# Establish a Ubuntu 18.04 Server

## Ubuntu Server

### ubuntu server 18.04 distro

## Change Sources

/etc/apt

```
sudo cp ./sources.list ./sources.list.backup
```

/etc/apt/sources.list

```
# tsinghua
deb https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic main restricted universe multiverse
deb https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-updates main restricted universe multiverse
deb https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-backports main restricted universe multiverse
deb https://mirrors.tuna.tsinghua.edu.cn/ubuntu/ bionic-security main restricted universe multiverse

# ustc
deb https://mirrors.ustc.edu.cn/ubuntu/ bionic main restricted universe multiverse
deb https://mirrors.ustc.edu.cn/ubuntu/ bionic-updates main restricted universe multiverse
deb https://mirrors.ustc.edu.cn/ubuntu/ bionic-backports main restricted universe multiverse
deb https://mirrors.ustc.edu.cn/ubuntu/ bionic-security main restricted universe multiverse
```

update

```
sudo apt-get update
sudo apt-get upgrade
```

## Make Usr Dirs

~/

```
mkdir usrname
```

~/usrname

```
mkdir Apps
mkdir Documents
mkdir Downloads
mkdir Workplaces
```

### Install Necessary pkgs

```
sudo apt-get install git tmux openssh-server mosh python-dev python3-dev libncurses5-dev python-pip python3-pip build-essential cmake perl-tk wget zip unzip python-m2crypto libsodium23 tsocks
```

### Download Installer

- **Oracle JDK 8**

- **TexLive 2019**

- **Anaconda mirror from tsinghua**

- **Vim**

  ~/usrname/Downloads

  ```
  git clone https://github.com/vim/vim.git
  ```

- **Shadowsocksr**

  **doc**

  ~/usrname/Apps

  ```
  curl https://github.com/shadowsocksrr/shadowsocksr/archive/3.2.2.zip
  ```

### Config Proxies

- git proxy

  ```
  git config --global user.name "me"
  ```

  ~/.gitconfig

```
[user]
    name = usr
    email = usr@xxx.com
[push]
    default = simple
[http]
    proxy = socks5://127.0.0.1:1080
[https]
    proxy = socks5://127.0.0.1:1080
```

- curl proxy

**reference**

~/.bashrc and ~/.zshrc in future

```
cpp  # set http socks proxy (local DNS)export http_proxy=socks5://127.0.0.1:1080
 # set https socks proxy (local DNS)export https_proxy=socks5://127.0.0.1:1080
```

update

```
cpp  source ~/.bashrc
```

- proxy software (ssr)

  ~/usrname/Apps/shadowsocksr

  ```
  bash initcfg.sh
  ```

  ~/usrname/Apps/shadowsocksr/user-config.json

  ```
  {
      "server": "remote.server",
      "server_ipv6": "::",
      "server_port": remote.server.port,
      "local_address": "127.0.0.1",
      "local_port": 1080,

      "password": "m",
      "method": "aes-128-ctr",
      "protocol": "auth_chain_a",
      "protocol_param": "",
      "obfs": "tls1.2_ticket_auth",
      "obfs_param": "",
      "speed_limit_per_con": 0,
      "speed_limit_per_user": 0,

      "additional_ports" : {}, // only works under multi-user mode
      "additional_ports_only" : false, // only works under multi-user mode
  ```

```
    "timeout": 120,
    "udp_timeout": 60,
    "dns_ipv6": false,
    "connect_verbose_info": 0,
    "redirect": "",
    "fast_open": false
}
```

~/usrname/Apps/shadowsocksr/shadowsocks

```
sudo python ./local.py -d start
```

### Install pkgs

- Open JDK 8, Open JDK 11 and Oraclo JDK 8

  ```
  sudo apt-get install openjdk-8-jdk openjdk-11-jdk
  ```

  ~/usrname/Downloads

  ```
  sudo tar xvf jdk-8u241-linux-x64.tar.gz --directory /usr/lib/jvm/
  ```

- Set Oraclo JDK PATH

  ~/.bashrc and ~/.zshrc in future

  ```
  # Oracle Java JDK
  export JAVA_HOME=/usr/lib/jvm/jdk1.8.0_241
  export JRE_HOME=${JAVA_HOME}/jre
  export CLASSPATH=.:${JAVA_HOME}/lib:${JRE_HOME}/lib
  export PATH=${JAVA_HOME}/bin:$PATH
  ```

  update

  ```
  source ~/.bashrc
  ```

- Set alias for Javas and Sys Pythons

  - Java
  - jdk1.8.0_241

    ```
    sudo update-alternatives --install /usr/bin/java java /usr/lib/jvm/jdk1.8.0_241/bin/java 1200
    sudo update-alternatives --install /usr/bin/javac javac /usr/lib/jvm/jdk1.8.0_241/bin/javac 1200
    sudo update-alternatives --install /usr/bin/javadoc javadoc /usr/lib/jvm/jdk1.8.0_241/bin/javadoc 1200
    ```

```
sudo update-alternatives --install /usr/bin/javap javap /usr/lib/jvm/jdk1.8.0_241/bin/javap 1200
sudo update-alternatives --install /usr/bin/javah javah /usr/lib/jvm/jdk1.8.0_241/bin/javah 1200
sudo update-alternatives --install /usr/bin/javafxpackager javafxpackager /usr/lib/jvm/jdk1.8.0_241/bin/javafxpackager 1200
sudo update-alternatives --install /usr/bin/javapackager javapackager /usr/lib/jvm/jdk1.8.0_241/bin/javapackager 1200
sudo update-alternatives --install /usr/bin/javaws javaws /usr/lib/jvm/jdk1.8.0_241/bin/javaws 1200
sudo update-alternatives --install /usr/bin/java-rmi.cgi java-rmi.cgi /usr/lib/jvm/jdk1.8.0_241/bin/java-rmi.cgi 1200
```

