Navigating performance workflows in the Unified Manager GUI

OnCommand Unified Manager 9.5

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Navigating performance workflows in the Unified Manager GUI

The Unified Manager interface provides many pages for the collection and display of performance information. You use the left navigation panel to navigate to pages in the GUI, and you use tabs and links on the pages to view and configure information.

You use all of the following pages to monitor and troubleshoot cluster performance information:

- dashboard pages
- storage object inventory pages
- storage object landing pages (including the performance explorer)
- configuration and setup pages
- events pages

A page in Unified Manager might display a large amount of information. To see all of the available information, always scroll to the bottom of the page.

Logging in to the UI

You can log in to the Unified Manager UI using a supported web browser.

Before you begin

- The web browser must meet minimum requirements.

  See the Interoperability Matrix at mysupport.netapp.com/matrix for the complete list of supported browser versions.

- You must have the IP address or URL of the Unified Manager server.

About this task

You are automatically logged out of the session after 24 hours of inactivity.

Steps

1. Enter the URL in your web browser, where `URL` is the IP address or fully qualified domain name (FQDN) of the Unified Manager server:
   - For IPv4: `https://URL/`
   - For IPv6: `https://[URL]/` If the server uses a self-signed digital certificate, the browser might display a warning indicating that the certificate is not trusted. You can either acknowledge the risk to continue the access or install a Certificate Authority (CA) signed digital certificate for server authentication.
2. At the login screen, enter your user name and password.

   If login to the Unified Manager user interface is protected using SAML authentication you will enter your

credentials in the identity provider (IdP) login page instead of the Unified Manager login page.

The Dashboards/Overview page is displayed.

If the Unified Manager server is not initialized, a new browser window displays the first experience wizard. You must enter an initial email recipient to which email alerts will be sent, the SMTP server that will handle email communications, and whether AutoSupport is enabled to send information about your Unified Manager installation to technical support. The Unified Manager UI appears after you complete this information.

Graphical interface and navigational paths

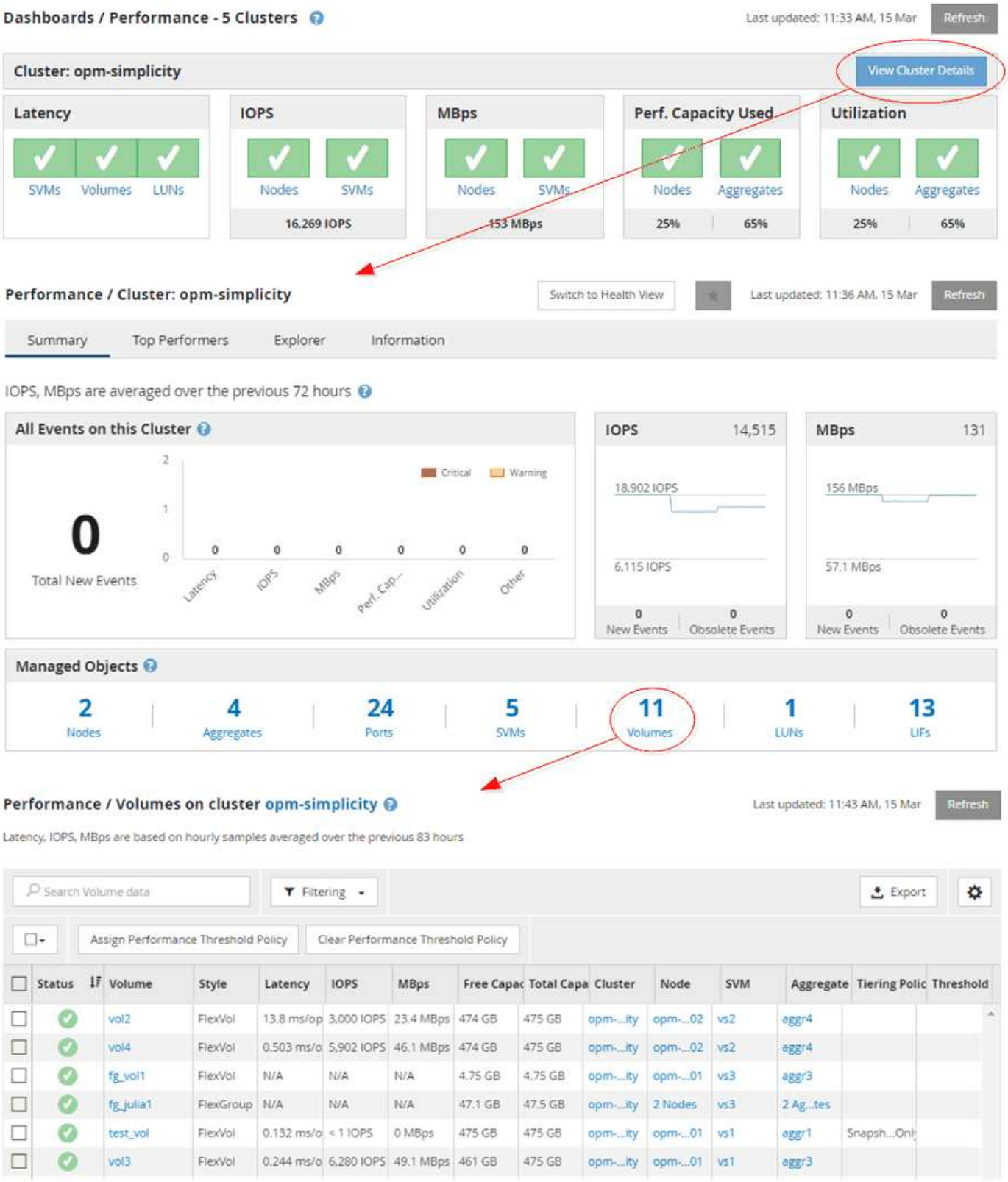
Unified Manager has great flexibility and enables you to accomplish multiple tasks in various ways. There are many navigation paths you will discover as you work in Unified Manager. While not all of the possible combinations of navigations can be shown, you should be familiar with a few of the more common scenarios.

