Managing and monitoring groups

Active IQ Unified Manager 9.8

NetApp
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Understanding groups

You can create groups in Unified Manager to manage storage objects. Understanding the concepts about groups and how group rules enable you to add storage objects to a group will help you to manage the storage objects in your environment.

What a group is

A group is a dynamic collection of heterogeneous storage objects (clusters, SVMs, or volumes). You can create groups in Unified Manager to easily manage a set of storage objects. The members in a group might change, depending on the storage objects that are monitored by Unified Manager at a point in time.

- Each group has a unique name.
- You must configure a minimum of one group rule for each group.
- You can associate a group with more than one group rule.
- Each group can include multiple types of storage objects such as clusters, SVMs, or volumes.
- Storage objects are dynamically added to a group based on when a group rule is created or when Unified Manager completes a monitoring cycle.
- You can simultaneously apply actions on all the storage objects in a group such as setting thresholds for volumes.

How group rules work for groups

A group rule is a criterion that you define to enable storage objects (volumes, clusters, or SVMs) to be included in a specific group. You can use condition groups or conditions for defining group rule for a group.

- You must associate a group rule to a group.
- You must associate an object type for a group rule; only one object type is associated for a group rule.
- Storage objects are added or removed from the group after each monitoring cycle or when a rule is created, edited, or deleted.
- A group rule can have one or more condition groups, and each condition group can have one or more conditions.
- Storage objects can belong to multiple groups based on group rules you create.

Conditions

You can create multiple condition groups, and each condition group can have one or more conditions. You can apply all the defined condition groups in a group rule for groups in order to specify which storage objects are included in the group.

Conditions within a condition group are executed using logical AND. All the conditions in a condition group must be met. When you create or modify a group rule, a condition is created that applies, selects, and groups only those storage objects that satisfy all conditions in the condition group. You can use multiple conditions within a condition group when you want to narrow the scope of which storage objects to include in a group.

You can create conditions with storage objects by using the following operands and operator and specifying the required value.

Storage object type	Applicable operands
Volume	• Object name • Owning cluster name • Owning SVM name • Annotations
SVM	• Object name • Owning cluster name • Annotations
Cluster	• Object name • Annotations

When you select annotation as an operand for any storage object, the "Is" operator is available. For all other operands, you can select either "Is" or "Contains" as operator.

- Operand

  The list of operands in Unified Manager changes based on the selected object type. The list includes the object name, owning cluster name, owning SVM name, and annotations that you define in Unified Manager.

- Operator

  The list of operators changes based on the selected operand for a condition. The operators supported in Unified Manager are "Is" and "Contains".

  When you select the "Is" operator, the condition is evaluated for exact match of operand value to the value provided for the selected operand.

  When you select the "Contains" operator, the condition is evaluated to meet one of the following criteria:

  - The operand value is an exact match to the value provided for the selected operand
  - The operand value contains the value provided for the selected operand

- Value

  The value field changes based on the operand selected.

Example of a group rule with conditions

Consider a condition group for a volume with the following two conditions:

- Name contains "vol"
- SVM name is "data_svm"

This condition group selects all volumes that include "vol" in their names and that are hosted on SVMs with the name "data_svm".

Condition groups

Condition groups are executed using logical OR, and then applied to storage objects. The storage objects must satisfy one of the condition groups to be included in a group. The storage objects of all the condition groups are combined. You can use condition groups to increase the scope of storage objects to include in a group.

Example of a group rule with condition groups

Consider two condition groups for a volume, with each group containing the following two conditions:

- Condition group 1
  - Name contains "vol"
  - SVM name is "data_svm" Condition group 1 selects all volumes that include "vol" in their names and that are hosted on SVMs with the name "data_svm".
- Condition group 2
  - Name contains "vol"
  - The annotation value of data-priority is "critical" Condition group 2 selects all volumes that include "vol" in their names and that are annotated with the data-priority annotation value as "critical".

When a group rule containing these two condition groups is applied on storage objects, then the following storage objects are added to a selected group:

- All volumes that include "vol" in their names and that are hosted on the SVM with the name "data_svm".
- All volumes that include "vol" in their names and that are annotated with the data-priority annotation value "critical".

How group actions work on storage objects

A group action is an operation that is performed on all the storage objects in a group. For example, you can configure volume threshold group action to simultaneously change the volume threshold values of all volumes in a group.

