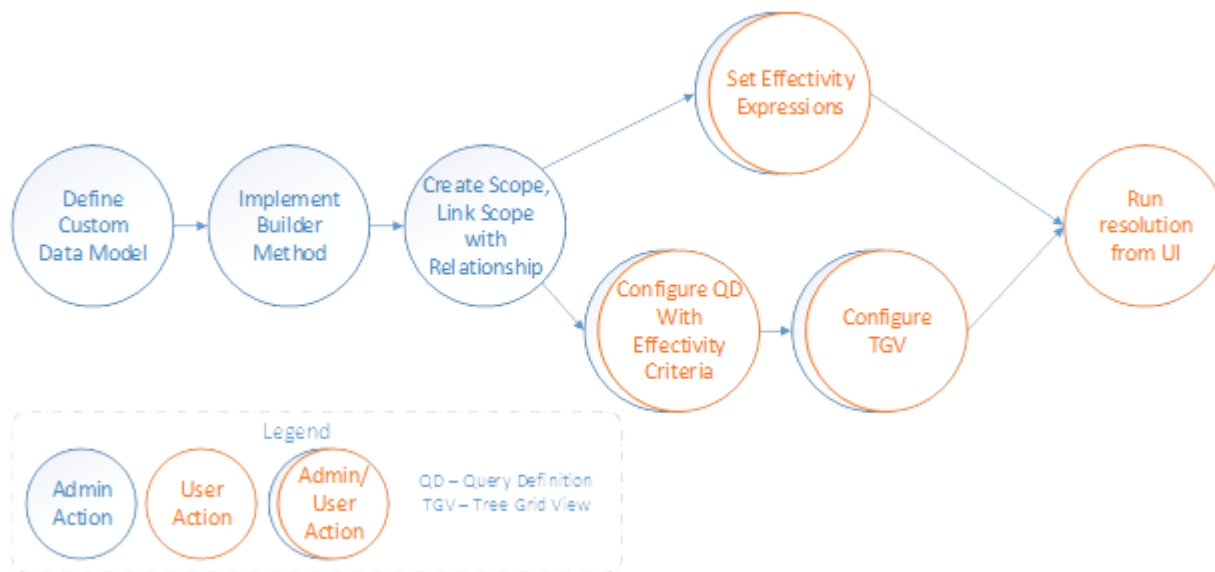


Configuring Effectivity Services

This section provides a brief description of what needs to be configured in Effectivity Services to use it with Query Builder and Tree Grid View. A more detailed description can be found in subsequent sections.



Administrator Actions

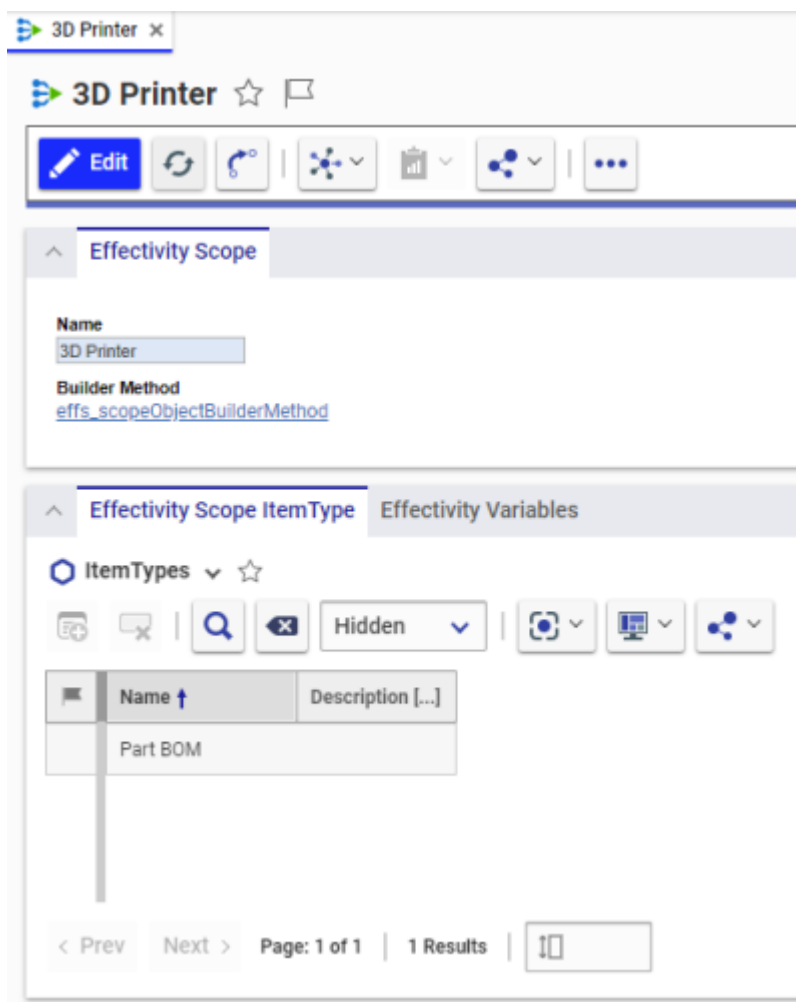
Administrators are responsible for the following tasks:

- Define Custom Data Model – Define business item types to be used to build the Effectivity Scope. These can be item types for effectivity variables, relationships where effectivity information is managed.
- Implement builder method - Implement the server method that builds the Scope object from custom Data.
- Create Scope – Add effs_scope Item, specify Name and builder method. Link custom Data to Scope if needed.
- Link Scope with Relationship – Add the effs_scope_itemtype Item. Link Scope and Relationship ItemType that need to be managed by effectivity.

Setting up Effectivity Scope

This section describes how to configure Effectivity Scope to manage Effectivity on selected Relationship ItemTypes.

1. Create an Effectivity Scope item to define a context. Select **Administration** → **Effectivity Services** → **Effectivity Scope** in the TOC.
2. Select the **Builder Method**. Method `effs_scopeObjectBuilderMethod` is provided out of the box and is used to construct a Scope object based on related **Effectivity Variables**.
3. Select **Effectivity Scope ItemTypes** where effectivity will be managed.
4. Select **Effectivity Variables** for the Scope by creating or using existing **Effectivity Variables**.
5. Save the **Effectivity Scope**.



The new **Effectivity** (effs_*EffectivityScopeItemType*_expression) **No Related** relationship ItemType is created automatically. With this configuration, an **Effectivity** tab appears on the **EffectivityScopeItemType** form.

Important

You can have any number of different Relationships in the same Effectivity Scope. If the automatically generated RelationshipType name (“effs_%ITEMTYPE%_expression”) is longer than 30 characters, you will not be able to create the relationship in the relationship grid. In this case, you can either manually enter the name on the **Effectivity Scope ItemType** form (by selecting Effectivity Scope ItemType, RMB → Open) or send an AML request with the explicitly specified property “name” to create the RelationshipType. The length of the property “name” value should not exceed 13 characters.

6. Log out of Aras Innovator and login again as new relationship ItemTypes are created automatically unless they already exist.

Administrator/User Actions

Both Administrators and Users can perform the following actions:

- Set Effectivity Expressions – Create the effs_*#ItemType#*_expression Item with an Effectivity Expression for a selected Relationship Item.
- Configure Query Definition to work with Effectivity Criteria – Create a Query Definition that selects your data using the specified criteria expression.
- Configure Tree Grid View to display returned data – Create a Tree Grid View configuration that shows the data returned from executing the Query Definition.

Configuring Effectivity Resolution

Using Query Builder with Effectivity Services, resolved item structures can be presented in a Tree Grid View. For additional information about Query Builder, refer to the Aras Innovator 40 – Query Builder Guide. For additional information about Tree Grid View, refer to the Aras Innovator 40 – Tree Grid View Administrator Guide.

Important



In this guide, the Part BOM ItemType is used as an example to explain Effectivity Services. The user interface (UI) does not reflect the actual UI in the Product Engineering application.

This section describes the following use cases using Effectivity Services combined with Query Builder and Tree Grid View:

- Resolving a Part BOM structure for the given effectivity criteria.
- Viewing all parts in a Part BOM structure that are a) effective for the criteria contained in the specified Effectivity Scope and b) have no Effectivity Expressions in the specified Effectivity Scope.

Before you can configure a **Query Definition** and a **Tree Grid View**, you need to:

- Define the business data that will be converted to Variables and Named Constants by the Builder Method.
- Implement the Builder Method.
- Create the Effectivity Scope.
- Relate a Relationship ItemType to the Effectivity Scope instance.

To follow the example in this section the Administrator has already defined the following structural elements:

- The Effectivity Scope item “3D Printer”. The Effectivity Scope item has the Relationship ItemType “Part BOM” as the Effectivity Scope ItemType.
- The Effectivity Variables associated with the Effectivity Scope item:
 - Model – is an Item Variable with effs_model ItemType. “Replicator” and “Replicator 2” items were created in the **Administration** → **Effectivity Services** → **Models** TOC category which means this Effectivity Variable has only two possible Named Constants (“Replicator” and “Replicator 2”), which can be assigned to it.
 - Unit – is an Integer Variable. That means any appropriate integer value can be assigned to this Effectivity Variable.
 - Production Date – is a Date Variable. That means any appropriate date value can be assigned to this Effectivity Variable.

Creating a Query Definition to Filter by Effectivity

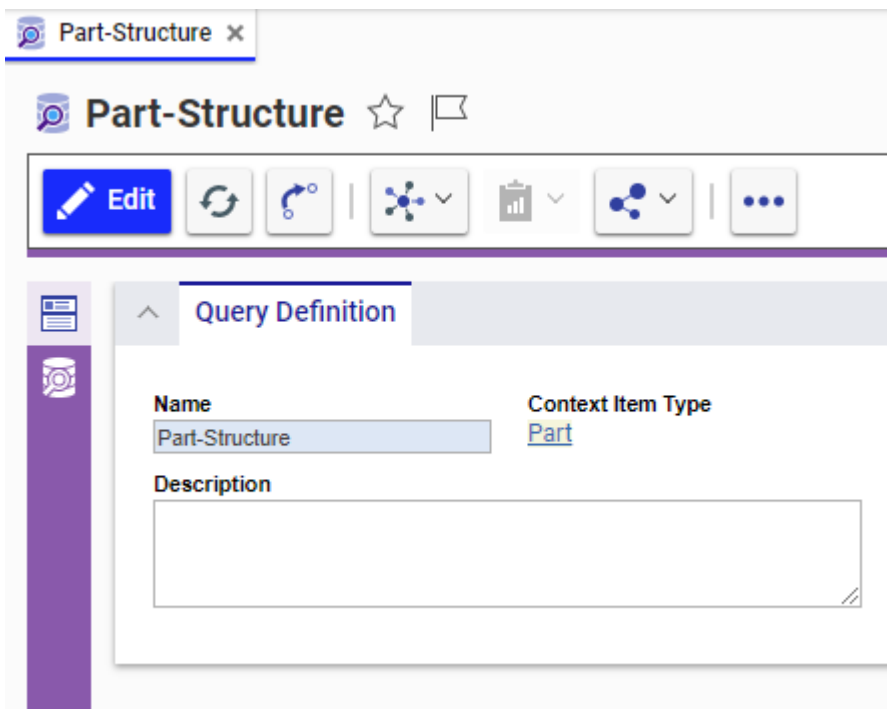
A Query Definition is a fundamental element to retrieve data from the server.



In this section we use the **Part** → **Part BOM** structure to show how Effectivity Services can be used.