Monitor cluster object navigation

Unified Manager enables you to monitor the performance of all objects in any cluster managed by Unified Manager. Monitoring your storage objects provides you with an overview of cluster and object performance, and includes performance event monitoring. You can view performance and events at a high level, or you can further investigate any details of object performance and performance events.

This is one example of many possible cluster object navigations:

1. From the Dashboards/Performance page, identify a cluster you want to investigate and navigate to the selected cluster's landing page.
2. From the Performance/Cluster Summary page, identify the cluster object you want to investigate and navigate to that object's inventory page. In this example, **Volumes** is selected to display the Performance/Volumes inventory page.



Monitor cluster performance navigation

Unified Manager enables you to monitor the performance of all clusters managed by Unified Manager. Monitoring your clusters provides you with an overview of cluster and object performance and includes performance event monitoring. You can view performance and events at a high level, or you can further investigate any details of

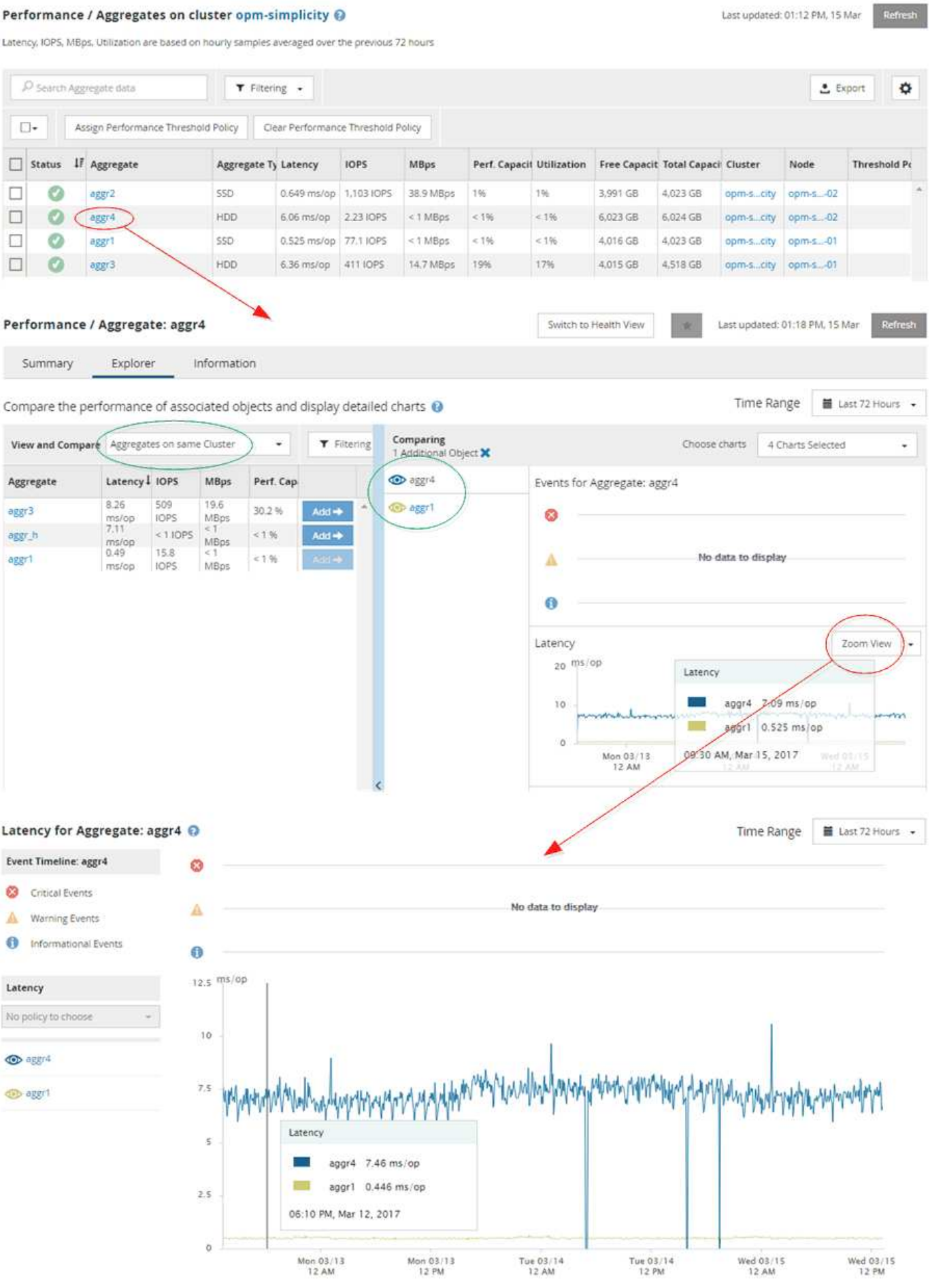
cluster and object performance and performance events.

This is one example of many possible cluster performance navigational paths:

1. In the Dashboards/Performance page, identify a cluster you want to investigate and click **View Cluster Details** to navigate to the selected cluster's landing page.
2. From the Performance/Cluster Summary page, identify the object type you want to investigate and click it to view the object inventory page.

   In this example, **Aggregates** is selected, displaying the Performance/Aggregates inventory page.
3. In the Performance/Aggregates page, identify the aggregate you want to investigate and click that aggregate name to navigate to the Performance/Aggregate Explorer page.
4. Optionally, select other objects to compare with this aggregate in the View and Compare menu, and then add one of the objects to the comparing pane.

   Statistics for both objects will appear in the counter charts for comparison.
5. In the Comparing pane at the right on the Explorer page, click **Zoom View** in one of the counter charts to view details about the performance history for that aggregate.


