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Managing reports

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Managing reports

OnCommand Unified Manager enables you to create and manage reports so that you can view customized information about the capacity, utilization, and performance of storage objects and events related to storage objects.

The implementation of scheduling and generating reports from the Reports option in the left Navigation pane will be deprecated in a future release. You can extract health and performance data from Unified Manager using these additional methods:



- · Extracting data directly from the grid pages in the GUI
- · Using Open Database for access to all the available objects
- Executing Unified Manager REST APIs to return the information you are interested in reviewing

Scheduling reports

You can schedule your reports from the Report details page and email the scheduled reports to one or more recipients in a particular format at a specified frequency. For example, you can schedule a report to be sent as email, in the PDF format, every Monday.

Steps

- In the left navigation pane, click **Reports**, and then click **Run Report** for the report that you want.
 The Report details page is displayed.
- 2. Click Actions > Schedule Report.
- 3. In the Schedule Report dialog box, select one of the preferred schedules for your report:

If you want to	Then
Select a schedule from the existing list of schedules	Click Use Existing Schedule and select the schedule.
Create a new schedule	Click Create New Schedule , and then enter the schedule name, specify the email address, select the report format and frequency, and enter a time or day you want the report to run. You can specify one or more email addresses, separated by commas. The <i>PDF</i> option is selected as the default report format. The <i>Hourly</i> option is selected as the default frequency.

4. Click Schedule.

Sharing reports

You can email and share your reports with one or more users.

Steps

1. In the left navigation pane, click Reports, and then click Run Report for the report that you want.

The Report details page is displayed.

- 2. Click Actions > Share.
- In the Share Report dialog box, specify the email address of the recipient with whom you want to share the report.

You can specify one or more email addresses, separated by commas.

Specify the subject of the email.

By default, the name of the report appears as the subject of the email.

5. Select the report format.

The *PDF* option is selected as the default report format. If the XHTML format is selected, the recipient must open the report that is sent by email by using a supported web browser.

6. Click Share.

Managing report schedules

You can manage your report schedules from the Manage Report Schedules dialog box. You can add a new schedule and view, modify, or delete existing schedules.

- 1. In the left navigation pane, click Reports, and then click Manage Report Schedules.
- 2. In the Manage Report Schedules dialog box,

If you want to	Then
View or modify an existing schedule	a. Select the schedule from the list displayed in the left pane.
	The schedule details are displayed.
	b. Make the necessary changes.
	c. Click Save or Save and Close.

If you want to	Then
Delete an existing schedule	a. Select the schedule from the list displayed in the left pane.The schedule details are displayed.b. Click Delete Schedule.
Add a new schedule	 a. Click Add Schedule. b. A new schedule form appears in the right pane. c. Enter the schedule name, recipient email address, report format and frequency and select the reports you want to schedule. d. Click Save. The new schedule will be added in the Schedules list.

Customizing a report

You can customize reports in the Report details page and then save the customized report with a different name.

About this task

After you save a customized report you cannot modify any of the filters you applied to create the report because the report is considered "new". So make sure you are satisfied with all changes before you save the report. You can, however, apply new filters to the report.

Steps

1. In the left navigation pane, click **Reports**, and then click **Run Report** for the report that you want to customize.

The Report details page is displayed.

- 2. Customize the report as necessary, and then click **Actions** > **Save Customized Report As**.
- 3. In the **Save Customized Report As** dialog box, enter a name for the customized report and a brief description about the customization so that others will understand what the report displays.

By default, the current report name is displayed.

4. Click Save.

If you receive the error message "Failed to save the custom report. The required file was not created", wait a few moments, and then click **Save** again. This issue has been seen when there is a slow connection between the web browser and the Unified Manager server.

Results

The customized report is saved and displayed in its respective report category in the Report details page.

Editing a customized report

You can make additional changes to an already customized report and save the report. You cannot change the name of the report after you have saved it.

Steps

- In the left navigation pane, click Reports, and then click Run Report for the report that you want to edit.
 The Report details page is displayed.
- Modify the report as necessary, and then click Actions > Save Custom Report.
- In the Save Custom Report dialog box, enter a brief description about the changes made on the custom report and click Save.

Importing reports

If you have created a report outside of Unified Manager, you can import and save the report file to use with Unified Manager.

Before you begin

You must have the OnCommand Administrator role.

You must ensure that the report you plan to import is supported by Unified Manager.

Steps

- 1. In the left navigation pane, click **Reports**, and then click **Import Report**.
- In the Import Report dialog box, click Browse and select the file you want to import, and then enter a name and brief description of the report.
- 3. Click **Import**.

If you cannot import the report, you can check the log file to find the error causing the issue.

Understanding more about reports

You can use the option to run, delete, export, and import reports. You can also create custom reports and save the customized report. You can perform additional operations such as filtering, sorting, grouping, and formatting.

What reports do

Reports display detailed information about storage objects, which enable you to review

and identify potential issues.

You can save, delete, share, schedule, and import reports. You can also search for specific reports. You can customize reports to address specific use cases, and save the customized report for future use. You can perform additional operations such as filtering, sorting, grouping, and formatting.

By default, each report group is displayed by report type and description. You can run reports to view a specific report group.

After you run a report, you can further customize it and save the customized report. You can view the custom reports that are saved in the Reports page, grouped under the specific report category.

You can schedule reports to be sent, or share reports in one of the supported formats: PDF, XHTML, CSV, XLS, or text.

You can export reports in different formats and save them on your desktop. You can export individual column data from the generated reports.

You can import report design files (.rptdesign files), and save the imported reports in the Reports page. You can delete custom and imported reports.

You can import the following reports:

- Reports with multiple headers that have a column span set to one
- Reports with charts only
- Reports with lists and grid only

Reports in text, CSV, and Excel formats are supported in the following scenarios:

- Table element only in the .rptdesign file
- · A table with just one header as a row

You cannot import reports that have a column span of more than one. If a report in text, CSV, or Excel format has more than a one-header row, only the first header row is considered, and the remaining rows are ignored.

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.

Starting with Unified Manager 7.3, additional schemas are exposed that provide access to additional table data.

All table data from the following databases are available:

Database	Description
netapp_model_view	Data about the objects on ONTAP controllers.
netapp_performance	Cluster specific performance counters.

Database	Description
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	Same as above, but this database is consumed by built-in BIRT reports.
opm	Performance configuration settings and threshold information.
scalemonitor	Data about the Unified Manager application health and performance issues.

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.

See the Technical Report for Unified Manager Reporting (TR-4565) for more details.

What report scheduling is

You can schedule a report to be generated at a specific date and time by using the **Schedule** option. The report is automatically sent by email to one or more recipients as per the schedule.

By scheduling a report, you can minimize the effort of generating and sending the reports manually. You can ensure that the current status of the storage is monitored at specified intervals by the administrators who are not otherwise notified by Unified Manager.

What report sharing is

You can share a report with one or more users through email using the Share option.

You must save the report prior to sharing it to ensure that the recent changes you made to the report is displayed.

You can share the report in any desired format. The **Share** option helps you to share reports through email instantly, even with persons who do not have access to Unified Manager but has a valid email address.

What report importing is

You can import a report using the **Import Report** option from Unified Manager and save the imported report with a name and a brief description. By importing reports, you can add custom reports to your environment in addition to the standard reports provided in

Unified Manager.

You can import a .rptdesign file that is already created. You can run, share, schedule, and delete an imported report.

Unified Manager stores the import report log files in the files jboss.log, ocum-report.log, and ocumserver-debug.log.



Customer support will not assist with designing reports, but they will support you with issues faced during a report import operation.

The import report feature includes the following support:

- Reports with multiple headers, in which the column span is set to 1 (colspan=1)
- · Reports with charts only
- · Reports with lists and grid only
- Passwords used in reports must be encoded using "base64" format. Reports using other encoding, for example, "jce" format, will cause an error during the import process.
- Reports containing data aggregation should include the aggregated column element in the table data of the report.

Reports in text, CSV, and Excel formats are supported in the following scenarios:

- Table element only in the .rptdesign file
- · A table with only one header row



You cannot import reports that have a column span of more than 1. If a report in text, CSV, or Excel format has more than one-header row, only the first header row is considered, and the rest are ignored.

Report customizations

You can customize various Unified Manager reports based on storage and utilization capacity, events, cluster inventory, NFS exports, or SVM inventory.

Storage Summary report customizations

You can customize Storage Summary reports to view and analyze information about storage capacity in HA pairs. You can use filters to display storage utilization by cluster model, capacity of the most unassigned LUNs, and capacity of available HA pairs to provision new volumes and LUNs.

