1ubuntu2) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Setting up libgtk-3-bin (3.24.33-1ubuntu2) ...
Setting up emacs-gtk (1:27.1+1-3ubuntu5) ...
update-alternatives: using /usr/bin/emacs-gtk to provide /usr/bin/emacs (emacs) in auto mode
Install emacsen-common for emacs
emacsen-common: Handling install of emacsen flavor emacs
Setting up at-spi2-core (2.44.0-3) ...
Setting up emacs (1:27.1+1-3ubuntu5) ...
Processing triggers for libgdk-pixbuf-2.0-0:amd64 (2.42.8+dfsg-1ubuntu0.2) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
miles@ubuntuserver:~$ _
```

Tmux: to install tmux on ubuntu use *sudo apt-get install tmux*

```
miles@ubuntuserver:~$ sudo apt-get install tmux
[sudo] password for miles:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
tmux is already the newest version (3.2a-4build1).
tmux set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 48 not upgraded.
miles@ubuntuserver:~$
```

Fail2Ban: to install Fail2Ban on ubuntu enter *sudo apt-get install fail2ban*

```
The following NEW packages will be installed:
  fail2ban python3-pyinotify whois
0 upgraded, 3 newly installed, 0 to remove and 48 not upgraded.
Need to get 473 kB of archives.
After this operation, 2,486 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us.archive.ubuntu.com/ubuntu jammy/universe amd64 fail2ban all 0.11.2-6 [394 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 python3-pyinotify all 0.9.6-1.3 [24.8 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu jammy/main amd64 whois amd64 5.5.13 [53.4 kB]
Fetched 473 kB in 0s (2,284 kB/s)
Selecting previously unselected package fail2ban.
(Reading database ... 93239 files and directories currently installed.)
Preparing to unpack .../fail2ban_0.11.2-6_all.deb ...
Unpacking fail2ban (0.11.2-6) ...
Selecting previously unselected package python3-pyinotify.
Preparing to unpack .../python3-pyinotify_0.9.6-1.3_all.deb ...
Unpacking python3-pyinotify (0.9.6-1.3) ...
Selecting previously unselected package whois.
Preparing to unpack .../whois_5.5.13_amd64.deb ...
Unpacking whois (5.5.13) ...
Setting up whois (5.5.13) ...
Setting up fail2ban (0.11.2-6) ...
Setting up python3-pyinotify (0.9.6-1.3) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
miles@ubuntuserver:~$ _
```

Fail2Ban Settings

```
# Option: pidfile
# Notes.: Set the PID file. This is used to store the process ID of the
#         fail2ban server.
# Values: [ FILE ]  Default: /var/run/fail2ban/fail2ban.pid
#
pidfile = /var/run/fail2ban/fail2ban.pid

# Options: dbfile
# Notes.: Set the file for the fail2ban persistent data to be stored.
#         A value of ":memory:" means database is only stored in memory
#         and data is lost when fail2ban is stopped.
#         A value of "None" disables the database.
# Values: [ None :memory: FILE ] Default: /var/lib/fail2ban/fail2ban.sqlite3
dbfile = /var/lib/fail2ban/fail2ban.sqlite3

# Options: dbpurgeage
# Notes.: Sets age at which bans should be purged from the database
# Values: [ SECONDS ] Default: 86400 (24hours)
dbpurgeage = 1d

# Options: dbmaxmatches
# Notes.: Number of matches stored in database per ticket (resolvable via
#         tags <ipmatches>/<ipjailmatches> in actions)
# Values: [ INT ] Default: 10
dbmaxmatches = 10

[Definition]


[Thread]

# Options: stacksize
# Notes.: Specifies the stack size (in KiB) to be used for subsequently created threads,
#         and must be 0 or a positive integer value of at least 32.
# Values: [ SIZE ] Default: 0 (use platform or configured default)
#stacksize = 0
miles@ubuntuserver:~$
```

centOS:

Emacs: to install emacs on centOS use *sudo yum install emacs*