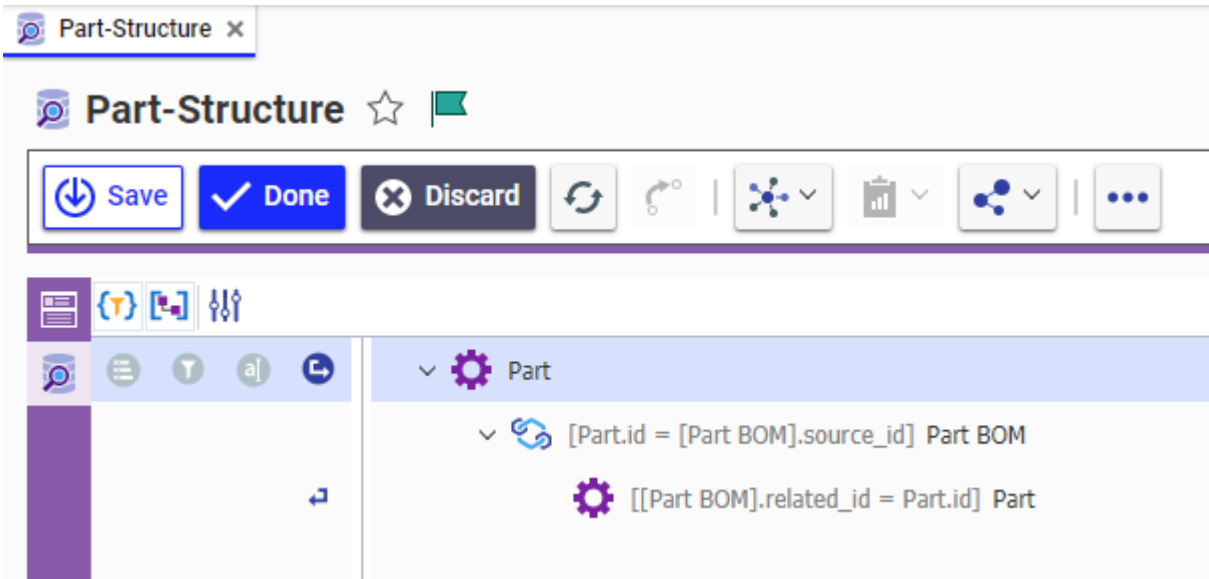
Creating the Query Definition

1. Select **Administration** → **Configuration** → **Query Definitions** in the TOC.
2. Click **Create New Query Definition**.
3. Enter a value in the **Name** field.
4. Click on the ellipses in the Context ItemType dialog to search for a **Context Item Type**. Once you select the ItemType and save the form, the selected ItemType appears as a link as shown here.

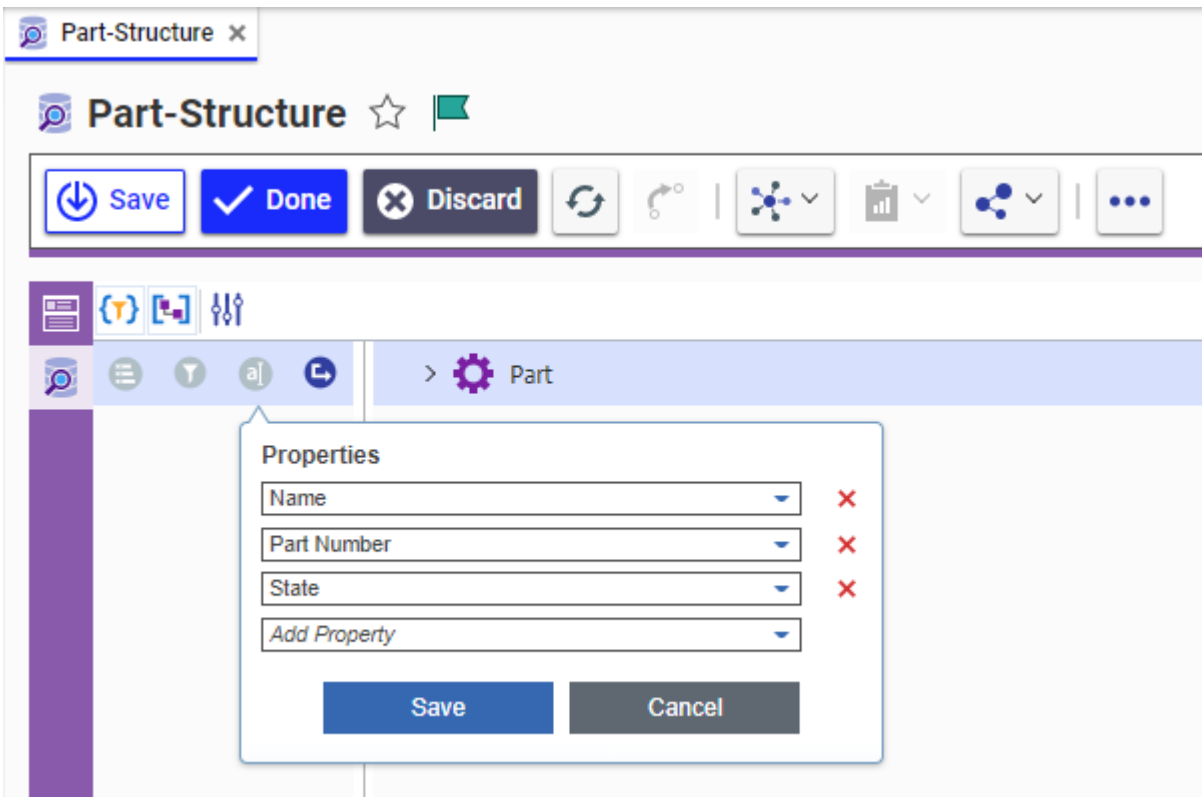


The screenshot shows a web application interface for creating a query definition. At the top, there is a tab labeled 'Part-Structure' with a close button. Below the tab is a header bar with the title 'Part-Structure' and icons for a star and a flag. A toolbar contains several icons: an 'Edit' button, a refresh icon, a circular arrow icon, a dropdown menu with a network diagram icon, a dropdown menu with a bar chart icon, a dropdown menu with a network diagram icon, and a three-dot menu icon. Below the toolbar is a sidebar with a list icon and a camera icon. The main content area is titled 'Query Definition' and contains a form with the following fields: 'Name' (containing 'Part-Structure'), 'Context Item Type' (containing a link to 'Part'), and 'Description' (a large empty text area).

5. Click the **Show Editor** button on the left sidebar to switch to Query-Editing Mode. Build a recursive Part structure using the Part BOM relationship.

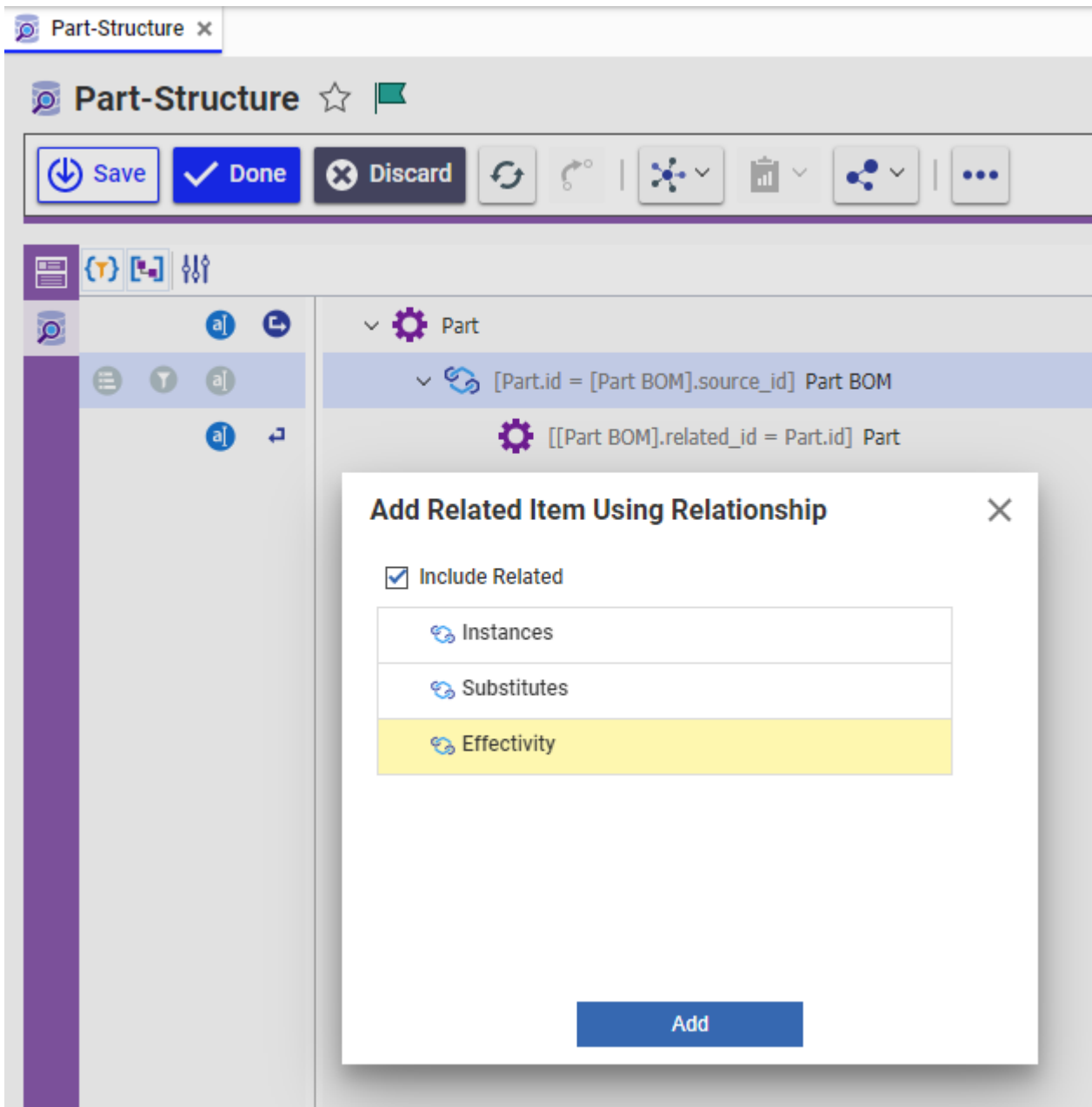


6. Select the properties that you want the query to return. Let's select the following properties for Part:



Defining Effectivity Criteria

To define effectivity criteria, add the corresponding “Effectivity” relationship (effs_Part_BOM_expression), where Effectivity Conditions are saved.



1. Add the **Effectivity** relationship twice with different aliases as shown in Figure 13.
2. Use the Relationship with the **effs_Part_BOM_expression** alias for structure resolution by effectivity.



3. Use the Relationship with the **effs_Part_BOM_expr_no_resolve** alias to check if the Part BOM item has any “Effectivity” relationship Items for the specified Scope.

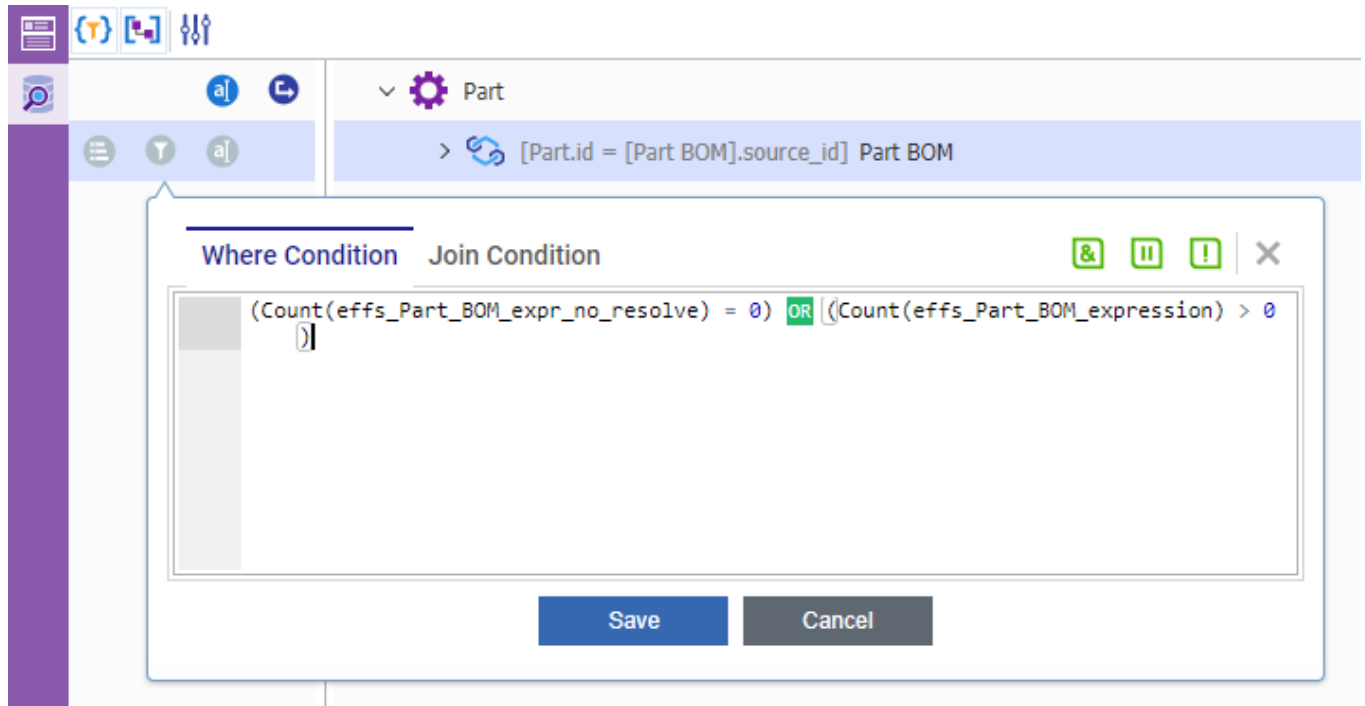


These two aliases will be used in the where condition on the **Part BOM** query item.

