

## MSP Server RAID Configuration

### Default configuration

The VSM MSP 2RU and 4RU servers use RAID with their storage. All of the drives are grouped into a RAID-5 array, with the array divided into one volume for the operating system and 1-2 volumes for video storage: servers with up to 12 hard drives contain one volume for video ( **/media1**), servers with more than 12 drives have a second volume for video ( **/media2**).

### Configuring the RAID

Should it become necessary to setup the server's RAID configuration again, the process is as follows:

1. After the motherboard BIOS loads the 'MegaRAID SAS-MFG BIOS' will load and display a long list of the controller configuration - controller, list of disks, list of volumes; at the bottom of this display the message to press CTRL-H to enter the MegaRAID configuration.
2. When the configuration program starts you will first be presented with a brief menu to select the MegaRAID controller - only one controller is possible so press SPACEBAR to continue or click the 'Start' button.
3. To configure the RAID for VSMS server select 'Configuration Wizard' -> 'New Configuration' -> 'Custom Configuration'
4. Create a Disk Group (DG) by selecting each of the Physical Disks and clicking the 'AddtoArray' button. You can select each disk one at a time, or select multiple disks with the SHIFT key depressed. Each of the disks will appear in the righthand DiskGroup window. Once all of the disks are in the DiskGroup, click Accept DG to create DG0. Click Next to continue.
5. Configure a Span by selecting DG0 from the Array With Free Space window and clicking the Add to SPAN button. Click Next to continue.
6. Create two Virtual Disks, starting with VDO. In the VD Definition form, set the following values:  
RAID Level RAID 5  
Strip Size 64 KB  
Access Policy RW  
Read Policy Normal  
Write Policy WThru  
Wrthru for BAD BBU Checked  
IO Policy Direct  
Disk Cache NoChange  
Disable BGI No  
Select Size 12 GB
7. Click Accept to create VDO.
8. Click Back
9. If the unit has (12) or fewer hard drives:
  1. Select DG0 from the Array With Free Space window again and click the Add to SPAN button.
  2. Click Next to continue.
  3. Create VD1. In the VD Definition form, set the following values:  
RAID Level RAID 5  
Strip Size 64 KB  
Access Policy RW

Read Policy Normal  
Write Policy Wthru  
Wrthru for BAD BBU Checked  
IO Policy Direct  
Disk Cache NoChange  
Disable BGI No

4. The Select Size box will fill in the correct size for VD1.
5. Click Accept to create VD1
6. Click Next to continue.
7. The Disk Group and Virtual Disk configuration will be displayed as follows:  
--+ DG 0  
|- VD 0  
|- VD 1

10. If the unit has more than (12) hard drives:

1. Select DG0 from the Array With Free Space window again and click the Add to SPAN button.
2. Click Next to continue.
3. Create VD1. In the VD Definition form, set the following values:  
RAID Level RAID 5  
Strip Size 64 KB  
Access Policy RW  
Read Policy Normal  
Write Policy Wthru  
Wrthru for BAD BBU Checked  
IO Policy Direct  
Disk Cache NoChange  
Disable BGI No
4. In the Select Size box enter a value one half the maximum size that was filled in. The virtual disk must be less than 15TB, and it is recommended that storage larger than 15TB be divided evenly into two virtual disks.
5. Click Accept to create VD1
6. Click Back
7. Select DG0 from the Array With Free Space window again and click the Add to SPAN button.
8. Click Next to continue.
9. Create VD2. In the VD Definition form, set the following values:  
RAID Level RAID 5  
Strip Size 64 KB  
Access Policy RW  
Read Policy Normal  
Write Policy Wthru  
Wrthru for BAD BBU Checked  
IO Policy Direct  
Disk Cache NoChange  
Disable BGI No
  1. The Select Size box will auto-fill with the correct value.
  2. Click Accept to create VD2
  3. Click Next to continue.

4. The Disk Group and Virtual Disk configuration will be displayed as follows:  
--+ DG 0  
|- VD 0  
|- VD 1  
|- VD 2

11. Click Accept to accept the configuraiton.
12. Click Yes to save the configuration.
13. Click Yes to initialize the created Virtual Disks.
14. The Virtual Disk details page will appear and display the new Virtual Disks with progress as they are initialized. It should only take a minute or less to initialize a 10TB VD.
15. Once the process is complete, press Home.
16. To exit the WebBIOS click the Exit option from the main menu. When prompted, reboot the server by pressing CTRL-ALT-DEL.

### Hard drive positions

The hard drives in the MSP servers are in numbered slots 0-11 in the 2RU, and 0-23 in the 4RU. Starting with the first drive, slot 0, is in the lower left corner of the front of the chassis the slot numbers go UP in the first column, then start again at the bottom of the next column to the right, with the last slot in the upper right corner.

### MSP Hard Drive Slot Numbers

