



Managing events

OnCommand Unified Manager 9.5

NetApp

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Managing events

Events help you to identify issues in the clusters that are monitored.

What health events are

Health events are notifications that are generated automatically when a predefined condition occurs or when an object crosses a health threshold. These events enable you to take action to prevent issues that can lead to poor performance and system unavailability. Events include an impact area, severity, and impact level.

Health events are categorized by the type of impact area such as availability, capacity, configuration, or protection. Events are also assigned a severity type and impact level that assist you in determining if immediate action is required.

You can configure alerts to send notification automatically when specific events or events of a specific severity occur.

Obsolete, resolved, and informational events are automatically logged and retained for a default of 180 days.

It is important that you take immediate corrective action for events with severity level Error or Critical.

What performance events are

Performance events are incidents related to workload performance on a cluster. They help you identify workloads with slow response times. Together with health events that occurred at the same time, you can determine the issues that might have caused, or contributed to, the slow response times.

When Unified Manager detects multiple occurrences of the same event condition for the same cluster component, it treats all occurrences as a single event, not as separate events.

What happens when an event is received

When Unified Manager receives an event, it is displayed in the Dashboards/Overview page, in the Summary and Explorer tabs of the Performance/Cluster page, in the Events inventory page, and in the object-specific inventory page (for example, the Health/Volumes inventory page).

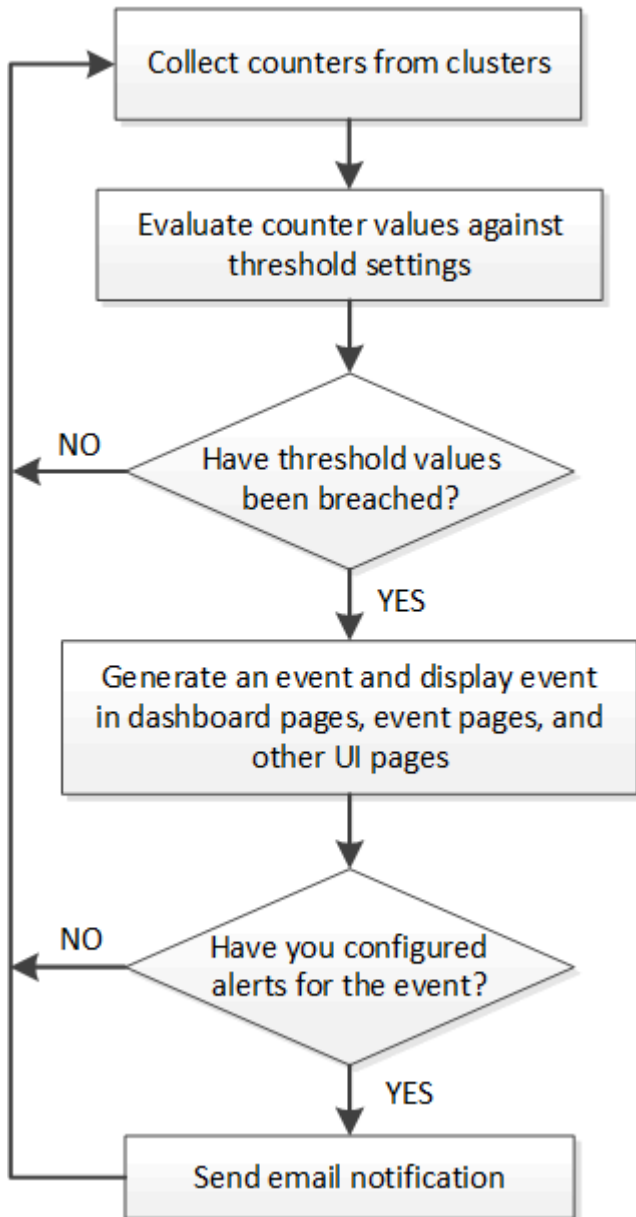
When Unified Manager detects multiple continuous occurrences of the same event condition for the same cluster component, it treats all occurrences as a single event, not as separate events. The duration of the event is incremented to indicate that the event is still active.

Depending on how you configure settings in the Configuration/Alerting page, you can notify other users about these events. The alert causes the following actions to be initiated:

- An email about the event can be sent to all Unified Manager Administrator users.
- The event can be sent to additional email recipients.

- An SNMP trap can be sent to the trap receiver.
- A custom script can be executed to perform an action.

This workflow is shown in the following diagram.



Configuration changes detected by Unified Manager

Unified Manager monitors your clusters for configuration changes to help you determine whether a change might have caused or contributed to a performance event. The Performance Explorer pages display a change event icon (●) to indicate the date and time when the change was detected.

You can review the performance charts in the Performance Explorer pages and in the Performance/Volume Details page to see whether the change event impacted the performance of the selected cluster object. If the change was detected at or around the same time as a performance event, the change might have contributed to the issue, which caused the event alert to trigger.

Unified Manager can detect the following change events, which are categorized as Informational events:

- A volume moves between aggregates.

Unified Manager can detect when the move is in progress, completed, or failed. If Unified Manager is down during a volume move, when it is back up it detects the volume move and displays a change event for it.

- The throughput (MBps or IOPS) limit of a QoS policy group that contains one or more monitored workloads changes.

Changing a policy group limit can cause intermittent spikes in the latency (response time), which might also trigger events for the policy group. The latency gradually returns back to normal and any events caused by the spikes become obsolete.

- A node in an HA pair takes over or gives back the storage of its partner node.

Unified Manager can detect when the takeover, partial takeover, or giveback operation has been completed. If the takeover is caused by a panicked node, Unified Manager does not detect the event.

- An ONTAP upgrade or revert operation is completed successfully.

The previous version and new version are displayed.

Configuring event retention settings

You can specify the number of days an event is retained in the Unified Manager server before it is automatically deleted. Only events that are resolved, obsolete, or of type Information are deleted. You can also specify the frequency with which these events are deleted or you can also manually delete the events.

Before you begin

You must have the OnCommand Administrator role to change the event settings.

About this task

Retaining events for more than 180 days affects the server performance and is not recommended. The lower limit for the event retention period is 7 days; there is no upper limit.

Steps

1. In the left navigation pane, click **Configuration > Manage Events**.
2. In the **Configuration/Manage Events** page, click the **Event Retention Settings** button.
3. Configure the appropriate settings in the **Event Retention Settings** dialog box.
4. Click **Save and Close**.

Configuring event notification settings

You can configure Unified Manager to send alert notifications when an event is generated or when an event is assigned to a user. You can configure the SMTP server that is used

to send the alert, and you can set various notification mechanisms—for example, alert notifications can be sent as emails or SNMP traps.

Before you begin

You must have the following information:


- Email address from which the alert notification is sent

The email address appears in the “From” field in sent alert notifications. If the email cannot be delivered for any reason, this email address is also used as the recipient for undeliverable mail.

- SMTP server host name, and the user name and password to access the server
- SNMP version, trap destination host IP address, outbound trap port, and the community to configure the SNMP trap

You must have the OnCommand Administrator or Storage Administrator role.

Steps

1. In the toolbar, click , and then click **Notifications** in the left Setup menu.
2. In the **Setup/Notifications** page, configure the appropriate settings and click **Save**.

Notes:

- If the From Address is pre-filled with the address “OnCommand@localhost.com”, you should change it to a real, working email address to make sure that all email notifications are delivered successfully.
- If the host name of the SMTP server cannot be resolved, you can specify the IP address (IPv4 or IPv6) of the SMTP server instead of the host name.

What Event Management System events are

The Event Management System (EMS) collects event data from different parts of the ONTAP kernel and provides event forwarding mechanisms. These ONTAP events can be reported as EMS events in Unified Manager. Centralized monitoring and management eases configuration of critical EMS events and alert notifications based on these EMS events.

The Unified Manager address is added as a notification destination to the cluster when you add the cluster to Unified Manager. An EMS event is reported as soon as the event occurs in the cluster.

There are two methods for receiving EMS events in Unified Manager:

- A certain number of important EMS events are reported automatically.
- You can subscribe to receive individual EMS events.

The EMS events that are generated by Unified Manager are reported differently depending on the method in which the event was generated:

Functionality	Automatic EMS messages	Subscribed EMS messages
Available EMS events	Subset of EMS events	All EMS events
EMS message name when triggered	Unified Manager event name (converted from EMS event name)	Non-specific in the format "Error EMS received". The detailed message provides the dot-notation format of the actual EMS event
Messages received	As soon as the cluster has been discovered	After adding each required EMS event to Unified Manager, and after the next 15 minute polling cycle
Event life cycle	Same as other Unified Manager events: New, Acknowledged, Resolved, and Obsolete states	The EMS event is made obsolete after the cluster is refreshed, after 15 minutes, from when the event was created
Captures events during Unified Manager downtime	Yes, when the system starts up it communicates with each cluster to acquire missing events	No
Event details	Suggested corrective actions are imported directly from ONTAP to provide consistent resolutions	Corrective actions not available in Event Details page



Some of the new automatic EMS events are Informational events that indicate that a previous event has been resolved. For example, the "FlexGroup Constituents Space Status All OK" Informational event indicates that the "FlexGroup Constituents Have Space Issues" Error event has been resolved. Informational events cannot be managed using the same event life cycle as other event severity types, however, the event is obsoleted automatically if the same volume receives another "Space Issues" Error event.

EMS events that are added automatically to Unified Manager

When using Unified Manager 9.4 or greater software, the following ONTAP EMS events are added automatically to Unified Manager. These events will be generated when triggered on any cluster that Unified Manager is monitoring.

The following EMS events are available when monitoring clusters running ONTAP 9.5 or greater software:

Unified Manager Event name	EMS Event name	Affected resource	ONTAP severity
Object-store Access Denied for Aggregate Relocation	arl.netra.ca.check.failed	Aggregate	Error

Unified Manager Event name	EMS Event name	Affected resource	ONTAP severity
Object-store Access Denied for Aggregate Relocation During Storage Failover	gb.netra.ca.check.failed	Aggregate	Error
FabricPool Space Nearly Full	fabricpool.nearly.full	Cluster	Error
NVMe-oF Grace Period Started	nvmf.graceperiod.start	Cluster	Warning
NVMe-oF Grace Period Active	nvmf.graceperiod.active	Cluster	Warning
NVMe-oF Grace Period Expired	nvmf.graceperiod.expired	Cluster	Warning
LUN Destroyed	lun.destroy	LUN	Information
Cloud AWS MetaDataConnFail	cloud.aws.metadataConnFail	Node	Error
Cloud AWS IAMCredsExpired	cloud.aws.iamCredsExpired	Node	Error
Cloud AWS IAMCredsInvalid	cloud.aws.iamCredsInvalid	Node	Error
Cloud AWS IAMCredsNotFound	cloud.aws.iamCredsNotFound	Node	Error
Cloud AWS IAMCredsNotInitialized	cloud.aws.iamNotInitialized	Node	Information
Cloud AWS IAMRoleInvalid	cloud.aws.iamRoleInvalid	Node	Error
Cloud AWS IAMRoleNotFound	cloud.aws.iamRoleNotFound	Node	Error
Objstore Host Unresolvable	objstore.host.unresolvable	Node	Error
Objstore InterClusterLifDown	objstore.interclusterlifDown	Node	Error

Unified Manager Event name	EMS Event name	Affected resource	ONTAP severity
Request Mismatch Object-store Signature	osc.signatureMismatch	Node	Error
One of NFSv4 Pools Exhausted	Nblade.nfsV4PoolExhaust	Node	Critical
QoS Monitor Memory Maxed	qos.monitor.memory.maxed	Node	Error
QoS Monitor Memory Abated	qos.monitor.memory.abated	Node	Information
NVMeNS Destroy	NVMeNS.destroy	Namespace	Information
NVMeNS Online	NVMeNS.offline	Namespace	Information
NVMeNS Offline	NVMeNS.online	Namespace	Information
NVMeNS Out of Space	NVMeNS.out.of.space	Namespace	Warning
Synchronous Replication Out Of Sync	sms.status.out.of.sync	SnapMirror relationship	Warning
Synchronous Replication Restored	sms.status.in.sync	SnapMirror relationship	Information
Synchronous Replication Auto Resync Failed	sms.resync.attempt.failed	SnapMirror relationship	Error
Many CIFS Connections	Nblade.cifsManyAuths	SVM	Error
Max CIFS Connection Exceeded	Nblade.cifsMaxOpenSameFile	SVM	Error
Max Number of CIFS Connection Per User Exceeded	Nblade.cifsMaxSessPerUserConn	SVM	Error
CIFS NetBIOS Name Conflict	Nblade.cifsNbNameConflict	SVM	Error
Attempts to Connect Nonexistent CIFS Share	Nblade.cifsNoPrivShare	SVM	Critical

Unified Manager Event name	EMS Event name	Affected resource	ONTAP severity
CIFS Shadow Copy Operation Failed	cifs.shadowcopy.failure	SVM	Error
Virus Found By AV Server	Nblade.vscanVirusDetected	SVM	Error
No AV Server Connection for Virus Scan	Nblade.vscanNoScannerConn	SVM	Critical
No AV Server Registered	Nblade.vscanNoRegdScanner	SVM	Error
No Responsive AV Server Connection	Nblade.vscanConnInactive	SVM	Information
AV Server too Busy to Accept New Scan Request	Nblade.vscanConnBackPressure	SVM	Error
Unauthorized User Attempt to AV Server	Nblade.vscanBadUserPrivAccess	SVM	Error
FlexGroup Constituents Have Space Issues	flexgroup.constituents.have.space.issues	Volume	Error
FlexGroup Constituents Space Status All OK	flexgroup.constituents.space.status.all.ok	Volume	Information
FlexGroup Constituents Have Inodes Issues	flexgroup.constituents.have.inodes.issues	Volume	Error
FlexGroup Constituents Inodes Status All OK	flexgroup.constituents.inodes.status.all.ok	Volume	Information
Volume Logical Space Nearly Full	monitor.vol.nearFull	Volume	Warning
Volume Logical Space Full	monitor.vol.full	Volume	Error
Volume Logical Space Normal	monitor.vol.one.ok	Volume	Information
WAFL Volume AutoSize Fail	wافل.vol.autoSize.fail	Volume	Error

Unified Manager Event name	EMS Event name	Affected resource	ONTAP severity
WAFI Volume AutoSize Done	wafI.vol.autoSize.done	Volume	Information

Subscribing to ONTAP EMS events

You can subscribe to receive Event Management System (EMS) events that are generated by systems that are installed with ONTAP software. A subset of EMS events are reported to Unified Manager automatically, but additional EMS events are reported only if you have subscribed to these events.

