Red Hat Insights 1-latest

Viewing and managing system inventory

Using inventory groups to organize system inventory and manage user access

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Legal Notice

Abstract

This document helps Insights for Red Hat Enterprise Linux users to organize their system inventory into logical groups and control user access to systems. Red Hat is committed to replacing problematic language in our code, documentation, and web properties. We are beginning with these four terms: master, slave, blacklist, and whitelist. Because of the enormity of this endeavor, these changes will be implemented gradually over several upcoming releases. For more details, see our CTO Chris Wright's message.

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CHAPTER 1. INVENTORY GROUPS

Inventory groups allow you to select specific systems and group them together. You can view and manage the individual inventory groups and the system membership of each group. In addition, you can filter your system lists across applications by groups. You can also manage user access to specific inventory groups to enhance security.

Inventory groups have the following characteristics:

- Inventory groups are only for systems.
- An inventory group cannot be added as a child of another inventory group.
- Each system can belong to only *one* inventory group.
- Using inventory groups is not mandatory; systems that are not assigned to specific groups can remain unassigned.

1.1. USER ACCESS TO INVENTORY GROUPS

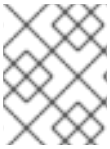
Inventory groups support role-based access (RBAC). Using RBAC enables you to set custom permissions on inventory groups according to user role.

The Inventory Group Administrator role allows the creation of Inventory Groups. This role is automatically included in the Default administrator access group and cannot be removed from it. However, users with this role can modify any Inventory Groups. Provide this role only to the users who are entitled to access the entire system inventory.

For a user to be able to use Inventory Groups and RBAC to restrict access to specific systems, that user must either be a member of the Default admin access group or have both the Inventory Group Administrator and the User Access administrator roles.

Inventory group users have group-level RBAC permissions. Custom permissions include the following:

- inventory:group:read
  - View group details page
- inventory:group:write
  - Rename the group
  - Add systems to group
- Remove systems from group



NOTE

A user cannot view the systems inside the group without inventory:hosts:read permissions.

Systems users have system-level RBAC permissions. They can perform the following inventory groups operations:

- Inventory host read
  - View all the systems in the inventory group and their details, or view ungrouped systems

- View all the systems in the inventory group and their details, or view ungrouped systems
- View information about the systems for other Insights services

- Inventory host write:
  - Rename the system
  - Delete the system

1.1.1. Managing user access using Inventory groups

NOTE

If you do not have access to Inventory groups, navigating to **Inventory > Groups** shows the message **Inventory group access permissions needed**.

Be aware that you can still view the Inventory group name assigned to the system for which you have read access, even if you do not have access to the group itself. To view the Inventory group that contains the system, you need to have the Inventory Group Viewer role or Inventory group view permissions assigned.

IMPORTANT

Before making changes in the RBAC configuration, review the list of known limitations in the User Scenarios section.

For more information about managing user access, assigning roles, and adding members to user access groups, see *User Access Configuration Guide for Role-based Access Control (RBAC)* .

1.2. USER SCENARIOS

This section contains two scenarios that illustrate the features of inventory groups. These scenarios follow a procedure format, so that you can follow the required steps and test them, if desired.

1.2.1. Scenario 1: Two different IT teams must manage their systems with Insights

In this scenario, two different IT teams working for the same company share the same Insights organization within their Red Hat account.

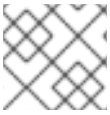
- Each IT team must have complete control of their systems in the Red Hat Hybrid Cloud Console, but should not be able to see or modify the systems belonging to the other team.
- All users within the same team have the same level of access on both their inventory groups and their systems. Access levels can be adjusted as needed.
- Regular users of both IT teams will not be able to see or modify systems that are not part of any inventory groups.
- Organization administrators, or anyone with Inventory Group administrator and Inventory Hosts administrator roles, have access to the entire inventory. Any other users without those roles cannot access the entire inventory.

1.2.1.1. Initial phase

By default, organization administrators (who are members of the Default administrator access group) on the Red Hat Hybrid Cloud Console always have read/write access to all inventory groups and read/write access to all systems, regardless of how permissions are defined for the inventory group objects and systems assigned to them.

These users are the only ones who may configure user access for inventory groups. If any regular users need to manage user access, the administrators may grant them Inventory Group admin and Inventory Hosts admin roles separately.

By default, users who are not Organization administrators are assigned the Inventory Hosts Administrator role from the Default access group. The Default access group gives these users inventory:hosts:read and inventory:hosts:write access across the entire inventory. Those permissions grant read and write permissions on all systems and all inventory groups.



NOTE

For more information about the Default access group, see The Default access group .

1.2.1.2. Restricting access

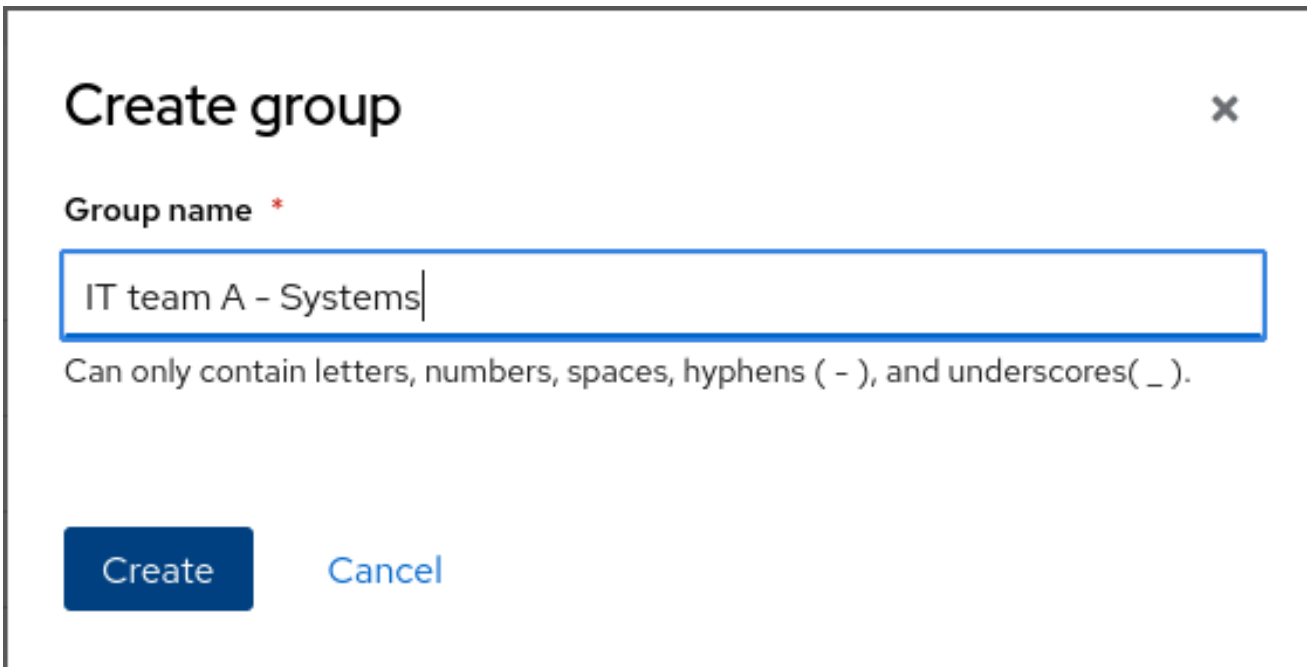
Prerequisites

- You are a member of the Default administrator access group.

Step 1: Create Inventory groups

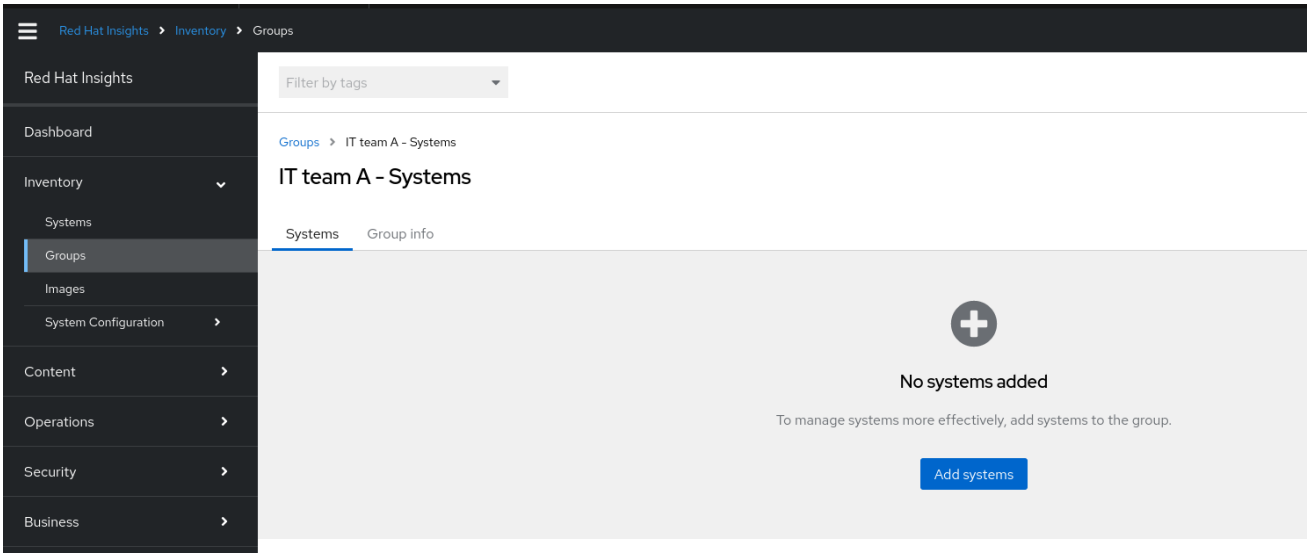
First, create two separate inventory groups. (This example shows two groups, but you may create as many as you need).

