

# Visual Studio 2013 ALM: Testing Tools



## WorkshopPLUS

### **Target Audience:**

*This WorkshopPLUS includes content targeted mainly toward testers and software developers who want to learn about scenarios and best practices for using Visual Studio 2013 Testing Tools. This WorkshopPLUS contains 300-level technical content; attendees should have a working knowledge of Visual Studio and Team Foundation Server.*

## Overview

The Visual Studio 2013 Application Lifecycle Management (ALM) Testing Tools WorkshopPLUS is a three-day instructor-led training course that provides participants with a wide range of technical information about Visual Studio 2013 Testing Tools. Specifically, it discusses how the Visual Studio integrated tool suite and Microsoft Test Manager (MTM) can help testers and developers create and manage robust test plans and suites throughout the Software Development Life Cycle. After completing the WorkshopPLUS, participants will have a deeper understanding of how to leverage Visual Studio testing tools to thoroughly test their applications and services. This WorkshopPLUS is meant to cover a variety of test types and tools available with Visual Studio 2013. An in-depth coverage for MTM and manual testing as well as automated testing using Visual Studio is included.

### Key Features and Benefits

During the WorkshopPLUS, participants are provided with content that covers authoring, executing, and managing tests, including:

- MTM and Test Case Management
- Web-based Test Case Management
- Manual, Unit, and Coded UI testing
- Web Performance and Load testing
- Test Impact Analysis and Code Coverage

# Syllabus

## Hardware

### Requirements:

*Hands-on labs require a premier, custom, Hyper-V, virtual hard disk (VHD). Minimum requirements also include:*

- *Disk space: At least 80 gigabytes (GB) of available disk space*
- *Memory: 8 GB of physical RAM*
- *Operating system: Windows Server 2012 R2, Windows Server 2012, Windows Server 2008 R2 with Service Pack 1 (SP1), Windows Server 2008, Windows 8 (with Second Level Address Translation (SLAT)-capable processors), or Windows 8.1.*

**Module 1: Visual Studio ALM Overview:** This module provides an overview of Visual Studio ALM. This module also introduces participants to the capabilities and concepts of Visual Studio Team Foundation Server 2013 and MTM.

**Module 2: Managing Testing Efforts:** This module introduces MTM. An overview of the testing hierarchy is provided and testing artifacts such as test plans, test suites, test cases, and test steps are discussed. This module covers how to create a test plan using MTM and the various options that the test plan provides.

**Module 3: Manual Testing:** In this module, participants take a closer look at creating and executing manual tests both from MTM and web browser. Test Runner is introduced and examined in detail. By the end of this module, participants will know how to work with test cases, run manual tests, and file bugs from Test Runner. Coverage is provided for all aspects of executing manual tests, including creating and running parameterized tests. Participants will also learn how to use data and diagnostics collectors to gather important information as part of a test run. This module will also examine the workflow between testers and developers to efficiently file, fix, and verify bugs.

**Module 4: Unit Testing:** In this module, unit testing fundamentals are established and Microsoft Fakes is covered. Visual Studio Unit Test tools are discussed in detail and an introduction to Test-Driven Development (TDD) is provided. Visual Studio Unit Test tools are designed to support developers and teams who wish to incorporate unit testing in their software development practices. Unit tests give developers and testers a quick way to find logic errors.

**Module 5 Coded UI Testing:** This module focuses on Coded UI tests. There is extensive coverage for creating and customizing Coded UI tests. Creating Coded UI tests using the Coded UI Test Builder and promoting manual tests to Coded UI are discussed. The anatomy of Coded UI testing is examined in detail.

**Module 6: Web Performance and Load Testing:** This module introduces Web Performance and Load testing. The module focuses on creating, executing, and working with Web Performance and Load tests using Visual Studio. There is also coverage for cloud-based load testing.

**Module 7: Introduction to Visual Studio Lab Management:** In this module, participants learn about Visual Studio Lab Management fundamentals, such as using Visual Studio Lab Management to set up and manage virtual machines and execute tests.