

INSTALACIÓN DEL SO DEBIAN LENNY 5.0.2

Objetivo

- Instalar el sistema operativo **Debian Lenny 5.0.2** para nuestra central con **Asterisk 1.4** con interfaz grafica de administración **freePBX 2.5**
- Instalación de **Hylafax** para el envío y recepción de faxes
- Instalación de **Avantfax** para la administración GUI de Hylafax
- Instalación de **A2Billing** (sistema de facturación de llamadas)
- Instalación de **Asternic Call Center Stats**, para el reporte de los agentes y las colas
- Instalación de **OpenVPN** para conexión remota segura y administrado vía GUI con **webmin**

Empezamos la instalación del sistema operativo

Previa descarga del CD-1 en <http://www.debian.org/CD/>

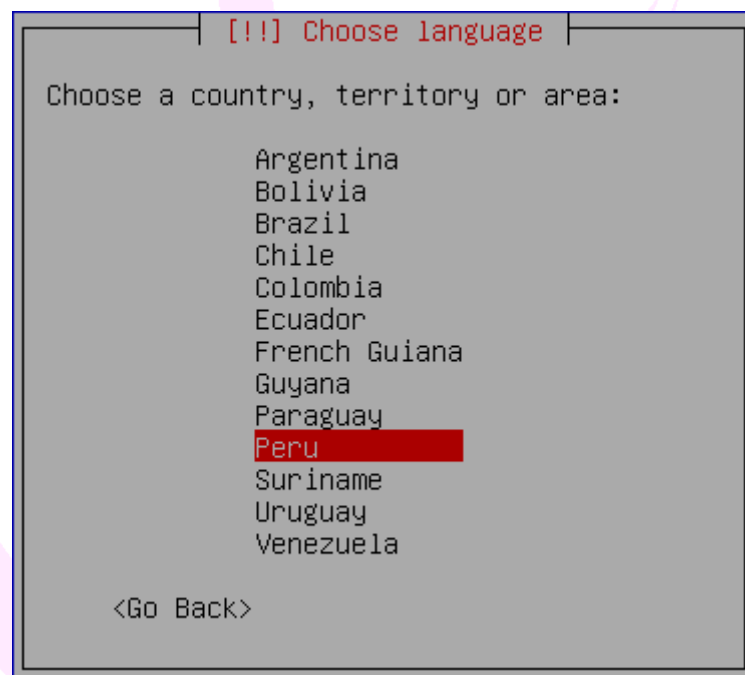
Seleccionamos **Install** y presionamos ENTER



Seleccionamos el idioma de la instalación (por default **English**)



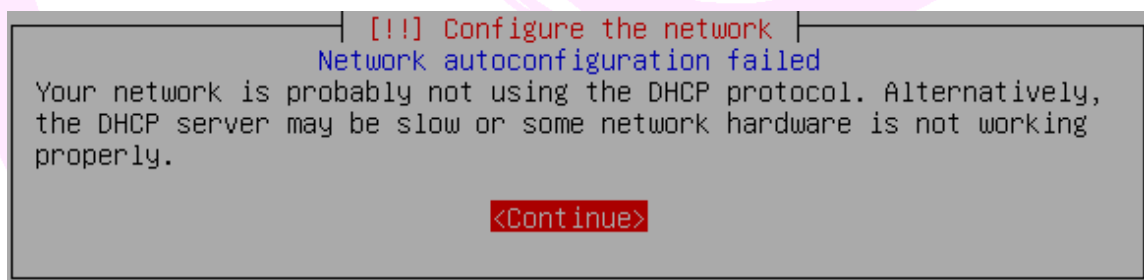
Indicamos nuestra ubicación, seleccionamos **other => South America => Peru**



Ahora seleccionamos el idioma de nuestro teclado (lo ponemos en **Spanish**)



Ahora el proceso de instalación asignará una dirección IP por DHCP, así que oprimimos **CANCEL** para agregarla manualmente



Empezamos a configurar manualmente la dirección IP

Agregamos la *dirección IP*, la *mascara de red*, la *dirección del router* ó gateway, la *dirección de dns*, el *nombre del servidor* (hostname), y finalmente el *nombre de nuestro dominio* (si es que tenemos, sino lo dejamos en blanco).

```
[[!]] Configure the network

From here you can choose to retry DHCP network autoconfiguration
(which may succeed if your DHCP server takes a long time to respond)
or to configure the network manually. Some DHCP servers require a
DHCP hostname to be sent by the client, so you can also choose to
retry DHCP network autoconfiguration with a hostname that you
provide.

Network configuration method:

    Retry network autoconfiguration
    Retry network autoconfiguration with a DHCP hostname
    Configure network manually
    Do not configure the network at this time

<Go Back>
```

Comenzamos con el particionamiento del disco

```
[[!]] Partition disks

The installer can guide you through partitioning a disk (using
different standard schemes) or, if you prefer, you can do it
manually. With guided partitioning you will still have a chance later
to review and customise the results.

If you choose guided partitioning for an entire disk, you will next
be asked which disk should be used.

Partitioning method:

    Guided - use entire disk
    Guided - use entire disk and set up LVM
    Guided - use entire disk and set up encrypted LVM
    Manual

<Go Back>
```

- Seleccionamos el disco que vamos a particionar en **Select disk to partition**

Seleccionamos que sea solo una partición **All files in one partition (recommended for new users)**

El sistema indica como quedara el particionado nuestro disco y finalizamos el proceso con **Finish partitioning and write changes to disk**

- Indicamos **<Yes>** para aceptar y grabar los cambios

Creación del password de root

En este paso creamos el password del root y lo confirmamos (*Re-enter password to verify*)

[!!] Set up users and passwords

You need to set a password for 'root', the system administrative account. A malicious or unqualified user with root access can have disastrous results, so you should take care to choose a root password that is not easy to guess. It should not be a word found in dictionaries, or a word that could be easily associated with you.

A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.

Note that you will not be able to see the password as you type it.

Root password:

<Go Back> **<Continue>**

El SO crea un usuario adicional al root, para esto escribimos el nombre completo del *nuevo usuario*, el *username* del nuevo usuario y su *password*, luego comenzara la instalación del sistema base.

[[!]] Set up users and passwords

A user account will be created for you to use instead of the root account for non-administrative activities.

Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or uses the user's real name. Your full name is a reasonable choice.

Full name for the new user:

Erick Manzur

<Go Back> <Continue>

Aquí nos preguntara si tenemos mas discos del sistema operativo, como solamente descargamos el disco CD Binary-1 le indico que **<No>**

[[!]] Configure the package manager

Your installation CD or DVD has been scanned; its label is:

Debian GNU/Linux 5.0.2 _Lenny_ - Official i386 CD Binary-1
20090628-14:43

You now have the option to scan additional CDs or DVDs for use by the package manager (apt). Normally these should be from the same set as the installation CD/DVD. If you do not have any additional CDs or DVDs available, this step can just be skipped.

If you wish to scan another CD or DVD, please insert it now.

Scan another CD or DVD?

<Go Back> <Yes> <No>

Esta parte es importante ya que indicaremos un repositorio ftp externo de donde podremos descargar todos los paquetes adicionales que necesitemos para la instalación de asterisk

Seleccionamos **<Yes>**

[!] Configure the package manager

A network mirror can be used to supplement the software that is included on the CD-ROM. This may also make newer versions of software available.

You are installing from a CD, which contains a limited selection of packages. Unless you don't have a good Internet connection, use of a mirror is recommended, especially if you plan to install a graphical desktop environment.

Note that using a mirror can result in a large amount of data being downloaded during the next step of the installation.

Use a network mirror?

<Go Back> **<Yes>** <No>

Seleccionamos **Spain => ftp.rediris.es => HTTP Proxy información** (sino usamos un Proxy para salir a Internet, lo dejamos en blanco), y comienza el escaneo de la red.

[!] Configure the package manager

If you need to use a HTTP proxy to access the outside world, enter the proxy information here. Otherwise, leave this blank.

The proxy information should be given in the standard form of "http://[[user][:pass]@]host[:port]/".

HTTP proxy information (blank for none):

<Go Back> **<Continue>**

Solicitud para que participes con la comunidad Debian indicando cuales son los paquetes que comúnmente usas, para hacer la distribución de los paquetes de manera mas ordenada en los CD's de instalación

Por default **<No>**

[!] Configuring popularity-contest

The system may anonymously supply the distribution developers with statistics about the most used packages on this system. This information influences decisions such as which packages should go on the first distribution CD.

If you choose to participate, the automatic submission script will run once every week, sending statistics to the distribution developers. The collected statistics can be viewed on <http://popcon.debian.org/>.

This choice can be later modified by running "dpkg-reconfigure popularity-contest".

Participate in the package usage survey?

<Yes>

<No>

Seleccionamos el software a instalar, desmarcamos usando la barra espaciadora la opción **Desktop environment**, nos quedamos solo con **Standard system** y continuamos con la instalación

[!] Software selection

At the moment, only the core of the system is installed. To tune the system to your needs, you can choose to install one or more of the following predefined collections of software.

Choose software to install:

[] Desktop environment

[] Web server

[] Print server

[] DNS server

[] File server

[] Mail server

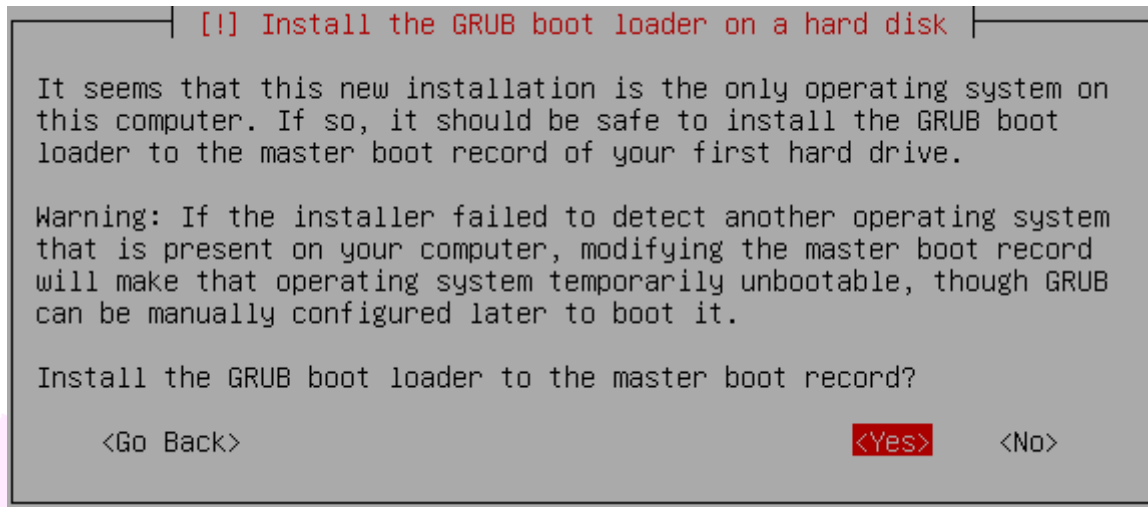
[] SQL database

[] Laptop

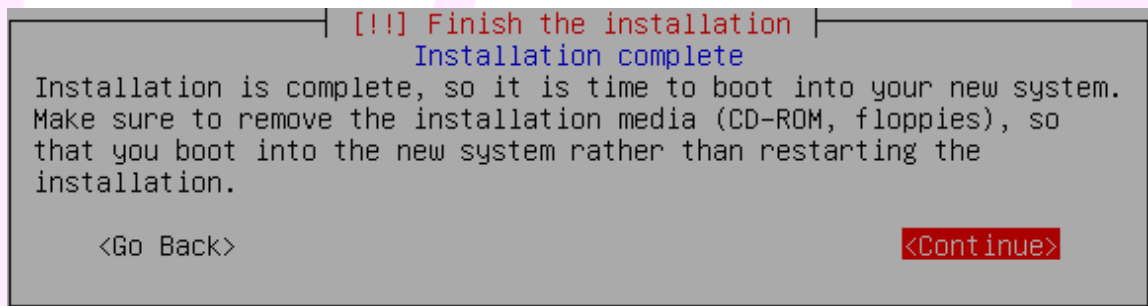
[*] Standard system

<Continue>

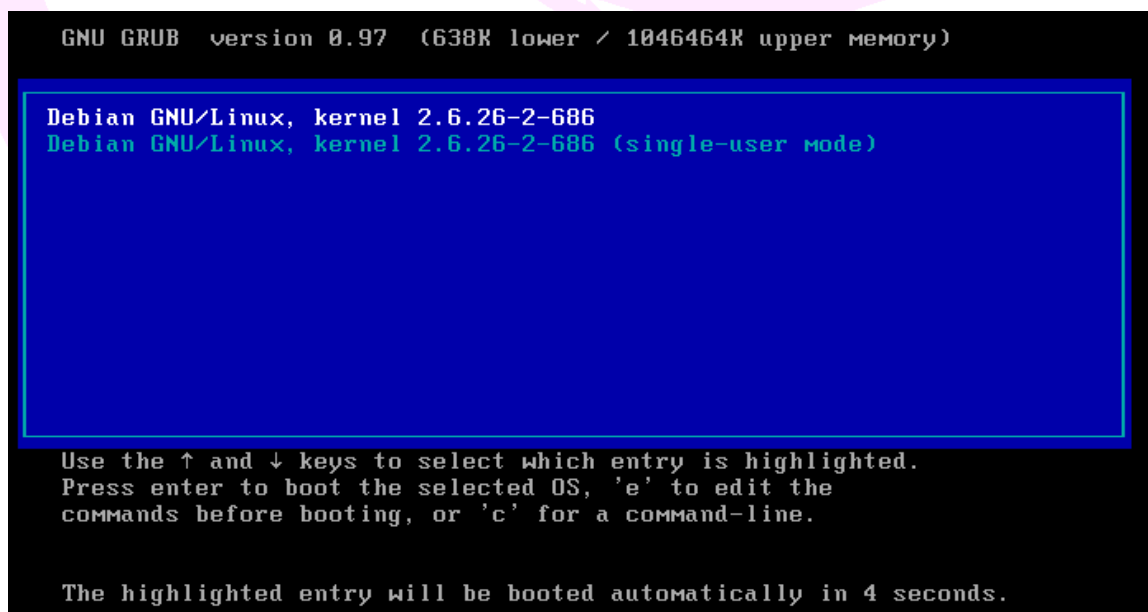
Instalamos el boot loader



El CD es expulsado indicando que se ha terminado con la instalación del sistema operativo



Iniciando el sistema operativo

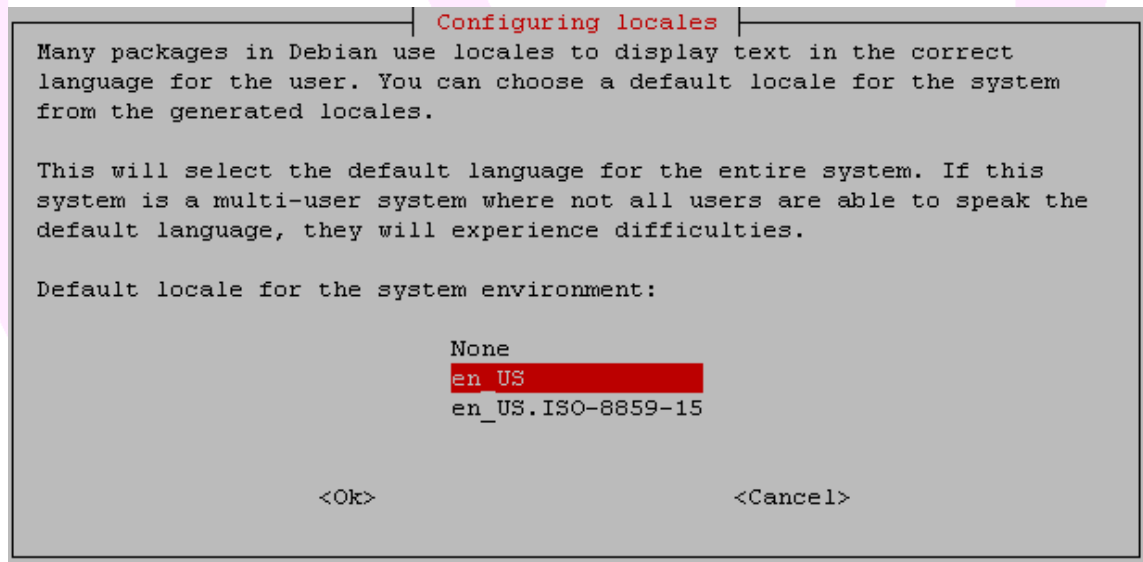
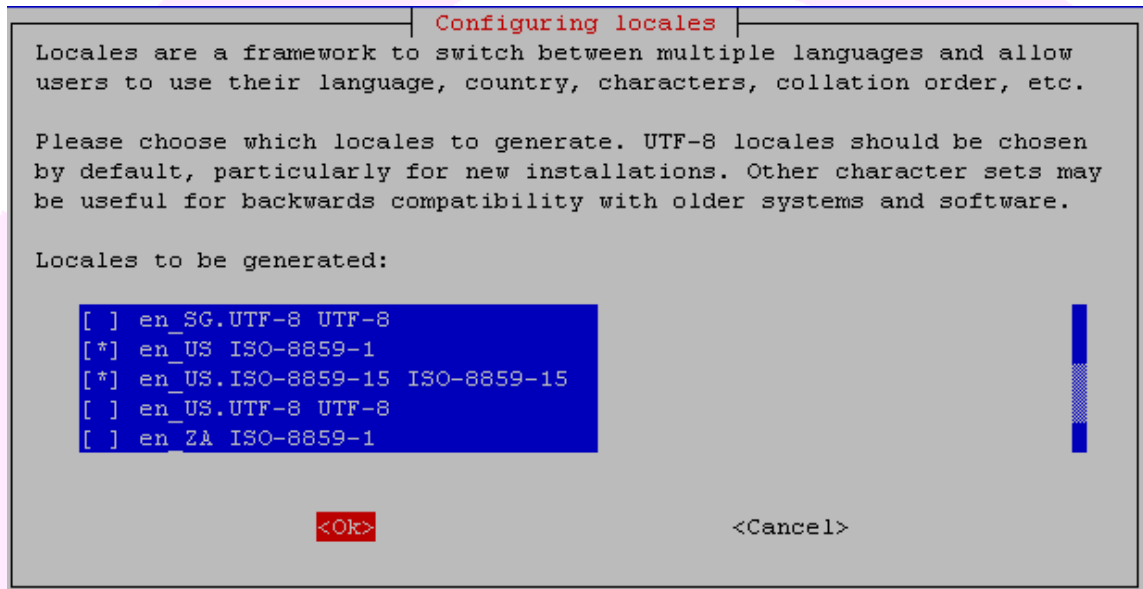


Ingresando al SO con el usuario root y ejecutamos los siguientes comandos:

asterisk:~# apt-get update (update del SO)

asterisk:~# apt-get upgrade (upgrade del SO)

asterisk:~# dpkg-reconfigure locales



asterisk:~# reboot (reinicia el SO)

Luego de haberse reiniciado el SO, insertamos nuevamente el CD1 de Debian e ingresamos con el usuario root y ejecutamos el siguiente comando:

asterisk:~# apt-get install ssh

Do you want to continue [Y/n]? **presionamos ENTER para continuar**

Ahora podemos conectarnos vía **ssh**, desde una PC con Windows con el cliente **Putty**
<http://the.earth.li/~sgtatham/putty/latest/x86/putty.exe>

Ejecutamos:

asterisk:~# apt-get install vim

Do you want to continue [Y/n]? **presionamos ENTER para continuar**

Editamos el archivo **vimrc** con el siguiente comando:

asterisk:~# vi /etc/vim/vimrc

Editamos 03 líneas del archivo para que quede de la siguiente manera:

syntax on (quitamos las comillas iniciales “)

set noai (agregamos)

set background=dark (quitamos la comilla inicial “)

```
runtime! debian.vim

" Uncomment the next line to make Vim more Vi-compatible
" NOTE: debian.vim sets 'nocompatible'.  Setting 'compatible' changes numerous
" options, so any other options should be set AFTER setting 'compatible'.
"set compatible

" Vim5 and later versions support syntax highlighting. Uncommenting the next
" line enables syntax highlighting by default.
syntax on
set noai

" If using a dark background within the editing area and syntax highlighting
" turn on this option as well
set background=dark

" Uncomment the following to have Vim jump to the last position when
" reopening a file
"if has("autocmd")
"  au BufReadPost * if line("'\"") > 0 && line("'\"") <= line("$")
"    \ | exe "normal! g'\"" | endif
"endif

33,0-1      30%
```

Para borrar usamos **Supr*

Para insertar presionamos **i*

Para salir grabando los cambios presionamos **Esc y **:x***

Para salir sin grabar los cambios presionamos **Esc y **:q!***

Ahora instalamos las siguientes dependencias para poder instalar Asterisk (esto toma su tiempo dependiendo de la velocidad de conexión de 30 ~ 35min)

Do you want to continue [Y/n]? **presionamos ENTER para continuar**

[illegible]

```
asterisk:~# perl -MCPAN -e 'install +YAML'
```

```
asterisk:~# perl -MCPAN -e "install Net::Telnet"
asterisk:~# perl -MCPAN -e "install IPC::Signal"
asterisk:~# perl -MCPAN -e "install Proc::WaitStat"
```

```
asterisk:~# apt-get install atftpd
asterisk:~# vi /etc/inetd.conf
```

Aquí modificamos la línea `/var/lib/tftpboot` y la dejamos solo como `/tftpboot`

```
#daytime          stream  tcp    nowait  root    internal
#time            stream  tcp    nowait  root    internal

#STANDARD: These are standard services.

#BSD: Shell, login, exec and talk are BSD protocols.

#MAIL: Mail, news and uucp services.

#INFO: Info services

#BOOT: TFTP service is provided primarily for booting. Most sites
#       run this only on machines acting as "boot servers."
tftp        dgram    udp4    wait    nobody  /usr/sbin/tcpd  /usr/sbin/in.tftpd
--tftpd-timeout 300 --retry-timeout 5 --mcast-port 1758 --mcast-addr 239.239.23
9.0-255 --mcast-ttl 1 --maxthread 100 --verbose=5 /tftpboot

#RPC: RPC based services

#HAM-RADIO: amateur-radio services

#OTHER: Other services

39,0-1          Final
```

```
asterisk:~# mkdir /tftpboot
```

Creación de enlaces simbólicos

```
asterisk:~# mkdir /usr/src/linux-2.6
```

```
asterisk:~# mkdir /usr/src/linux
```

```
asterisk:~# ln -s /usr/src/linux-headers-2.6.26-2-686 /usr/src/linux-2.6
```

```
asterisk:~# ln -s /usr/src/linux-headers-2.6.26-2-686 /usr/src/linux
```

Ahora copiamos todos los archivos necesarios (previamente descargados de la página www.asterisk.org) para la instalación de nuestra central asterisk al directorio: `/usr/src` haciendo uso de **FileZilla FTP Client**

<http://filezilla-project.org/download.php?type=client>

Instalación de lame (<http://lame.sourceforge.net/>)

```
asterisk: /usr/src# tar xzvf lame-3.98-2.tar.gz
```

```
asterisk: /usr/src# cd lame-3.98-2
```

```
asterisk: /usr/src/lame-3.98-2# ./configure --prefix=/usr --sysconfdir=/etc
```

```
asterisk: /usr/src/lame-3.98-2# make
```

```
asterisk: /usr/src/lame-3.98-2# make install
```

Instalación de asterisk-perl (<http://asterisk.gnuinter.net/>)

```
asterisk: /usr/src # tar xzvf asterisk-perl-1.01.tar.tar
```

```
asterisk: /usr/src# cd asterisk-perl-1.01
```

```
asterisk: /usr/src/asterisk-perl-1.01# perl Makefile.PL
```

```
asterisk: /usr/src/asterisk-perl-1.01# make all
```

```
asterisk: /usr/src/asterisk-perl-1.01# make install
```

