All Clusters View

SolidFire Active IQ

NetApp
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All Clusters View

The **All Clusters View** is the landing page for SolidFire Active IQ.

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All Clusters View dashboard

On the **Dashboard** page of the **All Clusters View**, you can view performance, capacity, and cluster statistic details about the clusters associated with your account.

Heading	Description
Company	Company name assigned to the cluster.
Cluster	Name assigned to the cluster.
Cluster ID	Assigned cluster number when the cluster is created.
Version	Version of the cluster master running on each node.
Nodes	Number of nodes in the cluster.
Volumes	Number of volumes in the cluster.
Efficiency	The amount of efficiency the system is seeing due to compression, deduplication, and thin provisioning.
Used Block Capacity	Current used capacity of the cluster block.
Faults	Number of currently unresolved faults detected on the cluster.
SVIP	Storage virtual IP address assigned to the cluster.
MVIP	Management Virtual IP address assigned to the cluster.
Last Update	Time and date that the most recent cluster update.

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Alerts

From the **Alerts** drop-down menu within **All Clusters View**, you can view the alert history, create and manage alert policies, and view and suppress cluster notifications.

Learn about or perform alerts-related tasks:

- View alerts history
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- View alert policies
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View alerts history

You can view the history for either unresolved or resolved alerts.

Steps

1. Select **Alerts** > **History**.
2. Select either the **Unresolved** or **Resolved** tab to view the history of alerts for the cluster.
3. (Optional) Select the  icon to export the data to a CSV file.

Alerts history details

The **History** page in the Alerts drop-down menu within All Clusters View shows up to 10000 entries of alert history, including all unresolved alerts and alerts resolved in the last 30 days.

The following list describes the details that are available to you:

Heading	Description
Alert ID	Unique ID for each alert.
Triggered	The time the alert was triggered in SolidFire Active IQ, not on the cluster itself.
Last Notified	The time the most recent alert email was sent.
Resolved	Shows if the cause of the alert has been resolved.
Resolution Time	The time an issue was resolved.
Policy	This is the user-defined alert policy name.

Heading	Description
Severity	Severity assigned at the time the alert policy was created.
Destination	The email address or addresses selected to receive the alert email.
Company	Name of customer associated with the alert.
Cluster	Displays the cluster name for which the alert policy was added.
Trigger	The user-defined setting that triggered the alert.

View alert policies

The **Policies** page in the **Alerts** drop-down menu within **All Clusters View** shows the following policy information for all clusters.

The following list describes the details that are available to you:

Heading	Description
Policy Name	User-defined alert policy name.
Destination	Email address defined in the alert policy.
Severity	Severity assigned in the alert policy.
Clusters	Number and name of each cluster defined in the alert policy. Select the information icon to reveal associated clusters.
Condition	User-defined setting for when an alert should be triggered.
Suppression Types	Determines which alerts and events are suppressed. The following types are possible: • **Full**: All alerts for the cluster are suppressed for the duration specified. No support cases or email alerts are generated. • **Upgrades**: Non-critical cluster alerts are suppressed for the duration specified. Critical alerts still generate support cases and emails. • **Compute**: Alerts that are triggered by VMware on the compute nodes are suppressed. • **NodeHardware**: Alerts associated with node maintenance are suppressed. For example, swapping out drives or taking nodes offline. • **Drive**: Alerts associated with drive health are suppressed. • **Network**: Alerts associated with network configuration and health are suppressed. • **Power**: Power redundancy alerts are suppressed. It does not suppress a *nodeOffline* alert which would occur in the event of a total power loss.
Actions	Select the vertical drop-down menu for edit and delete options for the selected policy.

Create an alert policy

You can create an alert policy to monitor information from the **All Clusters View** in SolidFire Active IQ. Alert policies allow you to be notified of a status or performance event with one or more clusters across an installation so that action can be taken in advance of, or in response to, a more serious event.

Steps

1. Select **Alerts** > **Policies**.
2. Select **Create Policy**.
3. Select an alert type from the **Policy Type** list. See Alert policy types.

   > There are additional policy-specific fields within the **Create Policy** dialog box depending on the policy type selected.

4. Enter a name for the new alert policy.

   > Alert policy names should describe the condition the alert is being created for. Descriptive titles help identify the alert easily. Alert policy names are displayed as a reference elsewhere in the system.

5. Select a severity level.

   > Alert policy severity levels are color coded and can be filtered easily from the **Alerts** > **History page**.

