DevOps : Awareness of the approach

Duration 2 day(s) (DEVOPS-02)

An immersion in the DevOps universe through presentations and workshops

Description

A reference framework of good practices initially pushed by the big actors of the web, the DevOps approach aims to reinforce the collaboration between the teams of development - the "Dev" - and the teams of operation - the "Ops" - and this with the aim of multiple improvements : * Improvement of the fluidity of the production chain and the provision of the software (the famous "Time to market") * Improvement of the general quality of the software and the user experience, by producing an industrialized software at the earliest, and by allowing a better reactivity and capacity of correction on the incidents and anomalies in production * Improvement of working relationships between teams, working in particular on the common sense of the work done This seminar will be an opportunity to explore these good practices, including the concepts of culture, automation, metrics and sharing that are the pillars of the implementation of a DevOps approach. For intra-company there is a program on 2j based on serious games and exchange workshops between participants (5 participants minimum). Serious games, workshops and exchanges between the participants will be led by the trainer and will punctuate this training.

Goals

The purpose of this seminar is to discover the concepts of the DevOps approach, to explore its ecosystem and to obtain a vision on the technical and collaborative practices associated with this approach.

We'll go through good implementation practices together, and explore ways to get started with DevOps implementation in your work environment.

Public

Anyone contributing to IT projects

Prerequisites

Experience in contributing or managing an IT project

Structure

40% Theory, 60% Practice

Program

Serious Game

Presentation of the DevOps approach

Establish a definition of DevOps

- What is not DevOps
- What is DevOps

The stakes and the vision of the DevOps approach

- The origins of this transformation process
- State of the market and goals for his business
- The role of automation in the process

The different pillars of DevOps: CAMS

- The common culture as a line of sight
- Automation at the service of collaboration
- Measure to know where you are and observe progress
- Sharing between different actors

Exchange workshop / scenario

The concepts of agility for understanding DevOps

An introduction to agility

- The Agile Manifesto as a source of inspiration
- The values and principles of Agility
- A response to the limits of classical / predictive methods
- The family of Agile methods: XP, Scrum, Crystal, Kanban, Lean ...

Presentation of different agile practices

- Iterative deliveries for flexibility and fluidity
- A different approach in the organization of the team
- Prioritization and planning techniques in the agile world
- Collectively improve by retrospectives

Declining agile concepts in the world "Ops"

- The impacts of agility on the world of Ops
- Transposition of Agile Principles and Values into Infrastructure
- Adaptation to the different types of work of the world Ops
- Agile practices and methods in the world Ops: Kanban, Scrum ...

Exchange workshop / scenario

DevOps tooling and Infrastructure as Code principles

From continuous integration to continuous deployment

- Integration continues as a starting point (Jenkins, Git, Maven ...): source management, automated testing, creation and storage of artifacts
- The extension of agile concepts for production
- The introduction of Continuous Delivery and focus of different processes
- To know how to put tools and to make live the different tools
- Modern supervision approaches, new indicators
- Using ChatOps

Principles of Infrastructure as Code

- The control of the infrastructures by the APIs (AWS, OpenStack, vSphere ...)
- Configuration management (Puppet, Chef, Ansible ...)

- The Software Defined Networking
- Containerization technologies (LXC, Docker, Kubernetes ...)

Tooling as a pretext for collaboration

- Common projects of technical improvements
- Need for shared tools
- Good transverse technical practices
- Technical requirements and automation

Exchange workshop / scenario

Great implementation principles

Evaluate yourself to know your way

- Concept of maturity model
- Realize an inventory of practices
- Definition of major axes of change, associated actions

Implementation of a transformation

- Use existing models or build yours
- Definition of pilot phases
- Setting goals and knowing how to measure as and when

Generalization of practices

- Identify success stories
- The role of evangelization
- Patterns and anti-patterns

Exchange workshop / scenario

DevOps in today's business

The impacts of adopting DevOps

- Adoption and controls of software development best practices
- Operational teams as a service center
- New tools for new uses (autoscaling, clustering, "Pets Vs. Cattle", ...)
- Component architecture and micro-services architecture, role of container orchestration
- A new culture

DevOps and ITIL

- The common search for fluidity
- DevOps impacts on ITIL processes
- Towards a standardization of changes

Beyond DevOps

- Internal and external communication
- End-to-end agility
- Evaluation of the winnings
- How to know if the goal is reached?