Performance / Aggregates on cluster opm-simplicity
Last updated: 01:12 PM, 15 Mar
Refresh
Latency, IOPS, MBps, Utilization are based on hourly samples averaged over the previous 72 hours
Search Aggregate data
Filtering
Export
Assign Performance Threshold Policy
Clear Performance Threshold Policy
Status
Aggregate
Aggregate Ty
Latency
IOPS
MBps
Perf. Capaci
Utilization
Free Capacit
Total Capaci
Cluster
Node
Threshold Pc
aggr2 SSD 0.649 ms/op 1,103 IOPS 38.9 MBps 1% 1% 3,991 GB 4,023 GB opm-s...city opm-s...-02
aggr4 HDD 6.06 ms/op 2.23 IOPS < 1 MBps < 1% < 1% 6,023 GB 6,024 GB opm-s...city opm-s...-02
aggr1 SSD 0.525 ms/op 77.1 IOPS < 1 MBps < 1% < 1% 4,016 GB 4,023 GB opm-s...city opm-s...-01
aggr3 HDD 6.36 ms/op 411 IOPS 14.7 MBps 19% 17% 4,015 GB 4,518 GB opm-s...city opm-s...-01
Performance / Aggregate: aggr4
Switch to Health View
Last updated: 01:18 PM, 15 Mar
Refresh
Summary
Explorer
Information
Compare the performance of associated objects and display detailed charts
Time Range
Last 72 Hours
View and Compare
Aggregates on same Cluster
Filtering
Comparing