Creación de los usuarios de la Base de Datos (BD)

```
asterisk: /usr/src # mysql -u root -p (el password de la BD la colocamos al comienzo de la instalación)
mysql > show databases;
mysql > use mysql;
mysql > grant all privileges on *.* to asterisk@localhost identified by "asteriskperu28";
mysql > flush privileges;
mysql > exit
```

Nos validamos con el usuario asterisk creado

```
asterisk: /usr/src # mysql -u asterisk -p (el password del usuario asterisk es asteriskperu28)
mysql > create database asteriskcdrdb;
mysql > create database asterisk;
mysql > create database avantfax; (para el Avantfax)
mysql > create database mya2billing; (para el A2Billing)
mysql > create database qstat; (para el Asternic Call Center Stats)
mysql > exit
```

Pasamos el esquema y la información de los scripts a la Base de Datos de FreePBX

```
asterisk: /usr/src # tar xzvf freepbx-2.5.1.tar.gz
asterisk: /usr/src# cd freepbx-2.5.1
asterisk: /usr/src/freepbx-2.5.1# mysql -u asterisk -p asterisk < /usr/src/freepbx-2.5.1/SQL/newinstall.sql
Enter password: asteriskperu28

asterisk: /usr/src/freepbx-2.5.1# mysql -u asterisk -p asteriskcdrdb < /usr/src/freepbx-2.5.1/SQL/cdr_mysql_table.sql
Enter password: asteriskperu28
```

Creamos el usuario y grupo que maneja los procesos de asterisk y creamos el directorio asterisk

```
asterisk: /usr/src # groupadd asterisk
asterisk: /usr/src # useradd -c "PBX asterisk" -d /var/lib/asterisk -g asterisk asterisk
asterisk: /usr/src # mkdir /var/run/asterisk
asterisk: /usr/src # chown asterisk:asterisk /var/run/asterisk
```

Cambiamos el usuario propietario de Apache

```
asterisk: /usr/src # vi /etc/group  
www-data:x:33:asterisk
```

```
uucp:x:10:  
man:x:12:  
proxy:x:13:  
kmem:x:15:  
dialout:x:20:emanzur  
fax:x:21:  
voice:x:22:  
cdrom:x:24:emanzur  
floppy:x:25:emanzur  
tape:x:26:  
sudo:x:27:  
audio:x:29:emanzur  
dip:x:30:  
www-data:x:33:asterisk  
backup:x:34:  
operator:x:37:  
list:x:38:  
irc:x:39:  
src:x:40:  
gnats:x:41:  
shadow:x:42:  
utmp:x:43:  
video:x:44:emanzur  
-- INSERT&R --
```

Cambiar el usuario y grupo de \$(APACHE_RUN_USER) a asterisk

```
asterisk: /usr/src # vi /etc/apache2/apache2.conf  
User ${APACHE_RUN_USER} cambiar a User asterisk  
Group ${APACHE_RUN_USER} cambiar a Group asterisk
```

Edición de php.ini para aumentar el tamaño de archivos que se suben al servidor web, para esto modificamos los siguientes valores

```
asterisk: /usr/src # vi /etc/php5/apache2/php.ini  
upload_max_filesize = 40M  
max_execution_time = 120  
max_input_time = 120
```

Sigamos, tendremos que decirle al php.ini del paquete **php5-cgi** que utilice la extension **mysql.so** (con esto le permitimos a este paquete realizar consultas contra el motor de bases de datos mySQL

asterisk: /usr/src # vi /etc/php5/cgi/php.ini
extension=mysql.so

```

;
; Dynamic Extensions ;
;
; If you wish to have an extension loaded automatically, use the following
; syntax:
;
;   extension=module.extension
;
; For example, on Windows:
;
;   extension=msql.dll
;
; ... or under UNIX:
;
extension=mysql.so
;
; Note that it should be the name of the module only; no directory information
; needs to go here.  Specify the location of the extension with the
; extension_dir directive above.
;
;
-- INSERTAR --
609,2 48%
```


[illegible]

Instalar Asterisk 1.4.26.1 con GUI de administración FreePBX 2.5.1 sobre el SO Debian Lenny 5.2.0

```
asterisk: /usr/src # tar xzvf dahdi-linux-2.2.0.2.tar.gz
asterisk: /usr/src# cd dahdi-linux-2.2.0.2
asterisk: /usr/src/dahdi-linux-2.2.0.2 # make
asterisk: /usr/src/dahdi-linux-2.2.0.2# make install
```

```
asterisk: /usr/src # tar xzvf dahdi-tools-2.2.0.tar.gz
asterisk: /usr/src# cd dahdi-tools-2.2.0
asterisk: /usr/src/ dahdi-tools-2.2.0 # ./configure
asterisk: /usr/src/ dahdi-tools-2.2.0# make menuselect
```

[illegible]

Instalación de libpri (para tarjetas T1/E1)

```
asterisk: /usr/src # tar xzvf libpri-1.4.10.1.tar.gz
asterisk: /usr/src# cd libpri-1.4.10.1
asterisk: /usr/src/ libpri-1.4.10.1 # make
asterisk: /usr/src/ libpri-1.4.10.1# make install
```

Instalación de asterisk

```
asterisk: /usr/src # tar xzvf asterisk-1.4.26.1.tar.gz
asterisk: /usr/src# cd asterisk-1.4.26.1#
asterisk: /usr/src/ asterisk-1.4.26.1# ./configure
asterisk: /usr/src/ asterisk-1.4.26.1# make menuselect (para ver las opciones)
asterisk: /usr/src/ asterisk-1.4.26.1# make
asterisk: /usr/src/ asterisk-1.4.26.1# make install
asterisk: /usr/src/ asterisk-1.4.26.1# make samples
```

Instalación de asterisk-addons

```
asterisk: /usr/src # tar xzvf asterisk-addons-1.4.9.tar.gz
asterisk: /usr/src# cd asterisk-addons-1.4.9
asterisk: /usr/src/asterisk-addons-1.4.9# ./configure
asterisk: /usr/src/asterisk-addons-1.4.9# make menuselect (para ver las opciones)
asterisk: /usr/src/asterisk-addons-1.4.9# make
asterisk: /usr/src/asterisk-addons-1.4.9# make install
asterisk: /usr/src/asterisk-addons-1.4.9# make samples
```

Modificamos y reiniciamos el servidor web apache

```
asterisk: /usr/src # vi /etc/apache2/sites-available/default
```

agregar en:

[DocumentRoot /var/www/asterisk](#)

```
<VirtualHost *:80>
    ServerAdmin webmaster@localhost

    DocumentRoot /var/www/asterisk
    <Directory />
        Options FollowSymLinks
        AllowOverride None
```

```
asterisk: /usr/src # /etc/init.d/apache2 restart
```

Editamos el archivo de configuracion de asterisk

```
asterisk: /usr/src # vi /etc/asterisk/asterisk.conf
```

agregar en:

[astrundir=/var/run/asterisk](#)

Asignamos los permisos

```
asterisk: /usr/src # chown -R asterisk:asterisk /var/run/asterisk
```

Modificar en:

asterisk: /usr/src # vi /usr/src/freepbx-2.5.1/amp_conf/bin/retrieve_op_conf_from_mysql.pl

reemplazar:

zapata.conf por **chan_dahdi.conf**

zapata-auto.conf por **dahdi-channels.conf**

```
#
# if flags = 1 then the records are not included in the output file

use FindBin;
push @INC, "$FindBin::Bin";

use DBI;
require "retrieve_parse_ampportal_conf.pl";

##### BEGIN OF CONFIGURATION #####

if (scalar @ARGV == 2)
{
    $ampportalconf = $ARGV[0];
    $zapataconf = $ARGV[1]."/chan_dahdi.conf";
    $zapataautoconf = $ARGV[1]."/dahdi-channels.conf";
} else
{
    $ampportalconf = "/etc/ampportal.conf";
    $zapataconf="/etc/asterisk/chan_dahdi.conf";
    $zapataautoconf="/etc/asterisk/dahdi-channels.conf";
}

28,0-1 0%
```

IMPORTANTE: Si actualizas el freePBX estos cambios se borrarán y tendrás que hacerlo nuevamente, esta vez en el archivo:

#vi /var/lib/asterisk/bin/retrieve_op_conf_from_mysql.pl

Iniciar Asterisk para poder hacer la instalación de freePBX

asterisk: /usr/src # asterisk start

Continuamos con la instalación de freePBX

asterisk: /usr/src/ # cd /usr/src/freepbx-2.5.1

Instalamos los paquetes para gestión de bases de datos en PHP

asterisk: /usr/src/freepbx-2.5.1 # pear install db

asterisk: /usr/src/freepbx-2.5.1 # mkdir /var/www/asterisk/

asterisk: /usr/src/freepbx-2.5.1 # chown asterisk:asterisk /var/www/asterisk

asterisk: /usr/src/freepbx-2.5.1 # ./install_amp

Después de ejecutar **./install_amp** pedirá los valores para crear el archivo de configuración

En primer lugar introducir el usuario de la base de datos que se creo previamente

[asteriskuser] **asterisk**

Introducir el password de usuario de la base de datos creada para asterisk

[amp109] **asteriskperu28**

Introducir el nombre del servidor de la base de datos, si está de forma local, introducir **localhost** (igual que este caso), de lo contrario introducir la dirección IP o nombre de dominio del servidor de base de datos

[localhost] **ENTER**

Introducir el nombre de usuario del administrador que se usara como admin del AMI de asterisk

[admin] **asterisk**

Password del usuario admin de AMI, importante para conectar aplicaciones terceras a Asterisk

[amp111] **ENTER**

Ruta de instalación del servidor de asterisk

[/var/www/html] **/var/www/asterisk**

Dirección IP del servidor asterisk

[xx.xx.xx.xx] **192.168.1.201** (para este caso: es la dirección IP de mi servidor asterisk)

Password para poder operar FOP

[passw0rd] **ENTER**

Use simple Extensions extensions admin or separate Devices and Users deviceanduser?

[extensions] **ENTER**

Enter directory in which to store AMP executable scripts:

[/var/lib/asterisk/bin] **ENTER**

Enter directory in which to store super-user scripts:

[/usr/local/sbin] **ENTER**

Configuramos los permisos para el directorio de asterisk

asterisk: /usr/src/ # chown -R asterisk:asterisk /var/lib/asterisk/

Paramos previamente la ejecución de asterisk

asterisk: /usr/src/ # ps aux | grep asterisk

```
asterisk:/usr/src/freepbx-2.5.1# ps aux | grep asterisk
root      9248  0.1  4.4 25296 8436 ?        Ssl  17:04   0:01 asterisk start
root      9467  0.0  0.3   3380  756 pts/0    S+   17:21   0:00 grep asterisk
```

asterisk: /usr/src/ # kill -s 9 9248 (el valor de 9248 es solo para este caso)

Creamos el siguiente archivo y lo editamos:

asterisk: /usr/src/ # vi /etc/default/asterisk

RUNASTERISK=yes

Realizamos algunos cambios para el freePBX

asterisk: /usr/src/ # vi /var/www/asterisk/admin/views/panel.php

debe quedar:

src="panel/index_amp.php?context='.\$deptname.'">

```
<?php
$template['amp_conf'] = &$amp_conf;
$template['title'] = $title;
$template['content'] =
    '<div id="panelframe">'.
    '<iframe width="97%" height="600" frameborder="0" align="top" src="..pa
nel/index_amp.php?context='.$deptname.'"></iframe>'.
    '</div>';
showview('freepbx', $template);
?>
```

asterisk: /usr/src/ # vi /var/www/asterisk/index.html

debe quedar:

```
<HTML>
<HEAD>
<head>
    <title>FreePBX</title>
    <meta http-equiv="Content-Type" content="text/html">
    <link href="mainstyle.css" rel="stylesheet" type="text/css">
</head>

<body>
<div id="page">

<div class="header">

    <a href="admin/index.php"></a>
```

Ejecutamos amportal

asterisk: /usr/src/ # amportal start

Abrir en un navegador de preferencia Firefox la dirección del servidor asterisk

http://192.168.1.201

Por default no nos pedirá password, pero hay que ir a **administrator** y cambiar el nombre de usuario y password del administrador

Ingresamos a freePBX Administration => Administrators => admin.

