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1 Windows

1.1 swap ctrl and caps

<https://www.mavjs.org/post/swap-ctrl-and-capslock-on-windows/>

1.2 UTF8

Need to enable beta utf8 in region setting

1.3 Rime

<https://rime.im/download/>

2 doom

```
ssh-keygen -o -t rsa -C "elecming@gmail.com"~C
git clone git@github.com:chenyanming/doom_mac.git .doom.d
pacman -S git
git clone --depth 1 https://github.com/hlissner/doom-emacs ~/.emacs.d
~/.emacs.d/bin/doom install
```

3 Msys2

3.1 pacman

```
pacman -S mingw-w64-x86_64-emacs
git submodule update --init --recursive
pacman -Syu
pacman -S mingw-w64-x86_64-gcc
pacman -S mingw-w64-x86_64-sqlite3
pacman -S unzip (for nov.el)
pacman -Syu
pacman -Sy
pacman -Sy\
    --needed \
    filesystem \
    msys2-runtime \
    bash \
    libreadline \
    libiconv \
    libarchive \
    libgpgme \
    libcurl \
    pacman \
    ncurses \
    libintl
pacman -Su
pacman -S \
    autoconf \
```

```
autogen \  
automake \  
automake-wrapper \  
diffutils \  
git \  
guile \  
libgc \  
libguile \  
libltdl \  
libunistring \  
make \  
mingw-w64-x86_64-binutils \  
mingw-w64-x86_64-bzip2 \  
mingw-w64-x86_64-cairo \  
mingw-w64-x86_64-cloog \  
mingw-w64-x86_64-crt-git \  
mingw-w64-x86_64-dbus \  
mingw-w64-x86_64-expat \  
mingw-w64-x86_64-fontconfig \  
mingw-w64-x86_64-freetype \  
mingw-w64-x86_64-gcc \  
mingw-w64-x86_64-gcc-libs \  
mingw-w64-x86_64-gdk-pixbuf2 \  
mingw-w64-x86_64-gettext \  
mingw-w64-x86_64-giflib \  
mingw-w64-x86_64-glib2 \  
mingw-w64-x86_64-gmp \  
mingw-w64-x86_64-gnutls \  
mingw-w64-x86_64-harfbuzz \  
mingw-w64-x86_64-headers-git \  
mingw-w64-x86_64-imagemagick \  
mingw-w64-x86_64-isl \  
mingw-w64-x86_64-libcroco \  
mingw-w64-x86_64-libffi \  
mingw-w64-x86_64-libiconv \  
mingw-w64-x86_64-libjpeg-turbo \  
mingw-w64-x86_64-libpng \  
mingw-w64-x86_64-librsvg \  
mingw-w64-x86_64-libtiff \  
mingw-w64-x86_64-libwinpthread-git \
```

```

mingw-w64-x86_64-libxml2 \
mingw-w64-x86_64-mpc \
mingw-w64-x86_64-mpfr \
mingw-w64-x86_64-pango \
mingw-w64-x86_64-pixman \
mingw-w64-x86_64-winpthread \
mingw-w64-x86_64-xpm-nox \
mingw-w64-x86_64-xz \
mingw-w64-x86_64-zlib \
tar \
wget

```

```

pacman -S mingw-w64-x86_64-aspell
pacman -S mingw-w64-x86_64-aspell-en

```

3.2 choco

```

Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServicePointManager]::SecurityProtocol = [System.Net.ServicePointManager]::SecurityProtocol -bor 3072
choco install ripgrep fd calibre

```

3.3 Rime

```

cd ~/AppData/Roaming
git clone git@github.com:chenyanming/rime-config.git Rime
mkdir /mingw64/share/rime-data/openccc
ln -s /mingw64/share/openccc/* /mingw64/share/rime-data/openccc
M-x rime-compile-module

```

3.4 emacs

open a pdf and compile pdf tools

4 WSL2

4.1 Install and enable WSL2

1. Important Update to latest windows 10.
2. Install WSL

```

Enable-WindowsOptionalFeature -Online -FeatureName Microsoft-Windows-Subsystem-Linux

```

Then install ubuntu 18.04 in windows store

1. Enable WSL2

```
dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart
```

1. Check WSL2

```
wsl -l -v
```

1. Convert WSL1 to WSL2

```
wsl.exe --set-version Ubuntu-18.04 2
```

1. Set default to WSL2

```
wsl.exe --set-default-version 2
```

4.1.1 References

- WSL 2 Support is coming to Windows 10 Versions 1903 and 1909 | Windows Command...
- Ubuntu on WSL 2 Is Generally Available | Ubuntu

4.2 X11 Server (VcXsrv)

```
export DISPLAY=$(awk '/nameserver / {print $2; exit}' /etc/resolv.conf 2>/dev/null):0
export LIBGL_ALWAYS_INDIRECT=1
```

Allow both private and public network.

4.2.1 References

<https://stackoverflow.com/questions/61110603/how-to-set-up-working-x11-forwarding-on-w>

4.3 Fonts

```
ln -s /mnt/c/Windows/Fonts ~/.fonts
fc-cache -fv
```

PS: The first time to startup emacs will setup fonts as well.