1 Additional Object
Choose charts
4 Charts Selected
Aggregate
Latency
IOPS
MBps
Perf. Cap
aggr3 8.26 ms/op 509 IOPS 19.6 MBps 30.2 % Add
aggr_h 7.11 ms/op < 1 IOPS < 1 MBps < 1 % Add
aggr1 0.49 ms/op 15.8 IOPS < 1 MBps < 1 % Add
aggr4
aggr1
Events for Aggregate: aggr4
No data to display
Latency
Zoom View
20 ms/op
10
0
Latency
aggr4 7.09 ms/op
aggr1 0.525 ms/op
09:30 AM, Mar 15, 2017
Mon 03/13 12 AM
Latency for Aggregate: aggr4
Time Range
Last 72 Hours
Event Timeline: aggr4
Critical Events
Warning Events
Informational Events
No data to display
Latency
No policy to choose
aggr4
aggr1
12.5 ms/op
10
7.5
5
2.5
0
Latency
aggr4 7.46 ms/op
aggr1 0.446 ms/op
06:10 PM, Mar 12, 2017
Mon 03/13 12 AM
Mon 03/13 12 PM
Tue 03/14 12 AM
Tue 03/14 12 PM
Wed 03/15 12 AM
Wed 03/15 12 PM

Event investigation navigation

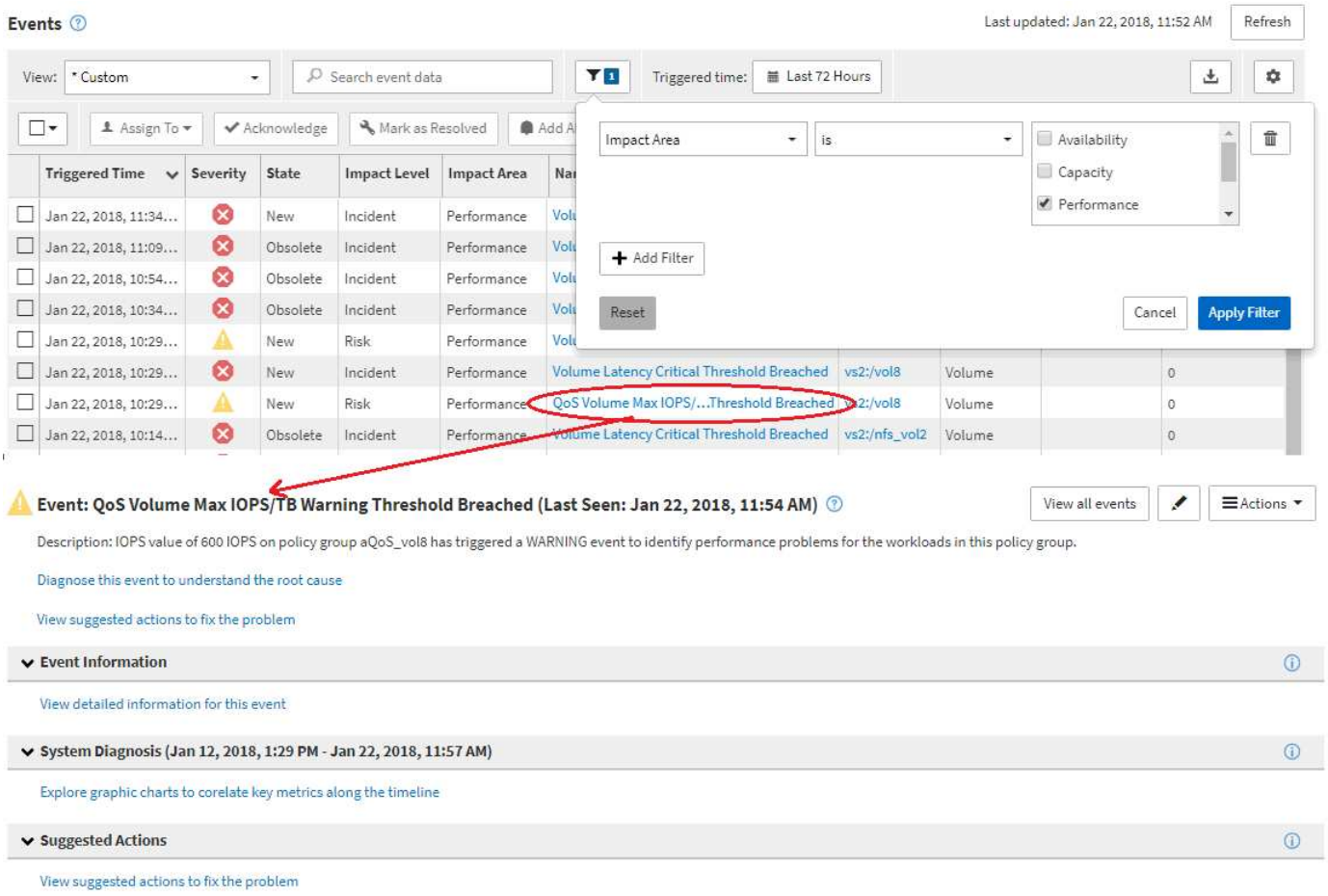
The Unified Manager event detail pages provide you with an in-depth look at any performance event. This is beneficial when investigating performance events, when troubleshooting, and when fine-tuning system performance.

