The Bash Fingertips: Making Your Own 'Information Centre'

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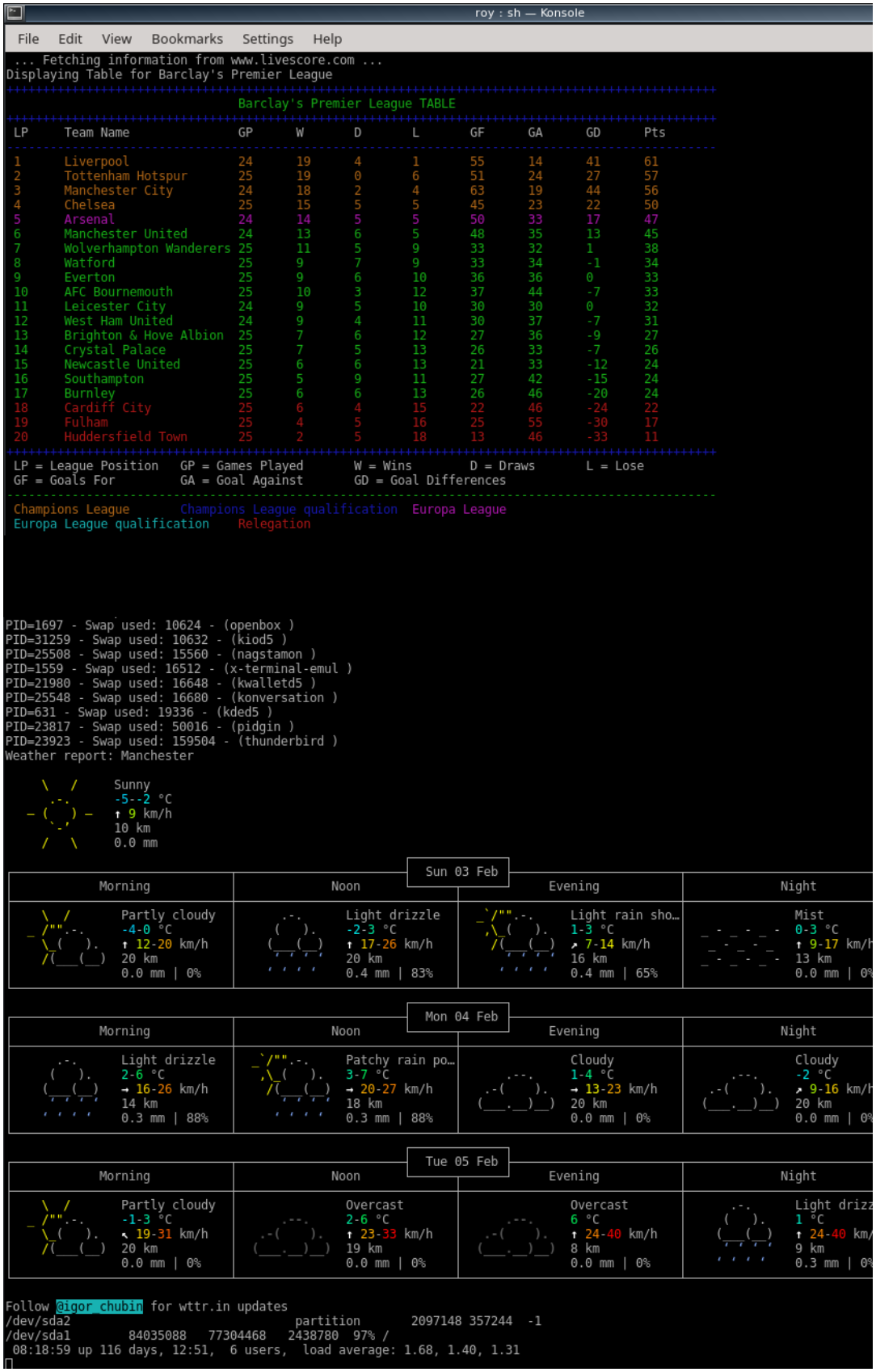

FORGET bloated Web browsers. Forget so-called 'social' media (I call it social *control* media). They're not efficient, they eat up a lot of memory and CPU cycles, and the interfaces are not consistent (across sites). They're sufficiently distracting and they have ads. They erode privacy. They don't scale well; neither for an aging system (my laptop turns 10 in a few months) nor for users. GUIs are good in particular scenarios, but when the same things are repeated over and over again one might as well set up scripts, automating things and tailoring one's own interfaces, which is easy to achieve (relatively fast and simple) in the command line. It's also more accessible, e.g. over SSH. The pertinent tools are already out there (available for download/installation from repositories), they just need to be put together and programming skills aren't required, just batching in a bash file.