- java-11-openjdk-amd64

```
sudo update-alternatives --install /usr/bin/java java /usr/lib/jvm/java-11-openjdk-amd64/bin/java 1111
sudo update-alternatives --install /usr/bin/javac javac /usr/lib/jvm/java-11-openjdk-amd64/bin/javac 1111
sudo update-alternatives --install /usr/bin/javadoc javadoc /usr/lib/jvm/java-11-openjdk-amd64/bin/javadoc 1111
sudo update-alternatives --install /usr/bin/javap javap /usr/lib/jvm/java-11-openjdk-amd64/bin/javap 1111
```

- java-8-openjdk-amd64

```
sudo update-alternatives --install /usr/bin/java java /usr/lib/jvm/java-8-openjdk-amd64/bin/java 1081
sudo update-alternatives --install /usr/bin/javac javac /usr/lib/jvm/java-8-openjdk-amd64/bin/javac 1081
sudo update-alternatives --install /usr/bin/javadoc javadoc /usr/lib/jvm/java-8-openjdk-amd64/bin/javadoc 1081
sudo update-alternatives --install /usr/bin/javap javap /usr/lib/jvm/java-8-openjdk-amd64/bin/javap 1081
sudo update-alternatives --install /usr/bin/javah javah /usr/lib/jvm/java-8-openjdk-amd64/bin/javah 1081
sudo update-alternatives --install /usr/bin/java-rmi.cgi java-rmi.cgi /usr/lib/jvm/java-8-openjdk-amd64/bin/java-rmi.cgi 1081
```

- Sys Python and Python3

```
sudo update-alternatives --install /usr/bin/python python /usr/bin/python2.7 10
sudo update-alternatives --install /usr/bin/python python /usr/bin/python3.6 40
sudo update-alternatives --install /usr/bin/python3 python3 /usr/bin/python3.6 40
```

- Texlive 2019

  remove old Texlive 2019

  ```
  rm -rf /usr/local/texlive/2019
  rm -rf ~/.texlive2019
  ```

  ~/usrname/Downloads

  ```
  tar xvf install-tl-unx.tar.gz
  ```

  ~/usrname/Downloads/install-tl-unx

  ```
  sudo perl install-tl

  [... messages omitted ...]

  Enter command: i

  [... when done, see below for post-install ...]
  ```

  ~/.bashrc , ~/.profile and ~/.zshrc in future

  ```
  # Texlive 2019
  export MANPATH=${MANPATH}:/usr/local/texlive/2019/texmf-dist/doc/man
  export INFOPATH=${INFOPATH}:/usr/local/texlive/2019/texmf-dist/doc/info
  export PATH=${PATH}:/usr/local/texlive/2019/bin/x86_64-linux
  ```

  update

  ```
  source ~/.bashrc
  source ~/.profile
  # source ~/.zshrc
  ```

  add Tex Fonts to Sys

  ```
  sudo cp /usr/local/texlive/2019/texmf-var/fonts/conf/texlive-fontconfig.conf /etc/fonts/conf.d/09-texlive.conf

  sudo fc-cache -fsv
  ```

  **Tsinghua CTAN source**

  ```
  tlmgr option repository https://mirrors.tuna.tsinghua.edu.cn/CTAN/systems/texlive/tlnet
  ```

- Pandoc

  ```
  sudo apt-get install pandoc
  ```

- Vim 8+

  ~/usrname/Downloads/vim/src

  ```
  make distclean

  ./configure --with-features=huge --enable-rubyinterp --enable-pythoninterp --enable-python3interp --enable-luainterp --enable-perlinterp --enable-multibyte --enable-cscope --with-python-config-dir=/usr/lib/python2.7/config-x86_64-linux-gnu/ --with-python-config-dir=/usr/lib/python3.6/config-3.6m-x86_64-linux-gnu/

  sudo make

  sudo make install
  ```

- Install Vundle, etc.

  **Vundle**

  make dirs

  ```
  mkdir ~/.vim
  mkdir ~/.vim/bundle
  ```

  clone Vundle

  ```
  git clone https://github.com/VundleVim/Vundle.vim.git ~/.vim/bundle/Vundle.vim
  ```

  make ~/.vimrc file

  ```
  vim ~/.vimrc
  ```

  after editing config file(~/.vimrc), install vim plugins in vim

  ```
  :PluginInstall
  ```

- Build YouCompleteMe

  **YouCompleteMe**

  ~/.vim/bundle/YouCompleteMe

  ```
  sudo python install.py --clangd-completer --java-completer

  # or we use proxy
  # sudo tsocks python install.py --clangd-completer --java-completer
  ```

