OpenEMR 2.8.3 Appliance Manual

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LINK TO MANUAL IN PDF FORMAT

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Introduction

Main TOC Link

The clinical benefits of computerized medical records are clear, however, the costs of current proprietary systems are large. This high cost precludes many small practices from transitioning to computerized medical records. Open Source medical record systems are quickly becoming a viable, cost effective alternative. Comprehensive open source medical practice management software suites consist of several independent software packages, which can make them more difficult to install/evaluate than their proprietary counterparts. This obstacle can easily be circumvented with a pre-installed Appliance.

The goal of this project was to build a comprehensive Open Source Medical Practice Management Software Appliance, which provides office scheduling, electronic medical records, prescriptions, insurance billing, accounting, inventory, and access controls. This appliance will have many possible applications, such as a fully functional demo, a testing/developing platform, and as the starting point in real world clinic applications. It can be run on any operating system that supports the *VMware Player*. The detailed building instructions of this appliance are also included in this manual, which will allow easy modification/updates of appliance and will allow simple transition to a native server, if required.

OpenEMR is installed, along with FreeB, SQL-Ledger, and php-GACL. They are installed on the Mandriva2006 operating system. OpenEMR is the practice management software. FreeB is the insurance billing/printing software. SQL-Ledger is the accounting software. Php-GACL is the access control software.

This manual contains instructions on downloading, starting, and using the OpenEMR Appliance, OpenEMR user manual web links, helpful tips on OpenEMR use, instructions for configuration of the Appliance, and full detailed instructions on how the Appliance was built.

The *Download the OpenEMR Appliance and VMware Player* chapter contains how and where to download software from.

The *Start the OpenEMR Appliance* chapter contains information on starting the OpenEMR Appliance.

The *Using the OpenEMR Appliance* chapter contains information on how to use the OpenEMR Appliance, web links to User Manuals, helpful tips, and all the login names and passwords that will be needed while using the appliance.

The *Configuration of the OpenEMR Appliance* chapter describes how to set up a printer, an email server, and an automated backup scheme which incorporates encryption. This chapter also describes how to change to the newer frames look and how to add the pharmacy dispensary module.

The *Instructions for Building the OpenEMR Appliance* chapter describes in detail how this Appliance was built.

Online Demo

Main TOC Link

Here are online demos of the OpenEMR 2.8.3 appliance:

With the new frames look:

<u>https://OpenSourceEMR.com:2086/openemr/</u> (Main OpenEMR program)

https://OpenSourceEMR.com:2086/sql-ledger/ (Sql-Ledger accounting) https://OpenSourceEMR.com:2086/phpgacl/admin (php-GACL access controls)

With the traditional look:

<u>https://OpenSourceEMR.com:2087/openemr/</u> (Main OpenEMR program)

https://OpenSourceEMR.com:2087/sql-ledger/ (Sql-Ledger accounting) https://OpenSourceEMR.com:2087/phpgacl/admin (php-GACL access controls)

These are fully functional demos, which allows you to play around with all the software packages in the appliance. It uses all the same logins and passwords as the appliance(refer to 'Login Name and Password' section). Some simple configuration has been added for clearer demonstration of OpenEMR, Sql-Ledger, FreeB, and php-GACL. OpenEMR users were added to demonstrate the access controls:

asswordD	escription
pass	Administrator
physician	Physician(more access than clinician)
clinician	Clinician(less access than physician)
accountant	Accountant
_receptionist	Front desk receptionist
	'assword D pass physician clinician accountant _receptionist

Don't worry about breaking it, because it resets itself to its original state every day at 5:00AM(new frames appliance) and 6:00AM(traditional look appliance) Pacific Time. Have fun. (If demo is not working email me at brady@sparmy.com)

Download the OpenEMR Appliance and VMware Player

Main TOC Link

- 1. Download and install the FREE VMware Player at: <u>http://www.vmware.com/products/player/</u>
- 2. Download the FREE OpenEMR Appliance. The file is 1019.7 MB, and will extract to 3 GB.
 - 1. You can download Appliance via Direct Download or Torrent:
 - 1. Direct Download from Sourceforge: http://sourceforge.net/project/showfiles.php?group_id=167832
 - 2. Torrent file link: <u>http://www.bradymd.com/OpenEMR-2-8-3-</u> <u>Appliance-1.torrent</u> (If you need a torrent software client, then try: <u>http://azureus.sourceforge.net/</u>)

Start the OpenEMR Appliance

<u>Main TOC Link</u>

Windows

Main TOC Link

- 1. Unpackage the OpenEMR-2-8-3-Appliance-1.tgz file (Use WinZip, WinRAR, or 7-Zip).
- 2. Run VMware Player.
- 3. Start up the OpenEMR Appliance by opening the OpenEMR-2-8-3-Appliance-1.vmx file in the VMware Player.
- 4. If this is your first time starting the OpenEMR Appliance, then a window will pop up explaining some nonsense about the changing location of a configuration file. Just click 'Create'.
- 5. Several windows will pop up explaining that /dev/hdc, /dev/hdd, and sound drivers are not gonna work. Just click 'ok' several times and continue.
- 6. Mandriva will now boot up, just give it some time. After boot up you

will see the following login screen:



This is the login screen. To log in, proceed to the 'Log In to Appliance' section below.

Linux

Main TOC Link

- 1. Unpackage the OpenEMR-2-8-3-Appliance-1.tgz file.
- 2. Run VMware Player.
- 3. Start the OpenEMR appliance by opening the OpenEMR-2-8-3-Appliance-1.vmx file in the VMware Player.
- 4. If this is your first time starting the OpenEMR Appliance, then the below window will pop up:

Θ	Question									
2	The location of this virtual machine's configuration file has changed since it was last powered on.									
	If the virtual machine has been copied, you should create a new unique identifier (UUID). If it has been moved, you should keep its old identifier.									
	If you are not sure, create a new identifier.									
	What do you want to do?									
Кеер	Always Create Always Keep 🏾 🏹 Cancel Create									

You will only see this window the first time you start the appliance. Click 'Create'.

- 5. Several windows may pop up explaining that /dev/hdc, /dev/hdd, and/ or sound drivers are not gonna work. Just click 'ok' several times and continue.
- 6. Mandriva will now boot up, just give it some time. After boot up you will see the following login screen:



This is the login screen. To log in, proceed to the 'Log In to Appliance' section below.

Using the OpenEMR Appliance

Main TOC Link

Log In to Appliance

Main TOC Link

1. The first time you use the appliance, you will login with user 'openemr' and password 'openemrcool'. You may be forced to change the password during your first login (detailed instructions below):



Enter 'Username' -> 'openemr'. Enter 'Password' -> 'openemrcool' (NOTE that this password may be changed after your first login). When done, hit the ENTER key.

If this is your first login, then you may be prompted to change your password:

You are required to change your password immediately (password aged).



Click 'OK'.

Changing auth	entication token
<u>N</u> ew password:	
Con <u>f</u> irm password:	
	<u>C</u> ancel

Enter and confirm a new password. This will be your new 'openemr' user password. **REMEMBER** this password!



Congratulations. You successfully logged in.

Using OpenEMR in Appliance

Main TOC Link

- 1. Use OpenEMR with the user name 'admin' and default password 'pass' via web browser at: <u>https://localhost/openemr</u>
- 2. Use SQL-Ledger with the user name 'openemr' and password 'openemr' via web browser at: <u>https://localhost/sql-ledger</u>
- 3. Use php-GACL with user name 'admin' and password 'admin' via web browser at: <u>https://localhost/phpgacl/admin</u>
- 4. Note that the full list of application login names and passwords can be found in the 'Login Name and Password' section below.

Using OpenEMR from another/virtual computer

Main TOC Link

- 1. Networking with the Virtual computer over a LAN. You can get the current IP address thru Mandriva settings, and then use that IP address as the web address on another computers(including virtual) web browser.
 - 1. First, get your virtual server IP address:



Click 'System' -> 'Configuration' -> 'Configure Your Computer'.

X Query	\odot
You are attempt requires adminis information is n	ting to run a command which strative privileges, but more eeded in order to do so.
Password for root	
_	<u>O</u> K <u>C</u> ancel

Enter 'root' user password. Then click 'OK'.

IMPORTANT, if you have not created a new 'root' user password, you need to proceed to Appendix B. '<u>Change Mandriva's expired 'root'</u> <u>user password</u>' **NOW**. (The default 'root' password will expire at some point and will no longer work) When your done updating the

password, then type your new password here.



Click 'Network & Internet'.



Click 'Reconfigure a network interface'.

👃 🛛 Mandriva Linux Control Center 2006.0 (Official) [on loca	alhost]	
<u>Eile Options Profiles H</u> elp		
Manage connections		
Device selected eth0: Advanced Micro Devices 79c970 [P	PCnet LANCE] 🔻	
TCP/IP DHCP Options Information		
IP configuration	DNS servers	
Protocol DHCP	66.51.205.100	
IP address 192.168.1.111	66.51.206.100	
Netmask 255.255.255.0	Search Domain	
Gateway	none	
Ok Help	Apply	Cancel

The circled number above is your *Your_Current_IP_address*.

- 2. Then you can use below links to connect to your virtual server
 - 1. OpenEMR at https://Your_Current_IP_address/openemr
 - 2. SQL-Ledger at https://Your_Current_IP_address/sql-ledger
 - 3. php-GACL at https://Your_Current_IP_address/phpgacl/admin
 - 4. For the list of application login names and passwords go to the 'Login Name and Password' section below.
- 2. You can also change your IP address to a static one, so it doesn't change after your virtual server is turned off or re-started. I'm out of time, so can't go thru it. You'll have to Google this one (Quickly, it can be changed in above window by clicking on the Protocol toggle and selecting static, then you can choose an IP address. However, you then need to type in DNS servers and you need to ensure your router does not assign any other computers your chosen static IP address)

OpenEMR User Training

Main TOC Link

- 1. There is an excellent web site for learning how to use all of the components of OpenEMR at: <u>http://www.sunsetsystems.com/node/8</u>
- 2. The above link is also mirrored at the following wiki site, which means it could theoretically contain updates: http://www.oemr.org/modules/cjaycontent/index.php?id=2
- 3. There is also an older user manual in the /var/www/html/openemr/Documentation directory which can be helpful.
- 4. You can ask question at the SourceForge OpenEMR forum at: <u>http://sourceforge.net/forum/?group_id=60081</u>
- 5. The OpenEMR home page is here with a wiki: <u>http://www.oemr.org/</u>
- 6. The most current version of this appliance user manual will hopefully always be available at: <u>http://www.bradymd.com/appliance</u>

Helpful Tips

Main TOC Link

- 1. **NEED** to mark bills as 'cleared' (even after hfca processing) on the billing menu to send data to sql-ledger.
- 2. NEED to leave the the 'Prior Authorization Form' installed and **disabled** for the hfca form printing to work.
- 3. **NEED** to also create your new OpenEMR users in php-GACL or strange things will happen. (I refer you to above OpenEMR User Training section on how to do this.)
- 4. **NEED** to ensure clock is set correctly (Virtual computer time should not differ from the host computers, or there will be cron scheduling and sql-ledger problems)
- 5. **NEED** to ensure your provider is authorized or you won't be able to send bills to sql-ledger. It's confusing because there are two different separate authorization options. Screenshots below go thru the process:

🥵 OpenEMR - Mozilla Firefox 😔	•
<u>Eile Edit View Go Bookmarks Tools Help</u>	0
G + O - G O O → http://localhost/openemr/interface/main/main_screen.php?auth= ▼ O G	
≽ Mandriva 🧚 Mandriva Store ≽ Mandriva Club ≽ Mandriva Expert 🏃 Mandriva Online 🔞 LPI 🧕 Free calls online	»
Name 🗹 Find Patient New Patient Password Administration Reports Notes Billing Home Lo	ogout
Logged in: Administrator (Default) Tue March 7th	2006
All Users All Users All Users Add Sea	rch
< Tuesday, March 7, 2006 >>	
Administrator	
8:00	
8:15	
8:30	
6:43 9-00 [N	
9:15	
9:30	
9:45	
10:00	
10.15	
ratient ivotes (See All) and Authorizations(Mole) (Find ratem)	
Dene	7
Done	_

Click 'Administration'.

	rms Practice	Calendar	Database	BatchCom	Language	Logs	Back
Logged in: Administra	tor				Mon M	arch 20t	h 2006
User & Group Adminis	stration						
New Facility Information:	Name		Phone				
	Address:		City:				
	State:		Zip Code:				
	Country:		Federal EIN				
				Add Facility	ľ		
					7 /(
Edit Facilities:	Your Clinic Name	Here(Edit)					
New User:	Username:		Pass	word:			
	Groupname:	Healthy Choice	Auth	orized:	Γ		
	First Name:	-	Mido	ile Name:	Att-		
	Last Name:		Defa	ult Facility:	Your Clinic Name	Here 💌	
	Federal Tax ID:		Fede	eral Drug ID:			
	UPIN:		See	Authorizations	None 💌		
	Additional Info:						
	Add User						
New Group:	Groupname:	Ir	iitial User: adm	nin 🝸 🛛 Ado	I Group		
Add User To Group:	User: admin 💌	Groupname:	Healthy Choice	e 🕶 🛛 Add I	Jser To Group		
	W	C					
Username Real Name Info	o Authorized?						
admin(Edit) Administrator	yes						
Tealthy Choice							
dmin(Remove)							

Click 'edit' for the user.

