



Build and Release Management Using TFS 2015

Duration	2 days	Version	2015.2
Skill level	Intermediate		
Focus	DevOps best practices using the latest Microsoft technologies around build and release management		
Audience	Developers, TFS Administrators, Build masters		
Products and technologies	The following products and technologies will be covered in this course: <ul style="list-style-type: none">• Visual Studio Team Foundation Server 2015 or Visual Studio Team Services• Visual Studio 2015• Team Build 2015• Windows Azure• Release Management for Visual Studio 2015• Release Management		

Course Description

Team Foundation Server 2015 and Visual Studio Team Services offer a completely redeveloped build system and Microsoft is in the process of rolling out a new system for release management.

This 2-day course focuses on building and releasing .NET applications using these new systems. It focuses on the new scriptable, cross-platform build system introduced in TFS 2015 and how to use it. The course briefly looks at the current version of Release Management for Visual Studio 2015 but then deep dives into Release Management. Release Management is currently in preview in Visual Studio Team Services and in TFS 2015 Update 2.

If you are eager to learn how to implement DevOps practices designed to streamline your build and release processes using TFS or VSTS, this is the course for you.

The content in this course is a subset of our 3-day "DevOps Using Visual Studio 2015" course.

This course includes hands-on labs to reinforce practical skills and ensure you're ready to use the tools on your return to your workplace.

Team Foundation Server or Visual Studio Team Services

This course is applicable for teams using Visual Studio Team Services or an on-premises Team Foundation Server. There will be examples of both used in the course.

Course Objectives

At the completion of this course, attendees will be able to:

- Describe the current features in TFS or VSTS focused on build and release management
- Plan and configure a scalable build environment including pools and queues
- Configure appropriate security on pools and queues
- Author build definitions
- Configure Continuous Integration (CI) builds as well as scheduled builds

- Use existing build templates as well as create new build templates
- Create custom build workflow using build steps
- Automate the execution of tests as part of our build
- Understand the features of the current version of Release Management for Visual Studio
- Use Release Management to create and manage releases
- Use Release Management to create environments
- Manage configuration information in each environment
- Deploy software to both on-premises servers as well as to Azure
- Configure continuous release by triggering releases from builds
- Create approval workflows and track releases across environments

Audience

This course is designed for .NET developers, TFS administrators, and build masters. It is a hands-on look at various technologies rather than a high-level management overview.

Prerequisites

Attendees should be familiar with Visual Studio and the basic use of Team Foundation Server or Visual Studio Team Services.

Modules

Module 1: A Lap Around the Microsoft Visual Studio 2015 Family

- Overview of the Visual Studio 2015 family
- Overview of product features
- The need for centralized builds
- The importance of release management

Module 2: Configuring Your Build Environment

- Understanding the new 2015 build infrastructure
- Creating agent pools and queues
- Installing build agents
- Specifying capabilities on your build agents
- Configuring security
- Overview of non-Windows build agents
- Overview of hosted build infrastructure

Module 3: Authoring Your First Build Definition

- Creating a new build definition
- Understanding build templates
- Selecting the solution to build
- Running tests as part of your build
- Queuing a build

Module 4: A Closer Look at Builds

- Selecting our source repository (TFVC/Git/GitHub/Subversion)
- Running multiple concurrent builds
- Working with build variables
- Configuring Continuous Integration (CI) and scheduled builds
- Using gated check-ins
- Using demands to influence agent selection
- Build retention policies

Module 5: Customizing Your Build Process

- A lap around the available build tasks
- Using build tasks to deploy your application components
- Extending builds using scripts

Module 6: Other Build Enhancements and Features

- Viewing build status
- Controlling build outputs and understanding artifacts
- Packaging your .NET application
- Examining test results from a build

Module 7: Overview of Release Management

- What is release management
- Key concepts in release management
- The current state of release management in TFS/VSTS

Module 8: Release Management for Visual Studio 2015

- Release Management for Visual Studio 2015
- Creating environments and releases
- Configuring approval workflows
- Triggering and tracking releases

Module 9: Release Management

- Authoring a new release definition
- Linking your build definition to a release
- Determining what to deploy using artifacts
- Defining and using configuration variables
- Configuring continuous release
- Naming your release and using retention policies

Module 10: Configuring Environments

- Understanding environments
- Configuring your approval workflow
- Notifying approvers
- Selecting your deployment queue
- Defining custom variables for your environments
- Configuring the environment owner
- Understanding deployment conditions
- Cloning environments

Module 11: Defining a Release Workflow for On-Premises Servers

- Overview of release tasks
- Copying files and running scripts
- Releasing a web application to an IIS server
- Executing tests as part of our on-premises release
- Tracking our release

Module 12: Defining a Release Workflow for Azure

- Understanding Azure resources
- Understanding service endpoints
- Configuring endpoints for connecting to Azure
- Releasing an Azure web application
- Executing tests as part of our Azure release