Install OpenVox A1200P A800P with trixbox-2.4

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Date:19/1/2008

This paper is to provide an instruction to those who want to install A1200P/A800P with trixbox-2.4. Before installing A1200P/A800P, you should have the foundation of Asterisk, very basic command for Linux and trixbox. If you do not know about those stuffs, please take time to make a research on those stuffs. Here, I tested A1200P with trixbox-2.4. To install A1200P in trixbox-2.4, please go through with follow steps:

1. Check hardware

• Make sure the A1200P can be found. Run the command: *lspci* –*vvvvvvv*. It will shows the A1200P information like this:

```
O2:04.0 Communication controller: Tiger Jet Network Inc. Tiger3XX Modem/ISDN interface

Subsystem: Unknown device 9100:0003

Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop- ParErr- Stepping- SERR- FastB2B-
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=medium >TAbort- <TAbort- <MAbort- >SERR- <PERR-
Latency: 32 (250ns min, 32000ns max)
Interrupt: pin A routed to IRQ 153
Region 0: I/O ports at a000 [size=256]
Region 1: Memory at f7004000 (32-bit, non-prefetchable) [size=4K]
Capabilities: [40] Power Management version 2
Flags: PMEC1k- DSt+ D1- D2+ AuxCurrent=55mA PME(DO+,D1-,D2+,D3hot+,D3cold+)
Status: D0 PME-Enable- DScale=0 PME-
```

• Plug in the power supply cable if you have FXS module on the board.

2. Check the versions of trixbox-2.4

- The version I tested is trixbox-2.4.0.2.
- Pay attention with yum update command after installing A1200P drivers.
 Warning: in trixbox, if you run yum update for other purpose, you must take care of it. After updating, zaptel might be overwritten. A1200P driver will be lost.

- 3. Download and install the script from openvox.
 - Run command: cd /usr/src
 - Check the zapel modules are in right directory. In my test environment, zaptel is under: /lib/modules/2.6.18-53.1.4.el5/extra/
 - **Download install script from OpenVox website.** Run command: wget http://www.openvox.com.cn/downloadsFile/install_a1200p_trixbox-2.4.sh. After downloading the script, please run: *chmod* 777 *install_a1200p_trixbox-2.4.sh.* please execute this command to install: /install_a1200p_trrix-2.4.sh.
- 4. Check the drivers and channels and make sure the divers are loaded successfully. You can perform few steps to check the A1200P drivers:
 - You can manually run: *modprobe zaptel, modprobe opvxa1200* and *asterisk* –*vvvgc* to start asterisk.
 - Run ztcfg –vvv, the system will see the modules are loaded successfully. The
 A1200P modules are shown like this:

• Run: *dmesg*, A1200P information will be shown. The information is shown as bellow:

```
Kapata Telephony Interface Registered on major 196
Zaptel Version: 1.4.7-3259
Zaptap registered 'sample' char driver on major 33
OpenVox A1200P version: 1.2
OpenVox A1200P passed register test
Module O: Installed -- AUTO FXO (FCC mode)
Module 1: Installed -- AUTO FXO (FCC mode)
Module 2: Installed -- AUTO FXS/DPO
Module 3: Installed -- AUTO FXS/DPO
Module 4: Not installed
Module 5: Not installed
Module 6: Not installed
Module 7: Not installed
Module 8: Not installed
Module 9: Not installed
Module 10: Not installed
Module 11: Not installed
Found a OpenVox A1200P: Version 1.2 (4 modules)
```

 Under asterisk console, you can see the zap channels if zap channels are loaded into asterisk.

```
[trixbox1.localdomain ~]#_asterisk -r
Asterisk 1.4.17-1 RPM by vc-rpms@voipconsulting.nl, Copyright (C) 1999 - 2007 Digium, Inc. and others.
Created by Mark Spencer <markster@digium.com>
Asterisk comes with ABSOLUTELY NO WARRANTY; type 'core show warranty' for details.
This is free software, with components licensed under the GNU General Public
License version 2 and other licenses; you are welcome to redistribute it under
certain conditions. Type 'core show license' for details.
Connecte<u>d to Asterisk 1.4.17-1 RPM by vc</u>-rpms@voipconsulting.nl currently running on trixbox1 (pid = 2512)
Verbosity is at least 3
trixbox1*CLI> zap show channels
                                                               the asterisk Asterisk-1.4.17-1 RPI
                                              MOH Interpret
  Chan Extension Context
                                   Language
 pseudo
                   default
                                   en
                   from-pstn
                                   en
                                              default
                   from-pstn
                                              default
                                   en
                   from-internal
                                   en
                                              default
                   from-internal
                                   en
                                              default
trixhox1*CLT>
```

You can access the GUI to know about zap channel status.

