Magic Compare and Merge 4.0 Release Notes

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Contents

We are excited to present new update of Compare and Merge Utility 4.0.

New Features and Enhancements

The following new features and enhancements are presented in Magic Compare and Merge:

Enhanced Merging of Logic Unit Handlers

If the same Login Unit Handler such as Control Prefix/Record Prefix is attempted to merge from two different branches, then both the handlers are merged to a single handler. Means if the handlers are same in terms of their names and parameters, they will be merged.

If the handlers are not same and they are attempted to merge together, then Merge utility identifies them with respect to their parameters. Until this version, Merge utility used to match and merge together operations within the same Logic Unit Handlers. From now on, if the parameters of both handlers are different, Merge utility compares the parameters and if there is a change, it offers to Merge both handlers (from both branches) as two separate handlers. The change in Parameters is detected by evaluating the number of Parameters, any new or deleted Parameters, or if the order of Parameters is different.

Support for Magic xpa Web Client in Merge Utility

Magic xpa Web Client is now supported in Merge Utility.

Elimination of Unnecessary Actions during Merge

A new flag named /merge_changes is introduced, which when exists, and when there are no conflicts during the process of merging, then Merge utility does not issue UI to the programmer. This eliminates the need of pressing 'Merge' button.

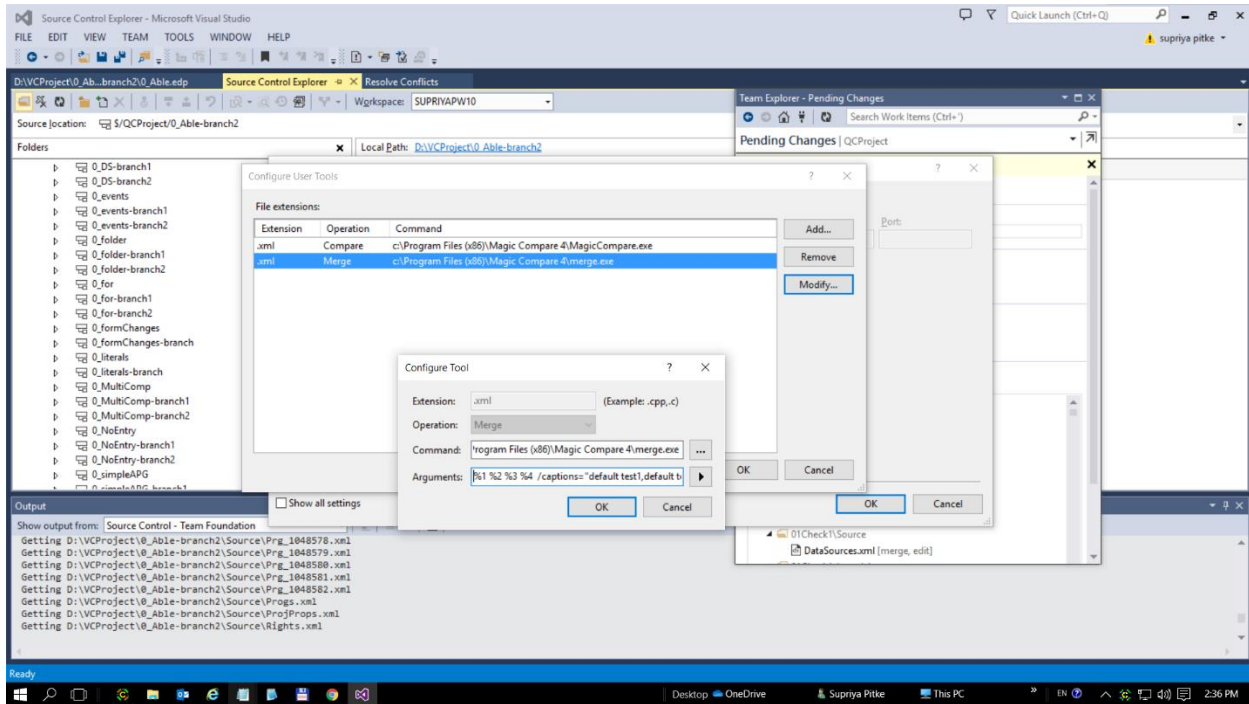You can set the merge-changes flag at the location: %1 %2 %3 %4 /merge_changes.

Compatibility with the Latest Magic xpa Release

Merge utility was tested and is compatible to work with Magic xpa 4.6.1 and backward.

Support of Captions for Merge Windows

Instead of the default captions Source branch/Target branch/Original branch/Merged output file, the captions Caption1, Caption2, Caption3, Caption4 are now shown.

