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Sign up

Keycloak training
2 days (14 hours)

PRESENTATION

Our Keycloak training course will help you access to your applications. Keycloak is a complete and powerful open-source Identity and Access Management (IAM) solution developed by RedHat.

In this course, you'll learn how to use Keycloak to authentication and authorization for your various applications. You'll learn how to control access to resources based on each user's credentials and authorizations. Key benefits of Keycloak include :

- An adaptable system that can handle an almost infinite number of accounts
- Integration of SAML, OAuth 2 and OpenID security protocols
- A regularly updated system for optimum protection
- A large, active community

Our Keycloak training course, which alternates 60% practice and 40% theory, will introduce you to the tool and the different ways of protecting your applications. We'll go into more detail on tokens, configuration and authorization management on Keycloak.

 prior knowledge of security or complex authentication protocols is required: Keycloak offers integration, so anyone can use it to secure their own applications and systems.

Our Keycloak training course will be based on the latest version of the tool, Keycloak 26.1.

OBJECTIVES

- Control the lifecycle of access and refresh tokens
- Create an effective identity and access management architecture with Keycloak
- Understand the different security protocols and when/how to use them
- How to design and configure role management

- Integrate Keycloak with existing directories
- Integrate external IDPs (SSO)
- Implement additional security policies

TARGET AUDIENCE

- Developers
- Directors
- Cybersecurity managers and experts

Prerequisites

- Good knowledge of Windows and Linux/UNIX
- Good TCP/IP skills
- Good command of HTTP
- Knowledge of software architecture
- Test My Knowledge

Software requirements

- Have Java installed
- Docker Desktop or Podman installed on your PCs

Recommendations for pre- and post-course reading

- "Keycloak - Identity and Access Management for Modern Applications" by Stian Thorgersen. This book is a truly comprehensive guide to Keycloak
- "Mastering Identity and Access Management with Microsoft Azure" by Jochen Nickel. This book provides an introduction to identity and access management and includes a section on Keycloak.
- Official Keycloak documentation
- You can also watch this introductory video to Keycloak

OUR KEYCLOAK TRAINING PROGRAM

Introduction to Keycloak

- Explanations of the IDP concept

KEYCLOAK CUSTOMER MANAGEMENT

- Basic client configuration
- OAuth 2.0 & OpenID Connect
- Authentication flows (OIDC)
- Secret management
- Role configuration
- Service account roles

CUSTOMER SCOPES MANAGEMENT

- User roles and attributes
- Impersonate (usage)
- Group management
- Session management

MANAGING GROUPS & USERS IN KEYCLOAK

- Active Directory / LDAP integration
- LDAP attribute mapping

DIVISION BY KINGDOM

- The Master realm
- Segmentation
- Realm roles
- Session management
- Division by organization

USING KEYCLOAK AS A CLIENT

- Understanding client-side configuration
- Configuration in Postman

INTEGRATION OF USERS FROM AN EXISTING DIRECTORY

- Integration with Active Directory / OpenLDAP
- LDAP attribute mapping
- Kerberos configuration

INTEGRATION WITH AN EXTERNAL IDP

- Integration configuration
- SSO integration methods for applications

STRENGTHENING KEYCLOAK'S SECURITY

- Password policies and requirements
- Multi-factor authentication (MFA) and other security measures

BONUS

- Audit and compliance check of your Keycloak installation

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire enabling us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives with regard to the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.