Base system:

* Wifi
* Ethernet
* Touchpad – disable while typing
* Monitor – disable touchscreen
* Keyboard – media & brightness controls

Further tweaks:

* Touchpad
* Auto-disable on USB plug
* Natural scrolling
* F7 toggle key
* Desktop notifications
* Network profile auto-sensing

# Keyboard

* + Volume Keys
    - Arch - i3
      * bindsym XF86AudioRaiseVolume exec --no-startup-id amixer -D pulse set Master 5%+ && killall -SIGUSR1 i3status
      * bindsym XF86AudioLowerVolume exec --no-startup-id amixer -D pulse set Master 5%- && killall -SIGUSR1 i3status
      * bindsym XF86AudioMute exec --no-startup-id amixer -D pulse set Master 1+ toggle && killall -SIGUSR1 i3status
      * **Tested working 11-9-2015 && 12/28/2015**
    - Mint/Ubuntu - i3
      * bindsym XF86AudioRaiseVolume exec --no-startup-id pactl set-sink-volume 1 -- +5% && pact set-sink-mute 0 0 && killall -SIGUSR1 i3status
      * bindsym XF86AudioLowerVolume exec --no-startup-id pactl set-sink-volume 1 -- -5% && pactl set-sink-mute 0 0 && killall -SIGUSR1 i3status
      * bindsym XF86AudioMute exec --no-startup-id pactl set-sink-mute 1 toggle
  + Media Keys for play/pause/forward/reverse
    - # Media player controls
    - #bindsym XF86AudioPlay exec playerctl play
    - #bindsym XF86AudioPause exec playerctl pause
    - #bindsym XF86AudioNext exec playerctl next
    - #bindsym XF86AudioPrev exec playerctl previous
      * Might require installing *playerctl* package?
    - **Testing this 11-9-2015**
      * Listening to music in google chrome, I tested the keys and they worked. Didn’t have to do anything because I don’t have a local player installed since I always stream!
        + I think this is because the chrome icon is visible in the i3bar and running passively in the background.
    - **Testing 11-11-2015**
      * keys didn’t work right off the bat. no icon present at the bottom for chrome. yaourt install playerctl
      * no luck. not sure what changed. look into this further.
    - **Testing 11-26-2015**
      * keys worked in chrome/google play music without further configuration. just added keybindings from above into my .i3/config file. worked flawlessly.
  + Keyboard delay rate
    - *exec --no-startup-id xset r rate 250 25*
  + Brightness keys
    - <http://haikarainen.github.io/light/>
    - <https://wiki.archlinux.org/index.php/Backlight#light>
    - *yaourt light-git, #2*
      * add to .i3/config
        + bindsym XF86MonBrightnessUp exec --no-startup-id light -A 5
        + bindsym XF86MonBrightnessDown exec --no-startup-id light -U 10

-A for increase, -U for decrease.

* + Sleep key
    - Add to .i3/config
      * *bindsym F9 exec sleep 1 && xset dpms force off*
  + Enable numlock on startup?!?!?
    - Linuxquestions.org article on how to DISABLE (search for #Enabling\_Keyboard\_Multimedia\_keys)
    - **Testing 11-9-2015**
    - *sudo nano /etc/lxdm/lxdm.conf*
    - Uncomment the “set numlock on your keyboard” line
    - **Tested 11-11-2015 as working!!!**
    - **Tested again 12/29/2015**
  + Xbindkeys
    - *sudo pacman -S xbindkeys*
      * execute the command and follow the prompt to copy the file to the relevant directory
      * ok so this is cool. use *xbindkeys -k* to get the key combination, then input that into the *.xbindkeysrc* file in ~
        + so for my Fn + F8 key, which should change to external display (need to tweak this), I added the following to my xbindkeysrc file:

“arandr”

two spaces in

m:0x40 + c:33

Mod4 + p also works!!!!, but p isn’t the same as the p key on keyboard, awesome!!!!!

* + - * + I can work on this later to get it to work with my setup. May want to read the man pages and/or ask on Reddit. All I want to do is emulate the extend/duplicate/toggle function I’d get in Windows (need to test this key in windows to see what it does, actually)
      * GUI - *yaourt xbindkeys\_config-gtk2*
  + Fix wifi-disable bind key in i3
    - Tested 12/28/2015 - it seems to work just fine? Must be something to do with network manager.

