

Quality-of-Life & Modern CLI Helpers (Optional)

Linux Commands Course · Section 20

Goal

Explore modern tools that improve your **terminal experience** – faster, more colorful, and user-friendly alternatives to traditional Unix utilities.

These are optional but highly recommended for daily productivity.

Quick References – tldr

`tldr` provides concise, example-driven help pages for common commands.

Install it:

```
sudo apt install tldr
# or
pip install tldr
```

Usage:

```
tldr tar
tldr grep
```

Example output for `tldr tar`:

```
tar – Archiving utility
Examples:
- Create a gzip-compressed archive:
  tar -czvf archive.tar.gz directory/
- Extract an archive:
  tar -xzvf archive.tar.gz
```

Fast, clean, and easy to read – great for quick reminders.

Faster File Searching – fd

`fd` is a simple, fast, user-friendly alternative to `find`.

Install (Debian/Ubuntu):

```
sudo apt install fd-find
```

Basic usage:

```
fd main  
fd -e txt -e md
```

- Ignores `.gitignore`-excluded files by default
- Colorful output
- Much faster than `find` for interactive use

You might need to symlink for convenience:

```
ln -s $(which fd-find) ~/.local/bin/fd
```

Faster Grep – ripgrep (rg)

`ripgrep` (`rg`) is a blazing-fast alternative to `grep` that respects `.gitignore` and highlights matches.

Install:

```
sudo apt install ripgrep
```

Search recursively for text:

```
rg "TODO"
```

Limit by file type:

```
rg "error" --type py
```

Count matches per file:

```
rg -c "pattern"
```

Faster than both `grep` and `ack`.

Better Cat – bat

`bat` enhances `cat` with syntax highlighting, line numbers, and paging.

Install:

```
sudo apt install bat
```

Usage:

```
bat script.sh  
bat /etc/passwd
```

You can also use it like `cat` in pipelines:

```
bat --plain file.txt | grep keyword
```

Alias it for convenience:

```
alias cat='batcat'
```

Monitoring Tools – btop, nload, iftop

btop

A colorful and interactive resource monitor.

```
sudo apt install btop
btop
```

Features:

- CPU, memory, disk, and network usage graphs
- Process viewer with search and sorting
- Mouse support and theme customization

nload

Real-time network bandwidth monitor (per interface).

```
sudo apt install nload
nload
```

Displays incoming and outgoing traffic separately.

iftop

Interactive bandwidth usage by connection.

```
sudo apt install iftop
sudo iftop
```

Shows which hosts are consuming bandwidth – great for network debugging.

Comparisons and Recommendations

Classic Tool	Modern Alternative	Benefit
<code>man</code>	<code>tldr</code>	Quick, example-focused help
<code>find</code>	<code>fd</code>	Faster, simpler syntax
<code>grep</code>	<code>ripgrep (rg)</code>	Fast recursive search with colors
<code>cat</code>	<code>bat</code>	Pretty printing and highlighting
<code>top</code>	<code>bt</code>	Graphical monitoring
<code>iftop</code>	(modern already)	Network inspection
<code>nload</code>	(modern already)	Lightweight bandwidth view

Bonus Tips

You can create an **alias group** for modern replacements:

```
alias cat='batcat'  
alias grep='rg'  
alias find='fd'  
alias top='btop'
```

Store them in `~/.bashrc` to persist.

Recap

- **tldr** – short and friendly command reference
- **fd** – faster file search
- **ripgrep (rg)** – next-gen grep
- **bat** – colorful file viewer
- **htop**, **nload**, **iftop** – intuitive performance monitors

These tools make everyday terminal work faster, clearer, and more enjoyable.

Practice

1. Use `tldr tar` to review archive usage.
 2. Search for a keyword in your home directory using `rg`.
 3. Replace `find` commands with `fd`.
 4. Try viewing scripts with `bat`.
 5. Monitor network traffic with `nload` or `iftop`.
 6. Explore system performance interactively using `htop`.
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Congratulations!

You've completed the **Linux Commands Course** – from fundamentals to modern workflow tools.

Next: combine your skills to create your own shell utilities and automation scripts!