Course duration

- 2 days

Course Benefits

- Confidently design a DevOps roadmap for your organization.
- Understand the various key components.
- Communication and evangelization of your DevOps progress.
- How automation is key to success
- Understand the key components;tools, processes, and people required
- Apply the knowledge to improve reliability of build & release processes
- Become literate in the vernacular of DevOps
- Learn the metrics and analytics that provide understanding of your organizational maturity
- Monitor your team and application lifecycle management effectiveness
- Understand how to create a culture that supports technology-enabled business
- Apply technology, people and process to shift left
- Map out the workforce strategy required for organizational success
- Compare other organizational journeys in DevOps to understand options and approaches

Course Outline

1. Devops Journey
    1. Why DevOps?
    2. What is DevOps?
    3. History behind DevOps
    4. Cross functional teams
    5. Key components of successful DevOps
    6. DevOps vocabulary
    7. DevOps goals
    8. Driving business outcomes with DevOps
    9. Summary
2. Cultural Alignment & Workforce Strategy
    1. Leading the charge to DevOps
    2. Core values and mission
    3. Communication
    4. Collaboration
    5. Value stream mapping
    6. Behavioral patterns
    7. Culture assessment

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    8. Summary
3. Continuous Integration & Delivery
    1. What does continuous delivery mean?
    2. What is continuous integration?
    3. Project methodologies
    4. Measuring your organization maturity
    5. Tool selection
    6. IT organization structure
    7. Business continuity
    8. Supportability and sustainability
    9. Summary
    10. Case Study 1: Global Financial Services
4. CI Tools
    1. Challenges solved by CI tools
    2. Introduction to Jenkins
    3. Introduction to Hudson
    4. Introduction to Cruise
    5. Introduction to SaltStack
    6. Comparison
    7. Summary
5. Monitoring
    1. What to monitor?
    2. How to monitor?
    3. Why to monitor?
    4. Application Performance Monitoring
    5. Infrastructure monitoring
    6. Monitoring across the stack
    7. Summary
6. Measurement
    1. What to measure?
    2. How to measure?
    3. Why to measure?
    4. Choosing the right metrics
    5. What are your key performance indicators?
    6. Actionable insight
    7. Software quality
    8. Top 5 metrics
    9. Summary
7. Automation scripting
    1. Why automate?
    2. Goals for scripting
    3. Error handling
    4. Logging
    5. Automating versioned builds
    6. Automating continuous integration tests
    7. Automated cleanup
    8. Introduction to Shell scripting

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9. Introduction to Python
10. Introduction to Ruby
11. Introduction to Perl
12. Summary
13. Case study 2. Enterprise Telecommunications

8. Agile
    1. History of Agile
    2. Managing sprints
    3. Maintaining the backlog
    4. Working with story points
    5. Distributed agile
    6. Kaizen
    7. Kanban
    8. Summary
9. Building Tools
    1. Build tool history
    2. Repeatability
    3. Notification
    4. Continuous build
    5. Build tool basics
    6. Summary
10. Configuration Management
    1. Why is configuration management key to DevOps success?
    2. What is configuration management
    3. Terminology
    4. Automation tool comparison
    5. Configuration management tools
    6. Setting up the environment
    7. Deployment
    8. Cloud integration
11. Continuous Code Quality
    1. What is continuous code quality?
    2. Continuous Testing
    3. Seven Axes of Quality
    4. Potential Bugs
    5. Test-Driven Development
    6. Behavior-Driven Development
    7. What is Sonar Qube
    8. SonarQube- Benefits
    9. Summary
    10. Case study 3. Federated Global Products
12. DevOps DBA
    1. DBA role in DevOps
    2. Why are DBAs often left out of the conversation?
    3. Database management with DevOps
    4. Push button CI for database
    5. Managing databases with configuration management

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6. Database self-service
7. Database configuration as code
8. Pay to Play or Open Source
9. Data as an asset
10. Big Data
11. NOSQL
12. Summary

13. Best Practices
    1. Who are the folks using the various solutions?
    2. DevOps implementation checklist
    3. Gap assessment survey
    4. Best practices
    5. Patterns
    6. Anti-patterns
    7. Summary
14. DevOps Action Plan
    1. What defines a cloud?
    2. Elasticity
    3. History of cloud
    4. Benefits of cloud
    5. Public, Private, or Hybrid?
    6. Governance in cloud
    7. Cloud deployment
    8. Introduction to AWS
    9. Introduction to Azure
    10. Introduction to SoftLayer
    11. Why virtualization?
    12. Virtual machines
    13. Virtualization with Citrix
    14. Summary

Class Materials

Each student will receive a comprehensive set of materials, including course notes and all the class examples.

Class Prerequisites

Experience in the following *is required* for this DevOps class:

- A desire to learn how to successfully implement DevOps in your organization.

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