



## Preparing the boot media/installer with the ZIP file:

Please extract the downloaded zip file to an empty USB Flash Drive.

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

- To make your USB Flash Drive bootable, enter the "boot" directory and run the bootinst.exe (in Windows) or bootinst.sh (in Linux).
- Continue to boot your storage server with USB Flash Drive.

### NOTE

So prepared USB Flash Drive will run software installer by default. For testing purposes or for non-mission critical application the USB Flash Drive can boot the JovianDSS instead of running the software installer. In order change the default, please run config.exe from boot directory and select "r".

## Booting Open-E JovianDSS:

### General Hardware requirements

- The minimum size for the JovianDSS boot medium is 16GB. As the JovianDSS boot medium please use an 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.
- Minimum of 8GB RAM plus 1GB per 1TB pool 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 may press enter or it will skip automatically within 5 seconds.

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

- 64-bit system (3.10)
- Run software installer

Please follow the instructions while running the installer. Finally, reboot your storage server from new 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. 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".

## Storage Configuration:

### Step 1. Initialize hardware

Before using Open-E JovianDSS you should have hard disk drives connected to the SATA and SAS ports on the motherboard, and the LAN Card 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, Open-E JovianDSS will show you information about 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 using 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
- <https://dss>

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:**

Password checking is case-sensitive.

## Step 4. Create zpools

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

The screenshot shows the 'Storage' management page in the Open-E JovianDSS web interface. The page title is 'Storage' and it features a navigation sidebar on the left with options: Storage, User Management, Storage Settings, System Settings, and Diagnostics. The main content area displays a message: 'No zpools found. To create your first zpool please select "Add zpool" button.' Below this, it says 'Zpools available for import' and 'Press Rescan storage button above to scan disks for new zpools.' A table titled 'Unassigned disks' lists 14 disks with the following columns: Name, Serial number, Size, Model, and Blink. The disks are numbered 1 through 14. At the bottom of the interface, there are notification icons for 0 errors, 0 warnings, and 1 information.

Name	Serial number	Size	Model	Blink
1 sdb	STM000189D52	7.45 GiB	ZeusRAM	●
2 sdc	STM000189D70	7.45 GiB	ZeusRAM	●
3 sdd	WX71E23NZF61	558.91 GiB	WD6001BKHG02D22	●
4 sdf	WXD1E33KHET1	558.91 GiB	WD6001BKHG02D22	●
5 sdg	WX11E23VM476	558.91 GiB	WD6001BKHG02D22	●
6 sdh	WX11E23VM693	558.91 GiB	WD6001BKHG02D22	●
7 sdi	WXD1E33KHAL4	558.91 GiB	WD6001BKHG02D22	●
8 sdj	WX71E23NZD69	558.91 GiB	WD6001BKHG02D22	●
9 sdk	WXD1E33KHEU1	558.91 GiB	WD6001BKHG02D22	●
10 sdl	WX11E23VM468	558.91 GiB	WD6001BKHG02D22	●
11 sdm	WX11E23VM694	558.91 GiB	WD6001BKHG02D22	●
12 sdn	WX71E23NZE20	558.91 GiB	WD6001BKHG02D22	●
13 sdo	13460C0A8CFC	372.61 GiB	Micron P410mMTF	●
14 sdp	13460C0A8D18	372.61 GiB	Micron P410mMTF	●

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

The screenshot shows the 'Zpool wizard' dialog box in the Open-E JovianDSS web interface. The wizard is at the '1. Add data group' step. It displays a list of available disks with checkboxes for selection. The 'Rescan disks' button is visible. The wizard also shows a 'Configuration preview' on the right side, including a table for 'Data groups' and 'Other groups'. The 'Data groups' table is currently empty. The 'Other groups' table shows the following information:

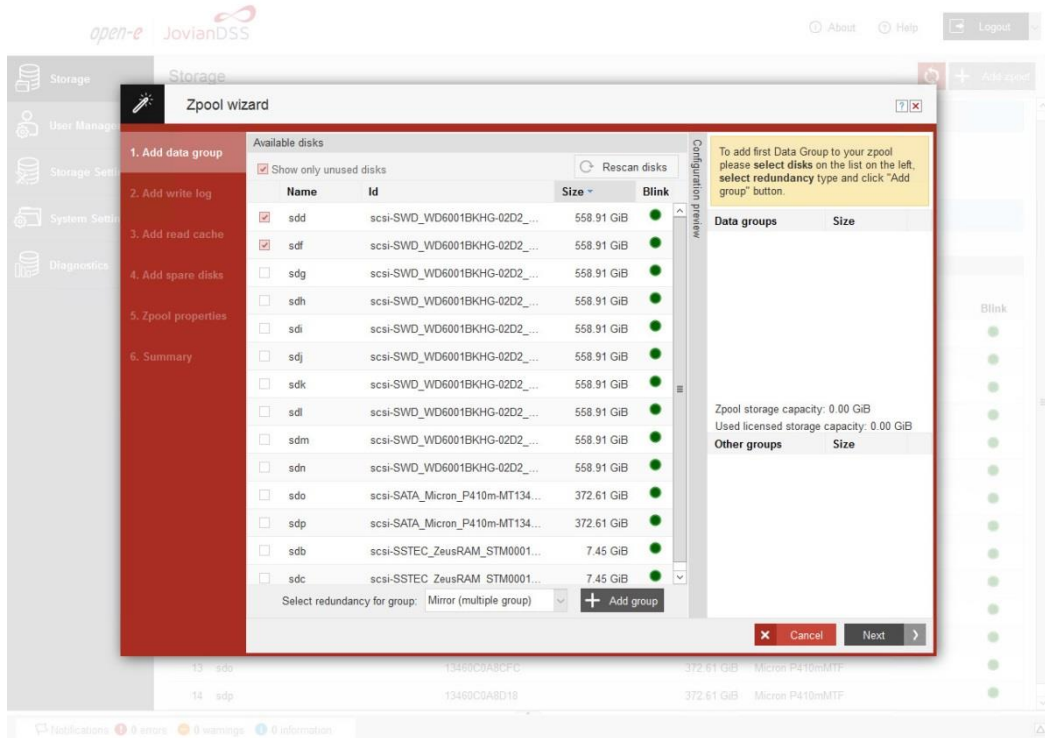
Other groups	Size
Zpool storage capacity	0.00 GiB
Used licensed storage capacity	0.00 GiB

The 'Available disks' table in the wizard is as follows:

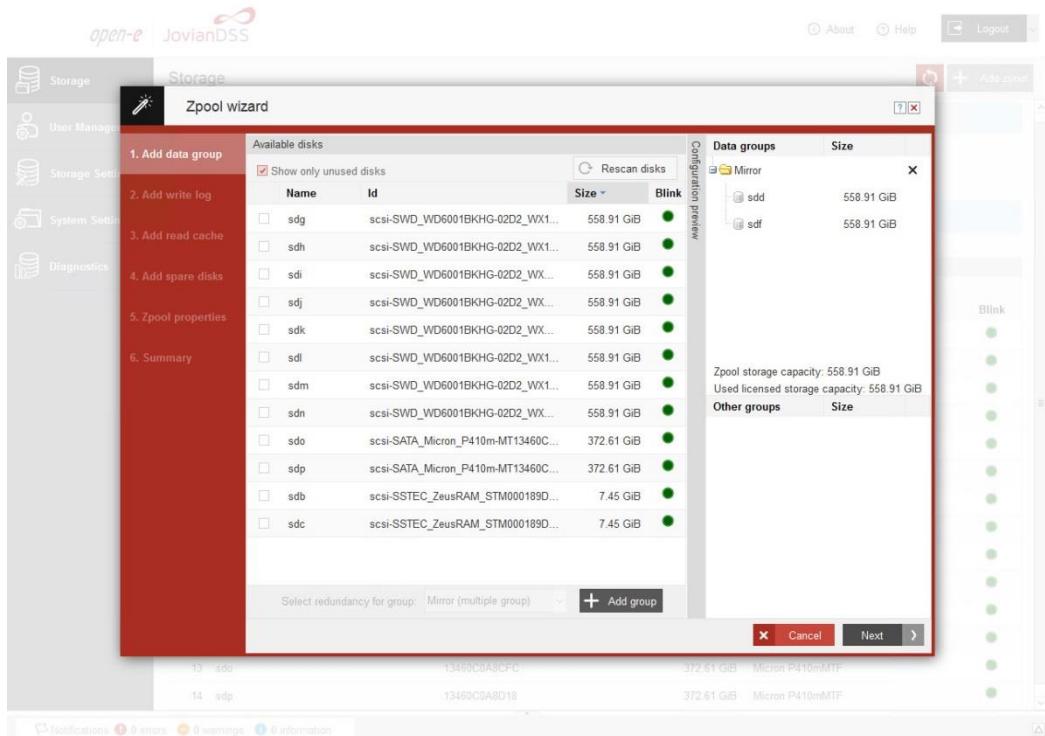
Name	Id	Size	Blink
<input type="checkbox"/> sdd	scsi-SWD_WD6001BKHG-02D2_...	558.91 GiB	●
<input type="checkbox"/> sdf	scsi-SWD_WD6001BKHG-02D2_...	558.91 GiB	●
<input type="checkbox"/> sdg	scsi-SWD_WD6001BKHG-02D2_...	558.91 GiB	●
<input type="checkbox"/> sdh	scsi-SWD_WD6001BKHG-02D2_...	558.91 GiB	●
<input type="checkbox"/> sdi	scsi-SWD_WD6001BKHG-02D2_...	558.91 GiB	●
<input type="checkbox"/> sdj	scsi-SWD_WD6001BKHG-02D2_...	558.91 GiB	●
<input type="checkbox"/> sdk	scsi-SWD_WD6001BKHG-02D2_...	558.91 GiB	●
<input type="checkbox"/> sdl	scsi-SWD_WD6001BKHG-02D2_...	558.91 GiB	●
<input type="checkbox"/> sdm	scsi-SWD_WD6001BKHG-02D2_...	558.91 GiB	●
<input type="checkbox"/> sdn	scsi-SWD_WD6001BKHG-02D2_...	558.91 GiB	●
<input type="checkbox"/> sdo	scsi-SATA_Micron_P410m-MT134...	372.61 GiB	●
<input type="checkbox"/> sdp	scsi-SATA_Micron_P410m-MT134...	372.61 GiB	●
<input type="checkbox"/> sdb	scsi-SSTEC_ZeusRAM_STM0001...	7.45 GiB	●
<input type="checkbox"/> sdc	scsi-SSTEC_ZeusRAM_STM0001...	7.45 GiB	●

The wizard also shows a 'Select redundancy for group' dropdown set to 'Single' and an 'Add group' button. At the bottom, there are 'Cancel' and 'Next' buttons.

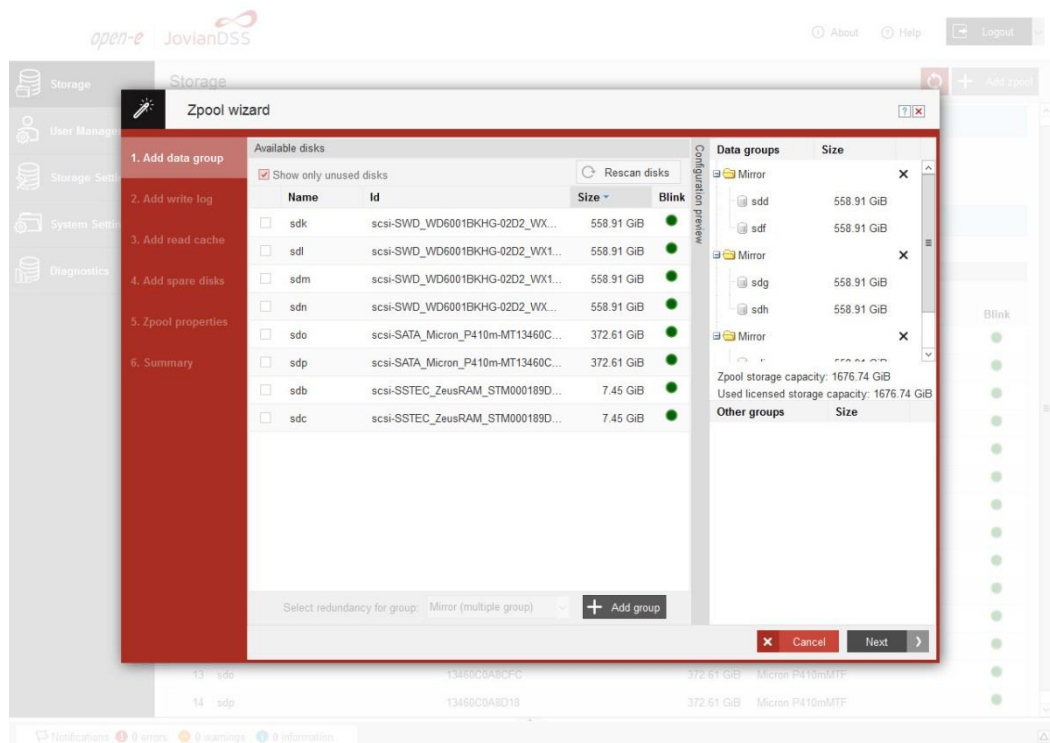
- Next, select disks and redundancy level and click on the "Add group" button.



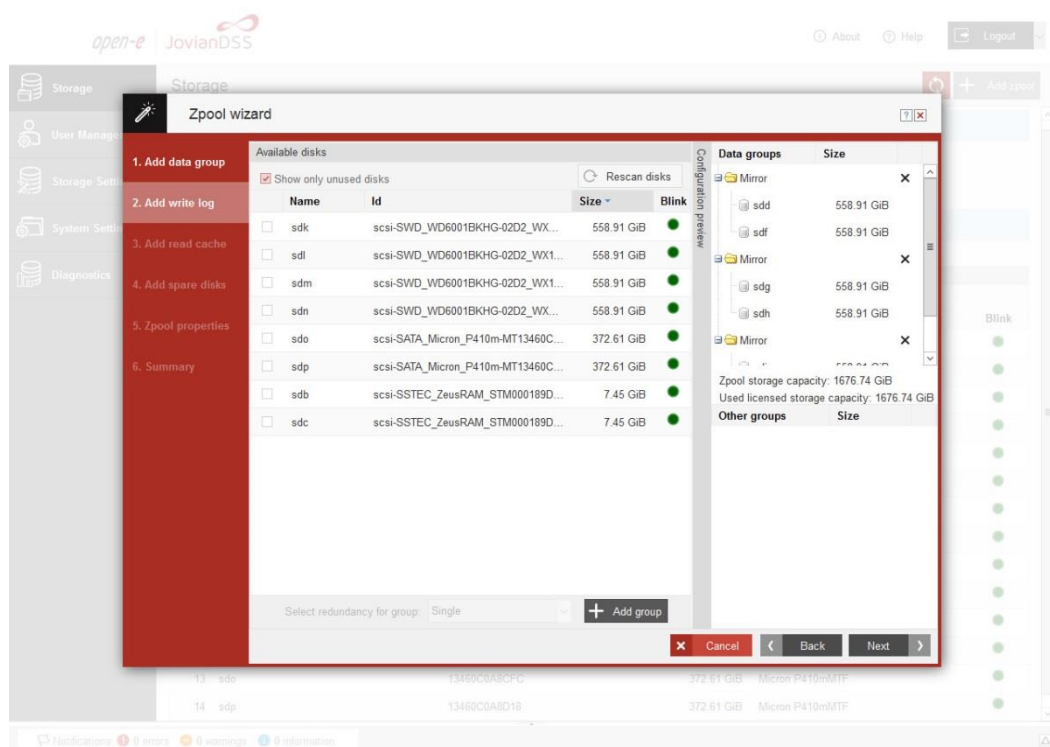
- Created group will be displayed in the "Configuration preview" on the right side.