Customizing the Storage Summary report to view capacity by cluster models

You can customize the Storage Summary report to analyze storage capacity and utilization of clusters, and to view aggregates included in the total raw capacity.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove the grouping by cluster, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To group the report by the model name, perform the following steps:
 - a. Click in the **Model** column and click the icon.
 - b. Select Group > Add Group.
- 3. To add aggregates to the total raw capacity, perform the following steps:
 - a. Click in the **Total Raw Capacity** column and click the icon.
 - b. Select Aggregation.
 - c. In the **Aggregation** dialog box, clear the **table level** check box and select the **group level** check box.
 - d. Enter a label name in the Enter Label field, if required.
- 4. Click OK.
- 5. To add aggregates to the other columns in the report, repeat Steps 3 and 4.

Customizing the Storage Summary report to analyze cluster capacity based on the ONTAP version

You can customize the Storage Summary report to group clusters by ONTAP version, and to view aggregates relating to your total raw capacity.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. To remove grouping by cluster, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click (menu icon).
 - c. Select Group > Delete Inner Group option.
- 2. To group the report by the ONTAP version, perform the following steps:
 - a. Click in the **OS version** column and select the icon.
 - b. Select Group > Add Group.
- 3. To add aggregates to the total raw capacity, perform the following steps:

- a. Click in the **Total Raw Capacity** column and click the icon.
- b. Select **Aggregation**.
- c. In the **Aggregation** dialog box, clear the **table level** check box and select the **group level** check box.
- d. Enter a label name in the Enter Label field, if required.
- 4. Click OK.

Customizing the Storage Summary report to analyze clusters with the most unallocated LUN capacity

You can customize the Storage Summary report to analyze the storage utilization of clusters, which enables you to locate the LUNs with the most unallocated capacity.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove grouping by cluster, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To sort HA pairs that have the most unallocated LUN capacity, click in the **Unallocated LUN Capacity (TB)** column, and click the icon.
- 3. Select Filter > Top/Bottom N.
- 4. In the **Top/Bottom N** dialog box, select **Top N** from the **Filter** field and enter a value in the text field.
- 5. Click OK.

Customizing the Storage Summary report to analyze HA pairs for available capacity to provision new volumes and LUNs

You can customize the Storage Summary report to display available HA pairs that have capacity, so that you can provision new volumes and LUNs. The report displays HA pairs sorted in order of decreasing aggregate unused capacity.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. To remove grouping by cluster, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click the icon.

- c. Select **Group > Delete Inner Group**.
- 2. To sort HA pairs with available capacity, click in the **Aggregate Unused Capacity (TB)** column, and click the icon.
- 3. Select Filter > Top/Bottom N.
- 4. In the **Top/Bottom N** dialog box, select **Top N** from the **Filter** field and enter a value in the text field.
- 5. Click OK.

Aggregate Capacity and Utilization Report customizations

You can customize reports to display a variety of information about aggregates.

Customizing the Aggregate Capacity and Utilization report to view aggregates reaching full capacity

You can customize the Aggregate Capacity and Utilization report to display aggregates sorted by increasing order of aggregate capacity utilization. This enables you to view the aggregates reaching full capacity.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove grouping by cluster and by HA pair, perform the following steps:
 - a. Click in the columns that need to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group option.
- 2. To sort the aggregates reaching full capacity, click in the **Days To Full** column, and click the icon.
- 3. Select Filter > Top/Bottom N.
- 4. In the **Top/Bottom N** dialog box, select **Bottom N** from the **Filter** field and enter a value in the text field.
- 5. Click OK.

Customizing the Aggregate Capacity and Utilization report to display aggregates with the nearly full threshold breached

You can customize the Aggregate Capacity and Utilization report to display the top aggregates, sorted by decreasing order of Snapshot copy overflow percentage. This enables you to view the storage space still available in the aggregates.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove the grouping by cluster or HA pair, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- To display the difference between the used data percentage and the nearly full threshold, add a new column:
 - a.
 Select a column and click the icon.
 - b. Select Column > New Computed Column.
 - c. In the New Computed Column dialog box, enter a column label.
 - d. From the Select Category list, select Math.
 - e. From the Select Function list, select DIFFERENCE.
 - f. From the Column 1 list, select **Space Nearly Full Threshold (%)**.
 - g. From the Column 2 list, select Used Data%.
 - h. Click OK.
- 3. To filter the values greater than 0 in the new column, click in the **New computed column** and open the
 - Filter dialog box by clicking the icon.
- 4. From the **Condition** drop-down list, select **Greater Than**.
- 5. In the **Value** field, type 0 and click **OK**.
- 6. To sort the values, click in the **New computed column** and click the icon.
- 7. Select Filter > Top/Bottom N.
- 8. In the Top/Bottom N dialog box, select Top N from the Filter field and enter a value in the text field.
- 9. Click OK.

Customizing the Aggregate Capacity and Utilization report to display aggregates with overcommitted threshold breached

You can customize the Aggregate Capacity and Utilization report to display the aggregates sorted by overcommitted capacity percentage, which enables you to view the storage space still available in the aggregates.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. To remove the grouping by cluster or HA pair, perform the following steps:
 - a. Click in the column that needs to be ungrouped.

- b. Click the icon.
- c. Select Group > Delete Inner Group.
- 2. To display the difference between the overcommitted used percentage and the overcommitted threshold, add a new column.
 - a. Select a column and click
 - b. Select Column > New Computed Column.
 - c. In the New Computed Column dialog box, enter a column label.
 - d. From the Select Category list, select Math.
 - e. From the Select Function list, select DIFFERENCE.
 - f. From the Column 1 list, select Overcommitted Threshold (%).
 - g. From the Column 2 list, select Overcommitted Capacity %.
 - h. Click OK.
- 3. To filter the values greater than zero in the new column, click in the **New computed column** and open the **Filter** dialog box by clicking the icon.
- 4. From the Condition list, select Greater Than.
- 5. In the **Value** field, type 0 and click **OK**.
- 6. To sort the values, click inside **New computed column** and click the icon.
- 7. Select Filter > Top/Bottom N.
- 8. In the Top/Bottom N dialog box, select Top N from the Filter field and enter a value in the text field.
- 9. Click OK.

Customizing the Aggregate Capacity and Utilization report to display aggregates with noncompliant configuration

You can customize the Aggregate Capacity and Utilization report to display the aggregates filtered by the full threshold. This enables you to view the aggregates that might not comply with company policies.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. To remove the grouping by cluster or HA pair, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To filter aggregates threshold not exceeding 85%, click in the Space Full Threshold column and open the

Filter dialog box by clicking the icon.

- 3. From the Condition list, select Greater Than.
- Click Select Values and select 85.
- 5. Click OK.

Volume Capacity and Utilization report customizations

You can create reports to monitor a variety of capacity and utilization information about volumes. For example, you can create reports to display volumes used, total capacity, daily growth rate, and Snapshot copy capacity, which can help you to determine if a volume is running out of space or whether it is being overutilized or underutilized.

Customizing the Volume Capacity and Utilization report to display volumes nearing full capacity with Snapshot Autodelete turned off

You can customize the Volume Capacity and Utilization report to display volumes sorted by increasing order of their volume capacity utilization. This enables you to display volumes reaching their full capacity.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove the grouping by SVM, cluster, or volume, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To sort volumes that are nearing full capacity, click in the **Days To Full** column, and click the icon.
- To filter volumes that have Snapshot Autodelete turned off, click in the Snapshot Autodelete column and open the Filter dialog box by clicking the icon.
- 4. From the **Condition** list, select **Equal To**.
- 5. Click Select Values and select Disabled.
- 6. Click OK.

Customizing the Volume Capacity and Utilization report to display the least consumed volumes with thin provisioning disabled

You can customize the Volume Capacity and Utilization report to display volumes based on their volume consumption.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove the grouping by SVM, cluster, or volume, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- To sort volumes based on percentage consumed, click in the Used Data % column, and click the icon
- 3. To filter volumes with thin provisioning disabled, click in the **Thin Provisioned** column and open the **Filter** dialog box by clicking the icon.
- 4. From the Condition list, select Equal To.
- Click Select Values and select No.
- Click OK.

Customizing the Volume Capacity and Utilization report to display volumes with noncompliant configuration

You can customize the Volume Capacity and Utilization report to display volumes that are not compliant with company policies. For example, if you must have deduplication enabled on all volumes, you can create a report listing all volumes where deduplication is disabled.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. To remove the grouping by SVM, cluster, or volume, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. Hide all columns except for the Cluster, Storage Virtual Machine, Volume, Deduplication, and Deduplication Space Savings (GB) columns:
 - a. Click in the column and click the icon.
 - b. From the menu, select Column > Hide Column.
- 3. To filter volumes that deduplication disabled, click in the **Deduplication** column and open the **Filter** dialog

box by clicking the icon.

