



**BOSCH**

# **DSA E-Series E2800 - Adding expansion units**

**en**

Installaton manual



# 1 Short information

This manual describes how to add NetApp E2800 expansion units to a running NetApp E2800 system without any data loss.

The description is valid for the following products:

- E2800 12-bay
  - DSA-N2E8X4-12AT
  - DSX-N1D8X4-12AT
  - DSA-N2C8X4-12AT
  - DSA-N2E8X8-12AT
  - DSX-N1D8X8-12AT
  - DSA-N2C8X8-12AT
  - DSA-N2E8XC-12AT
  - DSX-N1D8XC-12AT
  - DSA-N2C8XC-12AT
  - DSA-N2E8XG-12AT
  - DSX-N1D8XG-12AT
  - DSA-N2C8XG-12AT
- E2800 60-bay
  - DSA-N6C8X4-60AT
  - DSA-N6C8X8-60AT
  - DSA-N6C8XC-60AT
  - DSX-N6D8X4-60AT
  - DSX-N6D8X8-60AT
  - DSX-N6D8XC-60AT
  - DSX-NRCK40-INT8

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## Adding expansion units

**Notice!**

The following description refers to a duplex controller configuration. For a single controller configuration, the procedure is analogous.

To attach an expansion unit:

1. In the web browser, enter the management IP address of the E2800 controller.  
A dialog box appears to sign in to the SANtricity program.
2. Enter your credentials.  
The **SANtricity System Manager** window appears.
3. Click **Hardware**.  
The **HARDWARE** pane of the Controller Shelf appears showing the attached expansion units.

**Note:** The example shows a Controller Shelf with no expansion units connected.

4. Click **Storage**.

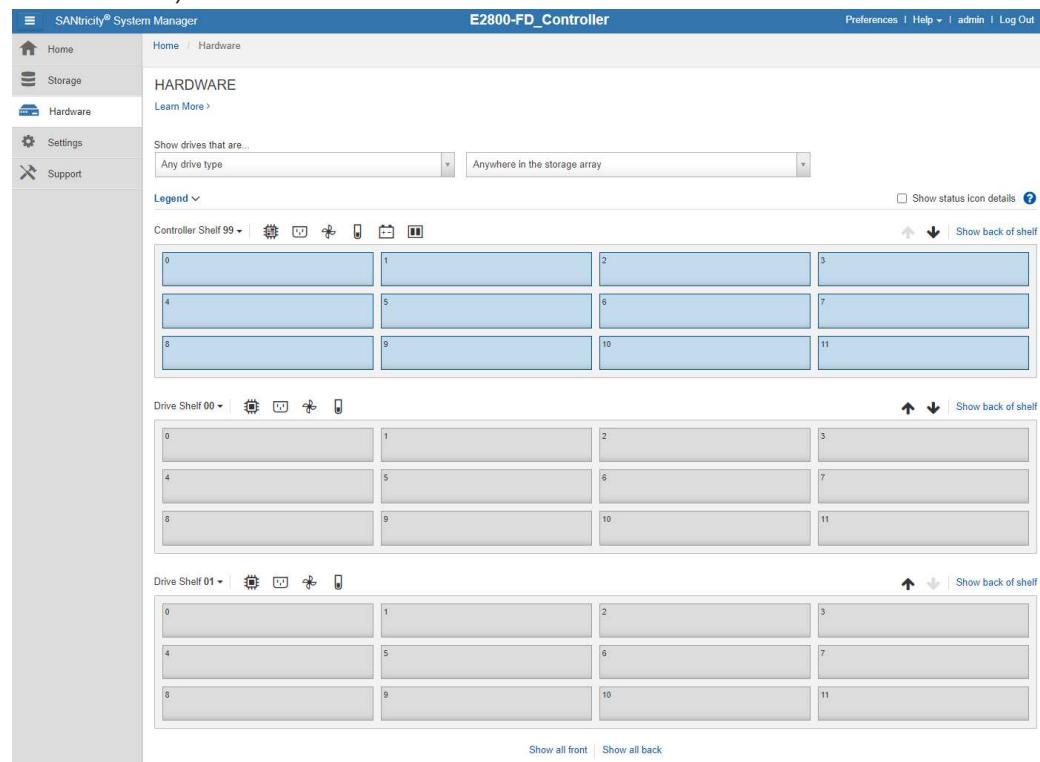
The **VOLUMES** pane appears showing the LUNs assigned in the VRM system.

