

What's New in Magic Optimizer 10

Magic Optimizer 10 continues with complete **360° Project Analysis** and is packed with features that help developers analyze to get complete view of all aspects of the project and are able to optimize and improve them.



Compatibility Magic Optimizer and Magic:

Magic Optimizer 10: + XPA 3.2a (+ all previous versions)

Magic Optimizer 9: + XPA 3.1

Magic Optimizer 8: Magic XPA 3.0
uniPaaS all versions
eDeveloper all versions

Overview

Major upgrade is **compatibility with Magic XPA 3.2a**, which previous versions of Magic Optimizer are not.

10x New Warnings:

- **WFL039: Button control is used in Batch task**
- **WFL040: Empty Expression (') is used**
- **WFL041: Len function without Trim/RTrim**
- **WFL042: Counter() function in Online task**
- **WFL043: Verify operation without message**
- **WFL044: Mixing Graphic and Text based output, input**
- **WFL045: Tab control is not modifiable**
- **WFL046: Unnecessary Condition with expression = 'TRUE'LOG**
- **WFL047: Odd Block If/Else conditions**
- **WFL048: Invalid Control name is used**

New features:

- **Repositories** (Analyze menu) - Repositories view shows all Repositories and analytical details such as cross reference count and other important analytical information.
- **Merge, Intersect Cross Reference results** (XReference menu) - combine cross reference results, by merging or intersecting 2 cross reference results.

Version 10 requires new license. It can be installed and used alongside previous version.

New: 10x Warnings

1) WFL039: Button control is used in Batch task

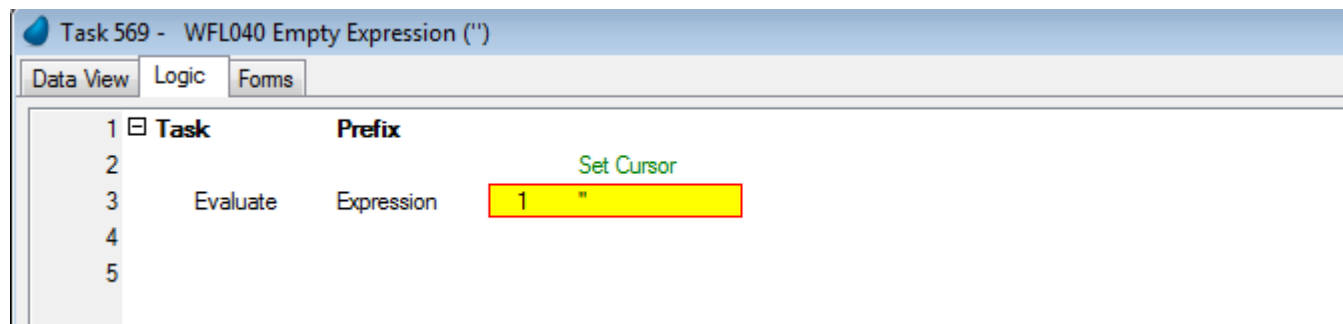
Common mistake when designing Online tasks is to put Button controls on Forms and assuming we will be able to press on this control and execute attached Event, but we are actually in Batch task. In Batch tasks Button controls are not reachable and so can be a result of mistaken Form or Task.

Magic Optimizer will find all Button controls on Forms in Batch tasks.

2) WFL040: Empty Expression (") is used

When working on large tasks with a lot of Operations and Expressions, it is very easy to make a mistake and use Empty (") expressions in Operations.

Magic F8 checker does not show any error on such occurrence.



Magic Optimizer will find all Operations that use Empty (") Expressions.

3) WFL041: Len function without Trim/RTrim


When we count number of characters in Alpha field, a **Len()** function will return full length of the variable. For example Variable with U20 picture will return 20 no matter what text is in the variable. We need to use **Trim()** or **RTrim()** functions to get the correct number of characters in the variable.

