

# **Tutorial “Trusted Federated Identity Management in Services and SDN”**

**Slides for demonstration steps**

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# Hands-on

- Introduce Keycloak
- Perform configurations of an OIDC client for a Sample Application
- Sample Application based on the example provided in the official site of Keycloak:
  - <https://www.keycloak.org/app/>
- Files available at the GitHub repository:
  - <https://github.com/bmsousa/tutorial-ISCC2022>



# Initial (reproducible) steps

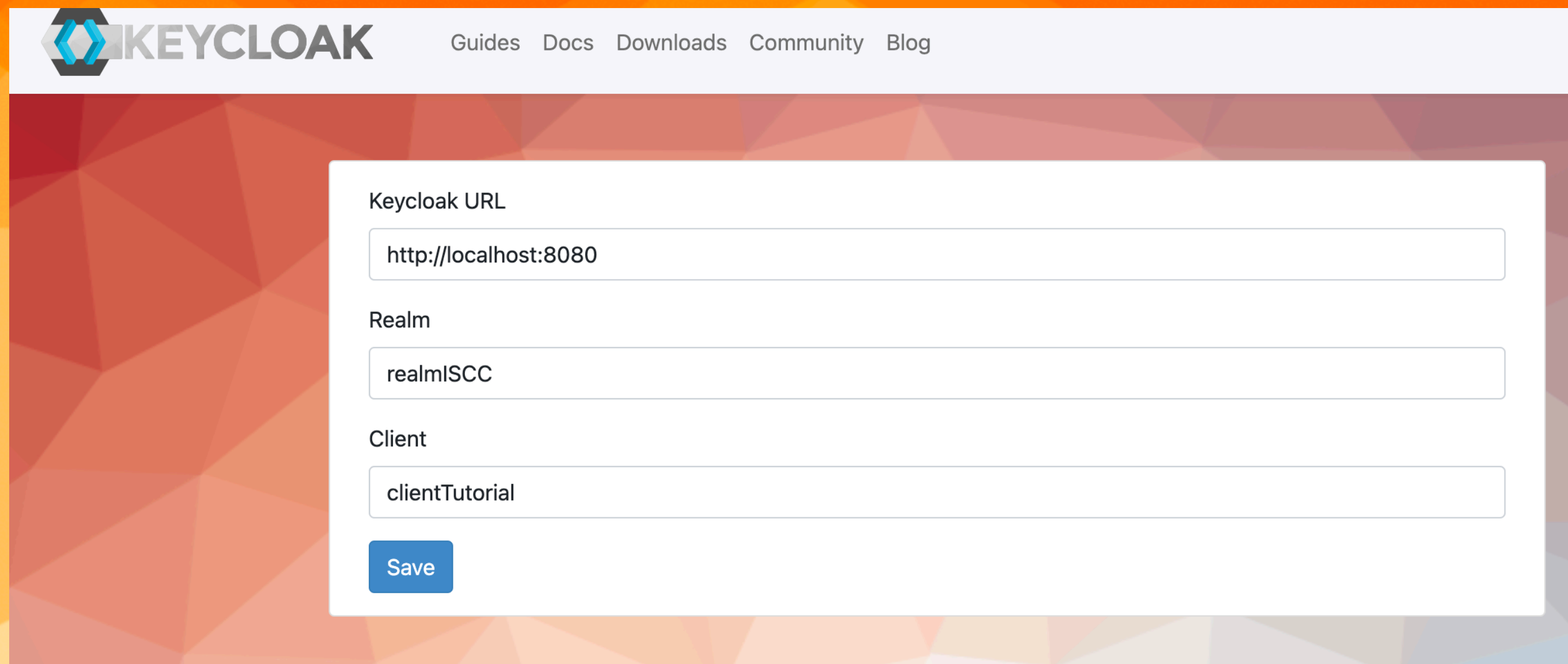
1. Assure you have docker desktop installed, download on [docker.com](https://docker.com) and go for a docker personal subscription
2. Clone repository for tutorial
3. Run the Keycloak daemon “***runKeycloak.sh***” (to download key cloak image)
4. Access admin console using url: <http://localhost:8080>
5. Choose Admin Console option



# Initial (reproducible) steps

1. On your browser open the page with the application:

► <https://www.keycloak.org/app/>



The screenshot shows the Keycloak web application interface. At the top, there is a navigation bar with the Keycloak logo and links for Guides, Docs, Downloads, Community, and Blog. The main content area features a configuration form with three input fields: 'Keycloak URL' containing 'http://localhost:8080', 'Realm' containing 'realmISCC', and 'Client' containing 'clientTutorial'. A blue 'Save' button is located at the bottom left of the form.