Θ			_) penEMR - M	lozilla Firefox					000
<u>F</u> ile <u>E</u> dit <u>V</u> i	ew <u>G</u> o	<u>B</u> ookmarks	Tools	<u>H</u> elp							1
	z 🗵) 😭 🗲 ht	tp://19	2.168.1	113/openem	r/interface/userg	roup/userg	ro 🔻	🖸 Go 💽		
Users & G	roups	Forms	Prac	tice	Calendar	Database	BatchCo	om	Language	Logs	Back
Logged in	: Admi	nistrator							Mon Mai	rch 20th	2006
User Adm	inistra	tion									1
Username:	admin			Passv	vord:	unchanged		* Le	ave blank to ke	ep passwo	rd
				Autho	rized:						
First Name:				Midd	le Name:			1			
Last Name:	Adminis	trator		Defau	lt Facility:	Your Clinic Nam	e Here 💌				
Federal Tax ID:				Fede	ral Drug ID:						
UPIN:				See Autho	rizations:	All 🔥					
Additional Info);					47					
	1										
Save Cha	inges	[Back]									-

Ensure the 'Authorized:' toggle is on. Ensure the 'See Authorizations:' is set to 'All' or 'only mine'. Then click 'Save Changes'.

List of Login Names and Passwords

Main TOC Link

- 1. Mandriva2006 user -> user: 'openemr' password: 'openemrcool' (this password may need to be changed during first login)
- 2. Mandriva2006 admin -> user: 'root' password: 'rootcool' (this password may be changed by user also)
- 3. OpenEMR -> user: 'admin' password: 'pass'
- 4. SQL-Ledger user -> user: 'openemr' password: 'openemr'
- 5. SQL-Ledger admin -> password: 'admin'
- 6. php-GACL -> user: 'admin' password: 'admin'
- 7. PostgreSQL -> user: 'sql-ledger' password: 'sqlledger'
- 8. MySQL user -> user: 'openemr' password: 'openemr'
- 9. MySQL admin -> user: 'root' NO PASSWORD

Configuration of the OpenEMR Appliance

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Change Display to the New Frames Look

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- 1. Decide which look you want by looking at the <u>online demos</u>.
- 2. The default look is traditional, if you want to change to the new frames look, then enter below **bolded** instructions on command line as root user:

#log into root **su**

#If you want to change to the new "frames look", then you will need to edit the file /var/www/html/openemr/interface/globals.php:

mcedit /var/www/html/openemr/interface/globals.php

#edit the below bolded variable :
 \$GLOBALS['concurrent_layout'] = true;
TEXT EDITOR SAVE AND EXIT

Enable Pharmacy Dispensary Module

Main TOC Link

- 1. The pharmacy dispensary module will allow you to dispense and keep track of your own med/herbs/supplement dispensary. It will also create bottle labels of the drugs you dispense.
- 2. Turn on the pharmacy dispensary module in the OpenEMR configuration file. Enter below **bolded** instructions on command line as root user:

#log into root **su**

1. Here are some quick OpenEMR screenshots that show how to navigate to the pharmacy dispensary module for administrative purposes:

Name Find Patient	New Patient Pa lealthy Choice Clinic)	ssword Adminis	Reports	Notes A	B Billing Hon In September	ne Logout • 9th 2007
All Users	2007-09-09 << Sui	Day View	Go Today 9, 2007 >>		Add	I Search
C Director		ΤS	Sanders	-11	B Bus	sh
8:00	8:00				8:00	
Patient Notes (See All) and Aut	horizations(Mo	re) (Find Patient)				

Click 'Administration'

Users & Groups Forms	Practice	Calendar	Database	BatchCom	Drugs	Language	Logs	Back
Logged in: Clinical Direc	tor				12-	Sun Sente	mher 9th	2007
User & Group Administra	ation				Y.X.	CopenEMR	- Free	-
New Facility Information:	Name:		Phone:			_		
			Hax:			_		
	Address:		City:	-				
	State:		Zip Co	de:				
	Country		Federal	EIN:				
				Add				
Edit Facilities:	Main Clinic/Edit	1						
	. Channel Sentime (Sentine	/						
New User:	Username:			Password:				
	Groupname:	Healthy Cho	ice Clinic 💌	Authorized:	in i			
	First Name:			Middle Name:			_	
	Last Name:			Default Facility:	Main Cli	nic 🔺		
	Federal Tax ID:	-		Federal Drug ID:			- i	
	UPIN:			See Authorizations	None			<u>8</u>
	Additional Info:							
	Add							
New Group:	Groupname:		Initial User:	admin 🗾	Add			-

Click 'Drugs'.



Click 'Add Drug', enter stuff and play around to figure out how to use.

Quick OpenEMR screenshots of prescribing drugs with the dispensary:



Click 'Add Prescription'.

Summary	History	Encounter	Transaction	Documents	Report	Close	Popups 💌
Robert Crawf	ord (ID: 1, 1	OOB: 1974-02-12,	Age: 33, Home: 123-21	4-3543) Logged i	n as: Clinica	Director I	EncounterSun A
This Encounte	er for Rob	ert Crawford:				category	/
Clinical Director	r SOAP r Patient Enco	Subj Obje Asse Plan Sunter	ective: lichy foot ctive: red foot ssment: athletes foot : anti-fungal cream				
Coding Superbill ICD9 Search CPT4 Search HCPCS Searc Copay Other Prescriptions List Prescript Add Prescrip	n ch ions tion	Starting Date Provider Drug in-house Quantity Medicine Units Take Refills Substitution Notes Add to Medication List Prescribe	September 🖌 03 🖌 Clinical Director 🖌 or select from inventor in 🗐 00 🐨 # of tablets: 0 substitution allowed	2007 I	Billing (Mo [Receipt] CPT4 tota ICD9 ↓	re) 5466 Foot R (416.0) I: 2200.00 16.0 Prim Puln	Justify ub 2200.00

Note the things circled in red, which are part of the pharmacy dispensary module.

Printer Setup

Main TOC Link

1. For USB printers, you will need to connect the device by clicking on printer on top of window. Your host computer may no longer be able to see the printer after this step(not permanent, but can be a pain).



window.

Θ	fulltestOpenEMRMandrivaAppliance
Player	CD-ROM CD-ROM 🛃 Floppy 🕮 Ethernet 🛛 Sound Adapter 🕄 Hewlett-Packard hp LaserJet 3015
@	Dpen Source Electronic Medical Record Software Review - Mozilla Firefox 💿 💿 🙁
<u>F</u> ile	Edit <u>V</u> iew <u>G</u> o Bookmarks <u>T</u> ools <u>H</u> elp
Θ	• 🕢 • 🧿 🕢 🗋 http://bradymd.com/#0.0.0.0.0.Prir 💌 🗟 Go 💽
≯ м	Iandriva 📌 Mandriva Store 📌 Mandriva Club 🧚 Mandriva Expert 🧚 Mandriva Online 🕲 LPI 🛛 »
	Printer Setup
	Quick Index Link.
	This is just to demonstrate that the 'Hewlett-Packard' button is now shaded.

2. Then install software and printer via Mandriva Control Center, which will first install CUPS, and then look for printers. If your lucky, Mandriva will see your printer.



Click 'System' -> 'Configuration' -> 'Configure Your Computer'.

X Query	\odot
You are attempt requires admini- information is n	ting to run a command which strative privileges, but more eeded in order to do so.
Password for root	
_	<u>O</u> K <u>C</u> ancel

Enter 'root' user password. Then click 'OK'.

IMPORTANT, if you have not created a new 'root' user password, you need to proceed to Appendix A. '<u>Change Mandriva's expired 'root'</u> <u>user password</u>' **NOW**. (The default 'root' password is expired and will no longer work) When your done updating the password, then

type your new password here.



Click 'Hardware'



Click 'Set up the printer(s)...'.



Click 'Yes'.

Local CUPS printing system or remote CUPS server?	
The CUPS printing system can be used in two ways:	
1. The CUPS printing system can run locally. Then locally connected pri and remote printers on other CUPS servers in the same network are an discovered. Disadvantage of this approach is, that more resources on needed: Additional software packages need to be installed, the CUPS the background and needs some memory, and the IPP port (port 631)	inters can be used utomatically the local machine are daemon has to run in is opened.
2. All printing requests are immediately sent to a remote CUPS server. occupation is reduced to a minimum. No CUPS daemon is started or po software infrastructure for setting up local print queues is installed, so space is used. Disadvantage is that it is not possible to define local pr specified server is down it cannot be printed at all from this machine.	Here local resource ort opened, no less memory and disk inters then and if the
How should CUPS be set up on your machine?	
Local CUPS printing system	
O Remote server, specify Name or IP here:	
OK	Cancel

Select 'Local CUPS printing system'. Then click 'Ok'.

system running in the high security leve	em COPS on a I.
This printing system runs a daemon (ba which waits for print jobs and handles th also accessible by remote machines thr and so it is a possible point for attacks. selected daemons are started by defaul level.	ckground process) nem. This daemon is ough the network Therefore only a few It in this security
Do you really want to configure printing	on this machine?

Click 'Yes'.



Just twiddle your thumbs and wait, it takes a while.

Mandriva Linux Control Center 2006.0 (Official)	[on localhost] 🛛 🕞 🕞 😣
<u>F</u> ile <u>A</u> ctions <u>O</u> ptions <u>H</u> elp	
Printers	
Add Priver Set as default Edit Delete Re	Configure CUPS
-0	Search: Apply filter
Configured on this machine Configured on other ma	chines

Click 'Add Printer'.

📥 Add a new printer 🕞 🗇	۲
Add a new printer	
Welcome to the Printer Setup Wizard	•
This wizard will help you to install your printer(s) connected to this computer, connected directly to the network or to a remote Windows machine.	
Please plug in and turn on all printers connected to this machine so that it/they can be auto-detected. Also your network printer(s) and your Windows machines must be connected and turned on.	-
Note that auto-detecting printers on the network takes longer than the auto- detection of only the printers connected to this machine. So turn off the auto-	•
Auto-detect printers connected to this machine	*
Auto-detect printers connected directly to the local network	•
Cancel	R

Select both auto-detect options. Then Click 'Next'.



No big deal. Close the windows and we will install the printer below thru CUPS.

3. If the above step found your printer, then you can skip to the section below which will have you place the name of the printer into the openemr config file (this will allow printing while creating billing forms via freeb). If Mandriva can't find the printer, don't worry, we will install it via CUPS directly at: <u>http://localhost:631/</u>



Click 'Manage Printers'.

🥐 Printer on localhost - CUPS v1.1.23 - Mozilla Firefox	
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>G</u> o <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp	0
G → O → O O O O http://localhost:631/printers 💽 记 Go 💽	
≽ Mandriva 🔸 Mandriva Store 📌 Mandriva Club ≯ Mandriva Expert 🔸 Mandriva Online 🕧 LF	4 »
ESP Administration Classes Help Jobs Printers Software)
Printer No printers Add Printer Copyright 1993-2005 by Easy Software Products, All Rights Reserved. The Common UNIX Printir	ng
System, CUPS, and the CUPS logo are the trademark property of Easy Software Products. Al other trademarks are the property of their respective owners.	
Done	

🥐 Pr	ompt 🔲 🙁
j	Enter username and password for "CUPS" at http://localhost:631 User Name:
	root
	Password:

	Use Password Manager to remember this password.
	OK Cancel

Enter 'User Name' -> 'root'. Enter the root password. Then click 'OK'.

Click 'Add Printer'.
🗭 Admin on localhost - CUPS v1.1.23 - Mozilla Firefox	
<u> E</u> ile <u>E</u> dit <u>V</u> iew <u>G</u> o <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp	0
G - O - O O O O □ http://localhost:631/admin/?op=add-p O O O O O O O O O O O O O O O O O O O	
📌 Mandriva 👒 Mandriva Store 📌 Mandriva Club 🧚 Mandriva Expert 🔸 Mandriva Online 🤇	DLPI »
ESP Administration Classes Help Jobs Printers Softwar	re
Admin	
Add New Printer	
Name: hp3015 Location: local Description: hp laserjet 3015 Continue	
Copyright 1993-2005 by Easy Software Products, All Rights Reserved. The Common UNIX Pri	inting
System, CUPS, and the CUPS logo are the trademark property of Easy Software Products other trademarks are the property of their respective owners.	. All
Done	
Fill in form, and then click 'Continue'. The only important field is	s the

'Name'. This will be used later when configuring printer for freeb/openemr.

🕐 Admin on localhost - CUPS v1.1.23 - Mozilla Firefox 🕞 🗇	×
<u>E</u> ile <u>E</u> dit <u>V</u> iew <u>G</u> o <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp	
G → O → O O O I http://localhost:631/admin	
📌 Mandriva 🔸 Mandriva Store 🏼 📌 Mandriva Club 🏼 📌 Mandriva Expert 🛛 📌 Mandriva Online 🖉 LPI	»
ESP Administration Classes Help Jobs Printers Software	
Admin	
Device for hpsorts	
Device: AppSocket/HP JetDirect AppSocket/HP JetDirect Backend Error Handler Internet Printing Protocol (http) Internet Printing Protocol (ipp) Copyright 1993-2005 LPD/LPR Host or Printer Second State St	
System, CUPS, and the Parallel Port #1 (CANON) Parallel Port #1 (EPSON) Parallel Port #1 (EPSON) Parallel Port #1 PDE Writing	
Pegg Printer SCSI Printer USB Printer #1	
Done USB Printer #2	
USB Printer #4 USB Printer #5 USB Printer #6 USB Printer #7 USB Printer #8 USB Printer #9	

In my case I am selecting the 'USB Printer #1'. If your using a USB printer, this will likely work.

