## Adding additional drives to a CIVS-MSP server Jim Sullivan

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.

dapter Selection	on			LSID
Adapter No.	Bus No	Device No	Туре	Firmware Version
0. 9	3	0	MegaRAID SAS 8888ELP	1.40.232-1007
			Start	

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

egaRAID BIOS Config Utility Foreign Configur	rtion	LSI
1 Foreign Config(s) Found. Want to Import?		
Select Configuration	All Configurations	
		_
	Preview Clear	Cancel

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

SegaRAID BIOS Config Utility Confirm Page	LSIX
Previous foreign configuration will be lost. Do you want to proceed? No 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.

ilegaRAID BIOS Config Utilit	y Configuration Wizard	LSI2;
Configuration Hizard guid system easily and efficie	es you through the steps for configuring the MegaRAID thy. The steps are as follows:	
1. Drive Group definitions	Group drives into Drive Groups.	
2. Virtual Drive definition	s Define virtual drives using those drive groups.	
3. Configuration Preview	Preview configuration before it is saved.	
Please choose appropriate of Clear Configuration	Allows you to clear existing configuration only. Clears the existing configuration. If you have any existing in the earlier defined drives, the data will be lost.	g data
€ Add Configuration	Retains the old configuration and then adds new drives to a configuration. This is the safest operation as it does not result in any data loss.	the
	X Cancel	Next

Select Manual configuration and Redundancy when possible and click next.

degal	RAID BIOS Config U	tility Configuration Wizard			LS
Sele	ect Configuration	Method:			
•	Manual Configur Manually create	ation drive groups and virtual driv	es and set their	r parameters a	as desired.
0	Automatic Confi Automatically c	guration reate the most efficient config	juration.		
	Redundancy:	Redundancy when possible	V		
			× Cancel	+ Back	→ 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.



MegaRAID BIOS Config Utili	ty Config Wizard – Sp	an Definition	LSI
Span Definition:	To add array hole t drop-down.Click or span.Array Hole ad Reclain button.	to a Span, select an array hole from n Add To Span. Array hole will be adde Idition can be undone by selecting t	the d to the he
Array With Fre	e Space	Span	
		Drive Group:1,R0, R5, R6,2-043 TB	
Add to	SPAN	A Reclaim	
		🗙 Cancel 🛛 🛻 Back 🔿	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

egaRAID BIOS Co	nfigUtility ConfigHizard	- Virtual Drive Definition
RAID Level	RAID 5	A Drave Group 0
Strip Size	64 KB	- VD 0 - VD 1
Access Policy	RW	
Read Policy	Normal	
Write Policy	Vrite Through	
10 Policy	Direct V	
Drive Cache	Disable V	Next LD, Possible RAID Levels R0:2-043 TB R5:1-362 TB R6: 697-560 GB
Disable BCI	No	
Select Size	1-362 TB	
	👃 Accept	S Reclaim
		🗙 Cancel 🍖 Back 📫 Next

Click Yes to accept write through mode.

MegaRAID BIOS Config Utility Confirm Page	LSIN
Write Through mode eliminates risk of losing cached data in case of power failu But it may result in slower performance.	re
Are you sure you want to select Write Through mode?	
No Tes	

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

gaRAID BIOS Co	nfigUtility ConfigWiz	ard-Virt	ial Drive Defini	tion	LSI
AID Level	RAID 0			1p 0	1
itrip Size	64 KB		VD0		
Iccess Policy	RW		Drive Grou	p1	
Read Policy	Normal		11		
Arite Policy	Write Through	V			
IO Policy	Direct V		1	2	
Drive Cache	Disable	Press	Back Button To F	dd Another V	Virtual Drive.
Disable BCI	No				
Select Size	KB V				
		S Recia	m		
			X Cancel	🔶 Back	- Next

Save the Configuration, click Yes.



Click Yes to initialize.

HegaRAID BIOS Config Utility Confirm Page	LSIS
fil data on the new Virtual Drives will be lost. Kant 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.

Ya512@linux-svwb											
artition your hard disks 🔺	Exp	ert Partiti	one	er							
is is intended for											
perts. If you are not											
niliar with the concepts	Device	Size	F	Type	Mount	Mount By	Start	End	Used By	Label	Device ID
hard disk partitions	(dev/eda	12.0 CP		I SI Maga DAID 9999 ELD		,		1060			cerci 260060
d how to use them, you	/dev/sda	12.0 GB		LSI-WegatAID 0000ELP	<i>(</i> <b>)</b> <i>() <i>() () () () <i>() () () () <i>() () () <i>() () () () <i>() () () () () <i>() () () () () () () () () <i>() () () () () <i>() () () () () () () () <i>() () () () () () () () <i>() () () <i>() () () () <i>() () () () () () () () () () <i>() <i>() () () <i>() () <i>() () <i>() () () <i>() () <i>() () <i>() () <i>() () <i>() <i>() () <i>() () <i>() <i>() () <i>() () <i>() <i>() () <i>() <i>() <i>() () <i>() <i>(, <i>)</i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i></i>			1305			SCSI-500000
ght want to go back and	/dev/sda1	70.5 MB		Linux native	/boot	1	U	8			SCSI-300000
ectautomatic	/dev/sda2	9.9 GB		Linux native	/	к	9	1303			scsi-360060
titioning.	/dev/sda3	2.0 GB		Linux swap	swap	к	1304	1565			scsi-360060
thing will be written	/dev/sdb	5.4 TB		LSI-MegaRAID 8888ELP			0	726918			scsi-360060
your hard disk until	/dev/sdb1	5.4 TB		Linux native	/media1	к	0	726918			scsi-360060
confirm all your	/dev/sdc	1.3 TB		LSI-MegaRAID 8888ELP	,		0	182120			scsi-360060
anges with the "Apply"	/dev/sdc1	1.3 TB		Linux native	/media2	I	0	182120			scsi-360060
ton. Until that point							-				
can safely abort											
can allery abort.											
LVM setup, using a											
-LVM root device and											
on-LVM swap device is											
ommended. Other than											
root and swap devices.											
should have partitions											
naged by LVM											
naged by EVM.											
a table to the right											
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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.

🖉 Video Surveillance Management Conso	le - Windows Internet Explorer pro	wided by Cisco		_[편]
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🕞 Installed Packages				
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Monitoring	Max	Storage %: 98		
monitoring	PTZ Configuration			
Archives	Camera Contr	ol Lockout: 5 Minutes 💌		
Archive Backup				
🔊 System Log	Media Out Ports			
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🔊 Server Status				
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🦓 Media Server		in the second		
🥰 Media Server Backup	Clipping			
🥞 Operations Manager	Local BVVM/X Clip F	Repository: /media1		
🦂 Operations Manager				
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