IX100+ AsteriskNow+Voyage-linux

Author: James.zhu@openvox.cn

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This instruction is for users who want to use OpenVox (IX100) mini cards (B100M/B200M/B400M/A400M) working with PC Engines TM Alix 2C2. There are few steps you have to go through:

1. **Preparing the hardware:.**
   A. Make sure that you have an at least 8GB CF cards.
   B. Make sure the power supply is set correctly. Please check that, if the ports of cards work under NT of mini BRI cards or FXS of A400M, you must provide such devices.
2. **Copying voyage-linux into your system**
   please go to voyage-linux official website (http://www.voyage.hk/download/voyage/voyage-0.5.1.tar.bz2)to get the image files. And copy it into CF cards. For more details about installing the image into CF cards, please refer the wiki from voyage-linux(http://wiki.voyage.hk/dokuwiki/doku.php?id=installation).

3. **Compiling mISDN, zaptel, asterisk**
   Once the images are copied into CF card, please insert the CF card into the CF slot and switch on the power supply. Note: please use super terminal to access the system. Please check the IP for ssh access. Through accessing SSH, we are able to see the console like this:

```
login as: root
root@192.168.2.109's password:
Last login: Fri Jul 11 06:15:12 2008 from zlz
Linux voyage 2.6.23-486-voyage #1 PREEMPT Wed May 21 15:31:49 GMT 2008 i586

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
 __  __
 \ \/ /___  __  __ ___  ___  ___      Useful Commands:
  \  // _ \\ \/ /,-_ |/ _ |/ -_)       remountrw - mount disk as read-write
   \/ \___/ \  / \___,\_  |\___|       remountro - mount disk as read-only
           _/_/          _'_|         remove.docs - remove all docs and manpages
     ( V o y a g e ) - L i n u x
      < http://linux.voyage.hk >    Version: 0.5 (Build Date 20080622)


voyage:~#
```

:

Please run the command: remountrw to get write permission.

Actually, in the system, asterisk and zaptel have built in, but I still can not run it. If so, please recompile asterisk, zaptel and mISDN. Go to asterisk.org to get those packages. Some packages I use for this system:

```
voyage:/usr/src# ls -l
total 59312
drwxr-xr-x 24 root root     4096 Jul 11 03:56 asterisk-1.4.21.1
-rw-r--r--  1 root src  11528154 Jul 10 10:23 asterisk-1.4.21.1.tar.gz
drwxr-xr-x  3 root root     4096 Nov  9  2007 chan_misdn
-rw-r--r--  1 root src    90838 Nov  9  2007 chan_misdn.tar.gz
-rw-r--r--  1 root src    58429 May 21 15:28 config-2.6.23-486-voyage_5.0-2
drwxr-xr-x 21 root root     4096 Jul 10 08:53 linux-source-2.6.23-voyage
-rw-r--r--  1 root root 46419776 Jun 22 17:52 linux-source-2.6.23-voyage.tar.bz2
drwxr-xr-x  5 root root     4096 Jun 18 08:41 mISDN-1_1_8
-rw-r--r--  1 root src   498226 Jun 18 08:23 mISDN-1_1_8.tar.gz
drwxr-xr-x 12 root root     4096 Jun 18 08:42 mISDNuser-1_1_8
-rw-r--r--  1 root src   330147 Jun 18 08:23 mISDNuser-1_1_8.tar.gz
drwxr-sr-x  8 root root     4096 Jul 11 05:42 zaptel-1.4.11
-rw-r--r--  1 root src  1681384 Jul 11 02:14 zaptel-1.4.11.tar.gz
voyage:/usr/src#
```

Before compiling those packages, please install some support packages

apt-get install:

bison openssl libssl-dev libeditline0 libeditline-dev libedit -dev,
gcc make g++ php5-cli mysql-common libmysqlclient15-dev libnewt-dev flex
you also need a linux source, please go to voyage-linux to get right version of linux source.
Make a link with kernel source:

voyage:/usr/src# *ln -s linux-source-2.6.23-voyage /lib/modules/2.6.23-486-voyage/build*
Then you can compile: zaptel, mISDNuser, mISDN and asterisk.