4. Add a where condition to the “Part BOM” query item. The “(Count(effs_Part_BOM_expr_no_resolve) = 0) OR (Count(effs_Part_BOM_expression) > 0)” condition allows us to get the related part in case the Part BOM item does not have any effectivity relationships (Count(effs_Part_BOM_expr_no_resolve) = 0), or it has at least one effectivity expression resolved to true for the given effectivity resolution criteria/condition (Count(effs_Part_BOM_expression) > 0).

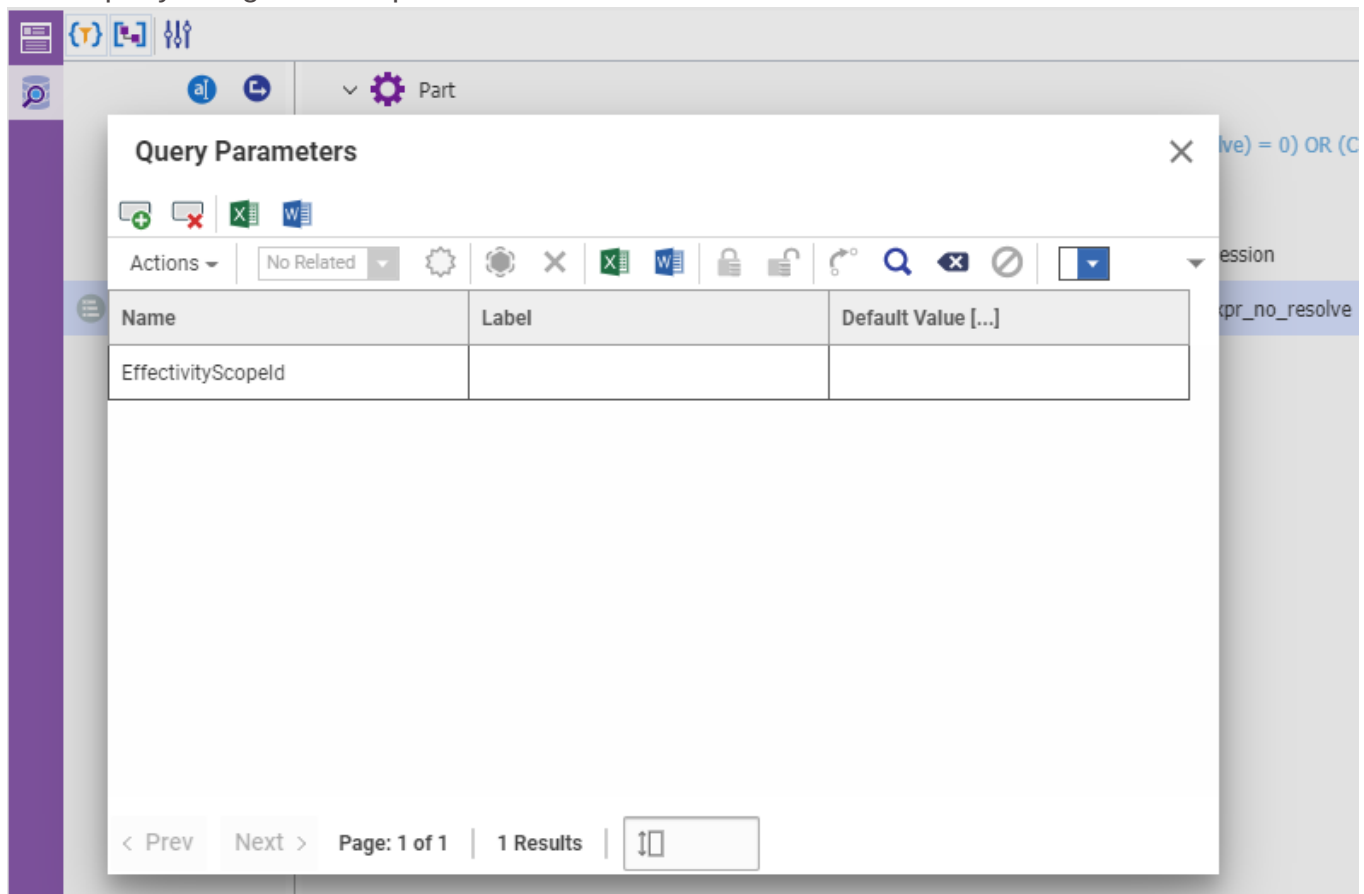
Important

It is recommended to use only the “Count” aggregate function for effectivity relationships to prevent performance degradation.



5. Add a where condition "Scope = \$EffectivityScopeld" on the "effs_Part_BOM_expr_no_resolve" query item filtering by the "Scope" property.
The "Scope" value must match the ID of the scope which is provided via \$EffectivityScopeld Query Parameter created for this Query Definition. Query parameters allow us to execute the

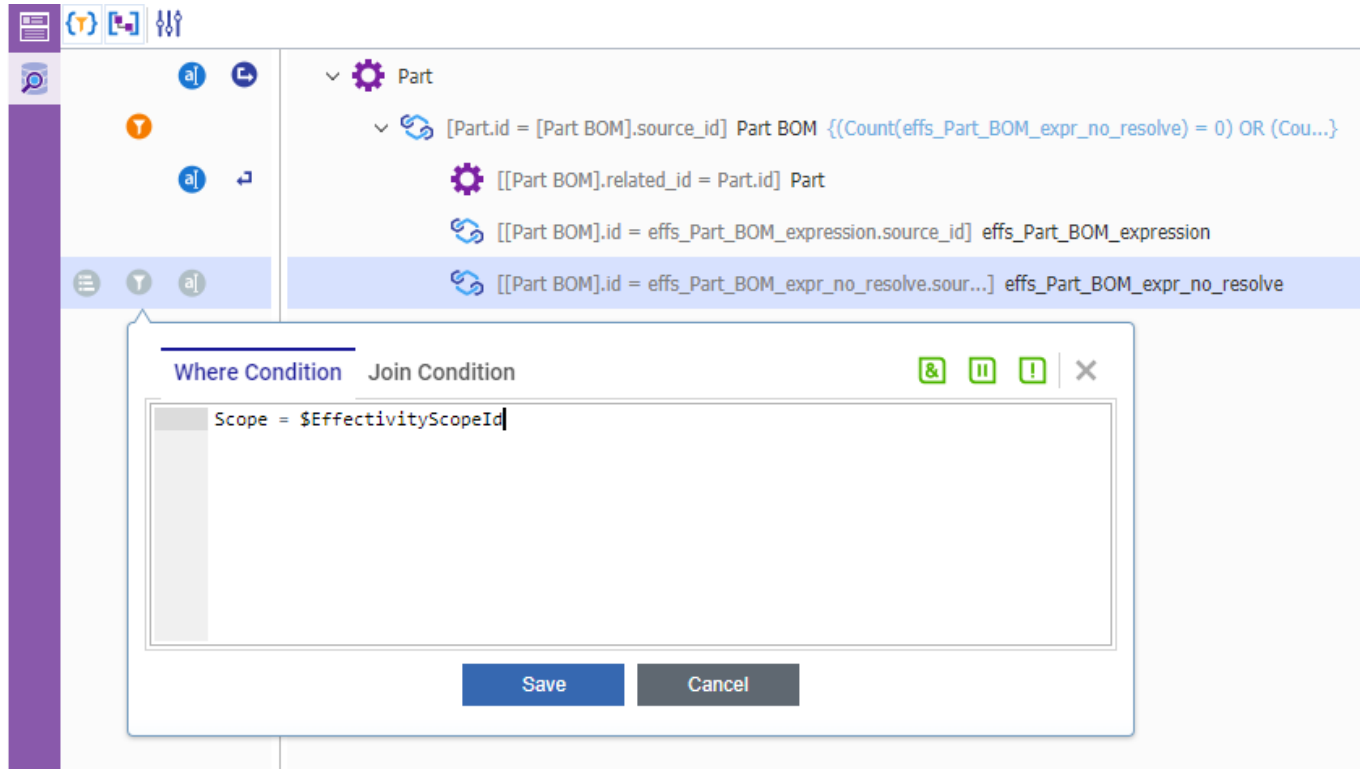
same query using different parameter values.



Important

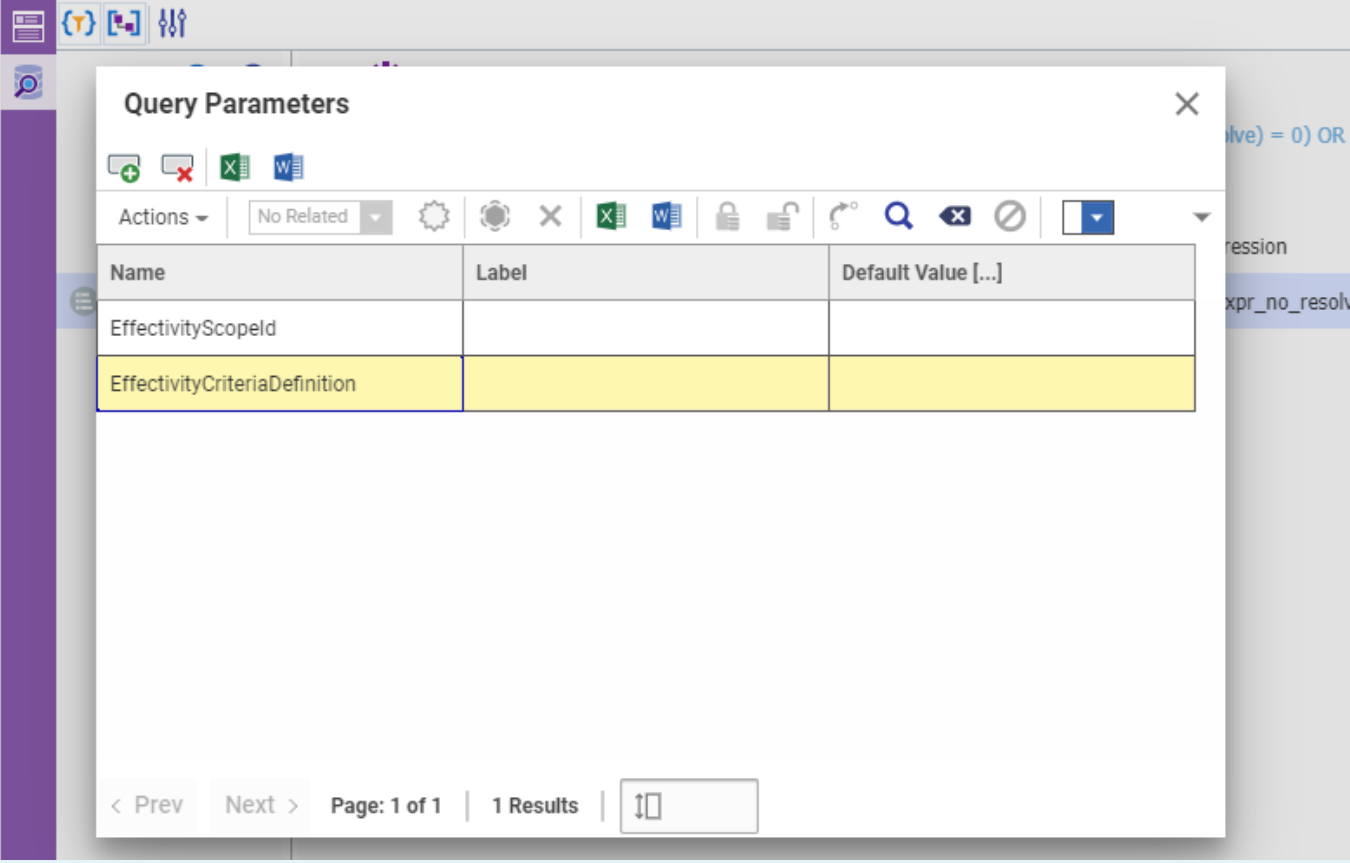
Default Value can be provided for the \$EffectivityScopeld Query Parameter. The Parameter name should be exactly "EffectivityScopeld" to be compatible with Effectivity Resolution via Effectivity Criteria Filter dialog.