> **Attention**:
>
> python version is python 3.6

- Vim Config file

  ~/.vimrc

```
" ~/.vimrc
" author: Ruohong Jiao
" github: github.jiaoruohong

" Vundle Settings
" ----------------------------------------
" Brief help
" :PluginList       - lists configured plugins
" :PluginInstall    - installs plugins; append `!` to update or just :PluginUpdate
" :PluginSearch foo - searches for foo; append `!` to refresh local cache
" :PluginClean      - confirms removal of unused plugins; append `!` to auto-approve removal
"
" see :h vundle for more details or wiki for FAQ

set nocompatible
filetype off

set rtp+=~/.vim/bundle/Vundle.vim
let vpath='~/.vim/bundle'

call vundle#begin(vpath)
Plugin 'VundleVim/Vundle.vim'

" Files management
" ----------------------------------------
Plugin 'scrooloose/nerdtree'
Plugin 'jistr/vim-nerdtree-tabs'

" Appearance
" ----------------------------------------
Plugin 'vim-airline/vim-airline'

" Coding
" ----------------------------------------
Plugin 'tmhedberg/SimpylFold'
Plugin 'vim-scripts/indentpython.vim'
Plugin 'Valloric/YouCompleteMe'
Plugin 'ctrlpvim/ctrlp.vim'
Plugin 'tpope/vim-fugitive'
Plugin 'fholgado/minibufexpl.vim'
Plugin 'majutsushi/tagbar'
Plugin 'tpope/vim-sensible'
Plugin 'scrooloose/syntastic'
Plugin 'sheerun/vim-polyglot'
Plugin 'SirVer/ultisnips'
Plugin 'honza/vim-snippets'
Plugin 'nvie/vim-flake8'

" LaTeX
" ----------------------------------------
Plugin 'lervag/vimtex'

" Markdown
" ----------------------------------------
Plugin 'junegunn/goyo.vim'
Plugin 'junegunn/limelight.vim'
Plugin 'plasticboy/vim-markdown'
Plugin 'godlygeek/tabular'
Plugin 'tpope/vim-surround'

" Themes
" ----------------------------------------
Plugin 'arcticicestudio/nord-vim'
Plugin 'hzchirs/vim-material'
Plugin 'dracula/vim', { 'name': 'dracula' }
Plugin 'cormacrelf/vim-colors-github'
Plugin 'kristijanhusak/vim-hybrid-material'
Plugin 'morhetz/gruvbox'

call vundle#end()

filetype plugin indent on

" Colors
" ----------------------------------------
if (has("termguicolors"))
    let &t_8f = "\<Esc>[38;2;%lu;%lu;%lum"
    let &t_8b = "\<Esc>[48;2;%lu;%lu;%lum"
    set termguicolors
else
    set t_Co=256
endif

" Base
" ----------------------------------------
syntax enable
syntax on
set number
set showmatch
set smartindent
set tabstop=4
set shiftwidth=4
set autoindent
set ai!
set noerrorbells
set colorcolumn=80,100
set scrolloff=3
" Highlight search results
" ----------------------------------------
set hlsearch
set incsearch

" ----------------------------------------
set ruler
" UTF-8 Support
" ----------------------------------------
set encoding=utf-8
" split directions
" ----------------------------------------
set splitbelow
set splitright
" Enable folding
" ----------------------------------------
set foldmethod=indent
set foldlevel=99
" System Clipboard
" ----------------------------------------
set clipboard=unnamedplus
set mouse=v
" split navigations
" ----------------------------------------
nnoremap <C-J> <C-W><C-J>
nnoremap <C-K> <C-W><C-K>
nnoremap <C-L> <C-W><C-L>
nnoremap <C-H> <C-W><C-H>
" Enable folding with the spacebar
" ----------------------------------------
nnoremap <space> za


" NERDTree Settings
" ----------------------------------------
map <C-b> :NERDTreeToggle<CR>
map <C-n> :tabnew<CR>
map <S-Right> :tabn<CR>
map <S-Left> :tabp<CR>

" SimpyFold settings
" ----------------------------------------
let g:SimpylFold_docstring_preview=1

" Tagbar settings
" -----------------------------------------
map <F8> :TagbarToggle<CR>

" UltiSnip settings
" -----------------------------------------
"set runtimepath+=/usr/share/vim/my-snippets/
"let g:UltiSnipsSnippetsDir='/usr/share/vim/my-snippets/'
"let g:UltiSnipsSnippetDirectories=["my-snippets"]
let g:UltiSnipsEditSplit='vertical'
let g:UltiSnipsExpandTrigger="<c-e>"
let g:UltiSnipsJumpForwardTrigger="<c-f>"
let g:UltiSnipsJumpBackwardTrigger="<c-b>"

" YouCompleteMe settings
" -----------------------------------------
" - Let YCM read tags from Ctags file
let g:ycm_collect_identifiers_from_tags_files = 1
" - Default 1, just ensure
let g:ycm_use_ultisnips_completer = 1
" - Completion for programming language's keyword
let g:ycm_seed_identifiers_with_syntax = 1
" - Completion in comments
let g:ycm_complete_in_comments = 1
" - Completion in string
let g:ycm_complete_in_strings = 1

let g:ycm_key_list_select_completion = ['<C-j>', '<Down>']
let g:ycm_key_list_previous_completion = ['<C-k>', '<Up>']

" - Goto definition with F3
map <F3> :YcmCompleter GoTo<CR>

" Python Settings
"let g:ycm_server_python_interpreter='/usr/bin/python'
"let g:ycm_python_interpreter_path = '~/anaconda3/envs/py36/bin/python'
"let g:ycm_python_sys_path = ['~/anaconda3/envs/py36/lib/python3.6/site-packages']
""let g:ycm_extra_conf_vim_data = [
""  \  'g:ycm_python_interpreter_path',
""  \  'g:ycm_python_sys_path'
""  \]
""let g:ycm_global_ycm_extra_conf = '~/global_extra_conf.py'
"let g:ycm_global_ycm_extra_conf = '~/.ycm_extra_conf.py'

