Red Hat Insights 1-latest

Assessing and remediating system issues using Red Hat Insights Tasks

Use predefined Insights Tasks playbooks to resolve issues on your systems

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Abstract

Red Hat Insights Tasks helps you assess and remediate system issues by using predefined playbooks called Tasks. 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. OVERVIEW OF INSIGHTS FOR RED HAT ENTERPRISE LINUX TASKS

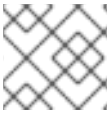
Tasks is part of the Automation Toolkit for Insights for Red Hat Enterprise Linux. Tasks offer predefined playbooks that help you maintain the health of your infrastructure by simplifying and solving complex problems using automated tasks. Tasks solve specific problems and are typically executed one time on your systems to accomplish things such as, detecting a high-profile vulnerability on your systems or preparing systems for a major upgrade. You can find tasks in Red Hat Hybrid Cloud Console > Red Hat Insights > RHEL > Automation Toolkit > Tasks.

Insights for Red Hat Enterprise Linux anticipates your need to solve problems and get things done in your infrastructure, and continuously adds specific tasks to the Automation Toolkit. Tasks include the following:

- RHEL pre-upgrade analysis utility task
- Pre-conversion analysis utility task
- Convert to RHEL from CentOS Linux 7

Some important information you will need to get started with executing a task are:

- **User Access considerations**. Find out what role or level of user access you need to complete tasks.
- **Registering and connecting hosts to Insights** Using tasks requires you to register and connect systems to Insights.
- **Executing Tasks using Red Hat Insights** Understand how to find and execute tasks.



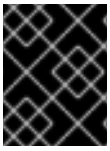
NOTE

System requirements to execute different tasks might vary.

1.1. USER ACCESS CONSIDERATIONS

An Organization Administrator on your account configures settings in User Access to control access to Red Hat Insights for Red Hat Enterprise Linux features. All users on your account have access to most of the data in Insights for Red Hat Enterprise Linux. However, performing some actions requires users to have elevated access.

Access is granted in User Access in the Red Hat Hybrid Cloud Console . To grant or change access, an Organization Administrator or User Access administrator must add you to a User Access group with the required roles in Red Hat Hybrid Cloud Console > the **Settings** icon (⚙) > Identity & Access Management > User Access > Users.



IMPORTANT

In this documentation, prerequisites for procedures declare whether you need elevated access to perform the procedure.

Important predefined groups and roles relevant to understanding User Access are:

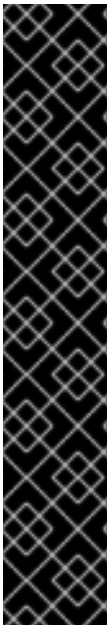
- **Default access group**

- **Default admin access group**
- **Organization Administrator role**

Brief overview about some predefined groups and roles

The following predefined groups and roles are relevant to access:

- **Default access group.** All users on the account are members of the Default access group. Members of the Default access group have read-only access, which allows you to view most information in Insights for Red Hat Enterprise Linux.
- **Default admin access group.** All users on the account who are Organization Administrators are members of this group. Users cannot modify the roles in the Red Hat-managed Default admin access group. Members of the Default admin access group have read-write access, which allows you to view and perform other actions in Insights for Red Hat Enterprise Linux.
- **Organization Administrator role.** All users on the account who are Organization Administrators can create and modify User Access groups and grant access to other account users. To find out whether you are an Organization Administrator, click your name in the Red Hat Hybrid Cloud Console header, in the upper right of your screen, and see whether the words "Org. Administrator" show under your username.



IMPORTANT

Requesting elevated access If you do not have access to features that you need, you can:

- Contact Customer Service to get Organization Administrator details for your account.
  - Provide your account number when you send the request.
- Contact the Organization Administrator and ask for access, providing the following information:
  - The name of the role you need access to, for example, Remediations administrator
  - A link to full User Access documentation, to help inform the Organization Administrator about how to give you access.

1.1.1. User Access roles for Insights Tasks users

The following role enables enhanced access to remediations features in Insights for Red Hat Enterprise Linux:

- **Tasks administrator.** The Tasks administrator role permits access to all Tasks capabilities to remotely execute Tasks on Insights-connected systems.

NOTE

All members of the Default Admin Access group can also execute Tasks.

A Tasks viewer role does not exist.

CHAPTER 2. REGISTERING AND CONNECTING SYSTEMS TO RED HAT INSIGHTS TO EXECUTE TASKS

To work with Red Hat Insights, you need to register systems to Insights, and enable system communication with Insights. In addition to communicating with Insights, you need to enable and install dependencies on Satellite 6.11+, Remote Host Configuration (rhc), **rhc-worker-playbook** and **ansible**, so that you can use task services, and other services in the Automation Toolkit.

For more information about enabling system communication with Insights, and addressing dependencies, see:

- Enabling host communication with Insights in the Red Hat Insights Remediations Guide .

