

Step-by-Step Guide to Open-E DSS V7 Active-Active iSCSI Failover

Software Version: DSS ver. 7.00 up10

Presentation updated: June 2013

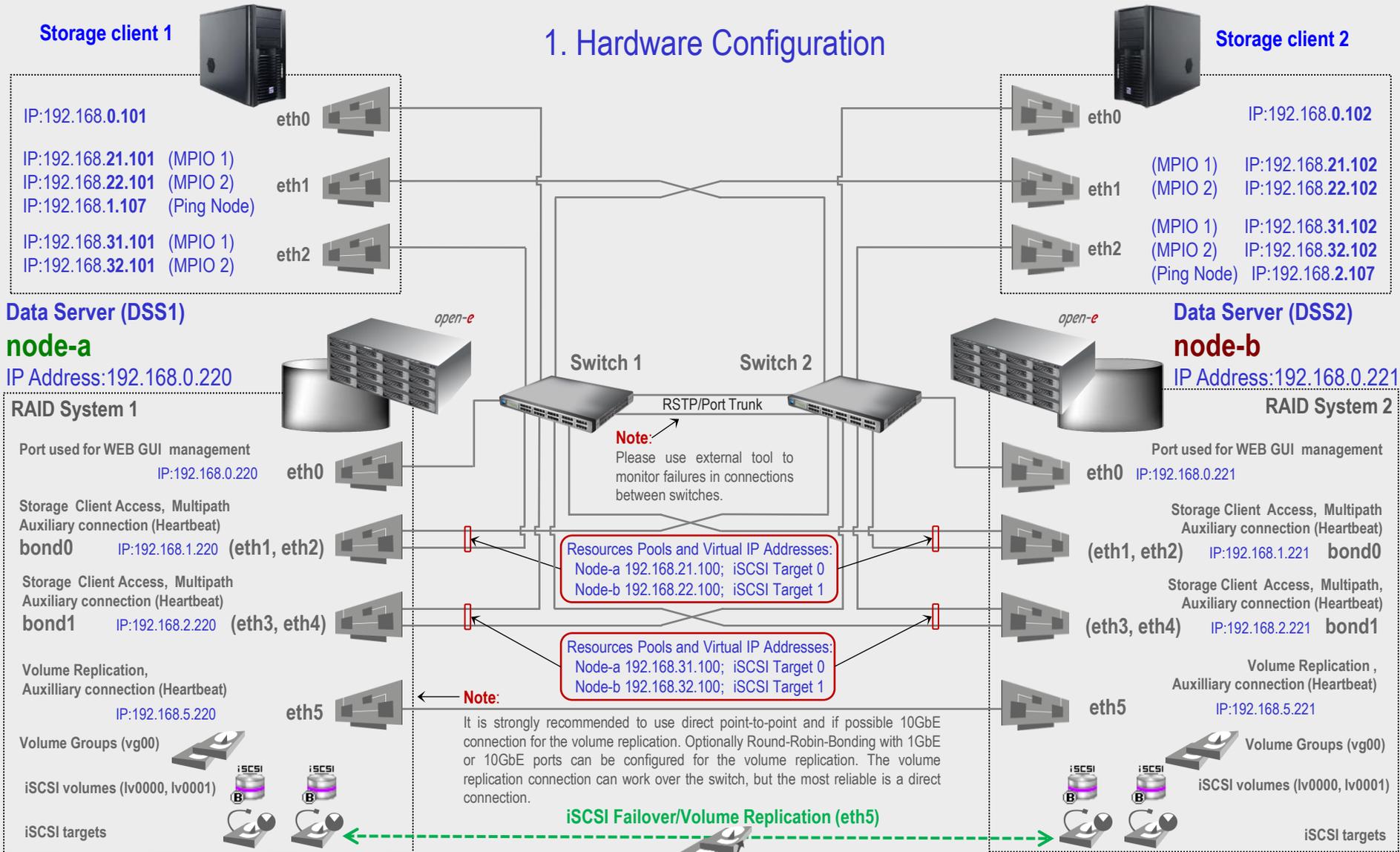
TO SET UP ACTIVE-ACTIVE iSCSI FAILOVER, PERFORM THE FOLLOWING STEPS:

1. Hardware configuration
2. Network Configuration:
 - Set server hostnames and Ethernet ports on both nodes (node-a, node-b)
3. Configure the node-b:
 - Create a Volume Group, iSCSI Volume
 - Configure Volume Replication mode (destination and source mode) – define remote mode of binding, create Volume Replication task and start the replication task
4. Configure the node-a:
 - Create a Volume Group, iSCSI Volume
 - Configure Volume Replication mode (source and destination mode), create Volume Replication task and start the replication task.
5. Create targets (node-a and node-b)
6. Configure Failover (node-a and node-b)
7. Start Failover Service
8. Test Failover Function
9. Run Failback Function

Open-E DSS V7 Active-Active iSCSI Failover



1. Hardware Configuration



NOTE:

To prevent switching loops, it's recommended to use RSTP (802.1w) or Port Trunking on network switches used to build A-A Failover network topology.



Data Server (DSS2)

node-b

IP Address:192.168.0.221

2. Network Configuration

After logging on to the Open-E DSS V7 (node-b), please go to **SETUP** and choose the "Network interfaces" option. In the **Hostname** box, replace the "dss" letters in front of the numbers with "node-b" server, in this example "node-b-59979144" and click the **apply** button (this will require a reboot).

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'Setup > Network interfaces'. On the left, there is a list of network interfaces: eth0, eth1, eth2, eth3, eth4, and eth5. On the right, there are three configuration panels: 'Server Name' (with 'Server name' set to 'dss2' and 'Comment' set to 'Data Storage Software'), 'Hostname' (with 'Hostname' set to 'node-b-59979144'), and 'DNS settings' (with 'DNS' set to '194.204.152.34;194.204.159.1'). Each panel has an 'apply' button. A blue box on the left contains instructions, with arrows pointing to the 'Network interfaces' list and the 'Hostname' field.



Data Server (DSS2)
node-b
IP Address: 192.168.0.221

2. Network Configuration

Next, select **eth0** interface and in the **IP address** field, change the IP address from 192.168.0.220 to 192.168.0.221
Then click **apply** (this will restart network configuration).

