

# **Preparing the boot media/installer with the ISO file:**

Downloaded and extract the ISO file with your favorite uncompressing/extracting software (for example: 7zip or WinZip<sup>®</sup> programs) to an empty USB Flash Drive.

After extracting the ISO file on your USB Flash Drive, the root directory must contain ONLY the following directories: bxxxx, boot, and file mmenu\_upd.sh where the xxxx is the software build number.

- To make your USB Flash Drive bootable, enter the "boot" directory and run the "bootinst.exe" (For Windows) or "bootinst.sh" (For Linux).
- Continue to boot your storage server with USB Flash Drive.
- **NOTE** The prepared USB Flash Drive will run the software installer by default. If you desire to test or for nonmission critical or non-production usage the USB Flash Drive can boot the JovianDSS instead of running the software installer. To make this default change, run the "config.exe" from boot directory and select "r" to remove the default boot of the software installer.

## **Booting the Open-E JovianDSS:**

#### **General Hardware requirements**

- The minimum size for the JovianDSS boot medium is 16GB. A recommended JovianDSS boot medium use a HDD or SSD device. USB Flash Drive can be used as JovianDSS boot media for testing purposes or non-mission critical applications.
- It is necessary to use ECC RAM modules in the system.
- SATA hard disk drives are supported, but SAS disks are recommended for performance.
- Minimum of 8GB RAM plus 1GB per 1TB zPool space.
- Mirrored "Write Log" is required for production.
- Uninterruptable Power Supply (UPS) is strongly recommended.

Plug your installer media (USB Flash Drive) into the storage appliance.

The first boot menu will show the software version. You can enter or it will skip and continue automatically within 5 seconds.

The second menu allows you to select the 64-bit architecture to boot the Open-E JovianDSS or to install the software on a writable recommended boot media in your system using the interactive installer utility. Select "Run software installer" to install the Open-E JovianDSS on a writable boot media in your system.



- Launch system
- Launch software installer

Please follow the instructions while running the installer. Finally, reboot your storage server from the new boot media (set your BIOS boot options back from USB to the media where you installed the software).

**NOTE** Open-E JovianDSS can be used for evaluation up to 60 days with the trial product key. The trial key will be provided by your Open-E sales representative or from Reseller. When you decide to purchase the full version, you can continue to use the software and all your data and settings will remain intact.

You will see an option to run a memory test on the system by choosing "Run Memtest utility" in the first menu.

In order to convert the trial version to the full version, please enter your Open-E JovianDSS product key and storage capacity key in the WebGUI menu "about" section.

## Storage Configuration:

#### Step 1. Initialize hardware

Before using Open-E JovianDSS you should have the hard disk drives connected to the SATA and SAS ports on the motherboard or SAS HBA, and the LAN Card and other NICs already in your server.

Connect the keyboard and monitor (they will be needed for setup only). Later you can run the server in "headless mode" (without keyboard and monitor).

**NOTE** Please check the motherboard BIOS if the "headless mode" is enabled. In some cases systems will not boot if the keyboard is not connected. You'll find more about the headless mode in the motherboard's BIOS manual.

#### **Step 2.** Preparing for the WebGUI administration

After the boot process has finished, the Open-E JovianDSS will show you information about all its network settings. The standard IP Address setting for Open-E JovianDSS is: IP address 192.168.0.220 and Netmask 255.255.255.0. This setting can be changed manually by entering the following key sequence: left "**Ctrl**" + left "**Alt**" + "**N**".

#### **Step 3.** Entering product key and logging into Open-E JovianDSS

Connect to Open-E JovianDSS via network using any standard browser, and type the IP address to the URL entry line:

- https://192.168.0.220 or
- <u>https://dss</u>

Next, a window for entering the product key will appear. If you already have one, please enter it and click the apply button. Log into Open-E JovianDSS using the standard password: "*admin*". Now you will be able to set all server parameters to get started.

**NOTE:** Be aware the Password is case-sensitive.

# Step 4. Create zpools

• To create a new zpool, please go to the "Storage" menu. Click the "Add zpool" button in the upper right corner to run the "Zpool wizard".

open-e	JovianDSS			(i) About	() Help	🖃 Logout
Storage	Storage				() Rescan	+ Add zpo
User Management	() No zpools have been found in	the system. To create your first zpool please select 7	Add zpool" button.			
Storage Settings	Zpools available for	import				
System Settings	<ol> <li>No external zpools available for</li> </ol>	r the import have been found.				
Diagnostics	Unassigned disks					
	Search					
	Name	Serial number	Size -	Model		Blink
	1 sdbv	WX31EA1EC1180	838.36 GiB	WD9001BKHG02D22		•
	2 sdbw	WX31EA1EC3680	838.36 GiB	WD9001BKHG02D22		٠
	3 sdbx	WX31EA1EC8080	838.36 GiB	WD9001BKHG02D22		•
	4 sdby	WX31EA1EC8520	838.36 GiB	WD9001BKHG02D22		•
	5 sdbz	WX31EA1EC3160	838.36 GiB	WD9001BKHG02D22		•
	6 sdca	WX31EB1UTR600	838.36 GiB	WD9001BKHG02D22		•
	7 sdcb	WX31EA1EA8040	838.36 GiB	WD9001BKHG02D22		•
	8 sdcc	WX31EA1EC1570	838.36 GIB	WD9001BKHG02D22		•
	9 sdcd	WX31EA1EC0450	838.36 GIB	WD9001BKHG02D22		•
	10 sdce	WX31EA1EC4850	838.36 GIB	WD9001BKHG02D22		•
	11 sdch	WX31EA1EC6390	838.36 GiB	WD9001BKHG02D22		•
	12 sdci	WX31EA1EC2830	838.36 GiB	WD9001BKHG02D22		•
	13 sdcj	WX31EA1EC1200	838.36 GiB	WD9001BKHG02D22		•
	14 sdck	WX31EA1EC5130	838.36 GiB	WD9001BKHG02D22		•