- Inventory Group 1: IT team A - Systems
- Inventory Group 2: IT team B - Systems



Step 2: Add systems to Inventory groups

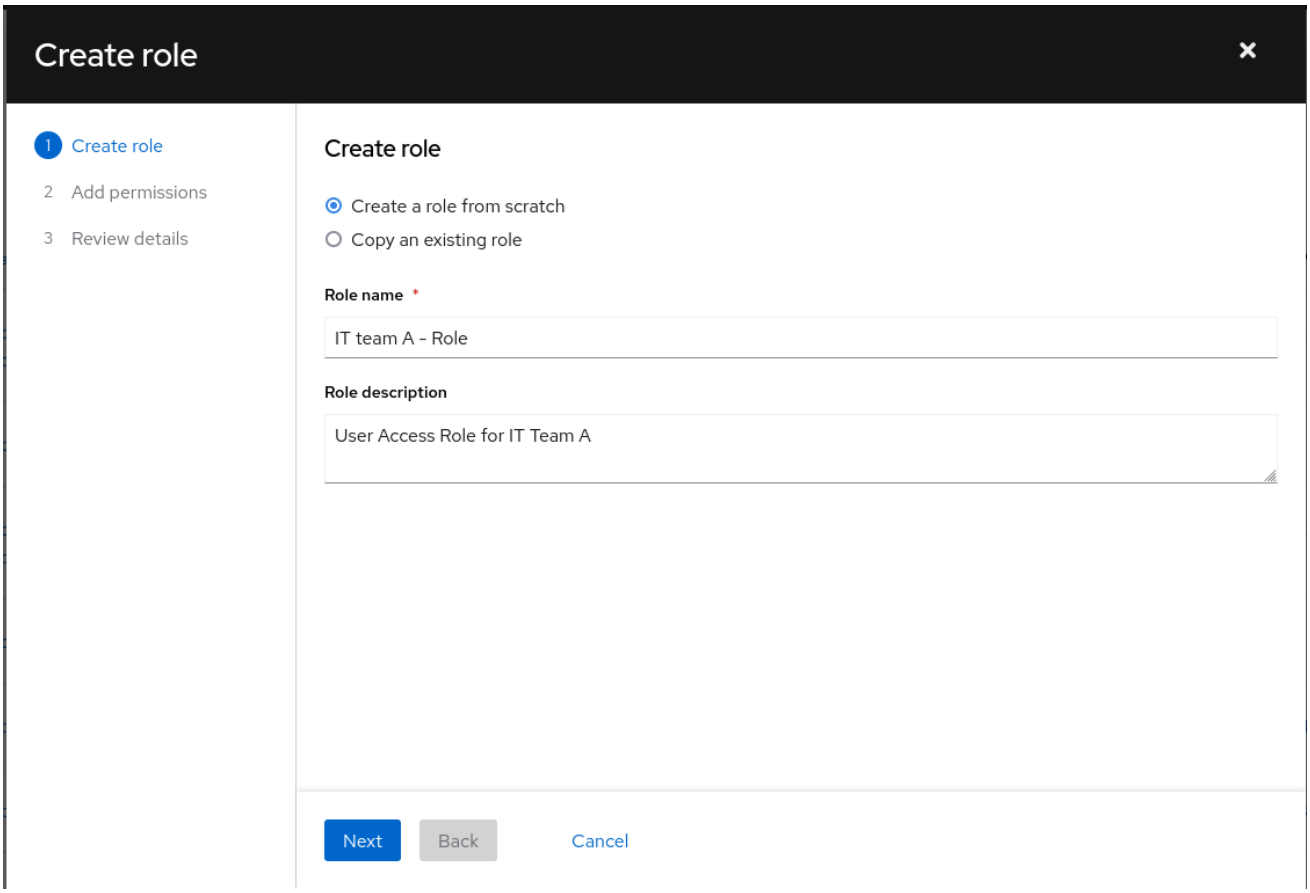
Now that the groups have been created, add systems to them. Click in each group and select **Add systems**.



At this stage, all the users still have access to all systems, regardless of the groups they are in. This is because they still have the Inventory hosts administrator role, which allows them to see all systems, whether or not they are grouped.

Step 3: Create custom roles

To customize access for different inventory groups, create custom roles for those groups. To create a custom role, navigate to **User Access > Roles**, and click **Create role**. A wizard opens. Name your role (For example, IT Team - A Role), and click **Next**.

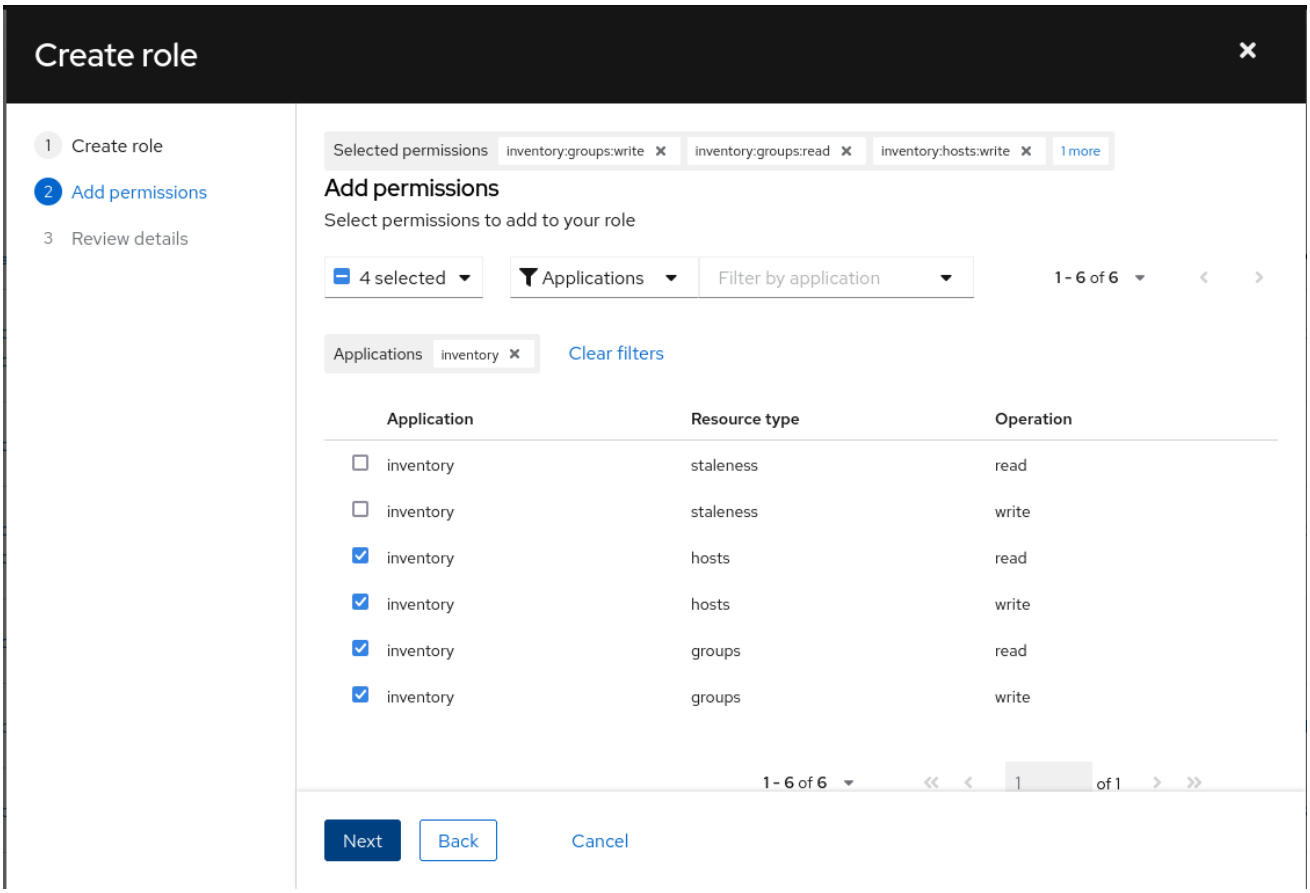


Step 3a: Select permissions to add to the custom role

The wizard displays the **Add permissions** step. This step contains four inventory permissions options. Select them depending on the desired level of access.

For full access to group(s) and its systems, select:

- inventory:group:read
- inventory:group:write
- inventory:hosts:read
- inventory:hosts:write

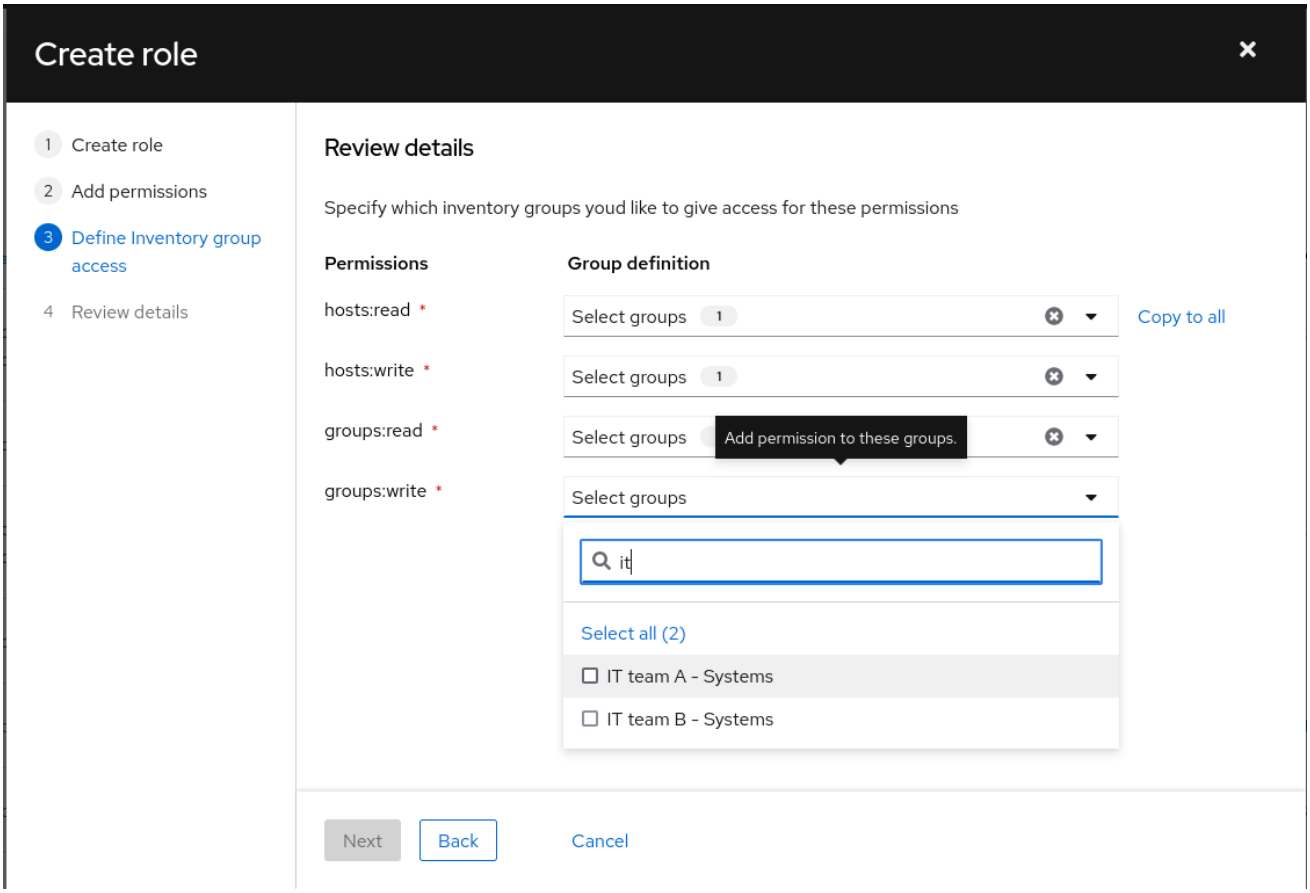


After selecting permissions, click **Next**. You may adjust the permissions as needed.

