

# Dell EMC VxRail™ G Series Appliances

Version 4.5

## Owner's Manual

REV 02

Copyright © 2016-2017 Dell EMC All rights reserved.

Published September 2017

Dell believes the information in this publication is accurate as of its publication date. The information is subject to change without notice.

THE INFORMATION IN THIS PUBLICATION IS PROVIDED "AS-IS." DELL MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WITH RESPECT TO THE INFORMATION IN THIS PUBLICATION, AND SPECIFICALLY DISCLAIMS IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. USE, COPYING, AND DISTRIBUTION OF ANY DELL SOFTWARE DESCRIBED IN THIS PUBLICATION REQUIRES AN APPLICABLE SOFTWARE LICENSE.

Dell, EMC, and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be the property of their respective owners.  
Published in the USA.

Dell EMC  
Hopkinton, Massachusetts 01748-9103  
1-508-435-1000 In North America 1-866-464-7381  
[www.DellEMC.com](http://www.DellEMC.com)

# CONTENTS

<b>Chapter 1</b>	<b>Introduction</b>	<b>5</b>
	Introduction.....	6
	Support.....	6
	Registering for online support.....	6
	Where to go for support resources.....	7
	Using the SolVe Desktop application for VxRail Series procedures....	7
<b>Chapter 2</b>	<b>About the VxRail G Series</b>	<b>9</b>
	Handling the appliance.....	10
	Appliance components and controls.....	10
<b>Chapter 3</b>	<b>Technical Specifications</b>	<b>13</b>
	Appliance power and cooling information.....	14
	Appliance dimensions and weight.....	14
	Operating and storage environment.....	15
<b>Chapter 4</b>	<b>Installation</b>	<b>17</b>
	Pre-installation Site Checklist.....	18
	10GbE or 1GbE switch networking.....	18
	Network requirements.....	18
<b>Chapter 5</b>	<b>Replacing and adding hardware</b>	<b>21</b>

## CONTENTS

# CHAPTER 1

## Introduction

- [Introduction](#)..... 6
- [Support](#)..... 6

# Introduction

This document describes the VxRail G Series appliances, including their physical features and technical specifications.

The target audience for this document includes customers, field personnel, and partners who want to operate a VxRail™ Appliance, including the following models:

- VxRail G410 Appliance
- VxRail G410F Appliance

This document is designed for people familiar with:

- Dell EMC systems and software
- VMware virtualization products
- Data center appliances and infrastructure

The VCE Glossary provides terms, definitions, and acronyms that are related to VCE Systems.

To suggest documentation changes and provide feedback on this book, send an email to [docfeedback@vce.com](mailto:docfeedback@vce.com). Include the name of the topic to which your feedback applies.

# Support

Create an Online Support account to get access to support and product resources for your VxRail Appliance.

If you already have an account, register your VxRail Appliance to access the available resources.

For convenience, you can link your Online Support account with VxRail Manager and access support resources without having to log in separately.

---

## Note

If you plan to set up ESRS, your Online Support account must be linked to VxRail Manager under the same party ID or the deployment will fail. Your appliance must also be in an installed state in the Install Base.

---

# Registering for online support

Create an Online Support account to access support resources.

After you register, you can:

- Register your system
- Obtain product license files and software updates
- Download VxRail Series product documentation
- Download the SolVe Desktop application for hardware replacement and upgrade procedures
- Browse the VxRail Series community and support information
- Link your support account for access to resources from within VxRail Manager

### Procedure

1. Point your Web browser to [emc.com/vxrailsupport](https://emc.com/vxrailsupport) (or [support.emc.com](https://support.emc.com)).
2. Click **Register here**.
3. Fill in the required information.

Support will send you a confirmation email, typically within 48 hours.

## Where to go for support resources

Access support resources for your VxRail Appliance by doing any of the following:

- Click the VxRail Manager **Support** tab.
- Point your Web browser to [emc.com/vxrailsupport](https://emc.com/vxrailsupport) (or [support.emc.com](https://support.emc.com)).

