

VxRail Management Pack for vRealize Operations

User's Guide

Version 1.0.1

Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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Introduction

Topics:

- [Revision history](#)
- [About this guide](#)
- [Overview of the VxRail Series](#)
- [Overview of VxRail Management Pack for vRealize Operations](#)
- [Where to go for support resources](#)
- [VxRail documentation](#)

Revision history

The following table lists the revision history for this document.

Table 1. Revision history

Date	Revision	Description of changes
May 26, 2020	02	Updated to support VxRail Management Pack for vRealize Operations 1.0.1, which includes vRealize Operations Manager 8.1.
January 22, 2020	01	Initial release to support VxRail Management Pack for vRealize Operations 1.0.

About this guide

This document describes the VxRail Management Pack for vRealize Operations, how to install it, and how to use it.

The target audience for this document includes customers, field personnel, and partners who want to install and configure the VxRail Management Pack for vRealize Operations. This document is designed for people familiar with:

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

Overview of the VxRail Series

The VxRail Series delivers virtualization, compute, and storage in a scalable, easy to manage, hyper-converged infrastructure appliance.

Your VxRail Appliance is built on Intel Xeon processor-based hardware with the VxRail Appliance software bundle, and support for other value-added software from Dell EMC and VMware.

The VxRail Appliance software bundle includes the following:

- VxRail™ Manager Plugin for VMware vCenter for configuration and management
- VMware vSphere®, including ESXi
- VMware vCenter Server™
- VMware vSAN™ for storage
- VMware vRealize Log Insight™

Your VxRail Appliance also includes complementary applications such as RecoverPoint for Virtual Machines.

Overview of VxRail Management Pack for vRealize Operations

The VxRail Management Pack for vRealize Operations is a software add-on that provides VxRail-specific operations management capabilities to the VMware vRealize Operations tool.

VMware vRealize Operations is an operations management software tool that lets customers maintain and tune their virtual application infrastructure with the aid of artificial intelligence and machine learning. It connects to the vCenter Server and collects metrics, events, configurations, and logs about the vSAN clusters and virtual workloads running on them.

The VxRail Management Pack is an additional software pack that can be installed onto vRealize Operations to provide VxRail cluster awareness. With this Management Pack, vRealize Operations knows which vSAN clusters are VxRail clusters.

The Management Pack consists of an adapter that collects 65 distinct VxRail events, analytics logic specific to VxRail, and three custom dashboards. These VxRail events are translated into VxRail alerts on vRealize Operations to help customers understand health issues and get recommended courses of resolution. With custom dashboards, customers can easily use VxRail-specific views to troubleshoot issues and leverage existing vRealize Operations capabilities in the context of VxRail clusters.

Where to go for support resources

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

- In the vSphere Client, select **VxRail** from the menu and use the **Support** functions on the **VxRail Dashboard**.
- Point your Web browser to www.emc.com/vxrailsupport (or <https://www.dell.com/support>).

VxRail documentation

The following tables list available documents about VxRail Manager and VxRail appliances.

Table 2. VxRail core administration and lifecycle management documentation

Document	Description
SolVe Online for VxRail	(Login required) Step-by-step instructions for procedures such as replacing hardware or performing system administrative tasks are available through SolVe Online and the SolVe Desktop application. For more information about SolVe for VxRail, refer to KB 525271 .
VxRail Appliance 7.0.x Administration Guide VxRail Appliance 4.7.x Administration Guide VxRail Appliance 4.5.x Administration Guide	These documents describe the VxRail appliance, how it works, and how to perform administrative tasks.
VxRail 7.0.x Release Notes VxRail 4.7.x Release Notes VxRail 4.5.x Release Notes	(Login required) These documents contain a brief description of VxRail Manager releases, including lists of known issues and workarounds.

Table 3. VxRail support matrices

Document	Description
VxRail 7.0.x Support Matrix VxRail 4.7.x Support Matrix VxRail 4.5.x Support Matrix VxRail 4.0.x Support Matrix	These documents provide information about supported software, firmware, and hardware versions for Dell EMC VxRail appliances based on Dell PowerEdge hardware, including the E Series, P Series, S Series, and V Series.
VxRail Appliance Simple Support Matrix	This document provides information about external software compatibility versions for VxRail appliances.

Table 4. VxRail API and Event guides

Document	Description
VxRail Appliance API User Guide	This document describes the API for the VxRail appliance versions 4.5.x, 4.7.x, and 7.0.x.
VxRail API Cookbook	This document provides sample VxRail API workflows.
VxRail API PowerShell Package	(Download package) The VxRail API PowerShell Package provides the VxRail API PowerShell user guide and modules to enable the management of VxRail systems using PowerShell cmdlets.
VxRail Event Code Reference	(Login required) This reference guide lists the alert and event codes generated by VxRail Manager.