Additional resources

- Red Hat Insights data and application security

CHAPTER 3. EXECUTING TASKS USING RED HAT INSIGHTS

You can execute tasks on remote systems in the Red Hat Hybrid Cloud Console directly from Red Hat Insights Tasks.

Tasks you can execute are:

- RHEL pre-upgrade analysis utility tasks.
- Pre-conversion analysis utility tasks.
- Convert to RHEL from CentOS Linux 7.

NOTE

Prerequisites and actions required to execute specific Insights tasks will vary.

Here are general instructions to execute a task.

Prerequisites

- You are logged in to the Red Hat Hybrid Cloud Console.
- You are a member of a User Access group with the **Tasks administrator** role.
- You have connected systems and addressed dependencies for Remote Host Configuration (rhc), **rhc-worker-playbook** and **ansible-core**, as needed. See Enabling host communication with Insights in the *Red Hat Insights Remediations Guide* .
- You have addressed dependencies for Satellite 6.11+. See Enabling host communication with Insights in the *Red Hat Insights Remediations Guide* .
  Services in the Insights Automation Toolkit have similar dependency requirements that must be met before Red Hat Insights users can execute playbooks for remediations and tasks.

Procedure

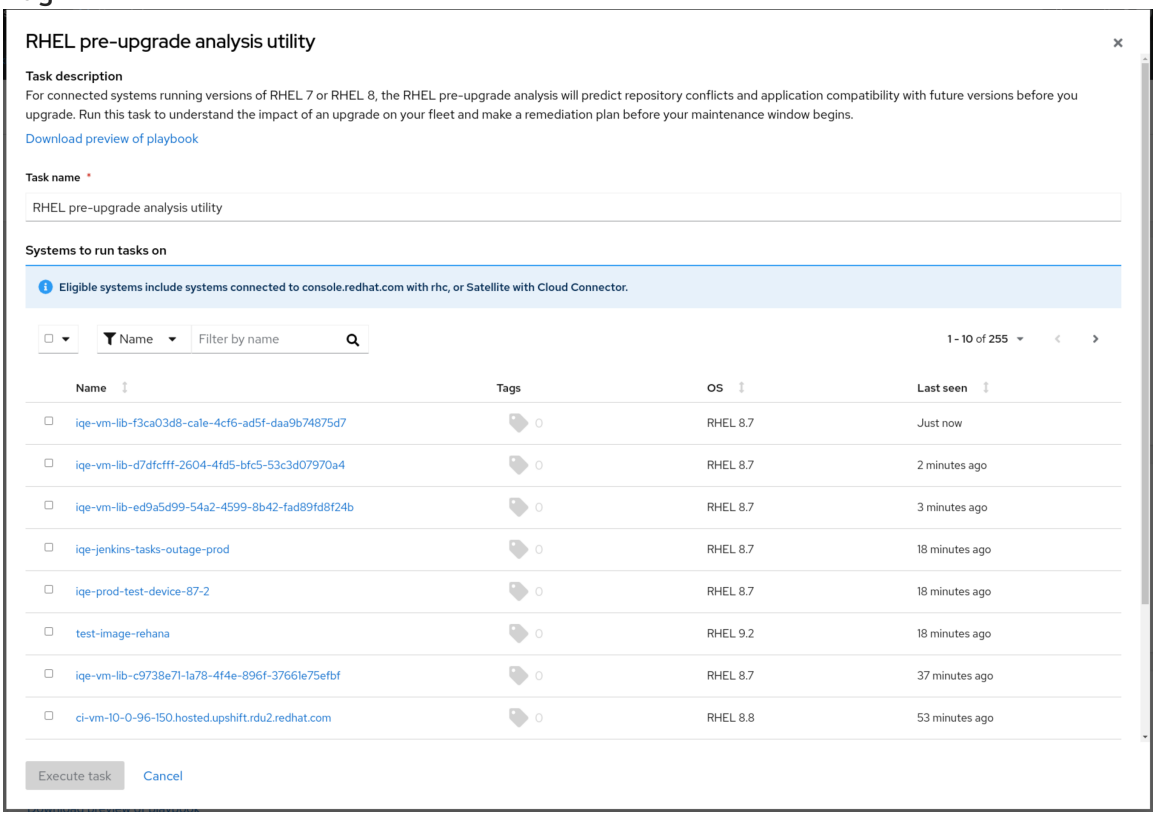
1. Navigate to **Automation Toolkit > Tasks**.
2. Select a task to execute and click **Run Task**.
3. Optional: Edit the default task name to customize it for your needs.