Zaptel Driver Info			
Chan Extension pseudo 1 2 3 4	Context default from-pstn from-pstn from-internal from-internal	Language en en en en en	MOH Interpret default default default default default
Conference Info No active MeetMe conferences.			

If you can reach this step successfully, be very sure the zaptel channels are loaded successfully into asterisk and you can make calls. If you have problems with loading drivers, please check the Troubleshoot to get help.

5. **Test the calls.** Here, I used channel 4, which is FXS module to call SIP 600. The result shows as follow:

```
== Manager 'admin' logged off from 127.0.0.1

-- AGI Script dialparties.agi completed, returning 0

-- Executing [s@macro-dial:10] Dial("Zap/4-1", "SIP/600||tr") in new stack

-- Called 600

-- SIP/600-09dd9540 is ringing

-- SIP/600-09dd9540 answered Zap/4-1

== Spawn extension (macro-dial, s, 10) exited non-zero on 'Zap/4-1' in macro 'dial'

== Spawn extension (macro-dial, s, 10) exited non-zero on 'Zap/4-1' in macro 'exten-vm'

== Spawn extension (macro-dial, s, 10) exited non-zero on 'Zap/4-1' in macro 'exten-vm'

== Spawn extension (macro-dial, s, 10) exited non-zero on 'Zap/4-1' in new stack

-- Executing [nemacro-dial:1] Macro("Zap/4-1", "hangupcall") in new stack

-- Executing [s@macro-hangupcall:2] NoCDR("Zap/4-1", "w") in new stack

-- Executing [s@macro-hangupcall:3] GotoIf("Zap/4-1", "1?skippg") in new stack

-- Executing [s@macro-hangupcall:6] GotoIf("Zap/4-1", "1?skipblkvm") in new stack

-- Goto (macro-hangupcall,s,6)

-- Executing [s@macro-hangupcall:9] GotoIf("Zap/4-1", "1?theend") in new stack

-- Goto (macro-hangupcall,s,1)

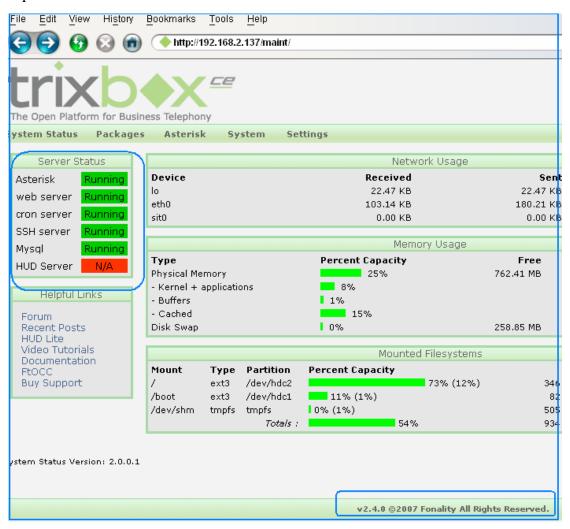
-- Executing [s@macro-hangupcall:11] Hangup("Zap/4-1", "") in new stack

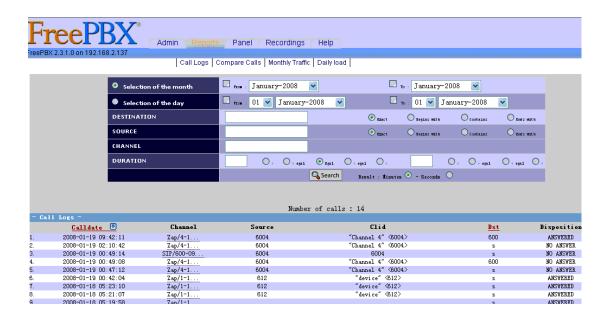
=- Spawn extension (macro-hangupcall; s, 11) exited non-zero on 'Zap/4-1' in macro 'hangupcall'

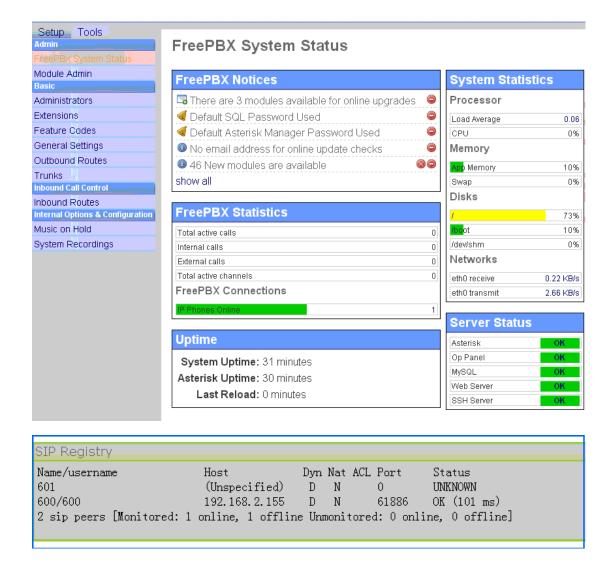
=- Spawn extension (macro-hangupcall, s, 11) exited non-zero on 'Zap/4-1'

-- Huncon 'Zap/4-1'
```

