

# **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 2.

<b>Version (Release)</b>	<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>
<b>Latest Version V4.1.1 (R2012a)</b>	Yes Details	Yes Summary	Bug Reports Includes fixes
V4.1 (R2011b)	Yes Details	None	Bug Reports Includes fixes
V4.0 (R2011a)	Yes Details	None	Bug Reports Includes fixes
V3.2.1 (R2010bSP1)	No	No	Bug Reports Includes fixes
V3.2 (R2010b)	Yes Details	Yes Summary	Bug Reports Includes fixes
V3.1 (R2010a)	Yes Details	No	Bug Reports Includes fixes
V3.0.2 (R2009b)	Yes Details	Yes Summary	Bug Reports Includes fixes
V3.0.1 (R2009a)	Yes Details	No	Bug Reports Includes fixes
V3.0 (R2008b)	Yes Details	Yes Summary	Bug Reports Includes fixes
V2.2.2 (R2008a)	Yes Details	No	Bug Reports Includes fixes
V2.2.1 (R2007b)	Yes Details	Yes Summary	Bug Reports Includes fixes
V2.2 (R2007a)	Yes Details	No	Bug Reports Includes fixes

<b>Version (Release)</b>	<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>
V2.1 (R2006b)	Yes Details	Yes Summary	Bug Reports Includes fixes
V2.0 (R2006a)	Yes Details	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®). Determine if enhancements, bugs, or compatibility considerations in other products impact you.

If you are upgrading from a software version other than the most recent one, review the current release notes and all interim versions. For example, when you upgrade from V1.0 to V1.2, review the release notes for V1.1 and V1.2.

## What Is 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 release appear under Bug Reports at the MathWorks Web site. Bug fixes can sometimes result in incompatibilities, so review the fixed bugs in Bug Reports for any compatibility impact.

## **Fixed Bugs and Known Problems**

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. Bug Reports include 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.

## **Documentation on the MathWorks Web Site**

Related documentation is available on [mathworks.com](http://mathworks.com) for the latest release and for previous releases:

- Latest product documentation
- Archived documentation

## Version 4.1.1 (R2012a) MATLAB Builder NE Software

This table summarizes what's new in Version 4.1.1 (R2012a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Bug Reports Includes fixes

New features and changes introduced in this version are:

### **MATLAB Compiler Runtime (MCR) Now Available for Web Download**

The MATLAB Compiler Runtime (MCR) is now available for downloading from the Web to simplify the distribution of your applications or components created with the MATLAB® Compiler.

Direct your end users to the MATLAB Compiler™ product page to download the MCR, as opposed to redistributing or packaging it with your applications or components.

### **Changes in MCR User Data Interface Arguments for Compiling Parallel Computing Toolbox Applications**

Parallel Computing Toolbox™ configurations are now referred to as *parallel profiles*, as of R2012a.

See “Profiles in Compiled Applications” in the *Parallel Computing Toolbox Release Notes* for complete information.



## Compatibility Considerations

The older MCR User Data Interface argument `ParallelConfigurationFile` and MAT files will still be supported until Parallel Computing Toolbox documentation states otherwise, but note that if you use the `ParallelConfigurationFile` argument, you must supply a configuration `.mat` file, rather than a profile `.settings` file. If the `ParallelProfile` argument is used, a configuration `.mat` file or a profile `.settings` file can be used.

## Support Updates for Microsoft Visual Studio Versions

The following changes to Microsoft® Visual Studio® support apply for R2012a and R2012b.

Microsoft Visual Studio Version	What Happens When You Attempt to Use This Version in R2012a	What Happens When You Attempt to Use This Version in R2012b
Microsoft Visual Studio 2010 Express, for 32-bit or 64-bit architectures	Not Available	Not Available
Microsoft Visual C++® 2008 for 32-bit or 64-bit architectures	Warns	Not Available

## Supported Microsoft .NET Framework Versions

Information relating to supported versions of Microsoft .NET Framework will no longer be found in the MATLAB Builder™ NE User's Guide due to their frequency of change.

MATLAB Builder NE supports the following versions of Microsoft .NET Framework.

- 2.0
- 3.0
- 3.5
- 4.0 (Managed Extensibility Framework (MEF) Plug-Ins feature only)

## Version 4.1 (R2011b) MATLAB Builder NE Software

This table summarizes what's new in Version 4.1 (R2011b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	None	Bug Reports Includes fixes

New features and changes introduced in this version are:

### Support for Managed Extensibility Framework (MEF)

This release introduces support for Managed Extensibility Framework (MEF). Using MEF, available through a Type-Safe Interface, you minimize costly application recoding by extending your software design through flexible metadata. MEF offers plug-in implementation that can be used with little user modification for Microsoft .NET Framework 4.0.