NOTE

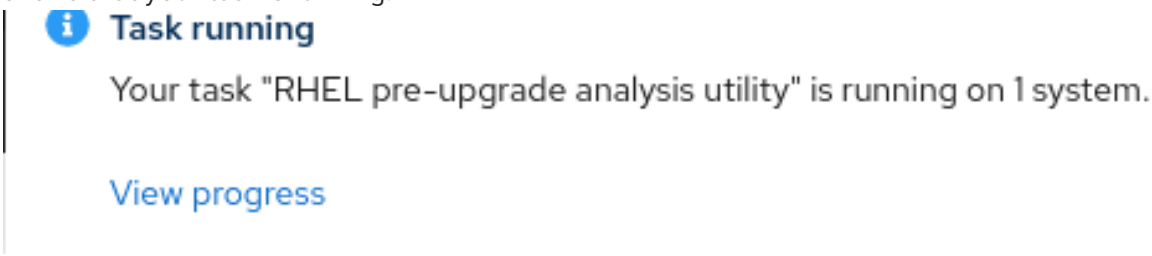
After you execute the task, you will not be able to change the task name again.

4. Make note of any task-specific prerequisites shown in the brief description of the task.
5. Select the systems on which to execute the task. You can use filters to search and filter systems by:
   - **Name**
   - **Operating System**

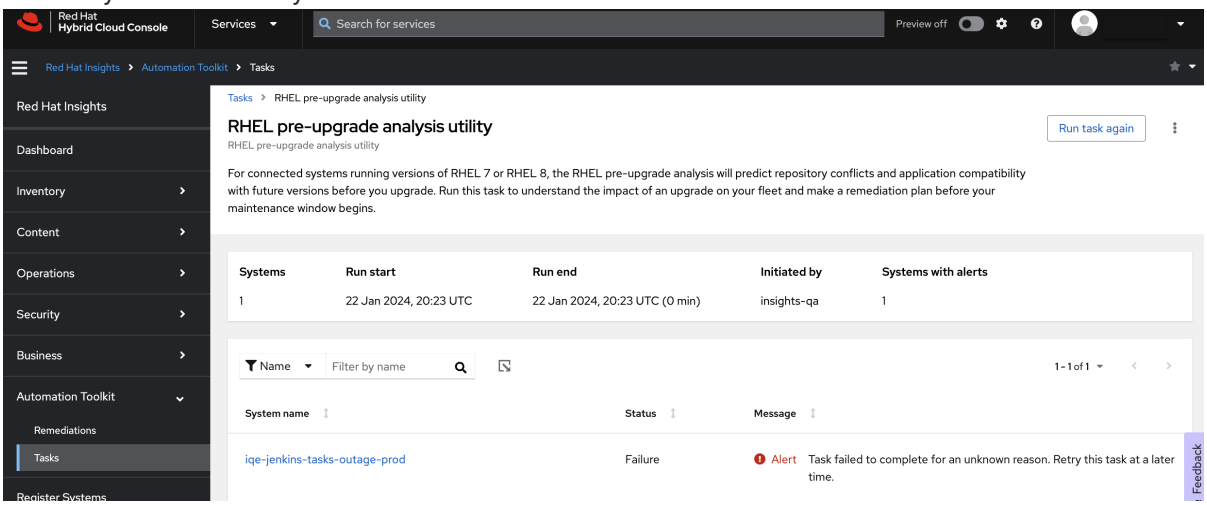
- Tag



6. Click **Execute task**. The task executes on the selected systems. You might see a pop-up that shows that your task is running.



7. Click **View Progress** to view the task details page which shows how the task is executing on each of your selected systems.



8. Review **Status** and **Message** details.

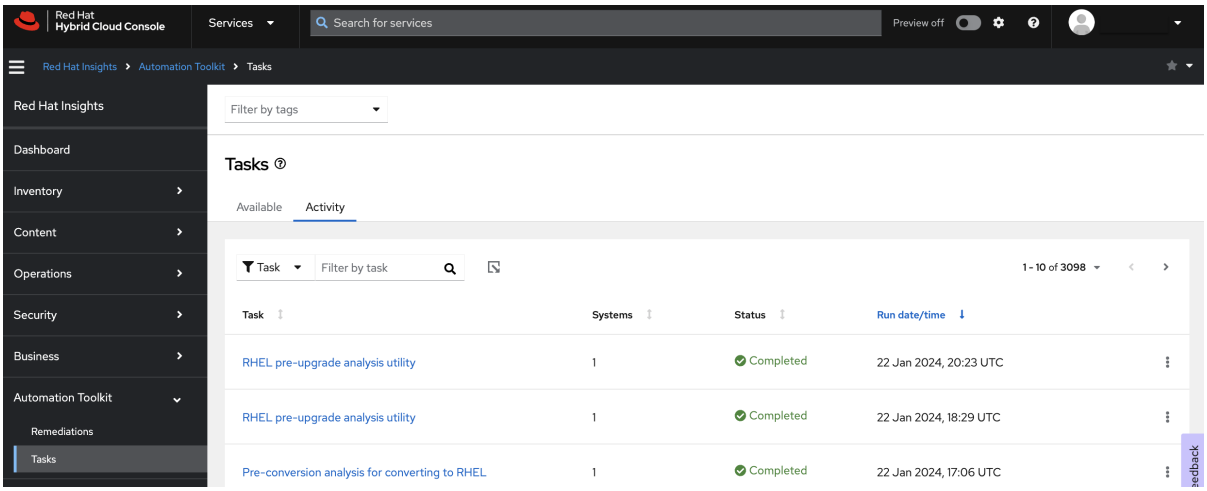
9. If shown, click the **Show more** icon beside the system name to find more information about messages.

