

???????

- Debian 5.0.6
- Asterisk 1.2.40
- zaptel 1.2.27

????

// ????

// ?? uname -r ????? Linux ?????????? linux-headers?

```
apt-get install linux-headers-2.6.26-2-686
```

```
apt-get install libncurses5-dev bison libssl-dev libnewt-dev zlib1g-dev procps gcc make binutils doxygen
```

```
apt-get install apache2 mysql-server php5-mysql php5-gd libmysqlclient15-dev
```

// ?????

```
cd /usr/src
```

```
wget http://downloads.asterisk.org/pub/telephony/asterisk/old-releases/asterisk-1.2.40.tar.gz
```

```
wget http://downloads.asterisk.org/pub/telephony/asterisk/old-releases/asterisk-addons-1.2.9.tar.gz
```

```
wget http://downloads.asterisk.org/pub/telephony/asterisk/old-releases/asterisk-sounds-1.2.1.tar.gz
```

```
wget http://downloads.asterisk.org/pub/telephony/zaptel/zaptel-1.2.27.tar.gz
```

```
wget http://downloads.asterisk.org/pub/telephony/libpri/libpri-1.2.8.tar.gz
```

// ????? libpri

```
cd /usr/src
```

```
tar xzf libpri-1.2.8.tar.gz
```

```
cd libpri-1.2.8
```

```
make
```

```
make install
```

Notes:

? libpri-1.2.x ??? zaptel-1.2.x?

// ????? zaptel

```
cd /usr/src
```

```
tar xzf zaptel-1.2.27.tar.gz
```

```
cd zaptel-1.2.27
```

```
make clean
```

```
./configure (??????? 1.4.x)
```

```
make menuselect (??????? 1.4.x)
```

```
make
```

```
make install
```

make config

Notes:

? ?? make config ??????????????

vi /etc/default/zaptel

?????????? ztdummy?????????

```
MODULES="$MODULES wcte11xp" # TE110P - Single Span T1/E1 Card
MODULES="$MODULES ztdummy" # UHCI USB Zaptel Timing Only Interface
```

// ????? Asterisk

```
cd /usr/src
tar xzf asterisk-1.2.40.tar.gz
cd asterisk-1.2.40
make clean
./configure (???????? 1.4.x)
make menuselect (???????? 1.4.x)
make
make install
make samples
make config
```

?? Asterisk ???

```
cp contrib/init.d/rc.debian.asterisk /etc/init.d/asterisk
chmod 0755 /etc/init.d/asterisk
```

// ????? asterisk-addons

```
cd /usr/src
tar xzf asterisk-addons-1.2.9.tar.gz
cd asterisk-addons-1.2.9
make
make install
```

Notes:

asterisk-addons ??? cdr\_addon\_mysql.so, app\_addon\_sql\_mysql.so, res\_config\_mysql.so ????  
MySQL ????????

?? Asterisk ??????

```
addgroup --system asterisk
adduser --system --ingroup asterisk --home /var/lib/asterisk --no-create-home asterisk
vi /etc/init.d/asterisk
```

????

```
AST_USER="asterisk"
AST_GROUP="asterisk"
```

```
?? /etc/asterisk/asterisk.conf
????
```

```
astrundir => /var/run/asterisk
```

```
mkdir /var/run/asterisk
chown asterisk:asterisk /var/run/asterisk
chown -R asterisk:asterisk /etc/asterisk
chown -R asterisk:asterisk /var/log/asterisk
chown -R asterisk:asterisk /var/spool/asterisk
chown -R asterisk:asterisk /var/lib/asterisk
chown asterisk:asterisk /dev/zap/pseudo
adduser asterisk audio (?? asterisk ? group audio)
```

//

## FAQ

**Error: Unable to open /dev/zap/ctl: Permission denied**

Ans: ?? /etc/udev/rules.d/zaptel.rules

```
# zaptel devices with ownership/permissions for running as non-root
KERNEL=="zapctl", NAME="zap/ctl", OWNER="asterisk", GROUP="asterisk", MODE="0660"
KERNEL=="zaptimer", NAME="zap/timer", OWNER="asterisk", GROUP="asterisk", MODE="0660"
KERNEL=="zapchannel", NAME="zap/channel", OWNER="asterisk", GROUP="asterisk", MODE="0660"
KERNEL=="zappseudo", NAME="zap/pseudo", OWNER="asterisk", GROUP="asterisk", MODE="0660"
KERNEL=="zaptranscode", NAME="zap/transcode", OWNER="asterisk", GROUP="asterisk", MODE="0660"
KERNEL=="zap[0-9]*", NAME="zap/%n", OWNER="asterisk", GROUP="asterisk", MODE="0660"
```

?????? zaptel??????????

```
acquavpbx:/etc/udev/rules.d# ls -l /dev/zap
total 0
crw-rw---- 1 asterisk asterisk 196, 1 2010-10-24 04:53 1
crw-rw---- 1 asterisk asterisk 196, 10 2010-10-24 04:53 10
```

```
crw-rw---- 1 asterisk asterisk 196, 11 2010-10-24 04:53 11
crw-rw---- 1 asterisk asterisk 196, 12 2010-10-24 04:53 12
crw-rw---- 1 asterisk asterisk 196, 13 2010-10-24 04:53 13
...
...
crw-rw---- 1 asterisk asterisk 196, 254 2010-10-24 04:53 channel
crw-rw---- 1 asterisk asterisk 196, 0 2010-10-24 04:53 ctl
crw-rw---- 1 asterisk asterisk 196, 255 2010-10-24 04:53 pseudo
crw-rw---- 1 asterisk asterisk 196, 253 2010-10-24 04:53 timer
crw-rw---- 1 asterisk asterisk 196, 250 2010-10-24 04:53 transcode
```

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- [Howto: Installing Asterisk on Debian Etch](#)
- [Asterisk Linux Debian](#)
- [Asterisk Downloads](#)
- [Asterisk, the easy way](#)