```
 hyphen-2.8.8-9.el8.x86_64                       iso-codes-3.79-2.el8.noarch
 jasper-libs-2.0.14-5.el8.x86_64                 jbigkit-libs-2.1-14.el8.x86_64
 lame-libs-3.100-6.el8.x86_64                    lcms2-2.9-2.el8.x86_64
 libXaw-1.0.13-10.el8.x86_64                     libXcomposite-0.4.4-14.el8.x86_64
 libXdamage-1.1.4-14.el8.x86_64                  libXmu-1.1.3-1.el8.x86_64
 libXpm-3.5.12-8.el8.x86_64                      libXt-1.1.5-12.el8.x86_64
 libXtst-1.2.3-7.el8.x86_64                      libXv-1.0.11-7.el8.x86_64
 libasyncns-0.8-14.el8.x86_64                    libatomic-8.5.0-17.el8.x86_64
 libavc1394-0.5.4-7.el8.x86_64                   libdatrie-0.2.9-7.el8.x86_64
 libdv-1.0.0-27.el8.x86_64                       libdvdnav-5.0.3-8.el8.x86_64
 libdvdread-5.0.3-9.el8.x86_64                   libepoxy-1.5.8-1.el8.x86_64
 libglvnd-egl-1:1.3.4-1.el8.x86_64              libglvnd-gles-1:1.3.4-1.el8.x86_64
 libglvnd-opengl-1:1.3.4-1.el8.x86_64           libiec61883-1.2.0-18.el8.x86_64
 liblockfile-1.14-2.el8.x86_64                  libnotify-0.7.7-6.el8.x86_64
 libogg-2:1.3.2-10.el8.x86_64                    libotf-0.9.13-11.el8.x86_64
 libraw1394-2.1.2-5.el8.x86_64                   librsvg2-2.42.7-4.el8.x86_64
 libshout-2.2.2-19.el8.x86_64                    libsndfile-1.0.28-12.el8.x86_64
 libsrtp-1.5.4-8.el8.x86_64                      libthai-0.1.27-2.el8.x86_64
 libtheora-1:1.1.1-21.el8.x86_64                libtiff-4.0.9-23.el8.x86_64
 libv4l-1.14.2-3.el8.x86_64                      libvisual-1:0.4.0-25.el8.x86_64
 libvorbis-1:1.3.6-2.el8.x86_64                 libvpx-1.7.0-8.el8.x86_64
 libwayland-client-1.21.0-1.el8.x86_64          libwayland-cursor-1.21.0-1.el8.x86_64
 libwayland-egl-1.21.0-1.el8.x86_64             libwayland-server-1.21.0-1.el8.x86_64
 libwebp-1.0.0-5.el8.x86_64                      m17n-db-1.8.0-3.el8.noarch
 m17n-lib-1.8.0-2.el8.x86_64                     mesa-libEGL-22.1.5-2.el8.x86_64
 mesa-libgbm-22.1.5-2.el8.x86_64                 mpg123-libs-1.25.10-2.el8.x86_64
 openjpeg2-2.4.0-5.el8.x86_64                    opus-1.3-0.4.beta.el8.x86_64
 orc-0.4.28-3.el8.x86_64                         pango-1.42.4-8.el8.x86_64
 pulseaudio-libs-14.0-4.el8.x86_64              rest-0.8.1-2.el8.x86_64
 soundtouch-2.0.0-3.el8.x86_64                   speex-1.2.0-1.el8.x86_64
 taglib-1.11.1-8.el8.x86_64                      twolame-libs-0.3.13-12.el8.x86_64
 wavpack-5.1.0-16.el8.x86_64                     webkit2gtk3-2.36.7-1.el8.x86_64
 webkit2gtk3-jsc-2.36.7-1.el8.x86_64            webrtc-audio-processing-0.3-10.el8.x86_64
 woff2-1.0.2-5.el8.x86_64                        xml-common-0.6.3-50.el8.noarch

