# **HP Storage Operations Manager**

Software Version: 10.10 Windows® and Linux® operating systems

### Release Notes

Document Release Date: January 2016 Software Release Date: January 2016



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### **Acknowledgements**

This product includes software developed by the Apache Software Foundation. (http://www.apache.org)

This product includes software developed by the Indiana University Extreme! Lab. (http://www.extreme.indiana.edu)

This product uses the j-Interop library to interoperate with COM servers. (http://www.j-interop.org)

### **Documentation Updates**

The title page of this document contains the following identifying information:

- · Software Version number, which indicates the software version.
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- Software Release Date, which indicates the release date of this version of the software.

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# Storage Operations Manager Release Notes

for the Windows® and Linux® operating systems.

Software version: 10.10

Publication date: January 2016

This document is an overview of the changes made to Storage Operations Manager (SOM). It contains important information that is not included in books or Help. You can find information about the following in this document:

"New Features in SOM 10.10" on the next page

"Installation " on page 13

"Open Defects" on page 16

**Note:** This document is updated as new information becomes available. To check for recent updates, or to verify that you are using the most recent edition of a document, go to: https://softwaresupport.hp.com/group/softwaresupport

For more information, see "Documentation Updates" on page 3.

# **Support Matrix**

For information about the installation requirements and compatibility with other products, see the *SOM Support Matrix*.

The support matrix includes the following information:

- Requirements for the SOM Management Server
  - Hardware
  - · Operating System
  - Databases
  - · Application Servers

- Web Servers
- · Web Browsers and Plug-ins
- Requirements for the SOM Reporting Server
- Compatibility
  - Languages
  - Internationalization Variances
  - Virtualization Products
  - High-Availability Products
  - HP Software Integrations
  - HP Software Coexistence
  - Performance and Sizing for the SOM Management Server
  - Performance and Sizing for the SOM Reporting Server
- Obsolescence Plans

### New Features in SOM 10.10

HP Storage Operations Manager 10.10 includes the following new features and enhancements:

- Enhanced storage analytics through new dashboards
  - Analytics for Virtual Servers

Extends the ThP Analytics for Virtual Servers dashboard from SOM 10.01 to provide a quick picture of several metrics that are key to monitoring storage availability on virtual servers:

- Datastores and virtual servers that are over provisioned in a VMware virtual environment
- The number of snapshots and the size of each snapshot on a virtual machine
- The number of powered-off virtual machines and the total size of such virtual machines on a virtual server
- Topology Analytics

Displays information about LUNs with suboptimal configurations:

- Storage volumes with single points of failure
- Hosts with missing LUN paths
- Hosts with shared storage volumes

#### Event monitoring

- SOM interprets SNMP traps from certain storage devices and switches. SOM converts these traps into incidents that inform your storage device management. For information about the supported device types for SNMP trap interpretation, see the "INCIDENTS" column in the SOM Device Support Matrix.
- You can customize the message for each incident type and choose to enable or disable it.
- View received incidents in the SOM Incident Browsing workspace.
- Configure SOM incident behavior in the Incidents folder of the Configuration workspace.
- For more information, see version 10.10 of the *SOM User Guide*.
- PKI user authentication
  - Enables logging on to SOM with a Common Access Card (CAC) or Personal Identity Verification (PIV) smart card.
  - Supports other types of certificate-based credentials.
  - For more information, see version 10.10 of the SOM Deployment Guide.
- Additional device support

The SOM 10.10 installer (for fresh installations and for upgrades) updates the device support with all device bundles available for SOM 10.01. Additionally, SOM 10.10 adds the following support:

- HP StoreEasy Storage
- IBM SAN Volume Controller
- IBM Storwize V7000
- HP XP7 Storage performance metrics
- HP 3PAR StoreServ adaptive optimization and deduplication
- HP 3PAR StoreServ improved discovery data and performance metrics collection

