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ASTPP is an Open Source VoIP Billing Solution for Freeswitch. It supports pre-paid and post-paid billing with call rating and credit control. It also provides many other features such as calling cards, least cost routing (LCR), did management, resellers management etc.
CHAPTER 1

Introduction

Related pages
1.1 Features

1.2 Components

- **Nginx** ([http://nginx.com/](http://nginx.com/))
  - NGINX accelerates content and application delivery, improves security, facilitates availability and scalability for the busiest web sites on the Internet.

- **PHP** ([http://php.net/](http://php.net/))
  - PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML.

- **Lua** ([http://lua.org/](http://lua.org/))
  - Lua is a powerful, efficient, lightweight, embeddable scripting language. It supports procedural programming, object-oriented programming, functional programming, data-driven programming, and data description.

- **MySQL** ([https://www.mysql.com/](https://www.mysql.com/))
  - MySQL is a freely available open source Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). SQL is the most popular language for adding, accessing and managing content in a database. It is most noted for its quick processing, proven reliability, ease and flexibility of use.

- **FreeSwitch** ([https://freeswitch.org/](https://freeswitch.org/))
FreeSWITCH is a scalable open source cross-platform telephony platform designed to route and interconnect popular communication protocols using audio, video, text or any other form of media. It was created in 2006 to fill the void left by proprietary commercial solutions.

1.3 System Requirement

Minimal System requirement

- 2GB RAM
- 40GB Hard drive
- 64 bit OS (Centos/ Debian latest version)
- Dedicated server ip
- 100 Mbps connection

VoIP Requirement

- Termination gateway to route outbound calls
- DIDs to receive incoming calls

Note: Promotion

If you’re carrier and would like to add your company name listed in ASTPP then please contact us at sales@inextrix.com.

1.4 How to Contribute

1. Become a tester and report bugs in bug tracker: Here is the link https://github.com/iNextrix/ASTPP/issues
2. Write or improve our project documentation: Which is me :)
3. Become a translator: If you have good command over other language then here is one more options for you to become a translator for documentation or portal labels.
4. Suggest a feature: If you have an idea you feel could improve the project, you can suggest us.
5. Help with design: If you have a talent for design, why not offer to help design the project’s website or logo? If you fancy a bigger challenge, you could volunteer to give the project’s user interface a makeover.
6. Donate by money: You can contribute to survive project, speed project development and to encourage team. Donation paypal id is billing@inextrix.com.
7. Build a community: As we are an open source, to survive it needs to become the center of a large, engaged community. Community means more people to discover and report issues, suggest new features, and generally help to spread the word. There’s lots of ways you can help to grow a project’s community, but a few popular methods are writing blogs and tutorials, promoting the project on social networks, and becoming active on its mailing list and/or forums, particularly when it involves answering questions newcomers have about the project.
ASTPP Installation Guide

Basic knowledge of Freeswitch and Linux is required in order to do installation. We provide two ways to do installation,

1. Quick Installation
2. Manual Installation

Related pages

2.1 Quick Installation

Quick installation will install ASTPP 3.5 in scratch system only.

Quick Installation

```
# wget --no-check-certificate http://bit.do/dHwVu -O install.sh
# chmod +x install.sh
# ./install.sh
```

2.2 Manual Installation

ASTPP Guide

we are using ASTPP version 3.5 and supporting only two OS for manual installation. You can opt any of them from below links.
2.2.1 Astpp Version 3.5

ASTPP Manual Installation Guide

Currently, we are supporting only two OS for manual installation. It’s CentOS 7 and Debian 8. You can opt any of them from below links.

CentOS 7 Installation V3.5

Install base packages

```
yum update
yum groupinstall "Development tools" -y

# Enable epel and freeswitch repository
yum install epel-release
rpm -Uvh http://files.freeswitch.org/freeswitch-release-1-6.noarch.rpm
yum update
```

Install Freeswitch

1. Install Freeswitch pre-requisite packages

```
# Install development tools
yum install -y wget git autoconf automake expat-devel yasm gnutls-devel libtiff-devel
   libX11-devel unixODBC-devel
python-devel zlib-devel alsa-lib-devel libogg-devel libvorbis-devel uuid-devel
                    @development-tools gdbm-devel
# Enable development tools
yum install -y wget git autoconf automake expat-devel yasm gnutls-devel libtiff-devel
   libX11-devel unixODBC-devel
python-devel zlib-devel alsa-lib-devel libogg-devel libvorbis-devel uuid-devel
                    @development-tools gdbm-devel
db4-devel libjpeg libjpeg-deve compat-libtermcap ncrurses ncurses-devel ntp screen
# Enable development tools
sendmail sendmail-cf gcc-c++
@development-tools bison bzip2 curl curl-devel m翮decode git make mysql-connector-
   opencv openssl-devel unixODBC
dblib pre-devel speex-devel sqlite-devel ldns-devel libedit-devel bc e2fsprogs-devel
   libcurl-devel libxml2-devel
libyuv-devel opus-devel libvpx-devel libvpx2+ libdb4+ libidn-devel unbound-devel
   libuuid-devel lua-devel libsndfile-devel
```

2. Download latest freeswitch version

```
cd /usr/local/src
git config --global pull.rebase true

# Clone freeswitch version 1.6.8 from git
git clone -b v1.6.19 https://freeswitch.org/stash/scm/fs/freeswitch.git
```

3. Edit modules.conf

```
# Enabling mod_xml_curl, mod_json_cdr, mod_db
sed -i "s#\#xml_int/mod_xml_curl#xml_int/mod_xml_curl#g" /usr/local/src/freeswitch/
   modules.conf
sed -i "s#\#mod_db#mod_db#g" /usr/local/src/freeswitch/modules.conf
sed -i "s#\#event_handlers/mod_json_cdr#event_handlers/mod_json_cdr#g" /usr/local/
   src/freeswitch/modules.conf
sed -i "s#\#applications/mod_voicemail#applications/mod_voicemail#g" /usr/local/src/
   freeswitch/modules.conf
```

Chapter 2. Installation
Note: # add a module by removing '#' comment character at the beginning of the line # remove a module by inserting the '#' comment character at the beginning of the line containing the name of the module to be skipped

4. Compile the Source

./configure -C

5. Install Freeswitch with sound files

make all install cd-sounds-install cd-moh-install
make && make install

6. Set right time in server

ntpd date pool.ntp.org
systemctl restart ntp
chkconfig ntp on

7. Create symbolic links for Freeswitch executables

ln -s /usr/local/freeswitch/bin/freeswitch /usr/local/bin/freeswitch
ln -s /usr/local/freeswitch/bin/fs_cli /usr/local/bin/fs_cli

ASTPP Install

1. Download ASTPP

# Download ASTPP 3.5 source from git
cd /usr/src
    git clone https://github.com/iNextrix/ASTPP

2. Change Apache working scenario

As we are using Nginx from now onwards from ASTPP 3.0, if you are using apache for
→ any applicaion then−
→ either have to move it to Nginx and/or remove apache. You can also change default−
→ port for apache if want to use−
it continue and troubleshoot some installation issue if arise.

3. Install ASTPP pre-requisite packages

yum install -y autoconf automake bzip2 cpio curl nginx php-fpm php-mcrypt* unixODBC−
→mysql-connector-odbc curl-devel php
php-devel php-common php-cli php-gd php-pear php-mysql php-mbstring sendmail sendmail−
→cf php-pdo php-xmljson mysql mariadb-server mysql-devel libxml2 libxml2-devel openssl openssl-devel gettext-devel
→ fileutils gcc-c++

4. Normalize ASTPP

#Create access & error log files.
touch /var/log/nginx/astpp_access_log
touch /var/log/nginx/astpp_error_log
touch /var/log/nginx/fs_access_log
touch /var/log/nginx/fs_error_log
systemctl restart php-fpm
service nginx reload

2.2. Manual Installation
ASTPP using FreeSWITCH (if you want to use ASTPP with FreeSWITCH)

1. Configure freeswitch startup script

```bash
cp /usr/src/latest/freeswitch/init/freeswitch.centos.init /etc/init.d/freeswitch
chmod 755 /etc/init.d/freeswitch
chmod +x /etc/init.d/freeswitch
chkconfig --add freeswitch
chkconfig --level 345 freeswitch on
mkdir /var/run/freeswitch
```

2. Configure ASTPP with freeswitch

```bash
# Create directory structure for ASTPP
mkdir -p /var/lib/astpp/
mkdir -p /var/log/astpp/
mkdir -p /usr/local/astpp/
mkdir -p /var/www/

# Setting permissions
chown -Rf root.root /var/lib/astpp/
chown -Rf root.root /var/log/astpp/
chown -Rf root.root /usr/local/astpp/
chown -Rf root.root /var/www/

# Setting up Scripts and Sounds for fs
cp -rf /usr/src/ASTPP/freeswitch/scripts/* /usr/local/freeswitch/scripts/
cp -rf /usr/src/ASTPP/freeswitch/fs /var/www/html/
cp -rf /usr/src/ASTPP/freeswitch/sounds/en/us/callie/
chmod -Rf 777 /usr/local/freeswitch/sounds/en/us/callie/
rm -rf /usr/local/freeswitch/conf/dialplan/*
touch /usr/local/freeswitch/conf/dialplan/astpp.xml
rm -rf /usr/local/freeswitch/conf/directory/*
touch /usr/local/freeswitch/conf/directory/astpp.xml
rm -rf /usr/local/freeswitch/conf/sip_profiles/*
touch /usr/local/freeswitch/conf/sip_profiles/astpp.xml
```