- 4. From the Condition list, select Equal To.
- Click Select Values and select Disabled.
- 6. Click OK.
- 7. To sort volumes based on deduplication space savings, click in the **Deduplication Space Savings (GB)**column and click the icon.

Qtree Capacity and Utilization report customizations

You can create customized reports to analyze capacity and utilization of the system's qtrees. For example, you can create reports to sort qtrees to determine whether any have breached the disk or file soft limit.

Customizing the Qtree Capacity and Utilization report to display qtrees that have breached the disk soft limit

You can customize the Qtree Capacity and Utilization report to display qtrees that have breached the disk soft limit. You can filter and sort by disk used, disk hard limit, and disk soft limit.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove the grouping by SVM, cluster or volume, perform the following steps:
 - a. Click in the columns that need to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To filter qtrees that do not have an unlimited disk hard limit, click in the Disk Hard Limit column and open

the **Filter** dialog box by clicking the icon.

- a. From the Condition drop-down list, select Not Equal To.
- b. Click **Select Values** and select **Unlimited**.
- c. Click Ok.
- 3. To filter qtrees that do not have an unlimited disk soft limit, click in the Disk Soft Limit column and open

the **Filter** dialog box by clicking the icon.

- a. From the Condition drop-down list, select Not Equal To.
- b. Click Select Values and select Unlimited.
- c. Click Ok.

- 4. To add a column for gtrees that have breached the disk soft limit, perform the following steps:
 - a.
 Click in the **Disk Soft Limit** column, click the column icon, and select **Column > New Computed**Column
 - b. In the New Computed Column dialog box, type Breached Disk Soft Limit Capacity in the Column Label field.
 - c. From the Select Category list, select Text.
 - d. From the Select Function drop-down list, select Advanced.
 - e. In the Enter Expression field, type IF(([qtreeDiskUsedPercent] *[diskLimit]/100 >
 [softDiskLimit]), "Yes", "No").
 - f. Click OK.
- 5. To filter qtrees that have breached the soft disk limit, click in the **Breached Disk Soft Limit Capacity** column and open the **Filter** dialog box by clicking the icon.
 - a. From the Condition drop-down list, select Equal To.
 - b. Click Select Values and select Yes.
 - c. Click Ok.

Customizing the Qtree Capacity and Utilization report to display qtrees that have breached the file soft limit

You can customize the Qtree Capacity and Utilization report to display qtrees that have breached the file soft limit. You can filter and sort by file used, file hard limit, and file soft limit.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove the grouping by SVM, cluster or volume, perform the following steps:
 - a. Click in the columns that need to be ungrouped.
 - b. Click the icon.
 - c. Select **Group > Delete Inner Group**.
- 2. To filter qtrees that do not have an unlimited file hard limit, click in the File Hard Limit column and open the

Filter dialog box by clicking the icon.

- a. From the Condition drop-down list, select Not Equal To.
- b. Click Select Values and select Unlimited.
- c. Click Ok.
- 3. To filter qtrees that do not have an unlimited file soft limit, click in the **File Soft Limit** column and open the **Filter** dialog box by clicking the icon.

- a. From the Condition drop-down list, select Not Equal To.
- b. Click Select Values and select Unlimited.
- c. Click Ok.
- 4. To add a column for qtrees that have breached the file soft limit, perform the following steps:
 - a.
 Click in the File Soft Limit column, click the con, and select Column > New Computed
 Column
 - b. In the **New Computed Column** dialog box, type Breached File Soft Limit Capacity in the **Column Label** field.
 - c. From the Select Category list, select Text.
 - d. From the **Select Function** drop-down list, select **Advanced**.
 - e. In the Enter Expression field, type IF(([qtreeFileUsedPercent]*[fileLimit]/100 >
 [softFileLimit]), "Yes", "No").
 - f. Click OK.
- 5. To filter qtrees that have breached the soft file limit, click in the **Breached File Soft Limit Capacity** column and open the **Filter** dialog box by clicking the icon.
 - a. From the Condition drop-down list, select Equal To.
 - b. Click **Select Values** and select **Yes**.
 - c. Click Ok.

Events report customizations

You can create reports to monitor outstanding events on a cluster.

Customizing the Events report to display events with a critical severity type

You can customize the Events report to display events filtered by their severity type, and by the events that have been unresolved for the longest period of time.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. To filter events with critical severity type, click in the **Status** column and open the **Filter** dialog box by clicking the icon.
- 2. From the Condition list, select Equal To.
- 3. Click Select Values and select Critical.
- 4. Click OK.
- 5. To sort the events that are unresolved for the longest period of time, click in the **Days Outstanding** column, and click the icon.

- 6. Select Filter > Top/Bottom N.
- 7. In the **Top/Bottom N** dialog box, select **Top N** from the **Filter** field and enter a value in the text field.
- 8. Click OK.

Customizing the Events report to display events on mission-critical objects

You can customize the Events report to display events filtered by mission-critical data priority.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To filter events with mission-critical data priority, click in the **Data Priority** column and open the **Filter** dialog box by clicking the icon.
- 2. From the Condition list, select Equal To.
- 3. Click Select Values and select Mission-Critical.
- 4. Click OK.

Customizing the Events report to display the top most discussed events

You can customize the Events report to display events that are most discussed.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To sort the events that are discussed the most, click in the **Notes** column and click the icon.
- Select Filter > Top/Bottom N.
- 3. In the Top/Bottom N dialog box, select Top N from the Filter field and enter a value in the text field.
- 4. Click OK.

Customizing the Events report to display incident events assigned to the admin

You can customize the Events report to display incident events that are assigned to the admin, filtered by the impact level and the admin name.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To filter incident events, click in the **Impact Level** column and open the **Filter** dialog box by clicking the icon.
- 2. From the Condition list, select Equal To.
- 3. Click Select Values and select Incident.
- 4. Click OK.
- 5. To assign these incidents to the admin, click in the **Assigned To** column and open the **Filter** dialog box by clicking the icon.
- 6. From the Condition drop-down list, select Equal To.
- 7. Click Select Values and select Admin Name.
- 8. Click OK.

Customizing the Events report to display events impacting availability

You can customize the Events report to display events that are categorized by the most incidents and are assigned to the admin. You can filter the report by the impact level and the admin name.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To filter availability events, click in the **Impact Area** column and open the **Filter** dialog box by clicking the icon.
- 2. From the **Condition** drop-down list, select **Equal To**.
- 3. Click Select Values and select Incident.
- 4. Click OK.

Customizing the Events report to display the top most acknowledged unresolved events

You can customize the Events report to display the most acknowledged events, filtered by the event state. You can sort them in decreasing order to display the number of outstanding days.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

1.



To filter acknowledged events, click in the **State** column and open the **Filter** dialog box by clicking the icon.

- From the Condition drop-down list, select Equal To.
- Click Select Values and select Acknowledged.
- Click OK.
- 5. To further filter the report, click in the **Acknowledged By** column and open the **Filter** dialog box by clicking
- 6. From the **Condition** drop-down list, select **Equal To**.
- 7. Click **Select Values** and select **Name**.
- 8. Click OK.
- 9. To sort the events that are outstanding for the most number of days, click in the **Days Outstanding** column and click
- 10. Select Filter > Top/Bottom N.
- 11. In the Top/Bottom N dialog box, select Top N from the Filter field and enter a value in the text field.
- 12. Click **OK**.

Cluster Inventory Report customizations

You can customize inventory reports to monitor for insufficient resources on clusters components. For example, you can customize reports to monitor information such as clusters that are nearing the SVM count limit, nodes that are running older versions of ONTAP, and nodes that are reaching the maximum disk limit.

Customizing the Cluster Inventory report to display clusters reaching SVM count limit

You can customize the Cluster Inventory report to display clusters, sorted by decreasing order of their SVM count.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. To remove the grouping by cluster or node, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click the icon.
 - c. Select **Group > Delete Inner Group**.
- 2. To sort clusters by SVM count, perform the following steps:
 - a. Click in the SVM Count column.

- b. Click the icon.
- c. Select Group > Delete Inner Group option.
- 3. Select Filter > Top/Bottom N.
- 4. In the **Top/Bottom N** dialog box, select **Top N** from the **Filter** field and enter a value in the text field.
- 5. Click OK.

