

ALERT/ADVANCE INSTALLATION & CONFIGURATION GUIDE

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1 About This Manual

This manual is intended for technical IT staff and Network Engineers who are responsible for the initial installation, setup and configuration of the Getbusi software. This manual assumes a general knowledge of computing and networking concepts. You should read and understand this manual prior to your installation of Getbusi.

For assistance in the setup and configuration of your Getbusi software, please first refer to the step-by-step instructions contained in this guide. You may also contact Getbusi support for additional assistance, if required:

Via email:	support@getbusi.com
Telephone (Australia):	(03) 6165 1555
Telephone (International):	+61 3 6165 1555

1.1 ASUS® Eee Box™ Hardware

If you are running Getbusi on ASUS® Eee Box™ hardware, please refer straight to section [4: Server Services Configuration](#), as installation and hardware configuration is not necessary.

For more information on the Eee Box™ hardware, operational parameters, mounting options etc. please refer to the included documentation from ASUS®. Information regarding software related features of the Eee Box™ will be irrelevant as it will be running Getbusi software -- built upon Red Hat® Enterprise Linux 5.

Please note that whilst the Eee Box™ hardware features wireless capabilities these are not compatible with Getbusi at this time. Attaching the included wireless antenna will currently be of no use.

2 System Requirements

The Getbusi Web Access Management solution provides central control and management of browser-based Internet access. The Getbusi system provides a proxy cache along with Getbusi's extensive feature list. Since Getbusi is the central point of access for your organisation's Internet usage, it is a requirement that Getbusi be installed on dedicated server hardware. Your Getbusi DVD-ROM includes all software, including the operating system, on your dedicated server. If you are re-purposing existing server hardware, **please ensure that you've backed-up that system prior to installing Getbusi, as the installer will format and erase the contents of the server's hard-drive(s). Getbusi Pty Ltd takes no responsibility for lost data due to the installation of the Getbusi software.**

2.1 Hardware Compatibility

For reliability and stability, Getbusi utilises the industry-leading Red Hat® Enterprise Linux 5 Operating System. To check your hardware compatibility against Red Hat's hardware compatibility please see the [Red Hat Hardware Compatibility Site](http://hardware.redhat.com/hwcert/index.cgi) at:

<https://hardware.redhat.com/hwcert/index.cgi>

and navigate to the 'Certified Systems' link for Red Hat® Enterprise Linux 5. You may obtain a list of your server's hardware components by referencing your server's BIOS. Please ensure that all of your installed hardware is compatible, or you may run into problems installing your Getbusi software.

2.1.1 Virtualisation

Getbusi features full support for installation within a VMware® virtual environment. Any virtualisation platform that supports Red Hat Enterprise Linux 5 operating systems *should* also be compatible. However, current testing has only extended to VMware® implementations.

When creating a virtual machine for Getbusi ensure that the Operating System Type is set to **Red Hat® Enterprise Linux 5**. The [Hardware Specification guidelines](#) apply equally to Virtual implementations as they do to Physical implementations.

2.2 Hardware Specifications

Your hardware specifications are dependent on the number of workstation clients within your organisation. Additionally, the number of transactions per second you expect from your Internet connection should also be taken into consideration. Please note that these are the minimum requirements, based on normal usage for a typical organisation. If your clients frequently visit a large number of sites and/or are large consumers of your Internet bandwidth resources, you will require a more powerful system.

The next page details the minimum server hardware requirements categorised by the number of clients, assuming normal Internet usage.

0 - 100 Workstations:

CPU:	3.0Ghz Intel P4 (or equivalent)
Memory:	512 MB
Hard Disk:	80 GB IDE
Ethernet:	100 Mbit

100 - 250 Workstations:

CPU:	3.0Ghz Intel P4 (or equivalent)
Memory:	1 GB
Hard Disk:	120 GB IDE
Ethernet:	100 Mbit

250+ Workstations:

CPU:	2.5GHz Dual-Processor P4 or XEON
Memory:	2 GB
Hard Disk:	140 GB SCSI
Ethernet:	1000 Mbit

1000+ Workstations

For sites requiring support for 1000 or greater workstations, please contact Getbusi for a custom hardware specification.

For the latest up-to-date information about Getbusi hardware requirements please visit our website at: www.getbusi.com.

2.3 Network Configuration

The Getbusi system is designed to reside on your Local Area Network, behind your network firewall. It does not act as a gateway or router. Client machines access the Internet by setting their proxy configuration to point at your Getbusi server.

2.3.1 Firewall Settings

To prevent users from bypassing the Getbusi system and gaining direct access to the Internet, you should configure your firewall to block all outgoing traffic on the following ports:

- Port 80 – HTTP
- Port 443 – HTTPS
- Port 21 – FTP

In order to aid in troubleshooting Internet access problems, you should also allow these ports for a designated client. You may then use that client to bypass the Getbusi system for troubleshooting.

You should then configure your firewall to specifically allow your Getbusi server access through your firewall on the following ports:

- Port 80 – HTTP
- Port 443 – HTTPS
- Port 21 – FTP
- Port 22 – SSH
- Port 25 – SMTP
- Port 53 – DNS (When using a DNS server outside of your LAN)
- Port 873 – RSYNC (Used to update managed filters from Getbusi)
- Port 123 – NTP (Network time protocol)
- Port 3436 – FILTERING (Used to communicate with upstream Category Name Servers)

2.3.2 LAN Settings

Since Getbusi is designed to be a server on your Local Area Network, it is *strongly* recommended that you allocate a fixed IP address for your Getbusi server. The Getbusi setup and installation does not currently support IP allocation via DHCP. You should also ensure that there is an entry in your DNS server for the Getbusi system prior to installing your Getbusi software.

2.3.3 Pre-Installation Checklist

To expedite installation, please complete the following pre-installation checklist prior to installing your Getbusi software. You may wish to print this page so that you have the necessary information on hand.

Getbusi server IP Address: _____

Subnet Mask: _____

Default Gateway (router): _____

Getbusi Server Hostname (DNS Name): _____

Primary DNS server IP address: _____

Secondary DNS server IP address (optional): _____

Tertiary DNS server IP address (optional): _____

DNS Domain Search Base: _____

Email address to send notifications: _____

3 Software Installation and Setup

This section documents the process of installing your Getbusi software on a server. You should have all of the information listed in the pre-installation checklist available to ease the installation process. Remember, if you are re-purposing existing server hardware rather than installing your Getbusi software on new hardware, **please ensure that you've backed-up that system prior to installing Getbusi, as the installer will format and erase the contents of the server's hard-drive(s). Getbusi Pty Ltd takes no responsibility for lost data due to the installation of the Getbusi software.**

3.1 Booting from DVD-ROM

Power on your server and load the Getbusi DVD-ROM into your server's DVD-ROM drive. If after you have powered on your system, and it is booting the existing operating system, you may need to press **CTRL-ALT-DEL** to restart the boot process. If the server does not boot off of the DVD-ROM, you will need to adjust your machine's BIOS settings to boot from the DVD-ROM device before any other devices in the hardware boot sequence.

Figure 1 shows the screen that is presented upon successful booting from the installation media:



Figure 1

Press the **ENTER** key to install or upgrade Getbusi in graphical mode. If your system is Red Hat® Enterprise Linux 5 Certified, the installer will detect your graphics card and allow you to continue.

3.2 Disk Partitioning

Disk partitioning strategies vary greatly, and depend upon a variety of factors. Disk partitioning can be a complex subject and opinions vary for the best partitioning strategies. This document does not endorse any particular strategy, and is only intended to provide some examples of partitioning strategies. If it is your wish to implement a particular partitioning strategy, there are some relevant issues to consider:

You must allocate enough space for your database, if you wish your database to reside on its own disk or partition. The database is the largest consumer of disk resources and should be allocated as much space as practical.

You must allocate enough space for your proxy cache. Your proxy cache is a configurable setting in Getbusi. By default, the proxy cache is set to 20GB.

Your database and your proxy cache are the two largest consumers of disk I/O. Performance improvements may be gained by placing these on their own separate disks, and if possible, on separate disk controllers.

It is not recommended that you deviate from the documented partitioning strategies unless you are familiar with Linux disk partitioning procedures, or are specifically advised by Getbusi technical support.

3.2.1 Disk Partitioning - Single Disk Systems

This section documents the recommended partitioning scheme for servers with a single hard-disk drive.

If you are installing Getbusi onto a new, unformatted Hard Drive then you will be presented with the following dialogue box as demonstrated in Figure 2. Click **Yes** to continue.

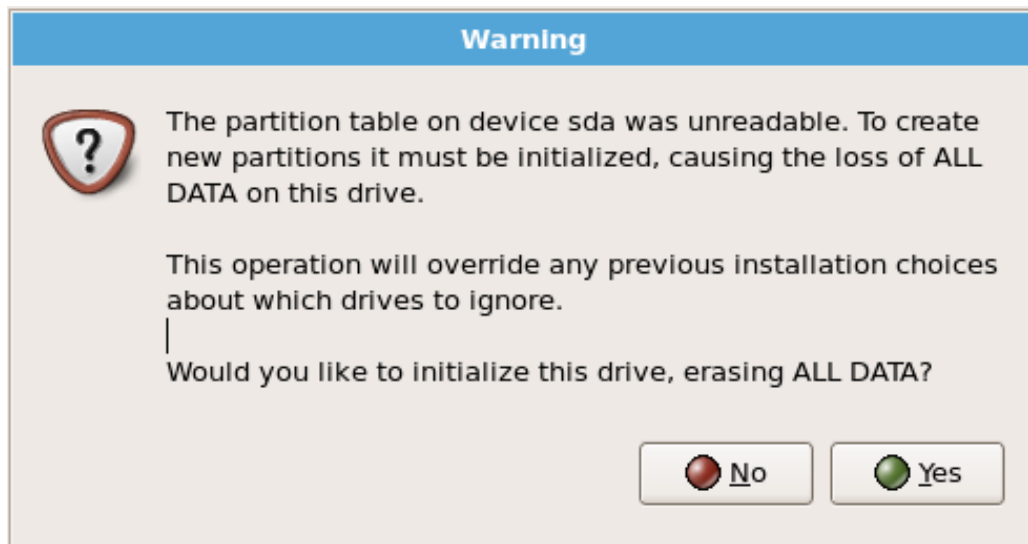


Figure 2

1. Ensure that *Remove all partitions on selected drives and create default layout* has been selected from the drop-down menu.
2. You are then presented a list of hard drives (there should only be one) available on your system.
3. Ensure that the check box that corresponds to your hard drive is selected.
4. Ensure that the *Review (and modify if needed) the partitions created* check box is selected.