Before you begin

Do not subscribe to EMS events that are already added to Unified Manager automatically as this can cause confusion when receiving two events for the same issue.

About this task

You can subscribe to any number of EMS events. All the events to which you subscribe are validated, and only the validated events are applied to the clusters you are monitoring in Unified Manager. The *ONTAP 9 EMS Event Catalog* provides detailed information for all of the EMS messages for the specified version of ONTAP 9 software. Locate the appropriate version of the *EMS Event Catalog* from the ONTAP 9 Product Documentation page for a list of the applicable events.

[ONTAP 9 Product Library](#)

You can configure alerts for the ONTAP EMS events to which you subscribe, and you can create custom scripts to be executed for these events.



If you do not receive the ONTAP EMS events to which you have subscribed, there might be an issue with the DNS configuration of the cluster which is preventing the cluster from reaching the Unified Manager server. To resolve this issue, the cluster administrator must correct the DNS configuration of the cluster, and then restart Unified Manager. Doing so will flush the pending EMS events to the Unified Manager server.

Steps

1. In the left navigation pane, click **Configuration > Manage Events**.
2. In the **Configuration/Manage Events** page, click the **Subscribe to EMS events** button.
3. In the **Subscribe to EMS events** dialog box, enter the name of the ONTAP EMS event to which you want to subscribe.

To view the names of the EMS events to which you can subscribe, from the ONTAP cluster shell, you can use the `event route show` command (prior to ONTAP 9) or the `event catalog show` command (ONTAP 9 or later). See Knowledgebase Answer 1072320 for detailed instructions for identifying individual EMS events.

[How to configure and receive alerts from ONTAP EMS Event Subscription in Active IQ Unified Manager](#)

4. Click **Add**.

The EMS event is added to the Subscribed EMS events list, but the Applicable to Cluster column displays the status as “Unknown” for the EMS event that you added.

5. Click **Save and Close** to register the EMS event subscription with the cluster.

6. Click **Subscribe to EMS events** again.

The status “Yes” appears in the Applicable to Cluster column for the EMS event that you added.

If the status is not “Yes”, check the spelling of the ONTAP EMS event name. If the name is entered incorrectly, you must remove the incorrect event, and then add the event again.

After you finish

When the ONTAP EMS event occurs, the event is displayed on the Events page. You can select the event to view details about the EMS event in the Event details page. You can also manage the disposition of the event or create alerts for the event.

Viewing event details

You can view details about an event that is triggered by Unified Manager to take corrective action. For example, if there is a health event Volume Offline, you can click that event to view the details and perform corrective actions.

Before you begin

You must have the Operator, OnCommand Administrator, or Storage Administrator role.

About this task

The event details include information such as the source of the event, cause of the event, and any notes related to the event.

Steps

1. In the left navigation pane, click **Events**.
2. In the **Events** inventory page, click the event name for which you want to view the details.

The event details are displayed in the Event details page.

Viewing unassigned events

You can view unassigned events and then assign each of them to a user who can resolve them.

Before you begin

You must have the Operator, OnCommand Administrator, or Storage Administrator role.

Steps

1. In the left navigation pane, click **Events**.

By default, New and Acknowledged events are displayed on the Events inventory page.

2. From the **Filters** pane, select the **Unassigned** filter option in the **Assigned To** area.

Acknowledging and resolving events

You should acknowledge an event before you start working on the issue that generated the event so that you do not continue to receive repeat alert notifications. After you take corrective action for a particular event, you should mark the event as resolved.

Before you begin

You must have the Operator, OnCommand Administrator, or Storage Administrator role.

About this task

You can acknowledge and resolve multiple events simultaneously.



You cannot acknowledge Information events.

Steps

1. In the left navigation pane, click **Events**.
2. From the events list, perform the following actions to acknowledge the events:

If you want to...	Do this...
Acknowledge and mark a single event as resolved	<ol style="list-style-type: none">a. Click the event name.b. From the Event details page, determine the cause of the event.c. Click Acknowledge.d. Take appropriate corrective action.e. Click Mark As Resolved.
Acknowledge and mark multiple events as resolved	<ol style="list-style-type: none">a. Determine the cause of the events from the respective Event details page.b. Select the events.c. Click Acknowledge.d. Take appropriate corrective actions.e. Click Mark As Resolved.

After the event is marked resolved, the event is moved to the resolved events list.

3. In the **Notes and Updates** area, add a note about how you addressed the event, and then click **Post**.

Assigning events to specific users


You can assign unassigned events to yourself or to other users, including remote users. You can reassign assigned events to another user, if required. For example, when frequent issues occur on a storage object, you can assign the events for these issues to the user who manages that object.

Before you begin

- The user's name and email ID must be configured correctly.
- You must have the Operator, OnCommand Administrator, or Storage Administrator role.

Steps

1. In the left navigation pane, click **Events**.
2. In the **Events** inventory page, select one or more events that you want to assign.
3. Assign the event by choosing one of the following options:

If you want to assign the event to...	Then do this...
Yourself	Click Assign To > Me .
Another user	<div><div><div>a. Click Assign To > Another user.</div><div>b. In the Assign Owner dialog box, enter the user name, or select a user from the drop-down list.</div><div>c. Click Assign.</div></div><div>An email notification is sent to the user.</div><div><div></div><div>If you do not enter a user name or select a user from the drop-down list, and click Assign, the event remains unassigned.</div></div></div>

Adding and reviewing notes about an event

While addressing events, you can add information about how the issue is being addressed by using the Notes and Updates area in the Event details page. This information can enable another user who is assigned to address the event. You can also view information that was added by the user who last addressed an event, based on the recent timestamp.

Before you begin

You must have the Operator, OnCommand Administrator, or Storage Administrator role.

Steps

1. In the left navigation pane, click **Events**.
2. From the **Events** inventory page, click the event for which you want to add the event-related information.
3. In the **Event** details page, add the required information in the **Notes and Updates** area.
4. Click **Post**.

Disabling or enabling events

All events are enabled by default. You can disable events globally to prevent the generation of notifications for events that are not important in your environment. You can enable events that are disabled when you want to resume receiving notifications for them.

Before you begin

You must have the OnCommand Administrator or Storage Administrator role.

About this task

When you disable events, the previously generated events in the system are marked obsolete, and the alerts that are configured for these events are not triggered. When you enable events that are disabled, the notifications for these events are generated starting with the next monitoring cycle.

When you disable an event for an object (for example, the `vol offline` event), and then later you enable the event, Unified Manager does not generate new events for objects that went offline when the event was in the disabled state. Unified Manager generates a new event only when there is a change in the object state after the event was reenabled.

Steps

1. In the left navigation pane, click **Configuration > Manage Events**.
2. In the **Configuration/Manage Events** page, disable or enable events by choosing one of the following options:

If you want to...	Then do this...
Disable events	<ol style="list-style-type: none"> Click Disable. In the Disable Events dialog box, select the event severity. In the Matching Events column, select the events that you want to disable based on the event severity, and then click the right arrow to move those events to the Disable Events column. Click Save and Close. Verify that the events that you disabled are displayed in the list view of the Configuration/Manage Events page.
Enable events	<ol style="list-style-type: none"> Select the check box for the event, or events, that you want to enable. Click Enable.

What a Unified Manager maintenance window is

You define a Unified Manager maintenance window to suppress events and alerts for a specific timeframe when you have scheduled cluster maintenance and you do not want to receive a flood of unwanted notifications.

When the maintenance window starts, an “Object Maintenance Window Started” event is posted to the Events inventory page. This event is obsoleted automatically when the maintenance window ends.

During a maintenance window the events related to all objects on that cluster are still generated, but they do not appear in any of the UI pages, and no alerts or other types of notification are sent for these events. You can, however, view the events that were generated for all storage objects during a maintenance window by selecting one of the View options on the Events inventory page.

You can schedule a maintenance window to be initiated in the future, you can change the start and end times for a scheduled maintenance window, and you can cancel a scheduled maintenance window.

Scheduling a maintenance window to disable cluster event notifications

If you have a planned downtime for a cluster, for example, to upgrade the cluster or to move one of the nodes, you can suppress the events and alerts that would normally be generated during that timeframe by scheduling a Unified Manager maintenance window.

Before you begin

You must have the OnCommand Administrator or Storage Administrator role.

About this task

During a maintenance window, the events related to all objects on that cluster are still generated, but they do not appear in the event page, and no alerts or other types of notification are sent for these events.

The time you enter for the maintenance window is based on the time at the Unified Manager server.

Steps

- 1. In the left navigation pane, click **Configuration > Cluster Data Sources**.
- 2. In the **Maintenance Mode** column for the cluster, select the slider button and move it to the right.

The calendar window is displayed.

- 3. Select the start and end date and time for the maintenance window and click **Apply**.

The message “Scheduled” appears next to the slider button.

Results

When the start time is reached the cluster goes into maintenance mode and an “Object Maintenance Window Started” event is generated.

Changing or canceling a scheduled maintenance window

If you have configured a Unified Manager maintenance window to occur in the future, you can change the start and end times or cancel the maintenance window from occurring.

Before you begin

You must have the OnCommand Administrator or Storage Administrator role.

About this task

Canceling a currently running maintenance window is useful if you have completed cluster maintenance before the scheduled maintenance window end time and you want to start receiving events and alerts from the cluster again.

Steps

- 1. In the left navigation pane, click **Configuration > Cluster Data Sources**.
- 2. In the **Maintenance Mode** column for the cluster:

If you want to...	Perform this step...
Change the timeframe for a scheduled maintenance window	<ul style="list-style-type: none">a. Click the text “Scheduled” next to the slider button.b. Change the start and/or end date and time and click Apply.

If you want to...	Perform this step...
Extend the length of an active maintenance window	a. Click the text “Active” next to the slider button. b. Change the end date and time and click Apply .
Cancel a scheduled maintenance window	Select the slider button and move it to the left.
Cancel an active maintenance window	Select the slider button and move it to the left.

Viewing events that occurred during a maintenance window

If necessary, you can view the events that were generated for all storage objects during a Unified Manager maintenance window. Most events will appear in the Obsolete state once the maintenance window has completed and all system resources are back up and running.

Before you begin

At least one maintenance window must have completed before any events are available.

About this task

Events that occurred during a maintenance window do not appear on the Events inventory page by default.

Steps

1. In the left navigation pane, click **Events**.

By default, all active (New and Acknowledged) events are displayed on the Events inventory page.

2. From the **View** pane, select the option **All events generated during maintenance**.

The list of events triggered during the last 7 days from all maintenance window sessions and from all clusters are displayed.

3. If there have been multiple maintenance windows for a single cluster, you can click the **Triggered Time** calendar icon and select the period of time for the maintenance window events that you are interested in viewing.

Managing host system resource events

Unified Manager includes a service that monitors resource issues on the host system on which Unified Manager is installed. Issues such as lack of available disk space or lack of memory on the host system may trigger management station events that are displayed as banner messages across the top of the UI.

About this task

Management station events indicate an issue with the host system on which Unified Manager is installed. Examples of management station issues include disk space running low on the host system; Unified Manager missing a regular data collection cycle; and noncompletion, or late completion, of statistics analysis because the next collection poll was initiated.

Unlike all other Unified Manager event messages, these particular management station warning and critical events are displayed in banner messages.

Steps

1. To view management station event information, perform these actions:

If you want to...	Do this...
View details of the event	Click the event banner to display the Event details page that includes suggested solutions for the issue.
View all management station events	<ol style="list-style-type: none">a. In the left navigation pane, click Events.b. In the Filters pane on the Events inventory page, click the box for Management Station in the Source Type list.

Understanding more about events

Understanding the concepts about events helps you to manage your clusters and cluster objects efficiently and to define alerts appropriately.

Event state definitions

The state of an event helps you identify whether an appropriate corrective action is required. An event can be New, Acknowledged, Resolved, or Obsolete. Note that both New and Acknowledged events are considered to be active events.

The event states are as follows:

- **New**

The state of a new event.

- **Acknowledged**

The state of an event when you have acknowledged it.

- **Resolved**

The state of an event when it is marked as resolved.

- **Obsolete**

The state of an event when it is automatically corrected or when the cause of the event is no longer valid.



You cannot acknowledge or resolve an obsolete event.

Example of different states of an event

The following examples illustrate the manual and automatic event state changes.

When the event Cluster Not Reachable is triggered, the event state is New. When you acknowledge the event, the event state changes to Acknowledged. When you have taken an appropriate corrective action, you must mark the event as resolved. The event state then changes to Resolved.

If the Cluster Not Reachable event is generated due to a power outage, then when the power is restored the cluster starts functioning without any administrator intervention. Therefore, the Cluster Not Reachable event is no longer valid, and the event state changes to Obsolete in the next monitoring cycle.

Unified Manager sends an alert when an event is in the Obsolete or Resolved state. The email subject line and email content of an alert provides information about the event state. An SNMP trap also includes information about the event state.

