



WHAT IS DEVOPS AND WHY IMPLEMENT IT



DESIGNED FOR

CxO, Solutions Architects, Engineers.

DESCRIPTION

How most innovative players tackle digital business transformation? This workshop offers an overview of IT infrastructures in the DevOps, Cloud, and Continuous Delivery era and it covers the fundamentals of Cloud computing and devops practices.

It is created to teach CxO, IT Architects and Engineers how to introduce the use of the Cloud computing by understanding IT trends, product and benefit about business needs. The course covers also an introduction to the Agile methodology best practices.

RECOMMENDED PREREQUISITES

Working knowledge of distributed systems and multi-tier architectures.
Basics of cloud computing concepts.

METHODOLOGY

Since we consider a course like a single project we apply to our trainings an iterative project management methodology suitable for any project.

Scrum is suitable for any project-based work, provides a framework to identify and prioritize work required and, for classroom teams, to commit to the set of priority items the attendee believe can be delivered during the training. Standup meeting is planned. The teacher creates a prioritized a wish list. The classroom has a certain amount of time to complete its tasks. ScrumMaster keeps the attendee focused on its goal. The sprint ends with a retrospective.

Delivery mode

classroom | virtual class | e-learning



WHAT IS DEVOPS AND WHY IMPLEMENT IT

TOPICS

IT Challenges

- Business needs
- Typical state
 - Dev
 - Ops
 - Production deployments
 - Monolithic applications
- Challenges
 - Devs challenges
 - Ops challenges
- Solutions
 - Microservices
 - Continuous Delivery
 - Continuous Integration
 - Tests
 - Infrastructure as Code
 - IaaS / PaaS
- Is Ops dead?
- Closing keypoints and feedback

DevOps

- DevOps team collaboration tools
 - Code lifecycle
- Code repository (obviously git based)
 - Code review/issue management
 - SaaS
 - On premise
- Code review only
 - On premise
- Continuous integration/deployment
 - SaaS
 - On Premise
- Team collaboration
 - IRC
 - IRC in the 21th century
 - Automation

Cloud IaaS

- Infrastructure management
- Pets vs Cattle

Infrastructure as Code

- Provisioning
- Immutable Infrastructure
 - Using Ansible/Puppet/Chef/Salt
 - Using Terraform
 - Create vs Upgrade
 - Upgrades

Microservices architectures

- Monolithic applications
- SOA vs Microservices

Implementation

- Infrastructure
 - Products
 - Consul
 - Packer
 - Terraform
 - Nomad
 - Docker
 - Rkt
 - Stolon
- Project Dependencies
- Next Steps

Agile

- Successfull of Agile Projects
- Continuous improvement
- Flexible response to change
- Achieve Business outcomes



COURSE KUBERNETES RECOMMENDED

3
DAYS

medium 



DESIGNED FOR

Engineers who need to manage a platform for automating deployment, scaling, and operations of application containers across clusters of hosts.

DESCRIPTION

This course introduces to kubernetes as open-source system for automating deployment and scaling of containerized applications.

Kubernetes groups containers that make up applications into logical units for management and discovery.

RECOMMENDED PREREQUISITES

GNU/Linux knowledge.

Cloud IaaS knowledge.

TOPICS

- Introduction to container orchestration
- Setup a kubernetes cluster on a cloud provider
- Deploy stateless and stateful applications on a kubernetes cluster
- Manage kubernetes cluster lifecycle
- Hands-On Labs

Delivery mode

classroom | virtual class



COURSE IAAS

3
DAYS

medium 



DESIGNED FOR

System administrators and others responsible that need to manage operations on the AWS and GCE platforms.

DESCRIPTION

The course is designed to introduce engineers to the AWS and GCE Cloud use. It covers introductions about how to manage instances. Define and manage appropriate Storage and network services. The course covers also an introduction to API and how to automate builds.