• After starting the "Zpool wizard" all available disks will be listed.

Storage					() Restan
Zpool wizard					
1. Add data group	Available dis	sks		To add first Data Gr please select disks left, select redunda	roup to your zpool s on the list on the ancy type and click
2. Add write log	C Show only u	inused disks	🔿 Rescan disks	"Add group" button	
	Name	Id	Size - Blink	Data groups	Size
3. Add read cache	sdbv	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌒 🌰		
4. Add spare disks	sdbw	scsi-SWD_WD9001BKHG-02D22	838.36 GiB		
	sdbx	scsi-SWD_WD9001BKHG-02D22	838.36 GiB		
5. Zpool properties	sdby	scsi-SWD_WD9001BKHG-02D22	838.36 GiB		
6. Summary	sdbz	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌑		
	sdca	scsi-SWD_WD9001BKHG-02D22	838.36 GIB		
	sdcb	scsi-SWD_WD9001BKHG-02D22	838.36 GIB 🕚	Zpool storage capacity: 0	00 B
	sdcc	scsi-SWD_WD9001BKHG-02D22	838.36 GiB	Used licensed storage ca	pacity: 0.00 B
	sdcd	scsi-SWD_WD9001BKHG-02D22	838.36 GiB	Other groups	Size
	sdce	scsi-SWD_WD9001BKHG-02D22	838.36 GIB		
	sdch	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🕚		
	sdci	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 ●		
	sdcj	scsi-SWD_WD9001BKHG-02D22	838.36 GiB		
	sdck	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌒 🗸		
	Select redund	ancy for group: Z-1	+ Add group		
				× Cancel	Next >
13 sticj		WX31EA1EC1200	830	36 GIB WD9001BKHG02D	22

• Next, select the disks and redundancy level and click on the "Add group" button.

ge	Storage	_							() Rescan	+ A
	Zpool wizard								? ×	
Manager	1. Add data group	Ava	ailable dis	sks				To add first Data Gr please select disks left, select redund	roup to your zpool s on the list on the ancy type and click	
ige Settir		O	Show only	unused disks		O Resca	an disks	"Add group" button.		
um Settin			Name	Id		Size -	Blink	Data groups	Size	
			sdbv	scsi-SWI	_WD9001BKHG-02D22	838.36 GIB	•			
nostics			sdbw	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•			
			sdbx	scsi-SWI	D_WD9001BKHG-02D22	838.36 GiB	•			
			sdby	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•			
			sdbz	scsi-SWI	D_WD9001BKHG-02D22	838.36 GiB	•			
			sdca	scsi-SWI	D_WD9001BKHG-02D22	838.36 GiB	•			
			sdcb	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•	Zpool storage capacity: 0	0.00 B	
			sdcc	scsi-SWI	0_WD9001BKHG-02D22	838.36 GIB	•	Used licensed storage ca	apacity: 0.00 B	
			sdcd	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•	Other groups	Size	
			sdce	scsi-SWI	_WD9001BKHG-02D22	838.36 GIB	•			
			sdch	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•			
			sdci	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•			
			sdcj	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•			
			sdck	scsi-SWI	0_WD9001BKHG-02D22	838.36 GiB	• .			
			Select redund	ancy for group:	Mirror (single group)	+ Add	1 group			1
								X Cancel	Next >	
	13 sdcj				WX31EA1EC1200		838	36 GIB WD9001BKHG02D	22	

• The created group will be displayed in the "Configuration preview" window on the right side.

Storage						() Rescan	+ A
Zpool wizard							
1. Add data group	Available di	sks			Data groups	Size	
	-				Mirror	×	
2. Add write log	Show only	unused disks	O Resca	in disks	- 🗑 sdbv	838.36 GiB	
3. Add read cache	Name	ld	Size -	Blink	sdbw	838.36 GiB	
	sdbx	scsi-SWD_WD9001BKHG-02D2	838.36 GIB	•			
4. Add spare disks	sdby	scsi-SWD_WD9001BKHG-02D2	838.36 GiB	•			
	sdbz	scsi-SWD_WD9001BKHG-02D2	22 838.36 GiB	•			
5. Zpool properties	sdca	scsi-SWD_WD9001BKHG-02D2	22 838.36 GiB	•			
6. Summary	sdcb	scsi-SWD_WD9001BKHG-02D2	838.36 GiB	•			BII
	sdcc	scsi-SWD_WD9001BKHG-02D2	838.36 GiB	•	Zpool storage capacity	: 838.36 GIB	
	sdcd	scsi-SWD_WD9001BKHG-02D2	838.36 GiB	•	Used licensed storage	capacity: 838.36 GiB	
	sdce	scsi-SWD_WD9001BKHG-02D2	838.36 GiB	•	Other groups	Size	
	sdch	scsi-SWD_WD9001BKHG-02D2	22 838.36 GiB	•			
	sdci	scsi-SWD_WD9001BKHG-02D2	22 838.36 GiB	•			
	sdcj	scsi-SWD_WD9001BKHG-02D2	22 838.36 GiB	•			
	sdck	scsi-SWD_WD9001BKHG-02D2	838.36 GiB	•			
	📄 sdap	scsi-STOSHIBA_PX02SMF020	_43 186.31 GiB	•			
	sdaq	scsi-STOSHIBA_PX02SMF020	_14 186.31 GiB	• .			
	Selectredun		) V + Add	group			
					X Canc	el Next >	
13 sdcj		WX31EA1EC120	0	838.3	36 GIB WD9001BKHG0	2022	