Username: admin

Password: asteriskperu28

Cerramos la ventana de explorador del freePBX y editamos el siguiente archivo:

asterisk: /usr/src/ # vi /etc/amportal.conf
AUTHTYPE=database

```
# AUTHTYPE: authentication type to use for web admin
# If type set to 'database', the primary AMP admin credentials will be the AMPDB
USER/AMPDBPASS above
# valid: none, database
AUTHTYPE=database
```

Para usar DAHDI en el freePBX
ZAP2DAHDICompat=true

```
ZAP2DAHDICompat=true
# DEFAULT VALUE: false
# If set to true, FreePBX will check if you have chan_dadhi installed. If so, it
will
# automatically use all your ZAP configuration settings (devices and trunks) and
# silently convert them, under the covers, to DAHDI so no changes are needed. Th
e
# GUI will continue to refer to these as ZAP but it will use the proper DAHDI ch
annels.
# This will also keep Zap Channel DIDs working.
AMPDBUSER=asterisk
AMPDBPASS=asteriskperu28
```

Ahora al volver a conectarnos al servidor asterisk vía web, nos pedirá el usuario y password

Para iniciar asterisk y freePBX al arrancar el servidor, editamos el siguiente archivo:

asterisk: /usr/src/ # vi /etc/rc.local
/usr/local/sbin/amportal start
exit 0

```
#!/bin/sh -e
#
# rc.local
#
# This script is executed at the end of each multiuser runlevel.
# Make sure that the script will "exit 0" on success or any other
# value on error.
#
# In order to enable or disable this script just change the execution
# bits.
#
# By default this script does nothing.
/usr/local/sbin/amportal start
exit 0
```

Para modificar las vistas en el FOP para que soporte 100 extensiones, ingresar a la siguiente dirección: <http://www.asterisk-peru.com/node/1405>

CONFIGURACIÓN DEL CLIENTE EXIM4 PARA EL ENVÍO DE LOS VOICEMAIL

Objetivo

Evitar problemas cuando se envían los **voicemail** a las cuentas de correos y estos no llegan

asterisk: `/usr/src/ # dpkg-reconfigure exim4-config`

Seleccionar **mail sent by smarthost; received via SMTP or fetchmail**

Mail Server configuration	
General type of mail configuration:	
internet site; mail is sent and received directly using SMTP	
mail sent by smarthost; received via SMTP or fetchmail	
mail sent by smarthost; no local mail	
local delivery only; not on a network	
no configuration at this time	
<div><Ok> <Cancel></div>	

Indicar el nombre del servidor de correo

Mail Server configuration	
The 'mail name' is the domain name used to 'qualify' mail addresses without a domain name.	
This name will also be used by other programs. It should be the single, fully qualified domain name (FQDN).	
Thus, if a mail address on the local host is foo@example.org, the correct value for this option would be example.org.	
This name won't appear on From: lines of outgoing messages if rewriting is enabled.	
System mail name:	
mail.asteriskperu.com	
<div><Ok> <Cancel></div>	

IP-addresses to listen on for incoming SMTP connections: 127.0.0.1

Mail Server configuration	
IP-addresses to listen on for incoming SMTP connections:	
127.0.0.1	
<div><Ok> <Cancel></div>	

Other destinations for which mail is accepted: **DEJAR VACIO**

Mail Server configuration	
<p>Please enter a semicolon-separated list of recipient domains for which this machine should consider itself the final destination. These domains are commonly called 'local domains'. The local hostname (asterisk) and 'localhost' are always added to the list given here.</p> <p>By default all local domains will be treated identically. If both a.example and b.example are local domains, acc@a.example and acc@b.example will be delivered to the same final destination. If different domain names should be treated differently, it is necessary to edit the config files afterwards.</p> <p>Other destinations for which mail is accepted:</p> <div></div>	
<Ok>	<Cancel>

Machines to relay mail for: **DEJAR VACIO**

Mail Server configuration	
<p>Please enter a semicolon-separated list of IP address ranges for which this system will unconditionally relay mail, functioning as a smarthost.</p> <p>You should use the standard address/prefix format (e.g. 194.222.242.0/24 or 5f03:1200:836f::/48).</p> <p>If this system should not be a smarthost for any other host, leave this list blank.</p> <p>Machines to relay mail for:</p> <div></div>	
<Ok>	<Cancel>

IP address or host name of the outgoing smarthost :

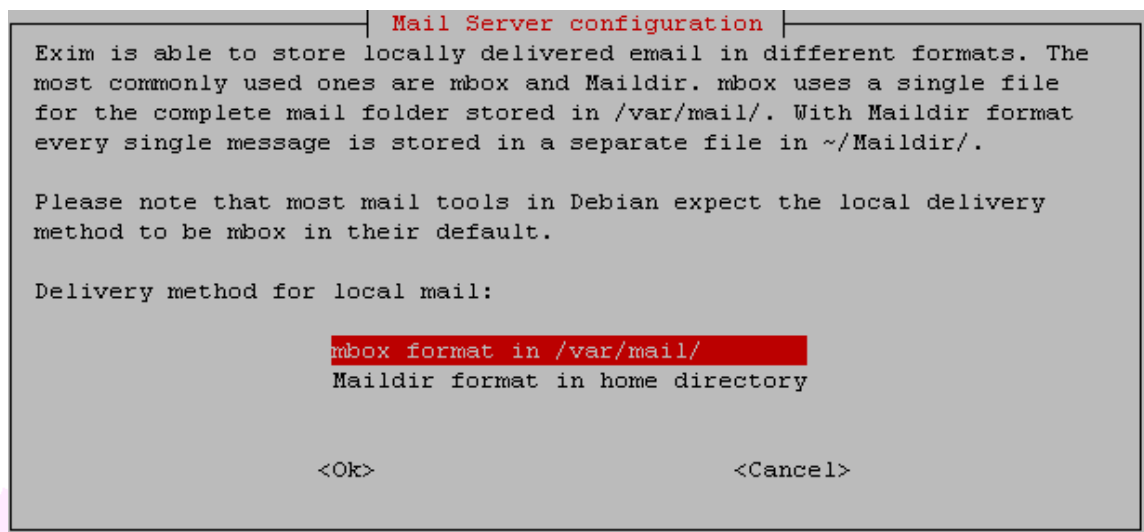
Mail Server configuration	
<p>Please enter the IP address or the host name of a mail server that this system should use as outgoing smarthost. If the smarthost only accepts your mail on a port different from TCP/25, append two colons and the port number (for example smarthost.example::587 or 192.168.254.254::2525). Colons in IPv6 addresses need to be doubled.</p> <p>If the smarthost requires authentication, please refer to the Debian-specific README files in /usr/share/doc/exim4-base for notes about setting up SMTP authentication.</p> <p>IP address or host name of the outgoing smarthost:</p> <p><u>mail.asteriskperu.com</u></p> <p><input type="button" value="OK"/> <input type="button" value="Cancel"/></p>	

Hide local mail name in outgoing mail? **NO**

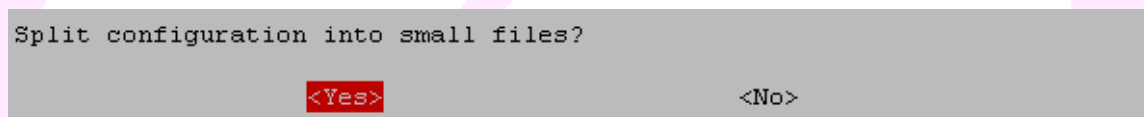
Mail Server configuration	
<p>The headers of outgoing mail can be rewritten to make it appear to have been generated on a different system. If this option is chosen, 'mail.asteriskperu.com', 'localhost' and '' in From, Reply-To, Sender and Return-Path are rewritten.</p> <p>Hide local mail name in outgoing mail?</p> <p><input type="button" value="Yes"/> <input checked="" type="button" value="No"/></p>	

Keep number of DNS-queries minimal (Dial-on-Demand) ? **NO**

Mail Server configuration	
<p>Keep number of DNS-queries minimal (Dial-on-Demand) ?</p> <p><input type="button" value="Yes"/> <input checked="" type="button" value="No"/></p>	



Split configuration into small files? **YES**



Ahora editamos el archivo:

asterisk: /usr/src/ # vi /etc/exim4/passwd.client

mail.asteriskperu.com:**nombre_de_usuario:clave_de_usuario**

Protegemos nuestros datos

asterisk: /usr/src/ # chown root:Debian-exim /etc/exim4/passwd.client

asterisk: /usr/src/ # echo "root@localhost: **nombre_de_usuario@mi_dominio.com**"
>> /etc/exim4/email-addresses

asterisk: /usr/src/ # update-exim4.conf

Editamos el archivo **voicemail.conf**

```
asterisk: /usr/src/ # vi /etc/asterisk/voicemail.conf  
mailcmd=/usr/sbin/exim -t
```

```
; Set the date format on outgoing mails. Valid arguments can be found on the  
; strftime(3) man page  
;  
; Default  
emaildateformat=%A, %B %d, %Y at %r  
; 24h date format  
emaildateformat=%A, %d %B %Y at %H:%M:%S  
;  
; You can override the default program to send e-mail if you wish, too  
;  
mailcmd=/usr/sbin/exim -t  
;  
; Users may be located in different timezones, or may have different  
; message announcements for their introductory message when they enter
```

Ahora realizamos un **TEST** para verificar la configuración

```
asterisk: /usr/src/ # echo "Cuerpo de email" |mail -s "Encabezado Prueba de  
email" manzurek@asteriskperu.com
```

IMPORTANTE : El administrador del servidor de correo debe hacer un relay de la dirección IP del servidor Asterisk, permitiendo de esta manera que el servidor de correo reciba los voicemail enviados por Asterisk.

INSTALACION DE HYLAFAX

Objetivo

Usar Hylafax para enviar y recibir faxes

asterisk: /usr/src/ # apt-get install iaxmodem hylafax-server

asterisk: /usr/src/ # faxsetup

Aceptamos todas las configuraciones por defecto y en la parte donde nos solicita configurar un modem le indicamos que **no**

```
HylaFAX configuration parameters are:

[1] Init script starts faxq:          yes
[2] Init script starts hfaxd         yes
[3] Start old protocol:              no
[4] Start paging protocol:           no
Are these ok [yes]?

Modem support functions written to /var/spool/hylafax/etc/setup.modem.
Configuration parameters written to /var/spool/hylafax/etc/setup.cache.

Restarting HylaFAX server processes.

You have a HylaFAX scheduler process running.  faxq will be
restarted shortly, as soon as some other work has been completed.
Can I terminate this faxq process (5955) [yes]?
Should I restart the HylaFAX server processes [yes]?

/etc/init.d/hylafax start
Not starting HylaFAX daemons since they are already running.

You do not appear to have any modems configured for use.  Modems are
configured for use with HylaFAX with the faxaddmodem(8) command.
Do you want to run faxaddmodem to configure a modem [yes]? no
```

Creamos en el freePBX una extensión IAX2 con numero 1318

This device uses iax2 technology.

secret	hylafax2009
nottransfer	yes
context	from-internal
host	dynamic
type	friend
port	4569
qualify	yes
disallow	all
allow	ulaw
dial	IAX2/1318
accountcode	
mailbox	1318@device
deny	0.0.0.0/0.0.0.0
permit	0.0.0.0/0.0.0.0

Recording Options

Record Incoming	Never
Record Outgoing	Never

Voicemail & Directory

Creamos un cliente iaxmodem de la siguiente manera:

asterisk: /usr/src/ # vi /etc/iaxmodem/iaxmodem-cfg.ttyIAX1

```
device      /dev/ttyIAX1
owner       asterisk:asterisk
mode        660
port        45699
refresh     300
server      127.0.0.1
peername     1318
secret      hylafax2009
cidname     Fax Erick Manzur
cidnumber   5138080
codec       slinear
```