Description of event severity types

Each event is associated with a severity type to help you prioritize the events that require immediate corrective action.

- **Critical**

A problem occurred that might lead to service disruption if corrective action is not taken immediately.

Performance critical events are sent from user-defined thresholds only.

- **Error**

The event source is still performing; however, corrective action is required to avoid service disruption.

- **Warning**

The event source experienced an occurrence that you should be aware of, or a performance counter for a cluster object is out of normal range and should be monitored to make sure it does not reach the critical severity. Events of this severity do not cause service disruption, and immediate corrective action might not be required.

Performance warning events are sent from user-defined, system-defined, or dynamic thresholds.

- **Information**

The event occurs when a new object is discovered, or when a user action is performed. For example, when any storage object is deleted or when there are any configuration changes, the event with severity type Information is generated.

Information events are sent directly from ONTAP when it detects a configuration change.

Description of event impact levels

Each event is associated with an impact level (Incident, Risk, or Event) to help you prioritize the events that require immediate corrective action.

- **Incident**

An incident is a set of events that can cause a cluster to stop serving data to the client and run out of space for storing data. Events with an impact level of Incident are the most severe. Immediate corrective action should be taken to avoid service disruption.

- **Risk**

A risk is a set of events that can potentially cause a cluster to stop serving data to the client and run out of space for storing data. Events with an impact level of Risk can cause service disruption. Corrective action might be required.

- **Event**

An event is a state or status change of storage objects and their attributes. Events with an impact level of Event are informational and do not require corrective action.

Description of event impact areas

Events are categorized into five impact areas (availability, capacity, configuration, performance, and protection) to enable you to concentrate on the types of events for which you are responsible.

- **Availability**

Availability events notify you if a storage object goes offline, if a protocol service goes down, if an issue with storage failover occurs, or if an issue with hardware occurs.

- **Capacity**

Capacity events notify you if your aggregates, volumes, LUNs, or namespaces are approaching or have reached a size threshold, or if the rate of growth is unusual for your environment.

- **Configuration**

Configuration events inform you of the discovery, deletion, addition, removal, or renaming of your storage objects. Configuration events have an impact level of Event and a severity type of Information.

- **Performance**

Performance events notify you of resource, configuration, or activity conditions on your cluster that might adversely affect the speed of data storage input or retrieval on your monitored storage objects.

- **Protection**

Protection events notify you of incidents or risks involving SnapMirror relationships, issues with destination capacity, problems with SnapVault relationships, or issues with protection jobs. Any ONTAP object (especially aggregates, volumes, and SVMs) that host secondary volumes and protection relationships are categorized in the protection impact area.

How object status is computed

Object status is determined by the most severe event that currently holds a New or Acknowledged state. For example, if an object status is Error, then one of the object's events has a severity type of Error. When corrective action has been taken, the event state moves to Resolved.

Sources of performance events

Performance events are issues related to workload performance on a cluster. They help you identify storage objects with slow response times, also known as high latency. Together with other health events that occurred at the same time, you can determine the issues that might have caused, or contributed to, the slow response times.

Unified Manager receives performance events from the following sources:

- **User-defined performance threshold policy events**

Performance issues based on custom threshold values that you have set. You configure performance threshold policies for storage objects; for example, aggregates and volumes, so that events are generated when a threshold value for a performance counter has been breached.

You must define a performance threshold policy and assign it to a storage object to receive these events.

- **System-defined performance threshold policy events**

Performance issues based on threshold values that are system-defined. These threshold policies are included with the installation of Unified Manager to cover common performance problems.

These threshold policies are enabled by default, and you might see events shortly after adding a cluster.

- **Dynamic performance threshold events**

Performance issues that are the result of failures or errors in an IT infrastructure, or from workloads overutilizing cluster resources. The cause of these events might be a simple issue that corrects itself over a period of time or that can be addressed with a repair or configuration change. A dynamic threshold event indicates that volume workloads on an ONTAP system are slow due to other workloads with high usage of shared cluster components.

These thresholds are enabled by default, and you might see events after three days of collecting data from a new cluster.

Dynamic performance event chart details

For dynamic performance events, the System Diagnosis section of the Event details page lists the top workloads with the highest latency or usage of the cluster component that is in contention. The performance statistics are based on the time the performance event was detected up to the last time the event was analyzed. The charts also display historical performance statistics for the cluster component that is in contention.

For example, you can identify workloads with high utilization of a component to determine which workload to

move to a less-utilized component. Moving the workload would reduce the amount of work on the current component, possibly bringing the component out of contention. At the of this section is the time and date range when an event was detected and last analyzed. For active events (new or acknowledged), the last analyzed time continues to update.

The latency and activity charts display the names of the top workloads when you hover your cursor over the chart. Clicking the Workload Type menu at the right of the chart enables you to sort the workloads based on their role in the event, including *sharks*, *bullies*, or *victims*, and displays details about their latency and their usage on the cluster component in contention. You can compare the actual value to the expected value to see when the workload was outside its expected range of latency or usage. See [Workloads monitored by Unified Manager](#).



When you sort by peak deviation in latency, system-defined workloads are not displayed in the table, because latency applies only to user-defined workloads. Workloads with very low latency values are not displayed in the table.

For more information about the dynamic performance thresholds, see [What events are](#). For information about how Unified Manager ranks the workloads and determines the sort order, see [How Unified Manager determines the performance impact for an event](#).

The data in the graphs shows 24 hours of performance statistics prior to the last time the event was analyzed. The actual values and expected values for each workload are based on the time the workload was involved in the event. For example, a workload might become involved in an event after the event was detected, so its performance statistics might not match the values at the time of event detection. By default, the workloads are sorted by peak (highest) deviation in latency.



Because Unified Manager retains a maximum of 30 days of 5-minute historical performance and event data, if the event is more than 30 days old, no performance data is displayed.

- **Workload Sort column**

- **Latency chart**

Displays the impact of the event to the latency of the workload during the last analysis.

- **Component Usage column**

Displays details about the workload usage of the cluster component in contention. In the graphs, the actual usage is a blue line. A red bar highlights the event duration, from the detection time to the last analyzed time. For more information, see [Workload performance measurements](#).



For the network component, because network performance statistics come from activity off the cluster, this column is not displayed.

- **Component Usage**

Displays the history of utilization, in percent, for the network processing, data processing, and aggregate components or the history of activity, in percent, for the QoS policy group component. The chart is not displayed for the network or interconnect components. You can point to the statistics to view the usage statistics at a specific point in time.

- **Total Write MBps History**

For the MetroCluster Resources component only, shows the total write throughput, in megabytes per

second (MBps), for all volume workloads that are being mirrored to the partner cluster in a MetroCluster configuration.

- **Event History**

Displays red-shaded lines to indicate the historic events for the component in contention. For obsolete events, the chart displays events that occurred before the selected event was detected and after it was resolved.

Types of system-defined performance threshold policies

Unified Manager provides some standard threshold policies that monitor cluster performance and generate events automatically. These policies are enabled by default, and they generate warning or information events when the monitored performance thresholds are breached.



System-defined performance threshold policies are not enabled on Cloud Volumes ONTAP, ONTAP Edge, or ONTAP Select systems.

If you are receiving unnecessary events from any system-defined performance threshold policies, you can disable individual policies from the Configuration/Manage Events page.

Node threshold policies

The system-defined node performance threshold policies are assigned, by default, to every node in the clusters being monitored by Unified Manager:

- **Node resources over-utilized**

Identifies situations in which a single node is operating above the bounds of its operational efficiency, and therefore potentially affecting workload latencies. This is a warning event.

For nodes installed with ONTAP 8.3.x and earlier software, it does this by looking for nodes that are using more than 85% of their CPU and RAM resources (node utilization) for more than 30 minutes.

For nodes installed with ONTAP 9.0 and later software, it does this by looking for nodes that are using more than 100% of their performance capacity for more than 30 minutes.

- **Node HA pair over-utilized**

Identifies situations in which nodes in an HA pair are operating above the bounds of the HA pair operational efficiency. This is an informational event.

For nodes installed with ONTAP 8.3.x and earlier software, it does this by looking at the CPU and RAM usage for the two nodes in the HA pair. If the combined node utilization of the two nodes exceeds 140% for more than one hour, then a controller failover will impact workload latencies.

For nodes installed with ONTAP 9.0 and later software, it does this by looking at the performance capacity used value for the two nodes in the HA pair. If the combined performance capacity used of the two nodes exceeds 200% for more than one hour, then a controller failover will impact workload latencies.

- **Node disk fragmentation**

Identifies situations in which a disk or disks in an aggregate are fragmented, slowing key system services and potentially affecting workload latencies on a node.

It does this by looking at certain read and write operation ratios across all aggregates on a node. This policy might also be triggered during SyncMirror resynchronization or when errors are found during disk scrub operations. This is a warning event.



The “Node disk fragmentation” policy analyzes HDD-only aggregates; Flash Pool, SSD, and FabricPool aggregates are not analyzed.

Aggregate threshold policies

The system-defined aggregate performance threshold policy is assigned by default to every aggregate in the clusters being monitored by Unified Manager.

• Aggregate disks over-utilized

Identifies situations in which an aggregate is operating above the limits of its operational efficiency, thereby potentially affecting workload latencies. It identifies these situations by looking for aggregates where the disks in the aggregate are more than 95% utilized for more than 30 minutes. This multicondition policy then performs the following analysis to help determine the cause of the issue:

- Is a disk in the aggregate currently undergoing background maintenance activity?

Some of the background maintenance activities a disk could be undergoing are disk reconstruction, disk scrub, SyncMirror resynchronization, and reparity.

- Is there a communications bottleneck in the disk shelf Fibre Channel interconnect?
- Is there too little free space in the aggregate? A warning event is issued for this policy only if one (or more) of the three subordinate policies are also considered breached. A performance event is not triggered if only the disks in the aggregate are more than 95% utilized.



The “Aggregate disks over-utilized” policy analyzes HDD-only aggregates and Flash Pool (hybrid) aggregates; SSD and FabricPool aggregates are not analyzed.

QoS threshold policies

The system-defined QoS performance threshold policies are assigned to any workload that has a configured ONTAP QoS maximum throughput policy (IOPS, IOPS/TB, or MBps). Unified Manager triggers an event when the workload throughput value is 15% less than the configured QoS value.

• QoS Max IOPS or MBps threshold

Identifies volumes and LUNs that have exceeded their QoS maximum IOPS or MBps throughput limit, and that are affecting workload latency. This is a warning event.

When a single workload is assigned to a policy group, it does this by looking for workloads that have exceeded the maximum throughput threshold defined in the assigned QoS policy group during each collection period for the previous hour.

When multiple workloads share a single QoS policy, it does this by adding the IOPS or MBps of all workloads in the policy and checking that total against the threshold.

- **QoS Peak IOPS/TB or IOPS/TB with Block Size threshold**

Identifies volumes that have exceeded their adaptive QoS peak IOPS/TB throughput limit (or IOPS/TB with Block Size limit), and that are affecting workload latency. This is a warning event.

It does this by converting the peak IOPS/TB threshold defined in the adaptive QoS policy into a QoS maximum IOPS value based on the size of each volume, and then it looks for volumes that have exceeded the QoS max IOPS during each performance collection period for the previous hour.



This policy is applied to volumes only when the cluster is installed with ONTAP 9.3 and later software.

When the “block size” element has been defined in the adaptive QoS policy, the threshold is converted into a QoS maximum MBps value based on the size of each volume. Then it looks for volumes that have exceeded the QoS max MBps during each performance collection period for the previous hour.



This policy is applied to volumes only when the cluster is installed with ONTAP 9.5 and later software.

List of events and severity types

You can use the list of events to become more familiar with event categories, event names, and the severity type of each event that you might see in Unified Manager. Events are listed in alphabetical order by object category.

Aggregate events

Aggregate events provide you with information about the status of aggregates so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

An asterisk (*) identifies EMS events that have been converted to Unified Manager events.