- VMware® ESXi<sup>™</sup> version 6.0
- IBM AIX with a CIM extension installed on the remote host
- Customer-requested enhancements:
  - The Last Data Collection Time field indicates when a storage element was last contacted for data collection.
  - Improvements to inferred host management:
    - Host inference rules can use the new Cisco Device Alias scope.
    - Topology maps now show connections from inferred hosts.
  - SOM collects and displays switch dependencies and host dependencies.
  - SOM collects and displays more presented storage details (by host).
  - SOM reports storage paths that lack redundancy.
  - SOM reports zoning misconfigurations.
- Support for upgrading the SOM management server from SOM 10.01 to SOM 10.10. (Same server upgrades only.)
- The somdiscoveryconfigexportimport.ovpl command now supports importing plain text device passwords from a CSV file. For more information, see the SOM CLI Reference Pages.
- The SOM console Java virtual machine has been upgraded to Java 8 for improved product security.
- Support for the SOM console running in current web browser versions. For more information, see "Web Browsers and Plug-ins" in the *SOM Support Matrix*.
- Support for additional operating system (Red Hat Enterprise Linux 7.0) and third-party database (Oracle 12c) versions. For more information, see "Requirements for the SOM Management Server" in the SOM Support Matrix.
- Enhanced REST API support

This release adds GET and SET functionality to the SOM REST API.

Reports

SOM 10.10 integrates with HPE Operations Bridge Reporter 10.00.

**Note:** Report definitions can be migrated from HP Service Health Reporter (SHR) to HPE Operations Bridge Reporter (OBR). However, data cannot be migrated from SHR to OBR. Also, OBR does not support an in-place upgrade from SHR.

To access the new reports in this release, install the required SOM content packs for OBR. The *Storage Resource Management Reports Guide* contains instructions for installing or uninstalling a content pack and brief descriptions of the available universes and reports.

The SOM content packs are available on the SOM installation media.

The following new standard reports are available with SOM 10.10:

- Storage Utilization report in the HP Storage Operations Manager Content Pack for Storage Systems
- Host Volume Dependency in the HP Storage Operations Manager Content Pack for End-to-End Connectivity
- XP and HDS Array Group and Processor Performance Metrics report in the HP Storage
   Operations Manager Content Pack for HP XP and HDS Performance Statistics

The following new content pack for performance reports is available with SOM 10.10:

■ HP Storage Operations Manager Content Pack for NetApp C-Mode Performance Statistics

### New Features in SOM 10.01

HP Storage Operations Manager 10.01 includes the following new features and enhancements:

- New dashboards
  - Storage Systems DTT Analytics
     Forecasts the number of days to threshold values for the capacity utilization (Raw Used, Actual Allocated, and Actual Used) of storage systems.
  - Storage Pools DTT Analytics
     Forecasts the number of days to threshold values for the capacity utilization (Actual Allocated, and Actual Used) of storage pools.
  - ThP Analytics for Virtual Servers
     Forecasts the number of datastores that are susceptible to an outage of physical disk space in a VMware virtual environment.

Storage Systems Unused Volumes Analytics
 Displays storage that can be reclaimed at storage system and volume levels.

#### UCMDB integration

Integration of SOM with HP Universal CMDB to facilitate change management and impact analysis of storage infrastructure. For more information, see the SOM HP Universal CMDB Integration Guide available in the UCMDB integration package.

For the UCMDB integration package, log on to the SOM HP Live Network web site (https://hpln.hpe.com/node/23692/cc) with your HP Passport credentials.

Additional device support

To use the new features for devices, install the required device bundle. The device bundle Readme file contains instructions to install or uninstall a device bundle and device-specific content.

Download a device bundle from the SOM HP Live Network web site (https://hpln.hpe.com/node/23692/cc) with your HP Passport credentials.

- Brocade AG device support
- Performance packs for XP/HDS, VMAX, and NetApp 7-mode and C-mode
- Performance pack for ESX servers
- EMC Symmetrix VMAX Fully Automated Storage Tiering (FAST) Virtual Pools (VP)
- Support for HP-UX without a (Common Information Model) CIM extension installed on the remote host
- Support for Solaris with a CIM extension installed on the remote host
- Localized help in Japanese and Simplified Chinese is available from the SOM console when SOM is running in either Japanese or Chinese.
- Support for the SOM console running in the Google Chrome browser. For more information, see "Web Browsers and Plug-ins" in the *SOM Support Matrix*.
- Improved import of a discovery configuration file
   Importing a discovery configuration results in a merge with the existing configuration therefore retaining earlier settings.
- Migration from a Storage Essentials configuration to SOM
   For more information, see the SOM HP Storage Essentials Configuration Migration Guide.

