



Red Hat Update Infrastructure 4

Migrating Red Hat Update Infrastructure

Migrating to Red Hat Update Infrastructure 4 and upgrading to the latest version of Red Hat Update Infrastructure

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Abstract

This document lists the requirements and provides detailed instructions to help cloud providers migrate to Red Hat Update Infrastructure 4 (RHUI 4). It also provides detailed instructions to upgrade to the latest version of Red Hat Update Infrastructure.

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MAKING OPEN SOURCE MORE INCLUSIVE

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](#).

CHAPTER 1. MIGRATING RED HAT UPDATE INFRASTRUCTURE

After you have installed Red Hat Update Infrastructure (RHUI) 4, it is possible to migrate your existing repositories from RHUI 3 to RHUI 4.

Migration enables RHUI 3 repositories on your RHUI 4 machine. However, it does not migrate the RPM contents or the RPM data. You must re-synchronize these repositories automatically or manually after the migration is complete.

Before you begin the migration process, note the following recommendations and limitations:

- You cannot upgrade directly from RHUI 3 to RHUI 4. You must install RHUI 4 alongside your current RHUI 3 installation. You can then synchronize the RHUI 3 repositories on RHUI 4 using the same CA certificate from RHUI 3. This also ensures that old clients are able to access content from RHUI 4. Finally, you can change the RHUI 3 load balancer to point to the RHUI 4 CDS nodes.
- You cannot use LEAPP to upgrade from RHUI 3 to RHUI 4. You must set up RHUI 4 alongside RHUI 3 and then migrate the RHUI data.
- With RHUI 4, you can use any version of a load balancer, before and after migration. For example, you can use a RHEL 7 version of an HAProxy node from RHUI 3 with a RHUI 4 instance instead of a RHEL 8 version from RHUI 4.
- To route to two different instances of RHUI, for example a RHUI 3 instance and a RHUI 4 instance, from one address or load balancer, you must set up a RHUI 4 instance so that it can take over all the content from the old RHUI 3 instance. However, a configuration where you run both RHUI3 and RHUI4 instances using a single address or a load balancer is not recommended. You can encounter a number of problems ranging from SSL certificate conflicts to repository path changes in between requests.

1.1. OVERVIEW OF RED HAT UPDATE INFRASTRUCTURE MIGRATION

Migration uses the **rhui-manager** utility, available in your Red Hat Update Infrastructure (RHUI) 4 installation, to transfer your repositories from RHUI 3 to RHUI 4. You must install RHUI 4 before migrating your repositories.

The **rhui-manager** utility uses the sub-command **migration** and the following mandatory arguments:

1. **--hostname** - The hostname of the remote RHUI 3 RHUA node
2. **--password** - The rhui-manager password of the remote RHUI 3 RHUA node



NOTE

You must add the public part of an SSH key pair for the current user on the RHUI 4 machine to the **.ssh/authorized_keys** file on the RHUI 3 machine.

Although a default path is provided, it is likely that the path to your keyfile may not match the provided default. You may have to add the following argument to your migration command:

- **--keyfile_path** - The path to the SSH private key on the RHUI 4 machine. The default path is **/root/.ssh/id_rsa_rhua**.

1.2. MIGRATING REPOSITORIES FROM RHUI 3 TO RHUI 4

The following procedure explains how to migrate your RHUI 3 repositories to RHUI 4.

Prerequisites

- Ensure that RHUI 4 is installed on your destination machine. For more information, see [Installing Red Hat Update Infrastructure](#).
- Ensure that you have the necessary credentials to access your RHUI 3 machine.
- Ensure that a RHUI entitlement certificate is available on your RHUI 4 machine. In case it is not, run the following command to add the certificate:

```
# rhui-subscription-sync
```

- **Optional:** Ensure that you have cached the repository information to speed up the migration. You can do so using the following command:

```
# rhui-manager repo unused
```

Procedure

1. On your RHUI 4 machine, use the **rhui-manager** utility to begin the migration:

```
# rhui-manager migrate --hostname my-rhui3-rhua.example.com --password  
<your_password> --keyfile_path ~/.ssh/id_rsa_rhua
```

2. If the migration fails with an error similar to the following, a conflict has occurred between the repositories that you are trying to migrate and those that already exist on your RHUI 4 machine.

```
ERROR: Configured repos detected. Use --force to ignore. Exiting
```

To fix this, use the **--force** argument to run the migration.



NOTE

Using the **--force** argument deletes and recreates any repositories whose IDs match the RHUI 3 repository IDs.

```
# rhui-manager migrate --hostname my-rhui3-rhua.example.com --password  
<your_password> --keyfile_path ~/.ssh/id_rsa_rhua --force
```

3. **Optional:** If custom repositories were migrated, you need to manually upload the RPM content to them.
For detailed instructions on how to do so, see the **upload_rpms_document.txt** file located in the **/root/.rhui/migration/** directory.