Event name(Trap name)	Impact level	Source type	Severity
Aggregate Offline(ocumEvtAggregateStateOffline)	Incident	Aggregate	Critical
Aggregate Failed(ocumEvtAggregateStateFailed)	Incident	Aggregate	Critical
Aggregate Restricted(ocumEvtAggregateStateRestricted)	Risk	Aggregate	Warning

Event name(Trap name)	Impact level	Source type	Severity
Aggregate Reconstructing(ocumEvtAggregateRaidStateReconstructing)	Risk	Aggregate	Warning
Aggregate Degraded(ocumEvtAggregateRaidStateDegraded)	Risk	Aggregate	Warning
Cloud Tier Partially Reachable(ocumEventCloudTierPartiallyReachable)	Risk	Aggregate	Warning
Cloud Tier Unreachable(ocumEventCloudTierUnreachable)	Risk	Aggregate	Error
MetroCluster Aggregate Left Behind(ocumEvtMetroClusterAggregateLeftBehind)	Risk	Aggregate	Error
MetroCluster Aggregate Mirroring Degraded(ocumEvtMetroClusterAggregateMirrorDegraded)	Risk	Aggregate	Error
Object-store Access Denied for Aggregate Relocation *	Risk	Aggregate	Error
Object-store Access Denied for Aggregate Relocation During Storage Failover *	Risk	Aggregate	Error

Impact area: capacity

Event name(Trap name)	Impact level	Source type	Severity
Aggregate Space Nearly Full(ocumEvtAggregateNearlyFull)	Risk	Aggregate	Warning

Event name(Trap name)	Impact level	Source type	Severity
Aggregate Space Full(ocumEvtAggregateFull)	Risk	Aggregate	Error
Aggregate Days Until Full(ocumEvtAggregateDaysUntilFullSoon)	Risk	Aggregate	Error
Aggregate Overcommitted(ocumEvtAggregateOvercommitted)	Risk	Aggregate	Error
Aggregate Nearly Overcommitted(ocumEvtAggregateAlmostOvercommitted)	Risk	Aggregate	Warning
Aggregate Snapshot Reserve Full(ocumEvtAggregateSnapshotReserveFull)	Risk	Aggregate	Warning
Aggregate Growth Rate Abnormal(ocumEvtAggregateGrowthRateAbnormal)	Risk	Aggregate	Warning

Impact area: configuration

Event name(Trap name)	Impact level	Source type	Severity
Aggregate Discovered(Not applicable)	Event	Aggregate	Information
Aggregate Renamed(Not applicable)	Event	Aggregate	Information
Aggregate Deleted(Not applicable)	Event	Node	Information

Impact area: performance

Event name(Trap name)	Impact level	Source type	Severity
Aggregate IOPS Critical Threshold Breached(ocumAggregateIopsIncident)	Incident	Aggregate	Critical
Aggregate IOPS Warning Threshold Breached(ocumAggregateIopsWarning)	Risk	Aggregate	Warning
Aggregate MBps Critical Threshold Breached(ocumAggregateMbpsIncident)	Incident	Aggregate	Critical
Aggregate MBps Warning Threshold Breached(ocumAggregateMbpsWarning)	Risk	Aggregate	Warning
Aggregate Latency Critical Threshold Breached(ocumAggregateLatencyIncident)	Incident	Aggregate	Critical
Aggregate Latency Warning Threshold Breached(ocumAggregateLatencyWarning)	Risk	Aggregate	Warning
Aggregate Perf. Capacity Used Critical Threshold Breached(ocumAggregatePerfCapacityUsedIncident)	Incident	Aggregate	Critical
Aggregate Perf. Capacity Used Warning Threshold Breached(ocumAggregatePerfCapacityUsedWarning)	Risk	Aggregate	Warning
Aggregate Utilization Critical Threshold Breached(ocumAggregateUtilizationIncident)	Incident	Aggregate	Critical

Event name(Trap name)	Impact level	Source type	Severity
Aggregate Utilization Warning Threshold Breached (ocumAggregateUtilizationWarning)	Risk	Aggregate	Warning
Aggregate Disks Over-utilized Threshold Breached (ocumAggregateDisksOverUtilizedWarning)	Risk	Aggregate	Warning
Aggregate Dynamic Threshold Breached (ocumAggregateDynamicEventWarning)	Risk	Aggregate	Warning

Cluster events

Cluster events provide information about the status of clusters, which enables you to monitor the clusters for potential problems. The events are grouped by impact area, and include the event name, trap name, impact level, source type, and severity.

Impact area: availability

An asterisk (*) identifies EMS events that have been converted to Unified Manager events.

Event name(Trap name)	Impact level	Source type	Severity
Cluster Lacks Spare Disks(ocumEvtDisksNoSpares)	Risk	Cluster	Warning
Cluster Not Reachable(ocumEvtClusterUnreachable)	Risk	Cluster	Error
Cluster Monitoring Failed(ocumEvtClusterMonitoringFailed)	Risk	Cluster	Warning
Cluster FabricPool License Capacity Limits Breached (ocumEvtExternalCapacityTierSpaceFull)	Risk	Cluster	Warning

Event name(Trap name)	Impact level	Source type	Severity
NVMe-oF Grace Period Started *(nvmfGracePeriodStart)	Risk	Cluster	Warning
NVMe-oF Grace Period Active *(nvmfGracePeriodActive)	Risk	Cluster	Warning
NVMe-oF Grace Period Expired *(nvmfGracePeriodExpired)	Risk	Cluster	Warning
Object Maintenance Window Started(objectMaintenanceWindowStarted)	Event	Cluster	Critical
Object Maintenance Window Ended(objectMaintenanceWindowEnded)	Event	Cluster	Information
MetroCluster Spare Disks Left Behind(ocumEvtSpareDiskLeftBehind)	Risk	Cluster	Error
MetroCluster Automatic Unplanned Switchover Disabled(ocumEvtMccAutomaticUnplannedSwitchOverDisabled)	Risk	Cluster	Warning

Impact area: capacity

Event name(Trap name)	Impact level	Source type	Severity
Cluster Cloud Tier Planning (clusterCloudTierPlanningWarning)	Risk	Cluster	Warning
FabricPool Space Nearly Full *	Risk	Cluster	Error

Impact area: configuration

Event name(Trap name)	Impact level	Source type	Severity
Node Added(Not applicable)	Event	Cluster	Information
Node Removed(Not applicable)	Event	Cluster	Information
Cluster Removed(Not applicable)	Event	Cluster	Information
Cluster Add Failed(Not applicable)	Event	Cluster	Error
Cluster Name Changed(Not applicable)	Event	Cluster	Information
Emergency EMS received (Not applicable)	Event	Cluster	Critical
Critical EMS received (Not applicable)	Event	Cluster	Critical
Alert EMS received (Not applicable)	Event	Cluster	Error
Error EMS received (Not applicable)	Event	Cluster	Warning
Warning EMS received (Not applicable)	Event	Cluster	Warning
Debug EMS received (Not applicable)	Event	Cluster	Warning
Notice EMS received (Not applicable)	Event	Cluster	Warning
Informational EMS received (Not applicable)	Event	Cluster	Warning

ONTAP EMS events are categorized into three Unified Manager event severity levels.

Unified Manager event severity level	ONTAP EMS event severity level
Critical	Emergency Critical
Error	Alert
Warning	Error Warning Debug Notice Informational

Impact area: performance

Event name(Trap name)	Impact level	Source type	Severity
Cluster IOPS Critical Threshold Breached(ocumClusterIopsIncident)	Incident	Cluster	Critical
Cluster IOPS Warning Threshold Breached(ocumClusterIopsWarning)	Risk	Cluster	Warning
Cluster MBps Critical Threshold Breached(ocumClusterMbpsIncident)	Incident	Cluster	Critical
Cluster MBps Warning Threshold Breached(ocumClusterMbpsWarning)	Risk	Cluster	Warning
Cluster Dynamic Threshold Breached(ocumClusterDynamicEventWarning)	Risk	Cluster	Warning

Disks events

Disks events provide you with information about the status of disks so that you can

monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Flash Disks - Spare Blocks Almost Consumed(ocumEvtClusterFlashDiskFewerSpareBlockError)	Risk	Cluster	Error
Flash Disks - No Spare Blocks(ocumEvtClusterFlashDiskNoSpareBlockCritical)	Incident	Cluster	Critical
Some Unassigned Disks(ocumEvtClusterUnassignedDisksSome)	Risk	Cluster	Warning
Some Failed Disks(ocumEvtDisksSomeFailed)	Incident	Cluster	Critical

Enclosures events

Enclosures events provide you with information about the status of disk shelf enclosures in your data center so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Disk Shelf Fans Failed(ocumEvtShelfFanFailed)	Incident	Storage shelf	Critical
Disk Shelf Power Supplies Failed(ocumEvtShelfPowerSupplyFailed)	Incident	Storage shelf	Critical

Event name(Trap name)	Impact level	Source type	Severity
Disk Shelf Multipath Not Configured(ocumDiskShelfConnectivityNotInMultiPath) This event does not apply to: <ul style="list-style-type: none"> Clusters that are in a MetroCluster configuration The following platforms: FAS2554, FAS2552, FAS2520, and FAS2240 	Risk	Node	Warning
Disk Shelf Path Failure(ocumDiskShelfConnectivityPathFailure)	Risk	Storage Shelf	Warning

Impact area: configuration

Event name(Trap name)	Impact level	Source type	Severity
Disk Shelf Discovered(Not applicable)	Event	Node	Information
Disk Shelves Removed(Not applicable)	Event	Node	Information

Fans events

Fans events provide you with information about the status fans on nodes in your data center so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
One or More Failed Fans(ocumEvtFansOneOrMoreFailed)	Incident	Node	Critical

Flash card events

Flash card events provide you with information about the status of the flash cards

installed on nodes in your data center so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Flash Cards Offline(ocumEvtFlashCardOffline)	Incident	Node	Critical

Inodes events

Inode events provide information when the inode is full or nearly full so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: capacity

Event name(Trap name)	Impact level	Source type	Severity
Inodes Nearly Full(ocumEvtInodesAlmostFull)	Risk	Volume	Warning
Inodes Full(ocumEvtInodesFull)	Risk	Volume	Error

Logical interface (LIF) events

LIF events provide information about the status of your LIFs, so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
LIF Status Down(ocumEvtLifStatusDown)	Risk	Interface	Error
LIF Failover Not Possible(ocumEvtLifFailoverNotPossible)	Risk	Interface	Warning

Event name(Trap name)	Impact level	Source type	Severity
LIF Not At Home Port(ocumEvtLifNotAtHomePort)	Risk	Interface	Warning

Impact area: configuration

Event name(Trap name)	Impact level	Source type	Severity
LIF Route Not Configured(Not applicable)	Event	Interface	Information

Impact area: performance

Event name(Trap name)	Impact level	Source type	Severity
Network LIF MBps Critical Threshold Breached(ocumNetworkLifMbpsIncident)	Incident	Interface	Critical
Network LIF MBps Warning Threshold Breached(ocumNetworkLifMbpsWarning)	Risk	Interface	Warning
FCP LIF MBps Critical Threshold Breached(ocumFcpLifMbpsIncident)	Incident	Interface	Critical
FCP LIF MBps Warning Threshold Breached(ocumFcpLifMbpsWarning)	Risk	Interface	Warning
NVMf FCP LIF MBps Critical Threshold Breached(ocumNvmfFcLifMbpsIncident)	Incident	Interface	Critical
NVMf FCP LIF MBps Warning Threshold Breached(ocumNvmfFcLifMbpsWarning)	Risk	Interface	Warning

LUN events

LUN events provide you with information about the status of your LUNs, so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

An asterisk (*) identifies EMS events that have been converted to Unified Manager events.

Event name(Trap name)	Impact level	Source type	Severity
LUN Offline(ocumEvtLunOffline)	Incident	LUN	Critical
LUN Destroyed *	Event	LUN	Information
Single Active Path To Access LUN(ocumEvtLunSingleActivePath)	Risk	LUN	Warning
No Active Paths To Access LUN(ocumEvtLunNotReachable)	Incident	LUN	Critical
No Optimized Paths To Access LUN(ocumEvtLunOptimizedPathInactive)	Risk	LUN	Warning
No Paths To Access LUN From HA Partner(ocumEvtLunHaPathInactive)	Risk	LUN	Warning

Impact area: capacity

Event name(Trap name)	Impact level	Source type	Severity
Insufficient Space For LUN Snapshot Copy(ocumEvtLunSnapshotNotPossible)	Risk	Volume	Warning

Impact area: performance

Event name(Trap name)	Impact level	Source type	Severity
LUN IOPS Critical Threshold Breached(ocumLunIopsIncident)	Incident	LUN	Critical
LUN IOPS Warning Threshold Breached(ocumLunIopsWarning)	Risk	LUN	Warning
LUN MBps Critical Threshold Breached(ocumLunMbpsIncident)	Incident	LUN	Critical
LUN MBps Warning Threshold Breached(ocumLunMbpsWarning)	Risk	LUN	Warning
LUN Latency ms/op Critical Threshold Breached(ocumLunLatencyIncident)	Incident	LUN	Critical
LUN Latency ms/op Warning Threshold Breached(ocumLunLatencyWarning)	Risk	LUN	Warning
LUN Latency and IOPS Critical Threshold Breached(ocumLunLatencyIopsIncident)	Incident	LUN	Critical
LUN Latency and IOPS Warning Threshold Breached(ocumLunLatencyIopsWarning)	Risk	LUN	Warning
LUN Latency and MBps Critical Threshold Breached(ocumLunLatencyMbpsIncident)	Incident	LUN	Critical

Event name(Trap name)	Impact level	Source type	Severity
LUN Latency and MBps Warning Threshold Breached(ocumLunLatencyMbpsWarning)	Risk	LUN	Warning
LUN Latency and Aggregate Perf. Capacity Used Critical Threshold Breached(ocumLunLatencyAggregatePerfCapacityUsedIncident)	Incident	LUN	Critical
LUN Latency and Aggregate Perf. Capacity Used Warning Threshold Breached(ocumLunLatencyAggregatePerfCapacityUsedWarning)	Risk	LUN	Warning
LUN Latency and Aggregate Utilization Critical Threshold Breached(ocumLunLatencyAggregateUtilizationIncident)	Incident	LUN	Critical
LUN Latency and Aggregate Utilization Warning Threshold Breached(ocumLunLatencyAggregateUtilizationWarning)	Risk	LUN	Warning
LUN Latency and Node Perf. Capacity Used Critical Threshold Breached(ocumLunLatencyNodePerfCapacityUsedIncident)	Incident	LUN	Critical
LUN Latency and Node Perf. Capacity Used Warning Threshold Breached(ocumLunLatencyNodePerfCapacityUsedWarning)	Risk	LUN	Warning

Event name(Trap name)	Impact level	Source type	Severity
LUN Latency and Node Perf. Capacity Used - Takeover Critical Threshold Breached(ocumLunLatencyAggregatePerfCapacityUsedTakeoverIncident)	Incident	LUN	Critical
LUN Latency and Node Perf. Capacity Used - Takeover Warning Threshold Breached(ocumLunLatencyAggregatePerfCapacityUsedTakeoverWarning)	Risk	LUN	Warning
LUN Latency and Node Utilization Critical Threshold Breached(ocumLunLatencyNodeUtilizationIncident)	Incident	LUN	Critical
LUN Latency and Node Utilization Warning Threshold Breached(ocumLunLatencyNodeUtilizationWarning)	Risk	LUN	Warning
QoS LUN Max IOPS Warning Threshold Breached(ocumQosLunMaxIopsWarning)	Risk	LUN	Warning
QoS LUN Max MBps Warning Threshold Breached(ocumQosLunMaxMbpsWarning)	Risk	LUN	Warning

Management station events

Management station events provide you with information about the status of server on which Unified Manager is installed so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: configuration

Event name(Trap name)	Impact level	Source type	Severity
Unified Manager Server Disk Space Nearly Full(ocumEvtUnifiedManagerDiskSpaceNearlyFull)	Risk	Management station	Warning
Unified Manager Server Disk Space Full(ocumEvtUnifiedManagerDiskSpaceFull)	Incident	Management station	Critical
Unified Manager Server Low On Memory(ocumEvtUnifiedManagerMemoryLow)	Risk	Management station	Warning
Unified Manager Server Almost Out Of Memory(ocumEvtUnifiedManagerMemoryAlmostOut)	Incident	Management station	Critical

Impact area: performance

Event name(Trap name)	Impact level	Source type	Severity
Performance Data Analysis Is Impacted(ocumEvtUnifiedManagerDataMissingAnalyze)	Risk	Management station	Warning
Performance Data Collection Is Impacted(ocumEvtUnifiedManagerDataMissingCollection)	Incident	Management station	Critical



These last two performance events were available for Unified Manager 7.2 only. If either of these events exist in the New state, and then you upgrade to a newer version of Unified Manager software, the events will not be purged automatically. You will need to move the events to the Resolved state manually.