- In this example we have 3 mirror groups added.
- The created 3 mirror groups will be displayed in the "Configuration preview" on the right side. After adding all groups click the "Next" button.

								13 2 2 2 2	1.1
Zpool wizard									+ A
1. Add data group	Av	ailable dis	sks				Data groups	Size	
						Mirror	× ^		
2. Add write log		Show only u	inused disks		O Resc	an disks	- 🗑 sdbv	838.36 GiB	
3. Add read cache		Name	Id		Size 🕶	Blink	- 🗑 sdbw	838.36 GIB	
		sdcb	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•	Mirror	×	-
4. Add spare disks		sdcc	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•	- 🗑 sdbx	838.36 GIB	
	Ó	sdcd	scsi-SWE	_WD9001BKHG-02D22	838.36 GiB	•	- 💼 sdby	838.36 GiB	
5. Zpool properties		sdce	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•	⊡ Mirror	×	
6. Summary		sdch	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•	- 🗑 sdbz	838.36 GIB	B
a ter statistication (	Ő	sdci	scsi-SWE	_WD9001BKHG-02D22	838.36 GiB	•	Zpool storage c	apacity: 2.46 TiB	
		sdcj	scsi-SWI	_WD9001BKHG-02D22	838.36 GiB	•	Used licensed s	storage capacity: 2.46 TiB	
		sdck	scsi-SWE	_WD9001BKHG-02D22	838.36 GIB	•	Other groups	Size	
		sdap	scsi-STO	SHIBA_PX02SMF020_43	186.31 GiB	•			
		sdaq	scsi-STO	SHIBA_PX02SMF020_14	186.31 GiB	•			
	Ő.	sdar	scsi-ST0	SHIBA_PX02SMF020_14	186.31 GiB	•			
		sdas	scsi-ST0	SHIBA_PX02SMF020_14	186.31 GiB	•			
		sdbn	scsi-ST0	SHIBA_PX02SMF020_14	186.31 GiB	•			
		sdbo	scsi-ST0	SHIBA_PX02SMF020_24	186.31 GiB	• .			
				Mirror (single group)	+ Add	d group			
							×	Cancel Next >	
13 sdcj									

- In next step you can create a write log (ZIL on SLOG).
- NOTE: Mirrored and fast SSD disks are strongly recommended for the random writes IOPS.

Character					D. Course 1
Zpool wizard					
1. Add data group	Available di	sks		Data groups	Size
Setter 2. Add write log	C Show only	unused disks	O Rescan disks	E Mirror	838.36 GiB
	Name	Id	Size - Blink	sdbw	838.36 GiB
3. Add read cache	sdcb	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌒 🌰	⊟— Mirror	×
4. Add spare disks	sdcc	scsi-SWD_WD9001BKHG-02D22	838.36 GiB	- 🗑 sdbx	838.36 GIB
	sdcd	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌒	- 🗑 sdby	838.36 GiB
5. Zpool properties	sdce	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌑	🖻 — Mirror	×
6 Summary	sdch	scsi-SWD_WD9001BKHG-02D22	838.36 GiB	- 🗑 sdbz	838.36 GiB
	sdci	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌘	Zpool storage capac	ity: 2.46 TIB
	🗌 sdcj	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌒	Used licensed stora	ge capacity: 2.46 TiB
	sdck	scsi-SWD_WD9001BKHG-02D22	838.36 GIB 🌘	Other groups	Size
	sdap	scsi-STOSHIBA_PX02SMF020_43	186.31 GiB 🌑		
	sdaq	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑		
	sdar	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑		
	🔲 sdas	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑		
	sdbn	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑		
	sdbo	scsi-STOSHIBA_PX02SMF020_24	186.31 GiB 🌒 📮		
	Select radund	lancy for group: Single 🗸	+ Add group		
			×	Cancel < Ba	ack Next >
13. 244	_	WX31EA1EC1200		36 GIR WORMARKER	302022



- Select the fastest disks from the list on the left and create a mirror set for the redundancy level, then click the "Add group", and then the "Next" button.
- NOTE: The mirrored redundancy level is strongly recommended for data integrity.