" Vim-Flake8
" -----------------------------------------
autocmd BufWritePost *.py call Flake8()

" VimTex
" -----------------------------------------
```

```
let g:tex_flavor='latex'
let g:vimtex_quickfix_mode=0
set conceallevel=1
let g:tex_conceal='abdmg'
let g:vimtex_complete_bib = { 'simple': 1 }

" Vim-Polyglot
" ----------------------------------------
let g:polyglot_disabled = ['latex']

" Goyo
" ----------------------------------------
" default: 80
let g:goyo_width = 80
" default: 85%
let g:goyo_height = 0.85
" default: 0
let g:goyo_linenr = 0

" Limelight
" ----------------------------------------
" Color name (:help cterm-colors) or ANSI code
let g:limelight_conceal_ctermfg = 'gray'
let g:limelight_conceal_ctermfg = 240
" Color name (:help gui-colors) or RGB color
let g:limelight_conceal_guifg = 'DarkGray'
let g:limelight_conceal_guifg = '#777777'
" Default: 0.5
let g:limelight_default_coefficient = 0.7
" Number of preceding/following paragraphs to include (default: 0)
let g:limelight_paragraph_span = 1
" Beginning/end of paragraph
"   When there's no empty line between the paragraphs
"   and each paragraph starts with indentation
let g:limelight_bop = '^\s'
let g:limelight_eop = '\ze\n^\s'
" Highlighting priority (default: 10)
"   Set it to -1 not to overrule hlsearch
let g:limelight_priority = -1
" Using Limelight when Goyo is started
autocmd! User GoyoEnter Limelight
autocmd! User GoyoLeave Limelight!

" Theme
" ----------------------------------------
"set background=[dark,light]
"colorschem X
"let g:airline_theme='X'
"highlight ColorColumn ctermbg=0 guibg=black

" Nord-Vim
" ----------------------------------------
" https://github.com/arcticicestudio/nord-vim
colorschem nord
let g:lightline = { 'colorscheme': 'nord' }

" Vim-Material
" ----------------------------------------
" https://github.com/hzchirs/vim-material
" Dark
"set background=dark
"colorscheme vim-material
"let g:airline_theme='material'
"let g:lightline = { 'colorscheme': 'vim-material' }

" Palenight
"let g:material_style='palenight'
"set background=dark
"colorscheme vim-material
"let g:airline_theme='material'
"let g:lightline = { 'colorscheme': 'vim-material' }

" Oceanic
"let g:material_style='oceanic'
"set background=dark
"colorscheme vim-material
"let g:airline_theme='material'
"let g:lightline = { 'colorscheme': 'vim-material' }

" Light
"set background=light
"colorscheme vim-material
"let g:airline_theme='material'
"let g:lightline = { 'colorscheme': 'vim-material' }

" Dracula
" ----------------------------------------
" https://github.com/dracula/vim
"colorschem dracula
"let g:lightline = { 'colorscheme': 'dracula' }

" Vim-Colors-Github
" ----------------------------------------
" https://github.com/cormacrelf/vim-colors-github
" Github Rust
"let g:github_colors_soft = 0
"let g:github_colors_block_diffmark = 0
"colorscheme github
"let g:airline_theme = "github"
"let g:lightline = { 'colorscheme': 'github' }

" Github C
```

```
"let g:github_colors_soft = 0
"let g:github_colors_block_diffmark = 1
"colorscheme github
"let g:airline_theme = "github"
"let g:lightline = { 'colorscheme': 'github' }

" Github Soft
"let g:github_colors_soft = 1
"let g:github_colors_block_diffmark = 0
"colorscheme github
"let g:airline_theme = "github"
"let g:lightline = { 'colorscheme': 'github' }

" Github Diff
"let g:github_colors_soft = 1
"let g:github_colors_block_diffmark = 1
"colorscheme github
"let g:airline_theme = "github"
"let g:lightline = { 'colorscheme': 'github' }

" Vim-Hybrid-Material
" ----------------------------------------
" https://github.com/kristijanhusak/vim-hybrid-material
"Options:
"If you would like some of the code to be bolded, like functions and language controls, add this option to vimrc:
"let g:enable_bold_font = 1
"If you want comments to be in italic, also add this:
"let g:enable_italic_font = 1
"To use transparent background, add this option:
"let g:hybrid_transparent_background = 1

"let g:enable_bold_font = 1
"let g:enable_italic_font = 1
"let g:hybrid_transparent_background = 1

" Hybrid Material
"set background=dark
"colorscheme hybrid_material
"let g:airline_theme = "dracula"
"let g:lightline = { 'colorscheme': 'hybrid_material' }

" Hybrid Reverse
"set background=dark
"colorscheme hybrid_reverse
"let g:airline_theme = "dracula"
"let g:lightline = { 'colorscheme': 'hybrid_reverse' }

" Hybrid Material Light
"set background=light
"colorscheme hybrid_material
```

```
"let g:airline_theme = "dracula"
"let g:lightline = { 'colorscheme': 'hybrid_material' }

" Gruvbox
" ----------------------------------------
" https://github.com/morhetz/gruvbox
" https://github.com/morhetz/gruvbox/wiki/Configuration#ggruvbox_contrast_dark
" Gruvbox Dark
"set background=dark
"colorscheme gruvbox
"let g:airline_theme = "gruvbox"
"let g:lightline = { 'colorscheme': 'gruvbox' }

" Gruvbox Light
"set background=light
"colorscheme gruvbox
"let g:airline_theme = "gruvbox"
"let g:lightline = { 'colorscheme': 'gruvbox' }
```

