



# **Unified Manager reporting**

## **Active IQ Unified Manager**

NetApp

January 31, 2022

This PDF was generated from [https://docs.netapp.com/us-en/active-iq-unified-manager/reporting/concept\\_unified\\_manager\\_databases\\_accessible\\_for\\_reporting.html](https://docs.netapp.com/us-en/active-iq-unified-manager/reporting/concept_unified_manager_databases_accessible_for_reporting.html) on January 31, 2022. Always check docs.netapp.com for the latest.

# Table of Contents

- Unified Manager reporting ..... 1
  - Access points for generating reports ..... 1
  - Understanding reports ..... 3
  - Understanding the view and report relationship ..... 3
  - Types of reports ..... 4
  - Reporting limitations ..... 5

# Unified Manager reporting

Active IQ Unified Manager (formerly OnCommand Unified Manager) provides the ability to view, customize, download, and schedule reports for your ONTAP storage systems. The reports can provide details about the storage system capacity, health, performance, security, and protection relationships.

The new Unified Manager reporting and scheduling functionality introduced in Active IQ Unified Manager 9.6 replaces the previous reporting engine that was retired in Unified Manager version 9.5.

Reporting provides different views of your network, offering actionable intelligence on capacity, health, performance, security, and protection data. You can customize your views by showing, hiding, and rearranging columns, filtering data, sorting data, and searching the results. You can save custom views for reuse, download them as reports, and schedule them as recurring reports to distribute through email.

You can download views in Microsoft® Excel format and customize them. You can use advanced Excel features, such as complex sorts, layered filters, pivot tables, and charts. When satisfied with the resulting Excel report, you can upload the Excel file for use each time the report is scheduled and shared.

In addition to generating reports from the user interface, you can extract health, security, and performance data from Unified Manager using these additional methods:

- Using Open Database Connectivity (ODBC) and ODBC tools to directly access the database for cluster information
- Executing Unified Manager REST APIs to return the information you are interested in reviewing

From this release of Active IQ Unified manager, following enhancements are made to the reports:

- Email is sent for a report as per the configured schedule. Even when you generate an on-demand report, you will receive an email.
- The file name of the report and metadata of the report includes the hostname from where the report was generated. Even if any one changes the filename, still you can identify the hostname from where the report was generated due to this enhancement.

## Access points for generating reports

You can gather information in Unified Manager about your clusters to create reports from the UI, MySQL database queries, and REST APIs.

This guide covers Unified Manager reporting and scheduling through the UI.

There are three ways you can access the reporting capabilities provided by Unified Manager:

- Extracting data directly from the inventory pages in the UI.
- Using Open Database Connectivity (ODBC) and ODBC tools to access all the available objects.
- Executing Unified Manager REST APIs to return the information that you want to review.

This guide covers Unified Manager reporting and scheduling through the UI.

## Unified Manager databases accessible for custom reporting

Unified Manager uses a MySQL database to store data from the clusters that it is monitoring. Data is persisted into various schemas in the MySQL database.

All table data from the following databases are available:

| Database           | Description  |
|--------------------|--|
| netapp_model       | Data about the objects on ONTAP controllers.   |
| netapp_model_view  | Data about the objects on ONTAP controllers, suitable for report tool consumption.   |
| netapp_performance | Cluster specific performance counters.   |
| ocum               | Unified Manager application data and information to support UI filtering, sorting, and the calculation of some derived fields. |
| ocum_report        | Data for inventory configuration and capacity-related information.   |
| ocum_report_birt   | Views for inventory configuration and capacity-related data, suitable for report tool consumption.                             |
| opm                | Performance configuration settings and threshold information.  |
| scalemonitor       | Data about the Unified Manager application health and performance issues.  |
| vmware_model       | VMware object data for datastores hosted on NetApp storage.  |
| vmware_model_view  | Views for VMware object data for datastores hosted on NetApp storage, suitable for report tool consumption.                    |
| vmware_performance | VMware performance counter data for datastores hosted on NetApp storage.   |

A reporting user — a Database user with the Report Schema role — is able to access the data in these tables. This user has read-only access to reporting and other database views directly from the Unified Manager database. Note that this user does not have permission to access any tables that contain user data or cluster credential information.

## Unified Manager REST APIs that can be used for reporting

You can use REST APIs to help manage your clusters by viewing the health, capacity, performance, and security information captured by Unified Manager.

REST APIs are exposed through the Swagger web page. You can access the Swagger web page to display the Unified Manager REST API documentation, as well as to manually issue an API call. From the Unified Manager web UI, in the Menu Bar, click the **Help** button and then select **API Documentation**. For information about Unified Manager REST APIs, see the [Active IQ Unified Manager API Developer's Guide](#).

You must have the Operator, Storage Administrator, or Application Administrator role to access the REST APIs.

## Understanding reports

Reports display detailed information about storage, network, quality of service, and protection relationships, helping you to identify and solve potential problems before they occur.