Table 5. VxRail appliance hardware documentation

Document	Description
VxRail Appliance Owner's Manuals <ul style="list-style-type: none"> VxRail P580N Owner's Manual VxRail Appliances on 14th Generation PowerEdge Servers P Series, V series, and S Series Owner's Manual VxRail Appliances on 14th Generation PowerEdge Servers E Series Owner's Manual VxRail G560 and G560F Owner's Manual VxRail 60 Series Appliance Owner's Manual VxRail 100 Series and 200 Series Appliance Owner's Manual VxRail G Series Appliance Owner's Manual 	These documents describe the various VxRail appliances, including their physical features and technical specifications.
VxRail Appliance Getting Started Guides <ul style="list-style-type: none"> VxRail G560 and G560F Getting Started Guide VxRail E Series Appliance Getting Started With Your Appliance VxRail P Series, S Series, and V Series Appliances Getting Started With Your Appliance 	These documents describe considerations for unpacking and preparing to install VxRail appliances.

Table 6. VxRail security guides

Document	Description
VxRail Security Configuration Guide	(Login required) This guide provides an overview of the configuration, deployment, and usage settings needed to ensure secure operation of the VxRail appliance.
VxRail Appliance STIG Compliance Guide	(Login required) This document provides guidance on the secure installation and secure use of the VxRail appliance for the DoDIN Approved Products List (APL) Deployment Configuration.

Table 7. VxRail planning guides and technical notes

Document	Description
VxRail vCenter Server Planning Guide	This planning guide discusses guidance for the various vCenter Server deployment options supported on VxRail appliances.
VxRail vSAN Stretched Cluster Planning Guide VxRail 7.0 vSAN Stretched Cluster Planning Guide	These planning guides provide best practices and requirements for using stretched clusters with VxRail appliances.
vSAN 2-Node Cluster on VxRail Planning Guide	This guide provides information for the planning of a VMware vSAN 2-Node Cluster infrastructure on a VxRail platform. (Not for VCF on VxRail solution deployments.)

Table 7. VxRail planning guides and technical notes (continued)

Document	Description
VxRail Networking Guide with Dell EMC S4148-ON Switches	The deployment guide covers the process of connecting a cluster of VxRail nodes to Dell EMC Networking S4148-ON switches in a high-availability configuration.
VxRail Network Planning Guide	This is a network planning and consideration guide for the VxRail. It provides valuable insight into supported switch requirements and the networking required to support VxRail.
Networking Guides > VxRail Networking Solutions	The networking guides provided on this website assist with the deployment of your infrastructure and the optimal connectivity of your Dell EMC Networking products. Click VxRail Networking Solutions for specific VxRail solutions.
VxRail Fabric Automation SmartFabric Services User Guide	This solution brief provides an overview of how VxRail works with HCI network fabrics using Dell OS10 Enterprise Edition SmartFabric services. (Not for VCF on VxRail solution deployments.)
Installing and Configuring VMware AppDefense on VxRail	This document describes the procedure for installing VMware AppDefense on a VxRail cluster and for protecting the VxRail Manager virtual machine.
VxRail Cluster Migration Package	(Download package) The VxRail Cluster Migration Package provides the VxRail Cluster Migration User Guide and the cluster migration PowerShell script that enables users to migrate a VxRail cluster from the source VC to the target VC without affecting running VMs.

Installation

Topics:

- [Installing VxRail Management Pack for vRealize Operations](#)

Installing VxRail Management Pack for vRealize Operations

The VxRail Management Pack for vRealize Operations consists of a PAK file that contains default dashboards for the objects that the solution identifies.

Prerequisites

- For vRealize Operations Manager 8.0 and 8.1, ensure that the vCenter Cloud Account is configured for the VxRail cluster and the vSAN is enabled on vCenter.
- For vRealize Operations Manager 7.5, ensure that the vCenter and the vSAN adapter instance are configured for the VxRail cluster.

Steps

1. Download the installation package for the VxRail Management Pack from the [VMware Marketplace](#) or <https://download.emc.com/downloads/DL96966>, and save the package file to a temporary folder on your local system.
The file name will be something like **VxRail_Management_Package_for_vROps_v1.0.zip**.
2. Open the zip package and extract the files.
There are four files in the package:
 - Installation PAK file
 - MD5 checksum text file
 - License file
 - User Guide PDF file
3. Use a checksum tool to calculate an MD5 for the PAK file, and check whether it is consistent with the MD5 data in checksum.md5 file.
4. Log in to the vRealize Operations Manager user interface with administrator privileges.
5. In the left pane of vRealize Operations Manager, click the **Administration** icon and click **Solutions**.
6. On the **Solutions** tab, click the plus sign.
7. Browse to locate the temporary folder and select the PAK file.
8. Click **Upload**. The upload might take several minutes.
9. Read and accept the EULA and click **Next**. Installation details appear in the window during the process.
10. When the installation is completed, click **Finish**.

