



## **Descriptions of the Performance inventory pages**

OnCommand Unified Manager 9.5

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# Table of Contents

Descriptions of the Performance inventory pages .....	1
Performance/Clusters inventory page .....	1
Performance/Nodes inventory page .....	2
Performance/Aggregates inventory page .....	4
Performance/Volumes inventory page .....	6
Performance/Ports inventory page .....	9
Performance/SVMs inventory page .....	11
Performance/LUNs inventory page .....	12
Namespaces inventory page .....	14
Performance/LIFs inventory page .....	16

# Descriptions of the Performance inventory pages

You use the Performance inventory pages to see a summary of performance information about each of the available storage objects, such as clusters, aggregates, volumes, and so on. You can link to the Performance object detail pages to view detailed information for a particular object.

## Performance/Clusters inventory page

The Performance/Clusters inventory page displays an overview of the performance events, data, and configuration information for each cluster that is monitored by an instance of Unified Manager. This page enables you to monitor the performance of your clusters, and to troubleshoot performance issues and threshold events.

Depending on how you navigate to this page, a different title may be displayed on the page to indicate whether the list has been filtered. For example, when displaying all clusters, the title is “Clusters”. When displaying a subset of clusters that are returned from the Threshold Policies page, the title is “Clusters on which policy XYZ is applied”.

The buttons along the top of the page enable you to perform searches to locate specific data, create and apply filters to narrow the list of displayed data, export the data on the page to a .csv file, and add or remove columns from the page.

By default, objects on the object inventory pages are sorted based on object performance event criticality. Objects with critical events are listed first, and objects with warning events are listed second. This provides an immediate visual indication of issues that must be addressed. The values of the performance counters are based on an average from the previous 72 or more hours of data, as indicated on the page. You can click the refresh button to update the object inventory data.

You can assign performance threshold policies to, or clear threshold policies from, any object on the object inventory pages using the **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons.

### Clusters inventory page columns

The Performance/Clusters inventory page contains the following columns for each cluster.

- **Status**

A healthy object with no active events displays a green check mark icon (✓). If the object has an active event, the event indicator icon identifies the event severity: critical events are red (✗), error events are orange (!), and warning events are yellow (⚠).

- **Cluster**

The name of the cluster. You can click the cluster name to navigate to that cluster’s performance details page.

- **IOPS**

The input/output operations per second on the cluster.

- **MBps**

The throughput on the cluster, measured in megabytes per second.

- **Free Capacity**

The unused storage capacity for this cluster, in gigabytes.

- **Total Capacity**

The total storage capacity for this cluster, in gigabytes.

- **Node Count**

The number of nodes in the cluster. You can click the node count number to navigate to the Performance/Nodes inventory page.

- **Host Name or IP Address**

The host name or IP address (IPv4 or IPv6) of the cluster management LIF.

- **Serial #**

The unique identification number of the cluster.

- **OS Version**

The version of ONTAP software that is installed on the cluster.



If different versions of ONTAP software are installed on the nodes in the cluster, the lowest version number is listed. You can view the ONTAP version that is installed on each node from the Performance/Nodes inventory page.

- **Threshold Policy**

The user-defined performance threshold policy, or policies, that are active on this storage object. You can position your cursor over policy names containing an ellipsis (...) to view the full policy name or the list of assigned policy names. The **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons remain disabled until you select one or more objects by clicking the check boxes located at the far left.

## Performance/Nodes inventory page

The Performance/Nodes inventory page displays an overview of the performance events, data, and configuration information for each node that is being monitored by an instance of Unified Manager. This enables you to quickly monitor the performance of your nodes, and to troubleshoot performance issues and threshold events.

Depending on how you navigate to this page, the top of the page may display a different title to indicate whether the list has been filtered. For example, when displaying all nodes, the title is “Nodes”. When displaying a subset of nodes that is returned from the Cluster Inventory page, the title is “Nodes on cluster: opm-cluster2”.

The buttons along the top of the page enable you to perform searches to locate specific data, create and apply

filters to narrow the list of displayed data, export the data on the page to a .csv file, and add or remove columns from the page.