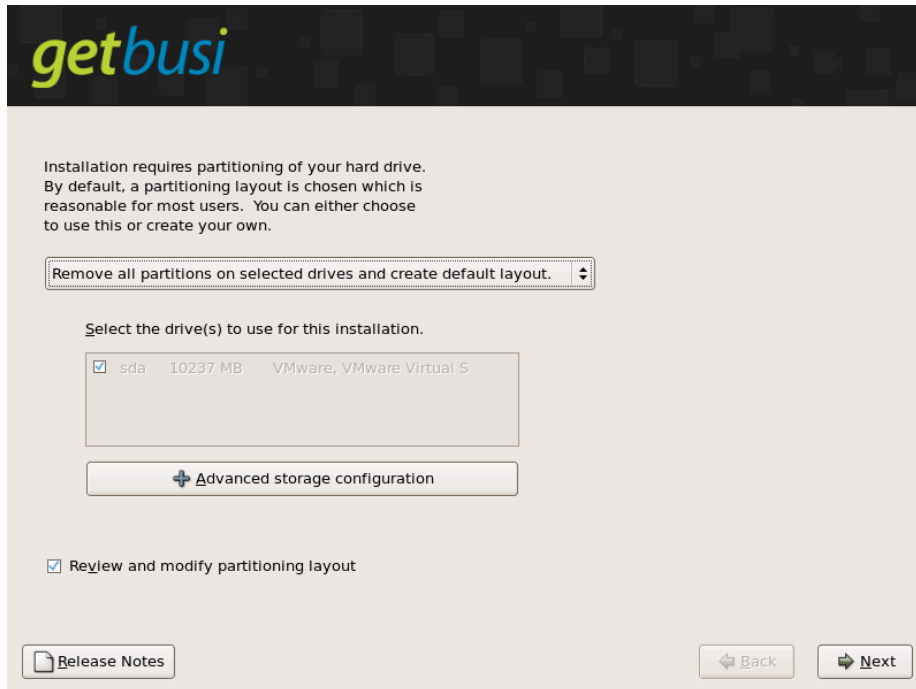


Figure 3

5. Select the **Next** button to continue.
6. Select **Yes** when presented with the warning: *You have chosen to remove all partition (ALL DATA) on the following drives.*

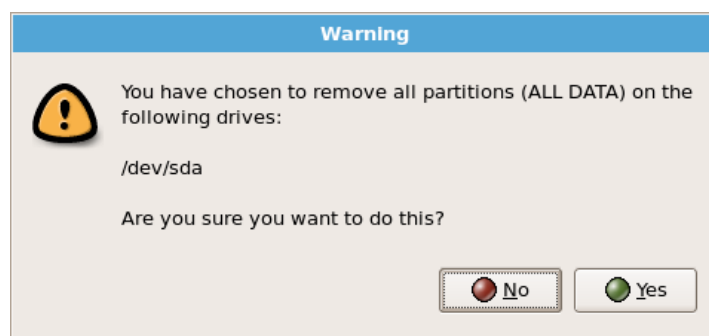


Figure 4

The Partitioning Screen will appear. This screen controls how you lay out your disk partitions. You need to have three partitions for a single-drive system: one for the boot partition, one for the root partition and one for the swap partition.

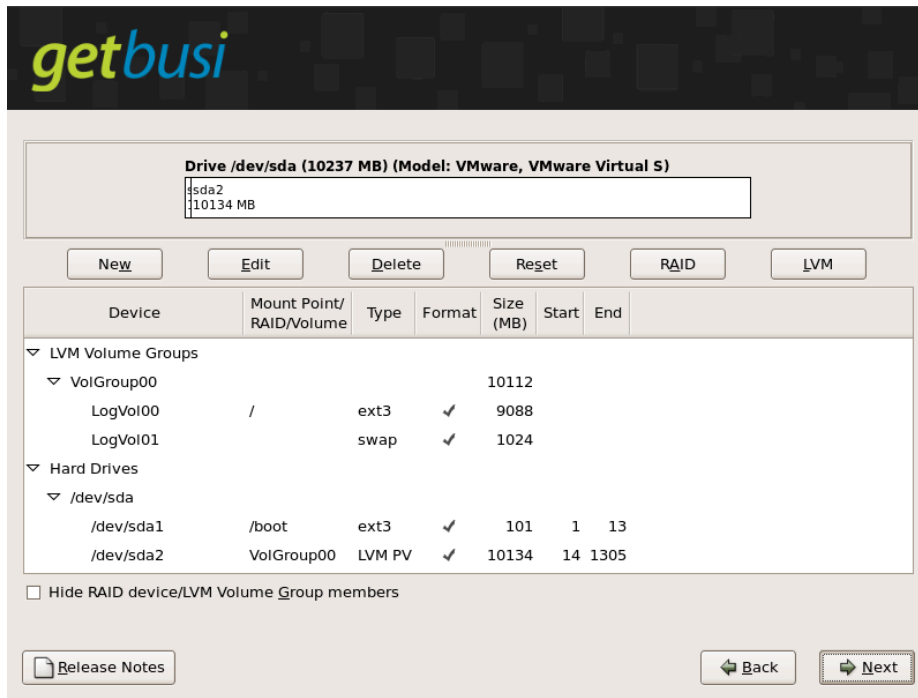


Figure 5

Figure 5 shows the default layout that Disk Druid creates, using a Logical Volume Group for the root and swap partitions. If you wish to edit a partition, use the mouse to highlight the partition, and double-click. A partition editing window like the one picture in Figure 6 will appear. Use the partition editor to edit each of the partitions.

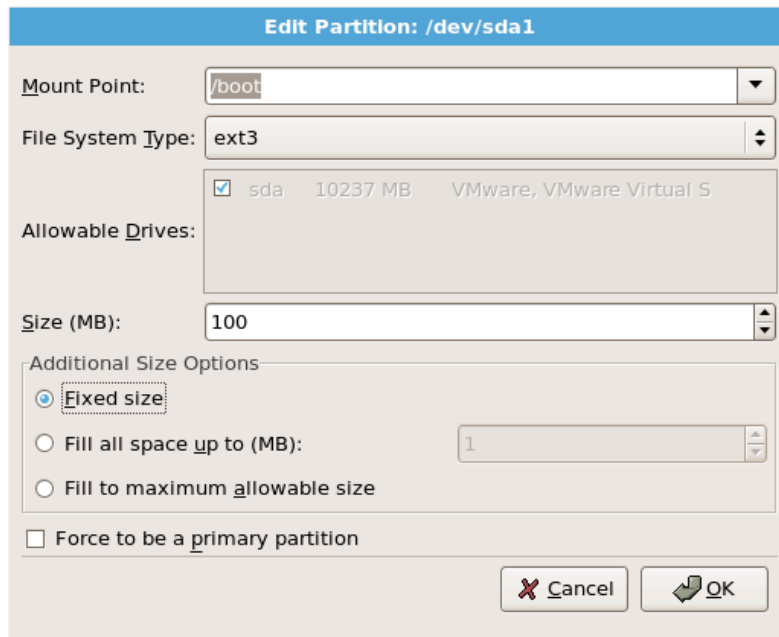


Figure 6

7. Enter the following values for the /boot partition:

- Mount Point: **/boot**
- File System Type: **ext3**
- Size (MB): **100**
- Additional Size Options: **Fixed Size**
- Force to be a primary partition: **Unchecked**
- Click **OK** to accept these settings

Editing Logical Volumes is slightly different. Use the mouse to highlight the Logical Volume Group, VolGroup00 in this example, and double-click. An LVM Group editing window like the one show in figure 7 will appear. From here you can select a Logical Volume from the list at the bottom of the window. When you have highlighted the desired partition, double-click to Edited it.

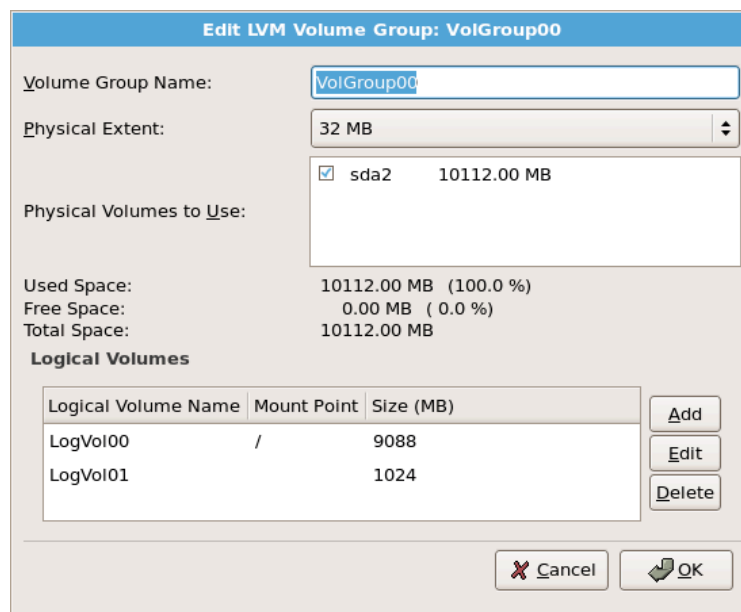


Figure 7

8. Enter the following values for the swap partition..

To determine the size of your swap partition, the standard calculation for swap is twice your installed RAM. If your machine has 1GB RAM, then your swap should be 2GB. For calculations, 1 GB = 1024 MB.

- Mount Point: cannot be selected. Swap partitions are not mounted to a point on the filesystem.
- File System Type: **swap**
- Logical Volume Name: *optional - but the default value of 'LogVol01' is recommended*
- Size (MB): Twice your installed RAM

9. Enter the following values for the root partition (denoted by the "/" character):

The size of your root partition will depend on the size of your swap partition, and should therefore be configured last. As this is a single disk configuration you may set the root partition to the maximum allowable size eg. *swap partition size* subtracted from the *LVM group size*.

- Mount Point: */*
- File System Type: **ext3**
- Logical Volume Name: *optional - but the default value of 'LogVol00' is recommended*
- Size (MB): *LVM Group size* subtracted by the *swap partition size*

10. Click **OK** to accept these settings.

11. Click **Next** to accept the new partition layout.

12. You have just configured your partition layout for your single-drive system. Proceed to the section [3.3: Time Zone](#) to continue the installation process.

3.2.2 Disk Partitioning – Dual Disk System with Software RAID Level 1

This section details how to setup a dual-disk system, configured with software RAID Level 1.

RAID Level 1 (disk mirroring), provides 100% redundancy in the event of a single drive failure. It is important to note that you should only implement RAID Level 1 if you have two drives of the same size. If they are different sizes, you will only mirror your smaller drive, wasting space on your larger drive. You cannot mirror a larger drive to a smaller drive.

Figure 8 shows the initial warning you will receive if your Hard Disks are not formatted. You will receive this message once for each unformatted hard disk.

1. Select **Yes** each time this warning appears to initialise both hard drives.
2. Select the **Next** button to proceed to the next screen.

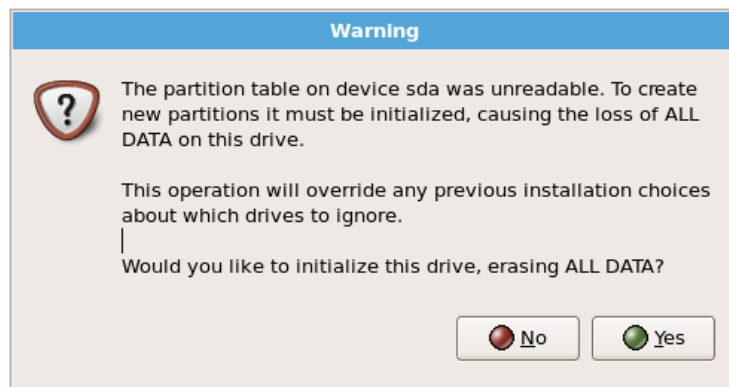


Figure 8

3. Select *Create Custom Layout* from the drop-down list and press **Next**. If warned about removing all partitions on your hard drive, click **Yes**.