6. Access GUI. You can access the GUI for more system information. Some captured GUI show here:







7. Troubleshooting.

Most of time, the command "genzaptelconf –d" can help you to generate zaptel.conf and zapata.conf successfully. But sometimes, you may have problems with no channels shown. If you can not load A1200P modules, please check the few things in your system:

Check the zaptel under /etc/sysconfig. There is one module added in zaptel file. If line: MODULES="\$MODULES opvxa1200" missed, please add it. It shows as bellow:

```
#MODULES="$MODULES xpp_usb"  # Xorcom Astribank Device

# Disables Astribank hotplug firmware loading

#XPP_HOTPLUG_DISABLED=yes

# Disables Astribank udev hook called when an astribank is added and ready

# or removed.

#ASTRIBANK_HOOK_DISABLED=yes

# Extensions genzaptelconf are (base + channel_number)

# base is by default 6000:

#base_exten=6000

#

# There are a host of other variables you can set to affect

# genzaptelconf. See the beginning of the script.

MODULES="$MODULES opvxa1200"
```

• Check the zaptel.conf under /etc directory. the correct format of zaptel.conf for my case is like this:

```
# Autogenerated by ./genzaptelconf -- do not hand edit
# Zaptel Configuration File
\# This file is parsed by the Zaptel Configurator, {\sf ztcfg}
# It must be in the module loading order
# Span 1: OPVXA1200/O "OpenVox A1200P Board 1"
fxsks=1
fxsks=2
fxoks=3
fxoks=4
# channel 5, WCTDM, no module.
\# channel 6, \mathtt{WCTDM}, no \mathtt{module}.
\# channel 7, \mathtt{WCTDM}, no module.
\# channel 8, WCTDM, no module.
\# channel 9, WCTDM, no module.
\# channel 10, WCTDM, no module.
\# channel 11, WCTDM, no module.
# channel 12, WCTDM, no module.
# Global data
loadzone
                 = us
defaultzone
                 = us
```

• Check the zapata.conf and zapata-channels.conf. Sometimes, the zapata-channels.conf is missed or empty in the file, the asterisk console will

not show the channels. Please double check the zapata.conf and zapata-channels.conf under /etc/asterisk. You must make sure the format of all channels is correct. Here is an example for my case.

zapata.conf:

```
; Zapata telephony interface
; Configuration file
[trunkgroups]
[channels]
language=en
context=from-zaptel
signalling=fxs ks
rxwink=300
                        ; Atlas seems to use long (250ms) winks
 Whether or not to do distinctive ring detection on FXO lines
usedistinctiveringdetection=yes;
usecallerid=yes
hidecallerid=no
callwaiting=yes
usecallingpres=yes
callwaitingcallerid=yes
threewaycalling=yes
transfer=yes
cancallforward=yes
callreturn=yes
echocancel=yes
echocancelwhenbridged=no
echotraining=800;
rxgain=0.0
txgain=0.0
group=0
callgroup=1
pickupgroup=1
immediate=no
:faxdetect=both
faxdetect=incoming
faxdetect=outgoing;
                      Make sure zapata-channels.conf is there
:faxdetect=no
;Include genzaptelconf configs
#include zapata-channels.conf
group=1
;Include AMP configs
#include zapata additional.conf
```

zapata-channels.conf:

```
; Span 1: OPVXA1200/O "OpenVox A1200P Board 1"
;;; line="1 OPVXA1200/0/0"
signalling=fxs ks
callerid=asreceived
group=0
context=from-pstn
channel => 1
context=default
;;; line="2 OPVXA1200/0/1"
signalling=fxs ks
callerid=asreceived
group=0
context=from-pstn
channel => 2
context=default
;;; line="3 OPVXA1200/0/2"
signalling=fxo ks
callerid="Channel 3" <6003>
mailbox=6003
group=5
context=from-internal
channel => 3
callerid=
mailbox=
group=
context=default
;;; line="4 OPVXA1200/0/3"
signalling=fxo_ks
callerid="Channel 4" <6004>
mailbox=6004
group=5
context=from-internal
channel => 4
callerid=
mailbox=
group=
context=default
```

8. References.

www.openvox.com

www.trixbox.org

www.voip-info.org

www.asterisk.org

Notes:

Test environments:

trixbox-2.4.0.2

Analog Card: OpenVox A1200P

This instruction is also workable for A800P.

If you have any problem with installing A1200P in trixbox, please report to www.openvox.com.cn or trixbox.org.