Magic xpa 3.2 Release Note Highlights

New Features, Feature Enhancements and Behavior Changes

Windows 10 Mobile Support

The Magic xpa RIA client is now capable of running on Windows 10 Mobile™ devices.

iOS 10 Support

Magic xpa was tested and is compatible to work with the iOS 10 operating system.

Java 7.0 Support

Magic xpa was tested and is compatible to work with Java 7.0.

Web Services as a Data Source

Web services are sometimes used as a means to access data in large organizations, instead of using database clients. Magic xpa 3.2 now provides a native development paradigm to support data access via a Web service. Once defining the data source as a Web Service data source, the developer can use the data source in native Magic programs. A new Web Service Data Source builder was added to allow the easy creation of Web services on the provider side.

Note: This feature is only available if you set the **SpecialWebServiceDataSource** flag to **Y**. In future versions there will be no backward compatibility regarding the schemas being used to describe the Web Service data source entries. We recommend consulting with MSE before using this feature in order to understand its scope and best usage.

Compare & Merge

A third party Compare & Merge tool, supporting Magic xpa's XML metadata format, is now available. This tool provides a graphic UI for identifying conflicts that may arise when merging between different project branches, and allows an easy method of choosing the source to be merged.

Please refer to the *Magic xpa Help* for information about how to define the Merge & Compare tool in your development environment. To obtain this tool and take full advantage of this functionality, please contact your local representative.

Prerequisite Changes

The minimum .NET version for C/S and RIA applications is 4.0 instead of 2.0. .NET framework 2.0 is no longer supplied with the installation.

Form and Control Property Enhancements

- Additional functionality has been added to the Edit control's **Hint** property:
  - The property is supported for Windows desktop (in addition to the existing mobile support).
  - The property supports the use of expressions.
  - You can define the foreground color of the hint's text.
  - When a translation file is defined, the Hint value is automatically translated.
- You can use pixels as a form's unit of measurement.
- You can define the color of a selected tab page.
- You can define the style of a check box's border.
- The Rich Edit appearance control's **Border** property has been replaced by the **Border Style** property.

Form Designer Enhancements

- When models are available for controls, you can right-click on a control in the Toolbox and select the required model from the context menu. The **Reset Toolbox** option has been moved to the Studio's **Options** menu.
- You can see checker and find-reference results in the Form Designer.
- The Task Variables pane has been renamed to the Variables pane. This pane now shows variables from ancestor tasks, and also includes search capability.
- Similar to the non-Visual Studio property sheet behavior, in the Form Designer's property sheet, pressing **Esc** saves any changes made.
- In the Form Designer, the values of the **X**, **Y**, **Width** and **Height** properties are displayed on the status bar.
- You can change the text of the Check Box, Group, Label, RTF and Column controls, by pressing **Enter**.
- The Edit control supports transparent colors.
- An **Inherit All** option is available in the Form Designer's **Model** property. This allows you to inherit all of the properties defined in the model.

Text-Based Forms in Visual Studio Format

Text-based forms are now edited in the Visual Studio-based Form Designer. In the text-based Form Designer:

- The **No Dividers** command for Text-based forms from previous versions is not supported.

- Dragging the splitter affects the height of the upper form only. The bottom form will only be moved and not resized.

- It is possible to collapse and expand a form using an icon in the divider area.

- The Undo/Redo is done on the last action performed on any of the forms (not just the current form).

Upgrade Process Enhancements

- You can run the Magic xpa upgrade process via the command line, outside of the Magic xpa Studio. This functionality allows you to write batch files to easily upgrade multiple projects multiple times.

- The Upgrade process can now:

  o Add title areas to Table controls that do not have a title area, so that the labels will be moved to the **Column Title** property.

  o Convert Edit controls with an expression on the column title into the Column Title expression.

  o Create OK user events to replace the non-supported OK internal event.

  o Create a context menu for RTF controls and assign it to the controls.

Additional Mobile Changes

- A new Android and iOS native code sample was added for audio recording and playback.

- For mobile devices, pictures from cameras are saved as .jpg files with all of their metadata. Until version 3.2, pictures on iOS devices were saved as .png files.

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View by Key Functionality

- The View by Key functionality that was available in V1.9 using Ctrl+K, is once again supported via the End User Functionality component. For this purpose, the following was added to V3.2:

    o The **Index Change** event changes the index of the main data source in a task.

    o The **DataViewIndexNames** function returns the index names of the main data source defined on the task.

    o The **DataViewIndexSegmentNames** function returns the segment names of a data source's index.

Special Settings

- The **SpecialDisableMouseWheel** flag lets you define whether the mouse wheel will scroll through records in screen mode.