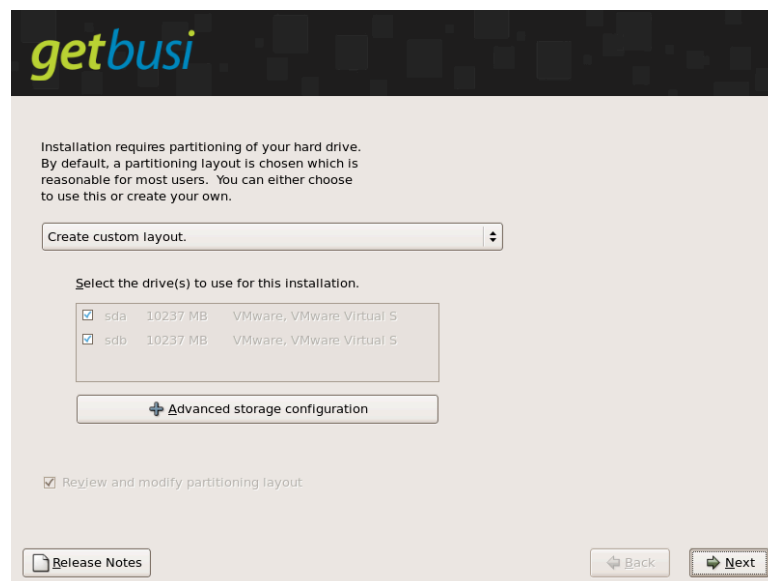


Figure 9

The Partition Editor window will appear. Note that for each device, you should only show free space. If you see any other partitions displayed on either device, select them and click on the **Delete** button. The Partition Editor screen should resemble Figure 10.

4. First, you must create your RAID partitions. Create identical partitions for each disk device. To create a RAID partition, click on the **RAID** button.

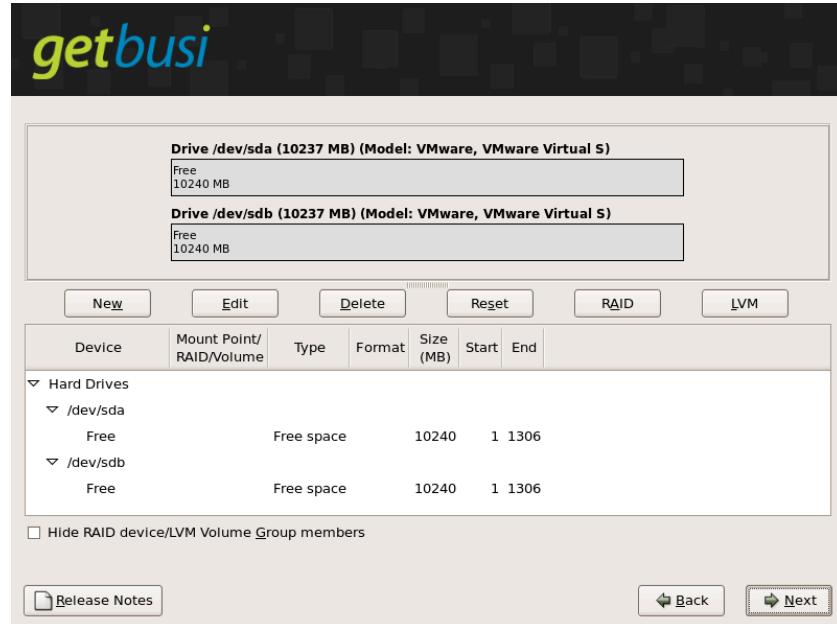


Figure 10

5. A RAID Options Screen will appear. Ensure that the *Create a software RAID partition* radio button is selected, and click on the **OK** button.

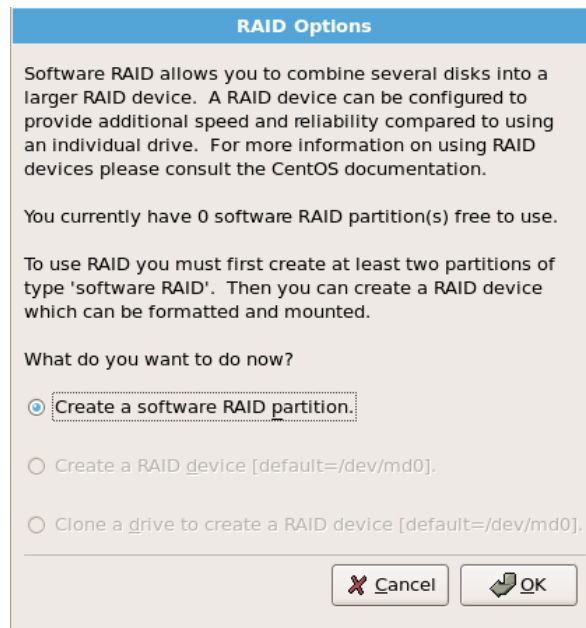


Figure 11

6. The **Add Partition** window will appear, allowing you to add a RAID partition. Select the *first* device in the hardware list.

7. Select the *Fixed Size* radio button. In the *Size* field, set the size to be **100 MB**. Check the *Force to be a primary partition* checkbox and click the **OK** button.

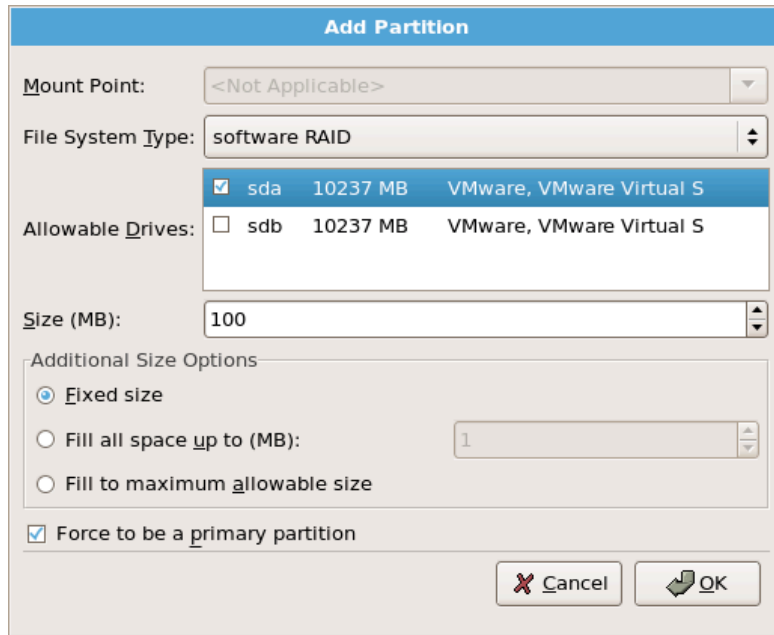


Figure 12

8. Repeat Steps 5 - 7 to create an identical RAID partition for your second disk device.
9. Once you have created two identical RAID partitions of 100 MB, you will see those devices in the partition table as shown in [Figure 13](#). You may disregard the information that they are each 101 MB. Click on the **RAID** button to proceed.

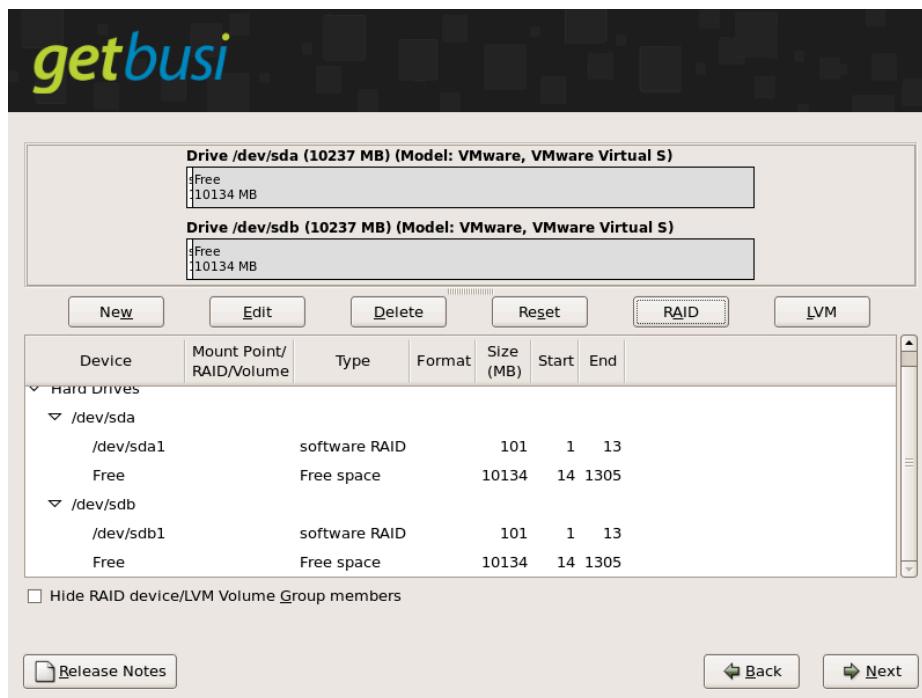


Figure 13

10. The RAID Options window will appear. Select the *Create a RAID device [default=/dev/md0]* radio button, and click **OK**.

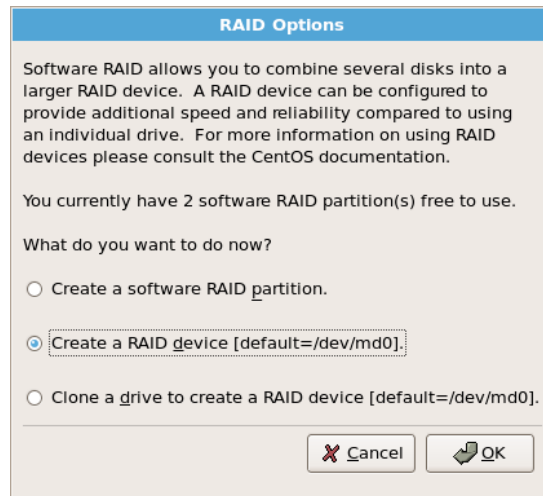


Figure 14

11. The *Make RAID Device* window will appear. Select the following options, and then click **OK**:

- Mount Point: **/boot**
- File System Type: **ext3**
- Raid Device: **md0**
- RAID Level: **RAID1**
- RAID Members: *Ensure both RAID Devices are selected*

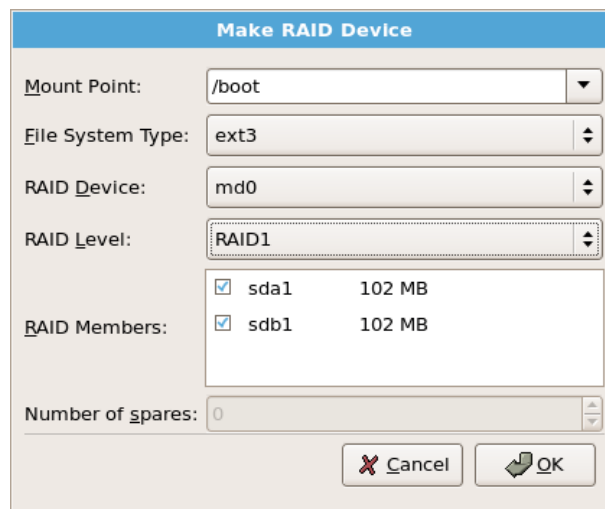


Figure 15

12. You will be returned to the Partition Editor window. Note that you can now see your mirrored /boot partition listed in the RAID Devices section of your Partition Editor. You will now create another RAID partition for the LVM Group which will contain the swap and root partitions.