See “Managed Extensibility Framework (MEF) Plug-Ins” for more information.

### Faster Installation of MATLAB Compiler Runtime (MCR) with Improved MCR Installer

The Application Deployment products now feature faster installation of the MATLAB Compiler Runtime (MCR) through improved MCR Installer technology. In addition to improved performance, the new installer provides a common interface for all platforms.

## **Support for Graphics Processing Unit (GPU) in Parallel Computing Toolbox Applications**

MATLAB Compiler generated executables and components now benefit from better performance when used with Parallel Computing Toolbox applications. The improvement is due to support of the Graphics Processing Unit (GPU) feature.

For more information, see “GPU Computing” in the *Parallel Computing Toolbox User’s Guide*, as well as the Parallel Computing Toolbox examples in the deployment user’s guides for additional information about compiling your deployable application with GPU.

## **Autodetection of Log-in Privileges When Registering COM Components**

MATLAB Builder NE now detects user privileges when registering your COM component, simplifying the process in many cases.

See “Add-in and COM Component Registration” in the User’s Guide for details.

## **COM Support for MCR Options -nojvm and -logfile**

The MCR options -nojvm (which can substantially improve performance of deployed applications) and -logfile (which allows specification of a user-chosen logfile name) are now available for COM components.

See MCR Options for more information.

## Version 4.0 (R2011a) MATLAB Builder NE Software

This table summarizes what's new in Version 4.0 (R2011a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	None	Bug Reports Includes fixes

New features and changes introduced in this version are:

### Local Worker Support for Parallel Computing Toolbox Applications

MATLAB Compiler and the builders now support local workers in Parallel Computing Toolbox applications.

For information about this feature, see “Use a Local Cluster” for general information on Local Workers. Also, see the *Parallel Computing Toolbox User's Guide* for information about working with compilable PCT applications.

### Type-Safe Automatic Conversions to and from Native .NET, COM and MATLAB Data Types

It is now possible to avoid manual data conversion to and from `MWArray` data types by implementing a type-safe API that allows you to work exclusively with native .NET types.

For detailed examples and information about creating and implementing a type-safe interface, see “Type-Safe Interfaces, WCF, and MEF” in the *MATLAB Builder NE User's Guide*.

In addition, support for this feature has been added under the Windows Communication Foundation programming model. See “Windows Communication Foundation (WCF) with Web or Enterprise Service-Oriented Architecture (SOA)” on page 9 for details.

## **Windows Communication Foundation (WCF) with Web or Enterprise Service-Oriented Architecture (SOA)**

Support for the Windows Communication Foundation programming model has been added for the type-safe interfaces feature.

Using WCF, available for Microsoft .NET Framework 3.5 and higher, allows you to achieve a greater degree of protocol portability and flexibility when developing Web services—beyond what is supported by SOAP.

For details about implementing a type-safe interface using WCF, see “Windows® Communications Foundation (WCF)™-Based Components”.

## **Passing of .NET Objects Directly to and from a Compiled MATLAB Function**

You can now pass .NET objects, by reference, to compiled MATLAB functions with assurance that the objects are fully accessible by the MATLAB .NET interface.

See “Object Passing by Reference” for complete information about the new class (`MWObjectArray`) that enables this functionality.

## **Administrative Rights No Longer Needed to Deploy COM Components**

When you deploy a COM component, using the functionality originally supported by MATLAB COM Builder, you have the option of specifying that the component be registered to the current user of the computer, rather than administrator (the previous default). See Add-In and COM Component Registration in the MATLAB COM Builder part of the *MATLAB Builder NE User’s Guide* for details.

## **Examples Now Compatible with Microsoft Visual Studio 2008**

The examples in `install_root\toolbox\dotnetbuilder\Examples` now feature code compliant for building with Microsoft Visual Studio 2008.

## Version 3.2.1 (R2010bSP1) MATLAB Builder NE Software

This table summarizes what's new in Version 3.2.1 (R2010bSP1):

<b>New Features and Changes</b>	<b>Version Compatibility Considerations</b>	<b>Fixed Bugs and Known Problems</b>
No	None	Bug Reports Includes fixes

## Version 3.2 (R2010b) MATLAB Builder NE Software

This table summarizes what's new in Version 3.2 (R2010b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Bug Reports Includes fixes

New features and changes introduced in this version are:

### Include the MCR Installer from a Link on Your Local Network

This feature lets you add a link to an MCR Installer residing on a local area network. Adding this link allows you to invoke the installer over the network, as opposed to copying the installer physically into each deployable package.

