Course : Cloud Computing: A Summary

Seminar - 2d - 14h00 - Ref. AAS
Price : 1810 € E.T.

★★★★☆ 4,3 / 5

BEST

Practical details

Teaching methods
Illustration through concrete cases, discussion and feedback from actual cases.

Course schedule

1 Introduction

- Defining Cloud Computing and SaaS
- History leading to the emergence of cloud computing and SaaS.
- Positioning of cloud computing versus classical hosting providers.
- Positioning of SaaS (Software as a Service) with regard to the concept of ASP.
- Relationship between Virtualization and Cloud Computing.
- Impact of SOA on the adoption of Cloud Computing solutions by company.

2 SaaS and cloud computing

- SaaS vs Cloud Computing.
- SaaS and Cloud Computing, what usages do they provide solutions for.
- Align costs and usage.
- Benefits of Cloud Computing: dynamic outsourced resource allocation, logical isolation ...
- Main Cloud computing drawbacks : Privacy, legislation ...
- Estimation and cost tracking challenges with Cloud and SaaS.
- Issues and benefits of the proliferation of unofficial Cloud ussage (Shadow IT)
- Managing backups. What's the impact on the backup strategy?
- Reversibility. Various strategies. Which one to choose.
- What are the main blocking factors for entreprise adoption of the Cloud, how to overcome the reluctance?

PARTICIPANTS

PREREQUISITES

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.

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.

3 **Market solutions - Overview**

- Public Cloud Computing. Private Cloud Computing. Hybrid cloud. Cloud Computing Communityoffering.
- Public cloud services. Amazon AWS and EC2 services, S3, SQS, SimpleDB, RDS, SNS, ELB, mail, ...
- Google Cloud AppEngine and Compute Engine / BigQuery / CloudSQL / etc. Microsoft Windows Azure PaaS and IaaS.
- OpenStack based clouds : HPCloud, Rackspace, IBM / Softlayer, etc. OVH "Public Cloud" and "Dedicated Cloud".
- Offers VDC: VMware vCloud ServiceHybrid.
- Other cloud offerings: DigitalOcean, Cloudwatt, Numergy Orange Flexible Computing SFR Cloud.
- Private Cloud solutions. OpenStack, Eucalyptus and CloudStackCloudBees. VMware vCloud Director / vFabric.
- Cloud Management solutions. RightScale, Scalr, Heroku, ...

4 **Usage scenarios for Cloud Computing**

- Technically oriented usage scenarios (IaaS, PaaS).
- Usage oriented scenarios (automation, mobility, Web integration ...).
- Eligibility of applications for a cloud outsourcing: business, collaborative applications, human resources management...
- Impact of SaaS and Cloud Computing on GreenIT.

5 **Security and Privacy**

- Differentiation between Security and Privacy.
- Levels where security can be implemented.
- Key issues.
- Main concerns.
- Legal aspects.
- Practical and technical aspects of data protection.
- Supplier Selection and contracting.
- Policy for password and keys management.
- Authentication Delegation.

6 **Integration of Cloud and SaaS solutions with enterprise IT**

- Technical aspects: communication between the IS and Cloud/SaaS solutions.
- Issues of bandwidth and QoS the link between internal and external IF.
- Software Licenses.
- Single Sign On.
- Internal management accounts and external access.
- Choose the billing mode (credit cards, monthly bills, ...)

7   Information system architecture integrating Cloud Computing solutions

- IT Architecture and SOA.
- Schematic of an globale IS with some internal and SaaS and Cloud resources.
- Patterns of Cloud application architectures.
- Integration between the internal IS and SaaS solutions.
- Issues with the integration between the interal IS and Cloud.
- Issues of integration between different Cloud services.
- Migration internal IS services to the Cloud.
- Manage the increased dependency toward the network.

8   Private Clouds

- Private Cloud, what for ?
- Definition of private cloud computing.
- Reminder about the basics of virtualization (para-virtualization, ...).
- Difference with regard to virtualization inside an internal or external Datacenter.
- Difference with regard to classical datacenters or "compute grids".
- Pros and cons. The economic equation. The main virtualization technologies.
- Open-source tools for the private cloud (OpenStack, CloudStack, KVM, libvirt, ...).
- Proprietary technologies.

9   The technical solutions and NoSQL Cloud

- Databases for the Cloud.
- Emergence of NoSQL databases. Differences with RDBMS.
- Foundations for NoSQL database.
- Features and limits of RDBMS.
- Main opensource NoSQL databases (Cassandra, MongoDB, HBase, ...).
- Main integrated cloud NoSQL databases (Google Datastore / CloudSQL, Amazon DynamoDB / SimpleDB, Google BigQuery).

Dates and locations

REMOTE CLASS
2026 : 18 June, 25 June, 1 Oct., 8 Oct., 3 Dec., 10 Dec.

PARIS LA DÉFENSE
2026 : 18 June, 1 Oct., 3 Dec.

LUXEMBOURG
2026 : 18 June, 3 Dec.