

# Adding additional drives to a CIVS-MSP server

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The following document is a step by step procedure for adding additional drives to a CIVS-MSP server with an existing raid 5 configuration. This procedure adds another disk group and keeps the existing disk group intact, preserving the configuration and retaining video data.

Stop the Cisco services from the command prompt on the terminal.

```
#!/etc/init.d/cisco stop
```

Run shutdown command

```
#shutdown -P now
```

Use root password to login at console prompt and then run poweroff command.

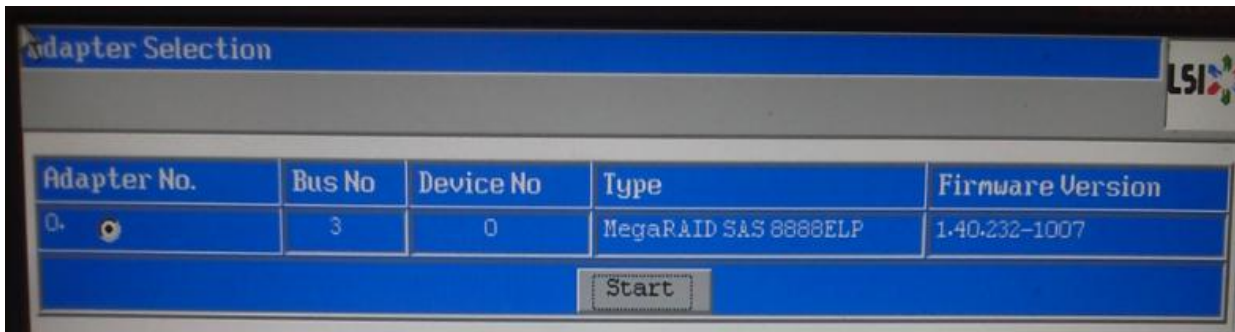
```
#poweroff
```

Physically remove power cord from server so power supply fans are stopped.

Physical drives can be added to the server at this point. I will be adding 3 additional drives for this example.

Power on the server and press 'ctrl' and 'h' key once you see the LSI raid controller load.

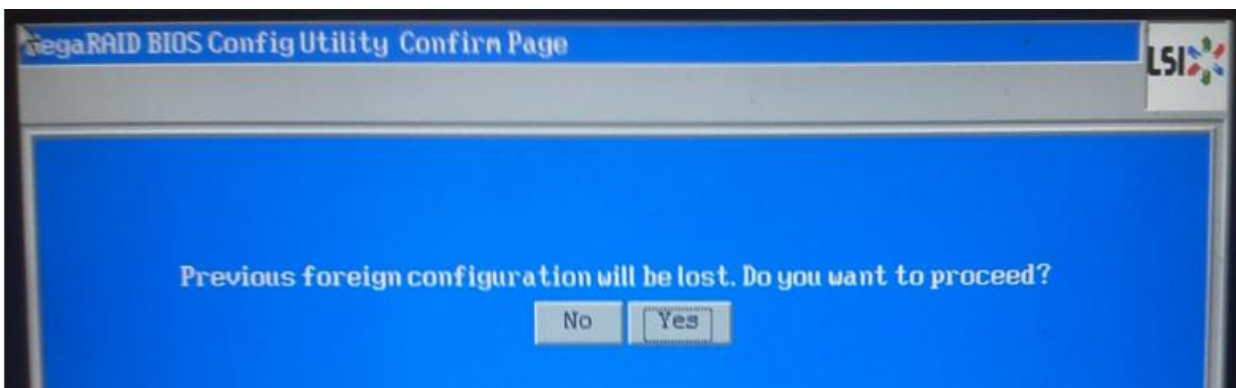
Click start to select the controller within the LSI adapter selection.



After clicking start the following foreign configuration screen will appear, click on clear.