Groups support unique group action types. You can have a group with only one volume health threshold group action type. However, you can configure a different type of group action, if available, for the same group. The rank of a group action determines the order in which the action is applied to storage objects. The details page of a storage object provides information about which group action is applied on the storage object.

Example of unique group actions

Consider a volume A that belongs to groups G1 and G2, and the following volume health threshold group actions are configured for these groups:

- `Change_capacity_threshold` group action with rank 1, for configuring the capacity of the volume

- `Change_snapshot_copies` group action with rank 2, for configuring the Snapshot copies of the volume

The `Change_capacity_threshold` group action always takes priority over the `Change_snapshot_copies` group action and is applied to volume A. When Unified Manager completes one cycle of monitoring, the health threshold related events of volume A are re-evaluated per the `Change_capacity_threshold` group action. You cannot configure another volume threshold type of group action for either G1 or G2 group.

Managing groups of storage objects

You can manage storage objects in your environment by creating groups of storage objects. These storage objects must satisfy the group rules associated with the group.

Adding groups

You can create groups to combine clusters, volumes, and storage virtual machines (SVMs) for ease of management.

Before you begin

You must have the Application Administrator or Storage Administrator role.

About this task

You can define group rules to add or remove members from the group and to modify group actions for the group.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.
2. In the **Groups** tab, click **Add**.
3. In the **Add Group** dialog box, enter a name and description for the group.
4. Click **Add**.

Deleting groups

You can delete a group from Unified Manager when the group is no longer required.

Before you begin

- None of the storage objects (clusters, SVMs, or volumes) must be associated with any group rule that is associated with the group that you want to delete.

- You must have the Application Administrator or Storage Administrator role.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.

2. In the **Groups** tab, select the group that you want to delete, and then click **Delete**.

3. In the **Warning** dialog box, confirm the deletion by clicking **Yes**.

   Deleting a group does not delete the group actions that are associated with the group. However, these group actions will be unmapped after the group is deleted.

Editing groups

You can edit the name and description of a group that you created in Unified Manager.

Before you begin

You must have the Application Administrator or Storage Administrator role.

About this task

When you edit a group to update the name, you must specify a unique name; you cannot use an existing group name.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.

2. In the **Groups** tab, select the group that you want to edit, and then click **Edit**.

3. In the **Edit Group** dialog box, change the name, description, or both for the group.

4. Click **Save**.

Adding group rules

You can create group rules for a group to dynamically add storage objects such as volumes, clusters, or storage virtual machines (SVMs) to the group. You must configure at least one condition group with at least one condition to create a group rule.

Before you begin

You must have the Application Administrator or Storage Administrator role.

About this task

Storage objects that are currently monitored are added as soon as the group rule is created. New objects are added only after the monitoring cycle is completed.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.

2. In the **Group Rules** tab, click **Add**.

3. In the **Add Group Rule** dialog box, specify a name for the group rule.

4. In the **Target Object Type** field, select the type of storage object that you want to group.

5. In the **Group** field, select the required group for which you want to create group rules.

6. In the **Conditions** section, perform the following steps to create a condition, a condition group, or both:

To create….	Do this…
A condition	a. Select an operand from the list of operands. b. Select either **Contains** or **Is** as the operator. c. Enter a value, or select a value from the available list.
A condition group	a. Click **Add Condition Group** b. Select an operand from the list of operands. c. Select either **Contains** or **Is** as the operator. d. Enter a value, or select a value from the available list. e. Click **Add condition** to create more conditions if required, and repeat steps a through d for each condition.

7. Click **Add**.

Example for creating a group rule

Perform the following steps in the Add Group Rule dialog box to create a group rule, including configuring a condition and adding a condition group:

1. Specify a name for the group rule.
2. Select the object type as storage virtual machine (SVM).
3. Select a group from the list of groups.
4. In the Conditions section, select **Object Name** as the operand.
5. Select **Contains** as the operator.
6. Enter the value as `svm_data`.
7. Click **Add condition group**.
8. Select **Object Name** as the operand.
9. Select **Contains** as the operator.
10. Enter the value as `vol`.
11. Click **Add condition**.
12. Repeat steps 8 through 10 by selecting **data-priority** as the operand in step 8, **Is** as the operator in step 9, and **critical** as the value in step 10.
13. Click **Add** to create the condition for the group rule.