# Touchpad

* + Scripts
    - *touchon.sh*
      * Enable touchpad, send notification, set natural scrolling and *syndaemon* delay.
    - *touchoff.sh*
      * Disable touchpad, send notification.
    - *01-touchpad.rules*
      * Call on above scripts based on state of external mouse
    - F7 toggle
      * *touchpad.sh* script calls on either above script based on toggle state.
    - need *notify-osd* package for notifications to show
  + Installing Touchpad
    - *sudo pacman -S xf86-input-synaptics*
    - *sudo cp /usr/share/X11/xorg.conf.d/50-synaptics.conf /etc/X11/xorg.conf.d*
    - *xinput list-props “DLL063E:00 06CB:2934”*
    - Verify the device is /dev/input/event10, line “Device Node(###)”
    - *sudo nano /etc/X11/xorg.conf.d/50-synaptics.conf*
      * Change line “MatchDevicePath” to */dev/input/event##*
    - Reboot
    - Do this during installation so it works afterward?
    - nope - can’t contact xserver during installation because it’s not initialized. so this has to be installed after
      * **11-9-2015**
        + 50-synaptics.conf file is not present but it still works. Look into this further. Touchpad works so who cares???
      * **11-26-2015**
        + All I did was install xf86-input-synaptics and touchpad worked. no further config necessary.
  + Natural Scrolling
    - For i3, *sudo nano ~/.i3/config* and add:
      * *exec --no-startup-id synclient HorizScrollDelta=-30*
      * *exec --no-startup-id synclient VertScrollDelta=-30*
      * The lower the number, the faster the scroll. -30 is a good value
    - Handled through *touchon.sh* script in scripts folder and called during USB mouse detection script (01-touchpad.rules) and F7 toggle.
  + Disable touchpad while typing
    - *sudo nano ~/.i3/config* and add:
      * *exec --no-startup-id syndaemon -i 1 -d*
      * *XF86TouchpadToggle* is a powerful command that works in Mint but isn’t present in Arch? It automatically toggles touchpad behavior the way I want without external scripts. Look into this further.
      * What is XF86TouchpadToggle bound to in Linux Mint? Need to find out!
  + Touchpad Toggle Key for F7
    - For i3, add to .i3/config file the following:
      * *bindsym F7 exec --no-startup-id sh /path/to/touchpad.sh*
    - For Ubuntu, bind using the keyboard GUI to the F7 key using:
      * bash /path/to/file.sh
    - Contents of *touchon.sh*
      * + #! /bin/sh  
            
          #turn on cursor  
          synclient TouchpadOff=0  
            
           #turn on buttons  
          xinput enable “DLL063E:00 06CB:2934”  
            
          #show a notification that it's turned on  
          #notify-send “Touchpad” “Touchpad Enabled” -i /path/to/enabled.jpg -t 1000  
            
          #keyboard delay when typing  
          syndaemon -i 1 -d  
            
          #natural scrolling  
          synclient VertScrollDelta=-30  
          synclient HorizScrollDelta=-30

note to self: have to install an updated notify-send package to get timeout to work

* + - Contents of *touchoff.sh*
      * + #! /bin/sh
        + synclient TouchpadOff=1
        + xinput disable “DLL063E:00 06CB:2934”
        + notify-send “Touchpad” “Touchpad Enabled” -i /path/to/disabled.jpg -t 1000
    - Contents of *touchpad.sh*
      * + #! /bin/sh
        + pointer\_status=$(synclient -l | grep TouchpadOff)
        + if [ -z `echo $pointer\_status | grep -o 1` ]; then

sh /path/to/touchoff.sh

* + - * + else

sh /path/to/touchon.sh

* + - * + fi
    - Disables buttons, disables touchpad and sends notification with icon and 1 second delay.
    - **Tested 11-9-2015 works FLAWLESSLY!!!!**
    - To test:
      * touchpad-state-git from the AUR
        + uses udev rules for disabling touchpad
        + **Testing 11-26-2015**

git clone <https://github.com/Gen2ly/touchpad-state.git>

copy the 01-touchpad-state-onmouse.rules file to /etc/udev/rules.d

will test later. got an error about not being able to attain user variable.