For example, %1 %2 %3 %4 /captions = "Caption1, Caption2, Caption3, Caption4".

Merge Utility Limitations

Merge utility has the following limitations:

Table controls from different branches cannot be merged together. Only one Table control can be merged. Frameset Forms from different branches cannot be merged together. Only one Frameset can be merged.

Similarly, if a new Parent task is added in the middle of the task structure, the Programs cannot be merged together from different branches. Only one Program can be merged.

Fixed Issues

#	Description
MXPA-548	When two projects of Magic xpa 2.x are compared in Magic Compare utility, the User Event in the resulting comparison was displayed as 'Unknown'.
MXPA-19969	After merging the sources resulted in having unsolvable missing references and an error occurred when 'Check for missing references' was attempted to open twice.
MXPA-20026	While merging the Data View and Form, if models were used from component, Merge utility showed differences.
MXPA-20486	When one folder was created in each of the two branches and one program was placed inside each of those folders, then the folders were found to be switched after merging.
MXPA-20488	There were missing expressions but Merge utility showed incorrect missing references.

Past Release Notes

Magic Compare and Merge 2.0

We are delighted to present Magic Compare and Merge utility release 2.0. This release is focused mainly on bringing stability to the product and fixing the following customer issues:
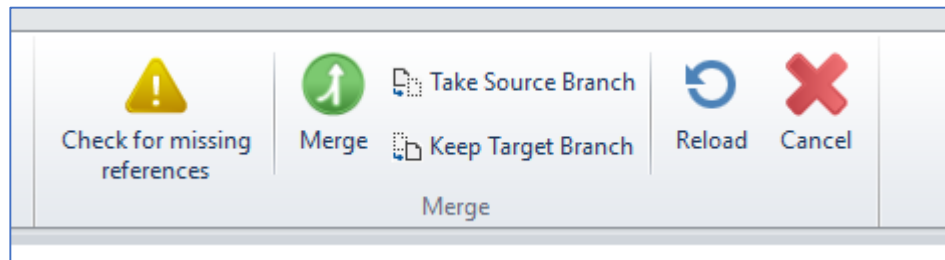
Fixed Issues

#	Description
154249	The result of Merge was incorrect when a user deleted a Subtask while another user modified the same Subtask.
154250	The result of Merge was incorrect when two users added a new program in the same project.

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Magic Compare and Merge 1.1a

We are excited to present an update of Compare and Merge utility with new features and enhancements.

New Features and Enhancements

Compare and Merge utility brings you more sophisticated UI that provides a new set of buttons.
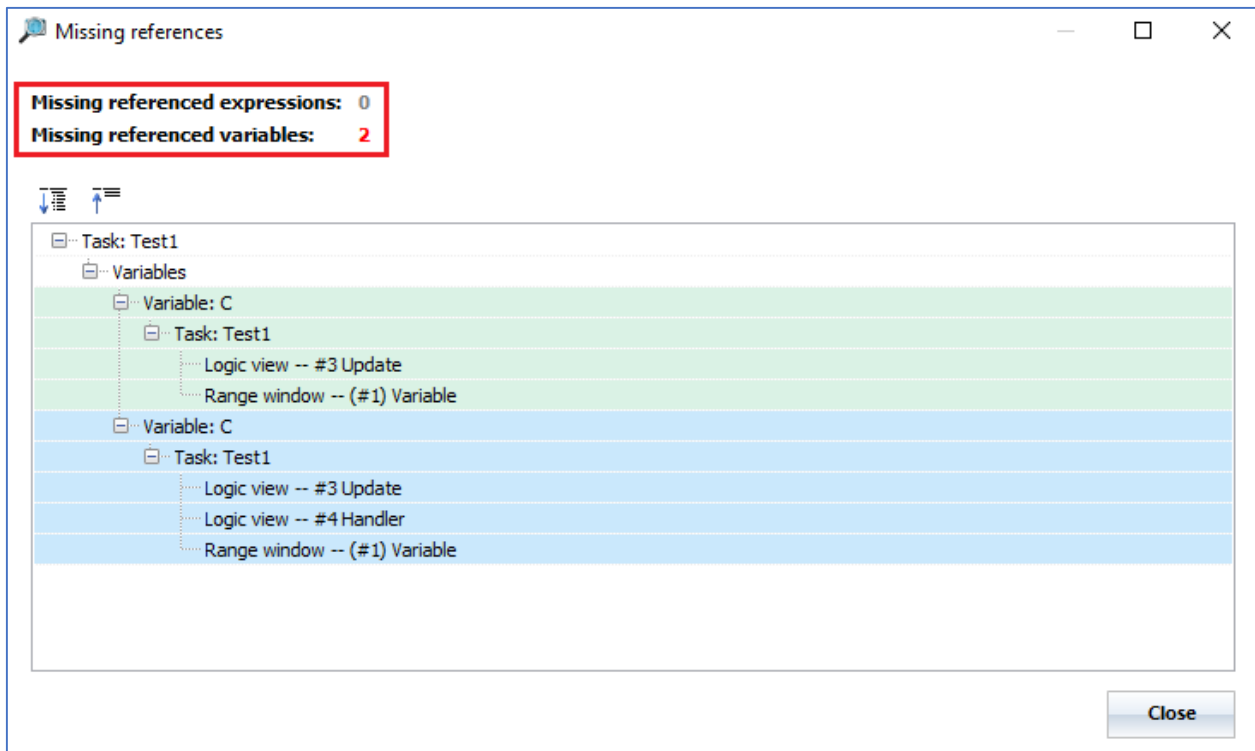