Enhanced monitoring group configuration
 The Create Monitoring Group option provides a way to select multiple performance collectors at a time during monitoring group creation.

#### REST API support

The Rest API integrates SOM with third-party applications such as UCMDB. The API presents SOM inventory data in XML or JSON format. User authentication and X.509 certificate -based security is embedded in the REST API framework.

#### Reports

To access the new reports in this release, install the required SOM content pack for HP Service Health Reporter (SHR). The *Storage Resource Management Reports Guide* contains instructions to install or uninstall a pack and information about its reports.

Download an SOM content pack from the SOM HP Live Network web site (https://hpln.hpe.com/node/23692/cc) with your HP Passport credentials.

The following new connectivity report and content packs (for performance reports) are available with SOM 10.01:

- HP Storage Operations Manager Content Pack for NetApp 7-Mode Performance Statistics
- HP Storage Operations Manager Content Pack for HP XP and HDS Performance Statistics
- HP Storage Operations Manager Content Pack for EMC VMAX Performance Statistics
- NAS Dependency Report *HP Storage Operations Manager Content Pack for End-to-End Connectivity*

The following content packs were available with SOM 10.00:

- HP Storage Operations Management Common Content Pack
- HP Storage Operations Management Content Pack for End-to-End Connectivity
- HP Storage Operations Management Content Pack for Switches
- HP Storage Operations Management Content Pack for Hosts
- HP Storage Operations Management Content Pack for Storage Systems
- HP Storage Operations Management Content Pack for HP 3PAR Performance Statistics
- HP Storage Operations Management Content Pack for HP EVA Performance Statistics

- HP Storage Operations Management Content Pack for EMC CLARiiON and VNX Performance Statistics
- HP Storage Operations Management Content Pack for EMC DMX Performance Statistics

### **About SOM 10.00**

HP Storage Operations Manager (SOM) 10.00 is a new offering for storage resource management. Key benefits of SOM include:

- Heterogeneous device support with enablement for device and reporting updates between releases. For the supported devices, see the *SOM Device Support Matrix*.
- A rich set of environment capacity dashboards for easy visualization of your current storage availability.
- Topology views that highlight the connectivity in your storage network.
- Optimized storage device discovery and data collection with an appropriate default configuration.
- A high-performance HTML5 user interface that runs in modern web browsers.
- Simplified deployment: SOM is customer installable and configurable for quick time-to-value.
- Low cost of ownership with the embedded Postgres database that scales to support many environments.
- High performance enterprise reporting with the bundled HP Service Health Reporter.
- High scale: Each SOM management server can manage a large number of storage devices. For specific numbers, see the *SOM Support Matrix*.

# **Installation**

The SOM Interactive Installation Guide available in the Documentation directory of the product installation media provides instructions for installing SOM 10.10.

### **Installation Notes**

Upgrading existing HP Storage Essentials installations to SOM 10.10 is not supported. You can migrate the configuration of an existing HP Storage Essentials installation to SOM 10.10. For more information, see the SOM HP Storage Essentials Configuration Migration Guide.

## **Mozilla Firefox Known Issues**

- By default, Firefox opens new windows in new tabs instead of new windows. This behavior can cause SOM to open windows that do not display in the foreground.
   To change the default setting, from the Tools > Options > Tabs, select the following check boxes:
  - Open new windows in a new tab instead
  - When I open a link in a new tab, switch to it immediately
- By default, Firefox limits the number of pop-up windows to 20. To change this limit, do the following:
  - a. Type about: config in the Firefox address bar.
  - b. From the Preference Name list, select **dom.popup\_maximum**, and double-click to modify the value.
  - c. Restart Firefox for the change to take effect.

**Note:** After opening and closing more than 50 forms in a single session, Firefox might start blocking pop-up windows, even if popups are enabled, which results in JavaScript errors. Increase dom.popup\_maximum to a number greater than 500 or restart the browser.