| Name      | Status  | Assigned To     | LUN | Pool/Volume Group     | Volume Block Size | RAID Level | Allocated Capacity (GiB) | Maximum Configured Capacity (GiB) | Edit |
|-----------|---------|-----------------|-----|-----------------------|-------------------|------------|--------------------------|-----------------------------------|------|
| LUN_VRM23 | Optimal | Default Cluster | 23  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM24 | Optimal | Default Cluster | 24  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM25 | Optimal | Default Cluster | 25  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM26 | Optimal | Default Cluster | 26  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM27 | Optimal | Default Cluster | 27  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM28 | Optimal | Default Cluster | 28  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM29 | Optimal | Default Cluster | 29  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM30 | Optimal | Default Cluster | 30  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM31 | Optimal | Default Cluster | 31  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM32 | Optimal | Default Cluster | 32  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM33 | Optimal | Default Cluster | 33  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM34 | Optimal | Default Cluster | 34  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM35 | Optimal | Default Cluster | 35  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM36 | Optimal | Default Cluster | 36  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM37 | Optimal | Default Cluster | 37  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM38 | Optimal | Default Cluster | 38  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM39 | Optimal | Default Cluster | 39  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                               |      |
| LUN_VRM40 | Optimal | Default Cluster | 40  | Volume Group VOL_VRM0 | 512n              | 5          | 291.72                   | N/A                               |      |
| LUN_VRM41 | Optimal | Default Cluster | 41  | Volume Group VOL_VRM0 | 512n              | 5          | 291.72                   | N/A                               |      |

5. Connect the expansion units to the Controller Shelf.
6. In the **SANtricity System Manager** window, click **Hardware**.

The **HARDWARE** pane appears showing the expansion units you have connected.

**Note:** The example shows the Controller Shelf with 2 expansion units (Drive Shelf 00 and Drive Shelf 01).



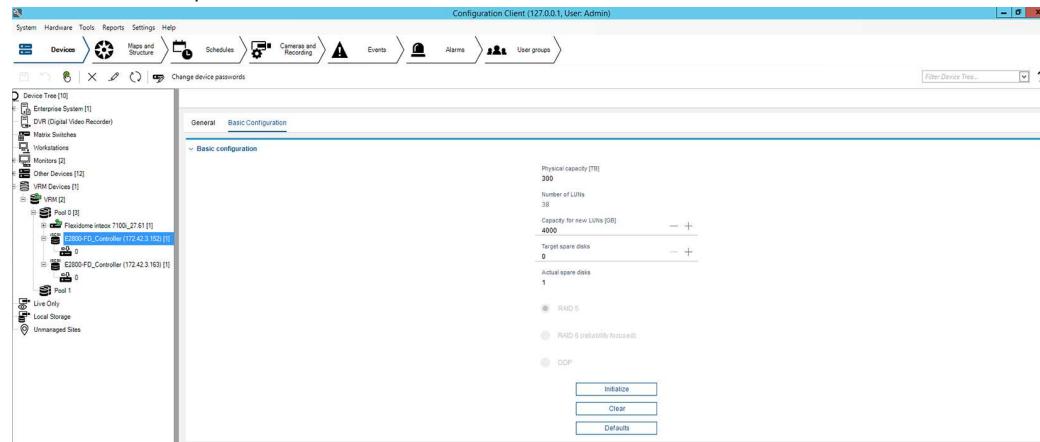
7. Open the BVMS Configuration Client program.
8. In the **Device Tree** structure:

Click **VRM Devices > VRM > Pool x > E2800 Controller**.