Install ASTPP web interface

```bash
mkdir -p /var/lib/astpp
```

```bash
cp /usr/src/ASTPP/config/* /var/lib/astpp/
```

```bash
# Setup web interface for ASTPP
mkdir -p /var/www/html/astpp
cp -rf /usr/src/ASTPP/web_interface/astpp/* /var/www/html/astpp/
chown -Rf root.root /var/www/html/astpp
```

```bash
# Apply security policy
sed -i "s/SELINUX=enforcing/SELINUX=disabled/" /etc/sysconfig/selinux
sed -i "s/SELINUX=enforcing/SELINUX=disabled/" /etc/selinux/config
/etc/init.d/iptables stop
chkconfig iptables off
setenforce 0
chmod -Rf 755 /var/www/html/astpp
```

```bash
touch /var/log/astpp/astpp.log
```
Install ASTPP Database

```bash
# Restart mysql service
systemctl start mariadb
mysql -uroot -e "UPDATE mysql.user SET password=PASSWORD('<MYSQL_ROOT_PASSWORD>') WHERE user='root'; FLUSH PRIVILEGES;"

# Create database astpp
mysql -uroot -p<MYSQL_ROOT_PASSWORD> -e "create database astpp;"
mysql -uroot -p<MYSQL_ROOT_PASSWORD> -e "CREATE USER 'astppuser'@'localhost' IDENTIFIED BY '<ASTPP_USER_PASSWORD>';"
mysql -uroot -p<MYSQL_ROOT_PASSWORD> -e "GRANT ALL PRIVILEGES ON `astpp`.* TO 'astppuser'@'localhost' WITH GRANT OPTION; FLUSH PRIVILEGES;"
mysql -uroot -p<MYSQL_ROOT_PASSWORD> astpp < /usr/src/ASTPP/database/astpp-3.0.sql
mysql -uroot -p<MYSQL_ROOT_PASSWORD> astpp < /usr/src/ASTPP/database/astpp-upgrade-3.5.sql
```

ASTPP Freeswitch Configuration

```bash
cp /usr/src/ASTPP/freeswitch/conf/autoload_configs/* /usr/local/freeswitch/conf/autoload_configs/

# Edit db password in autoload config files.
sed -i "s#dbpass = <PASSSWORD>#dbpass = <MYSQL_ROOT_PASSWORD>#g" /var/lib/astpp/astpp-config.conf
sed -i "s#DB_PASSWD="<PASSSWORD>"#DB_PASSWD = "<MYSQL_ROOT_PASSWORD>"#g" /var/lib/astpp/astpp.lua

# Edit base URL in astpp-config

Note:- Replace "<SERVER FQDN / IP ADDRESS>" with your server domain name or IP address
```

Finalize Installation & Start Services

```bash
# Open php short tag
sed -i "s#short_open_tag = Off#short_open_tag = On#g" /etc/php.ini

# Configure services for startup
systemctl disable httpd   # If you are using it then change the port or update your configuration for nginx otherwise
your gui will not up
systemctl enable nginx
systemctl enable php-fpm
systemctl start mariadb
systemctl start freeswitch
systemctl stop firewalld
chkconfig --levels 345 mariadb on
chkconfig --levels 345 freeswitch on
chkconfig --levels 123456 firewalld off

Note:- If you want to use firewall then configure it to allow all port used in fs and ASTPP.
```

Setup cron

2.2. Manual Installation
Finally Reboot it.

# You are almost done with your configuration so just reboot it and make sure everything is working fine.

reboot now

# Once server up and running again, check below service status.
systemctl status nginx
systemctl status mariadb
systemctl status freesoftware
systemctl status php-fpm

Note: You are done with GUI installation. Enjoy :) Visit the astpp admin page in your web browser. It can be found here: http://server_ip:8089/ Please change the ip address depending upon your box. The default username and password is “admin”.

Note: In case of any issue please refer apache error log.

Note: If you have any other question(s) then please contact us on sales@inextrix.com or post your questions(s) in https://groups.google.com/forum/#!forum/astpp.

Debian 8 Installation

Install base packages

ap-get -o Acquire::Check-Valid-Until=false update
apt-get install -y git wget curl

Install Freesoftware

1. Install Freesoftware pre-requisite packages

# Add Freesoftware source list
curl https://files.freeswitch.org/repo/deb/debian/freeswitch_archive_g0.pub | apt-key --add -
echo "deb http://files.freeswitch.org/repo/deb/freeswitch-1.6/ jessie main" > /etc/ apt/sources.list.d/freeswitch.list
# Install dependencies
```
apt-get -o Acquire::Check-Valid-Until=false update && apt-get install -y --force-yes
    -freeswitch-video-deps
most apt-get install -y autoconf automake devscripts gawk chkconfig dnsutils sendmail-
    -bin sensible-mda ntpdate ntp g++
git-core curl libjpeg62-turbo-dev libncurses5-dev make python-dev pkg-config libgdbm-
    -dev libyuv-dev libdb-
debug libvpx2-dev gettext sudo lua5.1 php5 php5-dev php5-common php5-cli php5-gd php-
    -pear php5-cli
php5-gd php-pear php5-cli php-apc php5-curl libxml2 libxml2-dev openssl libcurl4-
    --openssl-dev gettext gcc libldns-dev
libpcre3-dev build-essential libssl-dev libspeex-dev libspeexdsp-dev libsqlite3-dev
    --libedit-dev libldns-dev libpq-dev bc
```

# Install mysql server
```
apt-get install -y mysql-server php5-mysql
```

2. Download latest freeswitch version
```
cd /usr/local/src
git config --global pull.rebase true

# Clone freeswitch version 1.6 from git
git clone -b v1.6.19 https://freeswitch.org/stash/scm/fs/freeswitch.git
cd freeswitch
./bootstrap.sh -j
```

3. Edit modules.conf
```
# Enabling mod_xml_curl, mod_json_cdr, mod_db
sed -i "s#xml_int/mod_xml_curl#xml_int/mod_xml_curl#g" /usr/local/src/freeswitch/
    modules.conf
sed -i "s#mod_db#mod_db#g" /usr/local/src/freeswitch/modules.conf
sed -i "s#applications/mod_voicemail#applications/mod_voicemail#g" /usr/local/src/
    freeswitch/modules.conf
sed -i "s#event_handlers/mod_json_cdr#event_handlers/mod_json_cdr#g" /usr/local/src/
    freeswitch/modules.conf
```

Note: # add a module by removing ‘#’ comment character at the beginning of the line # remove a module by inserting the ‘#’ comment character at the beginning of the line containing the name of the module to be skipped

4. Compile the Source
```
./configure -C
```

5. Install Freeswitch with sound files
```
make all install cd-sounds-install cd-moh-install
make && make install
```

6. Set right time in server
```
ntpdate pool.ntp.org
systemctl restart ntp
chckconfig ntp on
```

2.2. Manual Installation
7. Create symbolic links for Freeswitch executables

    ln -s /usr/local/freeswitch/bin/freeswitch /usr/local/bin/freeswitch
    ln -s /usr/local/freeswitch/bin/fs_cli /usr/local/bin/fs_cli

ASTPP Install

1. Download ASTPP

    # Download ASTPP 3.5 source from git
    cd /usr/src
    git clone https://github.com/iNextrix/ASTPP

2. Change Apache working scenario

    As we are using Nginx from now onwards in ASTPP 3.0, if you are using apache for any application then either have to move it to Nginx and/or remove apache. You can also change default port for apache if want to use it continue and troubleshoot some installation issue if arise.

3. Install ASTPP pre-requisite packages

    apt-get -o Acquire::Check-Valid-Until=false update
    apt-get install -y curl libyuv-dev libvpx2-dev nginx php5-fpm php5 php5-mcrypt
    libmyodbc unixodbc-bin php5-dev php5-common php5-cli php5-gd php-pear php5-cli php-apc php5-curl libxml2 libxml2-dev openssl libcurl4-openssl-dev gettext gcc g++

4. Normalize ASTPP

    # Create access & error log files.
    touch /var/log/nginx/astpp_access_log
    touch /var/log/nginx/astpp_error_log
    touch /var/log/nginx/fs_access_log
    touch /var/log/nginx/fs_error_log
    php5enmod mcrypt
    systemctl restart php5-fpm
    service nginx reload

ASTPP using FreeSWITCH (if you want to use ASTPP with FreeSWITCH)

1. Configure freeswitch startup script

    cp /usr/src/ASTPP/freeswitch/init/freeswitch.debian.init /etc/init.d/freeswitch
    chmod 755 /etc/init.d/freeswitch
    chmod +x /etc/init.d/freeswitch
    update-rc.d freeswitch defaults
    chkconfig --add freeswitch
    chkconfig --level 345 freeswitch on

2. Configure ASTPP with freeswitch

    # Create directory structure for ASTPP
    mkdir -p /var/lib/astpp/
    mkdir -p /var/log/astpp/
mkdir -p /usr/local/astpp/
mkdir -p /var/www/

# Setting permissions
chown -Rf root.root /var/lib/astpp/
chown -Rf www-data.www-data /var/log/astpp/
chown -Rf root.root /usr/local/astpp/
chown -Rf www-data.www-data /var/www/

# Setting up Scripts and Sounds for fs
cp -rf /usr/src/ASTPP/freeswitch/scripts/* /usr/local/freeswitch/scripts/
cp -rf /usr/src/ASTPP/freeswitch/fs /var/www/html/
chmod -Rf 777 /usr/local/freeswitch/sounds/en/us/callie/
rm -rf /usr/local/freeswitch/conf/dialplan/ *
touch /usr/local/freeswitch/conf/dialplan/astpp.xml
rm -rf /usr/local/freeswitch/conf/directory/ *
touch /usr/local/freeswitch/conf/directory/astpp.xml
rm -rf /usr/local/freeswitch/conf/sip_profiles/ *
touch /usr/local/freeswitch/conf/sip_profiles/astpp.xml

Install ASTPP web interface

mkdir -p /var/lib/astpp
cp /usr/src/ASTPP/config/* /var/lib/astpp/

#Setup web interface for ASTPP
mkdir -p /var/www/html/astpp
cp -rf /usr/src/ASTPP/web_interface/astpp/* /var/www/html/astpp/
rm -rf /usr/local/freeswitch/conf/dialplan/ *
touch /usr/local/freeswitch/conf/dialplan/astpp.xml
rm -rf /usr/local/freeswitch/conf/directory/ *
touch /usr/local/freeswitch/conf/directory/astpp.xml
rm -rf /usr/local/freeswitch/conf/sip_profiles/ *
touch /usr/local/freeswitch/conf/sip_profiles/astpp.xml