Depending on the type of performance event, you might see one of two types of event detail pages:

- Event details page for user-defined and system-defined threshold policy events
- Event details page for dynamic threshold policy events

This is one example of an event investigation navigation.

1. In the left navigation pane, click **Events**.
2. In the Events inventory page, click the filter button and select **Performance** in the Impact Area to filter the list of events.
3. Click the name of the event that you want to investigate and the Event details page is displayed.
4. Expand any of the areas, such as Suggested Actions, to view more details about the event that may help you resolve the issue.

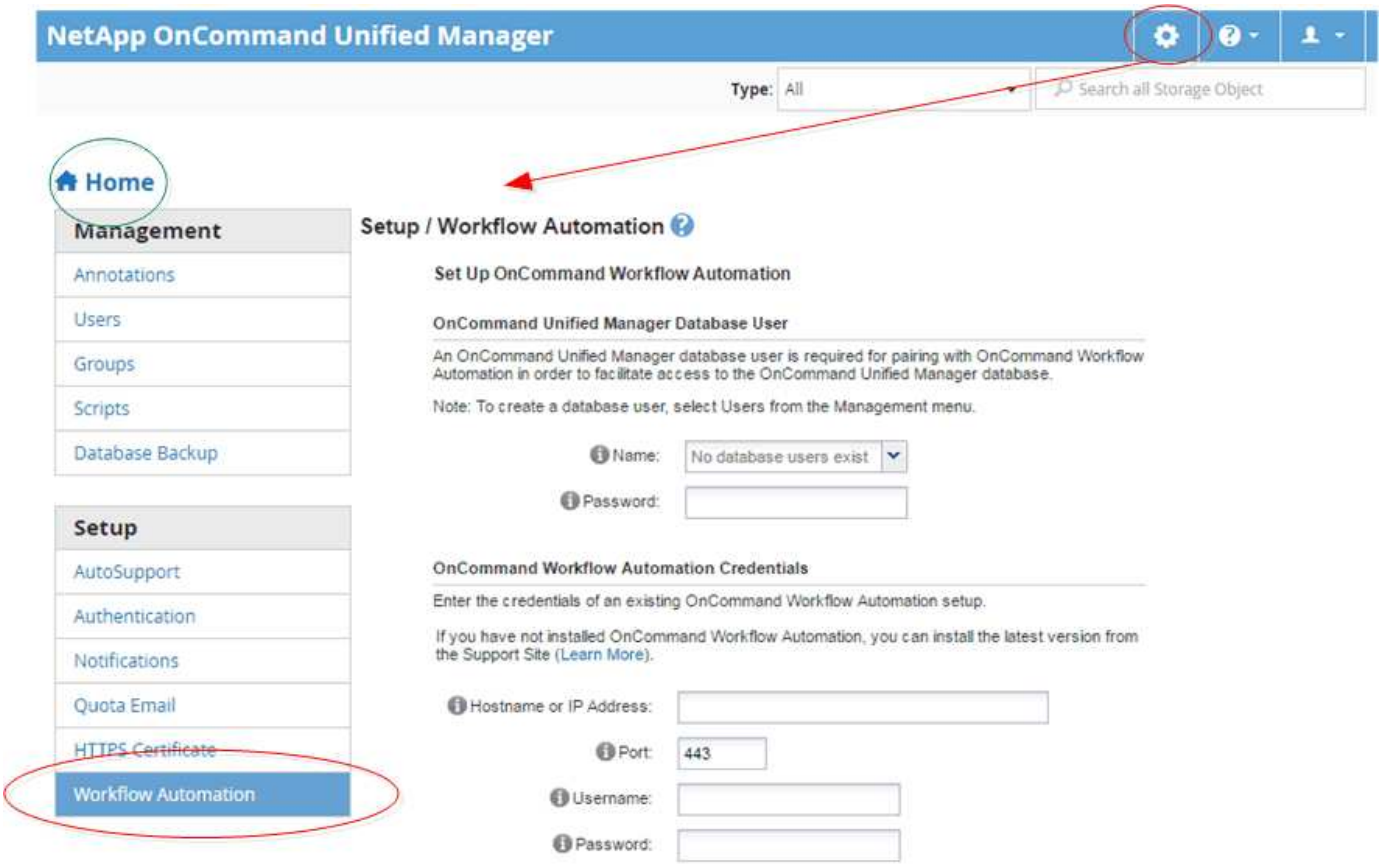


Unified Manager administration navigation

Unified Manager administration functionality enables you to manage users and data sources. You can also accomplish setup tasks such as authentication, AutoSupport,

