PRACTICAL PORTS

On Top of the World

BY BENEDICT REUSCHLING

This column covers ports and packages for FreeBSD that are useful in some way, peculiar, or otherwise good to know about. Ports extend the base OS functionality and make sure you get something done or, simply, put a smile on your face. Come along for the ride, maybe you'll find something new.

E ver since I began working with Unix, I remember using `top(1)`. For those of you who have been living under a Unix rock, you should really climb on top. With its continuing display of processes, it gives you an instant view of what is going on in your machine— process wise. Compared to the static output of `ps(1)`, it decorates at least one corner of any serious Unix sysadmin screen to make it look busy. Fancy screensaver or not, a quick glance can help in an early evaluation of system load. Of course, the BSDs are no different and they even provide some extra features that other top implementations don't have. For I/O,

```
top -m io
```

gives you reasons every second to finally replace that hard disk with something, well, flashier.
If you want to just list the ten most active processes that hog your system? Simply type

```
top 10
```

into your terminal to get it. Very intuitive! Also, exiting out of top is easier for beginners than getting out of vi (hint: q is involved). Perhaps that is one of the reasons this program has been cloned and rewritten for other purposes over the years. Whenever there is a need to figure out why things are sluggish, top is one way to figure it out. Users tend to complain about it only to discover that their own processes are grinding the system to a near standstill.

The most popular rewrite is probably `sysutils/htop`, which extends the base top with colors and a customizable display. From adding a remaining battery display on your laptop to a display of the hostname for the ssh system-to-system hoppers among us, it all can be configured. Process views offer a neat tree view of threads spawned by your shell or system daemons

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processing data. My years of playing DOS games and hitting the spacebar all too often has me confused in htop, though. On the FreeBSD top implementation, this causes the display to refresh. And on htop, it selects the process under the cursor. I should study the man page to see what it does instead of relying on top being the same everywhere.

Speaking of old DOS games: after installing `sysutils/bashtop` and invoking it for the first time, I can't shake the feeling that I'm running in professional protected mode runtime again. It freezes completely and the homepage redirects me to bpytop instead. Just looking at the github page [https://github.com/aristocratos/bpytop], I see it not only lists FreeBSD support, but a whole lot of others, too. My fingers quickly type

```
pkg install bpytop
```

into my terminal to pull down the latest ported version. The application runs and I'm stunned for a second: another initialization routine. My trained gaming fingers are quick enough to capture it in a screenshot for readers before the main display appears. You may think I'm taking this to the top, but what follows is as close to a drug trip that I have probably ever come to in my life—the colors are just too much for me. Nevertheless, it shows a lot of good information about your system. The little dots in the top left corner give me a combined view of each of the 24 CPUs I have on this system. Selecting a process and hitting enter yields more details about it. Network and memory are also shown on the same screen. Certainly neat, but now I need to get my eyeballs replaced—I think I still have some in the fridge...

OK, Dilbert's Topper would say "That's nothing..." so I'm searching freshports.org looking for other top-like utilities. Sure enough, nearly every letter of the Alphabet seems to have been put in front of top in one way or the other. From `sysutils/atop` that works quite well on FreeBSD despite the man page claiming it is a resource monitor for Linux, `databases/mtop`

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or `mytop` to view your MySQL processes, to `pgtop` (same for Postgres) there is plenty to select from. The only thing I'm missing is stop—stop a process. What happened to "programs should do one thing and do it well?" Maybe I'm old fashioned in this regard!

Network admins will probably take a look at `dns/dnstop` to capture and peek into DNS traffic flowing by. Simpler views than bpytop for sure but it has all one needs. Or try out `net-mgmt/bandwhich` to pinpoint where your bandwidth is going all day.

One thing I found that has not been ported yet and has nothing to do with a process viewer is topgrade [https://github.com/r-darwish/topgrade]. It upgrades not only from one, but all package managers you have on your system. Perhaps playing the Top Gun theme while doing it, the logo certainly brings that to mind. The server I was running this on has no sound chip, so I can't tell. Imagine all the datacenter workers scrambling to figure out which machine this comes from in a rack of machines!

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I also remember (off the top of my head, of course) other top-like programs not yet ported to FreeBSD. The movie TRON seems to have inspired eDEX-UI [https://github.com/GitSquared/edex-ui] with its futuristic design. Can we get that one ported, pretty please (with sugar on top)?

There is a base RUST library called tui-rs [https://github.com/fdehau/tui-rs] which provides the building blocks for many other flexible and dynamic window-like displays in the terminal. I'll mention just one of them here which seems to be what `tail(1)` is to top's `head(1)`: bottom [https://github.com/ClementTsang/bottom]. While there, `sysutils/gotop` may interest you with its squiggly line display of CPU usage. On laptops and servers, it tries to determine CPU temperatures as well.

I would refer you to www.unixtop.org to get some history about this utility if it were not down. Luckily, archive.org has a copy from 2017 that can be used. Wikipedia also has enlightening information, so I'll leave you to that. Here's hoping this column wasn't too much over the top and you could add some utilities to your Unix toolbox.

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