- Firefox tracks long running JavaScript operations and displays a warning message if it exceeds
  the timeout value. Complex map operations may exceed the maximum default of 5. To adjust the
  maximum time, do the following:
  - a. Type about: config in the Firefox address bar.
  - b. From the Preference Name list, select **dom.popup\_maximum**, and double-click to modify the value.

The value is in seconds. You can set it to zero for infinity, however this is not recommended.

- c. Restart Firefox for the change to take effect.
- Firefox enables the use of JavaScript by default. Disabling JavaScript requires a privacy
  extension. When signing in to the SOM console, if you see an error that JavaScript has been
  disabled, go to Tools > Add-ons > Extensions, and disable the extension that is disabling
  Javascript.

• If you created a user account but later deleted and recreated it, the Firefox auto-complete feature fills in the password field without notifying the user interface, causing the user account creation to fail. Change the password twice, or turn off form completion in Firefox.

# **Open Defects**

The reference number for each defect is the change request (QCCR) number. For more information about open defects, visit HP Software Support Online, or contact your HP Support representative directly.

### **SOM Console Known Issues**

The following known issues apply to SOM running in all supported languages.

**Title:** Error on viewing dependency tabs in an element inventory view.

**Description:** In an inventory view for an element, clicking one or more of the dependency tabs might result in an includeData servlet response error. The tab in the SOM console displays a general error message.

**Workaround:** Rerun data collection for the affected element.

Title: Non-administrative SOM users cannot change incident values.

**Description:** SOM console users with the Level 1 Operators or Level 2 Operators user role do not have sufficient privilege to change values such as incident priority, lifecycle state, or severity. If such a user attempts to change an incident, SOM displays an error message stating that the user is not authorized for the requested resource.

**Title:** Time stamps for data points in graphs are for the SOM management server time zone.

**Description:** The time information for data points in graphs of metrics is in the time zone of the SOM management server. If the system being used to display the SOM console is set to a different time zone, the times in the metrics graphs are offset by the difference.

**Title:** Duplicate collector entry cannot be removed from a monitoring group.

**Description:** When the collector settings for a monitoring group include multiple entries for one collector, it is not possible to delete the duplicate entries. SOM returns an error message similar to the following: The given object has a null identifier.

**Workaround:** Ignore the duplicate entries. They do not impact SOM functionality. Alternatively, delete and recreate the monitoring group using the Create Monitoring Group wizard from the Object Groups folder in the Configuration workspace of the SOM console.

**Title:** The first data collection might show incorrect data or fail to complete.

**Description:** When the first round of data collection is run against multiple devices, data collection might show incorrect data, such as incorrect interswitch links. Alternatively, data collection might fail to complete for some devices.

**Workaround:** Re-run data collection. The second pass should succeed with correct data.

**Title:** Cannot set a view filter equal to an empty cell.

**Description:** In the inventory views, attempting to set the filter to either "Equal to this value" or "Not equal to this value" of an empty cell results in a servlet error.

**Title:** SNMP Traps table view does not show data if a new tenant is created while the Message column is filtered.

**Description:** If the **Message** column of the SNMP Traps table view has a view filter applied at the time that an SOM administrator creates a new tenant, the next time that user attempts to view the SNMP Traps table view, SOM displays an error message instead of the trap data.

**Workaround:** Click **Restore Default Filters**, and then reapply the filter.

**Title:** Nodes are listed incorrectly by the Security Wizard.

**Description:** The Security Wizard incorrectly shows nodes mapped to multiple security groups.

**Workaround:** Use the Security Groups Mappings view in the Security configuration workspace.

**Title:** SOM shows DTT values as 99999 for a few analytics metrics.

**Description:** When the capacity numbers do not change over time, HPE Operations Bridge Reporter (OBR) reports the metric value as 99999.

# **Deployment Known Issues**

The following known issues apply across an SOM deployment.

**Title:** The SOM management server must be restarted after an upgrade from SOM 10.01.

**Description:** For SOM 10.01 deployments that are upgraded to SOM 10.10, restart the jboss service for the SNMP traps to be processed into Incidents.