email, HTTPS certificates, networks, and NTP servers using the Unified Manager Administration page.

This is one example of many possible administration navigational paths. To add or remove a connection to a Workflow Automation server, follow this navigation example:



Click the **Home** icon to return to the main Unified Manager navigation page.

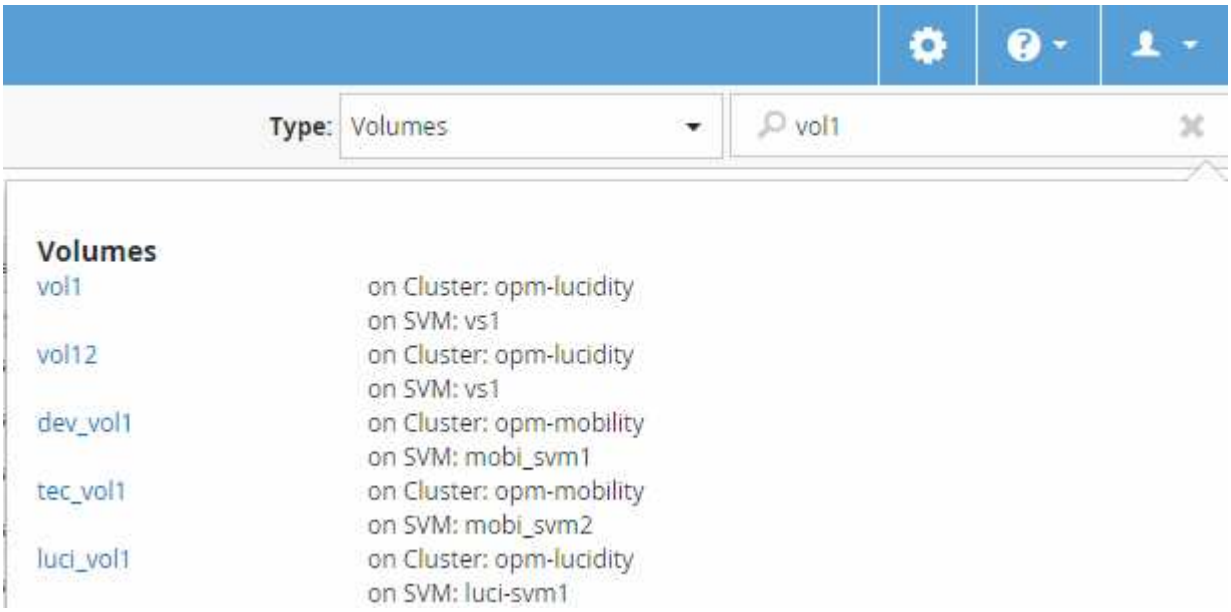
Searching for storage objects

To quickly access a specific object, you can use the **Search all Storage Objects** field at the top-right of the interface. This method of global search across all objects enables you to quickly locate specific objects by type. Search results are sorted by storage object type and you can filter them using the **Type** drop-down menu. A valid search must contain at least three characters.