KEYCLOAK Guides Docs Downloads Community Blog

Keycloak URL

Realm

Client

Save



# Access Admin console of Keycloak

1. Access admin console using url: <http://localhost:8080>
2. Choose Administration Console option



Administration Console >

Centrally manage all aspects of the Keycloak server



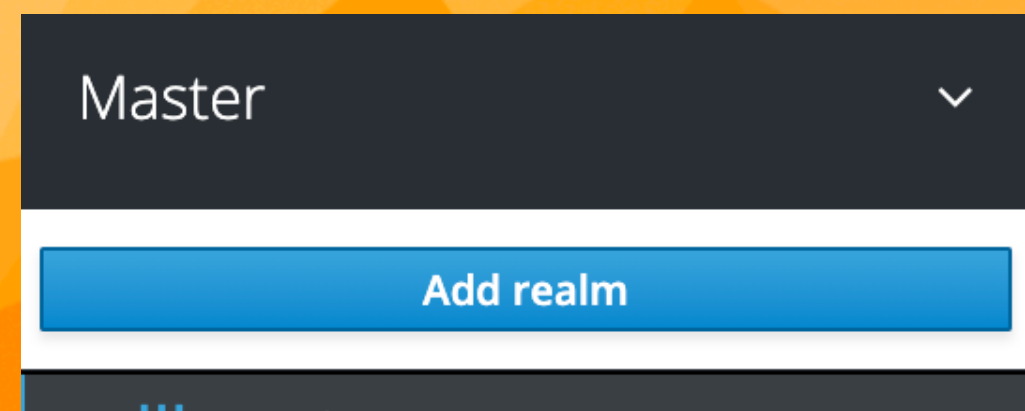
# Let's put (the basis) working

- Goals:
  - ▶ Create the required realm “***realmISCC***” and role “***roleParticipant***” in keycloak
  - ▶ Register the application as a client of Keycloak