Editing group rules

You can edit group rules to modify the condition groups and the conditions within a condition group to add or remove storage objects to or from a specific group.

Before you begin

You must have the Application Administrator or Storage Administrator role.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.
2. In the **Group Rules** tab, select the group rule that you want to edit, and then click **Edit**.
3. In the **Edit Group Rule** dialog box, change the group rule name, associated group name, condition groups, and conditions as required.

   > ⓘ You cannot change the target object type for a group rule.

4. Click **Save**.

Deleting group rules

You can delete a group rule from Active IQ Unified Manager when the group rule is no longer required.

Before you begin

You must have the Application Administrator or Storage Administrator role.

About this task

When a group rule is deleted, the associated storage objects will be removed from the group.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.
2. In the **Group Rules** tab, select the group rule that you want to delete, and then click **Delete**.
3. In the **Warning** dialog box, confirm the deletion by clicking **Yes**.

Configuring conditions for group rules

You can configure one or more conditions to create group rules in Unified Manager that are applied on the storage objects. The storage objects that satisfy the group rule are combined into a group.

Before you begin

You must have the Application Administrator or Storage Administrator role.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.
2. Click **Add**.
3. In the **Add Group Rule** dialog box, select one operand from the list of operands.

4. Select an operator for the condition.

5. Enter a required value or select one from the available list.

6. Click **Add**.

Example of configuring a condition for a group rule

Consider a condition for the object type SVM, where the object name contains "svm_data".

Perform the following steps in the Add Group Rule dialog box to configure the condition:

1. Enter a name for the group rule.

2. Select the object type as SVM.

3. Select a group from the list of groups.

4. In the **Conditions** field, select **Object Name** as the operand.

5. Select **Contains** as the operator.

6. Enter the value as `svm_data`.

7. Click **Add**.

Adding group actions

You can configure group actions that you want to apply to storage objects in a group. Configuring actions for a group enables you to save time, because you do not have to add these actions to each object individually.

Before you begin

You must have the Application Administrator or Storage Administrator role.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.

2. In the **Group Actions** tab, click **Add**.

3. In the **Add Group Action** dialog box, enter a name and description for the action.

4. From the **Group** menu, select a group for which you want to configure the action.

5. From the **Action Type** menu, select an action type.

   The dialog box expands, enabling you to configure the selected action type with required parameters.

6. Enter appropriate values for the required parameters to configure a group action.

7. Click **Add**.

Editing group actions

You can edit the group action parameters that you configured in Unified Manager, such as the group action name, description, associated group name, and parameters of the action type.

Before you begin

You must have the Application Administrator or Storage Administrator role.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.
2. In the **Group Actions** tab, select the group action that you want to edit, and then click **Edit**.
3. In the **Edit Group Action** dialog box, change the group action name, description, associated group name, and parameters of the action type, as required.
4. Click **Save**.

Configuring volume health thresholds for groups

You can configure group-level volume health thresholds for capacity, Snapshot copies, qtree quotas, growth, and inodes.

Before you begin

You must have the Application Administrator or Storage Administrator role.

About this task

The volume health threshold type of group action is applied only on volumes of a group.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.
2. In the **Group Actions** tab, click **Add**.
3. Enter a name and description for the group action.
4. From the **Group** drop-down box, select a group for which you want to configure group action.
5. Select **Action Type** as the volume health threshold.
6. Select the category for which you want to set the threshold.
7. Enter the required values for the health threshold.
8. Click **Add**.

Deleting group actions

You can delete a group action from Unified Manager when the group action is no longer required.

Before you begin

You must have the Application Administrator or Storage Administrator role.

About this task

When you delete the group action for the volume health threshold, global thresholds are applied to the storage

objects in that group. Any object-level health thresholds that are set on the storage object are not impacted.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.

2. In the **Group Actions** tab, select the group action that you want to delete, and then click **Delete**.

3. In the **Warning** dialog box, confirm the deletion by clicking **Yes**.

Reordering group actions

You can change the order of the group actions that are to be applied to the storage objects in a group. Group actions are applied to storage objects sequentially based on their rank. The lowest rank is assigned to the group action that you configured last. You can change the rank of the group action depending on your requirements.

Before you begin

You must have the Application Administrator or Storage Administrator role.

About this task

You can select either a single row or multiple rows, and then perform multiple drag-and-drop operations to change the rank of group actions. However, you must save the changes for the re-prioritization to be reflected in the group actions grid.