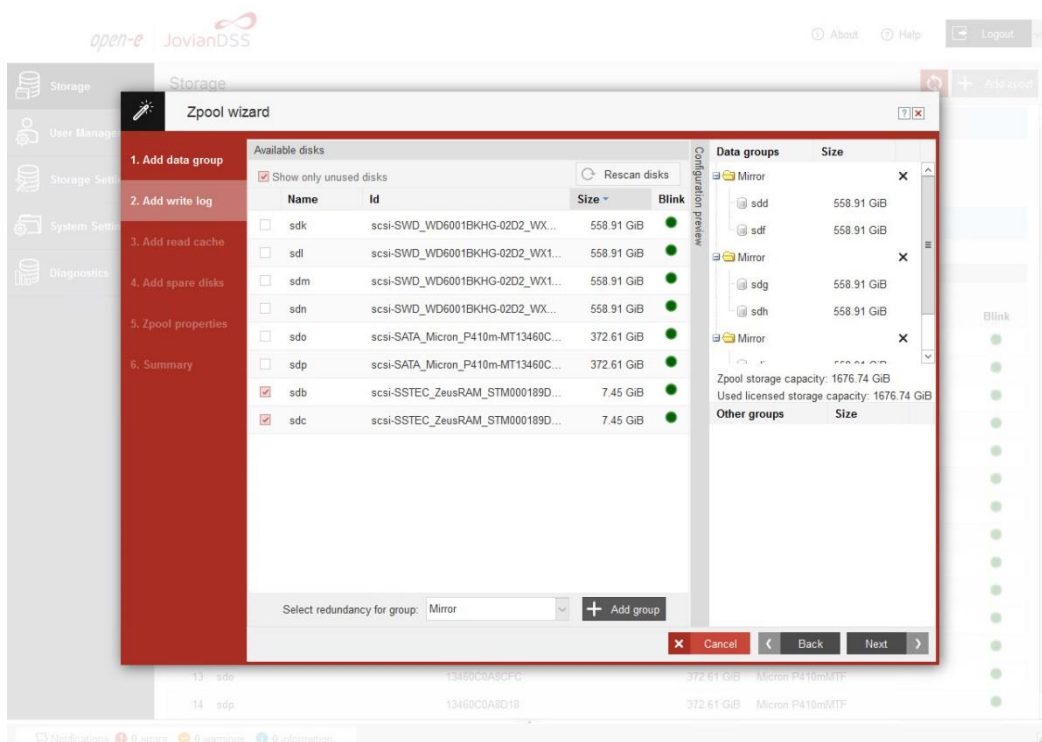
- In this example it was 3 mirror groups added.
- Created three groups will be displayed in the “Configuration preview” on the right side. After adding all groups click the "Next" button.



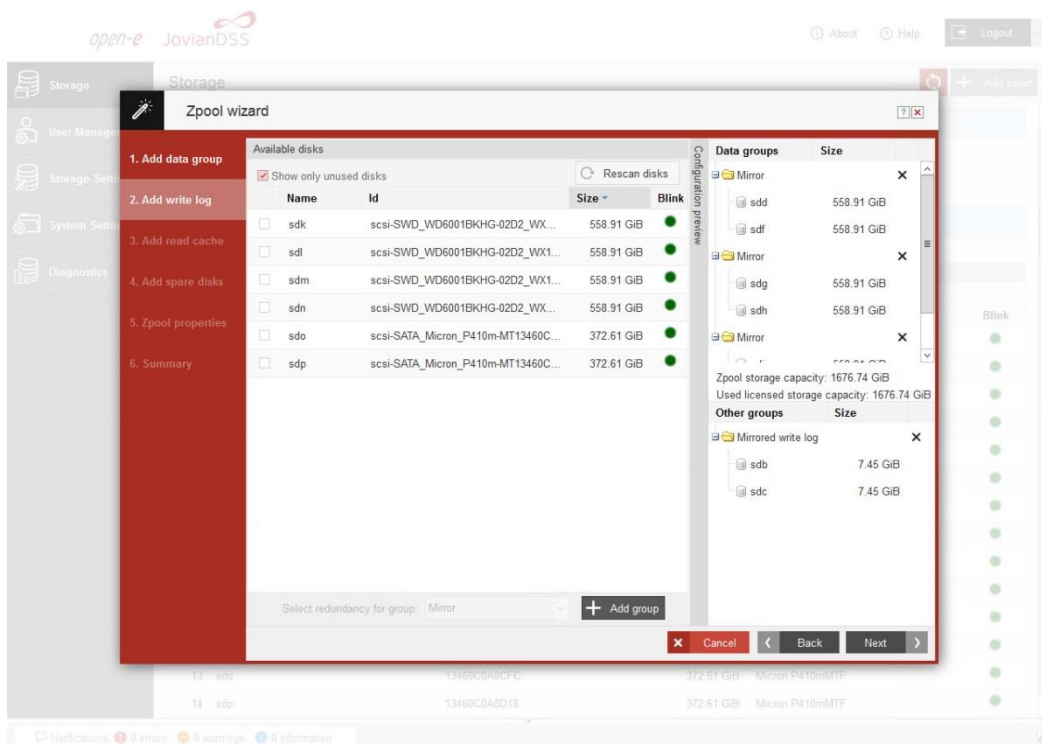
- In next step you can create a write log (ZIL on SLOG).
- NOTE: Mirrored and fast (random writes IOPS) SDD disks are strongly recommended.



- To do this, please select the fastest disks from the list on the left select the redundancy level, click the "Add group", and then the "Next" button.
- NOTE: The mirrored redundancy level is strongly recommended.

