Setting up LaTeX Workshop on Cursor on Rocky Linux 10.1 with TeX Live 2025

Documented Setup Guide

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Contents

1 Overview

This document describes the configuration used to set up a full LaTeX environment on Rocky Linux 10.1, using:

- TeX Live 2025 (scheme-full) installed under `/usr/local/texlive/2025`.
- Cursor (VS Code–like editor).

- The `LaTeX Workshop` extension.
- `latexmk` as the main build tool.

The goal is to have:

- A complete TeX Live installation to avoid missing packages.
- Proper PATH configuration so both the terminal and Cursor can find TeX tools.
- LaTeX Workshop configured explicitly to use `latexmk`.
- A simple clean recipe using `latexmk -c`.

2 Installing TeX Live 2025 (Full Scheme)

2.1 Downloading and unpacking the installer

In a terminal:

```
mkdir -p ~/installers
cd ~/installers
wget http://mirror.ctan.org/systems/texlive/tlnet/install-tl-unx.tar.gz
tar xzf install-tl-unx.tar.gz
cd install-tl-*
```

2.2 Running the TeX Live installer

Start the installer with root privileges (for system-wide installation):

```
sudo ./install-tl
```

In the text-based menu:

1. Select the installation scheme:

   ```
   <S> set installation scheme: scheme-full
   ```

   Choose the **full** scheme (everything) so that almost all packages are installed.

2. Optionally, set letter-size paper as the default (recommended in places that use US Letter):

```
<O> options:
  [X] use letter size instead of A4 by default
```

3. Confirm directories (defaults are fine):

```
<D> set directories:
  TEXDIR:         /usr/local/texlive/2025
  TEXMFLOCAL:     /usr/local/texlive/texmf-local
  TEXMFSYSVAR:    /usr/local/texlive/2025/texmf-var
  TEXMFSYSCONFIG:/usr/local/texlive/2025/texmf-config
  TEXMFVAR:       ~/.texlive2025/texmf-var
  TEXMFCONFIG:    ~/.texlive2025/texmf-config
  TEXMFHOME:      ~/texmf
```

4. When satisfied, start the installation:

```
<I> start installation to hard disk
```

At the end of the installation, TeX Live prints a message reminding you to add the `bin`, `MANPATH`, and `INFOPATH` entries to your environment.

3 Shell Environment Configuration

3.1 Cleaning up install-only environment variables

If the variable `TEXLIVE_INSTALL_NO_DISKCHECK` was used during the installation, it is safe—and recommended—to unset it afterwards, since it is no longer needed:

```
unset TEXLIVE_INSTALL_NO_DISKCHECK
```

Remove any persistent export line for this variable that may have been added to `~/.bashrc` or `~/.profile`.

3.2 Adding TeX Live to PATH, MANPATH, and INFOPATH

Append the following lines to `~/.bashrc`:

```
echo 'export PATH=/usr/local/texlive/2025/bin/x86_64-linux:$PATH' \
  >> ~/.bashrc
echo 'export MANPATH=/usr/local/texlive/2025/texmf-dist/doc/man:$MANPATH' \
  >> ~/.bashrc
echo 'export INFOPATH=/usr/local/texlive/2025/texmf-dist/doc/info:$INFOPATH' \
  >> ~/.bashrc
```

Reload the shell configuration:

```
source ~/.bashrc
```

Then verify that TEX tools are being found:

```
which pdflatex
pdflatex --version

which latexmk
latexmk -v

which biber
biber --version
```

The `which` commands should report paths under `/usr/local/texlive/2025/bin/x86_64-linux`.

4 Installing and Configuring Cursor + LaTeX Workshop

4.1 Installing the LaTeX Workshop extension

1. Open Cursor.
2. Open the Extensions view.
3. Search for `LaTeX Workshop` (author: James Yu).
4. Install the extension.

4.2 Ensuring PATH inside Cursor

Graphical applications sometimes do not inherit the same PATH as the terminal. To ensure that Cursor and the integrated terminal see TeX Live, we configure the PATH explicitly in the editor settings.