Complete!
[miles@localhost ~]$
```

Tmux: to install tmux on centOS use *sudo yum install tmux*

```
[miles@localhost ~]$ sudo yum install tmux
[sudo] password for miles:
Sorry, try again.
[sudo] password for miles:
Last metadata expiration check: 0:47:15 ago on Tue 06 Dec 2022 10:53:15 AM EST.
Package tmux-2.7-1.el8.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[miles@localhost ~]$ _
```

Fail2Ban: to install Fail2Ban on centOS first install EPEL by entering *sudo yum install epel-release* then use *sudo yum install fail2ban*

```
Is this ok [y/N]: y
Key imported successfully
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                              1/1
  Installing       : python36-3.6.8-38.module_el8.5.0+895+a459eca8.x86_64          1/8
  Running scriptlet: python36-3.6.8-38.module_el8.5.0+895+a459eca8.x86_64          1/8
  Installing       : python3-pip-9.0.3-22.el8.noarch                              2/8
  Installing       : fail2ban-server-0.11.2-1.el8.noarch                          3/8
  Running scriptlet: fail2ban-server-0.11.2-1.el8.noarch                          3/8
  Installing       : fail2ban-firewalld-0.11.2-1.el8.noarch                       4/8
  Installing       : libesmtp-1.0.6-18.el8.x86_64                                 5/8
  Installing       : esmtp-1.2-15.el8.x86_64                                      6/8
  Running scriptlet: esmtp-1.2-15.el8.x86_64                                      6/8
  Installing       : fail2ban-sendmail-0.11.2-1.el8.noarch                        7/8
  Installing       : fail2ban-0.11.2-1.el8.noarch                                 8/8
  Running scriptlet: fail2ban-0.11.2-1.el8.noarch                                 8/8
  Verifying        : python3-pip-9.0.3-22.el8.noarch                              1/8
  Verifying        : python36-3.6.8-38.module_el8.5.0+895+a459eca8.x86_64          2/8
  Verifying        : esmtp-1.2-15.el8.x86_64                                      3/8
  Verifying        : fail2ban-0.11.2-1.el8.noarch                                 4/8
  Verifying        : fail2ban-firewalld-0.11.2-1.el8.noarch                       5/8
  Verifying        : fail2ban-sendmail-0.11.2-1.el8.noarch                        6/8
  Verifying        : fail2ban-server-0.11.2-1.el8.noarch                          7/8
  Verifying        : libesmtp-1.0.6-18.el8.x86_64                                 8/8

Installed:
  esmtp-1.2-15.el8.x86_64                      fail2ban-0.11.2-1.el8.noarch
  fail2ban-firewalld-0.11.2-1.el8.noarch       fail2ban-sendmail-0.11.2-1.el8.noarch
  fail2ban-server-0.11.2-1.el8.noarch          libesmtp-1.0.6-18.el8.x86_64
  python3-pip-9.0.3-22.el8.noarch              python36-3.6.8-38.module_el8.5.0+895+a459eca8.x86_64

Complete!
[miles@localhost ~]$
```

3. Just for fun, install cowsay and lolcat. (Yes I know these are silly, the point is that i know they aren't there already.)

Ubuntu:

Cowsay:
Install coway by entering *sudo apt-get install cowsay

```
miles@ubuntuserver:~$ sudo apt-get install cowsay
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
  filters cowsay-off
The following NEW packages will be installed:
  cowsay
0 upgraded, 1 newly installed, 0 to remove and 48 not upgraded.
Need to get 18.6 kB of archives.
After this operation, 93.2 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu jammy/universe amd64 cowsay all 3.03+dfsg2-8 [18.6 kB]
Fetched 18.6 kB in 0s (177 kB/s)
Selecting previously unselected package cowsay.
(Reading database ... 93708 files and directories currently installed.)
Preparing to unpack .../cowsay_3.03+dfsg2-8_all.deb ...
Unpacking cowsay (3.03+dfsg2-8) ...
Setting up cowsay (3.03+dfsg2-8) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...
```

I also installed fortune which outputed a quote in the cows text bubble.