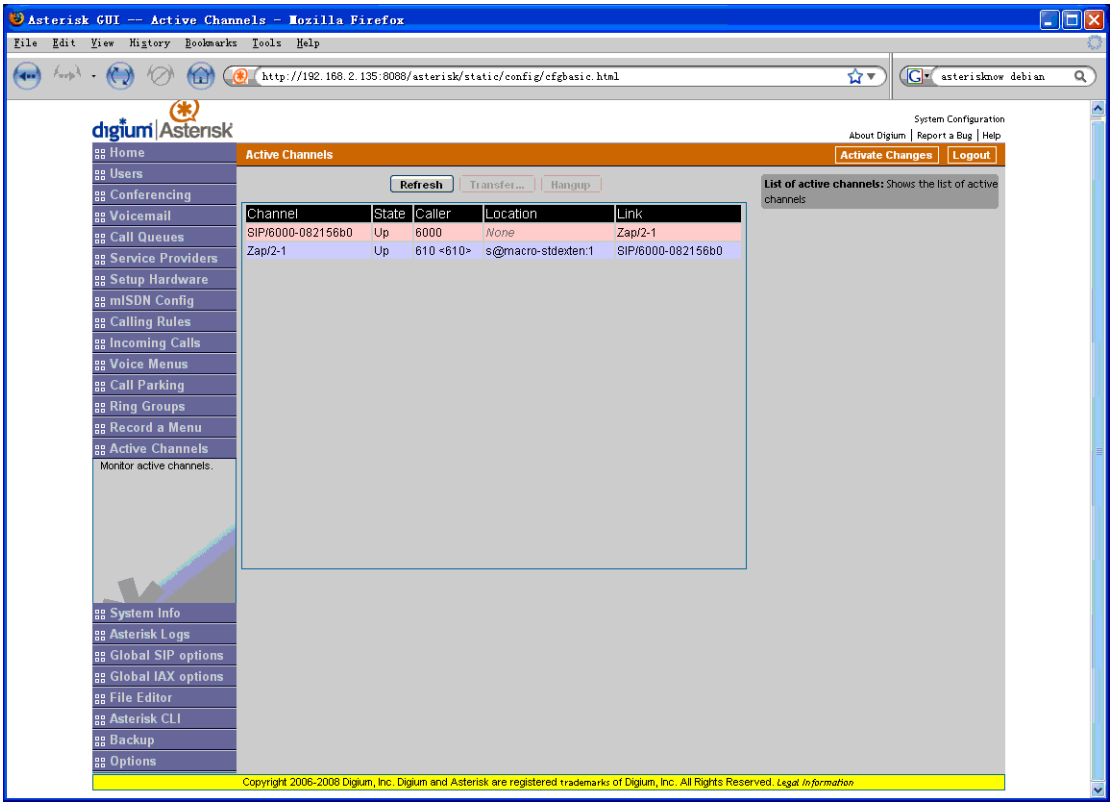
If all are done properly, the system should be able to start up successfully. Before making calls, please check the status of misdn channels and zap channels from asterisk console, make sure those channels can be shown.