no clear instructions on how to install

* + - * bindsym XF86TouchpadToggle exec “synclient TouchpadOff=$(synclient | awk ‘/TouchpadOff/ {print ($3+1)%2}’)”
  + Disable touchpad on external mouse detection
    - *sudo nano /etc/udev/rules.d/01-touchpad.rules* and add the following:
      * # Upon external mouse detection, disable touchpad, show notification. Facilitiated  
        # through executing a bash script located in ~/scripts. - 11/3/2015  
        SUBSYSTEM=="input", KERNEL=="mouse[0-9]\*", ACTION=="add", ENV{DISPLAY}=":0", ENV{XAUTHORITY}="/home/USERNAME/.Xauthority", RUN+="/bin/sh -c '/home/USERNAME/path/to/touchoff.sh'"  
          
        # Upon external mouse removal, enable touchpad, enable touchpad delay between  
        # keystrokes, show notification of enabling. Facilitated through executing a bash  
        # script located in ~/scripts. - 11/3/2015  
        SUBSYSTEM=="input", KERNEL=="mouse[0-9]\*", ACTION=="remove", ENV{DISPLAY}=":0", ENV{XAUTHORITY}="/home/USERNAME/.Xauthority", RUN+="/bin/sh -c '/home/USERNAME/path/to/touchon.sh'"

#SUBSYSTEM=="input", KERNEL=="mouse[0-9]\*", ACTION=="add", PROGRAM="/usr/bin/find /var/run/gdm -name USERNAME -print -quit", ENV{DISPLAY}=":0", ENV{XAUTHORITY}="$result/database", RUN+="/bin/sh -c '/usr/bin/synclient TouchpadOff=1 ; sleep 1; /bin/killall syndaemon;'"

# Power Management

* + Sleep/Suspend/Hibernate
    - Sleep: *sudo systemd suspend*
    - Poweroff: *sudo systemd* *shutdown/poweroff*
    - Hibernate: same as sleep/suspend?
      * Relies on swap partition
  + Brightness based on power source
    - <https://wiki.archlinux.org/index.php/Backlight#power-backlight>
    - *yaourt power-backlight-git*
      * *sudo nano /etc/udev/rules.d/45-power-backlight.rules* and add the following:
        + *# power-backlight udev rule*
        + *# Set screen backlight brightness dependent on power source type.*
        + *SUBSYSTEM=="power\_supply", ATTR{online}=="0", RUN+="/usr/bin/power-backlight -b"*
        + *SUBSYSTEM=="power\_supply", ATTR{online}=="1", RUN+="/usr/bin/power-backlight -a"*
      * *sudo nano /etc/default/power-backlight.conf*
        + *# power-backlight configuration file*
        + *# Screen backlight brightness: 0=low/9=max (>=5 recommended)*
        + *SCREEN\_BRIGHTNESS\_ON\_AC=3*
        + *SCREEN\_BRIGHTNESS\_ON\_BAT=2*
        + *# vim: set noet syn=conf:*
      * **Testing this 11-9-2015**
        + **power-backlight is no longer in the AUR :(**
        + Need to find an alternative?
    - **Alternative Method 11-9-2015**
      * power-backlight is no longer in the AUR so here’s what I did
      * source: <https://wiki.archlinux.org/index.php/Power_management#Using_a_script_and_an_udev_rule>
      * *sudo nano ~/scripts/AC.sh* and add the following:
        + #! /bin/bash
        + light -S 50
      * *sudo nano ~/scripts/battery.sh* and add the following:
        + #! /bin/bash
        + light -S 10
      * This requires the use of the “light-git” package (*yaourt light-git #2*)
      * Now create the udev rule:
        + *sudo nano /etc/udev/rules.d/powersave.rules*
      * SUBSYSTEM=="power\_supply", ATTR{online}=="0", RUN+="/home/kadar/scripts/battery.sh true"
      * SUBSYSTEM=="power\_supply", ATTR{online}=="1", RUN+="/home/kadar/scripts/AC.sh true"
        + I need a way to set the values.
        + had to chmod a+x scripts to make them work right.
    - **Another method 11-9-2015**
      * <https://wiki.archlinux.org/index.php/Acpid#Example_events>
    - Set Brightness at startup
      * *light -O* gets the current value, *light -I* restores it.
      * can also do *light -S <value>* to set the value, maybe useful in a startup script and/or .i3 script. need 2 different methods based on DE
    - **New Method 12/28/2015**
      * The best method, I think, is using the script I wrote. It downloads the Git repo, moves the .conf and bin files into the proper folders, and deletes the repo to save room on the drive. Also have an uninstall script (seriously, when did I come up with this shit?)
      * I tested the *light-git* package and it didn’t work for me immediately, so I’m not going to use it. Much easier to execute a .sh instead of installing a package through yaourt.
      * To install, execute *~/dotfiles/backlight/install.sh*.
        + Use *~/dotfiles/backlight/uninstall.sh* to uninstall.
  + Laptop Lid Actions – Tested 8/10/2015
    - git clone [https://https://github.com/orschiro/aclidswitch](https://https//github.com/orschiro/aclidswitch)
    - cd to that directory
    - copy files according to the directions in the README.md file
    - nano /etc/default/aclidswitch
      * change battery action to “lock” (no quotes)
    - Lid close action on A/C power does **not** seem to work. Tested it with ‘lock’ and ‘poweroff’ but no change :(
      * Not a big deal I guess since I manually lock when walking away from computer anyways?
      * Suspend on battery is the big thing.
    - now maybe look into locking the screen on wake from suspend so it’s somewhat secure since that’s the behavior I use the most often?
      * <https://wiki.archlinux.org/index.php/Pm-utils#Locking_the_screen_saver_on_hibernate_or_suspend>
      * nano 00screensaver-lock in /etc/pm/sleep.d
      * change username
      * change lock line to reflect /usr/bin/i3lock
        + didn’t seem to work :(
  + Turn off screen when locked
    - <https://wiki.archlinux.org/index.php/Acpid#Laptop_Monitor_Power_Off>
  + Power control menu/keys
    - Add to *.i3/config*
      * + # $mod+ctrl+l to open system menu  
          set $mode\_system System (l) lock, (e) logout, (s) suspend, (h) hibernate, (r) reboot, (Shift+s) shutdown  
          mode "$mode\_system" {  
           bindsym l exec --no-startup-id i3lock -i $wallpaper  
           bindsym e exec --no-startup-id i3-msg exit  
           bindsym s exec --no-startup-id systemctl suspend  
           bindsym h exec --no-startup-id sudo systemctl hibernate  
           bindsym r exec --no-startup-id sudo systemctl restart  
           bindsym Shift+s exec --no-startup-id sudo systemctl poweroff  
            