The buttons **Take Source Branch** and **Keep Target Branch** are available on the toolbar and on the sub-screen **Too complex to merge**. The **Take Source Branch** button takes the complete source branch xml source file and overwrites any merging changes from the target branch. Result is xml source file that was in the Source branch. The **Keep Target Branch** button keeps the target branch xml source file and disregards any changes made in the source target. Result is xml source files that is in the target branch.

The update brings you the following new features:
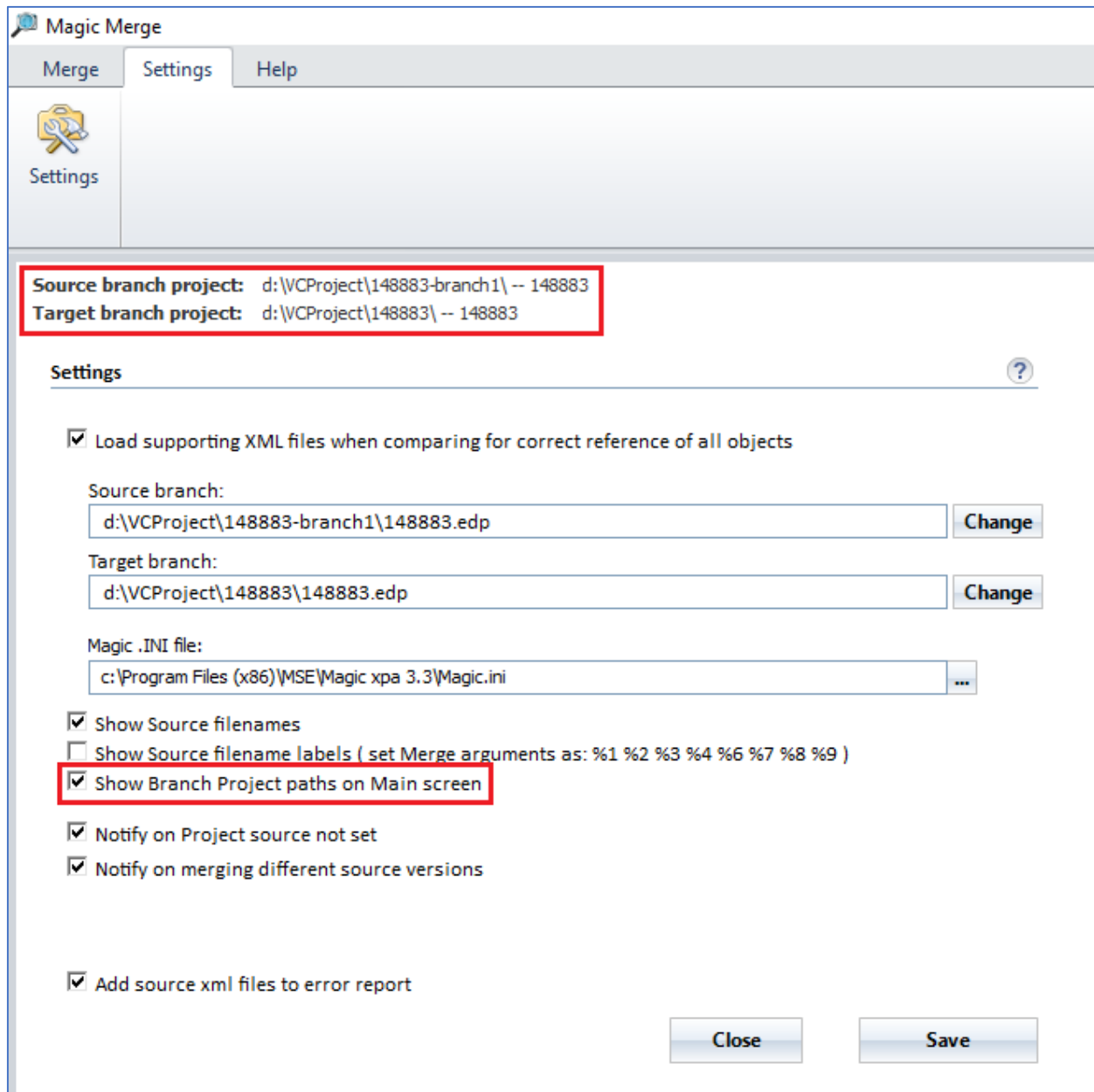
Support to Trace the Missing References