Configuring VxRail

Topics:

- [Configuring VxRail](#)

Configuring VxRail

After you install the VxRail Management Pack for vRealize Operations, configure an instance for this management pack.

Steps

1. On the menu, click **Administration** and in the left pane click **Solutions**.
2. Select **VxRail Adapter** and click the **Configure** icon.
3. Configure the adapter instance.

Option	Description
Name	Enter the name for the adapter instance.
Description	(Optional) Enter the description of the adapter instance.
vCenter Server	Enter the FQDN or the IP address of the vCenter Server.
Credential	<p>From the drop-down menu, select the credential you want to use to sign on to the environment. To add new credentials to access the VxRail environment, click the plus sign.</p> <ul style="list-style-type: none"> • Credential Name: The name by which you are identifying the configured credentials. • vCenter User Name: The username for the vCenter Server. • vCenter Password: The password for the vCenter Server.

4. Click **Test Connection** to validate the connection.
5. Click **Save Settings**.
The adapter instance is added to the list.

Next steps

What to do next: Verify that the adapter is configured and collecting data by viewing application-related data.

Alerts in VxRail

Topics:

- [Alerts in VxRail](#)

Alerts in VxRail

vRealize Operations Manager generates an alert if a problem occurs with the components in the storage area network that the VxRail adapter is monitoring.

Table 8. Alerts in VxRail

Name	Description	Symptom	Recommendation
VxRail: Authentication service temporarily unavailable	VxRail: Authentication service temporarily unavailable.	Authentication service temporarily unavailable.	Retry to add device periodically. For more information, see support.emc.com/kb/522799 .
VxRail: Current version is not same with reference version from manufactory or last upgraded version.	Misconfigured feature: This is for Cluster Level (for example, Mystic Manager, vCenter) If current version is not same with reference version (the manufactory or last upgraded version). This event should show.	Current version is not same with reference version from manufactory or last upgraded version.	
VxRail: Hardware health changed - The remaining rated write endurance of the device is lower than 5%.	Boot device remaining write endurance percentage <5%.	Hardware health changed - The remaining rated write endurance of the device is lower than 5%.	Replace node if confirmed. For more information, see support.emc.com/kb/198292
VxRail: Hardware health changed - disk status	Disk failed, with fault LED long amber.	Hardware health changed - disk status.	Replace the disk. For more information, see support.emc.com/kb/198313
VxRail: Hardware health changed - node status (System Status LED amber solid on)	Critical Alarm: Critical power modules failure, critical fans failure, voltage (power supply), critical temperature and voltage. ----- Technical details ----- Fatal alarm - System has failed or shut down. BIOS detected: 1. DIMM failure when there is one DIMM present and no good memory is present. 2. Run-time memory uncorrectable error in non-redundant mode.	Hardware health changed - node status (System Status LED amber solid on).	In this scenario, it is most likely caused by node internal error, expect node (FRU) replacement to solve the issue. Replace the Node which has solid amber System Status. For more information, see https://support.emc.com/kb/198316

Table 8. Alerts in VxRail (continued)

Name	Description	Symptom	Recommendation
	<p>3. CPU configuration error (for instance, processor stepping mismatch).</p> <p>Integrated BMC detected:</p> <ol style="list-style-type: none"> 1. CPU CATERR signal asserted. 2. CPU 1 is missing. 3. CPU THERMTRIP. 4. System cooling fan failure. 5. No power good - Redundant power fault. <p>- Power Unit Redundancy sensor - Insufficient resources offset (indicates not enough power supplies are present).</p>		
VxRail: Boot device remaining write endurance percentage <20%	Boot device remaining write endurance percentage <20%.	Boot device remaining write endurance percentage <20%.	SSH to host and run smartctl to query avg
VxRail: Hardware health changed - node status (System Status LED amber blinking)	<p>Non-Critical Alarm: Redundant fan failure, redundant power module failure, non-critical temperature and voltage.</p> <p>----- Technical details -----</p> <p>Non-Critical Alarm - System is likely to fail.</p> <p>BIOS detected:</p> <ol style="list-style-type: none"> 1. In non- mirroring mode, if the threshold of ten correctable errors is crossed within the window 2. PCI Express uncorrectable link errors <p>Integrated BMC detected:</p> <ol style="list-style-type: none"> 1. Critical threshold crossed - Voltage, temperature, power nozzle, power gauge, and PROCHOT (Therm Ctrl) sensors. 2. VRD Hot asserted. 3. One of the redundant power supplies failed. 4. Minimum number of fans to cool the system are not present or have failed. 	Hardware health changed - node status (System Status LED amber blinking).	In this scenario, it could be node internal error or PSU redundancy lost. Replace the Power Supply (CRU) if one of the redundant PSU lost. If problem remains, replace the Node (FRU) which has blinking System Status LED.
VxRail: Boot Device is missing or in invalid state	Boot Device is missing or in invalid state.	Boot Device is missing or in invalid state.	Please Check the B support.emc.com/kb/198320