Task 570 - WFL041 Len function w/o RTrim

Data View		Logic	Foms
1	Main Source	0	No Main Source
2	Virtual	1	vFirstName
		Index: 0	
		Alpha U20	

Data View		Logic	Foms
1	Task	Prefix	
2	Update	Variable	D vFirstName With: 1 'Magic'
3			
4	Verify	Warning	4 'Len(D) = '&Str(Len(vFirstName), Display in Box
5	Verify	Warning	5 'Len(Trim(D)) = '&Str(Len(Trim(vF Display in Box

Warning



Len(D) = 20
Len(Trim(D)) = 5

Magic Optimizer will find all Len() functions that do not use Trim() or RTrim() functions.

4) WFL042: Counter() function in Online task

Counter() function is used to count iterations at a record level, in Batch or Rich Client non-interactive tasks. Commonly can be mistaken and used in Online tasks, where it doesn't work correctly. Can be mistaken for **LoopCounter()** which can be used in Online tasks.

Magic Optimizer will check if Counter() is used in any of the Expressions in Online tasks.

5) WFL043: Verify operation without message

Very Warning or **Error** that have no message set or empty expression will not open Message Box or show any message in status line. Common mistake, by developers, when they forget to set the message.

Magic Optimizer checks if all Verify operations have text or expression that is not empty ("") set.

6) WFL044: Mixing Graphic and Text based output, input

When using same programs to Graphic and Text output/input, it's easy to mix-up and use them incorrectly.

Magic's F8 Checker will not report these combinations as wrong.

#	Name	Media	Printer	Access	Format	Exp/Var	PDlg	Rows
1	Report1	Graphic Printer	Printer1	Write	Page	0	No	
2	Report2	Graphic Printer	Printer1	Write	Page	0	No	

#	Name	Class	Area	Interface Type
1	Online Samples		0	GUI Display
2	RP11_ IOCurr()		0	GUI Display
3	Print Report		0	GUI Display
4	Page Header		1 Page Header	GUI Output
5	Page Footer		1 Page Footer	GUI Output
6	Detail Line		1 Detail	GUI Output
7	Page Header		2 Detail	Text-based
8	Page Footer		2 Detail	Text-based
9	Detail Line		2 Detail	Text-based

11	Event	Page Header		Scope: Sub Tree
12				
13	Form	Output	7 Page Header	I/O: 1 Report1

Magic Optimizer verifies if there are any occurrences when **Output/Input operations** are using **Graphic IO Device** with **Text-based form**.

7) WFL045: Tab control is not modifiable

Tab controls should be able to switch between tabs in **Query task mode**. It can occur that properties are set wrongly and Tab control is not allowed to change – switch between tabs.

Magic Optimizer reports on combinations when tabs can't be changed:

Query task mode + Tab Control property **Modify in Query** = **False**

Or **non-Query** task mode + Tab Control property **Modifiable** = **False**

8) WFL046: Unnecessary Condition with expression = 'TRUE'LOG

Operations which have **Condition** set as '**TRUE'LOG** Expression, will be executed every time – the same as if we leave Condition as it is set when creating operations – set to **Yes**. This is a common mistake that could happen when we replaced a correct condition with 'True'Log expression to test, debug or for any other reason temporarily enable allow execution of operations.

Magic Optimizer will report an all operations that use 'TRUE'LOG Expression as condition.

Task 573 - WFL046 Unnecessary 'TRUE'LOG						
Data View Logic Forms						
1	Task	Prefix				
2				Executed always		
3	Verify	Warning	0	Message	Display in Box	
4				Executed with Condition		
5	Verify	Warning	0	Message	Display in Box	Cnd: 1 TRUELOG

9) WFL047: Odd Block If/Else conditions

When we have multiple Block IF/Else operations it is not uncommon to mix-up conditions when each block of operation is executed. This can happen especially when Block If/Else combination spans across multiple pages of operations and we can't see the other conditions. Each condition has to be unique or it workflow of these operations will not execute as planned.