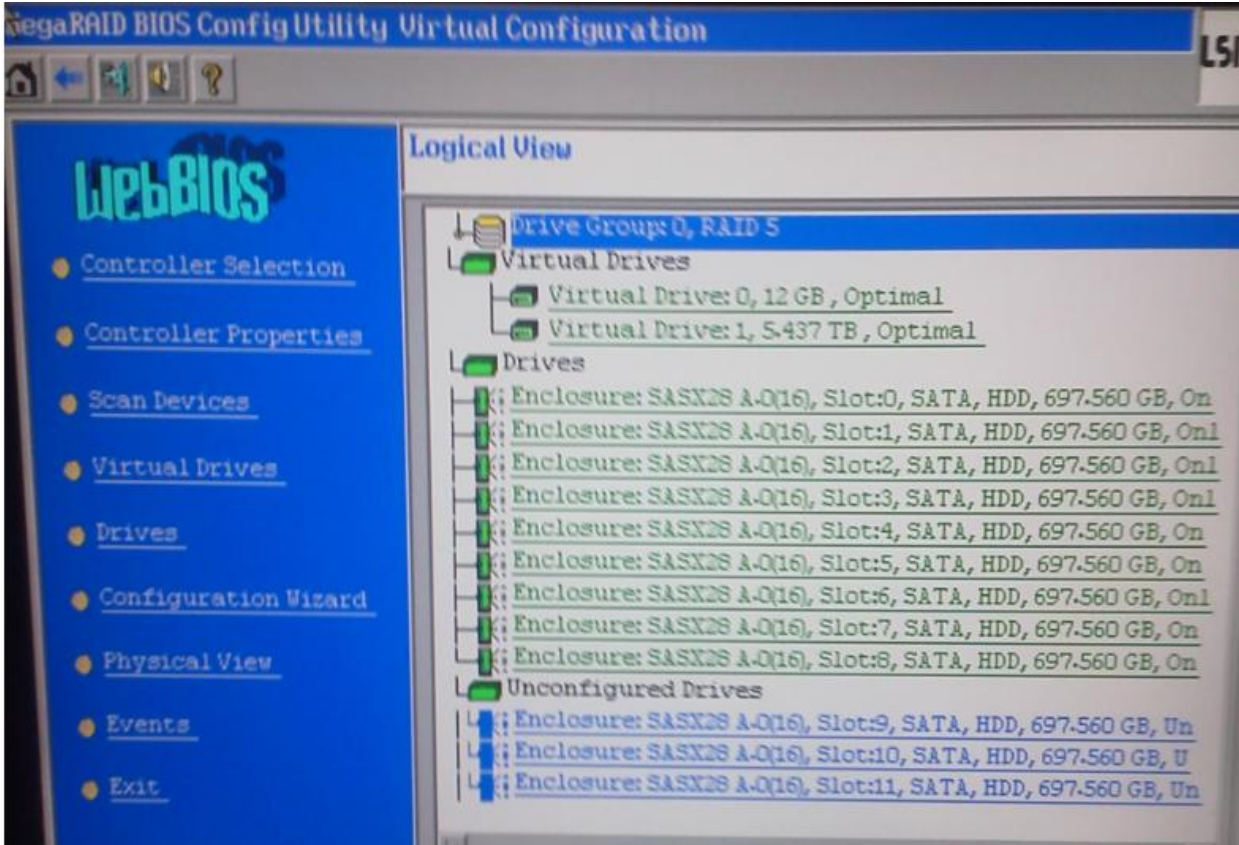


Once clicking clear you will be prompted to proceed, click Yes.

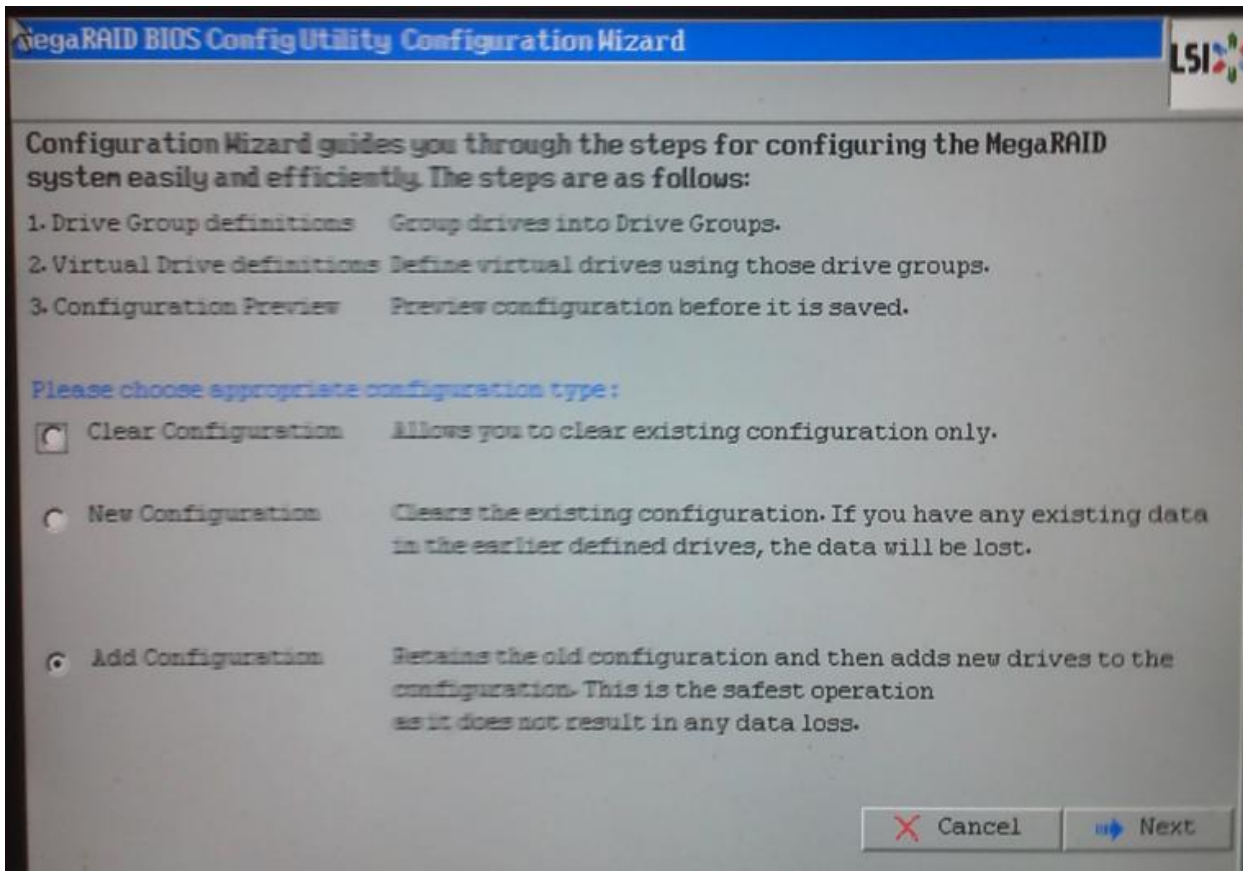


We are now on the MegaRAID BIOS ConfigUtility Virtual Configuration window. Notice the 3 newly installed unconfigured drives in blue at the bottom of the logical view.

