Middleware and services

ECTS
5 crédits

Hourly volume
62h

Introducing

Description

Objectives

This training consists of 3 parts, the following concepts will be discussed:
- Service oriented architectures
- Middlewares
- The Middleware for the Internet of Things through standards and the deployment of an architecture of sensors networks.
- The concept of Cloud and especially Infrastructure As A Service.
- Dynamic management through the principles of autonomic computing

The student will be able to:
- Design and develop a service oriented architecture
- Implement Web services SOAP and Rest
- Develop a service composition (orchestration) via BPEL
- Know the main standards of the Internet of Things
- Deploy an architecture according to a standard and implement a sensor network system services
- Understand the concept of cloud
- Use a cloud infrastructure in Infrastructure as a Service
- Recognise the different architecture types (type 1 and type 2) of cloud hypervisors
- Provision service-based (develop, deploy, manage) in cloud environment using Docker containers
- Deploy and adapt an Internet of things platform on cloud and manage it with autonomic concept

Necessary prerequisites

Java programming, Object Oriented design, base notion on network, XML and XML schema, NodeJS

Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

Practical info

Location(s)

Toulouse

Non-contractual information