Customizing the Cluster Inventory report to display nodes running older versions of ONTAP software

You can customize the Cluster Inventory report to display nodes filtered by older ONTAP versions.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove the grouping by cluster, or node, perform the following steps:
 - a. Click in the column that needs to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To filter nodes not running ONTAP 8.3, click the **ONTAP version** column and open the **Filter** dialog box by clicking the icon.
- 3. From the Condition drop-down list, select Not Equal To.
- 4. Click **Select Values** and select **8.3**.
- 5. Click OK.

Customizing the Cluster Inventory report to display nodes reaching the maximum disk limit

You can customize the Cluster Inventory report to display a list of nodes that are reaching the maximum disk limit and sorted by increasing order.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. To remove the grouping by cluster, or node, perform the following steps:
 - a. Click in the columns that needs to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.

- 2. To move the **Disk Count** column next to the **Model** column, perform the following steps:
 - a. Click in the Disk Count column.
 - b. Click the icon and select **Column > Reorder Columns**.
 - c. In the **Reorder Columns** dialog box, use the **up** and **down** arrow keys to move the column to the required position.
- 3. To add a new computed column, perform the following steps:
 - a. Select a column, click , and select Column > New Computed Column.
 - b. In the New Computed Column dialog box, type Maximum Disk Limit in the Column Label field.
 - c. From the Select Category list, select Comparison.
 - d. From the Select Function list, select Advanced.
 - e. In the Enter Expression field, type IF ([model]="FAS3250", 960, 0).
 - f. Click OK.
- 4. To add a second new column, perform the following steps:
 - a. Select the **Maximum Disk Limit** column, click the icon, and select **Column > New Computed Column**.
 - b. In the New Computed Column dialog box, type Available Volume in the Column Label field.
 - c. From the Select Category list, select Math.
 - d. From the Select Function list, select DIFFERENCE.
 - e. From the Column 1 list, select Maximum Disk Limit.
 - f. From the Column 2 list, select Disk Count.
 - g. Click OK.
- 5. To sort the values, click in the **Available Volume** column, and click the icon.
- Select Filter > Top/Bottom N.
- 7. In the Top/Bottom N dialog box, select Top N from the Filter field and enter a value in the text field.
- 8. Click OK.

NFS Export report customizations

You can customize NFS export reports to analyze information about NFS export policies and rules for volumes on your storage systems. For example, you can customize reports to display volumes with inaccessible junction paths and volumes with the default export policy.

Customizing the NFS Exports report to display a list of volumes that have an inaccessible junction path

You can customize the NFS Exports report to display a list of volumes that have an inaccessible junction path.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove the grouping by cluster or volume, perform the following steps:
 - a. Click in the columns that need to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To filter volumes that have an inaccessible junction path, click in the **Junction Path Active** column and open the **Filter** dialog box by clicking the icon.
- 3. From the Condition list, select Equal To.
- 4. Click Select Values and select No.
- Click OK.

Customizing the NFS Exports report to display a list of volumes with default export policy

You can customize the NFS Exports report to display a list of volumes with default export policy.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove the grouping by cluster or volume, perform the following steps:
 - a. Click in the columns that need to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To filter volumes with default export policy, click the **Export Policy** column and open the **Filter** dialog box by clicking the icon.
- 3. From the Condition list, select Equal To.
- 4. Click Select Values and select Default.
- 5. Click OK.

SVM Inventory report customizations

You can create SVM inventory reports to analyze volume information and to view overall health and storage availability. For example, you can create reports to display SVMs reaching the maximum volume count and to analyze stopped SVMs.

Customizing the SVM Inventory report to display a list of SVMs reaching maximum volume limit

You can customize the SVM Inventory report to display a list of SVMs that are reaching the maximum volume limit by sorting the volumes in increasing order.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To remove the grouping by cluster, perform the following steps:
 - a. Click inside the column that needs to be ungrouped.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To filter SVMs that do not have unlimited allowed volumes, click the **Maximum Allowed Volumes** column and open the **Filter** dialog box by clicking the icon.
- 3. In the Data type field, select String and click OK.
- 4. From the **Condition** drop-down list, select **Not Equal To**.
- 5. Click **Select Values** and select **Unlimited**.
- 6. To add a new computed column, perform the following steps:
 - a. Select a column, click the icon, and select **Column > New Computed Column**.
 - b. In the **New Computed Column** dialog box, type Available Volume in the **Column Label** field.
 - c. From the Select Category list, select Math.
 - d. From the Select Function drop-down list, select Advanced.
 - e. In the **Enter Expression** field, type [maximumVolumes]-[volumeCount].
 - f. Click OK.
- 7. To sort SVMs in ascending order, click in the **Available Volume** column, and click the icon.
- 8. Select Filter > Top/Bottom N.
- 9. In the Top/Bottom N dialog box, select Bottom N from the Filter field and enter a value in the text field.
- 10. Click **OK**.

Customizing the SVM Inventory report to display a list of stopped SVMs

You can customize the SVM Inventory report to display a list of stopped SVMs. The report filters the SVMs by their status.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- To filter SVMs by status, click the State column and open the Filter dialog box by clicking the icon.
- 2. From the Condition list, select Equal To.
- 3. Click Select Values and select Stopped.
- 4. Click OK.

Volume Relationships Inventory report customizations

You can customize the Volume Relationships Inventory report to view the volume details that are filtered based on the source of failure. You can use filters to display volume relationships inventory details based on schedules, and to group volume inventory details based on issues.

Customizing the Volume Relationships Inventory report to view volumes grouped by source of failure

You can customize the Volume Relationships Inventory report to view volumes grouped by source of failure.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. Select the **Relationship Health** column.
- 2. To view the volume details for bad volumes, click the sign next to the **Bad** column.
- 3. To view the volume details for good volumes, click the sign next to the **Good** column.

Customizing the Volume Relationships Inventory report to view volumes grouped by issue

You can customize the Volume Relationships Inventory report to view volumes that are grouped according to the volume relationship health status.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. To filter volumes according to the volume relationship health status, select the **Relationship Health** column, and click the icon.
- 2. In the **Filter** dialog box, click **Select Values**, and then select the required value from the drop-down list.

The volume details for the selected value are displayed.

Volume Transfer Status (Historical) report customizations

You can customize the Volume Transfer Status (Historical) report to view and analyze information about volume transfers at specific time intervals. You can use filters to view volume transfer details between two dates.

Customizing the Volume Transfer Status (Historical) report schedules

You can customize the schedules for the Volume Transfer Status (Historical) report to view the volume details based on different schedules. You can view, modify, or delete existing report schedules, and add new schedules for your reports.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. On the Volume Transfer Status (Historical) report page, click Manage Report Schedules.
- 2. In the **Manage Report Schedules** dialog box, enter specific details such as recipient schedule name, email address, report format, frequency, and the reports.
- 3. Select **Inventory** as the Report Category.
- Click Save and Close.

The Volume Transfer Status (Historical) report is automatically sent by email to one or more recipients as per the schedule.

Customizing the Volume Transfer Status (Historical) report to view volumes at specific time intervals

You can customize the Volume Transfer Status (Historical) report to view the volume details at specific time intervals.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. Remove grouping by cluster:
 - a. Click in the column that you want to ungroup.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- To view the volume details at a specific time interval, click in the **Start time** column, and then click the icon
- 3. In the Filter dialog box, click Select Values, and then select the specific date and time from the drop-down

list.

The volume details for the selected time range are displayed.

Customizing the Volume Transfer Status (Historical) report to view volumes grouped by time of occurrence

You can customize the Volume Transfer Status (Historical) report to display the list of volumes grouped by time of occurrence between two dates.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. Remove grouping by cluster:
 - a. In the column that has to be ungrouped, click the icon.
 - b. Select Group > Delete Inner Group.
- 2. In the **Start time** column, open the **Filter** dialog box by clicking the icon.
- 3. From the **Condition** drop-down list, select **Between**.
- 4. Click Select Values, and choose the Date From and Date To values.
- 5. Click OK.

Customizing the Volume Transfer Status (Historical) report to view failed or successful volume transfers

You can customize the Volume Transfer Status (Historical) report to view the details of failed or successful volume transfers.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. Remove grouping by cluster:
 - a. Select the column that you want to ungroup.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To sort the volume transfers according to failure or success, click in the **Operational Result** column, and then click the icon.
- 3. Select Filter.

4. In the Filter dialog box, click Select Values, and then select either Success or Failure.

Volume Transfer Rate (Historical) report customizations

You can customize the Volume Transfer Rate (Historical) report to view the volume transfer details based on the total transfer size of the volume. You can also view the volume transfers for a specific day of the week.