           # back to normal: Enter or Escape  
           bindsym Return mode "default"  
           bindsym Escape mode "default"  
          }  
            
          bindsym $mod+ctrl+l mode "$mode\_system"
      * *sudo systemctl* lists available functions
      * Check on wallpaper function for lock screen
  + Try out TLP?
    - <http://linrunner.de/en/tlp/docs/tlp-linux-advanced-power-management.html>
    - <https://wiki.archlinux.org/index.php/TLP>
    - **Testing 11-9-2015**
      * *sudo pacman -S tlp ethtool smartmontools x86\_energy\_perf\_policy*
      * *sudo systemctl enable tlp.service*
      * *sudo systemctl enable tlp-sleep.service*
      * *sudo systemctl disable systemd-rfkill@.service*
      * *sudo systemctl mask NetworkManager.service*
        + Don’t want network manager interfering with netctl
      * *sudo tlp start*
        + Passive tool?
      * *sudo nano /etc/default/tlp* configuration profile
  + Powertop
    - power usage analysis tool
    - *sudo pacman -S powertop*
    - *sudo powertop*

# Monitor

* + Brightness Control
    - *yaourt light-git, #2*
    - add to *.i3/config*:
      * *bindsym XF86MonBrightnessUp exec --no-startup-id light -A 5*
      * *bindsym XF86MonBrightnessDown exec --no-startup-id light -U 5*
  + Touchscreen
    - *exec –no-startup-id xinput disable “ELAN Touchscreen”*
    - **Look into blacklisting monitor driver? - 11/11/2015**
  + Multi-Monitor Setup – Testing 8/10/2015
    - * Connected HDMI port
      * *Sudo pacman –S arandr*
      * Using dmenu, ran *arandr*
      * Select ‘new layout’
        + Right-click
        + Active – HDMI 0
        + Drag it to its’ position relative to Laptop screen
      * Works flawlessly!
    - drag windows around using MOD+SHIFT+SPACE, drag them to the other window then use the keyboard shortcut again to make them behave as tiling
    - could also look into making certain windows open in certain monitors but this won’t be applicable till i have a full desktop setup.
      * only complaint is it is slow/seems delayed?
    - Monitor-only?
    - duplicate?
    - extend is default behavior, kinda. it’s more of a duplicate
    - ok so if I disconnect the hdmi cable, it moves over the windows automatically to the laptop
    - If I reconnect the cable, it’ll just present a secondary desktop but no i3bar or allow windows to be moved around
    - re-open arandr and hit “apply” and that works
    - so, automate the “apply” action of arandr when HDMI is connected? Maybe have a different bar display when this happens?
  + **Testing multi-monitor notes 11-9-2015**
    - arandr was already installed
    - launch arandr using *dmenu*
      * right-click, select HDMI-0, Active
      * Hit apply
      * And it works!!!!!!
      * Was able to adjust rotation to match monitor layout at work
    - File saved as ‘WorkScreenLayout.sh’
    - Testing further functionality
      * moved a window to external monitor, disconnected cable, window was lost.
      * changing to different desktops -- it handles desktop 1 on laptop, all others on extended
    - This can be made to be more elegant.
    - Question - how to rotate mouse on second screen so it fits with 90degree rotation?
    - Add *bindsym F8 exec arandr* to .i3/config!!!
  + **Testing xrandr CLI settings**
  + flux
    - *yaourt xflux, #1, 2*