13. Click the **RAID** button to proceed.

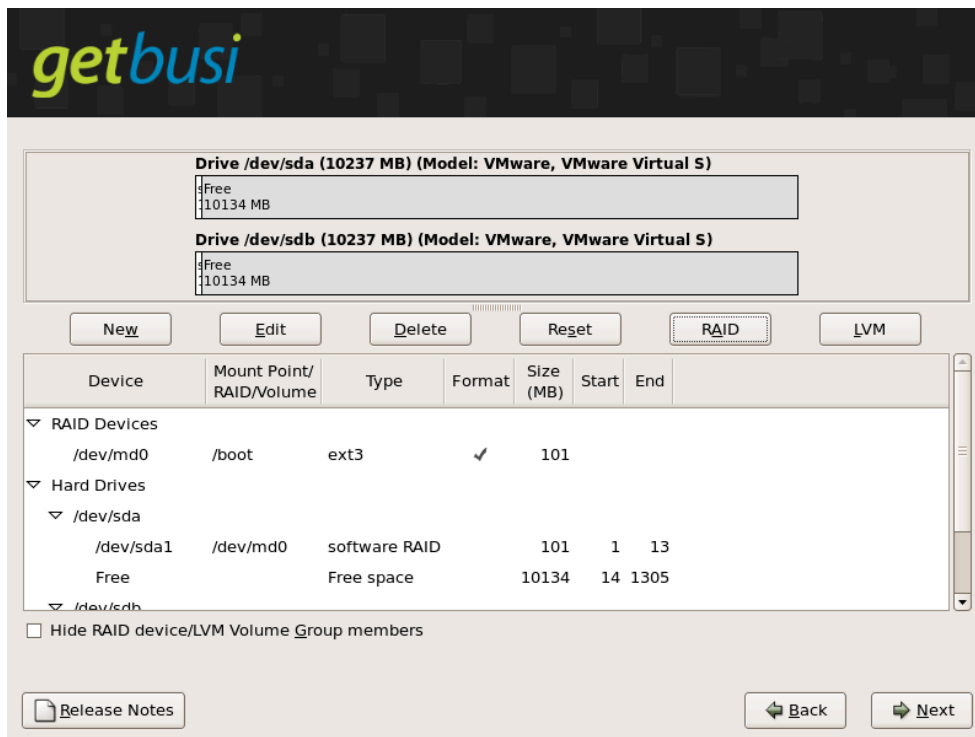


Figure 16

14. A RAID Options Screen will appear. Ensure that the *Create a software RAID partition* radio button is selected, and click on the **OK** button.

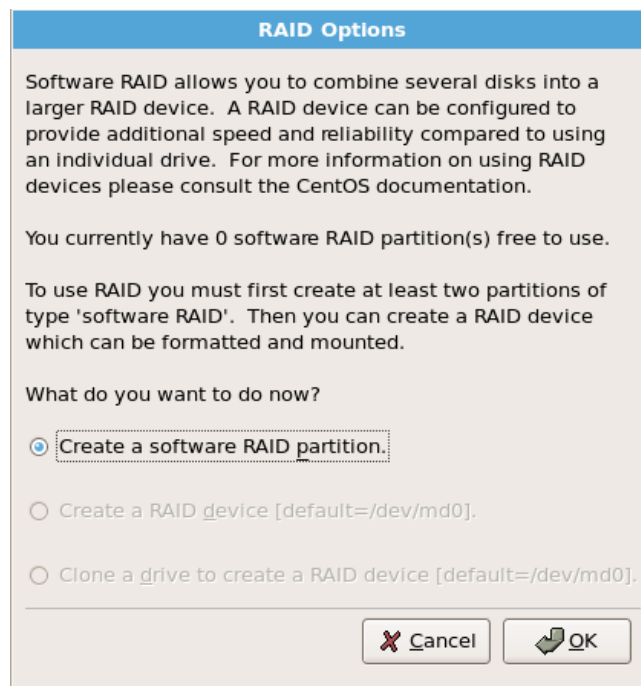


Figure 17

15. The Add Partition window will appear, allowing you to add a RAID partition. Select the *first* device in the hardware list.
16. Select the *Fill to maximum size* radio button. Check the *Force to be a primary partition* check-box and click the **OK** button.

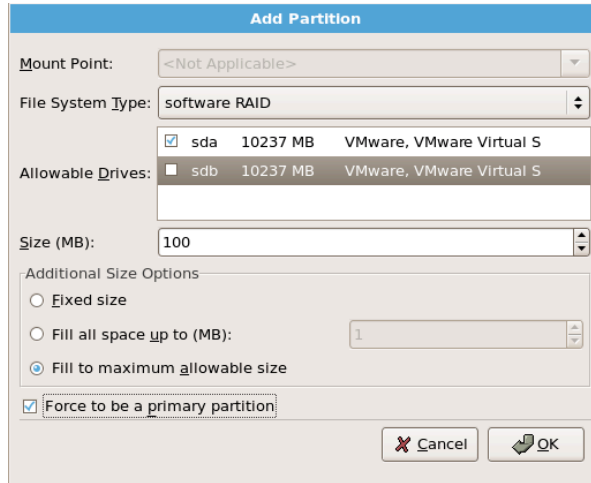


Figure 18

17. Repeat Steps 14 - 16 to create an identical RAID partition for your second disk device.
18. Once you have created two identical RAID partitions of of the maximum allowable size, you will see those devices in the partition table. Click on the **RAID** button to proceed.
19. The RAID Options window will appear. Select the *Create a RAID device [default=/dev/md1]* radio button, and click **OK**.

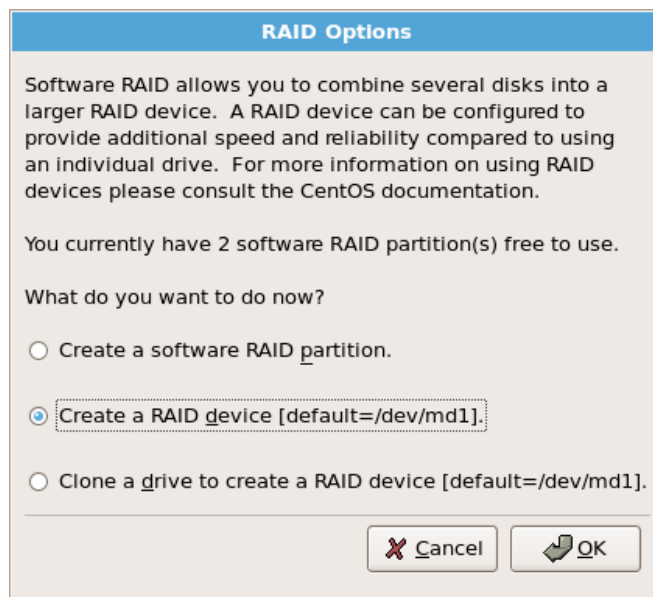


Figure 19

20. The Make RAID Device window will appear. Select the following options, and then click **OK**:

- Mount Point: **<Not Applicable>**
- File System Type: **physical volume (LVM)**
- Raid Device: **md1**
- RAID Level: **RAID1**
- RAID Members: *Ensure both RAID Devices are selected*

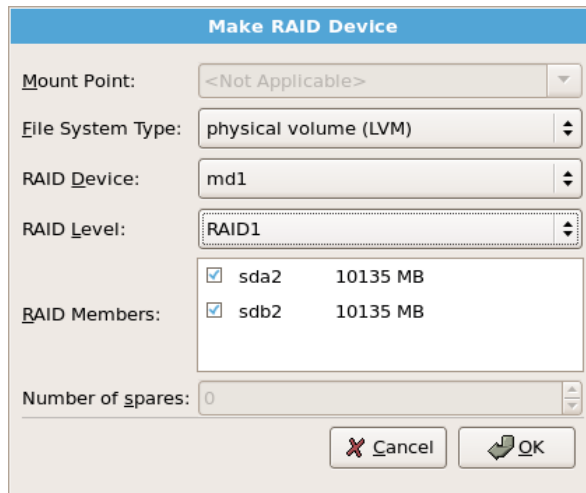


Figure 20

21. You will be returned to the Partition Editor window. Note that you can now see your mirrored /boot and LVM partitions listed in the RAID Devices section of your Partition Editor. You will now create an LVM Group for your swap and root partitions.

22. Click the **LVM** button to proceed.

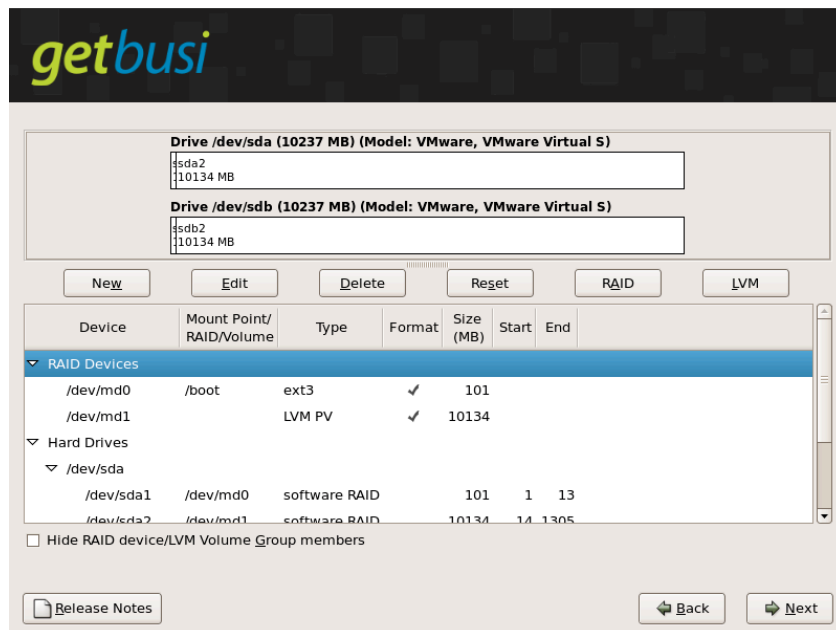


Figure 21

23. A Make LVM Volume Group Screen will appear. Ensure that the RAID device *md1* is checked. You may leave the other settings to their defaults. Click on the **OK** button.

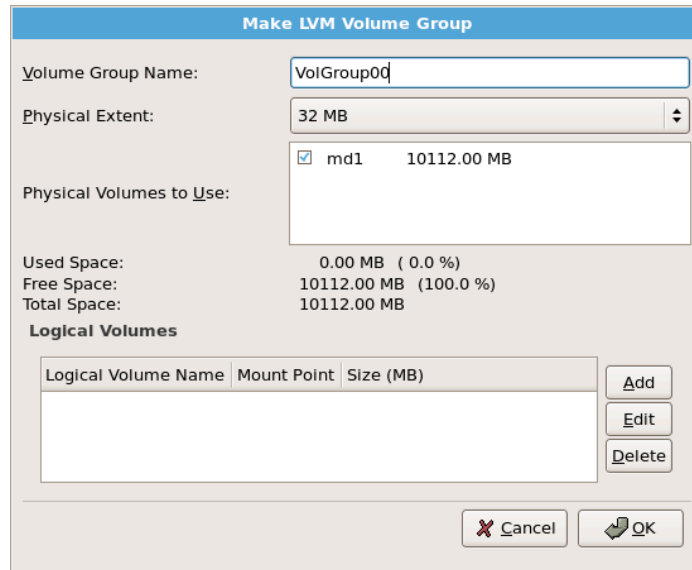


Figure 22

24. You will be returned to the Partition Editor window. Note that you will now see your LVM Volume Group listed above your RAID Devices. You will now create Logical Volumes for your swap space and / (root) file-systems.
25. Highlight the LVM Volume Group *VolGroup00* and click **Edit**. You will be presented with the LVM Volume Group Editor window.