Storage						() Restan
Zpool wizard						
1. Add data group	Available di	sks			Data groups	Size
2. Add write log	C Show only	unused disks	O Resc	an disks	E Mirror	838.36 GiB
	Name	Id	Size -	Blink	sdbw	838.36 GiB
3. Add read cache	sdbf	scsi-STOSHIBA_MK1401GRRB_83	136.98 GiB	• *	E Mirror	×
4. Add spare disks	sdbg	scsi-STOSHIBA_MK1401GRRB_83	136.98 GiB	•	- 🗑 sdbx	838.36 GiB
	sdbh	scsi-STOSHIBA_MK1401GRRB_83	136.98 GiB	•	- 🗑 sdby	838.36 GiB
5. Zpool properties	sdbi	scsi-STOSHIBA_MK1401GRRB_83	136.98 GiB	•	E Mirror	×
6. Summary	sdbj	scsi-STOSHIBA_MK1401GRRB_93	136.98 GiB	•	- 🗑 sdbz	838.36 GiB
	sdbk	scsi-STOSHIBA_MK1401GRRB_93	136.98 GiB	•	Zpool storage capa	icity: 2.46 TIB
	sdbl	scsi-STOSHIBA_MK1401GRRB_93	136.98 GiB	•	Other groups	Size
	sdbm	scsi-STOSHIBA_MK1401GRRB_83	136.98 GiB	•	Ouler groups	3128
	sdbr	scsi-STOSHIBA_MK1401GRRB_93	136.98 GiB	•		
	sdbs	scsi-STOSHIBA_MK1401GRRB_93	136.98 GiB	•		
	sdbt	scsi-STOSHIBA_MK1401GRRB_93	136.98 GiB	•		
	sdbu	scsi-STOSHIBA_MK1401GRRB_93	136.98 GiB	•		
	Sdcf	scsi-STOSHIBA_PX02SSF010_14	93.16 GiB	•		
	sdcg	scsi-STOSHIBA_PX02SSF010_14	93.16 GiB	•		
	Select redund	ancy for group: Mirror	+ Add	d group		
				>	Cancel K B	Back Next >
13 sdc]		WX31EA1EC1200		838	.36 GIB WD9001BKI	1602022

• The created "write log" will be displayed in the "Configuration preview" on the right side.

en-e JovianDS					Help	
Storage					() Rescan	+ Add z
Zpool wizard					17 ×	
1. Add data group	Available dis	sks		Data groups	Size	
2. Add write log	Show only	unused disks	O Rescan disks	Sdbv 8	138.36 GiB	
2 Add read cache	Name	ld	Size - Blink	sdbw 8	38.36 GiB	
5. Auto read cache	sdcb	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌒 🌰	E Mirror	×	
4. Add spare disks	sdcc	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 ●	- Sdbx 8	138.36 GIB	
	sdcd	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌒	- 📾 sdby 🛛 8	138.36 GiB	
5. Zpool properties	sdce	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌒	Mirror	×	
6. Summary	sdch	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌒	- 🗑 sdbz 🛛 8	138.36 GIB	
San San Maria	sdci	scsi-SWD_WD9001BKHG-02D22	838.36 GiB	Zpool storage capacity: 2	46 TIB	
	sdcj	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌒	Used licensed storage ca	pacity: 2.46 TiB	
	sdck	scsi-SWD_WD9001BKHG-02D22	838.36 GiB	Other groups	Size	
	sdap	scsi-STOSHIBA_PX02SMF020_43	186.31 GiB 🌑	Mirrored write log	×	
	sdaq	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑	- Sdcf	93.16 GiB	
	sdar	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑	- Sdcg	93.16 GIB	
	🔲 sdas	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑			
	sdbn	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑			
	sdbo	scsi-STOSHIBA_PX02SMF020_24	186.31 GiB 🏾 🌒			
	Select redund	ancy for group. Mirror 🗸 🗸	+ Add group	4		•
			>	Cancel Cancel	Next >	
13 sdcj		WX31EA1EC1200	838	36 GIB WD9001BKHG02D	2	



- In the next step you can create the read cache. Select the disks from the list on the left and select redundancy "Read Cache", type and click "Add group", and then the "Next" button.
- NOTE: For fast random read IOPS it is recommended to use SSD disks.

Storage					() Restan
Zpool wizard					
1. Add data group	Available dis	sks		Data groups	Size
2. Add write log	C Show only	unused disks	🔿 Rescan disks	⊟ Mirror	838.36 GiB
3 Add mad cache	Name	Id	Size - Blink	sdbw	838.36 GiB
J. Adu lead cache	sdcb	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌒 🌰	Mirror	×
4. Add spare disks	sdcc	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 ●	- 🗑 sdbx	838.36 GiB
	sdcd	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🕚	└─∭ sdby	838.36 GiB
5. Zpool properties	sdce	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🕚	Mirror	×
6. Summary	sdch	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 ●	- 🗑 sdbz	838.36 GiB
	sdci	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌑	Zpool storage capacity	2.46 TIB
	sdcj	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 ●	Used licensed storage	capacity: 2.46 TIB
	sdck	scsi-SWD_WD9001BKHG-02D22	838.36 GIB 🌑	Other groups *	Size
	🔽 sdap	scsi-STOSHIBA_PX02SMF020_43	186.31 GiB 🌑	Mirrored write log	X
	🗹 sdaq	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑	- i sdcr	93.16 GIB
	sdar	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🛛 ●	- Socg	93. 16 GID
	🔲 sdas	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑		
	sdbn	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑		
	sdbo	scsi-STOSHIBA_PX02SMF020_24	186.31 GiB 🌒 🗸		
	Select redund	ancy for group: Single 🗸	+ Add group	4	
			>	Cancel < Back	K Next >
13 sdcj		WX31EA1EC1200	830	.36 GIB WD9001BKHG0	2022

• The created "read cache" will be displayed in the "Configuration preview" on the right side.

