

Server Installation

Describes the RAID configuration and operating system installation on standard SuperMicro Server with 4x2TB drives and 1xSSD drives (128 or 256 GB)

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I MegaRAID SAS-MFI rsion 3.30.02.2 (E pyright(c) 2014 LS -0 (Bus 2 Dev 0) package: 12.15.0	BIOS Build June 17, 2014) SI Corporation LSI 2108 MegaRAID -0239			
ttery Status: Not I Slot Number: 5	present			
LUN VENDOR PR	ODUCT	REVISION	CAPACITY	
LSI LS 0 ATA T(0 ATA T(0 ATA T(0 ATA T(0 ATA T(0 LSI V) Virturi ive(s) irtual Drive(s) ess (Ctrl>(H) f	I 2108 MegaRAID OSHIBA MG03ACA2 OSHIBA MG03ACA2 OSHIBA MG03ACA2 OSHIBA MG03ACA2 irtual Drive found on the host adapter handled by BIOS r WebBIOS or press (Ctrl)	2.130.403-4660 FL1A FL1A FL1A RAID5 	512MB 1907729MB 1907729MB 1907729MB 1907729MB 5719182MB	
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Step 1 — Start RAID Configuration



- Start RAID configuration by pressing **Ctrl + H** during start up.
- Run Configuration Wizard from the left menu
- Pick New Configuration and press the Next button

Step 2 — Create RAID DriveGroups

MegaRAID BIOS Config Utility Config Wizard - Drive Group Definition LSDS Image: Drive Group Definition: To add drives to Drive Group, hold Control key while selecting Unconf Good drives and click on Add to Array. Then Accept Drive Group. Drive addition can be undone by selecting the Reclain button.				
Drives	Drive <u>G</u> roups			
Backplane (252) SASX28 A-0 (16), Connector: Port 0 - Ki Slot: 0, SAS, HDD, 1-818 TB, Online Ki Slot: 3, SAS, HDD, 1-818 TB, Online Ki Slot: 3, SAS, HDD, 1-818 TB, Online Ki Slot: 3, SAS, HDD, 1-818 TB, Online Ki Slot: 6, SATA, HDD, 1-818 TB, Uncon	Drive Group0 Size:1.818 TB Enclosure: SASX28 A-0(16), Slot:0, S Drive Group1 K: Enclosure: SASX28 A-0(16), Slot:2, S Enclosure: SASX28 A-0(16), Slot:3, S			
Add To Array	👃 Accept DG 🛛 🛉 Reclaim			
	X Cancel 🖣 Back 🕪 Next			

- Create two drivegroups, each with two discs
 - Insert disks from slot 0 and 1 into first drivegroup
 - Create second drivegroup by pressing the Accept DG button
 - Insert disks from slots 2 and 3 into the second drivegroup
 - Confirm the second drivegroup by pressing the Accept DG button again.

Step 3 — Create RAID Span

legaRAID BIOS Config Utili	ty Config Wizard - Sp	an Definition	
Span Definition:	To add array hole to a Span, select an array hole from the drop-down.Click on Add To Span. Array hole will be added to the span.Array Hole addition can be undone by selecting the Reclaim button.		
Array <u>W</u> ith Fre	e Space	<u>S</u> pan	
	.	Drive Group:0,R0, R1,3:636 TB Drive Group:1,R0, R1,3:636 TB	
Add to	SPAN	A Reclaim	
		X Cancel Im Back Wext	

 Create a span with both drivegroups that you have created in the previous step.

Step 4 — Configure Virtual Drive

RAID Level	RAID 10				anne a	⊻irt	ual Drives	
Strip Size	64 KB 🔻		111					
Access Policy	RW	•						
Read <u>Policy</u>	Ahead 🔻							
<u>Write Policy</u>	Write Throug	gh	T					
IO LOUCH	Cached 🔻							
Drive Cache	NoChange	•			Next LD,	Poss	ible RAID Lev	els
Disable BGI	No 🔻			ROU: 1-272 1B RI0:3-636 TB				
Select Size	3.636	тв 💦		Upda	te Size			
		♣ Ac	cept	5	Reclaim			
					X Cance	el	M Back	Mext