- Tmux

**Tmux Plugin Manager**

```
mkdir ~/.tmux
mkdir ~/.tmux/plugins
```

```
git clone https://github.com/tmux-plugins/tpm ~/.tmux/plugins/tpm
```

Tmux Config file

~/.tmux.conf

```
# ~/.tmux.conf
# author: Ruohong Jiao
# github: github.jiaoruohong

# Base
# ----------------------------------------
# "C-" stands for Ctrl
# "M-" stands for Alt
# "S-" stands for Shift
set -g history-limit 10000

# colors
# ----------------------------------------
set -g default-terminal "screen-256color"
set -ga terminal-overrides ",*256col*:Tc"

# split panes using / and -
# ----------------------------------------
```

```
bind / split-window -h
bind - split-window -v
unbind '"'
unbind %

# use r to quickly reload tmux settings
# ~/.tmux.conf
# ----------------------------------------
unbind r
bind r \
    source-file ~/.tmux.conf \;\
        display 'Reloading tmux config'

# switch panes using Alt-(kjhl) without prefix
# ----------------------------------------
bind -n M-k select-pane -U
bind -n M-j select-pane -D
bind -n M-h select-pane -L
bind -n M-l select-pane -R

# resize panes using Shift-(udlr) without prefix
# ----------------------------------------
bind -n S-Up resize-pane -U 1
bind -n S-Down resize-pane -D 1
bind -n S-Left resize-pane -L 1
bind -n S-Right resize-pane -R 1

# don't rename windows automatically
# ----------------------------------------
#set-option -g allow-rename off

# allow rename windows automatically
# ----------------------------------------
set-window-option -g automatic-rename on
set-option -g set-titles on

# Theme
# ----------------------------------------

# Ruohong.Jiao Tmux Theme
# ----------------------------------------
# inspired by
# https://cassidy.codes/blog/2019-08-03-tmux-colour-theme/
# http://vtechify.com/customizing-tmux-conf/

# pane border
set -g pane-border-style "fg=#5e5656 bg=#000000"
set -g pane-active-border-style "fg=#29a8ab bg=#000000"

# message text
set -g message-style fg="#f6cd61",bg="#2b2c26"
```

```

# status line
set -g status-position bottom
set -g status-justify left
set -g status-style fg="#bd93f9",bg="#2b2c26"
set -g status-interval 1
set -g status-left-length 50
set -g status-right-length 50
set-window-option -g window-status-style fg="#ffffff",bg="#2b2c26"
set-window-option -g window-status-current-style fg="#edc951",bg="#2b2c26"

# status left
# are we controlling tmux or the content of the panes?
set -g status-left "#[fg=#afafaf,bg=default]|"
set -ga status-left "#[fg=#2b2c26,bg=#00a0b0]#{?client_prefix,#[bg=#fff4e6],}#S"
# are we zoomed into a pane?
set -ga status-left "#[fg=#afafaf,bg=default]|"
set -ga status-left "#[fg=#2b2c26]#[bg=#8b9dc3]#{?window_zoomed_flag,#[bg=#851e3e],} Œ "
set -ga status-left "#[fg=#afafaf,bg=default] "

# window status
set -g window-status-format "#[fg=#edc951,bg=default⊠] "
set -ga window-status-format "#[fg=default,bg=default]#I:#W#F"
#set -ga window-status-format "#[fg=#afafaf,bg=#2b2c26]|"
set -g window-status-current-format "#[fg=defualt,bg=default⊠] "
set -ga window-status-current-format "#[fg=#a8e6cf,bg=#3d1e6d]#I#[fg=#f6cd61,bg=#3d1e6d]:#W#[fg=#a8e6cf,bg=#3d1e6d]#F"
#set -ga window-status-current-format "#[fg=#afafaf,bg=#2b2c26]|"

# status right
set -g status-right "#[fg=#afafaf,bg=default]|"
set -ga status-right "#[fg=#64a1f4,bg=#2b2c26]#(~/.tmux/plugins/tmux-mem-cpu-load/tmux-mem-cpu-load -i 1 -g 0 -m 2 -a 0)"
set -ga status-right "#[fg=#afafaf,bg=default]|"
set -ga status-right "#[fg=#f6cd61,bg=#2b2c26]%a %H:%M:%S"
set -ga status-right "#[fg=#afafaf,bg=default]|"
set -ga status-right "#[fg=#fe8a71,bg=#2b2c26]%Y-%m-%d"
set -ga status-right "#[fg=#afafaf,bg=default]|"
set -ga status-right "#[fg=#f6cd61,bg=#851e3e]#(whoami)"
set -ga status-right "#[fg=#afafaf,bg=default]|"

# Tmux Plugin Manager
# -----------------------------------------
# Put this at the bottom of ~/.tmux.conf ($XDG_CONFIG_HOME/tmux/tmux.conf works too):
# Examples:
# set -g @plugin 'github_username/plugin_name'
# set -g @plugin 'git@github.com/user/plugin'
# set -g @plugin 'git@bitbucket.com/user/plugin'
# prefix + I (upper i, as in Install)
#       - Installs new plugins from GitHub or any other git repository
#       - Refreshes TMUX environment
# prefix + U (upper u, as in Update)
#       - updates plugin(s)
# prefix + alt + u (lower u, as in uninstall)
#       - remove/uninstall plugins not on the plugin list

set -g @plugin 'tmux-plugins/tpm'
set -g @plugin 'tmux-plugins/tmux-sensible'
set -g @plugin 'valerino/dracula.tmux'
set -g @plugin 'thewtex/tmux-mem-cpu-load'

# Initialize TMUX plugin manager (keep this line at the very bottom of tmux.conf)
run -b '~/.tmux/plugins/tpm/tpm'
```

