

PlugPBX - FreePBX + Asterisk on Debian

????? <http://www.plugpbx.org/>

??????

- SheevaPlug
- SD SDHC Class6 4GB+ (NOTE: ??4GB?????????????? 4GB???????????????????? 4GB ??????)
- SDHC Card Reader (for USB)

PlugPBX ???????

- SSH console : **root / password**

?? image

<http://downloads.plugpbx.org/>

?? image ? SDHC ?

// ??? win32diskimager

<https://launchpad.net/win32-image-writer>

?????????? image ??? SDHC?

?? UBoot ? SDHC Card ??

// ?? UBoot version ? **3.4.19** ??????? SDHC ??

Windows XP ? SheevaPlug ? mini-USB ????? PuTTY ??? Console ???SheevaPlug ???????

?? PuTTY ??????????????????

Hit any key to stop autoboot... <?????>

Marvell >>

??? Marvell ?????????????? UBoot ??????????????

Marvell>> setenv mainlineLinux yes

Marvell>> setenv arcNumber 2097

Marvell>> setenv bootargs_console console=ttyS0,115200

Marvell>> setenv bootcmd_mmc 'mmcinit; ext2load mmc 0 0x0800000 /uInitrd; ext2load mmc 0 0x400000 /uImage'

Marvell>> setenv bootcmd 'setenv bootargs \$(bootargs_console); run bootcmd_mmc; bootm 0x400000 0x0800000'

Marvell>> saveenv

Marvell>> reset

?????????????? SDHC ? PlugPBX ???

TIPS:

???????????????? root ?????? reboot ????????????????? SDHC ????????

PlugPBX ????

????

PlugPBX:~# df -h

Filesystem	Size	Used	Avail	Use%	Mounted on
/dev/mmcbk0p2	3.4G	854M	2.4G	27%	/
tmpfs	252M	0	252M	0%	/lib/init/rw
udev	10M	128K	9.9M	2%	/dev
tmpfs	252M	0	252M	0%	/dev/shm
/dev/mmcbk0p1	206M	17M	179M	9%	/boot

PlugPBX:~# mount

```

/dev/mmcbk0p2 on / type ext2 (rw,errors=remount-ro)
tmpfs on /lib/init/rw type tmpfs (rw,nosuid,mode=0755)
proc on /proc type proc (rw,noexec,nosuid,nodev)
sysfs on /sys type sysfs (rw,noexec,nosuid,nodev)
udev on /dev type tmpfs (rw,mode=0755)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev)
devpts on /dev/pts type devpts (rw,noexec,nosuid,gid=5,mode=620)
/dev/mmcbk0p1 on /boot type ext2 (rw)

```

Linux ??

PlugPBX:~# uname -a

```
Linux PlugPBX 2.6.30-2-kirkwood #1 Sun Sep 27 22:57:55 UTC 2009 armv5tel GNU/Linux
```

PlugPBX:~# lsb_release -a

No LSB modules are available.

Distributor ID: Debian

Description: Debian GNU/Linux testing (squeeze)

Release: testing

Codename: squeeze

PlugPBX:~# cat /proc/version

```
Linux version 2.6.30-2-kirkwood (Debian 2.6.30-8) (waldi@debian.org) (gcc version 4.3.4 (Debian 4.3.4-3) )
#1 Sun Sep 27 22:57:55 UTC 2009
```

?????

PlugPBX:~# free

	total	used	free	shared	buffers	cached
Mem:	515888	136552	379336	0	3092	72248
-/+ buffers/cache:		61212	454676			
Swap:	224868	0	224868			

Asterisk ??

PlugPBX:~# asterisk -rx "core show version"

Asterisk 1.6.1.11 built by root @ debian on a armv5tel running Linux on 2009-12-14 03:19:39 UTC

Web UI

Home



PlugPBX v1.00 - Initial Release - Beta

Built on [FreePBX 2.5.2](#) / Asterisk 1.6.1 / Debian Squeeze Linux

The SheevaPlug Dedicated IP-Telephony Solution - [Visit the Project Website!](#)

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

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

[FreePBX Administration](#)

[System Information \(phpSysInfo\)](#)

[System Performance Charts \(MUNIN\)](#)

[Linux System Administration \(WEBMIN\)](#)

PlugPBX - Created by [Greg Jacobs](#)

All Components Copyright their Respective Owners - All Components Open Source
No Warranties expressed or implied. You use this system and software entirely at your own risk.
You are responsible for testing, configuration and reliability of 911 and other emergency calling services.