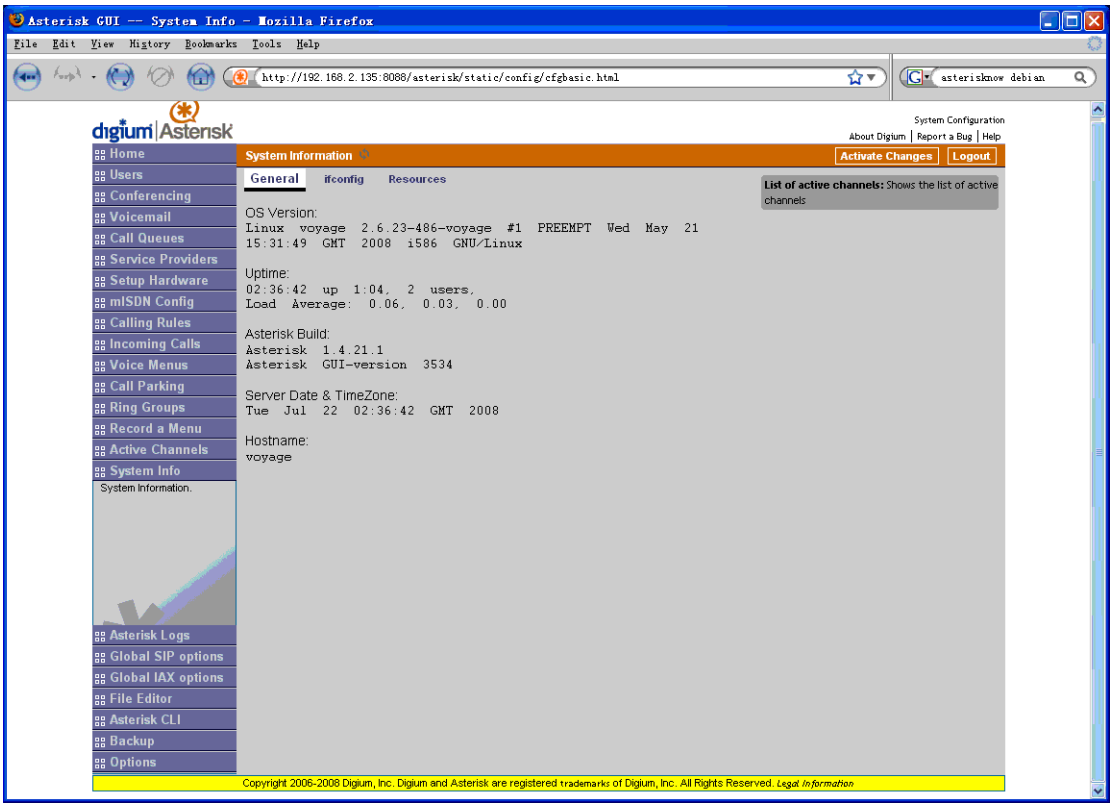
```
voyage*CLI> misdn show stacks
BEGIN STACK_LIST:
  * Port 1 Type TE Prot. PMP L2Link DOWN L1Link:UP Blocked:0  Debug:0
  * Port 2 Type TE Prot. PMP L2Link DOWN L1Link:DOWN Blocked:0  Debug:0
voyage*CLI> zap show channels
   Chan Extension  Context         Language   MOH Interpret
 pseudo            default                    default
      1            demo                       default
      2            demo                       default
      3            from-internal              default
      4            from-internal              default
voyage*CLI>
```