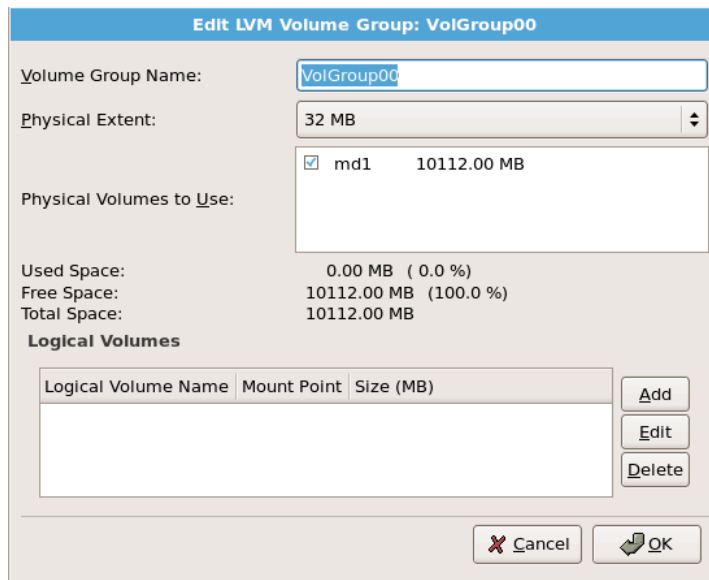


Figure 23

26. Select **Add** to add a new Logical Volume.

27. A Make Logical Volume screen will appear. You will now calculate your required swap space and configure this Volume appropriately. Select the following the options and click **OK** to continue

To determine the size of your swap partition, the standard calculation for swap is twice your installed RAM. If your machine has 1GB RAM, then your swap should be 2GB. For calculations, 1GB = 1024MB.

In this example the system contains 512MB of RAM, therefore the swap will be 1024MB

- Mount Point: cannot be selected. Swap partitions are not mounted to a point on the filesystem.
- File System Type: **swap**
- Logical Volume Name: *optional - but the default value of 'LogVol00' is recommended*
- Size (MB): *Twice your installed RAM*

Figure 24

28. You will be returned to the LVM Volume Group Editor window. Note that you will now see your swap partition in the list of Logical Volumes. Select **Add** to create your root partition.

29. You will, once again, be presented with the Make Logical Volume screen. Enter the following information and press **OK**.

- Mount Point: **/**
- File System Type: **ext3**
- Logical Volume Name: *optional - but the default value of 'LogVol01' is recommended*
- Size (MB): *The 'Max size' value as listed at the bottom of the window.*

Figure 25

30. Click **OK** again to return to the Partition Editor window. Note that you can now see your mirrored /boot and LVM Physical Volume partitions listed in the RAID Devices section of your Partition Editor. Also, note the two LVM Volumes you created for your swap and / (root) partitions.

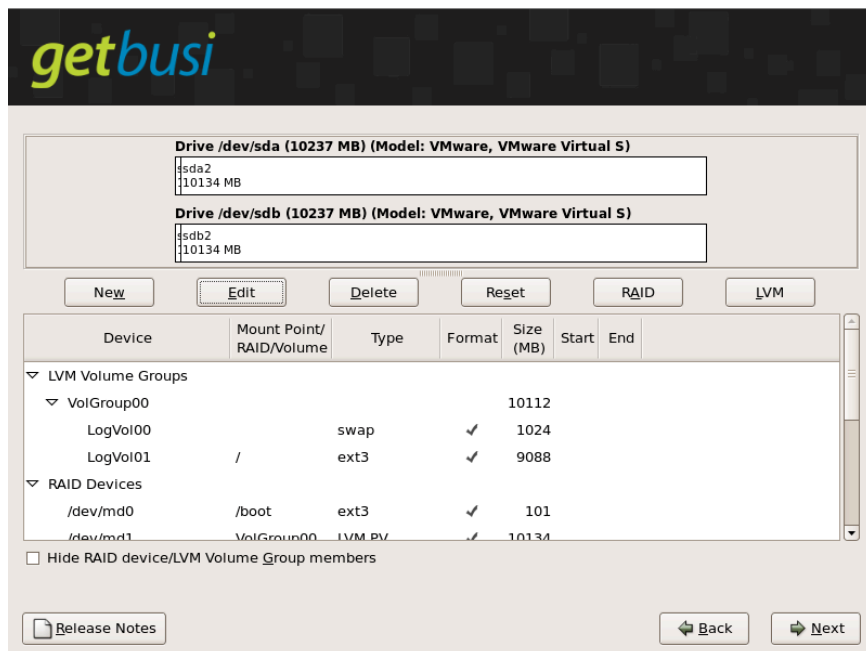


Figure 26

31. Click **Next** to accept the new partition layout.
32. You have just configured your partition layout for your dual-drive software RAID1 system. Proceed to the section [3.3: Time Zone](#) to continue the installation process.

3.2.3 Disk Partitioning – Dual Disk System for Better Performance

This section details how to setup a dual-disk system, configured for better performance. This setup involves placing your database on the second disk, reducing I/O contention. Since the two largest consumers of I/O are the proxy cache and the database system, performance improvements may be gained by separating them onto two different disks. This setup allows the system to simultaneously write to the proxy's cache, as well as the database, rather than sequentially as in the previous two disk partitioning schemes.

This setup does not utilise RAID technology, and does not allow the protection of disk mirroring. The only difference between this setup and a single-disk setup is that the database operations are on a dedicated disk.

Figure 27 shows the initial Warning you may receive if your hard drives are new and unformatted.

1. If warned about the partition tables on your hard drivers, click **Yes**.
2. Select the **Next** button to proceed to the next screen.

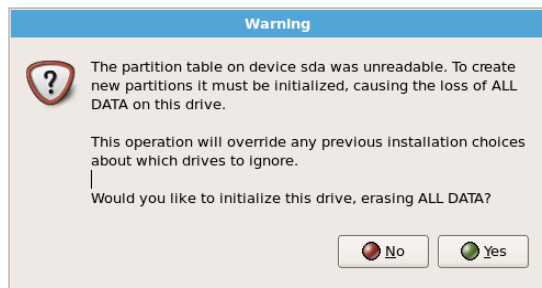


Figure 27

3. Select *Create Custom Layout* from the drop-down list. If warned about removing all partitions on your hard drives, click **Yes**.

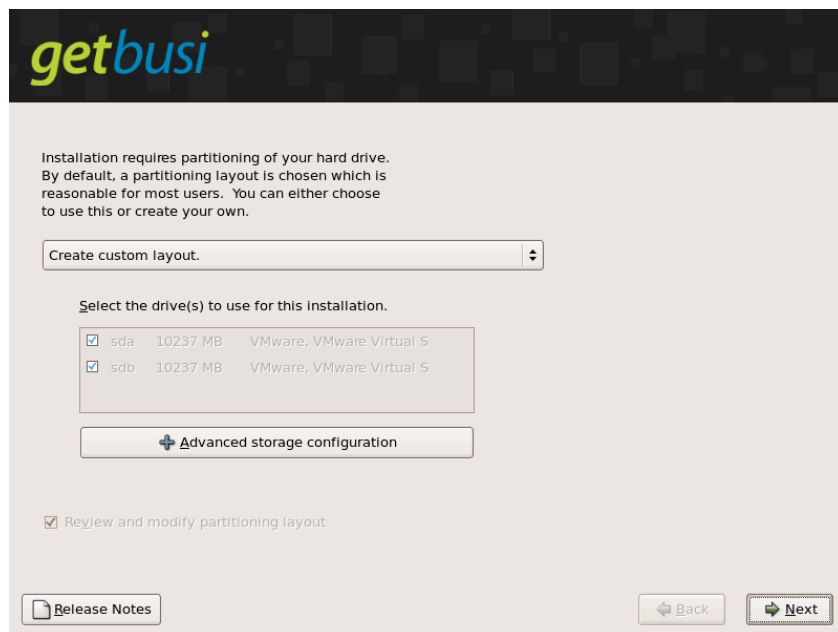


Figure 28

The Partition Editor window will appear. Note that for each device, you should only show free space. If you see any other partitions displayed on either device, select them and click on the **Delete** button. The Partition Editor screen should resemble Figure 29.

4. First, you must create boot partition. Create identical partitions for each disk device. To create a new partition, click the **New** button.

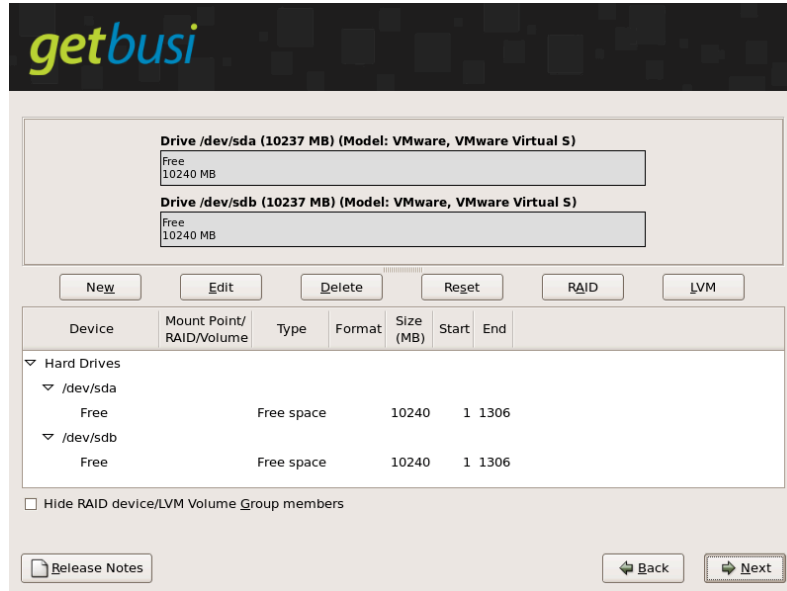


Figure 29

5. You will be presented with the Add Partition screen. Using the form select the following options as shown in Figure 30. **Ensure that you restrict the operation to only one drive, preferably the first drive in the list.**

- Mount Point: **/boot**
- File System Type: **ext3**
- Allowable Drives: **(the first of the list)**
- Size (MB): **100**
- Fixed Size: **selected**
- Force to be a primary partition: **checked**

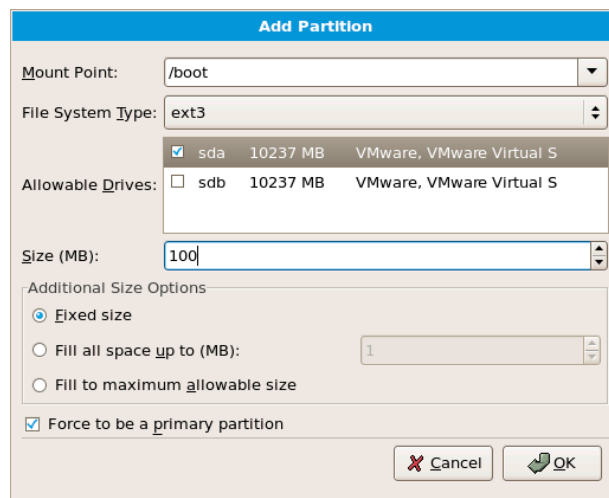


Figure 30

6. Referencing [Figure 30](#), create an LVM Physical Volume partition with the following settings. This partition will be used for the / (root) and swap space file-systems:
 - Mount Point: (Disregard. This will show <Not Applicable> upon completion of the next step)
 - File System Type: **physical volume LVM**
 - Allowable Drives: *(the first of the list)*
 - Size (MB): *(Disregard. You will be setting the size with the next option)*
 - Fill to maximum allowable size: **selected**
 - Force to be a primary partition: **checked**

7. Referencing [Figure 30](#), create another LVM Physical Volume partition, on the **second** hard drive, with the following settings. This partition will be used to store your database:
 - Mount Point: (Disregard. This will show <Not Applicable> upon completion of the next step)
 - File System Type: **physical volume LVM**
 - Allowable Drives: *(the second of the list)*
 - Size (MB): *(Disregard. You will be setting the size with the next option)*
 - Fill to maximum allowable size: **selected**
 - Force to be a primary partition: **checked**

8. Once you have return to the Partition Editor window you will notice your two LVM PV partitions; one on each hard drive.

