Elastix Appliance Assembly Process Guide

ELX-3000

PaloSanto Solutions

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I. INDIVIDUAL PARTS

Hardware	Brand	Model	Туре	Notes:
Mainboard	Intel	D525MW	Innovation	Hardware included:
			Series	- SATA drive data cable
Processor	Intel	Dual Core Intel [®]	N/A	Intel [®] NM10 Express Chipset
		Atom [™] processor D525		
Memory	Kingston / Corsair	DDR3 800/1066/1333	2 GB	Up to 4 GB
		MHz		
Hard Drive	Seagate / Samsung	Laptop Size SATA drive	500 GB	
	/ Toshiba			
Power Cord Cable	N/A	110V or 220 V	N/A	Model depends on region it is
				shipped to
1U customized	ЕМКО	ELX3000	N/A	Includes customized faceplate
case w/			6	for the Intel D525MW
integrated 90W				motherboard
Power Supply				
Unit (PSU)				
LCD	Crystalfontz	CFA635-TFE-KU1	LCD	USB LCD 20x4 +Keypad, White
				Edge LED Backlight
LCD USB Cable	Crystalfontz	WRUSBY11	Cable	USB Cable for LCD Panel
Flexible PCI Riser	idotPC	RS-1U2 B	N/A	N/A
(dual)				
Case Fan Cooling	Dynatron	DF124010BM	40mm Fan	





II. ASSEMBLY

- 1. Match the faceplate on the back of the case to each port on the back of the motherboard
- 2. Remove the protective plastic sticker off the LCD screen
- 3. Screw the LCD screen to the case
- 4. Screw the motherboard to the bottom of the case
- 5. Insert the memory module in the motherboard's memory slot
- 6. Connect the 24-pin ATX power connector coming from the PSU to the motherboard's power connector (2 x 12)
- 7. Screw the fan to the left side of the case and connect its power cord to the PSU
- 8. Connect the POWER SWITCH cable (orange-white) to the motherboard
- 9. Connect the HDD LED and Power cables (green-white and red-white , respectively) to the motherboard



- 10. Screw the SATA disk to the bottom of the case
- 11. Connect the data cable of the SATA disk to the motherboard
- 12. Connect the power cable of the SATA disk to the PSU
- 13. Connect the provided USB cable (WRUSBY11) from the LCD panel (CFA635-TFE-KU1) to an internal USB port of the motherboard



14. If necessary, insert the flexible riser into the PCI slot, after having set its jumper according to the following diagram:



15. Secure cables conveniently using nylon cable ties

NOTE: the assembly process will be completed in the VII. PACKAGING section of this document, once the installation of Elastix has been finished and tested

III. PRE-INSTALLATION

- 1. Connect the data and power cables of a SATA CD or DVD drive to the motherboard (*skip this step if installing Elastix from an external optical drive instead*)
- 2. If instead an external optical drive is used for the installation (**not recommended**), connect it to the corresponding port on the back of the ELX-3000
- 3. Connect the Power Cord Cable to the PSU connector on the back of the ELX-3000 and then to a nearby outlet
- 4. Press the power button to turn on the appliance
- Place in the optical drive a CD or DVD containing the latest Elastix stable 32 bits version found in http://sourceforge.net/projects/elastix/files/Elastix%20PBX%20Appliance%20Software/
 (this guide was written using Elastix 2.2)



6. Reboot the appliance if necessary until the following screen is displayed:



To install or upgrade in graphical mode, press the <ENTER> key.
To install or upgrade in text mode, type: linux text <ENTER>.
Use the function keys listed below for more information.
(F1-Main] [F2-Options] [F3-General] [F4-Kernel] [F5-Rescue] boot: _

IV. ELASTIX INSTALLATION

- 1. Press ENTER to begin the installation
- 2. Select English as the language for the installation:

Welcome to Elastix	
	Choose a Language
h d	What language would you like to use luring the installation process?
	Catalan ■ Chinese(Simplified) Chinese(Traditional) ■ Croatian Czech Danish Dutch
	English OK
<pre><tab>/<alt-tab> betw</alt-tab></tab></pre>	ween elements <space> selects <f12> next screen</f12></space>



3. Select 'us' as the type of keyboard:

Keyboard Type
What type of keyboard do you have?
sg-latin1 sk-qwerty slovene sv-latin1 trq ua-utf uk us
Back