Table 8. Alerts in VxRail (continued)

Name	Description	Symptom	Recommendation
			OSS SSD status on iDRAC. Replace it if is confirmed the BOSS SSD has failed. For more information, see support.emc.com/kb/524969 .
VxRail: boot device remaining write endurance percentage <30%	boot device remaining write endurance percentage <30%.	boot device remaining write endurance percentage <30%.	Connect to VxRail remotely, if available, Open vSphere Web Client. Click on the node that generated the dial-home, Click Monitor Tab, Click Hardware Status Tab, Select Sensors from the left pane and expand "Storage", look through the list to find any Storage devices in a warning/error state. For Quanta platform, SATADOM is not a Field or Customer- replaceable unit, the entire node will need to be replaced. For Dell platform, SATADOM / VD on BOSS card is a replaceable component, it could be replaced independently. If the SATADOM / VD on BOSS card device is in warning/error state, follow Solve procedure to replace node (Quanta platform) or replace the component (Dell platform).If you need any assistance on troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative, and quote this Knowledge base article ID. For more information, see support.emc.com/kb/198320 .
VxRail: Current version is not same with reference version from manufactory or last upgraded version	Misconfigured feature: This is for Node Level(e.g. ESXi, VIB, Dell PTAgent) If current version is not same with reference version (the manufactory or last upgraded version). This event should show.	Current version is not same with reference version from manufactory or last upgraded version.	
VxRail: Power LED - Blinking Green	Power LED - Blinking Green.	Power LED - Blinking Green.	
VxRail: Hardware health changed - node status (system status LED amber)	VxRail: Hardware health changed - node status (system status LED amber).	Hardware health changed - node status (system status LED amber).	It's just a warning message. Service action is to check whether there is other detail HW error message and take action accordingly.

Table 8. Alerts in VxRail (continued)

Name	Description	Symptom	Recommendation
VxRail: SRS VE activated but inaccessible	VxRail: Network connection issue. Port issue (service down). VM issue.	SRS VE activated but inaccessible.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/522803 .
VxRail: Authentication service temporarily unavailable	VxRail: Authentication service temporarily unavailable.	Authentication service temporarily unavailable.	Re-try to add device periodically. For more information, see support.emc.com/kb/522799 .
VxRail: Failed to add device to SRS VE	Invalid PowerLink credentials, or invalid PSNT. IT SHOULD BE CHANGE.	Failed to add device to SRS VE.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/522799 .
VxRail: Failed to send configuration to SRS VE	VxRail: Failed to send configuration to SRS VE	Failed to send configuration to SRS VE	
VxRail: Failed to send connect home to SRS VE	VxRail: Failed to send connect home to SRS VE.	Failed to send connect home to SRS VE.	For more information, see https://support.emc.com/kb/522788 .
VxRail: Failed to upload attachment to SRS VE	VxRail: Failed to upload attachment to SRS VE.	Failed to upload attachment to SRS VE.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/522785 .
VxRail: Failed to send heartbeat to SRS VE for 100 times.	VxRail: Failed to send heartbeat to SRS VE for 100 times.	Failed to send heartbeat to SRS VE for 100 times.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/522781 .
VxRail: Failed to delete device from SRS VE	Failed to delete device from SRS VE.	Failed to delete device from SRS VE.	For more information, see https://support.emc.com/kb/522793 .
VxRail: Failed to initial RSC	Something went wrong when trying to do preparation work for enabling RSC function.	Failed to initial RSC.	SSH login to your VxRail Manager and do the following checks. For more information, see support.emc.com/kb/525054 .