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'Setup > Network interfaces > eth0'. On the left, a list of interfaces shows 'eth0' selected with a red dot. On the right, the 'Interface info' section displays 'Intel Corporation 82546GB Gigabit Ethernet Controller (rev 03)'. Below that, the 'IP address' section has a yellow warning box: 'Warning! You are currently connected through this interface.' The configuration options are: 'Active' (checked), 'MAC: 00:04:23:B9:86:FA', 'DHCP' (unchecked), 'Static' (selected), 'IP address: 192.168.0.221', 'Netmask: 255.255.255.0', 'Broadcast: auto', and 'Gateway: 192.168.0.1'. A red 'apply' button is at the bottom right. The footer contains 'Event Viewer' and 'Data Storage Software V7 - All rights reserved'.



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Data Server (DSS2)
node-b
IP Address:192.168.0.221

2. Network Configuration

Once again, select **Interfaces** and in the "**Create new bond interface**" function check two boxes with **eth1** and **eth2**. Next, in the field **Create** select a bonding mode. In this example select **New balance-alb**.

Next, in the field **Address IP** enter 192.168.1.221 and in the **Netmask** field enter 255.255.255.0
Afterwards, click the **create** button and confirm this action by clicking the **yes** button.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'Setup > Network interfaces'. On the left, the 'Interfaces' section lists eth0 through eth5. On the right, the 'Create new bond interface' form is active. A table lists available interfaces with checkboxes for selection. Below the table, the 'Create' dropdown is set to 'New balance-alb', and the 'Static' radio button is selected. The 'Address IP' field contains '192.168.1.221' and the 'Netmask' field contains '255.255.255.0'. The 'Event Viewer' is visible at the bottom left, and the footer reads 'Data Storage Software V7 - All rights reserved'.

Select	Primary	Interface	Active	Cable	Available
<input type="checkbox"/>	<input type="checkbox"/>	eth0	yes	cable	yes
<input checked="" type="checkbox"/>	<input type="checkbox"/>	eth1	yes	cable	yes
<input checked="" type="checkbox"/>	<input type="checkbox"/>	eth2	yes	cable	yes
<input type="checkbox"/>	<input type="checkbox"/>	eth3	yes	cable	yes
<input type="checkbox"/>	<input type="checkbox"/>	eth4	yes	cable	yes
<input type="checkbox"/>	<input type="checkbox"/>	eth5	yes	cable	yes



Data Server (DSS2)
node-b
IP Address:192.168.0.221

2. Network Configuration

Again, in the "Create new bond interface" function check two boxes with **eth3** and **eth4**. Next, in the field **Create** select a bonding mode. In this example select **New balance-alb**.

Next, in the **Address IP** field enter 192.168.2.221 and in the **Netmask** field enter 255.255.255.0
Afterwards, click the **create** button and confirm this action by clicking the **yes** button.

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: Setup > Network interfaces

Interfaces

- eth0
- eth1 (bond0)
- eth2 (bond0)
- eth3
- eth4
- eth5
- bond0

Create new bond interface

Select	Primary	Interface	Active	Cable	Available	
<input type="checkbox"/>	<input type="checkbox"/>	eth0	yes	cable	yes	▼
<input type="checkbox"/>	<input type="checkbox"/>	eth1	yes	cable	no (bond0)	▼
<input type="checkbox"/>	<input type="checkbox"/>	eth2	yes	cable	no (bond0)	▼
<input checked="" type="checkbox"/>	<input type="checkbox"/>	eth3	yes	cable	yes	▼
<input checked="" type="checkbox"/>	<input type="checkbox"/>	eth4	yes	cable	yes	▼
<input type="checkbox"/>	<input type="checkbox"/>	eth5	yes	cable	yes	▼

Create: **New balance-alb**

MAC: 02:6F:E6:88:F6:56

DHCP

Static

Address IP: 192.168.2.221

Netmask: 255.255.255.0

Broadcast:

Gateway:

★ Event Viewer

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Data Server (DSS2)
node-b
IP Address: 192.168.0.221

2. Network Configuration

Next, select **eth5** interface and in the **IP address** field, change the IP address from 192.168.5.220 to 192.168.5.221 and click the **apply** button.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'Setup > Network interfaces > eth5'. On the left, a list of interfaces is shown, with 'eth5' selected. On the right, the 'Interface info' section shows 'Intel Corporation 82571EB Gigabit Ethernet Controller (rev 06)'. Below that, the 'IP address' section is active, showing 'Active' checked, 'MAC: 00:15:17:95:75:05', 'DHCP' unselected, and 'Static' selected. The 'IP address' field contains '192.168.5.221', 'Netmask' is '255.255.255.0', and 'Broadcast' is 'auto'. An 'apply' button is at the bottom right.



Data Server (DSS1)
node-a
IP Address:192.168.0.220

2. Network Configuration

After logging in to node-a, please go to **SETUP** and choose the "Network interfaces" option. In the **Hostname** box, replace the "dss" letters in front of the numbers with "node-a" server, in this example "**node-a-39166501**" and click **apply** (this will require a reboot).

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'Network interfaces'. On the left, there is a list of network interfaces: eth0, eth1, eth2, eth3, eth4, and eth5. On the right, there are three configuration panels: 'Server Name' (with fields for 'Server name' containing 'dss1' and 'Comment' containing 'Data Storage Software'), 'Hostname' (with a field for 'Hostname' containing 'node-a-39166501'), and 'DNS settings' (with a field for 'DNS' containing '194.204.152.34;194.204.159.1'). Each panel has an 'apply' button. A blue arrow points from the 'Network interfaces' section of the text box to the 'Server Name' panel, and another blue arrow points from the 'Hostname' section of the text box to the 'Hostname' field.



Data Server (DSS1)
node-a
IP Address:192.168.0.220

2. Network Configuration

Next, select **Interfaces** and in the "Create new bond interface" function check two boxes with **eth1** and **eth2**. Next, in the field **Create** select a bonding mode. In this example select **New balance-alb**.

In the field **Address IP** enter 192.168.1.220 and in the **Netmask** field enter 255.255.255.0
Afterwards, click the **create** button and confirm this action by clicking the **yes** button.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'Setup > Network interfaces'. On the left, there is a list of network interfaces: eth0, eth1, eth2, eth3, eth4, and eth5. On the right, the 'Create new bond interface' form is displayed. The form has a table with columns: Select, Primary, Interface, Active, Cable, and Available. The 'eth1' and 'eth2' rows have their 'Select' checkboxes checked. Below the table, the 'Create' dropdown menu is set to 'New balance-alb'. The 'MAC' field contains '02:E3:0F:50:D7:EE'. The 'Address IP' field contains '192.168.1.220' and the 'Netmask' field contains '255.255.255.0'. The 'Static' radio button is selected. At the bottom of the interface, there is an 'Event Viewer' icon and a footer that reads 'Data Storage Software V7 - All rights reserved'.