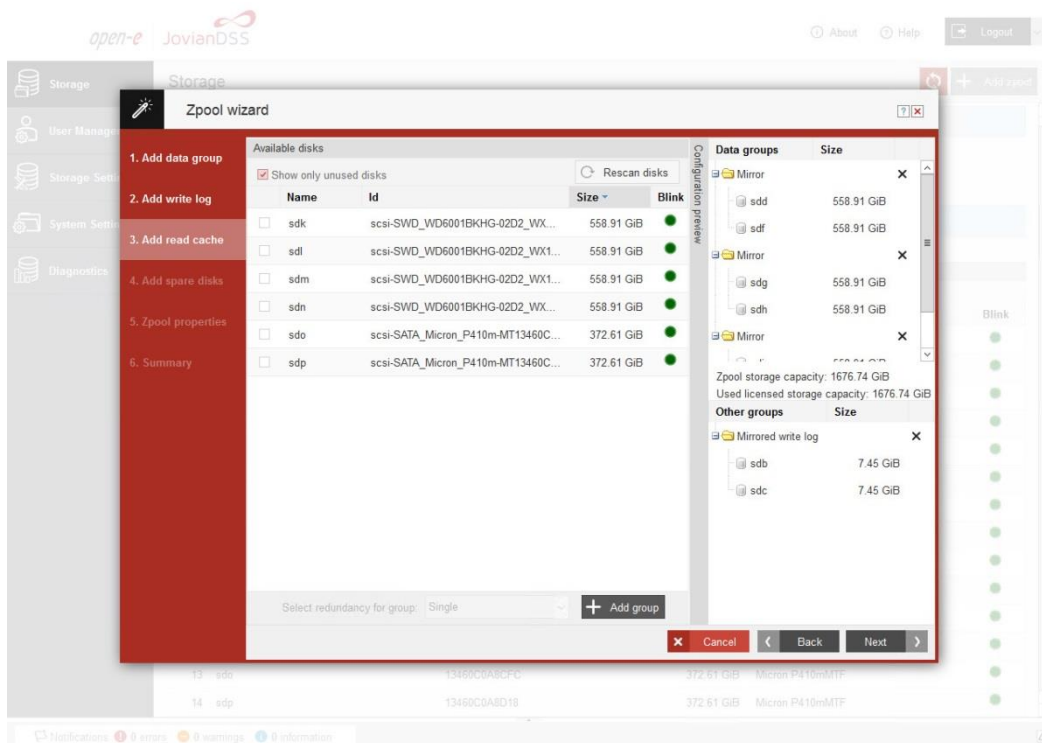


- Created "write log" will be displayed in the "Configuration preview" on the right side.

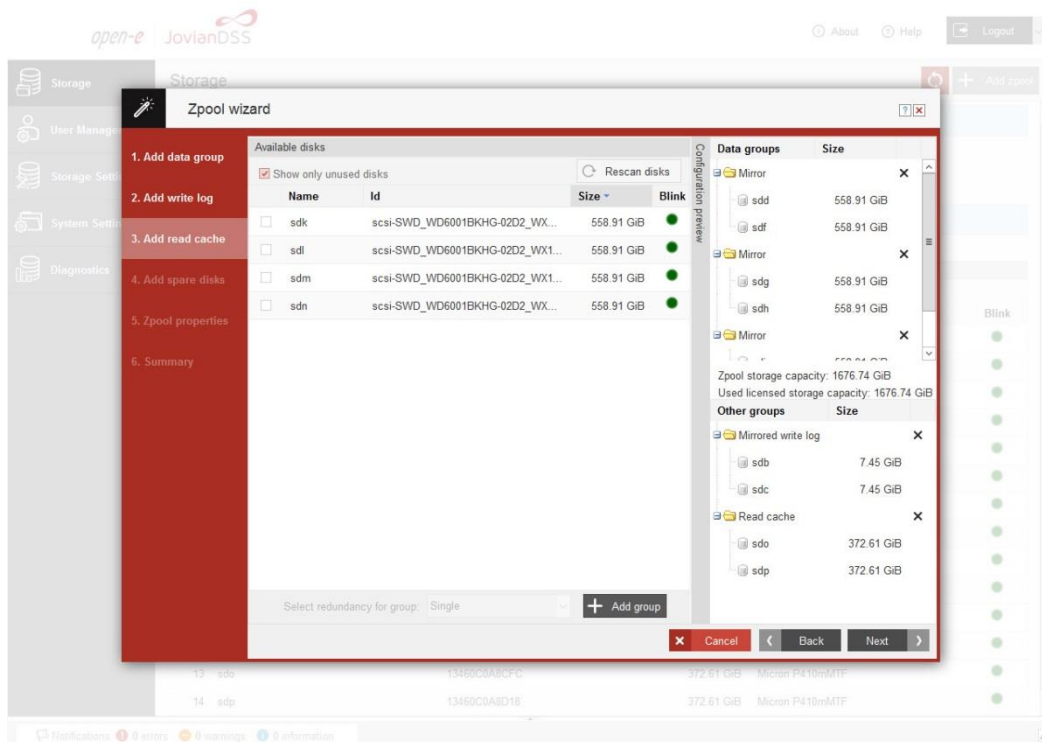




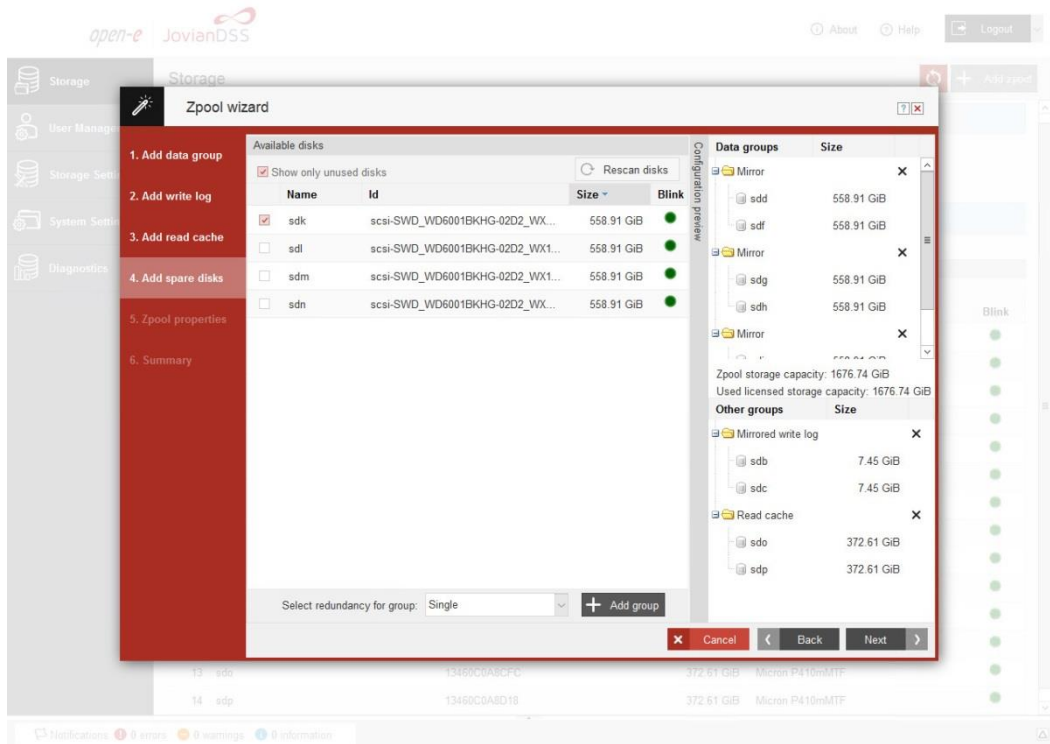
- In the next step you can create read cache. To do this, please select disks from the list on the left and select redundancy "Read Cache", type and click "Add group", and then the "Next" button.
- NOTE: Fast (random reads IOPS) SSD disks are strongly recommended.