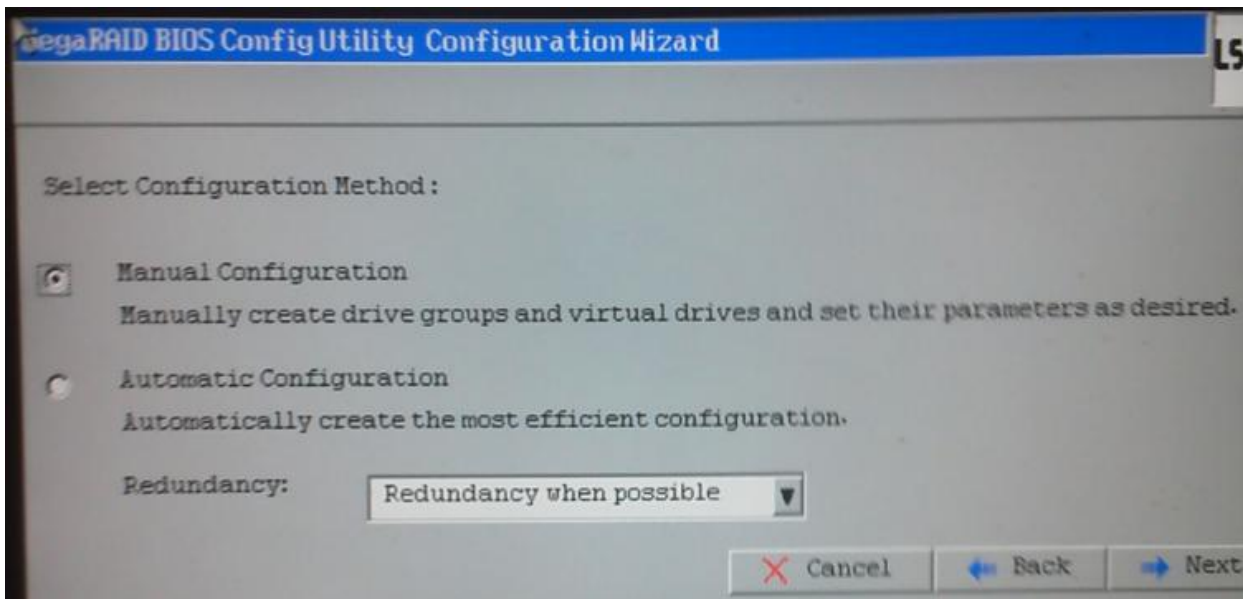
Tab down to configuration wizard and hit enter.



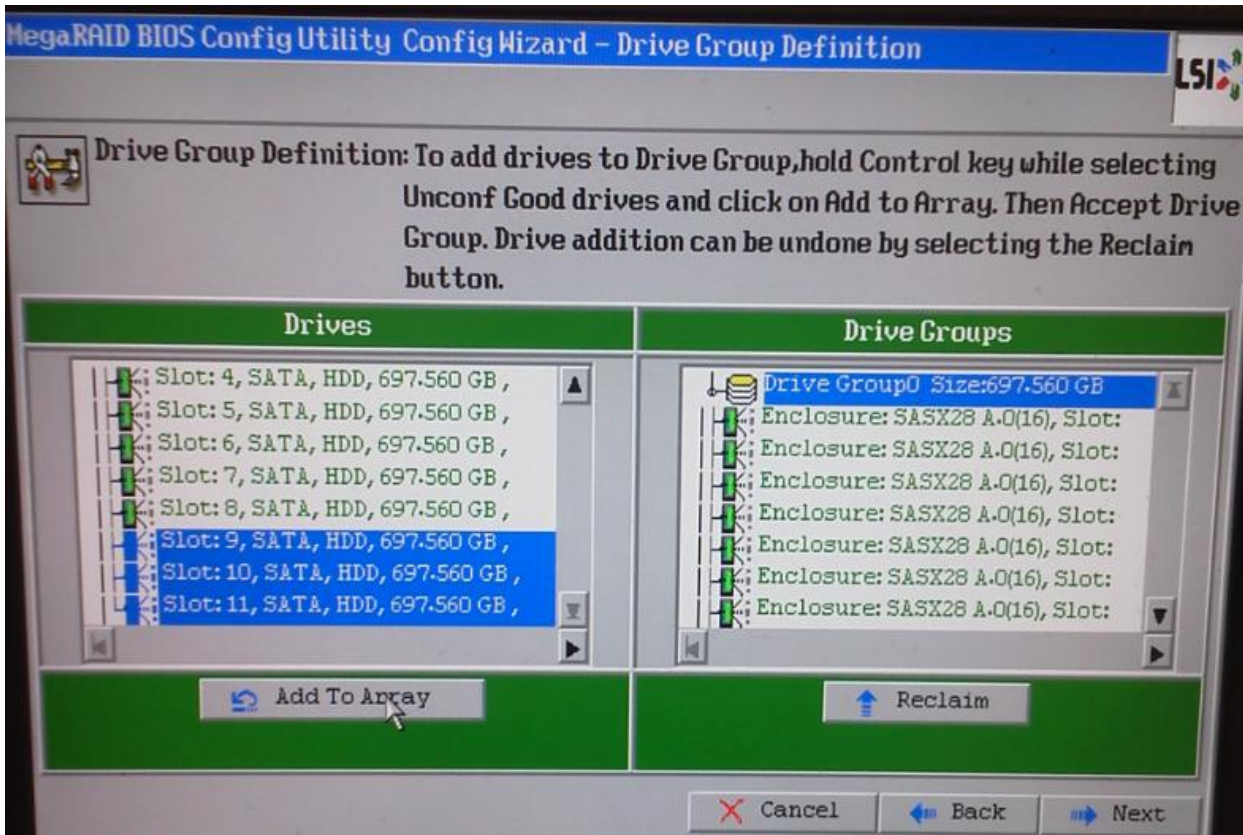
Once in the configuration wizard, select Add Configuration and click next.



Select Manual configuration and Redundancy when possible and click next.