- Zsh
- Install zsh from apt

```
sudo apt-get install zsh
```

- Install Oh My Zsh

  **ohmyzsh**

```
sh -c "$(curl -fsSL https://raw.githubusercontent.com/ohmyzsh/ohmyzsh/master/tools/install.sh)"
```

- Plugins Manager: Antigen

```
mkdir ~/.antigen
cd ~/.antigen

curl -L git.io/antigen > antigen.zsh
```

~/.zshrc

```
# Antigen
source ~/.antigen/antigen.zsh

# Load the oh-my-zsh's library
antigen use oh-my-zsh

# Bundles from the default repo (robbyrussell's oh-my-zsh)
antigen bundle git
antigen bundle mosh
antigen bundle tmux
```

```

# Bundles from external repo
antigen bundle zsh-users/zsh-autosuggestions
antigen bundle zsh-users/zsh-syntax-highlighting

# Load the theme.
#antigen theme robbyrussell

# Tell Antigen that you're done
antigen apply
```

- Anaconda

  ~/usrname/Downloads

  ```
  sudo bash Anaconda3-5.3.1-Linux-x86_64.sh
  ```

  > **Attention**:
  >
  > 1. The script will ask you to accept a license (you must scroll the whole license and type yes: careful with reckless spacing because the default answer is "no" and you'll end up aborting the installation
  > 2. Select the location where Anaconda is going to be installed (default is ~/anaconda, which is perfectly fine. Also, make sure you have writing permissions, so you don't have to sudo the installation and many other stuff like managing environments and packages)
  > 3. **Say no** when the script asks you to prepend Anaconda prefix to your PATH in your .bashrc

  ~/.bashrc and ~/.zshrc

  ```
  # anaconda
  export PATH=~/anaconda3/bin:$PATH
  alias python=/usr/bin/python
  alias python3=/usr/bin/python3
  ```

  **tsinghua mirror**

  ```
  conda config --set show_channel_urls yes
  ```

  ~/.condarc

  ```
  channels:
    - defaults
  show_channel_urls: true
  channel_alias: https://mirrors.tuna.tsinghua.edu.cn/anaconda
  default_channels:
    - https://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/main
  ```

```
  - https://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/free
  - https://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/r
  - https://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/pro
  - https://mirrors.tuna.tsinghua.edu.cn/anaconda/pkgs/msys2
custom_channels:
  conda-forge: https://mirrors.tuna.tsinghua.edu.cn/anaconda/cloud
  msys2: https://mirrors.tuna.tsinghua.edu.cn/anaconda/cloud
  bioconda: https://mirrors.tuna.tsinghua.edu.cn/anaconda/cloud
  menpo: https://mirrors.tuna.tsinghua.edu.cn/anaconda/cloud
  pytorch: https://mirrors.tuna.tsinghua.edu.cn/anaconda/cloud
  simpleitk: https://mirrors.tuna.tsinghua.edu.cn/anaconda/cloud
```

create new env

```
conda clean -i
conda create -n py36 python=3.6.5
```

alias conda for python and python3

```
sudo update-alternatives --install /usr/bin/python python ~/anaconda3/bin/python3.7 20
sudo update-alternatives --install /usr/bin/python3 python3 ~/anaconda3/bin/python3.7 20
```

### Check alias

```
sudo update-alternatives --config java

sudo update-alternatives --get-selections | grep ^java
```

### tsocks config

/etc/tsocks.conf

```
server = 127.0.0.1
server_type = 5
server_port = 1080
```

### Static IP In NAT (optional)

/etc/netplan/50-cloud-init.yaml

```
network:
    version: 2
    renderer: networkd
    ethernets:
        eth0:
            dhcp4: no
            addresses: [172.19.0.9/24]
            gateway4: 172.19.0.1
            nameservers:
                addresses: [8.8.8.8,8.8.4.4]
```

### KDE Desktop (optional)

- clear kubuntu-desktop

```
cpp  sudo apt purge kubuntu-desktop sudo apt autoremove
```

- add KDE Neon repository

```
cpp  sudo vim /etc/apt/sources.list.d/neon.list
```

/etc/apt/sources.list.d/neon.list

```
cpp  deb http://archive.neon.kde.org/user bionic main deb-src http://archive.neon.kde.org/user bionic main
```

- KDE repository public key

```
cpp  sudo wget https://archive.neon.kde.org/public.key sudo apt-key add public.key
```