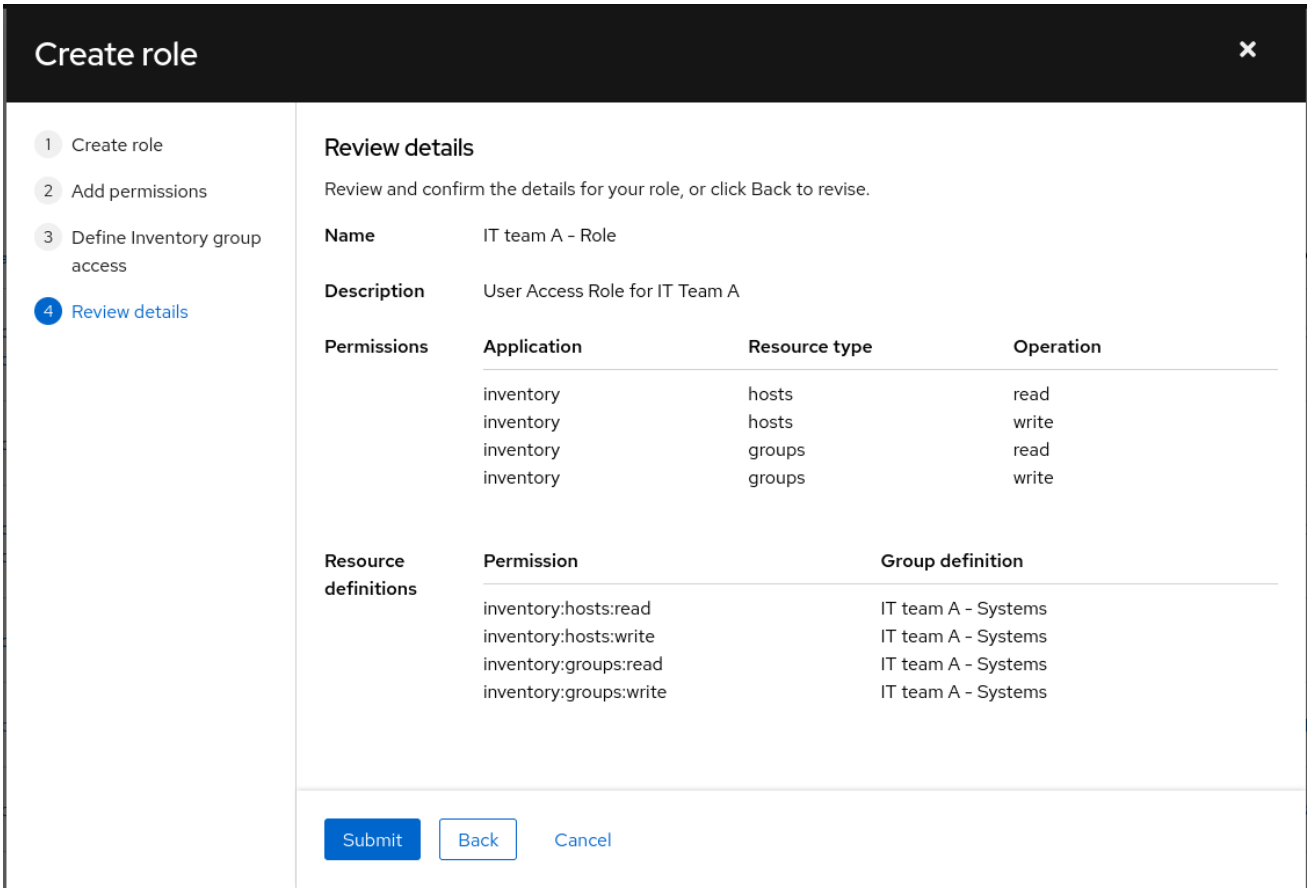
For more information about permissions, see User access to inventory groups.

Step 3b: Assign permissions to selected inventory groups

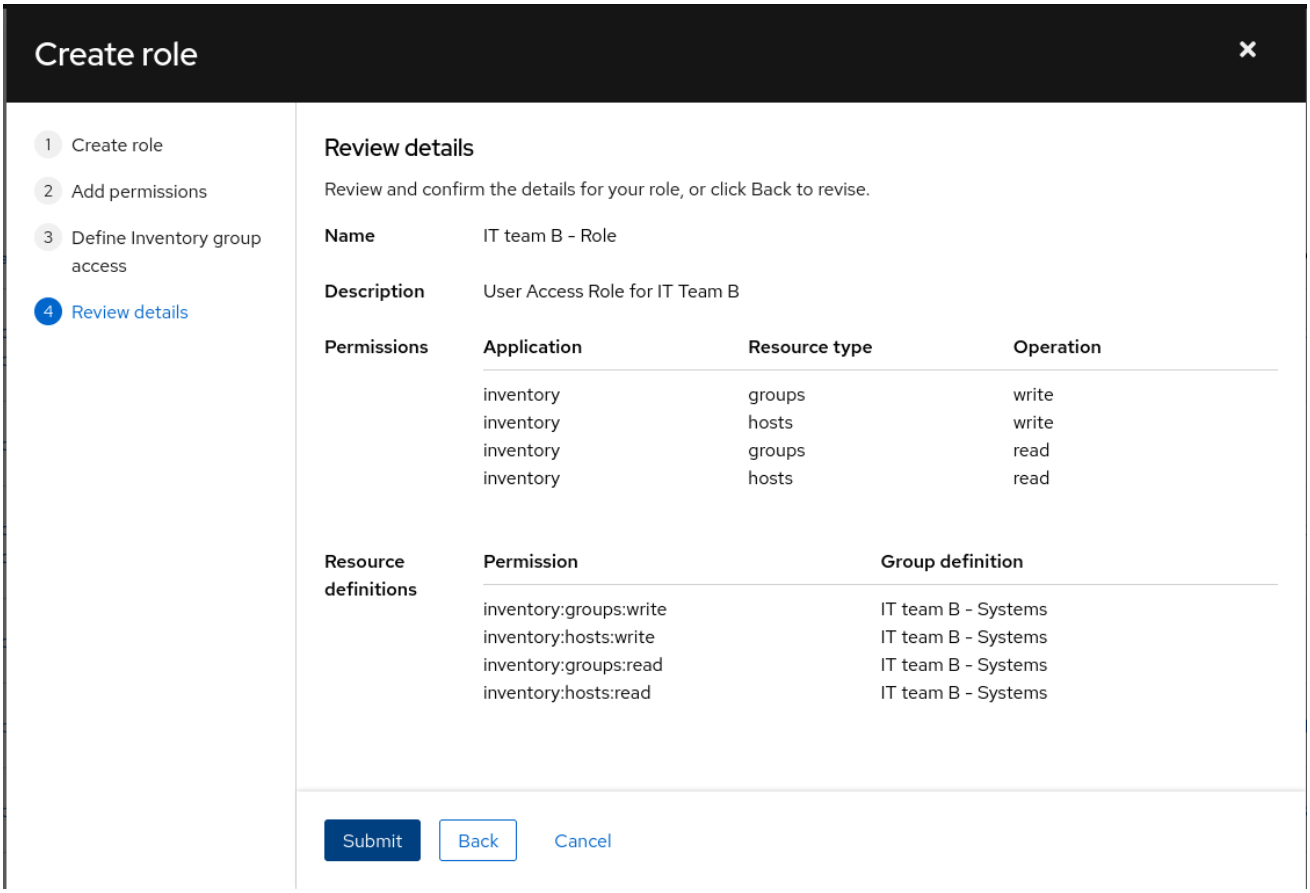
In this step, choose the Inventory group(s) to which you want to grant permission. This example shows how to select the inventory group that corresponds to the current role. For example, create the role **IT team A - Role**, and specify the inventory group **IT team A - Systems** for each permission.



Review the details and click **Submit**.