The Compare and Merge update now checks the result of Merge for any missing references for expression and variables. Merge checks the missing entries automatically before saving the Merge output. In addition, you can check them by clicking on Check for missing references button.

When you have defined a variable or created an expression and used either/both of them in the program, and when you try merging, Merge displays the details of missing references for them. Merge can proceed to merge when you resolve the missing references issue.
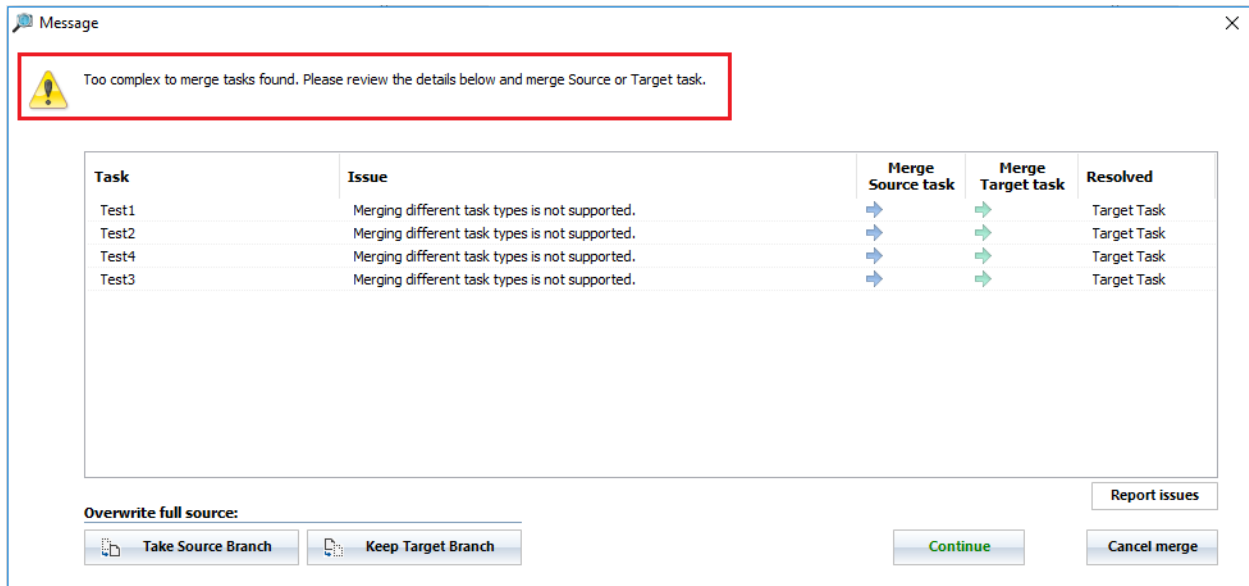
Handy Display of Project Path on Main Screen

A new checkbox is added named **Show Branch Project paths on Main Screen,** which if checked, enables/disables the display of the path on the main screen of Merge.
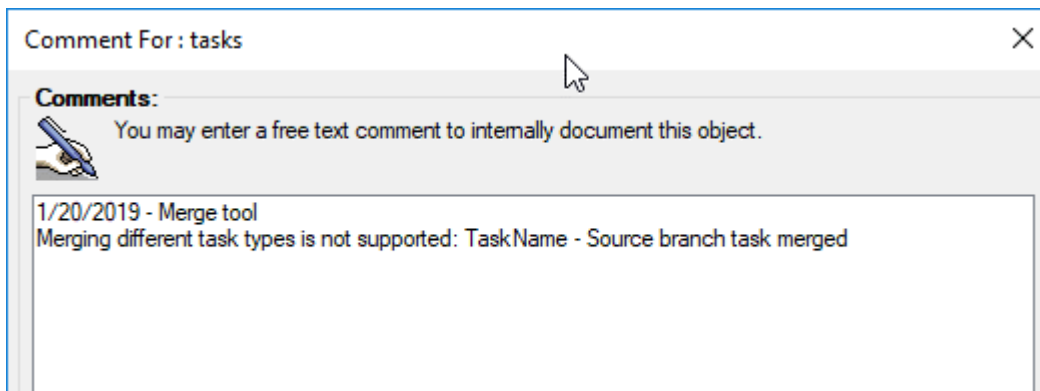
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This new checkbox enables you to have the branch path information on the main screen always visible. You can show/hide the information as per your requirement.

