

IDENTIFICATION

Course code : SR602
ECTS : 2

DURATION

Lectures : 0
Tutorial classes : 10
Labs : 14
Total : 24

Project :
Personnal work :

ASSESSMENT

Continuous assessments and a lab report.

TEACHING MATERIALS

Slides, guided work sheets, and practical work sheets.

LANGUAGE

English

CONTACT

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UE : UE6-SYSRES

COURSE : Directory Systems Administration

SCOPE OF THE COURSE

OBJECTIVES

This course aims to train students in the administration and management of directory systems, which play a key role in centralizing and securing identity information and resources within an IT infrastructure. Students will learn to configure, administer, and operate directories to manage access, users, and permissions in a network environment.

COMPETENCE AND SKILLS

- Set up, from design to production deployment, a company's IT network while integrating QoS and security issues.
- Manually deploy and administer services
- Produce and manage documentation for an IT infrastructure

PROGRAM

1. Introduction to directory systems

- Definition and role of directories in system administration.
- Fundamental concepts : hierarchy, objects, attributes, and schemas.
- Standards and protocols : LDAP (Lightweight Directory Access Protocol) and Active Directory.

2. Installation and configuration of directory services

- Setting up a directory server.
- Creating and managing schemas : defining structures and custom attributes.
- Integrating directories into heterogeneous environments.

3. User and group management

- Creating, modifying, and deleting user objects.
- Managing groups and roles : organizing permissions and access.
- Synchronization with other systems (SSO, identity management tools).

4. Securing and optimizing directory systems

- Implementing security policies : role-based access control (RBAC) and secure authentication.
- Backup, replication, and high availability of directories.
- Performance optimization : indexing and advanced configuration.

5. Practical project : designing and administering a directory

- Setting up a directory service for a fictional environment.
- Managing users, groups, and permissions.
- Applying security and performance concepts to the directory system.

BIBLIOGRAPHY

UNIX and Linux System Administration Handbook, Fifth edition, 2017

REQUIREMENTS

- Engineering tools
- SYSRES UE course from S5