Ejecutamos el siguiente comando para verificar el funcionamiento del modem:

asterisk: /usr/src/ # /usr/bin/iaxmodem iaxmodem-cfg.ttyIAX1

```
asterisk:/etc/iaxmodem# /usr/bin/iaxmodem iaxmodem-cfg.ttyIAX1
[2009-08-10 18:49:38] Modem started
[2009-08-10 18:49:38] Setting device = '/dev/ttyIAX1'
[2009-08-10 18:49:38] Setting owner = 'asterisk:asterisk'
[2009-08-10 18:49:38] Setting mode = '660'
[2009-08-10 18:49:38] Setting port = 45699
[2009-08-10 18:49:38] Setting refresh = 300
[2009-08-10 18:49:38] Setting server = '127.0.0.1'
[2009-08-10 18:49:38] Setting peername = '1318'
[2009-08-10 18:49:38] Setting secret = 'hylafax2009'
[2009-08-10 18:49:38] Setting cidname = 'Fax Erick Manzur'
[2009-08-10 18:49:38] Setting cidnumber = '5138080'
[2009-08-10 18:49:38] Setting codec = slinear
[2009-08-10 18:49:38] Opened pty, slave device: /dev/pts/1
[2009-08-10 18:49:38] Created /dev/ttyIAX1 symbolic link
[2009-08-10 18:49:38] Registration completed successfully.
```

Editamos el **inittab**

asterisk: /usr/src/ # vi /etc/inittab

agregamos al final:

fx1:2345:respawn:/usr/sbin/faxgetty ttyIAX1

```
# Format:
# <id>:<runlevels>:<action>:<process>
#
# Note that on most Debian systems tty7 is used by the X Window System,
# so if you want to add more getty's go ahead but skip tty7 if you run X.
#
1:2345:respawn:/sbin/getty 38400 tty1
2:23:respawn:/sbin/getty 38400 tty2
3:23:respawn:/sbin/getty 38400 tty3
4:23:respawn:/sbin/getty 38400 tty4
5:23:respawn:/sbin/getty 38400 tty5
6:23:respawn:/sbin/getty 38400 tty6

# Example how to put a getty on a serial line (for a terminal)
#
#T0:23:respawn:/sbin/getty -L ttyS0 9600 vt100
#T1:23:respawn:/sbin/getty -L ttyS1 9600 vt100

# Example how to put a getty on a modem line.
#
#T3:23:respawn:/sbin/mgetty -x0 -s 57600 ttyS3
fx1:2345:respawn:/usr/sbin/faxgetty ttyIAX1
```

Creamos el modem virtual **config.ttylAX1** manualmente de la siguiente manera:

asterisk: /usr/src/ # vi /var/spool/hylafax/etc/config.ttylAX1

```
CountryCode:      51
AreaCode:         1
FAXNumber:        5138080
LongDistancePrefix: 0
InternationalPrefix: 00
DialStringRules:  etc/dialrules
ServerTracing:    0xFFFF
SessionTracing:   0xFFFF
RecvFileMode:     0600
LogFileMode:      0600
DeviceMode:       0600
RingsBeforeAnswer: 1
SpeakerVolume:    off
GettyArgs:        "-h %l dx_%s"
LocalIdentifier:   "Fax Erick Manzur"
TagLineFont:      etc/lutRS18.pcf
TagLineFormat:    "From %l|c|Page %P of %T"
MaxRecvPages:     200
#
```

```

#
#
# Modem-related stuff: should reflect modem command interface
# and hardware connection/cabling (e.g. flow control).
#
ModemType:                Class1                # use this to supply a hint

#
# The modem is taken off-hook during initialization, and then
# placed back on-hook when done to prevent glare.
#
#ModemResetCmds:           "ATH1\nAT+VCID=1"      # enables CallID display
#ModemReadyCmds:           ATH0

Class1AdaptRecvCmd:        AT+FAR=1
Class1TMConnectDelay:      400                   # counteract quick CONNECT response
Class1RMQueryCmd:          "!24,48,72,96"        # V.17 fast-train recv doesn't work well

#
# You'll likely want Caller*ID display (also displays DID) enabled.
#
ModemResetCmds:            AT+VCID=1            # enables CallID display

#
# If you are "missing" Caller*ID data on some calls (but not all)
# and if you do not have adequate glare protection you may want to
# not answer based on RINGs, but rather enable the CallIDAnswerLength
# for NDID, disable AT+VCID=1 and do this:
#
#RingsBeforeAnswer: 0
#ModemRingResponse: AT+VRID=1

CallIDPattern:             "NMBR="
CallIDPattern:             "NAME="
CallIDPattern:             "ANID="
CallIDPattern:             "NDID="
# Uncomment these if you really want them, but you probably don't.
#CallIDPattern:            "DATE="
#CallIDPattern:            "TIME="

```

Configurando el correo donde llegara en fax en formato pdf

asterisk: /usr/src/ # vi /var/spool/hylafax/etc/FaxDispatch

```

TEMPLATE=es

SENDTO=faxmaster@asterisk-peru.com;
FILETYPE=pdf;

case "$DEVICE" in
    ttyIAX1) SENDTO=manzurek@hotmail.com;;
esac

```


asterisk: /usr/src/ # vi /var/spool/hylafax/etc/hosts.hfaxd

localhost:21::

127.0.0.1

192.168.1.201

192.168.1.3

winprinthylafax)

IP del servidor asterisk

IP de una maquina que se utilizara para enviar faxes (puede ser usando

```
# hosts.hfaxd
# This file contains permissions and password for every user in
# the system.
#
# For more information on this biject, please see its man page
# and the commands faxadduser and faxdeluser.
localhost:21::
127.0.0.1
192.168.1.201
192.168.1.3
```

Reiniciamos el servidor y ya tendremos el modem ttylAX1 funcionando, desde otro anexo podremos comprobar marcando al anexo que creamos (1318) y nos dará tono de fax.

INSTALACIÓN DE AVANTFAX

Objetivo

Instalar Avantfax 3.1.6 para la administración de Hylafax

Necesitamos instalar las siguientes dependencias:

asterisk: # apt-get install apache2-mpm-prefork apache2-utils apache2.2-common libapache2-mod-php5 libapr1 libaprutil1 libsqlite3-0 php5-cli php5-common imagemagick ghostscript netpbm libnetpbm10-dev libungif-bin libungif4-dev sudo cups php-mail php-mail-mime php-file php-db psutils wdiff expect libmagic-dev rsync

Durante la instalación nos pedirá ingresar el dominio de nuestra red:

Samba Server

Please specify the workgroup you want this server to appear to be in when queried by clients. Note that this parameter also controls the domain name used with the security=domain setting.

Workgroup/Domain Name:

ASTERISKPERU

<Ok>

Samba Server

If your computer gets IP address information from a DHCP server on the network, the DHCP server may also provide information about WINS servers ("NetBIOS name servers") present on the network. This requires a change to your smb.conf file so that DHCP-provided WINS settings will automatically be read from /etc/samba/dhcp.conf.

The dhcp3-client package must be installed to take advantage of this feature.

Modify smb.conf to use WINS settings from DHCP?

<Yes>

<No>

Continuamos con la instalación:

asterisk:~# pear channel-update pear.php.net

asterisk:~# pear upgrade-all

asterisk:~# pear install Mail_Net_SMTMail_mime MDB2_driver_mysql

Instalación de Avantfax

```
asterisk: /usr/src # tar xzvf avantfax-3.1.6.tgz
```

```
asterisk: /usr/src # cd avantfax-3.1.6
```

```
asterisk: /usr/src/avantfax-3.1.6# cp -r avantfax/ /var/www/asterisk/
```

```
asterisk: /usr/src/avantfax-3.1.6# chown asterisk:asterisk -R  
/var/www/asterisk/avantfax/
```

```
asterisk: /usr/src/avantfax-3.1.6# chmod -R 777 /var/www/asterisk/avantfax/tmp  
/var/www/asterisk/avantfax/faxes
```

Creando enlaces simbolicos:

```
asterisk: /usr/src/avantfax-3.1.6# ln -s
```

```
/var/www/asterisk/avantfax/includes/faxrcvd.php /var/spool/hylafax/bin/faxrcvd.php
```

```
asterisk: /usr/src/avantfax-3.1.6# ln -s
```

```
/var/www/asterisk/avantfax/includes/dynconf.php /var/spool/hylafax/bin/dynconf.php
```

```
asterisk: /usr/src/avantfax-3.1.6# ln -s /var/www/asterisk/avantfax/includes/notify.php  
/var/spool/hylafax/bin/notify.php
```

Ahora editamos los siguientes archivos:

```
asterisk: /usr/src/avantfax-3.1.6# vi /var/spool/hylafax/etc/config.ttylAX1
```

```
CallIDPattern:      "NMBR="
CallIDPattern:      "NAME="
CallIDPattern:      "ANID="
CallIDPattern:      "NDID="
# Uncomment these if you really want them, but you probably don't.
#CallIDPattern:      "DATE="
#CallIDPattern:      "TIME="

#
## AvantFAX configuration
#
FaxrcvdCmd:         bin/faxrcvd.php
DynamicConfig:      bin/dynconf.php
UseJobTSI:          true
```

```
asterisk: /usr/src/avantfax-3.1.6# vi /etc/hylafax/config
```

```
#ContCoverPage:      "etc/cover.templ"
#DestControls:        "etc/destctrls"
#DialStringRules:     "etc/dialrules"
#QualifyCID:          "etc/cid"
#QualifyTSI:          "etc/tsi"
#ServerTracing:       0x08501
InternationalPrefix:  00

#
## AvantFAX configuration
#
NotifyCmd:           bin/notify.php
```

Cambiamos el siguiente archivo:

```
asterisk:/usr/src/avantfax-3.1.6# mv /usr/bin/faxcover /usr/bin/faxcover.old
```

```
asterisk:/usr/src/avantfax-3.1.6# ln -s  
/var/www/asterisk/avantfax/includes/faxcover.php /usr/bin/faxcover
```

Creamos las tablas en la base de datos de avantfax

```
asterisk:/usr/src/avantfax-3.1.6# mysql -u asterisk -p avantfax < /usr/src/avantfax-  
3.1.6/create_tables.sql  
Enter password: asteriskperu28
```

Ahora creamos un usuario de Hylafax:

```
asterisk:/usr/src/avantfax-3.1.6# faxadduser -a asteriskperu28 asterisk
```

donde **asteriskperu28** es mi contraseña, y verificamos que se ha creado el usuario:

```
asterisk:/usr/src/avantfax-3.1.6# vi /etc/hylafax/hosts.hfaxd
```

```
# hosts.hfaxd  
# This file contains permissions and password for every user in  
# the system.  
#  
# For more information on this biject, please see its man page  
# and the commands faxadduser and faxdeluser.  
localhost:21::  
127.0.0.1  
192.168.1.201  
192.168.1.3  
  
^asterisk@:::bDMvOhaKM5tAc  
█
```

El usuario de Hylafax **siempre** debe estar primero así que modificamos el archivo

```
# hosts.hfaxd  
# This file contains permissions and password for every user in  
# the system.  
#  
# For more information on this biject, please see its man page  
# and the commands faxadduser and faxdeluser.  
^asterisk@:::bDMvOhaKM5tAc  
  
localhost:21::  
127.0.0.1  
192.168.1.201  
192.168.1.3  
█
```

Reiniciamos el servidor Apache para la sincronización de los archivos

asterisk:/usr/src/avantfax-3.1.6# /etc/init.d/hylafax restart

```
asterisk:/usr/src/avantfax-3.1.6# /etc/init.d/hylafax restart
Stopping HylaFAX: faxq hfaxd.
Starting HylaFAX: syncing directories...+ /bin/cp -p "/etc/hylafax/hosts.hfaxd"
"/var/spool/hylafax/etc/hosts.hfaxd"
faxq hfaxd.
asterisk:/usr/src/avantfax-3.1.6#
```

asterisk:/usr/src/avantfax-3.1.6# cd /var/www/asterisk/avantfax/includes/
asterisk:/var/www/asterisk/avantfax/includes# cp local_config-example.php
local_config.php