Storage					() Rearan -L
Zpool wizard					
9er 1. Add data group	Available di	sks		Data groups	Size
2. Add write log	C Show only	unused disks	O Rescan disks	B — Mirror —	838.36 GiB
	Name	Id	Size - Blink	- 🗑 sdbw	838.36 GiB
3. Add read cache	sdcb	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌒 🌰	Mirror	×
4. Add spare disks	sdcc	scsi-SWD_WD9001BKHG-02D22	838.36 GiB	- 🗑 sdbx	838.36 GiB
	sdcd	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🕚	sdby	838.36 GiB
5. Zpool propertie	sdce	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🕚	🖾 Mirror	×
6 Summary	sdch	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 ●	- 🗑 sdbz	838.36 GiB
	sdci	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌒	Zpool storage capacity: 2	.46 TIB
	sdcj	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 ●	Used licensed storage ca	pacity: 2.46 TiB
	sdck	scsi-SWD_WD9001BKHG-02D22	838.36 GiB	Other groups +	Size
	sdar	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑	Mirrored write log	×
	🔲 sdas	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑	sdcf	93.16 GiB
	sdbn	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌒	- Sdcg	93.16 GIB
	🔲 sdbo	scsi-STOSHIBA_PX02SMF020_24	186.31 GiB 🌑	E Read cache	196 21 CIP
	sdbp	scsi-STOSHIBA_PX02SMF020_43	186.31 GiB 🛛 🌒	- Stap	186 31 GIB
	sdbq	scsi-STOSHIBA_PX02SMF020_Z2	186.31 GiB 🌒 🗸	and	100.01 010
	Select redund	lancy for group: Single 🗸	+ Add group	4	
			>	Cancel Cancel	Next >
13 side		WX31EA1EC1200	838	36 GIB WD9001BKHG02D	22



• In the "Add spare disks" please select the disk from the available disks" list, click "Add group", and the "Next" button.

Storage					() Restan
Zpool wizard					
1. Add data group	Available di	sks		Data groups	Size
				B- Mirror	× ^
2. Add write log	Show only	unused disks	O Rescan disks	- 🗑 sdbv	838.36 GiB
3. Add read cache	Name	Id	Size - Blink	└─ 🗑 sdbw	838.36 GIB
	Sdcb	scsi-SWD_WD9001BKHG-02D22	838.36 GIB 🌒 🍵	Mirror	×
4. Add spare disks	sdcc	scsi-SWD_WD9001BKHG-02D22	838.36 GIB	- 🗑 sdbx	838.36 GIB
	sdcd	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌑	└─∭ sdby	838.36 GIB
5. Zpool properties	sdce	scsi-SWD_WD9001BKHG-02D22	838.36 GIB	E Mirror	×
6. Summary	sdch	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🕚	- 🗑 sdbz	838.36 GIB
	sdci	scsi-SWD_WD9001BKHG-02D22	838.36 GIB	Zpool storage capacit	ty: 2.46 TiB
	sdcj	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌒	Used licensed storag	e capacity: 2.46 TiB
	sdck	scsi-SWD_WD9001BKHG-02D22	838.36 GIB	Other groups -	Size
	sdar	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑	Mirrored write log	g ×
	🗌 sdas	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🛛 🌒	sdcf	93.16 GiB
	sdbn	scsi-STOSHIBA_PX02SMF020_14	186.31 GIB 🛛 🌒	sdcg	93.16 GiB
	sdbo	scsi-STOSHIBA_PX02SMF020_24	186.31 GiB 🌑	Head cache	X
	sdbp	scsi-STOSHIBA_PX02SMF020_43	186.31 GiB 🛛 🌒	- soap	186.31 GIB
	sdbq	scsi-STOSHIBA_PX02SMF020_Z2	186.31 GIB	- Suad	100.31 GID
	Select redund	lancy for group: Single	+ Add group		
			1		
			>	Cancel < Bac	ck Next >
13 sdcj		WX31EA1EC1200	838	36 GIB WD9001BKHG	02022

• The created "spare disks" will be displayed in the "Configuration preview" on the right side. Now click the "Next" button.