- update package repository index and upgrade software packages. (Note that you must use apt **dist-upgrade** instead of apt upgrade command when using the KDE Neon repository.)

```
cpp  sudo apt update sudo apt dist-upgrade
```

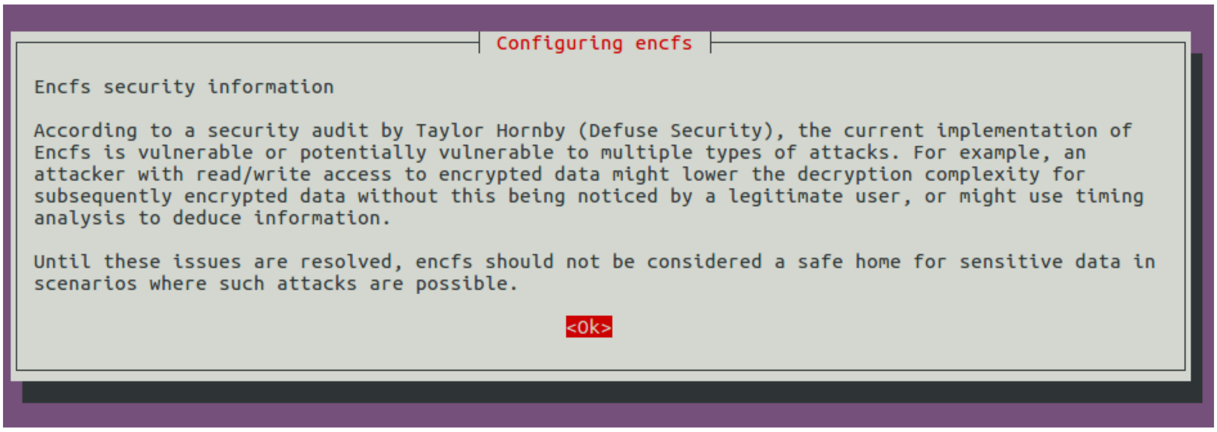
- install KDE Plasma Desktop.

```
cpp  sudo apt install neon-desktop
```

During the installation, a prompt tells you that the current implementation of **encfs** is vulnerable and should not be used. Press **Enter** to continue.

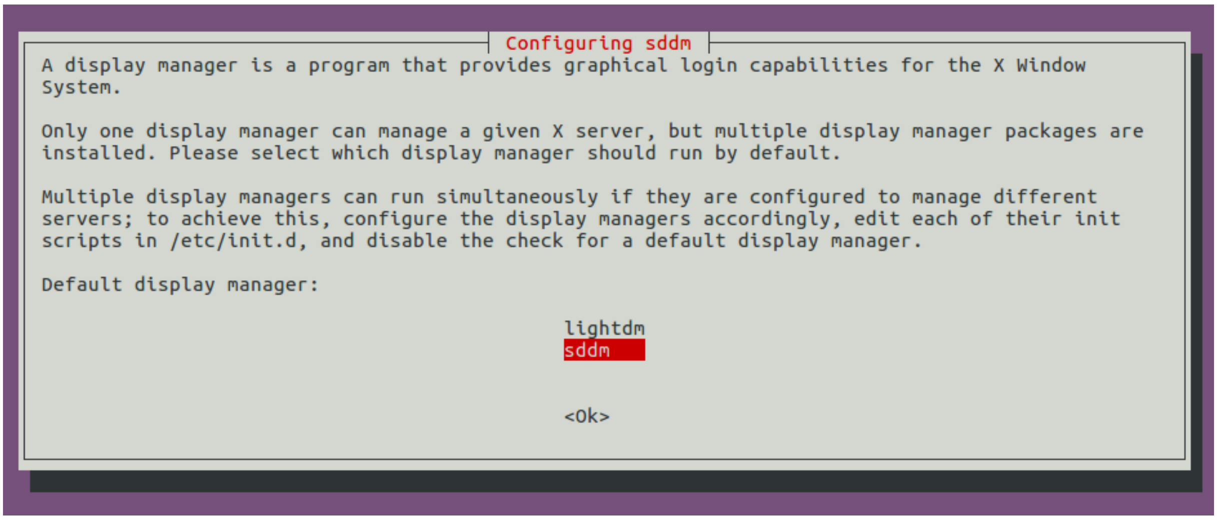
Then you will be prompted to select the display manager.

- Lightdm (Light Display Manager) is the default display manager for Unity, Mate and Cinnamon desktop enviroments.
- GDM (Gnome Display Manager) is the default display manger for GNOME desktop environment.



```
Configuring encfs

Encfs security information

According to a security audit by Taylor Hornby (Defuse Security), the current implementation of
Encfs is vulnerable or potentially vulnerable to multiple types of attacks. For example, an
attacker with read/write access to encrypted data might lower the decryption complexity for
subsequently encrypted data without this being noticed by a legitimate user, or might use timing
analysis to deduce information.

Until these issues are resolved, encfs should not be considered a safe home for sensitive data in
scenarios where such attacks are possible.

                                        <Ok>
```

**Figure 1:** encfs



```
Configuring sddm
A display manager is a program that provides graphical login capabilities for the X Window
System.

Only one display manager can manage a given X server, but multiple display manager packages are
installed. Please select which display manager should run by default.

Multiple display managers can run simultaneously if they are configured to manage different
servers; to achieve this, configure the display managers accordingly, edit each of their init
scripts in /etc/init.d, and disable the check for a default display manager.

Default display manager:

                                       lightdm
                                       sddm


                                       <Ok>
```

**Figure 2:** ssdm

- SSDM (Simple Desktop Display Manager) is the display manager for KDE Plasma desktop environment. So I will choose **ssdm**.