10. Click **Tasks** to go to the task detail view to see more information about how the task executed on the selected systems.

11. Click the **Activity tab** to see the status of all the task you have executed. Tasks are in chronological order, by the most recent date and time.

NOTE

A **Completed** status indicates that the task executed, but does not indicate that the task accomplished its goal.



12. Optional: Click the task you executed to return to the task detail view to see more information about how the task executed on the selected systems.

Next Steps

You might need to resolve errors, such as an error that occurs because you need to install a software package on your systems before a task can successfully execute. After you resolve those errors, you can execute the task again on the same systems.

Optional: To execute a task again, click **Run Task** again. The previously selected systems are still selected, and you can also add additional systems, if needed.

CHAPTER 4. USING INSIGHTS TASKS TO HELP YOU CONVERT FROM CENTOS LINUX 7 TO RHEL 7

You can use Red Hat Insights to help you convert from CentOS Linux 7 to RHEL 7.

For more information about using Insights tasks to help convert your systems, see Converting using Insights in the Converting from an RPM-based Linux distribution to RHEL documentation .

Additional resources

- **Video:** Pre-conversion analysis for converting to Red Hat Enterprise Linux
- **Video:** Convert to Red Hat Enterprise Linux from CentOS7 Linux using Red Hat Insights

Troubleshooting conversion-related Insights tasks

Tasks help you update, manage, or secure your Red Hat Enterprise Linux infrastructure using Insights. Each task is a predefined playbook that executes a task from start to finish. If you have trouble completing some Insights conversion-related tasks, see:

- Troubleshooting issues with Red Hat Insights conversions

CHAPTER 5. ASSESSING SYSTEM-UPGRADE READINESS WITH THE PRE-UPGRADE ANALYSIS TASK

This task is a component of the in-place upgrade capability for Red Hat Enterprise Linux using the Leapp tool. For more information about the Leapp tool and using it to check upgrade readiness manually, see *Upgrading from RHEL 8 to RHEL 9, Instructions for an in-place upgrade from Red Hat Enterprise Linux 8 to Red Hat Enterprise Linux 9*.

The pre-upgrade analysis task checks the readiness of systems to upgrade from Red Hat Enterprise Linux (RHEL) 8 to RHEL 9. If Insights detects upgrade-blocking issues, you can see more information about the issues, including steps to resolve them, in Insights for Red Hat Enterprise Linux on the Red Hat Hybrid Cloud Console (Console).

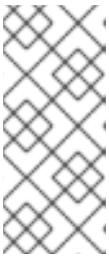
The pre-upgrade analysis task can run on any RHEL 8 system that is connected to Red Hat Insights using the remote host configuration (rhc) solution. You can verify that your system is connected to Insights by locating it in the Insights system inventory on the Console. If the system is not in the inventory, see Remote Host Configuration and Management documentation for information about connecting systems to Insights.

You can also run the Leapp utility manually on systems. When an Insights-connected system has a Leapp report in its archive, whether the utility was run manually or as an Insights task, you can see results from the report in Insights.

5.1. REQUIREMENTS AND PREREQUISITES

The following requirements and prerequisites apply to the pre-upgrade analysis task:

- **This guide assumes that you have read and understood the in-place upgrade documentation before attempting to perform any upgrade-related action using Red Hat Insights.**
- Your systems must be eligible for in-place upgrade. See in-place upgrade documentation for system requirements and limitations.
- Your RHEL system must be connected to Red Hat Insights using the remote host configuration solution in order to execute Insights tasks and other remediation playbooks from the Insights for Red Hat Enterprise Linux UI.
  - For more information, see Remote Host Configuration and Management documentation.
- You are logged into the console.redhat.com with **Tasks administrator** privileges granted in User Access.



NOTE

All members of the **Default admin access group** have **Tasks administrator** access. If you are not a member of a User Access group with this role, you will not see any tasks on the Tasks page. For more information about User Access, including how to request greater access to Insights features, see *User Access Configuration Guide for Role-based Access Control (RBAC)*.

5.2. RUNNING THE PRE-UPGRADE ANALYSIS TASK

Use the following procedure to analyze the readiness of RHEL systems for upgrading from RHEL 8 to RHEL 9.

Prerequisites

- Prerequisites are listed in the Requirements and prerequisites section of this chapter.

Procedure

1. Go to the Red Hat Hybrid Cloud Console > Red Hat Insights > RHEL > Automation Toolkit > Tasks.
2. Locate the **Pre-upgrade analysis for in-place upgrade from RHEL 8**task.

NOTE

If you can not see any tasks on the page, you might not have adequate User Access. See *User Access Configuration Guide for Role-based Access Control (RBAC)* for more information.

