# Veritas InfoScale Operations Manager 7.4.2 Patch 600

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https://sort.veritas.com/data/support/SORT_Data_Sheet.pdf

# VIOM Patch 7.4.2.600

This document includes the following topics:

- Post-installation tasks for this patch
- Changes introduced in this patch
- Known issues in this patch

## Post-installation tasks for this patch

After you install Patch 7.4.2.600 on a Veritas InfoScale Operations Manager (VIOM) Management Server and the managed hosts, update the following add-ons:

- Control Host (`VRTSsfmch-7.4.2.300` or later), which is applicable to the Management Server and the managed hosts. Update this add-on if you have configured agentless hosts, virtualization servers such as vCenter, HMC, and LPAR discoveries or storage arrays discoveries in the VIOM management console.
- Storage Insight add-on (`VRTSsfmsi-7.4.2.300` or later), which is applicable to the Management Server only. Update this add-on if you have configured storage array discoveries in the VIOM management console.

## Changes introduced in this patch

The following sections describe the changes that are introduced in this patch.

### Reconciliation of InfoScale Core Plus licenses

The License reconciliation feature lets you seamlessly compare InfoScale license usage data against each entitlement, and to view the effective license position summary of an organization.

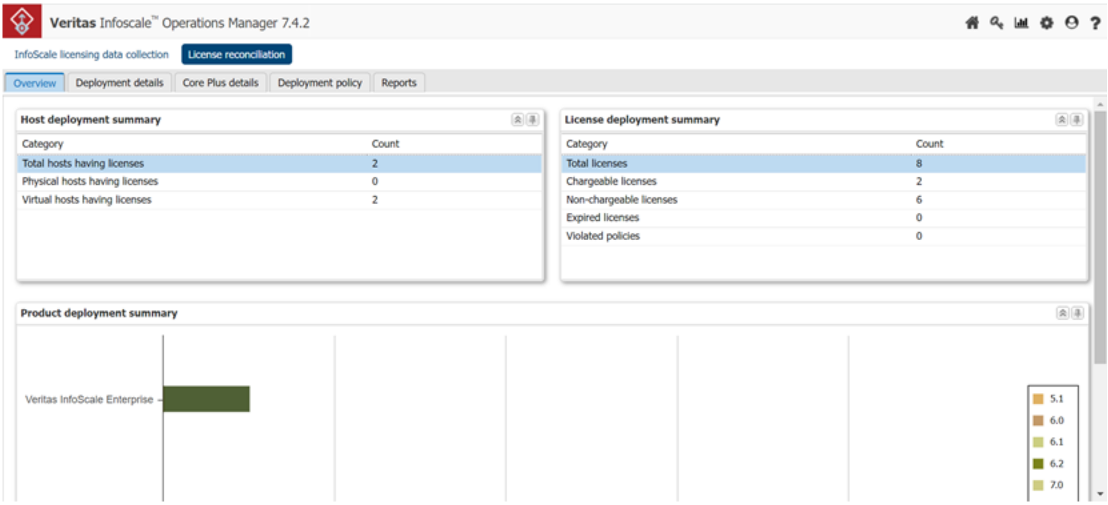
Previously, Veritas provided the Excel tool and CSV formats to collect the license usage data against each entitlement and platform-related information on InfoScale deployments in your environment.

As an administrator, you can use the License reconciliation in your environment from a licensing perspective.

To perform the license reconciliation, ensure that the VIOM Management Server is at 7.4.2.600 or later.

**To use License reconciliation**

1 In the Management Server console, open license perspective, and click the **License reconciliation** option at the top of the toolbar.


Veritas Infoscale™ Operations Manager 7.4.2
InfoScale licensing data collection
License reconciliation
Overview
Deployment details
Core Plus details
Deployment policy
Reports
Product deployment summary
Veritas InfoScale Enterprise
5.1
6.0
6.1
6.2
7.0