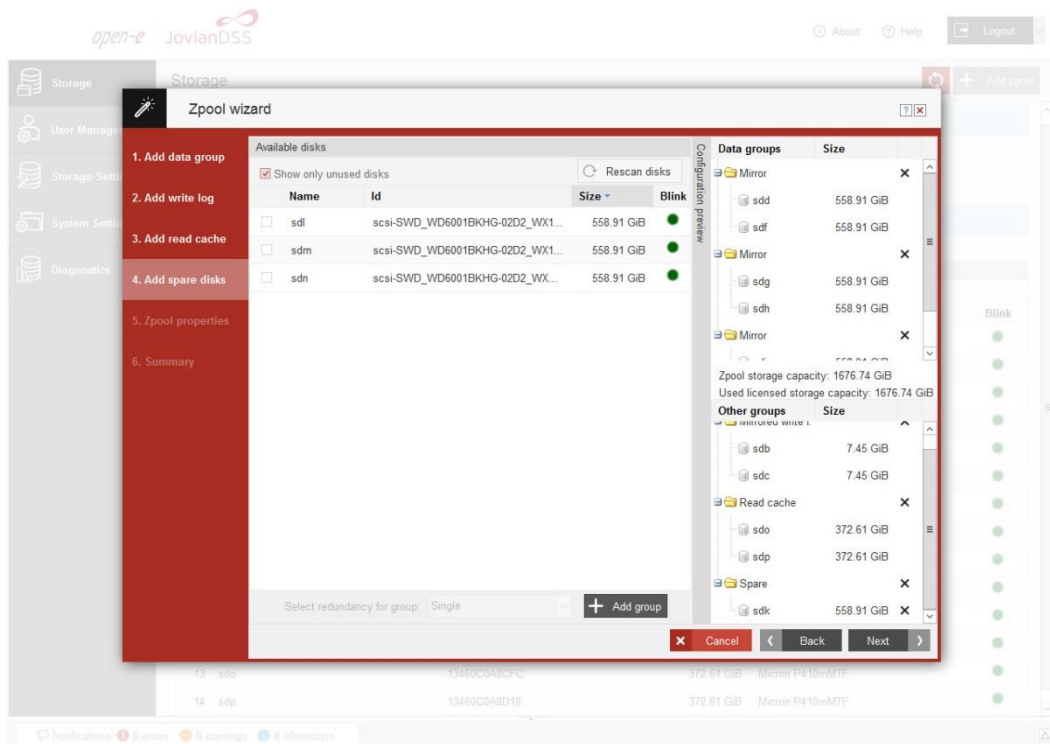
- Created "read cache" will be displayed in the "Configuration preview" on the right side.



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

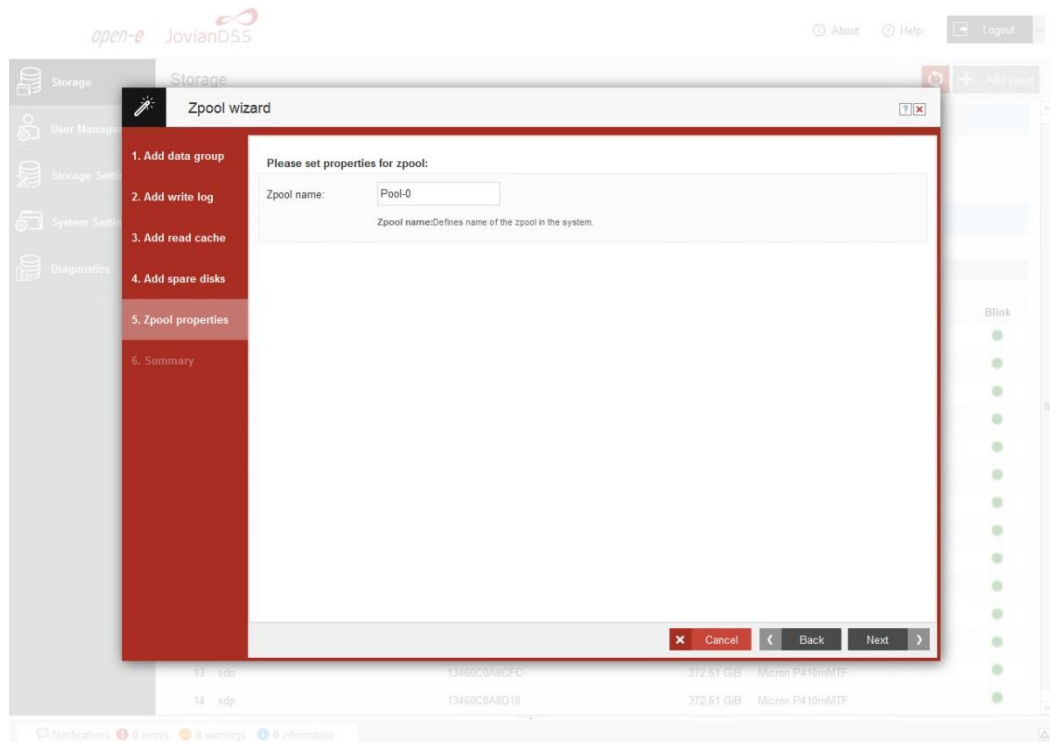


- Created "spare disks" will be displayed in the "Configuration preview" on the right side. Please click "Next" button.