🥵 Admin on localhost - CUPS v1.1.23 - Mozilla Firefox	
<u>Eile E</u> dit <u>V</u> iew <u>G</u> o <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp	0
G - O - O O O □ http://localhost:631/admin I Go C.	
📌 Mandriva 🔸 Mandriva Store 🔸 Mandriva Club 🤸 Mandriva Expert 🏼 🔸 Mandriva Online 🖉 Ll	Pl »
ESP Administration Classes Help Jobs Printers Software	
Admin	
Device for hp3015	
Device: USB Printer #1	
Copyright 1993-2005 by Easy Software Products, All Rights Reserved. The Common UNIX Printin System, CUPS, and the CUPS logo are the trademark property of Easy Software Products . A other trademarks are the property of their respective owners.	ng II
Done	
Click 'Continue'	

🥐 Admin on localhost - C	CUPS v1.1.23 - Mozilla Firefo	х		
<u>File Edit View Go B</u>	ookmarks <u>T</u> ools <u>H</u> elp			0
$\bigcirc \cdot \bigcirc \cdot \bigodot \bigcirc$	😡 🗋 http://localhost:6	31/admin	Go G	
📌 Mandriva 🛛 🜟 Mandriva	Store 🛛 📌 Mandriva Club	📌 Mandriva Expert	📌 Mandriva Online	CLPI »
Model/Driver for	r hp3015			
Make:	Fujitsu Generic Gestetner HP IBM Infotec KONICA MINOLTA Kyocera Kyocera Mita Lanier			
Copyright 1993-2005 System, CUPS, and the other trademarks are Done	by Easy Software Products ne CUPS logo are the trade the property of their resp	s, All Rights Reserved mark property of Eas ective owners.	l. The Common UNIX y Software Produc	Printing :ts. All

Select the make of your printer. Then click 'Continue'.



Select the model of your printer. Then click 'Continue'.

🥵 Admin on localhost - CUPS v1.1.23 - Mozilla Firefox	
<u>E</u> ile <u>E</u> dit <u>V</u> iew <u>G</u> o <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp	0
G • O • G O I http://localhost:631/admin • Go C.	
📌 Mandriva 📌 Mandriva Store ≽ Mandriva Club ≽ Mandriva Expert ≽ Mandriva Online 🕧 LPI	»
ESP Administration Classes Help Jobs Printers Software	
Admin Printer hp3015 has been added successfully.	
Copyright 1993-2005 by Easy Software Products, All Rights Reserved. The Common UNIX Printing System, CUPS, and the CUPS logo are the trademark property of Easy Software Products . All other trademarks are the property of their respective owners.	3
Done	
It Worked!! Click printer name to see more specifics on your new	vly

added printer.

hp3015 on localhost - CUPS v1.1.23 - Mozilla Firefox	
<u>E</u> ile <u>E</u> dit <u>V</u> iew <u>G</u> o <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp	$\langle \rangle$
G • O • G O □ http://localhost:631/printers/hp3015 • G G.	
📌 Mandriva 🔸 Mandriva Store 🔺 Mandriva Club 🧚 Mandriva Expert 🔸 Mandriva Online 🕲 L	Pl »
ESP Administration Classes Help Jobs Printers Software	
hp3015 Default Destination: hp3015	
hp3015 HP Laserlet 3015 Postscript (recommended)	
Description: hp laserjet 3015 Location: local Printer State: idle, accepting jobs. Device URI: usb:/dev/usb/lp0 Print Test Page Stop Printer Reject Jobs Modify Printer Configure Printer Delete Printer Set As Default	
Add Printer No Active Jobs	
Show Completed Jobs Copyright 1993-2005 by Easy Software Products, All Rights Reserved. The Common UNIX Printin System, CUPS, and the CUPS logo are the trademark property of Easy Software Products . A other trademarks are the property of their respective owners.	ng II
Done	

Done installing printer. I'd rec. testing it with 'Print Test Page'.

4. Confirm that your printer is seen by Mandriva and get your printer name:

😸 Mandriva Linux Control	Center 2006.0 (Ol	fficial) [on localho	st]	
<u>File Actions Options He</u>	elp			
Printers				
Add Printer Set as default	Edit Delet	Cor Refresh Cor	ifigure CUPS	
		Search:		Apply filter
Configured on this machine	Configured on oth	ner machines		
Def. Printer Name State	Model	Connection Type	Description	Location
X hp3015 Enabled	HP LaserJet 3015	USB printer #0	hp laserjet 301	5 local

Your printer name is underlined with red line. This will be typed into the below freeb/openemr configuration file.

5. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#edit file /var/www/html/openemr/includes/config.php:
mcedit /var/www/html/openemr/includes/config.php
#change bolded variable to the name of your printer
\$GLOBALS['oer_config']['freeb']['printer_name'] =
"YourPrinterName";
TEXT EDITOR SAVE AND EXIT

Email Server Setup

Main TOC Link

- 1. This will allow only locally produced emails (such as "status" emails during the below 'backup script', or emails originating from OpenEMR) to be sent over the internet.
- 2. Need to update a package called 'msec' if you want to avoid an error email every minute(not exaggerating)
 - 1. Enter below **bolded** instructions on command line as root user:

#log into root <mark>su</mark>

#Start MandrivaUpdate
MandrivaUpdate

👶 Rpmdrake	
I need to contact the mirror to Please check that your netwo Is it ok to continue?	o get latest update packages. rk is currently running.
No	Yes N

Click 'Yes'.



Click 'Yes'.

Please choo	se the desired mirror.	
United States		
ftp://mandrake.mirrors.pair.c	om/Mandrakelinux/official	l/current/i586/me
ftp://ftp.mandrake.ikoula.com	n/Mandrakelinux/official/c	urrent/i586/medi
http://mandrake.mirrors.pair	.com/Mandrakelinux/offici	al/current/i586/m
http://www.mirrorservice.org	/sites/carroll.cac.psu.edu	ı/MandrivaLinux/d
ftp://ftp.ale.org/pub/mirrors/r	nandrake/official/current/	/i586/media/main
rsync://www.mirrorservice.or	g/carroll.cac.psu.edu/Mar	ndrivaLinux/offici
ftp://ftp.mirrorservice.org/sit	es/carroll.cac.psu.edu/Ma	andrivaLinux/offic
http://ftp.ale.org/pub/mirrors	/mandrake/official/curren	t/i586/media/mai
ftp://mirrors.secsup.org/pub/	linux/mandrakelinux/offic	ial/current/i586/n
ftp://linux.ntcu.net/dists/mar	drake/official/current/i580	6/media/main/
rsync://ftp.esat.net/ftp/pub/l	nux/mandrakelinux/officia	al/current/i586/m
http://ftp.esat.net/pub/linux/	mandrakelinux/official/cur	rrent/i586/media/
ftp://mirrors.ptd.net/mandral	ce/official/current/i586/me	edia/main/
		•
Consert		(

Click 'Ok'. (just select the default mirror)

A COMPANY

👶 Rpmdrake		$\odot \odot \odot$
<u>F</u> ile <u>O</u> ptions <u>H</u> elp		
Software Packages Upda	ite	
Find: in names 💌 msec	Search K	
Bugfixes updates	Normal information	
Normal updates	O Maximum information	
□ msec-0.49.1-0.1.20060mdk	e + +	
Install	Selected size: 0 MB	Quit
		1

Type 'msec' and click 'Search'.

🔅 Rpmdrake	
<u>File Options H</u> elp	
Software Packages Update	
Find: in names ▼ ▼ Security updates □ Bugfixes updates □ Normal updates	 Search Normal information Maximum information
▶ □ All ✓ Search results ✓ msec-0.49.1-0.1.20060mdk	Name: msec Version: 0.49.1-0.1.20060mdk Architecture: i586 Size: 373 KB Importance: bugfix Summary: Security Level management for the Mandriva Linux distribution Reason for update: Bugs in the msec package have been corrected: msec wasn't properly parsing the output on security checks to check ownership of files, reporting files as
Install Selecte	d size: 0 MB

Select 'msec-0.49.1-...'. Then click 'Install'.

👶 Rpmdrake		
<u>E</u> ile <u>O</u> ptions <u>H</u> elp		
Software Packages Upda	ate	
Find: in names 💌 msec	Search	
🗵 Security updates		
Bugfixes updates	 Normal information 	
Normal updates	 Maximum information 	
apache-base-2.0.54-13.2.20060mdk		
apache-mod_ssl-2.0.54-6.1.20060mdk		
apache-modules-2.0.54-13.2.20060mdk		
□ bzip2-1.0.3-1.2.20060mdk	**	
□ clamav-0.88-0.1.20060mdk		
□ clamav-db-0.88-0.1.20060mdk		
🗆 cpio-2.6-5.1.20060mdk		
□ cume 1 1 32 17 1 20060mdb		
Install	Selected size: 0 MB	Quit
		-0-

Your done. Close the window.

3. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#This will allow outgoing mail from server. # Just made up virtual.org, this can be # anything since this is only an outgoing # email server. (It does not need to match # your domain or server name.) #edit config file /etc/postfix/main.cf: mcedit /etc/postfix/main.cf #add to end of file mydomain = virtual.org myhostname = \$mydomain myorigin = \$mydomain relayhost = YourOutgoingSMTPMailServerHere

#This will forward the root's email to

- # the below email address (needed to
- # monitor server emails such as below
- # backup script status)

#edit aliases file /etc/postfix/aliases:

mcedit /etc/postfix/aliases

#edit near end of file:

root: YourFullEmailAddressHere

#start postfix service and configure to start on computer boot up
service postfix start
chkconfig --add postfix

Automatic Backup Setup

Main TOC Link

- 1. This will enable a full daily backup of the MySQL server, PostGreSQL server, OpenEMR patient documents directory, OpenEMR X12 billing documents directory, and FreeB billing documents directory. The script will place a non-encrypted backup in the local hard drive secured /backup directory, and will also copy an encrypted backup to a DVD. The DVD copy works via multi-session, so you basically just need to leave one DVD in the DVD writer until it fills up. Do NOT use RW DVD. This script will work and should be used with R only DVD's. The output of the automated backup script will be emailed to the person's email entered in above email server setup.
 - 1. The local /backup directory will have to be manually cleaned up occasionally. I'd recommend deleting old backup sub-directories on a monthly basis or so. (of course, a script could be written for this)
 - 2. There is no restore script yet, will have to be done manually.
 - 3. The MySQL and PostGreSQL are gzipped. The ...openemr/documents and .../freeb/public backups are compressed via DAR (NOT tar).
- 2. Download the script file <u>fullbackup2.sh</u>. File can be found at: <u>http://bradymd.com/fullbackup2.sh</u> (to download file, you may need to Right-Click the link and select 'Save Link As...')
- 3. Configure file encryption package:
 - 1. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#Configure file encryption. If you want to be able to decrypt your encrypted files you need to remember (case sensitive) the passphrase that you type below. I'd also remember all the other info you type below.

gpg --gen-key

- -'ENTER' to default of 1 for key selection
- -'ENTER' to default 2048 keysize bits
- -'ENTER' to default '0' so key does not expires
- -Type 'Y' to confirm above
- -Type your real full name
- -Type your real email address
- -Type 'openemr secure backup key'
- *-Type 'O' to confirm*

-Type a very secure and long 'passphrase' (the longer your passphrase is the more secure, go for at least 15 characters with numbers, different cases, and strange characters)

#IMPORTANT!!! You **NEED** to backup the entire contents of directory **/root/.gnupg** on the most indestructible disk(s) you can find and then keep in a secure place. This directory contains your secret key file, and without this you will be unable to restore from your encrypted data backup!!! You also need to **remember** your **passphrase**, or you won't be able to restore your backed up data.

#The decrypt command, in case you need at some point: #gpg -o OutputFilename -d InputFilename

- 4. Configure backup script and automate it:
 - 1. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#install the DAR backup package
urpmi dar
-yes to packages

#create a secure backup directory mkdir /backup chown root:root /backup chmod 700 /backup

#move the backup script to /root , secure it, and allow execution
mv /location/to/file/fullbackup2.sh /root
chown root:root /root/fullbackup2.sh
chmod 700 /root/fullbackup2.sh

#edit file /root/dailybackup2.sh:
mcedit /root/fullbackup2.sh

#edit the below DVDDEVICE line to what the #device for the DVD writer is. It is likely going to #be /dev/hda , /dev/hdb , /dev/hdc ... A very #non-scientific way to figure this out is to put #a DVD with files in the DVD writer, go to root #command line and then use the #'mount /dev/hda /mnt/cdrom1' #command then 'ls /mnt/cdrom1', and continue #this until you get the right device, #don't forgot to 'umount /mnt/cdrom1': DVDDEVICE=/dev/hdb

#edit full name you entered **above** for **encryption** key: YOURFULLNAME='*Brady Miller*' **TEXT EDITOR SAVE AND EXIT**

#Automate script to cron for a daily run at 1:02 AM. WARNING: This script needs to finish and start on the same day since it plays around with file names using the date command. Basically, don't start this script before midnight unless you are sure it will finish before midnight. This is why I have it set for 1:02AM.

export EDITOR=/usr/bin/mcedit crontab -e

#paste below into empty file: 02 1 * * * . /root/fullbackup2.sh TEXT EDITOR SAVE AND EXIT

Instructions for Building the OpenEMR Appliance

Main TOC Link

LINK TO MANUAL IN PDF FORMAT

Instructions for Building the OpenEMR Appliance Chapter Index

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Install OpenEMR 2.8.1	
Install FreeB 0.11	

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Software

Main TOC Link Chapter Index Link

- 1. Apache (2.0.54), MySQL (4.1.12), and PHP (4.4.0)
- 2. OpenEMR (2.8.1), OpenEMR (2.8.2), and OpenEMR(2.8.3)
- 3. FreeB (0.11), FreeB (0.12), and FreeB (0.13) Insurance billing software
- 4. PostgreSQL (8.0.3) Database program required by SQL-ledger
- 5. SQL-Ledger (2.6.3) Billing, Accounting, and Inventory software
- 6. php-GACL (3.3.6) Access Control software

Important Issues Before Installation

Main TOC Link

- <u>Chapter Index Link</u>
 1. These instructions are exact instructions for building this appliance. If you are using these instructions, you have several
 - options:
 - 1. You can follow the instructions exactly, which means installing OpenEMR 2.8.1(with FreeB 0.11) first, then upgrade to 2.8.2(with FreeB 0.12), and then upgrade to 2.8.3(with FreeB 0.13). This will guarantee getting a working version, which is identical to the Appliance.
 - 2. Or you can try to install OpenEMR 2.8.3(with FreeB 0.13) using the 2.8.1 instructions(it should work in theory) to avoid having to go thru the upgrade sections. Please note I have not tested this.
 - 3. Also, OpenEMR 2.8.3 will now work with PHP5 and MySQL5, so you could, in theory, install these instead of PHP4 and MySQL4. Please note I have not tested this.
 - 2. Complete all of the steps before entering any data into OpenEMR. The SQL-Ledger and OpenEMR software may communicate in strange ways if you enter data into OpenEMR before installing SQL-Ledger.
 - 3. Passwords can be confusing during the SQL-Ledger installation. To

avoid any confusion it is helpful to know that during the installation you will create a PostGreSQL user called 'sql-ledger' with a password. This user/password combination will be used frequently, and the password will be referred to as '*sql-ledger-password*' throughout this document to avoid confusion.

