

Tutorial—Linux Kernel Source Code Reading

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1. Background

I try to document the steps when I set up a environment for reading Linux Kernel Source Code. Hopefully next time when I need to do the same thing again I can reuse this documnet to do it effectivly. If it can also help others when performing the similar task, it will be great.

2. Steps Outline

- Download Linux source code
- Install ctags
- Install ncurses
- Install cscope
- Re-install vim
- Get file list of source code
- Use ctags
- Use cscope

2. Download Linux source code

2.1. Download Linux source code through git

- 1). Download Git from <http://git-scm.com/#download>.
- 2). Upload the installation file to the target directory and unzipped it as follows.

```
tar -zxvf file.name
```

- 3). Executing the following commands.

```
./configure
```

```
make
```

```
sudo make install
```

- 4). create file prepare.txt with the following content. echo \$PATH;
export PATH=\$PATH:/home/oracle/exer/git-1.6.3.3/git-1.6.3.3/
echo \$PATH;

- 5). execute the command to set the path every time.

```
./prepare.txt
```

- 6). execute command below to get the source code of linux. git-clone
git://git.kernel.org/pub/scm/linux/kernel/git/torvalds/linux-2.6.git linux-2.6

*Here linux-2.6 is the top folder for Linux source code.

2.2. Download Linux source code through http

git is blocked by firewall, instead I download the source code from <http://www.kernel.org/>.
click the "F" link, which stands for the Full Source Code.

2. install ctags

and add /usr/local/bin into the PATH

3. install ncurses.

4. install cscope.

5. Re-install vim.

6. Get file list of source code.

7. Use ctags in vim.

8. Use cscope in vim.

```
7. 4/3/2008 3:33PM cscope
cd /home/oracle/exer/linux/linux-2.6.30.1;
LNX='pwd';
echo $LNX;
find $LNX \
-path "$LNX/arch/*" ! -path "$LNX/arch/x86*" -prune -o \
-path "$LNX/firmware*" -prune -o \
-path "$LNX/Documentation*" -prune -o \
-path "$LNX/scripts*" -prune -o \
-path "$LNX/drivers*" -prune -o \
-path "$LNX/samples*" -prune -o \
-path "$LNX/sound*" -prune -o \
-path "$LNX/net*" -prune -o \
-name ".*[chxsS]" -print | /home/oracle/exer/linux/cscope.files
```