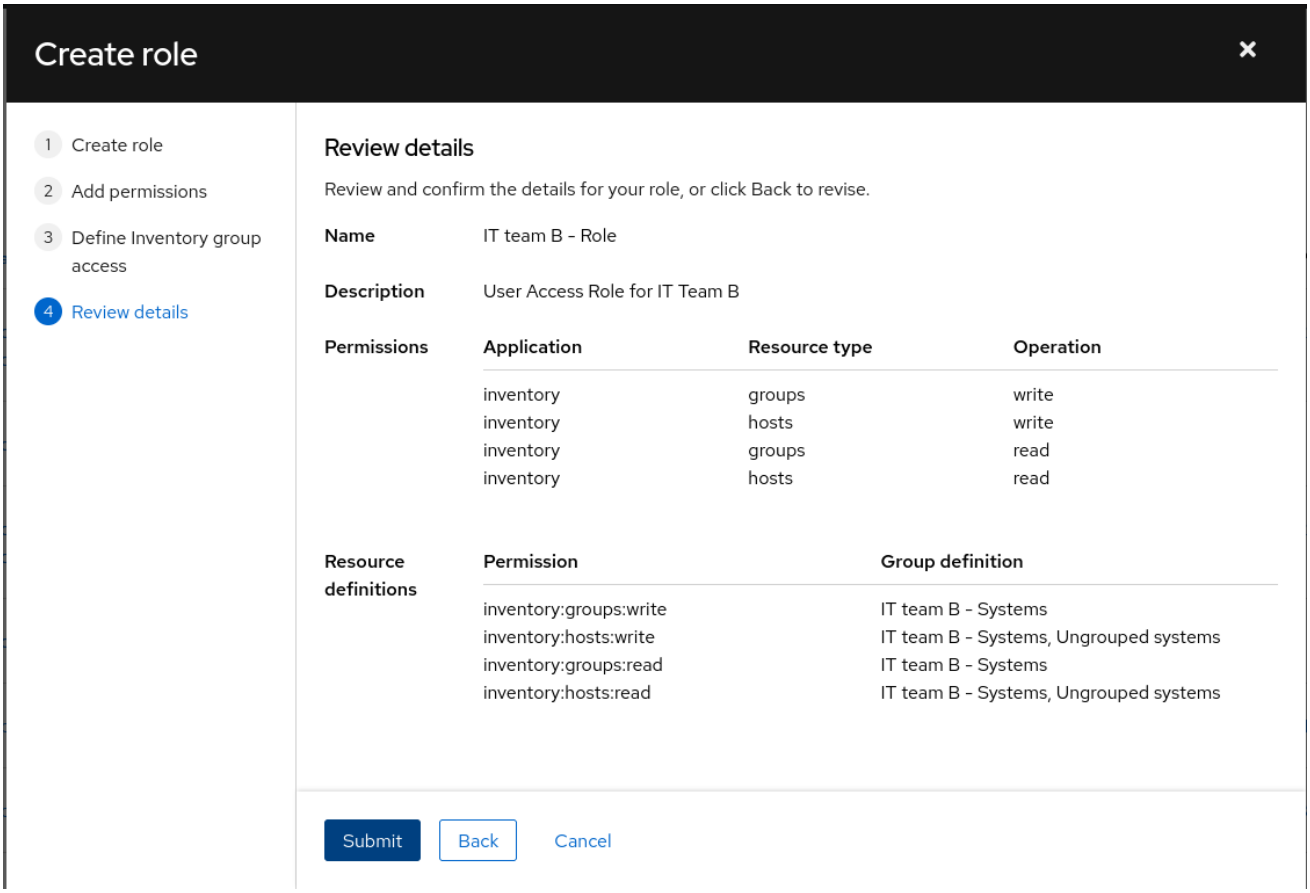


Repeat the steps in this section to create a second custom role called **IT team B - Role** and select the **IT team B - Systems** inventory group.



NOTE

You can grant access to systems that are not part of an inventory group to one or both IT teams. To add those systems, add the Ungrouped systems that appear in the Group definition of the host permissions to your custom role.



Step 4: Create User Access groups to assign custom roles to users

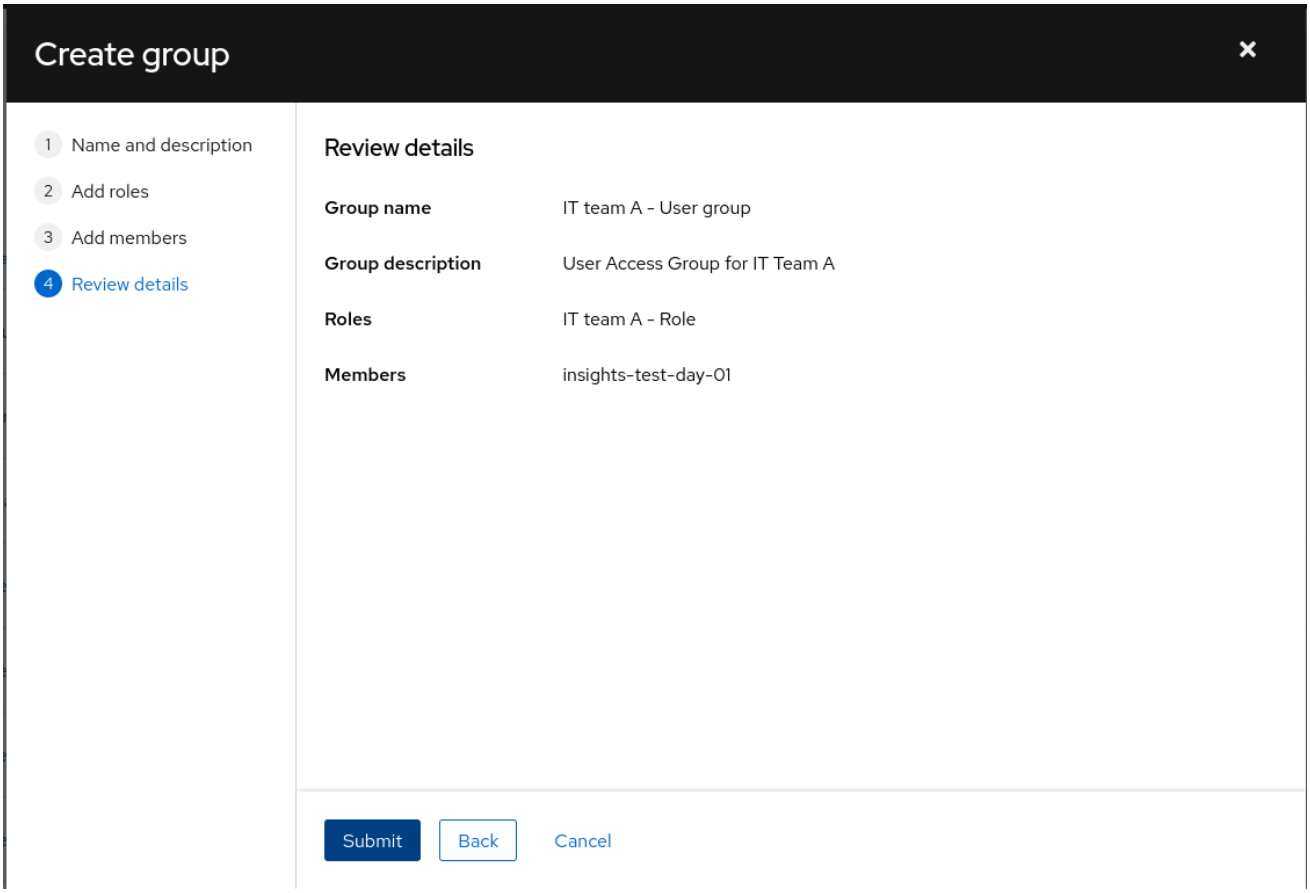
Now that the custom roles are created, create User Access groups to assign the custom roles to users.

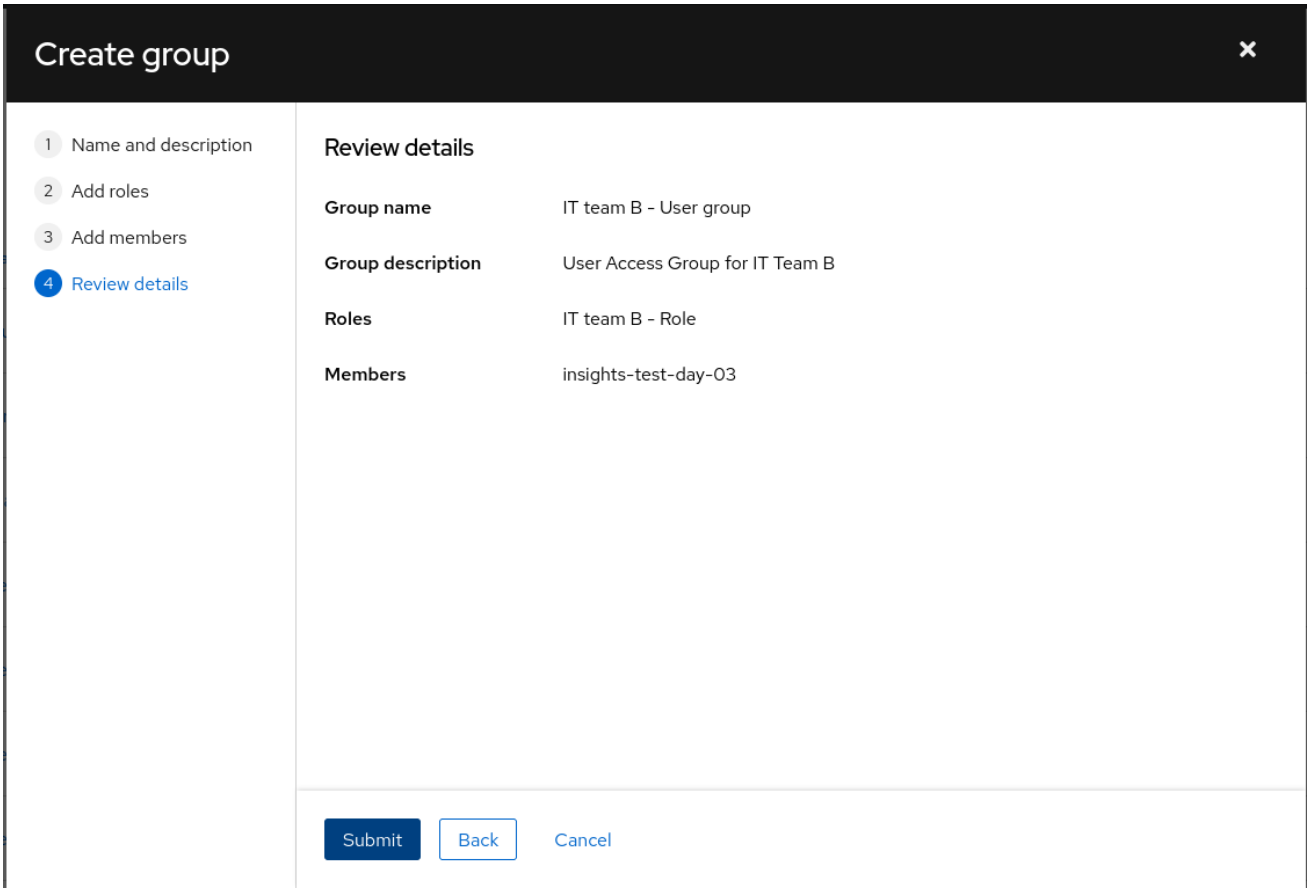
To create a new group, navigate to **User Access > Groups**and click **Create group**. Name the group, select the newly created role, and select the users to whom you want to give the role.