Note that you can always change the display manager later with **sudo dpkg-reconfigure sddm command.

Then wait for the installation to finish. Once the installation is complete, log out and select KDE Plasma from the login screen.

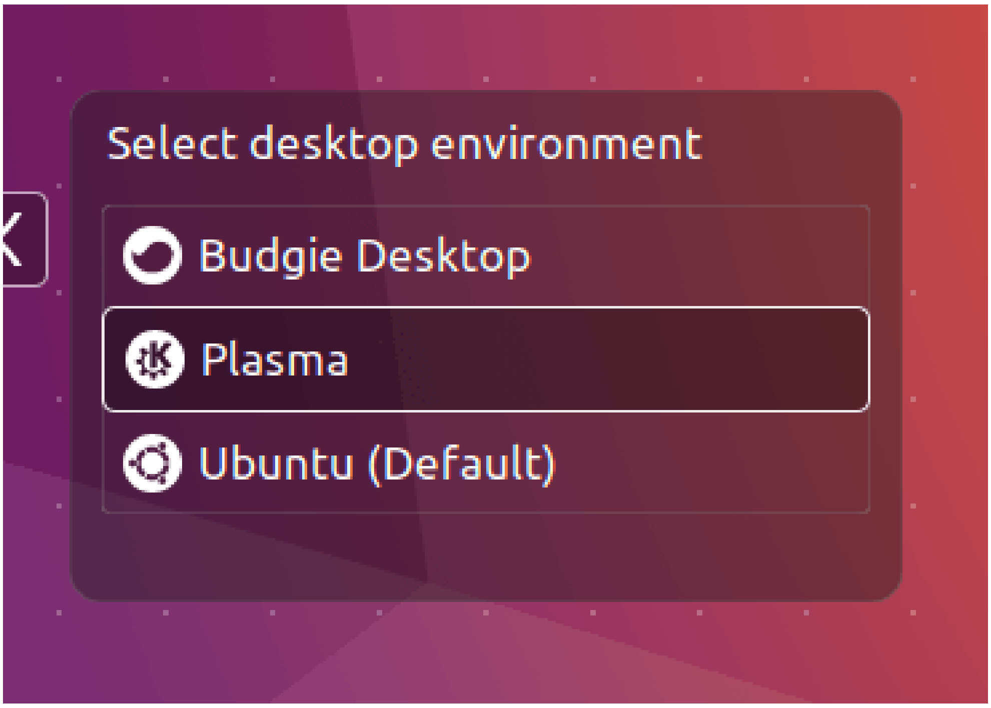


**Figure 3:** plasma

- Remove KDE Plasma Desktop from Ubuntu

```
cpp sudo apt remove neon-desktop plasma-desktop sudo apt autoremove
```

### Usr Sys Config Files

- ~/.profile

```
cpp # texlive 2019 export MANPATH=${MANPATH}:/usr/local/texlive/2019/texmf-
dist/doc/man export INFOPATH=${INFOPATH}:/usr/local/texlive/2019/texmf-dist
/doc/info export PATH=${PATH}:/usr/local/texlive/2019/bin/x86_64-linux
```

- ~/.bashrc

“‘ cpp # Texlive 2019 export MANPATH=$MANPATH : /usr/local/texlive/2019/texmf - dist/doc/manexportINFOPATH =${INFOPATH}:/usr/local/texlive/2019/texmf-dist/doc/info export PATH=${PATH}:/usr/local/texlive/2019/bin/x86_64-linux

# Oracle Java JDK export JAVA_HOME=/usr/lib/jvm/jdk1.8.0_241 export JRE_HOME=$JAVA_HOME/jreexportCLAS$
. :{JAVA_HOME}/lib:$JRE_HOME/libexportPATH =${JAVA_HOME}/bin:$PATH

# Anaconda export PATH=~/anaconda3/bin:$PATH alias python=/usr/bin/python alias python3=/usr/bin/python3
“‘

- ~/.zshrc

“‘ cpp plugins=()

# Antigen source ~/.antigen/antigen.zsh

# Load the oh-my-zsh’s library antigen use oh-my-zsh

# Bundles from the default repo (robbyrussell’s oh-my-zsh) antigen bundle git antigen bundle mosh antigen bundle tmux

# Bundles from external repo antigen bundle zsh-users/zsh-autosuggestions antigen bundle zsh-users/zsh-syntax-highlighting

# Load the theme #antigen theme robbyrussell

# Tell Antigen that you’re done antigen apply

# texlive 2019 export MANPATH=$MANPATH : /usr/local/texlive/2019/texmf-dist/doc/manexportINFOPA$
dist/doc/info export PATH=${PATH}:/usr/local/texlive/2019/bin/x86_64-linux

# Oracle Java JDK export JAVA_HOME=/usr/lib/jvm/jdk1.8.0_241 export JRE_HOME=$JAVA_HOME/jreexportCLAS$
. :{JAVA_HOME}/lib:$JRE_HOME/libexportPATH =${JAVA_HOME}/bin:$PATH

# Anaconda export PATH=~/anaconda3/bin:$PATH alias python=/usr/bin/python alias python3=/usr/bin/python3
“‘