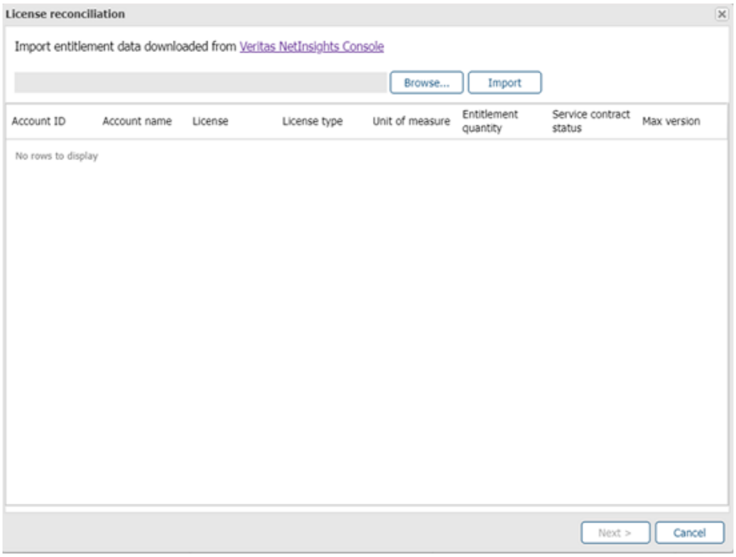
Host deployment summary

| Category | Count |
|---|---|
| Total hosts having licenses | 2 |
| Physical hosts having licenses | 0 |
| Virtual hosts having licenses | 2 |

License deployment summary

| Category | Count |
|---|---|
| Total licenses | 8 |
| Chargeable licenses | 2 |
| Non-chargeable licenses | 6 |
| Expired licenses | 0 |
| Violated policies | 0 |

The License reconciliation window appears.



License reconciliation

Import entitlement data downloaded from Veritas NetInsights Console

| Account ID | Account name | License | License type | Unit of measure | Entitlement quantity | Service contract status | Max version |
|---|---|---|---|---|---|---|---|

No rows to display

---

**Note:** In the License reconciliation window, you need to import the entitlement file. Therefore, download the entitlement file available from the Veritas NetInsights Console and save it in your local system.

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To download the entitlement file from the NetInsights Console application perform the steps sequentially:

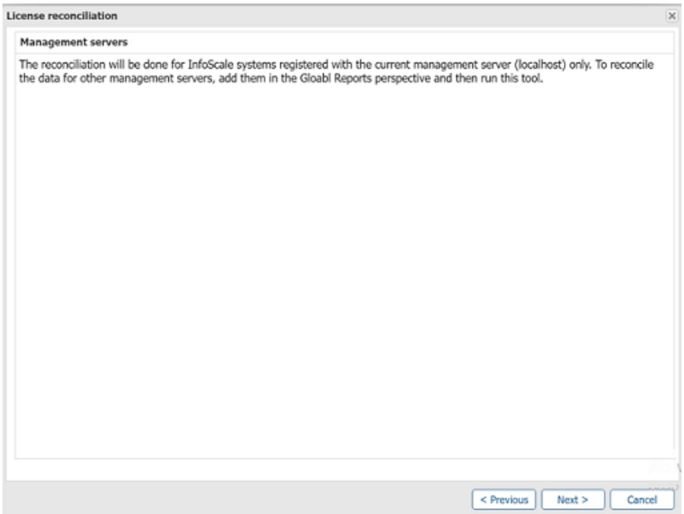
- Sign into https://sso.veritas.com/
- Select **NetInsights Console** application and then select **Usage Insights**
- Select **Registration and downloads** menu and **Reconciliatior** and then **Download entilements files**

2. Click **Browse** to locate the appropriate entitlement file (CSV format) that you want to upload.

3. Click **Import** to upload your entitlement file in to VIOM Management Server and click **Next**.

   The Management Server window appears; proceed as follows:

   - Scenario 1:
     You can see the following window, if there is no Management Server configured in the Global Reports.



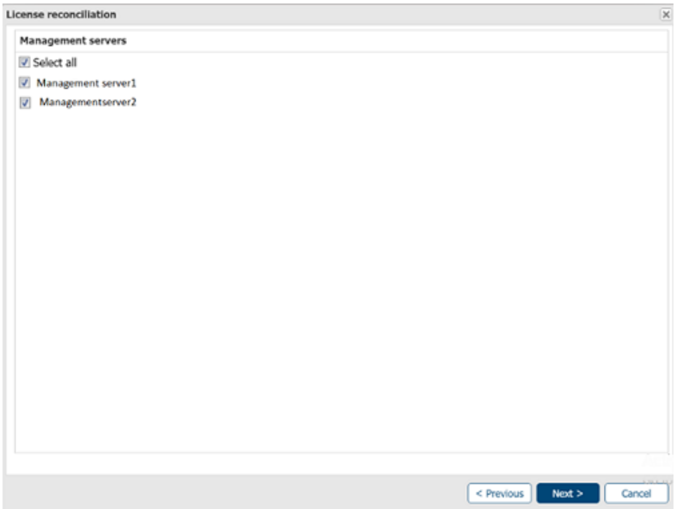
License reconciliation

Management servers

The reconciliation will be done for InfoScale systems registered with the current management server (localhost) only. To reconcile the data for other management servers, add them in the Gloabl Reports perspective and then run this tool.