By default, objects on the object inventory pages are sorted based on object performance event criticality. Objects with critical events are listed first, and objects with warning events are listed second. This provides an immediate visual indication of issues that must be addressed. The values of the performance counters are based on an average from the previous 72 or more hours of data, as indicated on the page. You can click the refresh button to update the object inventory data.

You can assign performance threshold policies to, or clear threshold policies from, any object on the object inventory pages using the **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons.

## Nodes inventory page columns

The Performance/Nodes inventory page contains the following columns for each node:

- **Status**

A healthy object with no active events displays a green check mark icon (✓). If the object has an active event, the event indicator icon identifies the event severity: critical events are red (✗), error events are orange (!), and warning events are yellow (⚠).

- **Node**

The name of the node. You can click the node name to navigate to that node's performance details page.

- **Latency**

The average response time for all I/O requests on the node, expressed in milliseconds per operation.

- **IOPS**

The average input/output operations per second on the node.

- **MBps**

The throughput on the node, measured in megabytes per second.

- **Flash Cache Reads**

The percentage of read operations on the node that are satisfied by cache, instead of being returned from the disk.



Flash Cache data is displayed only for nodes, and only when a Flash Cache module is installed in the node.

- **Performance Capacity Used**

The percentage of performance capacity that is being consumed by the node.



Performance capacity data is available only when the nodes in a cluster are installed with ONTAP 9.0 or later software.

- **Utilization**

Indicates whether the CPU or memory on the node is being overused.

- **Free Capacity**

The unused storage capacity of the node, in gigabytes.

- **Total Capacity**

The total storage capacity of the node, in gigabytes.

- **Cluster**

The cluster to which the node belongs. You can click the cluster's name to navigate to that cluster's details page.

- **Threshold Policy**

The user-defined performance threshold policy, or policies, that are active on this storage object. You can position your cursor over policy names containing an ellipsis (...) to view the full policy name or the list of assigned policy names. The **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons remain disabled until you select one or more objects by clicking the check boxes located at the far left.

## Performance/Aggregates inventory page

The Performance/Aggregates inventory page displays an overview of the performance events, data, and configuration information for each aggregate that is monitored by an instance of Unified Manager. This page enables you to monitor the performance of your aggregates, and to troubleshoot performance issues and threshold events.

Depending on how you navigate to this page, a different title may be displayed on the page to indicate whether the list has been filtered. For example, when displaying all aggregates, the title is “Aggregates”. When displaying a subset of aggregates that are returned from the Threshold Policies page, the title is “Aggregates on which policy aggr\_IOPS is applied”.

The buttons along the top of the page enable you to perform searches to locate specific data, create and apply filters to narrow the list of displayed data, export the data on the page to a .csv file, and add or remove columns from the page.

By default, objects on the object inventory pages are sorted based on object performance event criticality. Objects with critical events are listed first, and objects with warning events are listed second. This provides an immediate visual indication of issues that must be addressed. The values of the performance counters are based on an average from the previous 72 or more hours of data, as indicated on the page. You can click the refresh button to update the object inventory data.

You can assign performance threshold policies to, or clear threshold policies from, any object on the object inventory pages using the **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons.



Root aggregates are not displayed on this page.

## Aggregates inventory page columns

The Performance/Aggregates inventory page contains the following columns for each aggregate.

- **Status**

A healthy object with no active events displays a green check mark icon (✓). If the object has an active event, the event indicator icon identifies the event severity: critical events are red (✗), error events are orange (!), and warning events are yellow (⚠).

- **Aggregate**

You can click the aggregate name to navigate to that aggregate's performance details page.

- **Aggregate Type**

The type of aggregate:

- 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) This column displays “Not Available” when the monitored storage system is running a version of ONTAP earlier than 8.3.

- **Latency**

The average response time for all I/O requests on the aggregate, expressed in milliseconds per operation.

- **IOPS**

The input/output operations per second on the aggregate.

- **MBps**

The throughput on the aggregate, measured in megabytes per second.

- **Performance Capacity Used**

The percentage of performance capacity that is being used by the aggregate.