Table 8. Alerts in VxRail (continued)

Name	Description	Symptom	Recommendation
VxRail: Failed to enable RSC	Something went wrong when trying to do preparation work for enabling RSC function.	Failed to enable RSC.	<p>Please check KB525642 to make sure your SRS version is what we support, or it may cause RSC fail to enable.</p> <p>Please SSH login to your VxRail Manager and do the following checks. Check / home/mystic/esrs/conf/ rsc.config file, please make sure that all the fields are correct. product-serialnumber=(must be correct device PSNT) product-esrs-model=(must be correct esrs model) deviceKey=(must be correct device key) ve-ip=(must be correct VE ip) ve-port=9443 passcode-size=8 device-ip=(must be correct Vxrail Manager IP) enableRSC=failed rsclnitStatus=success2. If you are sure all the fields are correct, please change the value of enableRSC to "prepare", then the program will automatically try to enable RSC function. For more information, see support.emc.com/kb/525056.</p>
VxRail: SRS VE not activated	VxRail: SRS VE not activated.	SRS VE not activated.	These events will be shown in Web UI only. Customers need to call EMC for support.
VxRail: Failed to send heartbeat to SRS VE for 10 times	VxRail: Failed to send heartbeat to SRS VE for 10 times.	Failed to send heartbeat to SRS VE for 10 times.	
VxRail: SRS rectification is needed for RSC	Current SRS may not support RSC function and enable RSC failed.	SRS rectification is needed for RSC.	<p>All SRS versions lower than 3.16 don't support RSC. You will receive this warning event and event VXR034012 which means enable RSC failed. We recommend you to upgrade SRS to latest version if your current version is lower than 3.24. For more information, see https://support.emc.com/kb/525642.</p>
VxRail: Failed to upgrade internal SRS	Failed to upgrade internal SRS.	Failed to upgrade internal SRS.	
VxRail: ESX Server Inaccessible	Network connection issue. DNS issue. Port issue (service down).	ESX Server Inaccessible.	Check network connection of Mystic Manager VM. Check network connectivity to host via ping. If DNS problem exists, check DNS configuration (/etc/resolv.conf) of Mystic Manager, to confirm the first entry is

Table 8. Alerts in VxRail (continued)

Name	Description	Symptom	Recommendation
			<p>vCenter. Then SSH login to vCenter to check status of dnsmasq; restart the service to see if issue is fixed. If no DNS problem and resolved IP is not reachable, login to vSphere web client to see ESX host status. Check power status of node to see if it's powered off or put into Standby; power on with help from customer.</p> <p>Check network connection of Node with help from customer. For more information, see https://support.emc.com/kb/198283.</p>
VxRail: Failed to remove node	Failed to remove node.	Failed to remove node.	
VxRail: Failed to remove node due to PSNT resetting	Failed to remove node due to PSNT resetting.	Failed to remove node due to PSNT resetting.	
VxRail: MYSTIC Manager service down - Cluster Connector	MYSTIC Manager service down, due to a reported Cluster Connector error.	MYSTIC Manager service down - Cluster Connector.	<p>Check log file for cause analysis. Manually restart service. Upgrade Mystic Manger to latest for known issues. For more information, see support.emc.com/kb/198315.</p>
VxRail: MYSTIC Manager service down - SRS Connector	MYSTIC Manager service down - SRS Connector.	MYSTIC Manager service down - SRS Connector.	<p>If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/522778.</p>
VxRail: MYSTIC Manager service down - eService Connector	MYSTIC Manager service down - eService Connector.	MYSTIC Manager service down - eService Connector.	<p>Check log file for cause analysis. Manually restart service. Upgrade Mystic Manger to latest for known issues. For more information, see support.emc.com/kb/198318.</p>
VxRail: Failed to change ESXi hostname	Failed to change ESXi hostname.	Failed to change ESXi hostname.	<p>For more information, see https://support.emc.com/kb/528114.</p>
VxRail: Failed to change ESXi management IP	Failed to change ESXi management IP.	Failed to change ESXi management IP.	<p>For more information, see https://support.emc.com/kb/528115.</p>
VxRail: Failed to refresh VxRail IP in iDRAC	OME feature: when reading VxRail IP from PTAgent or writing VxRail IP to PTAgent failed.	Failed to refresh VxRail IP in iDRAC.	

Table 8. Alerts in VxRail (continued)

