ASP.NET MVC 3 RTM Release Notes

[Overview 2](#_Toc282198352)

[Installation Notes 2](#_Toc282198353)

[Software Requirements 2](#_Toc282198354)

[Documentation 3](#_Toc282198355)

[Support 3](#_Toc282198356)

[Upgrading an ASP.NET MVC 2 Project to ASP.NET MVC 3 3](#_Toc282198357)

[Changes in ASP.NET MVC 3 RTM 5](#_Toc282198358)

[Change: Updated the version of jQuery UI to 1.8.7 5](#_Toc282198359)

[Change: Changed the default ModelMetadataProvider back to DataAnnotationsModelMetadataProvider 5](#_Toc282198360)

[Fixed: Pasting part of a Razor expression that contains whitespace results in it being reversed 5](#_Toc282198361)

[Fixed: Renaming a Razor file that is opened in the editor disables syntax colorization and IntelliSense 6](#_Toc282198362)

[Known Issues 6](#_Toc282198363)

[Breaking Changes 7](#_Toc282198364)

[Disclaimer 9](#_Toc282198365)

# Overview

This document describes the release of ASP.NET MVC 3 RTM for Visual Studio 2010. ASP.NET MVC is a framework for developing Web applications that uses the Model-View-Controller (MVC) pattern. The ASP.NET MVC 3 installer includes the following components:

* ASP.NET MVC 3 runtime components
* ASP.NET MVC 3 Visual Studio 2010 tools
* ASP.NET Web Pages run-time components
* ASP.NET Web Pages Visual Studio 2010 tools
* Microsoft Package Manager for .NET (NuGet)
* An update for Visual Studio 2010 that enables support for Razor syntax. (For details, see KnowledgeBase article 2483190.)

The full set of release notes for each pre-release version of ASP.NET MVC 3 can be found on the ASP.NET website at the following URL:

<http://www.asp.net/learn/whitepapers/mvc3-release-notes>

# Installation Notes

To install ASP.NET MVC 3 RTM using the Web Platform Installer (Web PI), visit the following page:

<http://www.microsoft.com/web/gallery/install.aspx?appid=MVC3>

Alternatively, you can download the installer for ASP.NET MVC 3 RTM for Visual Studio 2010 from the following page:

http://go.microsoft.com/fwlink/?LinkID=208140

ASP.NET MVC 3 can be installed and can run side-by-side with ASP.NET MVC 2.

# Software Requirements

The ASP.NET MVC 3 run-time components require the following software:

* .NET Framework version 4.

ASP.NET MVC 3 Visual Studio 2010 tools require the following software:

* Visual Studio 2010 or Visual Web Developer 2010 Express.

# Documentation

Documentation for ASP.NET MVC is available on the MSDN Web site at the following URL:

<http://go.microsoft.com/fwlink/?LinkId=205717>

Tutorials and other information about ASP.NET MVC are available on the MVC page of the ASP.NET Web site at the following URL:

<http://www.asp.net/mvc/>

# Support

This is a fully supported release. Information about getting technical support can be found at the [Microsoft Support website](http://support.microsoft.com/).

Also feel free to post questions about this release to the ASP.NET MVC forum, where members of the ASP.NET community are frequently able to provide informal support:

<http://forums.asp.net/1146.aspx>

# Upgrading an ASP.NET MVC 2 Project to ASP.NET MVC 3

ASP.NET MVC 3 can be installed side by side with ASP.NET MVC 2 on the same computer, which gives you flexibility in choosing when to upgrade an ASP.NET MVC 2 application to ASP.NET MVC 3.