Handling Complex Candidate Tasks for Merge

When you click on **Merge** button, Merge will explain you why the tasks are too complex to be merged, and it will offer you to take one or the other full task. When you select a task, Merge will finish its job.

In addition, a Comment is written to the Program (F12), when a too complex to merge task is detected and resolved. The comment starts with the tag **Merge tool**, which you can use as a phrase to find out the unmerged tasks.
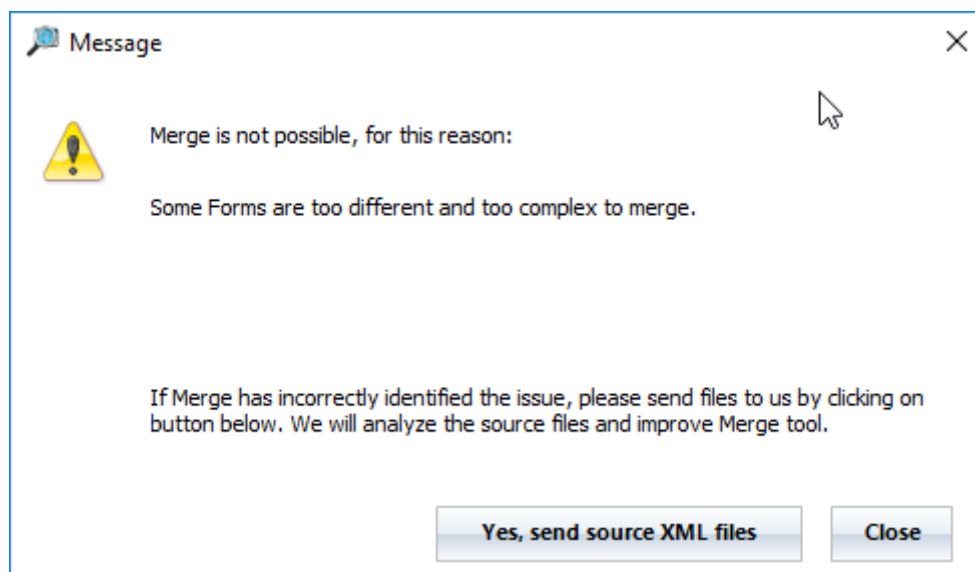
Magic Compare and Merge 1.1

We are delighted to present an update of Compare and Merge utility, which is focused on preventing Merge to create corrupt source related to duplicate events or missing Internal Sequence Numbers (ISNs).

New Features

Compare and Merge utility brings you the following new features:

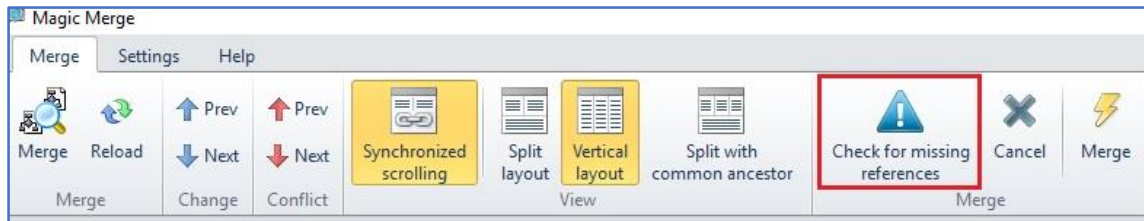## Spotting Duplicate Events and ISNs

Merge now checks for the duplicate events and Internal Sequence Numbers (ISNs). On finding an issue Merge notifies the issue and stops before creating an output XML file. Thus, it prevents creating any corrupt source.
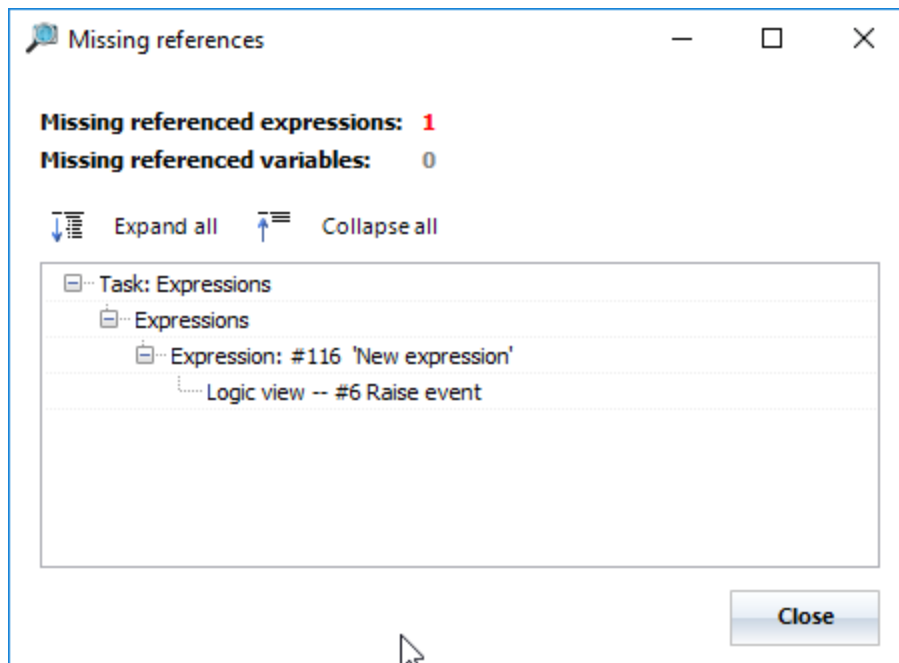

Merge also offers you to send the source XML files for analysis on a button-click.

Reporting Missing References

Compare and Merge now provides a new menu button named **Check for missing references** to report the missing references of Expressions or Variables.

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On clicking this button, Merge displays a brief report that shows **Missing referenced expressions** and **Missing referenced variables**. When there is at least one missing referenced expression or variable, the Merge does not proceed.

Download Links

You can download Compare and Merge tool from the following links:

English Version

https://www.magic-optimizer.com/MSE/MagicCompareMerge_setup_4.3.1.6_en.exe

Japanese Version

https://www.magic-optimizer.com/MSJ/MagicCompareMerge_setup_4.3.1.6_jp.exe

Fixed Issues

#	Description
149150	When the parent Form was changed in Source and Branch, the Subtask was deleted and an incorrect Form was shown.
149289	In Main program where Branch application had a Form generated in Screen mode and Source application had a Form generated in Line mode, Zooming into Form Editor crashed the Studio.
149558	When the Update operations for variables were placed in different handlers and the sequence of the handlers was interchanged in different branches then the operations were not merged correctly.
149962	The expressions from Source and Target branches were not highlighted by default in Merge utility interface.
150058	An Expression reference attached to the 'Return' value of a user-defined function was found to be vanished when the function was merged as Branch-to-Source and the Branch variables were deselected.
150063	Controls added from the Target branch were visible on the Form but were not visible in the Document Outline window's hierarchy. When the controls were clicked to find their parent, the xpa Studio crashed.
150087	The xpa Studio crashed when tried to merge two DSQL tasks with their respective variables and any two of the variables had the same name.
153900	The Resolve Conflicts were displayed for Raise Event operations though there were no changes done.
153902	The SQL 'Where' clause was not shown in Merge tool.
153938	An expression with SQL 'Where' clause was found to be not merging while attempting to merge the second branch.

Magic Compare and Merge 1.0

Introduction

This is the first public release of Compare and Merge tool for Magic xpa. The tool is a Windows desktop app that allows user-friendly comparison, and merging of Magic xpa projects and project branches. The purpose of creating this tool is to provide branching and merging of Magic projects.

Need for Branching & Merging

The Branching and Merging is essential when multiple developers work together in collaboration on the same project. The Version Control Systems (VCS) and the Distributed Version Control Systems (DVCS) provide wide flexibility in terms of using the version control to share and manage the code. The team members can use version control system to publish, share, review, and iterate on code changes through branches shared with others.

You need to adopt a branching strategy that suits your team so that you can collaborate effectively by spending less time on version control management and investing more time on code development.