Performance capacity data is available only when the nodes in a cluster are installed with ONTAP 9.0 or later software.

- **Utilization**

The percentage of the aggregate's disks that are currently being used.

- **Free Capacity**

The unused storage capacity for this aggregate, in gigabytes.

- **Total Capacity**

The total storage capacity for this aggregate, in gigabytes.

- **Inactive Data Reporting**

Whether the inactive data reporting capability is enabled or disabled on this aggregate. When enabled, volumes on this aggregate display the amount of cold data in the Performance/Volumes inventory page.

The value in this field is "N/A" when the version of ONTAP does not support inactive data reporting.

- **Cluster**

The cluster to which the aggregate belongs. You can click the cluster name to navigate to that cluster's details page.

- **Node**

The node to which the aggregate belongs. You can click the node name to navigate to that node's details page.

- **Threshold Policy**

The user-defined performance threshold policy, or policies, that are active on this storage object. You can position your cursor over policy names containing an ellipsis (...) to view the full policy name or the list of assigned policy names. The **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons remain disabled until you select one or more objects by clicking the check boxes located at the far left.

## Performance/Volumes inventory page

The Performance/Volumes inventory page displays an overview of the performance events, counter data, and configuration information for each FlexVol volume and FlexGroup volume that is being monitored by an instance of Unified Manager. This enables you to quickly monitor the performance of your volumes, and to troubleshoot performance issues and threshold events.

Depending on how you navigate to this page, the top of the page may display a different title to indicate

whether the list has been filtered. For example, when displaying all volumes, the title is “Volumes”. When displaying a subset of volumes that is returned from the Threshold Policies page, the title is “Volumes on which policy: vol\_IOPS is applied”.

The buttons along the top of the page enable you to perform searches to locate specific data, create and apply filters to narrow the list of displayed data, export the data on the page to a .csv file, and add or remove columns from the page.

By default, objects on the object inventory pages are sorted based on object performance event criticality. Objects with critical events are listed first, and objects with warning events are listed second. This provides an immediate visual indication of issues that must be addressed. The values of the performance counters are based on an average from the previous 72 or more hours of data, as indicated on the page. You can click the refresh button to update the object inventory data.

 For data protection (DP) volumes, only counter values for user-generated traffic are displayed. When the cluster is installed with a version of ONTAP software prior to 8.3, no counter values are displayed.

You can assign performance threshold policies to, or clear threshold policies from, any object on the object inventory pages using the **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons.

 Root volumes are not displayed on this page.

## Volume inventory page columns

The Performance/Volumes inventory page contains the following columns for each volume:

- **Status**

A healthy object with no active events displays a green check mark icon (✓). If the object has an active event, the event indicator icon identifies the event severity: critical events are red (✗), error events are orange (!), and warning events are yellow (⚠).

- **Volume**

The volume name. You can click the volume name to navigate to the volume's performance details page.

- **Style**

The style of volume; either FlexVol or FlexGroup.

- **Latency**

For FlexVol volumes, this is the average response time of the volume for all I/O requests, expressed in milliseconds per operation. For FlexGroup volumes, this is the average latency of all constituent volumes.

- **IOPS**

For FlexVol volumes, this is the number of input/output operations per second for the volume. For FlexGroup volumes, this is the sum of IOPS for all constituent volumes.

- **MBps**

For FlexVol volumes, this is the throughput on the volume, measured in megabytes per second. For FlexGroup volumes, this is the sum of MBps for all constituent volumes.

- **Free Capacity**

The unused storage capacity of the volume, expressed in gigabytes.

- **Total Capacity**

The total storage capacity of the volume, expressed in gigabytes.

- **Tiering Policy**

The tiering policy set on the volume. The policy takes affect only when the volume is deployed on a FabricPool aggregate. The available policies are:

- None. The data for this volume always remains on the performance tier.
- Snapshot Only. Only Snapshot data is moved automatically to the cloud tier. All other data remains on the performance tier.
- Backup. On data protection volumes, all transferred user data starts in the cloud tier, but later client reads can cause hot data to move back to the performance tier.
- Auto. Data on this volume is moved between the performance tier and the cloud tier automatically when ONTAP determines that the data is “hot” or “cold”.