Install the Mandriva 2006 Virtual Computer

Main TOC Link

Chapter Index Link

- 1. You can use either VMware Workstation or VMware Server to build the Mandriva 2006 Virtual Computer.
- 2. VMware Workstation Configuration:



Click 'New Virtual Machine'.



Select 'typical'. Then click 'Next'.



Select 'Linux' and 'Mandrake Linux'. Then click 'Next'.



Select 'Use bridged networking'. Then click 'Next'.



Enter 'Disk Size'->'20 GB'. Select 'Split disk into 2GB files'. Then click 'Finish'.

- 3. Insert the Mandriva2006 DVD/CD.
- 1. Click 'Power On' via Vmware.
- 1. Install Mandriva2006:

Installation 2006

System Installation	Security		
🔗 Language			
License	Please choose the desired security le	evel	
Security	Standard: This is the standard securit	ty recommended for a computer that w	vill be used to connect
Partitioning	to the Internet as a client.		
 Install system 	High: There are already some restrict	ions, and more automatic checks are	run every night.
ystem configuration	Higher: With this security level, the us	se of this system as a server becomes	possible. The security
 Administrator password 	Paranoid: This is similar to the previous level, but the system is entirely closed and security features are at their maximum.		
🐐 Add a user			
Install bootloader			
Summary			
Install updates			
🗧 Exit install	Security level	Higher	•
	Cocurty Administrator (login or omail)	[mot	
	Security Administrator (login of email)	lined	
			Next A

Change 'Security Level' -> 'Higher'. Type in an administrator log in name. Then click 'Next'.

0	VMware Workstation	000
Eile Edit View VM Team Tab	s Help	
Power Off Suspend	Sapshot Snapshot Manager Full Screen Quick Switch	, •
🏠 Home 🗙 🗗 WindowsXP 🗶 🔂	Updated WindowsXP 🗙 🔂 Mandrake2006 🗙 🔂 Kubuntubreezy 🗴 🔂 TemplateM	landrivaLinux 🗴
Mandriva Lin	ux Installation 2	2006
System installation Language License Security Partitioning Install system System configuration Add a user Install bootloader Summary Install updates Exit install	Ine DrakX Partitioning wizard found the following solutions: Use free space Custom disk partitioning	Next
🙆 You do not have VMware Tools instal	ied.	0 6 0



Installation 2006

installation	Please wait
nguage	
ense	
curity	
titioning	H-
ill system	The following installation media have been found. If you want to skip some of them, you can unselect them now.
onfiguration	🕱 Installation Free DVD
istrator password	
ser	You have the option to copy the contents of the CDs onto the hard drive before installation.
ootloader	It will then continue from the hard drive and the packages will
ry	remain available once the system is fully installed.
ates	Copy whole CDs
tall	Next
	└ ─₽ ²

Installation 2006

	The following media have been found and will be used during install: Installation Free DVD.
System installation	Do you have a supplementary installation media to configure?
🧳 Language	
License	
🧧 Security	
Partitioning	
 Install system 	
system configuration	
Administrator password	
🧉 Add a user	
Install bootloader	
🐔 Summary	
🐔 Install updates	
🗧 Exit install	(None
	○ CD-ROM
	O Network (HTTP)
	O Network (FTP)
	O Network (NFS)
	N ^{Ok}
Click 'Ok'.	

e	VMware Workstation	000
Eile Edit ⊻iew VM Team Tal	os Help	
Power Off Suspend Power On	Reset Snapshot Revent Snap	oshot Manager Full Screen Quick Switch 🗸
🖣 🔂 WindowsXP 🛛 🗙 🔂 Updated	WindowsXP 🗙 🗗 Mandrake2006 🗙 🗄	🕽 Kubuntubreezy 🗙 📸 TemplateMandrake2006 🗙
Mandriva Lir	านx	Installation 2006
System installation	Ackage Group Selection	
 License 	Workstation	Server
Security	🛛 Office Workstation	Web/FTP
Partitioning	Game station	🔲 Mail
install system	🔀 Multimedia station	🗌 Database
System configuration	🕱 Internet station	Firewall/Router
Administrator password	🔀 Network Computer (client)	Network Computer server
Add a user	🔀 Configuration	Graphical Environment
 Summary 	🕱 Console Tools	KDE Workstation
🧉 Install updates	× Development	GNOME Workstation
Exit install	× Documentation	🗌 lceWm Desktop
		Other Graphical Desktops
	Help Total size: 1928 / 5139 MB	Individual package selection
① You do not have VMware Tools insta	illed.	

Select 'Office Workstation', 'Multimedia Station', 'Internet Station', 'Network Computer(client)', 'Configuration', 'Console Tools', 'Development', 'Documentation', 'KDE Workstation'. Do NOT select any Server selections. Then click 'Next'.

Installation 2006

<u>System installation</u>	Set administrator (root) password and network authentication me
🧉 Partitioning	Password
🥌 install system	Password (again)
System configuration Administrator password Add a user Install bootloader Summary Install updates Exit install	
	Help Authentication method Next

Enter a secure password. Then click 'Next'.

Installation 2006

 Language License Security Partitioning 	Enter a user	
Install system	Real name	openemr
System configuration	Password	******
 Administrator password Add a user Install bootloader Summary Install updates Exit install 	Password (again) ctools rpm xgrp ntools adm wheel	******* access to compilation tools access to rpm tools x access to X programs x access to network tools access to administrative files x allow "su"
	Help	Advanced Next Next

Type in a 'Name', 'Login name', and 'Password'. Toggle ON 'xgrp', 'rtools', and 'wheel'. Then click 'Accept user'.

Installation 2006

 Language License Security Partitioning 	Enter a user (already added openemr)	
 Install system 	Real name	
	Login name	
stem configuration	Password	
 Add a user Install bootloader Summary Install updates Exit install 	Password (again) ctools access to compilation tools rpm access to rpm tools xgrp access to X programs ntools access to network tools adm access to administrative files wheel allow "su"	
	Help Advanced Accept user	Next

Click 'Next'.

9	VMware Workstation	000
Eile Edit View VM Team Tab	is Help	
Power Off Suspend	Snapshot Snapshot Manager Full Screen Quic	k Switch
🖣 🗗 WindowsXP 🛛 🗙 🗗 Updated V	NindowsXP 🗙 🗟 Mandrake2006 🗙 🗟 Kubuntubreezy 🗴 🔂 Templat	eMandrake2006 🗙 🕨
Mandriva Lir	nux Installatio	n 2006
System installation	Summary System Keyboard - US keyboard Country / Region - United States Timezone - America/New_York Mouse - Universal Any PS/2 & USB mice Hardware Printer - No printer Sound card - Creative Labs Sound Blaster AudioPCI64V/AudioPCI128 Graphical interface - not configured Network & Internet Proxies - not configured Security	Configure Configure Configure Configure Configure Configure Configure Configure Configure
🙆 You do not have VMware Tools insta	lled.	0.0.0.0.0

At 'Graphical Interface', click 'Configure'.

0	VMware Workstation	000
Eile ⊑dit ⊻iew VMTeam Tabs	Нер	
Power Off Suspend	Reset Snapshot Power Snapshot Manager Full Screen Quick S	witch -
🖣 🗗 WindowsXP 🛛 🗙 🔂 Updated W	ndowsXP 🗙 🗟 Mandrake2006 🗙 🔓 Kubuntubreezy 🗴 🛱 TemplateM	1andrake2006 🗙 🕨
Mandriva Lin	x Installation	2006
System installation • Language • License • Security • Partitioning • Install system System configuration • Administrator password • Add a user • Install bootloader • Summary • Install updates • Exit install	X server Sigma Legend Soyo AGP (SY-740 AGP) TechWorks Thunderbolt TechWorks Ultimate 3D VESA driver (generic) VI720 VMware virtual video card VideoExcel AGP 740 ViewTop PCI ViewTop ZeusL 8MB Voodoo Banshee (generic) Vondoo Graphics	Next

Select 'VMware virtual video card'. Then click 'Next'.

Θ	VMware Workstation	000
Eile Edit ⊻iew VM Team Tabs	Help	
Power Off Suspend	Reset Snapshot Snapshot Manager Full Screen Quick Switch	•
🖣 🗗 WindowsXP 🛛 🖈 Updated Wi	ndowsXP 🗙 🗟 Mandrake2006 🗙 🔂 Kubuntubreezy 🗴 🔂 TemplateMandrake2006	×
Mandriva Lin	ux Installation 200)6
System installation Language License Security Partitioning Install system System configuration Administrator password Add a user Install bootloader Summary Install updates Exit install	Monitor Choose a monitor Custom Plug'n Play Vendor Generic 1024x768 @ 60 Hz 1024x768 @ 60 Hz 1280x1024 @ 60 Hz 1280x1024 @ 60 Hz 1280x1024 @ 70 Hz 1280x1024 @ 76 Hz 1400x1050 1600x1200 @ 70 Hz 1600x1200 @ 76 Hz Help Previous Next	

Select '1024x768'. Then click 'Next'.

Ejle Edit ⊻iew VM Team Tabs Hel	lp	
	and the second se	
Power Off Suspend Power On Re	set Snapshot Full Sc	reen Quick Switch
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System installation • Language • License • Security • Partitioning • Install system System configuration • Administrator password • Add a user • Install bootloader • Summary • Install updates • Exit install	Choose the resolution and the color depth Graphics card: VMware virtual video card) Image: Color State of	Cancel

Select '800x600'. Then click 'OK'.

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Mandriva Lir	nux Installatio	n 2006		
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Click 'Next'.
Bie Edit View VM Beam Tags Heip Power Off Suspend Reset Snapshot Snapshot Manager Full Screen Quick Switch WindowsXP Updated WindowsXP Mandrake2006 X Mubuntubreczy TemplateMandrake2006 X MindowsXP Updated WindowsXP Mandrake2006 X Mubuntubreczy TemplateMandrake2006 X MindowsXP X Mandrake2006 X Mubuntubreczy X TemplateMandrake2006 X MindowsXP X Mandrake2006 X Mubuntubreczy X TemplateMandrake2006 X MindowsXP X Updated Mandrake2006 X Mubuntubreczy X TemplateMandrake2006 X MindowsXP X Updated Install Mubuntubreczy X TemplateMandrake2006 X Vietem License Security License Security Updated Security Updated Security Updates To download these packages, you will need to have a working internet connection. Do you want to install the updates? To download these packages, you will need to have a working internet connection. Nex Nex Nex	0	VMware Workstation	000
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System installation Anguage License Security Partitioning Install system System configuration Administrator password Add a user Install bootoader Summary Install updates Exit install	Mandriva Li	inux Installation	2006
	System installation • Language • License • Security • Partitioning • Install system System configuration • Add a user • Install bootloader • Summary • Install updates • Exit install	Vou now have the opportunity to download updated packages. These packages have updated after the distribution was released. They may contain security or bug fixes. To download these packages, you will need to have a working Internet connection. Do you want to install the updates?	been Next



Mandriva Linux

Installation 2006

ystem installation	Congratulations
🥌 Language	
License	Congratulations, installation is complete. Remove the boot media and press return to reboot.
Security	For information on fixes which are available for this release of Mandriva Linux, consult the Errata
Partitioning	available from:
🤌 install system	http://www.mandriva.com/security
ystem configuration	Information on configuring your system is available in the post install chapter of the Official
Administrator password	Mandriva Linux User's Guide.
🔷 Add a user	
Install bootloader	
Summary	
🍨 Install updates	
Exit install	
	Help Advanced Reboot



- 2. Install VMtools (Required by VMware software)
 - 1. This will require installation of kernel source/headers files
 - 2. Re-insert the Mandriva2006 CD/DVD
 - 3. Install kernel source/headers files:
 - 1. Enter below **bolded** instructions on command line as root user

#log into root **su**

#install the kernel header/source files
urpmi kernel-source

4. Set up Vmware:



Click above 'Install Vmware Tools'.



Click 'Install'.

- 5. Install the VMTools on Mandriva
- 6. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#if below doesn't work, try replacing /dev/hda with /dev/cdrom, /dev/hdb, /dev/hdc etc.

mount /dev/hda /mnt/cdrom

#unpack and move file
cd /tmp
tar zxpf /mnt/cdrom/VMwareTools-5.5.0-*.tar.gz
umount /mnt/cdrom
cd vmware-tools-distrib

#install the software
./vmware-install.pl
-answered all questions with defaults
-answered 3 for video mode("1024x768")

#need to re-boot or else weird stuff happens
shutdown -r now

8. Enable software package installation over internet:



Click 'System' -> 'Configuration' -> 'Packaging' -> 'Software Media Manager'.

