Performing a Break-Mirror Operation Using Lifecycle Controller

This Dell Technical White Paper provides the procedure to perform Break-Mirror operation using Lifecycle Controller on the 12th Generation servers and later of Dell.

Dell Engineering
November 2013

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Revisions

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov 2013</td>
<td>Initial release</td>
</tr>
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</table>

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Executive Summary

This whitepaper provides the procedure to perform Break-Mirror operation using Lifecycle Controller on
the 12th generation servers and later of Dell.

Introduction

Break-Mirror is a feature in the Lifecycle Controller of the 12th generation servers and later of Dell that is
used to replicate the data from one server to another by safely breaking or isolating a RAID1 virtual disk.
This feature enables easy operation by providing an intuitive, user-friendly graphical user interface (GUI).

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![The Break-Mirror Page](image)

Figure 1  The Break-Mirror Page
Performing Break-Mirror Operation Using Lifecycle Controller

1. To start **Lifecycle Controller**, press `<F10>` during POST.
2. In the left pane, click **Hardware Configuration**.

![Lifecycle Controller Home page](image)

**Figure 2** Lifecycle Controller Home page
3. In the left pane, click **Hardware Configuration**, and then click **Configuration Wizards**.

![Hardware Configuration](image)

**Figure 3** Hardware Configuration
4. **On the Hardware Configuration: Configuration Wizards page, click Break Mirror.**

![Configuration Wizards](image)

**Figure 4  Configuration Wizards**
5. On the **Break Mirror** page, a list of all the virtual disks that are RAID1 break-mirror—capable is displayed. In the **Controller** column, select the option corresponding to the virtual disk on which you want to apply the break-mirror feature, and then click **Finish**.

![Break Mirror Page](image)

**Figure 5** Break Mirror

<table>
<thead>
<tr>
<th>Controller</th>
<th>Virtual Disks</th>
<th>Size (GB)</th>
<th>Physical Disk</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCH710 Adapter</td>
<td>VirtualDisk1</td>
<td>465.00</td>
<td>Physical Disk</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0t2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0t3</td>
</tr>
</tbody>
</table>

*If the break-mirror operation is successful on any pair of physical disks, system shuts down.*
After the break-mirror operation is successfully completed, a message is displayed to indicate that the server will be automatically turned off.

6. Click Yes.

![Figure 6 Break Mirror Confirmation](image)

The break-mirror operation is completed successfully, and the LEDs corresponding to the HDDs start blinking.
7. Click **Shut down**.
8. Wait for the server to automatically turn off, remove the HDDs, and then turn on the server.

![Figure 7 Break Mirror Confirmation](image-url)
When you restart the server, Power-On-Self-Test (POST) indicates the status (of those virtual disks on which the break-mirror operation was performed) as **Degraded Virtual Disk**. The broken virtual disks are identified as **Degraded**.

![Figure 8 Degraded Virtual Disk](image-url)
On the **Raid Configuration** page of Lifecycle Controller, these virtual disks are indicated as **Degraded** (in the **State** column).

![Degraded Virtual Disk in LC UI](image)

Figure 9  Degraded Virtual Disk in LC UI
Pre-requisites

1. Break-Mirror operation can be performed only on RAID1 virtual disks.
2. System must have at least one RAID1 virtual disk to enable the Break-Mirror feature.

![Figure 10 Break-Mirror Disabled-1](image)

![Figure 11 Break-Mirror Disabled-2](image)
Notes:

- The time required to complete a Break-Mirror operation varies on the basis of number of virtual disk(s) selected for the Break Mirror operation.
- A Break-Mirror operation is not allowed when the initialization of virtual disk is in progress in the back-end. The Time required to complete the Background initialization process varies on the basis of size of the virtual disk.
- If the memory capacity of the virtual disk is higher, then longer duration is required to complete the background initialization of the virtual disk.

Figure 12 An Unsuccessfully Completed Break-Mirror Operation