This condition gives us Part BOMs that have no configured Effectivity Expression in the current Scope.



6. Add a where condition “(Scope = \$EffectivityScopeId) AND (Definition = '<expression>\$EffectivityCriteriaDefinition</expression>’)” on the “effs_Part_BOM_expression” query item filtering by the “Scope” and “definition” properties.
 The “Scope” value must match the ID of the scope which is provided via \$EffectivityScopeId Query Parameter created for this Query Definition.
 The Definition property value must contain an effectivity expression with Effectivity Criteria which is provided via \$EffectivityCriteriaDefinition Query Parameter created for this Query

Definition.



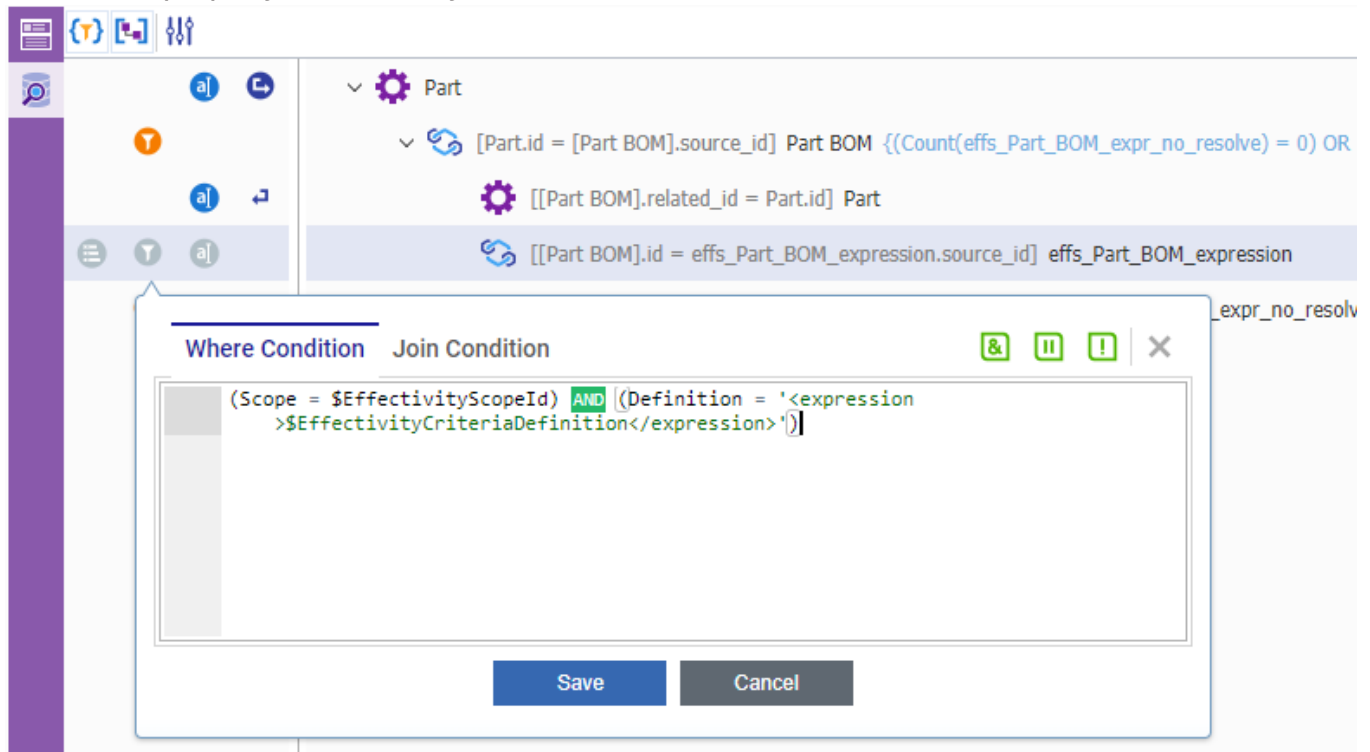
Name	Label	Default Value [...]
EffectivityScopeld		
EffectivityCriteriaDefinition		

Important

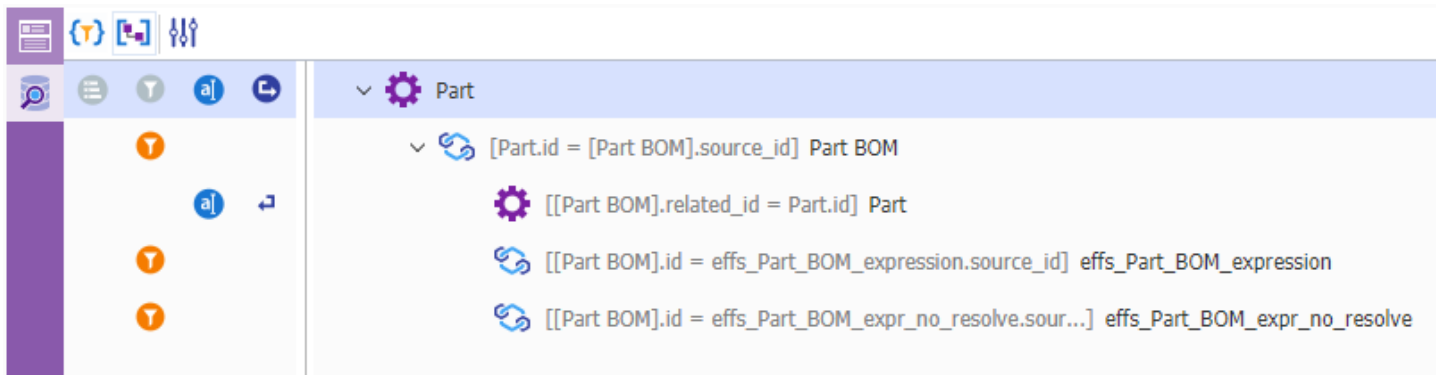
The Parameter name should be exactly “EffectivityCriteriaDefinition” in order to be compatible with Effectivity Resolution via the Effectivity Criteria Filter dialog.

This condition gives us Part BOMs that have a configured Effectivity Expression in the current Scope. The configured Effectivity Expression corresponds to the Effectivity Criteria from the

“definition” property of the Query Item.



7. Confirm that all conditions are set correctly. The final version of the effectivity query definition is as follows:



Creating a Tree Grid View to Display Effective Items

Tree Grid View is standard functionality for Aras Innovator. It offers a visual layout of the data as a Relationship tab in an item view. In this example Tree Grid View uses the Query Definition created in the previous section to resolve the Part BOM structure and display the result in the grid.

Creating a Tree Grid View Item



1. Go to **TOCAdministration** → **Configuration** → **Tree Grid Views**.
2. Click **Create New Tree Grid View**.
3. Enter a value in the **Name** field.
4. Specify the query definition in the **Query Definition** field.

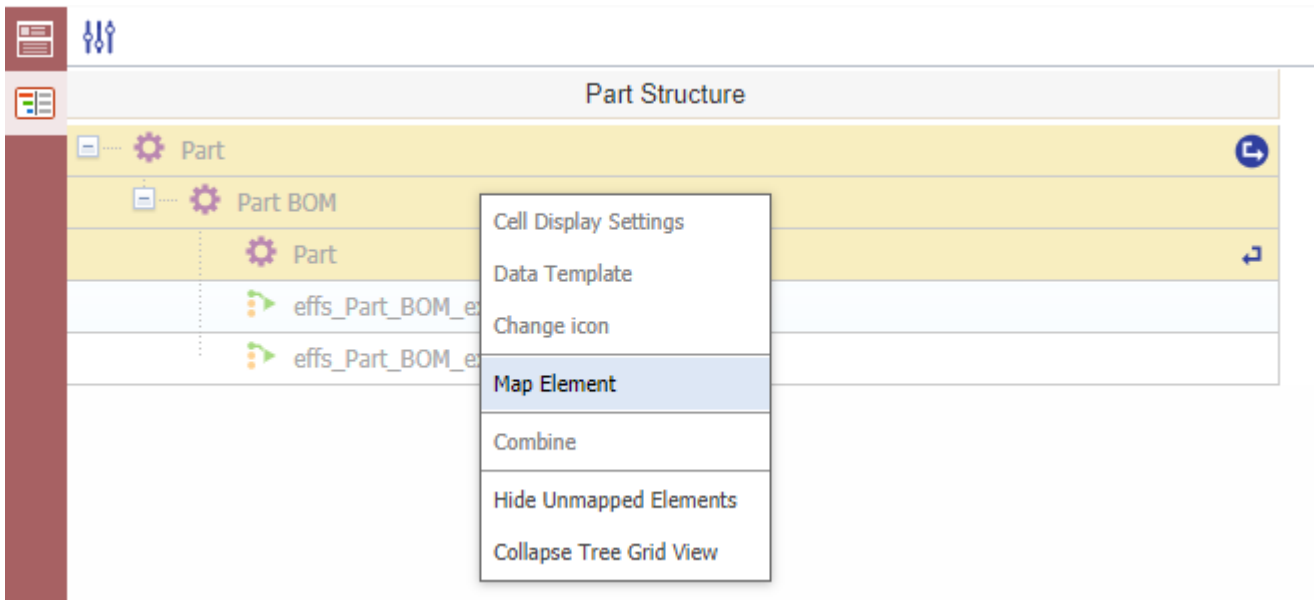
The screenshot shows a web application window titled 'Part Structure' with a close button. Below the title bar is a toolbar with icons for Edit, Refresh, Undo, a tree structure icon, a list icon, a search icon, and a menu icon. The main content area is titled 'Tree Grid View' and contains the following fields:

- Name:** A text input field containing 'Part Structure'.
- Query Definition:** A text input field containing 'Part-Structure'.
- Context Item Type:** A text input field containing 'Part'.
- Description:** A large, empty text area.
- Max Visible Children On Expand:** A text input field containing '100'.
- Max Grow Levels:** A text input field containing '3'.
- Auto Grow On Refresh:** A checked checkbox.
- Linked Toolbar/Context Menu:** A label with no associated input field.

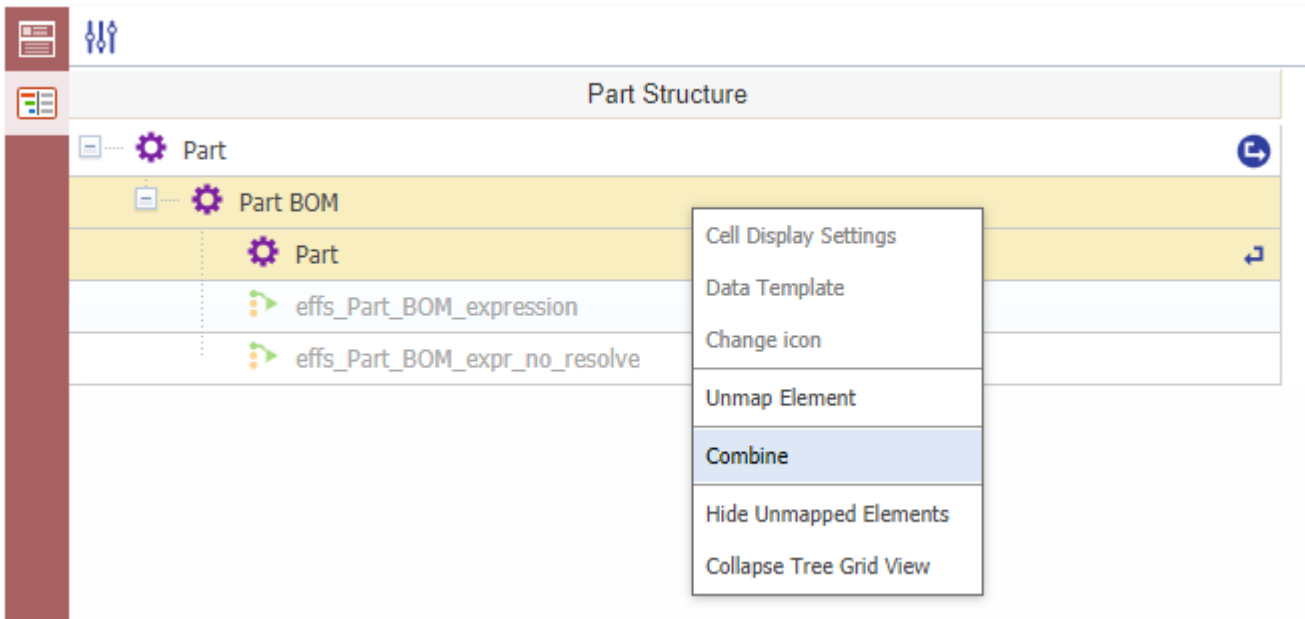
5. Click the **Show Editor** button on the sidebar.



