



Red Hat build of Keycloak 24.0

Getting Started Guide

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Abstract

This guide helps you practice using Red Hat build of Keycloak 24.0 to evaluate it before you use it in a production environment. It includes instructions for installing and running the Red Hat build of Keycloak server in development mode, creating realms and accounts for managing users and applications, and securing a Single Page Application (SPA)

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CHAPTER 1. GETTING STARTED

1.1. BEFORE YOU START

Make sure you have [OpenJDK 17](#) installed.

1.2. DOWNLOAD RED HAT BUILD OF KEYCLOAK

Download Red Hat build of Keycloak from the [Red Hat website](#) and extract it.

After extracting this file, you should have a directory that is named **rhbk-24.0.7**.

1.3. START RED HAT BUILD OF KEYCLOAK

1. From a terminal, open the **rhbk-24.0.7** directory.
2. Enter the following command:

- On Linux, run:

```
bin/kc.sh start-dev
```

- On Windows, run:

```
bin\kc.bat start-dev
```

Using the **start-dev** option, you are starting Red Hat build of Keycloak in development mode. In this mode, you can try out Red Hat build of Keycloak for the first time to get it up and running quickly. This mode offers convenient defaults for developers, such as for developing a new Red Hat build of Keycloak theme.

1.4. CREATE AN ADMIN USER

Red Hat build of Keycloak has no default admin user. You need to create an admin user before you can start Keycloak.

1. Open <http://localhost:8080/>.
2. Fill in the form with your preferred username and password.

1.5. LOG IN TO THE ADMIN CONSOLE

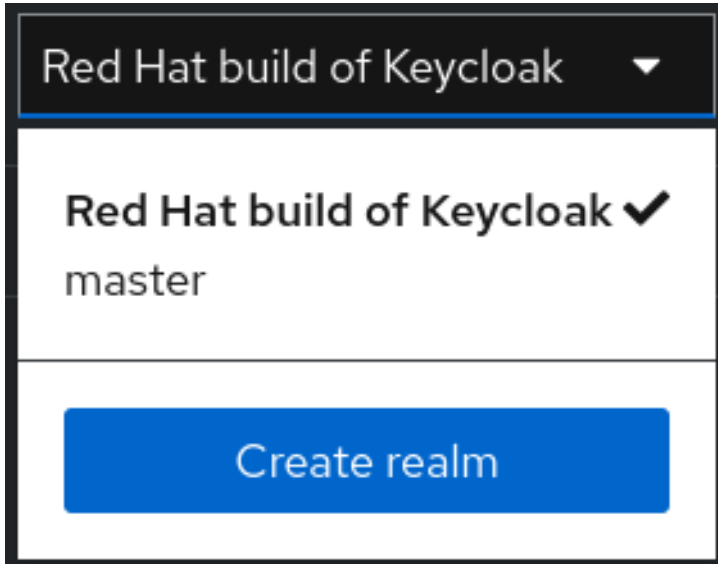
1. Go to the [Red Hat build of Keycloak Admin Console](#).
2. Log in with the username and password you created earlier.

1.6. CREATE A REALM

A realm in Red Hat build of Keycloak is equivalent to a tenant. Each realm allows an administrator to create isolated groups of applications and users. Initially, Red Hat build of Keycloak includes a single realm, called **master**. Use this realm only for managing Red Hat build of Keycloak and not for managing any applications.

Use these steps to create the first realm.

1. Open the [Red Hat build of Keycloak Admin Console](#).
2. Click **Red Hat build of Keycloak** next to **master realm**, then click **Create Realm**.
3. Enter **myrealm** in the **Realm name** field.
4. Click **Create**.



1.7. CREATE A USER

Initially, the realm has no users. Use these steps to create a user:

1. Verify that you are still in the **myrealm** realm, which is shown above the word **Manage**.
2. Click **Users** in the left-hand menu.
3. Click **Add user**.
4. Fill in the form with the following values:
 - **Username:** **myuser**
 - **First name:** any first name
 - **Last name:** any last name
5. Click **Create**.

Red Hat | Red Hat build of Keycloak | admin

myrealm

Users > Create user

Create user Enabled Action

Username * myuser

Email

Email verified Off

First name Foo

Last name Bar

Required user actions Select action

Groups [Join Groups](#)

[Create](#) [Cancel](#)

This user needs a password to log in. To set the initial password:

1. Click **Credentials** at the top of the page.
2. Fill in the **Set password** form with a password.
3. Toggle **Temporary** to **Off** so that the user does not need to update this password at the first login.