The global search displays the total number of results, but only the top 20 search results are accessible. Because of this, the global search functionality can be thought of as a shortcut tool for finding specific items if you know the items you want to quickly locate. For complete search results, you can use the search in the object inventory pages and its associated filtering functionality.

You can click the **Type** drop-down box and select **All** to simultaneously search across all objects and events. Alternatively, you can click the **Type** drop-down box to specify the object type. Type any number of characters of the object or event name into the **Search all Storage Objects** field, and then press **Enter** or click **Search All** to display the search results, such as:

- Events: performance event IDs
- Clusters: cluster names
- Nodes: node names
- Aggregates: aggregate names
- SVMs: SVM names
- Volumes: volume names
- LUNs: LUN paths



LIFs and ports are not searchable in the global search bar.

In this example, the **Type** drop-down box has the Volume object type selected. Typing “vol” into the **Search all Storage Objects** field displays a list of all volumes whose names contain these characters. For object searches, you can click any search result to navigate to that object’s Performance Explorer page. For event searches, clicking an item in the search result navigates to the Event Details page.

If the search results display several volumes with the same name, the name of the associated clusters and SVMs are not displayed.

Filtering performance inventory page content

You can filter performance inventory data in Unified Manager to quickly locate data based on specific criteria. You can use filtering to narrow the contents of the Unified Manager pages to show only the results in which you are interested. This provides a very efficient method of displaying only the performance data in which you are interested.

About this task

Use **Filtering** to customize the grid view based on your preferences. Available filter options are based on the object type being viewed in the grid. If filters are currently applied, an asterisk (*) displays at the left of the Filtering control.

Four types of filter parameters are supported.

Parameter	Validation
String (text)	The operators are **contains** and **starts with**.
Number	The operators are **greater than** and **less than**.
Resource	The operators are **name contains** and **name starts with**.
Status	The operators are **is** and **is not**.

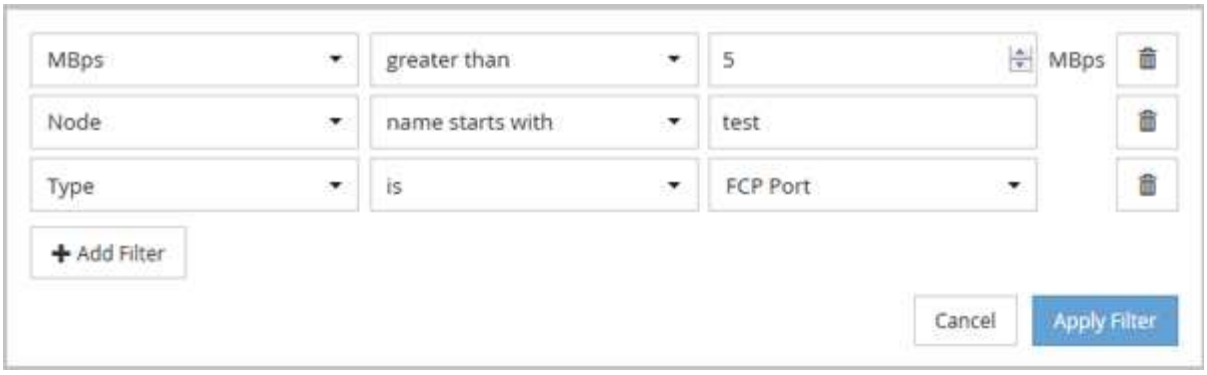
All three fields are required for each filter; the available filters reflect the filterable columns on the current page. The maximum number of filters you can apply is four. Filtered results are based on combined filter parameters. Filtered results apply to all pages in your filtered search, not just the page currently displayed.

You can add filters using the Filtering panel.

