

i3wm

Sumner Evans

March 2, 2017

Mines Linux Users Group

Let's Talk About Window Management

Why do we use windows?

- Windows separate information on a screen
- Windows allow you to easily switch between tasks

Most modern OSes have *workspaces* as well. Workspaces refer to the grouping of windows in some window managers. ¹

¹https://en.wikipedia.org/wiki/Workspace#Graphical_interfaces

What's the normal motif for windows?

- **Opening a window:** go to some menu somewhere, navigate through a ton of menus, click a button
- **Closing a window:** click the X button (or Alt + F4)
- **Moving a window:** find the title bar, click-and-drag
- **Resizing a window:** find the little thingy in the corner, click-and-drag
- **Snapping a window to the side of the screen:** find the title bar, drag it to the window to the side, hope that your desktop environment supports window snapping

What's the normal motif for windows?

- **Opening a window:** go to some menu somewhere, navigate through a ton of menus, click a button
- **Closing a window:** click the X button (or Alt + F4)
- **Moving a window:** find the title bar, click-and-drag
- **Resizing a window:** find the little thingy in the corner, click-and-drag
- **Snapping a window to the side of the screen:** find the title bar, drag it to the window to the side, hope that your desktop environment supports window snapping

What's the normal motif for windows?

- **Opening a window:** go to some menu somewhere, navigate through a ton of menus, click a button
- **Closing a window:** click the X button (or Alt + F4)
- **Moving a window:** find the title bar, click-and-drag
- **Resizing a window:** find the little thingy in the corner, click-and-drag
- **Snapping a window to the side of the screen:** find the title bar, drag it to the window to the side, hope that your desktop environment supports window snapping

What's the normal motif for windows?

- **Opening a window:** go to some menu somewhere, navigate through a ton of menus, click a button
- **Closing a window:** click the X button (or Alt + F4)
- **Moving a window:** find the title bar, click-and-drag
- **Resizing a window:** find the little thingy in the corner, click-and-drag
- **Snapping a window to the side of the screen:** find the title bar, drag it to the window to the side, hope that your desktop environment supports window snapping

What's the normal motif for windows?

- **Opening a window:** go to some menu somewhere, navigate through a ton of menus, click a button
- **Closing a window:** click the X button (or Alt + F4)
- **Moving a window:** find the title bar, click-and-drag
- **Resizing a window:** find the little thingy in the corner, click-and-drag
- **Snapping a window to the side of the screen:** find the title bar, drag it to the window to the side, hope that your desktop environment supports window snapping

Introducing i3wm

Behold: i3

```
marcel@MacArch:~$  
  
# same bindings, but for the arrow keys  
bindsym Left resize shrink width 10 px or 10 ppt  
bindsym Down resize grow height 10 px or 10 ppt  
bindsym Up resize shrink height 10 px or 10 ppt  
bindsym Right resize grow width 10 px or 10 ppt  
  
# back to normal: Enter or Escape  
bindsym Return mode "default"  
bindsym Escape mode "default"  
  
)  
  
bindsym $mod+r mode "resize"  
  
# Start i3bar to display a workspace bar (plus the system information i3status  
# finds out, if available)  
bar {  
    status_command i3status  
    tray_output primary  
}  
  
#  
# Modificaciones personales  
#  
  
# Iniciador de feh para manejar el wallpaper  
exec --no-startup-id feh --bg-fill ~/Pictures/archgris.jpg  
  
# Shortcut para Ejecucion de programas  
bindsym control+S exec --no-startup-id subl  
bindsym control+G exec --no-startup-id gedit  
bindsym control+Z exec --no-startup-id zim  
bindsym control+B exec --no-startup-id chromium  
bindsym control+T exec --no-startup-id terminator  
  
# Cambio a teclado en español  
exec --no-startup-id setxkbmap -layout latam  
  
# Moverse por los workspaces con ctrl-alt-flechas  
bindsym $mod+control+Right workspace next  
bindsym $mod+control+Left workspace prev  
  
[marcel@MacArch ~]$
```

```
marcel@MacArch:~$  
[marcel@MacArch ~]$ scrot ~/Pictures/Screenshot%Y-%m-%d%H:%M:%S.png  
  
marcel@MacArch:~$  
  
      .  
      .o^  
      'ooo/  
      '+oooo:  
      '+ooooooo:  
      '-ooooooo+:  
      '/:-:++oooo+:  
      '/+++/+++++++:  
      '/+++++++:  
      '/++o0000000000000000/  
  
Hz  
  
      ./ooooSSSSSo++oSSSSSSSo+^  
      .00SSSSSSo-''''/oSSSSSS+^  
      -oSSSSSSSo. :SSSSSSSo.  
      :oSSSSSSS/ oSSSSSo+++.  
      /oSSSSSSS/ +SSSSSo00/-  
      '/oSSSSSo+/- -:/+oSSSSSo+-  
      '+SSo+:-' '-/+oSo:  
      '++:-' '-/+  
      '+  
  
marcel@MacArch  
OS: Arch Linux  
Kernel: x86_64 Linux 4.2.5-1-ARCH  
Uptime: 10m  
Packages: 887  
Shell: bash 4.3.42  
Resolution: 2560x1600  
WM: i3  
CPU: Intel Core i5-4258U CPU @ 2.9G  
  
RAM: 582MiB / 3865MiB  
  
[marcel@MacArch ~]$
```

Why i3?

i3 is awesome because:

- Vim bindings
- workspaces are first-class citizens
- opening terminal emulators is optimized
- highly customizable

Using i3

- Mod + Enter: Open a terminal
- Ctrl + D: Open dmenu, a program launcher
- Mod + #: move to workspace # ($\# \in 0, \dots, 9$)
- Mod + Shift + #: move current window to workspace #
- Mod + H/J/K/L: make active window the one to the left/below/above/right, just like Vim.² You can also use the arrow keys.
- Mod + Shift + H/J/K/L: move window left/below/above/right
- Mod + E: activate split mode (default)
- Mod + W: activate tabbed mode
- Mod + S: activate stacked mode
- Mod + Shift + Space: float the current window

²I think by default it is actually shifted one to the right but that's fixable

Quick Live Demo

Customizing i3

You can customize i3 editing `.config/i3/config`.

- Desktop Background: `exec_always feh --bg-fill <file>`
- Fonts: `modify font pango:`
- Mod Key: `set $mod Mod#` (be careful or you could set it to the wrong key)
- Workspace Icons: `set $workspace1 "1: "`
results in a "1: 🌀"

You can customize the `i3status` bar by editing the `.config/i3status/config`.

Installing i3

- Arch: `pacman -S i3-wm i3status i3lock` (i3lock is optional)
- Ubuntu and derivatives: `apt install i3`
- Gentoo: good luck
- Windows or macOS/OS X: install Linux

Then add `exec i3` to your `~/.xinitrc`.

Further Reading

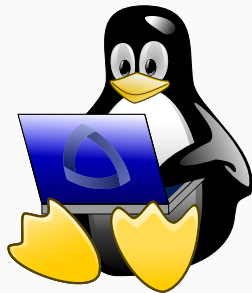
- My configurations:
`http://www.the-evans.family/sumner/.config/`
- The great i3 docs: `https://i3wm.org/`
- You can also check out `i3-gaps`^{AUR}

Questions?

Copyright Notice

This presentation was from the **Mines Linux Users Group**. A mostly-complete archive of our presentations can be found online at <https://lug.mines.edu>.

Individual authors may have certain copyright or licensing restrictions on their presentations. Please be certain to contact the original author to obtain permission to reuse or distribute these slides.



Colorado School of Mines
Linux Users Group