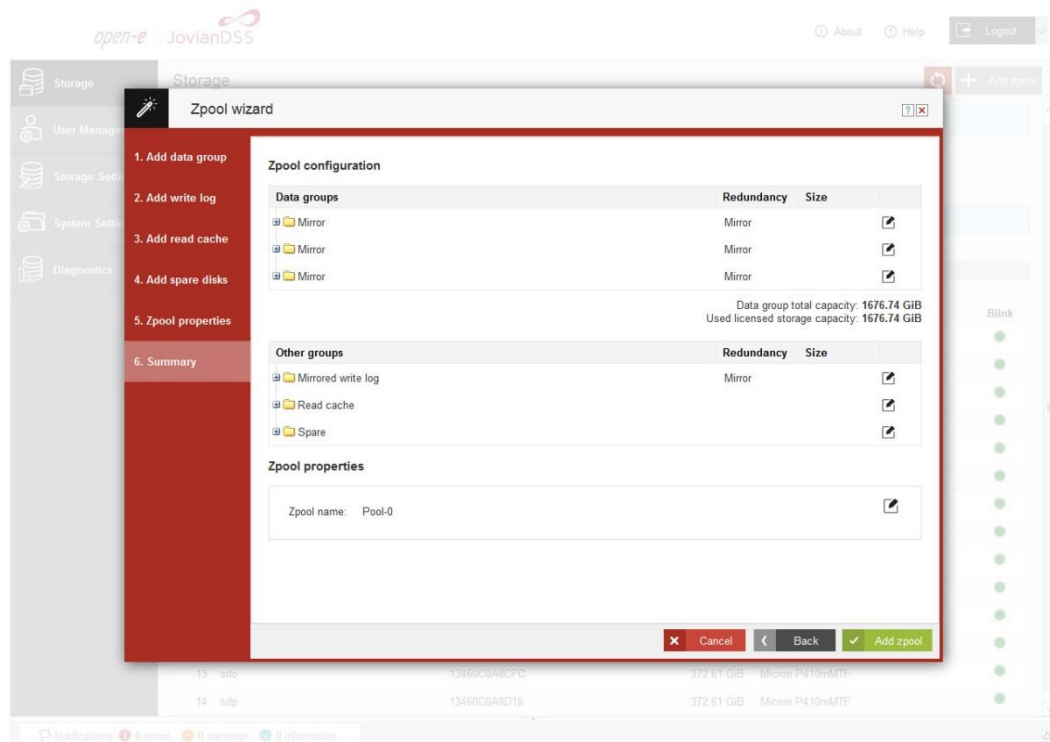




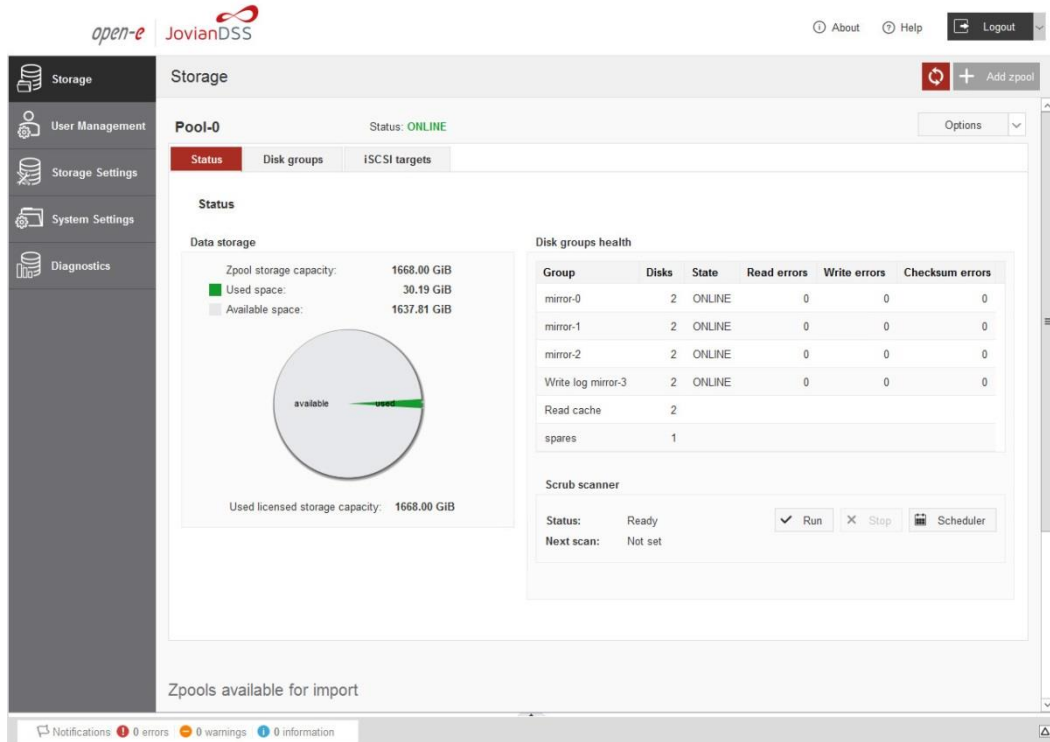
- In the next step, enter the zpool name and click the "Next" button.



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

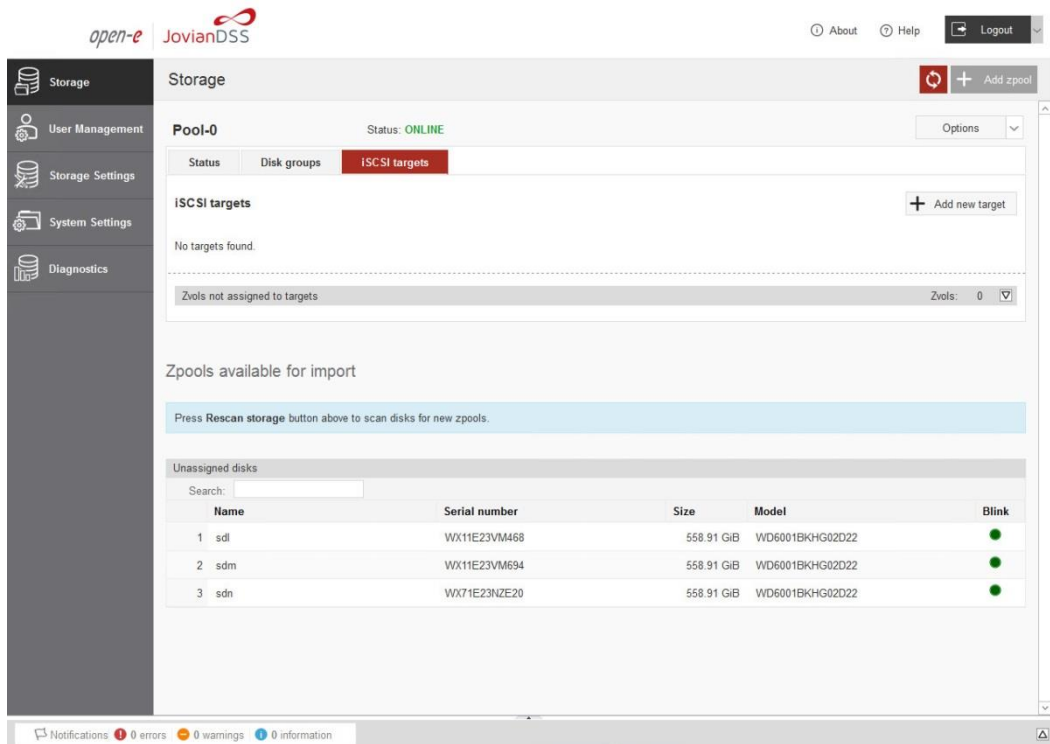


- At this point you have configured a new zpool (you can add more zpools if required).

