



## **Working with reports**

### **Active IQ Unified Manager 9.8**

NetApp  
February 20, 2023

# Table of Contents

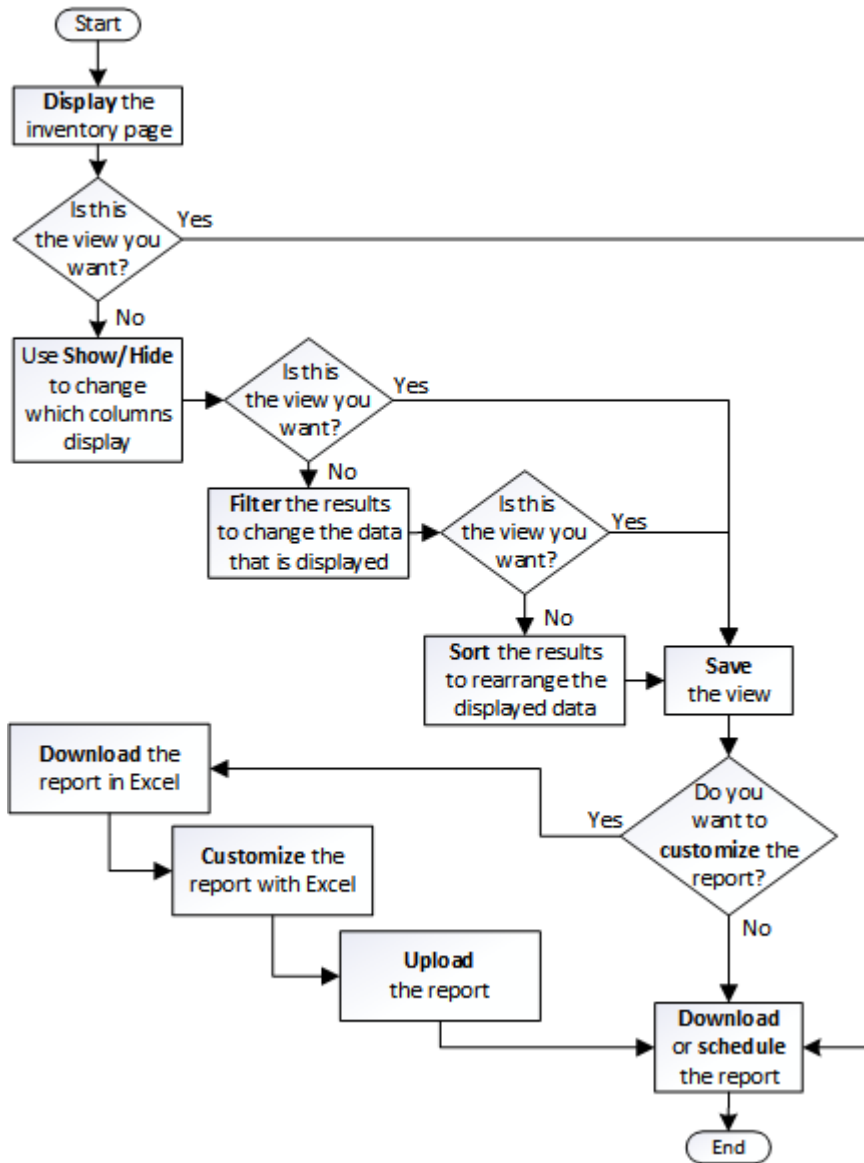
- Working with reports . . . . . 1
  - Report workflow . . . . . 1
  - Reporting quick start . . . . . 1
  - Searching for a scheduled report . . . . . 4
  - Customizing reports . . . . . 5
  - Downloading reports . . . . . 9

# Working with reports

Learn how to find and customize inventory page views into shareable scheduled reports.

## Report workflow

Decision tree that describes the report workflow.