Select	Primary	Interface	Active	Cable	Available
<input type="checkbox"/>	<input type="checkbox"/>	eth0	yes	cable	yes
<input checked="" type="checkbox"/>	<input type="checkbox"/>	eth1	yes	cable	yes
<input checked="" type="checkbox"/>	<input type="checkbox"/>	eth2	yes	cable	yes
<input type="checkbox"/>	<input type="checkbox"/>	eth3	yes	cable	yes
<input type="checkbox"/>	<input type="checkbox"/>	eth4	yes	cable	yes
<input type="checkbox"/>	<input type="checkbox"/>	eth5	yes	cable	yes



Data Server (DSS1)
node-a
IP Address: 192.168.0.220

2. Network Configuration

Again in the "Create new bond interface" function check two boxes with **eth3** and **eth4**. Next, in the field **Create** select a bonding mode. In this example select **New balance-alb**.

Next, in the field **Address IP** enter 192.168.2.220 and in the **Netmask** field enter 255.255.255.0
Afterwards, click the **create** button and confirm this action by clicking the **yes** button.



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Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

Under **CONFIGURATION**, select "Volume manager", then click on "Volume groups".

In the **Unit manager** function menu, add the selected physical units (Unit MD0 or other) to create a new volume group (in this case, vg00) and click the **apply** button.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The breadcrumb trail indicates the current location: 'You are here: Configuration > Volume manager > Volume groups'. The main content area is divided into several panels:

- Vol. groups**: A panel with a settings icon and a question mark.
- Unit rescan**: A panel with a 'rescan' button.
- Unit manager**: A panel containing a table of units and a form for creating a new volume group.

Unit	Size (GB)	Serial number	Status
<input checked="" type="checkbox"/> Unit MD0	298.10	N/A	available

Action:

Name:

apply

Please apply changes or press "reload" button to discard
- Vol. replication**: A panel with a settings icon and a question mark.
- Drive identifier**: A panel containing a table of drives.

Unit	Serial number	Status
<input type="checkbox"/> Unit S000	9SY0QWBT	
<input type="checkbox"/> Unit S001	9RA6VDG3	

At the bottom left, there is an 'Event Viewer' icon. At the bottom center, the footer text reads 'Data Storage Software V7 - All rights reserved'.



Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

Select the appropriate volume group (**vg00**) from the list on the left and create a **new iSCSI volume** of the required size. Please set 2 logical volumes in the Active-Active option. The 1st logical volume (**lv0000**) will be a destination of the replication process on node-b.

Next, check the box **Use volume replication**.

After assigning an appropriate amount of space for the iSCSI volume, click the **apply** button

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The breadcrumb trail is 'You are here: Configuration > Volume manager > Volume groups > vg00'. The main content area is divided into two panels: 'Vol. groups' on the left and 'Volume manager' on the right. The 'Vol. groups' panel shows a list with 'vg00' selected. The 'Volume manager' panel displays system volumes and their sizes. Below this, there are configuration options for creating a new volume. The 'Action' dropdown is set to 'new iSCSI volume' and 'Options' is 'Just create volume'. The 'Use volume replication' checkbox is checked. Under 'Block I/O', the 'Rate' is set to 'medium' and the 'add' field is set to '50 GB (+0.12 GB for replication)'. A red 'apply' button is at the bottom right. A footer note says 'Please apply changes or press "reload" button to discard'. The footer also includes 'Event Viewer' and 'Data Storage Software V7 - All rights reserved'.

System volumes	Size (GB)
SWAP	4.00
Reserved for snapshots	0.00
Reserved for system	4.00
Reserved for replication	0.00
Free	290.06



Data Server (DSS2)

node-b

IP Address:192.168.0.221

3. Configure the node-b

Next, create the 2nd logical volume on the node-b. Logical volume (lv0001) will be the source of the replication process on this node.

Next, check the box **Use volume replication**.

After assigning an appropriate amount of space for the iSCSI volume, click the **apply** button.

The screenshot shows the Open-E Data Storage Software V7 web interface. The breadcrumb trail is: Configuration > Volume manager > Volume groups > vg00. The 'Vol. groups' section shows 'vg00'. The 'Vol. replication' section has the 'Use volume replication' checkbox checked. The 'Logical Volume' table shows 'lv0000' with a size of 50.00 GB. The 'System volumes' table shows 'SWAP' (4.00 GB), 'Reserved for snapshots' (0.00 GB), 'Reserved for system' (4.00 GB), 'Reserved for replication' (0.13 GB), and 'Free' (239.94 GB). The 'Action' dropdown is set to 'new iSCSI volume' and 'Options' is 'Just create volume'. The 'Use volume replication' checkbox is checked, with 'File I/O' and 'Block I/O' options below it. The 'Rate' is set to 'medium'. The 'add:' field is set to '50' GB, with a note '(+0.12 GB for replication)'. The 'apply' button is highlighted in red.

Logical Volume	Type	Snap.	Rep.	Init.	Blocksize (bytes)	Size (GB)
lv0000	iSCSI		✓		N/A	50.00

System volumes	Size (GB)
SWAP	4.00
Reserved for snapshots	0.00
Reserved for system	4.00
Reserved for replication	0.13
Free	239.94



Data Server (DSS2)

node-b

IP Address: 192.168.0.221

3. Configure the node-b

2 logical iSCSI Volume Block I/O are now configured.



iSCSI volume (lv0000) is set to destination



iSCSI volume (lv0001) is set to source



Data Server (DSS1)
node-a
IP Address: 192.168.0.220

4. Configure the node-a

Under **CONFIGURATION**, select "Volume manager" and then click on "Volume groups".

Add the selected physical units (Unit S001 or other) to create a new volume group (in this case, vg00) and click **apply** button.



Volume Groups (vg00)

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The breadcrumb trail indicates the current location: 'You are here: Configuration > Volume manager > Volume groups'. The main content area is divided into several panels:

- Vol. groups:** A panel with a settings icon and a help icon.
- Unit rescan:** A panel with a 'rescan' button.
- Unit manager:** A panel containing a table of units and configuration options.

Unit	Size (GB)	Serial number	Status
<input checked="" type="checkbox"/> Unit S001	1862.95	N/A	available

Action:

Name:

apply
- Vol. replication:** A panel with a settings icon and a help icon.
- Drive identifier:** A panel containing a table of drives.

Unit	Serial number	Status
<input type="checkbox"/> Unit S001	N/A	

At the bottom left, there is an 'Event Viewer' icon. At the bottom right, the footer text reads 'Data Storage Software V7 - All rights reserved'.



