

Elastix Appliance Assembly Process Guide

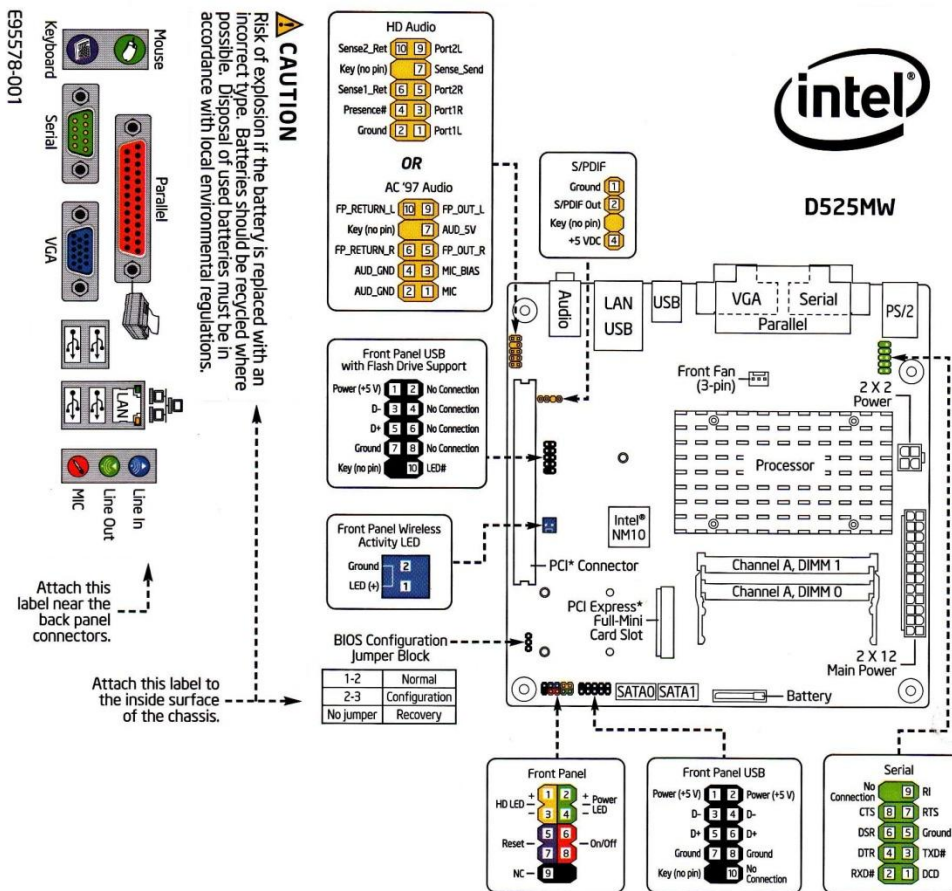
ELX-3000

PaloSanto Solutions

January, 2012

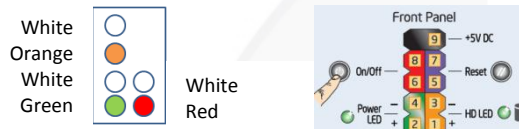
I. INDIVIDUAL PARTS

Hardware	Brand	Model	Type	Notes:
Mainboard	Intel	D525MW	Innovation Series	Hardware included: - SATA drive data cable
Processor	Intel	Dual Core Intel® Atom™ processor D525	N/A	Intel® NM10 Express Chipset
Memory	Kingston / Corsair	DDR3 800/1066/1333 MHz	2 GB	Up to 4 GB
Hard Drive	Seagate / Samsung / Toshiba	Laptop Size SATA drive	500 GB	
Power Cord Cable	N/A	110V or 220 V	N/A	Model depends on region it is shipped to
1U customized case w/ integrated 90W Power Supply Unit (PSU)	EMKO	ELX3000	N/A	Includes customized faceplate for the Intel D525MW motherboard
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 (dual)	idotPC	RS-1U2 B	N/A	N/A
Case Fan Cooling	Dynatron	DF124010BM	40mm Fan	

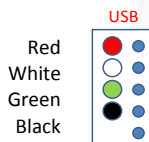


II. ASSEMBLY

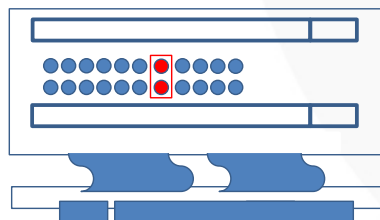
1. Match the faceplate on the back of the case to each port on the back of the motherboard
2. Remove the protective plastic sticker off the LCD screen
3. Screw the LCD screen to the case
4. Screw the motherboard to the bottom of the case
5. Insert the memory module in the motherboard's memory slot
6. 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