Editamos el archivo **local_config.php**, realizando los siguientes cambios:

asterisk:/var/www/asterisk/avantfax/includes# vi local_config.php

define('AFDB_USER', 'asterisk'); // username
define('AFDB_PASS', 'asteriskperu28'); // password

```
//
//      DATABASE SETTINGS
//
// EDIT DATABASE USER INFO
// You must create the database before you continue (mysql -p < create_t
able.sql)
define('AFDB_USER', 'asterisk'); // username
define('AFDB_PASS', 'asteriskperu28'); // password
define('AFDB_NAME', 'avantfax'); // database name
define('AFDB_ENGINE', 'mysql'); // database engine: mysql
define('AFDB_HOST', 'localhost'); // database host
```

\$FAXRMPWD = "asteriskperu2008";

```
//      Fax Queue Management
//
// For Fax Queue management to work, you must:
// Add an account in hosts.faxd for the user that Apache runs as (ie. ap
ache or wwwrun)
// To do so, run this: /usr/sbin/faxadduser -a pwd apache
// (IMPORTANT) You must install the 'expect' package
// (IMPORTANT) Then you must edit hosts.faxd and move the entry for this
new account to the top of the file
// (IMPORTANT) 127.0.0.1 must be second in the file
// Below, put the password for this user
$FAXRMPWD = "asteriskperu2008";
```

```
$WWWUSER = 'asterisk';
```

```
//      Apache user
//
// When resubmitting a fax job (faxalter -r), the fax job shows up as owned
// by the user running httpd
// In order to properly lookup the correct user, $WWWUSER must be the name
// of the user running httpd.
// Examples are apache, www-run, nobody
$WWWUSER = 'asterisk';
```

```
define('ADMIN_EMAIL', 'manzurek@asteriskperu.com'); // system return email address
```

```
//      AvantFAX System email address
//
// Emails from faxrcvd and notify are sent from this email address
define('ADMIN_EMAIL', 'manzurek@asteriskperu.com'); // system return
email address
```

Ahora:

```
asterisk:/var/www/asterisk/avantfax/includes# vi /etc/cron.d/avantfax
```

```
# runs once an hour to update the phone book
```

```
0 * * * * /var/www/avantfax/includes/phb.php
```

```
# runs once a day to remove old files
```

```
0 0 * * * /var/www/avantfax/includes/avantfaxcron.php -t 2
```

```
# runs once an hour to update the phone book
0 * * * * /var/www/avantfax/includes/phb.php
# runs once a day to remove old files
0 0 * * * /var/www/avantfax/includes/avantfaxcron.php -t 2
```

```
asterisk:/var/www/asterisk/avantfax/includes# visudo
```

```
#Defaults    requiretty
```

```
apache ALL = NOPASSWD: /sbin/reboot, /sbin/halt, /usr/sbin/faxdeluser,
/usr/sbin/faxadduser -u * -p * *
```

```
# Uncomment to allow members of group sudo to not need a password
# (Note that later entries override this, so you might need to move
# it further down)
# %sudo ALL=NOPASSWD: ALL
#Defaults    requiretty

apache ALL = NOPASSWD: /sbin/reboot, /sbin/halt, /usr/sbin/faxdeluser, /usr/sbin/faxadduser -u * -p * *

^G Get Help      ^C WriteOut      ^R Read File     ^Y Prev Page     ^K Cut Text      ^G Cur Pos
^X Exit          ^J Justify       ^W Where Is     ^V Next Page     ^U UnCut Text   ^T To Spell
```

*Para salir grabando los cambios presionamos **Ctrl x**

Abrir en el navegador Firefox la dirección:

<http://192.168.1.201/avantfax>

username: **admin**

password: **password**

:: AvantFAX LOGIN ::

AVANTFAX[®]

3.1.6

Enter your username and
password to access the fax
interface.

[Lost your Password?](#)

username

admin

password

••••••••

Login

Inmediatamente nos solicita cambiar el password por defecto por una contraseña de 8 caracteres como minimo

AVANTFAX[®]



Inbox



Send Fax



Archive



Outbox



Contacts

User: AvantFAX Admin
[Settings](#) | [Logout](#)



0 faxes

AvantFAX[®] 3.1.6

En la opción de **Menu => Fax Categories**

AVANTFAX
avantfax

-- Menu --

Fax Categories

Category name*:

Create

Iquitos

Menu => Modems

AVANTFAX
avantfax

-- Menu --

Modems

Device*:

Alias*:

Contact:

Printer:

Category:

Create

Ahora ya tenemos un MODEM creado con Avantfax

AVANTFAX
avantfax

-- Menu --

ttylAX2 - manzurek

INSTALACIÓN DE A2BILLING

Descargamos el paquete A2Billing de:

http://www.asterisk2billing.org/downloads/A2Billing_1.4.1.tar.gz

Creamos una carpeta con el nombre A2Billing dentro del directorio /usr/src/

```
asterisk: /usr/src # mkdir A2Billing
```

Guardar en la carpeta A2Billing el archivo [A2Billing_1.4.1.tar.gz](#)

```
asterisk: /usr/src # cd A2Billing
```

Pasamos el esquema y la información de los scripts a la Base de Datos de A2Billing

```
asterisk: /usr/src/A2Billing # tar xzvf A2Billing_1.4.1.tar.gz
```

```
asterisk: /usr/src/A2Billing # mysql -u asterisk -p mya2billing <  
/usr/src/A2Billing/DataBase/mysql-5.x/a2billing-schema-v1.4.0.sql
```

Enter password: asteriskperu28

Ahora copiamos el archivo **a2billing.conf** al directorio **/etc/**

```
asterisk: /usr/src/A2Billing # cp /usr/src/A2Billing/a2billing.conf /etc/
```

Editamos el archivo **a2billing.conf**

```
asterisk: /usr/src/A2Billing # vi /etc/a2billing.conf
```

[database]

hostname = localhost

port = 3306

user = asterisk

password = asteriskperu28

dbname = mya2billing

dbtype = mysql

```
; Global Database Setup - select the database type and authentication as required.
```

```
[database]
```

```
hostname = localhost
```

```
; port for postgres is 5432 by default
```

```
port = 3306
```

```
user = asterisk
```

```
password = asteriskperu28
```

```
dbname = mya2billing
```

```
; dbtype setting can either be mysql or postgres
```

```
dbtype = mysql
```

Asignamos permisos y creamos los archivos necesarios

```
asterisk: /usr/src/A2Billing # chmod 777 /etc/asterisk
asterisk: /usr/src/A2Billing # touch /etc/asterisk/additional_a2billing_iax.conf
asterisk: /usr/src/A2Billing # touch /etc/asterisk/additional_a2billing_sip.conf
asterisk: /usr/src/A2Billing # echo \#include additional_a2billing_sip.conf >>
/etc/asterisk/sip.conf
asterisk: /usr/src/A2Billing # echo \#include additional_a2billing_iax.conf >>
/etc/asterisk/iax.conf
asterisk: /usr/src/A2Billing # chown -Rf asterisk /etc/asterisk/additional_a2billing_iax.conf
asterisk: /usr/src/A2Billing # chown -Rf asterisk /etc/asterisk/additional_a2billing_sip.conf
```

Descomentamos el siguiente archivo

```
asterisk: /usr/src/A2Billing # vi addons/sounds/install_a2b_sounds_deb.sh
```

```
ast_sound=/var/lib/asterisk/sounds
#Use this line for Debian based systems
#ast_sound=/usr/share/asterisk/sounds
```

```
#!/bin/bash

ast_sound=/var/lib/asterisk/sounds

#Use this line for Debian based systems
#ast_sound=/usr/share/asterisk/sounds

lang=en
echo
echo Install A2Billing Audio files : "$lang"
echo -----
echo creating relevant folders : $ast_sound/$lang
echo creating relevant folders : $ast_sound/$lang/digits

mkdir $ast_sound/$lang
```

```
asterisk: /usr/src/A2Billing # cd addons/sounds/
```

```
asterisk: /usr/src/A2Billing/addons/sounds#
/usr/src/A2Billing/addons/sounds/install_a2b_sounds_deb.sh
```

Ahora:

```
asterisk: /usr/src/A2Billing/addons/sounds# chown asterisk:asterisk
/var/lib/asterisk/agi-bin
```

```
asterisk: /usr/src/A2Billing/addons/sounds# cd /usr/src/A2Billing/AGI
```

```
asterisk: /usr/src/A2Billing/AGI# ln -s /usr/src/A2Billing/AGI/a2billing.php
/var/lib/asterisk/agi-bin/a2billing.php
```

```
asterisk: /usr/src/A2Billing/AGI# ln -s /usr/src/A2Billing/AGI/lib /var/lib/asterisk/agi-
bin/lib
```

```
asterisk: /usr/src/A2Billing/AGI# chmod +x /var/lib/asterisk/agi-bin/a2billing.php
```

Instalamos la interfaz grafica del A2Billing

```
asterisk:/usr/src/A2Billing/AGI# mkdir /var/www/asterisk/a2billing
asterisk:/usr/src/A2Billing/AGI# chown asterisk:asterisk /var/www/asterisk/a2billing
```

```
asterisk:/usr/src/A2Billing/AGI# ln -s /usr/src/A2Billing/admin
/var/www/asterisk/a2billing/admin
asterisk:/usr/src/A2Billing/AGI# ln -s /usr/src/A2Billing/agent
/var/www/asterisk/a2billing/agent
asterisk:/usr/src/A2Billing/AGI# ln -s /usr/src/A2Billing/customer
/var/www/asterisk/a2billing/customer
asterisk:/usr/src/A2Billing/AGI# ln -s /usr/src/A2Billing/common
/var/www/asterisk/a2billing/common
```

Damos permisos:

```
asterisk:/usr/src/A2Billing/AGI# chmod 755 /usr/src/A2Billing/admin/templates_c
asterisk:/usr/src/A2Billing/AGI# chmod 755 /usr/src/A2Billing/customer/templates_c
asterisk:/usr/src/A2Billing/AGI# chmod 755 /usr/src/A2Billing/agent/templates_c
asterisk:/usr/src/A2Billing/AGI# chown -Rf asterisk:asterisk
/usr/src/A2Billing/admin/templates_c
asterisk:/usr/src/A2Billing/AGI# chown -Rf asterisk:asterisk
/usr/src/A2Billing/customer/templates_c
asterisk:/usr/src/A2Billing/AGI# chown -Rf asterisk:asterisk
/usr/src/A2Billing/agent/templates_c
```

Editamos el archivo **extensions.conf** adicionando **[a2billing]**

```
asterisk:/usr/src/A2Billing # vi /etc/asterisk/extensions.conf
```

[a2billing]

```
; CallingCard application
include => outbound-allroutes
exten => _X.,1,Answer
exten => _X.,2,Wait,2
exten => _X.,3,DeadAGI,a2billing.php
exten => _X.,4,Wait,2
exten => _X.,5,Hangup
```

[did]

```
; CallingCard application
include => outbound-allroutes
exten => _X.,1,DeadAGI(a2billing.php|1|did)
```

```

;this is where parked calls go if they time-out. Should probably re-ring
[default]
include => ext-local
exten => s,1,Playback(vm-goodbye)
exten => s,2,Macro(hangupcall)

[a2billing]
; CallingCard application
include => outbound-allroutes
exten => _X.,1,Answer
exten => _X.,2,Wait,2
exten => _X.,3,DeadAGI,a2billing.php
exten => _X.,4,Wait,2
exten => _X.,5,Hangup

[did]
; CallingCard application
include => outbound-allroutes
exten => _X.,1,DeadAGI(a2billing.php|1|did)

```

Abrir en el navegador Firefox la dirección:

<http://192.168.1.201/www/a2billing/admin>

User: **root**

Password: **changepassword**

AUTHENTICATION

User: root

Password: *****

English ▼

LOGIN

HOME
DASHBOARD
NOTIFICATION
LOGOUT

- ▶ CUSTOMERS
- ▶ AGENTS
- ▶ ADMINS
- ▶ SUPPORT
- ▶ CALL REPORTS
- ▶ RATES
- ▶ PROVIDERS
- ▶ INBOUND DID
- ▶ OUTBOUND CID
- ▶ BILLING
- ▶ INVOICES
- ▶ PACKAGE OFFER
- ▶ RECUR SERVICE
- ▶ CALLBACK
- ▶ CAMPAIGNS
- ▶ MAINTENANCE
- ▶ MAIL
- ▶ SYSTEM SETTINGS

Change Password

A²Billing 1.4

A2Billing is licensed under [AGPL 3](#).