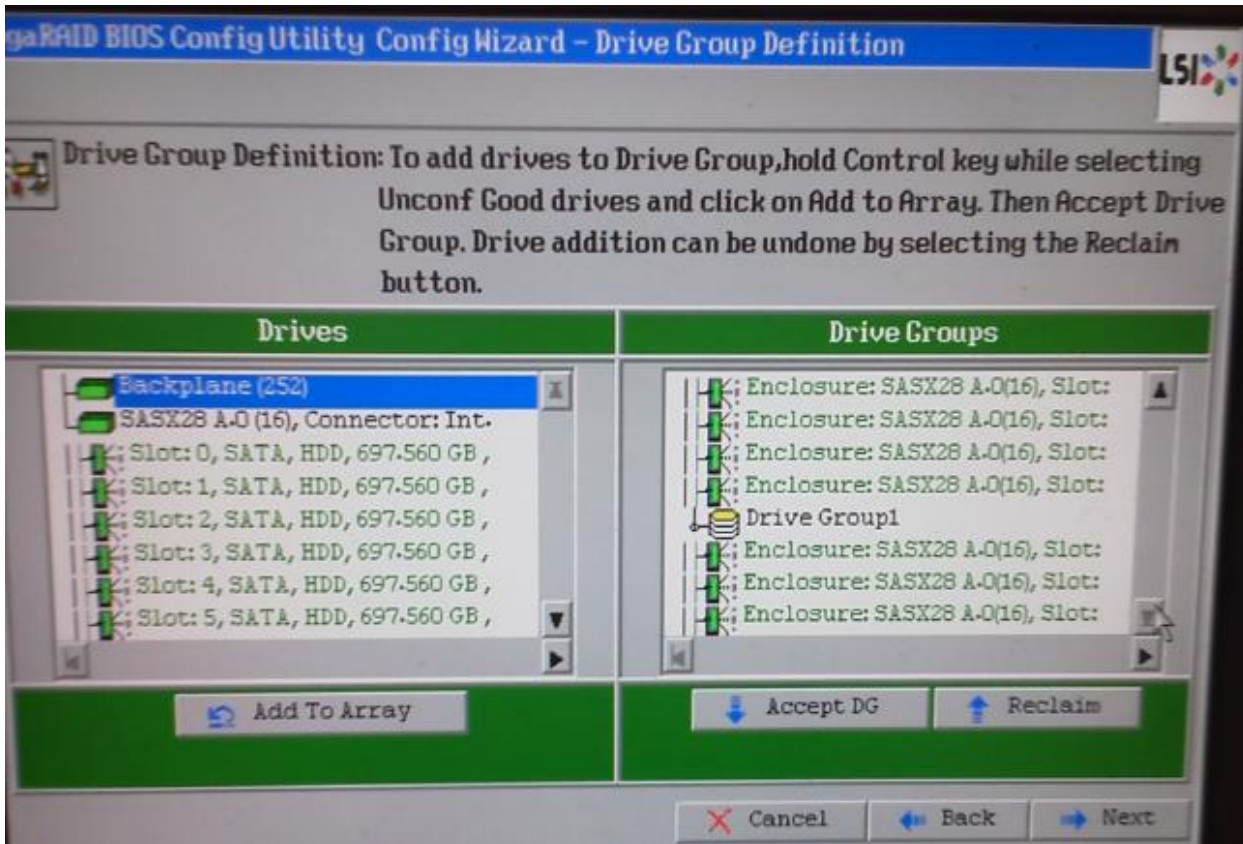


Select the newly added drives from the left hand column by holding down the shift key and using the down arrow. Once the drives are selected click Add To Array.

