

*Confidential Prerelease Documentation - Subject to Nondisclosure Agreement*

# **MATLAB<sup>®</sup> Builder<sup>™</sup> NE Release Notes**

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*MATLAB® Builder™ NE Release Notes*

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## Summary by Version

This table provides quick access to what's new in each version. For clarification, see “Using Release Notes” on page 1.

<b>Version (Release)</b>	<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
<b>Latest Version V3.0 (R2008b)</b>	Yes Details	Yes Summary	Bug Reports Includes fixes	Printable Release Notes: PDF  Current product documentation
V2.2.2 (R2008a)	Yes Details	No	Bug Reports Includes fixes	No
V2.2.1 (R2007b)	Yes Details	Yes Summary	Bug Reports Includes fixes	No
V2.2 (R2007a)	Yes Details	No	Bug Reports Includes fixes	No
V2.1 (R2006b)	Yes Details	Yes Summary	Bug Reports Includes fixes	No
V2.0 (R2006a)	Yes Details	No	No	No

### Using Release Notes

Use release notes when upgrading to a newer version to learn about:

- New features
- Changes
- Potential impact on your existing files and practices

Review the release notes for other MathWorks™ products required for this product (for example, MATLAB® or Simulink®) for enhancements, bugs, and compatibility considerations that also might impact you.

If you are upgrading from a software version other than the most recent one, review the release notes for all interim versions, not just for the version you are installing. For example, when upgrading from V1.0 to V1.2, review the release notes for V1.1 and V1.2.

## **What's in the Release Notes**

### **New Features and Changes**

- New functionality
- Changes to existing functionality

### **Version Compatibility Considerations**

When a new feature or change introduces a reported incompatibility between versions, the **Compatibility Considerations** subsection explains the impact.

Compatibility issues reported after the product is released appear under Bug Reports at the MathWorks Web site. Bug fixes can sometimes result in incompatibilities, so you should also review the fixed bugs in Bug Reports for any compatibility impact.

### **Fixed Bugs and Known Problems**

The MathWorks offers a user-searchable Bug Reports database so you can view Bug Reports. The development team updates this database at release time and as more information becomes available. This includes provisions for any known workarounds or file replacements. Information is available for bugs existing in or fixed in Release 14SP2 or later. Information is not available for all bugs in earlier releases.

Access Bug Reports using your MathWorks Account.

## Version 3.0 (R2008b) MATLAB® Builder™ NE Software

This table summarizes what's new in Version 3.0 (R2008b):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
Yes Details below	Yes Summary	Bug Reports Includes fixes	Printable Release Notes: PDF  Current product documentation

New features and changes introduced in this version are:

- “.NET Components Now Available for Remoting to Distributed .NET Frameworks” on page 4
- “Web Deployment of MATLAB Figures Available” on page 4
- “CTF Archives Now Embedded In a Single Binary Executable for Convenient Deployment of .NET and COM Components” on page 4
- “Applications Created with Parallel Computing Toolbox Now Able to Be Compiled” on page 4
- “Support Dropped for .NET Framework Version 1.1 in R2008b” on page 4
- “Warning Results When Running Figure-Generating Applications or Printing With -nojvm Flag” on page 5
- “MWException Replaced by .NET Exception Class” on page 5
- “Same Name Class Objects Shared Between MCR Instances Will Not Work Correctly ” on page 5

## **.NET Components Now Available for Remoting to Distributed .NET Frameworks**

.NET components can now be created that are ready for interfacing with distributed .NET Frameworks. For more information, see in the MATLAB® Builder™ NE User's Guide.

## **Web Deployment of MATLAB Figures Available**

Manipulation of MATLAB figures over the Web is now available through implementation of the Web Figures feature. For more information, see “Deploying a MATLAB Figure Over the Web Using Web Figures” in the MATLAB Builder NE User's Guide..

## **CTF Archives Now Embedded In a Single Binary Executable for Convenient Deployment of .NET and COM Components**

As of R2008b, CTF data is now automatically embedded directly in .NET and COM components by default for convenient deployment of applications. See “About Embedded CTF Archives” and “Overriding Default CTF Archive Embedding for Components Using the MCR Component Cache” in the MATLAB Builder NE User's Guide..