## Reporting quick start

Create a sample custom report to experience exploring views and scheduling reports. This quick start report finds a list of volumes that you might want to move to the cloud tier because there is a fair amount of inactive (cold) data. You will open the Performance: All Volumes view, customize the view using filters and columns, save the custom view as a report, and schedule the report to share once a week.

## Before you begin

- You must have the Application Administrator or Storage Administrator role.
- You must have configured FabricPool aggregates and have volumes on those aggregates.

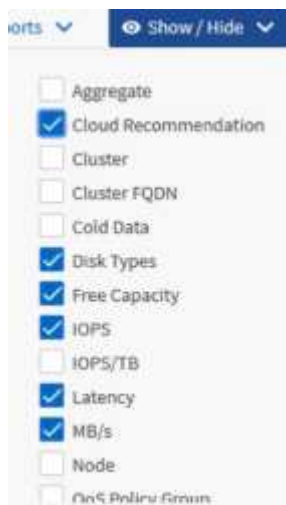
## About this task

Follow the steps below to:

- Open the default view
- Customize the columns by filtering and sorting the data
- Save the view
- Schedule a report to be generated for the custom view

## Steps

1. In the left navigation pane, click **Storage > Volumes**.
2. In the View menu, select **Performance > All Volumes**.
3. Click **Show/Hide** to make sure the “Disk Types” column appears in the view.



Add or remove other columns to create a view that contains the fields that are important for your report.

4. Drag the “Disk Types” column next to the “Cloud Recommendation” column.
5. Click the filter icon to add the following three filters, and then click **Apply Filter**:
  - Disk Types contains fabricpool
  - Cloud Recommendation contains tier
  - Cold Data greater than 10 GB

Filter

Disk Types contains fabricpool

Cloud Recommendation contains tier

Cold Data greater than 1 GB

+ Add Filter

Reset Apply Filter

Note that each filter is joined with a logical AND so that all volumes returned must meet all the criteria. You can add a maximum of five filters.

- Click the top of the **Cold Data** column to sort the results so that the volumes with the most cold data appear at the top of the view.
- When the view is customized, the view name is **Unsaved View**. Name the view to reflect what the view is showing, for example “Vols change tiering policy”. When done, click the check mark or press **Enter** to save the view with the new name.

Volumes - Performance / Vols change tiering policy Last updated: Feb 8, 2019, 12:26 PM

Latency, IOPS, MBps are based on hourly samples averaged over the previous 72 hours.

View: Vols change tiering policy

| Volume     | Cold Data | Tiering Policy | Disk Types       | Cloud Recommendation | Free Capacity | Total Capacity |
|------------|-----------|----------------|------------------|----------------------|---------------|----------------|
| nfs_vol4   | 38 GB     | Snapshot Only  | SSD (FabricPool) | Tier                 | 2.62 TB       | 3 TB           |
| kjagnfsdst | 28 GB     | Snapshot Only  | SSD (FabricPool) | Tier                 | 121 GB        | 150 GB         |

- Download the report as a **CSV**, **Excel**, or **PDF** file to see the output before you schedule or share it.

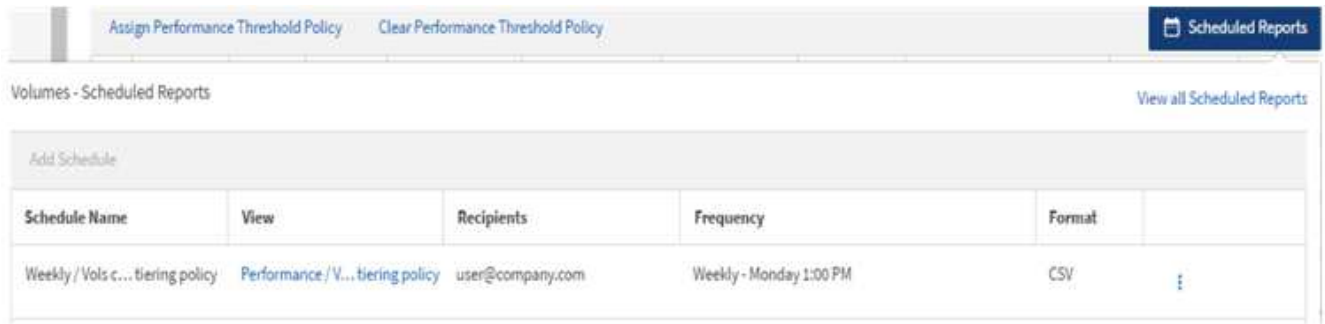
Open the file with an installed application, such as Microsoft Excel (CSV or Excel) or Adobe Acrobat (PDF), or save the file.