X Query	\bigcirc \otimes
You are attempt requires adminis information is ne	ing to run a command which strative privileges, but more eeded in order to do so.
Password for root	
	<u>O</u> K <u>C</u> ancel

Enter 'root' user password. Then click 'OK'.

	Ame Nome	Devices	
	Welcome	e congue meda	
2		Enabled? Updates? Medium Installation Free DVD (cdrom1)	Remove
1			Edit
			Add
			Add custom
			Update
			Manage keys
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Click 'Add...'.



Click 'Distribution sources'.

Config	ure med	lia	
nabled?	Updates	7 Medium	Remove
T X	 Installation Free DVD (cdrom1) Main (Official2006.0-1) 		Edit
×		Contrib (Official2006.0-2)	Add
			Add custom
			Update
			Manage keys
			Proxy
			Parallel
			Global options
			A

Select as above. Then click 'Ok'.

9. Disable the screensaver(it's annoying).

Install Apache, MySQL, and PHP4

Main TOC Link Chapter Index Link

1. OpenEMR 2.8.1 requires PHP4. If you are using version 2.8.1 then you will need to remove PHP5 on your system. If you are using 2.8.2 or greater, then PHP5 should work(in theory). Please note that I have not tested these installation instructions with PHP5. If you want to remove PHP5 then remove it using below **bolded** instructions on command line as root user:

> #log into root **su**

#list all the php5 packages

urpme php

#remove them all by pasting in all of the php5 packages
 below

urpme (paste)

2. Enter below **bolded** instructions on command line as root user :

#log into root **su**

#Install apache, php, mysql. Again, if you are installing 2.8.2 or greater then PHP5 should work, however I have not tested PHP5 with these installation instructions.(you could always try to substitute php5 for php4 in below commands, in theory, it should work).

urpmi apache php4-cli apache-mod_php4 apachemod_ssl php4-mysql php4-xml php4-xmlrpc htmldoc mysql

-I chose 1- apache-mpm-prefork-2.0.54-13mdk.i586 #As of version 2.8.2, MySQL 5 is now supported. You could try installing it, however, I have not tested this with these installation instructions.

-I chose 1- MySQL-4.1.12-3mdk.i586 -choose Yes to packages

#start apache and mysql service httpd start service mysqld start

#enables apache and mysql to start during boot-up
chkconfig --add httpd
chkconfig --add mysqld

3. Open the firewall for the web server:

Home Home Welcome	Devices	
Most lised Application		E Trash
Configure Your Desktop Software Media Manager Remove Software Configure Your Computer All Applications Office Internet Multimedia		
System More Applications Home Actions Find Recent Documents Run Command Switch User Lock Session Log Out	 Terminals Configuration Archiving Configure Your Desktop Archiving File Tools Hardware Packaging Printing Printing KDE Other 	Cr*Mandriva Linux

Click 'System' -> 'Configuration' -> 'Configure Your Computer'.

💥 Query	\odot
You are attempt requires adminis information is ne	ing to run a command which strative privileges, but more eeded in order to do so.
Password for root	
	<u>O</u> K <u>C</u> ancel

Enter 'root' user password. Then click 'OK'.



Click 'Security'.



Click 'Set up a personal firewall...'.

🚽 Mandriva Linux Control Cent	er 2006.0 (Official) [on localhost]	
<u>File Options Profiles H</u> elp		
Eine une U		
Firewall		
	Which services would you like to allow the Internet to connect to?	
Everything (no firewall)		
🗵 Web Server		
Domain Name Server		
SSH server		
FTP server		
Mail Server		
POP and IMAP Server		
🔲 Echo request (ping)		
Ok Advanced		Cancel

Select 'Web Server'. Then click 'OK'.

Mandriva Linux Control Center 2006.0 (Official) [on localhost]	\odot \odot \otimes
Eile <u>O</u> ptions <u>P</u> rofiles <u>H</u> elp	
Firewall	
Interactive Firewall	
You can be warned when someone accesses to a service or tries to intrude into your computer. Please select which network activity should be watched.	
🔀 Use Interactive Firewall	
Veb Server	
ok 💦	Cancel

Click 'OK'.

Mandriva Linux Control Center 2006.0 (Official) [on localhost]	
<u>File O</u> ptions <u>P</u> rofiles <u>H</u> elp	
Firewall	
Please enter the name of the interface connected to the internet.	
Examples: ppp+ for modem or DSL connections, eth0, or eth1 for cable connection, ippp+ for a isdn connection.	
Net Device eth0: Advanced Micro Devices 79c970 [PCnet LANCE]	-

Click 'Ok'. Keep defaults.



You are done. Close the window.

Install OpenEMR 2.8.1

Main TOC Link

Chapter Index Link

- 1. Download openemr-2.8.1.tar.gz (version 2.8.1) from sourceforge at : <u>http://sourceforge.net/project/showfiles.php?group_id=60081</u>
- 2. Enter below **bolded** instructions on command line as root user:

#log into root
su
#edit file /etc/php4.ini.(Or if your using php5, then
 /etc/php5.ini):
mcedit /etc/php4.ini
 #edit following variables:

post_max_size = 30M upload_max_filesize = 30M memory_limit = 128M max_execution_time = 45 magic_quotes_gpc = off register_globals = off TEXT EDITOR SAVE AND EXIT

#Ensure the following lines are included at the end of the /etc/httpd/conf/httpd.conf file (This was not in original OpenEMR Appliance and has been listed as a security patch; it is required to not allow unauthorized access to confidential patient medical records).

mcedit /etc/httpd/conf/httpd.conf

#Ensure below is included at end of file (if not found, then paste below into end of file)

<Directory "/var/www/html/openemr/documents"> order deny,allow Deny from all </Directory> <Directory "/var/www/html/openemr/edi"> order deny,allow Deny from all </Directory>

TEXT EDITOR SAVE AND EXIT

#restart httpd
service httpd restart

#put the OpenEMR program in its place
cd /var/www/html
tar pxzvf /location/to/tar/openemr-*.tar.gz
mv openemr-* /var/www/html/openemr
chown -Rf root:root openemr

#Prepare for install
chmod 666 /var/www/html/openemr/library/sqlconf.php

3. Then use Auto-installer at: <u>http://localhost/openemr/setup.php</u>

🚸 OpenEMR Setup Tool - Mozilla Firefox		00	*
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🕞 - 🕞 - 🧿 🕢 ≽ http://localhost/openemr/setup.php	₽Go	G.	T
📌 Mandriva 👒 Mandriva Store 🔸 Mandriva Club 💺 Mandriva Expert 👒 Mandriva Online	C LPI	SFree calls online	»
OpenEMR Setup			
Welcome to OpenEMR. This utility will step you through the configuration of OpenEMR for your sure that you have a properly installed and configured MySQL server available, and a PHP configured upgrading from a previous version, please read the README file.	practice igured v	. Before proceeding, vebserver.	be
Continue			

Click 'Continue'.



Select 'Have setup create the databases'. Then click 'Continue'.

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G • O • G) 🕢 🎧 ≽ http://localhost/	openemr/setup.php	I Go G.	
📌 Mandriva 🛛 🖈	Mandriva Store 🛛 🔆 Mandriva Club	🔆 Mandriva Expert 🛛 🖗 Mandriva Online 🖉	LPI 🔞 Free calls online 👫 Intel® Compilers	
OpenEMR Set	tup			
Step 2				
Now you need to	supply the MySQL server information	on.		
SERVER:				
Server Host:	localhost	(This is the IP address of the machine running	g MySQL)	
Server Port:	3306	(The default port for MySQL is 3306)	50 87	
Database Name:	openemr	(This is the name of the OpenEMR database - 'openemr' is the recommended)		
Login Name:	openemr	(This is the name of the OpenEMR login name	e - 'openemr' is the recommended)	
Password:	******* and composed of both numbers ar	(This is the Login Password for when PHP accesses MySQL - it should be at least 8 characters long		
CLIENT:				
User Hostname:	localhost computer, this is the same as the	(This is the IP address of the server machine running Apache and PHP - if you are setting up one s the Server Host above)		
Root Pass:	ass: (This is your MySQL root password. For localhost, it is usually ok to leave it blank.)			
USER:				
Initial User:	admin or other Practitioner)	(This is the user that will be created for you. It will be an authorized user, so it should be for a Doctor		
Initial User's Name:	Administrator	(This is the real name of the initial user.)		
Initial Group:	The Cool Practice	(This is the group that will be created for you	r users. This should be the name of your practice.)	
Continue				
Done				

In SERVER section: enter 'Password' -> secure password, otherwise keep defaults. In CLIENT section: keep defaults. In USER section: enter 'Initial User' -> new user login name, Enter 'Initial User's Name' -> new user name, enter 'Initial Group' -> name of practice. (I would recommend keeping the 'Initial User' -> 'admin' and the 'Initial User's Name' -> 'Administrator' to ensure easy installation of the php-GACL software.) Then Click 'Continue'.



Click 'Continue'. (Don't worry, we have already made the mentioned file world-writeable)



Click 'Continue'. (Don't worry, we will 'restore secure permissions' of file later)



This page list some additional instructions. Again, don't worry, we will do all of this stuff in next section below. You can close your browser window now and move onto the next section.

4. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#Re-secure the sqlconf.php file
chmod 644 /var/www/html/openemr/library/sqlconf.php

#Need to change some file/folder ownerships chown apache:apache -R /var/www/html/openemr/interface/main/calendar/m odules/PostCalendar/pntemplates/cache chown apache:apache -R /var/www/html/openemr/interface/main/calendar/m odules/PostCalendar/pntemplates/compiled chown apache:apache -R /var/www/html/openemr/documents

Install FreeB 0.11

Main TOC Link

Chapter Index Link

- Download freeb-0.11.tar.gz (version 0.11) from sourceforge: http://sourceforge.net/project/showfiles.php?group_id=60081
- 2. Enter below **bolded** instructions on command line as root user :

#log into root **su**

#put the program in its place
cd /usr/share
tar xzvf /location/to/tar/freeb-*.tar.gz
mv freeb-* /usr/share/freeb

#secure it
chown root:root -R /usr/share/freeb

#install the necessary packages
urpmi perl-Config-General perl-Date-Calc
-choose yes to packages

#need to install several PERL modules
perl -MCPAN -e shell
-Answer NO to first question, and then it will be auto-configured.
At cpan> prompt type:
install PDE Create

install PDF::Create install ConfigFile install Frontier::Daemon exit

#create a directory that apache can write to
mkdir /usr/share/freeb/public
chown apache:apache -R /usr/share/freeb/public

#change ownership of following directory
chown apache:apache -R
/var/www/html/openemr/library/freeb

#this will allow the user to use freeb while in openemr (Or if your using PHP5 then substitute php5 for php4) cp /usr/bin/php4 /usr/bin/php

- 3. Configure FreeB as a service
 - 1. Download <u>freeb</u> file, which is an init.d script. I wrote this file, and it seems to work alright. But I have to say, please use at your own risk. File can be found at: <u>http://bradymd.com/freeb</u>

(to download file, you may need to Right-Click the link and select 'Save Link As...')

2. Enter below **bolded** instructions on command line as root user :

#log into root **su**

#move file and change ownership/permissions
mv /location/to/file/freeb /etc/init.d/
chown root:adm /etc/init.d/freeb
chmod 740 /etc/init.d/freeb

#start service

service freeb start

-After 'before server setup', just hit 'enter' key once to get back to the prompt. If you saw 'before server setup', then it worked.

#configure freeb to start automatically during computer
 startup
chkconfig --add freeb

#You are done installing service, it will now start #up automatically during computer start up. #If the above service is not working, you can #manually start the FreeB server by typing: #'/usr/share/freeb/bin/FreeB_Server.pl &'

4. Next, need to do below "work-around" (Bug in OpenEMR) in order for HCFA billing to work.

Log in to OpenEMR with previously created username and default password 'pass' at <u>http://localhost/openemr</u>:

🐢 OpenEMR - Mozilla Firefox 😄 🕲	*
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G + O - O O O O I + http://localhost/openemr/interface/main/main_screen.php?auth= ▼ □ Go C.	
📌 Mandriva 🧚 Mandriva Store 🌟 Mandriva Club 🌟 Mandriva Expert 🥠 Mandriva Online 🔘 LPI 🧕 Free calls online	»
Name Find Patient New Patient Password Administration Reports Notes Billing Home Logou	t
All Users Mar 7 2006 Day Go Add Search Administrator Villes Mar 7 2006 Day Add Search Administrator Villes Mar 2006 Day Add Search	
Administrator	4
8:00 8:15 8:30 9:45 10:00 10:15	
Patient Notes (See All) and Authorizations(More) (Find Patient) Done	

Click 'Administration'.

🥐 OpenEMR - Mozilla Firefox							808
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Users & Groups Form	Practice	Calendar	Database	BatchCom	Lar	iguage Logs	Back
Logged in: Administrat	.ol 3					Tue March	7th 2006
User & Group Adminis	tration						-
New Facility Information:	Namo		Phone	-		i -	
	Address:		City:				
	State:		Zip Code:				
	Country:		Federal EII	4:			
				Add Facility			
Edit Facilities:	Your Clinic Na	me Here(Edit)					
New User:	Username:		Pas	sword:	-		
	Groupname:	Default 🛃	Aut	horized:			
	First Name:		Mid	dle Name:			
	Last Name:		Def	ult Facility:	Your Clin	ic Name Here 🗾	
	Federal Tax ID:		Fed	eral Drug ID:			
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New Group:	Groupname:	In	itial User:	admin 📲 🛛 A	dd Group	1	
Done							

Click 'Forms'.