**Title:** Earlier versions of CIM extensions are not forward compatible.

**Description:** For SOM 10.10 deployments, if a host uses a CIM extension for communicating with SOM, that CIM extension must be the version provided on the SOM 10.10 installation media.

**Title:** Target mappings of the second HBA port are not displayed for some HP-UX hosts.

**Description:** For some HP-UX hosts (discovered without a CIM extension) with dual port HBA adapters, the SNIA HBA API does not provide target mappings of the second port.

### **Localization and Globalization Known Issues**

The following known issues apply to SOM running in a non-English language.

#### General

**Title:** Error while editing configuration data in SOM on a Russian locale.

**Description:** When running on a Russian locale Windows operating system, SOM cannot interpret the localized SOM console session timeout value. Therefore, a warning message appears while editing configuration (User Interface Configuration view and Communication Configuration view) data.

Workaround: Ignore the warning.

**Title:** Discovery and data collection of HP 3PAR Storage arrays and IBM SVC arrays fail on a Simplified Chinese locale.

**Description:** When running on a Simplified Chinese Windows operating system, SOM fails to discover and collect data from HP 3PAR Storage arrays and IBM SVC arrays.

**Title:** Russian text cut off in the localized product.

**Description:** Some Russian text is too long for the allotted space and is truncated in the SOM console, notably in the Quick Find window.

**Title:** Text in some drop-down lists is not in the web browser locale.

**Description:** SOM localizes "drop-down choice" code values (available from the menu bar and shortcut menus, for example collector names and collector metric names) at database creation time using the locale of the server. Unlike most other content, if accessed from a client under a different supported locale, the values remain in the locale of the server set at the time of database creation, which is typically installation time. The same is true for any user created "drop-down choice" code values. Other drop-down choices that are enumeration values (such as incident severity) are locale-sensitive and appear in the locale of the web browser for supported locales.

**Title:** English text in the SOM installer.

**Description:** Some messages in the pre-installation checks are not localized.

**Title:** Date and time values are displayed in the English format not the local date and time format.

**Description:** Dates and times are not localized.

**Title:** Command-line output is in English.

**Description:** The SOM command line interface is not localized. While the commands can accept localized language inputs as parameter values, all command output is in English.

**Title:** English text in the localized product.

**Description:** The following text strings cannot be localized and are always shown in English:

- Java runtime exceptions such as "Unknown type"
- Device profile names
- The contents of the Description field for the properties of a data collection control.

#### Reports

**Title:** The SOM content pack installer is available in English and not in any other languages.

**Description:** The SOM reports have been localized into the same languages as the SOM management server software. The SOM content pack installer is not available in these languages.

**Workaround:** If the SOM reports have been localized to the locale of the SOM reporting server (the HPE Operations Bridge Reporter (OBR) system), the SOM content pack installer installs the SOM reports in that language. Otherwise, the SOM content pack installer installs the SOM reports in English.

**Title:** The SOM content pack uninstaller is available in English and not in any other languages.

**Description:** The SOM content pack uninstaller is not available in other languages.

**Workaround:** Regardless of report language, run the English language SOM content pack uninstaller to remove the SOM reports from the SOM reporting server.

**Title:** Report drill-down menus contain English text.

**Description:** In OBR, labels on report drill-down menus may contain English text. This text is not translated to any other supported languages.

Title: Report universe context descriptions are in English.

**Description:** For all SOM reporting universes, any contexts displayed while creating or running a report in OBR are not translated to any other supported languages. Context names and descriptions always appear in English only.

**Title:** SOM report descriptions are in English.

**Description:** In OBR, the descriptions of reports delivered in the SOM content packs are not localized.

**Title:** Report prompts for raw measures are in English.

**Description:** When configuring the SOM performance statistics reports, the prompts and options for raw data measures are not localized.

**Title:** Graph labels are in English.

**Description:** Some labels on graphs in the SOM reports are not localized.

**Title:** Content pack tool tips are in English.

**Description:** The tool tips for SOM content packs in the OBR administration console are not localized.

# We appreciate your feedback!

If you have comments about this document, you can contact the documentation team by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

#### Feedback on Release Notes, January 2016 (Storage Operations Manager 10.10)

Just add your feedback to the email and click send.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to storage-management-doc-feedback@hpe.com.