

Installing FreePBX 12 on CentOS 6.5

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Initial System Setup

You **MUST** run all of these commands as the root user!

You **MUST** disable selinux. selinux can cause strange behavior during the install

Disable selinux

In /etc/sysconfig/selinux , change the following lines:

```
sed -i 's/\(^SELINUX=\).*\/\SELINUX=disabled/' /etc/sysconfig/selinux
```

reboot, and verify the selinux status by running 'sestatus'. It should say:

```
SELinux status: disabled
```

Update Your System

```
yum -y update
yum groupinstall core
yum groupinstall base
```

Install Additional Required Dependencies

```
yum install gcc gcc-c++ lynx bison mysql-devel mysql-server php php-mysql
php-pear php-mbstring tftp-server httpd make ncurses-devel libtermcap-
devel sendmail sendmail-cf caching-nameserver sox newt-devel libxml2-devel
libtiff-devel audiofile-devel gtk2-devel subversion kernel-devel git
subversion kernel-devel php-process crontabs cronie cronie-anacron wget
vim php-xml uuid-devel libtool sqlite-devel unixODBC mysql-connector-odbc
```

IPTables

Keeping IPTables turned off indefinitely is strongly discouraged. You will incur the wrath of high fees and hackers

You must disable the default iptables. You can re-enable it later, once you have made the appropriate changes. Information on iptables can be found with a quick Google search. If iptables is left running, it will (at very least) block you from accessing the web interface.

See the current status:

```
chkconfig iptables --list
```

Disable iptables:

```
chkconfig --level 0123456 iptables off
```

Stop the service (this skips rebooting again):

```
service iptables stop
```

Auto Start MySQL

You must have mysql running for freepbx to operate normally. You need to set it to start at boot time. with the following command:

```
chkconfig --level 345 mysqld on
```

Then start mysql if you don't plan on rebooting during the installation phase:

```
service mysqld start
```

Auto Start Apache

You will want Apache running, so you can access the FreePBX admin interface, You need to set it to start at boot time. with the following command:

```
chkconfig --level 345 httpd on
```

Then start apache if you don't plan on rebooting during the installation phase:

```
service httpd start
```

Install PearDB

```
pear channel-update pear.php.net  
pear install db-1.7.14
```

You may receive a warning:

```
WARNING: "pear/DB" is deprecated in favor of "pear/MDB2"
```

At this time it is safe to ignore that message

Reboot server

```
reboot
```

Install Dependencies for Google Voice (If needed/wanted)

Install iksemel

```
cd /usr/src  
wget https://iksemel.googlecode.com/files/iksemel-1.4.tar.gz  
tar xf iksemel-*.tar.gz  
cd iksemel-  
./configure  
make  
make install
```

Add the Asterisk User

```
adduser asterisk -M -c "Asterisk User"
```

Install and Configure Asterisk

Download Asterisk source files.

```
cd /usr/src
wget http://downloads.asterisk.org/pub/telephony/dahdi-linux-complete
/dahdi-linux-complete-current.tar.gz
wget http://downloads.asterisk.org/pub/telephony/libpri/libpri-current.tar.
gz
wget http://downloads.asterisk.org/pub/telephony/asterisk/asterisk-13-
current.tar.gz
git clone https://github.com/akheron/jansson.git
wget http://www.pjsip.org/release/2.2.1/pjproject-2.2.1.tar.bz2
```

Compile and install DAHDI and LibPRI

If you don't have any physical hardware you don't need to run these commands, however, it is still suggested to compile the modules, to allow you to add hardware later.

```
cd /usr/src
tar xvfz dahdi-linux-complete-current.tar.gz
tar xvfz libpri-current.tar.gz
rm -f dahdi-linux-complete-current.tar.gz libpri-current.tar.gz
cd dahdi-linux-complete-*
make all
make install
make config
cd /usr/src/libpri-*
make
make install
```

Compile and install pjproject

If you are doing this on a 64 bit system, please note that you MUST set the following during configure:

```
--libdir=/usr/lib64
```

```
cd /usr/src
tar -xjvf pjproject-2.2.1.tar.bz2
cd pjproject-2.2.1
CFLAGS='-DPJ_HAS_IPV6=1' ./configure --prefix=/usr --enable-shared --
disable-sound\
  --disable-resample --disable-video --disable-opencore-amr --libdir=/usr
/lib64
make dep
make
make install
```

Compile and Install jansson

If you are doing this on a 64 bit system, please note that you MUST set the following during configure:

```
--libdir=/usr/lib64
```

```
cd /usr/src/jansson
autoreconf -i
./configure --libdir=/usr/lib64
make
make install
```