      * launch *auto-xflux* from terminal and it’s automatic. I FUCKING LOVE IT.

# SSH/Remote Access

* + SSH not installed by default
    - *sudo pacman –S openssh*
    - *sudo systemctl enable/start sshd.service*

# Printers

# Bluetooth

* + <https://wiki.archlinux.org/index.php/Bluetooth>
  + pacman -s bluez bluez-utils
  + modprobe btusb
  + sudo systemctl start bluetooth.service
    - bluetoothctl
    - power on
    - scan on
    - devices
      * something should pop up
    - agent on
      * at this point, put device into discovery mode
    - pair <MAC>
      * enter pin if necessary
    - connect <MAC>
    - pair <MAC>
    - it worked at first, and now it’s just spamming “connected yes/connected no” when i go to use the device.
    - tried this with bluetooth keyboard. seems janky.
  + blueberry is a graphical tool with just a bluetooth toggle
  + rfkill list shows radio-based interfaces (wlan and bluetooth)

# Webcam & Microphone

* + Webcam
    - If website test is accurate (when conducted?) then webcam works
    - **Need to test using Google Hangouts, OoVoo, Skype, Tango, etc**
    - **Testing 11-9-2015**
      * According to <https://www.onlinemictest.com/>
      * webcam & mic work fine. Didn’t have to do anything in alsamixer to change it.
  + Microphone – tested 8/10/2015
    - All I did to get this working was use ‘alsamixer’ in a terminal. Pressed F4 to select ‘capture’ and set the volume to 18, which correlates to a 0.00 dB gain. Enabled the channel (it says CAPTURE) by pressing space. Tested in Google Hangouts and it seems to have worked.
    - Unmuted from within *pavucontrol* program, seems to work?

# SSD

* + Trim?
    - *sudo fstrim -v /*
      * Set up a cron job?
  + Other optimizations?

# Arch Tweaks

* + Preload
    - *yaourt preload, #9 --- modified 11-6-2015 on native install10*
    - *Sudo systemctl enable/start preload.service*
    - Passive service that pre-loads frequently used programs
  + System log messages
    - *sudo pacman –S logger*
    - *logger <option> <message>*
    - so for instance,
      * *logger test*
    - then use journalctl and it’ll show up in the log. good for keeping notes as I go since it’s timestamped, and then I can just cat journalctl > log.txt and back it up to git?
    - or maybe an easier way is to create a notes.txt file and figure out how to append to it via CLI and just keep syncing that
      * *nano notes.txt*, and then I want to be able to just <some command> <notes.txt> and have the command add text to the bottom of the file (append), along with date/timestamp!!
  + Desktop notifications
    - Method 1: Using GNOME/Unity Notification server (notify-osd)
      * *sudo pacman -Sy libnotify notify-osd*
      * Then use the same commands as in Ubuntu/Unity with “*notify-send “Title” “content”*” from terminal.
      * Need to update the library so timeout value actually works.
      * Icons: <http://standards.freedesktop.org/icon-naming-spec/icon-naming-spec-latest.html>
      * **Testing this update 11-9-2015**
        + Cannot find updated info on this!!!
    - Method 2: Using dunst
      * pac dunst
      * <https://github.com/knopwob/dunst>
      * notify-send -t 0 -u normal “Touchpad Toggled” added to my .i3/config file to notify of touchpad toggle status
        + **11-9-2015**

This shows a pop up dialog box, not ideal.