Customizing the Volume Transfer Rate (Historical) report to view volume transfers based on transfer size

You can customize the Volume Transfer Rate (Historical) report to view the volume transfer details according to the total transfer size of the volume.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

Steps

- 1. Remove grouping by cluster:
 - a. Select the column that you want to ungroup.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To sort the volume transfers according to volume transfer size, click the Total Transfer Size (GB) column.

Customizing the Volume Transfer Rate (Historical) report to view volume transfers grouped by day

You can customize the Volume Transfer Rate (Historical) report to view the volume transfer details that are sorted by day.

About this task

You can also perform this task by going to the Reports page and clicking **Run Report** for the appropriate report.

- 1. Remove grouping by cluster:
 - a. Select the column that you want to ungroup.
 - b. Click the icon.
 - c. Select Group > Delete Inner Group.
- 2. To view the volume transfers for a specific day, click the **Day** column.

Description of report windows and dialog boxes

You can use the options to schedule, share, manage, save, and import the reports.

Reports page

The Reports page enables you to view detailed information about the reports that you generate. You can search for a specific report, save a report, and delete a report. You can also schedule, share, and import a report.

The Reports page displays categorized groups of reports about which you can obtain specific report details. By default, the report groups expand to display the report types, a report overview, and links that enable you to customize reports. Only one report can be viewed at a time. You can click the **Run Report** button to view a report for a specific group of reports.

The implementation of scheduling and generating reports from the Reports page will be deprecated in a future release. You can extract health and performance data from Unified Manager using these additional methods:



- Extracting data directly from the grid pages in the GUI
- Using Open Database for access to all the available objects
- Executing Unified Manager REST APIs to return the information you are interested in reviewing

The following is a list of report groups and report types that are displayed in the Reports page:

- · Capacity Utilization Reports
 - Storage Summary
 - Aggregate Capacity and Utilization
 - Volume Capacity and Utilization
 - Qtree Capacity and Utilization
- Operational Reports Events
- Inventory Reports
 - Cluster Inventory
 - NFS Exports
 - SVM Inventory
- · Imported Reports
- Data Protection Reports
 - Volume Data Protection Configuration
 - Volume Relationships Inventory
 - Volume Transfer Status (Historical)
 - Volume Transfer Rate (Historical)

Storage Summary report

The Storage Summary report enables you to view summarized information about storage capacity in the HA pairs. This information helps you to understand possible capacity risks and to take appropriate action to rebalance workload. Single-node cluster information is not visible in the report.

Storage Summary report chart view

The Storage Summary report is displayed in two formats:

- Storage Summary report chart view
- · Storage Summary report tabular view

The chart shows the capacity trend of used and unused data capacity of the aggregates over a period of time. Total data capacity is displayed on the vertical (y) axis and the cluster name on the horizontal (x) axis. Therefore, each bar in the chart represents one cluster. You can view the details for specific points on the graph by positioning your cursor over a particular point.

Cluster Name

Displays the cluster name.

HA Pair

Displays the HA pair value obtained by forming two nodes.

Model

Displays the name of the model.

OS Version

Displays the version of ONTAP used.

Total Raw Capacity

Displays the total physical capacity of all disks in the array.

Unconfigured Raw Capacity

Displays the unconfigured capacity of disks whose container type is other than aggregate, broken, spare, or shared. This capacity is always higher than the physical capacity of the disk in ONTAP. For example, consider a 2 TB disk. The physical capacity of the disk is 1.6 TB in ONTAP whereas the unconfigured raw capacity in Unified Manager is 1.8 TB.

Aggregate Total Capacity

Displays the total size of the available aggregates for the user. This includes the Snapshot copy reserve.

Aggregate Used Capacity

Displays the capacity already in use on aggregates. This includes the capacity consumed by volumes, LUNs, and other storage efficiency technology overheads.

Aggregate Unused Capacity

Displays capacity that might be available for storing additional data on the aggregate. This includes the Snapshot copy reserve.

Allocated LUN Capacity

Displays the capacity of LUNs that are mapped.

Unallocated LUN Capacity

Displays the capacity of all LUNs not mapped to the Host.

Volume Total Capacity

Displays the total capacity of the volumes (used plus unused).

Volume Used Capacity

Displays the used capacity of the volumes.

Volume Unused Capacity

Displays the unused capacity of the volumes.

Volume Protection Capacity

Displays the capacity of volumes that have SnapMirror and SnapVault enabled.

Cluster Licensed Cloud Tier Total

Displays the total capacity that has been licensed in the cloud tier. This field is displayed for storage providers that require a FabricPool license, for example, Amazon S3, IBM Cloud Object Storage, Microsoft Azure Cloud, or Alibaba Cloud Object Storage.

Cluster Licensed Cloud Tier Used

Displays the space used by data in the cloud tier for storage providers that require a FabricPool license.

Cluster StorageGRID Capacity Used

Displays the space used by data in the cloud tier for storage providers that do not require a FabricPool license, for example, StorageGRID.

Aggregate Capacity and Utilization report

The Aggregate Capacity and Utilization report enables you to view information about the capacity and utilization of aggregates in a cluster. This information enables you to understand possible capacity risks and also to view the configured, used, and unused capacity of aggregates.

Aggregate Capacity and Utilization report tabular view

Cluster

Displays the cluster name.

HA Pair

Displays the HA pair value obtained by forming two nodes.

Aggregate

Displays the aggregate name.

Total Data Capacity (GB)

Displays the total data capacity (used plus available).

Used Data Capacity (GB)

Displays the used data capacity.

Used Data %

Displays the used data capacity as a percentage.

Available Data Capacity (GB)

Displays the available data capacity.

Available Data %

Displays the available data capacity as a percentage.

Daily Growth Rate %

Displays the growth rate that occurs every 24 hours in the volume.

Days To Full

Displays the estimated number of days remaining before the aggregate reaches full capacity.

Space Full Threshold

Displays the percentage at which an aggregate is full.

Space Nearly Full Threshold

Displays the percentage at which an aggregate is nearly full.

· Growth Rate Threshold

Specifies the aggregate's growth rate is considered to be normal before the system generates an Aggregate Growth Rate Abnormal event.

· Growth Rate Sensitivity Threshold

Specifies the factor that is applied to the standard deviation of a volume's growth rate. If the growth rate exceeds the factored standard deviation, a Volume Growth Rate Abnormal event is generated.

Days Until Full Threshold

Specifies the number of days remaining before the aggregate reaches full capacity.

Snapshot Reserve Total Capacity (GB)

Displays the total snapshot reserve capacity of the aggregate.

Snapshot Reserve Used Capacity (GB)

Displays the amount of space used by snapshot copies from snapshot reserve.

Snapshot Reserve Used %

Displays the amount of space used by Snapshot copies from snapshot reserve as a percentage.

Snapshot Reserve Available Capacity (GB)

Displays the amount of space available for Snapshot copies.

Snapshot Reserve Available %

Displays the amount of space available for Snapshot copies as a percentage.

Snapshot Copies Reserve Full Threshold

Specifies the percentage at which an aggregate has consumed all its space reserved for Snapshot copies.

Overcommitted Capacity %

Displays the aggregate overcommitment as a percentage.

Overcommitted Threshold %

Displays the percentage at which an aggregate is overcommitted.

Nearly Overcommitted Threshold %

Displays the percentage at which an aggregate is nearly overcommitted.

Type

Displays the aggregate type:

- \circ HDD
- Hybrid

Combines HDDs and SSDs, but Flash Pool has not been enabled.

Hybrid (Flash Pool)

Combines HDDs and SSDs, and Flash Pool has been enabled.

- SSD
- SSD (FabricPool)

Combines SSDs and a cloud tier

VMDisk (SDS)

Virtual disks within a virtual machine

VMDisk (FabricPool)

Combines virtual disks and a cloud tier

 LUN (FlexArray) For standard disks and SSD disks, this column is blank when the monitored storage system is running an ONTAP version earlier than 8.3.

RAID Type

Displays the RAID configuration type.

Aggregate State

Displays the current state of the aggregate.

SnapLock Type

Indicates whether the aggregate is a SnapLock or non-SnapLock aggregate.

Cloud Tier Space Used (GB)

Displays the amount of data capacity that is currently being used in the cloud tier.

Cloud Tier

Displays the name of the cloud tier when it was created by ONTAP.

Volume Capacity and Utilization report

The Volume Capacity and Utilization report enables you to view information about the capacity and utilization of volumes in a cluster. This information enables you to understand possible capacity risks and to view the configured, used, and unused capacity of aggregates. Also, the report helps you to make decisions about enabling space-saving features such as deduplication and thin provisioning.

Volume Capacity and Utilization report tabular view

Cluster

Displays the cluster name.