To manually upgrade an existing ASP.NET MVC 2 application to version 3, do the following:

1. Create a new empty ASP.NET MVC 3 project on your computer. This project will contain some files that are required for the upgrade.
2. Copy the following files from the ASP.NET MVC 3 project into the corresponding location of your ASP.NET MVC 2 project:

* /Scripts/jquery.unobtrusive-ajax.js
* /Scripts/jquery.unobtrusive-ajax.min.js
* /Scripts/jquery.validate.unobtrusive.js
* /Scripts/jquery.validate.unobtrusive.min.js
* /Views/Web.config

1. If your ASP.NET MVC 2 project contains any areas, copy the /Views/Web.config file to the Views folder of each area.
2. In both Web.config files in the ASP.NET MVC 2 project, globally search and replace the ASP.NET MVC version. Find the following:

System.Web.Mvc, Version=2.0.0.0

Replace it with the following:

System.Web.Mvc, Version=3.0.0.0

1. In Solution Explorer, delete the reference to System.Web.Mvc (which points to the DLL from version 2), then add a reference to System.Web.Mvc (v3.0.0.0).
2. Add a reference to System.WebPages.dll and System.Web.Helpers.dll. These assemblies are located in the following folders:

* %ProgramFiles%\ Microsoft ASP.NET\ASP.NET MVC 3\Assemblies
* %ProgramFiles%\ Microsoft ASP.NET\ASP.NET Web Pages\v1.0\Assemblies

1. In Solution Explorer, right-click the project name and then select Unload Project. Then right-click the project name again and select Edit *ProjectName*.csproj.
2. Locate the ProjectTypeGuids element and replace {F85E285D-A4E0-4152-9332-AB1D724D3325} with {E53F8FEA-EAE0-44A6-8774-FFD645390401}.
3. Save the changes, right-click the project, and then select Reload Project.
4. In the application’s root Web.config file, add the following settings to the assemblies section.

<add assembly="System.Web.WebPages, Version=1.0.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" />

<add assembly="System.Web.Helpers, Version=1.0.0.0, Culture=neutral, PublicKeyToken=31BF3856AD364E35" />

1. If the project references any third-party libraries that are compiled using ASP.NET MVC 2, add the following highlighted bindingRedirect element to the Web.config file in the application root under the configuration section:

<runtime>

<assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">

<dependentAssembly>

<assemblyIdentity name="System.Web.Mvc"

publicKeyToken="31bf3856ad364e35"/>

<bindingRedirect oldVersion="1.0.0.0-2.0.0.0" newVersion="3.0.0.0"/>

</dependentAssembly>

</assemblyBinding>

</runtime>

# Changes in ASP.NET MVC 3 RTM

This section describes changes and bug fixes made in the ASP.NET MVC 3 RTM release since the RC2 release.

## Change: Updated the version of jQuery UI to 1.8.7

The ASP.NET MVC project templates for Visual Studio were updated to include the latest version of the jQuery UI library. The templates also include the minimal set of resource files required by jQuery UI, such as the associated CSS and image files.

## Change: Changed the default ModelMetadataProvider back to DataAnnotationsModelMetadataProvider

The RC2 release of ASP.NET MVC 3introduced a CachedDataAnnotationsMetadataProvider class that provided caching on top of the existing DataAnnotationsModelMetadataProvider class as a performance improvement. However, some bugs were reported with this implementation, so the change has been reverted and moved into the MVC Futures project, which is available on the CodePlex website at <http://aspnet.codeplex.com/>.

## Fixed: Pasting part of a Razor expression that contains whitespace results in it being reversed

In pre-release versions of ASP.NET MVC 3, when you paste a part of a Razor expression that contains whitespace into a Razor file, the resulting expression is reversed. For example, consider the following Razor code block:

@SomeMethod("first param", 100)  
@AnotherMethod()

If you select the text “first param” in the first method and paste it as an argument into the second method, the result is as follows:

@AnotherMethod(param""first)

The correct behavior is that the paste operation should result in the following:

@AnotherMethod("first param")

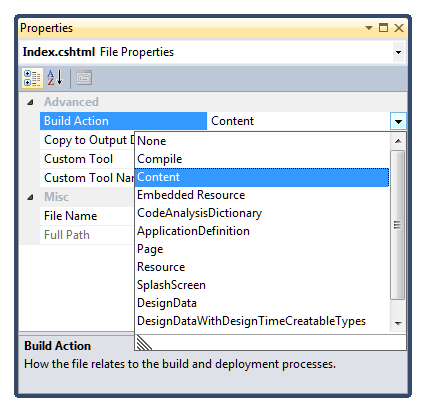
This issue has been fixed in the RTM release so that the expression is correctly preserved during the paste operation.