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1	New Encou	inter Form	enabled	PHP extracted	DB installed				
13	Review Of	Systems	enabled	PHP extracted	DB installed				
9	Review of	Systems Checks	enabled	PHP extracted	DB installed				
11	SOAP		enabled	PHP extracted	DB installed				
10	Speech Die	tation	enabled	PHP extracted	DB installed				
12	Vitals		enabled	PHP extracted	DB installed				
Um	egistered								
n	ote	register	PHP er	tracted	n/a				
a	nkleinjury	register	PHP ex	rtracted	n/a				
fe	e_sheet	register	PHP en	tracted	n/a				
b	ronchitis	register	PHP ex	tracted	n/a				
V	italSigns	register	PHP er	tracted	n/a				
p	rior_auth	register	PHP er	tracted	n/a				
		12							
Do	ne								
all shares									

Click 'register' at 'prior_auth' entry.

Mandriva 🛛 📌 Mano	lriva Store 👌	🕂 Mandriva Clu	ıb 😕 Mandri	va Expert	🔆 Mandriva Onlíne	CLPI	🕲 Free o	alls online	Intel®	Compilers	
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ged in: Admini ms Administra	strator								T	ue March	7th 2
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te	register	PHP extra	cted	n/a							
kleinjury	register	PHP extra	cted	in/a	- 24						
e_sheet	register	PHP extra	cted	n/a	_						
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	Edit View Go	Edit View Go Bookmarks 	Edit View Go Bookmarks Tools Help Mandriva Mandriva Store Mandriva Cluers & Groups Forms Practic Practic ged in: Administrator Practic ms Administration Practic stered registered Prior Prior Authorization Progistered Review of Systems enabled Speech Dictation enabled Vitals enabled enabled registered te register te register PHP extra kleinjury register PHP extra e sheet register PHP extra	Edit View Go Bookmarks Tools Help Image: Second Se	Edit Yiew Go Bookmarks Tools Help 	Edit Yiew Go Bookmarks Tools Help •	Edit Yiew Go Bookmarks Tools Help •	Edit View Go Bookmarks Tools Help * O O O O I http://localhost/openemr/interface/usergroup/usergroup.php Mandriva Store * Mandriva Club * Mandriva Expert * Mandriva Online OLP Free of the series & Groups Forms Practice Calendar Database BatchCom ged in: Administrator ms Administration stered New Encounter Form enabled PHP DB extracted installed Prior Authorization Form registered PHP DB extracted installed Review of Systems enabled PHP DB extracted installed SoAP enabled PHP DB extracted installed registered te register PHP extracted installed prior Authorization enabled PHP DB extracted installed enabled PHP DB extracted installed speech Dictation enabled PHP DB extracted installed registered te register PHP extracted n/a extracted n/a extracted installed registered te register PHP extracted n/a extracted n/a extracted n/a extracted n/a	Edit View Go Bookmarks Tools Help <l< td=""><td>Edit View Go Bookmarks Tools Help * O O O O O I http://localhost/openemr/interface/usergroup/usergroup.php * O O O O I http://localhost/openemr/interface/usergroup/usergroup.php * O O O O Processor Processor Practice Calendar Database BatchCom Language ged in: Administrator To Administration stered New Encounter Form enabled PHP DB extracted installed PHP DB extracted installed PHP DB extracted installed installed PHP DB extracted installed pHP PHP DB extracted<td>Edit View Go Bookmarks Tools Help <l< td=""></l<></td></td></l<>	Edit View Go Bookmarks Tools Help * O O O O O I http://localhost/openemr/interface/usergroup/usergroup.php * O O O O I http://localhost/openemr/interface/usergroup/usergroup.php * O O O O Processor Processor Practice Calendar Database BatchCom Language ged in: Administrator To Administration stered New Encounter Form enabled PHP DB extracted installed PHP DB extracted installed PHP DB extracted installed installed PHP DB extracted installed pHP PHP DB extracted <td>Edit View Go Bookmarks Tools Help <l< td=""></l<></td>	Edit View Go Bookmarks Tools Help <l< td=""></l<>

Click 'Install DB' at 'Prior Authorization Form' entry.

WARNING!! Do NOT click anything on screen below, read below the screenshot first.

1	OpenEMR - Mozil	la Firefox						_	808
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U	sers & Groups	Forms	Practice	Calendar	Database	BatchCom	Language	Logs	Back
Lo	gged in: Adm	inistrator					Tue	March	7th 2006
Fo	rms Administ	tration							
Re	gistered								
1	New Encounter	Form	enabled	PHP extracted	DB installed				
14	Prior Authorizat	tion Form	disabled	PHP extracted	DB installed				
13	Review Of Syst	tems	enabled	PHP extracted	DB installed				
9	Review of Syste	ems Checks	enabled	PHP extracted	DB installed				
11	SOAP		enabled	PHP extracted	DB installed				
10	Speech Dictatio	on	enabled	PHP extracted	DB installed				
12	Vitals		enabled	PHP extracted	DB installed				
Um	edistered								
n	ote	register	PHP ex	tracted	n/a				
a	akleinjury	register	PHP ex	tracted	n/a				
fe	e_sheet	register	PHP ex	tracted	n/a				
b	ronchitis	register	PHP es	tracted	n/a				
V	italSigns	register	PHP ex	tracted	n/a				
Do	ne								

Do **NOT** click the disabled button. You are done with OpenEMR for now. Basically this 'prior_auth' form has to be in the database and **disabled** for program to function normally. Log out and move on to the next section.(continue to research)

Install PostgreSQL

```
Main TOC Link
```

```
Chapter Index Link
```

1. Enter below **bolded** instructions on command line as root user :

#log into root

su

#install postgresql and needed packages
urpmi postgresql postgresql-devel postgresql-server
 postgresql-docs postgresql-pl php4-pg
-yes to packages

#start service and also have it start at computer boot-up
service postgresql start
chkconfig --add postgresql

Install SQL-Ledger

Main TOC Link Chapter Index Link

- We will do a manual install with version 2.6.3. I'd recommend installing this version also(at least 2.6.x), since we know it works.
- 2. Download sql-ledger-2.6.3.tar.gz file from: http://sourceforge.net/project/showfiles.php?group_id=4320
- 3. Enter below **bolded** instructions on command line as root user :

#log into root **su**

#install the needed dependencies
urpmi perl-DBD-Pg LaTeX perl-DBI
-yes to packages

#put the SQL-Ledger program in its place
cd /usr/local
tar xzvf /location/to/file/sql-ledger-2.6.3.tar.gz
mv sql-ledger/sql-ledger.conf.default sql-ledger/sqlledger.conf

#edit file /usr/local/sql-ledger/sql-ledger.conf: mcedit /usr/local/sql-ledger/sql-ledger.conf

#add the following to the vars section on first line of file
 (you must place this within the first line) For example:
 'use vars qw(\$oemr_ar_acc ...)':

\$oemr_ar_acc \$oemr_cash_acc \$oemr_due_days \$oemr_username \$oemr_services_partnumber

#Paste the entire section below into file:

#Some constants relevant to OpenEMR import.
#sql-ledger user
\$oemr_username = 'openemr';
#acc num for acc receivable
\$oemr_ar_acc = '1200';
acc num for check/copay
\$oemr_cash_acc = '1060';

creating a services item for medical services

OpenEMR billing "part number" here: \$oemr services partnumber = 'MS';

Num of days added to OpenEMR transaction date to

create the invoice due date when insurance. This affects the

pat. portion of outstanding balance shown in OpenEMR # summary, and also SQL-Ledger reports and statements. \$oemr_due_days = 40; TEXT EDITOR SAVE AND EXIT

#create and edit file /etc/httpd/conf/sql-ledger-httpd.conf: mcedit /etc/httpd/conf/sql-ledger-httpd.conf

#Paste the entire section below into empty file:

Alias /sql-ledger /usr/local/sql-ledger/ <Directory /usr/local/sql-ledger> AllowOverride All AddHandler cgi-script .pl AddDefaultCharset On Options ExecCGI Includes FollowSymlinks Order Allow,Deny Allow from All </Directory>

<Directory /usr/local/sql-ledger/users> Order Deny,Allow Deny from All </Directory> **TEXT EDITOR SAVE AND EXIT**

#edit file /etc/httpd/conf/httpd.conf: mcedit /etc/httpd/conf/httpd.conf #add following line to bottom of file include /etc/httpd/conf/sql-ledger-httpd.conf TEXT EDITOR SAVE AND EXIT

#change permissions
cd /usr/local/sql-ledger
chown -hR apache:apache users templates css spool

#restart httpd service
service httpd restart

#Set up PostgreSQL user(use 'sql-ledger'), password, and

database su postgres createuser -d -P sql-ledger

-type a good password for the sql-ledger user on PostgreSQL (this password is IMPORTANT and to avoid any severe confusion it will be referred to as the '**sql-ledger-password**' during the rest of the install documentation. I mean it, this is important to remember. This password will be typed in many times during instructions below.)

-type y to allow user to make more users createlang plpgsql template1 exit

1. Load your web browser and connect to: <u>http://localhost/sql-ledger/admin.pl</u>



There is no default password. Just click 'Login'.

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]		SQL-	Ledger Account	ing Administra	itlon				
Logi	n Name	Company	Driver	r He	ost	Dataset		Templates	
Add User	Change Admin Password	Pg Database Administration	Lock System	Logout					
To add a user	name to eone to a group edit a name, chang	ge the login name and save. A n	ew user with the s	ame variables w	ill then be	e saved under the new log	in name.		
Done									

Click 'Change Admin Password'.

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Change Password Password Confirm	
Change Password	
Done	

Enter a secure password. Then click 'Change Password'.

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		SOL-	Ledger Accounting Admi	nistration		
Logi	n Name	Company	Driver	Host	Dataset	Templates
Add User	Change Admin Password	Pg Database Administration	Lock System Logout			
Click on login	name to edit!	43				
To add a user	r to a group edit a name, chan	ge the login name and save. A n	ew user with the same variab	les will then be	e saved under the new login nam	e.
Dono						

Click 'Pg Database Administration'.

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SQL-Ledger Accounting / Database Administration	
Host	
Connect to template1	
Create Dataset Update Dataset Delete Dataset	
This is a preliminary check 论r existing sources. Nothing will be created or deleted at this stage!	
Done	

Enter 'User' -> 'sql-ledger'. Enter 'Password' -> '*sql-ledger-password*''. Otherwise keep above defaults. Then click 'Create Dataset'.

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				-
5	QL-Ledger Accounting D	atabase Administrati	on / Create Dataset	
Existing Datasets	[template0][template1]			
Create Dataset	openemr			
Multibyte Encoding		<u>×</u>		
	C Default	C Australia_General_0000	CAustralia_General_00000	
	C Austria	C Bahasa-Indonesia_Default	C Belgium	
	G Brazil_General	Canada-English_General	Canada-French_General	
	C Colombia-PUC	Colombia-utf8-PUC	C Czech-Republic	
	C Danish_Default	C Dutch_Default	C Dutch_Standard	
	C Egypt-UTF8	C France	C German-Sample	
	Germany-DATEV-SKR03	Germany-SKR03	C Hungary	
Create Chart of Accounts	C Italy_General	C Italy_cc2424	C Latvia	
	C Norwegian_Default	C Paraguay	C Poland	
	Simplified-Chinese_Default-UTF8	C Simplified-Chinese_Default	C Spain-ISO	
	C Spain-UTF8	C Swedish	C Swiss-German	
	C Traditional-Chinese_Default-UTF8	C Traditional-Chinese_Default	C UK_General	
	C US_General	C US_Manufacturing	C US_Service_Company	
	C Venezuela_Default			
-				
				-
		Continue		
Done		•//		

Enter 'Create Dataset' -> 'openemr'. Toggle 'Create Chart of Accounts' -> 'Default'. Then click 'Continue'.



Click 'Continue'.

SQL-Led	lger Accounting Administ	ration Mozilla Firefox				9 😔
ile <u>E</u> dit	<u>V</u> iew <u>G</u> o <u>B</u> ookmarks	<u>T</u> ools <u>H</u> elp				
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Logii	n Name	Company	Driver	Host	Dataset	Templates
Add User	Change Admin Password	Pg Database Administration	Lock System Logout			
Nek on login	name to edit!					
o add a user	to a group edit a name, chan	ge the login name and save. A n	ew user with the same variab	les will then b	e saved under the new log	gin name.

Click 'Add User'.

🦻 SQL-Ledger Accounting Administration / Add User Mozilla Firefox	00
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SQL-Ledger Accounting Administration / Ad	ld User
Login openemr Date Format	t mm-dd-yy 👻
Password ****** Number Format	1,000.00 -
Name openemr Dropdown Limit	1000
E-mail Menu Width	155
Signature	English
Session Timeout	3600
Phone Stylesheet	sql-ledger.css
Fax	
Company Use Templates	
Address New Templates	
Setup Templates	Default
Database	
Driver Pg Host	
Dataset openemr Port	
User sql-ledger Password	
Annua Onderl	
Access Control	
Done	

Enter 'Login' ->'openemr'. Enter a secure 'Password'->'openemrpassword'. Enter 'Name'-> 'openemr'. At the 'Database' section: ensure the 'Driver Pg' is toggled to ON , set 'Dataset'->'openemr', set 'User'->'sql-ledger', set 'Password'->'**sql-ledger-password**'. Keep above defaults for other above entries. Scroll to bottom of page and click 'Save'.

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SQL-Ledger Accounting Administration													
Lo	gin Name	Company	Driver	Host	Dataset	Templates							
openemr	openemr		Pg	localhost	openemr	openemr							
Add User Click on login	Change Admin Password name to edit!	Pg Database Administration	Lock System	ogout									
To add a use	r to a group edit a name, char	nge the login name and save. A n	new user with the sa	ne variables will then be s	aved under the new login	name.							

Click 'Logout' and continue below.

1. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#Copy and rename openemr perl script to sql-ledger directory
cp /var/www/html/openemr/accounting/ws_server_26.pl
 /usr/local/sql-ledger/ws_server.pl

#edit file /usr/local/sql-ledger/ws_server.pl:
mcedit /usr/local/sql-ledger/ws_server.pl

#edit the following bolded path:
use lib qw (/usr/local/sql-ledger);
TEXT EDITOR SAVE AND EXIT

#edit file /var/www/html/openemr/interface/globals.php mcedit /var/www/html/openemr/interface/globals.php

#edit the following bolded variables :
\$sl_income_acc = '4320';
\$sl_services_id = 'MS';
\$sl_dbname = 'openemr';
\$sl_dbuser = 'sql-ledger';
\$sl_dbpass = 'sql-ledger-password';
TEXT EDITOR SAVE AND EXIT

#edit file /var/www/html/openemr/includes/config.php: mcedit /var/www/html/openemr/includes/config.php

#edit the following **bolded** variables:

\$GLOBALS['oer_config']['ws_accounting']['enabled'] =
 true;

\$GLOBALS['oer_config']['ws_accounting']['username'] =
 "openemr";

\$GLOBALS['oer_config']['ws_accounting']['password'] =
"openemrpassword";



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					1.1.				
						Login			
						-0			

Enter 'Name' -> 'openemr'. Enter password then click 'Login'.


Click 'Goods & Services'.



Click 'Add Services'.



Enter 'Number' -> 'MS'. Enter 'Description' -> 'Medical Service'. Choose 'Income' -> '4320—Consulting'. Remove checks on the three tax toggles. Otherwise, keep defaults. Then click 'Save'. Your done with SQL-Ledger install, you can log-out now.

Install php-GACL

Main TOC Link Chapter Index Link

- 1. Download phpgacl-3.3.6.tar.gz file from: http://sourceforge.net/project/showfiles.php?group_id=57103
- 2. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#unpack and place program in its proper place
cd /var/www/html
tar xvzf /location/to/file/phpgacl-3.3.6.tar.gz

mv phpgacl-* phpgacl

#create the mySQL database
mysql
At mysql> prompt type:
CREATE DATABASE gacl;
exit

3. Start phpGACL Installer via : <u>http://localhost/phpgacl/setup.php</u>

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phpGACL Database Setup Configuration: driver = mysql, host = localhost, user = root, database = gacl,
table prefix =
Testing database connection
Success! Connected to "mysql" database on "localhost".
Testing database type
Success! Compatible database type "mysql" detected! Making sure database "gacl" exists
Success! Good, database "gacl" already exists!
Success! Installation Successful!!!
IMPORIANI
Please make sure you create the <phpgacl root="">/admin/templates_c</phpgacl> directory, and give it write permissions for the user your web server runs as.
Please read the manual, and docs/examples/* to familiarize yourself with phpGACL.
Let's get started!
Close the window (Don't worry we will make the 'Important' directory
helow)

4. Enter below **bolded** instructions on command line as root user:

#log into root **su**

chown -R apache:apache /var/www/html/phpgacl/admin/templates_c

#edit file /var/www/html/openemr/library/acl.inc: mcedit /var/www/html/openemr/library/acl.inc #uncomment and edit following line: \$phpgacl_location = "/var/www/html/phpgacl"; TEXT EDITOR SAVE AND EXIT

#Password protect the /var/www/html/phpgacl/admin directory. Will need to: FIRST add entry to apache2 config file, SECOND create a password file, and THIRD re-start apache.

#FIRST, edit file /etc/httpd/conf/httpd.conf: mcedit /etc/httpd/conf/httpd.conf

#paste following section at end of file: <Directory "/var/www/html/phpgacl/admin"> AuthType Basic AuthName "ACL Administrators" AuthUserFile /var/www/html/phpgacl/admin/.htpasswd Require valid-user </Directory> TEXT EDITOR SAVE AND EXIT

#SECOND, create the password file(file is .htpasswd and user is admin)

cd /var/www/html/phpgacl/admin htpasswd -c /var/www/html/phpgacl/admin/.htpasswd admin

-Type in a secure password

#THIRD, Re-start apache service httpd restart

5. Configure phpGACL to use OpenEMR via: http://localhost/openemr/acl_setup.php

🥵 OpenEMR ACL Setup - Mozilla Firefox	OOR
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G ▼ O ▼ O ⊗ O ≯ http://localhost/openemr/acl_setup.php ▼ Go G.	
OpenEMR ACL Setup	
All done!	

- Close window.
 - 6. Start phpGACL via: <u>http://localhost/phpgacl/admin/acl_admin.php</u>

🥐 Pr	ompt 🗇 🗷)
i	Enter username and password for "ACL Administrators" at http://localhost User Name:	
	admin	
	Password:	

	Use Password Manager to remember this password.	1

Log in as 'admin', and with password created by the above *htpasswd* command.



Close window. Learn how to use later. (Your OpenEMR 'admin' user is already configured as an administrator).

Configure SSL

Main TOC Link Chapter Index Link

1. SSL is very important, and will ensure encryption of all network traffic. This will allow safe use of a laptop over a wireless network. The protocol uses https instead of http and utilizes port 443 instead

of 80. Only two configuration files will need changing. We will also firewall port 80 to ensure that the only available option will be an encrypted connection.

2. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#Edit file /var/www/html/openemr/includes/config.php. This will fix the SQL-Ledger link in the OpenEMR billing page.

mcedit /var/www/html/openemr/includes/config.php

#edit following line (yes, you're just adding an 's'):

\$GLOBALS['oer_config']['ws_accounting']['url_path'] =
 "https://" .
 \$_SERVER["SERVER_NAME"] . "/sql-ledger/login.pl";
TEXT EDITOR SAVE AND EXIT

#Edit file /etc/httpd/modules.d/41_mod_ssl.default-vhost.conf. This will ensure only high level secure encryption is used. mcedit /etc/httpd/modules.d/41_mod_ssl.defaultvhost.conf

#REMOVE the entire line below: SSLCipherSuite ALL:!ADH:!EXPORT56:RC4+RSA:+HIGH: +MEDIUM:+LOW:+SSLv2:+EXP

#PASTE all of below in place of the above removed line: SSLOptions +StrictRequire <Directory /> SSLRequireSSL </Directory> SSLProtocol -all +TLSv1 +SSLv3 SSLCipherSuite HIGH:MEDIUM:!aNULL: +SHA1:+MD5:+HIGH:+MEDIUM TEXT EDITOR SAVE AND EXIT

#Re-start apache service httpd restart

1. Firewall port 80



Click 'System' -> 'Configuration' -> 'Configure Your Computer'.

X Query	\odot
You are attempt requires adminis information is ne	ing to run a command which strative privileges, but more eeded in order to do so.
Password for root	
	<u>O</u> K <u>C</u> ancel

Enter 'root' user password. Then click 'OK'.



Click 'Security'.



Click 'Set up a personal...'

Mandriva Linux Control Center 2006.0 (Official) [on localhost]	
<u> </u>	
Firewall	
Which services would you like to allow the Internet to connect to?	
🔲 Everything (no firewall)	
Web Server	
🔲 Domain Name Server	
🔲 SSH server	
FTP server	
🦳 Mail Server	
POP and IMAP Server	
CUPS server	
🔲 Echo request (ping)	
Ok Advanced	Cancel

Ensure 'Web Server' is NOT selected. Then Click on 'Advanced'.

Mandriva Linux Control Center 2006.0 (Official) [on localhost]	
. <u>F</u> ile <u>O</u> ptions <u>P</u> rofiles <u>H</u> elp	
Firewall	
Which services would you like to allow the Internet to connect to?	
🔲 Everything (no firewall)	
🔲 Web Server	
🔲 Domain Name Server	
🔲 SSH server	
FTP server	
🔲 Mail Server	
POP and IMAP Server	
CUPS server	
🔲 Echo request (ping)	
You can enter miscellaneous ports. Valid examples are: 139/tcp 139/udp 600:610/tcp 600:610/udp. Have a look at /etc/services for information.	
Other ports 443/tcp 443/udp	
Ok	Cancel

Enter 'Other ports' -> '443/tcp 443/udp'. Then click 'Ok'.

🛃 Mandriva Linux Control Center 2006.0 (Official) [on localhost] 🛛 🕞 🕞 🛞
<u>F</u> ile <u>O</u> ptions <u>P</u> rofiles <u>H</u> elp
Firewall
Interactive Firewall
You can be warned when someone accesses to a service or tries to intrude into your computer. Please select which network activity should be watched.
Se Interactive Firewall
🗵 Port scan detection
厂 443/tcp
☐ 443/udp
Ok

Click 'Ok'. Keep defaults.

Mandriva Linux Control Center 2006.0 (Official) [on localhost]	
<u>File O</u> ptions <u>P</u> rofiles <u>H</u> elp	
Firewall	
Please enter the name of the interface connected to the internet.	
Examples: ppp+ for modem or DSL connections, eth0, or eth1 for cable connection, ippp+ for a isdn connection.	
Net Device eth0: Advanced Micro Devices 79c970 [PCnet LANCE]	-

Click 'Ok'. Keep defaults.



You are done. Close the window.

Upgrade to OpenEMR 2.8.2

Main TOC Link Chapter Index Link

- 1. Download openemr-2.8.2.tar.gz (version 2.8.2) from sourceforge at: http://sourceforge.net/project/showfiles.php?group_id=60081
- 2. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#Ensure register globals in php is turned off. #edit file /etc/php4.ini: mcedit /etc/php4.ini

#EDIT the following variable: register_globals = off TEXT EDITOR SAVE AND EXIT

#restart httpd
service httpd restart

#make backup directories
mkdir /backupopenemrandfreeb
mkdir /backupopenemrandfreeb/2_8_1

#move old OpenEMR 2.8.1 to the backup directory
mv /var/www/html/openemr
/backupopenemrandfreeb/2_8_1/openemr

#put the new OpenEMR 2.8.2 program in its place
cd /var/www/html
tar pxzvf /location/to/tar/openemr-2.8.2.tar.gz
mv openemr-2.8.2 /var/www/html/openemr

#secure OpenEMR
chown -Rf root:root openemr

#Need to change some file/folder permissions chown apache:apache -R /var/www/html/openemr/interface/main/calendar/mod ules/PostCalendar/pntemplates/cache chown apache:apache -R /var/www/html/openemr/interface/main/calendar/mod ules/PostCalendar/pntemplates/compiled chown apache:apache -R /var/www/html/openemr/library/ freeb

#Restore the original scanned documents directory **cp -fr**

/backupopenemrandfreeb/2_8_1/openemr/documents / var/www/html/openemr/

#Change file-folder permissions of documents directory
chown apache:apache -R
/var/www/html/openemr/documents

#Now for the hardest part of the upgrade; editing the new config files. There are five files that need to be compared to your old config files: **openemr/interface/globals.php**, **openemr/library/sqlconf.php**, openemr/library/sqlledger.inc, **openemr/includes/config.php**, and **openemr/ library/acl.inc**. The below instructions are specific for the openemr 2.8.1 appliance(only the **bolded** files above require changing or copying). If you have made your own changes to the config files, then I'd recommend comparing them to ensure no other changes are needed. We will replace one file with the previous 2.8.1 config file and will edit three of the new 2.8.2 config files.

#replace new /var/www/html/openemr/library/sqlconf.php file
with the old 2.8.1 file

ср

/backupopenemrandfreeb/2_8_1/openemr/library/sqlc onf.php /var/www/html/openemr/library/sqlconf.php

#edit file /var/www/html/openemr/interface/globals.php: mcedit /var/www/html/openemr/interface/globals.php

- #edit the following **bolded** variables :
- \$sl_dbname = 'openemr'; // sql-ledger database
 name
- \$sl_dbpass = 'sql-ledger-password'; // sql-ledger
 database login password (click link for default
 above password, which is the PostgreSQL
 database password, and should be 'sqlledger')

TEXT EDITOR SAVE AND EXIT

#edit file /var/www/html/openemr/includes/config.php: mcedit /var/www/html/openemr/includes/config.php

#edit the following **bolded** variables :

\$GLOBALS['oer_config']['ws_accounting']['enabled']
= true;

- \$GLOBALS['oer_config']['ws_accounting']['password']

= "*openemrpassword*"; (click <u>link</u> for default above password, which is sql-ledger 'openemr' user password, and should be "openemr")

- \$GLOBALS['oer_config']['ws_accounting']['url_path'] = "https://".
 - \$_SERVER["SERVER_NAME"] . "/sql-

ledger/login.pl";

TEXT EDITOR SAVE AND EXIT

#Backup the mysql database into backup directory.

mkdir /backupopenemrandfreeb/2_8_1/mysqldatabase mysqldump --opt --all-databases | gzip > /backupopenemrandfreeb/2_8_1/mysqldatabase/mysql _backup.gz

#Upgrade the mysql database
mysql openemr < /var/www/html/openemr/sql/2_8_1to-2_8_2_upgrade.sql</pre>

#OPTIONAL In the appliance, I left the traditional look of OpenEMR as the default. If you want to change to the new frames look(check out the <u>demos</u> to decide), then you will need to edit the file

/var/www/html/openemr/interface/globals.php:

mcedit /var/www/html/openemr/interface/globals.php
 #edit the below bolded variable :
 \$GLOBALS['concurrent layout'] = true;

TEXT EDITOR SAVE AND EXIT

Upgrade to FreeB 0.12

Main TOC Link Chapter Index Link

- 1. Download freeb-0.12.tar.gz (version 0.12) from sourceforge: http://sourceforge.net/project/showfiles.php?group_id=60081
- 2. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#move old FreeB 0.11 to the backup directory
mv /usr/share/freeb
/backupopenemrandfreeb/2_8_1/freeb

#put the new FreeB 0.12 program in its place
cd /usr/share
tar xzvf /location/to/tar/freeb-0.12.tar.gz
mv freeb-* /usr/share/freeb

#secure FreeB directory chown root:root -R /usr/share/freeb

#create a directory that apache can write to **mkdir /usr/share/freeb/public**

#restore original billing files(if they exist)
cp -fr /backupopenemrandfreeb/2_8_1/freeb/public
 /usr/share/freeb/

#Allow apache access to public directory chown apache:apache -R /usr/share/freeb/public

#restart the freeb service
service freeb stop
service freeb start

Admin Authorization (bug fix)

Main TOC Link Chapter Index Link

1. This is to correct an annoying bug, which doesn't allow 'admin' to send bills to sql-ledger. It's easily corrected by below changes.