When you customize a view, you can save it with a unique name for future use. You can schedule a report based on that view to run on a regular basis and share it with others. You can also download the view in Excel to customize it using advanced Excel features, then upload that file back into Unified Manager. If you schedule a report using that view, it will use the Excel file you uploaded to create robust reports you can share.

You can manage all reports that have been scheduled from the Report Schedules page.



You must have the Application Administrator or Storage Administrator role to manage reports.

You can download reports as comma-separated values (CSV), Excel, or PDF files.

## Understanding the view and report relationship

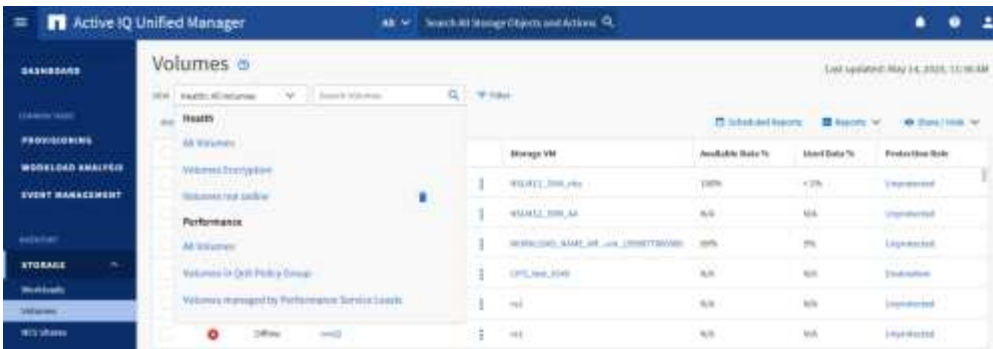
Views and inventory pages become reports when you download or schedule them.

You can customize and save views and inventory pages for reuse. Almost everything you can view in Unified Manager can be saved, reused, customized, scheduled, and shared as a report.

In the view drop down, items with the delete icon are existing custom views that you or another user have created. Items without an icon are default views provided with Unified Manager. Default views cannot be modified or deleted.



- If you delete a custom view from the list, it also deletes any Excel files or scheduled reports that use that view.
- If you change a custom view, reports that use that view will reflect the change the next time the report is generated and sent by email according to the report schedule. When changing views, make sure your changes work with any associated Excel customizations used for the reports. If needed, you can update the Excel file by downloading it, making the required changes, and uploading it as a new Excel customization for the view.



Only users with the Application Administrator or Storage Administrator role can see the delete icon, change or delete a view, or change or delete a scheduled report.

## Types of reports

This table provides a comprehensive list of the views and inventory pages that are available as reports that you can customize, download, and schedule.

### Active IQ Unified Manager reports

| Type     | Storage or network object |
|----------|---------------------------|
| Capacity | Clusters                  |
|          | Aggregates                |
|          | Volumes                   |
|          | Qtrees                    |
| Health   | Clusters                  |
|          | Nodes                     |
|          | Aggregates                |
|          | Storage VMs               |
|          | Volumes                   |
|          | SMB/CIFS shares           |
|          | NFS shares                |

| Type  | Storage or network object  |
|---|--|
| Performance   | Clusters<br>Nodes<br>Aggregates<br>Storage VMs<br>Volumes<br>LUNs<br>NVMe namespaces<br>Network Interfaces (LIFs)<br>Ports |
| Quality of Service  | Traditional QoS policy groups<br>Adaptive QoS policy groups<br>Performance Service Level policy groups                     |
| Volume protection relationships (available from the Volumes page) | All relationships<br>Last 1 month transfer status<br>Last 1 month transfer rate  |
| Security  | Storage VMs<br>Clusters  |

## Reporting limitations

There are some limitations with the new Active IQ Unified Manager reporting functionality of which you should be aware.

### Existing reports from previous versions of Unified Manager

You can only edit the schedule and recipients for existing reports that were created and imported (as .rptdesign files) in Unified Manager 9.5 and earlier releases. If you customized any of the standard reports that were provided with Unified Manager 9.5 or earlier, these custom reports are not imported into the new reporting tool.

If you need to edit existing reports imported from .rptdesign files, do one of the following and remove the imported report:

- create a new view and schedule a report from that view (preferred)

- hover over the report, copy the SQL, and pull the data using an external tool

The default views can be generated as reports without the need for any customization. You can use the new reporting solution to recreate any custom reports.

## **Schedule and report relationship**

You can create many different schedules with any combination of recipients for each saved report. However, you cannot reuse the schedule for multiple reports.

## **Report protection**

Any user with the appropriate permissions can edit or delete reports. There is no way to prevent other users from removing or making changes to saved views or schedules.

## **Event reports**

Although you can customize the event view and download the resulting report in CSV format, you cannot schedule recurring event reports for generation and distribution.

## **Report attachments**

Reports cannot be sent in the body of an email. Instead, reports are only sent as PDF, Excel, or CSV attachments.



## Copyright Information

Copyright © 2022 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system- without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

## Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.