You can further customize your report using complex filters, sorts, pivot tables, or charts by downloading the view as an Excel file. After you open the file in Excel, use the advanced features to customize your report. When satisfied, upload the Excel file. This file, with its customizations, is applied to the view when the report is run.

For more information on customizing reports using Excel, see *Sample Microsoft Excel reports*.

- Click the **Scheduled Reports** button on the inventory page. All scheduled reports relating to the object, in this case volumes, appear in the list.



10. Click **Add Schedule** to add a new row to the **Report Schedules** page so you can define the schedule characteristics for the new report.
11. Enter a name for the report and complete the other report fields, then click the check mark (✓) at the end of the row.

The report is sent immediately as a test. After that, the report generates and is sent by email to the recipients listed using the specified frequency.

The following sample report is in CSV format:

| Status | Volume      | Volume Ic Tiering Po | Cold Data | Free Capa | Total Capa | Cluster | Cluster Id | Node    | Node Id | Aggregate | Aggregate Id |
|--------|-------------|----------------------|-----------|-----------|------------|---------|------------|---------|---------|-----------|--------------|
| Ok     | kjagnfsdst1 | 101510 Snapshot      | 28.01     | 121.32    | 150        | ocum-mo | 99001      | ocum-mo | 99018   | aggr5_vs  | 99040        |
| Ok     | nfs_vol4    | 102294 Snapshot      | 379.64    | 2676.57   | 3072       | ocum-mo | 99001      | ocum-mo | 99113   | aggr4     | 99141        |

The following sample report is in PDF format:

Report: Performance - Vols change tiering policy (Latency, IOPS, MBps are based on hourly samples averaged over March 24, 2019, 11:51 PM - March 28, 2019, 12:51 PM)  
Generated At: March 28, 2019, 12:51 PM

| Status | Volume      | Tiering Policy | Cold Data (GB) | Free Capacity (GB) | Total Capacity (GB) | Cluster | Node    | Aggregate |
|--------|-------------|----------------|----------------|--------------------|---------------------|---------|---------|-----------|
| Ok     | kjagnfsdst1 | Snapshot       | 28.01          | 121.32             | 150                 | ocum-mo | ocum-mo | aggr5_vs  |
| Ok     | nfs_vol4    | Snapshot       | 379.64         | 2676.57            | 3072                | ocum-mo | ocum-mo | aggr4     |

## After you finish

Based on the results shown in the report, you might want to use ONTAP System Manager or the ONTAP CLI to change the tiering policy to “auto” or “all” for certain volumes to offload more cold data to the cloud tier.

## Searching for a scheduled report

You can search for scheduled reports by name, view name, object type, or recipients.

### Steps

1. In the left navigation pane, click **Storage Management > Report Schedules**.
2. Use the **Search Scheduled Reports** text field.

| To find reports by ... | Try ...                                |
|------------------------|--|
| Schedule name          | Type part of the report schedule name. |

| To find reports by ... | Try ...  |
|------------------------|--|
| View name              | Type part of the report view name. Default views and custom views appear in the view list. |
| Recipient              | Type part of the email address.  |
| File type              | Type "PDF", "CSV", or "XLSX".  |

3. You can click a column heading to sort reports in ascending or descending order by that column, such as schedule name or format.