4. Choose "Remove all partitions on selected drives and create default layout.":

Welo	come to Elastix Partitioning Type
	Installation requires partitioning of your hard drive. The default layout is reasonable for most users. You can either choose to use this or create your own.
	Remove all partitions on selected drives and create default layout. Remove linux partitions on selected drives and create default layout. Use free space on selected drives and create default layout. Create custom layout.
	Which drive(s) do you want to use for this installation? [*] sda 5318 MB (ATA VBOX HARDDISK)
	DK Back
(Sni	ace}.(+>.(-> selection (F2> Add drive (F12> next screen
(Spa	ace>,<+>,<-> selection <f2> Add drive <f12> next screen</f12></f2>



5. Confirm the removal of the partitions by selecting Yes:



6. Choose not to review or modify the partitioning layout:

lcome to Elastix	Pouiou Partition Lauout
	Review and modify partitioning layout?
200 1 X 220 1 4 10 1 X	



7. Select to configure the Network Interface:



8. Select to activate on boot and to enable IPv4 support:

Network Configuration for eth0
Intel Corporation 82540EM Gigabit Ethernet Controller 08:00:27:4E:D4:14
[*] Activate on boot [*] Enable IPv4 support L J Enable IPv6 support
DK Back



9. Manually assign the IP address 192.168.1.251 / 24:

Advanced Micro Devices	[AMD] 79-970 [PCnet22	LONCEL
08:00:27:76:D9:6E	THIDI TJCJTO LICHCUZ	LINCLI
() Dynamic IP configu (*) Manual address con	ration (DHCP) figuration	
IP Address 192.168.1.251	Prefix (Netmask) 24	
OK	Back	

10. Enter 192.168.1.1 as the Gateway and Primary DNS addresses:

Gateway	Miscellane	ous Network : 1.1	Settings —	
Seconda	ary DNS:	· · · ·		
	ОК		Back	



11. Type 'elx.palosanto.com' as the hostname:

assign select do not	r system is part ed by DHCP, selec manually and ent , your system wi	of a larger net ct automatically ter a hostname f ll be known as '	work where hostname via DHCP. Otherwis or your system. If localhost.'	s are e, you
I	() automaticall <u>i</u> (*) manually	y via DHCP <mark>elx.p</mark>	alosanto.com	
	OK		Back	

12. Select the time zone according to the city where the appliance is going to be used in:

	What time zone are you located in? I System clock uses UTC America/Grand_Turk America/Granda America/Guadeloupe America/Guatemala America/Guayaquil I System clock uses UTC I System clock uses UTC I Support I Support I	
--	--	--



13. Type 'palosanto' as the password for root:

	Root Password Pick a root password. You must type it twice to ensure you know what it is and didn't make a mistake in typing. Remember that the root password is a critical part of system security!
	Password: Password (confirm):
'ab>∠ <alt-tab< td=""><td>> between elements : { {Snace} selects : { {F12} next screen</td></alt-tab<>	> between elements : { {Snace} selects : { {F12} next screen

14. Wait until the package installation finishes:

19%
Packages Bytes Ti Total 445 1223M 0:05: Completed: 293 566M 0:02: Remaining: 152 657M 0:02:
46%



15. After the automatic reboot, type 'palosanto' as the password for the MySQL root user:

The Elastix system uses the open-source database engine MySQL for storage of important telephony information. In order to protect your data, a master password must be set up for the database. This screen will now ask for a password for the 'root' account of MySQL. Please enter your new MySQL root password: ****	The Elastix system uses the open-source database engine MySQL for storage of important telephony information. In order to protect your data, a master password must be set up for the database. This screen will now ask for a password for the 'root' account of MySQL. Please enter your new MySQL root password: [******** (Cancel>	tix password configuration (Sc	creen 1 of 4)
Please enter your new MySQL root password:	Please enter your new MySQL root password: ******** Cancel>	The Elastix system uses the o storage of important telephor your data, a master password This screen will now ask for MuSQL.	open-source database engine MySQL for ny information. In order to protect must be set up for the database. a password for the 'root' account of
		Please enter your new MySQL	root password:
	< <u>QK</u> → <cancel></cancel>	**************************************	