Steps

1. In the left navigation pane, click **Storage Management** > **Groups**.

2. In the **Group Actions** tab, click **Reorder**.

3. In the **Reorder Group Actions** dialog box, drag and drop the rows to rearrange the sequence of group actions as required.

4. Click **Save**.

Description of groups windows and dialog boxes

You can use the Groups page to view and manage all your groups. You can also configure group rules and actions for your storage objects from the Group Rules tab and Group Actions tab.

Groups page

The Groups page enables you to create groups in Unified Manager to easily manage storage objects. A group is a dynamic collection of storage objects (clusters, volumes, and SVMs), which is defined by the group rules you create for the group.

The Groups page includes tabs that enable you to add, delete, or edit a group, group rules, and group actions. When you log in as an operator, you will have only read access to the page. You can access the add, edit, or delete buttons in each tab when you log in as a Storage Administrator or Application Administrator.

Groups tab

The Groups tab displays the name and description of the groups you created. You can perform tasks such as adding, editing, or deleting a group. The tab also displays the number of group rules and group actions associated with a group, the number of clusters, SVMs, and volumes in the group.

Command buttons

- **Add**

  Displays the Add Group dialog box, which enables you to add a group and provide a name and description for the group.

  You can also apply group rules later to the group to include storage objects.

- **Edit**

  Displays the Edit Group dialog box, which enables you to edit the name and description for the selected group.

- **Delete**

  Deletes the selected group.

List view

The list view displays, in tabular format, the groups you created in Unified Manager. You can use the column filters to customize the data that is displayed. By default, the list is sorted by group name.

- **Name**

  Displays the name of the group.

- **Description**

  Displays the description of the group.

- **Associated Rules**

  Displays the number of rules added to the group.

- **Associated Actions**

  Displays the number of group actions added to the group.

- **Applicable Clusters**

  Displays the number of clusters included in the group.

- **Applicable SVMs**

  Displays the number of SVMs included in the group.

- **Applicable Volumes**

  Displays the number of volumes included in the group.

Group Rules tab

The Group Rules tab displays the group rules you created for groups to contain storage objects. You can perform tasks such as adding, editing, or deleting a group rule. The tab also displays the group name for which the group rule is created and the storage object for which the rule is applied. You can also view the number of storage objects that satisfy the group rule.

Command buttons

- **Add**

  Displays the Add Group Rule dialog box, which enables you to create group rules for storage objects.

- **Edit**

  Displays the Edit Group Rule dialog box, which enables you to reconfigure previously configured group rules.

- **Delete**

  Deletes the selected group rule.

List view

The list view displays, in tabular format, the group rules you created for a specific storage object (clusters, volumes, or SVMs) and the count of storage objects that satisfy the defined group rule.

- **Name**

  Displays the name of the rule.

- **Associated Group**

  Displays the name of the group for which the group rule is defined.

- **Target Object Type**

  Displays the type of storage object to which the group rule is applied.

- **Applicable Objects**

  Displays the count of the storage objects included in the group based on the group rule.

Group Actions tab

The Group Actions tab displays the name and type of group actions you define for groups. You can perform tasks such as adding, editing, deleting, or reordering the group actions. The tab also displays the name of the group on which the group action is applied.

Command buttons

- **Add**

  Displays the Add Action dialog box, which enables you to create group actions for a group of storage objects. For example, you can set the threshold levels of storage objects in a group.

- **Edit**

  Displays the Edit Action dialog box, which enables you to reconfigure previously configured group actions.

- **Delete**

  Deletes the selected group action.

- **Reorder**

  Displays the Reorder Group Actions dialog box to rearrange the order of the group actions.

List view

The list view displays, in tabular format, the group actions you created for the groups in the Unified Manager server. You can use the column filters to customize the data that is displayed.

- **Rank**

  Displays the order of the group actions to be applied on the storage objects in a group.

- **Name**

  Displays the name of the group action.

- **Associated Group**

  Displays the name of the group for which the group action is defined.

- **Action Type**

  Displays the type of group action that you can perform on the storage objects in a group.

  You cannot create multiple group actions of the same action type for a group. For example, you can create a group action of setting volume thresholds for a group. However, you cannot create another group action for the same group to change volume thresholds.

- **Description**

  Displays the description of the group action.

