Effectivity Services

Sample Application for 11.0 SP15

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Document Conventions

The following table highlights the document conventions used in the document:

Table 1: Document Conventions

Convention	Description
Bold	Emphasizes the names of menu items, dialog boxes, dialog box elements, and commands. Example: Click **OK**.
`Code`	Code examples appear in `courier` font. It may represent text you type or data you read.
`Yellow highlight`	Code highlighted in yellow draws attention to the code that is being indicated in the content.
`Yellow highlight with red text`	Red text highlighted in yellow indicates the code parameter that needs to be changed or replaced.
Italics	Reference to other documents.
Note:	Notes contain additional useful information.
Warning	Warnings contain important information. Pay special attention to information highlighted this way.
Successive menu choices	Successive menu choices may appear with a greater than sign (-->) between the items that you will select consecutively. Example: Navigate to **File** --> **Save** --> **OK**.

1 Overview

Effectivity Services enables you to create a single product structure that can handle numerous configurations. Effectivity identifies valid items to be used under different conditions. Managing a configurable structure is more efficient than managing structures for each unique instance.

Effectivity Services on the Aras PLM Platform provides the means to set effectivity within structures. The effectivity resolution engine resolves structures for any given effectivity criteria.

Using Effectivity Services, a custom application can enable you to:

- Define effectivity variables (such as date, model, unit, lot, batch, and plant).
- Set effectivity conditions on relationships.
- Resolve structures using effectivity to generate configured structures.

In this Sample Application, effectivity is managed in the Part BOM structure of MakerBot Replicator, which is MakerBot's last open-source 3D printer. Differences among various configurations of the Replicator are managed via effectivity using Model, Unit, and Production Date variables.

The configurable MakerBot Replicator Part BOM structure can be resolved to a specific structure by providing the desired effectivity criteria.

1.1 Purpose

This Sample Application shows technical teams how they can use Aras Effectivity Services to create custom applications to solve business requirements around effectivity management. It supplements *Aras Innovator 11.0 – Effectivity Services Programmer's Guide* with an implementation example.

To help follow this document, the package provides sample data, which is optional for loading.

The Sample Application is not a standard product, and should not be deployed to production as-is.

A production-quality solution for effectivity management requires, at minimum, a data model, user interfaces, permissions and change processes to meet specific business requirements

1.2 Terminology

Table 2 defines the terms, acronyms, and abbreviations used in this document.

Table 2: Terminology

Term	Definition
Effectivity	Identification of valid uses of an item in a structure if this item's use is conditional.
Effectivity Variable	A variable that influences effectivity decisions, such as a date, model, unit, batch, lot, plant, etc.
Effectivity Scope	A built-in ItemType that represents a list of relevant Effectivity Variables.

Term	Definition
	For example, the scope may contain a Model, Unit, and Date Effectivity Variables to track configuration differences in a 3D Printer product.
Effectivity Expression	A representation of an effectivity condition in the Boolean Expression Language. For example: Model = “Model X” and (Unit >= 10 and Unit <=20)
Effectivity Criteria	The criteria to resolve a structure by effectivity. Effectivity conditions set on relationships are evaluated against the input criteria to determine the inclusion or exclusion of conditional items in the resolved structure. For example: resolve the structure for criteria: (Model = “Model X” and Unit = 15).

1.3 References

Table 3: Reference Product Documentation

Aras Innovator 11.0 – Effectivity Services Programmer’s Guide
Aras Innovator 11.0 – Query Builder Guide
Aras Innovator 11.0 – Tree Grid View Administrator Guide

1.4 System Requirements

This Sample Application requires Aras Innovator version 11.0 SP15 to be installed.

2 Data Model Overview

Figure 1 shows the components of the Effectivity Data Model used in the Sample Application. For more information about the Effectivity Services data model concept, refer to sections *3.1* and *5* of the *Aras Innovator 11.0 – Effectivity Services Programmer's Guide*.