* + Bash completion
    - *sudo pacman –S bash-completion*
    - Add to *.bashrc*
      * If [ -f /etc/bash\_completion ]; then
        + ./etc/bash\_completion
      * fi
  + Bash aliases
    - Add to .bashrc
      * if [ -f ~/.bash\_aliases ]; then
        + . ~/.bash\_aliases
      * fi
  + LXDM Background
    - Since the default one is ugly, change it with the following:
    - *nano /etc/lxdm/lxdm.conf*
    - look for the line bg=XXXXXXX, might be commented out.
    - uncomment it and add the path to the .jpg or .png of your choice
    - *sudo lxdm-config* - GUI!!!!!!!!!!
    - **Testing 11-9-2015**
      * used *sudo lxdm-config* to set wallpaper.
      * Doesn’t seem to like the 1920x1080 wallpapers…
    - ok Better way to handle this **11/9/2015**
      * Download a theme here: <http://allanmcrae.com/2011/08/simple-arch-linux-theme-for-lxdm/>
        + CD to downloads folder
        + *tar -xzvf \*.tar.gz*
        + *mkdir arch*
        + *mv \* arch/*
        + *sudo mv -v arch /etc/usr/share/lxdm/themes/.*
        + *sudo nano /etc/lxdm/lxdm.conf*

