

Follow these steps to download and install ystdm8xx driver for Asterisk.

Installation

1. At the terminal: Type:

```
su
```

2. Enter the root password.

3. Change to the directory in which you want to extract the tarball. Type:

```
cd <directory path name>
```

For example, to extract the tarball in the /usr/src/ directory, Type:

```
cd /usr/src
```

4. Download Zaptel tarball to the directory. Type:

```
[root@asterisk1 src]# wget http://ftp.digium.com/pub/zaptel/releases/zaptel-1.2.16.tar.gz
```

Download other Zaptel tarball from asterisk website <http://www.asterisk.org>

5. Download relevant version of Asterisk patch files. Type:

```
[root@asterisk1 src]# wget http://www.yeastar.com/download/ystdm8xx-zaptel-1.2.16.patch.tar.gz
```

Other version patch files for Zaptel click [here](#)

Note: if you zaptel version is zaptel-1.4.1, the link is <http://www.yeastar.com/download/ystdm8xx-zaptel-1.4.1.patch.tar.gz>

6. Extract the tarball. Type:

```
[root@asterisk1 src]# tar xvzf zaptel-1.2.16.tar.gz
```

```
[root@asterisk1 src]# tar xvzf zaptel-1.2.16.patch.tar.gz
```

7. Patch the <patch file> into <zaptel> directory. Type:

```
[root@asterisk1 src]# patch -p0 < ystdm8xx-zaptel-1.2.16.patch
```

```
patching file zaptel-1.2.16/Makefile
```

```
patching file zaptel-1.2.16/ystdm8xx.c
```

```
patching file zaptel-1.2.16/zaptel.sysconfig
```

8. Change to the directory <zaptel>, compile and install the driver. Type:

```
[root@asterisk1 src]# cd zaptel-1.2.16
```

```
[root@asterisk1 zaptel-1.2.16]# make clean; make install
```

9. In order to auto-load ystdm8xx driver module at the system boot. Type:

```
[root@asterisk1 zaptel-1.2.16]# make config
```

.....

Configure

Modify /etc/zaptel.conf, configure zaptel hardware, If need details, check at “Asterisk The Future Of Telephony” Chapter 4

Here is the example, add the following lines into /etc/zaptel.conf

```
# Span 2: WCTDM/0 "YSTDM8xx REV E Board 1"
fxsks=1
fxsks=2
fxoks=3
fxoks=4
fxsks=5
fxsks=6
fxoks=7
fxoks=8
```

Attention: In this example, we have two **O2** modules at position 1、3 and two **S2** modules at position 2、4, you might change the configuration depends on your own situation.

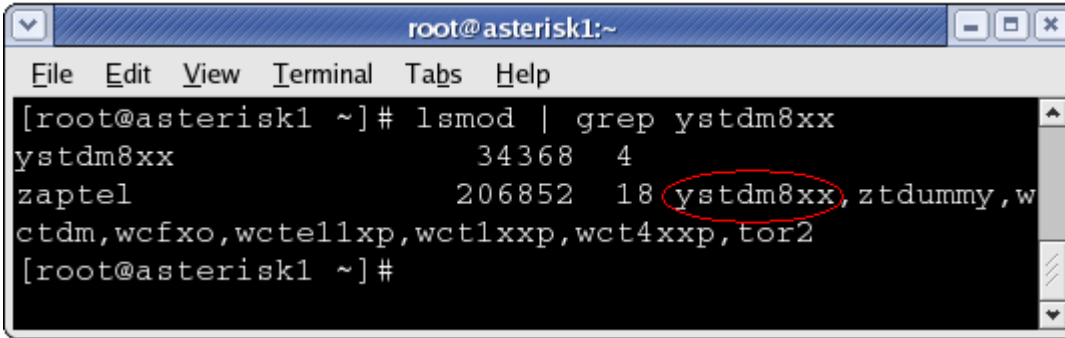
Finally, reboot the system:

```
[root@asterisk1 zaptel-1.2.16]# reboot
```

.....

