

Adding and Managing Users in Keycloak

Users in Keycloak represent the individuals or system accounts that authenticate and interact with your applications. This guide explains multiple methods to create and manage users via the Admin Console, REST API, and Docker CLI while covering required roles, best practices, and common issues.

Creating Users via Keycloak Admin Console

The Admin Console is the most user-friendly method to manage users and assign roles.

Access the Admin Console

Log in to your Keycloak Admin Console:

```
http://<your-keycloak-domain>/admin/
```

Choose the realm where you want to manage users.

Add a New User

1. Go to **Users > Add User**
2. Fill in the following:
 - **Username** (required)
 - **Email, First Name, Last Name** (optional but recommended)
 - Set **Email Verified** if applicable
3. Click **Create**

Users > Create user

Create user

Required user actions ? Select action × ▼

Email verified ? ☐ Off

General

Username *

Email

First name

Last name

Groups ? [Join Groups](#)

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Set Credentials

After creating the user:

1. Go to the **Credentials** tab
2. Set a password
3. Toggle **Temporary** to OFF if you don't want the user to reset on first login
4. Click **Set Password**

Creating Users via Keycloak REST API

This method is suitable for CI/CD pipelines or automated scripts.

Get Access Token

```
curl -X POST "https://<keycloak-domain>/realms/master/protocol/openid-connect/token" \  
-H "Content-Type: application/x-www-form-urlencoded" \  
-d "grant_type=password&username=<username>&password=<password>"
```

```
-d "username=admin" \  
-d "password=admin-password" \  
-d "grant_type=password" \  
-d "client_id=admin-cli"
```

Copy the `access_token` from the response.

Create User

```
curl -X POST "https://<keycloak-domain>/admin/realms/<realm>/users" \  
-H "Content-Type: application/json" \  
-H "Authorization: Bearer <access_token>" \  
-d '{  
  "username": "johndoe",  
  "email": "johndoe@example.com",  
  "enabled": true,  
  "emailVerified": true,  
  "firstName": "John",  
  "lastName": "Doe"  
'
```

Set Password

```
curl -X PUT "https://<keycloak-domain>/admin/realms/<realm>/users/<user-id>/reset-password" \  
-H "Authorization: Bearer <access_token>" \  
-H "Content-Type: application/json" \  
-d '{  
  "type": "password",  
  "value": "StrongPassword123!",  
  "temporary": false  
'
```

To get `<user-id>`, call:

```
curl -H "Authorization: Bearer <access_token>" \  
https://<keycloak-domain>/admin/realms/<realm>/users?username=johndoe
```

Creating Users via Docker CLI

Step into the Container

```
docker exec -it keycloak bash
```

Use Admin CLI Script

```
/opt/keycloak/bin/kcadm.sh config credentials --server http://localhost:8080 \  
  --realm master --user admin --password admin  
  
/opt/keycloak/bin/kcadm.sh create users -r <realm> -s username=jane -s enabled=true
```

Set Password

```
/opt/keycloak/bin/kcadm.sh set-password -r <realm> --username jane --new-password  
"SecurePass!123"
```

Required Permissions for User Management

- Requires manage-users role in the realm.
- Admin token used via CLI or REST must be scoped with user management privileges.

To assign permission via Admin Console:

```
Users > admin > Role Mappings > Realm Roles > Assign 'manage-users'
```

Best Practices for Managing Users

Use Verified Emails

Ensure emailVerified is set to true for pre-created users to skip email confirmation.

Avoid Temporary Passwords for API Imports

If scripting user creation, set temporary: false to avoid forcing password reset on first login.

Group Users by Role or Department

Organize users into **groups** (e.g., devs, sales, ops) for easier role management and policy application.

Monitor Login History

Enable event logging to track user login activity under **Events > Settings**.

Enforce Strong Passwords

Go to **Authentication > Password Policy** and configure rules like minimum length, digits, special chars, etc.

Common Issues and Troubleshooting

Issue	Possible Cause	Solution
409 Conflict: User exists	Username already taken	Use a unique username or search existing users
403 Forbidden on API	Missing permission or token scope	Ensure admin has manage-users in the correct realm
User not able to log in	Password not set or user is disabled	Check status under the user's profile and verify credentials
Password reset fails	Temporary password not set correctly	Use "temporary": false if you want permanent password via API
Email not received for verification	SMTP not configured	Go to Realm Settings > Email and add SMTP server details

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