Now you will assign the **first** LVM Physical Volume partition to an LVM Volume Group which will contain the / (root) and swap space file-systems. Click **LVM** to continue.

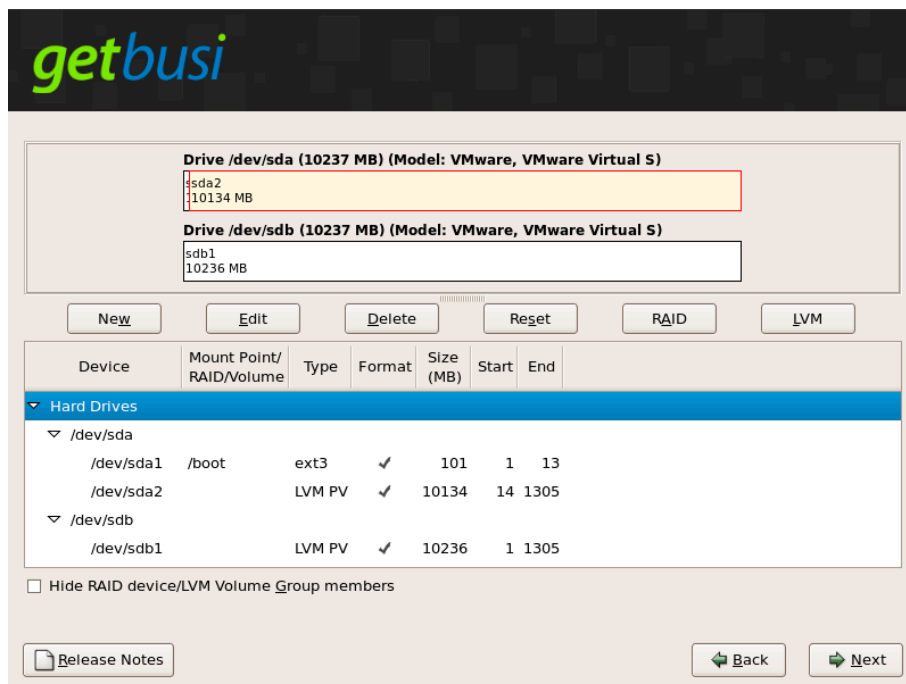


Figure 31

9. Now you will be presented with the Make LVM Volume Group screen. The *Volume Group Name* and *Physical Extent* options should be left as **defaults**. Ensure that only the **first** hard drive is checked and click **Add** to create the swap Logical Volume.

Make LVM Volume Group

Volume Group Name: VolGroup00

Physical Extent: 32 MB

Physical Volumes to Use:

<input checked="" type="checkbox"/>	sda2	10112.00 MB
<input type="checkbox"/>	sdb1	10208.00 MB

Used Space: 0.00 MB (0.0 %)
 Free Space: 10112.00 MB (100.0 %)
 Total Space: 10112.00 MB

Logical Volumes

Logical Volume Name	Mount Point	Size (MB)

Buttons: Add, Edit, Delete, Cancel, OK

Figure 32

10. The Make Logical Volume screen will appear. You will now calculate your swap space requirement enter the options accordingly and click **OK** to continue:

Note: To determine the size of your swap partition, the standard calculation for swap is twice your installed RAM. If your machine has 1GB RAM, then your swap should be 2GB. For calculations, 1GB = 1024MB.

- Mount Point: cannot be selected. Swap partitions are not mounted to a point on the filesystem.
- File System Type: **swap**
- Logical Volume Name: *optional - but the default value of 'LogVol00' is recommended*
- Size (MB): *Twice your installed RAM*

Make Logical Volume

Mount Point: <Not Applicable>

File System Type: swap

Logical Volume Name: LogVol00

Size (MB): 1024
(Max size is 10112 MB)

Buttons: Cancel, OK

Figure 33

11. Now you will return to the Make LVM Volume Group screen. Note the swap space Logical Volume you have created. Ensure that only the **first** hard drive has been checked and click **Add** to create the / (root) Logical Volume.

12. Referencing [Figure 33](#), create another LVM Logical Volume with the following settings:
- Mount Point: `/`
 - File System Type: **ext3**
 - Logical Volume Name: *optional - but the default value of 'LogVol01 is recommended*
 - Size (MB): The 'Max size' value as listed at the bottom of the screen.
13. Click **OK** to finish creating the LVM Volume Group and return to the Partition Editor screen. Take note of your new Logical Volume Group including the `/` (root) and swap Logical Volumes within it.

You will now create another Logical Volume Group for your database volume. Click **LVM** to proceed.

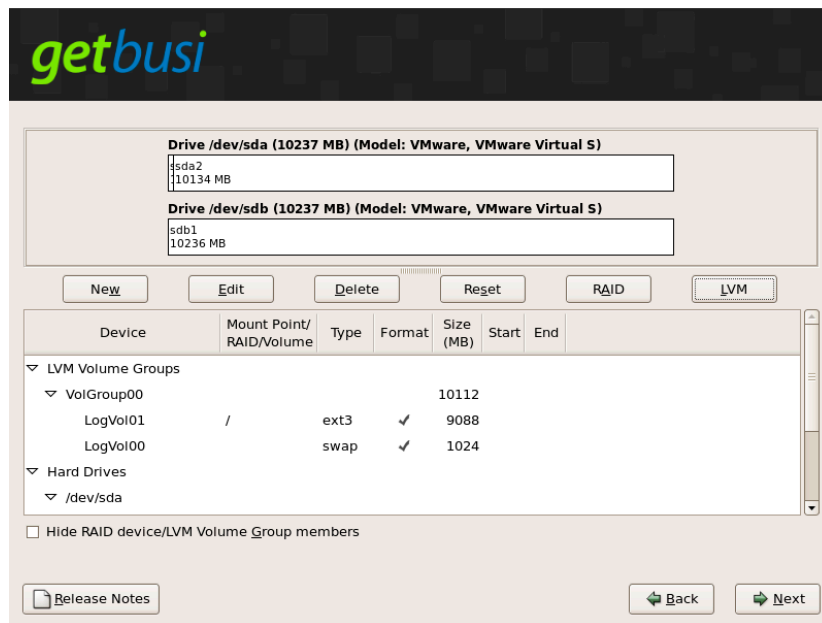


Figure 34

14. Referencing [Figure 32](#), click **LVM** to create a new LVM Volume Group. This time, ensure that your **second** hard drive is checked - if you completed the last step appropriate it should be the **only** hard drive in the list. Click **Add** to add a new Logical Volume to the LVM Volume Group.
15. Referencing [Figure 33](#), create your database Logical Volume. The mount point will not be selectable in the dropdown box, so you will have to type it in manually. Please ensure you enter the mount point **exactly** as shown and that you double check the mount point before accepting. If you enter an incorrect mount point, your database will not be on a separate disk, and you'll be wasting disk space.
- Mount Point: `/var/lib/pgsql`
 - File System Type: **ext3**
 - Logical Volume Name: *Optional - default name 'LogVol00' is recommended*
 - Size (MB): *Maximum allowable size, as reported at the bottom of the window.*

16. Click **OK** to finish making the Logical Volume Group and you will return to the Partition Editor screen.

Your partition table should resemble the one shown in Figure 35. Double check that everything is correct, especially your mount points. When you are satisfied, click the **Next** button.

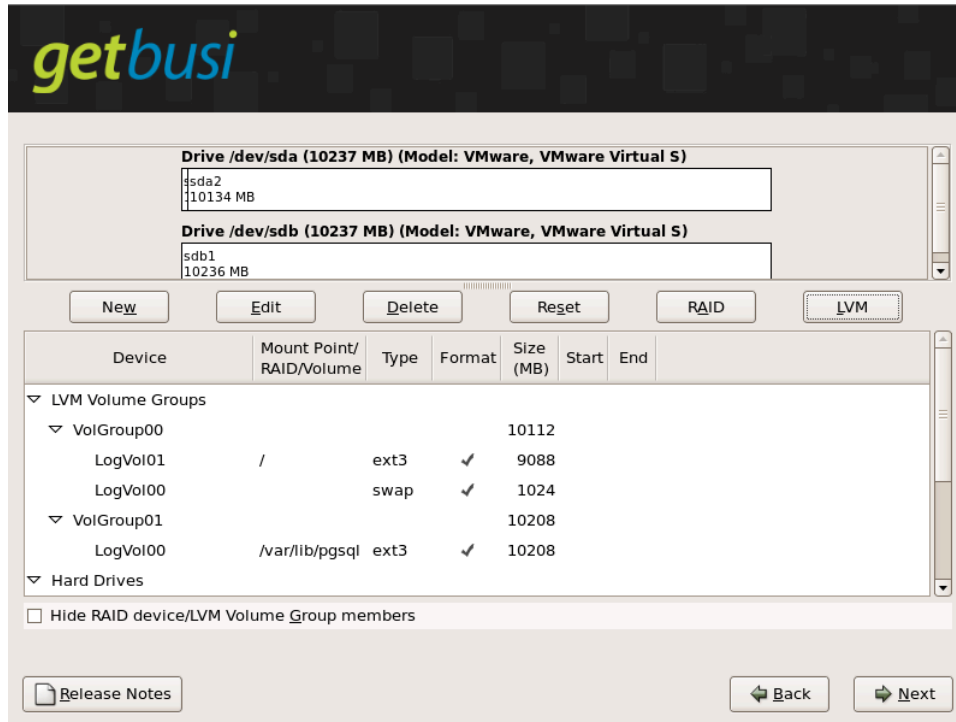


Figure 35

17. This concludes partitioning for a dual-drive system with the database on a separate drive. Proceed to the section [3.3: Time Zone](#) to continue the installation process.

3.3 Time Zone

The Getbusi system implements a graphical Time Zone tool allowing you to easily set the time zone of your server. The yellow dots on the Time Zone map indicate cities. Using your mouse, place your pointer close to the city in which you reside. A green arrow will point at the closest city to your mouse cursor. If you wish to accept the city that the green arrow is pointing to, simply click the left mouse button. The drop-down list below the map will automatically highlight your selection. If you wish, you may also scroll through the drop-down list to find your home city and select it. When you are satisfied with your selection, click the **Next** button.