Name	Description	Symptom	Recommendation
VxRail: Initialization failed	First-run initialization failed.	Initialization failed.	Check the format of the input of the vCenter IP address. Double check the username and password for the. Double check the username and password for the ESXi host. Run the initialization setup process of the VxRail Manager for another trial. For more information, see support.emc.com/kb/462919 .
VxRail: EVO-RAIL license expiration alert (<5 days)	When the ESXi Evaluation License expires, all ESXi hosts will disconnect from the cluster vSAN. The result of this will be Data Unavailable. EVO:RAIL 60 day evaluation license expiration alert (<5 days). EVO:RAIL Evaluation 60 day license expired.	EVO-RAIL license expiration alert (<5 days).	If you need any assistance on troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative, and quote this Knowledge base article ID. For more information, see support.emc.com/kb/198289 .
VxRail: EVO-RAIL license expiration reminder (<20 days)	VxRail: EVO-RAIL license expiration reminder (<20 days).	EVO-RAIL license expiration reminder (<20 days).	If you need any assistance on troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative, and quote this Knowledge base article ID. For more information, see https://support.emc.com/kb/198322 .
VxRail: Failed to query cluster info	VxRail: Failed to query cluster info.	Failed to query cluster info.	Check log file of cluster connector for details. Try to fix issues according to root causes. For more information, see support.emc.com/kb/198307 .
VxRail: PSC management account password is invalid in VxRail Manager.	VxRail: PSC management account password is invalid in VxRail Manager.	PSC management account password is invalid in VxRail Manager.	If the PSC management password is known, please refer to step 8 to update the new host password to VxRail Manager, otherwise, please reset the host management password from the disconnected host by step 2~7. Access PSC as https://psc-ip-or-fqdn/psc/Login with the administrator username and password. Click on "User and Groups" on the left panel and select "User" tab on the right panel, change domain according to your setting, and locate the management account. If the

Table 8. Alerts in VxRail (continued)

Name	Description	Symptom	Recommendation
			management account is in "localos" domain, login to PSC using appliance shell following VMware document, and reset the account's password using "passwd" command. If the management account is in some other domain, modify it directly. Double check that the new password is working by accessing PSC. Update the new PSC management password with VxRail Manager via RESTful api. For more information, see support.emc.com/kb/529667 .
VxRail: Node management account password is invalid in VxRail Manager	VxRail: Node management account password is invalid in VxRail Manager.	Node management account password is invalid in VxRail Manager.	For more information, see https://support.emc.com/kb/529668 .
VxRail: Connection to eService server	Error: Connection to eService server.	Connection to eService server.	Check server side status of colu.emc.com. Check client side network / firewall status. Fix network / firewall issue with customer's help For more information, see support.emc.com/kb/198310 .
VxRail: Failed to get Advisories catalog	Connection to colu.emc.com, failed to get Advisories catalog.	Failed to get Advisories catalog.	Check server side status of colu.emc.com. Check client side network / firewall status ³ . Fix network / firewall issue with customer's help. Check server side status of Advisory catalog. For more information, see https://support.emc.com/kb/198317 .
VxRail: Failed to get Download catalog	COLU was unable to download catalog information.	Failed to get Download catalog.	Check server side status of colu.emc.com. Check client side network / firewall status ³ . Fix network / firewall issue with customer's help ⁴ . Check server side status of Download catalog. For more information, see support.emc.com/kb/198321 .
VxRail: Failed to download file from catalog	Failed to download file from catalog at download.emc.com.	Failed to download file from catalog.	Check server side status of download.emc.com. Check validity of download links from server side ³ . Check client side network / firewall status ⁴ . Fix network / firewall issue with customer's help. For more information, see support.emc.com/kb/198323 .

Table 8. Alerts in VxRail (continued)

Name	Description	Symptom	Recommendation
VxRail: Proactive health Check Failed - report ID: critical	VxRail: Proactive health Check Failed - report ID: critical.	Proactive health Check Failed - report ID: critical.	Login to VxRail Manager using mystic user <code>cd /mystic/ proactive</code>
VxRail: Node upgrade operation failed	VxRail: Node upgrade operation failed.	Node upgrade operation failed.	This message could surface during VME upgrade by professional service. Service action is to follow upgrading procedure document. For more information, see support.emc.com/kb/524430 .
VxRail: Proactive health Check got errors - report ID : error	VxRail: Proactive health Check got errors - report ID: error.	Proactive health Check got errors - report ID: error.	
VxRail: The version is not supported. See KB500665	Misconfigured feature: This is for Cluster Level(e.g. Mystic Manager, vCenter). If current version is not supported, all supported versions are listed in KB500665. This event should show.	Not supported version" resourceKind="ClusterComp uteResource.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative For more information, see support.emc.com/kb/500665 .
VxRail: Version compatibility issue. See KB500666	Misconfigured feature: This is for Cluster Level(e.g. Mystic Manager, vCenter). If current version is incompatible with other component, the compatible versions of the current component depends on are listed in KB500666. This event should show.	Not compatible version" resourceKind="ClusterComp uteResource.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/500666 .
VxRail: Virtual Appliance process failed	queryCluster scheduled every 3 mins: Create/ Update Virtual Appliance(VXRAIL/ Mystic Manager/VC/ESXi/VIB/ PTAgent) failed.	Virtual Appliance process failed." resourceKind="VirtualMachin e.	
VxRail: The version is not supported. See KB500665	Misconfigured feature: This is for Node Level (e.g. ESXi, VIB, Dell PTAgent) If current version is not supported, all supported versions are listed in KB500665. This event should show.	The version is not supported. See KB500665" resourceKind="All.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/500665 .
VxRail: Version compatibility issue. See KB500666	Misconfigured feature: This is for Node Level(e.g. ESXi, VIB, Dell PTAgent) If current version is incompatible with other component, the compatible versions of the	Version compatibility issue. See KB500666" resourceKind="All.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see