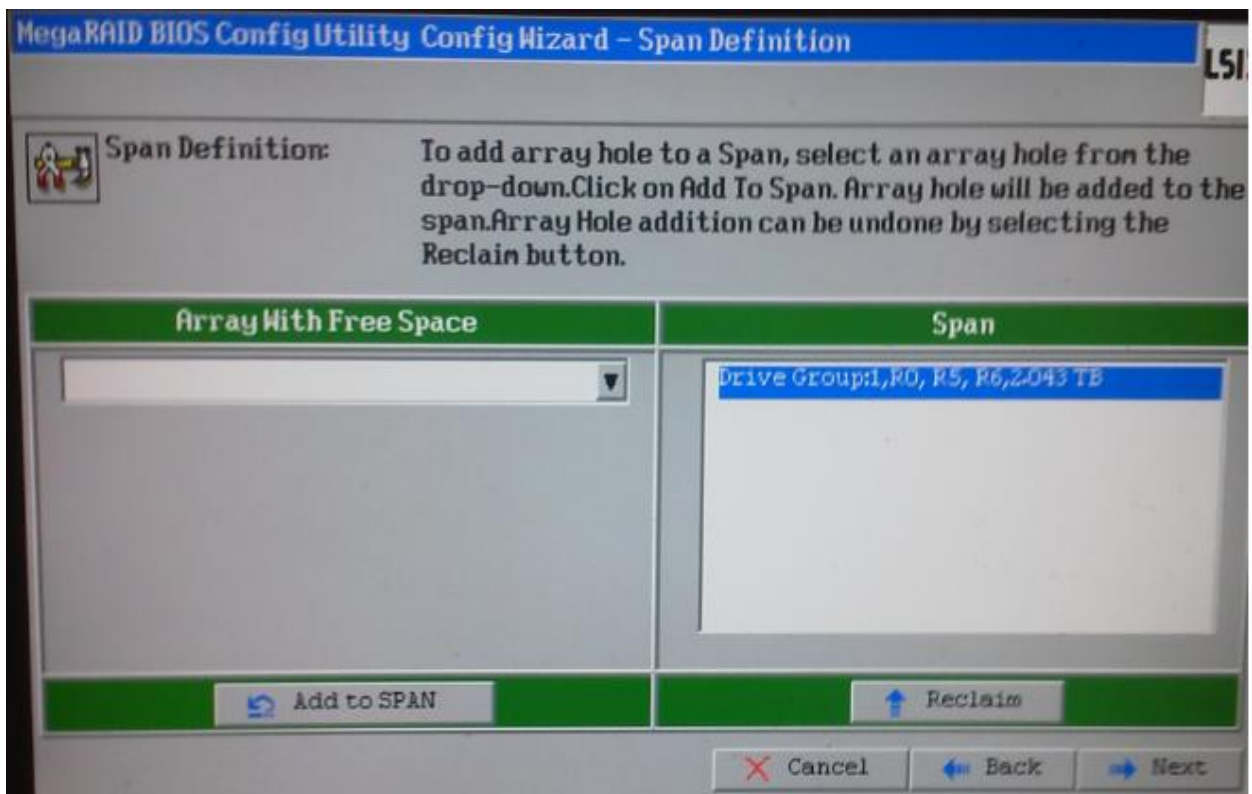
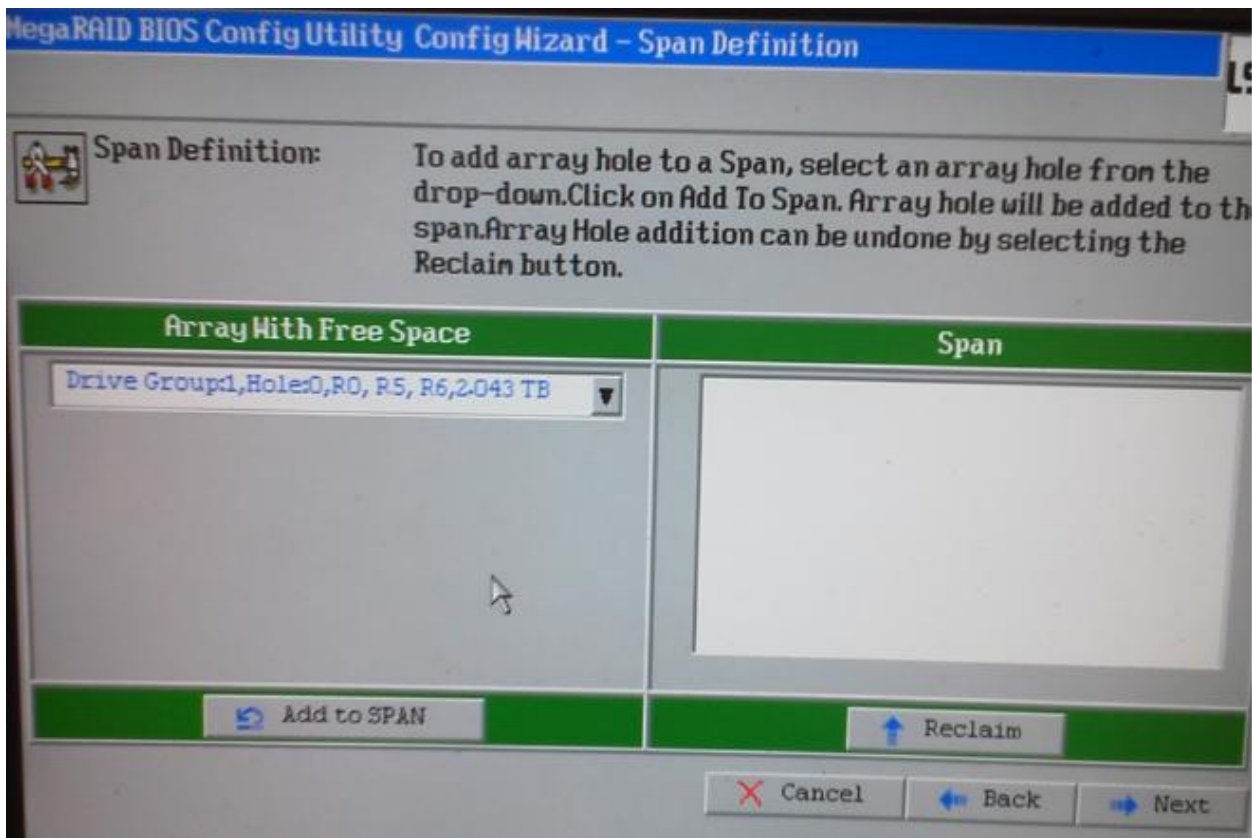




Notice it added Drive Group1 under Drive Groups on the left. Click Accept DG and then click next.



Click Add to SPAN on the Span Definition window and click next.