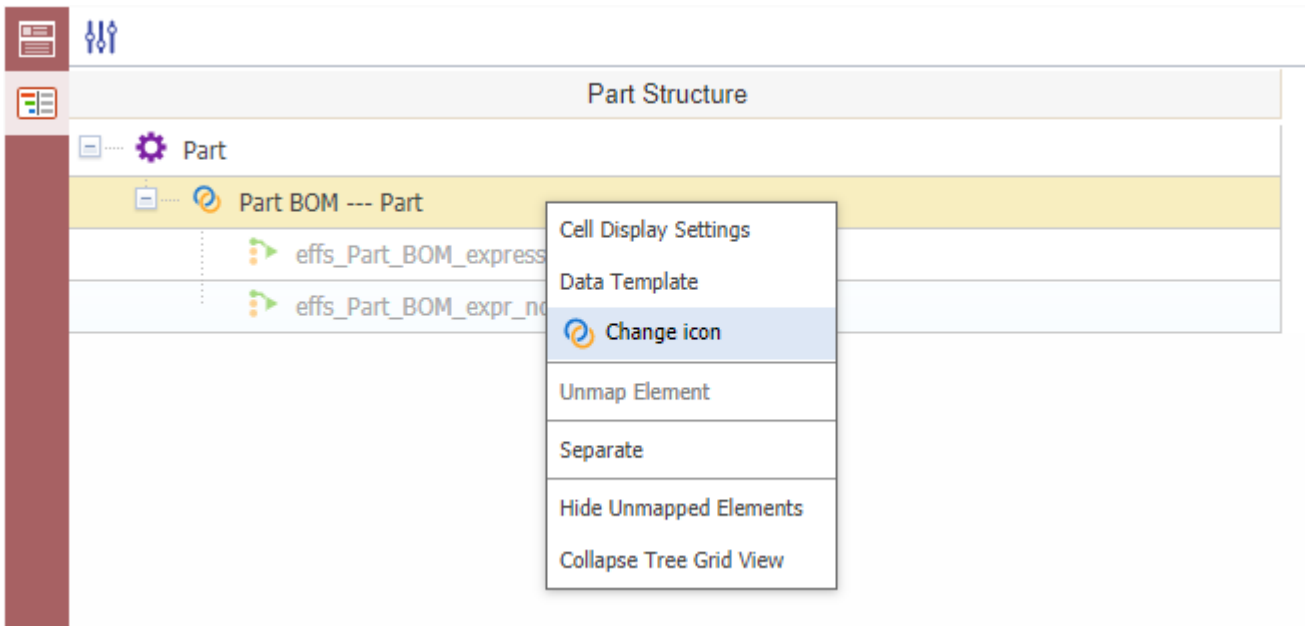
6. Select the “Part”, “Part BOM” and nested “Part” rows, right-click and select **Map Element** from the context menu to include these elements in the tree grid view.



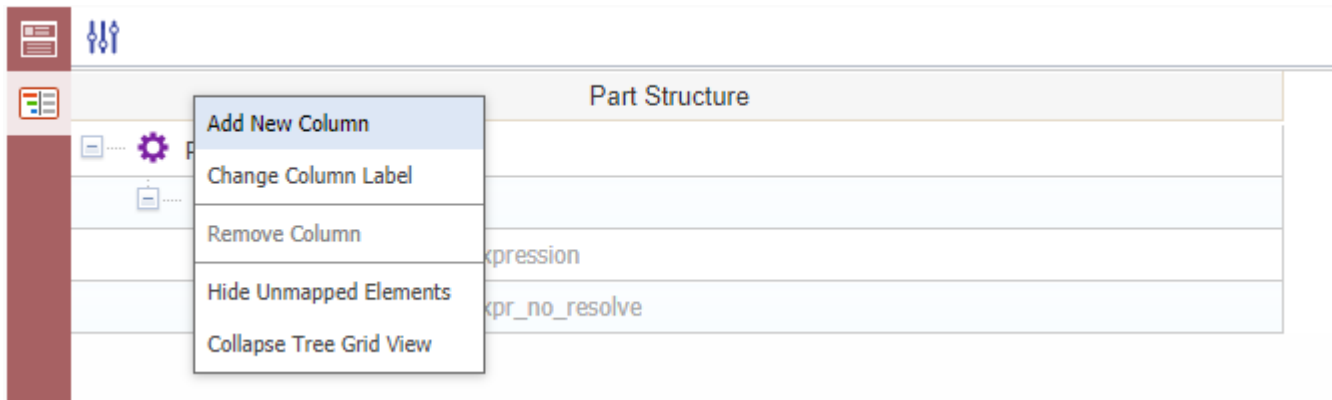
7. Select Part BOM and nested Part elements, right click on them and choose **Combine** from the context menu to combine them into one element for better structure visualization in the Tree Grid View.



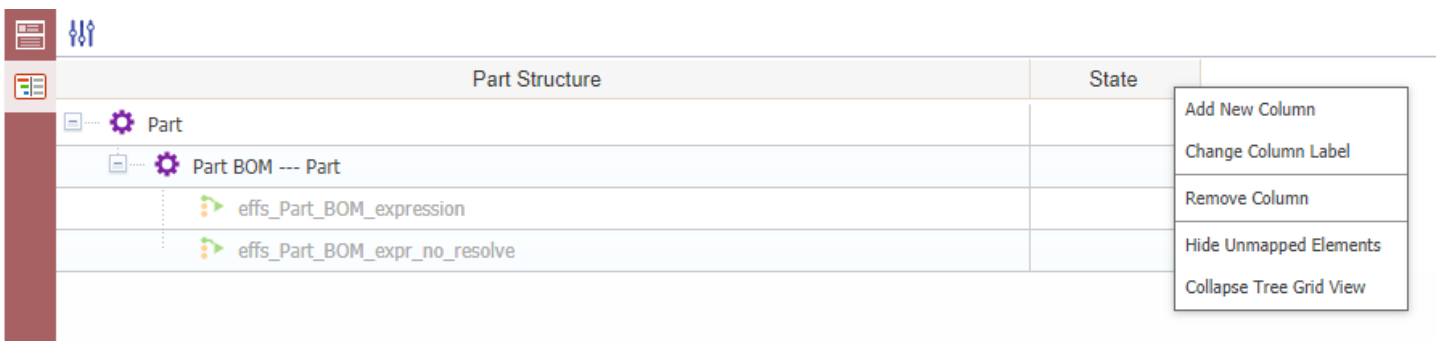
8. Select the row with combined Part BOM and Part elements, right click on it and choose **Change icon** from the context menu to change the standard icon for the combined row.



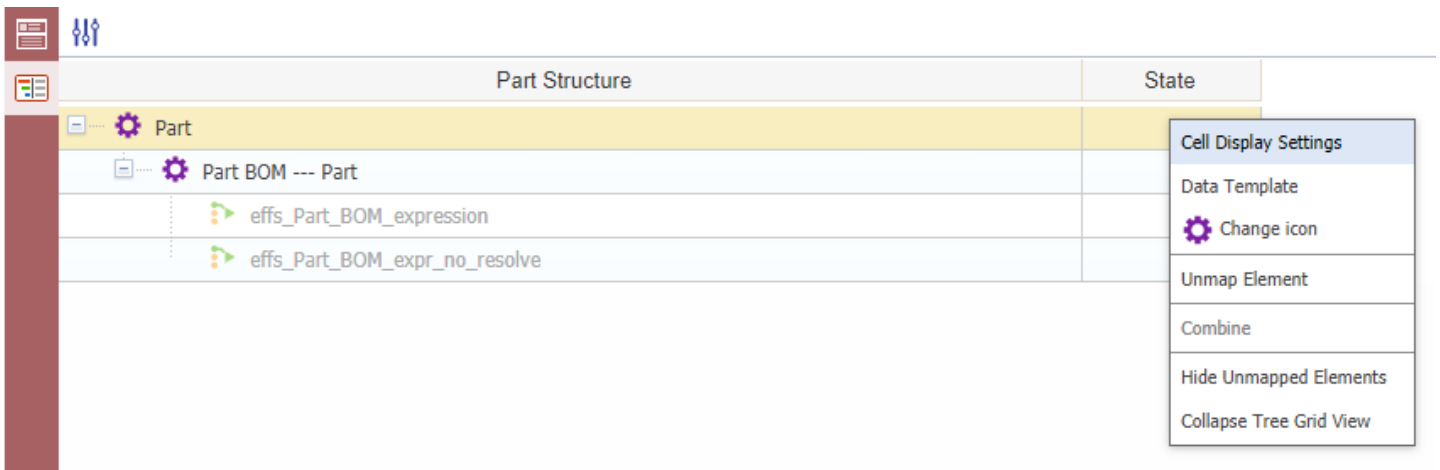
9. Right click on the **Part Structure** column header and select **Add New Column**.



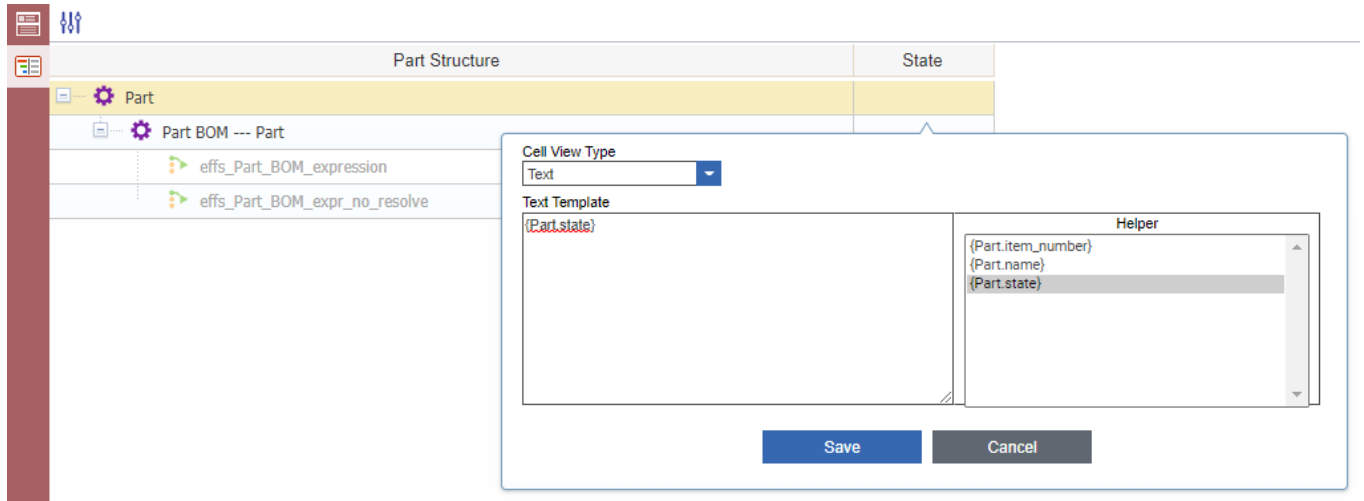
10. Change the new column label to **State**.



11. Select the **State** cell in the Part row, right click on it and choose **Cell Display Settings** from the context menu.