Log in to OpenEMR with 'admin' username and default password 'pass' at <u>http://localhost/openemr</u>:

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Log in with 'admin' user and default password 'pass'.

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Patient Notes (See All) and Authorizations(M	lore) (Find Patient)								

Click 'Administration'.

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				Add Facility			
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New User:	Username:		Pass	word:			
	Groupname:	Healthy Choice 🛓	Auth	orized:			
	First Name:		Mide	dle Name:			
	Last Name:		Defa	ult Facility:	Your Clinic Name	Here 🗾	
	Federal Tax ID:		Fede	eral Drug ID:	Next I		
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New Group:	Groupname:	In	utial User: adm		d Group		
Add User To Group:	User: admin 💌	Groupname:	Healthy Choice	e 🔺 🛛 Add	User To Group		
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admin(Edi), Administrator	yes						
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Click 'edit' for the 'admin' user.

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Set the 'Authorized:' and 'Active:' toggles to on. Set the 'See Authorizations:' to 'All'.

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Then click 'Save'.

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Then click 'Back'.

DONE

Upgrade to OpenEMR 2.8.3

Main TOC Link Chapter Index Link

- 1. Download openemr-2.8.3.tar.gz (version 2.8.3) from sourceforge at: <u>http://sourceforge.net/project/showfiles.php?group_id=60081</u>
- 2. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#Ensure the following lines are included at the end of the /etc/ httpd/conf/httpd.conf file (this has been listed as a security patch in previous versions, and is required to not allow

unauthorized viewing of patient's medical records). mcedit /etc/httpd/conf/httpd.conf

#Ensure below is included at end of file (if not found, then paste below into end of file) <Directory "/var/www/html/openemr/documents"> order deny,allow Deny from all </Directory> <Directory "/var/www/html/openemr/edi"> order deny,allow Deny from all </Directory> TEXT EDITOR SAVE AND EXIT

#restart apache
service httpd restart

#make backup directories
mkdir /backupopenemrandfreeb/2_8_2

#move old OpenEMR 2.8.2 to the backup directory
mv /var/www/html/openemr
/backupopenemrandfreeb/2_8_2/openemr

#put the new OpenEMR 2.8.3 program in its place
cd /var/www/html
tar pxzvf /location/to/tar/openemr-2.8.3.tar.gz
mv openemr-2.8.3 /var/www/html/openemr

#secure OpenEMR
chown -Rf root:root openemr

#Need to change some file/folder permissions chown apache:apache -R /var/www/html/openemr/interface/main/calendar/mod ules/PostCalendar/pntemplates/cache chown apache:apache -R /var/www/html/openemr/interface/main/calendar/mod ules/PostCalendar/pntemplates/compiled chown apache:apache -R /var/www/html/openemr/library/ freeb chown apache:apache -R /var/www/html/openemr/edi

#secure the /var/www/html/openemr/edi directory
chmod -R 700 /var/www/html/openemr/edi

#Restore the original scanned documents directory **cp -fr**

/backupopenemrandfreeb/2_8_2/openemr/documents / var/www/html/openemr/

#Change file-folder permissions of documents directory
chown apache:apache -R
/var/www/html/openemr/documents

#Now for the hardest part of the upgrade; editing the new config files. There are five files that need to be compared to your old config files: **openemr/interface/globals.php**, **openemr/library/sqlconf.php**, openemr/library/sql-ledger.inc, **openemr/includes/config.php**, and **openemr/library/acl.inc**. The below instructions are specific for the openemr 2.8.2 appliance(only the **bolded** files above require changing or copying). If you have made your own changes to the config files, then I'd recommend comparing them to ensure no other changes are needed. We will replace one file with the previous 2.8.2 config file and will edit three of the new 2.8.3 config files.

#replace new /var/www/html/openemr/library/sqlconf.php file
 with the old 2.8.2 file

cp -f

/backupopenemrandfreeb/2_8_2/openemr/library/sqlc onf.php /var/www/html/openemr/library/sqlconf.php

#edit file /var/www/html/openemr/interface/globals.php: mcedit /var/www/html/openemr/interface/globals.php

#edit the following **bolded** variables :

\$webserver_root = "/var/www/html/openemr";

- \$GLOBALS['concurrent_layout'] = **false**;
- \$sl_dbname = 'openemr'; // sql-ledger database
 name
- \$sl_dbpass = 'sql-ledger-password'; // sql-ledger
 database login password (click link for default
 above password, which is the PostgreSQL
 database password, and should be 'sqlledger')

TEXT EDITOR SAVE AND EXIT

#edit file /var/www/html/openemr/includes/config.php: mcedit /var/www/html/openemr/includes/config.php

#edit the following bolded variables :
\$GLOBALS['oer_config']['ws_accounting']['enabled']
= true;

\$GLOBALS['oer_config']['ws_accounting']['password'] = "*openemrpassword*"; (click <u>link</u> for default above password, which is sql-ledger 'openemr' user password, and should be "openemr") \$GLOBALS['oer_config']['ws_accounting']['url_path'] = "https://" . \$_SERVER["SERVER_NAME"] . "/sqlledger/login.pl"; TEXT EDITOR SAVE AND EXIT

TEXT EDITOR SAVE AND EXIT

#Backup the mysql database into backup directory.
mkdir /backupopenemrandfreeb/2_8_2/mysqldatabase
mysqldump --opt --all-databases | gzip >
 /backupopenemrandfreeb/2_8_2/mysqldatabase/mysql
 _backup.gz

#Fix a bug in the mysql upgrade script
mcedit /var/www/html/openemr/sql/2_8_2 to-2_8_3_upgrade.sql
 #Delete below two lines
 ALTER TABLE form_football_injury_audit
 ADD `fimatchtype` int(11) NOT NULL DEFAULT 0;
TEXT EDITOR SAVE AND EXIT

#Upgrade the mysql database
mysql openemr < /var/www/html/openemr/sql/2_8_2to-2_8_3_upgrade.sql</pre>

- 3. Next, need to fix the calendar bug with a patch. Download <u>CalendarPatchMonth283.txt</u> file, which can be found at: <u>http://www.bradymd.com/CalendarPatchMonth283.txt</u> (to download file, you may need to Right-Click the link and select 'Save Link As...')
 - 1. Enter below **bolded** instructions on command line as root user:

#log into root **su**

cp -f /location/to/file/CalendarPatchMonth283.txt /var/www/html/openemr/interface/main/calendar/mo dules/PostCalendar/pntemplates/default/views/mont h/default.html

- 4. Next, need to upgrade the php-GACL access controls. Download <u>acl_upgrade_1.txt</u> file, which is a php script. I wrote this script, and it seems to work alright. File can be found at: <u>http://bradymd.com/acl_upgrade_1.txt</u> (to download file, you may need to Right-Click the link and select 'Save Link As...')
 - 1. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#copy upgrade script to openemr directory (note that the
 '.txt' is being changed to '.php')
mv /location/to/file/acl_upgrade_1.txt

/var/www/html/openemr/acl_upgrade_1.php

2. Run php-gacl upgrade script via : http://localhost/openemr/acl_upgrade_1.php



Ensure you got no 'ERRORS'. Close the window.

3. **OPTIONAL** In the appliance, I left the traditional look of OpenEMR as the default. If you want to change to the new frames look(check out the <u>demos</u> to decide), then you will need to follow below instructions.

#log into root **su**

#OPTIONAL If you want to change to the new frames
 look(check out the demos to decide), then you will need to
 edit the file /var/www/html/openemr/interface/globals.php
 mcedit /var/www/html/openemr/interface/globals.php
 #edit the below bolded variable :
 \$GLOBALS['concurrent_layout'] = true;
TEXT EDITOR SAVE AND EXIT

Upgrade to FreeB 0.13

Main TOC Link Chapter Index Link

- 1. Download freeb-0.13.tar.gz (version 0.13) from sourceforge: http://sourceforge.net/project/showfiles.php?group_id=60081
- 2. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#move old FreeB 0.12 to the backup directory
mv /usr/share/freeb
/backupopenemrandfreeb/2_8_2/freeb

#put the new FreeB 0.13 program in its place
cd /usr/share
tar xzvf /location/to/tar/freeb-0.13.tar.gz
mv freeb-* /usr/share/freeb

#secure FreeB directory chown root:root -R /usr/share/freeb

#fix a bug with Freeb permissions, and allow execution of the /
 usr/share/freeb/formatbin/ub92.pl file
chmod +x /usr/share/freeb/formatbin/ub92.pl

#create a directory that apache can write to

mkdir /usr/share/freeb/public

#restore original billing files(if they exist)
cp -fr /backupopenemrandfreeb/2_8_2/freeb/public
 /usr/share/freeb/

#Allow apache access to public directory chown apache:apache -R /usr/share/freeb/public

#restart the freeb service
service freeb stop
service freeb start



Main TOC Link

A. Bug fixes and patches

Main TOC Link

Encounter 'Sensitivity' Default Value PATCH

<u>Main TOC Link</u>

- This is a minor bug, but can be really annoying for providers. When entering in a new encounter, there is a 'sensitivity' setting which can be applied. 'High' setting means only physicians can read it, while 'normal' means nurses and PA's can read it also. Default value is 'normal' in OpenEMR, however in my Appliance, I mistakenly set default to the 'high' value. So if a provider quickly clicks on encounter form without looking at all the options(likely a common occurrence), they will pick 'high' sensitivity. I've created a quick php script, which fixes the problem in php-GACL.
- Download <u>sensitivityPatch.txt</u> file, which is a php script. File can be found at: <u>http://bradymd.com/sensitivityPatch.txt</u> (to download file, you may need to Right-Click the link and select 'Save Link As...')
- 3. Enter below **bolded** instructions on command line as root user:

#log into root **su**

#copy upgrade script to openemr directory (note that the '.txt' is being changed to '.php') mv /location/to/file/sensitivityPatch.txt /var/www/ html/openemr/sensitivityPatch.php

1. Run patch script via : <u>http://localhost/openemr/sensitivityPatch.php</u>

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G → O → O Image: Second state Image: Second state	
Upgrading object The 'High' object in the 'Sensitivities' section has been successfully updated. ALL DONE	
Done	

Ensure you got no 'ERRORS'. Close the window.



B. Change Mandriva's 'root' user password

Main TOC Link

- 1. This section describes how to change the 'root' user's password. The default password is 'rootpassword'. Don't worry, this is very quick and easy.
- 2. We will begin by opening a console window:



Click on the Konsole icon at bottom left of Desktop.

	open	emr@	localho	ost: /home/op	enemr - Sl	hell - Konsole	
Ses	sion	Edit	View	Bookmarks	Settings	Help	
[op	enemr	@loca	alhost	~]\$			-
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8	👌 S	ihell					1656
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This is the console window, and where you type command line instructions. Move on to the next step.

🧧 openemr@localhost: /home/openemr - Shell - Konsole	
Session Edit View Bookmarks Settings Help	
[openemr@localhost ~]\$ su	

First, login to 'root' user. At command line type: **su**

🧧 oper	emr@	localho	ost: /home/op	enemr - Sl	hell - Konsole	
Session	Edit	View	Bookmarks	Settings	Help	
[openem Password	eloc	alhost	~]\$ su			^
	-					

Enter in the default 'root' password. At command line type: rootcool



command line type: rootcool



Enter a new 'root' password. At command line type: *A New Root Password*



Re-enter new password. At command line type: A New Root Password



Congratulations, you now have your own, secure 'root' password. This is a very important password, **DO NOT FORGET IT**. You can close the console window now.

C. Upgrade to OpenEMR Version 3.0.0

Main TOC Link

1. For instructions on upgrading to OpenEMR Appliance version 3.0.0, follow this link to the upgrade manual: <u>http://www.bradymd/appliance/update3/</u>

D. Useful Websites

Main TOC Link

OpenEMR links:

- 1. <u>http://www.oemr.org/</u> (Main OpenEMR website with a good Wiki and a new forum)
- 2. <u>http://sourceforge.net/projects/openemr/</u> (Main OpenEMR forums are here)
- 3. <u>http://www.bradymd.com/appliance/</u> (OpenEMR 2.8.1 Virtual Machine Manual)

Virtual Machine links:

1. <u>http://www.vmware.com/</u> (VMware website)
- 2. <u>http://www.vmware.com/appliances/</u> (VMware virtual appliance explanation)
- 3. <u>http://www.vmware.com/vmtn/appliances/overview.html</u> (Another VMware virtual appliance explanation)

General EMR links:

- 1. <u>http://www.linuxmednews.com/</u> (Open Source EMR news)
- 2. <u>http://www.emrupdate.com/</u> (Great site and forums which discusses proprietary and open source EMRs. It also has a great actively updated price comparison for most proprietary EMR's)
- 3. <u>http://ehr.gplmedicine.org/</u> (Great detailed reviews of OpenEMR, MirrorMed, and FreeMed)
- 4. <u>http://www.bradymd.com/</u> (Installation instructions and quick reviews of OpenEMR, MirrorMed, FreeMed, and VistA.)

E. Author Email and License/Disclaimer

Main TOC Link

Author: Brady Miller

Email:brady@sparmy.com

www.bradymd.com

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