Yah I know this is ugly, A nice GUI Dashboard is coming asap!

Batteries Not Included!

ARI



Login

Login:
 Password:

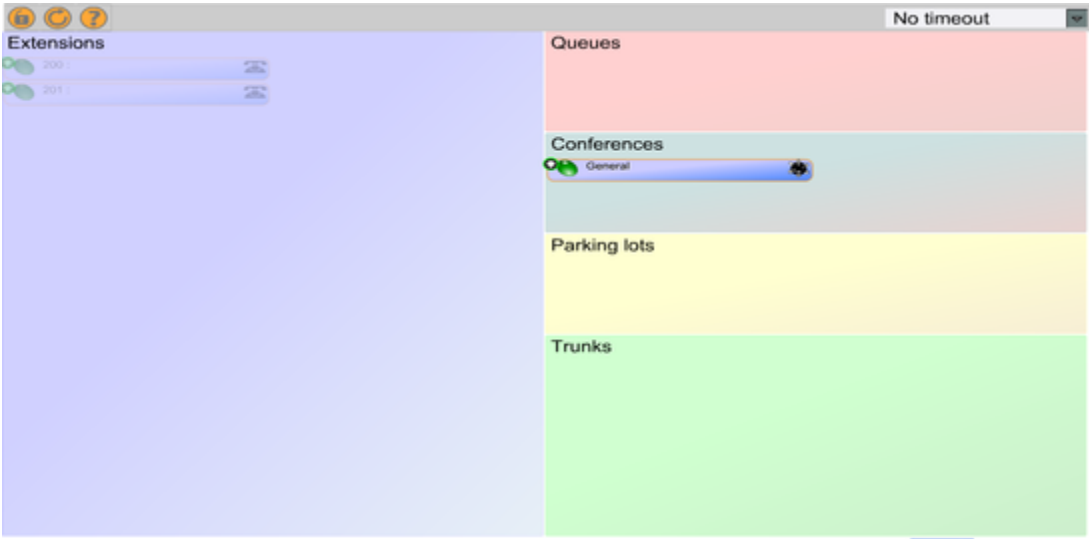
 Remember Password
 English

Use your **Voicemail Mailbox and Password**
This is the same password used for the phone

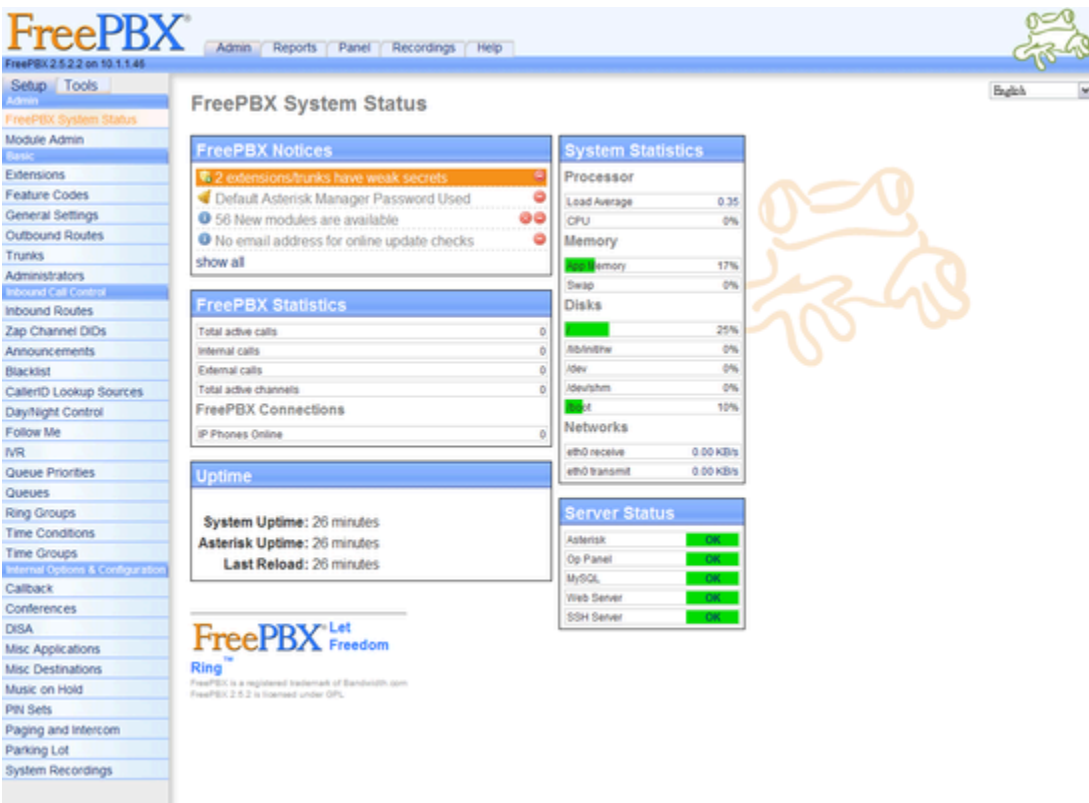
For password maintenance or assistance, contact your Phone System Administrator.