## Customizing reports

There are many ways you can customize views so that you can create a report that contains all the information you need to manage your ONTAP clusters.

Start with a default inventory page or a custom view, then customize it by adding or removing columns, changing the column order, filtering the data, or sorting on a specific column in ascending or descending order.

Starting in Unified Manager 9.8, you can also download the view in Excel to customize it using advanced features. When done, upload the customized Excel file. If you schedule a report using that view, it uses the customized Excel file to create robust reports you can share.

For more information on customizing reports using Excel, see *Sample Microsoft Excel reports*.



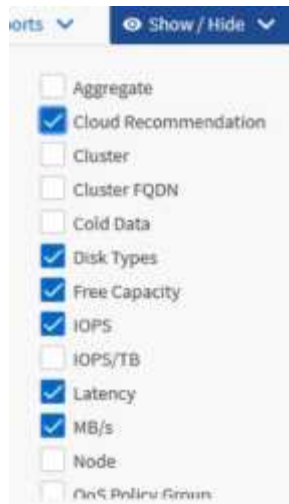
You must have the Application Administrator or Storage Administrator role to manage reports.

## Customizing columns

Use **Show/Hide** to choose the columns you want to use in your report. Drag the columns on the inventory page to rearrange them.

### Steps

1. Click **Show/Hide** to add or remove columns.



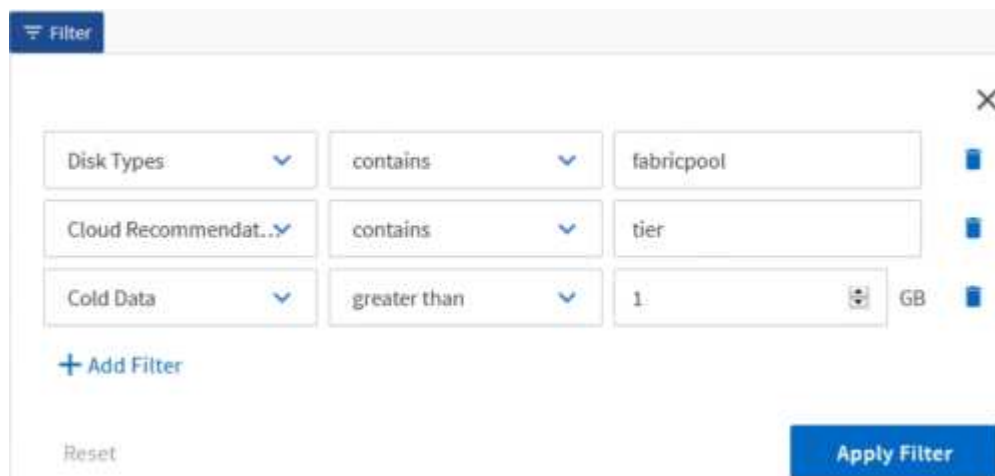
2. On the inventory page, drag columns to rearrange them in the order you want in your report.
3. Name the unsaved view to save your changes.

## Filtering data

Filter the data to make sure the results match your report requirements. Filtering enables you to display only the data in which you are interested.

### Steps

1. Click the filter icon to add filters to focus the results you want to view, and then click **Apply Filter**.



2. Name the unsaved view to save your changes.

## Sorting data

To sort the results, click a column and indicate ascending or descending order. Sorting data prioritizes the information you need for the report.

### Steps

1. Click the top of a column to sort the results so that the most important information appears at the top of the



view.

2. Name the unsaved view to save your changes.

## Using search to refine your view

After you have the view you want, you can further refine the results using the Search field to focus on the results that you want to include in the report.

### Steps

1. Open the custom or default view that you want to use as the basis of your report.
2. Type in the Search field to refine the data listed in the view. You can enter partial data in any of the displayed columns. For example, if you want to search for nodes that include "US\_East" in the name, you can refine the full list of nodes.