## **Applications Created with Parallel Computing Toolbox Now Able to Be Compiled**

MATLAB applications that make use of the Parallel Computing Toolbox (PCT) are now able to be compiled. Resulting executables and components can scale to multicore and multiprocessing environments using MATLAB Distributed Computing Server. See “Improving Data Access Using the MCR User Data Interface and MATLAB Builder NE” in the MATLAB Builder NE User's Guide..

## **Support Dropped for .NET Framework Version 1.1 in R2008b**

MATLAB® Builder™ NE no longer supports Microsoft .NET Framework 1.1.



## **Warning Results When Running Figure-Generating Applications or Printing With -nojvm Flag**

As of R2008b, running a figure-generating application, or printing, with the `-nojvm` option results in a warning message. In some cases, figure rendering may succeed, and in other cases it may not. In a future release, the `-nojvm` option will no longer support figure-generating or printing and will be removed.

## **MWException Replaced by .NET Exception Class**

In order to better support the .NET Remoting feature (see “.NET Components Now Available for Remoting to Distributed .NET Frameworks” on page 4) in this release, the `MWException` thrown by an error in the generated component or an in the encapsulated M-code is being replaced by the `.NET Exception` class. You should modify your code accordingly to test for a standard `.NET Exception` rather than `MWException`.

## **Same Name Class Objects Shared Between MCR Instances Will Not Work Correctly**

If the same class name is used in two or more separate MCR instances within the same process, the object will not work correctly. This bug impacts all component based targets: C/C++ shared libraries, COM/.Net targets, and Java targets. This bug does not affect standalone executables. This is due to a bug in the MATLAB Object System and is being addressed.

## Version 2.2.2 (R2008a) MATLAB® Builder™ NE Software

This table summarizes what's new in Version 2.2.2 (R2008a):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
Yes Details below	No	Bug Reports Includes fixes	Printable Release Notes: PDF  Current product documentation

New features and changes introduced in this version are:

- “Improved Error Diagnostics Available” on page 6
- “Support Being Dropped for .NET Framework Version 1.1 in R2008b” on page 6
- “MATLAB Application Deployment Web Example Guide Available” on page 7

### Improved Error Diagnostics Available

You can receive enhanced error reporting information by using `mstack` traces. See “Enhanced Error Diagnostics Using `mstack` Trace” in the MATLAB Builder NE User’s Guide documentation for details.

### Support Being Dropped for .NET Framework Version 1.1 in R2008b

MATLAB® Builder™ NE will no longer support Microsoft® .NET Framework 1.1 in R2008b. Please plan accordingly.

## **MATLAB Application Deployment Web Example Guide Available**

A new publication, the *MATLAB Application Deployment Web Example Guide*, is now available from the MATLAB® Compiler™, MATLAB Builder NE, and MATLAB Builder JA roadmap pages.

The guide provides full examples of common tasks performed by the MATLAB programmer, IT specialist, and others who play significant roles in deploying MATLAB applications to the Web.

## Version 2.2.1 (R2007b) MATLAB® Builder™ NE Software

This table summarizes what's new in Version 2.2.1 (R2007b):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
Yes Details below	Yes Summary	Bug Reports Includes fixes	No

### Functions Being Removed

The following functions were removed in R2007b:

<b>Function Being Removed</b>	<b>What Happens When You Run the Function?</b>	<b>Use This Instead</b>	<b>Compatibility Considerations</b>
buildmcr	Errors	MCRInstaller.exe (Windows), MCRInstaller.bin (UNIX), MCRInstaller.dmg (Mac)	See the MATLAB Compiler User's Guide documentation.
comtool	Undefined Function Error	deploytool	Migrate to deploytool.
dotnettool	Undefined Function Error	deploytool	Migrate to deploytool.

<b>Function Being Removed</b>	<b>What Happens When You Run the Function?</b>	<b>Use This Instead</b>	<b>Compatibility Considerations</b>
mxltool	Undefined Function Error	deploytool	Migrate to deploytool.
opennb1	Undefined Function Error	deploytool	Migrate to deploytool.
openmx1	Undefined Function Error	deploytool	Migrate to deploytool.
opencb1	Undefined Function Error	deploytool	Migrate to deploytool.