```
miles@ubuntuserver:~$ fortune | cowsay
 _____
/ You worry too much about your job. Stop \
\ it. You are not paid enough to worry.    /
 -----------------------------------------
        \   ^__^
         \  (oo)_____
            (__)\       )\/\
                ||----w |
                ||     ||
miles@ubuntuserver:~$ _
```

lolcat:

To install lolcat first install ruby by entering sudo *apt-get install ruby*, then enter sudo apt-get install lolcat

```
Unpacking ruby-paint (2.2.0-1) ...
Selecting previously unselected package lolcat.
Preparing to unpack .../16-lolcat_100.0.1-3_all.deb ...
Unpacking lolcat (100.0.1-3) ...
Setting up javascript-common (11+nmu1) ...
Setting up fonts-lato (2.0-2.1) ...
Setting up unzip (6.0-26ubuntu3.1) ...
Setting up rubygems-integration (1.18) ...
Setting up ruby-paint (2.2.0-1) ...
Setting up zip (3.0-12build2) ...
Setting up ruby-optimist (3.0.0-2) ...
Setting up ruby-net-telnet (0.1.1-2) ...
Setting up ruby-webrick (1.7.0-3) ...
Setting up libjs-jquery (3.6.0+dfsg+~3.5.13-1) ...
Setting up ruby-xmlrpc (0.3.2-1ubuntu0.1) ...
Setting up rake (13.0.6-2) ...
Setting up libruby3.0:amd64 (3.0.2-7ubuntu2.2) ...
Setting up ruby-rubygems (3.3.5-2) ...
Setting up ruby3.0 (3.0.2-7ubuntu2.2) ...
Setting up ruby (1:3.0~exp1) ...
Setting up lolcat (100.0.1-3) ...
Processing triggers for fontconfig (2.13.1-4.2ubuntu5) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...
```

One of the things you can do with lolcat.

```
miles@ubuntuserver:~$ echo miles | lolcat
miles
miles@ubuntuserver:~$ _
```

centOS:

Cowsay:
Install coway by entering *sudo yum install cowsay*

```
[miles@localhost ~]$ sudo yum install cowsay
[sudo] password for miles:
Last metadata expiration check: 0:13:45 ago on Tue 06 Dec 2022 11:52:44 AM EST.
Dependencies resolved.
================================================================================
 Package            Architecture      Version            Repository        Size
================================================================================
Installing:
 cowsay             noarch            3.04-16.el8         epel              47 k

Transaction Summary
================================================================================
Install  1 Package

Total download size: 47 k
Installed size: 77 k
Is this ok [y/N]: y
Downloading Packages:
cowsay-3.04-16.el8.noarch.rpm                       106 kB/s |  47 kB     00:00
--------------------------------------------------------------------------------
Total                                                72 kB/s |  47 kB     00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                        1/1
  Installing       : cowsay-3.04-16.el8.noarch                              1/1
  Running scriptlet: cowsay-3.04-16.el8.noarch                              1/1
  Verifying        : cowsay-3.04-16.el8.noarch                              1/1

Installed:
  cowsay-3.04-16.el8.noarch

Complete!
[miles@localhost ~]$ _
```

lolcat:

First you want to install ruby by entering *sudo yum install ruby*, then enter *gem install lolcat*