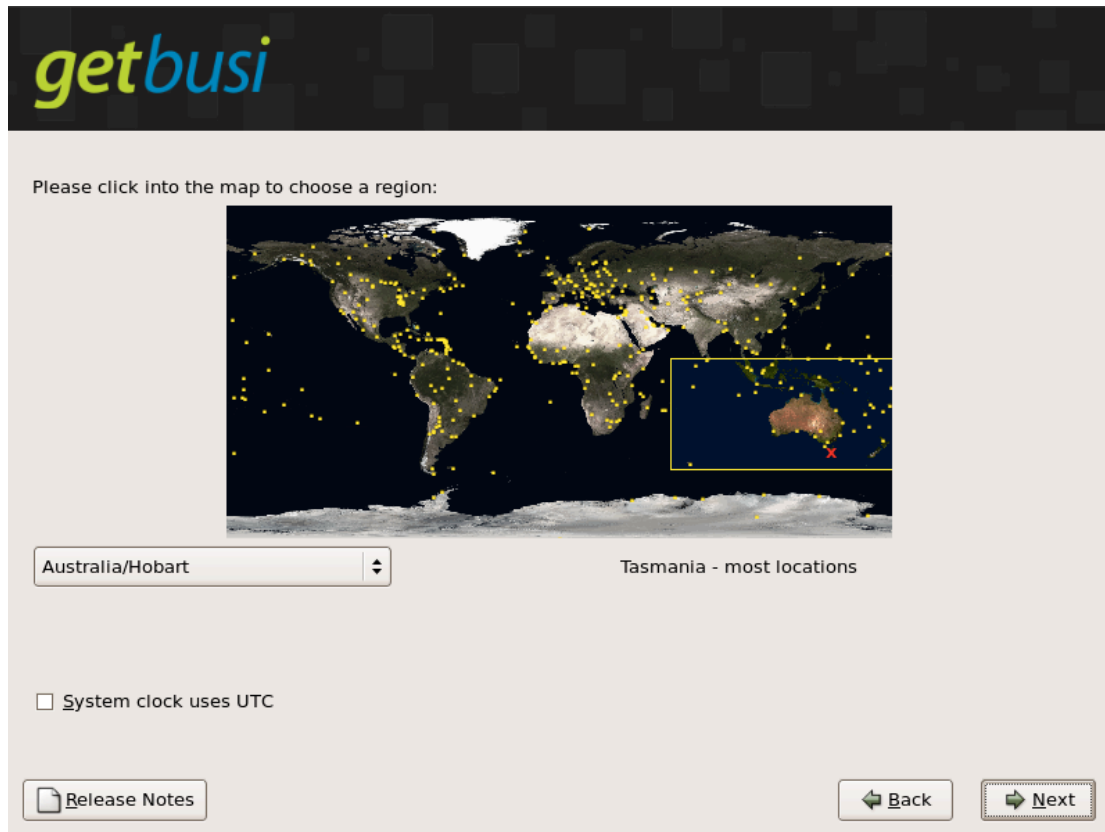


Figure 36

3.4 Setting Your Root Password

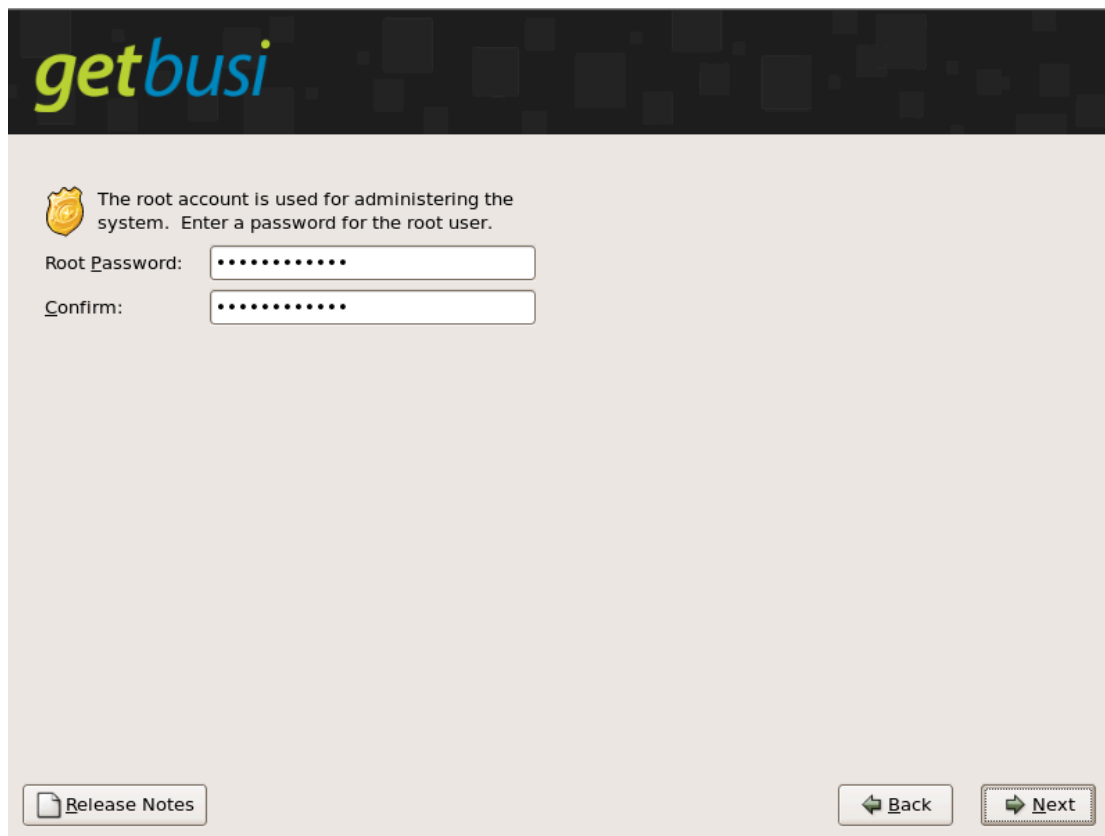
It is important to set your root password to something that cannot be easily guessed or cracked by using standard crack tools (like a dictionary crack).

Your root password is the master key to your entire system. Unauthorised users gaining root access to your system can reconfigure the system, allowing themselves unfettered access to the Internet. Additionally, they can destroy the system, or monitor everyone else's traffic, install Trojans, reap passwords and perform other unauthorised tasks which compromise your system's security.

You should guard your root password and only give it to authorised personnel. Your root password may be any combination of letters, numbers and special characters. At a minimum, your root password should be greater than six characters.

Enter your root password into the *Root Password* field. In the *Confirm* field, type the same password again.

Click on the **Next** button to proceed.



The screenshot shows the Getbusi web interface for setting the root password. At the top left is the 'getbusi' logo. Below it, a yellow shield icon is followed by the text: 'The root account is used for administering the system. Enter a password for the root user.' There are two input fields: 'Root Password:' and 'Confirm:', both containing ten dots to indicate masked text. At the bottom left is a 'Release Notes' button with a document icon. At the bottom right are 'Back' and 'Next' buttons with left and right arrows respectively.

Figure 37

3.5 Software Installation

Figure 38 shows the window that displays the progress of your software installation. This process usually takes approximately five to eight minutes, depending on the speed of your system. While your software is installing, you will not be able to navigate using the **Next** and **Back** buttons.

Once the software installation is complete, the **Next** button will no longer be greyed out. Click on the **Next** button to proceed to the Graphical Interface Configuration section.



Figure 38

3.6 Rebooting

At this point of the installation process, you should have all of your software installed and your hardware properly configured. A reboot is required to complete the installation process. The system will eject the Getbusi installation DVD-ROM. Remove the installation media and press the **Exit** button to reboot. If you accidentally reboot from the DVD-ROM, simply eject the media and press the **CTRL-ALT-DEL** keys to reboot your server.

You have now installed the Getbusi software and are ready to proceed to section [4: Server Services Configuration](#).

4 Server Services Configuration

This section describes how to configure your Getbusi server's services. The first time you configure your services, you must be on the physical console attached to your Getbusi server. Any subsequent times you wish to configure this portion of your Getbusi system, you may do so from your favourite web browser. Please see the Getbusi User Guide for information on how to configure your server services from a remote computer.

When the system reboots, you should be presented with a graphical login prompt. If you are not, please refer to the section [6.1: No X Windows](#).

4.1 Console Access

Figure 38 shows the graphical login screen that is presented on the console of your Getbusi server. From this console, you may either login to the system, reboot the system, or shut down the system.

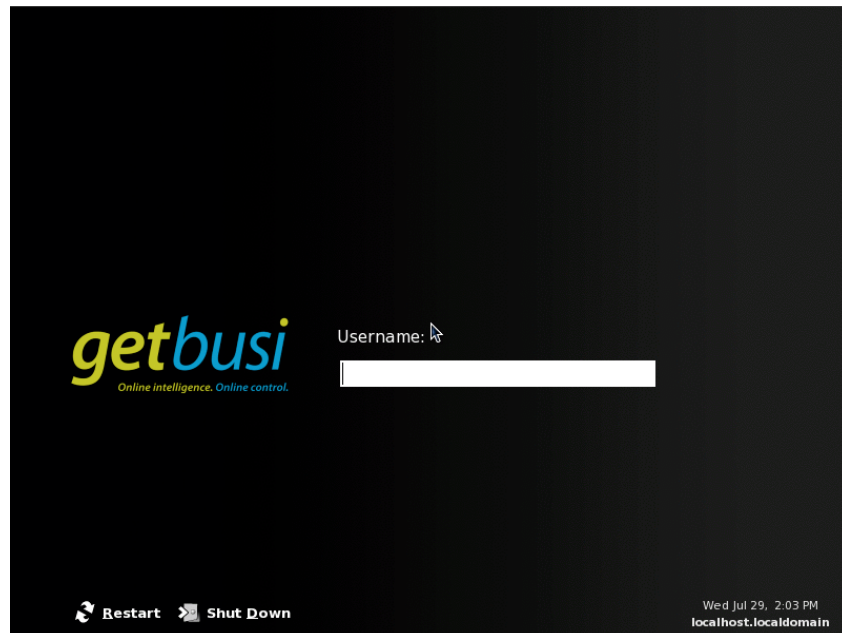


Figure 38

Use the username: **root**, to login to the console. The password is the one that you set in the section [3.4: Setting Your Root Password](#).

Note: If you're using Getbusi installed on ASUS® Eee Box™ hardware your root password will be the 12-character serial number on the barcode sticker located on the bottom-right corner of the right side of the appliance, all characters will be lowercase (see figure 39).



Figure 39

Once logged in, you will be presented with a browser screen that is navigable via three horizontal tabs along the top labelled: Network, Firewall and Miscellaneous. You may access any of these screens by clicking on the appropriate tab. The following sections describe the settings for each tab.

4.2 Network Configuration

Figure 40 shows the first screen that you'll see once you've logged into the console. This screen allows you to setup networking for your Getbusi machine. Use the values identified in the [Pre-Installation Checklist](#) to set the Network and Domain Name Server settings.

Figure 40

1. **Network Settings:** The top section of the screen allows you to enter values and setup your network settings for an ethernet card. Although Getbusi supports the use of multiple ethernet cards on a system, it is not a recommended configuration. If you wish to configure multiple ethernet cards, you must know the device name of each card, and which physical network it is plugged into. In the **Ethernet Device** dropdown box, Ethernet Card 1 corresponds to `/dev/eth0`; Ethernet Card 2 corresponds with `/dev/eth1`; etc.
 - **IP Address:** Enter your server's IP address here.