Magic's F8 checker does not check for fi any of these Block If/Else conditions are the same.

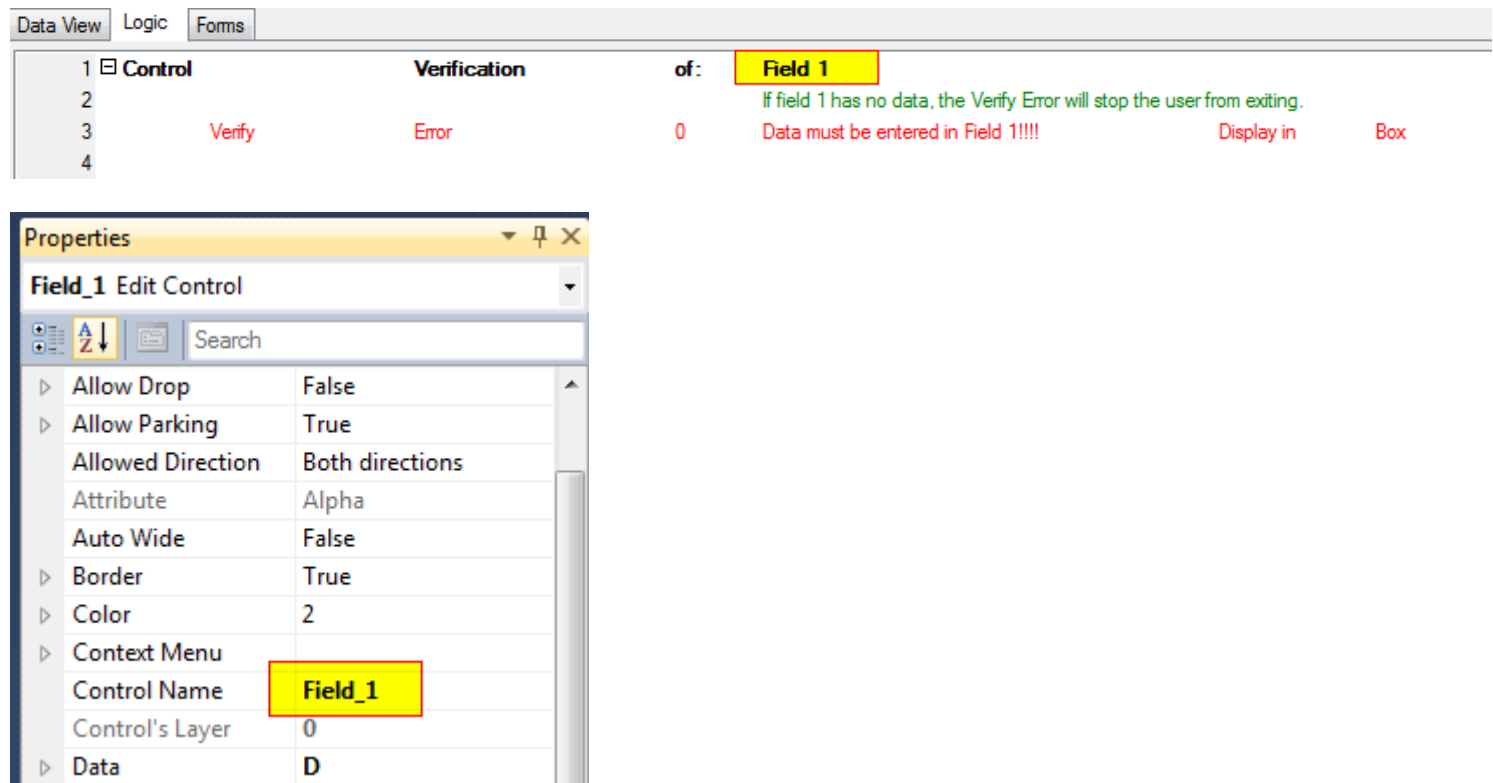
Data View Logic Forms						
1	Record	Suffix				
2						
3	Block	if	3	{Parent ID = '9'		
4	Verify	Warning	0	if	Display in Box	
5	Block	Else	4	{Parent ID = '10'		
6	Verify	Warning	0	Else #1	Display in Box	
7	Block	Else	3	{Parent ID = '9'		
8	Verify	Warning	0	Else #2	Display in Box	
9	Block	End		}		