4.4 Setup Emacs

```
## zsh
sudo apt install zsh
chsh -s $(which zsh)
sh -c "$(curl -fsSL https://raw.githubusercontent.com/robbyrussell/oh-my-zsh/master/to

## install dependencies (got those from all over the net and from the snap)

sudo apt install -y autoconf automake autotools-dev bsd-mailx build-essential \
    diffstat gnutls-dev imagemagick libasound2-dev libc6-dev libdattrie-dev \
    libdbus-1-dev libgconf2-dev libgif-dev libgnutls28-dev libgpm-dev libgtk2.0-dev \
    libgtk-3-dev libice-dev libjpeg-dev liblockfile-dev liblqr-1-0 libm17n-dev \
    libmagickwand-dev libncurses5-dev libncurses-dev libotf-dev libpng-dev \
    librsvg2-dev libsm-dev libthai-dev libtiff5-dev libtiff-dev libtinfo-dev libtool \
    libx11-dev libxext-dev libxi-dev libxml2-dev libxmu-dev libxmuu-dev libxpm-dev \
    libxrandr-dev libxt-dev libxtst-dev libxv-dev quilt sharutils texinfo xaw3dg \
    xaw3dg-dev xorg-dev xutils-dev zlib1g-dev libjansson-dev libxaw7-dev \
    libselinux1-dev libmagick++-dev libacl1-dev gir1.2-javascriptcoregtk-4.0 \
    gir1.2-webkit2-4.0 libenchanted1c2a libglvnd-core-dev libicu-le-hb-dev \
    libidn2-0-dev libjavascriptcoregtk-4.0-dev liboss4-salsa2 libsoup2.4-dev \
    libsystemd-dev libwebkit2gtk-4.0-dev libx11-xcb-dev libxcb-dri2-0-dev \
    libxcb-dri3-dev libxcb-glx0-dev libxcb-present-dev libxshmfence-dev \
    x11proto-composite-dev x11proto-core-dev x11proto-damage-dev \
    x11proto-fixes-dev

## download and install

cd ~
wget https://ftp.gnu.org/pub/gnu/emacs/emacs-27.1.tar.gz
tar -xzf emacs-27.1.tar.gz
cd emacs-27.1
./configure
make
sudo make install
rm ~/emacs-27.1.tar.gz
```

Add to ~/.zshrc, in WSL2 (WSL1 is different)

```
export DISPLAY_NUMBER="0.0"
export DISPLAY=$(grep -m 1 nameserver /etc/resolv.conf | awk '{print $2}'):${DISPLAY_NUMBER}
export LIBGL_ALWAYS_INDIRECT=1
```

Install useful packages

```
sudo apt install calibre sqlite3 pandoc
```

4.4.1 pdf-tools

```
sudo apt install libpng-dev zlib1g-dev libpoppler-glib-dev libpoppler-private-dev (pdf
M-x pdf-tools-install
```

4.4.2 rga

```
sudo apt install build-essential pandoc poppler-utils ffmpeg
wget https://github.com/phiresky/ripgrep-all/releases/download/v0.9.6/ripgrep_all-v0.9.6-x86_64-unknown-linux-musl.tar.gz
tar -zxvf ripgrep_all-v0.9.6-x86_64-unknown-linux-musl.tar.gz
cd ripgrep_all-v0.9.6-x86_64-unknown-linux-musl
sudo cp rga /usr/bin
sudo cp rga-preproc /usr/bin
```

4.4.3 pyenv

```
sudo apt-get install git gcc make openssl libssl-dev libbz2-dev libreadline-dev libsqlite3-dev
git clone https://github.com/pyenv/pyenv.git ~/.pyenv
echo 'export PYENV_ROOT="$HOME/.pyenv"' >> ~/.zshrc
echo 'export PATH="$PYENV_ROOT/bin:$PATH"' >> ~/.zshrc
echo -e 'if command -v pyenv 1>/dev/null 2>&1; then\n  eval "$(pyenv init -)"\nfi' >> ~/.zshrc
pyenv install 3.7.9
pyenv global 3.7.9
```

1. References <https://github.com/hubisan/emacs-wsl> <https://stackoverflow.com/questions/27022373/python3-importerror-no-module-named-ctypes-when-using-val>

4.4.4 Rime

```
sudo apt install git build-essential cmake libboost-all-dev libgoogle-glog-dev liblevelog-dev
cd /usr/src/gtest
sudo cmake CMakeLists.txt
sudo make
#copy or symlink libgtest.a and libgtest_main.a to your /usr/lib folder
```

```

sudo cp *.a /usr/lib
cd ~/.emacs.d/librime
make
sudo make install
sudo apt-get install ibus-rime (Need to install rime input method)
M-x rime-compile-module

```

PS: The first time to load rime need some times, pay attention.

4.4.5 sdcv

```
sudo apt install stardict sdcv
```

4.4.6 link OneDrive

Link OneDrive can handle all system.

```
ln -s /mnt/c/Users/elecm/OneDrive ~/OneDrive
```

4.4.7 telega

```

sudo apt install gperf
git clone https://github.com/tdlib/td.git
mkdir build && cd build && cmake ../
make
sudo make install
git clone https://github.com/zevlg/telega.el
make && make install

```

4.5 windows terminal

```

"defaults":
{
    // Put settings here that you want to apply to all profiles.
    "cursorShape": "filledBox" ,
    "fontFace": "JetBrains Mono"
},

...

"startingDirectory": "//wsl$/Ubuntu-20.04/home/damonchan"

```


4.5.1 References

- <https://github.com/microsoft/terminal/issues/1379>
- <https://github.com/microsoft/terminal>
- <https://docs.microsoft.com/en-us/windows/terminal/customize-settings/profile-settings>