- Scenario 2:

  You can see the following window, If there are Management Server configured in the Global Reports. By default, all the Management Servers are selected.



License reconciliation

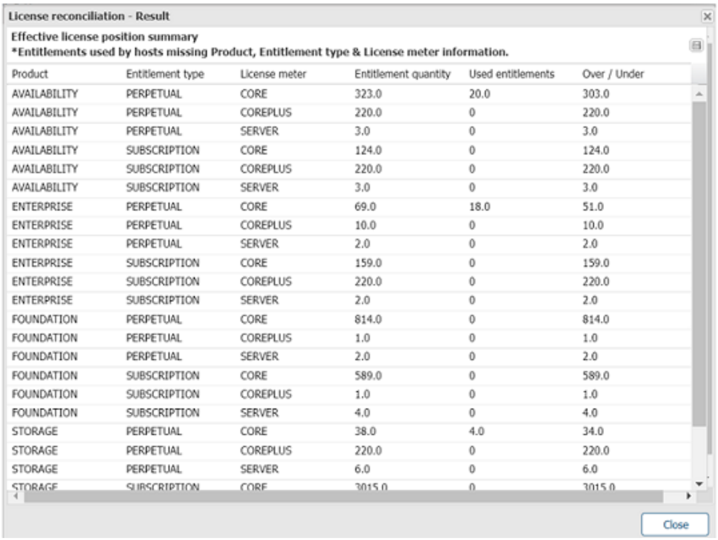
Management servers

☑ Select all

☑ Management server1

☑ Managementserver2

4 Irrespective of both the scenarios mentioned in the step 4, click **Next**. The Effective license position summary page displays.



License reconciliation - Result

Effective license position summary
*Entitlements used by hosts missing Product, Entitlement type & License meter information.

| Product | Entitlement type | License meter | Entitlement quantity | Used entitlements | Over / Under |
|---|---|---|---|---|---|
| AVAILABILITY | PERPETUAL | CORE | 323.0 | 20.0 | 303.0 |
| AVAILABILITY | PERPETUAL | COREPLUS | 220.0 | 0 | 220.0 |
| AVAILABILITY | PERPETUAL | SERVER | 3.0 | 0 | 3.0 |
| AVAILABILITY | SUBSCRIPTION | CORE | 124.0 | 0 | 124.0 |
| AVAILABILITY | SUBSCRIPTION | COREPLUS | 220.0 | 0 | 220.0 |
| AVAILABILITY | SUBSCRIPTION | SERVER | 3.0 | 0 | 3.0 |
| ENTERPRISE | PERPETUAL | CORE | 69.0 | 18.0 | 51.0 |
| ENTERPRISE | PERPETUAL | COREPLUS | 10.0 | 0 | 10.0 |
| ENTERPRISE | PERPETUAL | SERVER | 2.0 | 0 | 2.0 |
| ENTERPRISE | SUBSCRIPTION | CORE | 159.0 | 0 | 159.0 |
| ENTERPRISE | SUBSCRIPTION | COREPLUS | 220.0 | 0 | 220.0 |
| ENTERPRISE | SUBSCRIPTION | SERVER | 2.0 | 0 | 2.0 |
| FOUNDATION | PERPETUAL | CORE | 814.0 | 0 | 814.0 |
| FOUNDATION | PERPETUAL | COREPLUS | 1.0 | 0 | 1.0 |
| FOUNDATION | PERPETUAL | SERVER | 2.0 | 0 | 2.0 |
| FOUNDATION | SUBSCRIPTION | CORE | 589.0 | 0 | 589.0 |
| FOUNDATION | SUBSCRIPTION | COREPLUS | 1.0 | 0 | 1.0 |
| FOUNDATION | SUBSCRIPTION | SERVER | 4.0 | 0 | 4.0 |
| STORAGE | PERPETUAL | CORE | 38.0 | 4.0 | 34.0 |
| STORAGE | PERPETUAL | COREPLUS | 220.0 | 0 | 220.0 |
| STORAGE | PERPETUAL | SERVER | 6.0 | 0 | 6.0 |
| STORAGE | SUBSCRIPTION | CORE | 3015.0 | 0 | 3015.0 |