You can conceptualize the version control system as a tree. A tree has some branches on its large trunk. Similarly, the master branch is like the trunk of a tree and other branches are smaller parts of the project which need not interfere with the main branch (recall master). The branches have their own commits and they are added to the master once they are complete. In most cases, the code contained in the master branch is usually the one being deployed. The branching eventually leads to merging different branches together. At times conflicts can occur between the source and the target branches. Resolving conflicts in Magic sources can be a complex and tedious job while working on pure xml sources.
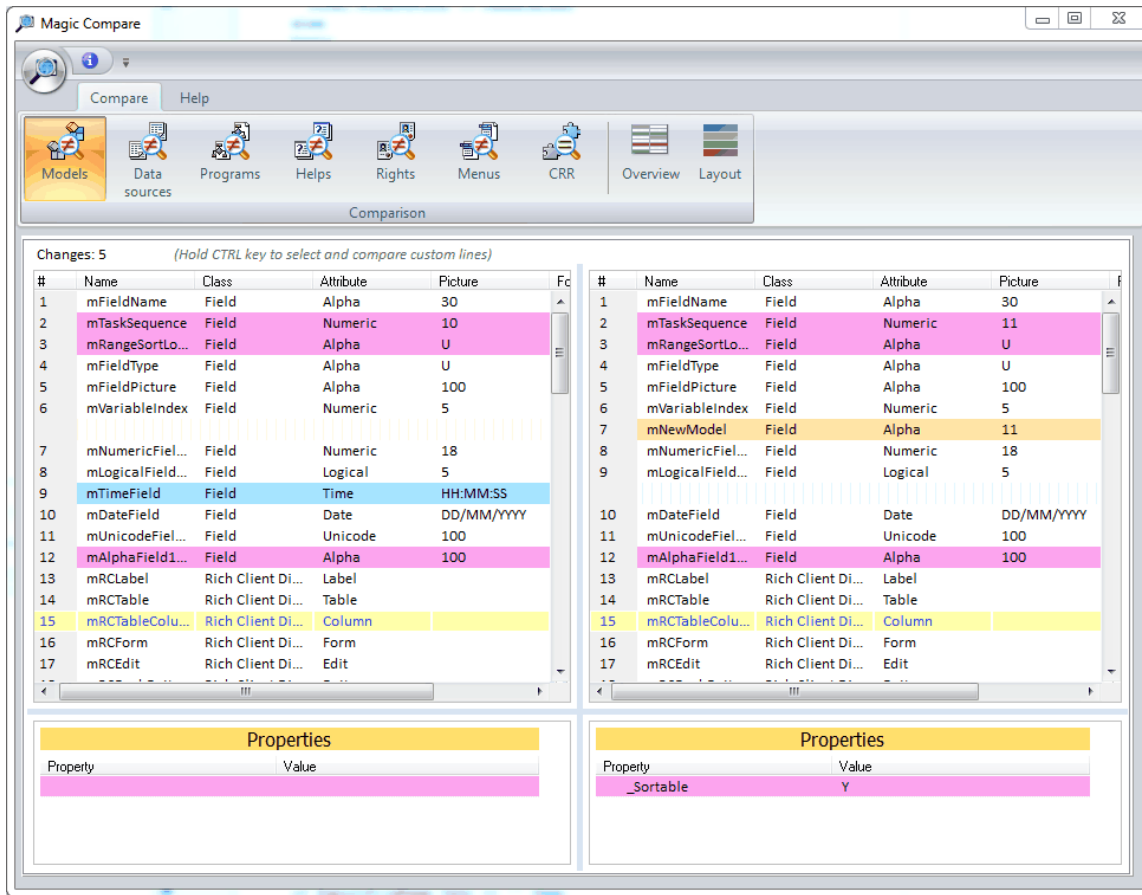
This is where Magic Compare and Merge tool facilitates you to compare and merge Magic sources without the need for working with xml.

Please refer for more details on [branching strategies and merging with xpa](#) OR Magic xpa's online help topic: *Home > Reference Guide > Utilities > Magic Compare and Merge Tool*.