## Fixed: Renaming a Razor file that is opened in the editor disables syntax colorization and IntelliSense

Renaming a Razor file using Solution Explorer while the file is opened in the editor window causes syntax highlighting and IntelliSense to stop working for that file. This has been fixed so that highlighting and IntelliSense are maintained after a rename.

# Known Issues

* If you close Visual Studio 2010 SP1 Beta while the NuGet Package Manager Console is open, Visual Studio crashes and attempts to restart. This will be fixed in the RTM release of Visual Studio 2010 SP1.
* The ASP.NET MVC 3 installer is only able to install an initial version of the NuGet package manager. After you have installed the initial version, NuGet can be installed and updated using Visual Studio Extension Manager. If you already have NuGet installed, go to the Visual Studio Extension Gallery to update to the latest version of NuGet.
* Creating a new ASP.NET MVC 3 project within a solution folder causes a NullReferenceException error. The workaround is to create the ASP.NET MVC 3 project in the root of the solution and then move it into the solution folder.
* The installer might take much longer than previous versions of ASP.NET MVC to complete. This is because it updates components of Visual Studio 2010.
* IntelliSense for Razor syntax does not work when ReSharper is installed. If you have ReSharper installed and want to take advantage of the Razor IntelliSense support in ASP.NET MVC 3, see the entry [Razor Intellisense and ReSharper](http://blogs.jetbrains.com/dotnet/2010/11/razor-intellisense-and-resharper/) on Hadi Hariri's blog, which discusses ways to use them together today.
* CSHTML and VBHTML views created with the Beta version of ASP.NET MVC 3 do not have their build action set correctly, with the result that these view types are omitted when the project is published. The Build Action value for these files should be set to "Content". ASP.NET MVC 3 RTM fixes this issue for new files, but doesn’t correct the setting for existing files for a project created with prerelease versions.



* During installation, the EULA acceptance dialog box displays the license terms in a window that is smaller than intended.
* When you are editing a Razor view (.cshtml file), the Go To Controller menu item in Visual Studio will not be available, and there are no code snippets.
* If you install ASP.NET MVC 3 for Visual Web Developer Express on a computer where Visual Studio is not installed, and then later install Visual Studio, you must reinstall ASP.NET MVC 3. Visual Studio and Visual Web Developer Express share components that are upgraded by the ASP.NET MVC 3 installer. The same issue applies if you install ASP.NET MVC 3 for Visual Studio on a computer that does not have Visual Web Developer Express and then later install Visual Web Developer Express.

# Breaking Changes

* In previous versions of ASP.NET MVC, action filters are create per request except in a few cases. This behavior was never a guaranteed behavior but merely an implementation detail and the contract for filters was to consider them stateless. In ASP.NET MVC 3, filters are cached more aggressively. Therefore, any custom action filters which improperly store instance state might be broken.
* The order of execution for exception filters has changed for exception filters that have the same Order value. In ASP.NET MVC 2 and earlier, exception filters on the controller that have the same Order value as those on an action method are executed before the exception filters on the action method. This would typically be the case when exception filters are applied without a specified Order value. In ASP.NET MVC 3, this order has been reversed so that the most specific exception handler executes first. As in earlier versions, if the Order property is explicitly specified, the filters are run in the specified order.
* A new property named FileExtensions was added to the VirtualPathProviderViewEngine base class. When ASP.NET looks up a view by path (not by name), only views with a file extension contained in the list specified by this new property are considered. This is a breaking change in applications where a custom build provider is registered in order to enable a custom file extension for Web Form views and where the provider references those views by using a full path rather than a name. The workaround is to modify the value of the FileExtensions property to include the custom file extension.
* Custom controller factory implementations that directly implement the IControllerFactory interface must provide an implementation of the new GetControllerSessionBehavior method that was added to the interface in this release. In general, it is recommended that you do not implement this interface directly and instead derive your class from DefaultControllerFactory.

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