Install ASTPP Database

# Restart mysql service
systemctl restart mysql
mysql -uroot -e "UPDATE mysql.user SET password=PASSWORD('<MYSQL_ROOT_PASSWORD>') WHERE user='root'; FLUSH PRIVILEGES;"

CREATE database astpp
mysql -uroot -p<MYSQL_ROOT_PASSWORD> -e "CREATE database astpp;"
mysql -uroot -p<MYSQL_ROOT_PASSWORD> -e "CREATE USER 'astppuser'@'localhost' IDENTIFIED BY '<ASTPP_USER_PASSWORD>';"
mysql -uroot -p<MYSQL_ROOT_PASSWORD> -e "GRANT ALL PRIVILEGES ON `astpp` . * TO 'astppuser'@'localhost' WITH GRANT OPTION;FLUSH PRIVILEGES;"
mysql -uroot -p<MYSQL_ROOT_PASSWORD> astpp < /usr/src/ASTPP/database/astpp-3.0.sql
mysql -uroot -p<MYSQL_ROOT_PASSWORD> astpp < /usr/src/ASTPP/database/astpp-upgrade-3.5.sql

#Setup ODBC Connection for mysql
cp /usr/src/ASTPP/misc/odbc/deb_odbc.ini /etc/odbc.ini
### ASTPP Documentation, Release latest

```
cp /usr/src/ASTPP/misc/odbc/deb_odbcinst.ini /etc/odbcinst.ini
```

*Update your mysql login information in odbc file*
```
sed -i "s#PASSWORD = <PASSWORD>#PASSWORD = <MYSQL_ROOT_PASSWORD>#g" /etc/odbc.ini
```

Note:- Replace "<MYSQL_ROOT_PASSWORD>" with your mysql root login password and "<ASTPP_USER_PASSWORD>" is as per your choice.

### ASTPP Freeswitch Configuration

```
cp /usr/src/ASTPP/freeswitch/conf/autoload_configs/* /usr/local/freeswitch/conf//autoload_configs/
```

*Edit db password in autoload config files.*
```
sed -i "s#dbpass = <PASSSWORD>#dbpass = <MYSQL_ROOT_PASSWORD>#g" /var/lib/astpp/astpp-config.conf
```

```
sed -i "s#DB_PASSWD = "<PASSSWORD>"#DB_PASSWD = "<MYSQL_ROOT_PASSWORD>"#g" /var/lib/astpp/astpp.lua
```

*Edit base URL in astpp-config*
```
```

Note:- Replace "<SERVER FQDN / IP ADDRESS>" with your server domain name or IPaddress

### Finalize Installation & Start Services

```
#Open php short tag
sed -i "s#short_open_tag = Off#short_open_tag = On#g" /etc/php.ini
```

*Configure services for startup*
```
systemctl disable apache2 #If you are using it then change the port or update your...
```
otherwise your gui will not up
```
systemctl enable nginx
```
```
systemctl enable php5-fpm
```
```
systemctl start mysql
```
```
systemctl start freeswitch
```
```
chkconfig --levels 345 mariadb on
```
```
chkconfig --levels 345 freeswitch on
```

Note:- If you want to use iptables then configure it to allow all port used in fs and astpp.

### Setup cron

```
# Generate Invoice
0 1 * * * cd /var/www/html/astpp/cron/ && php cron.php GenerateInvoice
```

```
# Low balance notification
0 1 * * * cd /var/www/html/astpp/cron/ && php cron.php UpdateBalance
```

```
# Low balance notification
0 0 * * * cd /var/www/html/astpp/cron/ && php cron.php LowBalance
```

# Update currency rate
0 0 * * * cd /var/www/html/astpp/cron/ && php cron.php CurrencyUpdate

# Email Broadcasting
0 0 * * * cd /var/www/html/astpp/cron/ && php cron.php BroadcastEmail

Finally Reboot it.

You are almost done with your configuration so just reboot it and make sure everything is working fine.
reboot now

Once server up and running again, check below service status.
systemctl status nginx
systemctl status mysql
systemctl status freeswitch
systemctl status php5-fpm

Note: You are done with GUI installation. Enjoy :) Visit the astpp admin page in your web browser. It can be found here: http://server_ip:8089/ Please change the ip address depending upon your box. The default username and password is “admin”.

Note: In case of any issue please refer apache error log.

Note: If you have any other question(s) then please contact us on sales@inextrix.com or post your questions(s) in https://groups.google.com/forum/#!forum/astpp.

2.3 Quick Start

Here are the steps to configure basic system:

[Origination Configuration]

1. Create Rate Group. Tariff -> Rate Group
2. Select Trunk in Rate Group
3. Add Origination Rates. Tariff -> Origination rates (Pattern example : 1, 235)

[Termination Configuration]

1. Add Gateway under your sip profile. Switch -> Gateways
2. Add Provider. Global Accounts -> Customers -> Create Provider
3. Add your trunk. Carriers -> Trunks
4. Add termination rates. Carriers -> Termination Rates(Pattern example : 1, 235)

Create new Customer or Reseller and assign your created rate group. For customer add SIP Device from View Account or Freeswitch SIP Devices.
For reseller configuration, create new reseller. Login as reseller. Add Routes. Create customers and then make calls using that customer.

Register it and make outbound calls.

How to ASTPP Quick Start
Fail2Ban is an intrusion prevention system that works by scanning log files and then taking action based on the entries in those logs.

You can configure Fail2Ban in a way that will update iptables firewall rules, when an authentication failure threshold is reached which helps in preventing SIP brute force attacks against FS instances.

Fail2Ban scans your freeswitch log file and bans IP that makes too many password failures. It updates firewall rules to reject the IP address.

Fail2Ban is available at fail2ban.org as well as more documentation.

**Related pages**

### 3.1 Apache Authentication

Apache authentication can be configured to require web site visitors to login with a user and password.

We protect cgi-bin apache directory which contains important perl scripts for dialplan, configurations and directory.

**Step # 1: Make sure Apache is configured to use .htaccess file**

You need to have "AllowOverride AuthConfig" directive in apache configuration file in order for directives to have any effect.

For CentOS:

```sh
vim /etc/httpd/conf/httpd.conf
<Directory "/var/www/cgi-bin">
AllowOverride AuthConfig
Options None
Order allow,deny
Allow from all
</Directory>
```

Save the file and restart Apache.
# service httpd restart

For Debian

vim /etc/apache2/sites-available/default
ScriptAlias /cgi-bin/ /usr/lib/cgi-bin/
<Directory "/usr/lib/cgi-bin">
AllowOverride AuthConfig
Options +ExecCGI -MultiViews +SymLinksIfOwnerMatch
Order allow,deny
Allow from all
</Directory>

Save the file and restart Apache
# service apache2 restart

Step # 2: Create a password file with htpasswd

htpasswd command is used to create and update the flat-files (text file) used to
→store usernames and password for
basic authentication of Apache users. General syntax: htpasswd -c password-file
→username
Where,
→c : Create the password-file. If password-file already exists, it is
→rewritten and truncated.
→username : The username to create or update in password-file. If
→username does not
→exist in this file, an entry is added. If it does exist, the password is
→changed.

Create directory outside apache document root, so that only Apache can access,
→password file. The password-file should
be placed somewhere not accessible from the web. This is so that people cannot,
→download the password file:

# mkdir -p /home/secure/
Add new user called astpp
# htpasswd -c /home/secure/apasswords astpp
New password:
Re-type new password:
allow apache user apache to read password file:

For CentOS
# chown apache:apache /home/secure/apasswords
# chmod 0660 /home/secure/apasswords

For Debian
# chown www-data:www-data /home/secure/apasswords
# chmod 0660 /home/secure/apasswords

Now user astpp is added but you need to configure the Apache web server to request a,
→password and tell the server
which users are allowed access. We have directory /var/www/cgi-bin and we would like,
→to protect it with a password.

For CentOS
# cd /var/www/cgi-bin
# vim .htaccess
For Debian
# cd /usr/lib/cgi-bin
# vim .htaccess
Add following text:

```plaintext
AuthType Basic
AuthName "Restricted Access"
AuthUserFile /home/secure/apasswords
Require user astpp
```

Now add username and password to following files:
# vim /usr/local/freeswitch/conf/autoload_configs/xml_curl.conf.xml
<!-- set this to provide authentication credentials to the server -->
<param name="gateway-credentials" value="astpp:your_password"/>

# vim /usr/local/freeswitch/conf/autoload_configs/xml_cdr.conf.xml
<!-- optional: credentials to send to web server -->
<param name="cred" value="astpp:your_password"/>

Now restart freeswitch
# service freeswitch restart

You can test it by running below url in browser
http://localhost/cgi-bin/astpp/astpp-fs-xml.cgi

You will be asked for username and password for authentication.

### 3.2 Secure Freeswitch

**Change Event Socket credential**

```plaintext
# vim /usr/local/freeswitch/conf/autoload_configs/event_socket.conf.xml
<param name="password" value="your_password"/>
Restart freeswitch service #service freeswitch restart
```

**Set FreeSwitch Event Socket credential in UI**

1. Login to ASTPP portal and Open Switch -> Freeswitch Server page.
2. Edit configured FreeSwitch settings to new credential which you just configured in event socket file.

### 3.3 Secure Portal

**Steps**:
1. Login to ASTPP portal
2. Open Accounts -> Admins page
3. Set strong password for admin

**Note**: Always use strong passwords to keep system secure.
3.4 Fail2ban

Fail2Ban is an intrusion prevention system that works by scanning log files and then taking action based on the entries in those logs.

You can configure Fail2Ban in a way that will update iptables firewall rules, when an authentication failure threshold is reached which helps in preventing SIP brute force attacks against FS instances.

Fail2Ban scans your freeswitch log file and bans IP that makes too many password failures. It updates firewall rules to reject the IP address.

Fail2Ban is available at fail2ban.org as well as more documentation.