- Pick RAID 10
- Set Write Policy to Write Through
- Set size to 3.636 TB

Step 5 — Confirm configuration&initialization



Confirm the configuration

Step 6 — Create Debian Installer bootable USB drive

 💉 Rufus 2.11.995 —	
Device	∳ *•
	~
Partition scheme and target system type	
	~
File system	
	~
Cluster size	
New volume label	~
Format Options Check device for bad blocks Quick format Create a bootable disk using FreeDOS Create extended label and icon files	~
READY	
About Log Start	Close
0 devices found	#

- You may skip this step if you already have a bootable installer media.
- Download Debian Jessie (stable) netinst ISO for AMD64 architecture (download)
- If you are running Windows, use Rufus (<u>download</u>) to create a bootable USB drive with downloaded ISO file

Step 7 — Start Debian Installation



- Boot from a USB drive (or different installer media) created in the previous step
 - Boot menu can be shown using the F11 key during startup
- Pick the default Install option (textual, no graphics)
- Pick the English language and english locale
- Select the expected destination country (eg. Germany for Buchshause, etc.). This info is needed for setting the correct time zone.
- Pick the American English keymap

Step 8 — Configure Network Installation



- Plug the ethernet cable into one ethernet socket (eg. the **middle** one eth0)
- Pick corresponding ethernet interface for installation (eg. eth0)
- Enter correct server name (eg. C014H010)
- Enter domain just to suit your needs, will be changed later on-site to suit customer network policies (eg. Inflex.local)

Step 9 — User Accounts Configuration

A user account will be non-administrative act	[!!] Set up users and passwords created for you to use instead of the r ivities.	root account for			
Please enter the real name of this user. This information will be used for instance as default origin for emails sent by this user as well as any program which displays or uses the user's real name. Your full name is a reasonable choice.					
Full name for the new	user:				
<go back=""></go>		<continue></continue>			

- Create root account with default password
- Create txpom account with default password

Step 10 — Configure Drives&Partitioning

[11] Partition disks This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table. Initial continuers Configure the logical Volume Manager Configure encrysted volumes Configure the logical Volume Manager Configure itsEl volumes SCSIS (0,0) (sdd) + 200.0 GB ATA INTEL SINGCAR20 pri/log 200.0 GB SCSIS (0,0) (sdd) + 200.0 GB ATA INTEL SINGCAR20 pri/log 200.0 GB FREE SPACE SISSIE (0,0) (sdd) + 200.0 GB ATA INTEL SINGCAR20 pri/log 200.0 GB SCSIS (0,0) (sdd) + 200.0 GB ATA INTEL SINGCAR20 pri/log 200.0 GB FREE SPACE SISSIE (0,0) (sdd) + 200.0 GB ATA INTEL SINGCAR20 pri/log 200.0 GB Mind changes to partitions file primery 3.5 GB BE field Free SPACE Distance Primer Bissie Bissie Primer Bissie P	[11] Partition disks Note that all data on the disk wou select will be ensed, but not before you have confirmed that you really want to make the changes. Select disk to partition: Select disk to partition: SSIE (00:00) (seb) - 200 0 de and this secondary seco	This is an exervise of your commutity configured partitions and mout points, select a partition to modify its acting the last spartitic to the select a partitions, on a device to initialize its partition to the select a commutations, on a device to initialize its partition to the select a commutations, on a device to initialize its partition to the select a commutations, on a device to initialize its partition to the select a commutation of the select a commutation of the select a sel
	<tab> moves; <space> selects; <enter> activates buttons</enter></space></tab>	
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- Pick guided partitioning, confirm removal of existing partitions (if-any)
- Confirm the usage of entire disk Guided Use entire disk
- Pick the correct drive for operating system installation SSD drive
- Finish partitioning and write changes

Step 11 — Finish Debian Installation



- Pick download mirror (eg. ignum.cz)
- Use no proxy
- Do not participate in package survey
- Pick web server, SSH server and Standard System Utilities
- Install GRUB loader to the root of the SSD drive

Step 12 — Reboot



- Remove the installer media, reboot the server and let the new operating system to start up.
- Complete the <u>OS First Start</u> <u>Configuration</u>