Storage					() Restan	- A
Zpool wizard						
1. Add data group	Available di	sks		Data groups	Size	
2. Add write log	Show only unused disks		🔿 Rescan disks	E Mirror	38.36 GiB	
	Name	Id	Size - Blink	sdbw 8	38.36 GiB	
3. Add read cache	sdcc	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌒 🌰	E Mirror	×	
4. Add spare disks	sdcd	scsi-SWD_WD9001BKHG-02D22	838.36 GiB	- 🗑 sdbx 8	38.36 GiB	
-	sdce	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌒	sdby 8	38.36 GiB	
5. Zpool properties	sdch	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌒	E Mirror	×	
6. Summary	sdci	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 🌒	- 🗑 sdbz 8	38.36 GiB	
Statistical and a	sdcj	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🌒	Zpool storage capacity: 2.	46 TIB	
	sdck	scsi-SWD_WD9001BKHG-02D22	838.36 GiB 🛛 ●	Used licensed storage cap	bacity: 2.46 TIB	
	sdar	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑	Other groups -	Size	
	sdas	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🌑	E Mirrored write log	× -	
	sdbn	scsi-STOSHIBA_PX02SMF020_14	186.31 GiB 🛛 ●	- Socr	93.16 GIB	
	sdbo	scsi-STOSHIBA_PX02SMF020_24	186.31 GiB 🌑	- Bead cache	55. 16 GID	
	sdbp	scsi-STOSHIBA_PX02SMF020_43	186.31 GiB 🌑	sdan	186 31 GIB	
	sdbq	scsi-STOSHIBA_PX02SMF020_Z2	186.31 GiB 🛛 ●	- Sdag	186.31 GiB	
	🔲 sdaa	scsi-STOSHIBA_MK1401GRRB_93	136.98 GiB 🌒 🖕	⊟ Spare	×	1
	Select redund	ancy for group: Single 🗸	+ Add group	- Sdcb	838.36 GiB 🗙 🗸	
			>	Cancel Cancel	Next >	
13		V0031EA1EC1000	838	36 GIR WID9001BIKHG0202	2	



• In the next step, enter the zpool name and click the "Next" button.

en-e JovianDS				🕒 Logout
Storage			() Resca	+ Add zp
1. Add data group	Please set properti	ies for zpool:		
2. Add write log	Zpool name:	Pool-0		
3. Add read cache	z	pool name: Defines name of the zpool in the system.		
4. Add spare disks				
5. Zpool properties				
6. Summary				Blink
				0
			X Cancel X Back Next >	
13 sdcj				

• In "Summary" you are able to see an overview of the Zpool configuration. If the settings need to be modified, click the "Back" button and make the required changes. If it is correct, please click "Add zpool".

Storage Zoool wizard				() Rescan
1. Add data group	Zpool configuration			
2. Add write log	Data groups		Redundancy	Size
3. Add read cache	⊞— Mirror		Mirror	
	⊞— Mirror		Mirror	
4. Add spare disks	⊞— Mirror		Mirror Data gro	up total capacity: 2 TiB
5. Zpool properties			Used licensed sto	rage capacity: 2.46 TiB
6. Summary	Other groups *		Redundancy	Size
	Mirrored write log     Read cache		Mirror	
	⊞ Spare			Ľ
	Zpool properties			
	Zpool name:	Pool-0		
			X Cancel < Ba	ck 🗸 Add zpool



• At this point you have configured a new zpool (you can add more zpools if required).

open-e	JovianDSS	0	About 🕜 Help 💽 Logout 🗸
Storage	Storage		C Rescan + Add zpool
O User Management	Pool-0		C Options V
Storage Settings	State:	ONLINE Status: Zpool is functioning correctly.	
System Settings	Zpool ID: 1618047174399 Total storage:	Action: None required.	
	Disks:	11	
	Status Disk groups iSCSI targ	ets Snapshots Shares Virtual IPs	
	O Data storage	Scrub scanner	
		Status	Ready
		Next scan	Not set
	avalable	Q Run 🔛 Scheduler	
	Zpool storage capacity:	2.44 TiB	
	Used space:	82.13 GIB	
	Available space:	2.36 TiB	
	Used licensed storage capacity:	2.44 TiB	
	<ul> <li>Disk groups health</li> </ul>		
Notifications 🔕 0 🔺	0 0 1		

### Step 5. Creating iSCSI targets

- After creating a zpool, the GUI shows pool status of just created zpool. In order to access pool **setup menu** click on arrow down button in the middle bottom of the pool status section.
- Next, select "iSCSI targets" and click the "Add new target" button.

open-e	JovianDSS	() About	() Help	🕒 Logout 🗸
Storage	Storage		() Rescan	+ Add zpool
User Management				i
Storage Settings	Pool-0			Options 🗸
System Settings	State:       ONLINE         Zpool ID:       16180471743990558370         Total storage:       2.44 TB         Disks:       11         Status       Disk groups         SCSI targets       Snapshots         O       ISCSI targets         No targets found.         Values to targets         Zvols not attached to targets         Zvols not attached to targets		+ Add	new target
	No external zpools available for the import have been found.			
	Unassigned disks			
Notifications 🔕 0 🛕	Search			



• In the "Target Wizard", you can enter a new "Target name". If the default target name is OK, click the "Next" button only.

	7-e   JovianDSS	2					📑 Logout v
	Storage					() Rescan	+ Add zpool
	Target Wizard				-		
	1. Target name	Target name:	iqn.2015-12:dss.target0	Generate default name			Options 🗸
	2. Zvols						
	3. Access						
	4. Summary						
							-
							new target
				×	Cancel	Next 💙	
	Unassig	ned disks					
Notifications 💿							

• In the Zvols step, click "Add new Zvol".