- Netmask: Enter your network mask here.
- Default Gateway: Enter the IP address of your default gateway here.
- Ethernet Device: Use **Ethernet Card 1** if you have one ethernet card.
- Host Name: Enter the fully qualified hostname here. For example, if your hostname is: **proxy**, and your domain is: **foo.com**, then your entry should read: **proxy.foo.com**.
- Click the **Apply** button to accept your settings.

2. Domain Name Servers: The lower section of the form allows you to configure your DNS settings. You should already have an entry in DNS which corresponds to the IP address you set in the previous step.
 - Primary Domain Name Server: Enter the IP address of your primary DNS server here. This is the only required field. You may use **127.0.0.1** if desired, as Getbusi runs it's own caching name service.
 - Secondary Domain Name Server: If you have a secondary DNS server, enter it's IP address here. Not required if you have no secondary DNS server. You may use **127.0.0.1** if desired, as Getbusi runs it's own caching name service.
 - Tertiary Domain Name Server: If you have a tertiary DNS server, enter it's IP address here. Not required if you have no tertiary DNS server.
 - Domain Search Base: Allows a search base to be set. For example, if you set a search base of **getbusi.com**, then the URL "myserver" would resolve to **myserver.getbusi.com**. Typically, you enter your own domain name here, so that the server can resolve hosts on your network without requiring a FQDN (fully qualified domain name). The search base is also optional.
 - Once you are satisfied with your settings, click the **Save** button. This will immediately apply your settings to your Getbusi server.
3. This concludes the Network Configuration section. You may now proceed to section [4.3: Firewall](#).

4.3 Firewall

This section allows you to define which ports on the Getbusi machine that may be accessed from **external machines**. You can minimise security threats by only allowing access to the Getbusi machine on specific ports. The proxy and administration ports are automatically opened, and may not be closed.

IMPORTANT: Your firewall is disabled the first time you access the system. In order to start your firewall, simply click the *Apply* button, even if you do not allow access on other ports. If you do not click the *Apply* button, your system will *not* have a firewall enabled!

In general, the only ports you may wish to have open are:

- DNS: If you use your Getbusi server as a caching name server.
- Database - Read access to database on port 5432: If you require external database read access utilising JDBC/ODBC.
- FTP: If you are running FTP services on your Getbusi server.
- HTTPS: If you are running the secure administration interface.

The default setting (all unchecked) is sufficient for most installations. If you wish change the default settings, please keep in mind that disabling firewall ports may compromise your Getbusi server's security.

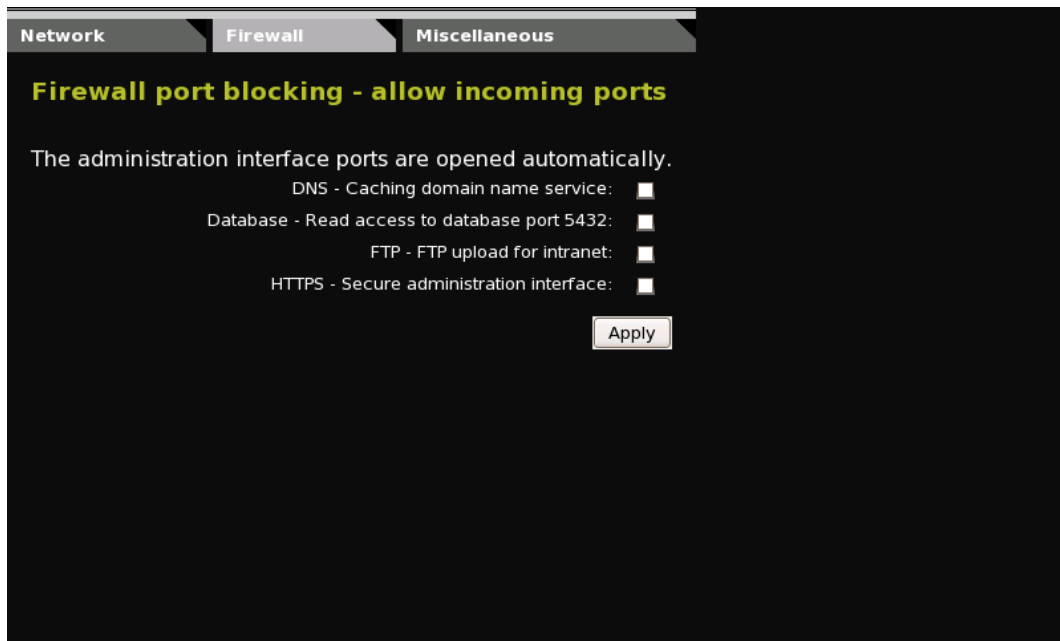


Figure 41

To allow inbound connections on any of the ports listed above, select the port(s) and click the **Apply** button. To disable inbound connections on any of the ports listed above, uncheck the port(s) and click the **Apply** button. Any changes to the firewall via this interface are effective immediately.

4.4 Miscellaneous Settings

This section allows you to configure an email address to which your Getbusi server sends reports and notifications. It is important that you configure a valid email address which you, or another administrator checks regularly. The Getbusi system regularly sends emails to inform you of it's overall health, that it is (or isn't) receiving blacklist updates, etc. If this is not a valid address, or it is an address that isn't being checked regularly, you may miss important information regarding your Getbusi server. Additionally, this screen allows you to shutdown, or reboot your system, should you need to do so.

IMPORTANT: You should always use this screen to either shutdown or reboot your system. PLEASE DO NOT REMOVE POWER WHILE THE SYSTEM IS RUNNING. If you are unable to reach this screen to reboot your system, please call Getbusi support immediately for help. We have other ways to safely shutdown and restart your system.

It should also be noted that rarely are problems solved by rebooting the system. If you have a problem with your system, you should first call Getbusi support.

Figure 42

1. Root email address: Enter the email address to which you wish the Getbusi system to notify of errors and status. Click the **Apply** button to accept your entry.
2. Timezone: If you configured the time zone incorrectly during installation, you may use this drop-down menu to change it. It will display the currently applied Time Zone beneath the menu.
3. Reboot the system: Click the **Reboot** button to reboot your system immediately. The system usually takes around 5 minutes to shutdown and reboot.
4. Shutdown the system: Click the **Shutdown** button to shutdown your system immediately. The system usually only takes a few minutes to shutdown. After the system has shutdown and powered off, you may safely remove power from the system.

5 Server Configuration Complete

You have now finished configuring your Getbusi server. You should now proceed to configuring the Getbusi software. You can do this via a web browser.

To access the Getbusi interface, open a browser and enter the IP address of your Getbusi server. Alternatively, if you have DNS setup correctly, you should be able to use the name of your Getbusi server as the address.

Please refer to the User Guide for instructions on how to configure the Getbusi system.

6 Troubleshooting

This section describes the various troubleshooting techniques for errors you may encounter when installing your Getbusi software.

6.1 No X Windows

In the event that X Windows (the graphical interface) cannot be configured on the Getbusi server, and you are simply presented with a text-based login prompt, you may configure networking using the following steps. You should see something similar to the following on your console:

```
CentOS release 5.2
Kernel 2.6.18-92.1.18.el5 on an i686

localhost login: _
```

If you do not see this on your screen, please contact Getbusi support.

6.1.1 Login

Login to the server with **root** as your username. When prompted for a password, enter the password you set section [3.4: Setting Your Root Password](#).

```
CentOS release 5.2
Kernel 2.6.18-92.1.18.el5 on an i686

localhost login: root
password:
```

Note: you will not see any response to keystroke when you type in your password. Simply type in your password and hit the **ENTER** key. If your password is correct, you will be presented with a shell prompt:

```
[root@localhost root]#
```

If your password is incorrect, you will be notified, and re-prompted for your password.

6.1.2 Configuring Networking

The following steps show how to setup networking on your Getbusi system.

5. At the shell prompt ([root@localhost root]#), type in the command: **netconfig**.
6. You should see a screen that looks like Figure 42

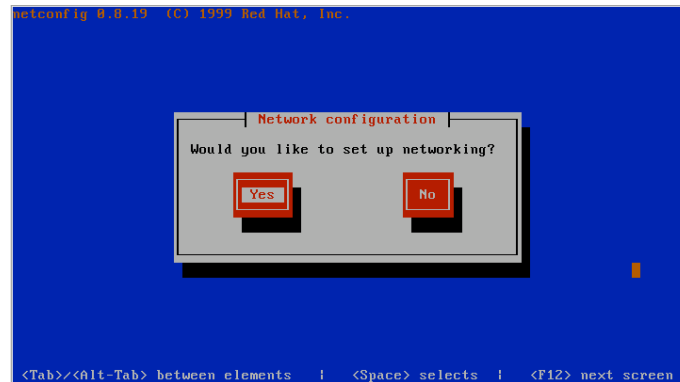


Figure 43

7. Use the **TAB** key to navigate these screens. Use the **ENTER** key to accept an option. Press the **ENTER** key to answer **yes**.
8. Figure 43 shows the screen from which you can configure networking. Use the **TAB** key to position the cursor on the IP Address line.

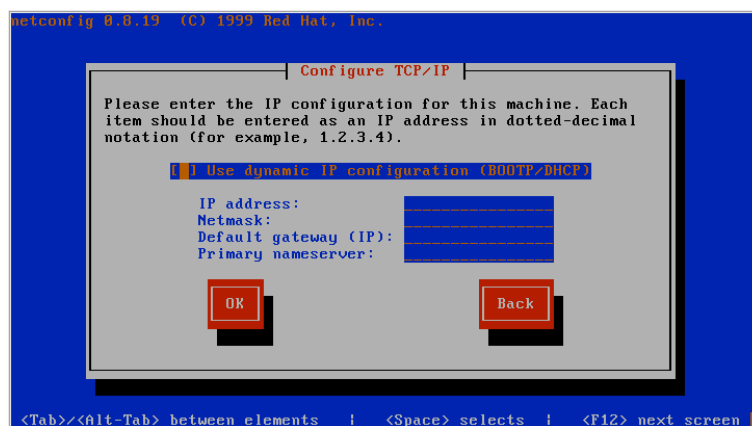


Figure 44

9. On the IP address line, enter your system's IP Address. Press the **TAB** key to proceed to the Netmask line.
10. On the Netmask line, enter a valid netmask for your network. Press the **TAB** key to proceed to the Default gateway (IP) line.
11. On the Default Gateway (IP) line, enter the IP address of your default gateway. Press the **TAB** key to proceed to the Primary Nameserver line.
12. On the Primary nameserver line, enter the IP address of your DNS server. Press the **TAB** key to place the cursor over the OK button and press **ENTER** to accept your settings. You will be returned to the command prompt.

13. At the command prompt, type: **service network start**. You should see messages confirming that your interface was started properly, and then returned to the command prompt. If you see any messages that indicate failure, please contact Getbusi support for assistance.

6.1.3 Starting the Getbusi Administration Server

To complete the configuration, you must start the Getbusi Administration Server. You should be logged into the console and at a shell prompt.

At the shell prompt, type the command: **getbusi-confd -d** and press the **ENTER** key. If the server starts successfully, you will be returned to the shell prompt. If there was an error starting the Getbusi Administration Server, those errors will display on the console. If you receive errors upon starting this service, please contact Getbusi support.

You may now log off the server by typing the command: **exit** and pressing the **ENTER** key. You should see a login prompt.

Once you have configured networking on your system, you can access the rest of the configuration remotely via a web browser via the URL:

http://<your getbusi server IP address>:8000

where <your getbusi server IP address> is the IP address of your Getbusi server. Complete the server installation tasks by resuming from section [4: Server Services Configuration](#).