

Build Automation in TFS 2010

Martin Woodward

Senior Software Engineer, MVP
Teamprise




Session Date: Thursday, September 17th, 2009
Time: 10:00AM PDT (1800UTC)


In this session, Team System MVP Martin Woodward takes us through the radically improved team build features in TFS 2010 Beta 1. You will learn all about the new private builds, gated check-ins and most importantly take a look at the new Windows Workflow based build system. Finally we will talk about protecting your investment in TFS2008 build automation and discuss what the TFS2010 build automation experience will be like for Visual Studio 2008 developers.

Martin Woodward



 martin@teamprise.com

 [@martinwoodward](https://twitter.com/martinwoodward)

 <http://www.woodwardweb.com>

 <http://www.radiotfs.com>



Twitter icon by mfilej (http://www.flickr.com/photos/mfilej/2397881577/in/pool-fluid_icons)

Agenda

- Overview of Builds in TFS 2010
- Demo
 - Creating a build definition
 - Customizing a build definition
- Protecting TFS 2008 Build Investment
- VS 2008 Build Experience

Build automation is not ...



Build automation helps you answer the tough questions

- Do our bits create a product?
- Are we on schedule?
- Is our product high quality?

Build automation makes it trivial to take the pulse of your team

Team Foundation Build 2010

- Core feature of TFS – do not pay extra
- Industrial strength build automation
- Provides the “F5” experience for your team

What's New in TFS 2010

- Windows Workflow 4.0 based
- Gated Check-ins
- Private Builds
- Build Controller architecture
- Properties for common customizations
- Integration with Symbol and Source server
- Advanced build delete options

WF 4.0

- Build across machines
- Control *entire* build process
- Visual Editor

Build Controller

- Build defs not linked to a build agent
- Can have pools of agents represented by a controller
- Can specify controllers by tags

Build Delete

- Deletes details of build (build report)
- Deletes files in drop location
- Deletes test results
- Deletes label from VC
- Deletes symbols from symbol server
- DOES NOT delete build from global list in WIT

Symbol server

- Stores the symbols, pdbs etc and how to get correct version of source control
- Allows you to take a build and attach debugger to it and get correct version of source for it

Demonstration

CREATING A BUILD DEFINITION

Create HelloWorld build def

General: Comment – use 3 lines (description, owner email, owner phone number)

Trigger: Trigger

Workspace: \$/AdventureWorks/main/dotnet/HelloWorld

Defaults: \\fs2010\drop\demo\hw

Process:

- Set Projects to Build
- Set Publish Symbols to \\fs2010\symbol
- Set Test Assembly Filespec to “*Tests.dll”
- Set configuration to Release|AnyCPU or it will default to a debug build.

Queue build.

Show new build report.

Perform check-in associated with work item.

Show build running, details included.

Make changes

Do a buddy build

Set build to be a gated check-in

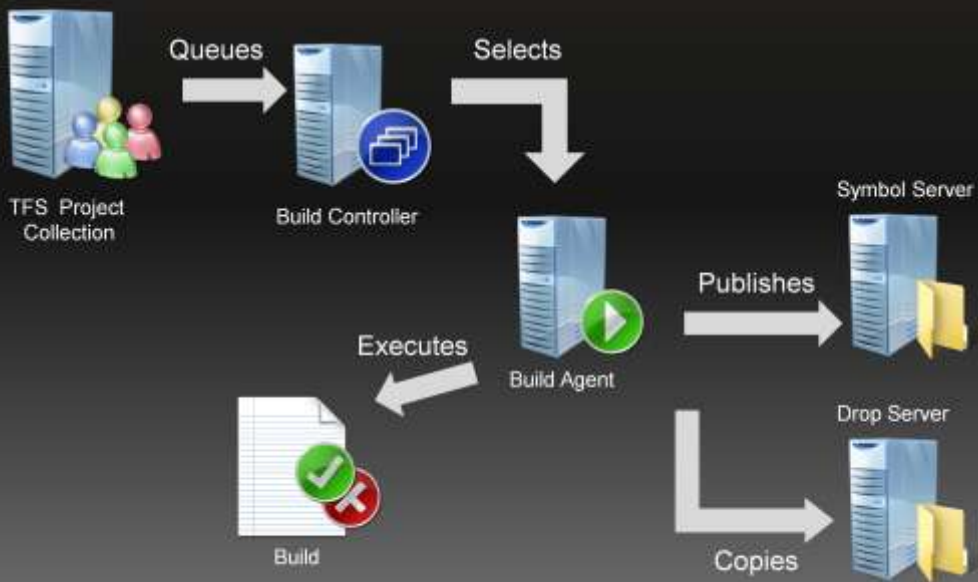
Make changes

Check-in

Team Foundation Build Key Features

- Build Management inside IDE
- Build Triggers (Manual, CI, Scheduled)
- Gated / Private Builds
- Integrated with VC + WIT
- Reports for status + quality metrics
- Warehouse support for historical trends
- Build Notifications
- Managed Object Model
- Distributed Build Servers

Team Build Architecture



Team Build Process



Customizing the Build

- Build Process Parameters
- Customize Workflow
- Extend Workflow

Demonstration

CUSTOMIZING THE BUILD DEFINITION

Change the version number to `$(BuildDefinitionName)_V1.0.0$(Rev:.r)`

Look at Tags feature for build agent

Create a new workflow

Drill into entire workflow, explaining all the process.

Add a “WriteBuildMessage” step to add a message to the log.

Re-run build.

See our message in the log.

Talk about writing custom workflow activities – will blog about that probably after Beta 2 because not if experience is going to change any before then.

Using MSBuild Based Builds

- UpgradeTemplate for old TFSBuild.proj style builds
- Default when upgrading from TFS2008
- Can be used for new builds if desired

VS 2008 Client Compatibility

Can

- Queue Build
- Trigger CI Builds
- Edit Build Qualities
- Set Keep Forever
- View Build Results
- Check-in to Gated Builds[‡]

Cannot

- Perform Private Builds
- Edit New Build Definition*
- Edit New Build Process*

•Unless using an upgrade template or one created using VS2008

If time permits, demonstrate experience and show upgrade template etc

Wrap Up

Q&A


Martin Woodward
martin@teamprise.com

Martin Woodward



 martin@teamprise.com

 [@martinwoodward](https://twitter.com/martinwoodward)

 <http://www.woodwardweb.com>

 <http://www.radiotfs.com>