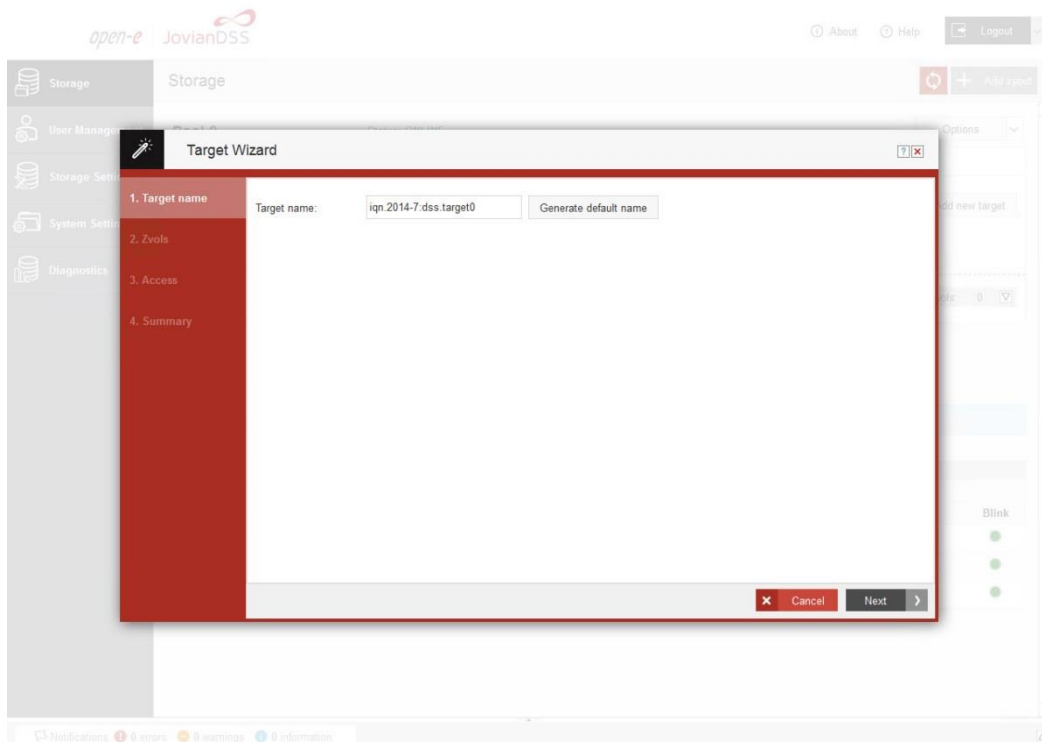


## Step 5. Defining iSCSI targets

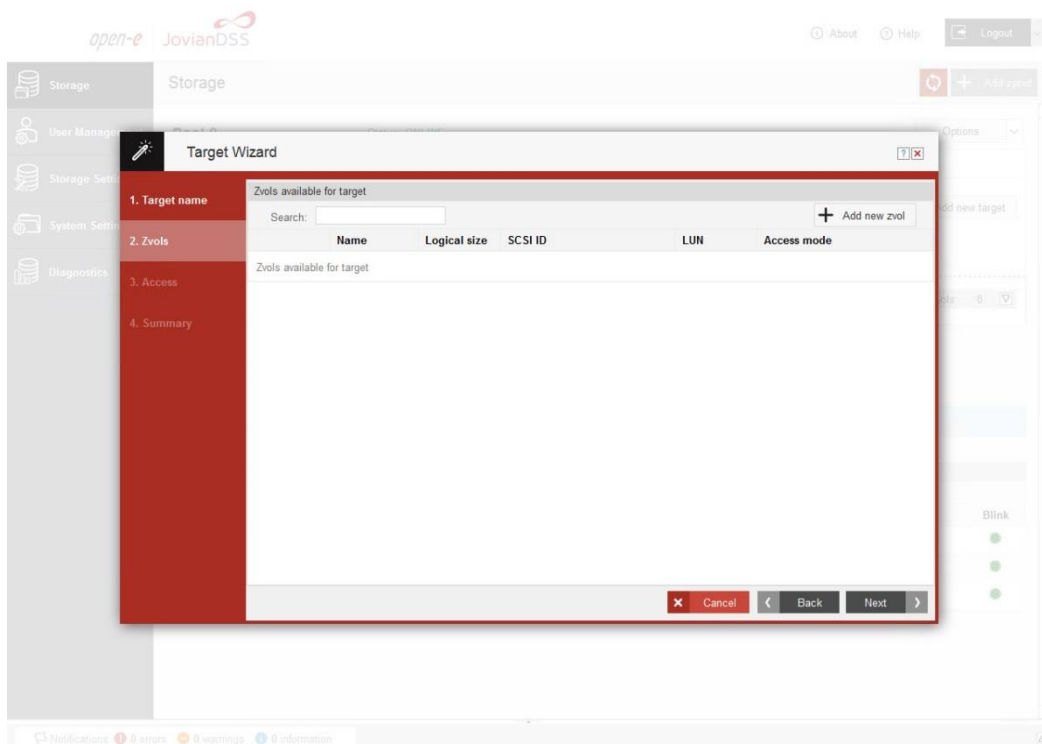
- After creating a zpool, please select "iSCSI targets" in "Storage" and click the "Add new target" button.



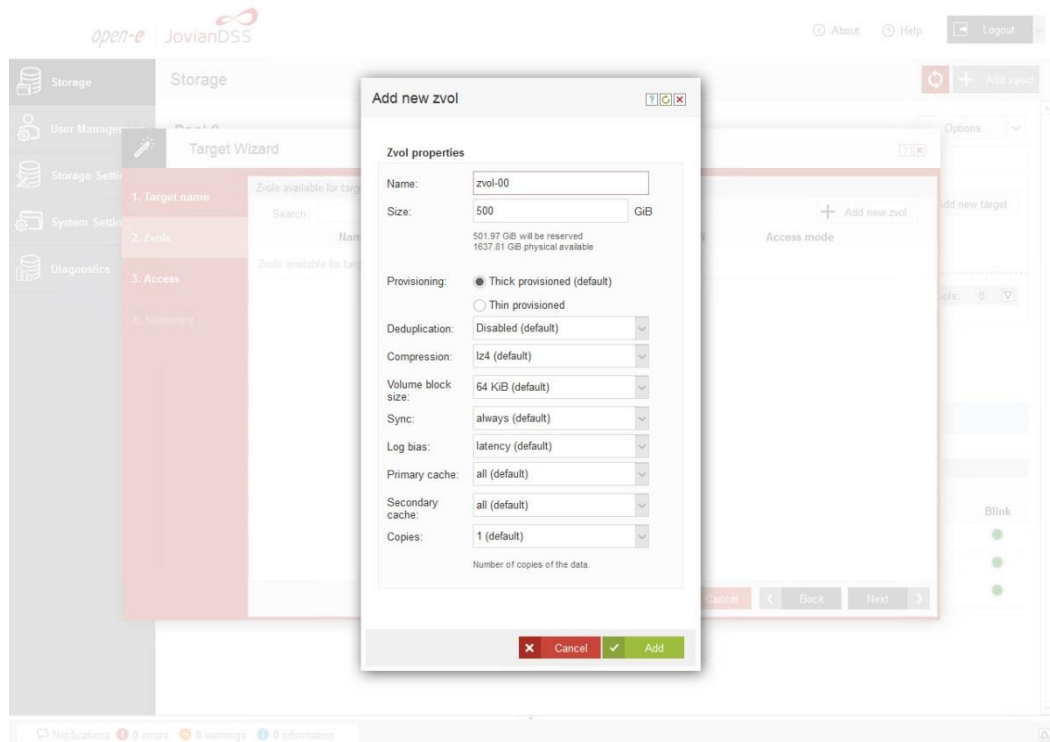
- In "Target Wizard", you can enter new "Target name". If the default target name is OK, just click the "Next" button only.



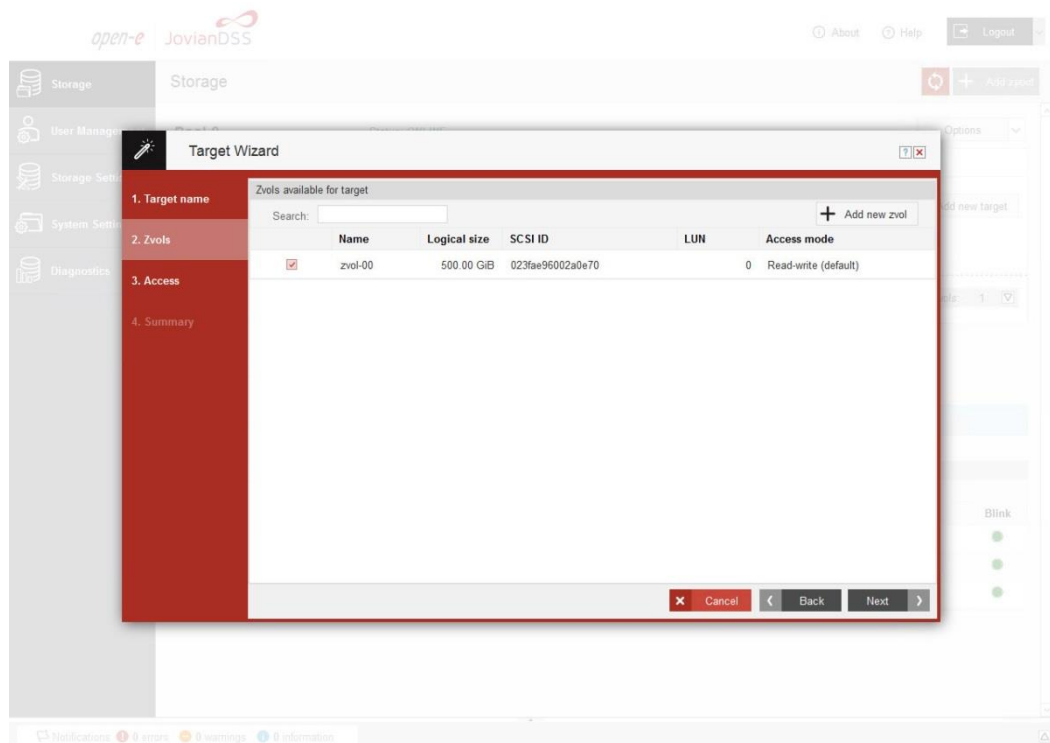
- In Zvols step, please click "Add new Zvol".