MetroCluster Bridge events

MetroCluster Bridge events provide you with information about the status of the bridges so that you can monitor for potential problems. Events are grouped by impact area and

include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Bridge Unreachable(ocumEvtBridgeUnreachable)	Incident	MetroCluster Bridge	Critical
Bridge Temperature Abnormal(ocumEvtBridgeTemperatureAbnormal)	Incident	MetroCluster Bridge	Critical

MetroCluster Connectivity events

Connectivity events provide you with information about the connectivity between the components of a cluster and between clusters in a MetroCluster configuration so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
All Inter-Switch Links Down(ocumEvtMetroClusterAllISLBetweenSwitchesDown)	Incident	MetroCluster inter-switch connection	Critical
All Links Between MetroCluster Partners Down(ocumEvtMetroClusterAllLinksBetweenPartnersDown)	Incident	MetroCluster relationship	Critical
FC-SAS Bridge To Storage Stack Link Down(ocumEvtBridgeSasPortDown)	Incident	MetroCluster bridge stack connection	Critical
MetroCluster Configuration Switched Over((ocumEvtMetroClusterDRStatusImpacted)	Risk	MetroCluster relationship	Warning

Event name(Trap name)	Impact level	Source type	Severity
MetroCluster Configuration Partially Switched Over(ocumEvtMetroClusterDRStatusPartiallyImpacted)	Risk	MetroCluster relationship	Error
MetroCluster Disaster Recovery Capability Impacted(ocumEvtMetroClusterDRStatusImpacted)	Risk	MetroCluster relationship	Critical
MetroCluster Partners Not Reachable Over Peering Network(ocumEvtMetroClusterPartnersNotReachableOverPeeringNetwork)	Incident	MetroCluster relationship	Critical
Node To FC Switch All FC-VI Interconnect Links Down(ocumEvtMccNodeSwitchFcviLinksDown)	Incident	MetroCluster node switch connection	Critical
Node To FC Switch One Or More FC-Initiator Links Down(ocumEvtMccNodeSwitchFcLinksOneOrMoreDown)	Risk	MetroCluster node switch connection	Warning
Node To FC Switch All FC-Initiator Links Down(ocumEvtMccNodeSwitchFcLinksDown)	Incident	MetroCluster node switch connection	Critical
Switch To FC-SAS Bridge FC Link Down (ocumEvtMccSwitchBridgeFcLinksDown)	Incident	MetroCluster switch bridge connection	Critical
Inter Node All FC VI InterConnect Links Down (ocumEvtMccInterNodeLinksDown)	Incident	Inter-node connection	Critical

Event name(Trap name)	Impact level	Source type	Severity
Inter Node One Or More FC VI InterConnect Links Down (ocumEvtMccInterNodeLinksOneOrMoreDown)	Risk	Inter-node connection	Warning
Node To Bridge Link Down (ocumEvtMccNodeBridgeLinksDown)	Incident	Node bridge connection	Critical
Node to Storage Stack All SAS Links Down (ocumEvtMccNodeStackLinksDown)	Incident	Node stack connection	Critical
Node to Storage Stack One Or More SAS Links Down (ocumEvtMccNodeStackLinksOneOrMoreDown)	Risk	Node stack connection	Warning

MetroCluster switch events

MetroCluster switch events provide you with information about the status of the MetroCluster switches so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Switch Temperature Abnormal(ocumEvtSwitchTemperatureAbnormal)	Incident	MetroCluster Switch	Critical
Switch Unreachable(ocumEvtSwitchUnreachable)	Incident	MetroCluster Switch	Critical
Switch Fans Failed(ocumEvtSwitchFansOneOrMoreFailed)	Incident	MetroCluster Switch	Critical

Event name(Trap name)	Impact level	Source type	Severity
Switch Power Supplies Failed(ocumEvtSwitchPowerSuppliesOneOrMoreFailed)	Incident	MetroCluster Switch	Critical
<div>  <p>This event is applicable only for Cisco switches.</p> </div> Switch Temperature Sensors Failed(ocumEvtSwitchTemperatureSensorFailed)	Incident	MetroCluster Switch	Critical

NVMe Namespace events

NVMe Namespace events provide you with information about the status of your namespaces, so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

An asterisk (*) identifies EMS events that have been converted to Unified Manager events.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
NVMeNS Offline *(nvmeNamespaceStatusOffline)	Event	Namespace	Information
NVMeNS Online *(nvmeNamespaceStatusOnline)	Event	Namespace	Information
NVMeNS Out of Space *(nvmeNamespaceSpaceOutOfSpace)	Risk	Namespace	Warning
NVMeNS Destroy *(nvmeNamespaceDestroy)	Event	Namespace	Information

Impact area: performance

Event name(Trap name)	Impact level	Source type	Severity
NVMe Namespace IOPS Critical Threshold Breached(ocumNvmeNamespaceIopsIncident)	Incident	Namespace	Critical
NVMe Namespace IOPS Warning Threshold Breached(ocumNvmeNamespaceIopsWarning)	Risk	Namespace	Warning
NVMe Namespace MBps Critical Threshold Breached(ocumNvmeNamespaceMbpsIncident)	Incident	Namespace	Critical
NVMe Namespace MBps Warning Threshold Breached(ocumNvmeNamespaceMbpsWarning)	Risk	Namespace	Warning
NVMe Namespace Latency ms/op Critical Threshold Breached(ocumNvmeNamespaceLatencyIncident)	Incident	Namespace	Critical
NVMe Namespace Latency ms/op Warning Threshold Breached(ocumNvmeNamespaceLatencyWarning)	Risk	Namespace	Warning
NVMe Namespace Latency and IOPS Critical Threshold Breached(ocumNvmeNamespaceLatencyIopsIncident)	Incident	Namespace	Critical
NVMe Namespace Latency and IOPS Warning Threshold Breached(ocumNvmeNamespaceLatencyIopsWarning)	Risk	Namespace	Warning

Event name(Trap name)	Impact level	Source type	Severity
NVMe Namespace Latency and MBps Critical Threshold Breached(ocumNvmeNamespaceLatencyMbpsIncident)	Incident	Namespace	Critical
NVMe Namespace Latency and MBps Warning Threshold Breached(ocumNvmeNamespaceLatencyMbpsWarning)	Risk	Namespace	Warning

Node events

Node events provide you with information about node status so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

An asterisk (*) identifies EMS events that have been converted to Unified Manager events.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Node Root Volume Space Nearly Full(ocumEvtClusterNodeRootVolumeSpaceNearlyFull)	Risk	Node	Warning
Cloud AWS MetaDataConnFail *(ocumCloudAwsMetadataConnFail)	Risk	Node	Error
Cloud AWS IAMCredsExpired *(ocumCloudAwsIamCredsExpired)	Risk	Node	Error
Cloud AWS IAMCredsInvalid *(ocumCloudAwsIamCredsInvalid)	Risk	Node	Error

Event name(Trap name)	Impact level	Source type	Severity
Cloud AWS IAMCredsNotFound *(ocumCloudAwsIamCredsNotFound)	Risk	Node	Error
Cloud AWS IAMCredsNotInitialized *(ocumCloudAwsIamCredsNotInitialized)	Event	Node	Information
Cloud AWS IAMRoleInvalid *(ocumCloudAwsIamRoleInvalid)	Risk	Node	Error
Cloud AWS IAMRoleNotFound *(ocumCloudAwsIamRoleNotFound)	Risk	Node	Error
Objstore Host Unresolvable *(ocumObjstoreHostUnresolvable)	Risk	Node	Error
Objstore InterClusterLifDown *(ocumObjstoreInterClusterLifDown)	Risk	Node	Error
Request Mismatch Object-store Signature *	Risk	Node	Error
One of NFSv4 Pools Exhausted *	Incident	Node	Critical

Impact area: capacity

Event name(Trap name)	Impact level	Source type	Severity
QoS Monitor Memory Maxed *(ocumQosMonitorMemoryMaxed)	Risk	Node	Error

Event name(Trap name)	Impact level	Source type	Severity
QoS Monitor Memory Abated *(ocumQosMonitorMemoryAbated)	Event	Node	Information

Impact area: configuration

Event name(Trap name)	Impact level	Source type	Severity
Node Renamed(Not applicable)	Event	Node	Information

Impact area: performance

Event name(Trap name)	Impact level	Source type	Severity
Node IOPS Critical Threshold Breached(ocumNodeIopsIncident)	Incident	Node	Critical
Node IOPS Warning Threshold Breached(ocumNodeIopsWarning)	Risk	Node	Warning
Node MBps Critical Threshold Breached(ocumNodeMbpsIncident)	Incident	Node	Critical
Node MBps Warning Threshold Breached(ocumNodeMbpsWarning)	Risk	Node	Warning
Node Latency ms/op Critical Threshold Breached(ocumNodeLatencyIncident)	Incident	Node	Critical
Node Latency ms/op Warning Threshold Breached(ocumNodeLatencyWarning)	Risk	Node	Warning

Event name(Trap name)	Impact level	Source type	Severity
Node Perf. Capacity Used Critical Threshold Breached(ocumNodePerfCapacityUsedIncident)	Incident	Node	Critical
Node Perf. Capacity Used Warning Threshold Breached(ocumNodePerfCapacityUsedWarning)	Risk	Node	Warning
Node Perf.Capacity Used - Takeover Critical Threshold Breached(ocumNodePerfCapacityUsedTakeoverIncident)	Incident	Node	Critical
Node Perf.Capacity Used - Takeover Warning Threshold Breached(ocumNodePerfCapacityUsedTakeoverWarning)	Risk	Node	Warning
Node Utilization Critical Threshold Breached (ocumNodeUtilizationIncident)	Incident	Node	Critical
Node Utilization Warning Threshold Breached (ocumNodeUtilizationWarning)	Risk	Node	Warning
Node HA Pair Over-utilized Threshold Breached (ocumNodeHaPairOverUtilizedInformation)	Event	Node	Information
Node Disk Fragmentation Threshold Breached (ocumNodeDiskFragmentationWarning)	Risk	Node	Warning

Event name(Trap name)	Impact level	Source type	Severity
Node Over-utilized Threshold Breached (ocumNodeOverUtilizedWarning)	Risk	Node	Warning
Node Dynamic Threshold Breached (ocumNodeDynamicEventWarning)	Risk	Node	Warning

NVRAM battery events

NVRAM battery events provide you with information about the status of your batteries so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
NVRAM Battery Low(ocumEvtNvramBatteryLow)	Risk	Node	Warning
NVRAM Battery Discharged(ocumEvtNvramBatteryDischarged)	Risk	Node	Error
NVRAM Battery Overly Charged(ocumEvtNvramBatteryOverCharged)	Incident	Node	Critical

Port events

Port events provide you with status about cluster ports so that you can monitor changes or problems on the port, like whether the port is down.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Port Status Down(ocumEvtPortStatusDown)	Incident	Node	Critical

Impact area: performance

Event name(Trap name)	Impact level	Source type	Severity
Network Port MBps Critical Threshold Breached(ocumNetworkPortMbpsIncident)	Incident	Port	Critical
Network Port MBps Warning Threshold Breached(ocumNetworkPortMbpsWarning)	Risk	Port	Warning
FCP Port MBps Critical Threshold Breached(ocumFcpPortMbpsIncident)	Incident	Port	Critical
FCP Port MBps Warning Threshold Breached(ocumFcpPortMbpsWarning)	Risk	Port	Warning
Network Port Utilization Critical Threshold Breached(ocumNetworkPortUtilizationIncident)	Incident	Port	Critical
Network Port Utilization Warning Threshold Breached(ocumNetworkPortUtilizationWarning)	Risk	Port	Warning
FCP Port Utilization Critical Threshold Breached(ocumFcpPortUtilizationIncident)	Incident	Port	Critical
FCP Port Utilization Warning Threshold Breached(ocumFcpPortUtilizationWarning)	Risk	Port	Warning

Power supplies events

Power supplies events provide you with information about the status of your hardware so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
One or More Failed Power Supplies(ocumEvtPowerSupplyOneOrMoreFailed)	Incident	Node	Critical

Protection events

Protection events tell you if a job has failed or been aborted so that you can monitor for problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: protection

Event name(Trap name)	Impact level	Source type	Severity
Protection Job Failed(ocumEvtProtectionJobTaskFailed)	Incident	Volume or storage service	Critical
Protection Job Aborted(ocumEvtProtectionJobAborted)	Risk	Volume or storage service	Warning

Qtree events

Qtree events provide you with information about the qtree capacity and the file and disk limits so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: capacity

Event name(Trap name)	Impact level	Source type	Severity
Qtree Space Nearly Full(ocumEvtQtreeSpaceNearlyFull)	Risk	Qtree	Warning
Qtree Space Full(ocumEvtQtreeSpaceFull)	Risk	Qtree	Error
Qtree Space Normal(ocumEvtQtreeSpaceThresholdOk)	Event	Qtree	Information

Event name(Trap name)	Impact level	Source type	Severity
Qtree Files Hard Limit Reached(ocumEvtQtreeFilesHardLimitReached)	Incident	Qtree	Critical
Qtree Files Soft Limit Breached(ocumEvtQtreeFilesSoftLimitBreached)	Risk	Qtree	Warning
Qtree Space Hard Limit Reached(ocumEvtQtreeSpaceHardLimitReached)	Incident	Qtree	Critical
Qtree Space Soft Limit Breached(ocumEvtQtreeSpaceSoftLimitBreached)	Risk	Qtree	Warning

Service processor events

Service processor events provide you with information about the status of your processor so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Service Processor Not Configured(ocumEvtServiceProcessorNotConfigured)	Risk	Node	Warning
Service Processor Offline(ocumEvtServiceProcessorOffline)	Risk	Node	Error

SnapMirror relationship events

SnapMirror relationship events provide you with information about the status of your SnapMirror relationships so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: protection

An asterisk (*) identifies EMS events that have been converted to Unified Manager events.