Details Attributes Credentials Role mapping Groups

Set password for myuser ×

Password *

Password confirmation *

Temporary Off

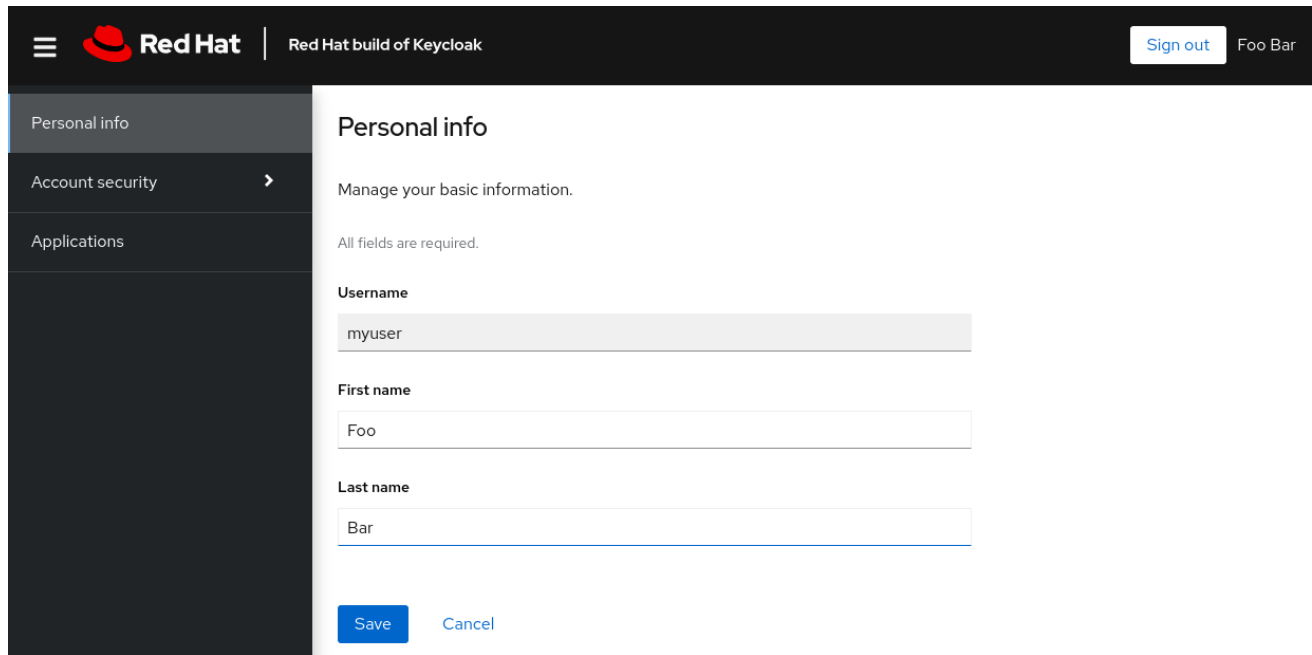
[Save](#) [Cancel](#)

1.8. LOG IN TO THE ACCOUNT CONSOLE

You can now log in to the Account Console to verify this user is configured correctly.

1. Open the [Red Hat build of Keycloak Account Console](#) .
2. Log in with **myuser** and the password you created earlier.

As a user in the Account Console, you can manage your account including modifying your profile, adding two-factor authentication, and including identity provider accounts.



The screenshot shows the 'Personal info' page in the Red Hat build of Keycloak Account Console. The page has a dark header with the Red Hat logo and 'Red Hat build of Keycloak' text. A 'Sign out' button and 'Foo Bar' user name are in the top right. A left sidebar contains 'Personal info', 'Account security', and 'Applications'. The main content area is titled 'Personal info' and includes the instruction 'Manage your basic information.' and 'All fields are required.' Below this are three input fields: 'Username' (containing 'myuser'), 'First name' (containing 'Foo'), and 'Last name' (containing 'Bar'). At the bottom are 'Save' and 'Cancel' buttons.

1.9. SECURE THE FIRST APPLICATION

To secure the first application, you start by registering the application with your Red Hat build of Keycloak instance:

1. Open the [Red Hat build of Keycloak Admin Console](#) .
2. Click the word **master** in the top-left corner, then click **myrealm**.
3. Click **Clients**.
4. Click **Create client**
5. Fill in the form with the following values:
 - **Client type: OpenID Connect**
 - **Client ID: myclient**

The screenshot shows the Red Hat Keycloak administration interface. At the top, there is a navigation bar with the Red Hat logo and the text 'Red Hat build of Keycloak'. On the right, there is a user profile dropdown showing 'admin'. Below the navigation bar, there is a sidebar menu with options like 'Manage', 'Clients', 'Client scopes', 'Realm roles', 'Users', 'Groups', 'Sessions', 'Events', 'Configure', 'Realm settings', 'Authentication', 'Identity providers', and 'User federation'. The main content area is titled 'Create client' and includes a breadcrumb 'Clients > Create client'. Below the title, there is a sub-header 'Create client' and a description: 'Clients are applications and services that can request authentication of a user.' The 'General Settings' tab is active, showing a form with the following fields: 'Client type' (OpenID Connect), 'Client ID' (myclient), 'Name' (empty), 'Description' (empty), and 'Always display in console' (Off). At the bottom of the form, there are three buttons: 'Next' (blue), 'Back' (grey), and 'Cancel' (grey).

6. Click **Next**
7. Confirm that **Standard flow** is enabled.
8. Click **Next**.
9. Make these changes under **Login settings**.
 - Set **Valid redirect URIs** to **https://www.keycloak.org/app/***
 - Set **Web origins** to **https://www.keycloak.org**
10. Click **Save**.

Red Hat | Red Hat build of Keycloak

admin

myrealm

Clients > Create client

Create client

Clients are applications and services that can request authentication of a user.

- 1 General Settings
- 2 Capability config
- 3 Login settings

Root URL

Home URL

Valid redirect URIs + Add valid redirect URIs

Valid post logout redirect URIs + Add valid post logout redirect URIs

Web origins + Add web origins

Save Back Cancel

To confirm the client was created successfully, you can use the SPA testing application on the [Keycloak website](https://www.keycloak.org).

1. Open <https://www.keycloak.org/app/>.
2. Click **Save** to use the default configuration.
3. Click **Sign in** to authenticate to this application using the Red Hat build of Keycloak server you started earlier.

1.10. TAKING THE NEXT STEP

Before you run Red Hat build of Keycloak in production, consider the following actions:

- Switch to a production ready database such as PostgreSQL.
- Configure SSL with your own certificates.
- Switch the admin password to a more secure password.

For more information, see the [Server Guide](#).