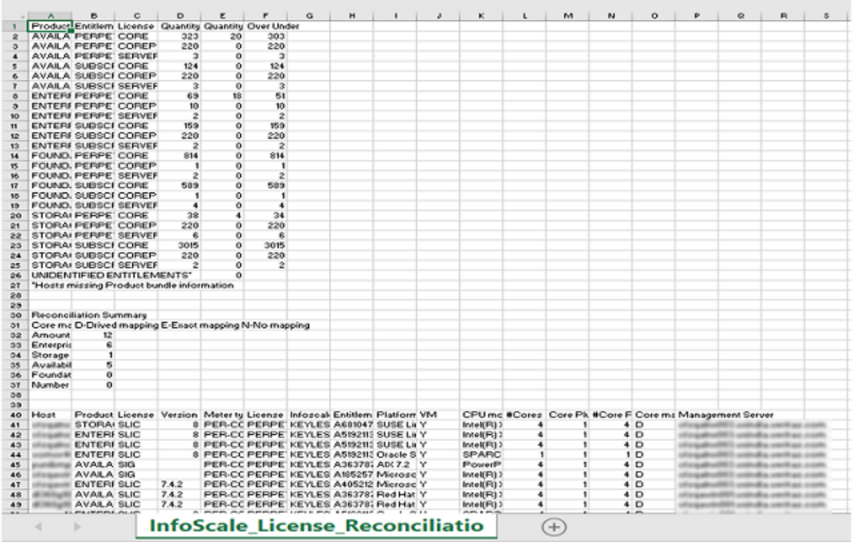
**The Effective license position summary** page displays the calculated license usage of an organization.

- **Entitlement quantity**: Specifies the total number of entitlements for each account. It shows the product usage limit for that entitlement.
- **Used Entitlement**: Specifies the total number of used entitlements against each entitlement.

- **Over/Under usage**: Specifies the number of entitlements that are available or overused. If the entitlement is overused the value will be shown with a negative sign.

5 Click the **Save** button to download license usage data in the CSV format.

The following is the downloaded sample entitlement (CSV) file that includes the **Reconciliation Summary** and **InfoScale Server** details:

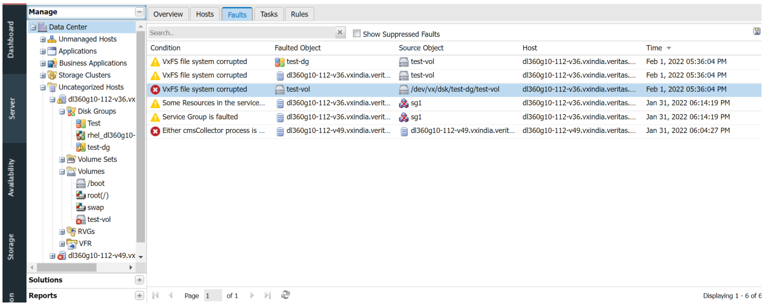


| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | Product | Entitlem | License | Quantity | Quantity | Over Under |
| 2 | AVAILA | PERPE' | CORE | 323 | 20 | 303 |
| 3 | AVAILA | PERPE' | COREP | 220 | 0 | 220 |
| 4 | AVAILA | PERPE' | SERVEF | 3 | 0 | 3 |
| 5 | AVAILA | SUBSCI | CORE | 124 | 0 | 124 |
| 6 | AVAILA | SUBSCI | COREP | 220 | 0 | 220 |
| 7 | AVAILA | SUBSCI | SERVEF | 3 | 0 | 3 |
| 8 | ENTERI | PERPE' | CORE | 69 | 18 | 51 |
| 9 | ENTERI | PERPE' | COREP | 10 | 0 | 10 |
| 10 | ENTERI | PERPE' | SERVEF | 2 | 0 | 2 |
| 11 | ENTERI | SUBSCI | CORE | 159 | 0 | 159 |
| 12 | ENTERI | SUBSCI | COREP | 220 | 0 | 220 |
| 13 | ENTERI | SUBSCI | SERVEF | 2 | 0 | 2 |
| 14 | FOUND. | PERPE' | CORE | 814 | 0 | 814 |
| 15 | FOUND. | PERPE' | COREP | 1 | 0 | 1 |
| 16 | FOUND. | PERPE' | SERVEF | 2 | 0 | 2 |
| 17 | FOUND. | SUBSCI | CORE | 589 | 0 | 589 |
| 18 | FOUND. | SUBSCI | COREP | 1 | 0 | 1 |
| 19 | FOUND. | SUBSCI | SERVEF | 4 | 0 | 4 |
| 20 | STORA | PERPE' | CORE | 38 | 4 | 34 |
| 21 | STORA | PERPE' | COREP | 220 | 0 | 220 |
| 22 | STORA | PERPE' | SERVEF | 6 | 0 | 6 |
| 23 | STORA | SUBSCI | CORE | 3015 | 0 | 3015 |
| 24 | STORA | SUBSCI | COREP | 220 | 0 | 220 |
| 25 | STORA | SUBSCI | SERVEF | 2 | 0 | 2 |
| 26 | UNIDENTIFIED ENTITLEMENTS* | | | | 0 | |
| 27 | *Hosts missing Product bundle information | | | | | |
| 28 | | | | | | |
| 29 | | | | | | |
| 30 | Reconciliation Summary | | | | | |
| 31 | Core ma | D-Drived mapping E-Exact mapping N-No mapping | | | | |
| 32 | Amount | 12 | | | | |
| 33 | Enterpris | 6 | | | | |
| 34 | Storage | 1 | | | | |
| 35 | Availabil | 5 | | | | |
| 36 | Foundat | 0 | | | | |
| 37 | Number | 0 | | | | |
| 38 | | | | | | |
| 39 | | | | | | |