Table 8. Alerts in VxRail (continued)

Name	Description	Symptom	Recommendation
	current component depends on are listed in KB500666. This event should show.		support.emc.com/kb/500666 .
VxRail: The remaining rated write endurance of disk on the node is at warning level	wearing level = 5%.	The remaining rated write endurance of disk on the node is at warning level" resourceKind="HostSystem.	Proactive SSD Replacement.
VxRail: vCenter Inaccessible	Network connection issue. Port issue (service down).	vCenter Inaccessible" resourceKind="HostSystem.	Check network connection of Mystic Manager VM. Check network connectivity to vCenter VM via ping. SSH login to vCenter to check status of vCenter services. Restart services which are down or not operational. Reboot vCenter VM to see if issue fixed. For more information, see support.emc.com/kb/198285 .
VxRail: MYSTIC Manager service down - Web UI	Service issue: connectors or web UI.	MYSTIC Manager service down - Web UI" resourceKind="VirtualMachine.	Check log file for cause analysis. Manually restart Tomcat service. Upgrade Mystic Manager to latest for known issues. For more information, see support.emc.com/kb/198311 .
VxRail: VxRail Manager Extension upgrade failed	VxRail Manager Extension upgrade failed.	VxRail Manager Extension upgrade failed" resourceKind="VirtualMachine.	This message could surface during VME upgrade by professional service. Service action is to follow upgrading procedure document. For more information, see support.emc.com/kb/522742 .
VxRail: VxRail Manager Inaccessible	VxRail Manager Inaccessible.	VxRail Manager Inaccessible" resourceKind="VirtualMachine.	
VxRail: The proxy server is out of connection	VxRail: The proxy server is out of connection.	The proxy server is out of connection." resourceKind="VirtualMachine	For more information, see https://support.emc.com/kb/198309 .
VxRail: Set node blue LED failed	for diagnosis or replacement.	Set node blue LED failed" resourceKind="VirtualMachine.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/522770 .
VxRail: Set node blue LED blink failed	Turn on node blue LED failed.	Set node blue LED blink failed" resourceKind="VirtualMachine.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service

Table 8. Alerts in VxRail (continued)

Name	Description	Symptom	Recommendation
			Representative. For more information, see support.emc.com/kb/522768 .
VxRail: Set node blue LED off failed	Turn off node blue LED failed.	Set node blue LED off failed" resourceKind="VirtualMachin e.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service. Representative. For more information, see support.emc.com/kb/522766 .
VxRail: Set disk green LED failed	Operation on disk green LED failed.	Set disk green LED failed" resourceKind="VirtualMachin e.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/522764 .
VxRail: Set disk green LED blink failed	Turn on disk green LED failed.	Set disk green LED blink failed" resourceKind="VirtualMachin e.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/522760 .
VxRail: Set disk green LED off failed	Turn off disk green LED failed.	Set disk green LED off failed" resourceKind="VirtualMachin e.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/522752 .
VxRail: Upgrade failed	An attempt to upgrade SRS virtual appliance has failed.	Upgrade failed" resourceKind="VirtualMachin e.	Establish remote access for cause analysis. For more information, see support.emc.com/kb/198263 .
VxRail: Upload failed	Dial-home event code: MYSTIC1F4114-Upload failed.	Upload failed" resourceKind="ClusterComp uteResource.	If you need further assistance troubleshooting the issues above, please contact Dell EMC Technical Support or your Authorized Service Representative. For more information, see support.emc.com/kb/522747 .

Dashboards in the VxRail Management Pack for vRealize Operations

You can use the dashboards in the VxRail Management Pack for vRealize Operations to see the operations overview, the capacity overview, or troubleshoot the clusters in this management pack.

Topics:

- [Access the Dashboards](#)
- [The Troubleshoot VxRail Dashboard](#)
- [VxRail Operations Overview Dashboard](#)
- [VxRail Capacity Overview Dashboard](#)

Access the Dashboards

Steps

1. To access the dashboards, from the main menu of VMware vRealize Operations Manager, click **Dashboards**.
2. From the dashboard list, select the required VxRail dashboard.