For example, two IT groups have the following permissions:

- IT team A - user group
- IT team A - role
- IT team B - user group
- IT team B - role

The groups appear as follows:

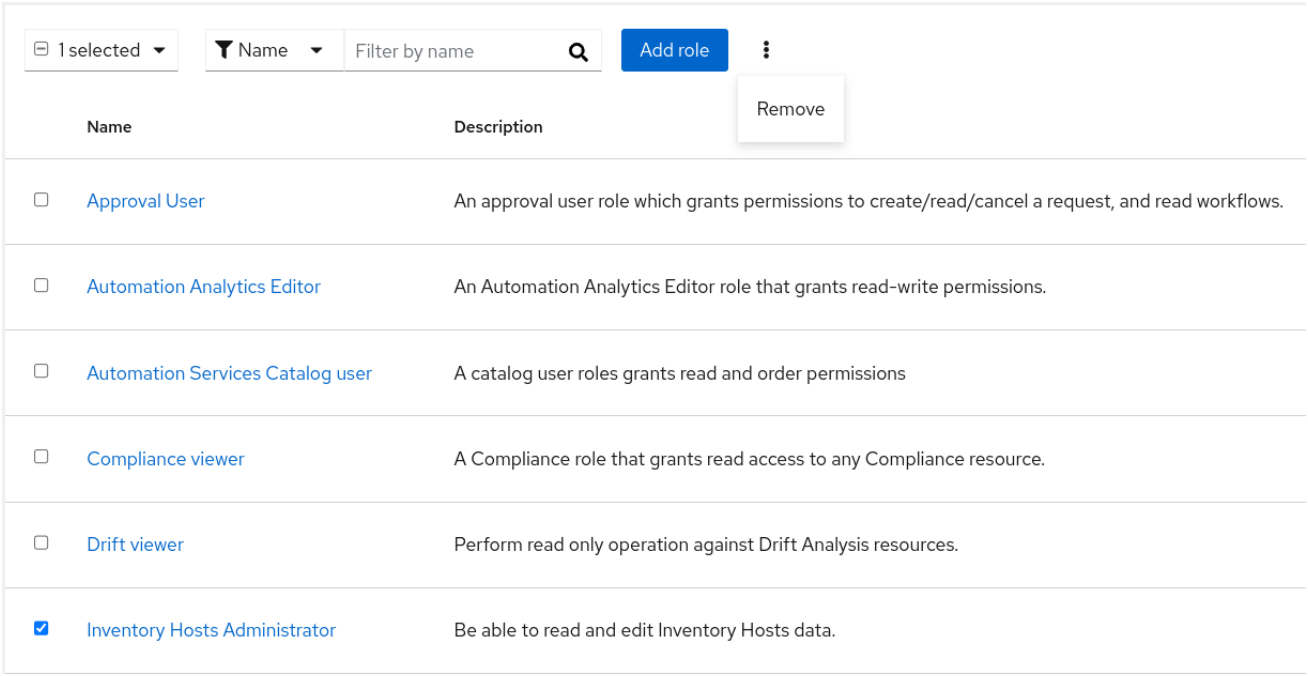


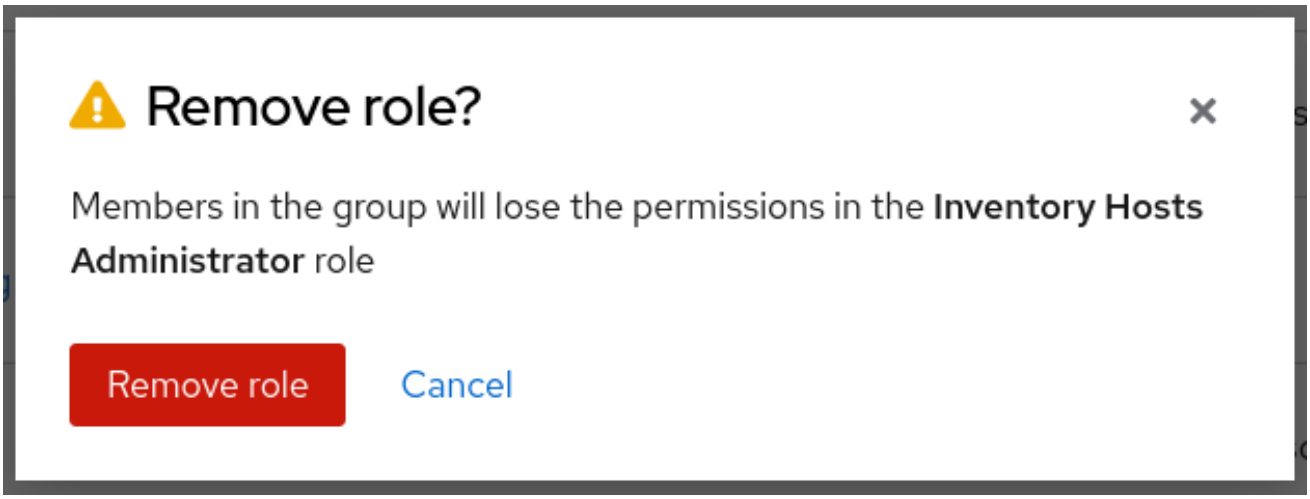


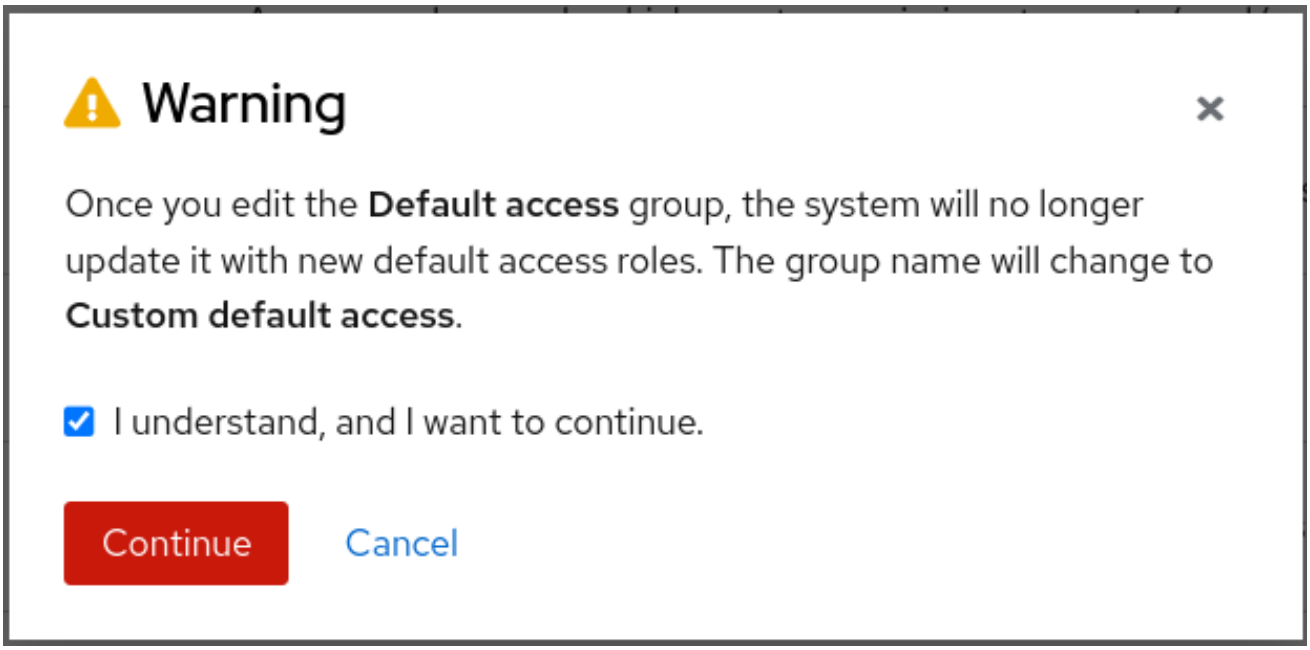
Step 5: Remove Inventory Hosts Admin role from Default Access group

At this stage, despite all the steps taken above, all users still have access to all systems, regardless of the groups they are in. This is because they still have the Inventory Hosts Administrator role, which allows them to see all systems, whether or not they are grouped.

To limit access to systems, navigate to **User Access** > **Groups** and select the Default Access group. Remove the Inventory Hosts Administrator role from this group.







If the users are also members of additional User Access Groups, make sure to review and remove the Inventory Hosts Administrator role from those groups as needed.

Once the role has been removed, the User Access controls behave as expected: Users given custom roles to limit their views to certain groups and systems only see those groups and systems.