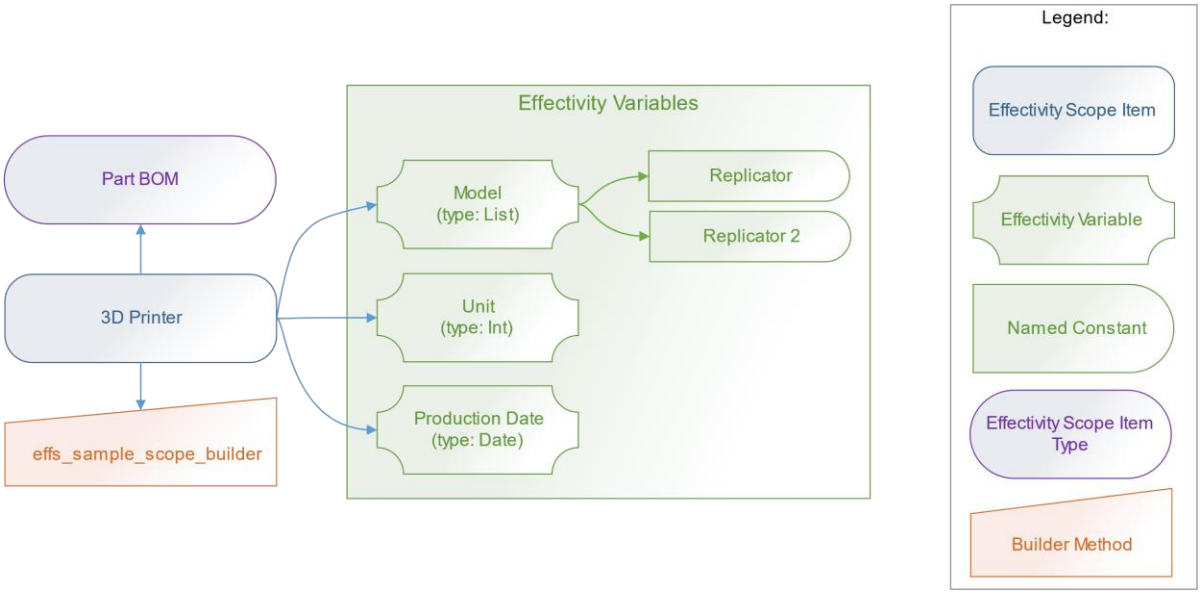


Figure 1.

The **3D Printer** Effectivity Scope defines the context for the Effectivity Resolution using the following elements:

- The Effectivity Variables specified to influence effectivity decisions:
  - Unit, an Integer representing an end item unit number
  - Production Date
  - Model, either Replicator or Replicator 2
- The **Part BOM** Effectivity Scope ItemType identifies that effectivity conditions will be managed for the Part BOM Relationship ItemType.
- The **effs_sample_scope_builder** Builder Method constructs a Scope object, which serves as the base for Effectivity Resolution.

3 Process Flow Overview

Let's take a high-level look at the Sample Application process flow for Effectivity Services:

1. The Company Management decides to manufacture a 3D Printer in two Models: **Replicator** and **Replicator 2**.
2. The Product Configuration Management Team identifies the **Unit**, **Production Date**, and **Model** Effectivity Variables to determine effective **BOMs** for each model.
3. The Product Configuration Management Team identifies the **Part BOM** Relationship ItemType as the Effectivity Scope ItemType to resolve the Effectivity between two Models.
4. An Aras Administrator creates the **Unit**, **Production Date**, and **Model** Effectivity Variables.
5. An Aras Developer creates the **effs_sample_scope_builder** Builder Method.
6. The Administrator creates the **3D Printer** Effectivity Scope using these Effectivity Variables, Effectivity Scope ItemType, and Builder Method.
7. The responsible Innovator Users create a multi-level Part BOM structure.
8. The Product Configuration Management Team sets, updates, and removes Effectivity Conditions in the Part BOM structure.
9. The Innovator Users specifies effectivity criteria to filter the structure:
    a. A User opens Parts with BOMs and sets Effectivity Criteria.
    b. The Effectivity Resolution Engine evaluates Effectivity Expressions on each **Part BOM** Relationship Item against Effectivity Criteria to identify effective **BOMs**.
    c. The User views the resolved structure.