Installation:

For CentOS

```bash
cd /usr/src
service iptables stop
wget -T 10 -t 1 http://sourceforge.net/projects/fail2ban/files/fail2ban-stable/
   →fail2ban-0.8.4/fail2ban-0.8.4.tar.bz2
tar -jxf fail2ban-0.8.4.tar.bz2
cd fail2ban-0.8.4
python setup.py install
cp /usr/src/fail2ban-0.8.4/files/redhat-initd /etc/init.d/fail2ban
chmod 755 /etc/init.d/fail2ban
```

For Debian

```bash
apt-get -y install fail2ban
```

Configurations:

```
touch /etc/fail2ban/filter.d/freeswitch.conf
cp /etc/fail2ban/filter.d/freeswitch.conf /etc/fail2ban/filter.d/freeswitch.bak

# vim /etc/fail2ban/filter.d/freeswitch.conf

[Definition]
# Option: failregex
# Notes.: regex to match the password failures messages in the logfile. The
# host must be matched by a group named host. The tag '{@HOST}' can
# be used for standard IP/hostname matching and is only an alias for
# {?::f{4,6}:)?{{P<host>\[\w\-._\^\-\]+}}
# Values: TEXT
#
failregex
   = \[WARNING\] sofia_reg.c:\d+ SIP auth challenge \(REGISTER\) on sofia
   profile '\[^']+' for \[.+\] from ip <HOST>
\[WARNING\] sofia_reg.c:\d+ SIP auth failure \(INVITE\) on sofia profile '\[^']+'\`
   →for \[.+\] from ip <HOST>
# Option: ignoreregex
# Notes.: regex to ignore. If this regex matches, the line is ignored.
# Values: TEXT
#
ignoreregex =
```

22 Chapter 3. Security
# vim /etc/fail2ban/filter.d/freeswitch-dos.conf

[Definition]
# Option: failregex
# Notes.: regex to match the password failures messages in the logfile. The
# host must be matched by a group named host. The tag '<HOST>' can
# be used for standard IP/hostname matching and is only an alias for
# {(?::f\{4,6}:)?(?P<host>[^\/-._]+)}
# Values: TEXT
#
failregex
  = \[WARNING\] sofia_reg.c:\d+ SIP auth challenge \(REGISTER\) on sofia
profile \'[^']*\' for \[.\] from ip <HOST>
# Option: ignoreregex
# Notes.: regex to ignore. If this regex matches, the line is ignored.
# Values: TEXT
#
ignoreregex =

cp /etc/fail2ban/jail.conf /etc/fail2ban/jail.bak

# vim /etc/fail2ban/jail.local

[freeswitch]
enabled = true
port = 5060,5061,5080,5081
filter = freeswitch
logpath = /usr/local/freeswitch/log/freeswitch.log
maxretry = 10
bantime = 1000000
findtime = 480
action = iptables-allports[name=freeswitch, protocol=all]
sendmail-whois[name=FreeSwitch, dest=, sender=fail2ban@]

[freeswitch-dos]
enabled = true
port = 5060,5061,5080,5081
filter = freeswitch-dos
logpath = /usr/local/freeswitch/log/freeswitch.log
action = iptables-allports[name=freeswitch-dos, protocol=all]
maxretry = 50
findtime = 30
bantime = 6000

/etc/init.d/iptables start

/etc/init.d/fail2ban start

chkconfig fail2ban on

3.4. Fail2ban
Monit is a small Open Source utility for managing and monitoring systems. Monit conducts automatic maintenance and repair and can execute meaningful causal actions in error situations.

For ASTPP we can configure apache, freeswitch and mysql services to monitor.

**Installation**

For CentOS

```bash
yum install monit
```

For Debian

```bash
apt-get install monit
```

**Configurations:**

**Enable Web Interface in Monit**

Monit also provided an web interface to view services and processes status. To enable the monit web interface, edit configuration file (For CentOS /etc/monit.conf & For Debian System /etc/monit/monitrc) and modify following lines as per your server information’s

```bash
set httpd port 2812 and
use address localhost
allow localhost
allow admin:monit
allow @monit
allow @users readonly
```

**Configure Monit To Monitor Services**

1) Nginx:
2) MySQL
check process mysqld with pidfile /var/run/mysqld/mysqld.pid
start program = "/etc/init.d/mysql start"
stop program = "/etc/init.d/mysql stop"
group resources
if cpu > 60% for 2 cycles then alert
if cpu > 80% for 5 cycles then restart

3) Freeswitch
check process freeswitch with pidfile /usr/local/freeswitch/run/freeswitch.pid
start program = "/etc/init.d/freeswitch start"
stop program = "/etc/init.d/freeswitch stop"
if 5 restarts within 5 cycles then timeout
if cpu > 60% for 2 cycles then alert
if cpu > 80% for 5 cycles then alert
if totalmem > 2000.0 MB for 5 cycles then restart
if children > 2500 then restart

Configuration for email notification

```
# set mailserver mail.bar.baz, # primary mailserver
# backup.bar.baz port 10025, # backup mailserver on port 10025
# localhost # fallback relay

set mailserver localhost

# set alert sysadm@foo.bar # receive all alerts
# set alert manager@foo.bar only on { timeout } # receive just service-
# # timeout alert

set alert your@email.com

It will notify the status of services in email which are configured in configuration file.
```

Start service

```
Now start the monit service
# service monit start
```
CHAPTER 5

Modules

5.1 Login

Login page for Customer, Reseller, Admin and Provider.
Enter Account number or email and password to login into associate portal.

<table>
<thead>
<tr>
<th>Signup up now</th>
<th>Click on signup to become new user</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forgot Password</td>
<td>If you forgot your password and want to reset then use this link</td>
</tr>
</tbody>
</table>
5.2 Dashboard

ASTPP have nice dashboard page with Summary of total call graph, Top 10 accounts and Recent accounts information. You can also change month and year from top right drop downs by default it show current month records in graph.

- **Summary of total call Graph**
  - This graph includes current month calls statics including total number of calls, answered calls, failed calls and profit.

- **Top 10 accounts**
  - You can filter top 10 accounts by minutes utilized OR by calls. That way admin can identify their potential clients easily.

- **Recharge information**
  - This report will gives admin to monitor recently done recharges in system.
5.3 Accounts

ASTPP have different types accounts based on their roles and responsibility. They are as below,

- **Customers / Providers**
  - We consider customers as (Originator) and providers as (Terminator + Originator) and will be able to do various operations like as below,
    1. Purchase DIDs & configure it
    2. Recharge account
    3. Create own SIP Devices
    4. Manage own caller ids
    5. Invoices
    6. Check their CDRs

- **Resellers**
  - ASTPP gives you freedom to create N level resellers and each reseller will be able to configure their own rates and customers. Resellers will be able to do below operations in system,
    1. Create customers & sub-resellers
    2. Configure rate groups & rates
    3. Purchase DIDs
    4. Invoices
    5. Check reports
    6. Personalize invoices configurations

- **Admin / Sub admins**
  - Admins are having full control over system whereas sub admins are having only reporting permissions.

You can navigate through different menus of ASTPP.

Eg. : To create new customer hover on Accounts, it will show sub menus like Customers, Admins, Resellers.Click on Customers and then click on Create Create Customer.

Related pages

5.3.1 List Account

This page will list customers and providers accounts.
Top panel button of grid

- **Create Customer**: To create a new customer account.
- **Mass Create**: To create multiple customer accounts.
- **Create Provider**: To create a new provider account.
- **Export**: It will export accounts data.
- **Delete**: Delete selected accounts.

Account column button of grid for account entity

- **C**: It indicates customer accounts.
- **P**: It indicates provider accounts.
- **A**: It indicates admin accounts.
- **S**: It indicates subadmin accounts.
Account column button of grid for account type

<table>
<thead>
<tr>
<th>Prepaid</th>
<th>It indicates account type is prepaid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postpaid</td>
<td>It indicates account type is postpaid</td>
</tr>
</tbody>
</table>

Action column in grid

<table>
<thead>
<tr>
<th>$</th>
<th>Refill</th>
</tr>
</thead>
<tbody>
<tr>
<td>✍️</td>
<td>Add Caller ID</td>
</tr>
<tr>
<td>📱</td>
<td>Edit</td>
</tr>
<tr>
<td>🗑️</td>
<td>Delete</td>
</tr>
</tbody>
</table>

### 5.3.2 Create Account

Once you click on Create Customer button, it will show you page to create new account like below screenshot. Enter appropriate information in page and click on save button to create account successfully.

For creating resellers, admins and sub-admins, we have similar process.
Create Customer Account Form Fields Details:
| **Account** | Also referred as User Name, Card Number or ID is typically a 10 unique digits that identify an account into the system. Length of account number is configurable, admin can change it from global configuration. |
|**Password** | The password that needs to be provided to the customer so he/she can log into portal. |
|**Pin** | Calling Card Pin Important if customer is using calling card feature. Length of pin is configurable, admin can change it from calling card configuration. |
|**First-Name** | Customer First name |
|**Last-Name** | Customer Last name |
|**Company** | Customer Company name |
|**Telephone** | Customer Telephone number |
|**Country** | Customer Country |
|**Time-zone** | Customer Timezone |
|**Status** | Customer account status |
|**Max Channels** | Maximum allowed concurrent channels for outbound calls. 0=Unlimited |
|**Number Translation** | If you wish to translate number with some defined number for specific customer then use this feature. |
|**First Used** | Customer account’s first used date and time. It will be updated when customer will do first call from system. |
|**Expiry Date** | Customer account’s expiry date. After that date, customer wouldn’t be able to make new calls. |
|**Valid Days** | Valid days for customer account. |
|**Create SIP Device** | By selecting check-box sip device is automatically created for that new user account. |
|**Rate Group** | Rate group is an essential field for billing. Without rate group customer wouldn’t be able to make any calls. You can create rate group by navigating to Tariff -> Rate group. |
|**Billing Schedule** | Billing schedule for invoice generation. |
|**Billing Day** | If billing schedule is monthly then you will be able to define the day on which you want customer invoice should be generated. |
|**Currency** | Customer account’s currency. If customer currency is INR then all amounts will appear in INR in customer portal. |
|**Account Type** | Select customer account type. Prepaid OR Postpaid. For prepaid customers, system will generate receipts as soon as any charges will be applied to them. For Postpaid, system will generate invoice on defined Billing Day. |
|**Credit Limit** | Customer account’s credit limit. Credit limit is only used for the postpaid account. |
|**Tax** | Select applicable taxes You can create taxes from Configuration -> Taxes. |
|**Low Balance Alert** | Define low balance amount on which you want to send notification to customer. |
|**Enable Email Alerts** | system will notify for Low credit if this option is set to Yes. |
|**Email Address** | E-mail address to get Low credit notification. |
5.3.3 Edit Account

