

# Magic Compare and Merge 4.3 Release Notes



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## 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.

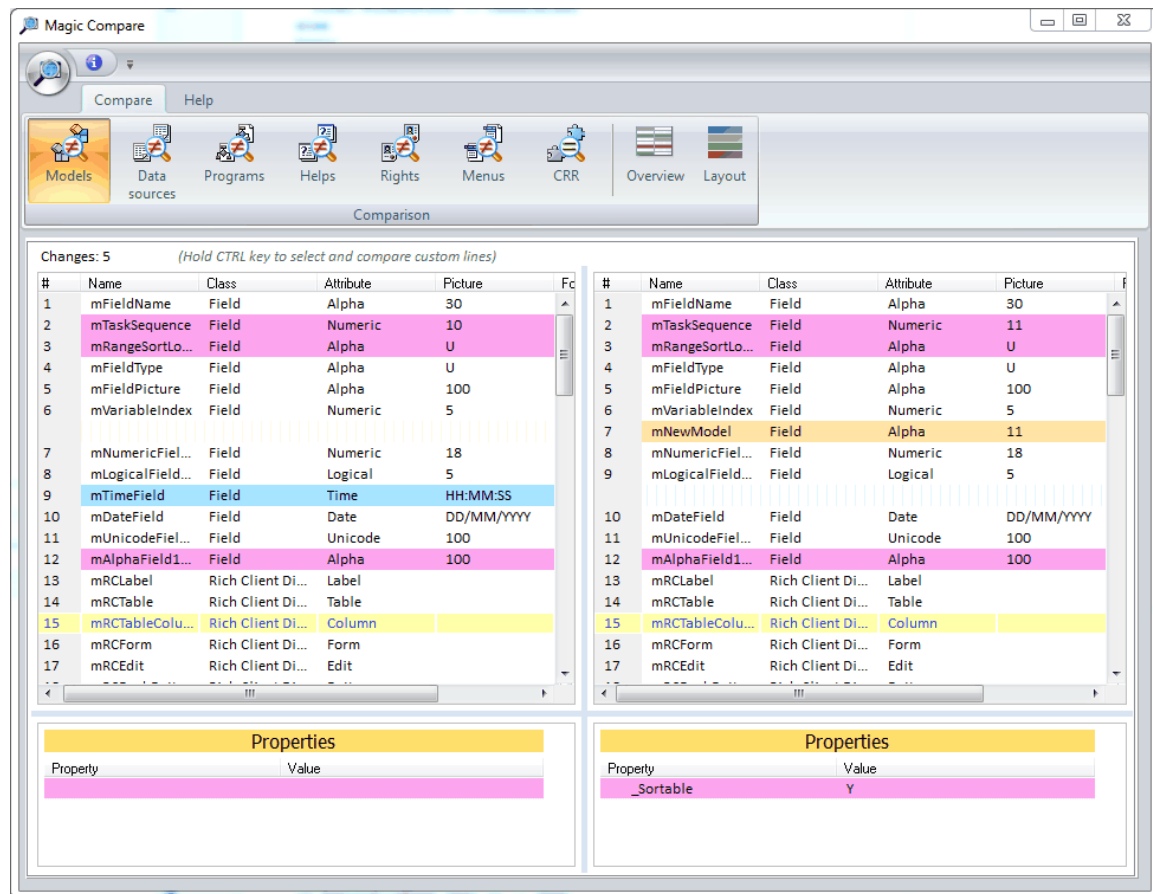
You can conceptualize the version control system as a tree. A tree has some branches on its large trunk. Similarly, the master branch is like the trunk of a tree and other branches are smaller parts of the project which need not interfere with the main branch (recall master). The branches have their 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

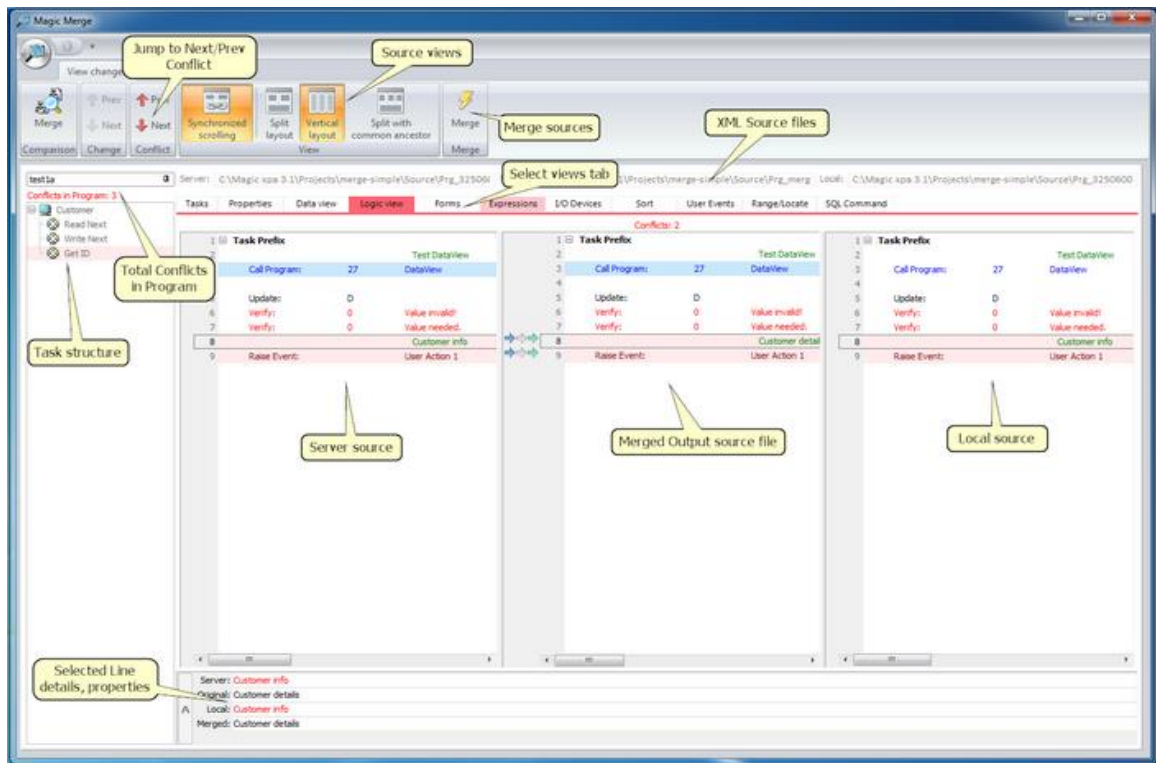
Magic Compare is a visual comparison tool for Magic xpa. It performs two-way comparison to identify the changes between different Magic xml sources and shows differences between the compared versions clearly.



## 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.
- 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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