Add Group dialog box

The Add Group dialog box enables you to create groups to include clusters, volumes, and SVMs based on the group rules.

You must have the Application Administrator or Storage Administrator role.

- **Name**

  Specifies the name of the group. You must enter a unique name for the group.

- **Description**

Specifies a meaningful description of the group.

Command buttons

The command buttons enable you to add or cancel the creation of a new group.

- **Add**

  Creates the new group.

- **Cancel**

  Closes the Add Group dialog box without saving your changes.

Edit Group dialog box

The Edit Group dialog box enables you to change the name and description of a group.

You must have the Application Administrator or Storage Administrator role.

- **Group Name**

  Displays the name of the group. When changing the group name, you must not use an existing group name.

- **Description**

  Provides a meaningful description of the group. You can edit this field when you want to change the current description of the group.

Command buttons

The command buttons enable you to save or cancel changes you make to the group.

- **Save**

  Saves the changes you made and closes the dialog box.

- **Cancel**

  Closes the Edit Group dialog box without saving your changes.

Groups details page

From the Groups details page, you can view the details of a selected group. You can also view additional information such as the group rules and group actions associated with the selected group.

Command buttons

- **View Groups**

Enables you to navigate to the Groups page.

- **Actions**

  Enables you to edit or delete the group, based on your role. You must have the Application Administrator or Storage Administrator role.

- **Manage Group Rules**

  Enables you to navigate to the Group Rules page, which displays rules for this group.

- **Manage Group Actions**

  Enables you to navigate to the Group Actions page, which displays actions for this group.

Summary area

You can view the following group details:

- **Description**

  Displays the description provided for the group.

- **Created by**

  Displays the name of the user who created the group.

- **Creation Date**

  Displays the date when the group was created.

- **Associated Rules**

  Displays all the group rules created for a group, in tabular format. You can view the details of each group rule, such as the rule name, associated object type, and the count of storage objects of the associated object type.

- **Associated Actions**

  Displays all the group actions, configured for a group, in tabular format. You can view the details of each group action, such as the rank, name, action type, and description.

Add Group Rule dialog box

The Add Group Rule dialog box enables you to create group rules in Unified Manager to dynamically group storage objects. You can later configure and apply group actions for the group.

You must have the Application Administrator or Storage Administrator role.

- **Name**

  Specifies the name of the group rule.

- **Target Object Type**

  Specifies the type of storage objects to include in the group.

- **Group**

  Specifies the name of the group for which the group rule is created.

- **Conditions**

  Specifies conditions that determine which storage objects can be included in a group.

- **Condition group**

  Specifies condition groups which have one or more conditions defined for including storage objects in a group.

Command buttons

- **Save and Add**

  Adds the group rule and enables you to add another group rule without closing the dialog box.

- **Add**

  Adds the group rule and closes the Add Group Rule dialog box.

- **Cancel**

  Cancels the changes and closes the Add Group Rule dialog box.

- **Add Condition**

  Adds a condition to define the group rule.

- **Add Condition Group**

  Adds a condition group to define conditions for the group rule.

Edit Group Rule dialog box

You can edit the group rules you created to include the maximum number of storage objects in a group.

You must have the Application Administrator or Storage Administrator role.

- **Rule Name**

  Displays the name of the rule.

- **Target Object Type**

  Displays the storage object to be added to a selected group. You cannot change the object type.

• **Associated Group**

Displays the associated group. You can select a different group for the group rule.

• **Condition**

Displays the list of conditions for a selected group. You can edit the conditions. The storage objects are either removed or added to a selected group based on the changes.

Command buttons

• **Save**

Saves the changes you made and closes the dialog box.

• **Cancel**

Closes the Edit Group Rule dialog box without saving your changes.

Add Group Action dialog box

The Add Group Action dialog box enables you to configure group actions that can be applied to storage objects of a selected group.

You must have the Application Administrator or Storage Administrator role.

• **Name**

Specifies the name of the action.

• **Description**

Specifies the description of the action.

• **Group**

Specifies the group for which the action is configured.

• **Action type**

Specifies the type of action configured. Based on the selected action type, the Add Group Action dialog box expands, enabling you to configure a group action by providing the required values.

Unified Manager currently supports only volume threshold action type.

Command buttons

• **Add**

Adds the new action and closes the dialog box.

• **Cancel**

Closes the Add Group Action dialog box dialog box without saving your changes.