Event name(Trap name)	Impact level	Source type	Severity
Mirror Replication Unhealthy(ocumEvtSnapmirrorRelationshipUnhealthy)	Risk	SnapMirror relationship	Warning
Mirror Replication Broken-off(ocumEvtSnapmirrorRelationshipStateBrokenoff)	Risk	SnapMirror relationship	Error
Mirror Replication Initialize Failed(ocumEvtSnapmirrorRelationshipInitializeFailed)	Risk	SnapMirror relationship	Error
Mirror Replication Update Failed(ocumEvtSnapmirrorRelationshipUpdateFailed)	Risk	SnapMirror relationship	Error
Mirror Replication Lag Error(ocumEvtSnapMirrorRelationshipLagError)	Risk	SnapMirror relationship	Error
Mirror Replication Lag Warning(ocumEvtSnapMirrorRelationshipLagWarning)	Risk	SnapMirror relationship	Warning
Mirror Replication Resync Failed(ocumEvtSnapmirrorRelationshipResyncFailed)	Risk	SnapMirror relationship	Error
Mirror Replication DeletedocumEvtSnapmirrorRelationshipDeleted	Risk	SnapMirror relationship	Warning
Synchronous Replication Out Of Sync *	Risk	SnapMirror relationship	Warning
Synchronous Replication Restored *	Event	SnapMirror relationship	Information
Synchronous Replication Auto Resync Failed *	Risk	SnapMirror relationship	Error

Snapshot events

Snapshot events provide information about the status of snapshots which enables you to monitor the snapshots for potential problems. The events are grouped by impact area, and include the event name, trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Snapshot Auto-delete Disabled(Not applicable)	Event	Volume	Information
Snapshot Auto-delete Enabled(Not applicable)	Event	Volume	Information
Snapshot Auto-delete Configuration Modified(Not applicable)	Event	Volume	Information

SnapVault relationship events

SnapVault relationship events provide you with information about the status of your SnapVault relationships so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: protection

Event name(Trap name)	Impact level	Source type	Severity
Asynchronous Vault Unhealthy(ocumEvtSnapVaultRelationshipUnhealthy)	Risk	SnapMirror relationship	Warning
Asynchronous Vault Broken-off(ocumEvtSnapVaultRelationshipStateBrokenoff)	Risk	SnapMirror relationship	Error
Asynchronous Vault Initialize Failed(ocumEvtSnapVaultRelationshipInitializeFailed)	Risk	SnapMirror relationship	Error

Event name(Trap name)	Impact level	Source type	Severity
Asynchronous Vault Update Failed(ocumEvtSnapVaultRelationshipUpdateFailed)	Risk	SnapMirror relationship	Error
Asynchronous Vault Lag Error(ocumEvtSnapVaultRelationshipLagError)	Risk	SnapMirror relationship	Error
Asynchronous Vault Lag Warning(ocumEvtSnapVaultRelationshipLagWarning)	Risk	SnapMirror relationship	Warning
Asynchronous Vault Resync Failed(ocumEvtSnapvaultRelationshipResyncFailed)	Risk	SnapMirror relationship	Error

Storage failover settings events

Storage failover (SFO) settings events provide you with information about whether your storage failover is disabled or not configured so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Storage Failover Interconnect One Or More Links Down(ocumEvtSfoInterconnectOneOrMoreLinksDown)	Risk	Node	Warning
Storage Failover Disabled(ocumEvtSfoSettingsDisabled)	Risk	Node	Error
Storage Failover Not Configured(ocumEvtSfoSettingsNotConfigured)	Risk	Node	Error

Event name(Trap name)	Impact level	Source type	Severity
Storage Failover State - Takeover(ocumEvtSfoStateTakeover)	Risk	Node	Warning
Storage Failover State - Partial Giveback(ocumEvtSfoStatePartialGiveback)	Risk	Node	Error
Storage Failover Node Status Down(ocumEvtSfoNodeStatusDown)	Risk	Node	Error
Storage Failover Takeover Not Possible(ocumEvtSfoTakeoverNotPossible)	Risk	Node	Error

Storage services events

Storage services events provide you with information about the creation and subscription of storage services so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: configuration

Event name(Trap name)	Impact level	Source type	Severity
Storage Service Created(Not applicable)	Event	Storage service	Information
Storage Service Subscribed(Not applicable)	Event	Storage service	Information
Storage Service Unsubscribed(Not applicable)	Event	Storage service	Information

Impact area: protection

Event name(Trap name)	Impact level	Source type	Severity
Unexpected Deletion of Managed SnapMirror Relationship(ocumEvtStorageServiceUnsupportedRelationshipDeletion)	Risk	Storage service	Warning
Unexpected Deletion of Storage Service Member Volume(ocumEvtStorageServiceUnexpectedVolumeDeletion)	Incident	Storage service	Critical

Storage shelf events

Storage shelf events tell you if your storage shelf has abnormal so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Abnormal Voltage Range(ocumEvtShelfVoltageAbnormal)	Risk	Storage shelf	Warning
Abnormal Current Range(ocumEvtShelfCurrentAbnormal)	Risk	Storage shelf	Warning
Abnormal Temperature(ocumEvtShelfTemperatureAbnormal)	Risk	Storage shelf	Warning

SVM events

SVM events provide you with information about the status of your SVMs so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: availability

An asterisk (*) identifies EMS events that have been converted to Unified Manager events.

Event name(Trap name)	Impact level	Source type	Severity
SVM CIFS Service Down(ocumEvtVserverCifsServiceStatusDown)	Incident	SVM	Critical
SVM CIFS Service Not Configured(Not applicable)	Event	SVM	Information
Attempts to Connect Nonexistent CIFS Share *	Incident	SVM	Critical
CIFS NetBIOS Name Conflict *	Risk	SVM	Error
CIFS Shadow Copy Operation Failed *	Risk	SVM	Error
Many CIFS Connections *	Risk	SVM	Error
Max CIFS Connection Exceeded *	Risk	SVM	Error
Max Number of CIFS Connection Per User Exceeded *	Risk	SVM	Error
SVM FC/FCoE Service Down(ocumEvtVserverFcServiceStatusDown)	Incident	SVM	Critical
SVM iSCSI Service Down(ocumEvtVserverIscsiServiceStatusDown)	Incident	SVM	Critical
SVM NFS Service Down(ocumEvtVserverNfsServiceStatusDown)	Incident	SVM	Critical
SVM FC/FCoE Service Not Configured(Not applicable)	Event	SVM	Information
SVM iSCSI Service Not Configured(Not applicable)	Event	SVM	Information

Event name(Trap name)	Impact level	Source type	Severity
SVM NFS Service Not Configured(Not applicable)	Event	SVM	Information
SVM Stopped(ocumEvtVserver Down)	Risk	SVM	Warning
AV Server too Busy to Accept New Scan Request *	Risk	SVM	Error
No AV Server Connection for Virus Scan *	Incident	SVM	Critical
No AV Server Registered *	Risk	SVM	Error
No Responsive AV Server Connection *	Event	SVM	Information
Unauthorized User Attempt to AV Server *	Risk	SVM	Error
Virus Found By AV Server *	Risk	SVM	Error
SVM with Infinite Volume Storage Not Available(ocumEvtVserverStorageNotAvailable)	Incident	SVMs with Infinite Volume	Critical
SVM with Infinite Volume Storage Partially Available(ocumEvtVserverStoragePartiallyAvailable)	Risk	SVMs with Infinite Volume	Error
SVM with Infinite Volume Namespace Mirror Constituents Having Availability Issues(ocumEvtVserverNsMirrorAvailabilityHavingIssues)	Risk	SVMs with Infinite Volume	Warning

Impact area: capacity

The following capacity events apply only to SVMs with Infinite Volume.

Event name(Trap name)	Impact level	Source type	Severity
SVM with Infinite Volume Space Full(ocumEvtVserverFull)	Risk	SVM	Error
SVM with Infinite Volume Space Nearly Full(ocumEvtVserverNearlyFull)	Risk	SVM	Warning
SVM with Infinite Volume Snapshot Usage Limit Exceeded(ocumEvtVserverSnapshotUsageExceeded)	Risk	SVM	Warning
SVM with Infinite Volume Namespace Space Full(ocumEvtVserverNamespaceFull)	Risk	SVM	Error
SVM with Infinite Volume Namespace Space Nearly Full(ocumEvtVserverNamespaceNearlyFull)	Risk	SVM	Warning

Impact area: configuration

Event name(Trap name)	Impact level	Source type	Severity
SVM Discovered(Not applicable)	Event	SVM	Information
SVM Deleted(Not applicable)	Event	Cluster	Information
SVM Renamed(Not applicable)	Event	SVM	Information

Impact area: performance

Event name(Trap name)	Impact level	Source type	Severity
SVM IOPS Critical Threshold Breached(ocumSvmIopsIncident)	Incident	SVM	Critical
SVM IOPS Warning Threshold Breached(ocumSvmIopsWarning)	Risk	SVM	Warning
SVM MBps Critical Threshold Breached(ocumSvmMbpsIncident)	Incident	SVM	Critical
SVM MBps Warning Threshold Breached(ocumSvmMbpsWarning)	Risk	SVM	Warning
SVM Latency Critical Threshold Breached(ocumSvmLatencyIncident)	Incident	SVM	Critical
SVM Latency Warning Threshold Breached(ocumSvmLatencyWarning)	Risk	SVM	Warning

SVM storage class events

SVM storage class events provide you with information about the status of your storage classes so that you can monitor for potential problems. SVM storage classes exist only in SVMs with Infinite Volume. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

The following SVM storage class events apply only to SVMs with Infinite Volume.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
SVM Storage Class Not Available(ocumEvtVserverStorageClassNotAvailable)	Incident	Storage class	Critical

Event name(Trap name)	Impact level	Source type	Severity
SVM Storage Class Partially Available(ocumEvtVserverStorageClassPartiallyAvailable)	Risk	Storage class	Error

Impact area: capacity

Event name(Trap name)	Impact level	Source type	Severity
SVM Storage Class Space Nearly Full(ocumEvtVserverStorageClassNearlyFull)	Risk	Storage class	Warning
SVM Storage Class Space Full(ocumEvtVserverStorageClassFull)	Risk	Storage class	Error
SVM Storage Class Snapshot Usage Limit Exceeded(ocumEvtVserverStorageClassSnapshotUsageExceeded)	Risk	Storage class	Warning

User and group quota events

User and group quota events provide you with information about the capacity of the user and user group quota as well as the file and disk limits so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: capacity

Event name(Trap name)	Impact level	Source type	Severity
User or Group Quota Disk Space Soft Limit Breached(ocumEvtUserOrGroupQuotaDiskSpaceSoftLimitBreached)	Risk	User or group quota	Warning

Event name(Trap name)	Impact level	Source type	Severity
User or Group Quota Disk Space Hard Limit Reached(ocumEvtUserOrGroupQuotaDiskSpaceHardLimitReached)	Incident	User or group quota	Critical
User or Group Quota File Count Soft Limit Breached(ocumEvtUserOrGroupQuotaFileCountSoftLimitBreached)	Risk	User or group quota	Warning
User or Group Quota File Count Hard Limit Reached(ocumEvtUserOrGroupQuotaFileCountHardLimitReached)	Incident	User or group quota	Critical

Volume events

Volume events provide information about the status of volumes which enables you to monitor for potential problems. The events are grouped by impact area, and include the event name, trap name, impact level, source type, and severity.

An asterisk (*) identifies EMS events that have been converted to Unified Manager events.