For the internal details of the process flow for Effectivity Services, refer to sections *3.2* and *3.3* of the *Aras Innovator 11.0 – Effectivity Services Programmer's Guide*.

4 Administrative Setup

This section describes the administrative setup within the Sample Application.

4.1 Effectivity Variables

An Effectivity Variable is a construction block for:

- Effectivity Expressions to set effectivity conditions within a structure
- Effectivity Criteria for structure resolution

For this Sample Application, the following Effectivity Variables have been created to use in Part BOM effectivity:

- **Unit**, an Integer
- Production Date, a Date
- **Model**, a List:
  - Replicator
  - Replicator 2

Use the following procedure to create the **Unit** Effectivity Variable:

1. Go to **TOC** --> **Administration** --> **Effectivity Services** --> **Effectivity Variable**.
2. Click **Create a New Item**.

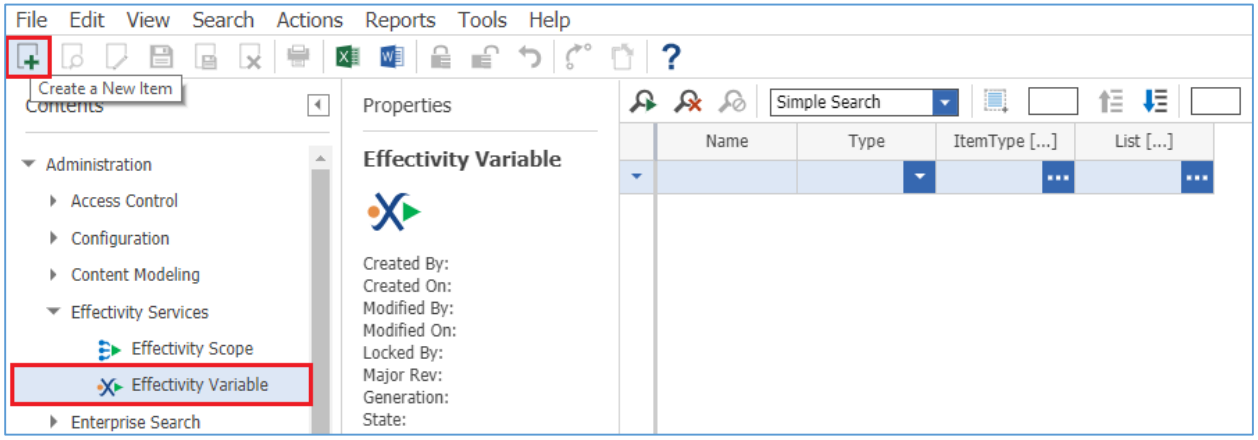


Figure 2.

A new **Effectivity Variable** form appears (see Figure 3) displaying blank text boxes and a drop-down list.