FreePBX 2.5
Original work based on ARI from Lefelph Consulting

FOP



FreePBX



phpSysInfo

System information: localhost (10.1.1.46) Terminal: plumb@localhost

SYSTEM VITAL		HARDWARE INFORMATION	
Canonical Hostname	localhost	Processors	1
Listening IP	10.1.1.46	Model	Feroceon 88FR131 rev 1.04C
Kernel Version	2.6.30-2-kirkwood-armv6l	CPU Speed	1.19 GHz
Distro Name	Debian GNU/Linux testing (squeeze)	BUS Speed	
Uptime	27 minutes	Cache Size	0 KB
Current Users	2	System Bootups	1192.75
Load Averages	0.31 0.25 0.24	PCI Devices	
		IDE Devices	
		SCSI Devices	
		USB Devices	

MEMORY USAGE				
Type	Usage	Free	Used	Size
Physical Memory	36%	320.74 MB	183.06 MB	503.80 MB
Disk Swap	0%	219.00 MB	0.00 KB	219.00 MB

MOUNTED FILESYSTEMS							
Mountpoint	Type	Partition	Usage	Free	Used	Size	
/boot	ext2	udev/mmcblk0p1	8% (1%)	178.07 MB	16.76 MB	205.81 MB	
/	ext2	udev/mmcblk0p2	25% (17%)	2.34 GB	853.58 MB	3.34 GB	
/dev/shm	tmpfs	tmpfs	0% (1%)	251.90 MB	0.00 KB	251.90 MB	
/lib/udev	tmpfs	tmpfs	0% (1%)	251.90 MB	0.00 KB	251.90 MB	
/dev	tmpfs	udev	1% (2%)	9.88 MB	128.00 KB	10.00 MB	
Totals			21%	3.61 GB	878.46 MB	4.64 GB	

NETWORK USAGE			
Device	Received	Sent	Err/Drop
lo	262.08 KB	262.08 KB	0/0
eth0	254.33 KB	361.79 KB	0/0

Powered by [phpSysInfo - 3.2.0d!](#)

MUNIN

Overview :: localhost.localdomain

- localhost.localdomain
 - Apache
 - Apache accesses
 - Apache processes
 - Apache volume
 - Asterisk
 - Asterisk lax.channels/codecs
 - Asterisk lax.log
 - Asterisk lax.peers
 - Asterisk actives.conferences
 - Asterisk sip.channels/codecs
 - Asterisk sip.peers
 - Asterisk Voicemail messages
 - Disk
 - Disk usage (in percent)
 - Inode usage (in percent)
 - IOstat
 - MySQL
 - MySQL throughput
 - MySQL queries
 - MySQL slow queries
 - MySQL threads
 - Network
 - eth0.errors
 - eth0.traffic
 - Postfix
 - Postfix Mailqueue
 - Postfix bytes throughput
 - Processes
 - Fork rate
 - Number of Processes
 - VMstat
 - Samba
 - Samba status
 - System
 - CPU usage
 - Available entropy
 - Interrupts & context switches
 - Individual interrupts
 - Load average
 - Memory usage
 - File table usage
 - Inode table usage
 - Swap in/out
 - Time
 - NTP timing statistics for system peer

localhost.localdomain :

This page was generated by [Munin](#) version 2.2.6 at 1910-06-07 7:23:05:56

WEBMIN

The screenshot shows the webmin interface with the following elements:

- Navigation Menu (Left):** Login: root, Webmin, System, Servers, Others, Networking, Hardware, Cluster, Un-used Modules, Search: [input], View Module's Logs, System Information, Refresh Modules, Logout.
- System Information (Right):**
 - System hostname: PlugPBX
 - Operating system: Debian Linux 6.0
 - Webmin version: 1.500
 - Time on system: Sun Aug 7 23:09:23 1910
 - Kernel and CPU: Linux 2.6.30-2-kidwood on armv5tel
 - Processor information: . 1 cores
 - System uptime: 0 hours, 33 minutes
 - Running processes: 77
 - CPU load averages: 0.78 (1 min) 0.39 (5 mins) 0.28 (15 mins)
 - Real memory: 503.80 MB total, 93.55 MB used
 - Virtual memory: 219.60 MB total, 0 bytes used
 - Local disk space: 3.54 GB total, 1.03 GB used
 - Package updates: 2 package updates are available

????