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40 | Host | Product | License | Version | Meter ty | License | Infoscal | Entitlem | Platform | VM | CPU mc | #Cores | Core Pk | #Core F | Core ma | Management Server |
| 41 | [redacted] | STORA | SLIC | 8 | PER-CC | PERPE' | KEYLES | A681047 | SUSE Lii | Y | Intel(R) ) | 4 | 1 | 4 | D | [redacted] |
| 42 | [redacted] | ENTERI | SLIC | 8 | PER-CC | PERPE' | KEYLES | A519211 | SUSE Lii | Y | Intel(R) ) | 4 | 1 | 4 | D | [redacted] |
| 43 | [redacted] | ENTERI | SLIC | 8 | PER-CC | PERPE' | KEYLES | A519211 | SUSE Lii | Y | Intel(R) ) | 4 | 1 | 4 | D | [redacted] |
| 44 | [redacted] | ENTERI | SLIC | 8 | PER-CC | PERPE' | KEYLES | A519211 | Oracle S | Y | SPARC | 1 | 1 | 1 | D | [redacted] |
| 45 | [redacted] | AVAILA | SIG | | PER-CC | PERPE' | KEYLES | A36378: | AIX 7.2 | Y | PowerP | 4 | 1 | 4 | D | [redacted] |
| 46 | [redacted] | AVAILA | SIG | | PER-CC | PERPE' | KEYLES | A185257 | Microsc | Y | Intel(R) ) | 4 | 1 | 4 | D | [redacted] |
| 47 | [redacted] | ENTERI | SLIC | 7.4.2 | PER-CC | PERPE' | KEYLES | A405212 | Microsc | Y | Intel(R) ) | 4 | 1 | 4 | D | [redacted] |
| 48 | [redacted] | AVAILA | SLIC | 7.4.2 | PER-CC | PERPE' | KEYLES | A36378: | Red Hat | Y | Intel(R) ) | 4 | 1 | 4 | D | [redacted] |
| 49 | [redacted] | AVAILA | SLIC | 7.4.2 | PER-CC | PERPE' | KEYLES | A36378: | Red Hat | Y | Intel(R) ) | 4 | 1 | 4 | D | [redacted] |

# Notification about a corrupted VxFS file system

Veritas InfoScale Operations Manager discovers FULLFSCK flag on a VxFS file system every 24 hours. If the file system is corrupted, a fault 'SF_FILESYSTEM_CORRUPTED' is raised.



□ Show Suppressed Faults

| Condition | Faulted Object | Source Object | Host | Time |
|---|---|---|---|---|
| VxFS file system corrupted | test-dg | test-vol | dl360g10-112-v36.vxindia.veritas.... | Feb 1, 2022 05:36:04 PM |
| VxFS file system corrupted | dl360g10-112-v36.vxindia.verit... | test-vol | dl360g10-112-v36.vxindia.veritas.... | Feb 1, 2022 05:36:04 PM |
| VxFS file system corrupted | test-vol | /dev/vx/dsk/test-dg/test-vol | dl360g10-112-v36.vxindia.veritas.... | Feb 1, 2022 05:36:04 PM |
| Some Resources in the service... | dl360g10-112-v36.vxindia.verit... | sg1 | dl360g10-112-v36.vxindia.veritas.... | Jan 31, 2022 06:14:19 PM |
| Service Group is faulted | dl360g10-112-v36.vxindia.verit... | sg1 | dl360g10-112-v36.vxindia.veritas.... | Jan 31, 2022 06:14:19 PM |
| Either cmsCollector process is ... | dl360g10-112-v49.vxindia.verit... | dl360g10-112-v49.vxindia.verit... | dl360g10-112-v49.vxindia.veritas.... | Jan 31, 2022 06:04:27 PM |