1.2.1.3. Adjustment considerations

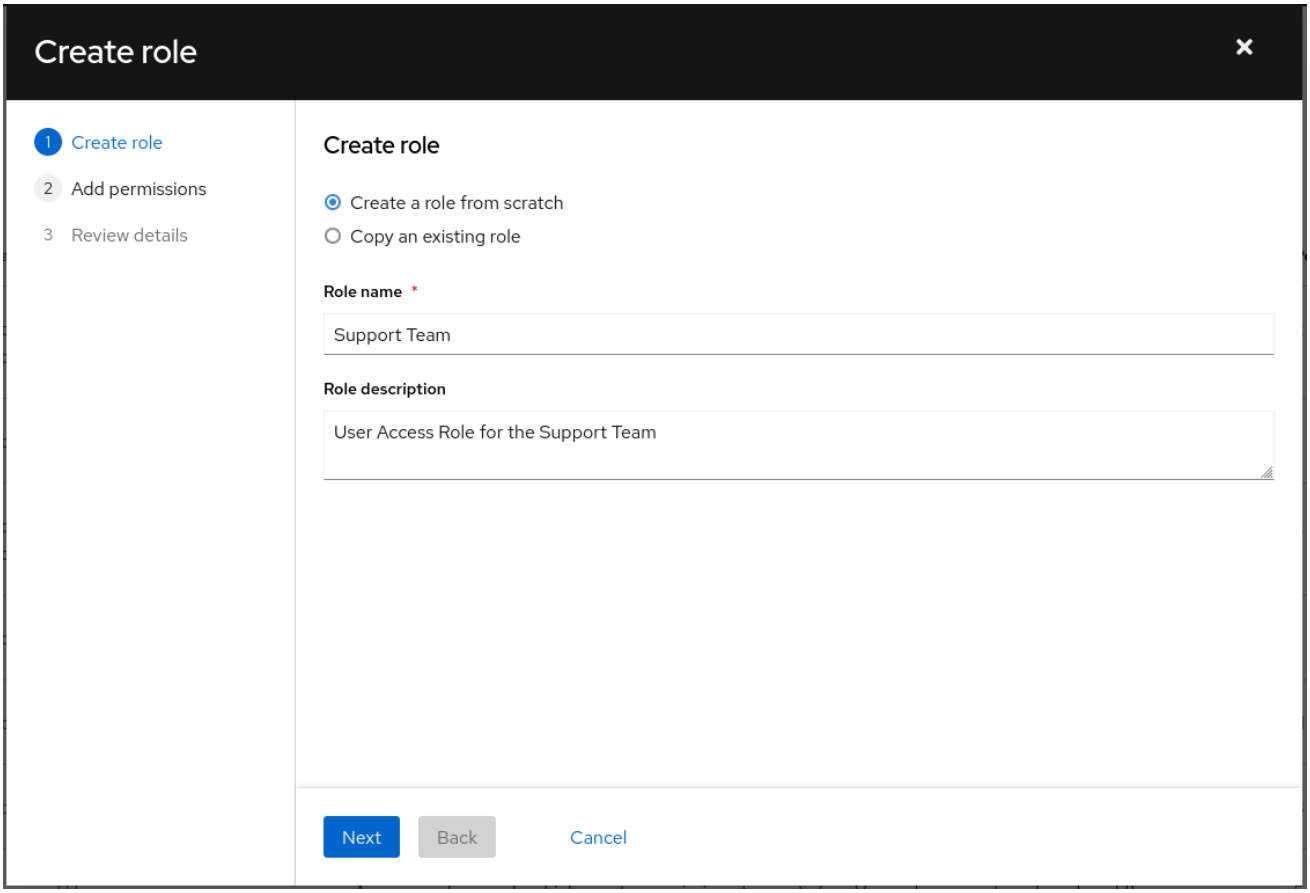
- If you have more than two IT groups, you can create as many custom roles and user groups as you need.
- If you are trying to grant the same people the same access to multiple Inventory groups, you can select more than one Inventory Group to grant permissions within the same custom role.
- You can grant access to systems that are not part of an inventory group. Add the Ungrouped systems in the Group definition of the host permissions to the custom role.
- Remember that as long the Inventory hosts administrator role is still in the Default Access group, all users who have that role still have access to everything.
- If you do not select Ungrouped systems in your custom roles, users with those roles will not be able to see any ungrouped systems once you remove the inventory hosts administrator permission from the Default access group.

1.2.2. Scenario 2: Access to ungrouped systems

In this example, an admin wants to give a group of users access to ungrouped systems, but not to grouped systems.

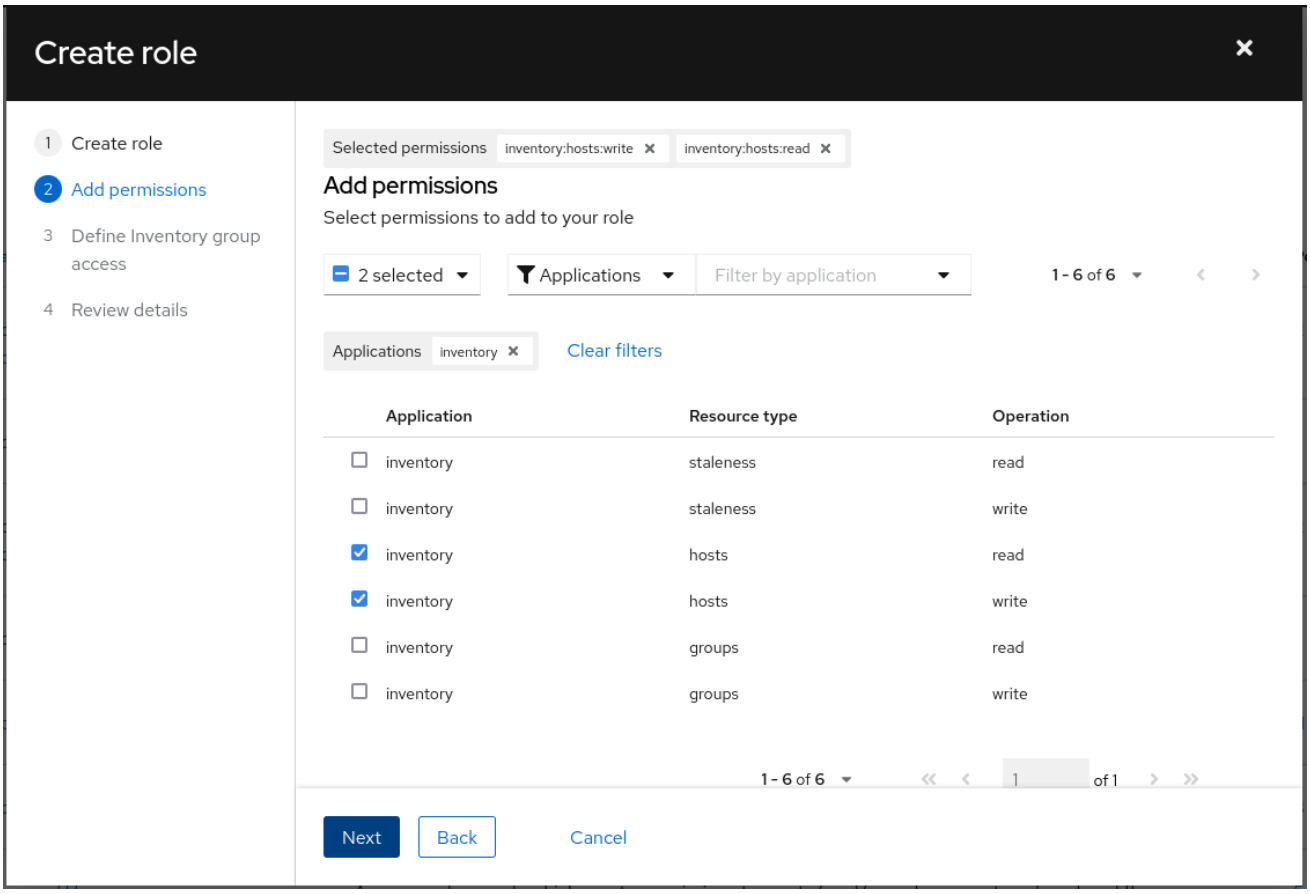
Step 1: Create a custom role

Navigate to **User Access > Roles**and click **Create role**. The Create Role wizard displays.

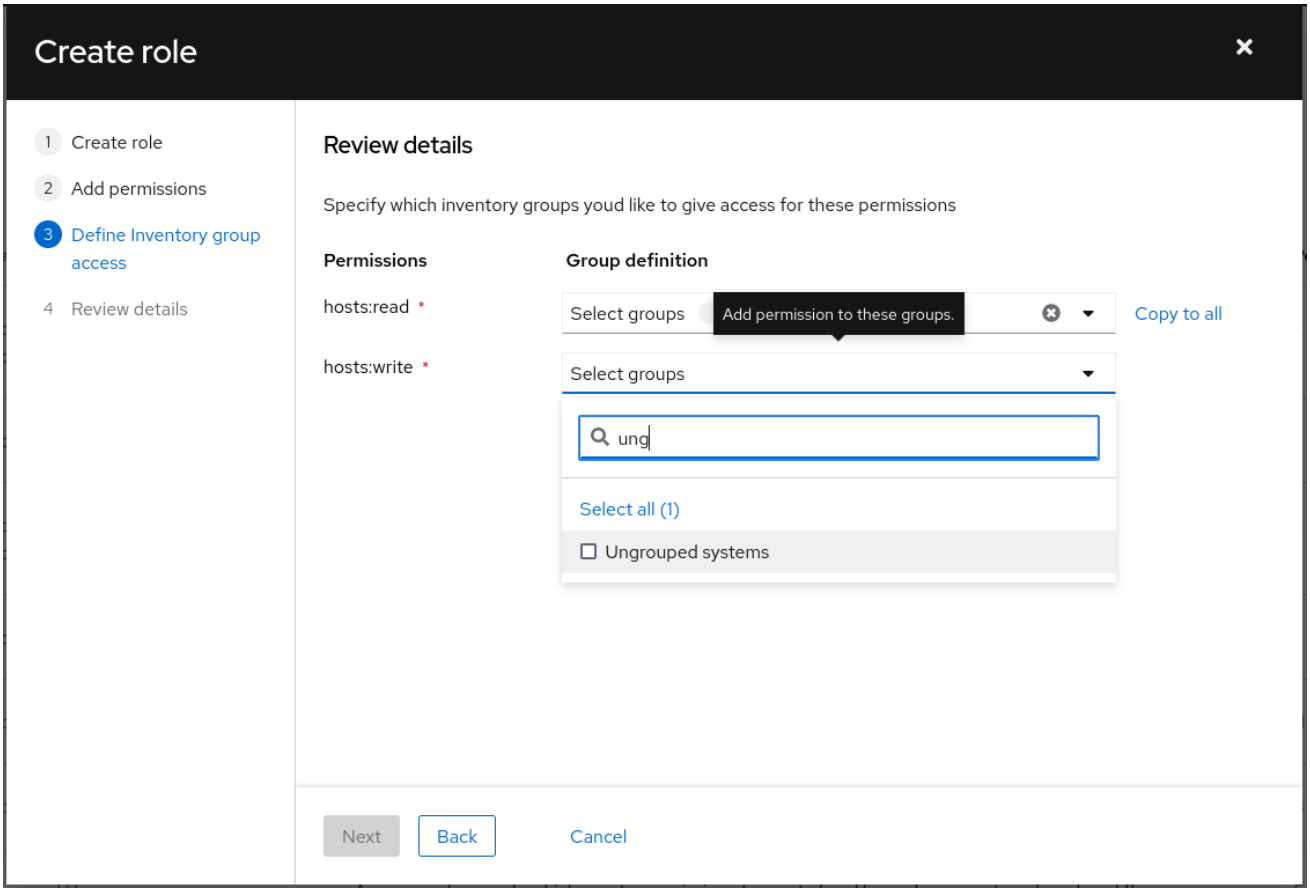


Set the role name and description and click **Next**.

