Synway AST Series

SynAST Application Platform-CallWeaver Installation Manual

Synway Information Engineering Co., Ltd

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Contents

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Preface

When you use the Synway AST series boards to set up a CallWeaver application system, this file provides the help for software installation, configuration and test. It aims at those people who use the Synway AST series boards in CallWeaver for the first time, and takes the use of TEJ-4A/PCI and FXM-16A/PCIe in CallWeaver1.2-RC2 for example.

Chapter 1 introduces how to install and automatically configure the driver of Synway AST series boards in CallWeaver.

Chapter 2 tells how to manually configure the system.

Chapter 3 shows how to test the Synway AST series boards in CallWeaver.

Appendix A gives the contact way of technical support and sales department in Synway.

Although Synway has scrupulously checked through this manual, but cannot guarantee the absence of errors and omissions. We sincerely apologize for any consequent inconvenience brought to you and will be very grateful if you kindly give your advice regarding amendments to this book.

Chapter 1 Installation & Automatic Configuration

1.1 CallWeaver

For detailed information about CallWeaver, visit the official website of CallWeaver: http://www.callweaver.org.

1.1.1 Preparation

Obtain the resource package you need for CallWeaver installation. See Table 1-1 below for details.

Resource Package	Version Recommendation	Address	Description
zaptel-1.4.x.tar.gz	1.4.x	http://downloads.digium.com/pub/zaptel/releases/	Command: #rpm –q zaptel, to check the version
callweaver	latest version downloaded from svn	http://svn.callweaver.org/callweaver/trunk	Command: #svn co [address] callweaver, to download callweaver
SynAST-x.x.x.x.tar.gz	1.1.0.0 or above	http://www.synway.net	None
Speex-1.0.5.tar.gz	1.0.5 or above	http://downloads.us.xiph.org/releases/speex/speex-1.0.5.tar.gz	None
tiff-3.8.0	3.8.0 or above	ftp://ftp.remotesensing.org/pub/libtiff/tiff-3.8.0.tar.gz	None
spandsp-0.0.3	0.0.3 or above	http://www.soft-switch.org/downloads/spandsp/spandsp-0.0.3pre25.tgz	None
libpri-1.4.x.tar.gz	1.4.7 or above	http://downloads.digium.com/pub/libpri/releases/	ISDN library for TEJ series

Table 1-1 Resource Packages for CallWeaver Installation

1.1.2 Driver Installation

Step 1: Install the library libpri.

```
#cd /opt                          # enter the directory to libpri
#tar –zxvf libpri-1.4.7.tar.gz    # decompress libpri
#cd libpri-1.4.7
#make
```

```
#make install
```

Step 2: Install the library SpanDSP.

```
#cd /opt                                  # enter the directory to the tiff library
#tar –zxvf tiff-3.8.0.tar.gz              # decompress tiff
#cd tiff
#./configure
#make
#make install


#cd /opt                                  # enter the directory to SpanDsp
#tar –zxvf spandsp-0.0.3pre25..tgz        # decompress spandsp
#cd spandsp-0.0.3
#./configure
#make
#make install
```

Step 3: Install the library speex.

```
#cd /opt                                  # enter the directory to speex
#tar –zxvf speex-1.0.5.tar.gz             # decompress speex
#cd speex
#./configure
#make
#make install
```

Step 4: Install the zaptel driver and the SynAST driver.

Refer to Chapter 3 Driver Installation & Configuration in the file *SynAST_UserManual.pdf*.

1.1.3 CallWeaver Installation

Step 1: Install CallWeaver.

CallWeaver is running as a non-root user. The default user is just callweaver. Therefore, we shall first set up a callweaver user in the system.

```
#useradd callweaver
#groupadd callweaver
```

Then install the program.

#cd /usr/src/callweaver

../bootstrap.sh

./configure

#make

#make install

1.1.4 Configuration

Refer to Chapter 2 Manual Configuration in this file.