Storage Virtual Machine

Displays the name of the storage virtual machine (SVM) that contains the volume.

Volume

Displays the volume name.

Total Data Capacity

Displays the total data capacity (used plus available) in a volume.

Used Data Capacity

Displays the used data capacity in a volume.

Used Data %

Displays the used data in a volume as a percentage.

Available Data Capacity

Displays the available data capacity in a volume.

Available Data %

Displays the available data capacity in a volume as a percentage.

Daily Growth Rate %

Displays the growth rate that occurs every 24 hours in the volume.

Days To Full

Displays the estimated number of days remaining before the volume reaches full capacity.

Space Full Threshold %

Specifies the limit to the volume that is considered full.

Space Nearly Full Threshold %

Specifies the limit to the volume that is considered nearly full.

Growth Rate Threshold %

Specifies the aggregate's growth rate is considered to be normal before the system generates an Aggregate Growth Rate Abnormal event.

Growth Rate Sensitivity Threshold

Specifies the factor that is applied to the standard deviation of a volume's growth rate. If the growth rate exceeds the factored standard deviation, a Volume Growth Rate Abnormal event is generated.

· Days Until Full Threshold

Specifies the number of days remaining before reaching full capacity.

Snapshot Overflow %

Displays the percentage of the data space that is consumed by the Snapshot copies.

Snapshot Reserve Used Capacity

Displays the amount of space used by Snapshot copies in the volume.

Snapshot Reserve Used %

Displays the amount of space used by Snapshot copies in the volume as a percentage.

Snapshot Reserve Available Capacity

Displays the amount of space available for Snapshot copies in the volume.

Snapshot Reserve Available %

Displays the amount of space available for Snapshot copies in the volume as a percentage.

Snapshot Reserve Total Capacity

Displays the total Snapshot copy capacity in the volume.

Snapshot Copies Reserve Full Threshold %

Specifies the percentage at which the space reserved for Snapshot copies is considered full.

Snapshot Copies Count Threshold

Specifies the number of Snapshot copies on a volume that are considered to be too many.

Snapshot Copies Days Until Full Threshold

Specifies the number of days remaining before the space reserved for Snapshot copies reaches full capacity.

Number Of Inodes

Displays the number of inodes in the volume.

Inode Utilization %

Specifies the percentage of inode space used in the volume.

Inodes Full Threshold

Specifies the percentage at which a volume is considered to have consumed all of its inodes.

Inodes Nearly Full Threshold

Specifies the percentage at which a volume is considered to have consumed most of its inodes.

Quota Committed Capacity

Displays the space reserved in the volumes.

Quota Overcommitted Capacity

Displays the amount of space that can be used before the system generates the Volume Quota Overcommitted event.

Quota Overcommitted Threshold %

Specifies the percentage at which the volume is nearly overcommitted.

Quota Nearly Overcommitted Threshold %

Specifies the percentage at which the volume space is nearly overcommitted.

Snapshot Autodelete

Displays whether automatic deletion of Snapshot copies is enabled or disabled.

Deduplication

Displays whether deduplication is enabled or disabled for the volume.

Deduplication Space Savings

Displays the amount of space saved in a volume by using deduplication.

Compression

Displays whether compression is enabled or disabled for the volume.

Compression Space Savings

Displays the amount of space saved in a volume by using compression.

Caching Policy

Displays the caching policy that is associated with the selected volume. The policy provides information about how Flash Pool caching occurs for the volume. See the Health/Volumes inventory page for more information on caching policies.

Cache Retention Priority

Displays the priority used for retaining cached pools.

Thin Provisioned

Displays whether space guarantee is set for the selected volume. Valid values are Yes and No.

Autogrow

Displays whether the FlexVol volume automatically grows in size when it is out of space.

Space Guarantee

Displays the FlexVol volume setting control when a volume removes free blocks from an aggregate.

State

Displays the state of the volume that is being exported.

SnapLock Type

Indicates whether the volume is a SnapLock or non-SnapLock volume.

Expiry Date

The SnapLock expiration date.

Tiering Policy

If this volume is deployed on a FabricPool-enabled aggregate, then the tiering policy set for the volume is displayed.

Qtree Capacity and Utilization report

The Qtree Capacity and Utilization report enables you to analyze capacity and utilization of the system's qtrees to understand possible risks that might occur due to reduced cluster capacity.

Qtree Capacity and Utilization report tabular view

Cluster

Displays the name of the cluster containing the qtree.

Storage Virtual Machine

Displays the storage virtual machine (SVM) name containing the qtree.

Volume

Displays the name of the volume containing the qtree.

Qtree

Displays the name of the gtree.

· Quota type

Specifies if the quota is for a user, user group or a qtree.

User or Group

Displays the name of the user or user group. There will be multiple rows for each user and user group. When the quota type is qtree, then *Not Applicable* is displayed. If the quota is not set, then the column is empty.

Disk Used %

Displays the percentage of the disk space used. If a disk hard limit is set, this value is based on the disk hard limit. If the quota is set without a disk hard limit, the value is based on the volume data space. If the quota is not set or if the quotas are off on the volume to which the qtree belongs, then *Not applicable* is displayed.

Disk Hard Limit

Displays the maximum disk space allocated for the qtree. Unified Manager generates a critical event when

this limit is reached and no further disk writes are allowed. The value is displayed as *Unlimited* if the quota is set without a disk hard limit, If the quota is not set, or if the quotas are off on the volume to which the qtree belongs.

Disk Soft Limit

Displays the disk space allocated for the qtree before a warning event is generated. The value is displayed as *Unlimited* if the quota is set without a disk soft limit, if the quota is not set, or if the quotas are off on the volume to which the qtree belongs.

Files Used %

Displays the percentage of files used in the qtree. If the file hard limit is set, this value is based on the file hard limit. The value is displayed as *Not applicable* if the quota is not set, or if the quota is set without a file hard limit, or if the quotas are off on the volume to which qtree belongs.

File Hard Limit

Displays the hard limit for the number of files permitted on the qtrees. The value is displayed as *Unlimited* if the quota is set without a file hard limit, if the quota is not set, or if the quotas are off on the volume to which the qtree belongs.

File Soft Limit

Displays the soft limit for the number of files permitted on the qtrees. The value is displayed as *Unlimited* if the quota is set without a file soft limit, if the quota is not set, or if the quotas are off on the volume to which the qtree belongs.

Events report

The Events report enables you to view information about event trends over a specific time period. This information enables you to compare recent activity with any past operational activity, such as configuration changes, upgrades, and so on. The information also helps you to determine any outstanding events.

Events report chart view

The Events report is displayed in two formats:

- · Events report chart view
- · Events report tabular view

The Events Chart is displayed in two formats:

- Events Severity Trend (All open events)
- · Event Status Trend

The chart shows the event severity trends for all open events over a time period. A count of events is displayed on the vertical (y) axis and the date is displayed on the horizontal (x) axis. You can view the details for specific points on the graph by positioning your cursor over a particular point. The details display the event severity, number of events of the specific severity type, and the date of the event.

The event severity types displayed are Critical, Error, and Warning. The event severities are differentiated by

different colors. There can be the same number of events on the same date in different states.

Count

Displays a count of events.

Date

Displays the date. The x axis shows data from the time that the event occurred up to the present date. You can click and zoom the chart to get details.

The chart shows the event status trending per day over a period of time. A count of events is displayed on the vertical (y) axis and the date is displayed on the horizontal (x) axis. The details display the event state, number of events of the specific state, and the date of the event.

The event status are New, Acknowledged, and Resolved. The event status are differentiated by different colors.

The chart shows the new events generated daily on a cumulative basis in a bar graph represented in green color. The number of Acknowledged and Resolved events are shown as and when they are acknowledged and resolved on a daily basis.

There is a zoom functionality provided within the charts. You can use this feature to zoom a particular point in the chart for more clarity.

Source

Displays the source of an event.

Status

Displays the severity of the event. You can filter this column to display events of a specific severity type. The event severity types are Critical, Error, or Warning.

State

Displays the event state: New, Acknowledged, Resolved, or Obsolete. You can filter this column to show events of a specific state.

Event

Displays the event names.

Triggered Time

Displays the time when the event was generated. Both the time and the date are displayed.

Days Outstanding

Displays the number of days between an event occurring and its resolution or designation as Obsolete.

Source Type

Displays the object type (for example, Storage Virtual Machine (SVM), volume, or qtree) with which the event is associated.

Data Priority

Displays the annotation type, based on the priority of data of the storage object.

Impact Level

Displays whether the event is categorized as an incident, a risk, or information.

Impact Area

Displays whether the event is a capacity, availability, performance, protection, or configuration event.