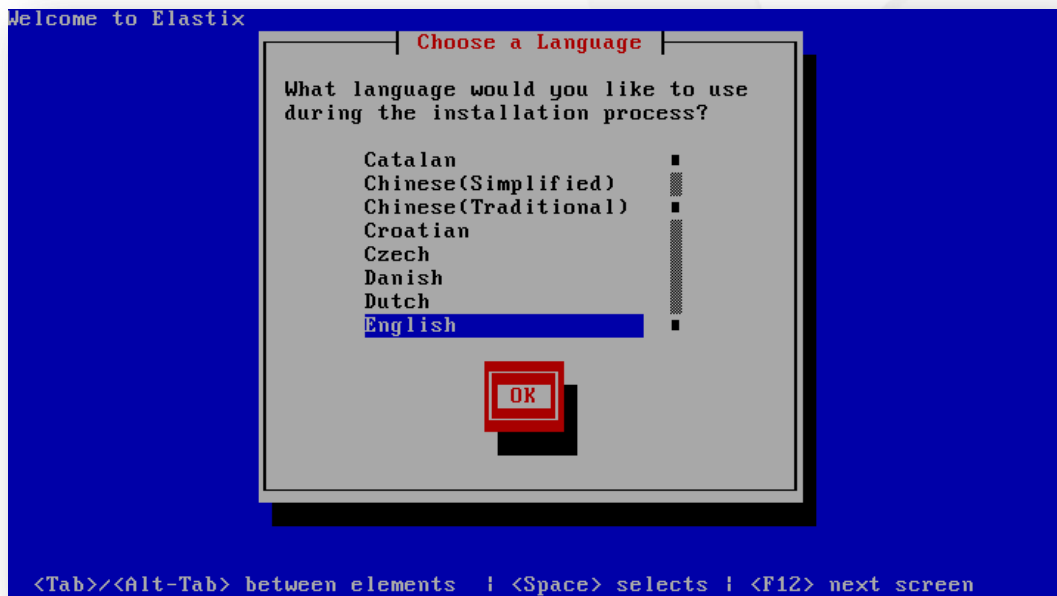
1. Connect the data and power cables of a SATA CD or DVD drive to the motherboard (*skip this step if installing Elastix from an external optical drive instead*)
2. If instead an external optical drive is used for the installation (**not recommended**), connect it to the corresponding port on the back 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
5. 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:

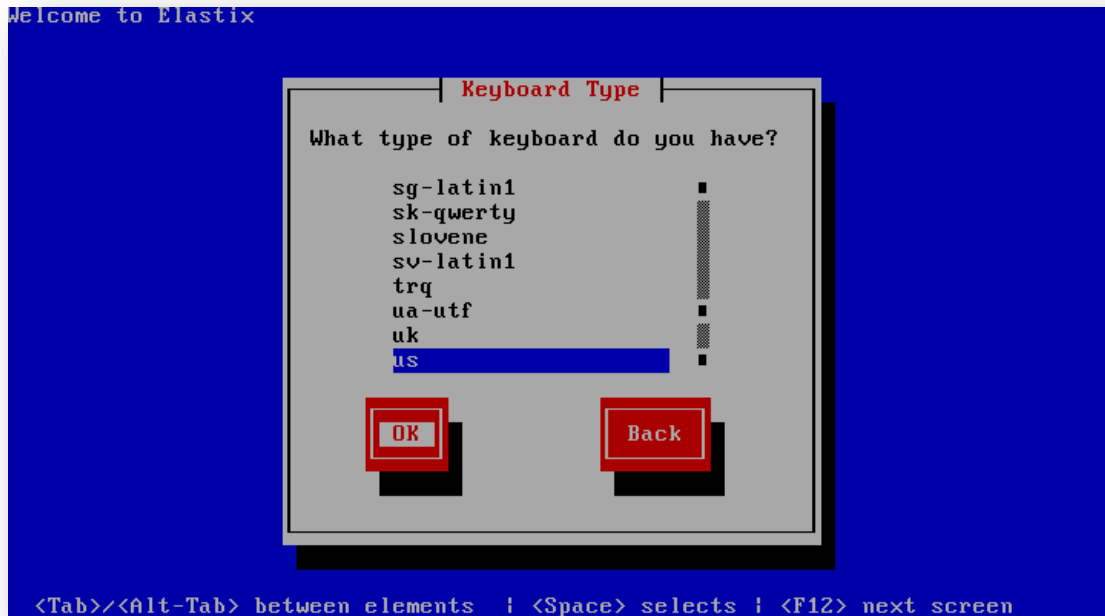


IV. ELASTIX INSTALLATION

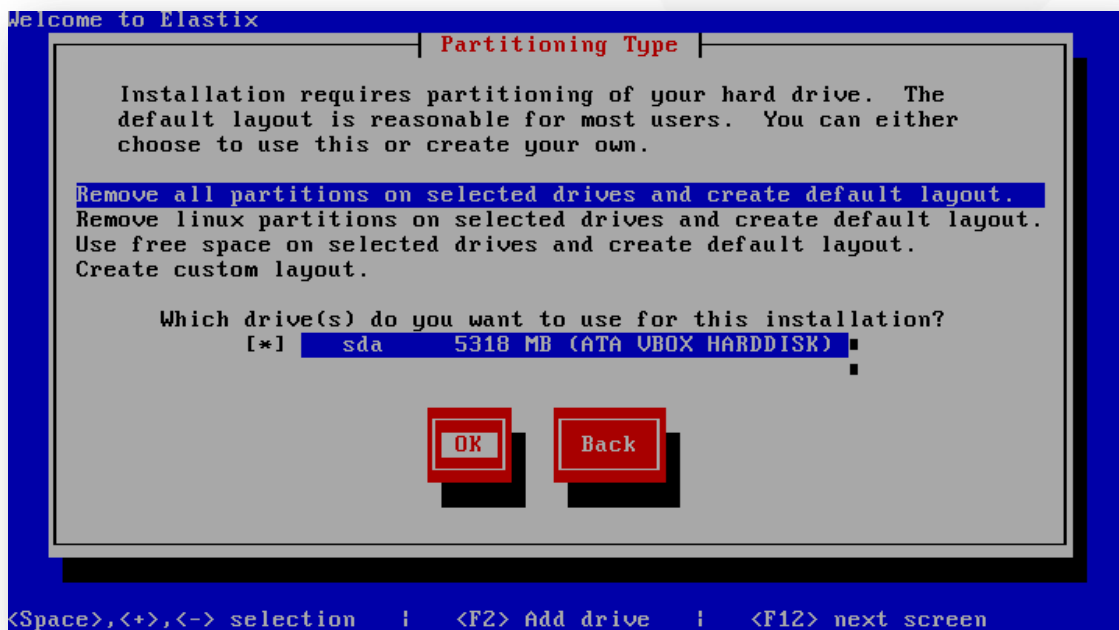
1. Press ENTER to begin the installation
2. Select English as the language for the installation:



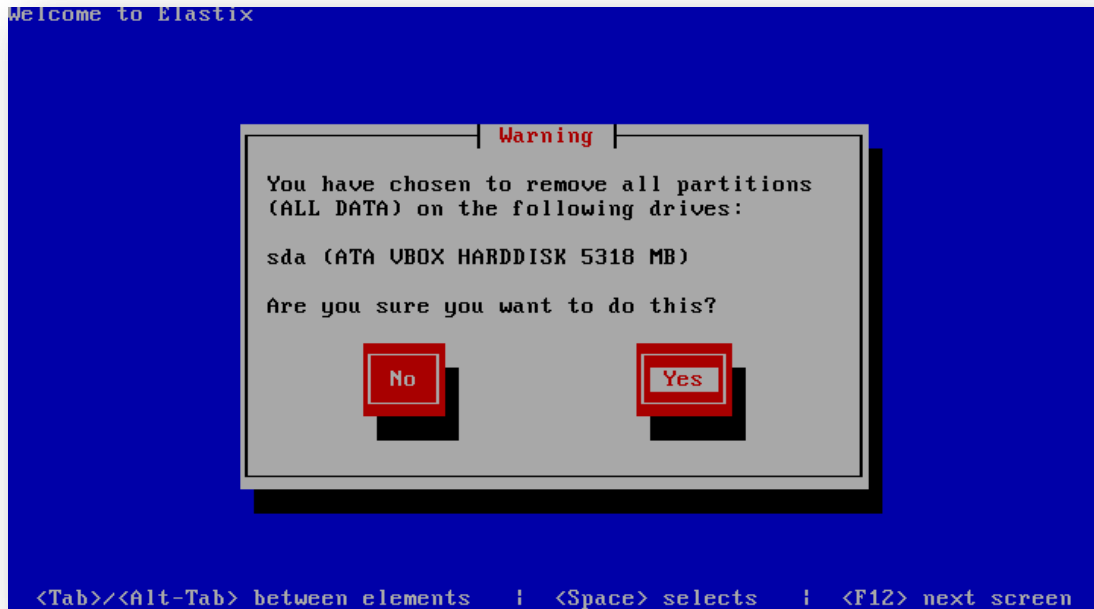
3. Select 'us' as the type of keyboard:



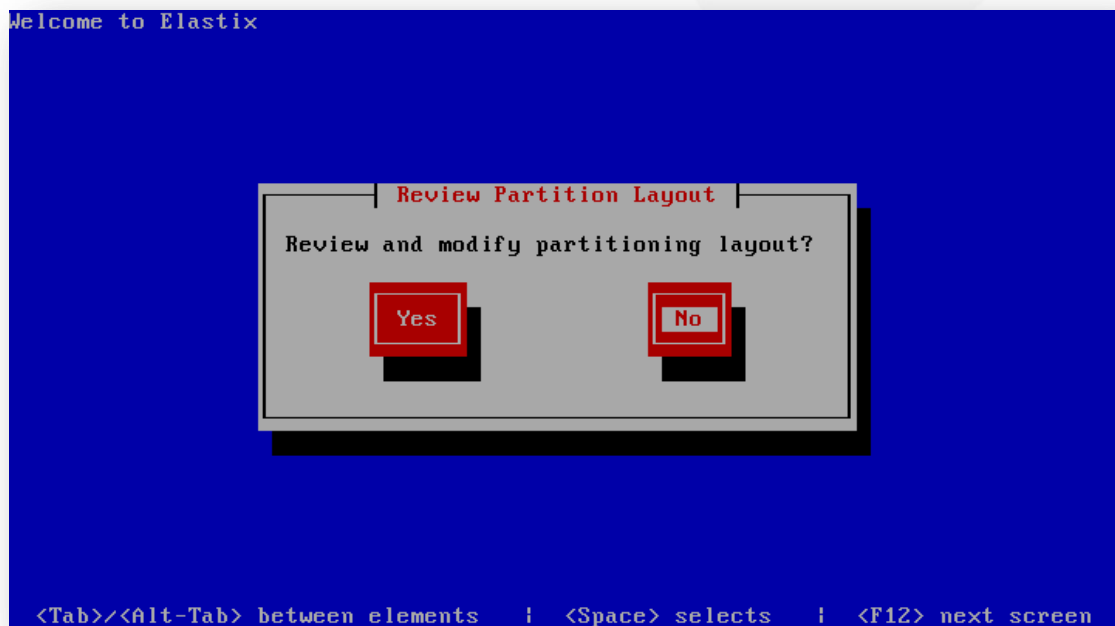
4. Choose "Remove all partitions on selected drives and create default layout.":