Impact area: availability

Event name(Trap name)	Impact level	Source type	Severity
Volume Restricted(ocumEvtVolumeRestricted)	Risk	Volume	Warning
Volume Offline(ocumEvtVolumeOffline)	Incident	Volume	Critical
Volume Partially Available(ocumEvtVolumePartiallyAvailable)	Risk	Volume	Error
Volume Unmounted(Not applicable)	Event	Volume	Information
Volume Mounted(Not applicable)	Event	Volume	Information

Event name(Trap name)	Impact level	Source type	Severity
Volume Remounted(Not applicable)	Event	Volume	Information
Volume Junction Path Inactive(ocumEvtVolumeJunctionPathInactive)	Risk	Volume	Warning
Volume Autosize Enabled(Not applicable)	Event	Volume	Information
Volume Autosize-Disabled(Not applicable)	Event	Volume	Information
Volume Autosize Maximum Capacity Modified(Not applicable)	Event	Volume	Information
Volume Autosize Increment Size Modified(Not applicable)	Event	Volume	Information

Impact area: capacity

Event name(Trap name)	Impact level	Source type	Severity
Thin-Provisioned Volume Space At Risk(ocumThinProvisionVolumeSpaceAtRisk)	Risk	Volume	Warning
Volume Space Full(ocumEvtVolumeFull)	Risk	Volume	Error
Volume Space Nearly Full(ocumEvtVolumeNearlyFull)	Risk	Volume	Warning
Volume Logical Space Full *(volumeLogicalSpaceFull)	Risk	Volume	Error
Volume Logical Space Nearly Full *(volumeLogicalSpaceNearlyFull)	Risk	Volume	Warning

Event name(Trap name)	Impact level	Source type	Severity
Volume Logical Space Normal *(volumeLogicalSpaceAll OK)	Event	Volume	Information
Volume Snapshot Reserve Space Full(ocumEvtSnapshotFull)	Risk	Volume	Warning
Too Many Snapshot Copies(ocumEvtSnapshotTooMany)	Risk	Volume	Error
Volume Qtree Quota Overcommitted(ocumEvtVolumeQtreeQuotaOvercommitted)	Risk	Volume	Error
Volume Qtree Quota Nearly Overcommitted(ocumEvtVolumeQtreeQuotaAlmostOvercommitted)	Risk	Volume	Warning
Volume Growth Rate Abnormal(ocumEvtVolumeGrowthRateAbnormal)	Risk	Volume	Warning
Volume Days Until Full(ocumEvtVolumeDaysUntilFullSoon)	Risk	Volume	Error
Volume Space Guarantee Disabled(Not applicable)	Event	Volume	Information
Volume Space Guarantee Enabled(Not Applicable)	Event	Volume	Information
Volume Space Guarantee Modified(Not applicable)	Event	Volume	Information
Volume Snapshot Reserve Days Until Full(ocumEvtVolumeSnapshotReserveDaysUntilFullSoon)	Risk	Volume	Error

Event name(Trap name)	Impact level	Source type	Severity
FlexGroup Constituents Have Space Issues *(flexGroupConstituentsHaveSpaceIssues)	Risk	Volume	Error
FlexGroup Constituents Space Status All OK *(flexGroupConstituentsSpaceStatusAllOK)	Event	Volume	Information
FlexGroup Constituents Have Inodes Issues *(flexGroupConstituentsHaveInodesIssues)	Risk	Volume	Error
FlexGroup Constituents Inodes Status All OK *(flexGroupConstituentsInodesStatusAllOK)	Event	Volume	Information
WAFL Volume AutoSize Fail *	Risk	Volume	Error
WAFL Volume AutoSize Done *	Event	Volume	Information

Impact area: configuration

Event name(Trap name)	Impact level	Source type	Severity
Volume Renamed(Not applicable)	Event	Volume	Information
Volume Discovered(Not applicable)	Event	Volume	Information
Volume Deleted(Not applicable)	Event	Volume	Information

Impact area: performance

Event name(Trap name)	Impact level	Source type	Severity
QoS Volume Max IOPS Warning Threshold Breached(ocumQosVolumeMaxIopsWarning)	Risk	Volume	Warning

Event name(Trap name)	Impact level	Source type	Severity
QoS Volume Max MBps Warning Threshold Breached(ocumQosVolumeMaxMbpsWarning)	Risk	Volume	Warning
QoS Volume Max IOPS/TB Warning Threshold Breached(ocumQosVolumeMaxIopsPerTbWarning)	Risk	Volume	Warning
Volume IOPS Critical Threshold Breached(ocumVolumeIopsIncident)	Incident	Volume	Critical
Volume IOPS Warning Threshold Breached(ocumVolumeIopsWarning)	Risk	Volume	Warning
Volume MBps Critical Threshold Breached(ocumVolumeMbpsIncident)	Incident	Volume	Critical
Volume MBps Warning Threshold Breached(ocumVolumeMbpsWarning)	Risk	Volume	Warning
Volume Latency ms/op Critical Threshold Breached(ocumVolumeLatencyIncident)	Incident	Volume	Critical
Volume Latency ms/op Warning Threshold Breached(ocumVolumeLatencyWarning)	Risk	Volume	Warning
Volume Cache Miss Ratio Critical Threshold Breached(ocumVolumeCacheMissRatioIncident)	Incident	Volume	Critical

Event name(Trap name)	Impact level	Source type	Severity
Volume Cache Miss Ratio Warning Threshold Breached(ocumVolumeCacheMissRatioWarning)	Risk	Volume	Warning
Volume Latency and IOPS Critical Threshold Breached(ocumVolumeLatencyIopsIncident)	Incident	Volume	Critical
Volume Latency and IOPS Warning Threshold Breached(ocumVolumeLatencyIopsWarning)	Risk	Volume	Warning
Volume Latency and MBps Critical Threshold Breached(ocumVolumeLatencyMbpsIncident)	Incident	Volume	Critical
Volume Latency and MBps Warning Threshold Breached(ocumVolumeLatencyMbpsWarning)	Risk	Volume	Warning
Volume Latency and Aggregate Perf. Capacity Used Critical Threshold Breached(ocumVolumeLatencyAggregatePerfCapacityUsedIncident)	Incident	Volume	Critical
Volume Latency and Aggregate Perf. Capacity Used Warning Threshold Breached(ocumVolumeLatencyAggregatePerfCapacityUsedWarning)	Risk	Volume	Warning
Volume Latency and Aggregate Utilization Critical Threshold Breached(ocumVolumeLatencyAggregateUtilizationIncident)	Incident	Volume	Critical

Event name(Trap name)	Impact level	Source type	Severity
Volume Latency and Aggregate Utilization Warning Threshold Breached(ocumVolumeLatencyAggregateUtilizationWarning)	Risk	Volume	Warning
Volume Latency and Node Perf. Capacity Used Critical Threshold Breached(ocumVolumeLatencyNodePerfCapacityUsedIncident)	Incident	Volume	Critical
Volume Latency and Node Perf. Capacity Used Warning Threshold Breached(ocumVolumeLatencyNodePerfCapacityUsedWarning)	Risk	Volume	Warning
Volume Latency and Node Perf. Capacity Used - Takeover Critical Threshold Breached(ocumVolumeLatencyAggregatePerfCapacityUsedTakeoverIncident)	Incident	Volume	Critical
Volume Latency and Node Perf. Capacity Used - Takeover Warning Threshold Breached(ocumVolumeLatencyAggregatePerfCapacityUsedTakeoverWarning)	Risk	Volume	Warning
Volume Latency and Node Utilization Critical Threshold Breached(ocumVolumeLatencyNodeUtilizationIncident)	Incident	Volume	Critical

Event name(Trap name)	Impact level	Source type	Severity
Volume Latency and Node Utilization Warning Threshold Breached(ocumVolumeLatencyNodeUtilizationWarning)	Risk	Volume	Warning

Volume move status events

Volume move status events tell you about the status of your volume move so that you can monitor for potential problems. Events are grouped by impact area and include the event and trap name, impact level, source type, and severity.

Impact area: capacity

Event name(Trap name)	Impact level	Source type	Severity
Volume Move Status: In Progress(Not applicable)	Event	Volume	Information
Volume Move Status - Failed(ocumEvtVolumeMoveFailed)	Risk	Volume	Error
Volume Move Status: Completed(Not applicable)	Event	Volume	Information
Volume Move - Cutover Deferred(ocumEvtVolumeMoveCutoverDeferred)	Risk	Volume	Warning

Description of event windows and dialog boxes

Events notify you about any issues in your environment. You can use the Events inventory page and Event details page to monitor all the events. You can use the Notification Setup Options dialog box to configure notification. You can use the Configuration/Manage Events page to disable or enable events.

Event Retention Settings dialog box

You can configure the event settings to automatically delete events (information, resolved, or obsolete) after a specified time and at a specified frequency. You can also delete these events manually.

You must have the OnCommand Administrator or Storage Administrator role.

Event Settings

You can configure the following options:

- **Delete Information, Resolved, and Obsolete Events Older Than**

Enables you to specify the retention period after which events that are marked as Information, Resolved, or Obsolete are removed from the management server.

The default value is 180 days. Retaining the events for more than 180 days affects the performance and is not recommended. The lower limit for the event retention period is 7 days, although there is no upper limit.

- **Delete Schedule**

Enables you to specify the frequency at which all the events that are marked as Information, Resolved, or Obsolete and that have exceeded their age limit are automatically deleted from the management server. The possible values are Daily, Weekly, or Monthly.

The default value is Daily.

- **Delete Now**

Enables you to manually delete all the information, resolved, and obsolete events that have exceeded their specified retention period.

Command buttons

The command buttons enable you to save or cancel the setup options:

- **Save and Close**

Saves the configuration settings for the selected option and closes the dialog box.

- **Cancel**

Cancels the recent changes and closes the dialog box.

Setup/Notifications page

You can configure the Unified Manager server to send notifications when an event is generated or when it is assigned to a user. You can also configure the notification mechanisms. For example, notifications can be sent as emails or SNMP traps.

You must have the OnCommand Administrator or Storage Administrator role.

Email

This area enables you to configure the following email settings for alert notification:

- **From Address**

Specifies the email address from which the alert notification is sent. This value is also used as the from address for a report when shared. If the From Address is pre-filled with the address ["OnCommand@localhost.com"](mailto:OnCommand@localhost.com), you should change it to a real, working email address to make sure that all

email notifications are delivered successfully.

SMTP Server

This area enables you to configure the following SMTP server settings:

- **Host Name or IP Address**

Specifies the host name of your SMTP host server, which is used to send the alert notification to the specified recipients.

- **User Name**

Specifies the SMTP user name. SMTP user name is required only when the SMTPAUTH is enabled in the SMTP server.

- **Password**

Specifies the SMTP password. SMTP user name is required only when the SMTPAUTH is enabled in the SMTP server.

- **Port**

Specifies the port that is used by the SMTP host server to send alert notification.

The default value is 25.

- **Use STARTTLS**

Checking this box provides secure communication between the SMTP server and the management server by using the TLS/SSL protocols (also known as start_tls and StartTLS).

- **Use SSL**

Checking this box provides secure communication between the SMTP server and the management server by using the SSL protocol.

SNMP

This area enables you to configure the following SNMP trap settings:

- **Version**

Specifies the SNMP version you want to use depending on the type of security you require. Options include Version 1, Version 3, Version 3 with Authentication, and Version 3 with Authentication and Encryption. The default value is Version 1.

- **Trap Destination Host**

Specifies the host name or IP address (IPv4 or IPv6) that receives the SNMP traps that are sent by the management server.

- **Outbound Trap Port**

Specifies the port through which the SNMP server receives the traps that are sent by the management

server.

The default value is 162.

- **Community**

The community string to access the host.

- **Engine ID**

Specifies the unique identifier of the SNMP agent and is automatically generated by the management server. Engine ID is available with SNMP Version 3, SNMP Version 3 with Authentication, and SNMP Version 3 with Authentication and Encryption.

- **Username**

Specifies the SNMP user name. User name is available with SNMP Version 3, SNMP Version 3 with Authentication, and SNMP Version 3 with Authentication and Encryption.

- **Authentication Protocol**

Specifies the protocol used to authenticate a user. Protocol options include MD5 and SHA. MD5 is the default value. Authentication protocol is available with SNMP Version 3 with Authentication and SNMP Version 3 with Authentication and Encryption.

- **Authentication Password**

Specifies the password used when authenticating a user. Authentication password is available with SNMP Version 3 with Authentication and SNMP Version 3 with Authentication and Encryption.

- **Privacy Protocol**

Specifies the privacy protocol used to encrypt SNMP messages. Protocol options include AES 128 and DES. The default value is AES 128. Privacy protocol is available with SNMP Version 3 with Authentication and Encryption.

- **Privacy Password**

Specifies the password when using privacy protocol. Privacy password is available with SNMP Version 3 with Authentication and Encryption.

Events inventory page

The Events inventory page enables you to view a list of current events and their properties. You can perform tasks such as acknowledging, resolving, and assigning events. You can also add an alert to specific events.

By default The information on this page is refreshed automatically every 5 minutes to ensure that the most current new events are displayed.

Filter components

Enable you to customize the information that is displayed in the events list. You can refine the list of events that are displayed using the following components:

- View menu to select from a pre-defined list of filter selections.

This includes items such as all active (new and acknowledged) events, active performance events, events assigned to me (the logged in user), and all events generated during all maintenance windows.

- Search pane to refine the list of events by entering full or partial terms.
- Filter button that launches the Filters pane so you can select from every available field and field attribute to refine the list of events.
- Time selector to refine the list of events by the time at which the event was triggered.

Command buttons

The command buttons enable you to perform the following tasks:

• Assign To

Enables you to select the user to whom the event is assigned. When you assign an event to a user, the user name and the time when you assigned the event is added in the events list for the selected events.

- Me

Assigns the event to the currently logged in user.

- Another user

Displays the Assign Owner dialog box, which enables you to assign or reassign the event to other users. You can also unassign events by leaving the ownership field blank.

• Acknowledge

Acknowledges the selected events.

When you acknowledge an event, your user name and the time when you acknowledged the event are added in the events list for the selected events. When you acknowledge an event, you are responsible for managing that event.



You cannot acknowledge Information events.