Some years ago I 'developed' a little script (I've been scripting since I was about 12). I called it `getswap-sorted.sh`

and it just ran another script that helped me see what applications use the swap (and how much of it). For the sake of speed I like to restart applications that heavily use swap (i.e. depend on magnetic disk operations). I don't have much RAM. I never had more than 2 GB. `getswap-sorted.sh` just called out `./getswap.sh | sort -n -k 5` and `getswap.sh` comes from Erik Ljungstrom. Here it is:

```
#!/bin/bash
# Get current swap usage for all running processes
# Erik Ljungstrom 27/05/2011
SUM=0
OVERALL=0
for DIR in `find /proc/ -maxdepth 1 -type d | egrep "^/proc/[0-9]"` ; do
PID=`echo $DIR | cut -d / -f 3`
PROGNAME=`ps -p $PID -o comm --no-headers`
for SWAP in `grep Swap $DIR/smaps 2>/dev/null| awk '{ print $2 }'`
do
let SUM=$SUM+$SWAP
done
echo "PID=$PID - Swap used: $SUM - ($PROGNAME )"
let OVERALL=$OVERALL+$SUM
SUM=0
done
```

The output of `getswap-sorted.sh` would be something like this:

```
PID=1559 - Swap used: 16472 - (x-terminal-emul )
PID=21980 - Swap used: 16648 - (kwalletd5 )
PID=25548 - Swap used: 16704 - (konversation )
PID=631 - Swap used: 19336 - (kded5 )
PID=23817 - Swap used: 50048 - (pidgin )
PID=23923 - Swap used: 180312 - (thunderbird )
```

This helps me see which application/process number uses swap and to what degree. It's sorted by the amount of swap taken and the PID helps when I just want to kill a process from the command line (some are small and obsolete anyway).

My script, however, grew bigger over time. I added more things to it, eventually binding it to a special (fifth) mouse key, using `xbindkeys` -- an immensely valuable and powerful program I've used since around 2004. Extra mouse buttons always seemed worthless (anything more than three), but that's just because there was no program I needed to open or action I needed to invoke often enough. Over time I found that keeping a new terminal one click away (fourth button) and another *special* terminal also a click away improved my workflow/productivity. I just needed to invest some time in tailoring it. I ended up opening, temporarily, a terminal window with important information displayed, such as weather, disk space (I'm always near the limits), swap usage (I have only 2GB of RAM), uptime, real-time football scores etc. Change of wallpapers was lumped in too, for good measure...

For football tables/scores use one of the following 1) `livescore-cli` [2] 2) soccer-cli [3] and 3) `football-cli` [4].

Sadly, the above CLI football scores' tools got 'stolen' by Microsoft and need to isolate themselves GitHub, in due cource/time. I use the first of the three as it suits my needs best and does not require an API key.

The output looks like this:

```
 ... Fetching information from www.livescore.com ...
Displaying Table for Barclay's Premier League
+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                                Barclay's Premier League TABLE
+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
 LP     Team Name                GP      W       D       L       GF      GA
-------------------------------------------------------------------------------
 1      Liverpool                24      19      4       1       55      14
 2      Tottenham Hotspur        25      19      0       6       51      24
 3      Manchester City          24      18      2       4       63      19
 4      Chelsea                  25      15      5       5       45      23
 5      Arsenal                  24      14      5       5       50      33
 6      Manchester United        24      13      6       5       48      35
 7      Wolverhampton Wanderers  25      11      5       9       33      32
 8      Watford                  25      9       7       9       33      34
 9      Everton                  25      9       6       10      36      36
 10     AFC Bournemouth          25      10      3       12      37      44
 11     Leicester City           24      9       5       10      30      30
 12     West Ham United          24      9       4       11      30      37
 13     Brighton & Hove Albion   25      7       6       12      27      36
 14     Crystal Palace           25      7       5       13      26      33
 15     Newcastle United         25      6       6       13      21      33
 16     Southampton              25      5       9       11      27      42
 17     Burnley                  25      6       6       13      26      46
 18     Cardiff City             25      6       4       15      22      46
 19     Fulham                   25      4       5       16      25      55
 20     Huddersfield Town        25      2       5       18      13      46
+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
 LP = League Position   GP = Games Played       W = Wins        D = Draws
 GF = Goals For         GA = Goal Against       GD = Goal Differences
-------------------------------------------------------------------------------
 Champions League       Champions League qualification  Europa League
 Europa League qualification    Relegation
+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
```