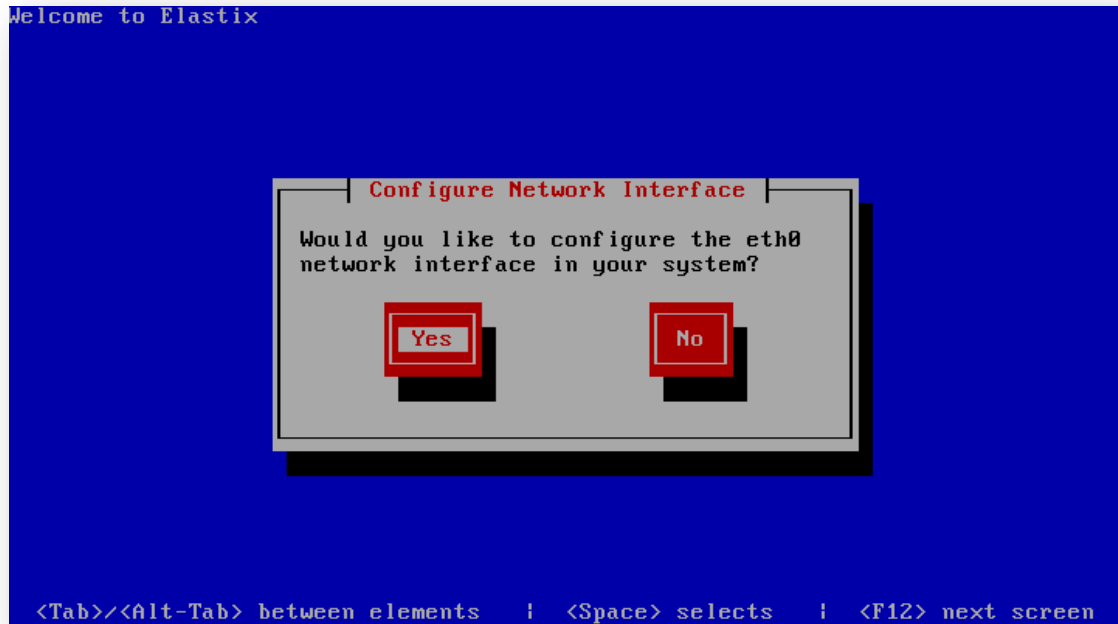
5. Confirm the removal of the partitions by selecting Yes:



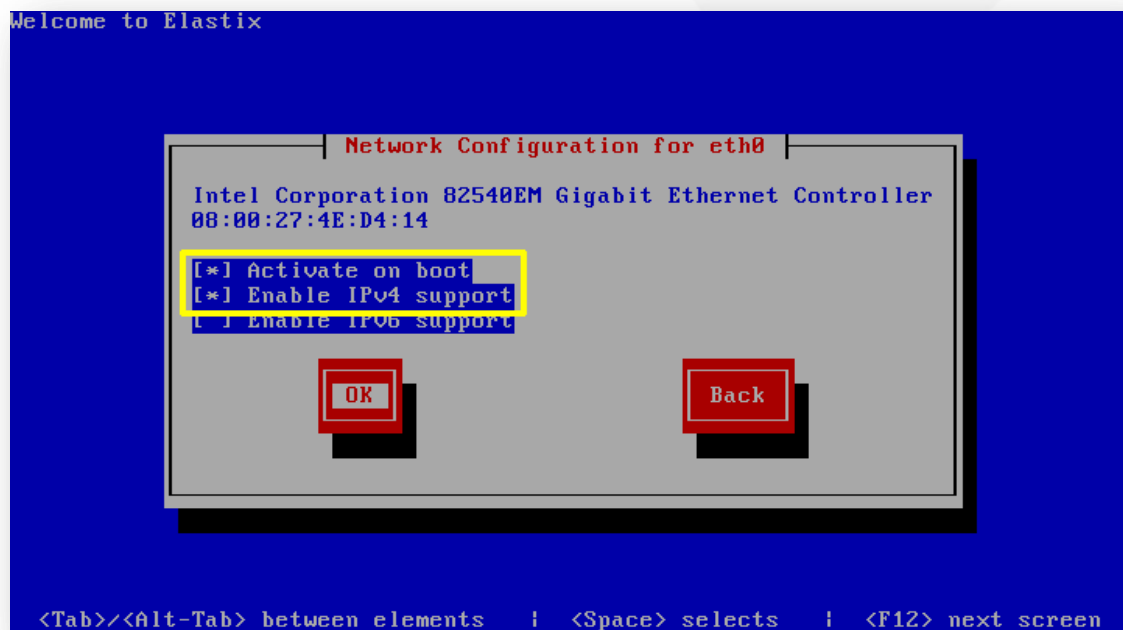
6. Choose not to review or modify the partitioning layout:



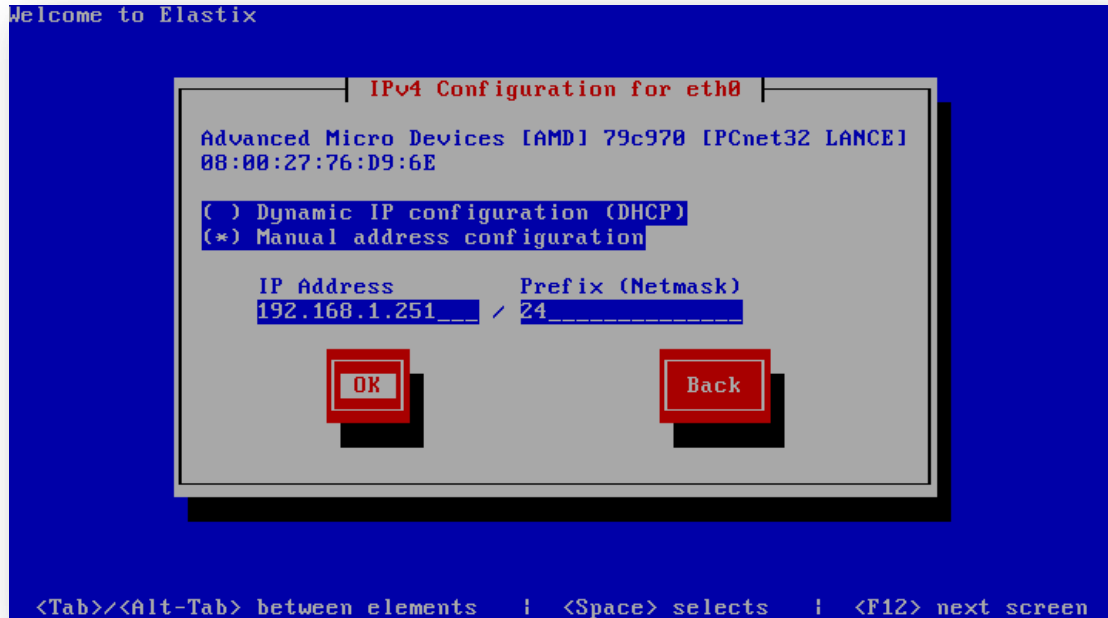
7. Select to configure the Network Interface:



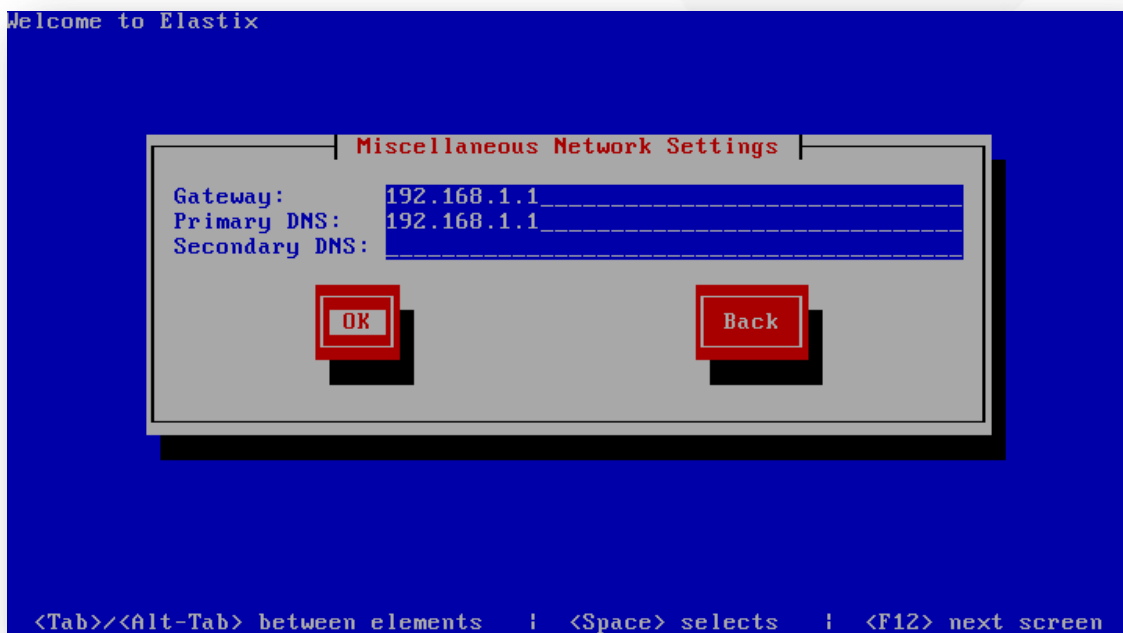
8. Select to activate on boot and to enable IPv4 support:



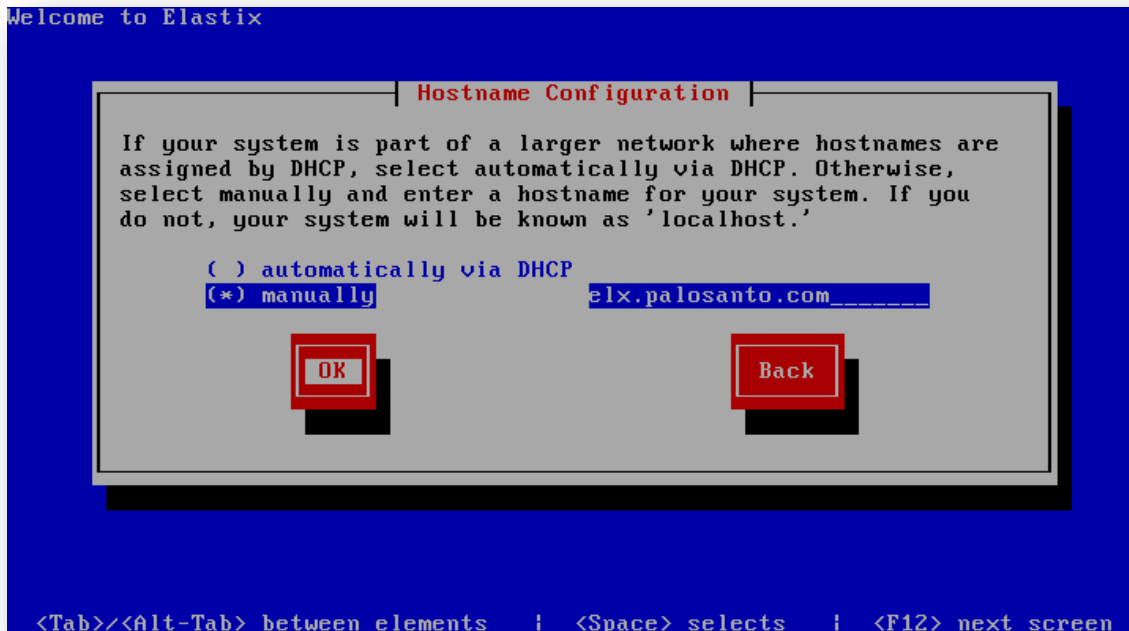
9. Manually assign the IP address 192.168.1.251 / 24:



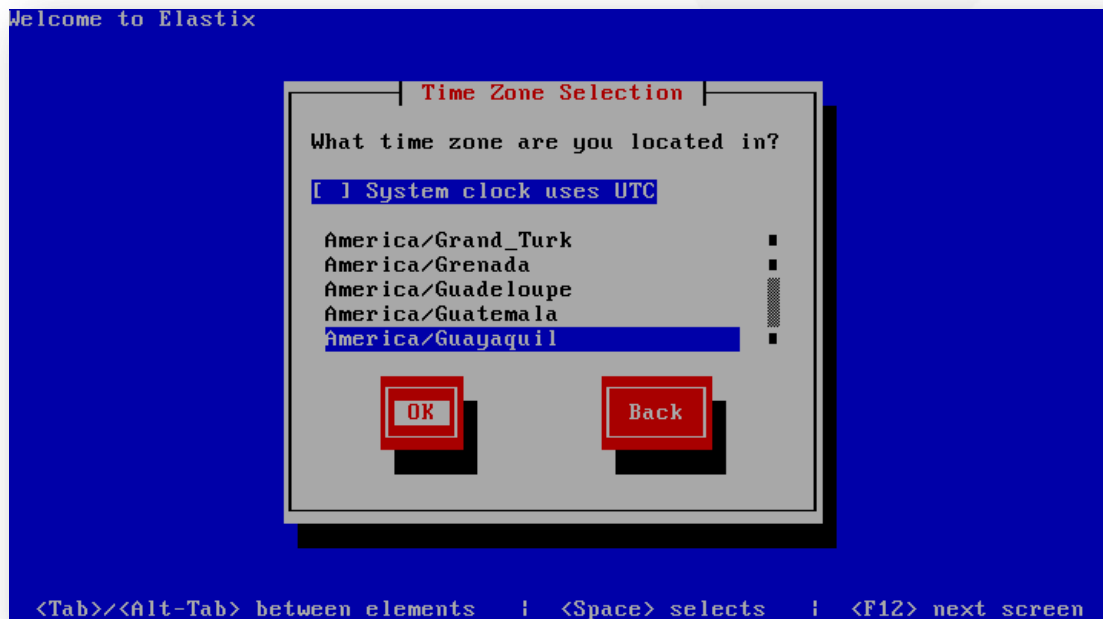
10. Enter 192.168.1.1 as the Gateway and Primary DNS addresses:



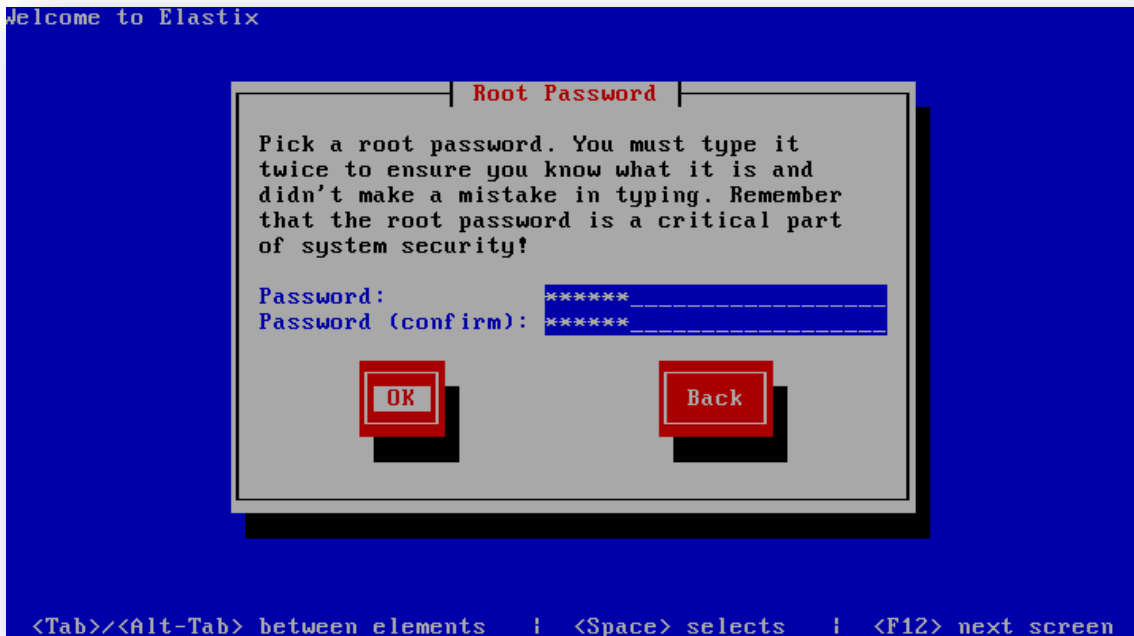
11. Type 'elx.palosanto.com' as the hostname:



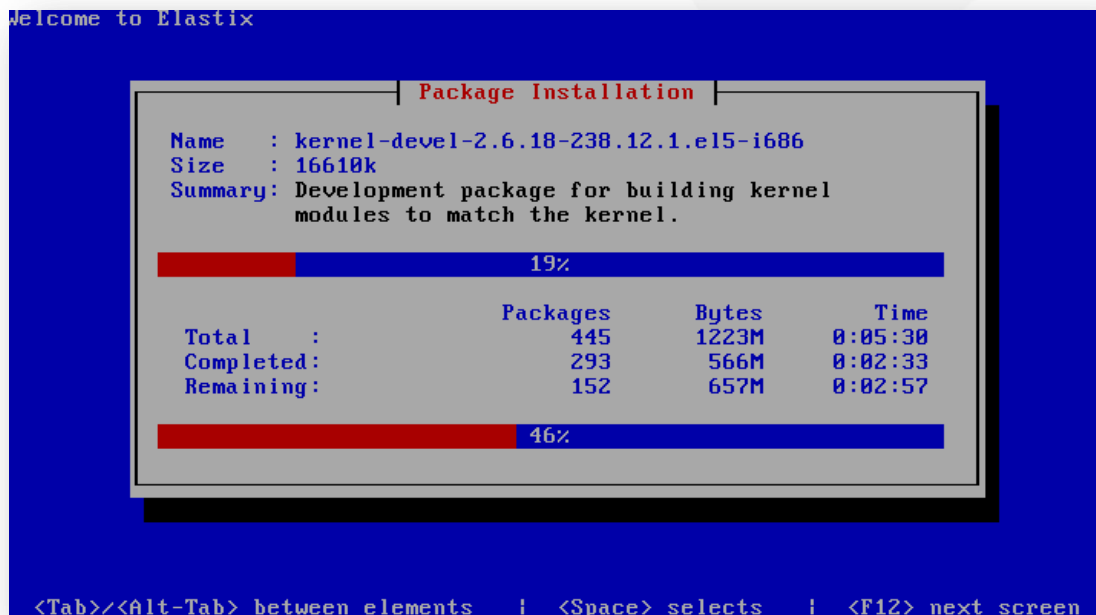
12. Select the time zone according to the city where the appliance is going to be used in:



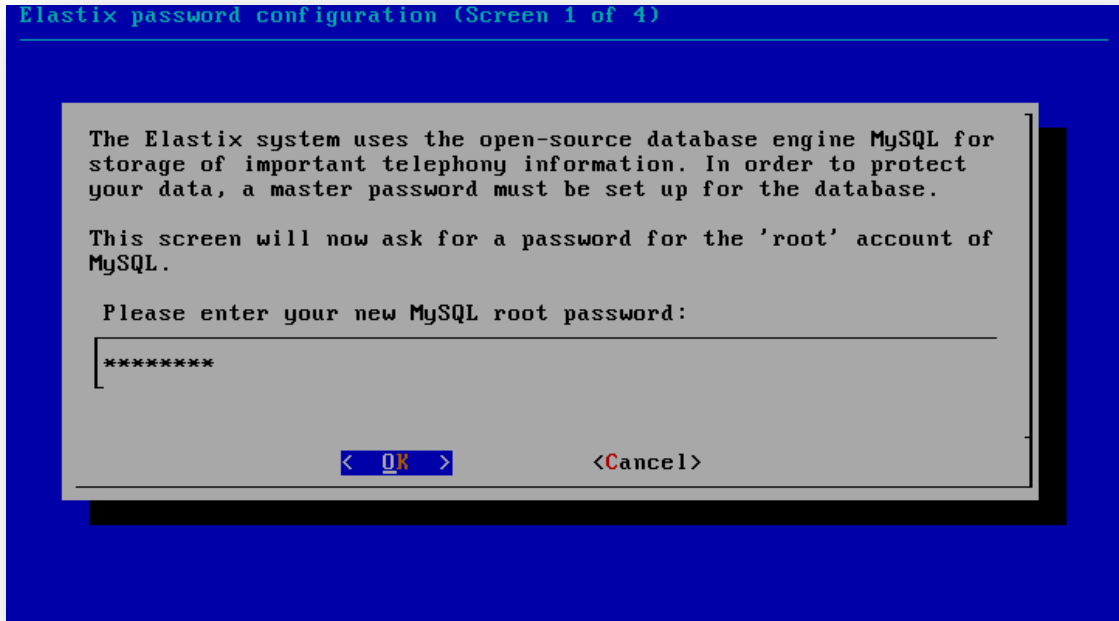
13. Type 'palosanto' as the password for root:



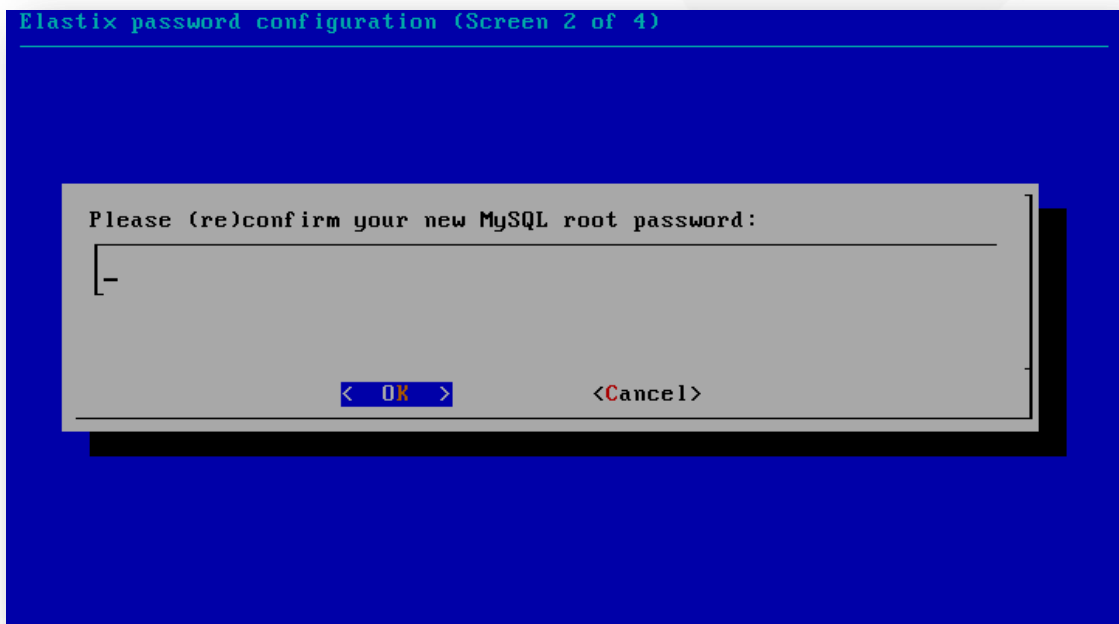
14. Wait until the package installation finishes:



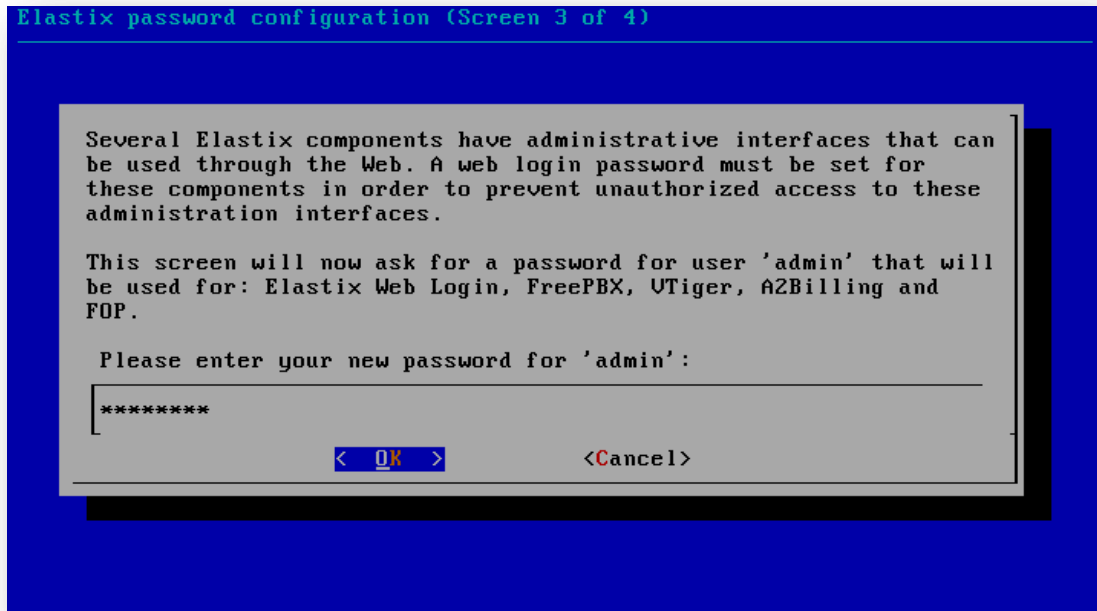
15. After the automatic reboot, type 'palosanto' as the password for the MySQL root user:



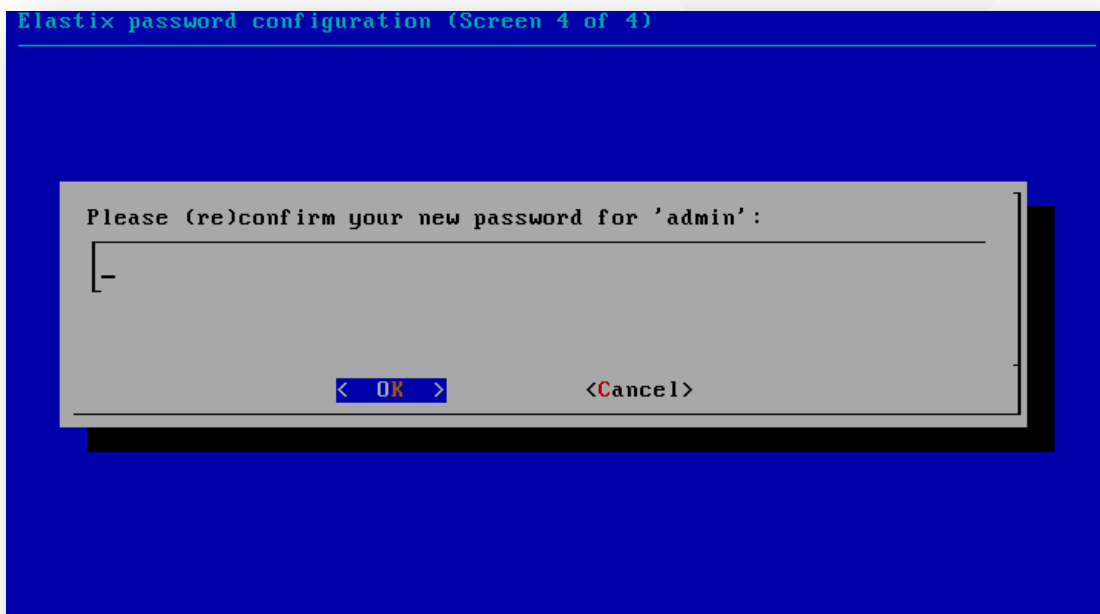
16. Reenter the MySQL root user password just typed:



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



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



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 lcdelastix 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