6. Determine the type of suppression for the alert policy by selecting a type from **Suppressible Types**. You can select more than one type.

   Confirm that the associations make sense. For example, you have selected **Network Suppression** for a network alert policy.

7. Select one or more clusters to include in the policy.

   > When you add a new cluster to your installation after you have created the policy, the cluster will not automatically be added to existing alert policies. You must edit an existing alert policy and select the new cluster you want to associate with the policy.

8. Enter one or more email addresses to which alert notifications will be sent. If you are entering multiple addresses, you must use a comma to separate each address.
9. Select **Save Alert Policy**.

Alert policy types

You can create alert policies based on available policy types listed in the **Create Policy** dialog box from **Alarms** > **Policies**.

Available policy alerts include the following types:

Policy Type	Description
Cluster Fault	Sends a notification when a specific type or any type of cluster fault occurs.

Policy Type	Description
Event	Sends a notification when a specific event type occurs.
Failed Drive	Sends a notification when a drive failure occurs.
Available Drive	Sends a notification when a drive comes online in *Available* state.
Cluster Utilization	Sends a notification when the cluster capacity and performance being used is more than the specified percentage.
Usable Space	Sends a notification when usable cluster space is less than a specified percentage.
Provisionable Space	Sends a notification when provisionable cluster space is less than a specified percentage.
Collector Not Reporting	Sends a notification when the collector for SolidFire Active IQ that runs on the management node fails to send data to SolidFire Active IQ for the duration specified.
Drive Wear	Sends a notification when a drive in a cluster has less than a specified percentage of wear or reserve space remaining.
iSCSI Sessions	Sends a notification when the number of active iSCSI sessions is greater than the value specified.
Chassis Resiliency	Sends a notification when the used space of a cluster is greater than a user-specified percentage. You should select a percentage that is sufficient to give early notice before reaching the cluster resiliency threshold. After reaching this threshold, a cluster can no longer automatically heal from a chassis-level failure.
VMware Alarm	Sends a notification when a VMware alarm is triggered and reported to SolidFire Active IQ.
Custom Protection Domain Resiliency	When used space increases beyond the specified percentage of custom protection domain resiliency threshold, the system sends a notification. If this percentage reaches 100, the storage cluster does not have enough free capacity to self-heal after a custom protection domain failure occurs.
Node Core/Crash Dump Files	When a service becomes unresponsive and must be restarted, the system creates a core file or crash dump file and sends a notification. This is not the expected behavior during regular operations.

Edit an alert policy

You can edit an alert policy to add or remove clusters from a policy or change additional policy settings.

Steps

1. Select **Alerts** > **Policies**.
2. Select the menu for more options under **Actions**.
3. Select **Edit Policy**.

   The policy type and type-specific monitoring criteria are not editable.

4. (Optional) Enter a revised name for the new alert policy.

Alert policy names should describe the condition the alert is being created for. Descriptive titles help identify the alert easily. Alert policy names are displayed as a reference elsewhere in the system.

5. (Optional) Select a different severity level.

   Alert policy severity levels are color coded and can be filtered easily from the Alerts > History page.

6. Determine the type of suppression for the alert policy when it is active by selecting a type from **Suppressible Types**. You can select more than one type.

   Confirm that the associations make sense. For example, you have selected **Network Suppression** for a network alert policy.

7. (Optional) Select or remove cluster associations with the policy.

   When you add a new cluster to your installation after you have created the policy, the cluster is not automatically be added to existing alert policies. You must select the new cluster you want to associate with the policy.

8. (Optional) Modify one or more email addresses to which alert notifications will be sent. If you are entering multiple addresses, you must use a comma to separate each address.
9. Select **Save Alert Policy**.

Delete an alert policy

Deleting an alert policy removes it permanently from the system. Email notifications are no longer sent for that policy and cluster associations with the policy are removed.

Steps

1. Select **Alerts** > **Policies**.
2. Under **Actions**, select the menu for more options.
3. Select **Delete Policy**.
4. Confirm the action.

   The policy is permanently removed from the system.

View suppressed clusters

On the **Suppressed Clusters** page in the **Alerts** drop-down menu within the **All Clusters View**, you can view a list of clusters which have alert notifications suppressed.