## Using the SolVe Desktop application for VxRail Series procedures

Step-by-step instructions for procedures such as replacing hardware or performing system administrative tasks are available through the SolVe Desktop application.

### CAUTION

**To avoid potential data loss, refer to the VxRail Series procedures in the SolVe Desktop application before performing any hardware replacement or upgrade activity.**

---

To download the SolVe Desktop application, go to <https://support.emc.com> and click **SolVe** on the main page. Download and install the SolVe Desktop application on your computer.

You must have an online support account to use the SolVe Desktop application.





# CHAPTER 2

## About the VxRail G Series

- [Handling the appliance.....](#)10
- [Appliance components and controls.....](#) 10

## Handling the appliance

**Table 1** Heavy lift warning



CL5561

The appliance is heavy and should be handled by two people. To avoid personal injury and/or damage to the appliance, do not attempt to lift the appliance without a mechanical lift and help from another person.

## Appliance components and controls

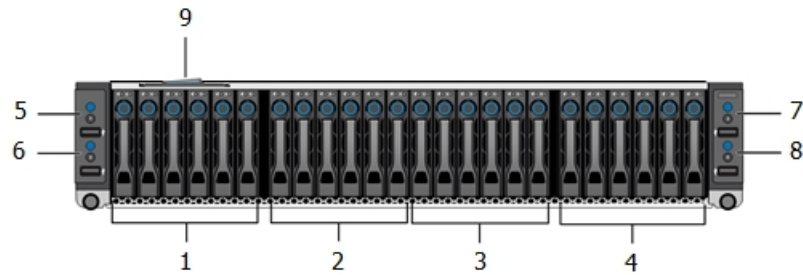
The appliance has four server nodes that are accessible at the rear of the appliance. Server node 1 defines the default node type for the system.

**Figure 1** Location of server nodes



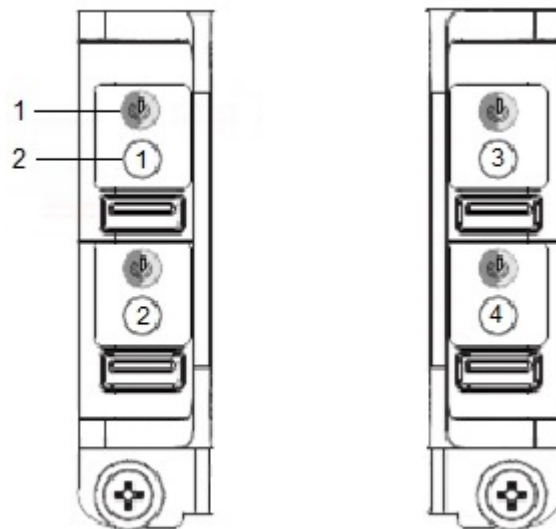
1. Node 1
2. Node 2
3. Node 3
4. Node 4

Each of the four server nodes has a front control panel and designated disk drive group.

**Figure 2** Node control and disk drive groups

1. Node 1 disk drive group
2. Node 2 disk drive group
3. Node 3 disk drive group
4. Node 4 disk drive group
5. Node 1 front control panel
6. Node 2 front control panel
7. Node 3 front control panel
8. Node 4 front control panel
9. Product serial number tag (PSNT)

Control panels for nodes 1 and 2 are on the left side and control panels for nodes 3 and 4 are on the right side. A fault with the associated node will cause the **Power** button with **Status** LED on the control panel to blink amber and blue.