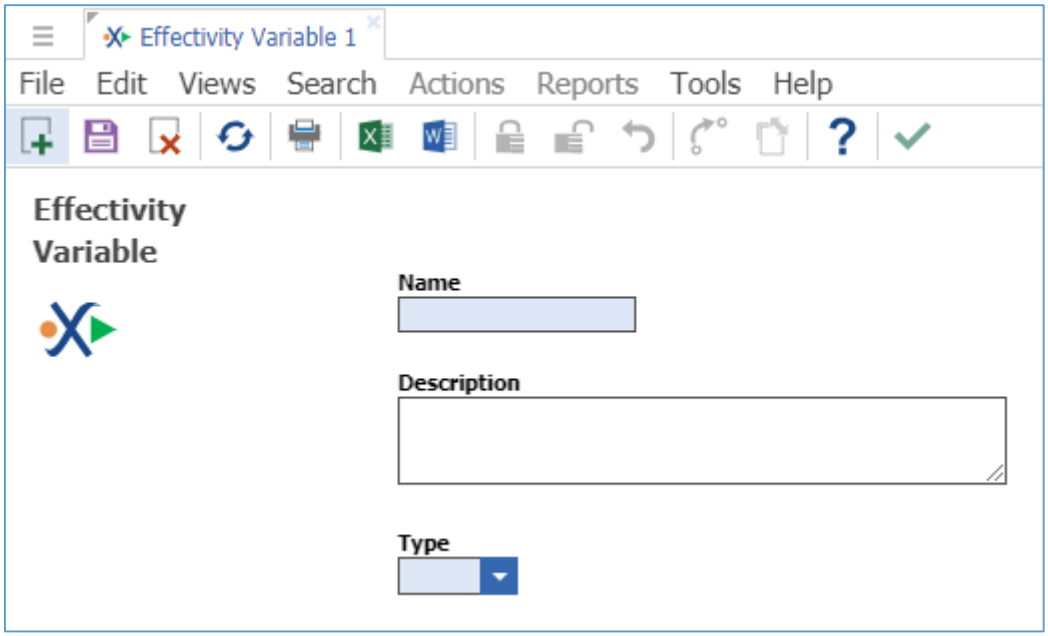


Figure 3.

3. Enter the following information in the Effectivity Variable form:
   a. Type **Unit** in the **Name** text box.
   b. Type **Unit Effectivity Variable** in the **Description** text box.
   c. Select **Integer** from the **Type** drop-down list.
4. Click **Save, Unlock & Close.** The **Unit** Effectivity Variable is created.

Use the same procedure to create the other two Effectivity Variables: **Model,** and **Production Date**.

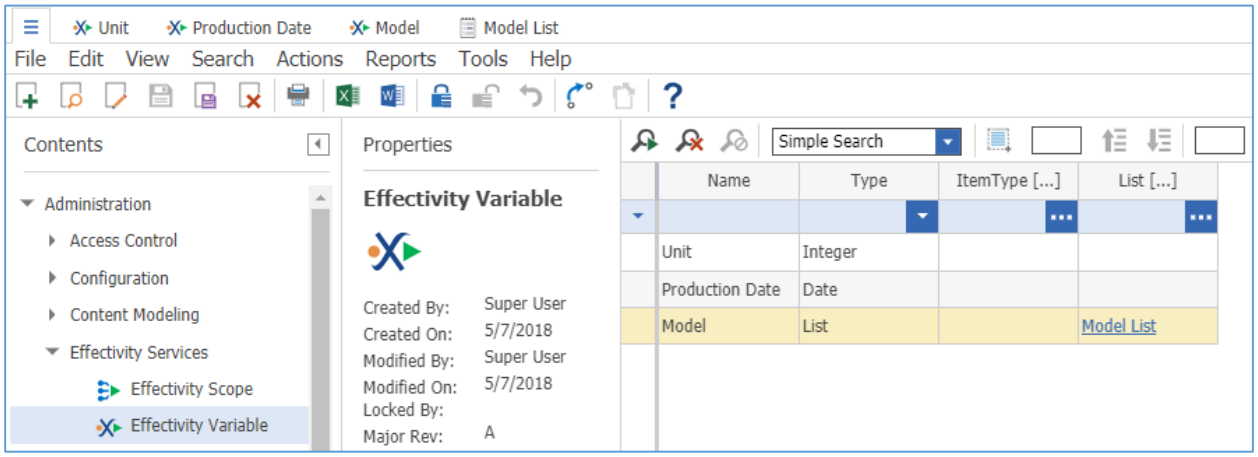


Figure 4.