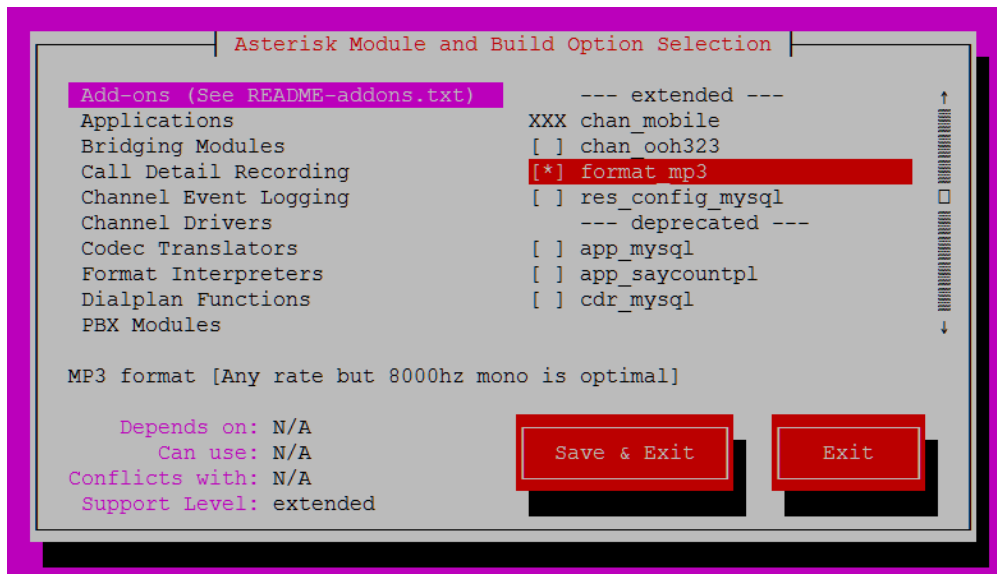
Compile and install Asterisk

If you are doing this on a 64 bit system, please note that you MUST set the following during configure:

```
--libdir=/usr/lib64
```

```
cd /usr/src
tar xvfz asterisk-13-current.tar.gz
rm -f asterisk-13-current.tar.gz
cd asterisk-*
contrib/scripts/install_prereq install
./configure --libdir=/usr/lib64
contrib/scripts/get_mp3_source.sh
make menuselect
```

You will be prompted at the point to pick which modules to build. Most of them will be enabled, but if you want to have MP3 support, you need to manually turn on 'format_mp3' on the first page.



After selecting 'Save & Exit' you can then continue

```
make
make install
make config
ldconfig
```

Install Asterisk-Extra-Sounds

Note that this installs the (8khz) 'wav' soundfiles and G722 (High Definition 'Wideband') audio.

```
mkdir -p /var/lib/asterisk/sounds
cd /var/lib/asterisk/sounds
wget http://downloads.asterisk.org/pub/telephony/sounds/asterisk-extra-sounds-en-wav-current.tar.gz
tar xzf asterisk-extra-sounds-en-wav-current.tar.gz
rm -f asterisk-extra-sounds-en-wav-current.tar.gz
# Wideband Audio download
wget http://downloads.asterisk.org/pub/telephony/sounds/asterisk-extra-sounds-en-g722-current.tar.gz
tar xzf asterisk-extra-sounds-en-g722-current.tar.gz
rm -f asterisk-extra-sounds-en-g722-current.tar.gz
```

Install and Configure FreePBX

Download and extract FreePBX.

```
cd /usr/src
wget http://mirror.freepbx.org/modules/packages/freepbx/freepbx-12.0-latest.tgz
tar vxzf freepbx-12-latest.tgz
```

Set ownership permissions.

```
chown asterisk. /var/run/asterisk
chown -R asterisk. /etc/asterisk
chown -R asterisk. /var/{lib,log,spool}/asterisk
chown -R asterisk. /usr/lib/asterisk
chown -R asterisk. /usr/lib64/asterisk
mkdir /var/www/html
chown -R asterisk. /var/www/
```

A few small modifications to Apache.

```
sed -i 's/^(^upload_max_filesize = \).*\/120M/' /etc/php.ini
cp /etc/httpd/conf/httpd.conf /etc/httpd/conf/httpd.conf_orig
sed -i 's/^(User|Group\).*\/1 asterisk/' /etc/httpd/conf/httpd.conf
service httpd restart
```

Configure Asterisk database in MYSQL.

```
cd /usr/src/freepbx
export ASTERISK_DB_PW=amp109
mysqladmin -u root create asterisk
mysqladmin -u root create asteriskcdrdb
```

Set permissions on MYSQL database.

```
mysql -u root -e "GRANT ALL PRIVILEGES ON asterisk.* TO
asteriskuser@localhost IDENTIFIED BY '${ASTERISK_DB_PW}';"
mysql -u root -e "GRANT ALL PRIVILEGES ON asteriskcdrdb.* TO
asteriskuser@localhost IDENTIFIED BY '${ASTERISK_DB_PW}';"
mysql -u root -e "flush privileges;"
```

Restart Asterisk and install FreePBX.

```
cd /usr/src/freepbx
./start_asterisk start
./install_amp --installdb --username=asteriskuser --
password=${ASTERISK_DB_PW}
amportal chown
amportal a ma installall
amportal a reload
amportal a ma refreshsignatures
amportal chown
```

If you see an error about "Uncaught exception 'RuntimeException' with message 'gpg took too long to run.'" it is safe to run "amportal a ma installall" again.

Finally, one last mod and start FreePBX.

```
ln -s /var/lib/asterisk/moh /var/lib/asterisk/mohmp3  
amportal restart
```

Start FreePBX

Navigate:

<http://yourlocalipaddress/html> or if you prefer <http://localhost/admin>

Install and Setup Commercial Modules

Enable the FreePBX Commercial yum repos

```
wget -P /etc/yum.repos.d/ -N http://yum.schmoozecom.net/schmooze-commercial  
/schmooze-commercial.repo
```

yum clean all to clean out yum cache so it will find out new RPMs

```
yum clean all
```

yum install needed RPMs for Commercial Modules

```
yum -y install php-5.3-zend-guard-loader sysadmin fail2ban incron  
ImageMagick
```

Restart Apache and Install Sysadmin

```
service httpd restart  
amportal a ma download sysadmin  
amportal a ma install sysadmin
```

For Further information see: [Installation on CentOS and RHEL based systems](#)