

# **CentOS Stream 9 – DNF & tmux Installation**

## **Overview**

This project demonstrates basic Linux system administration on CentOS Stream 9, focusing on DNF repository management and package installation.

## **Summary**

Cleaned and rebuilt DNF metadata.

Identified a misconfigured EPEL repository that failed to load.

Confirmed BaseOS, AppStream, and Extras repositories were operational.

Installed tmux from the BaseOS repository.

Verified installation with a version check.

## **Verification**

```
tmux -V
```

Output: tmux 3.2a

## **Skills Demonstrated**

DNF package management

Repository troubleshooting

Linux command-line verification

## **Outcome**

tmux was successfully installed and verified, confirming proper package management despite a broken EPEL configuration.

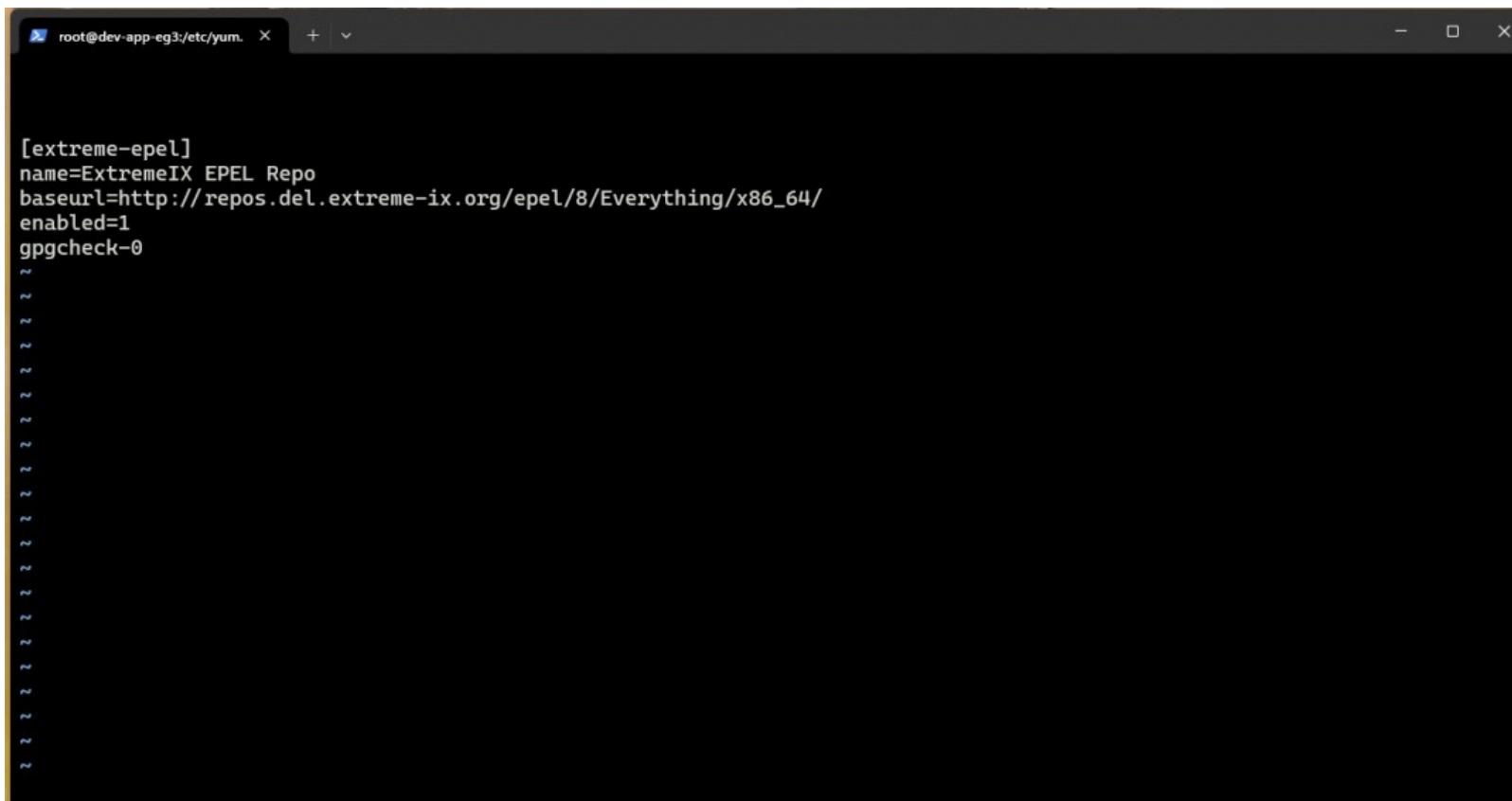
A custom YUM repository configuration is being edited as root, defining an ExtremeIX EPEL repo. The file sets the repo name, points baseurl to the ExtremeIX EPEL 8 x86\_64 mirror, enables the repo, and disables GPG signature checking.