Data Server (DSS1)

node-a

IP Address:192.168.0.220

4. Configure the node-a

Select the appropriate volume group (**vg00**) from the list on the left and create a **new iSCSI volume** of the required size. Please set 2 logical volumes in the Active-Active option. The 1st logical volume (**lv0000**) will be a source of the replication process on the node-a.

Next, check the box for "Use volume replication"

After assigning an appropriate amount of space to the iSCSI volume, click the **apply** button.

NOTE:

The source and destination volumes must be of identical size.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The breadcrumb trail is 'You are here: Configuration > Volume manager > Volume groups > vg00'. The main content area is divided into two panels: 'Vol. groups' on the left and 'Volume manager' on the right. In the 'Vol. groups' panel, 'vg00' is selected. In the 'Volume manager' panel, the 'System volumes' table shows the following data:

System volumes	Size (GB)
SWAP	4.00
Reserved for snapshots	0.00
Reserved for system	4.00
Reserved for replication	0.00
Free	1854.91

Below the table, the 'Action' dropdown is set to 'new iSCSI volume' and the 'Options' dropdown is set to 'Just create volume'. The 'Use volume replication' checkbox is checked. Under 'Block I/O', the 'Initialize' checkbox is checked, and the 'Rate' is set to 'medium'. At the bottom, a slider shows the volume size set to 50 GB, with a note '(+0.12 GB for replication)'. A red 'apply' button is visible at the bottom right. A footer message reads 'Please apply changes or press "reload" button to discard'. The footer also includes 'Event Viewer' and 'Data Storage Software V7 - All rights reserved'.



Data Server (DSS1)

node-a

IP Address: 192.168.0.220

4. Configure the node-a

Next, create the 2nd logical volume on the node-a. Logical volume (lv0001) will be a destination of the replication process on this node.

Next, check the box for "Use volume replication".

After assigning an appropriate amount of space to the iSCSI volume, click the **apply** button.

NOTE:

The source and destination volumes must be of identical size.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The breadcrumb trail indicates the current location: 'Configuration > Volume manager > Volume groups > vg00'. The main content area is divided into two sections: 'Vol. groups' and 'Vol. replication'. The 'Vol. groups' section shows a table with one entry: 'lv0000' of type 'iSCSI' and size '50.00'. The 'Vol. replication' section shows a table with one entry: 'vg00' of type 'iSCSI' and size '50.00'. The right-hand side of the interface displays the configuration options for the selected volume. The 'Action' dropdown is set to 'new iSCSI volume'. The 'Options' dropdown is set to 'Just create volume'. The 'Use volume replication' checkbox is checked. The 'File I/O' radio button is selected. The 'Initialize' checkbox is checked. The 'Rate' dropdown is set to 'medium'. The 'Block I/O' radio button is selected. The 'add:' field is set to '50' GB, with a note '(+0.12 GB for replication)'. The 'apply' button is highlighted in red.

Logical Volume	Type	Snap.	Rep.	Init.	Blocksize (bytes)	Size (GB)
lv0000	iSCSI		✓		N/A	50.00

System volumes	Size (GB)
SWAP	4.00
Reserved for snapshots	0.00
Reserved for system	4.00
Reserved for replication	0.13
Free	1804.78

Action: new iSCSI volume
Options: Just create volume
 Use volume replication
 File I/O
 Initialize
Rate: medium
 Block I/O
add: 50 GB (+0.12 GB for replication)
apply



Data Server (DSS1)
node-a
IP Address: 192.168.0.220

4. Configure the node-a

2 logical iSCSI Volume Block I/O are now configured.



iSCSI volume (lv0000) is set to source



iSCSI volume (lv0001) is set to destination

Logical Volume	Type	Snap.	Rep.	Init.	Blocksize (bytes)	Size (GB)
lv0000	iSCSI		✓		N/A	50.00
lv0001	iSCSI		✓		N/A	50.00

System volumes	Size (GB)
SWAP	4.00
Reserved for snapshots	0.00
Reserved for system	4.00
Reserved for replication	0.25
Free	1754.66



Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

Now, on the node-b, go to "Volume replication". Within Volume replication mode function, check the Destination box for lv0000 and check the Source box for lv0001. Then, click the **apply** button.

In the Hosts binding function, enter the IP address of node-a (in our example, this would be 192.168.5.220), enter node-a administrator password and click the **apply** button.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The breadcrumb trail indicates the current location: 'You are here: Configuration > Volume manager > Volume replication'. The interface is divided into several sections:

- Vol. groups:** A list containing 'vg00'.
- Volume replication mode:** A table with columns: Logical Volume, Init, Source, Destination, and Clear metadata. The table shows two logical volumes, lv0000 and lv0001, both with 'done' in the Init column. For lv0000, the Destination checkbox is checked. For lv0001, the Source checkbox is checked. An 'apply' button is visible below the table.
- Hosts Binding:** A section for configuring remote nodes. It includes fields for 'Remote node IP address' (set to 192.168.5.220) and 'Remote node GUI (administrator) password' (masked with dots). A 'connect' button is at the bottom.
- Create new volume replication task:** A section with an 'Info' icon and a message: 'Volume replication tasks can not be created because there is no remote node connected.'

At the bottom of the interface, there is an 'Event Viewer' icon and a footer that reads 'Data Storage Software V7 - All rights reserved'.

NOTE:

The remote node IP Address must be on the same subnet in order for the replication to communicate. VPN connections can work providing you are not using a NAT. Please follow example:

- node-a: 192.168.5.220
- node-b: 192.168.5.221



Data Server (DSS1)

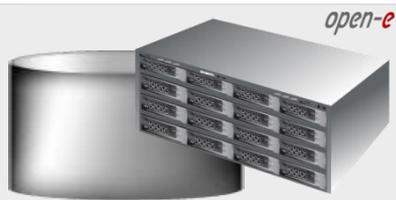
node-a

IP Address: 192.168.0.220

4. Configure the node-a

Next, on the node-a, go to "Volume replication". Within Volume replication mode function, check the **Source** box for lv0000 and check the **Destination** box for lv0001. Next, click the **apply** button.

Logical Volume	Init	Source	Destination	Clear metadata
lv0000	done	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lv0001	done	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Data Server (DSS1)

node-a

IP Address:192.168.0.220

4. Configure the node-a

In the **Create new volume replication task**, enter the task name in the **Task name** field, then click on the button. In the **Destination volume** field, select the appropriate volume (in this example, **lv0000**).

In the **Bandwidth for SyncSource (MB)** field you must change the value. In the example, 35MB is used. Next, click the **create** button.

NOTE:

The "Bandwidth for SyncSource (MB)" need to be calculated based on available Ethernet Network throughput and number of replication tasks and the limitation factor (about 0.7).