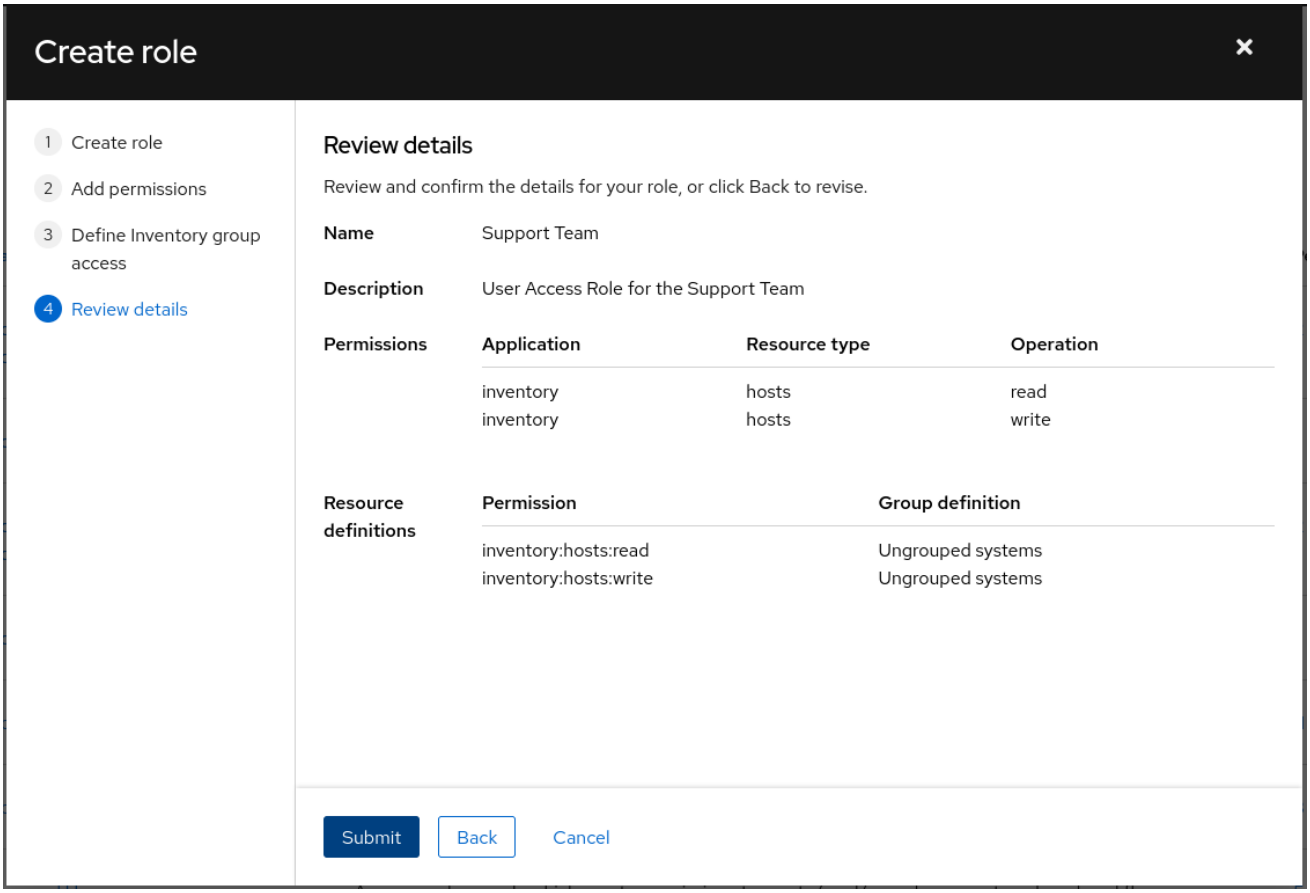
Add the inventory:hosts permissions and click **Next**.



Configure both of the permissions to apply to the Group definition named **Ungrouped systems**. Click **Next**.

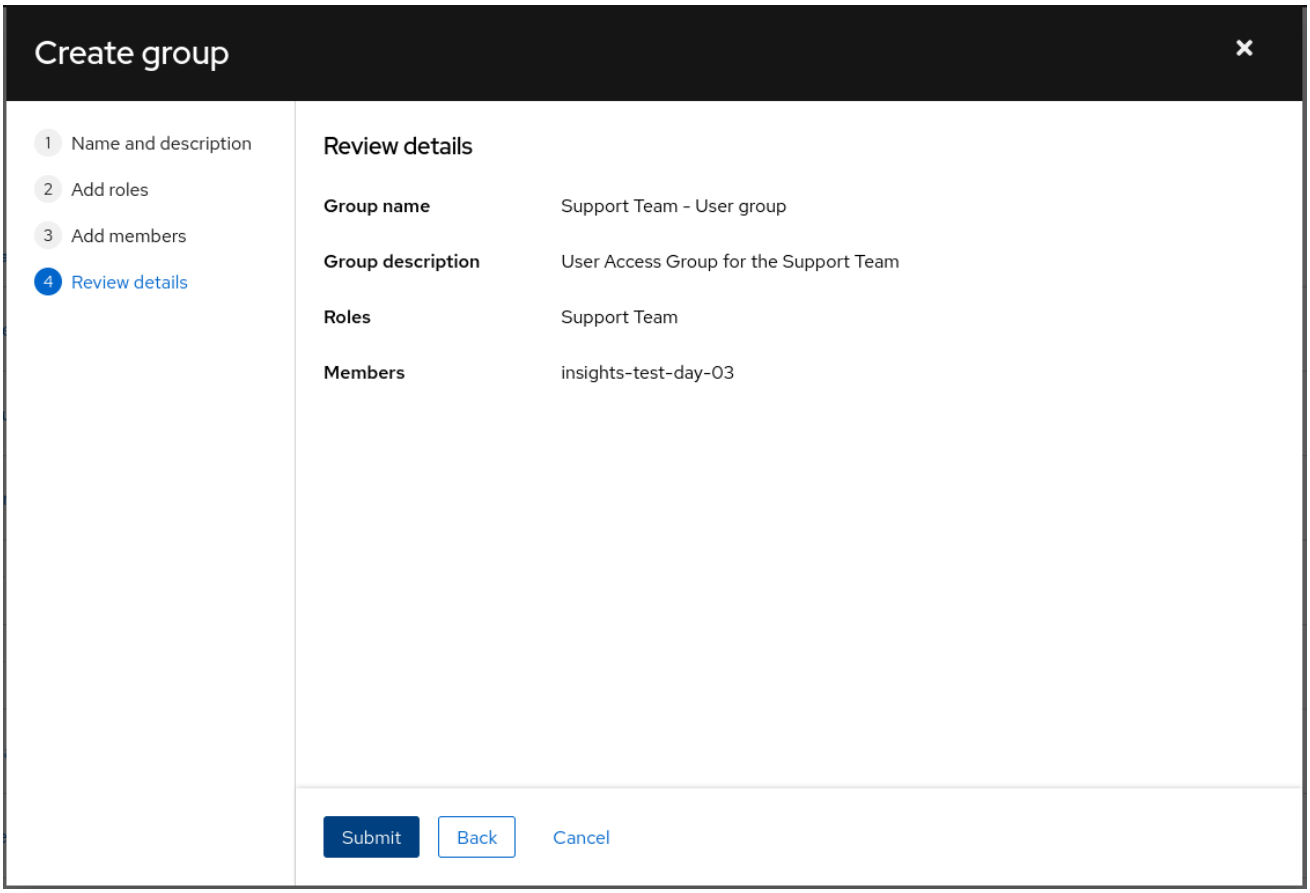


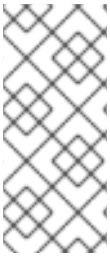
Review the details of the role and click **Submit**.



Step 2: Add the custom role to an RBAC group

Once you create the custom role, navigate to **User Access > Groups** and click **Create Group** to create a User Access (RBAC) group. Name the group, select the new custom role, and select the users to whom you want to assign this role.





NOTE

These steps only work when the users do *not* have the inventory hosts admin role assigned from the Default Access group. To check this, navigate to **User Access > Groups** and click on the Default Access group at the top. If that role is in the group, remove it, because that role gives users access to the whole inventory - including both ungrouped and grouped systems.

After you remove the role, the selected set of users only has access to ungrouped systems in your inventory.

1.2.3. Known limitations

- Users who are Org Admin (member of the Default admin access group) will always have full access to systems and Inventory Groups
- A user without permission on the system will not be able to add it to a Remediation. However, if an existing Remediation with active systems was created in the past, the user will still be able to run it, even if the permissions have been removed on that system for the current user.

NOTE

Before enabling Inventory groups in your organization, review your Notifications configuration to ensure that only appropriate groups of users are configured to receive Email notifications. If you do not review your Notifications configuration, users might receive alerts triggered by systems outside of their Inventory group permission scope.

1.3. CREATING AN INVENTORY GROUP

Prerequisites

- You must be an Organization administrator (member of the Default administrator access group) or have the Inventory Group Administrator role.

Procedure

1. On the Red Hat Hybrid Cloud Console, navigate to **Inventory**.
2. Click the Inventory drop-down menu and select **Groups**.
3. Click **Create group**. The **Create group** dialog box displays.
4. Type a name for the group in the **Group name** field. Names can consist of lowercase letters, numbers, spaces, hyphens (-), and underscores (_).
5. Click **Create**. A **Group Created** message displays, and the new group appears in the list of inventory groups.

1.4. ADDING SYSTEMS TO A NEWLY CREATED INVENTORY GROUP

NOTE

Each system can belong to only one inventory group. In the current release of inventory groups, a system cannot be reassigned to a different group in a single step. You must first remove the system from its current group, and then assign it to a new group.