Group action-volume thresholds section

The group action-volume thresholds section enables you to configure group-level health thresholds for volumes. These thresholds are applied to all the volumes in a group. When the volume health thresholds are configured at the group level, the global health threshold values are not affected.

You can configure volume health thresholds for the following to configure a group action:

- Capacity
- Growth
- Qtree quota
- Snapshot copies
- Inodes

Global default values are used if volume health thresholds are not configured for any of these categories. You can set health thresholds for the following:

- Capacity
- Growth
- Qtree quota
- Snapshot copies
- Inodes

Capacity section

You can set conditions for the following volume capacity health thresholds:

- **Space Nearly Full**

  Specifies the percentage at which a volume is considered to be nearly full:

  - Default value: 80 percent

    The value for this threshold must be lower than the value for the Volume Full threshold for the management server to generate an event.

  - Event generated: Volume Nearly Full
  - Event severity: Warning

- **Space Full**

  Specifies the percentage at which a volume is considered full:

  - Default value: 90 percent
  - Event generated: Volume Full
  - Event severity: Error

- **Overcommitted**

Specifies the percentage at which a volume is considered to be overcommitted:

- ◦ Default value: 100 percent
- ◦ Event generated: Volume Overcommitted
- ◦ Event severity: Error

Growth section

You can set the following health threshold conditions for volume growth:

- **Growth Rate**

  Specifies the percentage at which a volume's growth rate is considered to be normal before the system generates a Volume Growth Rate Abnormal event:

  - ◦ Default value: 1 percent
  - ◦ Event generated: Volume Growth Rate Abnormal
  - ◦ Event severity: Warning

- **Growth Rate Sensitivity**

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

  A lower value for growth rate sensitivity indicates that the aggregate is highly sensitive to changes in the growth rate. The range for the growth rate sensitivity is 1 through 5.

  - ◦ Default value: 2

Qtree Quota section

You can set the following health threshold conditions for volume quotas:

- **Nearly Overcommitted**

  Specifies the percentage at which a volume is considered to be nearly overcommitted by qtree quotas:

  - ◦ Default value: 95 percent
  - ◦ Event generated: Volume Qtree Quota Nearly Overcommitted
  - ◦ Event severity: Warning

- **Overcommitted**

  Specifies the percentage at which a volume is considered to be overcommitted by qtree quotas:

  - ◦ Default value: 100 percent
  - ◦ Event generated: Volume Qtree Quota Overcommitted
  - ◦ Event severity: Error

Snapshot Copies section

You can set the following health threshold conditions for the Snapshot copies in the volume:

- **Snapshot Reserve Full**

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

  - Default value: 90 percent
  - Event generated: Volume Snapshot Reserve Full
  - Event severity: Error

- **Days Until Full**

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

  - Default value: 7
  - Event generated: Volume Snapshot Reserve Days Until Full
  - Event severity: Error

- **Count**

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

  - Default value: 250
  - Event generated: Too Many Snapshot Copies
  - Event severity: Error

Inodes section

You can set the following health threshold conditions for inodes:

- **Nearly Full**

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

  - Default value: 80 percent
  - Event generated: Inodes Nearly Full
  - Event severity: Warning

- **Full**

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

  - Default value: 90 percent
  - Event generated: Inodes Full
  - Event severity: Error

Edit Group Action dialog box

You can edit the group action that you created for groups by using the Edit Group Action dialog box.

You must have the Application Administrator or Storage Administrator role.

- **Action Name**

  Displays the name of the group action.

- **Description**

  Displays the description of the group action.

- **Group**

  Displays the name of the group selected.

- **Action type**

  Displays the type of group action. You cannot change the action type. However, you can modify the parameters that you used to configure the group action.

Command buttons

- **Save**

  Saves the changes you made to the group action.

- **Cancel**

  Closes the Edit Group Action dialog box without saving your changes.

Reorder Group Actions dialog box

You can use the Reorder Group Actions dialog box to change the ranks of one or more group actions. The position of a group action in the grid determines the rank for the group action.

You must have the Application Administrator or Storage Administrator role.

- **Rank**

  Specifies the order of the group action to be applied on storage objects in a group.

- **Name**

  Specifies the name of the group action.

- **Action Type**

  Specifies the type of action that you can perform on the storage objects in a group.

- **Associated Group**

  Specifies the name of the group for which the group actions are defined.