The Troubleshoot VxRail Dashboard

The **Troubleshoot VxRail** dashboard helps you view the properties of your VxRail cluster and the active alerts on the cluster components. The cluster components include hosts, VMs, or disk groups.

You can select a cluster from the dashboard and then list all the known problems with the objects associated with the cluster. The objects include clusters, datastores, disk groups, physical disks, and VMs served by the selected VxRail cluster.

You can view the key use and performance metrics from the dashboard. You can also view the use and performance trend of the cluster for the last 24 hours. You can also view historical issues and analyze the host, disk group, or physical disk.

Table 9. Widgets in the Troubleshoot VxRail Dashboard

Widget	Description
Search for a VxRail cluster (use filter)	Use this widget to search VxRail clusters. You can view the details of each VxRail cluster including the number of hosts, VMs, cache disks, capacity disks, and cluster type. You can also view if the VxRail cluster is dedupe and compression enabled and stretched.
Any alerts on the cluster, hosts, VMs or disks?	Use this widget to view alerts on the cluster, VMs, or disks in your environment.
Are the relatives healthy?	Use this widget to view the health, risk, and efficiency of the relatives. This widget also allows you to view the health of the datastore in a host and disks in each disk group.
Cluster I/O Read Latency	Use this widget to view the read latency of VMs.
Cluster I/O Write Latency	Use this widget to view the Write latency of VMs.
Max CPU Demand among ESXi Hosts	Use this widget to view the hourly trends of the CPU used by the ESXi hosts in the selected cluster.
Max Memory Demand among ESXi Hosts	Use this widget to view the hourly trends of the RAM used by the ESXi hosts in the selected cluster.

Table 9. Widgets in the Troubleshoot VxRail Dashboard (continued)

Widget	Description
Disk Space Used on the Cluster	Use this widget to view the hourly trends of the disk space used by the selected cluster.
Cluster Network Utilization (MBps)	Use this widget to view the hourly network speed trends of the selected cluster. The network utilization speed is shown in Megabytes per second.
Cluster Disk Throughout (MBps)	Use this widget to view the hourly disk access speed trends of the selected cluster. The disk throughput speed is shown in Megabytes per second.
Cluster IOPS	Use this widget to view the hourly trends of the selected cluster's input/output speed.
Are the hosts consistently configured?	Use this widget to check host configuration on the selected cluster.
Is vSAN cache latency high?	Use this widget to check the vSAN cache latency on selected cluster.
Are we reading from Cache? (n/a for all-flash)	Use this widget to check the percentage of read operations from vSAN Cache.
Is Write Buffer low?	Use this widget to check the percentage of write buffer on the vSAN Cache.
Are outstanding I/Os high?	Use this widget to view the I/Os for the selected vSAN cluster.
Is IOPS Congestion high?	Use this widget to check IOPS congestion of the selected vSAN cluster.
How often does congestion happen?	Use this widget to view timeline of congestion on selected vSAN cluster.
Is Capacity Disk latency high?	Use this widget to check capacity disk latency on selected vSAN cluster.
Is Disk Group running low on capacity?	Use this widget to view the disk group capacity free in percentage on selected vSAN cluster.
Is the disk groups usage balance?	Use this widget to view the heat map of disk group usage on selected vSAN cluster.
Any errors on the Disk Group?	Use this widget find any disk group errors on selected vSAN cluster.
Any dropped packets on the vSAN Network?	Use this widget to check any dropped packets on the vSAN network.
Cache Disks: Any hardware issues? Use heatmap configurations to check.	User this widget to view the heat map of cache disks bus reset count.
Capacity Disks: Any hardware issues? Use heatmap configurations to check.	User this widget to view the heat map of cache disks bus reset count.

VxRail Operations Overview Dashboard

The **VxRail Operations Overview** dashboard provides an aggregated view of the health and performance of your VxRail clusters.

Use this dashboard to get a complete view of your VxRail environment and what components make up the environment.

The widgets in the dashboard help you to understand the utilization and performance patterns for the selected VxRail cluster. The widgets also show the details of cluster storage, cluster compute, cluster wide IOPs, the average cluster wide disk latency, alert volume, cluster throughput, and the maximum latency among the capacity disks.

VxRail Capacity Overview Dashboard

The **VxRail Capacity Overview** dashboard provides an overview of VxRail storage capacity and savings achieved by enabling deduplication and compression across all VxRail clusters.

The widgets in this dashboard show the current and historical use trends, future procurement requirements, the details such as capacity remaining, time remaining, and storage reclamation opportunities to make effective capacity management decisions.

These widgets also show the distribution of use among VxRail disks. You can view these details either as an aggregate or at an individual cluster level.