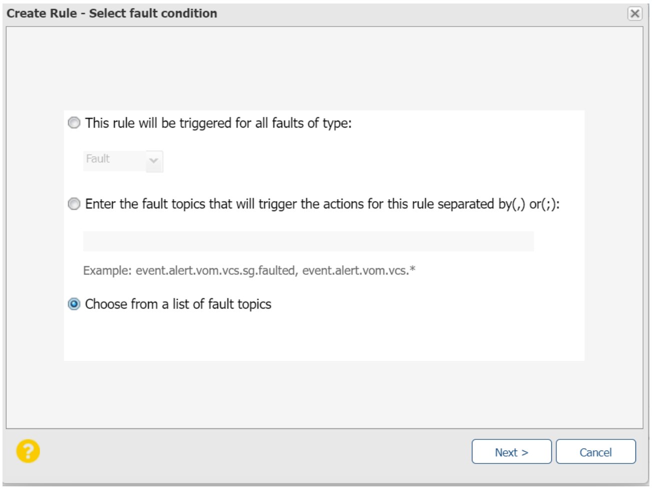
Page 1 of 1

Displaying 1 - 6 of 6

You can create a rule to get an email/SNMP notification about this fault.

Complete the following steps

1. In the Server perspective, click **Rules** and right-click to create a new rule.
2. Select **Choose from a list of fault topics** in the following screen. Click **Next**.



Create Rule - Select fault condition

○ This rule will be triggered for all faults of type:

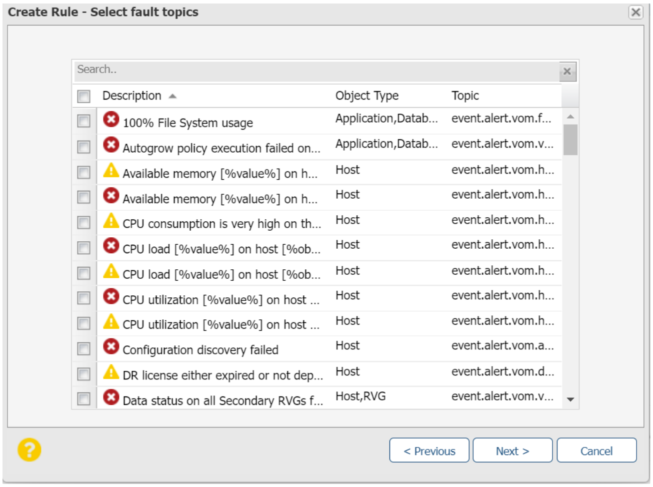
Fault

○ Enter the fault topics that will trigger the actions for this rule separated by(,) or(;):

Example: event.alert.vom.vcs.sg.faulted, event.alert.vom.vcs.*

● Choose from a list of fault topics

3. Enter **VxFS file system corrupted** to search this topic or select **event.alert.vom.vm.fs.corrupted** in **Topic** .

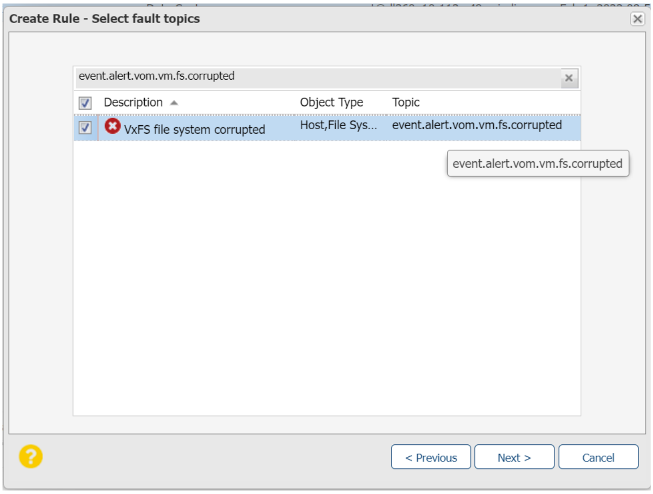


Create Rule - Select fault topics

Search..