Quick notes (optional add-on):

enabled=1 means the repo is active.

gpgcheck=0 disables package signature verification (not recommended for production).

If this host is CentOS Stream 9, consider using an EPEL 9–compatible repo URL to avoid dependency issues



```
[extreme-epel]
name=ExtremeIX EPEL Repo
baseurl=http://repos.del.extreme-ix.org/epel/8/Everything/x86_64/
enabled=1
gpgcheck=0
~
```

The system refreshes DNF metadata on CentOS Stream 9, but repeatedly skips the EPEL repository due to a misconfigured or unreadable /etc/yum.repos.d/epel.repo file. Core repositories (BaseOS, AppStream, Extras) load successfully, metadata is rebuilt, and dnf repolist confirms only the default CentOS Stream repos are active.

```
[root@dev-app-eg3 yum.repos.d]# dnf clean all
Warning: failed loading '/etc/yum.repos.d/Epel.repo', skipping.
21 files removed
[root@dev-app-eg3 yum.repos.d]# dnf makcache
No such command: makcache. Please use /usr/bin/dnf --help
It could be a DNF plugin command, try: "dnf install 'dnf-command(makcache)'"
[root@dev-app-eg3 yum.repos.d]# dnf makecache
Warning: failed loading '/etc/yum.repos.d/Epel.repo', skipping.
CentOS Stream 9 - BaseOS          1.6 MB/s | 8.8 MB   00:05
CentOS Stream 9 - AppStream        799 kB/s | 25 MB    00:31
CentOS Stream 9 - Extras packages 10 kB/s  | 20 kB    00:01
Last metadata expiration check: 0:00:01 ago on Wed 17 Sep 2025 11:32:23 PM EDT.
Metadata cache created.
[root@dev-app-eg3 yum.repos.d]# dnf repolist
Warning: failed loading '/etc/yum.repos.d/Epel.repo', skipping.
repo id                      repo name
appstream                     CentOS Stream 9 - AppStream
baseos                        CentOS Stream 9 - BaseOS
extras-common                  CentOS Stream 9 - Extras packages
[root@dev-app-eg3 yum.repos.d]#
```