- The **SpecialXMLViewCreateOptional** flag lets you define whether optional compound elements with no simple elements under them will be created when inserting a node.

Replacing Repository Objects

You can replace any repository object with another object of the same type as was possible in previous versions.

Environment Setting Addition and Change

- The new **HTTP Framework** environment setting lets you define Java as the underlying HTTP library to use for the HTTPxxx functions. Using Java provides enhanced support in TLS 1.2.

- The **Century Start** environment setting's default value was changed from 1920 to 1930.

Application Properties Enhancement

In the **Application Properties** dialog box, you can zoom to select the external files.

Fetching a Single Record Limit

Link Query operations for Oracle, MSSQL and ODBC databases are now limited to fetching a single record, even if the cursor returns more than one record. You can maintain the previous behavior of not limiting the fetch to one record by setting the **LimitLinkToSingleFetch** keyword to **N** in the **Database Information** property.

Opening Projects from Major Versions

When opening a project, the last opened projects list is no longer shared between major versions of Magic xpa. This prevents unintentionally opening projects from a different major version, which might result in an unintentional upgrade.

Validation with Third Party Tools

You can add the **schemaLocation** attribute to newly generated XML files to enable validation tests using third party tools. This is done by using a new property added to the XML data sources.

Results Sets in Oracle

You can use result sets in Oracle stored procedures.

Space Middleware Improvements

- The underlying GigaSpaces infrastructure was updated to version 11.

- The support for posting XML files to a Magic xpa server was improved. You can now disable URL-decoding according to selected values of the HTTP header 'Content-Type' that is (optionally) sent within HTTP requests using the **-Dcom.magicsoftware.xpa.ExcludeUrlDecodingForContentTypes** system property.

- You can now increase the concurrency of the **HttpRequestsConvertor** and **HttpResponsesConvertor** event containers using the optional **MgxpaGSSpace.properties** file.

- Multiple RIA clients from the same machine consume one (RIA) license token, similar to the behavior when using the broker.

- The reserving of licenses is managed per project and not per servers/workers. For this purpose, a number of changes were made:

  o In the Monitor, the **Reserved Workers** and **Floating Workers** columns were combined into one column displaying the total number of workers. In addition, the license reservation information is displayed in the **License Usage** pane.

  o In the **projectsStartup.xml** file, the **WorkersCountReservedForThreadsBased** and **WorkersCountReservedForUsersBased** command line keywords were removed and the **ReservedThreadsLicenses** and **ReservedUsersLicenses** attributes were added.
  Note: For projects created in earlier versions of Magic xpa 3.x, the **WorkersCountReservedForXXX** keywords will be ignored.

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- The **projectsStartup.xml** file was improved and repetitive values can be defined once in the new (optional) **CMDLineArgs** attribute in the **Projects** element.

- The log4j infrastructure was updated and is based on log4j V2.5.

- The host ID and PID were added to the log file names to provide easier identification of the log files in a clustered environment.

- You can set the **BASIC** logging level for the Space middleware in the **log4j2.xml** file.

- The log file will not exceed 10MB.

- The **StopProjects.bat** file was renamed to **ShutdownProjects.bat**.

- In the **setenv.bat** file, a number of GigaSpaces environment variables, such as **LOOKUPLOCATORS**, were renamed.

- The **PollingIntervalMs** setting was removed from the Mgreq.ini file. (The setting was redundant because the Web requester waits for a response rather than polls.)

- The **Default Space** option was removed from the **MessagingServer** setting in the **Magic.ini** and the **projectsStartup.xml** files. Starting from version 3.2, when a Magic xpa server is started by a GS agent, it is automatically directed to the grid according to the **XAP_LOOKUP_LOCATORS** environment variable set in the **GigaSpaces-xpa\bin\setenv.bat** file of that GS agent.

- The GigaSpaces Monitor's **Restart Project Gracefully** option lets existing clients continue working, while new clients are immediately able to use the upgraded application. The **Shut Down Pausing Servers** option lets you pause and shut down a physical server, to be used before a server machine is shut down.

- The GigaSpaces Monitor's **Requests log** window contains **Client ID** and **User Name** columns. The **Status** column now has a drop-down list to enable you to filter requests according to their status.

- The GigaSpaces Monitor's **Contexts** window contains a **Status** column.

- When starting projects using the GS-agent (from the **projectsStartup.xml** file), the project name is automatically used as the value of the **ApplicationPublicName** setting.

Outdated Utilities and Removed Files

- The Builder Data Converter, INI Conversion and v9 Migration UI utilities were removed.

- The **Scripts\RIA folder** was removed.

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