For information and documentation on A2Billing, please visit <http://www.a2billing.org>

For Commercial Installations, Hosted Systems, Customisation and Commercial support, please visit <http://www.star2billing.com>

CALL LABS.COM

For VoIP termination, please visit <http://www.call-labs.com>

Profits from Call-Labs are used to support the A2Billing project.

If you find A2Billing useful, please donate to the A2Billing project by clicking the Donate button :

BY USING THIS SOFTWARE, YOU ASSUME ALL RISKS OF USE AND NO WARRANTIES EXPRESSED OR IMPLIED ARE PROVIDED WITH THIS SOFTWARE INCLUDING FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY.

INSTALACIÓN DE ASTERNIC CALL CENTER STATS

Descargamos el archivo desde <http://www.asterisk.biz>

Copiamos en el directorio /var/www/asterisk/ el archivo [asternic-stats-1.2.tgz](#)

asterisk: /var/www/asterisk/ # tar xzvf asternic-stats-1.2.tgz

Pasamos el esquema y la información de los scripts a la Base de Datos de Asternic Call Center

asterisk: /var/www/asterisk/ # mysql -u asterisk -p qstat < /var/www/asterisk/asternic-stats/sql/qstat.sql

Enter password: asteriskperu28

Ahora editamos el siguiente archivo:

asterisk: /var/www/asterisk/ # vi /var/www/asterisk/asternic-stats/html/config.php

\$dbhost = 'localhost';

\$dbname = 'qstat';

\$dbuser = 'asterisk';

\$dbpass = 'asteriskperu28';

```
<?
require_once("dblib.php");
require_once("misc.php");

// Credentials for MYSQL database
$dbhost = 'localhost';
$dbname = 'qstat';
$dbuser = 'asterisk';
$dbpass = 'asteriskperu28';

// Credentials for AMI (for the realtime tab to work)
// See /etc/asterisk/manager.conf
```

Ahora editamos el archivo **config.php**

asterisk: /var/www/asterisk/ # vi /var/www/asterisk/asternic-stats/parselog/config.php

```
$dbhost = 'localhost';  
$dbname = 'qstat';  
$dbuser = 'asterisk';  
$dbpass = 'asteriskperu28';
```

```
<?  
require_once("dblib.php");  
require_once("misc.php");  
  
$queue_log_dir = '/var/log/asterisk/';  
$queue_log_file = 'queue_log';  
  
$dbhost = 'localhost';  
$dbname = 'qstat';  
$dbuser = 'asterisk';  
$dbpass = 'asteriskperu28';  
  
$midb = conecta_db($dbhost,$dbname,$dbuser,$dbpass);
```

Abrir en el navegador Firefox la dirección:

<http://192.168.1.201/asternic-stats/html/>

The screenshot shows the 'Asternic Call Center Stats' web application. The interface has a sidebar on the left with the logo and name. The main content area is divided into three sections: 'Select Queues', 'Select Agents', and 'Select Time Frame'. Each of the first two sections contains two empty list boxes labeled 'Available' and 'Selected' with green double-headed arrows between them. The 'Select Time Frame' section includes a 'Shortcuts' row with links for 'Today', 'This week', 'This month', and 'Last 3 months'. Below this are 'Start Date' and 'End Date' fields, each with a day, month, and year dropdown menu. A 'Display Report' button is at the bottom of the main content area. The footer contains copyright information for 2008 by Nicolás Gudiño, mentioning 'Asternic Asterisk Tools' and a GPL3 license.

Home

Select Queues

Available Selected

Select Agents

Available Selected

Select Time Frame

Shortcuts
[Today](#) | [This week](#) | [This month](#) | [Last 3 months](#)

Start Date 11 August 2009

End Date 11 August 2009

Display Report

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INSTALACIÓN DE OPENVPN

Objetivo

Instalar OpenVPN para conectarnos remotamente de manera segura y en este caso para hacer uso de clientes softphone de la central asterisk

asterisk: /var/www/asterisk # apt-get install openvpn

Habilitando el IP-Forwarding

verificando

asterisk:/usr/src # cat /proc/sys/net/ipv4/ip_forward

0 => deshabilitado

1 => habilitado

para habilitarlo editamos el siguiente archivo:

asterisk:/usr/src# vi /etc/sysctl.conf

net.ipv4.ip_forward=1

```
# Uncomment the next line to enable packet forwarding for IPv4
net.ipv4.ip_forward=1
```

asterisk:/usr/src# sysctl -p /etc/sysctl.conf

Ahora descargamos el paquete webmin para debian desde:

http://sourceforge.net/projects/webadmin/files/webmin/1.480/webmin_1.480_all.deb/download y lo copiamos en /usr/src/

asterisk: /var/www/asterisk # cd /usr/src/

asterisk:/usr/src # apt-get install libnet-ssleay-perl libauthen-pam-perl libpam-runtime libio-pty-perl libmd5-perl

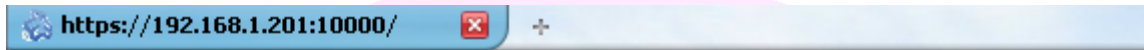
asterisk:/usr/src # sudo dpkg -i webmin_1.480_all.deb

```
Webmin install complete. You can now login to https://asterisk:10000/
as root with your root password, or as any user who can use sudo
to run commands as root.
```

Abrir en el navegador Firefox la dirección: <https://192.168.1.201:10000>

Username: **root**

Password: **la contraseña del SO Debian**



Login to Webmin

You must enter a username and password to login to the Webmin server on 192.168.1.201.

Username

























Password

☐ Remember login permanently?

Webmin => Webmin Configuration

Module Config

Webmin Configuration
Webmin 1.480

 IP Access Control	 Ports and Addresses	 Logging	 Proxy Servers and Downloads
 User Interface	 Webmin Modules	 Operating System and Environment	 Language
 Index Page Options	 Upgrade Webmin	 Authentication	 Reassign Modules
 Edit Categories	 Module Titles	 Webmin Themes	 Trusted Referrers
 Anonymous Module Access	 File Locking	 Mobile Device Options	 Blocked Hosts and Users
 Advanced Options	 Debugging Log File	 SSL Encryption	 Certificate Authority

Ahora vamos a Webmin Modules

Seleccionamos **From ftp or http URL** y pegamos la siguiente dirección
<http://www.openit.it/downloads/OpenVPNAdmin/openvpn-2.5.wbm.gz>

[Module Index](#)

Webmin Modules

[Install](#) [Clone](#) [Delete](#) [Export](#)

Webmin modules can be added after installation by using the form to the right. Modules are typically distributed in .wbm files, each of which can contain one or more modules. Modules can also be installed from RPM files if supported by your operating system.

Install Module

Install from

☐ From local file

☐ From uploaded file

☒ From ftp or http URL

☐ Standard module from www.webmin.com

☐ Third party module from

Ignore dependencies?

☐ Yes ☒ No

Grant access to

☒ Grant access only to users and groups :

☐ Grant access to all Webmin users

Una vez finalizado la instalación del modulo
Servers => OpenVPN + CA

Login: root

☒ Webmin

☒ System

☒ Servers

Apache Webserver

CVS Server

MySQL Database Server

OpenVPN + CA

Procmail Mail Filter

Read User Mail

SSH Server

Vamos a la opción de **Certification Authority List**

Completamos los campos para generar el certificado

New Certification Authority	
Name of Certification Authority	asterisk
Complete path to openssl.cnf	/etc/openvpn/openvpn-ssl.cnf
Keys directory	/etc/openvpn/keys
Key size (bit)	1024 ▼
Expiration time of Certification Authority key (days)	3650
State	PE
Province	LIMA
City	Lima
Organization	Debian
Email	manzurek@hotmail.com

Generar el certificado toma algo de tiempo dependiendo del **Key size** elegido

Certification Authority List				
Name	Notes	Info	Keys list	Remove
asterisk		CA Info	Keys list	Remove

Ahora creamos el certificado para el servidor

Certification Authority List => Keys list

New key to Certification Authority: asterisk	
Key name	server
Key password (min 4 chars)	
Server key doesn't need password!	
Key Server	server
Generate exportable PKCS#12 key	no
Password for exporting PKCS#12 (min 4 chars)	
Key expiration time (days)	3650
State	PE
Province	LIMA
City	Lima
Organization	Debian
Organization Unit	Datacenter
Email	manzurek@hotmail.com

Ahora el certificado para el cliente

New key to Certification Authority: asterisk	
Key name	manzurek
Key password (min 4 chars)	••••••••
Server key doesn't need password!	
Key Server	client
Generate exportable PKCS#12 key	no
Password for exporting PKCS#12 (min 4 chars)	
Key expiration time (days)	3650
State	PE
Province	LIMA
City	Lima
Organization	asteriskperu
Organization Unit	Office
Email	manzurek@asterisk-peru.com

Ya se crearon los certificados

Keys list of Certification Authority asterisk					
Name	Key Server	Verify	Export	Complete path of status log file	
server	server	Verify	Export	active	Remove
manzurek	client	Verify	Export	active	Remove

Ahora en **Servers => OpenVPN + CA => VPN List**
New VPN server

VPN server list:

VPN List is empty

ca (Certification Authority): asterisk

New VPN server

Creation of new VPN Server: select the Certification Authority and click New VPN server

VPN server list with simmetric key

VPN List is empty

Completamos

*En **Net IP assigns (option server)** indicamos la red (debe ser diferente a cualquiera que tengamos previamente) de la VPN

New VPN server

Name	server	
port (Port)	1194	
proto (Protocol)	tcp-server	
Device	tun	
Bridge Device		
Network Device for Bridge	eth0	
IP config for bridge	IP-Address/Gateway : <input type="text"/> Netmask : <input type="text"/>	
IP-Range for Bridge-Clients	Start: <input type="text"/> End: <input type="text"/>	
management (Enable Management)	Enable: <input type="checkbox"/> IP: 127.0.0.1 Port: <input type="text"/>	
ca (Certification Authority)	asterisk	
Choose key	server	
Certificate Server	automatic	
Key Server	automatic	
Diffie-Hellman random file	dh1024.pem	
enable TLS and assume server role during TLS handshake	<input type="checkbox"/>	
Local host name or IP address	ALL	
Net IP assigns (option server)	network	192.168.100.0 netmask 255.255.255.0
Persist/unpersist ifconfig-pool data to file, at seconds intervals (default=600), as well as on program startup and shutdown (option ifconfig-pool-persist)	<input type="checkbox"/>	
Because the OpenVPN server mode handles multiple clients through a single tun or tap interface, it is effectively a router (option client-to-client)	<input type="checkbox"/>	
Allow multiple clients with the same common name to concurrently connect (option duplicate-cn)	<input type="checkbox"/>	
Add an additional layer of HMAC authentication on top of the TLS control channel to protect against DoS attacks (option tls-auth)	<input type="checkbox"/>	
ccd-exclusive (Clients enabled only for this server)	yes	
Encrypt packets with cipher algorithm (option cipher)	BF-CBC 128 bit default key (variable)	
Use fast LZO compression (option comp-lzo)	<input type="checkbox"/>	
Limit server to a maximum of n concurrent clients (option max-clients)	100	
User	nobody	
Group	nogroup	
Don't re-read key files (option persist-key)	<input type="checkbox"/>	
Don't close and reopen TUN/TAP device or run up/down scripts (option persist-tun)	<input type="checkbox"/>	
keepalive (A helper directive designed to simplify the expression of ping and ping-restart in server mode configurations)	Ping: 10	Ping-Restart: 120
Set output verbosity	3	
Log at most n consecutive messages in the same category	20	
Complete path of status log file	openvpn-status.log	
Complete path of log file	openvpn.log	
tun-mtu (Take the TUN device MTU to be n and derive the link MTU from it)	<input type="text"/>	
fragment (Enable internal datagram fragmentation so that no UDP datagrams are sent which are larger than max bytes)	<input type="text"/>	
mssfix (Announce to TCP sessions running over the tunnel that they should limit their send packet sizes such that after OpenVPN has encapsulated them, the resulting UDP packet size that OpenVPN sends to its peer will not exceed max bytes)	<input type="text"/>	
float (Allow remote peer to change its IP address and/or port number)	<input type="checkbox"/>	
chroot (Chroot to dir after initialization) /etc/openvpn	<input type="checkbox"/>	
Additional Configurations example: push "route 192.168.100.0 255.255.255.0" This parameter adds a route to the client when it's connected	route 192.168.100.0 255.255.255.0	