		-e JovianDS							🕒 Logout 🗸
								() Rescan	+ Add zpool
	User Manager	Target Wizard							
	Storage Semi-	1. Target name	Zvols available for target						Options 🗸
	System Settin	2. Zvols	Search					+ Add new zvol	
	Diagnostics.		Name	Туре	Logical size	SCSI ID	LUN Acc	ess mode	
			Zvols available for target						new target
						× Cancel	< Bac	k Next >	
		Unassig	ned disks						
No	tifications 🔕								



• In "Zvol properties" enter the name of a new zvol and the appropriate size and click "Add" button.

open-e JovianDSS					📑 Logout v
Storage Storage	Add new zvol			() Rescar	+ Add zpool
	Zvol properties				
	Name:	zvol-00			
	Size:	500 GiB 500.98 GiB will be reserved 2.35 TiB physical available		+ Add new zvol	
	Provisioning:	Thick provisioned (default)		N Access mode	
	Deduplication:	Thin provisioned Disabled (default)	~		
	Copies:	1 (default) Number of copies of the data	~		
	Compression:	Iz4 (default)	~		
	Volume block size:	128 KiB (default)	~		
	Sync:	Always (default)	~		
	Log bias:	Latency (default)	~		
	Secondary cache:	All (default)	~	A THE MARK	
				Next >	
Unassigned		× Cancel	🗸 Add		
Notifications					

• After creating the new zvols, click the "Next" button.

		-e JovianDSS	2									💽 Logout 👒
		Storage									() Rescan	+ Add zpool
	sar Manager	Target Wizard					_					1
	torage Settin	1. Target name	Zvo	ols available f	or target							1
	ýstem Settin	2. Zvols	Sei	arch						+	Add new zvol	
	agnostics	3. Access		Name	Туре	Logical size	SCSI ID		LUN	Access m	node	
			2	zvol-00	zvol	500.00 GiB	lk9hGmZ1aJUSCEAi		0	Read-writ	e (default)	new target
												ptions v
		Unassig	gned	disks				X Can	cel	Back	Next 义	
Notifi	ications 📀											



• In the "Access" step, you can change the security options of the targets. After making these changes click the "Next" button.

	n-e JovianDS	S ① About ③ Hillp	📄 Logout 🗸
		Q Rescar	+ Add zpool
	Target Wizard		
	1. Target name	CHAP user access authentication	
	2. Zvols	Enable CHAP users authentication	
	3. Access	Mutual CHAP user	
	4. Summary	Enable mutual CHAP user     Target IP access restrictions     Enable target IP access restrictions	new target
			ptions 🖌 🗸
		Cancel Cancel Next >	
	Unassi	igned disks	
Notifications	0 🔺 0 🛛 1		

• In "Summary" you are able to see an overview of the configuration of the target. If the settings need to be modified, click the "Back" button and make the required changes. If it is correct, click "Add".

	e   JovianDS	S						🕒 Logout
							() Rescan	+ Add zpoo
🕉 User Manager	Target Wizard			_				
🗧 Storage Settir	1. Target name	Target name					Â	
System Settin	2. Zvols	Name:	iqn.2015-12 dss.target0					
Diagnostics	3. Access	Zvols attached to t	arget				_	
	4. Summary	Name		SCSI ID	LUN	Access mode	2	new target
		zvol-00		lk9hGmZ1aJUSCEAi	0	Read-write (default)		
		CHAP users						otions 🗸 🗸
		CHAP user access	authentication is disabled.					8
		Mutual CHAP user						
		Mutual CHAP user	is disabled.				Ľ	
		Target IP access r	estrictions					ptions 🐱
							2	
					🗙 Cancel	K Back	<ul> <li>Add</li> </ul>	
	Zpools a	vailable for in	nport					
Notifications 💿 0								



• After completion of the "Target wizard" return to the "Storage". Below you will see the "iSCSI targets" you are able to see and overview of the configuration targets.

open-e	JovianDSS					() About (	) Help	🕒 Logout 🗸
Storage	Storage						() Rescan	+ Add zpool
User Management	State:	ONLINE	Statu	. Zpool is functi	oning correctly.			
G Starsan Catrians	Zpool ID:	16180471743990558370	(i) Action	None required.				
X Storage Settings	Total storage:	2.44 TiB						
System Settings	Disks:	11						
	Status Disk groups	iSCSI targets	Snapshots	Shares Virti	ual IPs			
	O iSCSI targets						+ Add	new target
	iqn.2015-12:dss.target0		- Zvols: 1					
	Search							ptions 🗸
	Name	Type SCSI ID	LU	Logical size	Physical size	Compression	Provisionin	g
	1 zvol-00	zvol lk9hGm2	Z1aJUSC	500.00 GiB	500.98 GiB	1.00	thick	
	<ul> <li>Zvols not attached to tan Search</li> </ul>	gets — Zvols: 0 —					C C	)ptions v
	Name -		Туре	Logical size	Physical size	Compression	Provisionin	g
	No volumes found.							
	Zpools available for in	mport		^				
	(j) No external zpools available for th	ne import have been found.						
Notifications 😣 0 🔺	0 0 1							

### Step 6. Exploring targets

Now it is possible to connect with your iSCSI initiator and use your targets.