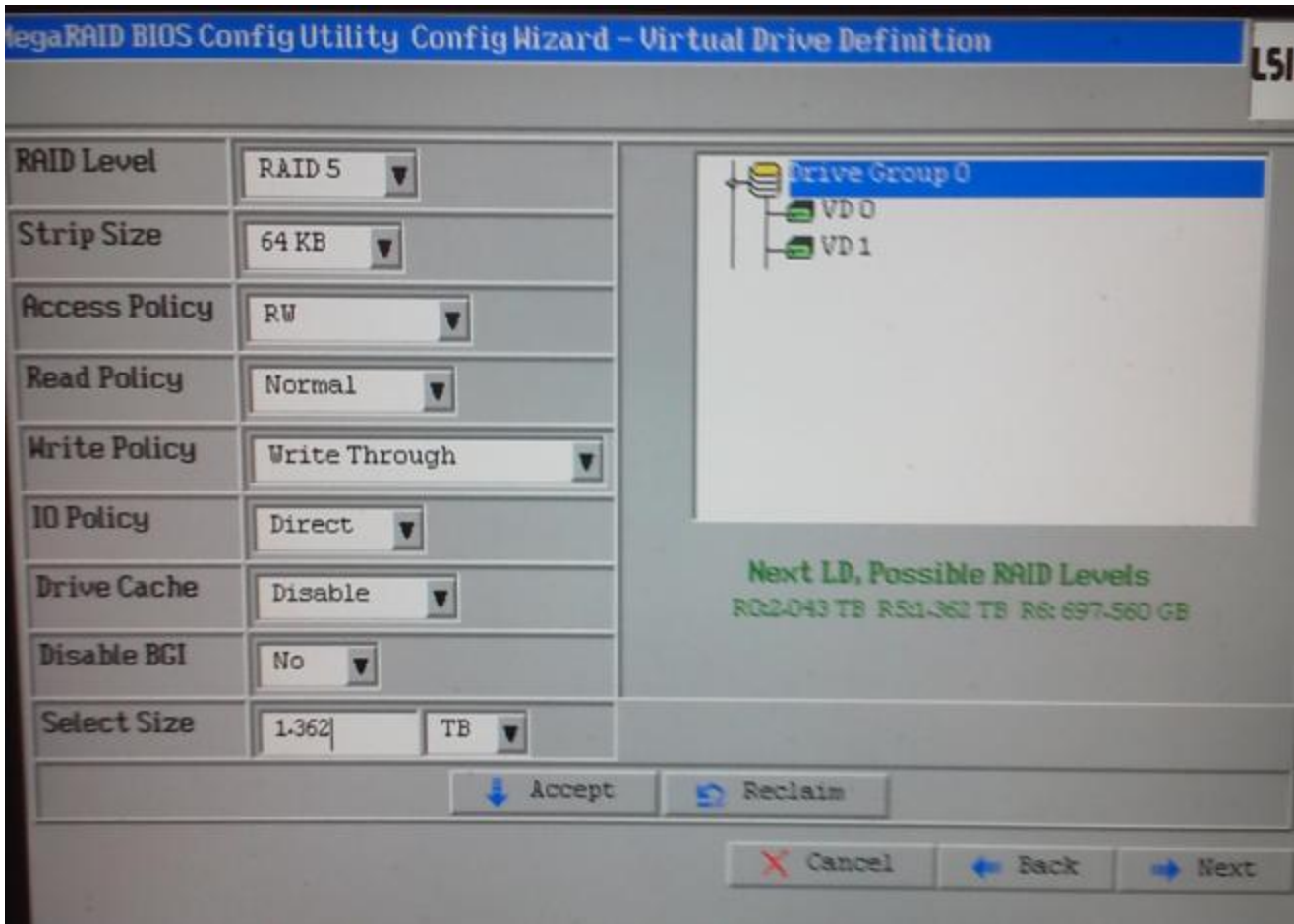


Now we need to define the virtual drive as RAID Level 5, strip size 64KB, Access Policy RW, Read Policy Normal, Write Policy Write Through, IO policy Direct, Drive Cache Disable, Disable BGI NO. We also have to define the size in the Select Size field.

Note that the size to enter is taken from the right of the screen in green R5:1.362 TB.

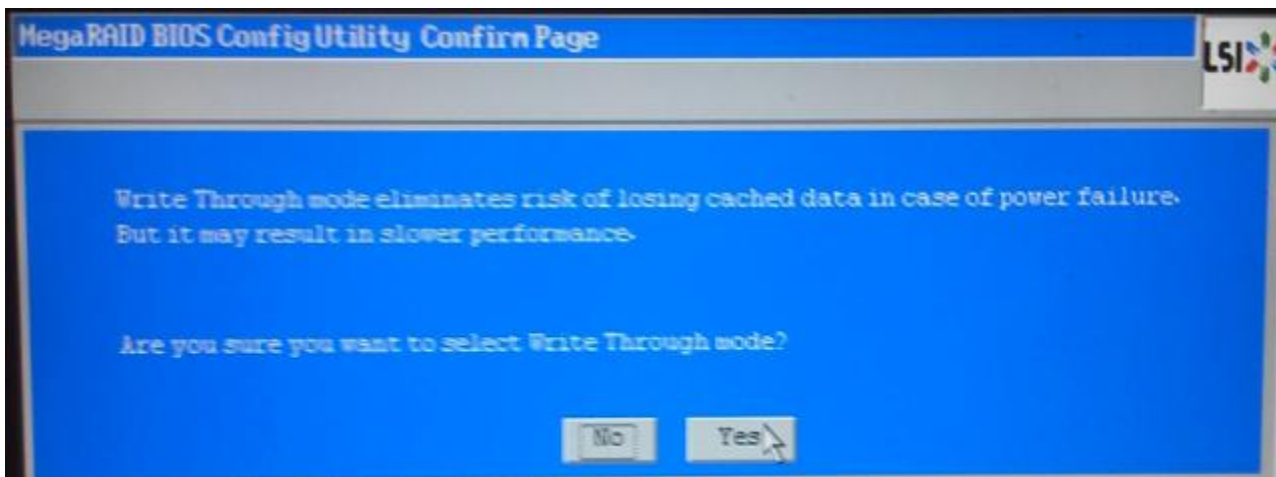
This size will vary depending on the number of drives added to server.