Assigned To

Displays the name of the user to whom the event is assigned.

Assigned Time

Displays the time when the event was assigned to a user.

Notes

Displays the number of notes that are added for an event.

Acknowledged By

Displays the name of the user who acknowledged the event. The field is blank if the event is not acknowledged.

Acknowledged Time

Displays the time that has elapsed since the event was acknowledged. If the time elapsed exceeds a week, the timestamp displays when the event was acknowledged.

Resolved By

Displays the name of the user who resolved the event. The field is blank if the event is not resolved.

Resolved Time

Displays the time that has elapsed since the event was resolved. If the time elapsed exceeds a week, the timestamp displays when the event was resolved.

Obsoleted Time

Displays the time when the state of the event became Obsolete.

Cluster Inventory report

Cluster Inventory report provides information about available resources for cluster components for the purpose of understanding possible risks caused by insufficient resources.

Cluster Inventory report tabular view

Cluster

Displays the name of the cluster.

HA pair

Displays the HA pair value obtained by forming two nodes.

Node

Displays the name of the nodes.

Model

Displays the name of the model.

OS version

Displays the version of ONTAP used.

All Flash Optimized

Displays whether node is configured to support only solid-state drives (SSDs).

Serial Number

Displays the serial number of the node.

Firmware Version

Displays the firmware version of the node.

SVM Count

Displays the number of SVM contained by the cluster.

• FC Port Count

Displays the number of FC ports contained by the node.

FCoE Port Count

Displays the number of FCoE ports contained by the node.

Ethernet Port Count

Displays the number of ethernet ports contained by the node.

Flash Card Count

Displays the number of flash cards installed on nodes in your data center so that you can monitor for potential problems.

Flash Card Size (GB)

Displays the size of the flash cards installed on nodes.

Disk Shelves Count

Displays the number of disk shelves contained by the node.

Disk Count

Displays the number of disks in a node.

NFS Exports report

NFS Exports report enables you to audit information about NFS export policies and its associated rules for volumes in your storage system.

NFS Exports report tabular view

Cluster

Displays the name of the cluster.

Storage Virtual Machine

Displays the name of the SVM with NFS export policies.

Volume

Displays the name of the volume with NFS export policies.

Qtree

Displays the name of the qtree on a volume with NFS export policies.

Volume State

Displays the current state of the volume. The state can be Offline, Online, or Restricted.

· Offline

Read or write access to the volume is not allowed.

Online

Read and write access to the volume is allowed.

Restricted

Limited operations, such as parity reconstruction, are allowed, but data access is not allowed.

Junction Path

Displays the path on which the volume is mounted.

Junction Path Active

Displays whether the path to access the mounted volume is active or inactive.

Export policy

Displays the rules that define the access permission for volumes that are exported.

Rule Index

Displays the rules associated with the export policy such as the authentication protocols and the access permission.

Access Protocols

Displays the protocols that are enabled for the export policy rules.

Client Match

Displays the clients that have permission to access data on the volumes.

Read Only Access

Displays the authentication protocol used to read data on the volumes.

Read Write Access

Displays the authentication protocol used to read or write data on the volumes.

Security Style

Displays the access permission for volumes that are exported. The security style can be UNIX, Unified, NTFS, or Mixed.

UNIX (NFS clients)

Files and directories in the volume have UNIX permissions.

Unified

Files and directories in the volume have a unified security style.

NTFS (CIFS clients)

Files and directories in the volume have Windows NTFS permissions.

Mixed

Files and directories in the volume can have either UNIX permissions or Windows NTFS permissions.

Unix Permission

Displays the UNIX permission bits in an octal string format, which is set for the volumes that are exported. It is similar to the UNIX style permission bits.

SVM Inventory report

SVM Inventory report enables you to analyze SVM volume configuration limits and overall health to understand risks to future storage availability.

SVM Inventory report tabular view

Cluster

Displays the name of the cluster containing the SVM.

Storage Virtual Machine

Displays the name of the SVM.

State

Displays the current administrative state of the SVM. The state can be Running, Stopped, Starting, Stopping, Not mapped, Initializing, or Deleting.

Volume count

Displays the number of volumes contained by the SVM.

Maximum Allowed Volumes

Displays the maximum allowed volumes that can be configured on the SVM.

Root Volume

Displays the name of the root volume of the SVM.

Allowed protocols

Displays the type of protocols that can be configured on the SVM.

DNS Domain

Displays the DNS domain name.

NIS Domain

Displays the Network Information Service (NIS) domain name. This column is blank when the Network Information Service (NIS) server is disabled or is not configured.

LDAP Enabled

Displays if the LDAP protocol is enabled or not.

Name Service Switch

Displays the information type gathered from hosts. Possible values are file, LDAP, or NIS.

Volume Data Protection Configuration report

The Volume Data Protection Configuration report enables you to view the unprotected volumes and storage virtual machines (SVMs) that are used in a node or a cluster. This information enables you to understand the data protection risks for your system, and to view the details of the protected volumes and unprotected volumes in your system.

The Volume Data Protection Configuration report is displayed in two formats:

- · Protected and Unprotected Volumes pie chart
- · Unprotected Volume Data tabular view

Protected and Unprotected Volumes pie chart

Displays the relative percentage of the protected volumes and unprotected volumes in your system.

Unprotected Volume Data tabular view

Cluster

Displays the cluster name.

Storage Virtual Machine

Displays the name of the storage virtual machine (SVM) that contains the volume.

Volume

Displays the volume name.

Total Data Capacity (GB)

Displays the total data capacity (used plus available) in GB.

Used Data Capacity (GB)

Displays the used data capacity (in GB).

Used Data %

Displays the used data capacity as a percentage.

Available Data Capacity (GB)

Displays the available data capacity (in GB).

Available Data %

Displays the available data capacity as a percentage.

Snapshot Reserve Used Capacity (GB)

Displays the amount of space that is used by Snapshot copies from Snapshot reserve (in GB).

Snapshot Reserve Used %

Displays the amount of space that is used by Snapshot copies from Snapshot reserve as a percentage.

Snapshot Reserve Available Capacity (GB)

Displays the amount of space that is available for Snapshot copies (in GB).

Snapshot Reserve Available %

Displays the amount of space that is available for Snapshot copies as a percentage.

Snapshot Reserve Total Capacity (GB)

Displays the total snapshot reserve capacity of the aggregate (in GB).

Days To Full

Displays the estimated number of days remaining before the aggregate reaches full capacity.

Space Full Threshold %

Displays the percentage at which an aggregate is full.

Space Nearly Full Threshold %

Displays the percentage at which an aggregate is nearly full.

Daily Growth Rate %

Displays the growth rate that occurs every 24 hours in the volume.

Total Number Of Inodes

Displays the total number of inodes in the volume.

Inode Utilization

Specifies the inode space that is used in the volume.

Quota Committed Capacity

Displays the space that is reserved in the volumes.

Quota Overcommitted Capacity (GB)

Displays the amount of space that can be used (in GB) before the system generates the Volume Quota Overcommitted event.

Snapshot Autodelete

Displays whether automatic deletion of Snapshot copies is enabled or disabled.

Deduplication

Displays whether deduplication is enabled or disabled for the volume.

Deduplication Space Savings (GB)

Displays the amount of space that is saved in a volume by using deduplication (in GB).

Compression

Displays whether compression is enabled or disabled for the volume.

Compression Space Savings (GB)

Displays the amount of space that is saved in a volume by using compression (in GB).

Thin Provisioned

Displays whether space guarantee is set for the selected volume. Valid values are Yes and No.

Autogrow

Displays whether the FlexVol volume automatically grows in size when it is out of space.

Space Guarantee

Displays the FlexVol volume setting control when a volume removes free blocks from an aggregate.

State

Displays the state of the volume that is being exported.

SnapLock Type

Indicates whether the volume is a SnapLock or non-SnapLock volume.

Expiry Date

Volume Relationships Inventory report

The Volume Relationships Inventory report enables you to analyze the storage inventory details in a cluster, understand the degree of protection that is required for volumes, and filter the volume details based on source of failure, pattern, and schedules.

The Volume Relationships Inventory report is displayed in two formats:

- SnapMirror relationships pie chart and SnapVault relationships pie chart
- · Volume Relationships Inventory report tabular view

SnapMirror and SnapVault pie charts

Displays the configuration details of the volume relationships that are present in your storage system.

Volume Relationships Inventory tabular view

Relationship Health

Displays the relationship heath of the cluster.

· Relationship State

Displays the the mirror state of the SnapMirror relationship.

Transfer Status

Displays the status of the SnapMirror relationship.

