Server Inspection Guide

VxFlex Ready Node

Server Inspection Guide

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DELL EMC

Introduction

This document provides an overview of the inspection process for servers.

When the node is powered on, the front panel blue LED should light up and be steady. In addition, neither the power supplies nor drives should have any amber LEDs lit.

If the front panel LEDs are either blinking or colored amber, or if the drives light up an amber LED, use the information in the following sections to check the nodes. The sensor information and the Event log information are available via the iDRAC. You can access the information on the drives from the PERCCLI utility.

Before you begin, ensure that you know the IP address of the iDRAC port on the server.

Perform the following steps to inspect a server:

- Check the hardware installation.
- Check the sensors.
- Enable the disk utility.
- Verify the drive status.
- Prepare the hardware for failure analysis, if necessary.

Hardware installation checklist

This section includes a hardware checklist to be used by the CE.

It is the CE's responsibility to complete this checklist.

Customer Name:		CE Name:
Customer Location:		
Installation Type:	☐ New Installation ☐ Add-On ☐ Revisit ☐ Other (specify) _____	
Install Start Date:	Install End Date:	
VxFlex Ready Node Hardware Info		
VxFlex OS Node Type	Check all that apply: ☐ 1U1N Qty: ☐ 2U1N Qty: ☐ Mgmt. Server	
Network Equipment:	☐ Mgmt Switch Qty: ☐ Data Switch Qty: ☐ Mgmt. Server	
Packaging Issues:		
Item	**Observation**	**Notes**
Missing rails/screws/docs		
Physical damage to node		

Physical damage to switch		
Other		
Hardware Checks (prior to powering on the server)		
Item	**Observation**	**Notes**
Server/node can move freely on rails		
PSU seated (reseat if loose)		
Power-cords secured with retaining clips		
Drives seated (do *NOT* pull drives yet)		
Bezels installed if available		
Rack stable and castor wheels locked		
Network cables labelled and clicked-in		
Hardware checks: (post power-up)		
Item	**Observation**	**Notes**
Server responds to power-button		
All PSUs power-on		
Rear fan-spin (feel air-flow)		
PSU has no amber LED on		
Server has no amber LED on		
HDD/SSD has no amber LED on (reseat and reset the server)		
Attach KVM, reset/power-cycle server and note down error displayed, if any are shown. Open SRs for errors.		
Other issues:		
Briefly list any hardware issues identified (list any cases/SRs opened):		

Prerequisites

Prerequisites for inspecting a server in the VxFlex Ready Node environment are as follows:

General prerequisites

- Ensure that you know the IP address range, subnet, and gateway IP addresses for the iDRAC port for all servers.
- To connect via a service PC or laptop computer using SSH/RDP, ensure that the computer has a functional network port and an available IP address (and subnet and gateway) on the management network.
- For console operations (KVM access), ensure that you have either a VGA tool kit to allow console connection from a laptop computer to a server, or a computer screen and keyboard connection to the rack.

Java requirements

Both the VxFlex OS GUI and iDRAC management client (Java console) require the Java 1.8 latest update.

In your Internet browser, ensure that pop-ups are enabled (or enabled just for the Java console features).

Internet browsers

The following internet browsers are supported:

- Google Chrome 72
- Firefox 65.0.1
- Internet Explorer 11

Verify the status of the system hardware, storage controller, and disks

Verify the status of the system hardware, storage controller, and drives on a VxFlex Ready Node server.

Before you begin

Ensure that you know:

- The IP address of the iDRAC port
- The username and password for the iDRAC portal (default username and password are root and password)

Procedure

1. From a browser, go to http://*<iDRAC_IP_address>*.
2. In the **DELL Console Login** window, enter the user name and password, and then click **Login**.

   The **Dashboard** displays the high-level status of all hardware devices in the **System Health** pane. In an ideal scenario, all hardware sensors are green.
3. Navigate to **Maintenance** > **System event log.**

   The **System Event Log** pane is displayed with color-coded severity levels.
4. R640/R740xd servers only, check whether the System Event Log displays either of the following RAID controller errors:

   - `The PERC1 battery has failed`
   - `Integrated RAID Controller 1 is unable to recover cached data from the Battery Backup Unit (BBU).`

   If either of these alerts appears in the system event log, it is possible that the RAID storage controller has failed and requires replacement. Refer to the Integrated Storage Controller procedure in the *VxFlex Ready Node Field Replaceable Units Guide* for the relevant server model. In order to avoid data loss or data integrity issues, ensure that you follow the special procedure for preparing the server for part replacement when RAID controller errors occur.

5. R640/R740xd servers only, check whether either of the following errors occurs for a physical drive:

   - `The rebuild of Disk 0 in Backplane 1 of Integrated RAID Controller 1 failed due to errors on the source physical disk.`
   - `A block on Disk 0 in Backplane 1 of Integrated RAID Controller 1 was punctured by the controller.`

   If either of these alerts appears in the system event log, one of the drives on the SDS may have failed and requires replacement. Refer to the drive replacement procedure in the *VxFlex Ready Node Field Replaceable Units Guide* for the relevant server model. In order to avoid data loss or data integrity issues, follow any additional instructions for replacing a drive when either of these errors occurs.

6. Ensure that any power supply- and fan-related events in the event log are non-repetitive. Repetitive events may be due to the intermittent nature of faults, such as poor physical connections.

For repetitive events, Dell EMC recommends that you remove the relevant hardware module and replace it in its socket.

7. In the navigation pane, select **Storage** > **Overview** > **Controller**.

   A table displays the controller-related information, with the controller type in the **Name** column. For example:

   - ESXi: `PERC H740P Mini (Embedded)`
   - Linux: `PERC H740P Mini (Embedded)`
   - Windows: `PERC H740P Adapter (PCI Slot 4)`

8. In the navigation pane, select **Storage** > **Physical Disks**.

   A table displays information regarding the physical drives, and an option to **Blink/Unblink** the selected drive.

9. Verify that no drive is in failed state.

   If any of the drives is failed, refer to the drive replacement procedure in the *VxFlex Ready Node Field Replaceable Units Guide* for the relevant server model.

10. In the navigation pane, select **System**.

11. In the **Inventory** pane, verify that the server drivers and firmware in the **Firmware Inventory** list match the required versions, as published in the Driver and Firmware Matrix.

    If the driver and firmware versions do not match the matrix, you must update them. See "Updating the BIOS, firmware and settings" in the *VxFlex Ready Node Operating System Installation and Configuration Guide* for the relevant operating system.

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