**Figure 3** Node control panel controls and indicators**Table 2** Control panel controls and indicators description

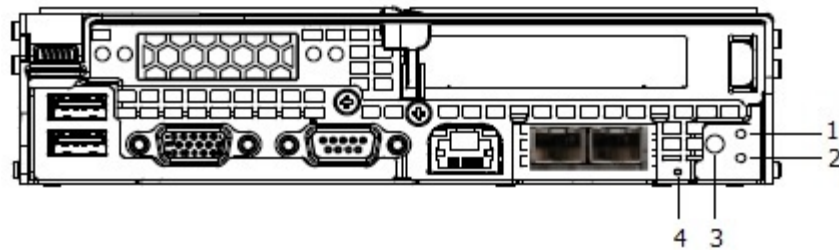
No.	Name	Color	Status	Description
1	Power button with Status LED	Blue	On	System power on
			Off	System power off
		Amber	Blinking	DC off and fault

**Table 2** Control panel controls and indicators description (continued)

No.	Name	Color	Status	Description
		Amber and Blue	Blinking	DC on and fault
2	ID button with LED	Blue	Blinking	Identification activated
			Off	No identification

Each node is equipped with a power button and three LED indicators, which are visible at the rear of the server. A fault with a node will cause the **Power** LED to blink blue, and the **Node Status** LED to blink amber on its front control panel.

Pressing the **ID** button on the front control panels will cause the **ID** LED on the respective node to blink.

**Figure 4** Node controls and indicators**Table 3** Node controls and indicators description

No.	Name	Color	Status	Description
1	Power LED	Blue	On	System power on
			Off	Power off
		Blue	Blinking	Reports system health fault
2	Node Status LED		Off	Normal - system healthy
		Amber	Blinking	Reports system health fault
3	Power button			Press and hold more than four seconds to turn off node
4	ID LED	Blue	Blinking	Identification activated (from front control panel)
			Off	No identification

# CHAPTER 3

## Technical Specifications

- [Appliance power and cooling information.....](#)14
- [Appliance dimensions and weight.....](#)14
- [Operating and storage environment.....](#)15

## Appliance power and cooling information

The following tables contain specifications for the appliance power consumption and dissipation. Calculations based on these tables are intended to provide maximum power and heat dissipation. EMC provides a power and weight calculator at <http://powercalculator.EMC.com>. Use this calculator to refine the power and heat values in the table below to more-closely match the specific appliance hardware configuration. Ensure that the appliance installation site meets the requirements for your configuration.

**Table 4** Appliance power consumption and dissipation—Hybrid Nodes

Specification	VxRail G410
Power supplies	2 × 1600 W high efficiency redundant PSUs
AC line voltage	220V AC, 50/60Hz
Power consumption (operating maximum)	1486 KVA
Heat dissipation	5070.232 BTU/hr
Maximum inrush current	55 A per power supply unit up to one-quarter of AC cycle

**Table 5** Appliance power consumption and dissipation—All-flash Nodes

Specification	VxRail G410F
Power supplies	2 × 1600 W high efficiency redundant PSUs
AC line voltage	220V AC, 50/60Hz
Power consumption (operating maximum)	1500 KVA
Heat dissipation (fully loaded appliance)	5118 BTU/hr
Maximum inrush current	55 A per power supply unit up to one-quarter of AC cycle

## Appliance dimensions and weight

**Table 6** Appliance dimensions and weight

Dimension	Appliance	Appliance with rails
Form factor	2U chassis	2U chassis
Height	3.44 in (8.74 cm)	2.0 U (with or without bezel)
Depth	31.1 in (79 cm)	32.1 in (81.53 cm)
Width	17.48 in (43.4 cm) without cabinet latch brackets	18.99 in (48.23 cm) with cabinet latch brackets

**Table 6** Appliance dimensions and weight (continued)

Dimension	Appliance	Appliance with rails
Maximum weight	91.31 lb (41.42 kg)	102.34 lb (46.42 kg)

## Operating and storage environment

The site must have air conditioning of the correct size and placement to maintain the specified temperature and relative humidity range listed in Table 3.

