

# Course : Cloud Computing, architecture and expertise

*Seminar - 2d - 14h00 - Ref. CAE*

*Price : 1850 € E.T.*

Cloud Computing represents a major evolution in information systems, offering very high computing power at low cost. This training course will enable you to understand the different components of a Cloud Computing architecture, as well as the DevOps philosophy.

## Teaching objectives

**At the end of the training, the participant will be able to:**

- ✓ Discover the features of Cloud Computing
- ✓ Understanding cloud access with broadband networks and WiFi
- ✓ Learn the differences between private and hybrid clouds
- ✓ Understanding the DevOps approach

## Intended audience

IT and functional managers. All IT managers.

## Prerequisites

Basic knowledge of Cloud architectures, operating systems and enterprise networks.

## Course schedule

### 1 Cloud computing features

- SaaS, or Software as a Service.
- IaaS, or infrastructure as a service.
- An entirely virtual computer park.
- PaaS, or Platform as a Service.
- Virtualization and Cloud Computing.

### PARTICIPANTS

IT and functional managers. All IT managers.

### PREREQUISITES

Basic knowledge of Cloud architectures, operating systems and enterprise networks.

### TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

### ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.

Participants also complete a placement test before and after the course to measure the skills they've developed.

## 2 Networks, mobile terminals and BYOD

- Cloud access via broadband networks: fiber optics and xDSL technologies.
- Wireless networks: WiFi and 4G.
- Unified communications.
- Mobile terminals and tablets.
- The BYOD phenomenon.

## 3 Private and hybrid clouds

- The definition of private cloud computing.
- The fundamentals of virtualization technologies.
- Open Source tools and proprietary technologies.
- Overview of the major private cloud families: Eucalyptus, Xen Cloud Platform, VMware...
- Technical solutions for implementing a hybrid solution.
- NoSQL databases used in the Cloud (MongoDB, Cassandra, CouchDB, Hadoop).
- IaaS (Amazon EC2 and S3) and PaaS (Amazon SQS, SimpleDB...) market platforms.

## 4 DevOps approach and philosophy

- Description of DevOps by DevOps enthusiasts.
- Acknowledging divergent objectives.
- The origins of DevOps and Internet companies.
- The DevOps solution.

## 5 Differences between the DevOps movement and traditional IT departments

- The reluctance of traditional CIOs.
- Software "good for service" or "Production Ready".
- The organization of traditional CIOs.
- DevOps: a new paradigm for enterprise IT.

## 6 Supporting an IT department in its transition to DevOps

- The DevOps IT organization.
- Redefining roles and responsibilities: what roles for production?
- The tricky points, the levers of change, the DevOps culture.
- Use of Agile methods. ITIL best practices.
- Change management in the Lean sense.

## 7 Industrialization and DevOps practices

- Need for traceability and repeatability. Infrastructure as Code (IaC).
- Best practices and available tools.
- Definition and use of Cloud architectures with role-based instances.
- Cloud-Init mechanism and UserData concept.

### TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

### TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

### ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at [psh-accueil@orsys.fr](mailto:psh-accueil@orsys.fr) to review your request and its feasibility.

## Dates and locations

### REMOTE CLASS

2026 : 31 Mar., 11 June, 24 Sep., 26 Nov.

### PARIS LA DÉFENSE

2026 : 30 Mar., 11 June, 24 Sep., 26 Nov.