## Adding a New Physical Volume

This discussion assumes that the hardware has already been installed and needs to be configured for use. It also assumes that the Gnome desktop has been installed as it makes use of GUI packages to install and configure the new physical volume.

## Install the Logical Volume Management Tool

- 1. Open the *Terminal* application (**Applications/System Tools/Terminal**) and log in as a super-user.
- 2. At the prompt in the Terminal window enter

## yum install system-config-lvm

to install the Logical Volume Manager.

3. Exit the *Terminal* application (enter **exit** at the prompt, or select **File/Close Window** from the menu bar).

## **Configure the Physical Volume Using the Logical Volume Management Tool**

- 1. Start the *Logical Volume Management* Tool (System/Administration/Logical Volume Management).
- 2. Expand **Uninitialized Entities** in the leftmost column and select the drive to be configured (in this example, it is /dev/sdb)



Press the *Initialize Entry* button at the bottom of the window.

3. Click Yes when the following pop-up window appears



4. A Format Authorization window will pop up next. Click Yes to continue.



5. When the format has completed, the main window will appear and show that there is now an **Unallocated Volume** present (in the left column). Expand this entry and select the newly added device partition (in this case, */dev/sdb*. *Partition* **1**)



Press the Create New Volume Group button at the bottom of the screen.

6. When the **New Volume Group** window appears, enter the name of the new volume group, modify any other parameters appropriately (or accept the defaults) and press the *Ok* button.

🗖 New Volume Group 🛛 🕅				
Volume Group Name	EarthWalkData			
Maximum Physical Volumes	256			
Maximum Logical Volumes	256			
Physical Extent Size	4 ♀ ● Meg ○ Kilo			
Clustered				
	X <u>C</u> ancel			

7. A new view will be presented showing the Volume Groups. Highlight the Logical View entry for the new partition and click the *Create New Logical Volume* button at the bottom of the screen

<u>F</u> ile <u>T</u> ools <u>V</u> iew <u>H</u> elp						
<ul> <li>✓ Volume Groups</li> <li>✓ EarthWalkData</li> <li>▷ EarthWalkData</li> <li>Physice</li> <li>EarthWalkData</li> <li>○ VolGroup00</li> <li>▷ Uninitialized Entiti</li> </ul>	Wolume Group   EarthWalkData   Logical View	Properties for Volume Group EarthWalkData Volume Group Name: Clustered: False System ID: Format: Ivm2 Attributes: wZn- Volume Group Size: 2 Available Space: 20.0( Total Number of Extent Number of Free Extent Extent Size: 4.00M Maximum Allowed Phy: Number of Physical Vol Maximum Allowed Phy: Number of Logical Volu VG UUID: 04ppb0-c6Fd				
< III >	Create New Logical Volume					

8. Fill in the fields on the *Create New Logical Volume* pop-up window appropriately. In this example, a new logical volume named **Data**, using the **Ext3** file system and consuming all of the remaining space on the volume will be created, mounted and entered into **/etc/fstab** to be mounted automatically upon restarts.

🗖 Create New Logical Volume 🛛 🕅				
LV name: Data				
LV Properties				
Iinear				
○ Striped				
2 ☆ stripes 4 ≎ Kilobytes granularity				
Size				
Remaining free space in Volume Group: 0 Extents				
LV size 5119 Extents 🗘				
1 5119				
Use remaining Remaining space for this Volume: 0 Extents				
Filesystem				
Ext3				
$\checkmark$ Mount $\checkmark$ Mount when rebooted				
Mount point: /Data				
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Press the *Ok* button to create the new volume. If the following pop-up window appears, press the *Yes* button to continue.



9. When the allocation has been completed, a window similar to the following will be displayed showing the newly allocated logical volume:

	Logical Volume Man	agement			
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▽ Volume Groups	Best <u>F</u> it Soom In Zoon	n <u>O</u> ut	Properties for		
▼ EarthWalkData			Volume Group		
EarthWalkData Physica			EarthWalkData		
EarthWalkData Logical			Volume Group Name:		
VolGroup00		Data	Clustered: False System ID:		
Uninitialized Entiti			Format: lvm2		
	Volume Group		Attributes: wzn- Volume Group Size: 2		
	Logical View		Available Space: 0		
		cdb1	Total Number of Exten Number of Free Extent Extent Size: 4.00M Maximum Allowed Phys Number of Physical Vo Maximum Allowed Log		
		SUDI	Number of Logical Volu		
	Volume Group EarthWalkData Physical View				
K			< III >		

The new Volume Group is now ready for use.

10. Select **File/Quit** from the main menu to exit the *Logical Volume Management* tool.