```
  inflating: lolcat-master/README.md
 extracting: lolcat-master/Rakefile
   creating: lolcat-master/ass/
  inflating: lolcat-master/ass/nom.jpg
  inflating: lolcat-master/ass/screenshot.png
   creating: lolcat-master/bin/
  inflating: lolcat-master/bin/lolcat
   creating: lolcat-master/lib/
  inflating: lolcat-master/lib/lolcat.rb
   creating: lolcat-master/lib/lolcat/
  inflating: lolcat-master/lib/lolcat/cat.rb
  inflating: lolcat-master/lib/lolcat/lol.rb
 extracting: lolcat-master/lib/lolcat/version.rb
  inflating: lolcat-master/lolcat.gemspec
   creating: lolcat-master/man/
  inflating: lolcat-master/man/lolcat.6
[miles@localhost ~]$ cd lolcat-master/bin
[miles@localhost bin]$ gem install lolcat
Fetching: manpages-0.6.1.gem (100%)
Successfully installed manpages-0.6.1
Fetching: optimist-3.0.1.gem (100%)
Successfully installed optimist-3.0.1
Fetching: paint-2.3.0.gem (100%)
Successfully installed paint-2.3.0
Fetching: lolcat-100.0.1.gem (100%)
Successfully installed lolcat-100.0.1
Parsing documentation for manpages-0.6.1
Installing ri documentation for manpages-0.6.1
Parsing documentation for optimist-3.0.1
Installing ri documentation for optimist-3.0.1
Parsing documentation for paint-2.3.0
Installing ri documentation for paint-2.3.0
Parsing documentation for lolcat-100.0.1
Installing ri documentation for lolcat-100.0.1
Done installing documentation for manpages, optimist, paint, lolcat after 0 seconds
4 gems installed
[miles@localhost bin]$ _
```

```
[miles@localhost bin]$ lolcat -h

Usage: lolcat [OPTION]... [FILE]...

Concatenate FILE(s), or standard input, to standard output.
With no FILE, or when FILE is -, read standard input.

  -p, --spread=<f>      Rainbow spread (default: 3.0)
  -F, --freq=<f>        Rainbow frequency (default: 0.1)
  -S, --seed=<i>        Rainbow seed, 0 = random (default: 0)
  -a, --animate         Enable psychedelics
  -d, --duration=<i>    Animation duration (default: 12)
  -s, --speed=<f>       Animation speed (default: 20.0)
  -i, --invert          Invert fg and bg
  -t, --truecolor       24-bit (truecolor)
  -f, --force           Force color even when stdout is not a tty
  -v, --version         Print version and exit
  -h, --help            Show this message

Examples:
  lolcat f - g    Output f's contents, then stdin, then g's contents.
  lolcat          Copy standard input to standard output.
  fortune | lolcat  Display a rainbow cookie.

Report lolcat bugs to <https://github.com/busyloop/lolcat/issues>
lolcat home page: <https://github.com/busyloop/lolcat/>
Report lolcat translation bugs to <http://speaklolcat.com/>

[miles@localhost bin]$ _
```

4. Update VI to vim, update your servers if it's needed.

Ubuntu:

Installvim on ubuntu with *sudo apt-get install vim*. Then update vim with sudo apt-get update

```
miles@server1:~$ sudo apt-get install vim
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
vim is already the newest version (2:8.2.3995-1ubuntu2.11).
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
miles@server1:~$ sudo apt-get update
Hit:1 http://us.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1,062 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [234 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [16.0 kB]
Get:8 http://us.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [992 kB]
Get:9 http://us.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [217 kB]
Get:10 http://us.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [22.0 kB]
Get:11 http://us.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [24.3 kB]
Get:12 http://us.archive.ubuntu.com/ubuntu jammy-security/main amd64 Packages [856 kB]
Get:13 http://us.archive.ubuntu.com/ubuntu jammy-security/main Translation-en [175 kB]
Get:14 http://us.archive.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [11.4 kB]
Get:15 http://us.archive.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [790 kB]
Get:16 http://us.archive.ubuntu.com/ubuntu jammy-security/universe Translation-en [145 kB]
Get:17 http://us.archive.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.8 kB]
Fetched 4,900 kB in 1s (3,889 kB/s)
Reading package lists... Done
miles@server1:~$
miles@server1:~$ _
```

centOS:

Install vim on centOs with *sudo yum install vim* then do *sudo yum update vim*

installed:

In ubuntu to see Installed programs use apt list –installed