For example: 1 Gbit Ethernet and 2 replication tasks (assuming 1 Gbit provides about 100 MB/sec sustained network throughput)

- Bandwidth for SyncSource (MB): = $0.7 * 100 / 2 = 35$

For example: 10 Gbit Ethernet and 10 replication tasks (assuming 10 Gbit provides about 700 MB/sec sustained network throughput)

- Bandwidth for SyncSource (MB): = $0.7 * 700 / 10 = 49$



Data Server (DSS1)

node-a

IP Address:192.168.0.220

4. Configure the node-a

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'Configuration > Volume manager > Volume replication'. The left sidebar shows 'Vol. groups' with 'vg00' and 'Vol. replication' with 'Mirror_0000'. The main content area has three sections: 'Hosts Binding' showing a remote node 'node-b-5...' with IP '192.168.5.221' and status 'Reachable'; 'Create new volume replication task' with an info message; and 'Replication tasks manager' with a table:

Name	Start time	Action
Mirror_0000	n/a	[Play] [Stop] [Delete]

A blue callout box on the left contains the text: 'Now, in the Replication task manager function, click the corresponding "play" button to start the Replication task on the node-a.' An arrow points from this box to the play button in the 'Replication tasks manager' table.

Now, in the Replication task manager function, click the corresponding "play" button to start the Replication task on the node-a.



Data Server (DSS1)

node-a

IP Address:192.168.0.220

4. Configure the node-a

In the **Replication tasks manager** window, you may view information about currently running replication tasks.

When a task is started, a date and time will appear.



Data Server (DSS1)
node-a
IP Address:192.168.0.220

4. Configure the node-a

You can check the status of Volume Replication anytime in **STATUS** → **"Tasks"** → **"Volume Replication"** menu.

Click on the  button, located next to a task name (in this case **Mirror_0000**) to display detailed information on the current replication task.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The breadcrumb trail indicates 'You are here: Status > Tasks > Volume Replication'. The main content area is divided into two panels. The left panel, titled 'Tasks', shows a list of tasks: 'Data (File) Replication', 'Antivirus', 'Volume Replication' (highlighted), and 'Snapshots'. The right panel, titled 'Running tasks', displays details for the 'Mirror_0000' task. It includes a table with columns for Name, Type, and Start time. Below the table, it shows 'Protocol type: Synchronous', 'Connection: Connected', 'Source info: Logical volume: lv0000, Consistency: Consistent', 'Destination info: Logical volume: lv0000, Consistency: Consistent', and 'IP address: 192.168.5.221'. At the bottom, there is a 'Tasks log' table with columns for Time, Name, Type, Status, and Action. The log entry for 'Mirror_0000' shows a status of 'OK' and an action of 'Started'. The footer of the interface includes 'Event Viewer' and 'Data Storage Software V7 - All rights reserved'.

NOTE:
Please allow the replication task to complete (similar to above with status being "Consistent") before writing to the iSCSI Logical Volume.



Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

Next, go to the node-b.
Within **Create new volume replication task**, enter the task name in the **Task name** field, then click on the  button.
In the **Destination volume** field, select the appropriate volume (in this example, lv0001).

As in the node-a, in the **Bandwidth for SyncSource (MB)** field you must change the value. In our example 35 MB is used. Next click the **create** button.

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: Configuration > Volume manager > Volume replication

disconnect

Vol. groups

- vg00

Vol. replication

- Mirror_0000_reverse

Create new volume replication task

Task name:

Source volume:

Destination volume: 

Bandwidth for SyncSource (MB):

create

Please apply changes or press "reload" button to discard

Replication tasks manager

Name	Start time	Action
Mirror_0000_reverse	n/a	  

Event Viewer

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

In the **Replication tasks manager** function, click the corresponding "play" button to start the Replication task on the node-b: **Mirror_0001**.

In this box you can find information about currently running replication tasks.

When a task is started a date and time will appear.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The breadcrumb trail indicates the current location: 'You are here: Configuration > Volume manager > Volume replication'. The interface is divided into several panels:

- Vol. groups:** Shows a single group named 'vg00'.
- Vol. replication:** Shows two replication tasks: 'Mirror_0000_reverse' and 'Mirror_0001'.
- Hosts Binding:** Shows a 'Remote node' with 'Host name: node-a-3...' and 'IP address: 192.168.5.220'. The status is 'Reachable'. A 'disconnect' button is present.
- Create new volume replication task:** Displays an 'Info' message: 'No volumes with replication functionality found or all volumes have a task assigned already.'
- Replication tasks manager:** A table listing active replication tasks.

Name	Start time	Action
Mirror_0000_reverse	n/a	[Play] [Stop] [Delete]
Mirror_0001	2013-06-24 20:10:03	[Play] [Stop] [Delete]

At the bottom, there is an 'Event Viewer' icon and a footer: 'Data Storage Software V7 - All rights reserved'.



Data Server (DSS2)
node-b
IP Address:192.168.0.221

5. Create new target on the node-b

Choose **CONFIGURATION**, "iSCSI target manager" and "Targets" from the top menu.

In the **Create new target** function, uncheck the box **Target Default Name**.
In the **Name** field, enter a name for the new target and click **apply** to confirm.

iSCSI targets



NOTE:
Both systems must have the same Target name.



Data Server (DSS2)
node-b
IP Address:192.168.0.221

5. Create new target on the node-b

Next, you must set the 2nd target. Within the **Create new target** function, uncheck the box **Target Default Name**. In the **Name** field, enter a name for the 2nd new target and click **apply** to confirm.

iSCSI targets



NOTE:
Both systems must have the same Target name.



Data Server (DSS2)
node-b
IP Address:192.168.0.221

5. Create new target on the node-b

After that, select **target0** within the **Targets** field.

To assign appropriate volume to the target (**iqn.2013-06:mirror-0** → **lv0000**) and click **attach** button located under **Action**.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The breadcrumb trail indicates the current location: 'You are here: Configuration > iSCSI target manager > Targets > iqn.2013-06:mirror-0 (target0)'. The main content area is divided into two panels. The left panel, titled 'Targets', shows a list of targets: 'target0' (selected with a red dot) and 'target1' (unselected with a grey dot). The right panel, titled 'Target volume manager', displays information about the selected target. It includes two 'Info' sections: one explaining that logical volumes are selected as mirror destinations and another noting that a LUN 0 is required for access. Below this is a table of logical volumes attached to the target, which is currently empty. At the bottom, there is a table of 'Available logical volumes' with two entries: 'lv0000' (SCSI ID: YAkFXJf3NEV5870A) and 'lv0001' (SCSI ID: ZiGxwlh33QBSpR1N). Both have LUN 0 and 'write-through' access mode. The 'attach' button for 'lv0000' is highlighted with a red arrow from the text box above.