• Mark As Resolved

Enables you to change the event state to resolved.

When you resolve an event, your user name and the time when you resolved the event are added in the events list for the selected events. After you have taken corrective action for the event, you must mark the event as resolved.

• Add Alert

Displays the Add Alert dialog box, which enables you to add alerts for the selected events.

• Export

Enables you to export details of all events to a comma-separated values (.csv) file.

- **Column Selector**

Enables you to choose the columns that display on the page and select the order in which they are displayed.

Events list

Displays details of all the events ordered by triggered time.

By default New and Acknowledged events for the previous seven days of severity type Critical, Error, and Warning are displayed.

- **Triggered Time**

The time at which the event was generated.

- **Severity**

The event severity: Critical () , Error () , Warning () , and Information () .

- **State**

The event state: New, Acknowledged, Resolved, or Obsolete.

- **Impact Level**

The event impact level: Incident, Risk, or Event.

- **Impact Area**

The event impact area: Availability, Capacity, Performance, Protection, or Configuration.

- **Name**

The event name.

You can select the event name to display the Event details page.

- **Source**

The name of the object on which the event has occurred.

When a shared QoS policy breach occurs, only the workload object that is consuming the most IOPS or MBps is shown in this field. Additional workloads that are using this policy are displayed in the Event details page.

You can select the source name to display the health or performance details page for that object.

- **Source Type**

The object type (for example, SVM, Volume, or Qtree) with which the event is associated.

- **Assigned To**

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

- **Notes**

The number of notes that are added for an event.

- **Days Outstanding**

The number of days since the event was initially generated.

- **Assigned Time**

The time that has elapsed since the event was assigned to a user. If the time elapsed exceeds a week, the timestamp when the event was assigned to a user is displayed.

- **Acknowledged By**

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

- **Acknowledged Time**

The time that has elapsed since the event was acknowledged. If the time elapsed exceeds a week, the timestamp when the event was acknowledged is displayed.

- **Resolved By**

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

- **Resolved Time**

The time that has elapsed since the event was resolved. If the time elapsed exceeds a week, the timestamp when the event was resolved is displayed.

- **Obsoleted Time**

The time when the state of the event became Obsolete.

Event details page

From the Event details page, you can view the details of a selected event, such as the event severity, impact level, impact area, and event source. You can also view additional information about possible remediations to resolve the issue.

- **Event Name**

The name of the event and the time the event was last seen.

For non-performance events, while the event is in the New or Acknowledged state the last seen information is not known and is therefore hidden.

- **Event Description**

A brief description of the event.

In some cases a reason for the event being triggered is provided in the event description.

- **Component in Contention**

For dynamic performance events, this section displays icons that represent the logical and physical components of the cluster. If a component is in contention, its icon is circled and highlighted red.

The following components may be displayed:

- **Network**

Represents the wait time of I/O requests by the iSCSI protocols or the Fibre Channel (FC) protocols on the cluster. The wait time is time spent waiting for iSCSI Ready to Transfer (R2T) or FCP Transfer Ready (XFER_RDY) transactions to finish before the cluster can respond to an I/O request. If the network component is in contention, it means high wait time at the block protocol layer is impacting the latency of one or more workloads.

- **Network Processing**

Represents the software component in the cluster involved with I/O processing between the protocol layer and the cluster. The node handling network processing might have changed since the event was detected. If the network processing component is in contention, it means high utilization at the network processing node is impacting the latency of one or more workloads.

- **QoS Policy**

Represents the storage Quality of Service (QoS) policy group of which the workload is a member. If the policy group component is in contention, it means all workloads in the policy group are being throttled by the set throughput limit, which is impacting the latency of one or more of those workloads.

- **Cluster Interconnect**

Represents the cables and adapters with which clustered nodes are physically connected. If the cluster interconnect component is in contention, it means high wait time for I/O requests at the cluster interconnect is impacting the latency of one or more workloads.

- **Data Processing**

Represents the software component in the cluster involved with I/O processing between the cluster and the storage aggregate that contains the workload. The node handling data processing might have changed since the event was detected. If the data processing component is in contention, it means high utilization at the data processing node is impacting the latency of one or more workloads.

- **MetroCluster Resources**

Represents the MetroCluster resources, including NVRAM and interswitch links (ISLs), used to mirror data between clusters in a MetroCluster configuration. If the MetroCluster component is in contention, it means high write throughput from workloads on the local cluster or a link health issue is impacting the latency of one or more workloads on the local cluster. If the cluster is not in a MetroCluster configuration, this icon is not displayed.

- **Aggregate or SSD Aggregate Ops**

Represents the storage aggregate on which the workloads are running. If the aggregate component is in contention, it means high utilization on the aggregate is impacting the latency of one or more workloads. An aggregate consists of all HDDs, or a mix of HDDs and SSDs (a Flash Pool aggregate). An “SSD Aggregate” consists of all SSDs (an all-flash aggregate), or a mix of SSDs and a cloud tier (a

FabricPool aggregate).

- **Cloud Latency**

Represents the software component in the cluster involved with I/O processing between the cluster and the cloud tier on which user data is stored. If the cloud latency component is in contention, it means that a large amount of reads from volumes that are hosted on the cloud tier are impacting the latency of one or more workloads.

- **Sync SnapMirror**

Represents the software component in the cluster involved with replicating user data from the primary volume to the secondary volume in a SnapMirror Synchronous relationship. If the sync SnapMirror component is in contention, it means that the activity from SnapMirror Synchronous operations are impacting the latency of one or more workloads.

The Event Information, System Diagnosis, and Suggested Actions sections are described in other topics.

Command buttons

The command buttons enable you to perform the following tasks:

- **Notes icon**

Enables you to add or update a note about the event, and review all notes left by other users.

Actions menu

- **Assign to Me**

Assigns the event to you.

- **Assign to Others**

Opens the Assign Owner dialog box, which enables you to assign or reassign the event to other users.

When you assign an event to a user, the user's name and the time when the event was assigned are added in the events list for the selected events.

You can also unassign events by leaving the ownership field blank.

- **Acknowledge**

Acknowledges the selected events so that you do not continue to receive repeat alert notifications.

When you acknowledge an event, your user name and the time that you acknowledged the event are added in the events list (Acknowledged By) for the selected events. When you acknowledge an event, you take responsibility for managing that event.

- **Mark As Resolved**

Enables you to change the event state to Resolved.

When you resolve an event, your user name and the time that you resolved the event are added in the events list (Resolved By) for the selected events. After you have taken corrective action for the event, you

must mark the event as resolved.

- **Add Alert**

Displays the Add Alert dialog box, which enables you to add an alert for the selected event.

What the Event Information section displays

You use the Event Information section on the Event details page to view the details about a selected event, such as the event severity, impact level, impact area, and event source.

Fields that are not applicable to the event type are hidden. You can view the following event details:

- **Event Trigger Time**

The time at which the event was generated.

- **State**

The event state: New, Acknowledged, Resolved, or Obsolete.

- **Obsolete Cause**

The actions that caused the event to be obsoleted, for example, the issue was fixed.

- **Event Duration**

For active (new and acknowledged) events, this is the time between detection and the time when the event was last analyzed. For obsolete events, this is the time between detection and when the event was resolved.

This field is displayed for all performance events, and for other event types only after they have been resolved or obsoleted.

- **Last Seen**

The date and time at which the event was last seen as active.

For performance events this value may be more recent than the Event Trigger Time as this field is updated after each new collection of performance data as long as the event is active. For other types of events, when in the New or Acknowledged state, this content is not updated and the field is therefore hidden.

- **Severity**

The event severity: Critical (❌), Error (⚠️), Warning (⚠️), and Information (ℹ️).

- **Impact Level**

The event impact level: Incident, Risk, or Event.

- **Impact Area**

The event impact area: Availability, Capacity, Performance, Protection, or Configuration.

- **Source**

The name of the object on which the event has occurred.

When viewing the details for a shared QoS policy event, up to three of the workload objects that are consuming the most IOPS or MBps are listed in this field.

You can click the source name link to display the health or performance details page for that object.

- **Source Annotations**

Displays the annotation name and value for the object to which the event is associated.

This field is displayed only for health events on clusters, SVMs, and volumes.

- **Source Groups**

Displays the names of all the groups of which the impacted object is a member.

This field is displayed only for health events on clusters, SVMs, and volumes.

- **Source Type**

The object type (for example, SVM, Volume, or Qtree) with which the event is associated.

- **On Cluster**

The name of the cluster on which the event occurred.

You can click the cluster name link to display the health or performance details page for that cluster.

- **Affected Objects Count**

The number of objects affected by the event.

You can click the object link to display the inventory page populated with the objects that are currently affected by this event.

This field is displayed only for performance events.

- **Affected Volumes**

The number of volumes that are being affected by this event.

This field is displayed only for performance events on nodes or aggregates.

- **Triggered Policy**

The name of the threshold policy that issued the event.

You can hover your cursor over the policy name to see the details of the threshold policy. For adaptive QoS policies the defined policy, block size, and allocation type (allocated space or used space) is also displayed.

This field is displayed only for performance events.

- **Acknowledged by**

The name of the person who acknowledged the event and the time that the event was acknowledged.

- **Resolved by**

The name of the person who resolved the event and the time that the event was resolved.

- **Assigned to**

The name of the person who is assigned to work on the event.

- **Alert Settings**

The following information about alerts is displayed:

- If there are no alerts associated with the selected event, an **Add alert** link is displayed.

You can open the Add Alert dialog box by clicking the link.

- If there is one alert associated with the selected event, the alert name is displayed.

You can open the Edit Alert dialog box by clicking the link.

- If there is more than one alert associated with the selected event, the number of alerts is displayed.

You can open the Configuration/Alerting page by clicking the link to view more details about these alerts.

Alerts that are disabled are not displayed.

- **Last Notification Sent**

The date and time at which the most recent alert notification was sent.

- **Sent Via**

The mechanism that was used to send the alert notification: email or SNMP trap.

- **Previous Script Execution**

The name of the script that was executed when the alert was generated.

What the System Diagnosis section displays

The System Diagnosis section of the Event details page provides information that can help you diagnose issues that may have been responsible for the event.

This area is displayed only for some events.

Some performance events provide charts that are relevant to the particular event that has been triggered. Typically this includes an IOPS or MBps chart and a latency chart for the previous ten days. When arranged this way you can see which storage components are most affecting latency, or being affected by latency, when the event is active.

For dynamic performance events, the following charts are displayed:

- **Workload Latency** - Displays the history of latency for the top victim, bully, or shark workloads at the component in contention.
- **Workload Activity** - Displays details about the workload usage of the cluster component in contention.
- **Resource Activity** - Display historical performance statistics for the cluster component in contention.

Other charts are displayed when some cluster components are in contention.

Other events provide a brief description of the type of analysis the system is performing on the storage object. In some cases there will be one or more lines; one for each component that has been analyzed, for system-defined performance policies that analyze multiple performance counters. In this scenario, a green or red icon displays next to the diagnosis to indicate whether an issue was found, or not, in that particular diagnosis.

What the Suggested Actions section displays

The Suggested Actions section of the Event details page provides possible reasons for the event and suggests a few actions so that you can try to resolve the event on your own. The suggested actions are customized based on the type of event or type of threshold that has been breached.

This area is displayed only for some types of events.

In some cases there are **Help** links provided on the page that reference additional information for many suggested actions, including instructions for performing a specific action. Some of the actions may involve using Unified Manager, OnCommand System Manager, OnCommand Workflow Automation, ONTAP CLI commands, or a combination of these tools.

There are also some links provided in this help topic.

You should consider the actions suggested here as only a guidance in resolving this event. The action you take to resolve this event should be based on the context of your environment.

Configuration/Manage Events page

The Configuration/Manage Events page displays the list of events that are disabled, and provides information such as the associated object type and severity of the event. You can also perform tasks such as disabling or enabling events globally.

You can access this page only if you have the OnCommand Administrator or Storage Administrator role.

Command buttons

The command buttons enable you to perform the following tasks for selected events:

- **Disable**

Launches the Disable Events dialog box, which you can use to disable events.

- **Enable**

Enables selected events that you had chosen to disable previously.

- **Subscribe to EMS Events**

Launches the Subscribe to EMS Events dialog box, which enables you to subscribe to receive specific Event Management System (EMS) events from the clusters that you are monitoring. The EMS collects information about events that occur on the cluster. When a notification is received for a subscribed EMS event, a Unified Manager event is generated with the appropriate severity.

- **Event Retention Settings**

Launches the Event Retention Settings dialog box, which enables you to specify the retention period after which the information, resolved, and obsolete events are removed from the management server. The default retention value is 180 days.

List view

The List view displays (in tabular format) information about events that are disabled. You can use the column filters to customize the data that is displayed.

- **Event**

Displays the name of the event that is disabled.

- **Severity**

Displays the severity of the event. The severity can be Critical, Error, Warning, or Information.

- **Source Type**

Displays the source type for which the event is generated.

Disable Events dialog box

The Disable Events dialog box displays the list of event types for which you can disable events. You can disable events for an event type based on a particular severity or for a set of events.

You must have the OnCommand Administrator or Storage Administrator role.

Event Properties area

The Event Properties area specifies the following event properties:

- **Event Severity**

Enables you to select events based on the severity type, which can be Critical, Error, Warning, or Information.

- **Event Name Contains**

Enables you to filter events whose name contains the specified characters.

- **Matching events**

Displays the list of events matching the event severity type and the text string you specify.

- **Disable events**

Displays the list of events that you have selected for disabling.

The severity of the event is also displayed along with the event name.

Command buttons

The command buttons enable you to perform the following tasks for the selected events:

- **Save and close**

Disables the event type and closes the dialog box.

- **Cancel**

Discards the changes and closes the dialog box.

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