Publication date : 07/23/2024

Course : The digital revolution, an overview of the evolution of technology

Seminar - 3d - 21h00 - Ref. NTI
Price : 2550 € E.T.

4,2 / 5

BEST

The omnipresence of digital technology and related techniques on the web has given rise to new approaches that enable flexible, scalable architectures to be put in place to meet the company's need for agility. Should we say digital or numérique? Understand the concepts behind these technologies and their impact on your organization. You'll learn about developments on the customer side, Cloud technologies, new service approaches, data-related issues (big data, etc.), the arrival of Artificial Intelligence and digital infrastructures with network services.

Teaching objectives

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

- Understanding the concepts of digital technologies
- Cloud computing and networking solutions
- Discover new service technologies
- New architectures and their security
- Understanding the importance of Big Data and Artificial Intelligence
- Knowing how digital networks and infrastructures are evolving

Intended audience

IT directors, IS managers or anyone interested in current and future technological trends.

Prerequisites

Basic knowledge of information systems.

Course schedule

PARTICIPANTS

IT directors, IS managers or anyone interested in current and future technological trends.

PREREQUISITES

Basic knowledge of information systems.

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.

1 The digital world

- Defining digital concepts.
- Digital challenges for governance and competitiveness.
- ROI, TCO, flexibility, impact on architectures and application design.
- Innovation, the key to competitiveness.

2 The Cloud and its evolution

- Different cloud architectures (public, private, hybrid, distributed, multi-cloud, sovereign).
- IaaS, PaaS and SaaS architectures.
- CaaS (Container as a Service), FaaS (Function as a Service) and SOA (Service Oriented Architecture) architectures.
- Virtualization and cloudification.
- Core, Edge, Fog and Embedded data centers.
- Cloud architecture choices.
- Cloud players.
- The ongoing transition via digital infrastructures.
- The problem of energy consumption.
- The Cloud Act, the Patriot Act and the RGPD.

3 Services and applications

- Software architecture.
- Service architectures: from web to serverless.
- SOA architecture.
- Microservices-based architecture.
- Serverless-based architecture.
- Low-code and no-code.
- Service architectures: Cloud Native with Kubernetes and DevOps.
- Open source: the most popular software.
- Operating systems, office solutions...

4 Internet and its services

- Google's search engine optimization algorithm. Impact on Web design.
- The different generations of web.
- Social networks, LinkedIn, Facebook, Whaller, X..
- Document sharing: players and solutions.
- Blockchain and collaborative projects.

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 to review your request and its feasibility.

5 Big data, data management

- History of database management servers
- The challenges of big data.
- Data lifecycle. Solutions for data collection, consolidation, analysis and visualization.
- Complementarity with BI, Business Analytics, DatawareHouse, Data Lake, Data Mesh, Data Fabric solutions.
- Data collection: real-time architectures.
- Storage solutions: HDFS, NoSQL databases, Hadoop, HBase, MongoDB, Cassandra...
- Data handling, Pig, Hive...
- Open Data.
- DataScience.
- Data Scientists at the heart of Business Intelligence.
- Crawling and scraping.

6 Artificial Intelligence

- The positioning and functions offered by AI.
- Machine learning and deep learning.
- Artificial Intelligence engineering.
- Human-machine differentiation, complementarity and collaboration.
- Generative AI and multi-language model (LLM).
- Speech recognition and synthesis (NLP).
- Ethics and sovereignty.

7 Security

- IS security issues.
- Normative and regulatory framework.
- ISO 27002, 27003, 27004, 27005 standards.
- Contingency and continuity plans, PCA/PRA, PSI, RTO/RPO...
- Types of attack and best practices.
- Cybersecurity mesh.
- Optimized confidentiality.
- SASE (Secure Access Service Edge).
- Segmentation and ZTNA (Zero Trust Network Access).
- Security components (firewall, VPN, DMZ, biometrics, certificates, etc.).
- Encryption algorithms and digital signatures.
- Authentication and passwordless.
- Hardware security and TPM (Trusted Platform Module).
- Wi-Fi security.
- New security directions: IAM, Behavioral AI protection and Code Security).
- Detection of domain name attacks.

8 Mobility trends

- IP mode and its services.
- LAN and WAN.
- Participatory systems.
- Ad hoc and mesh networks.
- New generations of Wi-Fi.
- 5G public and private.
- 5G applications.
- 6G and vertical and horizontal networks.
- High-altitude platforms and low-orbit satellite constellations.

9 The Internet of Things

- The Internet of Things (IoT).
- The value chain.
- IoT architecture.
- IoT networks (LPWAN).
- IoT platforms
- Players and solutions.
- The Internet of Edges.
- Mobile Internet.

10 Paradigm shifts

- Quantum computing.
- Quantum networks.
- Industry 4.0, metavers, healthcare and autonomous, connected vehicles.

Options

Certification : 190 € HT

DiGiTT® certification is optional when you register for this training course, and consists of 3 stages: taking a Diag® before the course, access to a digithèque to learn the concepts and notions for each digital skill, and then taking the certification exam. This consists of a 90-minute test available in English and French. The result certifies your skill level out of 1000 points (beginner, intermediate, advanced, expert). Taking this course alone is not enough to guarantee a maximum score on the exam. You can schedule and take the exam online within 4 weeks of the start of your session.returnchariot

Dates and locations

REMOTE CLASS
2026 : 2 June, 15 Sep., 8 Dec.

PARIS LA DÉFENSE
2026 : 26 May, 8 Sep., 1 Dec.