- **Cold Data**

The size of the user data stored on the volume that is inactive (cold).

The value is listed as “N/A” in the following situations:

- When “inactive data reporting” is disabled on the aggregate on which the volume resides.
- When “inactive data reporting” is enabled, but the minimum number of days for collecting data has not been reached.
- When using the “backup” tiering policy, or when using a version of ONTAP prior to 9.4 (when inactive data reporting is not available).

- **Cloud Recommendation**

Unified Manager runs capacity analysis on each volume to determine if you can improve your storage system’s disk utilization and save space on the performance tier by moving inactive (cold) data to the cloud tier. When the recommendation is “Tier”, hover your cursor over the word **Tier** to view the recommendation. Possible recommendations are:

- Learning. Not enough data has been collected to make a recommendation.
- Tier. Analysis has determined that the volume contains inactive (cold) data and that you should configure the volume to move that data to the cloud tier.
- No Action. Either the volume has very little inactive data, or the volume is already set to the “auto” tiering policy, or the version of ONTAP does not support FabricPool. If you are logged in to Unified Manager with the OnCommand Administrator or Storage Administrator role, when you hover your cursor over the word **Tier** the **Configure Volume** link is available to launch System Manager so you can make the recommended change.

- **Cluster**

The cluster to which the volume belongs. You can click the cluster name to navigate to that cluster's details page.

- **Node**

The name of the node on which the FlexVol volume resides, or the number of nodes on which the FlexGroup volume resides.

For FlexVol volumes, you can click the name to display node details in the Node details page. For FlexGroup volumes, you can click the number to display the nodes that are used in the FlexGroup in the Nodes inventory page.

- **SVM**

The storage virtual machine (SVM) to which the volume belongs. You can click the SVM name to navigate to that SVM's details page.

- **Aggregate**

The name of the aggregate on which the FlexVol volume resides, or the number of aggregates on which the FlexGroup volume resides.

For FlexVol volumes, you can click the name to display aggregate details in the Aggregate details page.

For FlexGroup volumes, you can click the number to display the aggregates that are used in the FlexGroup in the Aggregates inventory page.

- **Threshold Policy**

The user-defined performance threshold policy, or policies, that are active on this storage object. You can position your cursor over policy names containing an ellipsis (...) to view the full policy name or the list of assigned policy names. The **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons remain disabled until you select one or more objects by clicking the check boxes located at the far left.

## Performance/Ports inventory page

The Performance/Ports inventory page displays an overview of the performance events, data, and configuration information for each port that is being monitored by an instance of Unified Manager. This enables you to quickly monitor the performance of your ports, and to troubleshoot performance issues and threshold events.



Performance counter values are displayed for physical ports only. Counter values are not displayed for VLANs or interface groups.

Depending on how you navigate to this page, the top of the page may display a different title to indicate whether the list has been filtered. For example, when displaying all ports, the title is "Ports". When displaying a subset of ports that is returned from the Threshold Policies page, the title is "Ports on which policy: port\_IOPS is applied".

The buttons along the top of the page enable you to perform searches to locate specific data, create and apply filters to narrow the list of displayed data, export the data on the page to a .csv file, and add or remove columns from the page.

By default, objects on the object inventory pages are sorted based on object performance event criticality. Objects with critical events are listed first, and objects with warning events are listed second. This provides an immediate visual indication of issues that must be addressed. The values of the performance counters are based on an average from the previous 72 or more hours of data, as indicated on the page. You can click the refresh button to update the object inventory data.

You can assign performance threshold policies to, or clear threshold policies from, any object on the object inventory pages using the **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons.

## **Ports inventory page columns**

The Performance/Ports inventory page contains the following columns for each port:

- **Status**

A healthy object with no active events displays a green check mark icon (✓). If the object has an active event, the event indicator icon identifies the event severity: critical events are red (✗), error events are orange (!), and warning events are yellow (⚠).

- **Port**

You can click the port name to navigate to that port's performance details page.