```
ucf/jammy,now 3.0043 all [installed,automatic]
udev/jammy-updates,now 249.11-0ubuntu3.10 amd64 [installed,automatic]
udisks2/jammy,now 2.9.4-1ubuntu2 amd64 [installed,automatic]
ufw/jammy-updates,now 0.36.1-4ubuntu0.1 all [installed,automatic]
unattended-upgrades/jammy,now 2.8ubuntu1 all [installed,automatic]
unzip/jammy-updates,jammy-security,now 6.0-26ubuntu3.1 amd64 [installed,automatic]
update-manager-core/jammy-updates,now 1:22.04.10 all [installed,automatic]
update-notifier-common/jammy-updates,now 3.192.54.6 all [installed,automatic]
upower/jammy,now 0.99.17-1 amd64 [installed,automatic]
usb-modeswitch-data/jammy,now 20191128-4 all [installed,automatic]
usb-modeswitch/jammy,now 2.6.1-3ubuntu2 amd64 [installed,automatic]
usb.ids/jammy,now 2022.04.02-1 all [installed,automatic]
usbmuxd/jammy,now 1.1.1-2build2 amd64 [installed,automatic]
usbutils/jammy,now 1:014-1build1 amd64 [installed,automatic]
usrmerge/jammy,now 25ubuntu2 all [installed,automatic]
util-linux/jammy,now 2.37.2-4ubuntu3 amd64 [installed,automatic]
uuid-runtime/jammy,now 2.37.2-4ubuntu3 amd64 [installed,automatic]
vim-common/jammy-updates,jammy-security,now 2:8.2.3995-1ubuntu2.12 all [installed,automatic]
vim-runtime/jammy-updates,jammy-security,now 2:8.2.3995-1ubuntu2.12 all [installed,automatic]
vim-tiny/jammy-updates,jammy-security,now 2:8.2.3995-1ubuntu2.12 amd64 [installed,automatic]
vim/jammy-updates,jammy-security,now 2:8.2.3995-1ubuntu2.12 amd64 [installed]
wget/jammy,now 1.21.2-2ubuntu1 amd64 [installed,automatic]
whiptail/jammy,now 0.52.21-5ubuntu2 amd64 [installed,automatic]
whois/jammy,now 5.5.13 amd64 [installed,automatic]
wireless-regdb/jammy-updates,jammy-security,now 2022.06.06-0ubuntu1~22.04.1 all [installed,automatic
]
xauth/jammy,now 1:1.1-1build2 amd64 [installed,automatic]
xdg-user-dirs/jammy,now 0.17-2ubuntu4 amd64 [installed,automatic]
xfsprogs/jammy,now 5.13.0-1ubuntu2 amd64 [installed,automatic]
xkb-data/jammy,now 2.33-1 all [installed,automatic]
xxd/jammy-updates,jammy-security,now 2:8.2.3995-1ubuntu2.12 amd64 [installed,automatic]
xz-utils/jammy,now 5.2.5-2ubuntu1 amd64 [installed,automatic]
zerofree/jammy,now 1.1.1-1build3 amd64 [installed,automatic]
zip/jammy,now 3.0-12build2 amd64 [installed,automatic]
zlib1g/jammy-updates,jammy-security,now 1:1.2.11.dfsg-2ubuntu9.2 amd64 [installed,automatic]
zstd/jammy,now 1.4.8+dfsg-3build1 amd64 [installed,automatic]
miles@server1:~$
```

In centos use yum list –installed