12. Select the **{Part.state}** option in the Helper listbox to set it as the text template for this cell.



13. Set **{Part.state}** as the text template for the “State” cell in the “Part BOM --- Part” row.

Part Structure		State
Part		{Part.state}
Part BOM --- Part		{Part.state}
effs_Part_BOM_expression		
effs_Part_BOM_expr_no_resolve		

14. Add the **Part Number** column and setup display settings as shown here:

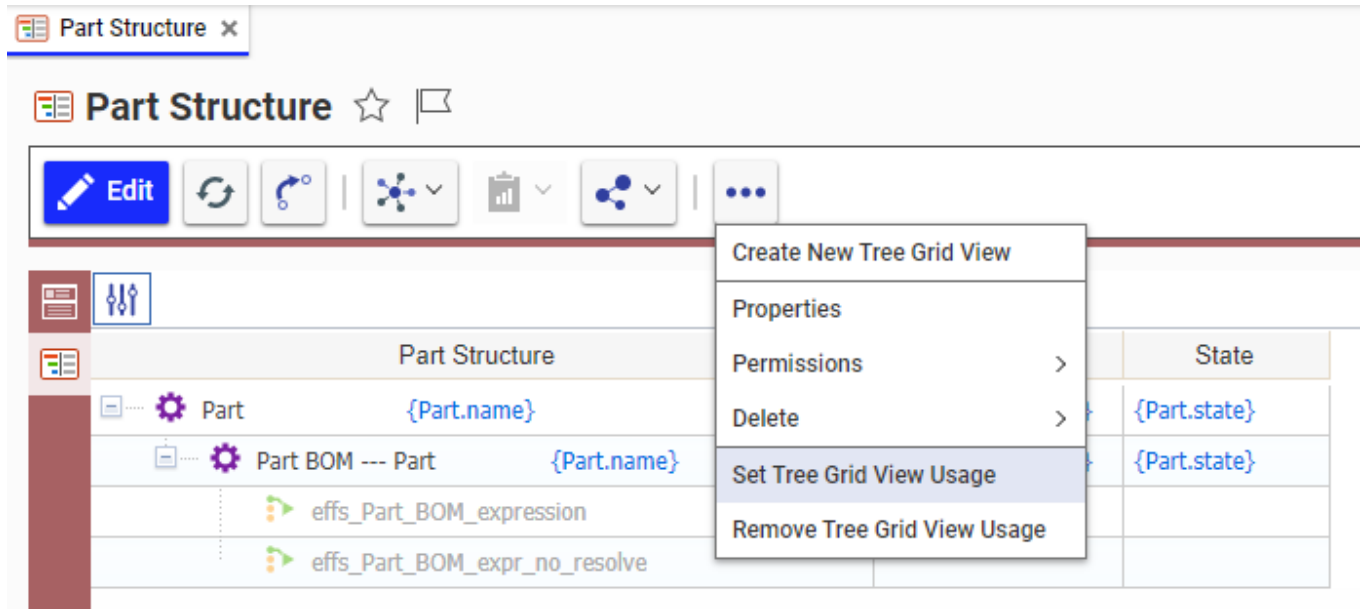
Part Structure		Part Number	State
Part	{Part.name}	{Part.item_number}	{Part.state}
Part BOM --- Part	{Part.name}	{Part.item_number}	{Part.state}
effs_Part_BOM_expression			
effs_Part_BOM_expr_no_resolve			

15. Click **Save** to save your changes.

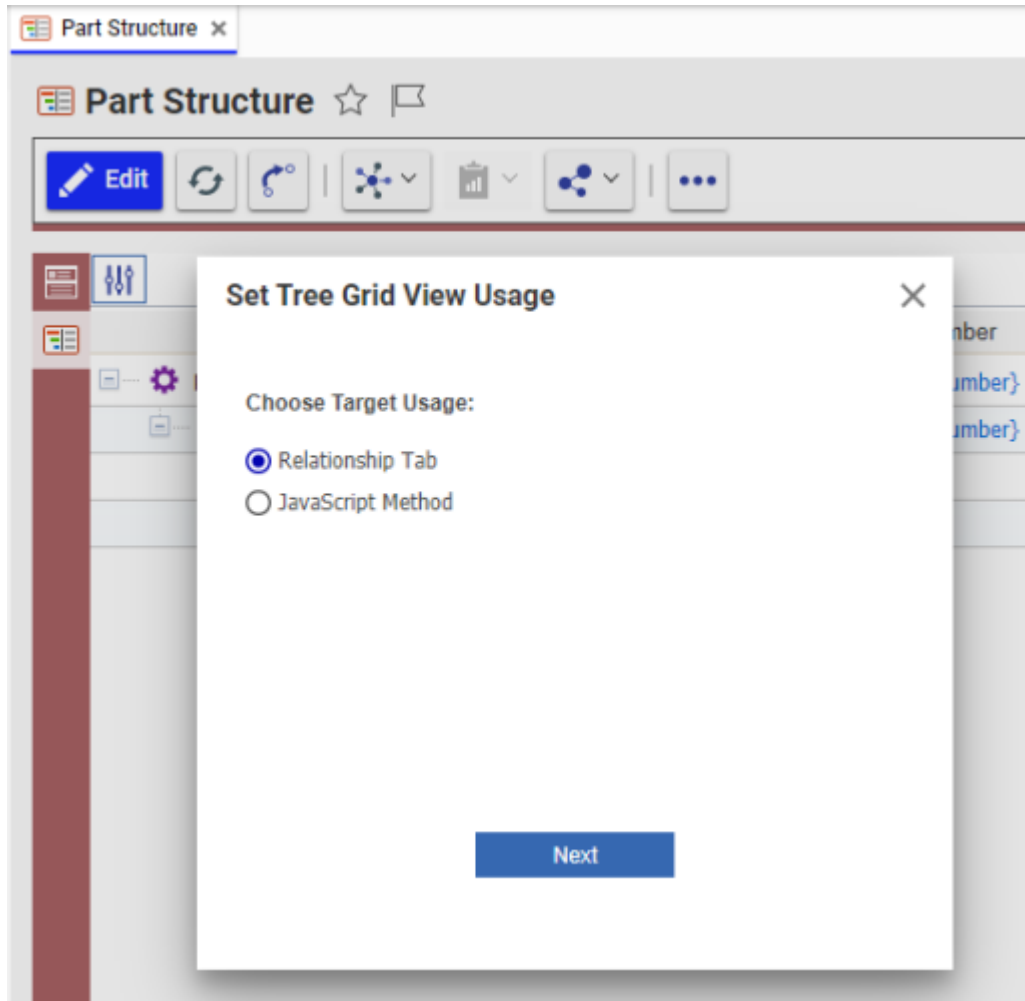
Tree Grid View Usage

1. From the Tree Grid View, click the Actions menu and select **Set Tree Grid View Usage**.

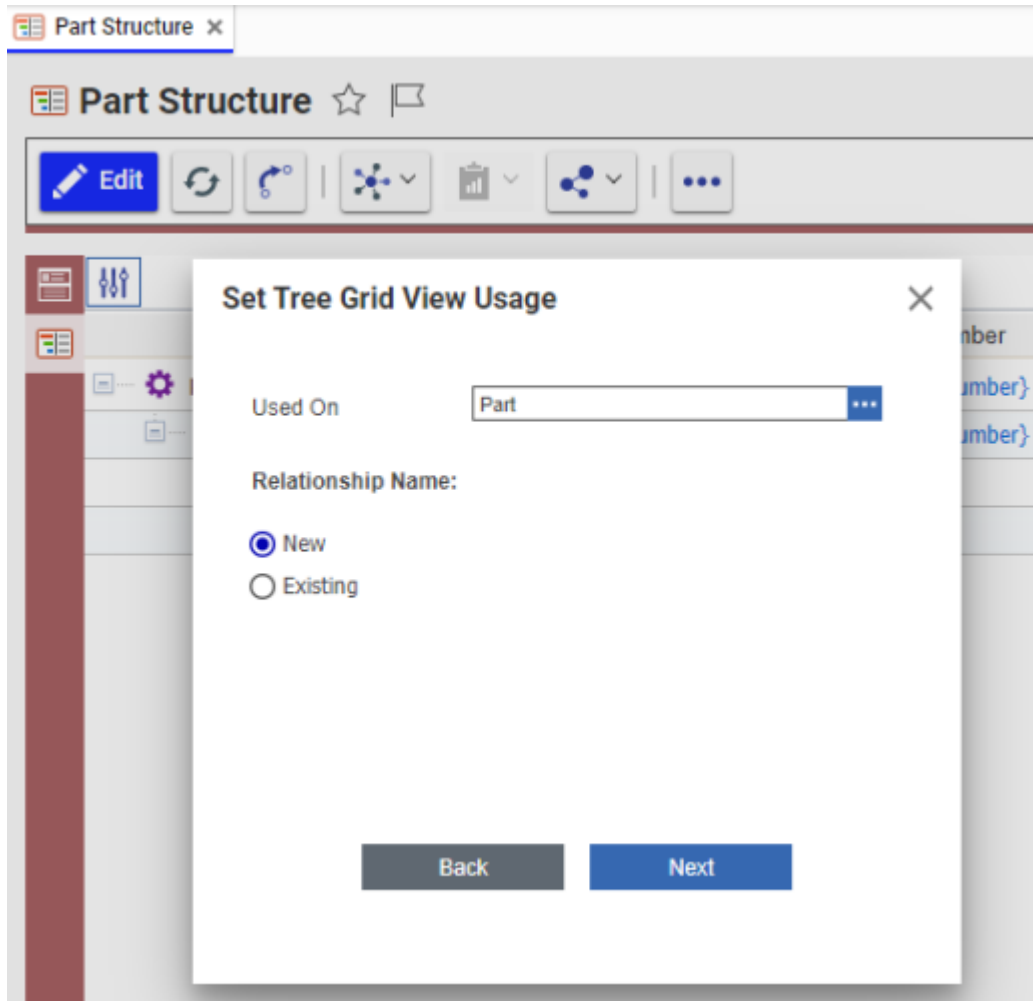




2. Choose the **Relationship Tab** option as the target usage in the Set Tree Grid View Usage dialog box.

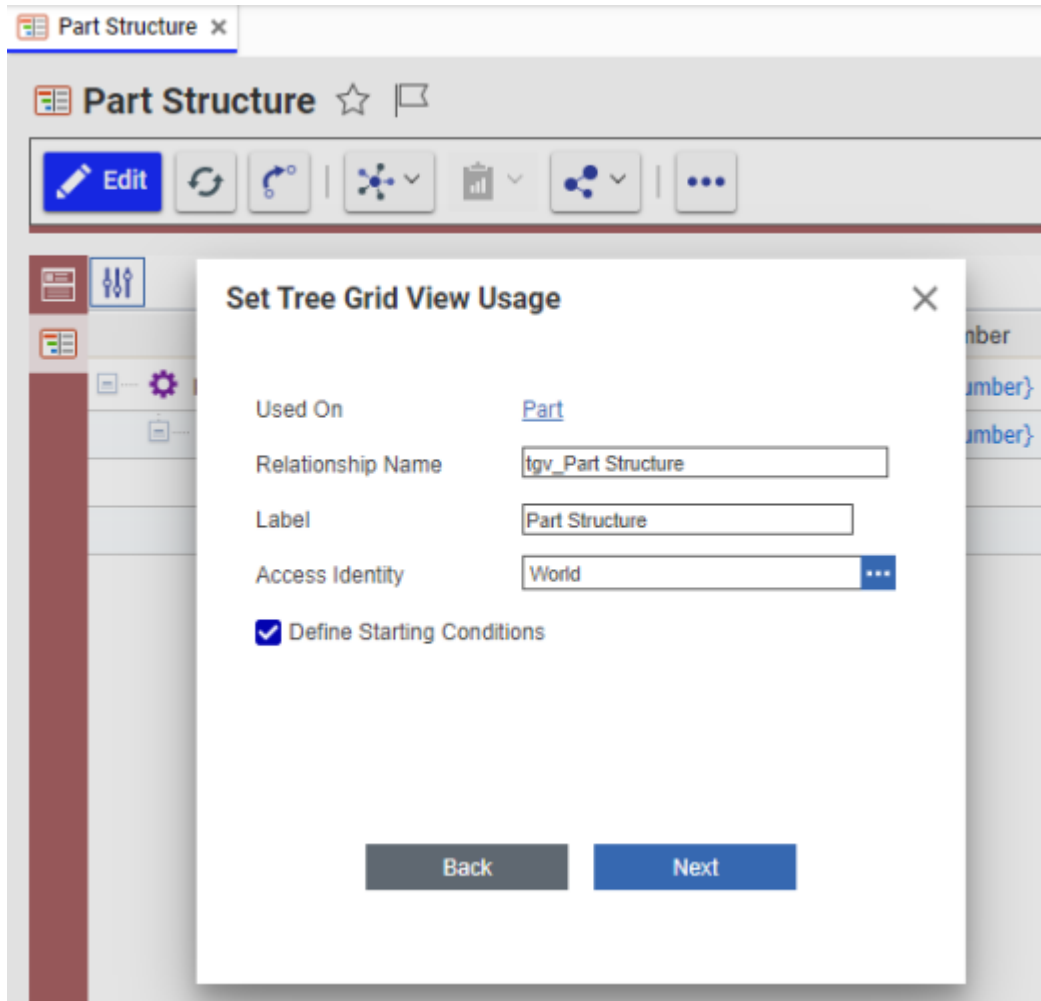


3. Click **Next** to proceed to the next dialog box. Click the ellipses in the **Used On** field and select the ItemType to add to the new relationship. Click **Next**.

