DevOps: State of the Art and Best Practices

Seminar of 2 days - 14h
Ref.: DOE - Price 2025: 2 140 (excl. taxes)

EDUCATIONAL OBJECTIVES

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

Measure the scale of a DevOps-driven ISD reorganization

Know what makes up a DevOps software factory

Be able to design a strategy to enable an ISD to grow into a DevOps organization

TEACHING METHODS

The instructor describes the software they feel is important. No demonstrations are included.

Strategy discussions.

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.

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.

THE PROGRAMME

last updated: 06/2024

1) » DevOps approach: In search of an initial definition

- Description of DevOps by DevOps supporters.
- Observation of contradictory goals.
- Origin of DevOps and Internet companies.
- The DevOps solution.

2) » The genealogy of DevOps: Agile Methods and Lean Manufacturing

- Some principles of Lean Manufacturing.
- The mass production of traditional IT.
- "Just-in-time" doesn't care about the nature of the business.
- The one-piece-flow model: Smaller, faster, more frequent.
- Limiting demand and increasing flow. Stacks and one-piece-flow.
- Optimizing the flow and productivity. The value chain.
- Eliminating bottlenecks and waste.
- Reducing the size of batches to one-piece-flow.
- Stopping at the first defect.
- The fourteen principles of Deming.
- "The Machine That Changed the World" by James Womack.
- "The Agile Manifesto".
- "Lean Software Development" by the Poppendiecks.
- "Continuous Deployment" by Jez Humble.
- "The Phoenix Project" by Gene Kim.

3) » Operation and key processes of the DevOps ISD

- Life cycle of the Release.
- Scrum Agile development.
- Backlogs and waste, sprints and reactivity, Scrum Master and Lean Management.
- Continuous integration: Principle and tools (Jenkins, SVN, GIT).
- "Branches are evil".
- Automating tests.
- Continuous development. Modularity. Role of interfaces.
- Industrializing/automating Deployments: Tools like Capistrano and Ansible.
- Data cases, package types, and the Liquibase tool.
- Zero Downtime Deployment.

- Business Activity Monitoring.
- Service infrastructure and provisioning servers.
- Puppet: Administration of servers.

4) » From operability to dependability

- Non-functional requirements.
- Integrated Logistics Support and total cost of ownership.
- DevOps and dependability.
- Netflix and ability to survive.
- Achieving dependability by instrumenting the platform.
- The Cloud solution and instrumentation.
- Programmable infrastructure.
- Productivity and dependability: The two pillars of DevOps.

5) » DevOps movement and traditional ISDs: Radical differences

- The reticence of traditional ISDs.
- "Production-Ready" software.
- The structure of traditional ISDs.
- "You build it, you run it": Another specialization of Amazon's structure.
- Integrated mode and Taylorized mode.
- Two ways of seeking productivity.
- DevOps: A new paradigm in corporate IT.

6) » Reorganizing a traditional ISD into DevOps

- An inevitable, desirable, and possible change, how far and at what price?
- The digital revolution, SaaS, Cloud, and business behavior.
- Doing DevOps without the ISD. Shadow IT.
- A complex situation, a possible imbalance.

7) » What vision should be central to managing the DevOps transformation?

- Bottom-up versus top-down changes: The need for a vision.
- Determining the target and multimodal ISDs.
- The structure of the DevOps ISD. The example of Spotify in 2014.
- Redefining roles and responsibilities: What roles for production?
- Tricky issues, change levers, DevOps culture.
- Agile vs. ITIL?
- CALMS, the change management proposed by DevOps.
- Change management in the Lean sense: More experimentation than imitation.
- Checking up on change already begun in the field. Limits of bottom-up approaches.

8) » Enterprise architecture for change management

- Why enterprise architecture?
- DevOps promise: Responsibility and dependability for business divisions.
- Changing responsibilities. Necessary skills and HR impact. Promoting a collaborative culture.
- Building the trajectory by application. Eligible applications.
- Urbanization and interface management. Modularity of the target IS.
- Impact on the outsourcing strategy. Scope and new types of contracts.
- Production platform instrumentation program.
- Budget governance: Free or managed.
- Group discussion¤Summary, conclusion, debates.

DATES

REMOTE CLASS
2025 : 16 oct., 04 déc.