```
timedatex.x86_64                         0.5-3.el8                      @baseos
tmux.x86_64                              2.7-3.el8                      @baseos
tpm2-tools.x86_64                        4.1.1-5.el8                    @baseos
tpm2-tss.x86_64                          2.3.2-5.el8                    @baseos
tracer-common.noarch                     0.7.5-2.el8                    @appstream
tree.x86_64                              1.7.0-15.el8                   @baseos
trousers.x86_64                          0.3.15-1.el8                   @baseos
trousers-lib.x86_64                      0.3.15-1.el8                   @baseos
tuned.noarch                             2.21.0-1.el8                   @baseos
twolame-libs.x86_64                      0.3.13-12.el8                  @appstream
tzdata.noarch                            2023c-1.el8                    @baseos
udisks2.x86_64                           2.9.0-16.el8                   @appstream
udisks2-iscsi.x86_64                     2.9.0-16.el8                   @appstream
udisks2-lvm2.x86_64                      2.9.0-16.el8                   @appstream
unbound-libs.x86_64                      1.16.2-5.el8                   @appstream
unzip.x86_64                             6.0-46.el8                     @baseos
usb_modeswitch.x86_64                    2.5.2-1.el8                    @baseos
usb_modeswitch-data.noarch               20191128-1.el8                 @baseos
usbutils.x86_64                          010-3.el8                      @baseos
userspace-rcu.x86_64                     0.10.1-4.el8                   @baseos
util-linux.x86_64                        2.32.1-43.el8                  @baseos
util-linux-user.x86_64                   2.32.1-43.el8                  @baseos
vdo.x86_64                               6.2.9.7-14.el8                 @baseos
vim-common.x86_64                        2:8.0.1763-19.el8.4            @appstream
vim-enhanced.x86_64                      2:8.0.1763-19.el8.4            @appstream
vim-filesystem.noarch                    2:8.0.1763-19.el8.4            @appstream
vim-minimal.x86_64                       2:8.0.1763-19.el8.4            @baseos
virt-what.x86_64                         1.25-4.el8                     @baseos
volume_key-libs.x86_64                   0.3.11-6.el8                   @appstream
vsftpd.x86_64                            3.0.3-36.el8                   @appstream
wavpack.x86_64                           5.1.0-16.el8                   @appstream
webkit2gtk3.x86_64                       2.40.5-1.el8                   @appstream
webkit2gtk3-jsc.x86_64                   2.40.5-1.el8                   @appstream
webrtc-audio-processing.x86_64           0.3-10.el8                     @appstream
wget.x86_64                              1.19.5-11.el8                  @appstream
which.x86_64                             2.21-20.el8                    @baseos
woff2.x86_64                             1.0.2-5.el8                    @appstream
words.noarch                             3.0-28.el8                     @baseos
wpebackend-fdo.x86_64                    1.10.0-3.el8                   @appstream
xdg-utils.noarch                         1.1.2-5.el8                    @appstream
xfsdump.x86_64                           3.1.8-7.el8                    @baseos
xfsprogs.x86_64                          5.0.0-12.el8                   @baseos
xkeyboard-config.noarch                  2.28-1.el8                     @appstream
xml-common.noarch                        0.6.3-50.el8                   @baseos
xz.x86_64                                5.2.4-4.el8                    @baseos
xz-libs.x86_64                           5.2.4-4.el8                    @baseos
yum.noarch                               4.7.0-19.el8                   @baseos
zip.x86_64                               3.0-23.el8                     @baseos
zlib.x86_64                              1.2.11-25.el8                  @baseos
[miles@localhost ~]$
```

Updates: I used sudo apt-get update and sudo yum install update on both servers 10/14/23

Fail2ban: I didnt change any of the settings yet.

References:

https://www.tecmint.com/lolcat-command-to-output-rainbow-of-colors-in-linux-terminal/

https://upcloud.com/resources/tutorials/install-fail2ban-centos