

- Leverage DevOps best practices and discover how to avoid the common mistakes of DevOps implementations
- Understand the use of Chef for system installation and configuration
- Learn the setup and use of Vagrant workflows for creating, customizing, and configuring virtual environments
- Understand customization and use of automated deployment scripts to implement the environment

Agile development adoption is driving the need for increased value delivery efficiency. Software development, testing, and operations must evolve to meet iteration and release delivery goals while continuing to meet organizational quality objectives.

DevOps combines development, testing, and operations and includes continuous integration, automated testing, continuous delivery, and rapid deployment practices. Because DevOps practices require confidence in nearly all changes, automated testing is an essential ingredient that is integrated into the process and relied upon for enforcement of quality gates and to ensure overall delivery quality.

This course is the add-on lab companion to our [Foundations of DevOps—ICAgile Certification](#) [1] course and will teach you how to avoid the common mistakes of DevOps implementations and how to leverage DevOps best practices. Upon completion of the course, students will understand and have hands-on experience with critical DevOps techniques including:

- The use of Chef for system installation and configuration
- Setup and use of Vagrant workflows for creating, customizing, and configuring virtual environments
- Customization and use of automated deployment scripts to implement the environment
- Provisioning
- Deployment
- Configuration
- Test Data Population
- Automated Test execution
- Environment cleanup/disposal

## Hands-on Exercises

In this one-day hands-on workshop, students will stand up a local test environment including initial provisioning and configuration of a multi-tier test application, web server, DB server, and a selenium test client. Students will also utilize automation scripts to execute automated testing.

## Who Should Attend

This course is appropriate for experienced test professionals, operations engineers, developers, project managers, and business owners.

## Laptop Required

With their laptops, participants will connect remotely via Google Chrome VNC to a specialized virtual environment for the hands-on portion of this session, so a laptop is required and [Putty](#) [2] will need to be pre-loaded and configured before class begins. Complete instructions will be emailed to all registrants.

## Course Outline

---

### **Introduction to Vagrant**

Installing Vagrant

Building a VM

### **Introduction to Chef**

Installing Chef

Configuring a web server and a database

### **Automated Testing**

Testing the deployment

Adding test data

Automating tests

Deploying to multiple test configurations

Re-initializing test environments for multiple test cycles

### **Deploying and Testing in the Cloud**

Managed Boxes

Remote Public Clouds

Using Hosted Test Tools for Test Execution