3. **Optional:** You can view details of the pre-upgrade analysis utility by clicking **Download preview of playbook**.
4. Click Run task.
5. On the **Pre-upgrade analysis for in-place upgrade from RHEL 8**popup, select systems on which to run the pre-upgrade analysis by checking the box next to each system.

NOTE

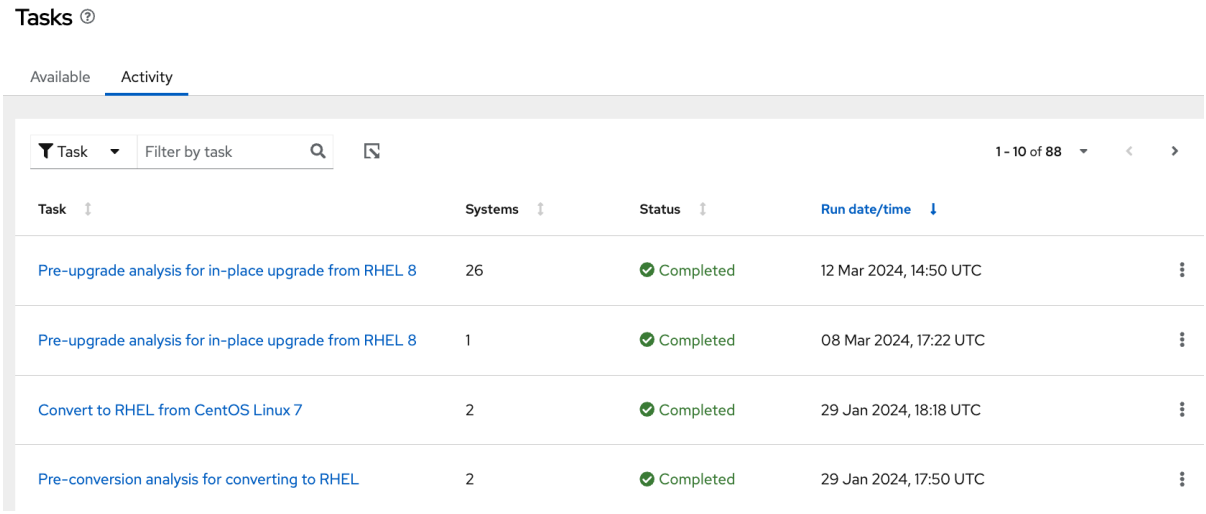
By default, the list of systems is filtered to only display systems that are eligible to run the task. You can change or add filters to expand the parameters of included systems from your inventory.

6. Click **Execute task** to run the task on the selected systems.

Verification

Use the following procedure to verify that a task has been executed successfully.

1. Go to the Red Hat Hybrid Cloud Console > Red Hat Insights > RHEL > Automation Toolkit > Tasks page and click the **Activity** tab. The status of tasks, whether they are in progress or have been completed, can be viewed here.
2. Locate your task based on the run date and time. You can see whether the task completed or failed.



5.3. REVIEWING THE PRE-UPGRADE ANALYSIS TASK REPORT

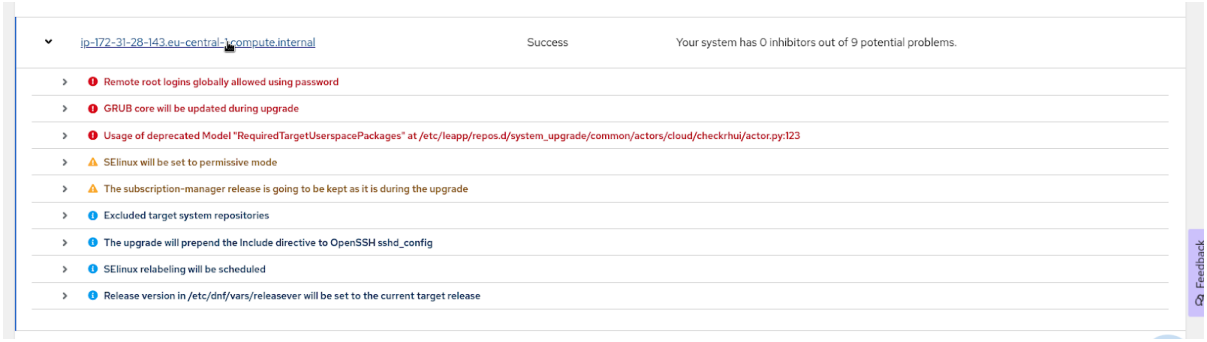
After executing the pre-upgrade analysis task on systems, you can review specific details and upgrade-inhibiting recommendations for each system.

Prerequisites

- Prerequisites are listed in the Requirements and prerequisites section of this chapter.

Procedure

1. Go to the Red Hat Hybrid Cloud Console > Red Hat Insights > RHEL > Automation Toolkit > Tasks and click the **Activity** tab.
2. Click on the task name to view the results of a task. Note the run date and time so that you select the correct report.
3. Click on the carat next to the system name to view a list of alerts for that system.