The tmux package is successfully installed on a CentOS Stream 9 system using DNF. Despite repeated warnings about a skipped EPEL repository, dependencies resolve correctly and tmux is pulled from the BaseOS repository, completing the transaction without errors.

```
[root@dev-app-eg3:/etc/yum.repos.d]# dnf install -y tmux
Warning: failed loading '/etc/yum.repos.d/Epel.repo', skipping.
Last metadata expiration check: 0:01:35 ago on Wed 17 Sep 2025 11:32:23 PM EDT.
Dependencies resolved.

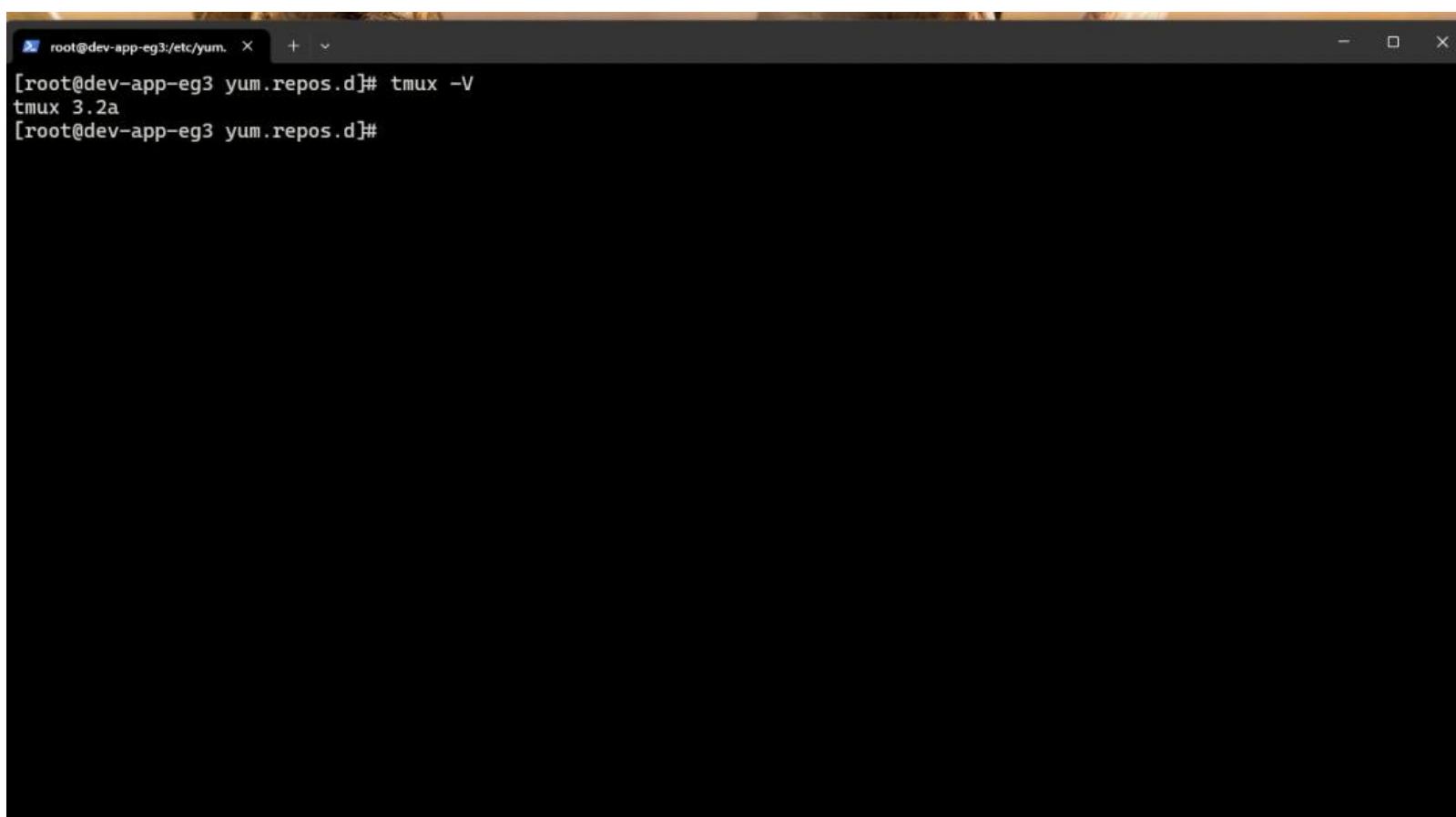
=====
| Package           | Architecture | Version      | Repository | Size | |
|---|---|---|---|---|---|
| Installing:      |             |             |            |       |
| tmux              | x86_64      | 3.2a-5.el9  | baseos     | 474 k |
| Transaction Summary |           |             |            |       |
|:-----|           |             |            |       |
| Install 1 Package |           |             |            |       |
| Total download size: 474 k |           |             |            |       |
| Installed size: 1.1 M |           |             |            |       |
| Downloading Packages: |           |             |            |       |
| tmux-3.2a-5.el9.x86_64.rpm |           |             | 411 kB/s | 474 kB | 00:01 |
| Total |           |             |            |       |
| Running transaction check |           |             |            |       |
| Transaction check succeeded. |           |             |            |       |
| Running transaction test |           |             |            |       |
| Transaction test succeeded. |           |             |            |       |
| Running transaction |           |             |            |       |
| Preparing : |           |             |            | 1/1 |
| Installing : tmux-3.2a-5.el9.x86_64 |           |             | 1/1 |
| Running scriptlet: tmux-3.2a-5.el9.x86_64 |           |             | 1/1 |
| Verifying : tmux-3.2a-5.el9.x86_64 |           |             | 1/1 |
| Installed: |           |             |            |       |
| tmux-3.2a-5.el9.x86_64 |           |             |            |       |
```

The tmux installation is verified successfully on CentOS Stream 9. Running tmux -V confirms the installed version as tmux 3.2a, validating that the package was installed correctly and is functioning as expected.

Outcome:

tmux is available system-wide

Version confirmation completes post-install verification



```
[root@dev-app-eg3 yum.repos.d]# tmux -V
tmux 3.2a
[root@dev-app-eg3 yum.repos.d]#
```

A screenshot of a terminal window titled "root@dev-app-eg3: /etc/yum.repos.d". The window shows a single line of text output from the command "tmux -V", which displays the version "tmux 3.2a". The terminal has a dark theme with white text and a light gray background. The window title bar is visible at the top.

Summary (last 4 screenshots):

A custom EPEL repository configuration is present but fails to load due to misconfiguration on CentOS Stream 9.

DNF cache is cleaned and rebuilt successfully using the default BaseOS, AppStream, and Extras repositories.

The tmux package installs successfully from the BaseOS repository despite EPEL being unavailable.

Installation is verified by checking the installed version, confirming tmux 3.2a is working correctly.