Customer edit page contains settings tabs,

Here is left side menu information,
<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Profile</td>
<td>To edit customer's personal details.</td>
</tr>
<tr>
<td>SIP Devices</td>
<td>Create/update SIP Devices.</td>
</tr>
<tr>
<td>IP Settings</td>
<td>Configure IP to allow calls from defined IPs.</td>
</tr>
<tr>
<td>Caller ID</td>
<td>Set caller id for pinless authentication.</td>
</tr>
<tr>
<td>Speed Dial</td>
<td>Set your favourite number as speed dial from here.</td>
</tr>
<tr>
<td>Block Codes</td>
<td>Configure blocked prefixes for account.</td>
</tr>
<tr>
<td>DID</td>
<td>Assign DID To account.</td>
</tr>
<tr>
<td>Subscription</td>
<td>Assign subscription charges to account.</td>
</tr>
<tr>
<td>Invoices</td>
<td>Shows list of invoices generated for this account.</td>
</tr>
<tr>
<td>Refill Report</td>
<td>Show all refill history of specific account.</td>
</tr>
<tr>
<td>Charges History</td>
<td>It shows all charges which apply to specific customer.</td>
</tr>
<tr>
<td>CDRS</td>
<td>Customer accounts CDRs information.</td>
</tr>
<tr>
<td>Emails</td>
<td>Here you can check email history of accounts.</td>
</tr>
<tr>
<td>Alert Threshold</td>
<td>Here we can set low balance email notification.</td>
</tr>
</tbody>
</table>

Related pages

5.3. Accounts
| **Account** | Also referred as User Name,Card Number or ID is typically a 10 unique digits that identify an account into the system. Length of account number is configurable, admin can change it from global configuration. |
| **Password** | The password that needs to be provided to the customer so he/she can log into portal. |
| **Pin** | Calling Card Pin Important if customer is using calling card feature. Length of pin is configurable, admin can change it from calling card configuration. |
| **First-Name** | Customer First name |
| **Last-Name** | Customer Last name |
| **Company** | Customer Company name |
| **Telephone** | Customer Telephone number |
| **Country** | Customer Country |
| **Time-zone** | Customer Timezone |
| **Status** | Customer account status |
| **Max Channels** | Maximum allowed concurrent channels for outbound calls. 0=Unlimited |
| **Number Translation** | If you wish to translate number with some defined number for specific customer then use this feature. |
| **First Used** | Customer account’s first used date and time. It will be updated when customer will do first call from system. |
| **Expiry Date** | Customer account’s expiry date. After that date, customer wouldn’t be able to make new calls. |
| **Valid Days** | Valid days for customer account. |
| **Create SIP Device** | By selecting check-box sip device is automatically created for that new user account. |
| **Rate Group** | Rate group is an essential field for billing. Without rate group customer wouldn’t be able to make any calls. You can create rate group by navigating to Tariff -> Rate group. |
| **Billing Schedule** | Billing schedule for invoice generation. |
| **Billing Day** | If billing schedule is monthly then you will be able to define the day on which you want customer invoice should be generated. |
| **Currency** | Customer account’s currency. If customer currency is INR then all amounts will appear in INR in customer portal. |
| **Account Type** | Select customer account type. Prepaid OR Postpaid. For prepaid customers, system will generate receipts as soon as any charges will be applied to them. For Postpaid, system will generate invoice on defined Billing Day. |
| **Credit Limit** | Customer account’s credit limit. Credit limit is only used for the postpaid account. |
| **Tax** | Select applicable taxes You can create taxes from Configuration -> Taxes. |
| **Low Balance Alert** | Define low balance amount on which you want to send notification to customer. |
| **Enable Email Alerts?** | system will notify for Low credit if this option is set to Yes. |
| **Email Address** | E-mail address to get Low credit notification. |

### 5.3. Accounts

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Customer SIP Devices

Create/update SIP Devices.

IP Settings

To enable IP Based authentication for customer. Define customer IP’s in below TAB and system will start accepting calls from defined IPs.

Add/Edit IP Settings form fields description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Add a name for identification only, this can be the client OR server name if you wish.</td>
</tr>
<tr>
<td>IP Address</td>
<td>Add the IP Address you want to authenticate with.</td>
</tr>
<tr>
<td>Prefix</td>
<td>For additional validation over IP based authentication.</td>
</tr>
</tbody>
</table>

Caller ID

Set caller id for pinless authentication.
Speed Dial

Block Codes

If you wish to block certain prefixes for account then you can configure those prefixes from Block Codes TAB.
DID

Assign DID To account.

Subscription

Assign subscription charges to account.
Account Invoices

Shows list of invoices generated for this account.
Refill Report

Charges History

CDRs

Customer account CDR information. That will display incoming and outgoing calls.

This report will display only current day records only.
5.3. Accounts
Alert Threshold

5.3.4 Email Mass

Email Mass Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate Group</td>
<td>Rate group is an essential field for billing. You can create rate group by navigating to Tariff -&gt; Rate group.</td>
</tr>
<tr>
<td>Account Type</td>
<td>Type Select customer account type. Prepaid OR Postpaid.</td>
</tr>
<tr>
<td>Status</td>
<td>Account status.</td>
</tr>
<tr>
<td>Entity Type</td>
<td>Type Account entity type whether its customer or provider.</td>
</tr>
<tr>
<td>Email</td>
<td>Template Select appropriate template from drop-down.</td>
</tr>
</tbody>
</table>
Compose Email

Compose Mail Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>Specify sender’s email address here.</td>
</tr>
<tr>
<td>To</td>
<td>Specify receiver’s email address here.</td>
</tr>
<tr>
<td>Subject</td>
<td>Subject of email.</td>
</tr>
<tr>
<td>Message</td>
<td>Content of email.</td>
</tr>
<tr>
<td>Attach Files</td>
<td>You can attach maximum 4 files.</td>
</tr>
</tbody>
</table>

5.3. Accounts
5.4 Accounting

Related pages

5.4.1 Invoices

This page will display list of Invoice & Receipt generated for customers and resellers.
Also admin & reseller can generate manual invoice for their customer.
You can download invoice in PDF format.

Action Column In Grid
5.4.2 Subscription

Subscription is kinda package that will be applicable to customer upon invoice generation OR assignment.

Example: If admin would like to charge customers $100 for Equipment usage on monthly/Daily basis then they can create such type of subscription packages from this module and assign it to entire rate group to individual customers.

Create Subscription

Create new subscription package using below page,
Add/Edit subscription form fields description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Subscription name</td>
</tr>
<tr>
<td>Rate Group</td>
<td>Select Rate group. Charges will be applicable to all customers who are using selected Rate Group</td>
</tr>
<tr>
<td>Amount</td>
<td>Subscription charge</td>
</tr>
<tr>
<td>Prorate</td>
<td>Enable it to apply prorate based charge to customer</td>
</tr>
<tr>
<td>Bill Cycle</td>
<td>Daily OR Monthly bill cycle to apply charge on customer</td>
</tr>
<tr>
<td>Status</td>
<td>Active OR Inactive subscription</td>
</tr>
</tbody>
</table>

5.4.3 Refill Report

Report will display payment transaction information.
5.4.4 Charges History

This report will display all the charges information which apply to specific account.

By this report admin know the complete system transaction same way reseller can show their sub entity transactions.

5.4.5 Refill Coupon

Using refill coupon number user can refill their own account.

Only admin & reseller can create refill coupon.

5.4. Accounting
5.4.6 Payment Report

Report will display payment transaction information.

5.5 DIDs

Manage DIDs (Direct Inward Dialing)

Manage your DIDs from this module. You can add number of DIDs, map it with accounts and route to appropriate destination. ASTPP gives you various options like LOCAL, PSTN and OTHER to route incoming calls.
Top panel Grid Button

<table>
<thead>
<tr>
<th>Create</th>
<th>Delete</th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Create New DID</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To Delete multiple DIDs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To Import DID number from CSV file</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To Export DID number in CSV file</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Related pages

5.5.1 Create DIDs

You can create new DID using below page,
DIDs Add/Edit Field description

DID Information

<table>
<thead>
<tr>
<th>DID Enter</th>
<th>unique numeric DID number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>Select country of DID</td>
</tr>
<tr>
<td>City</td>
<td>DID City</td>
</tr>
<tr>
<td>Province/State</td>
<td>DID State</td>
</tr>
<tr>
<td>Provider</td>
<td>Select provider to whom this DID belongs to</td>
</tr>
</tbody>
</table>

DID Billing

<table>
<thead>
<tr>
<th>Account</th>
<th>Select account number you wish to assign DID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increments</td>
<td>Rate of increment to calculate call cost. Example: 60 to charge every minute</td>
</tr>
<tr>
<td>Cost</td>
<td>Cost per minute</td>
</tr>
<tr>
<td>Included Seconds</td>
<td>Define seconds will be free from the call duration for each call</td>
</tr>
<tr>
<td>Setup Fee</td>
<td>One time Setup fee</td>
</tr>
<tr>
<td>Monthly Fee</td>
<td>Monthly recurring fee</td>
</tr>
<tr>
<td>Connection Fee</td>
<td>Connection fee to charge customer minimum when their call will be connected</td>
</tr>
</tbody>
</table>
DID Setting

| Call Type | LOCAL : Wish to route call to Local extension  
| PSTN : Wish to route call to PSTN Number  
| OTHER : If you wish to route call to custom destination  
| Destination | Set appropriate destination based on call Type.  
| Example :  
| LOCAL : 1001 (Local Extension number)  
| PSTN : 1800214018 (PSTN number)  
| OTHER : sofia/default/1234567890@192.168.1.3  
| OR  
| sofia/gateway/gwname/121423232  
| Max Channels | Maximum allowed concurrent channels for DID calls.  
| 0=Unlimited  

5.5.2 Import DIDs

Note: **File must be in the following format(.csv):** DID,Country,Account,Per Minute Cost(USD),Initial Increment,Increment,Setup Fee(USD),Monthly Fee(USD),Call Type,Destination,Status

535345345,India,2096034879,1,0,0,0,0,PSTN,1234567890,Active

65456456,Alaska,2096035512,0.5,0,1,0,1,DID-Local,1002,Active

Select provider, csv file of DID and click on Import button, It will display below sample output. You can confirm format if its system recognize your imported file correctly.If all looks good then click on process and system will import all your DIDs.
5.5.3 Export DIDs

Export your DIDs by clicking on Export button.