See “Packaging (Optional)” in the *MATLAB Compiler User's Guide*, or in your respective Builder product User's Guide, for more details.

### Support for Microsoft Visual Studio 2010 Added

This release adds support for Microsoft® Visual Studio® software on both 32-bit and 64-bit systems. See the “Installation and Configuration” chapter in the *MATLAB® Compiler™ User's Guide* for more information.



## **Special Instructions for Compiling C# or VB.NET Code Using a 32-Bit Assembly on Windows 64 Systems**

Use of the Any CPU generic is not recommended when running a 32-bit .NET assembly on a Windows 64 system because of MEX-file compatibility considerations.

### **Compatibility Considerations**

When you compile C# or VB.Net code on Windows 64, using a 32-bit MATLAB Builder NE assembly, change the platform target. Use x86 instead of Any CPU in the **Build** properties of Microsoft Visual Studio.

Alternatively, invoke the C# or Microsoft Visual Basic® compiler with `/platform:x86`.

## Version 3.1 (R2010a) MATLAB Builder NE Software

This table summarizes what's new in Version 3.1 (R2010a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports Includes fixes

New features and changes introduced in this version are:

### Native Data Types Available for Cell Arrays and Data Structures

MATLAB Programmers now have the option of using native .NET data types for cell array and data structure handling. These native types provide data in a more useful, easy-to-process output. See “Using the Native .NET API: Cell and Struct Example” for more information about using the feature with MATLAB Builder NE.

### Deployment Tool Now Available from Command Line

You can now invoke the Deployment Tool GUI from the command line. See “Using the Deployment Tool GUI from the Command Line” for more information.

### New Video Demo Available

Watch a video about deploying applications using MATLAB Builder NE.

### Support for .NET Framework Versions 3.0 and 3.5

In addition to supporting Microsoft .NET Framework 2.0, MATLAB Builder NE now also supports versions 3.0 and 3.5.

## Version 3.0.2 (R2009b) MATLAB Builder NE Software

This table summarizes what's new in Version 3.0.2 (R2009b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Bug Reports Includes fixes

New features and changes introduced in this version are:

- “Redesigned Deployment Tool GUI” on page 15
- “Memory Management Reliability, Performance Improved for Hosted Applications” on page 15
- “Alternate Graphic Renderers Now Available” on page 16
- “Enhanced Auto-Generated Documentation” on page 16
- “New Format for Deployment Tool Projects” on page 16

### Redesigned Deployment Tool GUI

The new Deployment Tool (deploytool) interface features intuitive task-based navigation, a cancellable progress dialog, fast loading of previously-created projects, and ability to add supporting files as folders. The GUI also features new context sensitive help.

### Memory Management Reliability, Performance Improved for Hosted Applications

Several enhancements have increased the reliability and performance of memory management in hosted applications such as ASP.NET and Microsoft Windows services. As a result, previous manual methods of memory management have been deprecated in this release.

## **Alternate Graphic Renderers Now Available**

Graphic renderers Z-Buffer and OpenGL are now available for invocation. See “Supported Renderers for WebFigures” for more information.

## **Enhanced Auto-Generated Documentation**

Compiled Components now feature expanded MWArray API documentation. This documentation is of particular interest to the .NET developer who is integrating components produced by MATLAB Builder NE into enterprise Windows environments. See “Enhanced XML Documentation Files” for more information.

## **New Format for Deployment Tool Projects**

If you have projects that were created with the Deployment Tool prior to R2009b, those projects will continue to work. However, projects created or changed in R2009b cannot be opened in previous versions of Deployment Tool (deploytool).

## Version 3.0.1 (R2009a) MATLAB Builder NE Software

This table summarizes what's new in Version 3.0.1 (R2009a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports Includes fixes

New features and changes introduced in this version are:

- “Reduced MCR Size Saves on Transfer Time” on page 17
- “Customized readme.txt Produced with Each Compilation” on page 17
- “Specify Run-Time Options to the MATLAB Compiler Runtime (MCR)” on page 17

### Reduced MCR Size Saves on Transfer Time

MCR copying and transfer time has been improved by 50% following a reduction in the file's contents. The change will not reduce processor time or memory consumption since the deleted files were not loaded into RAM.

### Customized readme.txt Produced with Each Compilation

An enhanced version of the `readme.txt` file, which is generated with each successful compilation, is now customized to include specific instructions about MATLAB Builder NE deployment requirements.

### Specify Run-Time Options to the MATLAB Compiler Runtime (MCR)

You can now specify run-time options `-nojvm` and `-logfile` to the MATLAB Compiler Runtime (MCR). For more information about this feature, see “MCR Run-Time Options” in the product User's Guide.