Once defined click Accept

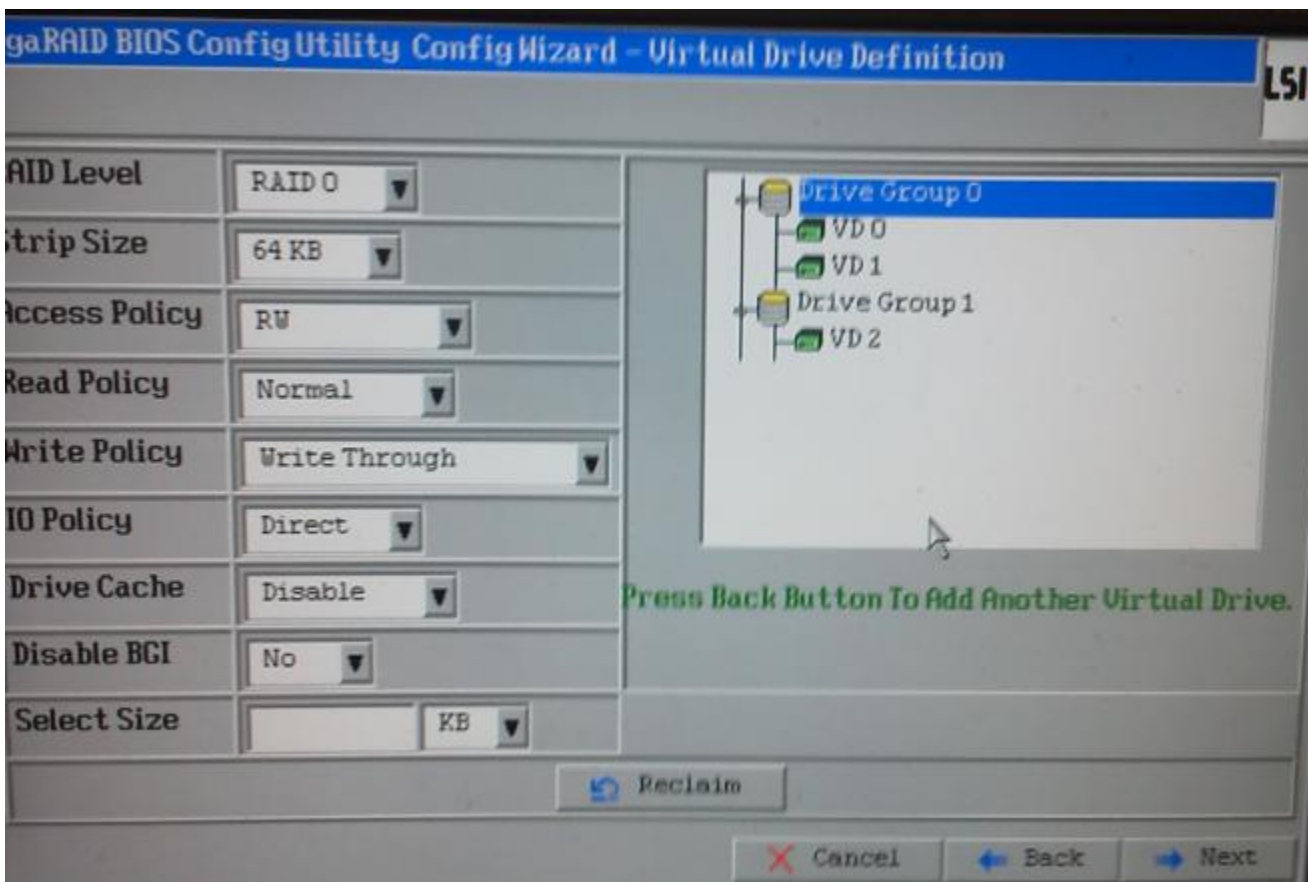




Click Yes to accept write through mode.



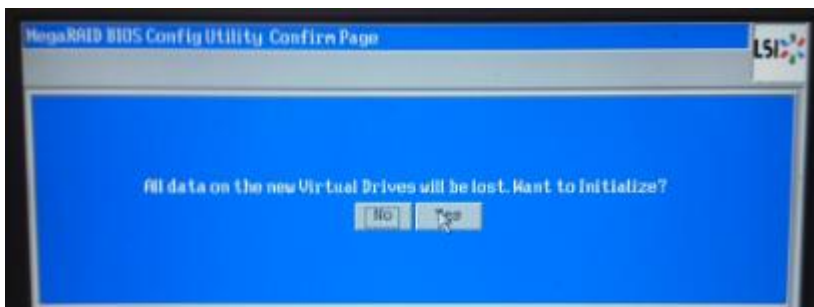
Notice VD2 is now under Drive Group 1, click next then Accept.



Save the Configuration, click Yes.

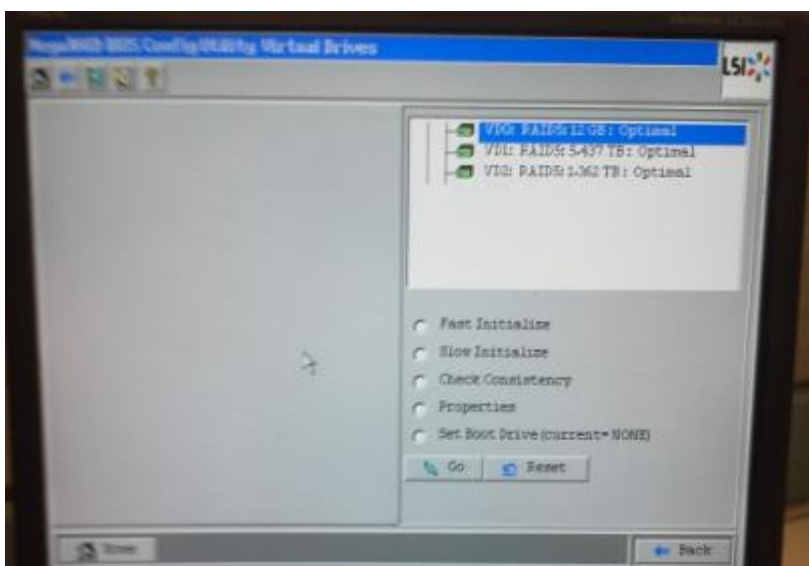


Click Yes to initialize.



The added disks in this example now show up as VD2, a new RAID 5 configuration. Click home and exit.

CTRL- ALT-DEL to reboot server.



Next we need to format and make a mount point.

Open a console on the server and use the following commands.

```
#cat /proc/partitions
```

You will see /dev/sdb and /dev/sdb1. The one you just created will not have a mount point so you will only see /dev/sdx this is what we need for the next command. It is likely /dev/sdc or /dev/sdd.