1.1.5 CallWeaver Startup

Step 1: Modify the configuration file udev.

#cd /etc/udev/rules.d

#vim zaptel.rules *# Modify the rule for visiting zaptel in udev*

Change both values of OWNER and GROUP fields in the file to callweaver.

Step 2: Start CallWeaver.

#callweaver -vvvc

Chapter 2 Manual Configuration

This chapter takes the FXM-16A/PCIe board and the TEJ-4A/PCI board for example to show you how to configure a system.

2.1 Zaptel/Dahdi Configuration

Refer to Section 3.2.2 Manual Configuration in the document *SynAST_UserManual.pdf*.

2.2 CallWeaver Configuration

Modify the configuration file according to Table 2-1 below.

Board / Config Model / File	TEJ-4A/PCI		FXM-16A/PCIe (top 4 slots: trunk; bottom 4 slots: station)
	E1 Mode	T1/J1 Mode	
	ISDN	ISDN	
/usr/local/etc/callweaver/zapata.conf	[trunkgroups] [channels] usecallerid=yes hidecallerid=no callwaiting=no threewaycalling=yes transfer=yes rxgain=0.0 txgain=0.0 echocancel=yes echocancelwhenbridged=yes busydetect=yes busycount=7 relaxdtmf=yes Context=from-pstn signalling=pri_cpe switchtype=euroisdn channel=>1-15,17-31 channel=>32-46,48-62 channel=>63-77,79-93 channel=>94-108,110-124 Note: For the configuration to support channel bank, Context=channelbanktest signalling=fxo_rx channel => 1-15,17-31	[trunkgroups] [channels] usecallerid=yes hidecallerid=no callwaiting=no threewaycalling=yes transfer=yes rxgain=0.0 txgain=0.0 echocancel=yes echocancelwhenbridged=yes busydetect=yes busycount=7 relaxdtmf=yes context=from-pstn signalling=pri_cpe switchtype=national channel=>1-23 channel=>25-47 channel=>49-71 channel=>73-95	;fxo Module context=from-pstn signalling=fxs_ks channel=>1-8 ;fxs Module context=from-internal signalling=fxo_ks channel=>9-16

Table 2-1 CallWeaver Configuration

Chapter 3 Test

3.1 Preparation

Use an FXM-16A/PCIe board and a TEJ-4A/PCI board for example. The former 4 modules on the FXM-16A/PCIe board are FXO and the latter 4 are FXS. Meanwhile, configure the TEJ-4A/PCI board with E1+ISDN mode.

Examine the configuration of zaptel:

```
#ztcfg –vv
```

3.2 Test Example

3.2.1 CallWeaver Environment

Step 1: Examine the configuration of CallWeaver.

```
#callweaver–vvvc                    # start weaver
*CLI>zap show channels              # check the channel state
```

Step 2: Test Example 1 (FXM-16A/PCIe).

a) Add dialing rules to '/usr/local/etc/callweaver/extensions.conf':

```
[text]
exten => _300X,1,Dial(zap/ 13,50)
exten => _300X,n,playback(hello-world)
exten => _300X,n,Hangup()
```

b) Use Station 15 to dial 3000. Then test the call with Channel 13.

Step 3: Test Example 2 (TEJ-4A/PCI).

a) Register sip to Asterisk.

b) Add dialing rules to '/usr/local/etc/callweaver/extensions.conf':

```
[text]
exten => _300X,1,Dial(zap/ 13,50)
exten => _300X,n,playback(hello-world)
exten => _300X,n,Hangup()
```

c) Use sip to dial 3000 out. Then test the call with Channel 13.

Appendix A Technical/Sales Support

Thank you for choosing Synway. Please contact us should you have any inquiry regarding our products. We shall do our best to help you. However, our technicians and salesmen are mainly responsible for maintaining our boards and providing relative technical support. If there are problems about Asterisk, please keep touch with Digium Inc. for help.

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