MATLAB® Builder™ JA Release Notes

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MATLAB® Builder™ JA Release Notes

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Contents

Summary by Version

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

Version (Release)	New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Latest Version V2.0.2 (R2008b)	Yes Details	Yes Summary	Bug Reports	Printable Release Notes: PDF Current product documentation
V 2.0.1 (R2008a)	Yes Details	No	Bug Reports	No
V2.0 (R2007b)	Yes Details	Yes Summary	Bug Reports	No
V1.1 (R2007a)	Yes Details	No	Bug Reports	No
V1.0 (R2006b)	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 2.0.2 (R2008b) MATLAB® Builder™ JA Software

This table summarizes what's new in Version 2.0.2 (R2008b):

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

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. For more information, see "Improving Data Access Using the MCR User Data Interface and MATLAB® Builder™ JA".

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. The -nojvm option will be removed in a future release.

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 2.0.1 (R2008a) MATLAB® Builder™ JA Software

This table summarizes what's new in Version 2.0.1 (R2008a):

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

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 JA, and MATLAB Builder NE roadmap pages. From MATLAB, select **Help > Product Help** and select the product from the left pane.

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 2.0 (R2007b) MATLAB® Builder for Java™ Software

This table summarizes what's new in Version 2.0 (R2007b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	Yes Summary	Bug Reports	No

New features and changes introduced in this version are:

- "Support for RMI" on page 6
- "Interactive MATLAB Graphics Support" on page 6
- "Enhanced CTF Archives" on page 7
- "Web Deployment Documentation" on page 7
- "Enhanced Javadoc Support" on page 7
- "Functions Being Removed" on page 7

Support for RMI

The Sun Microsystems® Java™ native RPC mechanism, RMI, is now supported for "Creating Scalable Web Applications with RMI". RMI support enables automatic generation of interface code for Java remoting, allowing components to be started in separate processes.

Interactive MATLAB Graphics Support

Interactive graphics are now available for user-developed Web applications, using AJAX technology to enable rotating, zooming, and panning.

Enhanced CTF Archives

Output JAR files containing embedded CTF files are now produced for more convenient deployment. Also, it is now possible to ensure that CTF archives containing MEX- files are platform independent.

Web Deployment Documentation

The basics of Web deployment with MATLAB Builder for Java, interactive Web graphics, and performance features using RMI are now included in the User's Guide documentation.

Enhanced Javadoc Support

Sun Microsystems® Javadoc™ is now searchable from the MathWorks Web site and is also available within packaged MATLAB Builder for Java components.

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 the MATLAB Compiler User's Guide documentation.
comtool	Undefined Function Error	deploytool	Migrate to deploytool.
dotnettool	Undefined Function Error	deploytool	Migrate to deploytool.
mxltool	Undefined Function Error	deploytool	Migrate to deploytool.
opennbl	Undefined Function Error	deploytool	Migrate to deploytool.

Function Being Removed	What Happens When You Run the Function?	Use This Instead	Compatibility Considerations
openmxl	Undefined Function Error	deploytool	Migrate to deploytool.
opencbl	Undefined Function Error	deploytool	Migrate to deploytool.

Version 1.1 (R2007a) MATLAB® Builder for Java™ Software

This table summarizes what's new in Version 1.1 (R2007a):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports	No

New features and changes introduced in this version are:

- "Support Added for Win 64, Mac, Intel Mac, and Solaris 64" on page 9
- "Support Dropped for Solaris 2" on page 9
- "Java Objects Accessible by the MATLAB Java Interface" on page 10
- "Conversion Methods Available for Java Primitive Types" on page 10
- "Image Conversion from RGB to Java AWT Format Available" on page 10
- "Issues with the MicrosoftWindows Vista Operating System" on page 10

Support Added for Win 64, Mac, Intel Mac, and Solaris 64

Support has been added for the following operating systems:

- Windows® 64-bit
- Macintosh®
- Intel® Mac
- Solaris™ 64-bit

Support Dropped for Solaris 2

Support has been dropped for the Solaris 2 operating system. It has been replaced by support for Solaris 64.

Java Objects Accessible by the MATLAB Java Interface

Java objects can now be passed by reference to compiled M-functions and be fully accessible by the MATLAB Java interface.

Conversion Methods Available for Java Primitive Types

Conversion methods are now available that force MATLAB numeric array data into Java primitive numeric types.

Image Conversion from RGB to Java AWT Format Available

Conversion of RGB image data to Java AWT image object data format is now available.

Issues with the MicrosoftWindows Vista Operating System

The following are known issues withWindows 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\msvc80compp.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 1.0 (R2006b) MATLAB® Builder for Java™ Software

This table summarizes what's new in Version 1.0 (R2006b):

New Features and Changes	Version Compatibility Considerations	Fixed Bugs and Known Problems	Related Documentation at Web Site
Yes Details below	No	Bug Reports See also "Known Issues" on page 13.	No

New features and changes introduced in this version are:

- "Introducing MATLAB® Builder for Java" on page 12
- "Support for MATLAB Features in Java" on page 12
- "Deployment Tool User Interface" on page 13
- "Known Issues" on page 13

Introducing MATLAB Builder for Java

MATLAB® Builder for Java™ is an extension to MATLAB Compiler software. Use this builder to wrap MATLAB functions into one or more Java classes that comprise a Java package. Each of the MATLAB functions is encapsulated as a method of a Java class and can be invoked from within a Java application.

When you distribute the application to your users, you must include supporting files generated by the builder as well as the MATLAB Component Runtime (MCR), which is provided by the product. Your users do not have to purchase and install MATLAB.

Support for MATLAB Features in Java

MATLAB Builder for Java provides robust data conversion, indexing, and array formatting capabilities to preserve the flexibility of MATLAB when called from Java code. To support the MATLAB data types, the builder provides the MWArray class hierarchy. You can use MWArray and other Java

class members in your application to convert native arrays to MATLAB arrays and vice versa. builder also provides automatic data conversion for passing arguments that are Java types.
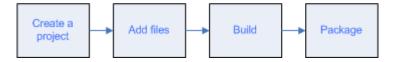
MATLAB Builder for Java provides custom error handling so that errors originating from MATLAB functions are reported as standard exceptions. The error description contains specific references to the MATLAB code, thus simplifying the debugging process.

Deployment Tool User Interface

To use the builder, open the Deployment Tool by issuing the following MATLAB command:

```
deploytool
```

You can use the Deployment Tool to create a project that encapsulates MATLAB code. You can perform the following tasks using the Deployment Tool:

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 can 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 Java** in the Product list.

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

Compatibility Summary for MATLAB® Builder™ JA 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.

Version (Release)	New Features and Changes with Version Compatibility Impact
Latest Version V2.0.2 (R2008b)	"Warning Results When Running Figure-Generating Applications or Printing With -nojvm Flag" on page 3.
V2.0.1 (R2008a)	None
V2.0 (R2007b)	See "Functions Being Removed" on page 7.
V1.1 (R2007a)	None
V1.0 (R2006b)	None