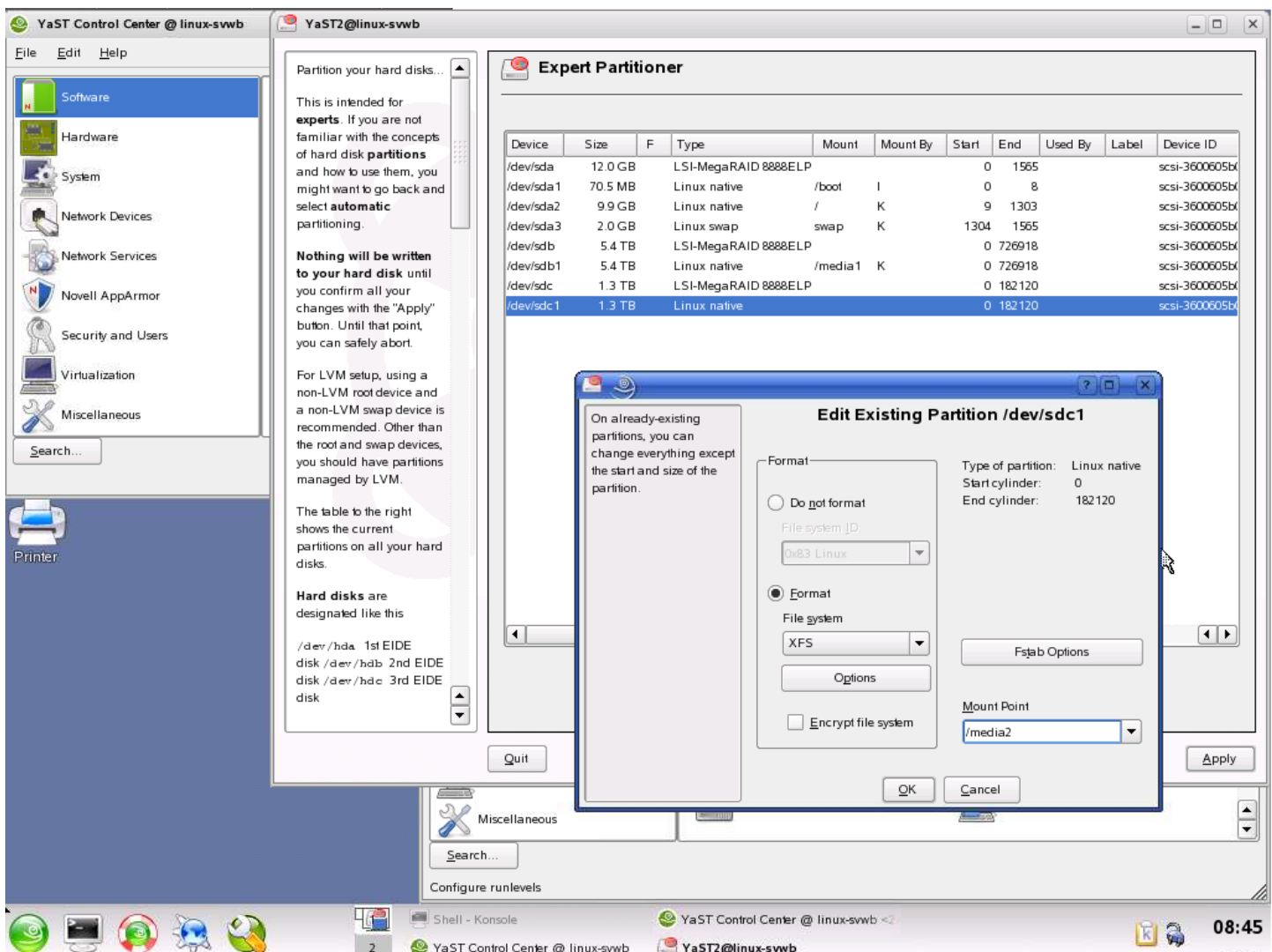
```
# parted -- /dev/sdd mklabel gpt
```

```
#parted -- /dev/sdd mkpart primary xfs 0 -0 mkdir /media2
```

Go to YaST > system > partitioner

Select /dev/sdx, Format for XFS, mount Point is /media2 (the one you just created)

Click ok and finish to complete the formatting.



Below shows the newly added 1.3TB mounted at /media2.

Partition your hard disks...

This is intended for **experts**. If you are not familiar with the concepts of hard disk **partitions** and how to use them, you might want to go back and select **automatic** partitioning.

**Nothing will be written to your hard disk** until you confirm all your changes with the "Apply" button. Until that point, you can safely abort.

For LVM setup, using a non-LVM root device and a non-LVM swap device is recommended. Other than the root and swap devices, you should have partitions managed by LVM.

The table to the right shows the current partitions on all your hard disks.

**Hard disks** are designated like this

/dev/hda 1st EIDE disk  
/dev/hdb 2nd EIDE disk  
/dev/hdc 3rd EIDE disk

### Expert Partitioner

Device	Size	F	Type	Mount	Mount By	Start	End	Used By	Label	Device ID
/dev/sda	12.0 GB		LSI-MegaRAID 8888ELP			0	1565			scsi-3600605b
/dev/sda1	70.5 MB		Linux native	/boot	I	0	8			scsi-3600605b
/dev/sda2	9.9 GB		Linux native	/	K	9	1303			scsi-3600605b
/dev/sda3	2.0 GB		Linux swap	swap	K	1304	1565			scsi-3600605b
/dev/sdb	5.4 TB		LSI-MegaRAID 8888ELP			0	726918			scsi-3600605b
/dev/sdb1	5.4 TB		Linux native	/media1	K	0	726918			scsi-3600605b
/dev/sdc	1.3 TB		LSI-MegaRAID 8888ELP			0	182120			scsi-3600605b
/dev/sdc1	1.3 TB		Linux native	/media2	I	0	182120			scsi-3600605b

Buttons: Create, Edit, Delete, Resize, LVM..., RAID..., Crypt File..., Expert., Quit, Apply

The final step to make the newly added drives available as a storage repository in VSM.

Check the newly added media repository under local repositories on the vsmc pages of the server.

In our example our new mount point was /media2.

The screenshot displays the Video Surveillance Management Console (VSMC) interface within a Windows Internet Explorer browser window. The browser's address bar shows the URL `http://14.114.1.80/vsmc`. The interface features a left-hand navigation menu with categories: Overview, Monitoring, and Configuration. The main content area is titled "Media Server Configuration" and is divided into several sections:

- Storage Configuration:** Includes a "Max Storage %" dropdown menu set to 98.
- PTZ Configuration:** Includes a "Camera Control Lockout" dropdown menu set to 5 Minutes.
- Media Out Ports:** Includes input fields for "HTTP Port" (80), "RTSP Port" (554), "Proxy Port" (9090), and "RTP Port Range".
- Local Repositories:** Includes a "Local Archive Repositories" section with checkboxes for `/media1` and `/media2`, both of which are checked.
- Clipping:** Includes a "Local BWMIX Clip Repository" dropdown menu set to `/media1`.
- Back-up:** Includes a "Back-up Repository" section with checkboxes for `/media1` and `/media2`, both of which are unchecked.
- Events:** Includes a "Maximum Event Marking Duration" input field set to 7200.

At the bottom of the configuration area, there are two buttons: "Update" and "Reset".