Magic Optimizer will report on all Block If/Else combinations that use the same condition more than once.

10) WFL048: Invalid Control name is used

Even though we can Zoom into a list of possible Control names, when setting up Event Handlers, Magic does not prevent to enter any text as Control name. This could cause that we make a mistake with spelling and enter invalid Control name. Also, when Control is deleted, any connected Event Handlers will stay with this Control's name, even though it doesn't exist, anymore.

Magic F8 Checker doesn't verify if Event handlers are using correct Control name.



The screenshot shows the Magic F8 Checker interface with the 'Forms' tab selected. A table displays verification results for a control named 'Field_1'. The table has columns for 'Control', 'Verification', 'of:', and a description. The 'Control' column shows '1 Control', '2', '3', and '4'. The 'Verification' column shows 'Verify', 'Error', and '0'. The 'of:' column shows 'Field_1'. The description for the 'Error' row states: 'If field 1 has no data, the Verify Error will stop the user from exiting. Data must be entered in Field 1!!!!'. The 'Display in' column shows 'Display in' and 'Box'.

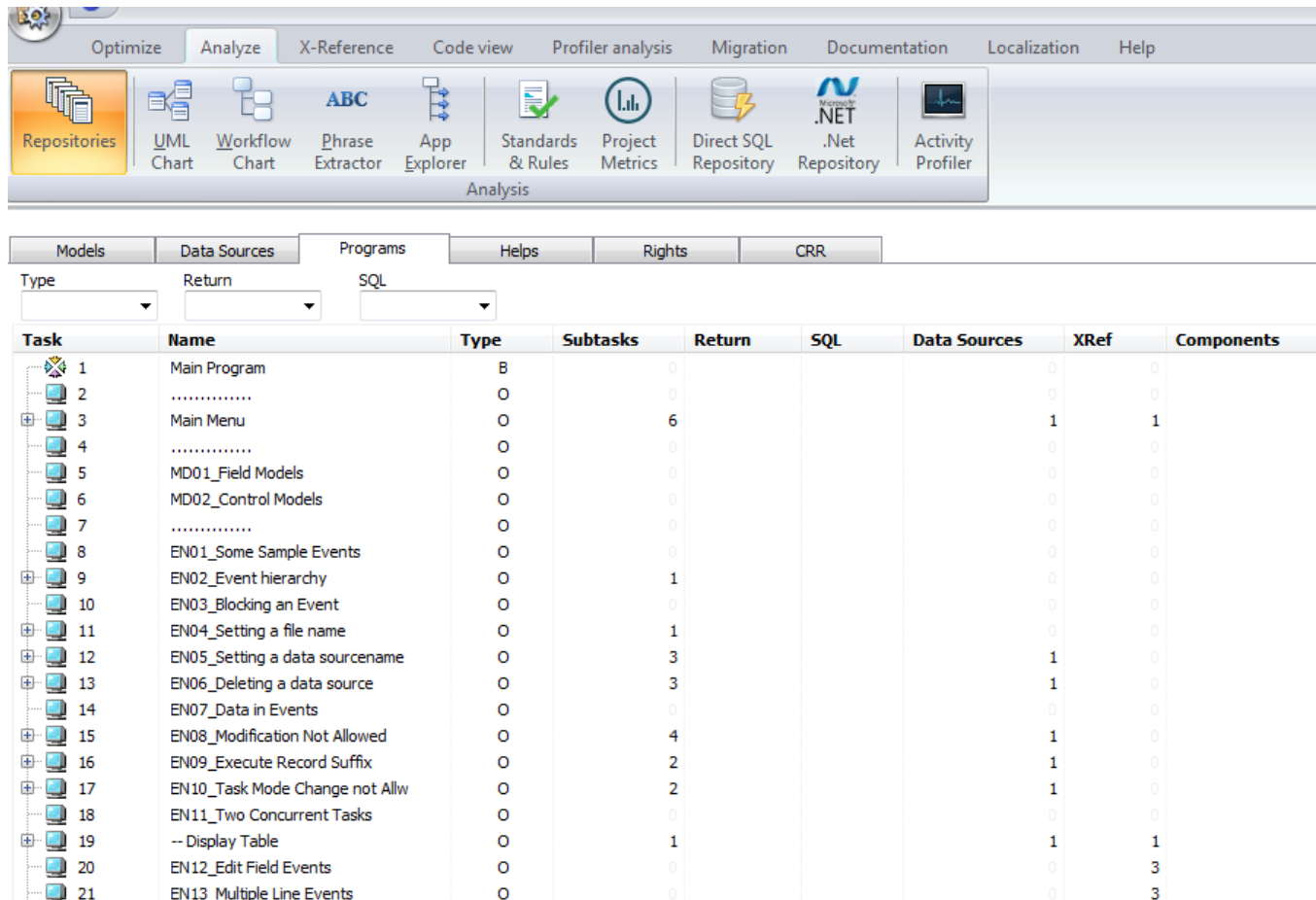
Below the table is the 'Properties' window for 'Field_1 Edit Control'. The 'Control Name' property is highlighted in yellow and set to 'Field_1'. Other properties include 'Allow Drop' (False), 'Allow Parking' (True), 'Allowed Direction' (Both directions), 'Attribute' (Alpha), 'Auto Wide' (False), 'Border' (True), 'Color' (2), 'Context Menu', 'Control's Layer' (0), and 'Data' (D).