4.2 Part BOM ItemType Configuration

The standard **Part BOM** Relationship ItemType is used to manage effectivity in the Sample Application.

Part BOM uses the new **effectivity_string_notation** property to display user-friendly effectivity notation in various grids. The new **effs_sample_PartBOM_OnAfterGet** server method populates this property.

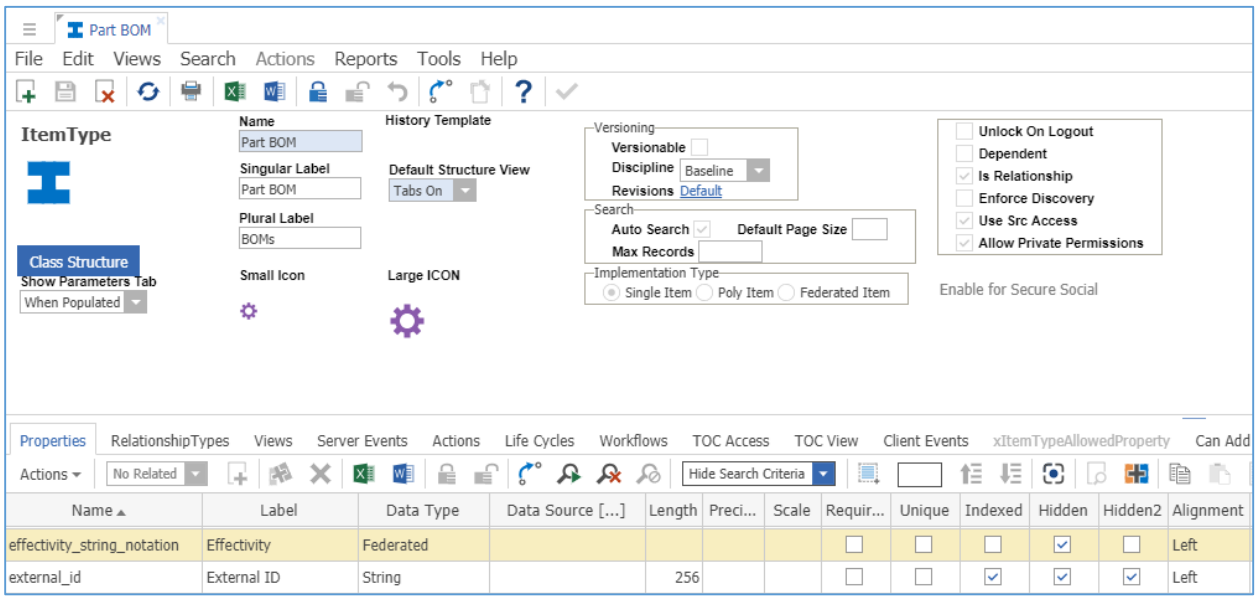


Figure 5.

4.3 Builder Method

A **Builder Method** is an item of the **Method** ItemType, which constructs the Scope object using custom business data and business logic.

The **effs_sample_scope_builder** Builder Method is implemented using the predefined **CSharp:Aras.Server.Core.Configurator** method template supplied with Aras Innovator 11.0 SP15.