If you would like to export specific criteria DIDs then you can search those DIDs using search feature and then export. Below is an example with search option,

Exported .csv file,
5.6 Tariff

5.6.1 Rate Group

Rate group is an important module of ASTPP. This belongs to customer and rating.
Create Rate Group

Rate Group Information

- **Name**: 
- **Routing Type**: LCR
- **Initial Increment**: 
- **Default Increment**: 
- **Markup(%):** 0
- **Trunks**: inex_trunk
- **Status**: Active

Rate Group Add/Edit Field description
### Name
Name of Rate Group

### Increment
Rate of increment to calculate call cost.
Example: 60 to charge every minute
This increment will be useful when increment is not defined in origination rate.

### Markup (%)
Additional charges will be applicable on call cost.
Example: If 10% markup defined in rate group and customer made call of $1 then system will charge customer 10% extra on $1 and that will be $1.1.

### Trunks
Select the trunks for LCR and routing.
If no trunks selected then customers who are having same rate group wouldn’t be able to make outbound calls.

### Status
Select status of rate group

---

How to create rate group

### 5.6.2 Origination Rates

Origination rates belongs to Rate group.

We can consider origination rates as customer rates / sell rates as these rates will be applicable on customers.
Create Origination Rate

**Rate Information**
- **Rate Group**: Select the rate group for origination rate
- **Code**: Prefix of origination rate. Example: 91
- **Destination**: Description for rate. Example: India
- **Status**: Priority of rate

**Billing Information**
- **Connect Cost**: Connection fee to charge customer minimum when their call will be connected
- **Included Seconds**: Define seconds will be free from the call duration for each call
- **Per Minute Cost**: Cost per minute
- **Increment**: Rate of increment to calculate call cost. Example: 60 to charge every minute
- **Force Trunk**: To force call to route using specific trunk. Note: Leave it – Select – if you would like to do LCR among trunks which are selected in rate group

**How to create origination rate**

**Import Origination Rate**
Note:   **File must be in the following format (.csv):** Code, Destination, Connect Cost, Included Seconds, Per Minute Cost, Increment, Precedence.

1, USA, 0.0000, 0, 1.0000, 30, 60
91, India, 0.0000, 0, 0.5000, 0, 0

Select rate group, force trunk and csv file of origination rates and click on Import button. It will show below output to confirm if rates format are correct. Once you confirm then click on process and it will import those rates in system.

**Export Origination Rate**

Export your Origination rates by clicking on Export button. If you would like to export specific criteria rates then you can search those rates using search feature and then export.

Below is an example with search option,
5.6.3 Packages

Package feature allows you to prepare various free packages for specific destinations and offer to your customers. Customers can take benefit of this and can make free calls to selected destinations.
Create Package

Package Details Add/Edit Form Fields Description

<table>
<thead>
<tr>
<th>Name</th>
<th>Package Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate Group</td>
<td>Select rate group. The customers who are having that rate group will get benefit of this package.</td>
</tr>
<tr>
<td>Included Seconds</td>
<td>Defined free seconds of package</td>
</tr>
</tbody>
</table>

Package edit you will get two tabs

- **Package Details**: Allow to change package details
- **Package Patterns**: Form this tab you can select destinations

How to create package

Package Codes

This tab is useful to add destination for package.

If you have entered 91 and 1 destination in package then customer who are getting benefit of this package will be able to make free calls to 91 and 1 destination.
Usage Report

Package usage report is shows the usage of the customer for specific package.

<table>
<thead>
<tr>
<th>Package Name</th>
<th>Account</th>
<th>Used Seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>new_acc</td>
<td>iNetroic Test (1930710086)</td>
<td>190</td>
</tr>
<tr>
<td>new_gsm</td>
<td>2895661100 (2895661100)</td>
<td>150</td>
</tr>
<tr>
<td>new_pak</td>
<td>94785101400 (94785101400)</td>
<td>150</td>
</tr>
<tr>
<td>inex_pak</td>
<td>iNetroic Test (1930710086)</td>
<td>60</td>
</tr>
<tr>
<td>inex_pak</td>
<td>2895661100 (2895661100)</td>
<td>60</td>
</tr>
<tr>
<td>inex_pak</td>
<td>inex reseller (5074233333)</td>
<td>0</td>
</tr>
</tbody>
</table>

5.7 Carriers

Trunk is key module for LCR routing and associated with termination rates and provider account.

Related pages

5.7.1 Trunk

Top panel button
Create Trunk Add / Edit Form Fields Description:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trunk name</td>
<td>Trunk name</td>
</tr>
<tr>
<td>Provider</td>
<td>Select provider to whom this trunk belongs to</td>
</tr>
<tr>
<td>Gateway</td>
<td>Select gateway on which call will be terminated</td>
</tr>
<tr>
<td>Failover gateway</td>
<td>Select failover gateway on which call will be terminated. If primary gateway failed in establishing call then system will try call using failover gateway.</td>
</tr>
<tr>
<td>Max Channels</td>
<td>Number of Maximum concurrent call for this trunk</td>
</tr>
<tr>
<td>Number Translation</td>
<td>If you wish to translate number with some defined number for trunk then use this feature. Ex: “011/2222” (You can define multiple translations like “011/2222”, “02/33”) That means from called number 011 is replaced by 2222.</td>
</tr>
<tr>
<td>Codecs</td>
<td>Enter codecs if you want call to use specific codecs only</td>
</tr>
<tr>
<td>Precedence</td>
<td>Priority of trunk</td>
</tr>
</tbody>
</table>
5.7.2 Termination Rates

Termination rates belongs to Trunk. We can consider termination rates as carrier rates / buy rates as these rates will be applicable on providers.

Before dialing number to gateway, system will do LCR process in termination rates and find out best match and low cost prefix and dial out using that.

### Related pages

**Table: Termination Rates**

<table>
<thead>
<tr>
<th>Code</th>
<th>Destination</th>
<th>Connect Cost (USD)</th>
<th>Included Seconds</th>
<th>Per Minute Cost (USD)</th>
<th>Initial Increment</th>
<th>Priority</th>
<th>Strip Prepend</th>
<th>Trunk</th>
<th>Status</th>
<th>Modified Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>USD</td>
<td>0.0000</td>
<td>0</td>
<td>0.0001</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td>2010-08-10 20:24:06</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>0.0000</td>
<td>1</td>
<td>0.0000</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td>2010-09-13 17:25:25</td>
</tr>
<tr>
<td>1001</td>
<td></td>
<td>1.0000</td>
<td>1</td>
<td>1.0000</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>2010-09-13 17:25:25</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>0.0000</td>
<td>1</td>
<td>0.0000</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td>2010-09-13 17:25:25</td>
</tr>
</tbody>
</table>
Create Termination Rate

<table>
<thead>
<tr>
<th>Rate Information</th>
<th>Billing Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trunk</strong></td>
<td><strong>Connect</strong></td>
</tr>
<tr>
<td><strong>Code</strong></td>
<td><strong>Cost</strong></td>
</tr>
<tr>
<td><strong>Destination</strong></td>
<td><strong>Included</strong></td>
</tr>
<tr>
<td><strong>Strip</strong></td>
<td><strong>Seconds</strong></td>
</tr>
<tr>
<td><strong>Prepend</strong></td>
<td><strong>Per Minute</strong></td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td><strong>Cost</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Initial</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Increment</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Increment</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Priority</strong></td>
</tr>
</tbody>
</table>

**Trunk** Select trunk for termination rate  
**Code** Prefix of termination rate. Example: 91  
**Destination** Description for rate. Example: India  
**Strip** To remove any specific prefix from dialed number  
**Prepend** To append any specific prefix in dialed number  
**Connect** Connection fee to charge customer minimum when their call will be connected  
**Included** Define seconds will be free from the call duration for each call  
**Per Minute** Cost per minute  
**Initial** Cost you have to take when call is initiate  
**Increment** Rate of increment to calculate call cost  
**Precedence** Priority of rate. If LCR found same prefix with same rate for different trunk then based on precedence/priority level trunk will be selected.

How to create termination rate

Import Termination Rate
**Note:** File must be in the following format (.csv): Code, Destination, Connect Cost, Included Seconds, Per Minute Cost, Increment, Precedence, Strip, Prepend.

1. UNITED STATES, 0, 10, 0, 5, 60, 0, 0, 0, 0
2. 91, India, 0.1, 15, 0.25, 60, 0, 0, 0, 0

Select trunk and csv file of termination rates and click on Import button. It will show below output to confirm if rates format are correct. Once you confirm then click on process and it will import those rates in system.

**Export Termination Rate**

Export your Termination rates by clicking on Export button. If you would like to export specific criteria rates then you can search those rates using search feature and then export.

Below is an example with search option,
5.8 Switch

Related pages

5.8.1 Sip Devices

To navigate this Menu System Switch -> SIP Devices
From here user can create sip devices for the customer to make call. To Create sip devices click on Add SIP Devices and you will get popup form to create device. Assign this device to appropriate customer and suitable sip profile.