Prerequisites

- Organization Administrator access to Insights for Red Hat Enterprise Linux, or Inventory Groups administrator permissions to the group, or both inventory:groups:write and inventory:groups:read permissions to the group

Procedure

1. On the Red Hat Hybrid Cloud Console, navigate to **Inventory > Groups**.
2. Click the name of the group to which you want to add systems. An **Inventory group** page displays with the name of the group and two tabs, **Systems** and **Group Details**.
3. On the **Systems** tab, click **Add systems**. The **Add systems** dialog box displays and shows the systems available for you to view in inventory.
4. Select the systems you want to add to the group.

NOTE

If you select a system that already belongs to another group, a warning message displays: *One or more of the selected systems already belong to a group. Make sure that all the systems you have selected are ungrouped, or you will not be able to proceed.*

5. When you have finished selecting systems, click **Add systems**. The **Inventory group** page displays and includes the systems you added to the group.

1.4.1. Adding a system and creating a group from the Inventory systems page

Prerequisites

- Organization Administrator access to Insights for Red Hat Enterprise Linux, or Inventory Groups administrator permissions to the group, or both inventory:groups:write and inventory:groups:read permissions to the group

Procedure

1. On the Red Hat Hybrid Cloud Console, navigate to **Inventory**. The list of systems in your inventory appears.
2. Locate the system that you want to add.
3. Click the **More options** icon (⋮) on the far right side of the system listing.
4. Select **Add to group** from the pop-up menu. The **Add to group** dialog box displays.
5. Click **Create a new group**. The **Create group** dialog box displays.
6. Type a name for the new group in the **Name** field and click **Create**.

The **Inventory** page appears and displays a status (success or failure) message.

1.5. REMOVING SYSTEMS FROM A GROUP

You can remove systems from an inventory group from two pages in the Red Hat Hybrid Cloud Console: the Groups page and the Systems page.

1.5.1. Removing systems from the group using the Groups page

Prerequisites

- You must be an Organization administrator (member of the Default admin access group), or have the Inventory Group Administrator role, or have the inventory:group:write permissions for that particular inventory group.

Procedure

1. On the Red Hat Hybrid Cloud Console, navigate to **Inventory**.
2. Click the **Inventory** drop-down menu and select **Groups**. The **Groups** page displays.

3. Select the group that contains the systems that you want to remove.
4. Locate the system that you want to remove from the group.
5. Click the **More options** icon (⋮) on the far right side of the system listing.
6. Select **Remove from group** from the pop-up menu. The **Remove from group?** dialog box displays.
7. **Optional:** To remove multiple systems from the group at once, select each system you want to remove, and then select **Remove from group** from the **More options** menu (⋮) in the toolbar.
8. Click **Remove**.

The group page displays and shows the updated group with a status (success or failure) message.

1.5.2. Removing systems from the group using the Systems page

Prerequisites

- Organization Administrator access to Insights for Red Hat Enterprise Linux, or Inventory Groups administrator permissions to the group, or both inventory:groups:write and inventory:groups:read permissions to the group

Procedure

1. On the Red Hat Hybrid Cloud Console, navigate to **Inventory**.
2. Click the **Inventory** drop-down menu and select **Systems**. The **Systems** page displays.
3. Locate the system that you want to remove from the group.
4. Click the **More options** icon (⋮) on the far right side of the system listing.
5. Select **Remove from group** from the pop-up menu. The **Remove from group?** dialog box displays.

NOTE

If any of the systems you selected do not belong to any group, the **Remove from group** option remains disabled. Make sure that you select only systems that belong to the group.

6. **Optional:** To remove multiple systems from the group, select each system you want to remove, and then select **Remove from group** from the **More options** (⋮) menu.
7. Click **Remove**.

The Systems page displays and shows a status (success or failure) message.

1.6. RENAMING A GROUP

Prerequisites

- You must be an Organization administrator (member of the Default admin access group), or have the Inventory Group Administrator role, or have the inventory:group:write permissions for that particular inventory group.

Procedure

1. On the Red Hat Hybrid Cloud Console, navigate to **Inventory**.
2. Click the **Inventory** drop-down menu and select **Groups**. The **Groups** page displays.
3. Click the **Group actions** drop-down menu in the upper right corner of the **Groups** page.
4. Select **Rename** from the drop-down menu. The **Rename group** dialog box displays.
5. Type the new name into the **Name** field, and click **Save**.
6. The **Groups** page shows the renamed group in the list of groups.

1.7. DELETING A GROUP

NOTE

Before you delete a group, make sure that the group does not contain any systems. You can only delete empty groups. If you attempt to delete a group that still contains systems, Insights returns a warning message.

Prerequisites

- You must be an Organization administrator (member of the Default admin access group), or have the Inventory Group Administrator role, or have the inventory:group:write permissions for that particular inventory group.

Procedure

1. On the Red Hat Hybrid Cloud Console, navigate to **Inventory**.
2. Click the **Inventory** drop-down menu and select **Groups**. The **Groups** page displays.
3. Click the **More options** icon (⋮) on the far right side of the listing for the group you want to delete.
4. Select **Delete** from the pop-up menu. The **Delete group** dialog box displays.
5. Select the checkbox to acknowledge that the delete operation cannot be undone. Click **Delete**.

The **Groups** page shows an updated list of groups and a status (success or failure) message.

NOTE

You can also delete a group from within the page for the group. Navigate to the group and click the **Group Actions** drop-down menu, and then select **Delete** from the drop-down menu.

CHAPTER 2. MANAGING SYSTEM STALENESS AND DELETION WITH RED HAT INSIGHTS FOR RED HAT ENTERPRISE LINUX

As a systems administrator, you can specify when your systems that are managed by Insights for Red Hat Enterprise Linux are considered stale, as well as the amount of time that your systems are inactive before they are deleted from the inventory.

2.1. INSIGHTS FOR RED HAT ENTERPRISE LINUX SYSTEM STALENESS AND DELETION

A system is a Red Hat Enterprise Linux (RHEL) environment that is managed through the Red Hat Insights Inventory feature of the Red Hat Hybrid Cloud Console. System activity is automatically monitored by Red Hat. If a system is inactive for a specified period of time, it is labeled stale. After a system is stale for a specified period of time, a system staleness warning is issued, and after another specified period of time, the system is deleted from the Insights for Red Hat Enterprise Linux inventory. After a system is deleted, it must be reregistered to be added back to your inventory.

The default configuration requires systems to communicate with Red Hat daily. If a system does not communicate with Red Hat within one day, it is automatically labeled *stale* and a warning icon appears at the top of the systems page, in the **Last seen:** field. If it does not communicate within 7 days, it is labeled *stale warning* and the **Last seen:** field turns red. If it does not communicate with Red Hat within 14 days, it is deleted. However, there are situations where a system is offline for an extended period of time, but is still being used. For example, test environments are often kept offline except when they are used for testing. Edge devices, for example submarines or Internet of Things (IoT) devices, can be out of range of communication for extended periods of time. You can modify the system staleness and deletion values to accommodate these situations.

2.2. MODIFYING INSIGHTS FOR RED HAT ENTERPRISE LINUX SYSTEM STALENESS AND DELETION TIME LIMITS

You can modify the system staleness and deletion time limits for both conventional and edge (immutable) systems that are managed by Insights for Red Hat Enterprise Linux. Do this so that systems that are offline but still active are not deleted. Note that any changes that you make to these limits affect all of your conventional or edge systems.

Prerequisites

- You are logged in to the Red Hat Hybrid Cloud Console as a user with the Organization Staleness and Deletion Administrator role.

Procedure

1. On the Red Hat Hybrid Cloud Console main page, click **RHEL** in the **Red Hat Insights** tile.
2. In the left navigation bar, click **Inventory** > **System Configuration** > **Staleness and Deletion**. The **Staleness and Deletion** page displays the current settings for system staleness, system stale warning, and system deletion for conventional systems.
3. Optional: To manage the staleness and configuration settings for edge (immutable) systems, select the **Immutable (OSTree)** tab.
4. To change these values, click **Edit**. The drop-down arrows next to each value are now enabled.

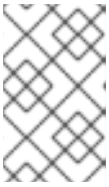
5. Click the arrow next to the value that you want to change and then select a new value.

NOTE

The system stale warning value must be less than the system deletion value.

6. Optional: To revert to the default values for the organization, click **Reset**.

7. Click **Save** to save your changes.



NOTE

If you set the system deletion maximum time to less than the current maximum time, systems that have been stale for longer than then new maximum time will be deleted.

2.3. VIEWING THE STATE OF AN INSIGHTS FOR RED HAT ENTERPRISE LINUX SYSTEM

You can view the state of your systems to check for staleness and potential scheduled deletion.

Prerequisites

- You are logged in to the Red Hat Hybrid Cloud Console.

Procedure

1. On the Red Hat Hybrid Cloud Console main page, click **RHEL** in the **Red Hat Insights** tile.

2. In the left navigation bar, click **Inventory** > **Systems**. The **Systems** page lists the systems that are managed by Insights for Red Hat Enterprise Linux.

3. To view the state of a system, click a system name and scroll to the bottom of the page. The state is listed in the **System status** box. It is either **Active** or **Stale**.

   - If the state is **Stale**, a warning icon appears at the top of the system page, in the **Last seen:** field and field is highlighted in brown.

   - If the state is **Stale** for a specified amount of time, the system is labeled *stale warning* and the **Last seen:** field turns red.

4. If the system has a stale warning icon in the **Last seen:** field, click the icon to view when the system will be deleted from the inventory. For example, "System scheduled for removal in 11 days."

PROVIDING FEEDBACK ON RED HAT DOCUMENTATION

We appreciate and prioritize your feedback regarding our documentation. Provide as much detail as possible, so that your request can be quickly addressed.

Prerequisites

- You are logged in to the Red Hat Customer Portal.

Procedure

To provide feedback, perform the following steps:

1. Click the following link: Create Issue
2. Describe the issue or enhancement in the **Summary** text box.
3. Provide details about the issue or requested enhancement in the **Description** text box.
4. Type your name in the **Reporter** text box.
5. Click the **Create** button.

This action creates a documentation ticket and routes it to the appropriate documentation team. Thank you for taking the time to provide feedback.