Click the **Basic Configuration** tab, then click **Initialize**.

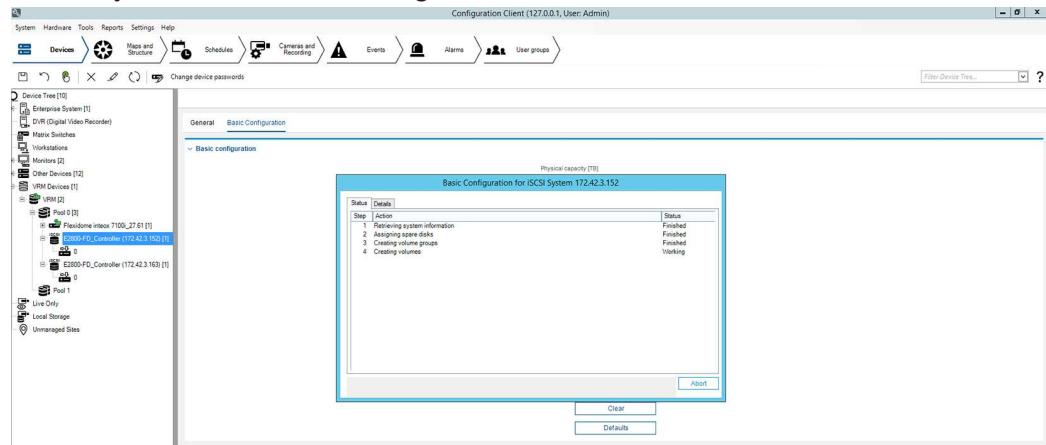
The **Basic Configuration for iSCSI System** dialog box appears.

**Note:** The example shows Controller A selected.

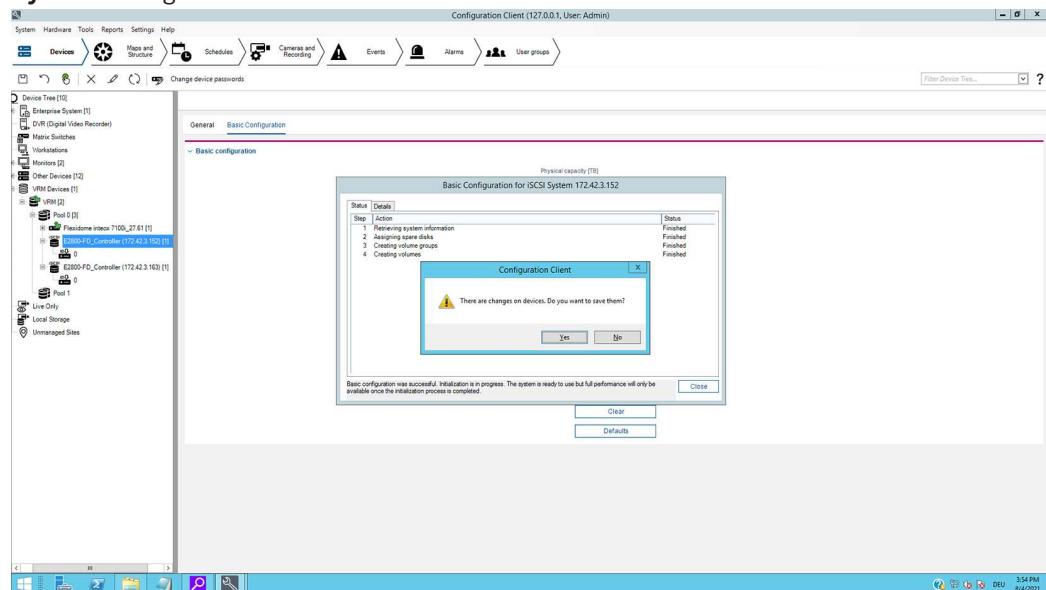


9. In the **Basic Configuration for iSCSI System** dialog box, select the **Status** tab.  
Make sure that in the **Action** column the **Creating volumes** status changes from **Working** to **Finished**.