NetApp Support or customers can suppress alert notifications for a cluster when performing maintenance. When notifications are suppressed for a cluster using upgrade suppression, common alerts that occur during upgrades are not sent. There is also a full alert suppression option that stops alert notification for a cluster for a specified duration. You can view any email alerts that are not sent when notifications are suppressed on the **History** page of the **Alerts** menu. Suppressed notifications resume automatically after the defined duration elapses.

The following information is available on **Suppressed Clusters** page.

Heading	Description
Company	Company name assigned to the cluster.
Cluster ID	Assigned cluster number when the cluster is created.
Cluster Name	Name assigned to the cluster.
Start Time	The exact time that the suppression of notifications started.
End Time	The exact time that the suppression of notifications is scheduled to end.
Type	Determines which alerts and events are suppressed. The following types are possible: • **Full**: All alerts for the cluster are suppressed for the duration specified. No support cases or email alerts are generated. • **Upgrades**: Non-critical cluster alerts are suppressed for the duration specified. Critical alerts still generate support cases and emails. • **Compute**: Alerts that are triggered by VMware on the compute nodes are suppressed. • **NodeHardware**: Alerts associated with node maintenance are suppressed. For example, swapping out drives or taking nodes offline. • **Drive**: Alerts associated with drive health are suppressed. • **Network**: Alerts associated with network configuration and health are suppressed. • **Power**: Power redundancy alerts are suppressed. It does not suppress a *nodeOffline* alert which would occur in the event of a total power loss.
Actions	Select the option to suppress or resume notifications for a cluster.

Suppress cluster notifications

You can suppress alert notifications at the cluster level for a single cluster or multiple clusters.

Steps

1. Do one of the following:
   a. From the **Dashboard** overview, select the Actions menu for the cluster that you want to suppress.
   b. From **Alerts** > **Cluster Suppression**, select **Suppress Clusters**.
2. In the **Suppress Alerts for Cluster** dialog box, do the following:
   a. If you selected the **Suppress Clusters** button from the **Suppressed Clusters** page, select a cluster.
   b. Select an alert suppression type as either **Full**, **Upgrades**, **Compute**, **NodeHardware**, **Drive**, **Network** or **Power**. Learn about suppression types.

> A cluster can have multiple suppression types but cannot share a suppression type. For example, a cluster can have a **Full**, **Compute**, and **Drive** suppression, but not two **Full** suppressions. When a suppression already exists on a cluster, it is greyed out. To replace an existing suppression, select **Override Existing** and select the new suppression type.

c. Select a common duration or enter a custom end date and time during which notifications should be suppressed.

3. Select **Suppress**.

> This action also suppresses certain or all notifications to NetApp Support. After cluster suppression is in effect, NetApp Support or any user that is entitled to view the cluster can update the suppression state.

End cluster suppression from a cluster

You can end cluster alert suppression on clusters that was applied using the Suppress Clusters feature. This enables clusters to resume their normal state of alert reporting.

Steps

1. From the **Dashboard** overview or **Alerts** > **Cluster Suppression**, end suppression for the single or multiple clusters that you want to resume normal alert reporting:
   a. For a single cluster, select the Actions menu for the cluster and select **End Suppression**.
   b. For multiple clusters, select the clusters and then select **End Selected Suppressions**.

Alert notification email

Subscribers to SolidFire Active IQ alerts receive different status emails for each alert that triggers on the system. There are three types of status emails associated with alerts:

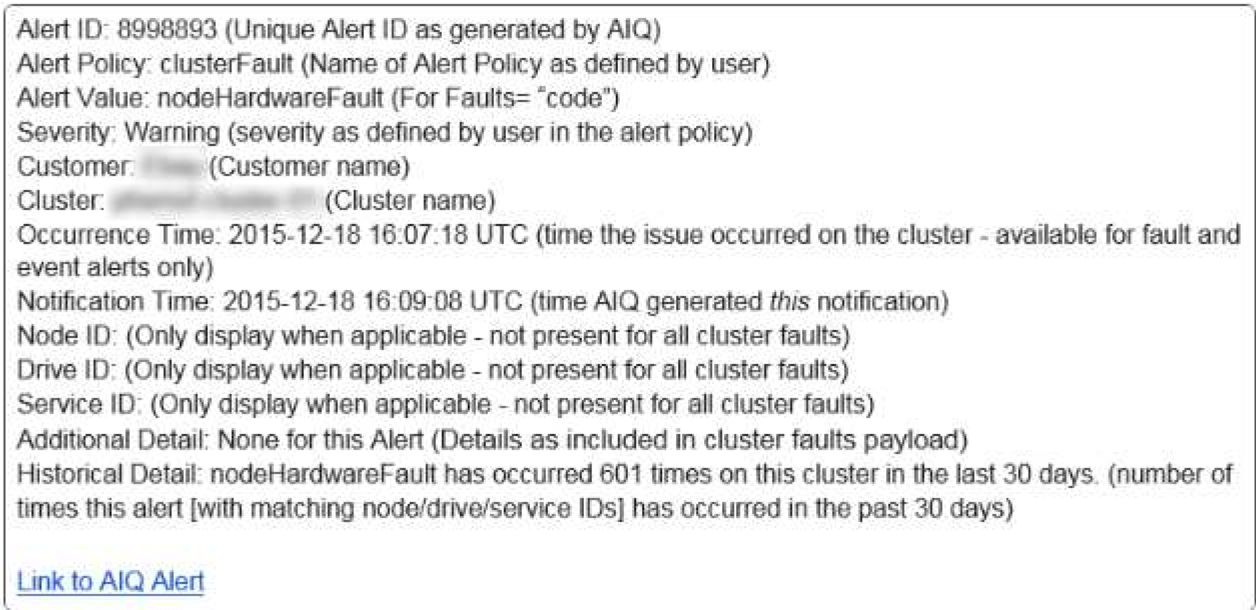
New Alert Email	This type of email is sent when an alert is triggered.
Reminder Alert Email	This type of email is sent once every 24 hours for as long as the alert remains active.
Alert Resolved Email	This type of email is sent when the issue is resolved.

After an alert policy is created, and if a new alert is generated for this policy, an email is sent to the designated email address (see Create an Alert Policy).

The alert email subject line uses one of the following formats depending on error type reported:

- Unresolved cluster fault: `[cluster fault code] fault on [cluster name] ([severity])`
- Resolved cluster fault: `Resolved: [cluster fault code] fault on [cluster name] ([severity])`
- Unresolved alert: `[policy name] alert on [cluster name] ([severity])`
- Resolved alert fault: `Resolved: [policy name] alert on [cluster name] ([severity])`

The content of the notification email will be similar to the following example:


Alert ID: 8998893 (Unique Alert ID as generated by AIQ)
Alert Policy: clusterFault (Name of Alert Policy as defined by user)
Alert Value: nodeHardwareFault (For Faults= "code")
Severity: Warning (severity as defined by user in the alert policy)
Customer: [redacted] (Customer name)
Cluster: [redacted] (Cluster name)
Occurrence Time: 2015-12-18 16:07:18 UTC (time the issue occurred on the cluster - available for fault and event alerts only)
Notification Time: 2015-12-18 16:09:08 UTC (time AIQ generated *this* notification)
Node ID: (Only display when applicable - not present for all cluster faults)
Drive ID: (Only display when applicable - not present for all cluster faults)
Service ID: (Only display when applicable - not present for all cluster faults)
Additional Detail: None for this Alert (Details as included in cluster faults payload)
Historical Detail: nodeHardwareFault has occurred 601 times on this cluster in the last 30 days. (number of times this alert [with matching node/drive/service IDs] has occurred in the past 30 days)

Link to AIQ Alert

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Capacity Licensing

On the **Capacity Licensing** page within the **All Clusters View**, you can view information about the NetApp Capacity Licensing model. Customers using standard SolidFire appliances should disregard this page.

Capacity Licensing is an alternative licensing option available from NetApp. Learn about or perform capacity licensing related tasks:

Heading	Description
Pool Name	Name of the customer associated with the license.
Entitled Capacity	Sum of software capacity licenses purchased.
Provisioned Capacity	Amount of allocated provisioned capacity on all capacity licensed nodes in a customer environment.
Used Capacity	Current used capacity by all clusters in a cluster pool.
Clusters	Number of clusters and their IDs, which comprise a cluster pool for a license.

Find more information

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Term Capacity

On the **Term Capacity** page within the **All Clusters View**, you can view information about the NetApp term-capacity model.

Heading	Description
Company ID	Company ID associated with the license.
Company Name	Name of the company associated with the license.
Licenses	Number of licenses in a customer environment.
Clusters	Number of clusters and their IDs belonging to a customer.
Licensed Capacity	Amount of allocated capacity on the capacity licensed nodes in a customer environment.
Consumed Capacity	Current consumed capacity by all clusters belonging to a customer.

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