1. At the top of the page, click **Filtering**. TheFiltering panel displays.
2. In the Filtering panel, click the left drop-down list, and select an object name: for example, *Cluster*, or a performance counter.
3. Click the center drop-down list, and select the boolean operator **name contains** or **name starts with** if the first selection was an object name. If the first selection was a performance counter, select **greater than** or **less than**. If the first selection was **Status**, select **is** or **is not**.
4. If your search criteria requires a numeric value, up and down arrow buttons display in the field at the right. You can click the up and down arrow buttons to display your desired numeric value.
5. If required, type your non-numeric search criteria in the text field at the right.
6. To add filters, click **Add Filter**. An additional filter field displays. Complete this filter using the process described in the preceding steps. Note that upon adding your fourth filter, the **Add Filter** button no longer displays.
7. Click **Apply Filter**. The filter options are applied to the grid and an asterisk (*) is displayed in the Filtering button.
8. Use the Filtering panel to remove individual filters by clicking the trash icon at the right of the filter to be removed.
9. To remove all filters, click **Reset** at the bottom of the filtering panel.

Filtering example

The illustration shows the Filtering panel with three filters. The **Add Filter** button displays when you have fewer than the maximum of four filters.



After clicking **Apply Filter**, the Filtering panel closes and applies your filters.

Accessing OnCommand System Manager from the Unified Manager interface

When troubleshooting requires that you make configuration changes to a cluster, you can use the System Manager graphical interface instead of the ONTAP command-line interface. System Manager is included with ONTAP as a web service, it is enabled by default, and it is accessible by using a browser.

Before you begin

You must have a cluster user account configured with the `admin` role and the `http`, `ontapi`, and `console` application types.

Steps

1. In the left navigation pane, click **Dashboards** > **Cluster View**.
2. In the **Dashboards/Cluster View** page, select the cluster that you want to manage.

   An overview of the monitoring status, capacity, and performance for that cluster is displayed.

3. Click the **System Manager** icon.

   If the cluster uses a self-signed digital certificate, the browser might display a warning indicating that the certificate is not trusted. You can either acknowledge the risk to continue the access or install a Certificate Authority (CA) signed digital certificate on the cluster for server authentication.

4. Log in to System Manager by using your cluster administrator credentials.

   If login to the System Manager user interface is protected using SAML authentication you will enter your credentials in the identity provider (IdP) login page instead of the System Manager login page.

Adding to, and removing storage objects from, the Favorites list

You can add storage objects to a Favorites list so you can monitor the objects for health, capacity, and performance. You can use object status in the Favorites list to determine

issues and fix them before they become critical. The Favorites list also provides the most recent monitoring status of a storage object. You can remove storage objects from the Favorites list when you no longer require them to be marked as favorite.

About this task

You can add up to 20 clusters, nodes, aggregates, or volumes to the Favorites list. When you add a node to the Favorites list, it is displayed as a cluster.

Steps

1. Go to the **Details** page of the storage object that you want to mark as a favorite.
2. Click the star icon () to add the storage object to the Favorites list.

Adding an aggregate to the Favorites list

1. In the left navigation pane, click **Health** > **Aggregates**.
2. In the Health/Aggregates inventory page, click the aggregate that you want to add to the Favorites list.
3. In the Health/Aggregate details page, click the star icon ().

After you finish

To remove a storage object from the Favorites list, go to the Favorites list page, click the star icon () on the object card you want to remove, and then select the **Remove from Favorites** option.

Bookmarking frequently viewed product pages

You can bookmark frequently accessed product pages from the Unified Manager UI. This enables you to quickly return to these pages. When you view the page later, it displays the latest data.

About this task

You can also copy the link (URL) to the current product page so that you can paste it into an email, or another application, to share it with other people.

Steps

1. Create a bookmark using whatever step is required to bookmark a page in your browser.

   The link for the page is saved with details about the page, but you might want to customize the bookmark text to identify the page: for example, “Unified Manager | Node: node-01” or “Unified Manager | User-defined Threshold Event: IOPS volume1”.

Bookmarking your favorite Help topics

In the Help Favorites tab, you can bookmark Help topics that you use frequently. Help bookmarks provide fast access to your favorite topics.

Steps

1. Navigate to the Help topic that you want to add as a favorite.
2. Click **Favorites**, and then click **Add**.

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