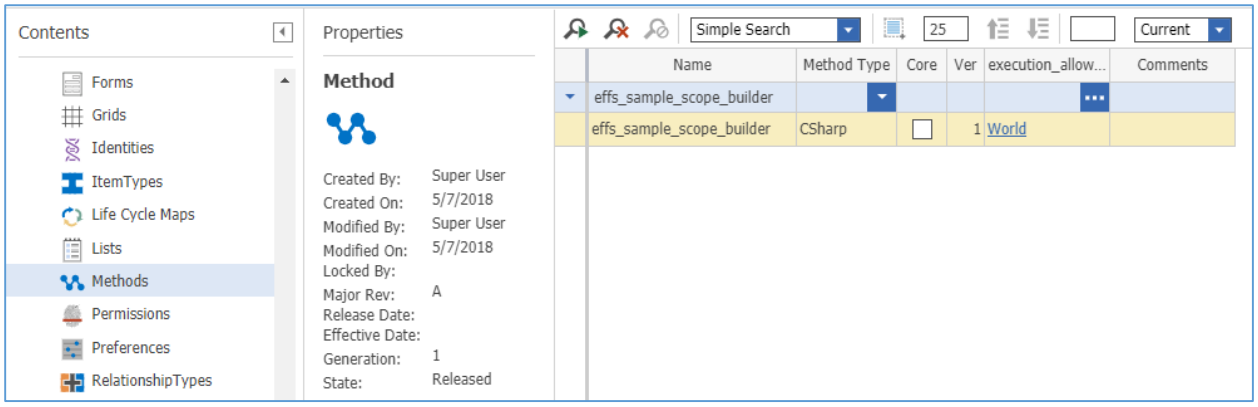


Figure 6.

The Sample Application provides the source code for the **effs_sample_scope_builder** Builder Method, which is implemented to work with the effectivity variables listed in the effectivity scope.

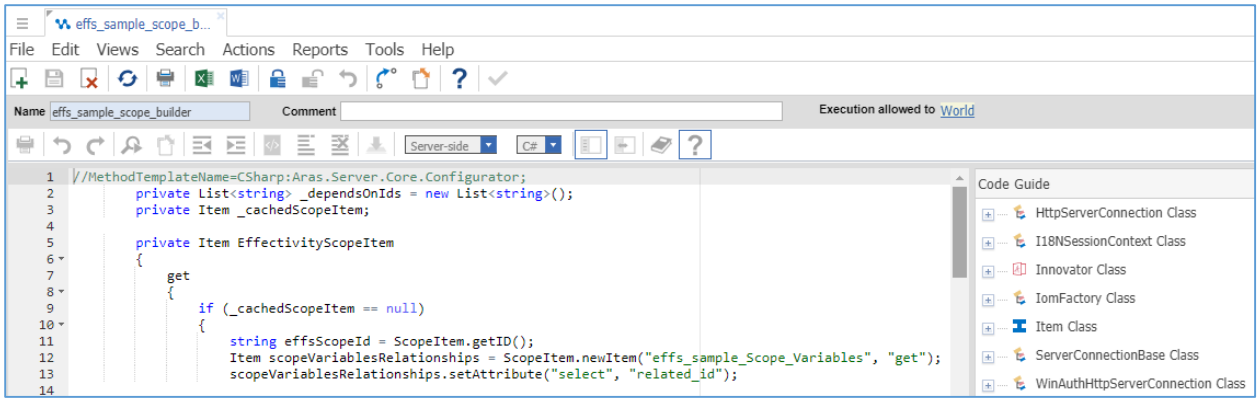


Figure 7.

For detailed information about writing a custom Builder Method, refer to section 7.*2* of the *Aras Innovator 11.0 – Effectivity Services Programmer's Guide*.

4.4 Effectivity Scope

An **Effectivity Scope** is an item of the **effs_scope** ItemType that defines the context for setting effectivity as well as effectivity resolution.

The **3D Printer** Effectivity Scope in the Sample Application is configured with the **Unit**, **Production Date**, and **Model** Effectivity Variables, and **Part BOM** Relationship ItemType as an effective ItemType using the **effs_sample_scope_builder** Builder Method.