- **Type**

The port type is either Network or Fibre Channel Protocol (FCP).

- **MBps**

The throughput on the port, measured in megabytes per second.

- **Utilization**

The percentage of the port's available bandwidth that is currently being used.

- **Cluster**

The cluster to which the port belongs. You can click the cluster name to navigate to that cluster's details page.

- **Node**

The node to which the port belongs. You can click the node name to navigate to that node's details page.

- **Speed**

The maximum data transfer rate for the port.

- **Role**

The network port function: either Data or Cluster. FCP ports cannot have a role, and the role is displayed as N/A.

- **Threshold Policy**

The user-defined performance threshold policy, or policies, that are active on this storage object. You can position your cursor over policy names containing an ellipsis (...) to view the full policy name or the list of assigned policy names. The **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons remain disabled until you select one or more objects by clicking the check boxes located at the far left.

## Performance/SVMs inventory page

The Performance/SVMs inventory page displays an overview of the performance events, data, and configuration information for each storage virtual machine (SVM) that is being monitored by an instance of Unified Manager. This enables you to quickly monitor the performance of your SVMs, and to troubleshoot performance issues and threshold events.

Depending on how you navigate to this page, the top of the page may display a different title to indicate whether the list has been filtered. For example, when displaying all SVMs, the title is “SVMs”. When displaying a subset of SVMs that is returned from the Threshold Policies page, the title is “SVMs on which policy: SVM\_IOPS is applied”.

The buttons along the top of the page enable you to perform searches to locate specific data, create and apply filters to narrow the list of displayed data, export the data on the page to a .csv file, and add or remove columns from the page.

By default, objects on the object inventory pages are sorted based on object performance event criticality. Objects with critical events are listed first, and objects with warning events are listed second. This provides an immediate visual indication of issues that must be addressed. The values of the performance counters are based on an average from the previous 72 or more hours of data, as indicated on the page. You can click the refresh button to update the object inventory data.

You can assign performance threshold policies to, or clear threshold policies from, any object on the object inventory pages using the **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons.



The SVMs that are listed on this page include only Data and Cluster SVMs. Unified Manager does not use or display Admin or Node SVMs.

### SVMs inventory page columns

The Performance/SVMs inventory page contains the following columns for each SVM:

- **Status**

A healthy object with no active events displays a green check mark icon (✓). If the object has an active event, the event indicator icon identifies the event severity: critical events are red (✗), error events are orange (!), and warning events are yellow (⚠).

- **SVM**

You can click the SVM name to navigate to that SVM’s performance details page.

- **Latency**

The average response time for all I/O requests, expressed in milliseconds per operation.

- **IOPS**

The input/output operations per second for the SVM.

- **MBps**

The throughput on the SVM, measured in megabytes per second.

- **Free Capacity**

The unused storage capacity of the SVM, in gigabytes.

- **Total Capacity**

The total storage capacity of the SVM, in gigabytes.

- **Cluster**

The cluster to which the SVM belongs. You can click the cluster name to navigate to that cluster's details page.

- **Threshold Policy**

The user-defined performance threshold policy, or policies, that are active on this storage object. You can position your cursor over policy names containing an ellipsis (...) to view the full policy name or the list of assigned policy names. The **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons remain disabled until you select one or more objects by clicking the check boxes located at the far left.

## Performance/LUNs inventory page

The Performance/LUNs inventory page displays an overview of the performance events, data, and configuration information for each LUN that is being monitored by an instance of Unified Manager. This enables you to quickly monitor the performance of your LUNs, and to troubleshoot performance issues and threshold events.

Depending on how you navigate to this page, the top of the page may display a different title to indicate whether the list has been filtered. For example, when displaying all LUNs, the title is "LUNs". When displaying a subset of LUNs that is returned from the Threshold Policies page, the title is "LUNs on which policy: LUN\_IOPS is applied".

The buttons along the top of the page enable you to perform searches to locate specific data, create and apply filters to narrow the list of displayed data, export the data on the page to a .csv file, and add or remove columns from the page.