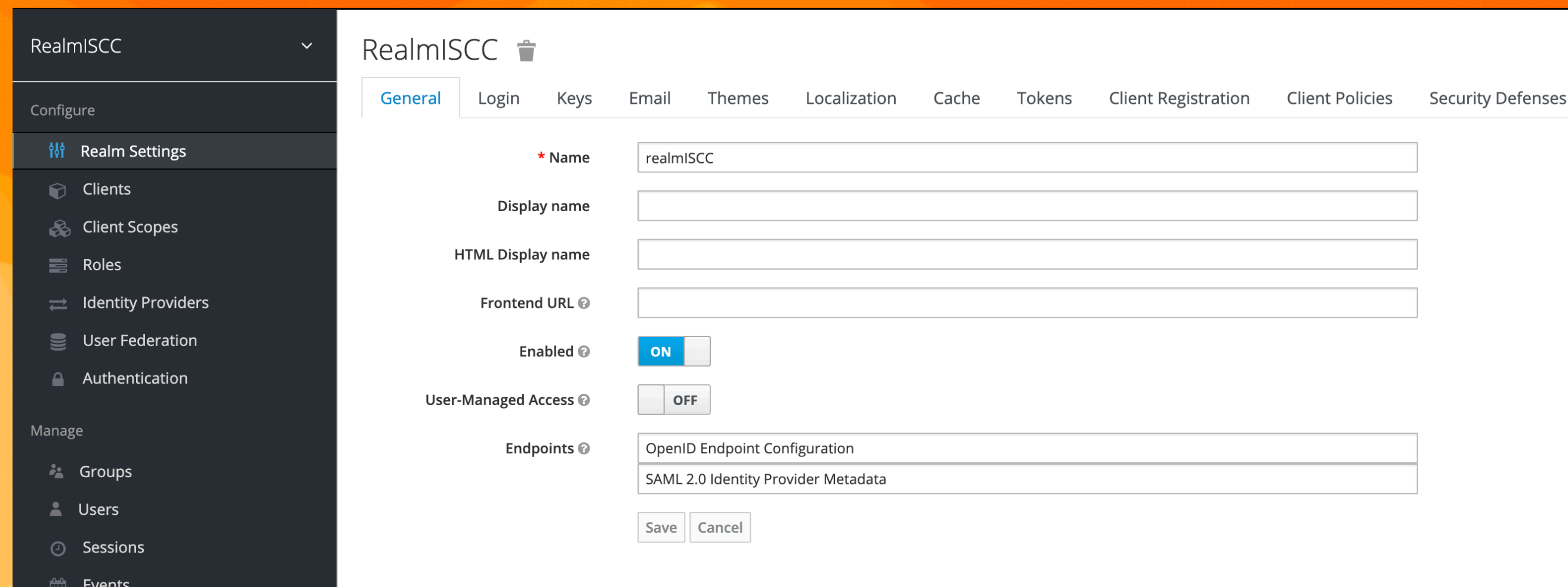


# Create a realm

1

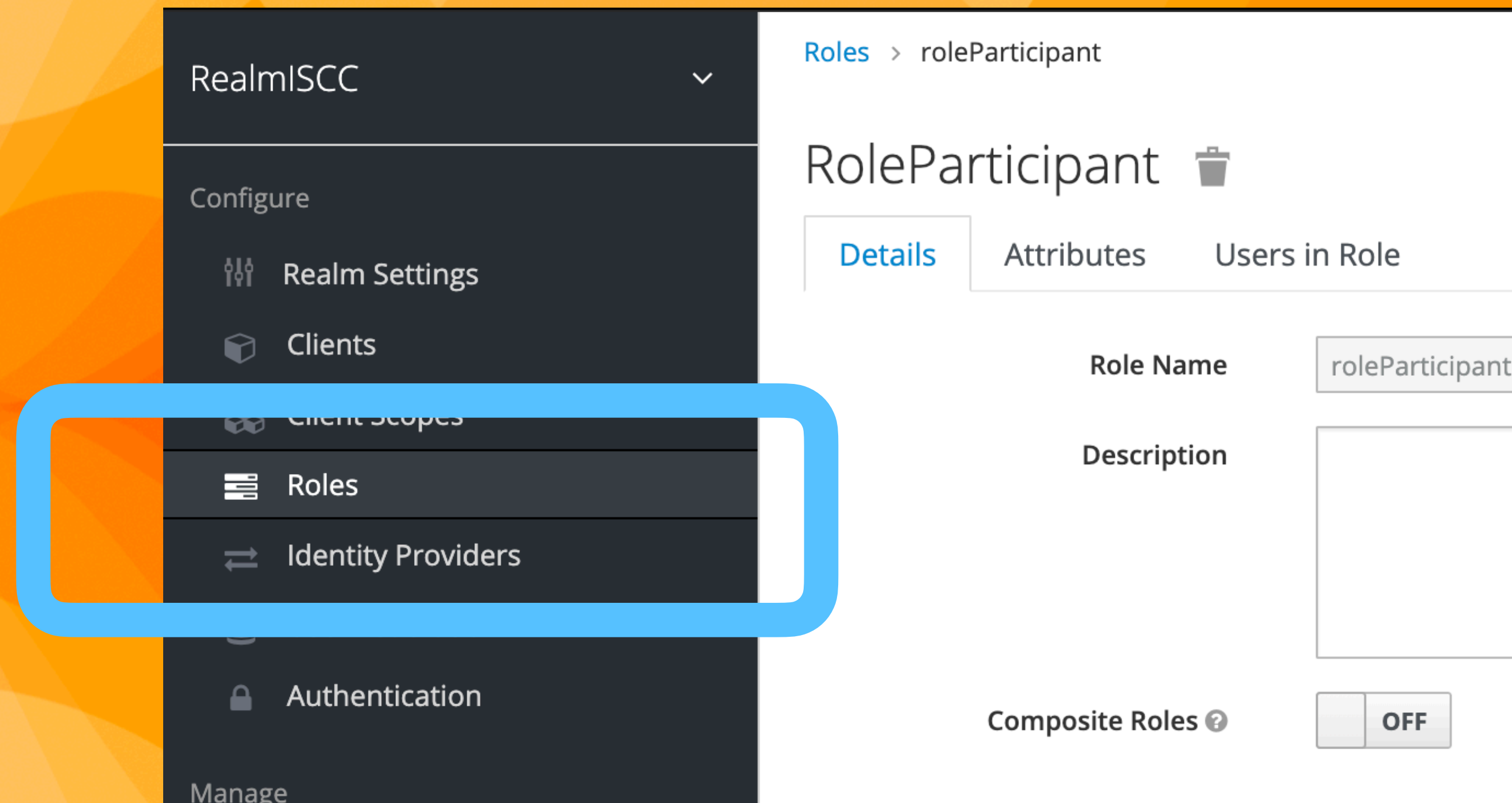


2





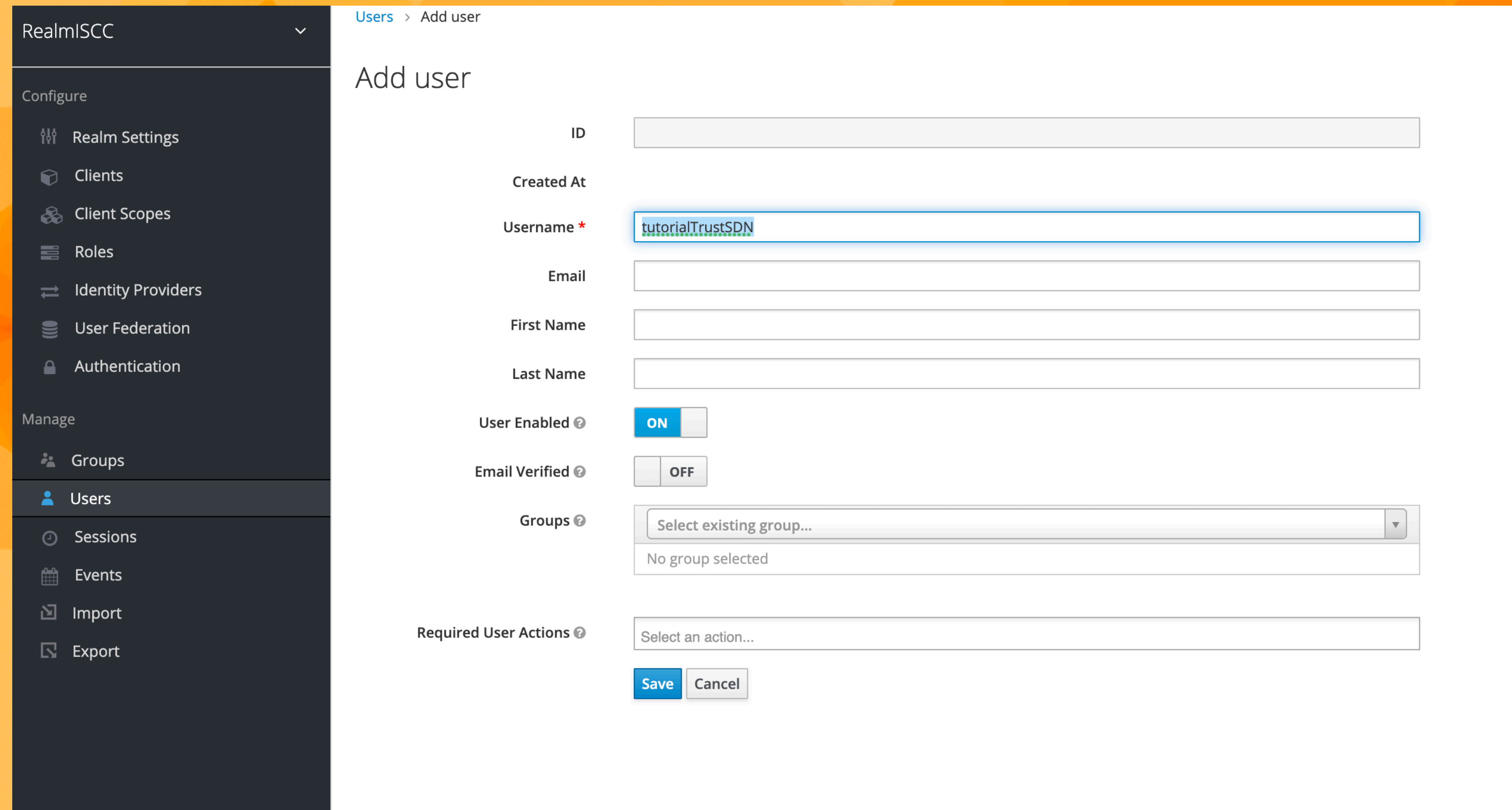
# Role in Keycloak





# Create User

## “tutorialTrustSDN” in Keycloak




The screenshot shows the Keycloak administration interface for the 'tutorialTrustSDN' user. The left sidebar contains navigation links for 'Configure' (Realm Settings, Clients, Client Scopes, Roles, Identity Providers, User Federation, Authentication) and 'Manage' (Groups, Users, Sessions, Events, Import, Export). The 'Users' link is selected. The main content area is titled 'Add user' and contains the following fields:

- ID**: Empty text input field.
- Created At**: Empty text input field.