| □ | Description ▲ | Object Type | Topic |
|---|---|---|---|
| □ | ✖ 100% File System usage | Application,Datab... | event.alert.vom.f... |
| □ | ✖ Autogrow policy execution failed on... | Application,Datab... | event.alert.vom.v... |
| □ | ⚠ Available memory [%value%] on h... | Host | event.alert.vom.h... |
| □ | ✖ Available memory [%value%] on h... | Host | event.alert.vom.h... |
| □ | ⚠ CPU consumption is very high on th... | Host | event.alert.vom.h... |
| □ | ✖ CPU load [%value%] on host [%ob... | Host | event.alert.vom.h... |
| □ | ⚠ CPU load [%value%] on host [%ob... | Host | event.alert.vom.h... |
| □ | ✖ CPU utilization [%value%] on host ... | Host | event.alert.vom.h... |
| □ | ⚠ CPU utilization [%value%] on host ... | Host | event.alert.vom.h... |
| □ | ✖ Configuration discovery failed | Host | event.alert.vom.a... |
| □ | ⚠ DR license either expired or not dep... | Host | event.alert.vom.d... |
| □ | ✖ Data status on all Secondary RVGs f... | Host,RVG | event.alert.vom.v... |

4 Select the rule as indicated in the following screen. Click **Next**.



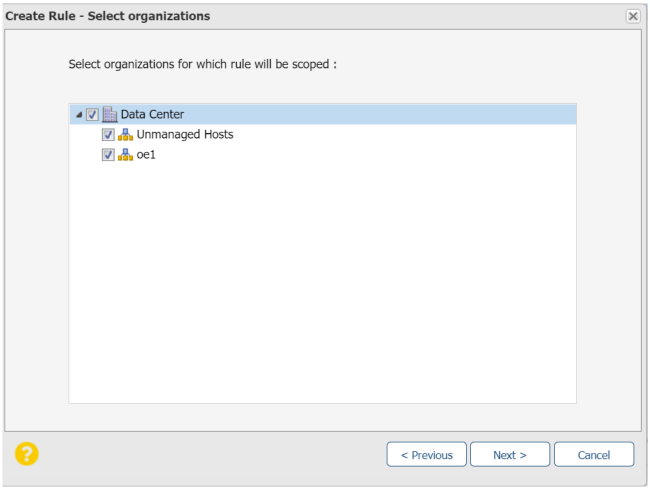
Create Rule - Select fault topics

event.alert.vom.vm.fs.corrupted

| ☑ | Description | Object Type | Topic |
|---|---|---|---|
| ☑ | VxFS file system corrupted | Host,File Sys... | event.alert.vom.vm.fs.corrupted |

event.alert.vom.vm.fs.corrupted

5 Select Organizations for which you want to send this notification. Click **Next**.

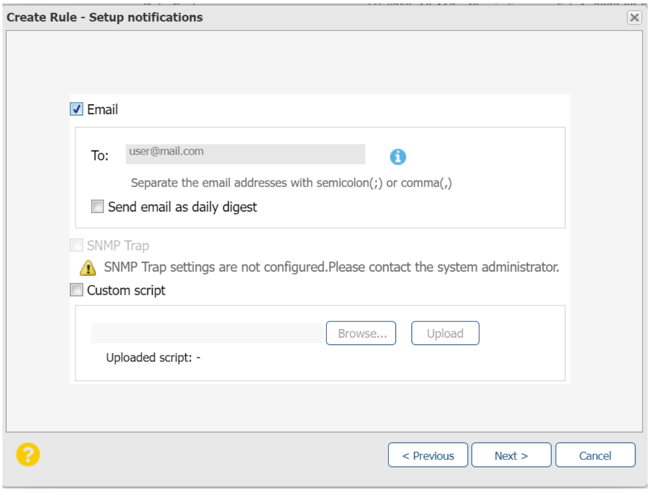


Create Rule - Select organizations

Select organizations for which rule will be scoped :

☑ Data Center
☑ Unmanaged Hosts
☑ oe1

6 Select **Email** and enter the email addresses of those who want to receive this notification. You can enter multiple email addresses as indicated. Click **Next**.