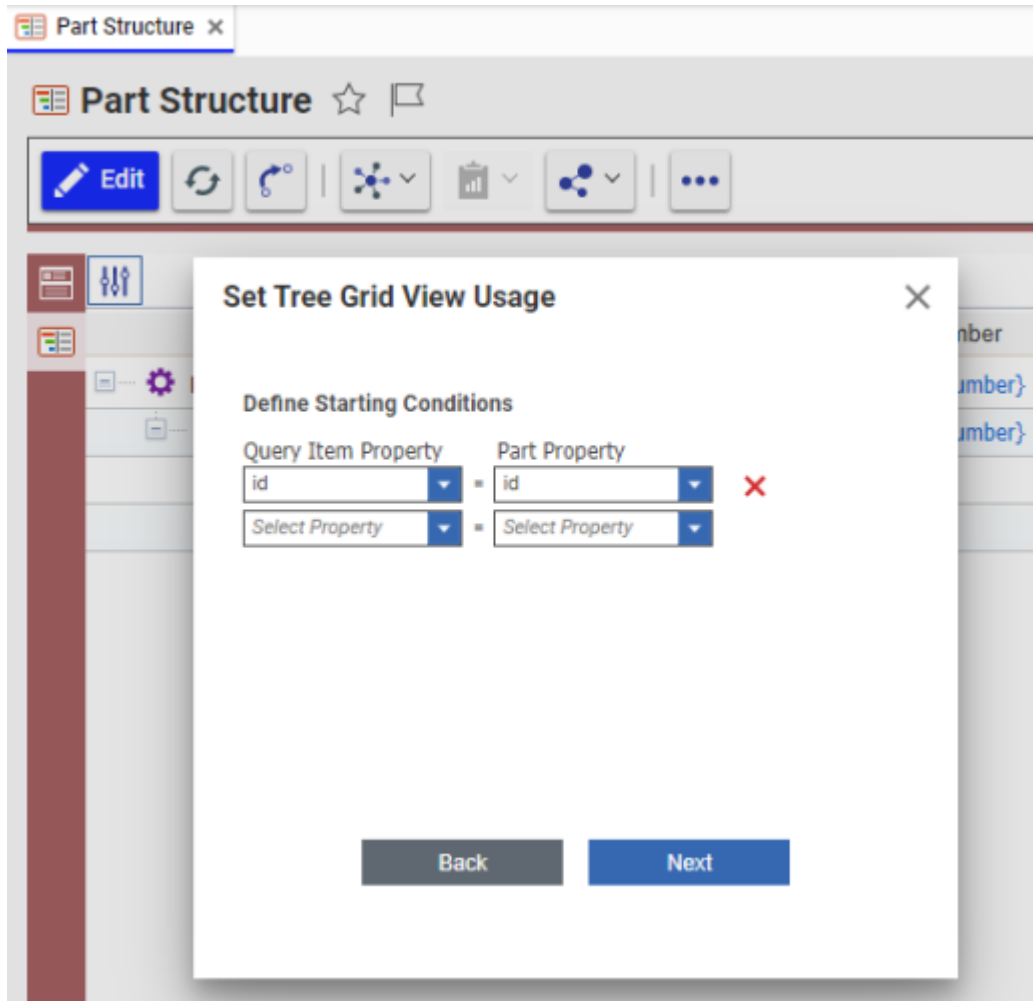


4. Specify the relationship name and label.

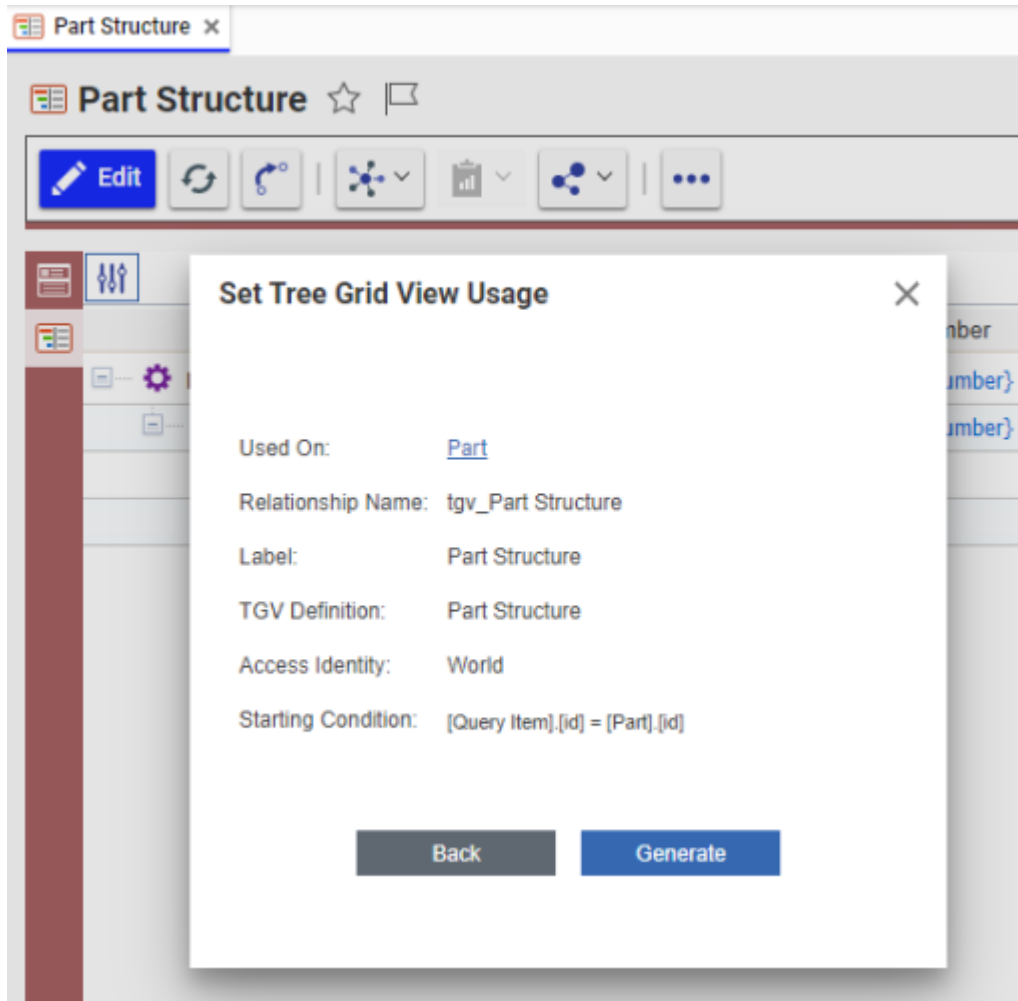




5. Define the starting condition for query definition execution. The Starting condition is applied once to the root item of the query definition. It allows to get the resolved part structure for one part item.



6. Click **Next**. The following dialog box appears:



7. Click **Generate** to create the relationship with the Tree Grid View.

Adding “Set Effectivity Criteria” Button to the Tree Grid View Toolbar

1. Create a Presentation Configuration Item and specify a name for it.
2. In the Command Bar Section relationships tab, select the effs_tgvToolbarCustomization Command Bar Section item. The effs_tgvToolbarCustomization Command Bar Section is provided out of the box and contains the “Set Effectivity Criteria” toolbar button which will be added to the Tree Grid View toolbar in the next steps.



3. Specify a value for the “For Identity” cell and save the Presentation Configuration item.

effs guide configuration

Save

Done

Discard

^

Presentation Configuration

Color

Name

effs guide configuration

^

Command Bar Section

cui_PresentConfigWinSection

Presentation Command

CommandBarSection

Hidden

	Classification	Name	Builder Meth...	Label	Description	Additional Da...	Location [...]	sort_order	For Identity [...]	For Classifica...
	Data Model	effs_tgvToolbarCustomization					TGV_Toolbar	128	World	

Important

If the Presentation Configurations category is not displayed in the TOC, you will need to expose the category by opening the Presentation Configuration ItemType and adding TOC Access for the current user.

4. Open the Tree Grid View item where the **Set Effectivity Criteria** button will be added and specify the just created Presentation Configuration in the **Linked Toolbar/Context Menu** field.



Part Structure ☆

Save

Done

Discard

Tree Grid View

Name

Part Structure

Query Definition

Part-Structure

Context Item Type

Part

Description

Max Visible Children On Expand

100

Max Grow Levels

3

Auto Grow On Refresh

☒

Linked Toolbar/Context Menu

effs guide configuration

- Click **Save** to add the **Set Effectivity Criteria** button to all Tree Grid View toolbars which use this Tree Grid View definition.



MP0101

Edit

Part

^

BOM

BOM Structure

Alternates

AML

Documents

CAD Documents

Goals

Changes

Part Structure

Part Structure	Set Effectivity Criteria	Part Number	State
----------------	-------------------------------------	-------------	-------

Using Effectivity Criteria Filter Dialog for Resolving Effective Items

The resolved part structure for the current part item is displayed in the Tree Grid View. Figure 40 shows the related parts. The Effectivity Expressions have not been added yet.

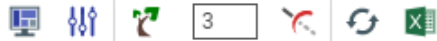


MP0101 ☆



Part

BOM BOM Structure Alternates AML Documents CAD Documents Goals Changes **Part Structure**



Part Structure	Part Number	State
[-] Makerbot Replicator	MP0101	Preliminary
[-] Body	MP2942	Preliminary
Spacer Black 5-16 in length .14in ID .25in OD	MP2667	Preliminary
RGB LED Strip Common Anode	MP2322	Preliminary
Spacer Black 1-2 in length .14in ID .25in OD	MP2660	Preliminary
[-] Body Fan Assembly	MP2939	Preliminary
Fan 24V 40x40x10 1m leads	MP2347	Preliminary
Spacer Black 16.5mm length 3.2mm ID 7mm OD	MP2685	Preliminary
[-] Body Hardware	MP2940	Preliminary
M3 Square Nut	MP2295	Preliminary
M3x16 Socket Cap Bolt	MP0370-004	Preliminary
M3x25 Socket Cap Bolt	MP0370-006	Preliminary
Support Blind Hole Mount	MP2728	Preliminary
M3x35 Socket Cap Bolt	MP0370-008	Preliminary
[-] Body Panels	MP2941	Preliminary
Thing-O-Matic 2 Front Panel	MP2194	Preliminary
Thing-O-Matic 2 Back Panel	MP2196	Preliminary

Adding Effectivity Expressions to the Structure Relationships



In this example, Part “MP2940” has related Parts as shown in Figure 41. Effectivity Expressions will be added to the Part BOM relationships with the “MP0370-004” and “MP0370-006” related Part items.

1. Open the “MP2940” Part item which is present in the Part Structure Tree Grid View.
2. Click **Edit** so that the Part BOM relationships can be edited too.
3. Right click on the “MP0370-004” Part row and click **Open** to open the Part BOM relationship item.

MP2940 ☆

Save Done Discard

Part

BOM BOM Structure Alternates AML Documents CAD Documents Goals Changes Part Structure

Parts ☆ Hidden

	Seq... ↑ 1	Part Number ↑ 2	Revi...	Name	Type		State	Unit
	5	MP2295	A	M3 Square Nut	Component		Preliminary	EA
	10	MP0370-004	A	M3x16 Socket Cap Bolt	Component		Preliminary	EA
	15	MP0370-006	A	M3x25 Socket Cap Bolt	Component		Preliminary	EA
	20	MP2728	A	Support Blind Hole Mount	Component			
	25	MP0370-008	A	M3x35 Socket Cap Bolt	Component			

< Prev Next > Page: 1 of 1 | 5 Results |

Open

Edit

Replace

Remove

Add to Favorites

Claim

Open

Actions > Copy Row

Permissions > Show Clipboard

BOM > Promote

4. Go to the **Effectivity** relationship tab and add a new Effectivity Expression. Set “3D Printer” Effectivity Scope in the Scope cell. Right click on the Effectivity Expression row and select **Open** to open the expression item.