Comment out existing “industrial” theme

add in “arch” theme

* + - * + exit out of i3. Profit.
    - *sudo yaourt lxdm-themes #2*

# i3 Tweaks & Configurations

* + Fonts
    - <http://fortawesome.github.io/Font-Awesome/cheatsheet/>
    - *yaourt ttf-font-awesome*
    - in the .i3/config file, add the following:
      * font pango: M+ 1m, Cousine, FontAwesome, Ionicons, 8
        + this seems to load some icons, I guess? It’s hard to tell
        + I still need help getting icons to render. It’s showing up as boxes. This is frustrating, there is no fucking documentation out there!
    - xterm (default i3 terminal) doesn’t support unicode
    - use rxvt-unicode
    - font-terminus and cantarella
    - still need to figure out icons, honestly. I can’t figure out which icon pack i have installed or which one is best to use. time to start uninstalling crap…….
    - 8-10-2015 - so it seems in i3 fonts are dependent on the application using them. so for instance overall i3 settings are found in .i3/config and these set the fonts for the bar also, which are defined at the top of the file.
      * font icons are defined in this file and then used in the i3status.conf file.
      * in my experience the icons show as boxes but render just fine in the actual bar itself. Same for the github documentation, the icons are rendered by the browser fine, but don’t render in urxvt and xterm.
      * Worry about icons in bar later - that’s a minor change.
    - **12/29/2015**
      * i3bar files already have proper icons in them (wifi, disk icon, etc)
      * *yaourt ttf-font-awesome* for the package
      * in the .i3 config file:
        + the first font section determines if icons work, so use font FontAwesome, 8
        + The second font section, the size is determined here.
  + Status bar – Default - *i3status.conf* from within i3
    - Battery Display
      * Change battery0 to battery1
      * This information was gleaned from /sys/class/power\_supply
    - Add *i3status.conf* file to bottom of this document and link here
    - Questions:
      * Display uptime?
      * Conky?
  + Other Status bars
    - i3bar.py
      * <http://dotshare.it/dots/443/>
      * copy and paste the file to i3bar.py
      * put this file wherever
      * in the *.i3/config* file, add the following to a bar:
        + *status\_command python2 /path/to/i3bar.py*
        + mod + shift + R to reload and it just freaking works!
        + look into modifying this further. I like the colors and font.
    - i3blocks
      * *yaourt i3blocks, #1*
      * <https://github.com/vivien/i3blocks> - author
        + <https://github.com/raphapr/dotfiles/blob/master/home/.i3blocks.conf> - inspiration
      * add optional packages, sensors playerctl etc
      * <https://github.com/vivien/i3blocks/blob/master/README.md>
      * add *status\_command i3blocks* to *.i3/config*
    - Multiple bars
    - Clickable buttons
    - Icons in bar
  + Solarized Theme
    - I wrote a guide somewhere. Need to find it…
  + Wallpaper
    - *sudo pacman -S feh*
    - To set a background, download a picture and save it to the desired location, like ~/Pictures
    - in the .i3/config file, add:
      * *set $wallpaper /path/to/file*
      * *exec --no-startup-id feh --bg-scale $wallpaper*
  + Lock Screen Wallpaper
    - image has to be in .png format
    - in the .i3/config file, add the following:
      * *bindsym Mod1+ctrl+l exec i3lock -i /path/to/.png*
      * **Tested working 11-9-2015**
  + Print Screen button
    - *bindsym Print exec --no-startup-id scrot '%Y%m%d-%H:%M:%S\_$wx$h\_scrot.png' -e 'mv $f /home/kadar/Pictures/screenshots/'*
  + Suppress messages in yaourt
    - <http://kissmyarch.blogspot.com/2012/05/two-simple-yaourt-tips.html>
    - “Edit PKGBUILD and edit packname.install” messages are too frequent in yaourt
    - To suppress them, do the following:
      * *cp /etc/yaourtrc ~/.yaourtrc*
      * *nano .yaourtrc*
        + Set BUILD\_NOCONFIRM = 1
        + Set EDITFILES = 0
        + uncomment where necessary
  + Terminal
    - use rxvt-unicode (package) and urxvt (executable) for terminal with unicode support
    - i3-sensible-terminal chooses this by default automatically
    - created a .Xdefaults file in ~ and pasted this: <https://github.com/JustinSinc/dotfiles/blob/master/.Xdefaults>
      * initial thoughts - font is way too big, would be nice to have the window start out smaller, transparency is on point, try a different font maybe?
    - learn how to make changes to the .Xdefaults file
    - ctrl + shift to enter “icon” mode for urxvt
      * still having trouble with icons actually showing up
    - so it seems like inserting the box shows up as a box in the terminal but it actually works in the bar?
      * just tested this. cute little tux penguin in my bar!
      * trying something on github…...if I copy/paste my config on github will Chrome render the unicode properly?
    - rxvt-unicode-256 thing - shows more colors in terminal
    - gedit - unicode characters with ctrl + shift + u, an underlined U will show, then enter the code.
  + i3-gaps – Tested 8/10/2015
    - <https://github.com/Airblader/i3>
    - Test later
  + Network Manager output in i3status – Testing 8/10/2015
    - <https://gist.github.com/breunigs/3259332>
    - I don’t think it’s possible to use slurm and have it’s output piped to the i3status bar but this is a workaround.