Open the user settings JSON in Cursor:

1. Press `Ctrl+Shift+P`.
2. Run `Preferences: Open User Settings (JSON)`.

Use the following configuration (this is the final, working setup):

```
{
  "window.commandCenter": true,
```

```
"terminal.integrated.env.linux": {
  "PATH": "/usr/local/texlive/2025/bin/x86_64-linux:/usr/bin:/bin"
},

"latex-workshop.latex.path": "/usr/local/texlive/2025/bin/x86_64-linux",

// === Tools: define latexmk and clean tools ===
"latex-workshop.latex.tools": [
  {
    "name": "latexmk",
    "command": "latexmk",
    "args": [
      "-synctex=1",
      "-interaction=nonstopmode",
      "-file-line-error",
      "-pdf",
      "-outdir=%OUTDIR%",
      "%DOC%"
    ]
  },
  {
    "name": "latexmk-clean",
    "command": "latexmk",
    "args": [
      "-c",
      "-outdir=%OUTDIR%",
      "%DOC%"
    ]
  }
],

// === Recipes: define latexmk recipes ===
"latex-workshop.latex.recipes": [
  {
    "name": "latexmk",
    "tools": ["latexmk"]
  },
  {
    "name": "latexmk-clean",
    "tools": ["latexmk-clean"]
  }
],

"latex-workshop.view.pdf.viewer": "tab"
```

```
}
```

Notes:

- The key `"terminal.integrated.env.linux"` ensures the integrated terminal has the correct PATH to find TeX Live.
- `"latex-workshop.latex.path"` points LaTeX Workshop directly to the TeX Live binaries.
- A `latexmk` tool is defined for normal PDF builds.
- A `latexmk-clean` tool is defined to clean auxiliary files using `latexmk -c`.
- Two recipes are provided: one for building, one for cleaning.

After editing `settings.json`, reload the Cursor window (*Developer: Reload Window*) to ensure the new configuration is picked up.

5 Using LaTeX Workshop with `latexmk`

5.1 Testing with a minimal document

Create a test directory and a simple document:

```
mkdir -p ~/tex-test
cd ~/tex-test
```

Create `main.tex`:

```
\documentclass{article}
\usepackage[utf8]{inputenc}
\usepackage{amsmath, amssymb}
\usepackage{hyperref}

\title{TeX Live + LaTeX Workshop Test}
\author{Me}
\date{\today}

\begin{document}
\maketitle

This is a test. Here is an equation:
\begin{equation}
  E = mc^2
\end{equation}
```

```
A link: \url{https://example.com}

\end{document}
```

Then:

1. Open the folder `~/tex-test` in Cursor.
2. Open `main.tex`.
3. In the LaTeX Workshop sidebar, select the `latexmk` recipe.
4. Run "Build LaTeX project".

You should see `latexmk` running in the LaTeX Workshop log, and the resulting PDF should open in a tab. SyncTeX (jumping between source and PDF) should also work.

5.2 Cleaning auxiliary files

To clean the auxiliary files produced by `latexmk`, select the `latexmk-clean` recipe and run it. This runs:

```
latexmk -c -outdir=%OUTDIR% %DOC%
```

which removes common temporary files but leaves the PDF.

6 Notes on Bibliography and BibTeX/Biber

During setup, an error of the following form may appear in the `latexmk` log:

```
Running 'bibtex  "main.aux"'
This is BibTeX, Version 0.99d (TeX Live 2025)
I found no \citation commands---while reading file main.aux
I found no \bibdata command---while reading file main.aux
I found no \bibstyle command---while reading file main.aux
(There were 3 error messages)
```

This indicates that `latexmk` attempted to run BibTeX, but the document either:

- does not contain any bibliography commands at all, or
- is not yet properly configured with `\bibliography{...}` and `\bibliographystyle{...}` (for classic BibTeX), or with BibLaTeX and Biber.

For simple test documents with no citations, one can disable automatic calls to BibTeX by adding the option `-bibtex-` in the `latexmk` tool definition, e.g.:

```
"args": [
  "-synctex=1",
  "-interaction=nonstopmode",
  "-file-line-error",
  "-pdf",
  "-bibtex-",
  "-outdir=%OUTDIR%",
  "%DOC%"
]
```

For real projects with bibliographies, ensure that either classic BibTeX or BibLaTeX+Biber is configured correctly in `main.tex` and that the corresponding `.bib` files exist.

7 Summary

The working configuration consists of:

- TeX Live 2025 installed with the full scheme in `/usr/local/texlive/2025`.
- Environment variables PATH, MANPATH, and INFOPATH extended to include the TeX Live directories.
- Cursor configured so that its integrated terminal and LaTeX Workshop extension can see the TeX Live binaries.
- LaTeX Workshop explicitly configured to use `latexmk` for building and `latexmk -c` for cleaning.

With these steps, a full LaTeX project on Rocky Linux 10.1 can be edited and compiled comfortably in Cursor using LaTeX Workshop.