// ??????????

// ??????????

vi /etc/dahdi/modules

// ?? IPV6 ??

echo "blacklist ipv6" >> /etc/modprobe.d/blacklist.conf

?? ipv6 ??????

PlugPBX:~# lsmod

Module	Size	Used by
dahdi_dummy	3632	0
dahdi	192688	1 dahdi_dummy
crc_ccitt	2084	1 dahdi
ipv6	284676	31 << ?????
loop	15032	0
ext2	63916	2
mbcache	8248	1 ext2
mmc_block	10172	4
ehci_hcd	34648	0
mvsdio	7544	0
mmc_core	55124	2 mmc_block,mvsdio
usbcore	137016	2 ehci_hcd
mv643xx_eth	26092	0
libphy	22724	1 mv643xx_eth

PlugPBX:~# ip a

```
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 16436 qdisc noqueue state UNKNOWN
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
```

```

inet 127.0.0.1/8 scope host lo
inet6 ::1/128 scope host
    valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP qlen 1000
    link/ether 00:50:43:1c:12:3a brd ff:ff:ff:ff:ff:ff
    inet 10.1.1.46/24 brd 10.1.1.255 scope global eth0
    inet6 fe80::250:43ff:fe1c:123a/64 scope link    << ???
    valid_lft forever preferred_lft forever

```

PlugPBX:~# netstat -lt

Active Internet connections (only servers)

Proto	Recv-Q	Send-Q	Local Address	Foreign Address	State
tcp	0	0	*:5038	*:*	LISTEN
tcp	0	0	localhost:sunrpc	*:*	LISTEN
tcp	0	0	*:webmin	*:*	LISTEN
tcp	0	0	*:cisco-sccp	*:*	LISTEN
tcp	0	0	*:munin	*:*	LISTEN
tcp	0	0	*:ssh	*:*	LISTEN
tcp	0	0	*:smtp	*:*	LISTEN
tcp	0	0	*:4445	*:*	LISTEN
tcp	0	0	*:36829	*:*	LISTEN
tcp	0	0	localhost:mysql	*:*	LISTEN
tcp6	0	0	:::www	:::*	LISTEN <<
tcp6	0	0	:::ssh	:::*	LISTEN <<
tcp6	0	0	:::microsoft-ds	:::*	LISTEN <<
tcp6	0	0	:::netbios-ssn	:::*	LISTEN <<

// ?? Samba ??

update-rc.d -f samba remove

FAQ

?? PlugPBX ??? SDHC Boot????????????

```

USB 0: host mode
PEX 0: interface detected no Link.
Net: egiga0 [PRIME], egiga1
Hit any key to stop autoboot: 0
SDHC found. Card description is:
Manufacturer: 0x1b, OEM "SM"
Product name: "00000", revision 1.0
Serial number: 1909810478
Manufacturing date: 9/2010
CRC: 0x00, b0 = 0
Failed to mount ext2 filesystem...
** Bad ext2 partition or disk - mmc 0:1 **

```

Failed to mount ext2 filesystem...

** Bad ext2 partition or disk - mmc 0:1 **

Booting image at 00800000 ...

Bad Magic Number

Ans: ??? win32diskimager ? image ?? SDHC????? <https://launchpad.net/win32-image-writer?>

?? SDHC boot ??????done, booting the kernel.

Ans: ?? U-Boot ??

Marvell>> resetenv

Marvell>> reset

...

...

Marvell>> setenv mainlineLinux yes

Marvell>> setenv arcNumber 2097

Marvell>> setenv bootargs_console console=ttyS0,115200

Marvell>> setenv bootcmd_mmc 'mmcinit; ext2load mmc 0 0x0800000 /uInitrd; ext2load mmc 0 0x400000 /uImage'

Marvell>> setenv bootcmd 'setenv bootargs \$(bootargs_console); run bootcmd_mmc; bootm 0x400000 0x0800000'

Marvell>> saveenv