- Username \***: Text input field containing 'tutorialTrustSDN'.
- Email**: Empty text input field.
- First Name**: Empty text input field.
- Last Name**: Empty text input field.
- User Enabled ?**: Toggle switch set to 'ON'.
- Email Verified ?**: Toggle switch set to 'OFF'.
- Groups ?**: Dropdown menu showing 'Select existing group...' and 'No group selected'.
- Required User Actions ?**: Text input field containing 'Select an action...'.

At the bottom of the form are 'Save' and 'Cancel' buttons.



# Define a password for User “tutorialTrustSDN” in Keycloak

Tutorialtrustsdn 

Details

Attributes

Credentials

Role Mappings

Groups

Consents

Sessions


Manage Credentials

Position	Type	User Label	Data
----------	------	------------	------

Set Password


Password


.....



Password Confirmation

.....




Temporary 

ON




Set Password



# Associate role “roleParticipant” to User “tutorialTrustSDN” in Keycloak

Tutorialtrustsdn 

Details Attributes Credentials **Role Mappings** Groups Consents Sessions

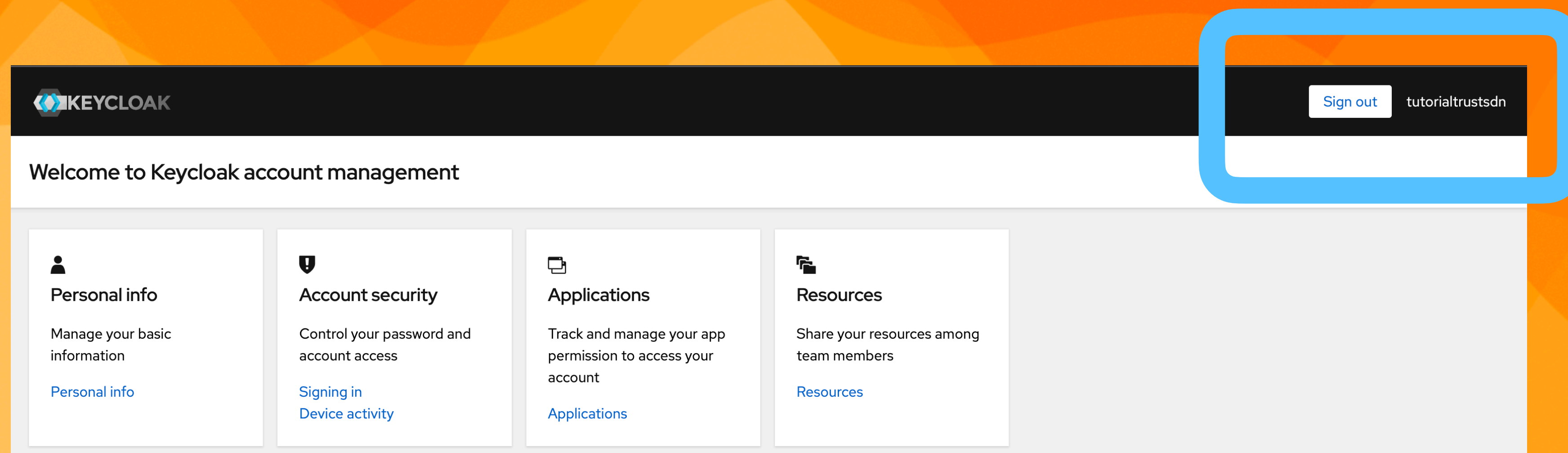
Realm Roles	Available Roles 	Assigned Roles 	Effective Roles 
	<div>offline_access uma_authorization</div> <div>Add selected &gt;</div>	<div>default-roles-realmiscc roleParticipant</div> <div>&lt;&lt; Remove selected</div>	<div>default-roles-realmiscc offline_access roleParticipant uma_authorization</div>
Client Roles	<div>Select a client...</div>		



# Login with “tutorialTrustSDN” in Keycloak

Login using URL:

- <http://localhost:8080/realms/realmlSCC/account/#/>
- ▶ Note: First login should ask to change password





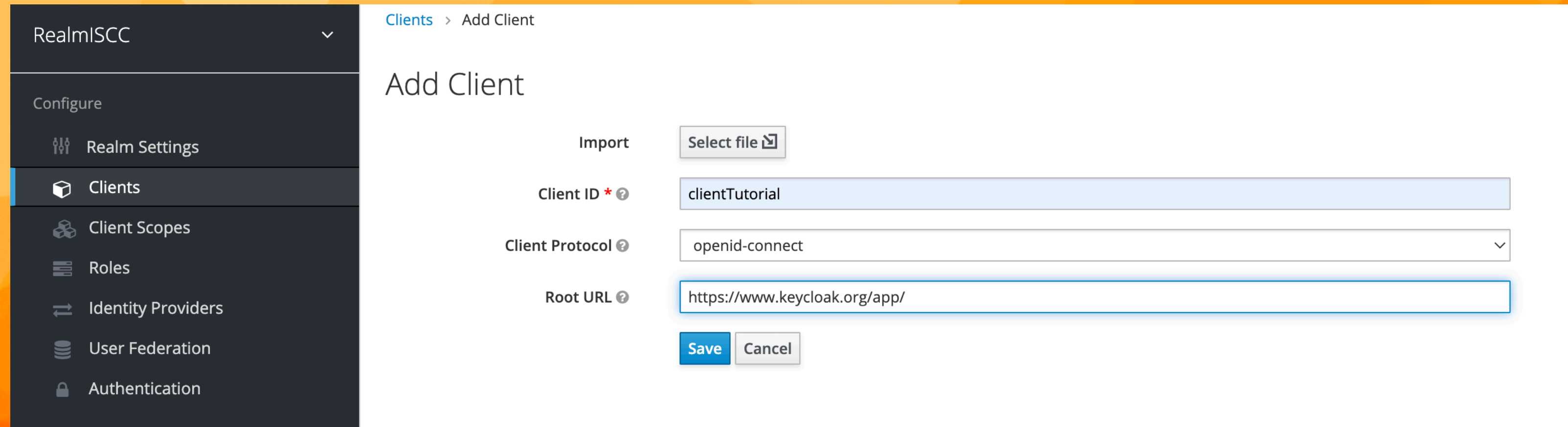
# Sample Application working with login

- Goals:
  - ▶ Register the application as a client of Keycloak “***clientTutorial***”



# Create the clientTutorial

1



RealmISCC

Configure

- Realm Settings
- Clients**
- Client Scopes
- Roles
- Identity Providers
- User Federation
- Authentication

Clients > Add Client

### Add Client

Import

Client ID <sup>\*</sup> <sup>?</sup> clientTutorial

Client Protocol <sup>?</sup> openid-connect

Root URL <sup>?</sup> https://www.keycloak.org/app/

Need to specify the root URL



# After Successful login

1