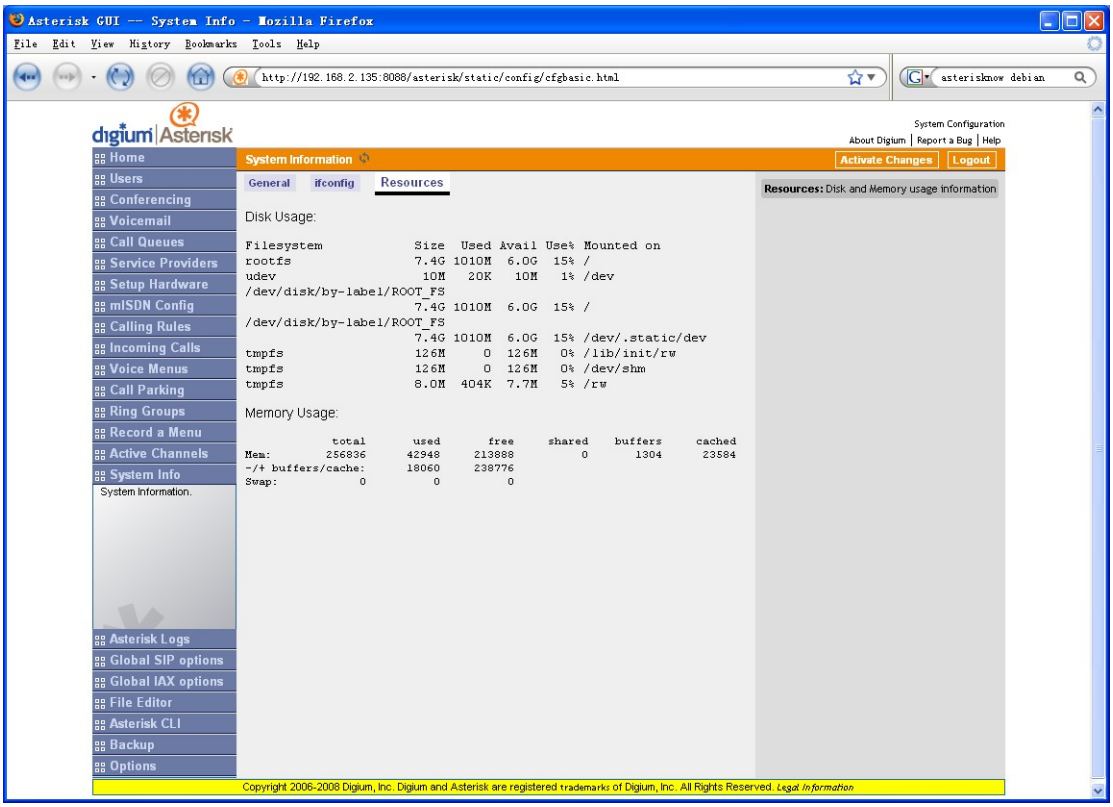
4) Download and install Asterisk-GUI:

```
cd /usr/src
svn checkout http://svn.digium.com/svn/asterisk-gui/trunk asterisk-gui
cd /usr/src/asterisk-gui
./configure && make && make install
make samples

Edit the configuration files...

in /etc/asterisk/http.conf
[general]
enabled=yes
enablestatic=yes

in /etc/asterisk/manager.conf
[general]
displaysystemname = yes
enabled = yes
webenabled = yes
port = 5038
;httptimeout = 60
bindaddr = 0.0.0.0

[admin]
secret = admin
read = system,call,log,verbose,command,agent,config
write = system,call,log,verbose,command,agent,config


Under the directory, run the commands:

make checkconfig
asterisk -r
reload
exit
```

Go to the URL to access the GUIs:
http://IP:8088/asterisk/static/config/cfgbasic.html#