Ahora vamos a **Client List => New VPN Client**

VPN server list:										
Name	management	CA	proto	port	local	Logs	Client List	Status	Remove	Actions
server		asterisk	tcp-server	1194	ALL	Log	Client List	Disable	Remove	Start

VPN Client List server:

No client configured

New VPN Client

Creation of NEW VPN client server

*En **remote (Remote IP)** indicamos la dirección pública de Internet para acceder al servidor de VPN

New VPN Client server

Name	manzurek
proto (Protocol)	tcp-client
Device	tun
ca (Certification Authority)	asterisk
Choose key	automatic (= name)
cert (Client Certificate)	automatic
key (Client Key)	automatic
Diffie-Hellman random file	dh1024.pem
remote (Remote IP)	IP server: 190.43.127.127 Port server: 1194
Add an additional layer of HMAC authentication on top of the TLS control channel to protect against DoS attacks (option tls-auth)	no automatic (= server)
Encrypt packets with cipher algorithm (option cipher)	BF-CBC
Use fast LZO compression (option comp-lzo)	yes
User	nobody
Group	nogroup
Don't re-read key files (option persist-key)	yes
Don't close and reopen TUN/TAP device or run up/down scripts (option persist-tun)	yes
keepalive (A helper directive designed to simplify the expression of ^{***} ping ^{***} and ^{***} ping-restart ^{***} in server mode configurations)	Ping: 10 Ping-Restart: 120
Set output verbosity	3
Log at most n consecutive messages in the same category	20
tun-mtu (Take the TUN device MTU to be n and derive the link MTU from it)	automatic (= server)
fragment (Enable internal datagram fragmentation so that no UDP datagrams are sent which are larger than max bytes)	
mssfix (Announce to TCP sessions running over the tunnel that they should limit their send packet sizes such that after OpenVPN has encapsulated them, the resulting UDP packet size that OpenVPN sends to its peer will not exceed max bytes)	automatic (= server)
float (Allow remote peer to change its IP address and/or port number)	yes
Additional Configurations example: push "route 192.168.100.0 255.255.255.0" This parameter adds a route to the client when it's connected	<pre>route 192.168.1.0 255.255.255.0</pre>

PRE/POST UP/DOWN commands

up-pre (script execute before VPN up)	
up (script execute after VPN up)	
down-pre (script execute before VPN down)	
down (script execute after VPN down)	

ccd file configurations

ccd file content	<pre>iroute 192.168.100.0 255.255.255.0</pre>
------------------	---

Ahora exportamos el certificado del cliente para copiarlo en una PC con windows
emanzur.tgz

VPN Client List server:					
Name	CA	proto	port	Export	Remove
manzurek	asterisk	tcp-client		Export	Remove

En nuestra PC con Windows, descargamos el cliente de **openvpn** desde
<http://openvpn.net/release/openvpn-2.0.9-install.exe>

Una vez instalado, copiamos el contenido de **emanzur.tgz** en
Archivos de programa\OpenVPN\config\



IMPORTANTE : Se necesita habilitar el port-forwarding en el router para llegar al servidor de vpn usando el puerto 1194, asi como adicionar una ruta estatica para poder ver los equipos de la red principal (192.168.1.0)

NAT - Edit SUA/NAT Server Set

	Start Port No.	End Port No.	IP Address
1	All ports	All ports	0.0.0.0
2	1194	1194	192.168.1.201

```
Copyright (c) 1994 - 2004 ZyXEL Communications Corp.
Prestige 660HW-T1 Main Menu

Getting Started
1. General Setup
2. WAN Backup Setup
3. LAN Setup
4. Internet Access Setup

Advanced Applications
11. Remote Node Setup
12. Static Routing Setup
14. Dial-in User Setup
15. NAT Setup

Advanced Management
21. Filter and Firewall Setup
22. SNMP Configuration
23. System Security
24. System Maintenance
25. IP Routing Policy Setup
26. Schedule Setup

99. Exit

Enter Menu Selection Number: 12_
```

```
Menu 12 - Static Route Setup
1. IP Static Route
3. Bridge Static Route

Please enter selection: 1_
```



```
Menu 12.1 - IP Static Route Setup

1. openvpn
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____

Enter selection number: 1
```

```
Menu 12.1.1 - Edit IP Static Route

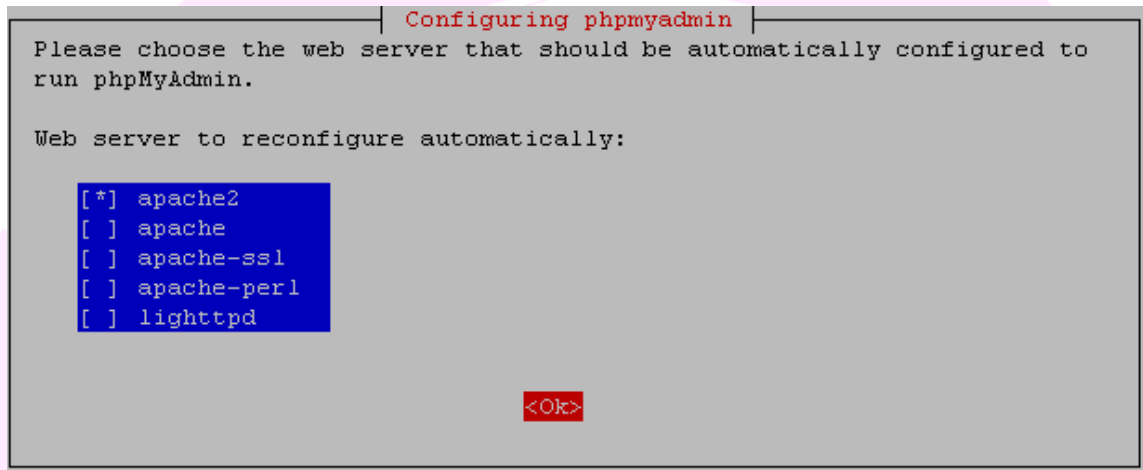
Route #: 1
Route Name= openvpn
Active= Yes
Destination IP Address= 192.168.100.1
IP Subnet Mask= 255.255.255.0
Gateway IP Address= 192.168.1.201
Metric= 2
Private= No

Press ENTER to Confirm or ESC to Cancel:
```

INSTALACIÓN DE PHPMYADMIN (OPCIONAL: PARA ADMINISTRATAR GRAFICAMENTE LA BD)

asterisk:/var/www/asterisk# apt-get install phpmyadmin

Seleccionamos **apache2**



Editamos el archivo

asterisk:/var/www/asterisk# vi /etc/phpmyadmin/config.inc.php

```
* Server(s) configuration
*/
$i = 0;
// The $cfg['Servers'] array starts with $cfg['Servers'][1]. Do not use $cfg['Servers'][0].
// You can disable a server config entry by setting host to ''.
$i++;

/* Authentication type */
// $cfg['Servers'][$i]['auth_type'] = 'cookie';
/* Server parameters */
```

Cambiar de:

// \$cfg['Servers'][\$i]['auth_type'] = 'cookie';

a

\$cfg['Servers'][\$i]['auth_type'] = 'http';

```
* Server(s) configuration
*/
$i = 0;
// The $cfg['Servers'] array starts with $cfg['Servers'][1]. Do not use $cfg['Servers'][0].
// You can disable a server config entry by setting host to ''.
$i++;

/* Authentication type */
$cfg['Servers'][$i]['auth_type'] = 'http';
/* Server parameters */
```

asterisk:/var/www/asterisk# htpasswd -c -m /etc/phpmyadmin/htpasswd.setup
asterisk

donde el usuario es **asterisk** y el password es **asteriskperu28**

```
asterisk:/var/www/asterisk# htpasswd -c -m /etc/phpmyadmin/htpasswd.setup asterisk
New password:
Re-type new password:
Adding password for user asterisk
```

Abrir en el navegador Firefox la dirección:
<http://192.168.1.201/phpmyadmin>

The screenshot shows the phpMyAdmin web interface. On the left, there is a sidebar with the phpMyAdmin logo and a list of databases: asterisk (53), asteriskcdrdb (1), avantfax (13), information_schema (17), mya2billing (92), mysql (17), and qstat (4). Below the list is a button labeled 'Seleccionar una base de datos'. The main content area is titled 'localhost' and displays server information: 'Versión del servidor: 5.0.51a-24+lenny1', 'Versión del protocolo: 10', 'Servidor: Localhost via UNIX socket', and 'Usuario: asterisk@localhost'. It also shows 'Juegos de caracteres de MySQL: UTF-8 Unicode (utf8)' and 'Cotejamiento de las conexiones MySQL: utf8_unicode_ci'. There is a section for 'Crear nueva base de datos' with a text input field, a 'Cotejamiento' dropdown menu, and a 'Crear' button. Below this are several links: 'Mostrar información de tiempo de ejecución de MySQL', 'Mostrar las variables del sistema MySQL', 'Procesos', 'Juego de caracteres y sus cotejamientos', 'Motores de almacenamiento', 'Cargar los privilegios nuevamente', 'Privilegios', 'Bases de datos', 'Exportar', 'Importar', and 'Salir'.

Finalmente editamos el archivo [index.html](#) en la dirección [/var/www/asterisk/](#)

asterisk: [/var/www/asterisk/](#) # vi index.html

```
<h4><a href="recordings/">Voicemail & Recordings (ARI)</a></h4>
<h4><a href="panel/">Flash Operator Panel (FOP)</a></h4>
<h4><a href="admin/">FreePBX Administration</a></h4>
<h4><a href="avantfax/">Avantfax Administration</a></h4>
<h4><a href="a2billing/admin/">A2Billing Administration</a></h4>
<h4><a href="https://192.168.1.201:10000">webmin / OpenVPN Administration</a></h4>
<h4><a href="asternic-stats/html/">Asternic Call Center Stats</a></h4>
<h4><a href="phpmyadmin/">phpMyAdmin</a></h4>
```

```
<div class="content">
<h4><a href="recordings/">Voicemail & Recordings (ARI)</a></h4>
<h4><a href="panel/">Flash Operator Panel (FOP)</a></h4>
<h4><a href="admin/">FreePBX Administration</a></h4>
<h4><a href="avantfax/">Avantfax Administration</a></h4>
<h4><a href="a2billing/admin/">A2Billing Administration</a></h4>
<h4><a href="https://192.168.1.201:10000">webmin / OpenVPN Administration</a></h4>
<h4><a href="asternic-stats/html/">Asternic Call Center Stats</a></h4>
<h4><a href="phpmyadmin/">phpMyAdmin</a></h4>
<br><br><br><br>
</div>
```

Abrir en el navegador Firefox la dirección: <http://192.168.1.201>



[Voicemail & Recordings \(ARI\)](#)

[Flash Operator Panel \(FOP\)](#)

[FreePBX Administration](#)

[Avantfax Administration](#)

[A2Billing Administration](#)

[webmin / OpenVPN Administration](#)

[Asternic Call Center Stats](#)

[phpMyAdmin](#)

Erick Manzur