Volume	Type	SCSI ID	LUN	Access mode	Action
lv0000	iSCSI	YAkFXJf3NEV5870A	0	write-through	attach
lv0001	iSCSI	ZiGxwlh33QBSpR1N	0	write-through	attach

NOTE:
Volumes on both sides must have the same SCSI ID and LUN# for example: lv0000 SCSI ID on node-a = lv0000 SCSI ID on node-b.
In this case before clicking the **attach** button please copy the SCSI and LUN# from this node.



Data Server (DSS2)
node-b
IP Address:192.168.0.221

5. Create new target on the node-b

Next, select **target1** within the **Targets** field.

To assign appropriate volume to the target (**iqn.2013-06:mirror-1** → **lv0001**) and click **attach** button located under **Action**.

The screenshot shows the Open-E DSS V7 web interface. The breadcrumb navigation is: Configuration > iSCSI target manager > Targets > iqn.2013-06:mirror-1 (target1). The 'Targets' section lists 'target0' and 'target1', with 'target1' selected. The 'Target volume manager' section contains an info box, a table of logical volumes attached to the target (currently empty), and a table of available logical volumes. The available volumes table has one row: Volume 'lv0001', Type 'iSCSI', SCSI ID 'ZIGxwlh33QBSpR1N', LUN '0', Access mode 'write-through', and an 'attach' button. The 'CHAP user access authentication' section has two radio buttons: 'No CHAP user access authentication' (selected) and 'Enable CHAP user access authentication'. An 'apply' button is at the bottom right.

NOTE:
Both systems must have the same SCSI ID and LUN#



Data Server (DSS1)
node-a
IP Address: 192.168.0.220

5. Create new target on the node-a

On the node-a, choose **CONFIGURATION**, "iSCSI target manager" and "Targets" from the top menu.

Within the **Create new target** function, uncheck the box **Target Default Name**. In the **Name** field, enter a name for the new target and click **apply** to confirm.

iSCSI targets



NOTE:
Both systems must have the same Target name.



Data Server (DSS1)

node-a

IP Address: 192.168.0.220

5. Create new target on the node-a

Next, you must set the 2nd target. In the **Create new target** function, uncheck the box **Target Default Name**. In the Name field, enter a name for the 2nd new target and click **apply** to confirm.

iSCSI targets



NOTE:
Both systems must have the same Target name.



Data Server (DSS1)
node-a
IP Address:192.168.0.220

5. Create new target on the node-a

Select the **target0** within the Targets field.

To assign appropriate volume to the target (**iqn.2013-06:mirror-0** → **lv0000**) and click **attach** button located under **Action**.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The breadcrumb trail indicates the current location: 'Configuration > iSCSI target manager > Targets > iqn.2013-06:mirror-0 (target0)'. The 'Targets' section on the left lists 'target0' (selected) and 'target1'. The 'Target volume manager' section on the right provides information about logical volumes and includes a table of available volumes.

Volume	Type	SCSI ID	LUN	Access mode	Action
lv0000	iSCSI	YAkFXJf3NEV5870A	0	write-through	attach
lv0001	iSCSI	ZiGxwlh33QBSpR1N	0	write-through	attach

★ Event Viewer



Data Server (DSS1)

node-a

IP Address:192.168.0.220

5. Create new target on the node-a

Select the **target1** within the **Targets** field.

To assign appropriate volume to the target (**iqn.2013-06:mirror-1** → **lv0001**) and click **attach** button located under **Action**.

The screenshot shows the Open-E DSS V7 web interface. The breadcrumb path is: Configuration > iSCSI target manager > Targets > iqn.2013-06:mirror-1 (target1). The 'Targets' section on the left lists 'target0' and 'target1', with 'target1' selected. The 'Target volume manager' section on the right displays information about the target and a table of available logical volumes. The table has columns: Volume, Type, SCSI ID, LUN, Access mode, and Action. The row for 'lv0001' is highlighted, and the 'attach' button in the 'Action' column is highlighted with a red box. Below the table is the 'CHAP user access authentication' section.

Volume	Type	SCSI ID	LUN	Access mode	Action
lv0001	iSCSI	ZiGxwlh33QBSpR1N	0	write-through	attach

NOTE:
Before clicking the **attach** button again, please copy & paste the SCSI ID and LUN# from the node-b.



Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

On the node-a, go to **SETUP** and select "Failover".

In the **Auxiliary paths** function, select the 1st **New auxiliary path** on the local and remote node and click the **add new auxiliary path** button.



Data Server (DSS1)
node-a
IP Address: 192.168.0.220

6. Configure Failover

In the **Auxiliary paths** function, select the 2nd **New auxiliary path** on the local and remote node and click the **add new auxiliary path** button.



Data Server (DSS1)

node-a

IP Address:192.168.0.220

6. Configure Failover

In the **Ping nodes** function, enter two ping nodes.
In the **IP address** field enter IP address and click the **add new ping node** button (according to the configuration in the third slide).
In this example, IP address of the first ping node is: 192.168.1.107 and the second ping node: 192.168.2.107



Data Server (DSS1)
node-a
IP Address: 192.168.0.220

6. Configure Failover

Next, go to the **Resources Pool Manager** function (on node-a resources) and click the **add virtual IP** button. After that, enter **Virtual IP**, (in this example 192.168.21.100 according to the configuration in the third slide) and select two appropriate interfaces on local and remote nodes. Then, click the **add** button.



Data Server (DSS1)

node-a

IP Address: 192.168.0.220

6. Configure Failover

Now, still on node-a resources (local node) enter the next Virtual IP address. Click **add virtual IP** enter **Virtual IP**, (in this example 192.168.31.100), and select two appropriate interfaces on the local and remote nodes. Then, click the **add** button.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'Setup > Failover'. The main content area is titled 'Resources pool manager' and shows the configuration for 'node-a-39166501 resources (local node)'. The status is 'not configured'. There are buttons for 'move' and 'sync between nodes'. Below this, there are tabs for 'Virtual IP addresses' and 'iSCSI resources'. The 'add virtual IP' form is active, showing the following fields: Virtual IP: 192.168.31.100; Interface on local node: bond1 (192.168.2.220); Interface on remote node: bond1 (192.168.2.221); Netmask: 255.255.255.0; Broadcast (optional): (empty). There are 'cancel' and 'add' buttons at the bottom of the form. Below the form, there is a section for 'node-b-59979144 resources (remote node)' with a status of 'not configured' and a 'move' button. The footer includes 'Event Viewer' and 'Data Storage Software V7 - All rights reserved'.