RECOMMENDED PREREQUISITES

Basics of cloud computing concepts.

Skills related to a system administrator.

TOPICS

- IaaS basic concepts
- AWS Components: overview and introduction
- Regions and Availability Zones
- Compute, storage and networking services
- Google Compute Engine
- Google Compute Engine Unit
- Persistent Disks
- Machine Types
- AWS vs GCE
- API
- Hands-On Labs

Delivery mode

classroom | virtual class



COURSE DEVOPS DEVELOPMENT TOOLS

3 DAYS

high

DESIGNED FOR

Engineers and developers who need to be introduced to devops tools and methods.

DESCRIPTION

A course about the developer modern tools used today. You will be introduced to Git a version control system widely used for software development and version control tasks. You also will learn about GitHub, a web SaaS hosting service for software development projects used by thousands of developers around the world, and the continuous delivery software engineering approach.

RECOMMENDED PREREQUISITES

Linux basic knowledge.
Bash/Zsh basic knowledge.
Some SCM experience.

TOPICS

- Git features and advantages compared to other source control system
- Github as flexible and collaborative development process tool, use cases
- Code review Guidelines
- Continuous Delivery: how to put in control an ongoing cycle of software releases
- Hands-On Labs

Delivery mode

classroom | virtual class



COURSE MICROSERVICES AND CONTINUOUS DELIVERY

4 DAYS

high

DESIGNED FOR

DevOps engineers who need to use new technologies to reduce the time to market and growing productivity.

DESCRIPTION

This course will introduce the student to the implementation of continuous delivery using microservices application container and the orchestration with kubernetes.

RECOMMENDED PREREQUISITES

Cloud IaaS (aws, gce) basic knowledge.
Kubernetes basic knowledge.
Git and git workflows (Github like, code review) knowledge.

TOPICS

- Implement microservices and continuous delivery with application containers
- Use Kubernetes for application container orchestration, high availability, service discovery, persistent data
- Develop and manage stateless microservices
- Develop and manage stateful microservices (sql/nosql/newsq databases, object storage, filesystems)
- Manage upgrades of microservices (rolling upgrades and blue/green deployments)

Delivery mode

classroom | virtual class

ABOUT SORINT.LAB

Sorint.Lab has been a leader in Information, Communication Technology and System Integration for over 30 years.

Our company objectives are to be the Client's trusted technical partner. Our primary aim is to help the Client reach their business goals by understanding the business requirements and supporting them with technology innovation that will add value for their business. Allowing the Client's IT to focus on new projects and on higher strategic activities.

SORINT.lab is independent of Hardware and Software vendors, allowing the Client to be completely flexible in product selection. SORINT.lab offers a wide spectrum of solutions suitable for the Client needs.

INNOVATIVE MANAGED SERVICES AND CONTINUOUS SECURITY 24X7: We develop flexible and tailored services to support infrastructure and application, thanks to the deep knowledge of more than 400 opensource products. Available services with remote management and/or with an onsite team of experts, delivering services to the highest standards of certification ISO 9001, ISO 20000-1 and ISO 27001. We offer services of Security DevOps, Security Device Management and Security Design & Delivering on trials, codes, architectures and infrastructures.

CONSULTING AND PROJECTS: SORINT.lab offers Clients a wide range of knowledge and expertise offering personalized projects, consulting, streamlining, optimization and creation of technological platforms in all their components; from operating systems to databases, network, middleware, to the most sophisticated added value implementing activities applications, migrations, infrastructural assessment, consolidation and IT transformation, IT automation, Cloud.

SOFTWARE DEVELOPMENT: Our development teams are skilled in many programming languages with particular strength in Agile methodology and DevOps, supporting many clients in software integration and in the legacy modernization toward the cloud native programming.

EDUCATION: through his own structure "Academia", SORINT.lab offers technical educational and training courses of different technologies at Sorint lab headquarters, Sorint lab offices and Client offices.



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