# i3 Applications

* + Teamviewer
    - enable the multilib repository in /etc/pacman.conf
      * uncomment both lines or it won’t work
      * this is relevant when I get a bunch of errors about missing libraries (for instance, when installing teamviewer)
    - *yaourt teamviewer*, #3
    - *sudo systemctl enable teamviewerd*
    - *sudo teamviewer --daemon start*
    - start using dmenu
  + Dropbox
    - *yaourt dropbox*, #12
    - Need a new icon
  + Hexchat
    - Add snoonet and freenode as favorites
    - display only favorite servers
    - Edit snoonet
      * choose ‘NickServer (/MSG NickServ + password) as login method
      * add password in the password box
    - Theme:
      * download themes from <https://hexchat.github.io/themes.html> (.hct archive)
      * To install the theme with hexchat closed:
        + pacman -S unzip
        + mv \*.hct ~/.config/hexchat
        + unzip \*.hct
        + replace any duplicates
        + restart hexchat
    - Question:
      * Open friends list conversation dialog box?
      * Keyboard shortcut?
  + Spotify
    - *yaourt spotify, #29*
  + CLI Apps
    - slurm - nice CLI tool for showing network stats
      * yaourt #2 or 3
        + 2 is good
        + slurm -z -d 1 -l -L -i wlp2s0 or enp1s0
    - glances - great CLI tool for system overview
      * yaourt 1
    - htop - enhanced version of top (equiv to windows task manager)
      * yaourt 1
    - feh - CLI-based image viewer, used to set background for i3
    - weechat - CLI IRC chat tool
      * pacman -S weechat
        + to create a channel profile: /server add <profile name> <server.address>/port
        + To join a channel (profile): /connect <profilename>
    - colors script -
      * see bottom of page: <http://tldp.org/HOWTO/Bash-Prompt-HOWTO/x329.html>
        + add to colors.sh or whatever in directory of choice
      * yaourt colortest #1 or #2
        + c256 is command to execute it in the terminal
        + *color\_matrix* in terminal to run?
        + for vim\_colortest, command is *colortest*
    - cmus - CLI-based music player
      * <https://github.com/cmus/cmus/blob/master/Doc/cmus-tutorial.txt>
      * not gonna rewrite the manual here
    - irssi
      * terminal-based IRC client, similar to weechat
    - figlet/toilet
      * yaourt figlet and toilet
      * figlet was yaourt 1 2
      * toilet was yaourt 2 3
      * no real purpose but to make cool ascii art when posting to /r/unixporn
  + Virtualbox – installing on Arch
    - <https://wiki.archlinux.org/index.php/VirtualBox>
    - followed the wiki and only had the do the following:
    - *pac virtualbox virtualbox-guest-iso*
    - *yaourt virtualbox-ext-oracle*
    - *nano /etc/modules-load.d/virtualbox.conf*
      * add ‘vboxdrv, vboxnetadp, vboxnetflt, vboxpci’ on separate lines
    - *gpasswd -a $USER vboxusers*
    - That’s it! virtualbox from dmenu launches the GUI!
  + Installing Arch with VMWare
    - To install vmware guest tools:
      * reference: <https://wiki.archlinux.org/index.php/VMware/Installing_Arch_as_a_guest>
      * *sudo pacman -Syu*
      * *sudo pacman -S base-devel net-tools linux-header*
      * *sudo reboot*
      * *sudo su*
      * *# fo x in {0..6}; do mkdir -p /etc/init.d/rc${x}.d; done*
      * *mount /dev/cdrom /mnt*
        + If there is an error about no cd, select ‘Install VMWare Tools’ from the VM menu
      * *tar xf /mnt/VM<tab> -C /root*
      * Select all defaults (using enter)
      * I initially had errors doing this method, but I had tried installing open-vm-tools first before doing this. I restored a snapshot, tried this method and it worked perfectly.
        + after installing I’m presented with instructions to do the following:

*manually start /usr/bin/vmware-user*

*log out and log back into desktop*

*restart x session*

* + - * + Next, do the following:

*sudo systemctl reboot*

*/etc/init.d/rc6.d/K99vmware-tools start*

* + - * Honestly not sure what all this does, but I’m still trying to get resolution to work in the guest VM. Not a huge deal.
    - Time Sync:
      * *sudo vmware-toolbox-cmd timesync enable*
      * seems to have persisted after reboot
    - Github script for vmware tools
      * *sudo pacman -Sy git wget unzip*
        + Meh, too many errors. I’ll do this later.

# Fun stuff

* + Emulators
    - Zsnes
      * *Sudo pacman –S zsnes lib32-mesa-vdpau lib32-libpulse lib32-alsa-plugins*
      * Sound doesn’t work
      * Graphics/speed are flawless, though
      * **Doing this on 12/29/2015**.
        + enable multilib in */etc/pacman.conf*
        + *pacman -Sy* to update
        + *sudo pacman -S zsnes* and it installs dependencies

# Further investigation

* + To investigate further:
    - mopidy - mpd backend that works with google play music, spotify & soundcloud
    - unclutter - autohide mouse cursor
    - udiskie - device automounting
    - autocutsel - clipboard synchroniation
    - scrollback - cross platform chat? <https://github.com/scrollback/scrollback>
    - Permanent numlock enable/enable on boot
    - Program icons for running or docked programs in i3status bar
      * Launchers?
      * clickable?
    - i3lock alternative
    - fuzzy tab completion
    - Plymouth --- prettier splash screen for bootup – no more cryptic text!
    - Question – what is the difference between ./something and sh blah.sh?
    - Xresources
    - External monitor - figure out how to bind keys to control either internal or external audio.
    - external monitor - auto-change to external monitor as primary upon HDMI cable plug in. as well as change sound.
    - systemd-firstboot

# Troubleshooting

* + **Error**: *locale error with exit code 1 on i3status bar*
    - Cause: locale was not properly set during setup/install
    - *Solution*
      * *Sudo nano /etc/locale.gen*
      * Uncomment en\_US-UTF-8
      * *Sudo locale-gen*
      * Inline reload i3 (*mod + shift + r*)