4. View information about upgrade-inhibiting alerts by clicking on the carat next to an alert with a white exclamation mark inside of a red dot, accompanying red alert text.

NOTE

In addition to the inhibitor alerts, you might also see lower severity and informative alerts that do not require remediation in order for the upgrade to proceed.

5. Review the report thoroughly. While some recommendations may be informational, it is crucial to take action if you encounter any errors or warnings. In the event of such issues, address them on your systems and re-run the pre-upgrade task to assess the impact of your remediation efforts.

NOTE

Certain errors are classified as official inhibitors, and proceeding with the upgrade is not possible until these are remediated.

5.4. VIEWING UPGRADE-INHIBITING RECOMMENDATIONS

After running the pre-upgrade analysis task, or manually running the Leapp tool on individual systems, you can view a list of recommendations for upgrade-inhibiting issues in your infrastructure.

Using the list of pre-upgrade recommendations, you can view the following information about each recommendation:

- Recommendation details
- Affected-system information
- Total risk and impact insights
- Risk to system availability during resolution actions

Prerequisites

- Any user with default access (the default for every user) can view the list of in-place upgrade recommendations.

Procedure

1. Go to Red Hat Insights > Operations > Advisor > Topics > In-place upgrade to view recommendations affecting the success of in-place upgrades.

NOTE

Currently, the in-place upgrade recommendations list only shows recommendations that Insights has identified as upgrade inhibitors. All in-place upgrade recommendations, including non-inhibitors, can be seen in the detailed view of each executed task.

5.5. REMEDIATING UPGRADE-INHIBITING RECOMMENDATIONS

You can use the in-place upgrade recommendations list as a basis for remediating upgrade-inhibiting issues on systems in your infrastructure.

Some recommendations have a playbook available for automating the execution of remediations directly from the Insights for Red Hat Enterprise Linux UI. However, some recommendations require manual resolutions, the steps of which are customized for the system and recommendation pair, and are provided with the recommendation. You can tell which recommendations have playbooks available by viewing the Remediation column in the list of recommendations.

For more information about Insights remediations, see the *Red Hat Insights Remediations Guide* .

5.5.1. Using Insights remediation playbooks to resolve RHEL upgrade-inhibiting recommendations

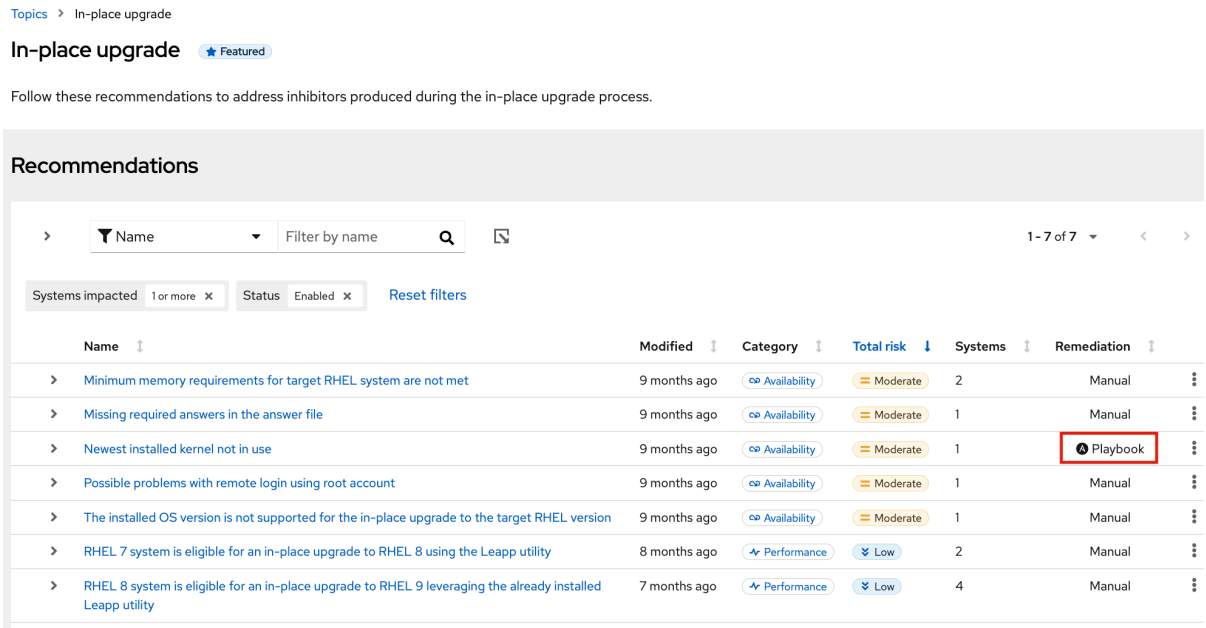
You can automate the remediation of upgrade-inhibiting recommendations using Ansible Playbooks that you create in Insights. Use the following procedure to locate your inhibitor issues and select recommendations and systems to remediate.

