

Implementing DevOps

14 PMI PDUs | 14 IIBA CDUs

Format: Live Instructor-Led Online through Zoom

Duration: Three 4.5 hour sessions

Technology and

Attendance Requirements:

Computer with a browser, Zoom, a microphone and speaker. For this workshop, camera should be on if possible and you must be actively participating.

Are you a developer or operations staff member working in a DevOps environment? Applying DevOps requires well-defined goals and a good understanding of the different tools available and which ones are right for you.

This course will provide you with hands-on experience in a DevOps environment: planning and setting the strategy; designing and implementing the pipeline; automating the provisioning and configuration of infrastructure and deployment of systems; monitoring the pipeline and the systems with telemetry; identifying bottlenecks; and applying continuous improvement to evolve the pipeline and the architecture.

Certification:



ICAgile accredited course: The ICAgile Certified Professional, Implementing DevOps certification is granted on the successful completion of this course. This certification is part of the ICAgile DevOps track along with our Agile Fundamentals and Foundation of DevOps courses. We offer the complete ICAgile DevOps Track for those looking to become an ICAgile Certified Expert in DevOps (ICD-DO).

Learning Outcomes:

During this course you will learn about:

- Identifying policies and processes to support DevOps and prepare a strategy for continuous delivery
- The impact of various architectural patterns on DevOps
- Designing a deployment pipeline and implement it
- Automating the provisioning and configuring of environments in the cloud
- Implementing telemetry monitoring to support continuous improvement
- Techniques for involving the customer in continuous improvement efforts
- Maturing the pipeline, including evolving the architecture, using virtualization and cloud computing, and ensuring compliance and governance is maintained.

Contents:

Continuous improvement follows a Plan-Do-Study-Act cycle, and this course follows that cycle.

Plan – identify the objectives.

- Identify what changes are needed in the culture, policies, and processes.
- Use Value Stream Mapping to identify waste in the process.
- Apply the Theory of Constraints to improve the process.
- Define an architecture, including the pipeline and its stages, to support the goals.

Implementing DevOps

14 PMI PDUs | 14 IIBA CDUs

Format: Live Instructor-Led Online through Zoom

Duration: Three 4.5 hour sessions

Technology and

Attendance Requirements:

Computer with a browser, Zoom, a microphone and speaker. For this workshop, camera should be on if possible and you must be actively participating.

Contents:

Do – build the pipeline.

- Implement the pipeline (as code) in Go CD.
- Evaluate the benefits of automating each stage in the pipeline.
- Provision a VM in AWS EC2 with Terraform.
- Configure the VM and deploy the system with Ansible.

Study – monitor the pipeline.

- Manage log data with the Elastic stack:
 - Collect log events with Logstash,
 - Aggregate them in Elasticsearch,
 - Analyze them with Kibana.
- Evaluate the benefits of different types of telemetry and the policies around it.
- Diagnose problems using the telemetry.
- Identify symptoms of security problems using the telemetry – DevSecOps.
- Evaluate policies and practices for support in production.
- Use formal techniques to elicit feedback from the users and customers.

Act – mature the pipeline

- Evolve the architecture in response to issues identified, for example:
 - Moving to microservices to address deployment problems.
 - Using cloud computing and containers to address performance and scalability.
- Evolve the pipeline in response to issues identified:
 - Evaluate release patterns to address deployment problems.
 - Engineer the pipeline to make it more robust.
 - Ensure compliance and governance needs are satisfied.