

System Integration

Person in charge: Gilles CARPENTIER

Prerequisite: Basic knowledge in computer science, programming and networks

Organization: lectures, labs and a project (42 hours)

Evaluation: Project (50%), Written Exam (50%)

ECTS: 5 credits

Context

System integration corresponds to a set of activities allowing a design of new solutions from existing elements, in particular:

- *integration of various components in order to design a new system*
- *adapting a software to a specific system or hardware*
- *revamping*
- *retro engineering*
- *integration of a new application into an existing information system*
- *design of a new solution by introducing new relationships between existing services*

Internet of Things requires integration of various technologies, sensors and actuators, gateways, long distance networks, cloud and big data.

Objectives

Skills

In terms of skills, this module aims to make students to know and be able to choose tools and methods of system integration.

Knowledge

This module enables students to develop the following concepts:

- **Concepts**
 - Introduction et overview of system integration
 - Open-source strategy

- Tools for integration (BPM, ETL, BI, Spring)
- Test and validation
- System integration is essentially a collection of know-how and best practices

Pedagogical Approach

Lectures with a direct application of methods and tools in labs. Practical implementation in a project.

References

Lecture notes.