Prerequisites

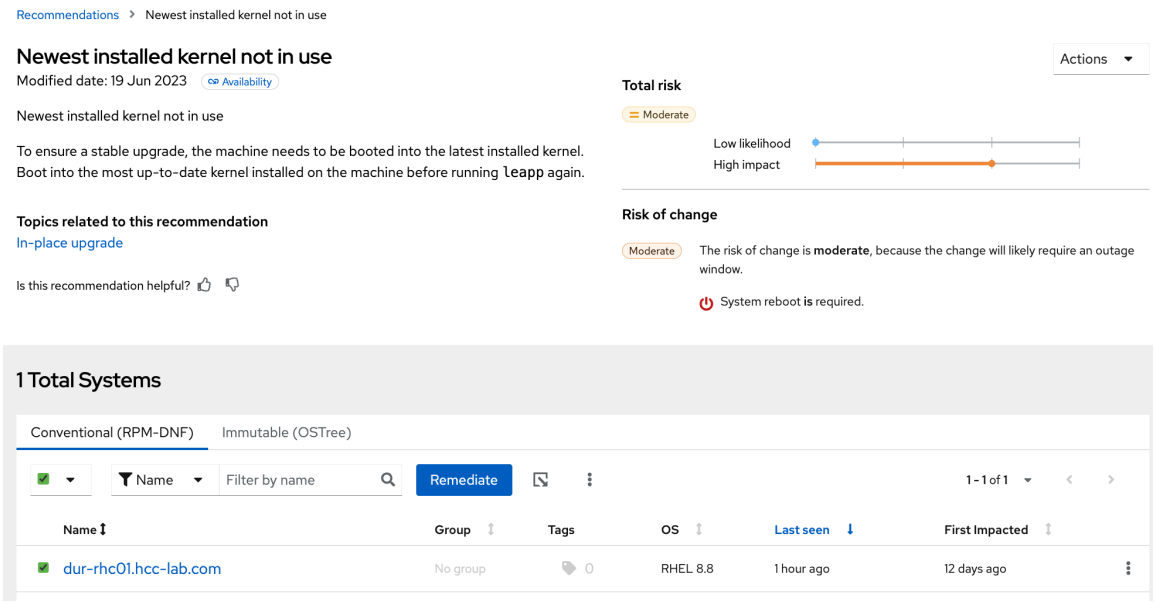
- Prerequisites are listed in the Requirements and prerequisites section of this chapter.

Procedure

1. Go to Red Hat Insights > Operations > Advisor > Topics > In-place upgrade to view recommendations affecting the success of in-place upgrades.
2. Choose a recommendation with the word "Playbook" in the **Remediation** tab, which indicates issues that have a playbook available.



3. For each recommendation *with an available playbook* , take the following actions:
   a. Click on the recommendation to see more information about the issue, including the systems that are affected.
   b. Check the box next to each system you want to add to the playbook and click **Remediate**.



c. In the popup, select **Create a new playbook** and enter a name for the playbook, then click **Next**.

d. **Optional:** Alternatively, you can add the resolution for the selected systems to an existing playbook.

e. Review the included systems and click **Next**.

f. Review the included recommendation. You can click the carat next to the recommendation name to see included systems.

IMPORTANT

Some resolutions require the system to reboot. Auto reboot is not enabled by default but you can enable it by clicking **Turn on autoreboot** above the list of recommendations.

g. Click **Submit**. The final popup view confirms that the playbook was created successfully. You can select to return to the application or open the playbook.

4. Find the playbook in Automation Toolkit > Remediations and click on it to open it.

5. The playbook includes a list of actions. Select the actions to execute by checking the box next to each one.

6. Click **Execute playbook** to run the playbook on the specified systems.

7. On the popup, click on the **Execute playbook on systems** button. The playbook runs on those systems.

5.5.2. Remediating RHEL upgrade-inhibiting recommendations manually

You can remediate upgrade-inhibiting recommendations by manually applying resolution steps on affected systems. The following procedure shows how to find the resolution steps for a system and recommendation pairing.

