Unified Manager reporting

Active IQ Unified Manager 9.13

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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.

These sections describe 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.

These sections describe 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 Getting started with Active IQ Unified Manager REST APIs.

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.

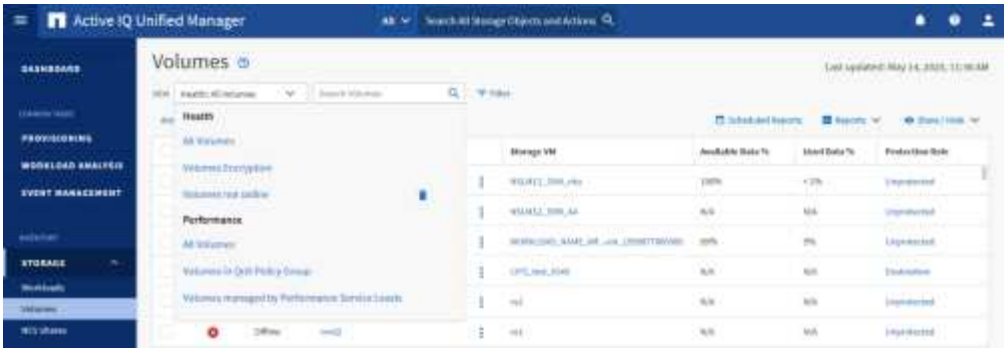
Understanding the view and report relationship

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 Nodes Aggregates Storage VMs Volumes LUNs NVMe namespaces Network Interfaces (LIFs) Ports
Quality of Service	Traditional QoS policy groups Adaptive QoS policy groups Performance Service Level policy groups
Volume protection relationships (available from the Volumes page)	All relationships Last 1 month transfer status Last 1 month transfer rate
Security	Storage VMs 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.

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