Magic Optimizer will report on any Event Handlers that use control names that do not exist on any of the Task's Forms.

New: Repositories

Repositories view shows all Repositories and analytical details such as **cross reference count** and other important **analytical information**.

All repositories and be **sorted** and **ranged** by important information.

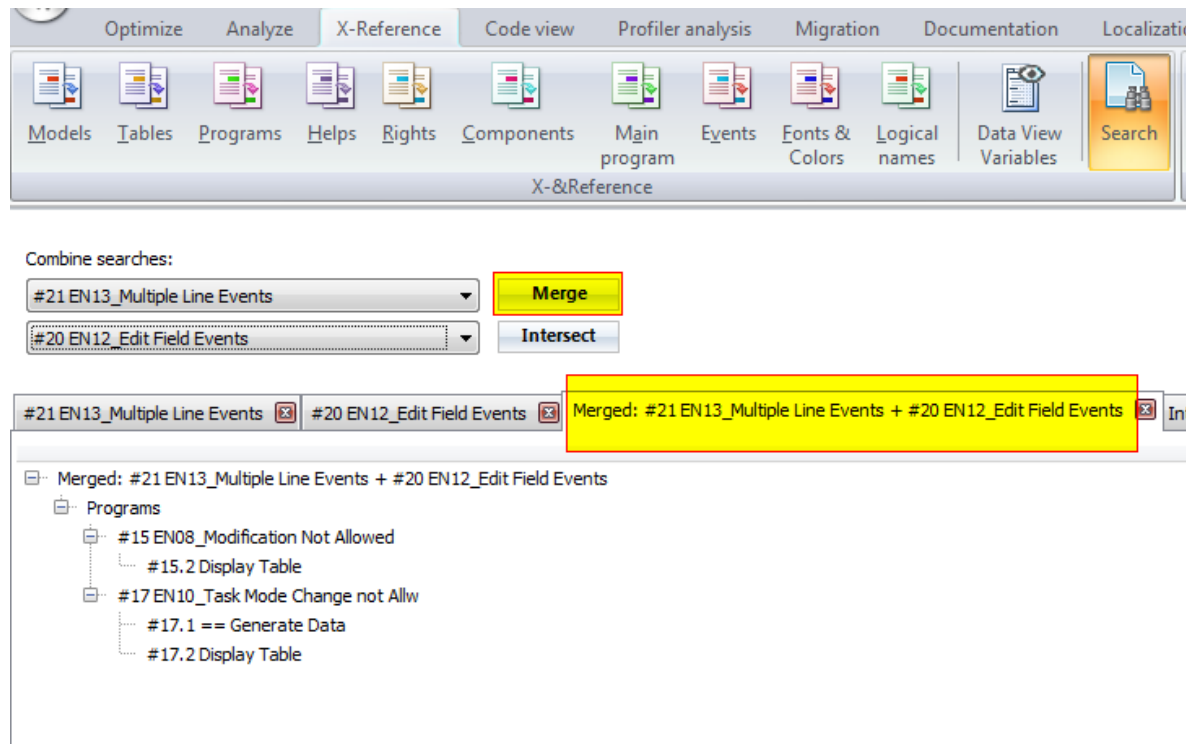


Task	Name	Type	Subtasks	Return	SQL	Data Sources	XRef	Components
1	Main Program	B		0		0	0	
2	.....	O		0		0	0	
3	Main Menu	O	6			1	1	
4	.....	O		0		0	0	
5	MD01_Field Models	O		0		0	0	
6	MD02_Control Models	O		0		0	0	
7	.....	O		0		0	0	
8	EN01_Some Sample Events	O		0		0	0	
9	EN02_Event hierarchy	O	1			0	0	
10	EN03_Blocking an Event	O		0		0	0	
11	EN04_Setting a file name	O	1			0	0	
12	EN05_Setting a data sourcename	O	3			1	0	
13	EN06_Deleting a data source	O	3			1	0	
14	EN07_Data in Events	O		0		0	0	
15	EN08_Modification Not Allowed	O	4			1	0	
16	EN09_Execute Record Suffix	O	2			1	0	
17	EN10_Task Mode Change not Allw	O	2			1	0	
18	EN11_Two Concurrent Tasks	O		0		0	0	
19	--Display Table	O		1		1	1	
20	EN12_Edit Field Events	O		0		0	3	
21	EN13 Multiple Line Events	O		0		0	3	

New: Merge, Intersect XReference results

This view allows **combining cross reference results**, by **merging** or **intersecting** 2 cross reference results. We can merged to see which programs are being used combined by 2 different tables, or Intersect to see which programs use both 2 tables at the same time.

Merge, Intersect can be used on any cross reference result, models, Data Sources, Programs, Helps, Rights, Components, Main Program details, Events, Font & Colors and Logical Names results.



The screenshot shows the X-Reference tool interface. The 'X-Reference' tab is active, and the 'Combine searches:' section is visible. Two search results are selected: '#21 EN13_Multiple Line Events' and '#20 EN12_Edit Field Events'. The 'Merge' button is highlighted in yellow, and the 'Intersect' button is also visible. Below the buttons, the merged results are displayed in a tree view under the heading 'Merged: #21 EN13_Multiple Line Events + #20 EN12_Edit Field Events'. The tree view shows the following structure:

- Merged: #21 EN13_Multiple Line Events + #20 EN12_Edit Field Events
 - Programs
 - #15 EN08_Modification Not Allowed
 - #15.2 Display Table
 - #17 EN10_Task Mode Change not Allw
 - #17.1 == Generate Data
 - #17.2 Display Table

Ocean Software Solutions is a software company, developing tools for Magic Software developers, for Magic XPA, uniPaaS and Magic eDeveloper projects.

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