

# Install FreePBX 15 with Asterisk 16 on Debian 10

## Install Asterisk 16

### Step 1: Update system

```
sudo apt update && sudo apt upgrade  
sudo reboot
```

### Step 2: Install Asterisk 16 LTS dependencies

```
sudo apt install git curl wget libnewt-dev libssl-dev libncurses5-dev subversion libsqlite3-dev build-essential  
libjansson-dev libxml2-dev uuid-dev
```

### Step 3: Download Asterisk 16 LTS tarball

```
cd /usr/src/  
sudo curl -O http://downloads.asterisk.org/pub/telephony/asterisk/asterisk-16-current.tar.gz  
  
sudo tar xvf asterisk-16-current.tar.gz  
cd asterisk-16*/  
  
# download the mp3 decoder library into the source tree  
sudo contrib/scripts/get_mp3_source.sh  
  
# Ensure all dependencies are resolved  
sudo contrib/scripts/install_prereq install
```

### Step 4: Build and Install Asterisk 16

```
sudo ./configure  
sudo make menuselect
```

- Add-ons: chan\_ooh323, format\_mp3
- Core Sound Packages: CORE-SOUNDS-EN-\*
- Music On Hold File Packages: MOH-OPSOUND-\*
- Extra Sound Packages: EXTRA-SOUNDS-EN-\*
- Applications: app\_macro

```
sudo make
sudo make install
sudo make progdocs
sudo make samples
sudo make config
sudo ldconfig
```

## Create Asterisk User

```
sudo groupadd asterisk
sudo useradd -r -d /var/lib/asterisk -g asterisk asterisk
sudo usermod -aG audio,dialout asterisk
sudo chown -R asterisk.asterisk /etc/asterisk
sudo chown -R asterisk.asterisk /var/{lib,log,spool}/asterisk
sudo chown -R asterisk.asterisk /usr/lib/asterisk
```

## Set Asterisk default user to asterisk

```
$ sudo vim /etc/default/asterisk
AST_USER="asterisk"
AST_GROUP="asterisk"

$ sudo vim /etc/asterisk/asterisk.conf
runuser = asterisk ; The user to run as.
rungroup = asterisk ; The group to run as.
```

## Restart asterisk service

```
sudo systemctl restart asterisk

# Enable asterisk service to start on system boot
sudo systemctl enable asterisk

# Test to see if you can connect to Asterisk CLI
sudo asterisk -rvv
```

# Install FreePBX 15

## Step 1: Install MariaDB Database server

```
sudo apt update
sudo apt install mariadb-server mariadb-client

# Initial DB setup and set root's password for DB
sudo /usr/bin/mysql_secure_installation
```

## Step 2: Installing Node.js 10 LTS

```
sudo apt install curl dirmngr apt-transport-https lsb-release ca-certificates
curl -sL https://deb.nodesource.com/setup_10.x | sudo bash
sudo apt update
sudo apt install gcc g++ make
sudo apt install nodejs
```

## Step 3: Install and configure Apache Web Server

```
sudo apt install apache2

# change Apache user to asterisk and turn on AllowOverride option
sudo cp /etc/apache2/apache2.conf /etc/apache2/apache2.conf_orig
sudo sed -i 's/^(User|Group).*\1 asterisk/' /etc/apache2/apache2.conf
sudo sed -i 's/AllowOverride None/AllowOverride All/' /etc/apache2/apache2.conf

# Remove default index.html page
sudo rm -f /var/www/html/index.html
```

## Step 4: Install PHP and required extensions

```
sudo apt install wget php php-pear php-cgi php-common php-curl php-mbstring php-gd php-mysql \
php-gettext php-bcmath php-zip php-xml php-imap php-json php-snmp php-fpm libapache2-mod-php
```

### Change php maximum file upload size

```
sudo sed -i 's/^(upload_max_filesize = \).*\120M/' /etc/php/7.3/apache2/php.ini
sudo sed -i 's/^(upload_max_filesize = \).*\120M/' /etc/php/7.3/cli/php.ini
```

## Step 5: Install FreePBX 15

```
sudo apt install wget
cd /usr/src
wget http://mirror.freepbx.org/modules/packages/freepbx/freepbx-15.0-latest.tgz

tar xzf freepbx-15.0-latest.tgz
rm -f freepbx-15.0-latest.tgz

cd freepbx
sudo ./start_asterisk start
sudo ./install -n --dbuser root --dbpass "yourpassword"

# Enable Apache Rewrite engine
sudo a2enmod rewrite
sudo systemctl restart apache2
```

## Step 6: Access FreePBX 15 Web Interface

Create the first admin account.

## Q & A

Q: Online modules are not available.

Error:

Warning: Error retrieving updates from online repository(s)  
(<https://mirror.freepbx.org> 35). Online modules are not available.

A: Change the DNS to 8.8.8.8

```
vi /etc/resolv.conf

nameserver 8.8.8.8
#nameserver 67.207.67.3
#nameserver 67.207.67.2
```

# Reference

- [Install Asterisk 16 with FreePBX 15 on Ubuntu 20.04/18.04/16.04 & Debian 9](#)
- [Install Asterisk 16 LTS on Ubuntu 20.04/18.04/16.04 & Debian 10/9](#)
- [How To Install FreePBX 15 on Ubuntu 20.04/18.04/16.04 & Debian 10/9](#)
- [Installing FreePBX 15 on Debian 9.6](#)

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