## Version 2.2 (R2007a) MATLAB® Builder™ NE Software

This table summarizes what's new in Version 2.2 (R2007a):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
Yes Details below	No	Bug Reports Includes fixes	No

New features and changes introduced in this version are:

- “Support Added for Win64” on page 10
- “Issues with the Microsoft Windows Vista Operating System” on page 10

### Support Added for Win64

Support has been added for the Windows® 64-bit operating system.

### Issues with the Microsoft Windows Vista Operating System

The following are known issues with Windows Vista™ as of this release:

- With User Account Control (UAC) enabled, a standard user is not able to write to a directory in the `c:\Program Files` directory. See the *MATLAB Release Notes* for more details regarding this issue.
- With User Account Control (UAC) enabled, a standard user is not able to register DLLs. When `mbuild -setup` attempts to register `mwcomutil.dll`, the following errors are displayed:

```
Trying to update options file:
  C:\Users\qe\AppData\Roaming\MathWorks\MATLAB\R2007a\compopts.bat
From template:
  C:\PROGRA~1\MATLAB\R2007a\bin\win64\mbuildopts\msvc80comp.bat

Done . . .
```

```
--> "C:\PROGRA-1\MATLAB\R2007a\bin\win64\mwregsvr C:\PROGRA-1\MATLAB\R2007a\bin\
win64\mwcomutil.dll"
```

```
Error: DllRegisterServer in C:\PROGRA-1\MATLAB\R2007a\bin\win64\mwcomutil.dll
failed
Undefined subroutine &mexsetup::expire called at C:\PROGRA-1\MATLAB\R2007a\bin\
mexsetup.pm line 839.
```

This is also the case when MATLAB Builder for Excel invokes `mbuild` in an attempt to register DLLs after a compilation completes.

- The following message is displayed when MATLAB Builder for .NET, attempts to install a DLL into the Global Assembly Cache from a network location:

```
Unhandled Exception: System.IO.FileLoadException: Could not load file or assembly
'GACInstaller, Version=1.0.2568.30711, Culture=neutral, PublicKeyToken=null' or
one of its dependencies. Failed to grant permission to execute. (Exception from
HRESULT: 0x80131418)
File name: 'GACInstaller, Version=1.0.2568.30711, Culture=neutral,
PublicKeyToken=null' --> System.Security.Policy.PolicyException: Execution
permission cannot be acquired.
    at System.Security.SecurityManager.ResolvePolicy(Evidence evidence,
PermissionSet reqdPset, PermissionSet optPset, PermissionSet denyPset,
PermissionSet& denied, Boolean checkExecutionPermission)
    at System.Security.SecurityManager.ResolvePolicy(Evidence evidence,
PermissionSet reqdPset, PermissionSet optPset, PermissionSet denyPset,
PermissionSet& denied, Int32& securitySpecialFlags, Boolean
checkExecutionPermission)
```

- Printing from a compiled application is not currently available with Microsoft Windows Vista. The following message is displayed if you attempt to print on systems with the Microsoft Windows Vista 32-bit operating system installed:

```
PrintImage Error
StartPage failed with error 6: The handle is invalid.
```

Printing with Vista 64-bit installed results in an error message that lists a manifest as missing. Please check <http://www.mathworks.com/support/> for updates on these issues.



## Version 2.1 (R2006b) MATLAB® Builder™ NE Software

This table summarizes what's new in Version 2.1 (R2006b):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
Yes Details below	Yes Summary	Bug Reports Includes fixes See also “Known Issues” on page 15.	No

New features and changes introduced in this version are:

- “New User Interface” on page 13
- “Support for Shared Assemblies” on page 14
- “Support for Nested Namespaces” on page 14
- “Support for .NET Framework Version” on page 14
- “Additional Support for Microsoft Visual Studio .NET Users” on page 15
- “Known Issues” on page 15

### **New User Interface**

This release of MATLAB Builder for .NET provides a new graphical user interface for creating and building projects. Issue the `deploytool` command in MATLAB to use the new GUI.

### **Compatibility Considerations**

Projects built with the previous user interface cannot be used with the new interface. For the current release, you can still issue the `dotnettool` command to access projects from a previous release. The next release of MATLAB Builder for .NET will no longer support `dotnettool`, or projects from the previous user interface.