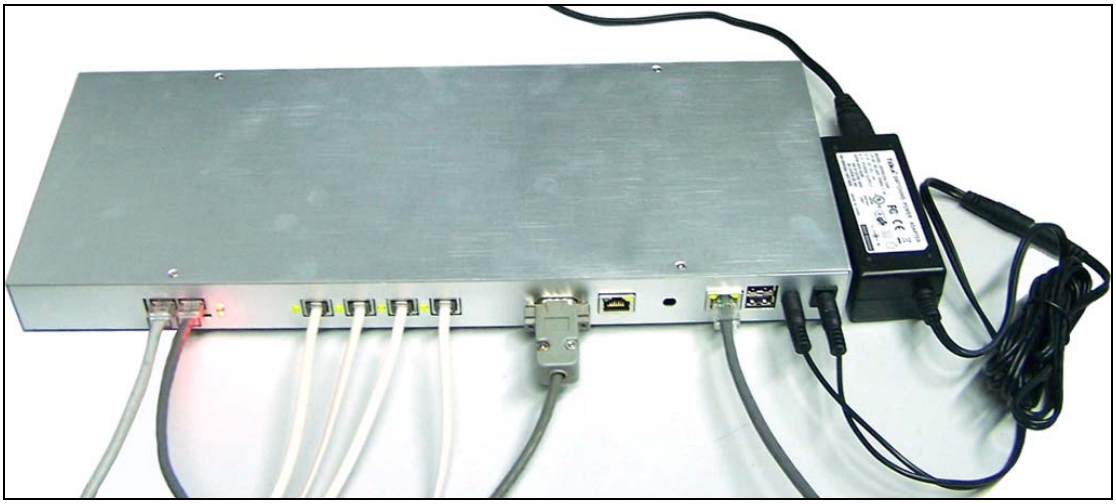


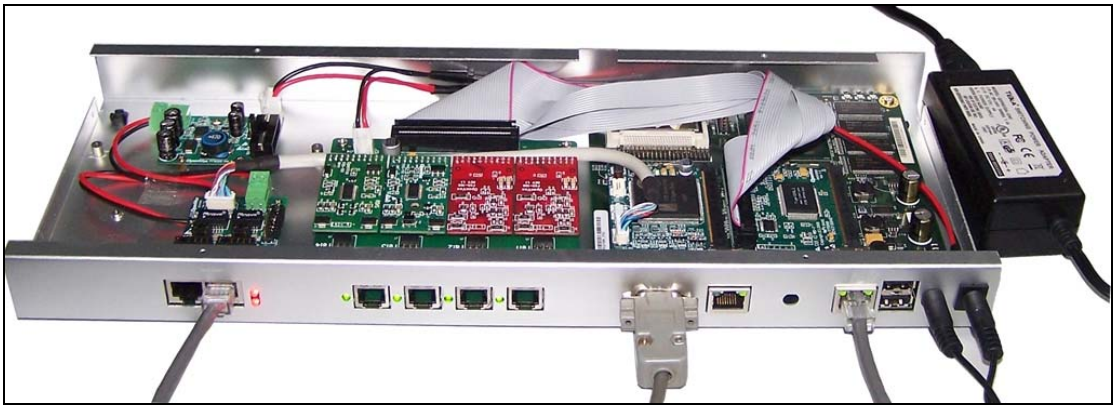


Asterisk Console:

```
voyage*CLI>
voyage*CLI> P[ 1] channel with stid:0 for one second still in use!
  == Starting mISDN/2-u7 at demo,,1 failed so falling back to exten 's'
    -- Executing [s@demo:1] Answer("mISDN/2-u7", "") in new stack
    -- Executing [s@demo:2] Dial("mISDN/2-u7", "ZAP/4") in new stack
    -- Called 4
P[ 1] channel with stid:0 for one second still in use!
  == Starting mISDN/2-u7 at demo,,1 failed so falling back to exten 's'
    -- Executing [s@demo:1] Answer("mISDN/2-u7", "") in new stack
    -- Executing [s@demo:2] Dial("mISDN/2-u7", "ZAP/4") in new stack
    -- Called 4
    -- Zap/4-1 is ringing
    -- Zap/4-1 is ringing
voyage*CLI>      -- Zap/4-1 is ringing
    -- Zap/4-1 is ringing
voyage*CLI>      -- Zap/4-1 answered mISDN/2-u7
    -- Zap/4-1 answered mISDN/2-u7
```

Physical layout:





Test environments:

OS-Voyage-linux Version: 0.5 (Build Date 20080622)
OpenVox cards: B200M, A400M
OpenVox IX100 with Alix 2c2
CF card: Kingston compact flash 8 GB
AsteriskNOW
Drivers: asterisk-1.4.21.1, zaptel-1.4.11 and mISDN-1_1_8
If you only install A400M, you do not need to install mISDN.
Bristuff should be ok under Voyage-linux.

References:

http://linux.voyage.hk/
www.asterisk.org
www.openvox.com.cn
http://www.debian.org/
www.misdn.org
http://www.pcengines.ch/alix2c2.htm