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Preface

When you use the Synway AST series boards to set up a Yate 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 Yate for the first time, and takes the use of TEJ-4A/PCI and FXM-16A/PCle in Yate-1.3.0 for example.

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

Chapter 2 tells how to manually configure the system.

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

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  Yate

For detailed information about Yate, visit the official website of Yate: http://yate.null.ro.

1.1.1  Preparation

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

<table>
<thead>
<tr>
<th>Resource Package</th>
<th>Version Recommendation</th>
<th>Address</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>zaptel-1.4.x.tar.gz</td>
<td>1.4.x</td>
<td><a href="http://downloads.digium.com/pub/zaptel/releases/">http://downloads.digium.com/pub/zaptel/releases/</a></td>
<td>Command: #rpm –q zaptel, to check the version</td>
</tr>
<tr>
<td>yate</td>
<td>latest version downloaded from CVS</td>
<td>pserver:<a href="mailto:anonymous@voip.null.ro">anonymous@voip.null.ro</a>:/home/cvsroot/private</td>
<td>Respectively execute the following commands: #cvs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-d :pserver:<a href="mailto:anonymous@voip.null.ro">anonymous@voip.null.ro</a>:/home/cvsroot/private login</td>
</tr>
<tr>
<td>SynAST-x.x.x.tar.gz</td>
<td>1.1.0.0 or above</td>
<td><a href="http://www.synway.net">http://www.synway.net</a></td>
<td>None</td>
</tr>
</tbody>
</table>

Table 1-1 Resource Packages for Yate Installation

1.1.2  Driver Installation

Step 1:  Install the zaptel driver and the SynAST driver.


1.1.3  Yate Installation

# ./configure

#make

#make install
1.1.4 Configuration

*Note: Follow Chapter 2 Manual Installation in this file to configure.*

1.1.5 Yate Startup

```
#yate&
```
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 Yate Configuration

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

```plaintext
<table>
<thead>
<tr>
<th>Board Config</th>
<th>FXM-16A/PCIe</th>
<th>TEJ-4A/PCI</th>
<th>E1 Mode</th>
<th>T1/J1 Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(top 4 slots: trunk; bottom 4 slots: station)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/usr/ local/ etc/ yate/ zapcard.conf</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[span1-1] type=E1 offset=0 sigchan=16 voicechans=1-15</td>
<td>[span1] type=T1 offset=0 sigchan=24 voicechans=1-23</td>
<td>.fxo Module</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[span2-1] type=E1 offset=31 sigchan=47 voicechans=1-15</td>
<td>[span1] type=T1 offset=48 sigchan=72 voicechans=1-23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[span2-2] type=E1 offset=47 voicechans=1-15</td>
<td>[span1] type=T1 offset=72 sigchan=96 voicechans=1-23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[span3-1] type=E1 offset=62 sigchan=78 voicechans=1-15</td>
<td>[span3-1] type=E1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

SynAST Application Platform – Yate Installation Manual
<table>
<thead>
<tr>
<th>/usr/</th>
<th>local/</th>
<th>etc/</th>
<th>yate/</th>
<th>ysigchan.conf</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>type=isdn-pri-net</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sig=span1-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>voice=span1-1,span1-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[link1] type=isdn-pri-net</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sig=span2-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>voice=span2-1,span2-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[link2] type=isdn-pri-net</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sig=span3-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>voice=span3-1,span3-2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[link3] type=isdn-pri-net</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sig=span4-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>voice=span4-1,span4-2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>/usr/</th>
<th>Local/</th>
<th>etc/</th>
<th>yate/</th>
<th>analog.conf</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>type=FX0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>spans=span1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[link1] echocancel=enable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>type=FXS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>spans=span2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2-1 Yate 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 Yate Environment

Step 1: Examine the configuration of Yate.

#yate&  # start Yate
#telnet 127.0.0.1 5038  # connect to Yate
status zaptel  # enter this command at the terminal telnet to check the configuration

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

1) Add dialing rules to ‘/usr/local/etc/yate/regexroute.conf’:

[default]
^3020$=analog/span1/1

2) Use the client program in Yate to dial 3020 and call out through the first channel on FXM-16A/PCIe.
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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