- Example (Microsoft Windows environment). Run the Microsoft iSCSI Initiator and follow the instructions:
- Start the software, add the targets in the "Discovery" menu and enter the IP Address of Open-E JovianDSS and Port (default 3260).
- From the "Targets" menu "Log on" to a target.
- Now access the Windows "Computer Management" feature and start the Disk Manager function, where you will be able to partition and format the new iSCSI drives for your operating system.

# Step 7. Creating NFS shares

• In the Pool menu select "Shares" tab. Click on the "Add dataset" button in order to create new NAS-volume.

open- <mark>e</mark>	JovianDSS				() About	() Help	🕒 Logout
Storage	Storage					() Rescan	+ Add zpool
User Management							
Storage Settings	Pool-0						Options v
System Settings	State: ONLINE Status: Zpool is functioning correctly.						
	Zpool ID:	161804/1/439905583/0	i Action: N	lone required.			
3 Diagnostics	Disks:	11					
	C Shares No datasets found.	for import	~			+ /	udd dataset
	No external zpools availab	ele for the import have been found.					
	Unassigned disk	s					
	Search						
	Name	Serial number		Size 🕶	Model		Blink
	1 sdcc	WX31EA1EC1570		838.36 GiB	WD9001BKHG02D22		•

• In the "Add new dataset" window enter the dataset name and click on "Apply" button.

				ut () Help 💽 Logout
Storage				() Rescan + Add zpoo
	Add new dataset			
Pool-0	Dataset properties			🕑 Options 🤟
	Name:	data-00		
	Deduplication:	Disabled (default)	~	
	Copies:	1 (default)	~	
		Number of copies of the data.		
	Compression:	Iz4 (default)	~	
O Shares	Sync:	Always	~	+ Add dataset
	Log bias:	Latency (default)	~	
	Primary cache:	All (default)	$\sim$	
Zoools availa	Secondary cache:	All (default)	~	
	Access time:	Disabled (default)	~	
Unassigned	Enable quota			
		× c.	ancel 🗸 Apply	
		Serial number	Size - Model	
				122
				122



• Next, select the created dataset and click on the "Add share" button. Enter the share name, optionally you can enter the subdirectory name in the dataset. If the subdirectory is not entered the share will be pointed directly to the dataset.

	JovianDSS				() Help 🕒 Logo	ut v
	Storage				Q Rescan + Add	
	Pool-O				C Options	
	State. Zpool ID.	Add share		estly.		
	Total storage Dinks:	Share properties	data-00			
	Status Disk g	Path:	data-00/ data-00			
	O Shares		If you want to share whole dataset leave this input empty.		+ Add dataset	
	^ data-00 ── sh	Comment:		Hatarat 🗴 Dalah	a datasat 🚽 Addishara	
	Share earne Path			States	atus Options	
	No shares found		X Cancel V Apply			
	Zpools available f	or import				
	Unassigned disk	s				
Notifications 🔕 0 🔬						

• Next click on "Enable NFS protocol" and "Yes" button.

JovianDSS		🕕 About 🛞 Help 📄 Logout
Storage		Rescan + Add zpoc
Pool-O		🕐 Options 🗸
	Enable NFS	
	NFS p NFS service for shares access is disabled. Would you like to enable it?	make
O Shares	Note: NFS service will be enabled with default settings. In order to configure it go to Storage settings/Share access.	+ Add dataset
	Read	etx dataset 🗙 Delete dataset 🕂 Add share
	Read with access (Ps) France access (or an interaction of the construction of the cons	Status Options
Zpools available		
Unassigned disk		



• Then to complete click the "Apply" button. Now the NFS share is ready to mount.

	Add share		3		() Res	can + Add zpo
	Share properties					
• Pool-0	Name: Path:	data-00 data-00/ data-00				🕑 Options 🗸
		If you want to share whole dataset leave this input empty.	ectly.			
	Comment:					
	Enable NFS protocol					
Status Diskip O Shares	NFS path: /Pools/Poo	I-0/data-00/data-00 In order to get access to the share please make sure to include correct server name or IP address (see Help for more information)				+ Add dataset
	Read access IPs:	Read access allowed for all IPs	-	V Delde		L. Addebase
	Read/write access IPs:	Read/write access allowed for all IPs	Galaset	Sta		Options
	Additional options:	Synchronous data record				
Zpools available		All squash No root squash				
Unassigned dis		X Cancel V Apply				

• In order to change the NFS share settings, click on the "Options" drop-down menu and select "Edit". In order to change the dataset setting click on the "Edit dataset" button.

open-e	JovianDSS				i) About 🕜 Help	🕒 Logout 🗸
Storage	Storage				() Re	scan 🕂 Add zpool
User Management						ĺ
Storage Settings	Pool-0					Options 🗸
Diagnostics	State: Zpool ID: Total storage:	ONLINE 16180471743990558370 2.44 TIB	Status: Zpool is Action: None re	functioning correctly. quired.		
	Status Disk groups O Shares ^ data-00 — Shares: 1	iSCSI targets Snap	Shares	Virtual IPs	X Delete dataset	+ Add dataset + Add share
	Share name Path 1 data-00 //data-00		Access protocols NFS	Comments	Status Active	Options V
	Zpools available for in () No external zpools available for the Unassigned disks	import have been found.				
Notifications 🔕 0 🔺	0 0 2					



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