Data Server (DSS1)

node-a

IP Address:192.168.0.220

6. Configure Failover

Then, go to node-b resources and click the **add virtual IP** button again and enter the **Virtual IP** (In this example 192.168.22.100 according to the configuration in the third slide) and select two appropriate interfaces on the local and remote nodes. Then, click the **add** button.



Data Server (DSS1)

node-a

IP Address:192.168.0.220

6. Configure Failover

Now, still on node-b resources, click the **add virtual IP** button and enter the next **Virtual IP**, (in this example 192.168.32.100, according to the configuration in the third slide) and select two appropriate interfaces on the local and remote nodes. Then, click the **add** button.

The screenshot shows the Open-E DSS V7 web interface. At the top, there is a navigation bar with tabs for SETUP, CONFIGURATION, MAINTENANCE, STATUS, and HELP. Below this, a breadcrumb trail indicates 'You are here: Setup > Failover'. The main content area displays a list of resources for node-b-59979144 (remote node). The resources are listed in a table with columns for IP address, local node interface, and remote node interface. Below the table, there are buttons for 'move' and 'sync between nodes'. A modal window titled 'add virtual IP' is open, showing fields for 'Virtual IP' (192.168.32.100), 'Interface on local node' (bond1 (192.168.2.220)), 'Interface on remote node' (bond1 (192.168.2.221)), 'Netmask' (255.255.255.0), and 'Broadcast (optional)'. There are 'cancel' and 'add' buttons at the bottom of the modal. The footer of the interface includes an 'Event Viewer' icon and the text 'Data Storage Software V7 - All rights reserved'.



Data Server (DSS1)

node-a

IP Address: 192.168.0.220

6. Configure Failover

Now you have 4 Virtual IP addresses configured on two interfaces.

The screenshot shows the Open-E DSS V7 web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'Setup > Failover'. The interface is divided into two main sections for 'node-a' and 'node-b-59979144 resources (remote node)'. Each section has a 'Virtual IP addresses' tab and an 'iSCSI resources' tab. Under 'Virtual IP addresses', there is an 'add virtual IP' button and a table with columns for 'Virtual IP', 'Interface on local node', and 'Interface on remote node'. The table lists two Virtual IP addresses for each node: 192.168.21.100 and 192.168.31.100 for node-a, and 192.168.22.100 and 192.168.32.100 for node-b. Each entry has a gear icon for configuration and a trash icon for deletion. Below the table, there is an 'Info' box stating 'Virtual IP has been created successfully.' and buttons for 'move' and 'sync between nodes'. The bottom of the interface shows an 'Event Viewer' icon and the text 'Data Storage Software V7 - All rights reserved.'



Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

When you are finished with setting the virtual IP, go to the **iSCSI resources** tab on the local node resources and click the **add or remove targets** button. After moving the target **mirror-0** from **Available targets** to **Targets already in cluster**, click the **apply** button.

The screenshot shows the Open-E DSS V7 web interface. At the top, there's a navigation bar with 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. Below that, a breadcrumb trail says 'You are here: Setup > Failover'. The main content area is titled 'Resources pool manager' and shows details for 'node-a-39166501 resources (local node)'. The 'iSCSI resources' tab is active. Under 'Virtual IP addresses', there's a red button labeled 'iSCSI resources'. Below this, there are two lists: 'Available targets' containing 'iqn.2013-06:mirror-1' and 'Targets already in cluster' containing 'iqn.2013-06:mirror-0'. A red 'apply' button is at the bottom of these lists. Below the lists, there's a section for 'node-b-59979144 resources (remote node)' with an 'Info' message: 'Virtual IP has been created successfully.' and buttons for 'move' and 'sync between nodes'. At the bottom left, there's an 'Event Viewer' icon, and at the bottom right, it says 'Data Storage Software V7 - All rights reserved'.



Data Server (DSS1)
node-a
IP Address: 192.168.0.220

6. Configure Failover

Next, go to the **iSCSI resources** tab on the **remote node resources** and click the **add or remove targets** button.
After moving the target **mirror-1** from **Available targets** to **Targets already in cluster**, click the **apply** button.

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: Setup > Failover

cancel | apply

iSCSI target: target0 (iqn.2013-06:mirror-0)

Replication task	Logical volume	Replication task state
Mirror_0000	lv0000	OK

node-b-59979144 resources
(remote node)

Status: inactive | move

Synchronization status: not configured | sync between nodes

Virtual IP addresses | **iSCSI resources**

Available targets | Targets already in cluster

iqn.2013-06:mirror-1

cancel | apply

★ Event Viewer

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Data Server (DSS1)
node-a
IP Address: 192.168.0.220

6. Configure Failover

After that, scroll to the top of the **Failover manager** function.
At this point, both nodes are ready to start the Failover.
In order to run the Failover service, click the **start** button and confirm this action by clicking the **start** button again.

The screenshot shows the Open-E DSS V7 Failover Manager web interface. The top navigation bar includes 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. The current page is 'Failover Manager'. The main content area displays the following information:

- Cluster status:** Ready for Start
- All required settings have been set up, cluster is ready to be started.
- Important!** Please refer to [Failover: Important notes](#) help for important information related to configuration and maintenance of failover services.
- A red **start** button is visible.
- Resources pool**
 - node-a-39166501 (local node) resources pool:**
 - Status: inactive
 - Replication state: **synced**
 - Persistent reservation synchronization: inactive
 - node-b-59979144 (remote node) resources pool:**
 - Status: inactive
 - Replication state: **synced**
 - Persistent reservation synchronization: inactive
- [See details >](#)
- Network statuses**
 - Ping nodes: **2 of 2 reachable**
 - [See details >](#)
 - Auxiliary paths: 3 defined
 - [See details >](#)
- Remote node status**
 - Remote node availability: **Reachable**
 - Remote node hostname: **node-b-59979144**
 - Remote node IP: **192.168.5.221**
 - [See details >](#)

The bottom of the interface shows an 'Event Viewer' icon and the text 'Data Storage Software V7 - All rights reserved'.

★ Event Viewer

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NOTE:

If the start button is grayed out, the setup has not been completed.



Data Server (DSS1)

node-a

IP Address:192.168.0.220

7. Start Failover Service

After clicking the **start** button, configuration of both nodes is complete.