96C832A9F7DA46E1AA020603E4B1DB77

Save
 Done
 Discard

^ Part BOM

Quantity:
Part Number:

Reference Designator:

^ Instances Substitutes **Effectivity**

Part BOM Effectivity

Hidden

Scope [...]	Expression [...]
3D Printer	

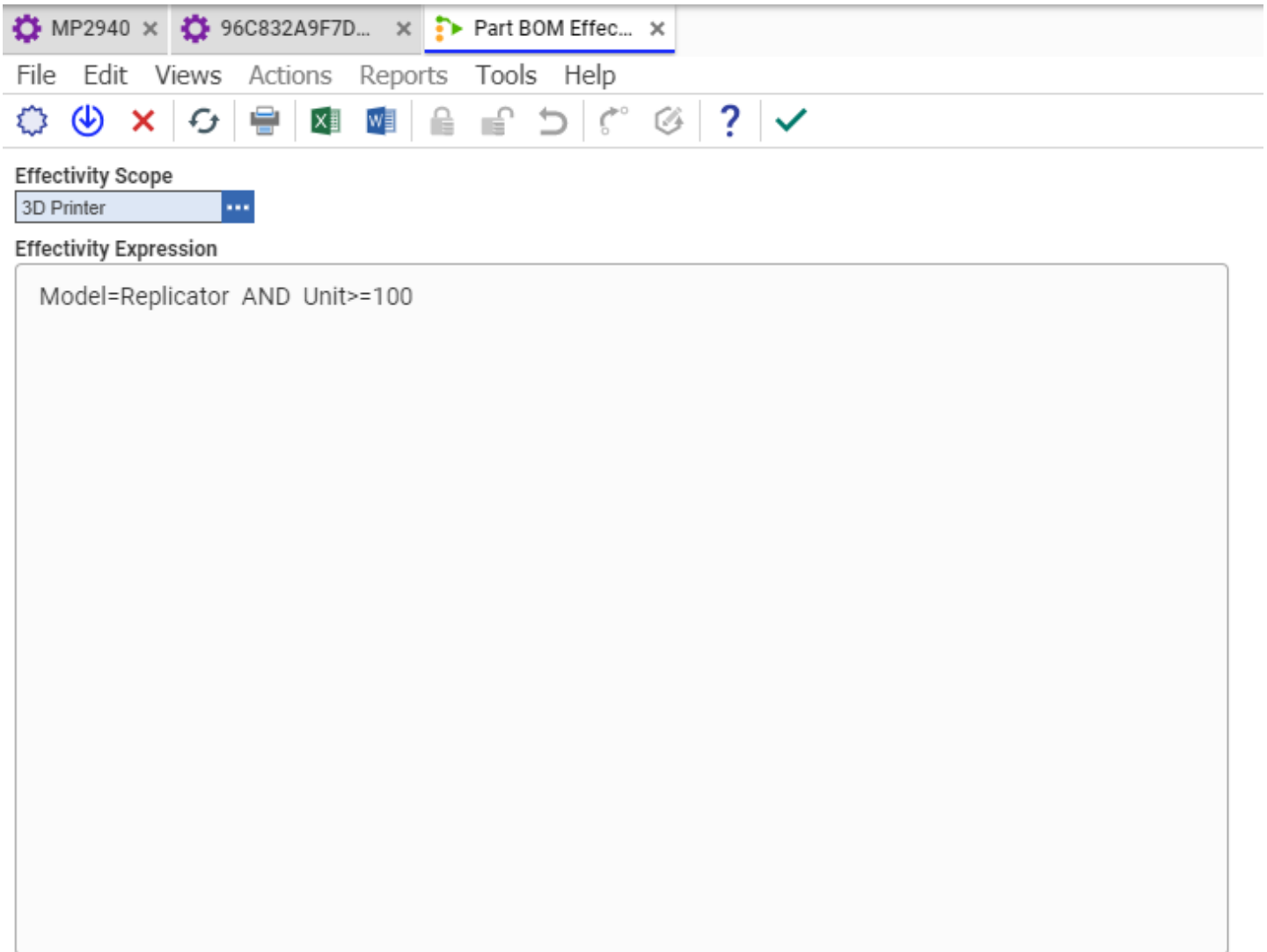
Open
 Replace
 Remove
 Actions >
Permissions >
Effectivity >

Open
Copy Row
Show Clipboard
Promote

< Prev
Next >
Page: 1 of 1 | 0 Results |

5. Fill the **Effectivity Expression** field with the expression: “Model = Replicator and Unit >= 100”.





6. Save, unlock, and close the Effectivity Expression item.
7. Save and close the Part BOM item.



96C832A9F7DA46E1AA020603E4B1DB77 ☆



Part BOM

Quantity Part Number [MP0370-004](#)

Reference Designator

Instances Substitutes Effectivity

Part BOM Effectivity ☆



Scope [...]	Expression [...]
3D Printer	Model = Replicator AND Unit >= 100

< Prev Next > Page: 1 of 1 | 1 Results |

8. Repeat steps 3-7 for the related Part “MP0370-006” and add two Effectivity Expressions: “Model = [Replicator 2]”, “[Production Date] >= [7/1/2021]”.



EBA83A12471A4D0599215136FAE90266

Edit | |

Part BOM

Quantity
4

Part Number
[MP0370-006](#)

Reference Designator

Instances Substitutes **Effectivity**

Part BOM Effectivity

| Hidden |

Scope [...]	Expression [...]
3D Printer	Model = [Replicator 2]
3D Printer	[Production Date] >= [7/1/2021]

Specifying Effectivity Criteria for Resolution

The Effectivity Criteria Filter dialog can be opened via the “Set Effectivity Criteria” button of the Tree Grid View toolbar.



^ BOM BOM Structure Alternates AML Documents CAD Documents Goals Changes **Part Structure**

Part Structure

- Makerbot Replicator
 - Body
 - Spacer Black 5-16 in length .14in ID
 - RGB LED Strip Common Anode
 - Spacer Black 1-2 in length .14in ID
 - Body Fan Assembly
 - Fan 24V 40x40x10 1m leads
 - Spacer Black 16.5mm length 3.2
 - Body Hardware
 - M3 Square Nut
 - M3x16 Socket Cap Bolt
 - M3x25 Socket Cap Bolt
 - Support Blind Hole Mount
 - M3x35 Socket Cap Bolt
 - Body Panels

Effectivity Criteria Filter

Scope

Variable	Value
----------	-------

Apply **Clear**

The Effectivity Scope can be selected in the “Scope” field to populate the grid with Effectivity Variables which are present in the selected Scope.



Effectivity Criteria Filter

Scope

3D Printer

...

Variable	Value
Unit	
Production Date	
Model	

Apply

Clear

For Integer and String Effectivity Variables, users can enter a variable value manually into the input field.

Effectivity Criteria Filter

Scope

3D Printer

...

Variable	Value
Unit	112
Production Date	
Model	

Apply

Clear

MP2941Preliminary

For Date Effectivity Variables, users can enter values manually or via the Date Picker.

Effectivity Criteria Filter

Scope

3D Printer

...

Variable

Unit

Production

Model

MP2941

Preliminary

×

June 2021

<

>

#	S	M	T	W	T	F	S
23	30	31	1	2	3	4	5
24	6	7	8	9	10	11	12
25	13	14	15	16	17	18	19
26	20	21	22	23	24	25	26
27	27	28	29	30	1	2	3
28	4	5	6	7	8	9	10

Reset

Apply

For List and Item Effectivity Variables, users can enter values manually or via the dropdown list.



Effectivity Criteria Filter

Scope

Variable	Value
Unit	112
Production Date	8/18/2021
Model	Replicator Replicator Replicator 2

Apply

Clear

The **Apply** button converts the entered Effectivity Variable values into Effectivity Criteria in the free-form Boolean expression format and refreshes the Tree Grid View with the item structure resolved according to the provided Effectivity Criteria.

For example, a user enters and applies the following Effectivity Criteria: Unit = 112, Production Date = 3/1/2021, Model = Replicator.

Effectivity Criteria Filter

Scope

3D Printer

...

Variable	Value
Unit	112
Production Date	3/1/2021
Model	Replicator

Apply

Clear

MP2941Preliminary

In this case Part “MP0370-006” is no longer displayed in the Tree Grid View because its Effectivity Expressions “Model = [Replicator 2]”, “[Production Date] >= [7/1/2021]” conflict with the provided Effectivity Criteria.



MP0101 ☆



Part

BOM BOM Structure Alternates AML Documents CAD Documents Goals Changes **Part Structure**



Part Structure	Part Number	State
☐ Makerbot Replicator	MP0101	Preliminary
☐ Body	MP2942	Preliminary
Spacer Black 5-16 in length .14in ID .25in OD	MP2667	Preliminary
RGB LED Strip Common Anode	MP2322	Preliminary
Spacer Black 1-2 in length .14in ID .25in OD	MP2660	Preliminary
☐ Body Fan Assembly	MP2939	Preliminary
Fan 24V 40x40x10 1m leads	MP2347	Preliminary
Spacer Black 16.5mm length 3.2mm ID 7mm OD	MP2685	Preliminary
☐ Body Hardware	MP2940	Preliminary
M3 Square Nut	MP2295	Preliminary
M3x16 Socket Cap Bolt	MP0370-004	Preliminary
Support Blind Hole Mount	MP2728	Preliminary
M3x35 Socket Cap Bolt	MP0370-008	Preliminary
☐ Body Panels	MP2941	Preliminary
Thing-O-Matic 2 Front Panel	MP2194	Preliminary
Thing-O-Matic 2 Back Panel	MP2196	Preliminary
New Thing-O-Matic 2 Right Panel	MP2199-2	Preliminary



If Effectivity Criteria is changed to Unit = 112, Production Date = 3/1/2021, Model = [Replicator 2] then Part “MP0370-004” is not displayed because its Effectivity Expression “Model = Replicator and Unit $\geq$ 100” conflicts with provided Effectivity Criteria.



MP0101 ☆



Part

BOM BOM Structure Alternates AML Documents CAD Documents Goals Changes **Part Structure**



Part Structure	Part Number	State
Makerbot Replicator	MP0101	Preliminary
Body	MP2942	Preliminary
Spacer Black 5-16 in length .14in ID .25in OD	MP2667	Preliminary
RGB LED Strip Common Anode	MP2322	Preliminary
Spacer Black 1-2 in length .14in ID .25in OD	MP2660	Preliminary
Body Fan Assembly	MP2939	Preliminary
Fan 24V 40x40x10 1m leads	MP2347	Preliminary
Spacer Black 16.5mm length 3.2mm ID 7mm OD	MP2685	Preliminary
Body Hardware	MP2940	Preliminary
M3 Square Nut	MP2295	Preliminary
M3x25 Socket Cap Bolt	MP0370-006	Preliminary
Support Blind Hole Mount	MP2728	Preliminary
M3x35 Socket Cap Bolt	MP0370-008	Preliminary
Body Panels	MP2941	Preliminary
Thing-O-Matic 2 Front Panel	MP2194	Preliminary
Thing-O-Matic 2 Back Panel	MP2196	Preliminary
New Thing-O-Matic 2 Right Panel	MP2199-2	Preliminary



If the Effectivity Criteria is changed to Unit = 7, Production Date = 3/1/2021, Model = Replicator then both “MP0370-004” and “MP0370-006” Parts are not displayed because their Effectivity Expressions conflict with the provided Effectivity Criteria.

^ BOM BOM Structure Alternates AML Documents CAD Documents Goals Changes Part Structure		
3		
Part Structure	Part Number	State
Makerbot Replicator	MP0101	Preliminary
Body	MP2942	Preliminary
Spacer Black 5-16 in length .14in ID .25in OD	MP2667	Preliminary
RGB LED Strip Common Anode	MP2322	Preliminary
Spacer Black 1-2 in length .14in ID .25in OD	MP2660	Preliminary
Body Fan Assembly	MP2939	Preliminary
Fan 24V 40x40x10 1m leads	MP2347	Preliminary
Spacer Black 16.5mm length 3.2mm ID 7mm OD	MP2685	Preliminary
Body Hardware	MP2940	Preliminary
M3 Square Nut	MP2295	Preliminary
Support Blind Hole Mount	MP2728	Preliminary
M3x35 Socket Cap Bolt	MP0370-008	Preliminary
Body Panels	MP2941	Preliminary
Thing-O-Matic 2 Front Panel	MP2194	Preliminary
Thing-O-Matic 2 Back Panel	MP2196	Preliminary
New Thing-O-Matic 2 Right Panel	MP2199-2	Preliminary
Thing-O-Matic 2 Top Panel	MP2193	Preliminary

When the user clicks the “Set Effectivity Criteria” button again, the previously applied Effectivity Criteria will be displayed in the Effectivity Criteria Filter dialog. Each Effectivity Variable value can be

After the Effectivity Criteria is cleared and **Apply** is clicked, an unfiltered BOM is displayed including both Parts.