16. Reenter the MySQL root user password just typed:

Elastix password configuration (Screen 2 of 4)	
Please (re)confirm your new MuSOI root password:	



17. Type 'palosanto' as the password for the admin user:

lastix password configuration (Screen 3 of 4)
Several Elastic components have administrative interfaces that can
be used through the Web. A web login password must be set for these components in order to prevent unauthorized access to these administration interfaces.
This screen will now ask for a password for user 'admin' that will be used for: Elastix Web Login, FreePBX, VTiger, A2Billing and FOP.
Please enter your new password for 'admin':

18. Reenter the password for the admin user just typed:

Elastix password configuration (Screen 4 of 4)	
Please (re)confirm your new password for 'admin': 	
Cancel>	



V. POST INSTALLATION TESTS

- 1. Confirm the installation was completed successfully:
 - a. Log into the console (Login: root Password: palosanto)
 - b. Execute the following line: md5sum /root/install.log
 - c. The following output should be displayed (for Elastix 2.2 32 bits): 04e0a1db3707367c7030e476418416a7
- 2. Confirm correct access to Elastix's web UI is possible:
 - a. Connect the Ethernet port on the ELX-3000 to a free Ethernet port on a computer nearby (using a normal Ethernet straight-thru patch cord)
 - b. Configure that NIC on the computer with IP address 192.168.1.1 (mask 255.255.255.0)
 - c. From a web browser on the computer go to the URL: https://192.168.1.251
 - d. Username: admin
 - e. Password: palosanto
 - f. Elastix's Dashboard should be displayed
- 3. Confirm correct access to Elastix's shell via ssh is possible:
 - a. Open a terminal software on the computer used on the previous test and execute: ssh root@192.168.1.251
 - b. As the password type: palosanto
 - c. Access into Elastix's shell should have been granted
- 4. Confirm correct access to MySQL is possible:
 - a. Using the same ssh session opened in the previous test execute the following line: mysql -uroot –ppalosanto
 - b. Access into the MySQL monitor should have been granted

VI. LCD SCREEN CONFIGURATION

- 1. Execute the following command in Elastix's linux shell:
 - crystalfontz.pl
- 2. This will open a cli session with the LCD controller where the following commands need to be executed:
 - _lcd_> clear
 - _lcd_> pos_data 2 2 Booting Elastix...
 - _lcd_> store_state
 - _lcd_> quit
- 3. Back in Elastix's linux shell, execute the following commands:

chown asterisk:asterisk -R /opt/lcdelastix

service LCDd start

service Icdelastix start

- chkconfig LCDd on
- chkconfig lcdelastix on
- 4. Navigate through the LCD screen menus to confirm the configuration was successful



VII. PACKAGING

- 1. Before turning off the ELX-3000 to begin packing it, run the following console command: history -c
- 2. Press the ELX-3000's Power button and wait for the shutdown process to complete
- 3. Disconnect and tidily tie the power cord
- 4. Disconnect the data and power cables of the SATA CD or DVD drive from the motherboard (*skip this step if you installed Elastix from an external optical drive instead*)
- 5. If instead an external optical drive was used for the installation (**not recommended**), disconnect it from the corresponding port on the back of the ELX-3000
- 6. Place the warranty seals on the telephony cards inside the appliance (if applicable)
- 7. Place and screw both covers to the top of the case
- 8. Place the warranty seals on all three outside edges on the case's top cover (the cover with the Elastix logo)
- 9. Generate and place the label with the Serial Number on the right side of the case (when the power button is facing you)
- 10. Wrap the ELX-3000 inside the plastic bag
- 11. Place the two pieces of sponge on the case's lateral ends
- 12. Place the appliance, with the sponges on its sides, inside the box
- 13. Ensure that the following parts and documents are properly placed inside the ELX-3000's box:
 - Power cord (either American or European model depending on the region it will operate in)
 - Two rack-mounting ears and 6 screws for attaching them to the case
 - A (flexible) dual PCI riser (RS-1U2 type B)
 - Two mounting ears to fix PCI cards inside the ELX-3000 and 2 screw to attach them properly
 - "Please Read First" sheet
 - Service Letter
 - Invoice / Delivery Note
 - Original telephony PCI card's box (if applicable)
- 14. Close the box and secure it with packing tape