By default, objects on the object inventory pages are sorted based on object performance event criticality. Objects with critical events are listed first, and objects with warning events are listed second. This provides an immediate visual indication of issues that must be addressed. The values of the performance counters are based on an average from the previous 72 or more hours of data, as indicated on the page. You can click the refresh button to update the object inventory data.

You can assign performance threshold policies to, or clear threshold policies from, any object on the object

inventory pages using the **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons.

## LUNs inventory page columns

The Performance/LUNs inventory page contains the following columns for each LUN:

- **Status**

A healthy object with no active events displays a green check mark icon (✓). If the object has an active event, the event indicator icon identifies the event severity: critical events are red (✗), error events are orange (!), and warning events are yellow (⚠).

- **LUN**

You can click the LUN name to navigate to that LUN's performance details page.

- **Latency**

The average response time for all I/O requests, expressed in milliseconds per operation.

- **IOPS**

The input/output operations per second for the LUN.

- **MBps**

The throughput on the LUN, measured in megabytes per second.

- **Free Capacity**

The unused storage capacity of the LUN, in gigabytes.

- **Total Capacity**

The total storage capacity of the LUN, in gigabytes.

- **Cluster**

The cluster to which the LUN belongs. You can click the cluster name to navigate to that cluster's details page.

- **Node**

The node to which the LUN belongs. You can click the node name to navigate to that node's details page.

- **SVM**

The storage virtual machine (SVM) to which the LUN belongs. You can click the SVM name to navigate to that SVM's details page.

- **Aggregate**

The aggregate to which the LUN belongs. You can click the aggregate name to navigate to that aggregate's details page.

- **Volume**

The volume to which the LUN belongs. You can click the volume name to navigate to that volume's details page.

- **Threshold Policy**

The user-defined performance threshold policy, or policies, that are active on this storage object. You can position your cursor over policy names containing an ellipsis (...) to view the full policy name or the list of assigned policy names. The **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons remain disabled until you select one or more objects by clicking the check boxes located at the far left.

## Namespaces inventory page

The Namespaces inventory page displays an overview of the performance events, data, and configuration information for each Namespace that is being monitored by an instance of Unified Manager. This enables you to quickly monitor the performance and health of your Namespaces, and to troubleshoot issues and threshold events.

Depending on how you navigate to this page, the top of the page may display a different title to indicate whether the list has been filtered. For example, when displaying all Namespaces, the title is "Namespaces". When displaying a subset of Namespaces that is returned from the Threshold Policies page, the title is "Namespaces on which policy: Namespace\_IOPS is applied".

The buttons along the top of the page enable you to perform searches to locate specific data, create and apply filters to narrow the list of displayed data, export the data on the page to a .csv file, and add or remove columns from the page.

By default, objects on the object inventory pages are sorted based on object performance event criticality. Objects with critical events are listed first, and objects with warning events are listed second. This provides an immediate visual indication of issues that must be addressed. The values of the performance counters are based on an average from the previous 72 or more hours of data, as indicated on the page. You can click the refresh button to update the object inventory data.

You can assign performance threshold policies to, or clear threshold policies from, any object on the object inventory pages using the **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons.

## Namespaces inventory page columns

The Namespaces inventory page contains the following columns for each Namespace:

- **Subsystem**

The subsystem of the Namespace.

- **Status**

A healthy object with no active events displays a green check mark icon (✓). If the object has an active event, the event indicator icon identifies the event severity: critical events are red (✗), error events are orange (!), and warning events are yellow (⚠).

- **Namespace**

You can click the Namespace name to navigate to that Namespace's performance details page.

- **State**

The current state of the Namespace.

- Offline - Read or write access to the Namespace is not allowed.
- Online - Read and write access to the Namespace is allowed.
- NVFail - The Namespace was automatically taken offline due to an NVRAM failure.
- Space Error - The Namespace has run out of space.

- **SVM**

The storage virtual machine (SVM) to which the Namespace belongs. You can click the SVM name to navigate to that SVM's details page.

- **Cluster**

The cluster to which the Namespace belongs. You can click the cluster name to navigate to that cluster's details page.