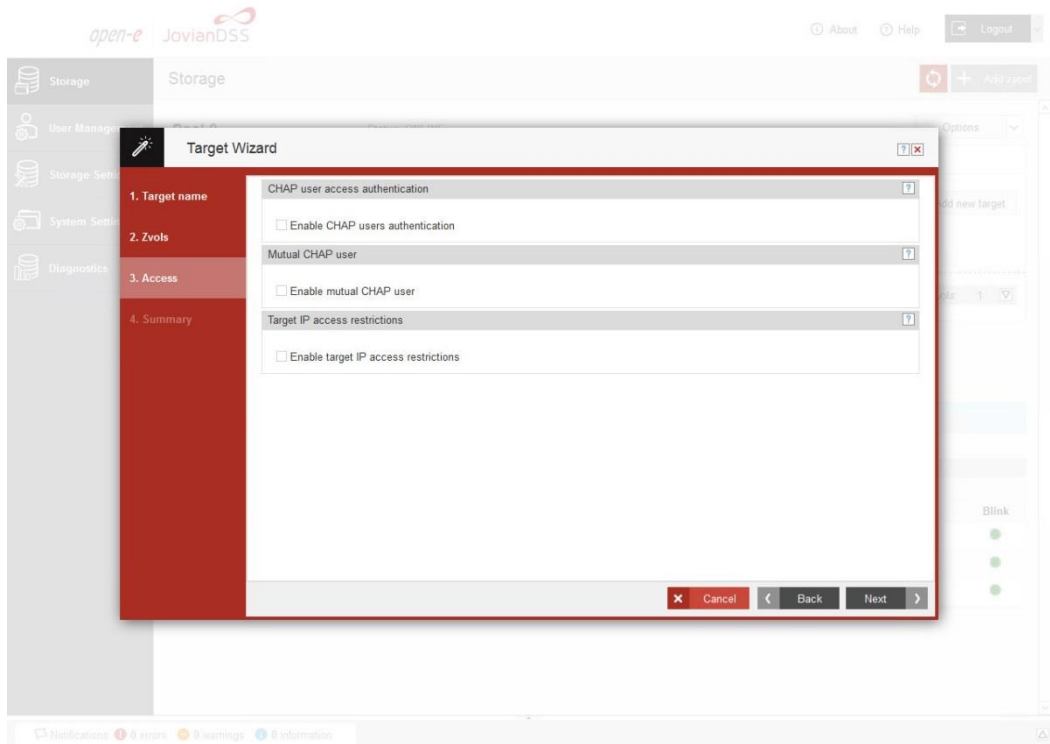
- In “Zvol properties” please enter the name of a new zvol, an appropriate size and click „Add” button.



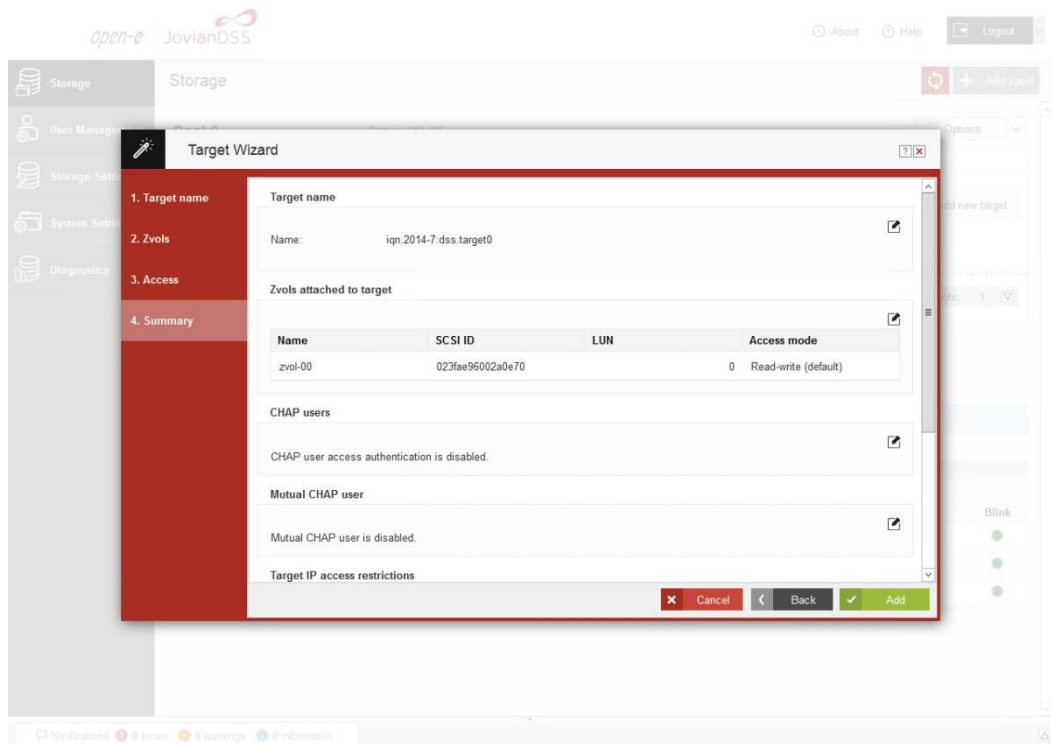
- After creating a new zvols, please click the "Next" button.



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



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



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

The screenshot displays the Open-E JovianDSS Storage management interface. The main content area shows the 'Storage' section for 'Pool-0' (Status: ONLINE). Under the 'iSCSI targets' tab, a table lists the configured targets:

Name	SCSI ID	LUN	Logical size	Physical size	Compression
1 zvol-00	023fae96002a0e70	0	500.00 GiB	501.97 GiB	1.00x

Below the table, there are sections for 'Zpools available for import' and 'Unassigned disks'. The 'Unassigned disks' section contains a table with the following data:

Name	Serial number	Size	Model	Blink
1 sdl	WX11E23VM468	558.91 GiB	WD6001BKHG02D22	●
2 sdm	WX11E23VM694	558.91 GiB	WD6001BKHG02D22	●
3 sdn	WX71E23NZE20	558.91 GiB	WD6001BKHG02D22	●

## Step 6. Exploring targets

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

Example (Microsoft Windows environment). Please run 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 please "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.

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