Compare

Magic Compare is a visual comparison tool for Magic xpa. It performs two-way comparison to identify the changes between different Magic xml sources and shows differences between the compared versions clearly.
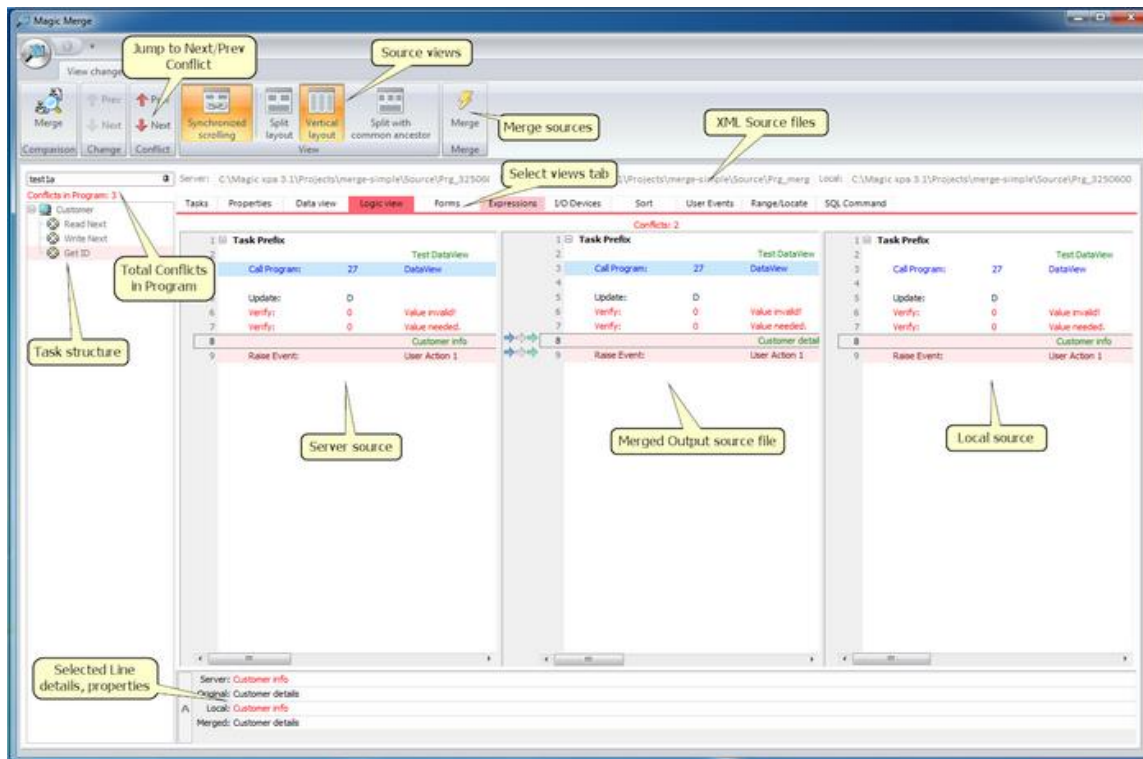
Merge

Magic Merge tool performs three-way merge among source, target, and the original branch to identify all the changes done in each branch and the conflicts. It can compare and merge Models, Data Sources, Programs, Rights, Helps, Menus, and CRRs. Magic Merge tool is used to merge branches when the development team is branching the Magic sources.

Magic Merge can merge xml source files from Magic XPA version 3.1 and onward projects. It cannot be run as a standalone Windows® application.

Features

Compare and Merge tool offers the following features:

Compare

- Provides an intuitive GUI for visual comparing of Magic xpa projects.
- Displays the added, deleted or changed entries in all Repositories, Models, Data Sources, Programs, Rights, Helps, Menus, and CRRs.
- Shows changes as they appear in Magic studio; you can easily spot their location.
- Can be used as a standalone tool or integrated it as an external differencing tool with most VCSs.

Merge

- Provides a comprehensive view of project conflicts. You can choose items from the left and right panes to merge into the output file.
- Enables you to review changes between branches and resolve the conflicts.
- You can decide which changes to keep in the merged output and which ones to skip; simply by choosing the desired parts of the Magic source, which are presented in the similar way as they look in Magic studio and not the xml source.
- Considers the correct structure of xml source for merging result to be valid for Magic studio, which other tools cannot.

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- Can be executed as an External Merge tool from various VCSs.

Prerequisites

The Compare and Merge tool can execute on the following platforms:

- Microsoft® Windows Vista and onwards

Compare & Merge

- Magic xpa 3.1a and above

Known Issues

The Compare and Merge tool has some limitations:

- In general, a dramatic change of a program (50% or more of the code was changed/replaced) the tool might not be able to Compare & Merge.

- In some cases, the merged output is too complex or not compatible:
    - While trying to merge different types of Tasks (Online and Batch, etc.)
    - While trying to merge different types of Forms (GUI Display and Text-base, etc.)
    - Using Automatic Program Generator (CTRL+ G) to overwrite the existing program details may cause difficulty in showing and merging the changes correctly.

- If both branches create new Tasks above the Main task in the program, the Merge is not able to merge the program sources.

- The Merge UI allows to customize the merged output though it cannot prevent all the possible incorrectness in the customized merged output.

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