Create Rule - Setup notifications

☑ Email

To: user@mail.com

Separate the email addresses with semicolon(;) or comma(,)

□ Send email as daily digest

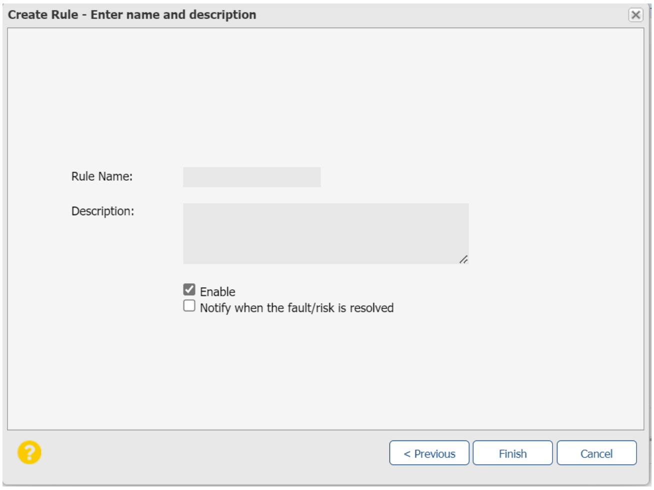
□ SNMP Trap

SNMP Trap settings are not configured.Please contact the system administrator.

□ Custom script

Uploaded script: -

7 Enter a **Name** and **Description** for this rule. Optionally, you can click the check box next to **Notify when the fault/risk is resolved**. If you select this option, an email notification is sent when the file system is back. Click **Finish**.



Create Rule - Enter name and description

Rule Name:

Description:

☑ Enable

□ Notify when the fault/risk is resolved

You have successfully created a rule for email notifications to be sent when a file system is corrupted. Email notification contains the corrupted file system path.

## Security vulnerabilities fixes in Veritas InfoScale Operations Manager

As part of a privately reported vulnerability, Veritas has discovered security vulnerabilities with Veritas InfoScale Operations Manager (VIOM) as described below.

**Table 1-1**

| Issue | Description | Severity |
|---|---|---|
| 1 | Improper Neutralization of Input During Web Page Generation (‘Reflected Cross-site Scripting') | Medium |
| 2 | Absolute Path Traversal | Medium |

### Issue #1

A reflected cross-site scripting (XSS) vulnerability allows a malicious VIOM user to inject malicious script into another user’s browser. (CWE-79)

**Severity**: Medium

CVSS v3.1 Base Score 4.8 (AV:N/AC:L/PR:H/UI:R/S:C/C:L/I:L/A:N)

**Affected Versions**

Veritas InfoScale Operations Manager (VIOM) Management Server and Managed Hosts/Agents 8.0, 7.4.2, 7.4, 7.3.1, 7.3, 7.2, 7.1, 7.0. Earlier unsupported versions may be affected as well.

**Summary**

Cross-site scripting Reflected (XSS) vulnerability affects the Veritas Operations Manager application, which allows authenticated remote attackers to inject arbitrary web script or HTML into HTTP/GET parameter which reflect the user input without sanitization. The Veritas Operations Manager web application does not properly check parameters sent via GET methods which are included in the server response.

**Affected Endpoints**

http://hostname:5634/admin/cgi-bin/listdir.pl

**Security Impact**

By exploiting this vulnerability it is possible to conduct phishing attacks against users of the Veritas Operations Manager web application.

### Issue #2

An absolute path transversal vulnerability allows a user to gain unauthorized access to resources on the server (CWE-36).

**Severity**: Medium

CVSS v3.1 Base Score 4.9 (AV:N/AC:L/PR:H/UI:N/S:U/C:L/I:N/A:N)

**Affected Versions**

Veritas InfoScale Operations Manager (VIOM) Management Server and Managed Hosts/Agents 8.0, 7.4.2, 7.4, 7.3.1, 7.3, 7.2, 7.1, 7.0. Earlier unsupported versions may be affected as well.

**Summary**

The web server fails to sanitize the input data allowing a remote authenticated attacker to read files on the filesystem arbitrarily. By manipulating the resource name in the GET requests referring to files with absolute paths, it is possible to access arbitrary files stored on the filesystem, including application source code, configuration files and critical system files.

**Prerequisites**

It is required to have access to the web application as a user with administrative/root role.

**Affected Endpoints**

http://hostname:5634/admin/cgi-bin/rulemgr.pl/getfile/

**Security Impact**

By exploiting this vulnerability on the web server it was possible to read any file on the filesystem, being the web application running with the privileges of the root user.

# Known issues in this patch

- After you install a patch, the discovery of fabrics or switches from Brocade and Cisco may fail due to incorrect credentials.

  **Workaround**: Reconfigure the fabrics and switches so that they can be discovered successfully.

- After you install a patch, two-factor authentication (2FA) for any existing credentials fails.

  **Workaround**: Reset the pin; the new pin is then accepted by 2FA.