**Note:** As soon as the status has changed to **Finished**, a notification appears, asking whether you want to save the changes.



- Click **Yes** to save the changes, then click **Close** to close the **Basic Configuration for iSCSI System** dialog box.



- In the Configuration Client program, click the **Save** icon.

12. In the SANtricity System Manager window, click **Storage**.

The **VOLUME** pane appears showing the new LUNs added to new volume groups.

**Note:** The example shows the new LUNs (LUN\_VRM 42 - LUN\_VRM 49) in the new volume group VOL\_VRM1.

| Name      | Status  | Assigned To     | LUN | Pool/Volume Group     | Volume Block Size | RAID Level | Allocated Capacity (GiB) | Maximum Configurable Capacity (GiB) | Edit |
|-----------|---------|-----------------|-----|-----------------------|-------------------|------------|--------------------------|-------------------------------------|------|
| LUN_VRM31 | Optimal | Default Cluster | 31  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM32 | Optimal | Default Cluster | 32  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM33 | Optimal | Default Cluster | 33  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM34 | Optimal | Default Cluster | 34  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM35 | Optimal | Default Cluster | 35  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM36 | Optimal | Default Cluster | 36  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM37 | Optimal | Default Cluster | 37  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM38 | Optimal | Default Cluster | 38  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM39 | Optimal | Default Cluster | 39  | Volume Group VOL_VRM0 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM40 | Optimal | Default Cluster | 40  | Volume Group VOL_VRM0 | 512n              | 5          | 291.72                   | N/A                                 |      |
| LUN_VRM41 | Optimal | Default Cluster | 41  | Volume Group VOL_VRM0 | 512n              | 5          | 291.72                   | N/A                                 |      |
| LUN_VRM42 | Optimal | Default Cluster | 42  | Volume Group VOL_VRM1 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM43 | Optimal | Default Cluster | 43  | Volume Group VOL_VRM1 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM44 | Optimal | Default Cluster | 44  | Volume Group VOL_VRM1 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM45 | Optimal | Default Cluster | 45  | Volume Group VOL_VRM1 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM46 | Optimal | Default Cluster | 46  | Volume Group VOL_VRM1 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM47 | Optimal | Default Cluster | 47  | Volume Group VOL_VRM1 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM48 | Optimal | Default Cluster | 48  | Volume Group VOL_VRM1 | 512n              | 5          | 4000.00                  | N/A                                 |      |
| LUN_VRM49 | Optimal | Default Cluster | 49  | Volume Group VOL_VRM1 | 512n              | 5          | 4000.00                  | N/A                                 |      |

13. In the **Device Tree** structure of the Configuration Client program, click the E2800 target.

The LUN overview appears.

**Note:** The example shows the target of Controller A selected.

| Format | LUN ID | Size (GiB) | Large LUN | State       | Progress |
|--------|--------|------------|-----------|-------------|----------|
| ✓      | Lun 54 | 3997       | ✗         | unformatted | 0%       |
| ✓      | Lun 55 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 56 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 57 | 3997       | ✗         | unformatted | 0%       |
| ✓      | Lun 58 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 59 | 3997       | ✗         | unformatted | 0%       |
| ✓      | Lun 60 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 61 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 62 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 63 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 64 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 65 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 66 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 67 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 68 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 69 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 70 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 71 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 72 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 73 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 74 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 75 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 76 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 77 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 78 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 79 | 0          | ✗         | unformatted | 0%       |
| ✓      | Lun 80 | 3997       | ✗         | formatted   | 100%     |

14. In the **Format** column, select the check boxes of all unformatted LUNs, then click **Format LUN**.

15. Make sure all LUNs have the status **formatted**.

16. Format Controller B in the same way.





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