Lag Status

Displays the lag status of the volume.

Source Cluster

Displays the name of the source cluster for the SnapMirror relationship.

Source SVM

Displays the name of the source storage virtual machine (SVM) for the SnapMirror relationship.

Source Volume

Displays the name of the source volume for the SnapMirror relationship.

Destination Cluster

Displays the name of the destination cluster for the SnapMirror relationship.

Destination SVM

Displays the name of the destination storage virtual machine (SVM) for the SnapMirror relationship.

Destination Volume

Displays the name of the destination volume for the SnapMirror relationship.

Relationship Type

Displays any relationship type, including SnapMirror or SnapVault.

· Last Successful Update Time

Displays the time of the last successful SnapMirror or SnapVault operation.

Last Transfer Duration (hrs)

Displays the time taken for the last data transfer to complete.

Last Transfer Size (MB)

Displays the size, in bytes, of the last data transfer.

Last Transfer End Time

Displays the time that the last successful SnapMirror or SnapVault operation completed.

Unhealthy Reason

The reason the relationship is in an unhealthy state.

Lag Duration (hrs)

Displays the amount of time that the data on the mirror lags behind the source.

Version Flexible Replication

Displays either Yes, Yes with backup option, or None.

Volume Transfer Status (Historical) report

The Volume Transfer Status (Historical) report enables you to analyze the volume transfer trends over a period of time. You can configure the report to view the volume transfer status for a specific time interval. The report also displays whether the volume transfer was a success or a failure.

The Volume Transfer Status (Historical) report is displayed in two formats:

- · Volume Transfer Status line chart
- · Volume Transfer Status (Historical) report tabular view

Volume Transfer Status line chart

The line chart displays the volume transfer details by plotting transfer count against date. You can also view whether a particular volume transfer has succeeded or failed.

Volume Transfer Status tabular view

Source Cluster Name

Displays the source cluster name.

Source SVM

Displays the storage virtual machine (SVM) name.

Source Volume Name

Displays the source volume name.

Destination Cluster Name

Displays the destination cluster name.

Destination SVM

Displays the destination SVM name.

Destination Volume Name

Displays the destination volume name.

Operation Result

Displays whether volume transfer was successful.

Start time

Displays the volume transfer start time.

End time

Displays the volume transfer end time.

Transfer duration (hh:mm:ss)

Displays the time taken (in hours) to complete the volume transfer.

Transfer size (MB)

Displays the size (in MB) of the transferred volume.

Operation Type

Displays the type of volume transfer.

Volume Transfer Rate (Historical) report

The Volume Transfer Rate (Historical) report enables you to analyze the amount of data volume that is transferred on a day-to-day basis. The report also provides details about daily volume transfers and the time required to complete the transfer operation.

The Volume Transfer Rate (Historical) report is displayed in two formats:

- · Volume Transfer Rate bar chart
- · Volume Transfer Rate tabular view

Volume Transfer Rate bar chart

Displays the volume transfer rate details by plotting the total transfer size against the number of hours. You can also view the details of the amount of data that is transferred on a daily basis.

Volume Transfer Rate tabular view

Total Transfer Size (GB)

Displays the total size of the volume transfer in gigabytes.

Day

Displays the day on which the volume transfer was initiated.

End Time

Displays the volume transfer end time with date.

Schedule Report dialog box

You can schedule the reports to be generated on a recurring basis at a specified

frequency from the Schedule Report dialog box. The report is sent by email to one or more users specified in the Schedule Report dialog box.

Properties

You can schedule a report by specifying properties such as the email address of the user, the format of the report, and the frequency at which the report is generated.

Using Existing Schedule

Schedule Name

Displays all the existing schedule names. You can select an existing schedule for your reports from here.

· Create New Schedule

Schedule Name

Enables you to enter the schedule name while creating a new schedule.

Recipient Email Address

Specifies the email address of the user to whom you want to send the report. You can specify one or more entries, separated by commas. This is a mandatory field.

Report Format

Specifies the format in which you want to schedule the report. The PDF option is selected by default.

Frequency

Specifies the frequency at which you want to schedule the report. The *Hourly* option is selected by default.

Command buttons

The command buttons enable you to perform the following tasks:

Schedule

Schedules the report with the saved or updated template and closes the Schedule Report dialog box.

Cancel

Closes the Schedule Report dialog box while displaying a message to save the schedule report template.

Share Report dialog box

You can share a report with one or more users through email. After you customize a report, you must save the changes before you share the report to ensure that the changes are displayed.

Properties

You can share a report by specifying properties such as the email address of the user, subject of the email, and the format of the report.

Recipient Email Address

Specifies the email address of the user with whom you want to share the report. You can specify one or more entries, separated by commas. This is a mandatory field.

Subject

Specifies the subject of the email. By default, the name of the report is displayed.

Report Format

Specifies the format in which you want to share the report. The *PDF* option is selected by default. If the XHTML format is selected, open the report that is sent by email by using a supported web browser.

Command buttons

The command buttons enable you to perform the following tasks:

Share

Shares the report with the saved configuration and closes the Share Report dialog box.

Cancel

Closes the Share Report dialog box while displaying a message to save the report configuration.

Manage Report Schedules dialog box

You can view, modify, or delete existing report schedules and add new schedules for your reports from the Manage Report Schedules dialog box.

Properties

You can select an existing schedule or create a new schedule for your reports. You can view, modify, or delete your report schedules.

Left pane

Schedule Name

Displays the existing schedules. By clicking on any schedule you can view the schedule details in the right pane. For the first login, there are no existing schedules.

Add Schedule

Displays the new schedule form in the right pane. You can now add a new schedule.

Right pane

Schedule Name

Displays the schedule name.

Recipient Email Address

Displays the email address of the user to whom the report must be sent. You can enter more than one email addresses separated by commas.

Report Format

Displays the format in which the report must be presented. The PDF option is selected as the default report format. If the XHTML format is selected, open the report that is sent by email by using a supported web browser.

Frequency

Displays the frequency at which the report is scheduled.

Report Category

Displays the report category groups. Selecting a report category from the list, displays the reports that belong to that report category in the Available Reports column.

Available Reports

Displays only the reports that belong to the report category selected.

Selected Reports

Displays the selected reports to which you choose to apply the schedule. You can select the required reports from the Available Reports column. At least one report must be selected

Command buttons

The command buttons enable you to perform the following tasks:

Add Schedule

Enables you to add a new schedule.

· Delete Schedule

Enables you to delete the schedule being currently viewed. When you create a new schedule, this button is not available.

Save

Saves the schedule being viewed, modified, or added.

Save and Close

Saves the schedule being viewed, modified, or added and closes the Manage Report Schedules dialog box.

Cancel

Closes the Manage Report Schedules dialog box while displaying a message to save the schedule.

Save Customized Report As dialog box

You can use the Save Customized Report As dialog box to save a report after customizing it.

Properties

You can customize and save a report by specifying properties such as the name and description.

Report Name

Displays the name of the report. The original report name is displayed by default. You can modify the report name as per the customization. Report name cannot exceed 255 characters.

Description

Specifies the description of the customization made on the report. Description cannot exceed 150 characters.

Command buttons

The command buttons enable you to perform the following tasks:

Save

Saves the customized report.

Cancel

Cancels the recent changes and closes the Save Customized Report As dialog box.

Save Custom Report dialog box

You can use the Save Custom Report dialog box to save a custom report after making additional changes to the custom report.

Properties

You can save a custom report by specifying properties such as the description.

Report Name

Displays the name of the custom report. This field cannot be edited.

Description

Specifies the description of the customization made on the custom report. Description cannot exceed 150 characters .

Command buttons

The command buttons enable you to perform the following tasks:

Save

Saves the custom report .

Cancel

Cancels the recent changes and closes the Save Custom Report dialog box.

Import Report dialog box

You can use the Import Report dialog box to import reports from .rptdesign files.

Properties

You can import a report by specifying the report file name, report name, and report description.

Select Report File

Enables you to select the .rptdesign file that you want to import.



In Google Chrome, the fakepath of the .rptdesign file is displayed. In Mozilla Firefox, only the .rptdesign file name is displayed. In Internet Explorer, the complete path of the .rptdesign file is displayed.

Name

Displays the name of the report. This field is empty by default. You can enter a name for the imported report.

Description

Specifies the description of the imported report. The description cannot exceed 150 characters.

· Select database user with report schema role

Select, or create, a database user if you are importing reports from the Storage Automation Store.

Command buttons

The command buttons enable you to perform the following tasks:

Import

Validates the selected .rptdesign file, and imports the report.

Cancel

Cancels the import operation, and closes the Import Report dialog box.

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