

CIS241

System-Level Programming and Utilities

(mostly) tmux and (a bit of) screen

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Based on material provided by Erin Carrier, Austin Ferguson, and Katherine Bowers

CIS241 | Fredericks | F25 | 26-tmux

ole@nobara-esque

Nobara release 39 (Thirty N
Plasma 5.27.9
bash 5.2.21
tmux
44 mins
4786 (rpm), 62 (flatpak)
Intel i7-10700K (16) @ 5.10
7745MiB / 47959MiB
AMD ATI Radeon RX 6800/6800
NVIDIA GeForce RTX 3070
7616 / 9296 (83%)

○ ○ ○ ○ ○ ○ ○ ○

IP 2001:1970:4c22:3000::8480
Hostname
City Cornwall
Region Ontario
Country CA
Loc 45.0181,-74.7281

Time
London 22:37 GMT Jan 4
New_York 17:37 EST Jan 4
Shanghai 06:37 CST Jan 5
UTC 22:37 UTC Jan 4

-x efivarfs -x devtmpfs --output=tar-
Mounted on Used Size Use% Files
/ 7616 9296 83% /dev/
/boot 347M 974M 29% /dev/
/usr 7616 9296 83% /dev/
/usr/er1 18M 599M 5% /dev/
/mnt/Backup 1896 4586 44% /dev/
/mnt/Juggernaut 1.7T 4.6T 36% /dev/

uptime 1
17:37:02 up 45 min, 2 users, load average: 5.23, 5.01, 5.98

Feed 2
1. CBC | Top Stories News Jan 04 Iowa police say Grade 6 student killed,
2. CBC | Top Stories News Jan 04 Canadian ice dancer reportedly under inv
3. CBC | Top Stories News Jan 04 Glynis Johns, who played Mrs. Banks in M
4. Hacker News: Newest Jan 04 Poor Charlie's Almanack
5. CBC | Top Stories News Jan 04 Senate ordered to reinstate executive wh
6. CBC | Top Stories News Jan 04 Health Canada approves RSV vaccine for m
7. Hacker News: Newest Jan 04 Go: What We Got Right, What We Got Wrong
8. Hacker News: Newest Jan 04 Clicks - Physical keyboard for iPhone
9. Hacker News: Newest Jan 04 Minimum Wage Clock
0. Hacker News: Newest Jan 04 Hydroxychloroquine could have caused 17,000
1. Hacker News: Newest Jan 04 GPU 2 is now in production - Zed
2. Hacker News: Newest Jan 04 Vox: Alpha open-source browser engine in V
3. Hacker News: Newest Jan 04 The Brain Circuit Behind Male Libido Has Be
4. Hacker News: Newest Jan 04 RIP: Pascal Creator Niklaus Wirth
5. Hacker News: Newest Jan 04 Unemployed Americans Are Being Forgotten in
6. Hacker News: Newest Jan 04 2023 Was a Turning Point for Microservices
7. Hacker News: Newest Jan 04 Fed Court: First Amendment Protects Enginee
8. Hacker News: Newest Jan 04 UCLA will transform dead Westside mall into
9. Hacker News: Newest Jan 04 Sentry's new TOS include agreement to inclu

Dow 10.148 (0.027) at 37440.340 S&P 500 -16.130 (-0.343) at 4688.680 NASDAQ -81.911 (-0.56
Tokyo -175.883 (-0.526) at 33288.290 HK +0.430 (-0.003) at 16645.980 London 40.740 (0.530)
7.991 (0.084) Euro \$0.913 (-0.251%) Yen ¥144.571 (1.017%) Oil \$72.400 (-0.41
▲Ticker Last Change Change% Open Low High 52w Low 52w High
AMZN \$144.57 -\$3.90 -2.62% \$145.59 \$144.05 \$147.37 \$81.43 \$155.63
BABA \$74.66 -\$1.93 -2.52% \$75.56 \$74.44 \$75.71 \$70.08 \$121.30
BTCC.TO \$8.43 \$0.28 3.43% \$8.27 \$8.25 \$8.53 \$3.28 \$8.70
ENB.TO \$40.79 \$0.08 0.16% \$40.96 \$40.70 \$40.27 \$42.75 \$56.33
NVDA \$477.75 \$4.29 0.90% \$477.07 \$475.93 \$485.00 \$146.04 \$585.40
TEC.TO \$30.70 -\$0.12 -0.38% \$30.63 \$30.63 \$30.87 \$20.23 \$31.99
VGRU.TO \$31.54 -\$0.07 -0.22% \$31.57 \$31.54 \$31.71 \$28.42 \$32.08
VOD \$429.43 -\$1.36 -0.31% \$430.33 \$429.21 \$432.78 \$348.06 \$438.84
XEQT.TO \$27.42 -\$0.01 -0.03% \$27.43 \$27.40 \$27.56 \$24.11 \$27.88
XLK \$184.17 -\$1.36 -0.73% \$184.39 \$183.99 \$185.66 \$120.81 \$193.72

> 0 N P % v K B l 1 W
' i E + ' c ^ x
^ c r h i 2 d K
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- z 8 /) I . w
U 8 z U \ P d
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C \$ W / [N _
) 8 I P d 7 0 / ^
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s ; P 9 [0 n 9]
y c 9 H b 4 U h 6
n j Z 5 t & ' 1

tmux

terminal multiplexer

Way to:

- Split your terminal into panes
 - Each pane is a bash instance
- Have "background" sessions running

Installing (if you don't have it - EOS does):

- `sudo apt install tmux` or `brew install tmux`

(Note - only will be showing "common" usages)

Ref: <https://hamvocke.com/blog/a-quick-and-easy-guide-to-tmux/>

The screenshot shows a tmux terminal window with two panes. The left pane displays a file editor (vim) editing a file named `src/amazon-s3-and-cloudfront/ui/components/Settings.svelte`. The file content includes Svelte component code with imports, state management, and a `onMount` lifecycle hook. The right pane shows the output of the `neofetch` command, displaying system information in a stylized ASCII art format, including OS (Ubuntu 20.04.2 LTS), Host (Droplet 20171212), Kernel (5.4.0-109-generic), Uptime (21 days, 23 hours, 25 mins), Package (793 (dpkg)), Shell (bash 5.0.17), Terminal (/dev/pts/0), CPU (Intel Xeon E5-2650 v4 (2) @ 2.199GHz), GPU (00:02.0 Red Hat, Inc. QXL paravirtual graphic car), and Memory (740MiB / 3931MiB).

tmux - sessions

Creating a session: `tmux`

- Green status bar at bottom tells you pane+shell information
- Also, is configurable!

Listing existing sessions: `tmux ls`

Re-attach existing sessions: `tmux attach-session -t <id>`

Killing sessions: `Ctrl+d` or `exit`

Detaching sessions: `Ctrl+b d`

- (goes into background)

tmux - panes

In a tmux session:

Splitting panes:

- Horizontally: `Ctrl-b "`
- Vertically: `Ctrl-b %`

Navigating panes:

- `Ctrl-b <arrow key>`

New window: `Ctrl-b c`

- Navigating: `Ctrl-b p` (previous) or `Ctrl-b n` (next)

screen

Also fine - though I don't use it anymore

Does similar things: <https://www.baeldung.com/linux/screen-command>

(Kind of like the emacs vs vim debate, you'll see people arguing over tmux vs screen)

- `tmux` is newer and often pre-installed