Verification

- Run the following command and verify whether the RHUI 3 repositories are now available on your RHUI 4 machine:

```
-
```

rhui-manager repo list

1.3. MIGRATING CLIENT RPMS FROM RHUI 3 TO RHUI 4

After you upgrade to RHUI 4, you might want to keep using your RHUI 3 client RPMs. You can do so by migrating the RHUI 3 certificate authority (CA) to your RHUI 4 system and configuring RHUI 4 to use the CA.

Prerequisites

- Ensure that you have the necessary credentials to access your RHUI 3 machine.

Procedure

1. Copy the CA certificate and CA key from RHUI 3 to RHUI 4.
 - The certificate, **rhui-default-ca.crt**, is located in the `/etc/pki/rhui/certs/` directory.
 - The key, **rhui-default-ca.key**, is located in the `/etc/pki/rhui/private/` directory.
2. On the RHUA node, rerun **rhui-installer** and specify the CA copied from the RHUI 3 installation.

```
# rhui-installer --rerun --remote-fs-server <address> --rhua-hostname <RHUA
hostname> --cds-lb-hostname <HAProxy hostname> --user-supplied-rhui-ca-crt rhui-
default-ca.crt --user-supplied-rhui-ca-key rhui-default-ca.key
```

- **--remote-fs-server:** The remote mountpoint for the shared file system.
- **--rhua-hostname:** The hostname of the RHUA node. You must specify the name as a Fully Qualified Domain Name (FQDN).
- **--cds-lb-hostname:** The name of the load balancer that clients use to access the CDS. You must specify the name as a Fully Qualified Domain Name (FQDN).
- **--user-supplied-rhui-ca-crt rhui-default-ca.crt:** The CA certificate copied from the RHUI 3 installation.
- **--user-supplied-rhui-ca-key rhui-default-ca.key:** The CA key copied from the RHUI 3 installation.



NOTE

You can use the RHUI 3 HAProxy if it is configured to use the new RHUI 4 CDS nodes. Or, you can use a new RHUI 4 HAProxy by updating the DNS so that the RHUI 3 HAProxy hostname points to the new HAProxy.

CHAPTER 2. UPGRADING RED HAT UPDATE INFRASTRUCTURE

Red Hat Update Infrastructure (RHUI) is periodically upgraded to introduce bug fixes, enhancements, and fix common vulnerabilities and exposures.



IMPORTANT

Red Hat recommends keeping your installation up to date by applying the latest RHUI updates when they are released.

2.1. UPDATING RED HAT UPDATE INFRASTRUCTURE

To update your instance of Red Hat Update Infrastructure (RHUI) to the latest version, you must update RHUI Manager and the associated packages and nodes.

Prerequisites

- Root access to the RHUA node.
- All of your RHUI nodes are subscribed and are using the correct repositories.
- All previously released errata for Red Hat Enterprise Linux (RHEL) are applied. For more information, see [How do I apply package updates to my RHEL system?](#)
- Repository synchronization tasks are scheduled to run after the update is complete. Tasks that run while the update is in progress might be aborted. For more information see [Known Issues](#).

Procedure

1. On the RHUA node, update RHUI Installer.

```
# dnf update rhui-installer
```

2. Run RHUI Installer:

- If you are updating from RHUI 4.1.0 or older, you must specify your custom RHUI CA along with the **rerun** option:

```
# rhui-installer --rerun --user-supplied-rhui-ca-crt <custom_RHUI_CA.crt> --user-supplied-rhui-ca-key <custom_RHUI_CA_key>
```

- If you are updating from RHUI 4.1.1 or newer, run RHUI Installer with just the **rerun** option:

```
# rhui-installer --rerun
```

3. **Optional:** In some environments, **rhui-installer** fails to rerun and displays the following error instead:

```
There have been identified artifacts with forbidden checksum md5. Run pulpcore-manager handle-artifact-checksums first to unset forbidden checksums.
```

To fix this error:

- a. Run the following command on the RHUA node:

```
# env PULP_SETTINGS=/etc/pulp/settings.py pulpcore-manager handle-artifact-checksums
```

- b. Run **rhui-installer** with the **rerun** option.
4. Check if the **rhui-installer** installed updated packages.
By default the **rhui-installer** will install any available RHEL package updates. RHUA must be rebooted if any package has been updated that requires rebooting. The command to check this is:

```
# needs-restarting -r
```

5. To apply updated templates and playbooks, reinstall all of the CDS nodes.

```
# rhui-manager --noninteractive cds reinstall --all
```

6. Log in to RHUI Manager.

```
# rhui-manager
```

Verification

- On the RHUA node, run the following command and verify whether the latest version of RHUI is installed.

```
# rpm -q rhui-tools
```