FUNDAMENTALS OF DEVOPS

SYNOPSIS

Fundamentals of DevOps provides new ways of thinking about how development and operations can work better together to deliver value to customers more quickly. It is expected that course participants already have a solid background in IT as well as strong knowledge of Agile, Lean, Systems Thinking, Kanban, Continuous Delivery and related techniques and practices.

This course builds on that knowledge and makes connections to the concept of DevOps. The key principles, components and considerations of DevOps are explored. This course is highly interactive, with almost half of the course time dedicated to exercises and discussions. While this course addresses the considerations for a DevOps implementation, this course does not focus on any particular tools and technologies needed to implement DevOps, nor does it align to any formal body of knowledge for DevOps while one does not exist.

LEARN

- Define DevOps
- Explain the benefits that DevOps provides
- Connect DevOps to the practices of Lean, Agile, and Systems Thinking
- Identify and differentiate between the components of the DevOps cycle
- List the aspects to consider when implementing DevOps

TOPICS

THE NEED FOR DEVOPS

- Traditional vs. New IT Landscape
- What is DevOps?
- DevOps life Cycle Components
- DevOps History
- Issues in the Current Work Environment
- Why Do We Need DevOps?
- DevOps Addresses Technical Deb
- DevOps Increases Performance
- DevOps Minimizes Technology Waste

DEVOPS AND OTHER MINDSETS AND TECHNIQUES

- DevOps and How it Connects to:
  - Iterative and Incremental Delivery
  - Kaizen
  - PDCA Cycle
  - The Andon Cord Agile
  - Scrum
  - Systems Thinking
  - Value Stream Mapping
  - Project Management
  - Kanban

DEVOPS PRINCIPLES

- Continuous Delivery
- Continuous Experimentation and Learning
- Cams: the Four Pillars of DevOps Philosophy
  - Culture
  - Automation
  - Measurement
  - Sharing
- People Over Processes Over Tools

THE DEVOPS LIFE CYCLE

- The DevOps Life Cycle
- Life Cycle Components
- Architecture
- Elements of Continuous Development
- Trunk-based Development
- The Build Pipeline
- Continuous Testing
- Test-driven Development (TDD)
- The Testing Quadrants
- Benefits of Continuous Integration
- Continuous Deployment
- Version Control
- Continuous Monitoring
- Indicators Used to Measure DevOps Performance

IMPLEMENTING DEVOPS

- Considerations for Implementation
- Leaderships for DevOps Transformation
- Business and Process Constraints
- DevOps Toolchains
- Telemetry
- Infrastructure as Code
- Design for Operation
- Operate for Design
- Revisiting Technology Waste

STRATEGY EXECUTION™

To learn more about our Lean and Agile curriculum, contact us at +1.888.374.8884 or info@strategyex.com.