- **Volume**

The volume to which the Namespace belongs. You can click the volume name to navigate to that volume's details page.

- **Total Capacity**

The total storage capacity of the Namespace, in gigabytes.

- **Free Capacity**

The unused storage capacity of the Namespace, in gigabytes.

- **IOPS**

The input/output operations per second for the Namespace.

- **Latency**

The average response time for all I/O requests on the Namespace, expressed in milliseconds per operation.

- **MBps**

The throughput on the Namespace, measured in megabytes per second.

- **Threshold Policy**

The user-defined performance threshold policy, or policies, that are active on this storage object. You can position your cursor over policy names containing an ellipsis (...) to view the full policy name or the list of assigned policy names. The **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons remain disabled until you select one or more objects by clicking the check boxes located at

the far left.

## Performance/LIFs inventory page

The Performance/LIFs inventory page displays an overview of the performance events, data, and configuration information for each LIF that is being monitored by this instance of Unified Manager. This page enables you to quickly monitor the performance of your LIFs, and to troubleshoot performance issues and threshold events.

Depending on how you navigate to the Performance/LIFs inventory page, the top of the page may display a different title to indicate whether the list has been filtered. For example, when displaying all LIFs, the title is “LIFs”. When displaying a subset of LIFs that is returned from the Threshold Policies page, the title is “LIFs on which policy: LIF\_IOPS is applied”.

The buttons along the top of the page enable you to perform searches to locate specific data, create and apply filters to narrow the list of displayed data, export the data on the page to a .csv file, and add or remove columns from the page.

By default, objects on the object inventory pages are sorted based on object performance event criticality. Objects with critical events are listed first, and objects with warning events are listed second. This provides an immediate visual indication of issues that must be addressed. The values of the performance counters are based on an average from the previous 72 or more hours of data, as indicated on the page. You can click the refresh button to update the object inventory data.

You can assign performance threshold policies to, or clear threshold policies from, any object on the object inventory pages using the **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons.

 The LIFs that are listed on the Performance/LIFs inventory page include Data LIFs, Cluster LIFs, Node Management LIFs, and Intercluster LIFs. Unified Manager does not use or display System LIFs.

### LIFs inventory page columns

The Performance/LIFs inventory page contains the following columns for each LIF.

- **Status**

A healthy object with no active events displays a green check mark icon (✓). If the object has an active event, the event indicator icon identifies the event severity: critical events are red (✗), error events are orange (⚠), and warning events are yellow (⚠).

- **LIF**

You can click the LIF name to navigate to the performance details page of that LIF.

- **Type**

The LIF type: Network (iSCSI, NFS, CIFS), FCP, or NVMe FCP.

- **Latency**

The average response time for all I/O requests, expressed in milliseconds per operation. Latency is not

applicable to NFS LIFs and CIFS LIFs, and is displayed as N/A for these types.

- **IOPS**

The input/output operations per second. IOPS is not applicable to NFS LIFs and CIFS LIFs, and is displayed as N/A for these types.

- **MBps**

The throughput on the LIF, measured in megabytes per second.

- **Cluster**

The cluster to which the LIF belongs. You can click the cluster's name to navigate to that cluster's details page.

- **SVM**

The storage virtual machine to which the LIF belongs. You can click the SVM name to navigate to that SVM's details page.

- **Home Location**

The home location for the LIF, displayed as node name and port name, separated by a colon (:). If the location is displayed with an ellipsis (...), you can position your cursor over the location name to view the full location.

- **Current Location**

The current location for the LIF, displayed as node name and port name, separated by a colon (:). If the location is displayed with an ellipsis (...), you can position your cursor over the location name to view the full location.

- **Role**

The LIF role: Data, Cluster, Node Management, or Intercluster.

- **Threshold Policy**

The user-defined performance threshold policy, or policies, that are active on this storage object. You can position your cursor over policy names containing an ellipsis (...) to view the full policy name or the list of assigned policy names. The **Assign Performance Threshold Policy** and **Clear Performance Threshold Policy** buttons remain disabled until you select one or more objects by clicking the check boxes located at the far left.

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