Failover Manager

Cluster status: Running - OK

Important! Please refer to [Failover: Important notes](#) help for important information related to configuration and maintenance of failover services.

stop

Resources pool

node-a-39166501 (local node) resources pool:

Status: **active on node-a-3... (local node)**

Replication state: **synced**

Persistent reservation synchronization: **active**

node-b-59979144 (remote node) resources pool:

Status: **active on node-b-5... (remote node)**

Replication state: **synced**

Persistent reservation synchronization: **active**

[See details >](#)

Network statuses	Remote node status
Ping nodes: 2 of 2 reachable	Remote node availability: Reachable
See details >	Remote node hostname: node-b-59979144
Auxiliary paths: 3 of 3 reachable	Remote node IP: 192.168.5.221
See details >	See details >

★ **Event Viewer**

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NOTE:

You can now connect with iSCSI Initiators. The first storage client, in order to connect to target0 please setup multipath with following IP on the initiator side: 192.168.21.101 and 192.168.31.101. In order to connect to target1 please setup multipath with following IP on the initiator side: 192.168.22.101 and 192.168.32.101.

For the next storage client please setup multipath accordingly: for access to target0: 192.168.21.102, 192.168.31.102 and for access to target1: 192.168.22.102, 192.168.32.102.



Data Server (DSS1)

node-a

IP Address:192.168.0.220

8. Test Failover Function

In order to test Failover, go to the **Resources pool manager** function. Then, in the **local node** resources, click on the **move to remote node** button and confirm this action by clicking the **move** button.

Resources pool manager

Info
While a cluster is running you are not able to change Virtual IPs settings. Please stop cluster in order to make changes.

node-a-39166501 resources
(local node)

Status: **active on node-a-3... (local node)** **move to remote node**

Synchronization status: **synced** **sync between nodes**

Virtual IP addresses **iSCSI resources**

add or remove targets

iSCSI target: target0 (iqn.2013-06:mirror-0)

Replication task	Logical volume	Replication task state
Mirror_0000	lv0000	OK

node-b-59979144 resources
(remote node)

Info
Targets have been added/removed successfully.

Status: **active on node-b-5... (remote node)** **move to local node**

Synchronization status: **synced** **sync between nodes**

★ **Event Viewer**

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Data Server (DSS1)
node-a
IP Address:192.168.0.220

8. Test Failover Function

After performing this step, the status for **local node** resources should state "active on node-b (remote node)" and the **Synchronization status** should state "synced".

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: Setup > Failover

Resources pool manager

Info
While a cluster is running you are not able to change Virtual IPs settings. Please stop cluster in order to make changes.

node-a-39166501 resources
(local node)

Info
Resources were moved successfully.

Status: **active on node-b-5... (remote node)** move to local node

Synchronization status: **synced** sync between nodes

Virtual IP addresses | **iSCSI resources**

add or remove targets

iSCSI target: target0 (iqn.2013-06:mirror-0)

Replication task	Logical volume	Replication task state
Mirror_0000	lv0000	OK

node-b-59979144 resources
(remote node)

Info
Targets have been added/removed successfully.

Status: **active on node-b-5... (remote node)** move to local node

★ Event Viewer

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Data Server (DSS1)

node-a

IP Address:192.168.0.220

9. Run Failback Function

In order to test failback, click the **move to local node** button in the **Resources pool manager** box for local node resources and confirm this action by clicking the **move** button.

The screenshot shows the Open-E DSS V7 web interface. At the top, there is a navigation bar with tabs for SETUP, CONFIGURATION, MAINTENANCE, STATUS, and HELP. Below this, a breadcrumb trail indicates 'You are here: Setup > Failover'. The main content area is titled 'Resources pool manager' and contains an information box stating: 'While a cluster is running you are not able to change Virtual IPs settings. Please stop cluster in order to make changes.' Below this, the resources for 'node-a-39166501 (local node)' are displayed. The status is 'active on node-b-5... (remote node)' and the synchronization status is 'synced'. A red button labeled 'move to local node' is highlighted with a blue arrow. Below the resources, there are tabs for 'Virtual IP addresses' and 'iSCSI resources'. Under the 'iSCSI resources' tab, there is a table for 'iSCSI target: target0 (iqn.2013-06:mirror-0)'. The table has columns for 'Replication task', 'Logical volume', and 'Replication task state'. The first row shows 'Mirror_0000' for the replication task, 'lv0000' for the logical volume, and 'OK' for the replication task state. Below the table, there are buttons for 'add or remove targets', 'move to local node', and 'sync between nodes'. At the bottom of the interface, there is an 'Event Viewer' section and a footer that reads 'Data Storage Software V7 - All rights reserved'.



Data Server (DSS1)
node-a
IP Address:192.168.0.220

9. Run Failback Function

After completing this step, the status for node-a resources should state "active on node-a (local node)" and the Synchronization status should state "synced". Then, you can apply the same actions for node-b resources.

NOTE:
The Active-Active option allows configuring resource pools on both nodes and makes it possible to run some active volumes on node-a and other active volumes on node-b. The Active-Active option is enabled with the TRIAL mode for 60 days or when purchasing the Active-Active Failover Feature Pack. The Active-Passive option allows configuring a resource pool only on one of the nodes. In such a case, all volumes are active on a single node only.

The configuration and testing of Active-Active iSCSI Failover is now complete.

The screenshot displays the Open-E DSS V7 web interface. At the top, there's a navigation bar with 'SETUP', 'CONFIGURATION', 'MAINTENANCE', 'STATUS', and 'HELP'. Below that, a breadcrumb trail shows 'You are here: Setup > Failover'. The main content area is titled 'Resources pool manager' and contains several sections:

- Info:** A message stating, 'While a cluster is running you are not able to change Virtual IPs settings. Please stop cluster in order to make changes.'
- node-a-39166501 resources (local node):**
 - Info:** 'Resources were moved successfully.'
 - Status:** 'active on node-a-3... (local node)' with a red button 'move to remote node'.
 - Synchronization status:** 'synced' with a grey button 'sync between nodes'.
 - Buttons for 'Virtual IP addresses' and 'iSCSI resources'.
 - A red button 'add or remove targets'.
- iSCSI target: target0 (iqn.2013-06:mirror-0):**
 - Replication task: 'Mirror_0000' (dropdown arrow)
 - Logical volume: 'lv0000'
 - Replication task state: 'OK'
- node-b-59979144 resources (remote node):**
 - Status:** 'active on node-b-5... (remote node)' with a red button 'move to local node'.
 - Synchronization status:** 'synced' with a grey button 'sync between nodes'.

At the bottom left, there's an 'Event Viewer' icon. At the bottom right, it says 'Data Storage Software V7 - All rights reserved'.

Thank you!

Follow Open-E:

