

Institute of Computer Technology
B. Tech Computer Science and Engineering

Sub: Identity and Access Management (2CSE507)

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Branch - Cyber Security

Enrollment no. – 23162171019

Semester - 5

Class - A

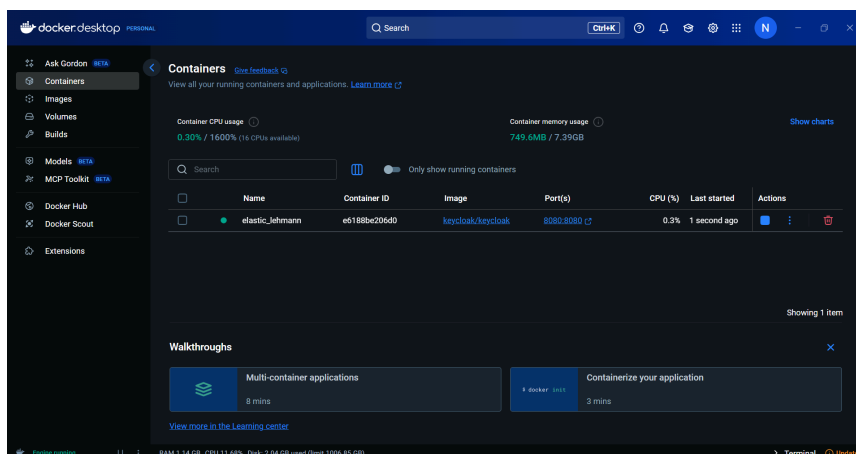
Batch – 52

PRACTICAL NO:- 5

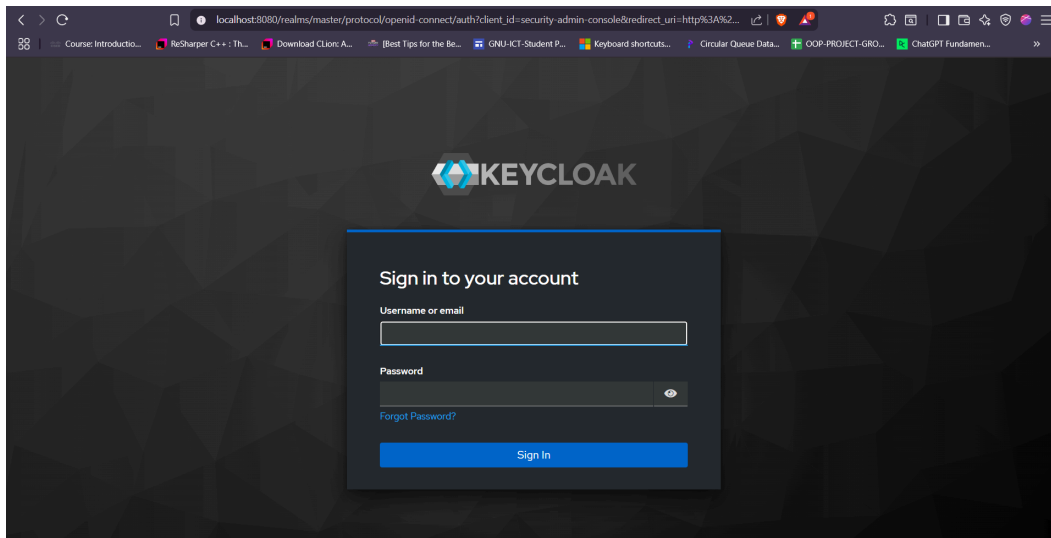
Aim : Realm Management and Client Management

Starting the Container:

- Open your Docker Desktop.
- In the containers tab, click the start button of the container you want to start.

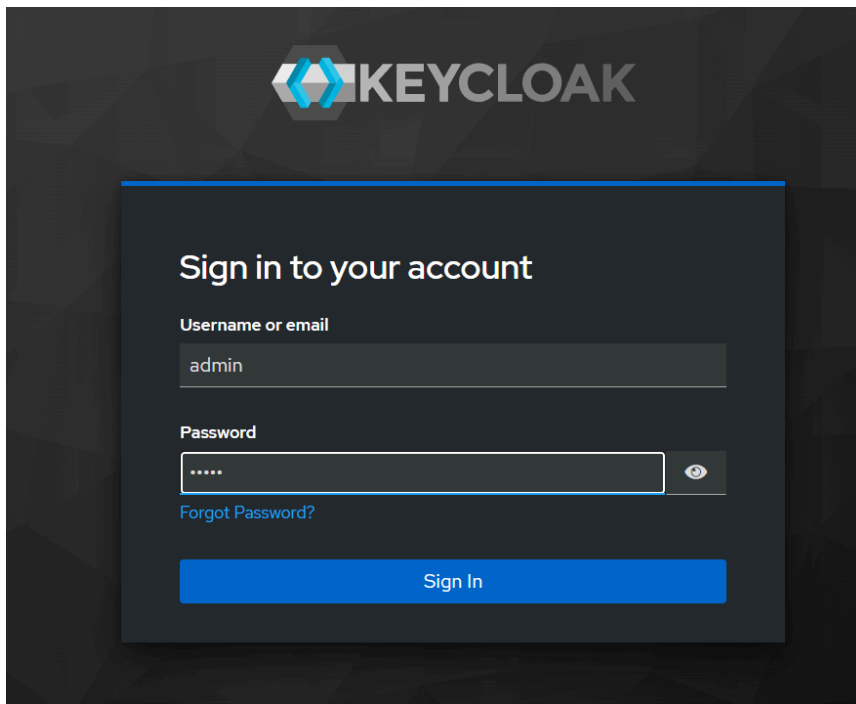


- Now open your browser and go to '<http://localhost:8080/>'.

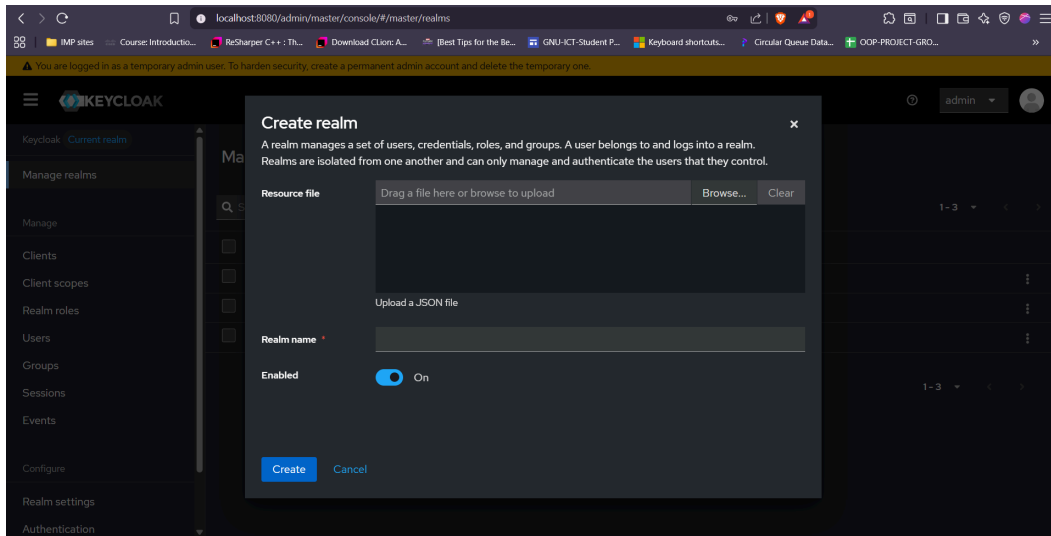


Creating a new Realm:

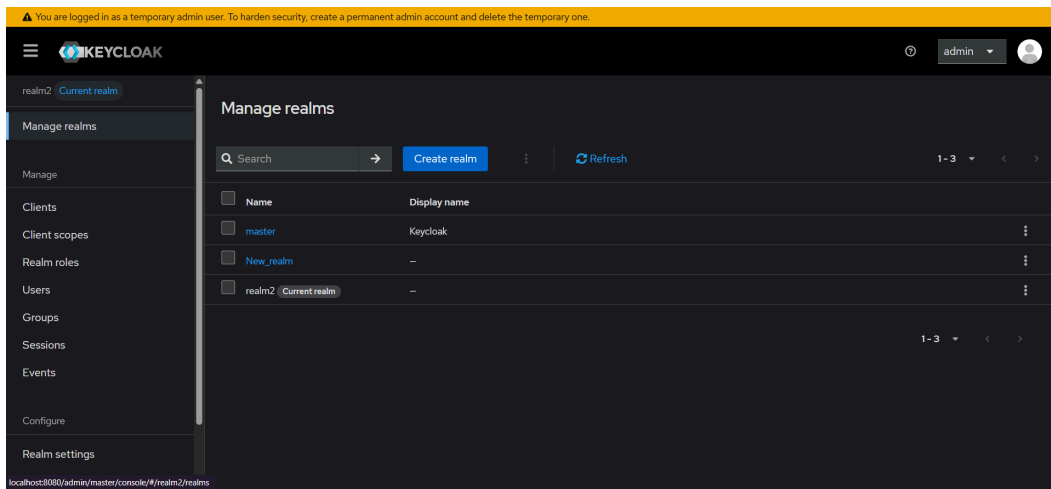
- Login as admin.



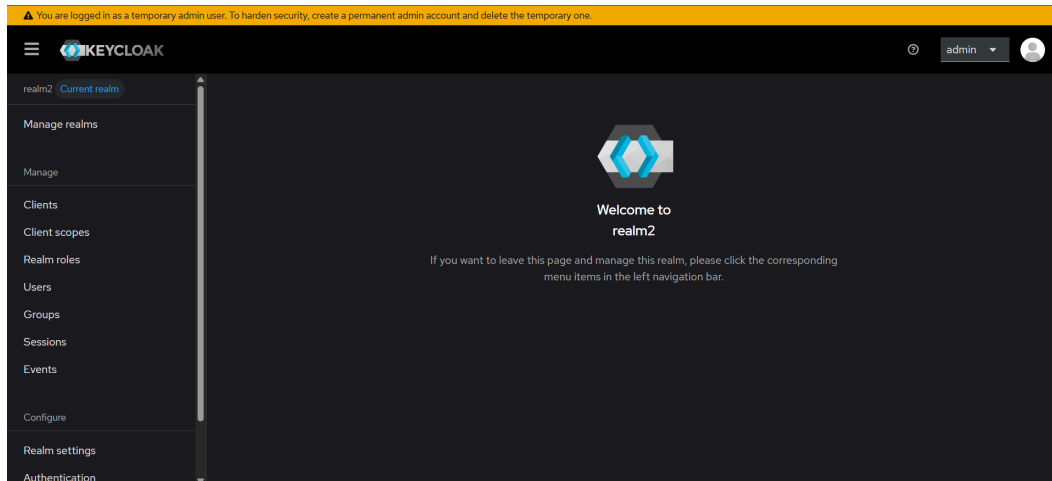
- Go to the ‘Manage Realm’ tab and click on ‘Create realm’.
- Enter the realm name and create the realm.



- To change between realms, in ‘Manage Realm’ tab, click on the realm name.

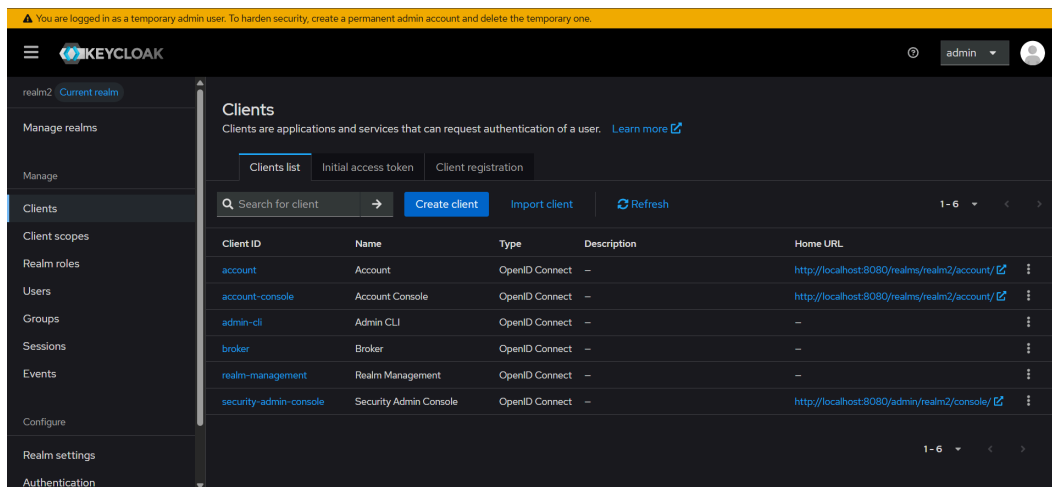


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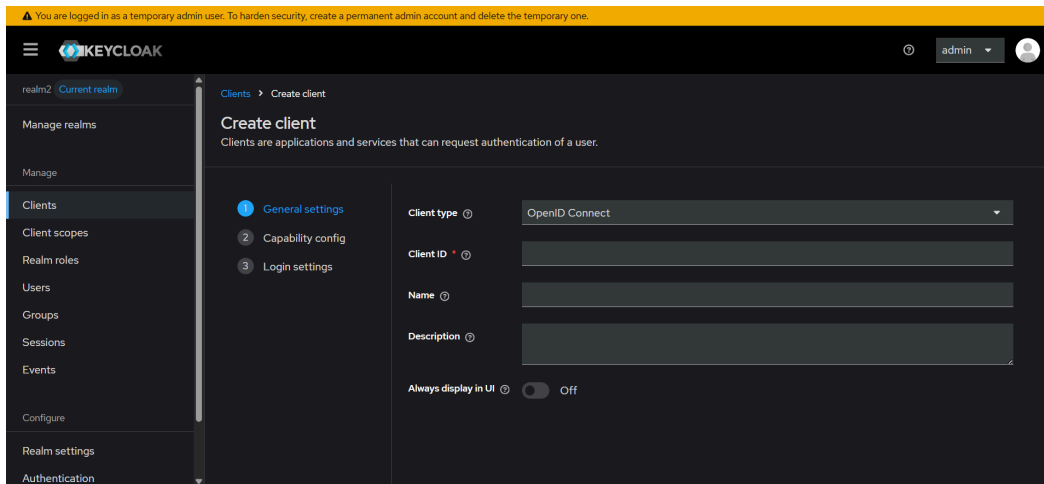


Creating a Client:

- Go to the 'Clients' tab.

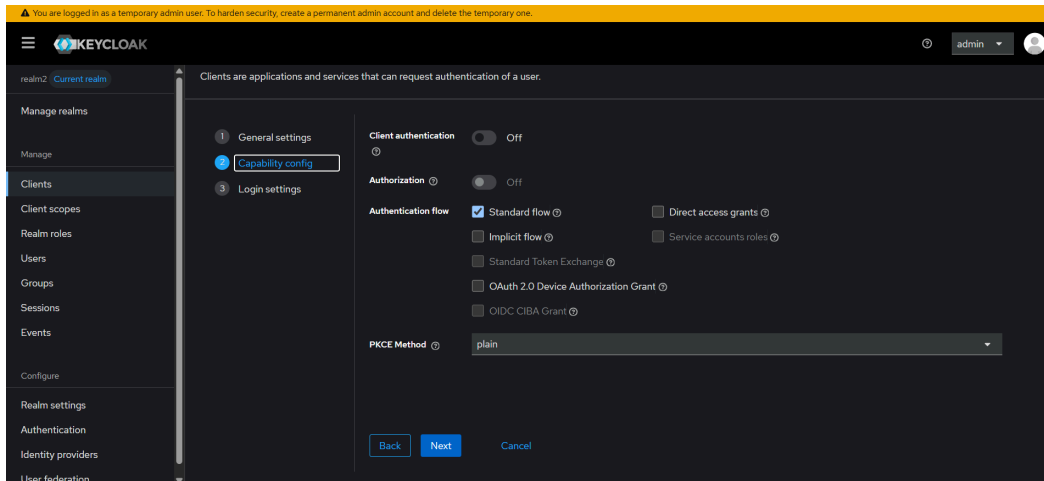


- Click on ‘Create client’



This screenshot shows the 'Create client' page in Keycloak, specifically the 'General settings' tab. The left sidebar contains navigation links for 'Manage realms', 'Manage', 'Clients', 'Client scopes', 'Realm roles', 'Users', 'Groups', 'Sessions', 'Events', 'Configure', 'Realm settings', and 'Authentication'. The main content area is titled 'Create client' and includes a sub-header 'Clients are applications and services that can request authentication of a user.' Below this, there are three numbered steps: 1. General settings (active), 2. Capability config, and 3. Login settings. The 'General settings' section includes a 'Client type' dropdown menu set to 'OpenID Connect', a 'Client ID' text input field, a 'Name' text input field, a 'Description' text area, and an 'Always display in UI' toggle switch currently set to 'Off'.

- In Capability config, set-up client authentication, authorization, authentication flow and pkce method and click the next button.



This screenshot shows the 'Create client' page in Keycloak, specifically the 'Capability config' tab. The left sidebar is identical to the previous screenshot. The main content area is titled 'Clients are applications and services that can request authentication of a user.' Below this, there are three numbered steps: 1. General settings, 2. Capability config (active), and 3. Login settings. The 'Capability config' section includes a 'Client authentication' toggle switch set to 'Off', an 'Authorization' toggle switch set to 'Off', and an 'Authentication flow' section with several checkboxes: 'Standard flow' (checked), 'Implicit flow', 'Standard Token Exchange', 'OAuth 2.0 Device Authorization Grant', and 'OIDC CIBA Grant'. There are also checkboxes for 'Direct access grants' and 'Service accounts roles'. Below these is a 'PKCE Method' dropdown menu set to 'plain'. At the bottom of the form are three buttons: 'Back', 'Next', and 'Cancel'.

- In Login settings, Enter root url, home url, redirect url, post logout redirect url and web origins and click save button.

KEYCLOAK

realm2 Current realm

Manage realms

Manage

Clients

Client scopes

Realm roles

Users

Groups

Sessions

Events

Configure

Realm settings

Authentication

Identity providers

User federation

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](#)

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

KEYCLOAK

realm2 Current realm

Manage realms

Manage

Clients

Client scopes

Realm roles

Users

Groups

Sessions

Events

Configure

Realm settings

Authentication

Identity providers

Clients

Clients are applications and services that can request authentication of a user. [Learn more](#)

[Clients list](#) [Initial access token](#) [Client registration](#)

[Create client](#) [Import client](#) [Refresh](#)

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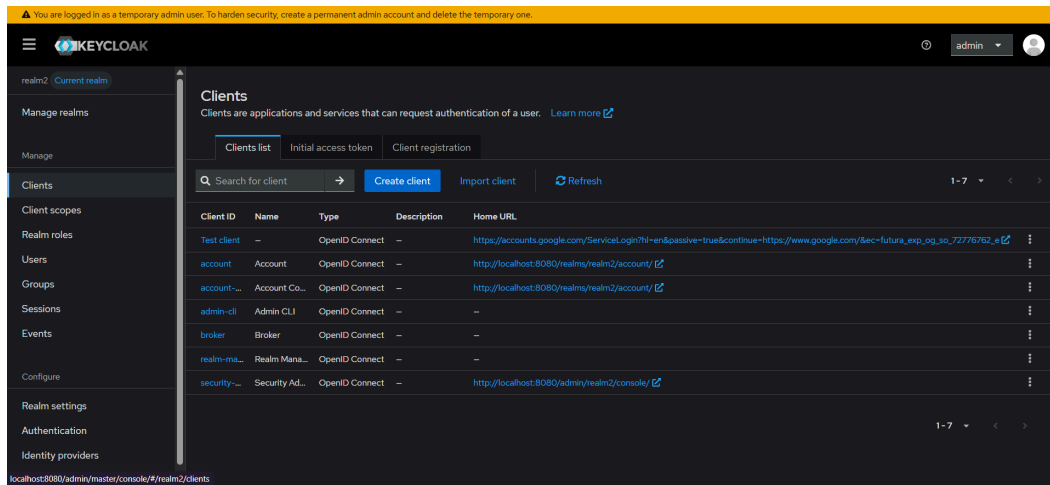
Client ID	Name	Type	Description	Home URL
Test client	-	OpenID Connect	-	https://accounts.google.com/ServiceLogin?hl=en&passive=true&continue=https://www.google.com/&ec=futura_exp...
account	Account	OpenID Connect	-	http://localhost:8080/realms/realm2/account/
account-...	Account Co...	OpenID Connect	-	http://localhost:8080/realms/realm2/account/
admin-cli	Admin CLI	OpenID Connect	-	-
broker	Broker	OpenID Connect	-	-
realm-ma...	Realm Mana...	OpenID Connect	-	-
security-...	Security Ad...	OpenID Connect	-	http://localhost:8080/admin/master/console/#/realm2/clients

1-7

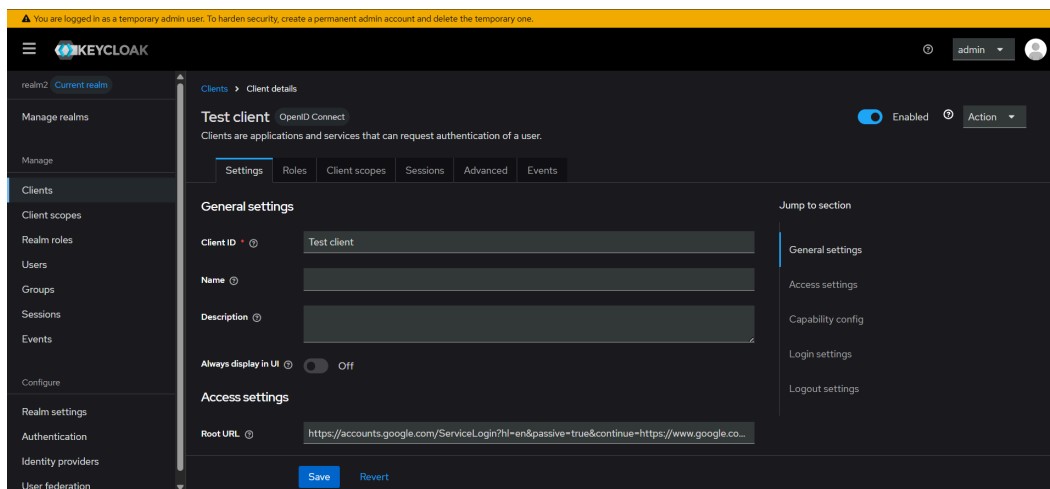
localhost:8080/admin/master/console/#/realm2/clients

Creating a client role:

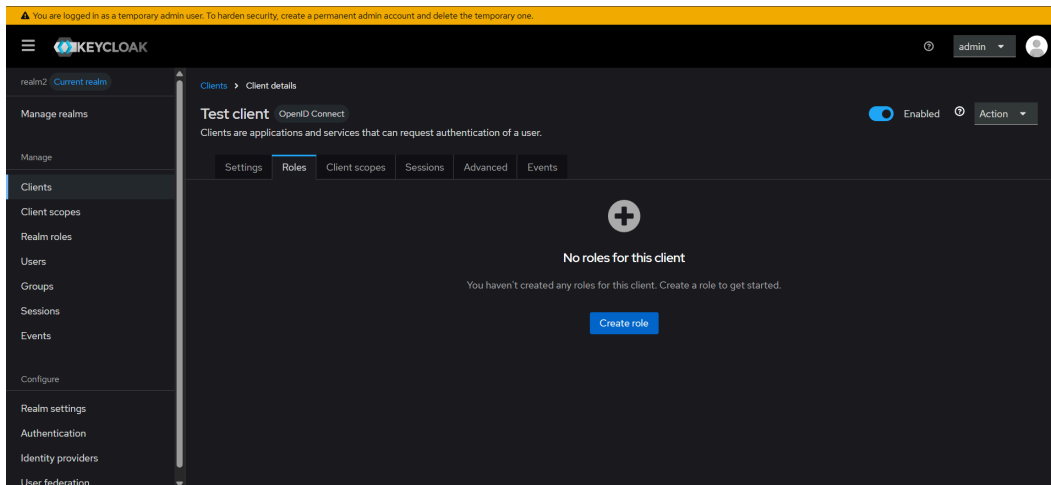
- Go to the ‘Clients’ tab.



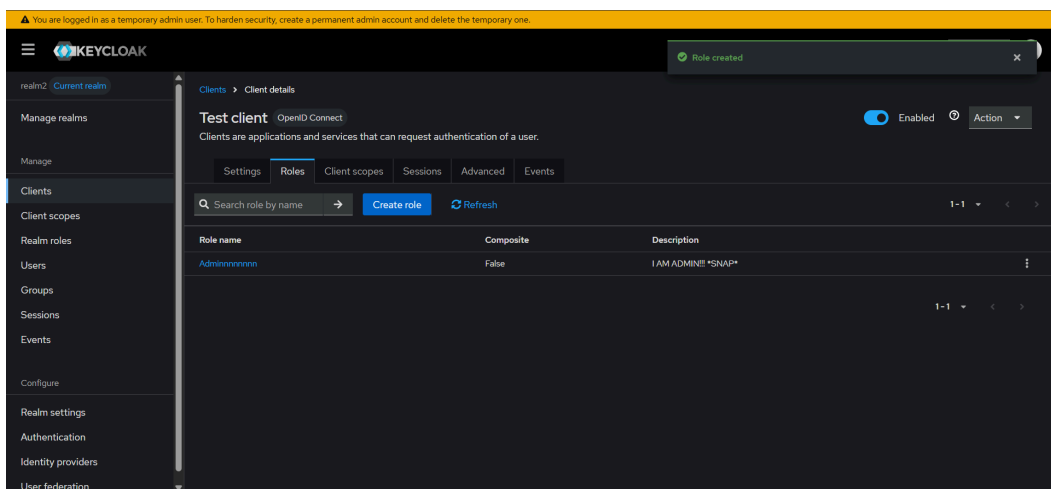
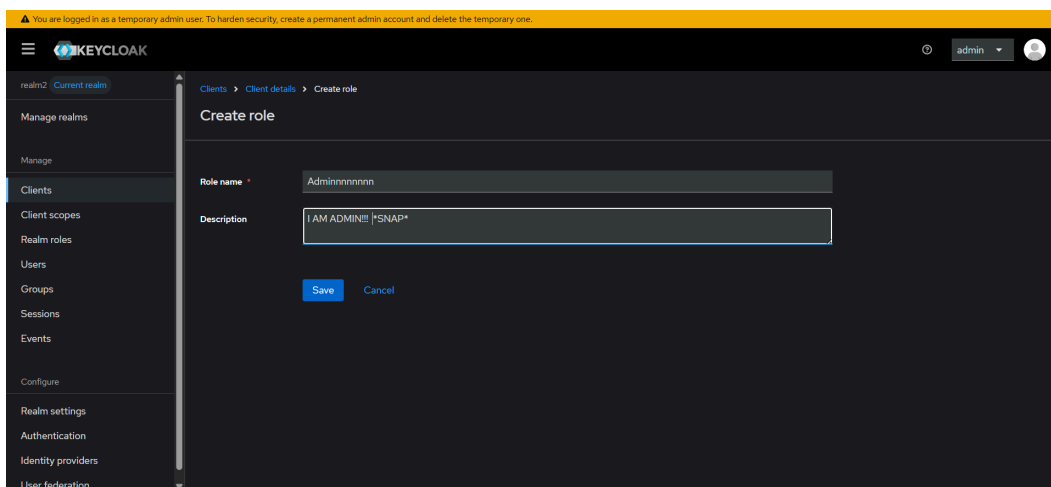
- Click on the client whose settings you wanted to update.



- Go to the Roles tab.

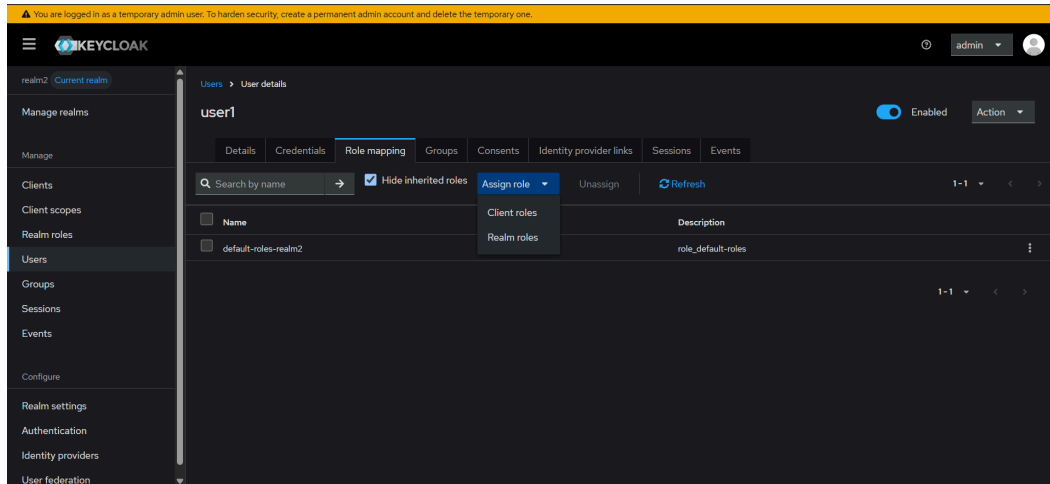


- Click on 'Create code' and Enter the role name and description and save it.

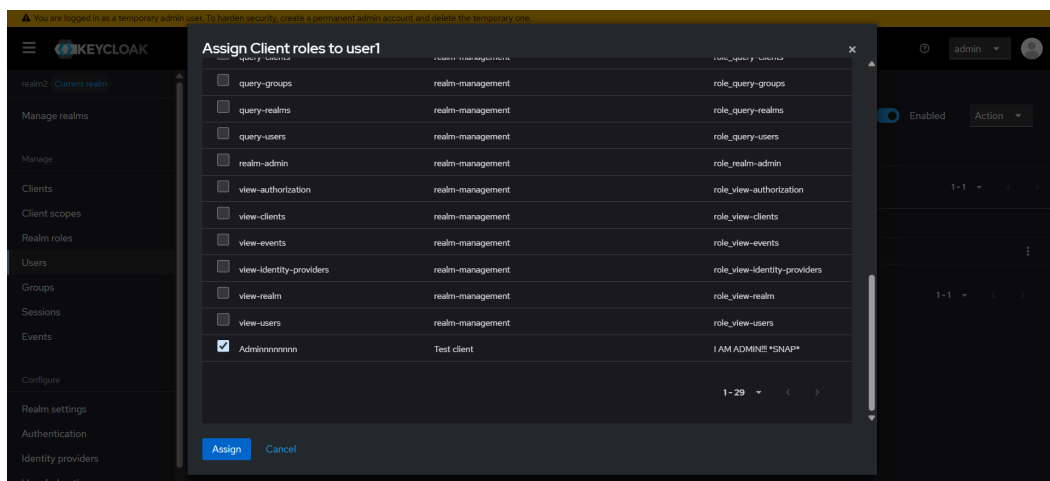


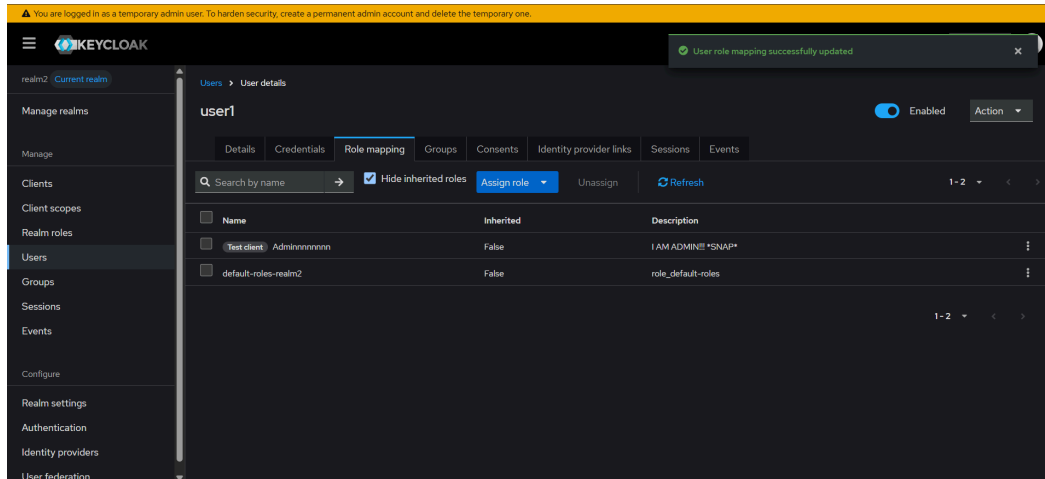
Assigning a Client role:

- Go to the 'role mapping' tab of the user in the 'users' tab and click on 'Assign Role'.



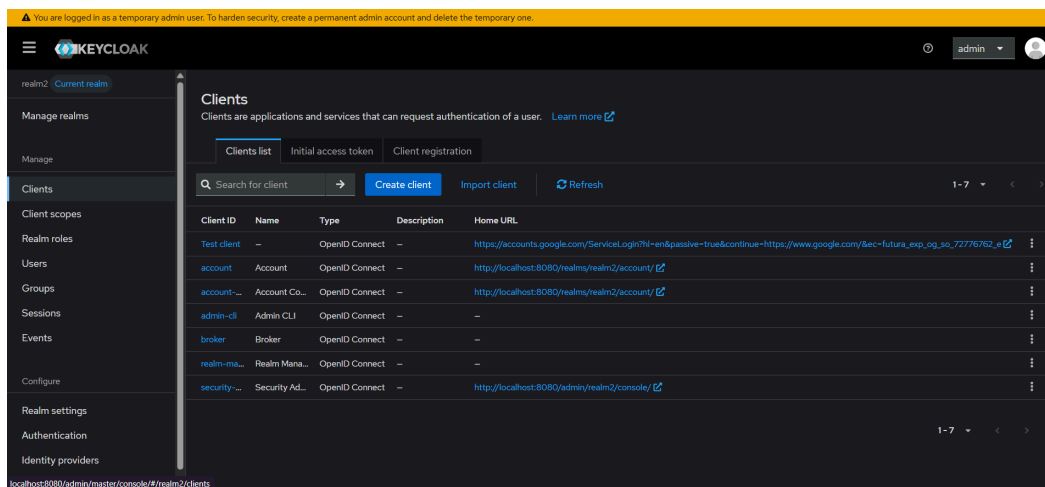
- Select the role you want to assign to the user and click on 'Assign'.



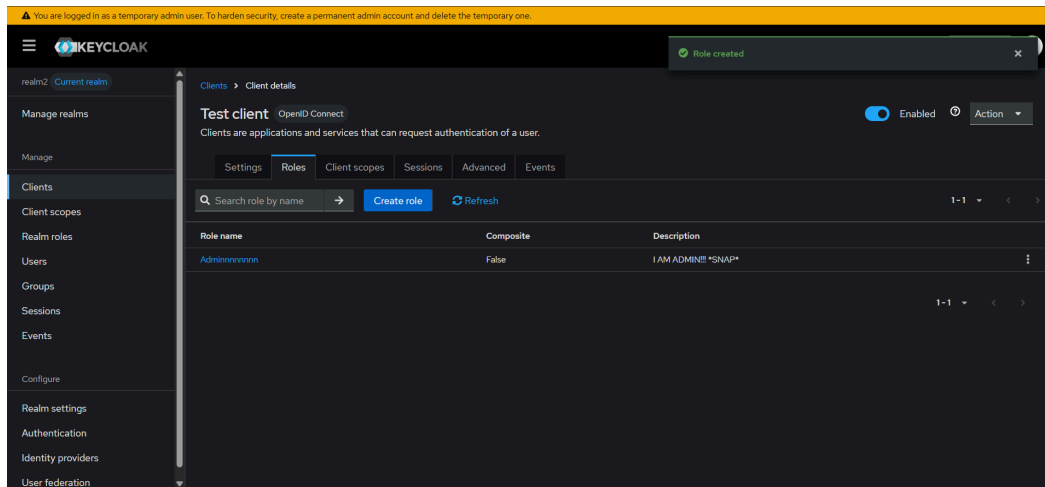


Check the list of user assigned with the client role:

- Go to the 'Clients' tab.



- Go to the Roles tab.



- Click on the role you want to check and go to the 'User in role' tab.