## Version 3.0 (R2008b) MATLAB Builder NE Software

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

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Bug Reports Includes fixes

New features and changes introduced in this version are:

- “.NET Components Now Available for Remoting to Distributed .NET Frameworks” on page 18
- “Web Deployment of MATLAB Figures Available” on page 19
- “CTF Archives Now Embedded in a Single Binary Executable for Convenient Deployment of .NET and COM Components” on page 19
- “Applications Created with Parallel Computing Toolbox Now Able to Be Compiled” on page 19
- “Support Dropped for .NET Framework Version 1.1 in R2008b” on page 19
- “Warning Results When Running Figure-Generating Applications or Printing with -nojvm Flag” on page 19
- “MWException Replaced by .NET Exception Class” on page 20
- “Same Name Class Objects Shared Between MCR Instances Do Not Work Correctly ” on page 20

### **.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 “.NET Remoting” 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 “Web Deployment of Figures and Images” 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 “MCR Component Cache and CTF Archive Embedding” and “Embedded CTF Archives” 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 “Supplying Cluster Profiles for Parallel Computing Toolbox Applications” 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. Similarly, various MATLAB graphics functions dependent on Java, such as graphics passed with -R -nojvm, will not result in displayable graphics. 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 Remoting”) in this release, the `MWException` thrown by an error in the generated component or an in the encapsulated MATLAB 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 Do 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):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports Includes fixes

New features and changes introduced in this version are:

- “Improved Error Diagnostics Available” on page 21
- “Support Being Dropped for .NET Framework Version 1.1 in R2008b” on page 21
- “MATLAB Application Deployment Web Example Guide Available” on page 21

### 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):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Bug Reports Includes fixes

### Functions Being Removed

The following functions were removed in R2007b:

Function Being Removed	What Happens When You Run the Function?	Use This Instead	Compatibility Considerations
buildmcr	Errors	MCRInstaller.exe (Windows), MCRInstaller.bin (UNIX), MCRInstaller.dmg (Mac)	See “Distribute MATLAB Code Using the MATLAB Compiler Runtime (MCR)” in the MATLAB Compiler User’s Guide documentation.
comtool	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>
dotnettool	Undefined Function Error	deploytool	Migrate to deploytool.
mx1tool	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):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	No	Bug Reports Includes fixes

New features and changes introduced in this version are:

- “Support Added for Win64” on page 25
- “Issues with the Microsoft Windows Vista Operating System” on page 25
- “Unsupported MATLAB Data Types” on page 27

### 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. To resolve these issues, ensure you are logged in as Administrator.

- With User Account Control (UAC) enabled, a standard user is not able to write to a folder in the `c:\Program Files` folder. 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.

## **Unsupported MATLAB Data Types**

The MATLAB Builder NE product does not support MATLAB object data types (for example, Time Series Objects) and most unsigned numeric types.

## Version 2.1 (R2006b) MATLAB Builder NE Software

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

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	Yes Summary	Bug Reports Includes fixes See also "Known Issues" on page 30.

New features and changes introduced in this version are:

- "New User Interface" on page 28
- "Support for Shared Assemblies" on page 29
- "Support for Nested Namespaces" on page 29
- "Support for .NET Framework Version" on page 29
- "Additional Support for Microsoft Visual Studio .NET Users" on page 30
- "Known Issues" on page 30

### 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 can 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/?product=MN&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):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems
Yes Details below	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 V4.1.1 (R2012a)</b>	See “Changes in MCR User Data Interface Arguments for Compiling Parallel Computing Toolbox Applications” on page 4 See “Support Updates for Microsoft® Visual Studio® Versions” on page 5
V4.1 (R2011b)	None
V4.0 (R2011a)	None
V3.2.1 (R2010bSP1)	None
V3.2 (R2010b)	See “Special Instructions for Compiling C# or VB.NET Code Using a 32-Bit Assembly on Windows 64 Systems” on page 13
V3.1 (R2010a)	None
V3.0.2 (R2009b)	See “New Format for Deployment Tool Projects” on page 16
V3.0.1 (R2009a)	None
V3.0 (R2008b)	See “Warning Results When Running Figure-Generating Applications or Printing with -nojvm Flag” on page 19.
V2.2.2 (R2008a)	None
V2.2.1 (R2007b)	See “Functions Being Removed” on page 23.
V2.2 (R2007a)	None

<b>Version (Release)</b>	<b>New Features and Changes with Version Compatibility Impact</b>
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 28</li><li>• “Support for .NET Framework Version” on page 29</li></ul>
V2.0 (R2006a)	None