Create SIP Device

Device Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Username</td>
<td>Here specify the name of user</td>
</tr>
<tr>
<td>Password</td>
<td>It is use to set password of user</td>
</tr>
<tr>
<td>Caller Name</td>
<td>Write caller name here</td>
</tr>
<tr>
<td>Caller Number</td>
<td>Write called number here</td>
</tr>
<tr>
<td>Account</td>
<td>Select account of user</td>
</tr>
<tr>
<td>Status</td>
<td>Device status should be active/inactive</td>
</tr>
<tr>
<td>Sip Profile</td>
<td>Select sip profile</td>
</tr>
</tbody>
</table>

Voicemail Options

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td></td>
</tr>
<tr>
<td>Mail To</td>
<td></td>
</tr>
<tr>
<td>Attach File</td>
<td></td>
</tr>
<tr>
<td>Local After Email</td>
<td></td>
</tr>
<tr>
<td>Send All Message</td>
<td></td>
</tr>
</tbody>
</table>
Voicemail Options

<table>
<thead>
<tr>
<th>Enable</th>
<th>From here set status of voice mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Password</td>
<td>Set your voice mail password here</td>
</tr>
<tr>
<td>Mail To</td>
<td>Define your email address</td>
</tr>
<tr>
<td>Attach File</td>
<td>If it set yes then you will get file in attachment otherwise not</td>
</tr>
<tr>
<td>Local After Email</td>
<td>Write called number here</td>
</tr>
<tr>
<td>Send All Message</td>
<td>If it set true then user will get all message</td>
</tr>
</tbody>
</table>

How to create SIP device

5.8.2 Gateways

![Gateways Table]

5.8. Switch
Create Gateway

Gateways Add/Edit Form Fields Description:

Basic Information
<table>
<thead>
<tr>
<th><strong>Name</strong></th>
<th>Username of gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SIP Profile</strong></td>
<td>Select appropriate sip profile</td>
</tr>
<tr>
<td><strong>Username</strong></td>
<td>Same as gateway name</td>
</tr>
<tr>
<td><strong>Password</strong></td>
<td>Password for authentication</td>
</tr>
<tr>
<td><strong>Proxy</strong></td>
<td>Here specify the ip of proxy server</td>
</tr>
<tr>
<td><strong>Outbound-Proxy</strong></td>
<td>Here specify the ip of outbound-proxy</td>
</tr>
<tr>
<td><strong>Register</strong></td>
<td>True / False</td>
</tr>
<tr>
<td><strong>Caller-Id-In-From</strong></td>
<td>True / False</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Active / Inactive</td>
</tr>
</tbody>
</table>

### Optional Information

<table>
<thead>
<tr>
<th><strong>From-Domain</strong></th>
<th>Domain url</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>From User</strong></td>
<td>From user : <em>optional</em> same as username</td>
</tr>
<tr>
<td><strong>Realm</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Extension</strong></td>
<td>Extensions to be registered with your voip provider</td>
</tr>
<tr>
<td><strong>Expire Seconds</strong></td>
<td>Expire in seconds</td>
</tr>
<tr>
<td><strong>Reg-Transport</strong></td>
<td>Which transport to use for register</td>
</tr>
<tr>
<td><strong>Contact Params</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Ping</strong></td>
<td>Send an options ping every x seconds, failure will unregister and/or mark it down</td>
</tr>
<tr>
<td><strong>Retry-Seconds</strong></td>
<td>How many seconds before a retry when a failure or timeout occurs</td>
</tr>
<tr>
<td><strong>Register-Proxy</strong></td>
<td>Send register to this proxy: <em>optional</em> same as proxy</td>
</tr>
<tr>
<td><strong>Channel</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Dialplan Variable</strong></td>
<td></td>
</tr>
</tbody>
</table>

### How to create gateway

#### 5.8.3 SIP Profiles

![SIP Profile Interface](image_url)
Create SIP Profile

Sip Profile List Add/Edit Form Fields Description:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIP Profile name</td>
<td>Name of sip profile</td>
</tr>
<tr>
<td>sip-ip</td>
<td>IP address to bind to for SIP traffic. DO NOT USE HOSTNAMES, ONLY IP ADDRESSES</td>
</tr>
<tr>
<td>sip-port</td>
<td>Port to bind to for SIP traffic</td>
</tr>
<tr>
<td>Status</td>
<td>Active / Inactive</td>
</tr>
</tbody>
</table>

How to create SIP profile

5.8.4 Freeswitch Server

Freeswitch Server is use to store freeswitch server details with host and location

Once is there any changes are done in Gateways or sip profiles at that time its need to reload Freeswitch servers that time this information are useful to reload freeswitch.
Create Freeswitch Server

Freeswitch Server Information

- **Host**: Set the default domain to the host
- **Password**: Password of freeswitch server
- **Port**: Port of freeswitch

**How to create freeswitch server**

**5.8.5 IP map(ACL)**
Create IP map (ACL)

**Add IP Map**

**IP Map Field Description**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Account</strong></td>
<td>Select account number you wish to assign IP based authentication.</td>
</tr>
<tr>
<td><strong>Name</strong></td>
<td>Give name of IP map.</td>
</tr>
<tr>
<td><strong>IP</strong></td>
<td>Enter IP address.</td>
</tr>
<tr>
<td><strong>Prefix</strong></td>
<td>Enter prefix value.</td>
</tr>
</tbody>
</table>

**5.8.6 Caller ID List**
Create Caller ID

![Add Caller ID](image)

**Caller ID Field Description**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Account</strong></td>
<td>Select account number you wish to assign caller ID</td>
</tr>
<tr>
<td><strong>Caller ID</strong></td>
<td>Enter ID of caller.</td>
</tr>
</tbody>
</table>

### 5.9 Call Reports

**Related pages**

#### 5.9.1 Detail Reports

**Related pages**

**Customer**

You can find CDRs entry under reports menu. CDRs for different accounts
Provider

5.9.2 Summary Reports

Related pages

Customer Summary
Reseller Summary

Provider Summary

Trunk Stats
5.9.3 Live Call Reports

5.9.4 Email History List

5.10 Configuration

Related pages

5.10.1 Invoice Configuration

Whatever information you configure in invoice configuration that will be shown in generated invoice.
Basic information should be filled in this for like company name, address, website and contact information.
To configure this go to Configuration -> Invoice Configuration.

5.10.2 Taxes

Taxes are meant to be charge some amount on invoices. After creating taxes you can assign it to any of customer by clicking on Add Taxes button from customer list.

Taxes can assign to customer as well as resellers. You can specify tax in percentage (%) as well as specific amount to be charge on invoice.

To create Taxes go to Accounting menu in ASTPP portal. From popup select Taxes it will show you the list of the taxes. You can create new taxes by clicking on Create button.
Create Tax

Add/Edit Taxes Form Fields Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority</td>
<td>Priority is the sequence to apply taxes on invoice-able amount.</td>
</tr>
<tr>
<td>Amount</td>
<td>If there are tax amount is fixed for any usage then we can specified tax amount in this field.</td>
</tr>
<tr>
<td>Rate(%)</td>
<td>If Taxes amount is based on % and it should be calculated based on usage then we can specify rate on taxes in (%) in this field.</td>
</tr>
<tr>
<td>Description</td>
<td>Taxes Description for reference.</td>
</tr>
</tbody>
</table>

5.10.3 Email Templates

To navigate this Menu System Configuration -> Email Template.
This menu contains email body for system generated emails.
There are many email template so user can modify that template accordingly their needs.

**Edit Email Template**

**Email Add / Edit Field description**
5.10.4 Countries

Create Country

Countries Add/Edit Field description
**5.10.5 Currencies**

<table>
<thead>
<tr>
<th>Name</th>
<th>Code</th>
<th>Rate</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albanian Lek</td>
<td>ALL</td>
<td>122.780</td>
<td></td>
</tr>
<tr>
<td>Algerian Dinar</td>
<td>DZD</td>
<td>109.296</td>
<td></td>
</tr>
<tr>
<td>Aluminium Ougoude</td>
<td>XAL</td>
<td>8.001</td>
<td></td>
</tr>
<tr>
<td>Argentine Peso</td>
<td>ARS</td>
<td>14.919</td>
<td></td>
</tr>
<tr>
<td>Aruba Florin</td>
<td>AWG</td>
<td>1.790</td>
<td></td>
</tr>
<tr>
<td>Australian Dollar</td>
<td>AUD</td>
<td>1.309</td>
<td></td>
</tr>
<tr>
<td>Bahamian Dollar</td>
<td>BSD</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Bahraini Dinar</td>
<td>BHD</td>
<td>0.377</td>
<td></td>
</tr>
<tr>
<td>Bangladeshi Taka</td>
<td>BDT</td>
<td>78.170</td>
<td></td>
</tr>
<tr>
<td>Barbados Dollar</td>
<td>BBD</td>
<td>2.009</td>
<td></td>
</tr>
</tbody>
</table>
Create Currency

Currencies Add/Edit Field description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name of currency</td>
</tr>
<tr>
<td>Code</td>
<td>Code of currency</td>
</tr>
<tr>
<td>Rate</td>
<td>Rate of currency</td>
</tr>
</tbody>
</table>

How to create currency

5.10.6 Database Restore

Action Column In Grid:
Create Database Backup

**Database Backup**

**Database Information**

<table>
<thead>
<tr>
<th>Name</th>
<th>Here specify the name of database</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Name</td>
<td>Here describe file name of database and path of database</td>
</tr>
</tbody>
</table>

**Backup Database Add Field description**

How to take database backup
Import Database

**Name**: Here specify the name of database.

**Select File**: Select your database file from your system.

(Allowed file format is: .csv, .tar.gz, .sql)

Import Database Field description

<table>
<thead>
<tr>
<th>Name</th>
<th>Here specify the name of database.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select File</td>
<td>Select your database file from your system.</td>
</tr>
</tbody>
</table>