Real-time scores (when matches are on):

```
 ... Fetching information from www.livescore.com ...
Displaying Scores for Barclay's Premier League
-------------------------------------------------------------------------------
                  Barclay's Premier League SCORES
-------------------------------------------------------------------------------
 January 29  FT     Arsenal                  2 - 1  Cardiff City
 January 29  FT     Fulham                   4 - 2  Brighton & Hove Albion
 January 29  FT     Huddersfield Town        0 - 1  Everton
 January 29  FT     Wolverhampton Wanderers  3 - 0  West Ham United
 January 29  FT     Manchester United        2 - 2  Burnley
 January 29  FT     Newcastle United         2 - 1  Manchester City
 January 30  FT     AFC Bournemouth          4 - 0  Chelsea
 January 30  FT     Southampton              1 - 1  Crystal Palace
 January 30  FT     Liverpool                1 - 1  Leicester City
```

```
 January 30  FT     Tottenham Hotspur        2 - 1  Watford
 February 2  FT     Tottenham Hotspur        1 - 0  Newcastle United
 February 2  FT     Brighton & Hove Albion   0 - 0  Watford
 February 2  FT     Burnley                  1 - 1  Southampton
 February 2  FT     Chelsea                  5 - 0  Huddersfield Town
 February 2  FT     Crystal Palace           2 - 0  Fulham
 February 2  FT     Everton                  1 - 3  Wolverhampton Wanderers
 February 2  FT     Cardiff City             2 - 0  AFC Bournemouth
 February 3  15:05  Leicester City           ? - ?  Manchester United
 February 3  17:30  Manchester City          ? - ?  Arsenal
 February 4  21:00  West Ham United          ? - ?  Liverpool
-------------------------------------------------------------------------------
---------------------------------------
```

Now putting it all together:

```
feh --bg-fill --randomize /media/roy/c3fd5b6e-794f-4f24-b3e7-b4ead3722f11/ho
livescore -t bpl
./getswap.sh | sort -n -k 5
 curl -4 http://wttr.in/Manchester
 swapon --summary | grep sda2
 df | grep sda1
uptime
sleep 10
livescore -s bpl
sleep 40
```

The first line is `feh` choosing a wallpaper at random from a collection of award-winning National Geographic photographs. The options and the underlying parameters are self-explanatory.

The football league's table is then shown.

Next, after about 10 seconds of processing, a list of processes will show up based on swap usage (as described above)

The weather at home (Manchester) will then be shown, with colour. Right now I get:

```
Weather report: Manchester
     \   /     Sunny
      .-.      -5--2 °C
   ? (   ) ?   ? 9 km/h
      `-?      10 km
     /   \     0.0 mm
                                                       ??????????????
????????????????????????????????????????????????????  Sun 03 Feb ???????
?             Morning           ?              Noon      ??????????????    E
????????????????????????????????????????????????????????????????????????????
?    \  /       Partly cloudy  ?      .-.      Light drizzle  ?  _`/"".-.
?  _ /"".-.     -4-0 °C        ?     (   ).    -2-3 °C        ?   ,\_(   ).
?    \_(   ).   ? 12-20 km/h   ?    (___(__)   ? 17-26 km/h   ?    /(___(__)
?    /(___(__)  20 km          ?     ? ? ? ?   20 km          ?      ? ? ? ?
?               0.0 mm | 0%    ?    ? ? ? ?    0.4 mm | 83%   ?     ? ? ? ?
```

```
????????????????????????????????????????????????????????????????????????????????????
                                                       ???????????????
????????????????????????????????????????????????????????  Mon 04 Feb ???????
?             Morning           ?             Noon      ???????????????     E
????????????????????????????????????????????????????????????????????????????????????
?      .-.      Light drizzle  ?  _`/"".-.     Patchy rain po??
?     (   ).    2-6 °C         ?   ,\_(   ).   3-7 °C         ?      .--.
?    (___(__)   ? 16-26 km/h   ?    /(___(__)  ? 20-27 km/h   ?   .-(    ).
?     ? ? ? ?   14 km          ?      ? ? ? ?  18 km          ?  (___.__)__)
?    ? ? ? ?    0.3 mm | 88%   ?     ? ? ? ?   0.3 mm | 88%   ?
????????????????????????????????????????????????????????????????????????????????????
                                                       ???????????????
????????????????????????????????????????????????????????  Tue 05 Feb ???????
?             Morning           ?             Noon      ???????????????     E
????????????????????????????????????????????????????????????????????????????????????
?    \  /       Partly cloudy  ?               Overcast       ?
?  _ /"".-.     -1-3 °C        ?      .--.     2-6 °C         ?      .--.
?    \_(   ).   ? 19-31 km/h   ?   .-(    ).   ? 23-33 km/h   ?   .-(    ).
?    /(___(__)  20 km          ?  (___.__)__)  19 km          ?  (___.__)__)
?               0.0 mm | 0%    ?               0.0 mm | 0%    ?
????????????????????????????????????????????????????????????????????????????????????
```

After this I am shown general memory usage and disk usage (for a particular partition) along with uptime thusly:

```
/dev/sda2                               partition       2097148 381128  -1
/dev/sda1        84035088   77299588   2443660  97% /
 08:03:28 up 116 days, 12:36,  7 users,  load average: 1.70, 1.40, 1.26
```

It will close on its own after I see what needs seeing, owing to the `sleep` command. It saves me the clicking (required to then close the window); it just fades away or 'expires', so to speak (until the next time the mouse button gets pressed). ?

Howtos

Source URL: http://www.tuxmachines.org/node/120234

Links:
[1] http://www.tuxmachines.org/taxonomy/term/58
[2] https://github.com/codeezer/livescore-cli/
[3] https://github.com/architv/soccer-cli
[4] https://github.com/manrajgrover/football-cli/