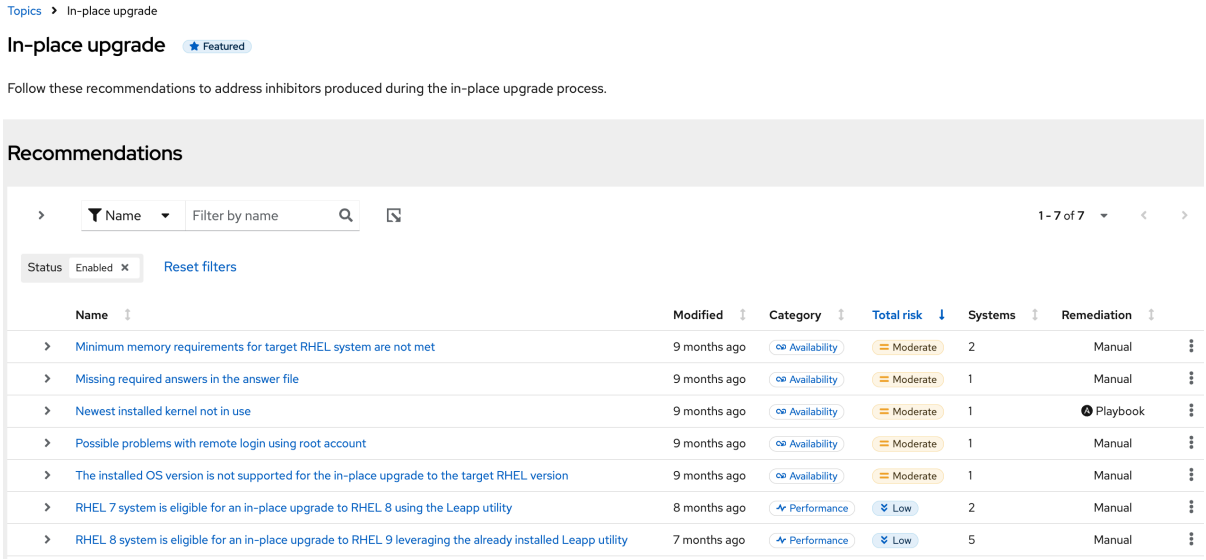
Prerequisites

- Prerequisites are listed in the Requirements and prerequisites section of this chapter.

Procedure

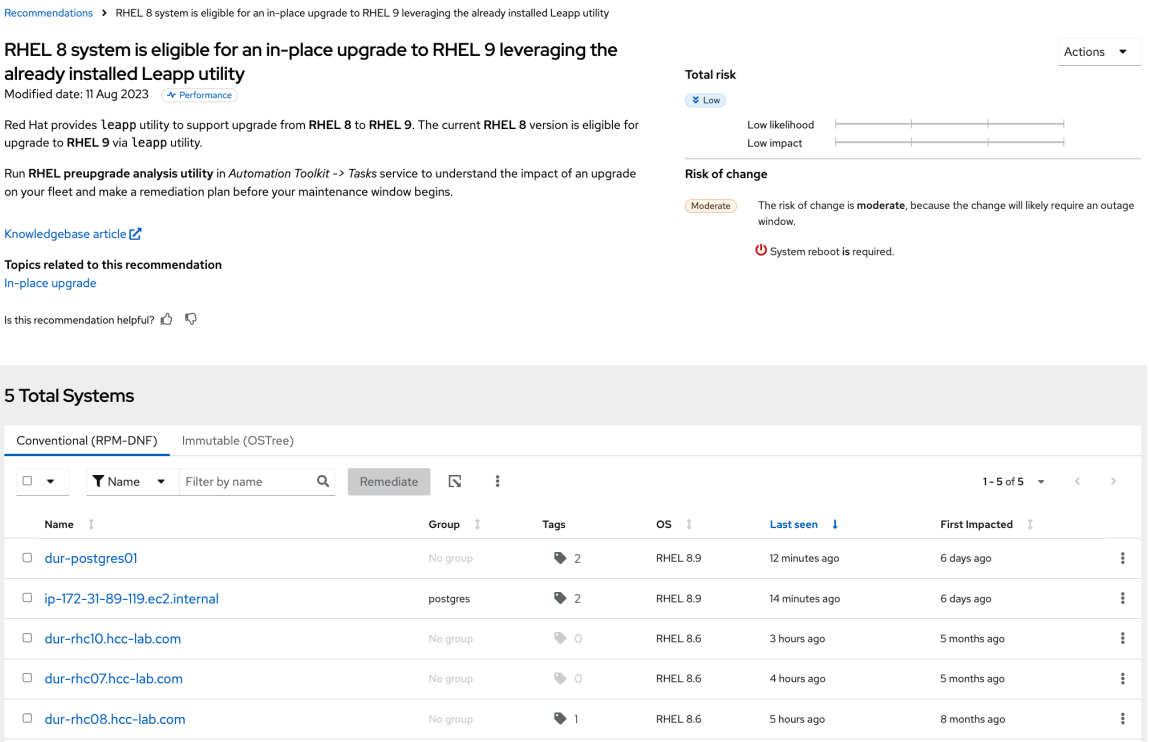
1. Go to Red Hat Insights > Operations > Advisor > Topics > In-place upgrade to view recommendations affecting the success of in-place upgrades.

2. Choose a recommendation with the word "Manual" in the ***Remediation** tab, which indicates that the issue requires manual remediation.



3. For each recommendation requiring a manual remediation, take the following actions:

   a. Click on the recommendation to open the recommendation-details page, which shows affected systems.



   b. Click on a system name.

   c. Pick a recommendation to resolve manually and click on the carat to view the **Steps to resolve** the recommendation on the system.

d. Perform the resolution steps on the system.

e. Repeat steps b, c, and d for each affected system.

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.