**Table 7** Operating and storage environment

Specification	Description
Operating temperature	5°C to 35°C (41°F to 95°F)
Non-operating temperature	-40°C to 70°C (-40°F to 158°F)
Operating relative humidity	50% to 85% RH
Non-operating relative humidity	20% to 90% RH
Storage time (unpowered) Recommendation	Do not exceed 6 consecutive months of unpowered storage.





# CHAPTER 4

## Installation

Installation of your VxRail Appliance is performed by Dell EMC or your partner. Work with your Dell EMC or partner representative to arrange for installation of your appliance.

This section contains information to help you prepare to have your VxRail Appliance installed.

- [Pre-installation Site Checklist](#)..... 18
- [10GbE or 1GbE switch networking](#)..... 18
- [Network requirements](#)..... 18

## Pre-installation Site Checklist

Before your appliance is installed, work with your sales representative or partner to complete the *VxRail Appliance Pre-installation Site Checklist*.

The *VxRail Appliance Pre-installation Site Checklist* is a site survey that help you gather the key information needed to successfully install your appliance.

## 10GbE or 1GbE switch networking

Your VxRail Appliance relies on your 10GbE or 1GbE switches for all of the networking between nodes in the cluster, and between the cluster and the rest of your infrastructure. It is crucial that your switches are configured properly for the VxRail Appliance to work.

Consult with your sales representative or partner to ensure your switch is properly set up to work with your VxRail Appliance according to the instructions provided by your switch manufacturer.

The following table lists the type of switches needed for different VxRail Appliance models.

**Table 8** VxRail Appliance network switch requirements

VxRail Appliance model	Network switch requirement
VxRail 60, VxRail 60F VxRail E460 VxRail G410, VxRail G410F VxRail P470 VxRail S470 VxRail V470	10GbE or 1GbE
VxRail 120, VxRail 120F VxRail 160, VxRail 160F VxRail 200, VxRail 200F VxRail 240F VxRail 280F VxRail E460F VxRail P470F VxRail V470F	10GbE

## Network requirements

Your sales representative or partner will work closely with you to ensure you have the following network resources available before installing the VxRail Appliance.

### 10GbE or 1GbE switches

You must have one or more 10GbE or 1GbE switches:

- Two or more network switches are recommended for failover, and for installations with more than four appliances.
- Two switch ports are required for each node (the VxRail 60 requires four ports per node). A fully-populated appliance can require eight switch ports.

**Cabling**

If you have RJ45 NIC ports on your appliance you need:

- Two CAT6 or higher cables per node (these cables are included with RJ45-equipped appliances). A fully-populated appliance requires up to eight cables (the VxRail 60 requires 16 cables).

If you have SFP+ NIC ports on your appliance you need:

- Two compatible Twinax Direct-Attach-Copper (DAC) cables per node (these cables are not included; you must supply your own). Active DAC cables should be used if the cable is over 5 meters long.

or

- Two compatible fiber cables with appropriate transceivers per node (these cables and transceivers are not included; you must supply your own).
- A fully-populated appliance requires up to eight cables.

**Servers**

You must have a DNS server for network address resolution and ESRS support.



# CHAPTER 5

## Replacing and adding hardware

You may be able to add or replace hardware components on your VxRail Appliance such as hard disk drives (HDDs), solid state drives (SSDs), power supplies, and so on. Only qualified personnel should perform these procedures. For some hardware components, you may need to contact Customer Support to arrange for repair or replacement.

Refer to the online support website or the SolVe Desktop application for hardware-specific information.

### **Using the SolVe Desktop application for VxRail Series hardware tasks**

Step-by-step hardware component tasks such as replacement and upgrade procedures are available through the SolVe Desktop application.

#### **⚠ CAUTION**

**To avoid potential data loss, refer to the VxRail Series procedures in the SolVe Desktop application before performing any hardware replacement or upgrade procedures.**

---

To download the SolVe Desktop application, go to <https://support.emc.com> and click **SolVe** on the main page. Download and install the SolVe Desktop application on your computer.

You must have an online support account to use the SolVe Desktop application.