5.10.7 Settings

Global-Settings

![Global-Settings](image)
Global - Settings Field Description

<table>
<thead>
<tr>
<th>Company Website</th>
<th>Company Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Name</td>
<td>The name of your company. Used in emails.</td>
</tr>
<tr>
<td>Call Debug</td>
<td>Enable debugging output? 0=no 1=yes.</td>
</tr>
<tr>
<td>Decimal Points</td>
<td>How many decimal points do we bill to?</td>
</tr>
<tr>
<td>Max Free Length</td>
<td>What is the maximum length (in minutes) of calls that are at no charge?</td>
</tr>
<tr>
<td>Call Max Length</td>
<td>What is the maximum length (in ms) of a LCR call?</td>
</tr>
<tr>
<td>Base Currency</td>
<td>Base Currency of System.</td>
</tr>
<tr>
<td>Default Timezone</td>
<td>System timezone.</td>
</tr>
<tr>
<td>Default Country</td>
<td>Default country.</td>
</tr>
<tr>
<td>Version</td>
<td>ASTPP Version.</td>
</tr>
<tr>
<td>Did Global Translation</td>
<td>Global number translation for DID.</td>
</tr>
<tr>
<td>Playback Audio Notification</td>
<td>Global audio notification.</td>
</tr>
<tr>
<td>Outbound Fax</td>
<td>Set enable to allow outbound fax in call.</td>
</tr>
<tr>
<td>Inbound Fax</td>
<td>Set enable to allow inbound fax in call.</td>
</tr>
<tr>
<td>Refill Coupon Length</td>
<td>Set refill coupon generation length.</td>
</tr>
<tr>
<td>Minimum Fund Transfer</td>
<td>Set minimum amount for fund transfer.</td>
</tr>
<tr>
<td>Balance Announcement</td>
<td>To enable balance playback in call.</td>
</tr>
<tr>
<td>Minutes Announcement</td>
<td>To enable minute playback in call.</td>
</tr>
<tr>
<td>Voicemail Number</td>
<td>Voicemail listen number.</td>
</tr>
</tbody>
</table>

Email-Settings

![Email Settings](image)

Email - Settings Field Description

<table>
<thead>
<tr>
<th>Email</th>
<th>Send out email? 0=no 1=yes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMTP</td>
<td>Send out email using SMTP? 0=no 1=yes.</td>
</tr>
<tr>
<td>SMTP host</td>
<td>Host name for SMTP connection.</td>
</tr>
<tr>
<td>SMTP port</td>
<td>Port name for SMTP connection.</td>
</tr>
<tr>
<td>SMTP user</td>
<td>User name for SMTP connection.</td>
</tr>
<tr>
<td>SMTP pass</td>
<td>Password name for SMTP connection.</td>
</tr>
</tbody>
</table>
Calling Cards

Callingcard - Settings Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting Digit</td>
<td>The digit that all calling cards must start with. 0=disabled.</td>
</tr>
<tr>
<td>Card Length</td>
<td>Number of digits in calling cards and cc codes.</td>
</tr>
<tr>
<td>Pin Length</td>
<td>For those calling cards that are using pins this is the number of digits it will have.</td>
</tr>
<tr>
<td>Card Retries</td>
<td>How many retries do we allow for calling card numbers?</td>
</tr>
<tr>
<td>Pin Retries</td>
<td>How many retries do we allow for pins?</td>
</tr>
<tr>
<td>Rate Announcement</td>
<td>Do we want the calling cards script to announce the rate on calls?</td>
</tr>
<tr>
<td>Time Limit Announcement</td>
<td>Do we want the calling cards script to announce the time-limit on calls?</td>
</tr>
<tr>
<td>Pin Input Timeout</td>
<td>How long do we wait when entering the calling card pin? Specified in MS.</td>
</tr>
<tr>
<td>Card Input Timeout</td>
<td>How long do we wait when entering the calling card number? Specified in MS.</td>
</tr>
<tr>
<td>Dial Input Timeout</td>
<td>How long do we wait when entering the destination number in calling cards? Specified in MS.</td>
</tr>
<tr>
<td>General Input Timeout</td>
<td>How long do we wait for input in general menus? Specified in MS.</td>
</tr>
<tr>
<td>Welcome File</td>
<td>What do we play for a welcome file?</td>
</tr>
<tr>
<td>ANI Authentication</td>
<td>Calling card ANI authentication. 0 for disable and 1 for enable.</td>
</tr>
<tr>
<td>IVR count</td>
<td>IVR playback loop count.</td>
</tr>
<tr>
<td>Balance Announcement</td>
<td>Do we want the calling cards script to announce the balance of account?</td>
</tr>
<tr>
<td>CC Access Numbers</td>
<td>Add calling card access numbers with comma separation. Ex : 12345678,3581629</td>
</tr>
</tbody>
</table>
### Opensips-Settings

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opensips DB Engine</td>
<td>MySQL</td>
</tr>
<tr>
<td>Opensips</td>
<td>Use Opensips? 1 for Enable or 0 for Disable.</td>
</tr>
<tr>
<td>Opensips DB Name</td>
<td>Opensips Database Name.</td>
</tr>
<tr>
<td>Opensips DB User</td>
<td>Opensips Database User.</td>
</tr>
<tr>
<td>Opensips DB Host</td>
<td>Opensips Database Host.</td>
</tr>
<tr>
<td>Opensips DB Pass</td>
<td>Opensips Database Password.</td>
</tr>
<tr>
<td>Opensips Domain</td>
<td>Opensips Domain.</td>
</tr>
</tbody>
</table>

### Paypal-Settings

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paypal status</td>
<td>0=enable paypal module 1=disable paypal module.</td>
</tr>
<tr>
<td>Paypal url</td>
<td>Paypal live url.</td>
</tr>
<tr>
<td>Paypal sandbox url</td>
<td>Paypal Sandbox url for testing.</td>
</tr>
<tr>
<td>Paypal id</td>
<td>Paypal Live account id.</td>
</tr>
<tr>
<td>Paypal sandbox id</td>
<td>Paypal sandbox accountid for testing.</td>
</tr>
<tr>
<td>Paypal mode</td>
<td>0=paypal Live mode 1=paypal Sandbox mode.</td>
</tr>
<tr>
<td>Paypal fee</td>
<td>0=paypal mc fee paid by admin 1=paypal mc fee paid by customer.</td>
</tr>
<tr>
<td>Paypal tax</td>
<td>Paypal tax rate (in percentage) apply to recharge amount.</td>
</tr>
</tbody>
</table>
Signup-Settings

<table>
<thead>
<tr>
<th>Default Rategroup</th>
<th>Set default rategroup for new signup account.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Signup From</td>
<td>here we can set enable/disable signup process.</td>
</tr>
<tr>
<td>Create SIP Device</td>
<td>If you select Enable then it create automatic sip device for new account.</td>
</tr>
<tr>
<td>Default Balance</td>
<td>From here we can set default balance.</td>
</tr>
</tbody>
</table>

5.11 Forgot Password

From here you can reset your password.

You can enter your register email address or account number after that you will get email to reset your password.

5.12 Signup Now!

From this page you can signup as customer into astpp.

By fill-up all complete detail you will get success message and activation mail in your email account.
6.1 Questions

Two Types Of Questions:
1. General Questions
2. Technical Questions

General Questions
1. Is this solution completely open source? Yeah.
2. What kind of license does it have? GNU AGPL3 More info: https://www.gnu.org/licenses/agpl-3.0.en.html
3. Is there any limitation of using ASTPP? Nope. There is no limitation of using ASTPP. You can use it anywhere.
4. Where ASTPP can be used? It can be used in small scale as well as large scale carrier setup.
5. What do i need to setup ASTPP on my system? You just need to have system with above defined OS and then you will be able to setup ASTPP on that.
6. Which OS are preferable for ASTPP? It is strongly recommended that ASTPP be deployed on the Linux distribution CentOS version 7.x or Debian version 8.x
7. What is the minimum hardware requirement? CentOS 7.X OR Debian 8.x, 4GB RAM (8 or 16gb is highly recommended for better performance), 40gb Hard Drive, We recommend to use high configuration hardware to get better performance.
8. Does ASTPP work on Virtual servers? Yeah, It can work on Virtual servers.
9. How many concurrent calls ASTPP can handle? That is purely depends on hardware which you will use. More Hardware resource can give more concurrent calls.
10. **How can I contribute code or donate money to support project?** You can simply send your code to us for review and we will include it in open source version. You can donate us at paypal account billing@inextrix.com

11. **Do you offer support?** Yeah we do offer installation, configuration, on demand support, recurring support & custom development. You can check our pricing from http://astpp.inextrix.com/cart.php. For custom development, you can drop an email to us at sales@inextrix.com OR use http://astpp.inextrix.com/contact.php

**Technical Questions**

1. **What databases are supported in ASTPP?** It supports only MySQL (PostgreSQL support will be added in future release).

2. **What payment gateways are supported in ASTPP?** Paypal only for now. In future we have plan to add authorize.net payment gateway.

3. **Does ASTPP support Multi-language?** No

4. **Does ASTPP current version support callshop?** No. It will be included in future releases. To get more information you can contact us at sales@inextrix.com.

5. **How can I update my source from to keep it update to date?** ASTPP provides update.sh script with its source just run that script to update your source.

6. **When I go to login page, rather WEBUI I get long list of php contents.** Enable short_open_tag in php.ini and then restart apache.

7. **Why I am not able to register extensions after installation?** Make sure you have configured your IP in Sip Profile and your registration request is reaching to server.

8. **How to verify if ASTPP and FreeSWITCH communicating properly?** Default sip profile must be loaded in FreeSWITCH

9. **While login I am getting “Unable to connect to your database server using the provided settings” error.** Please check your database credentials. ASTPP uses /var/astpp/astpp-config.conf file for database connection.

10. **How can I do IP Authentication for my customers?** Configure your customer IP under Customers -> IP Settings

11. **Does CDRs report will show all data?** No, CDRs report will only record of current day. If you want to see record of previous days record then you need to search.
Please feel free to report in our bug tracker below in case of any issues you find:
https://github.com/iNextrix/ASTPP/issues
Or post your questions on:-
https://groups.google.com/forum/#!forum/astpp

Note: To avoid duplicate bug posts, we would suggest you to refer existing bugs list and google groups first.
We have provided installation and operation instructions with online help to assist you to install and manage your own ASTPP Platform. However from time to time you may need some clarification or support. There are a number of options available described below.

**Paid Support** : Paid support is available from ASTPP.

**Managed Installation** : Stable and secure installations can be performed by us with training and optionally, ongoing support.