## Support for Shared Assemblies

When you create a .NET component using the `mcc` command or the Deployment Tool, you can tell builder to create a shared assembly. Click **More Settings** in the Deployment Tool dialog box, and select **.NET Component** in the navigation pane.

## Support for Nested Namespaces

MATLAB Builder for .NET now supports nested namespaces, which you can use to create a hierarchical naming structure for types.

## Support for .NET Framework Version

You can now specify which version of the .NET Framework you want to use when compiling a component using the `mcc` command of the Deployment Tool. You can specify any of the following three values.

Version Value	Meaning
0.0	Use the latest supported version of the framework that is available on the system.
1.1	Use Version 1.1
2.0	Use Version 2.0

## Compatibility Considerations

In previous releases, you could specify a version number when creating a .NET component, but the value was not used. In this release, the version numbers specify which version of the .NET Framework to use. Note also that the interpretation of version number with MATLAB Builder for .NET is different from COM Builder. In COM Builder, the version number specifies the version of the component being created.

## **Additional Support for Microsoft Visual Studio .NET Users**

### **MWArray.dll Added to Reference Tab**

MATLAB Builder for .NET now adds the `MWArray.dll` containing the data conversion classes to the list of .NET components accessible from the **Add Reference** tab in Microsoft Visual Studio .NET.

### **Sample Applications on Visual Studio .NET 2005**

The set of sample applications in `matlabroot\toolbox\dotnetbuilder\Examples` now includes applications for Visual Studio .NET 2005, as well as for Visual Studio .NET 2003.

### **Known Issues**

The following issue is known and a patch to fix the problem is available at the linked bug report.

### **Data Returned by ToArray Referencing Sparse Format May Be Corrupt**

The data returned by calling `ToArray` on a `MWNumericArray` or `MWLogicalArray` object that references a MATLAB array stored in sparse format may be incorrect or corrupted. More information and a patch that corrects this issue may be found at the Customer Bug Reports area of the MathWorks Web site: <http://www.mathworks.com/support/bugreports/index.html?release=R2006b>. At the Bug Reports page, select **R2006b** in the Release list, and select **MATLAB Builder for .NET** in the Product list.

This bug does not affect normal (non-sparse) arrays, nor does it affect other methods of retrieving data from a sparse array, such as `get`, `getDouble`, and `getData`.

## Version 2.0 (R2006a) MATLAB® Builder™ NE Software

This table summarizes what's new in Version 2.0 (R2006a):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>	<b>Related Documentation at Web Site</b>
Yes Details below	No	No	No

MATLAB Builder for .NET extends MATLAB Compiler with tools for automatically generating independent .NET assemblies or Common Object Model (COM) objects from your MATLAB algorithms.

These tools allow you to do the following:

- Convert your MATLAB algorithms into .NET or COM components via a graphics user interface
- Create .NET assemblies that can be called from C#, VB.NET, or any other CLS-compliant technology
- Create COM objects that can be called from Visual Basic, ASP, Microsoft Excel, or any other COM-compliant technology
- Support conversion between native .NET and COM data types and the MATLAB array data types, using data conversion classes
- Enable unlimited free desktop and Web deployment of independent components

## Compatibility Summary for MATLAB® Builder™ NE Software

This table summarizes new features and changes that might cause incompatibilities when you upgrade from an earlier version, or when you use files on multiple versions. Details are provided in the description of the new feature or change.

<b>Version (Release)</b>	<b>New Features and Changes with Version Compatibility Impact</b>
<b>Latest Version V3.0 (R2008b)</b>	See “Warning Results When Running Figure-Generating Applications or Printing With -nojvm Flag” on page 5.
V2.2.2 (R2008a)	None
V2.2.1 (R2007b)	See “Functions Being Removed” on page 8.
V2.2 (R2007a)	None
V2.1 (R2006b)	See the <b>Compatibility Considerations</b> subheading for each of these new features or changes: <ul style="list-style-type: none"> <li>• “New User Interface” on page 13</li> <li>• “Support for .NET Framework Version” on page 14</li> </ul>
V2.0 (R2006a)	None