The results of your search are saved in the custom view and used in the resulting scheduled report.

3. Name the unsaved view to save your changes.

## Using Excel to customize your report

After you have saved the view, you can download it in Excel Workbook format (.xlsx). When you open the Excel file, you can use advanced Excel features to customize your report.

### Before you begin

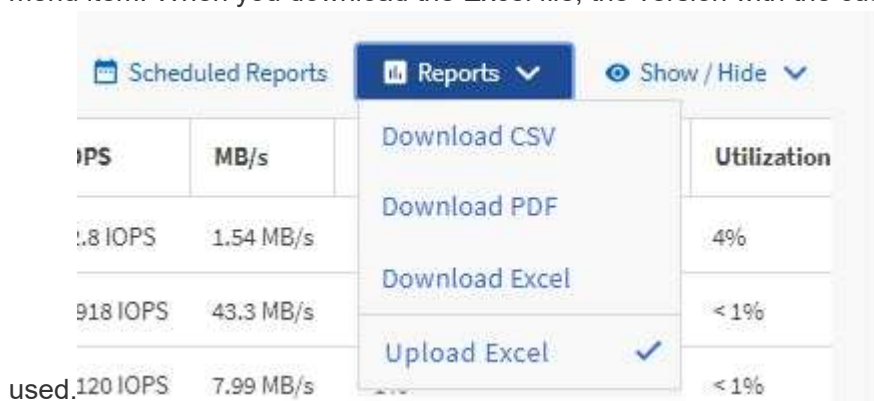
You can only upload an Excel Workbook file with the .xlsx extension.

### About this task

For example, some advanced Excel features you can use in your report include:

- Multi-column sort
- Complex filtering
- Pivot tables
- Charts

- The downloaded Excel file uses the default file name for the view, not your saved name.
  - The format is <View Area>-<Day>-<Month>-<Year>-<Hour>-<Minute>-<Second>.xlsx.
  - For example, a custom saved view named Volumes-not online has a file name of health-volumes-05-May-2020-19-18-00.xlsx if saved at that day and time.
- You can add sheets to the Excel file, but do not change existing sheets.
  - Do not change the existing sheets, data and info. Instead, copy the data to a new page that you create.
  - One exception to the above rule is that you can create formulas on the “data” page. Use the data page formulas to create charts on new pages.
  - Do not name a new sheet data or info.
- If a customized Excel file exists, there is a check mark beside the **Reports > Upload Excel** menu item. When you download the Excel file, the version with the customizations is



## Steps

1. Open the default, custom, or saved view that you want to use as the basis of your report.
2. Select **Reports > Download Excel**.
3. Save the file.

The file is saved to your downloads folder.

4. Open the saved file in Excel.

Do not move the file to a new location, or if you do your work in another location, save the file back to the original location using the original file name before uploading the file.

5. Customize the file using Excel features, such as complex sorts, layered filters, pivot tables, or charts. For more information, see the Microsoft® Excel documentation.
6. Select **Reports > Upload Excel** and select the file that you modified.

The most recently downloaded file is uploaded from the same file location.

7. Send yourself a test report using the **Scheduled Reports** feature.

# Downloading reports

You can download reports and save the data to a local or network drive as a comma-separated values (CSV) file, a Microsoft Excel (.XLSX) file, or a PDF file. You can open CSV and XLSX files with spreadsheet applications, such as Microsoft Excel, and PDF files with readers such as Adobe Acrobat.

## Steps

1. Click the **Reports** button to download the report as one of the following:

| Choose         | To...   |
|----------------|---|
| Download CSV   | Save the report as a comma-separated values (CSV) file. |
| Download PDF   | Save the report as a .pdf file.                         |
| Download Excel | Save the report as a Microsoft Excel (XLSX) file.       |

## Copyright information

Copyright © 2023 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.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

## 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.