Check installation

1. Use **lsmod** to check driver module “ystdm8xx” has been loaded into kernel:

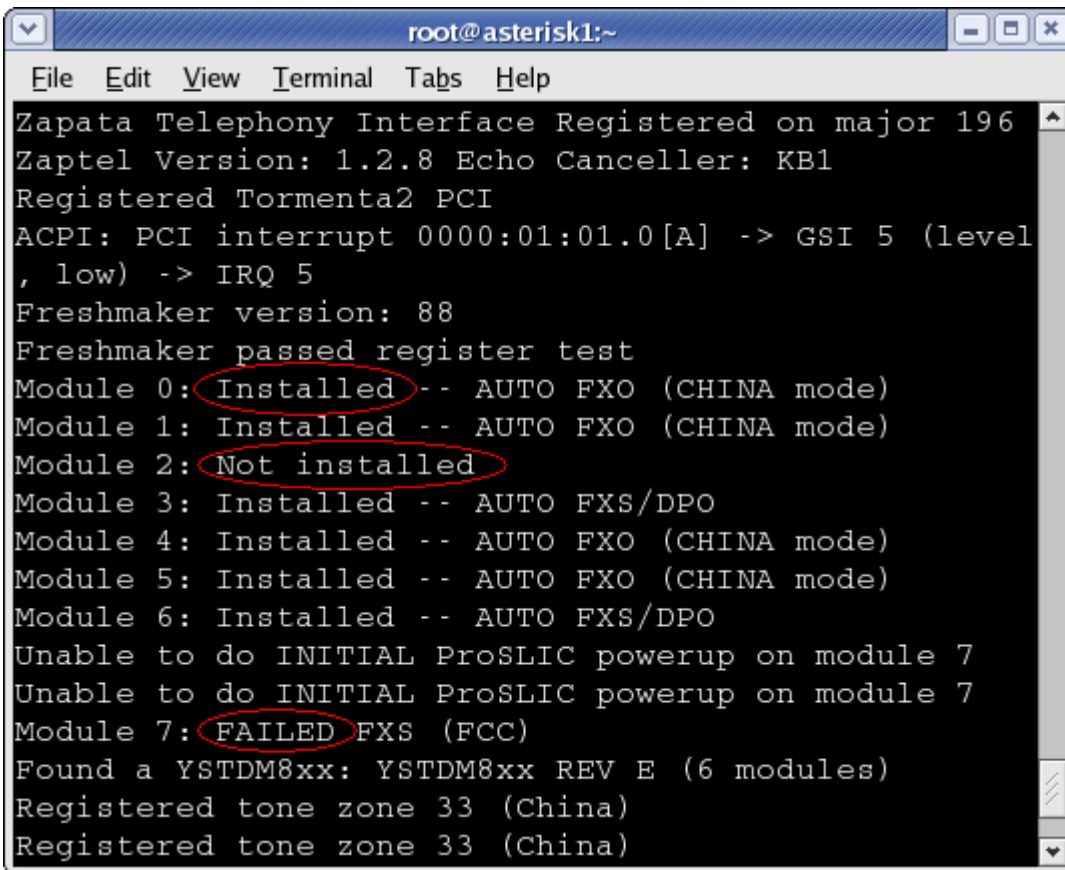


```
root@asterisk1:~  
File Edit View Terminal Tabs Help  
[root@asterisk1 ~]# lsmod | grep ystdm8xx  
ystdm8xx                34368  4  
zaptel                  206852  18 ystdm8xx, ztdummy, w  
ctdm, wcfxo, wctellxp, wctlxxp, wct4xxp, tor2  
[root@asterisk1 ~]#
```

2. Use `dmesg` to check system information,

“Installed” - load module successfully;

“Not installed” or “FAILED” - load module failed.



```
root@asterisk1:~  
File Edit View Terminal Tabs Help  
Zapata Telephony Interface Registered on major 196  
Zaptel Version: 1.2.8 Echo Canceller: KB1  
Registered Tormenta2 PCI  
ACPI: PCI interrupt 0000:01:01.0[A] -> GSI 5 (level  
, low) -> IRQ 5  
Freshmaker version: 88  
Freshmaker passed register test  
Module 0: Installed -- AUTO FXO (CHINA mode)  
Module 1: Installed -- AUTO FXO (CHINA mode)  
Module 2: Not installed  
Module 3: Installed -- AUTO FXS/DPO  
Module 4: Installed -- AUTO FXO (CHINA mode)  
Module 5: Installed -- AUTO FXO (CHINA mode)  
Module 6: Installed -- AUTO FXS/DPO  
Unable to do INITIAL ProSLIC powerup on module 7  
Unable to do INITIAL ProSLIC powerup on module 7  
Module 7: FAILED FXS (FCC)  
Found a YSTDm8xx: YSTDm8xx REV E (6 modules)  
Registered tone zone 33 (China)  
Registered tone zone 33 (China)
```

3. check the indicator LEDs on the TDM800 card:

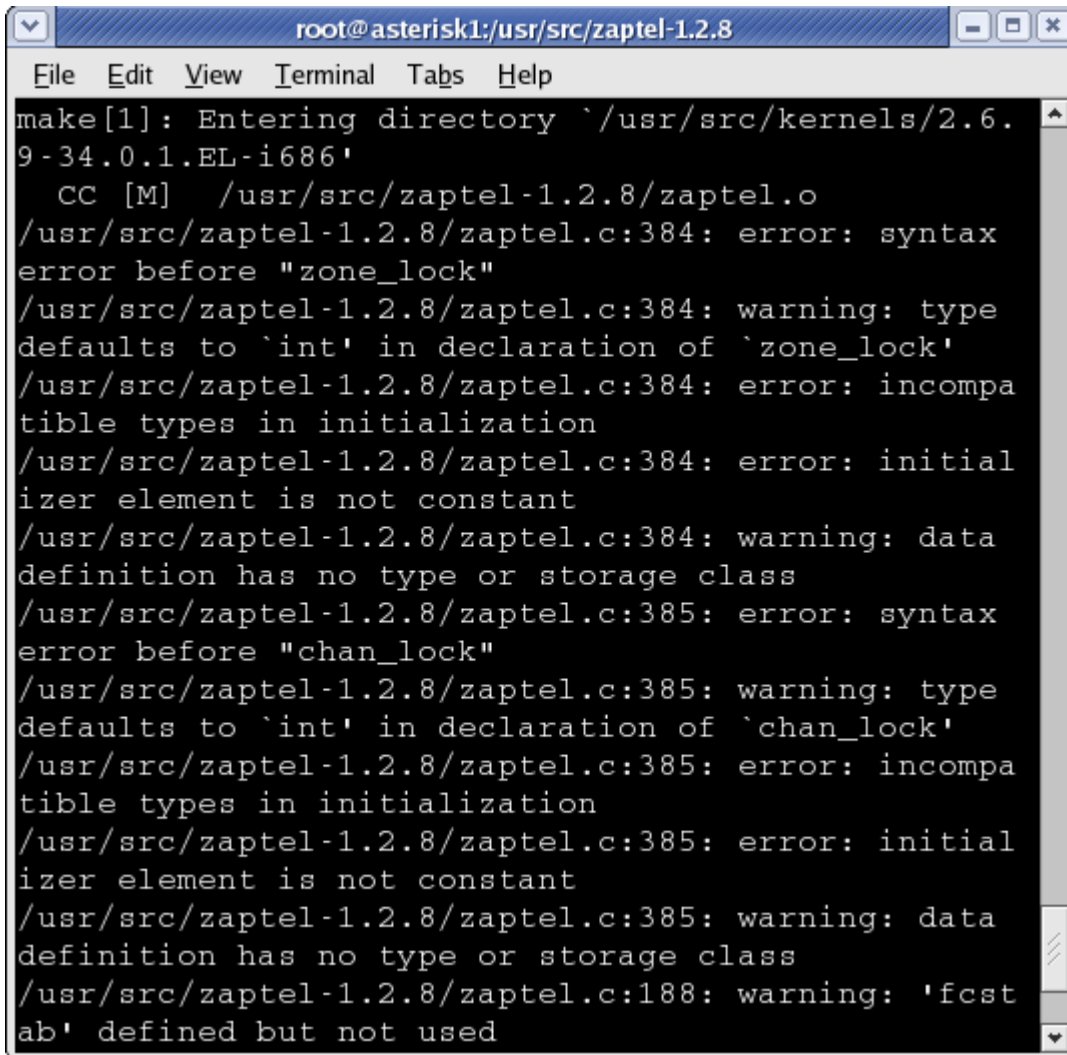
Light on - load module successfully;

Light off - load module failed.

.....
Tribox is one of the version of Asterisk, you could make a reference at <http://www.tribox.org>

For the Trixbox users, please operate as follows.

1. This is a well-known error in Trixbox 1.1 or later when you "make clean; make install".



```
root@asterisk1:/usr/src/zaptel-1.2.8
File Edit View Terminal Tabs Help
make[1]: Entering directory `/usr/src/kernels/2.6.9-34.0.1.EL-i686'
  CC [M] /usr/src/zaptel-1.2.8/zaptel.o
/usr/src/zaptel-1.2.8/zaptel.c:384: error: syntax error before "zone_lock"
/usr/src/zaptel-1.2.8/zaptel.c:384: warning: type defaults to `int' in declaration of `zone_lock'
/usr/src/zaptel-1.2.8/zaptel.c:384: error: incompatible types in initialization
/usr/src/zaptel-1.2.8/zaptel.c:384: error: initializer element is not constant
/usr/src/zaptel-1.2.8/zaptel.c:384: warning: data definition has no type or storage class
/usr/src/zaptel-1.2.8/zaptel.c:385: error: syntax error before "chan_lock"
/usr/src/zaptel-1.2.8/zaptel.c:385: warning: type defaults to `int' in declaration of `chan_lock'
/usr/src/zaptel-1.2.8/zaptel.c:385: error: incompatible types in initialization
/usr/src/zaptel-1.2.8/zaptel.c:385: error: initializer element is not constant
/usr/src/zaptel-1.2.8/zaptel.c:385: warning: data definition has no type or storage class
/usr/src/zaptel-1.2.8/zaptel.c:188: warning: 'fcstab' defined but not used
```

2. Solution:

Just modify `/usr/src/kernels/2.6.9-34.0.1.EL-i686/include/linux/spinlock.h` in about line 407.

Original:

```
#define DEFINE_RWLOCK(x)      rw_lock_t x = RW_LOCK_UNLOCKED
```

Modified:

```
#define DEFINE_RWLOCK(x)      rwlock_t x = RW_LOCK_UNLOCKED
```

3. After finished the above modification please re-operate the order “make clean; make install”.