Use the following procedure to set up the **3D Printer** Effectivity Scope:

1. Go to TOC --> Administration --> Effectivity Services --> Effectivity Scope.
2. Click Create a New Item.

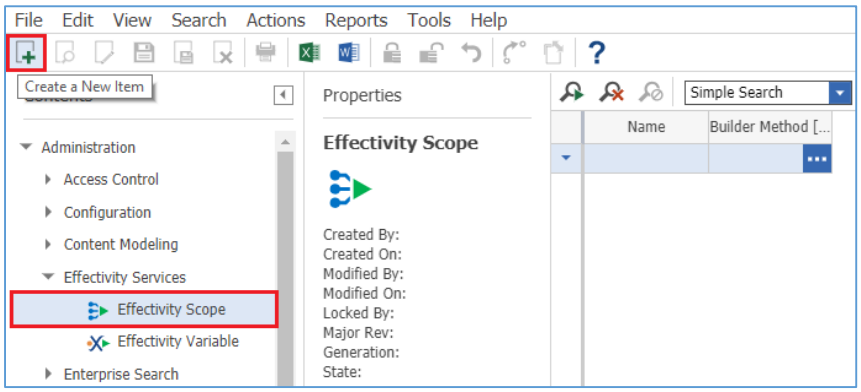


Figure 8.

A new **Effectivity Scope** form appears (see Figure 9) containing blank text boxes and empty tabs.

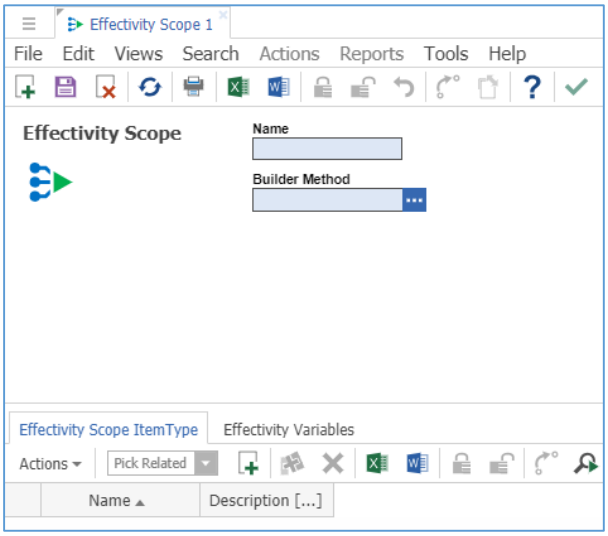


Figure 9.

3. Enter the following information in the Effectivity Scope form:
   a. In the **Name** text box, type **3D Printer**.
   b. In the **Builder Method** text box, enter the **effs_sample_scope_builder** method name.
   c. Aras Innovator searches for the string you entered, and presents a drop-down list of methods whose names contain this string (see Figure 10).
   d. Select **effs_sample_scope_builder** from the drop-down list or search it via the Search button:

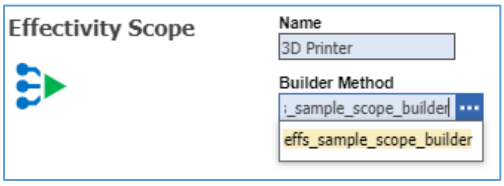


Figure 10.

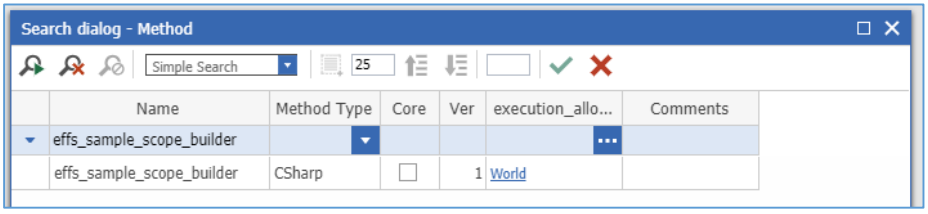


Figure 11.

4. Click the New Relationship icon on the Effectivity Scope ItemType tab.

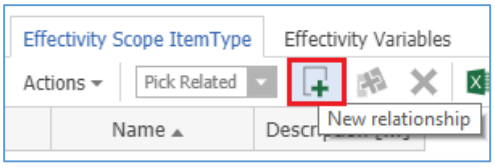


Figure 12.

The **Search dialog – ItemType** appears (see Figure 13).

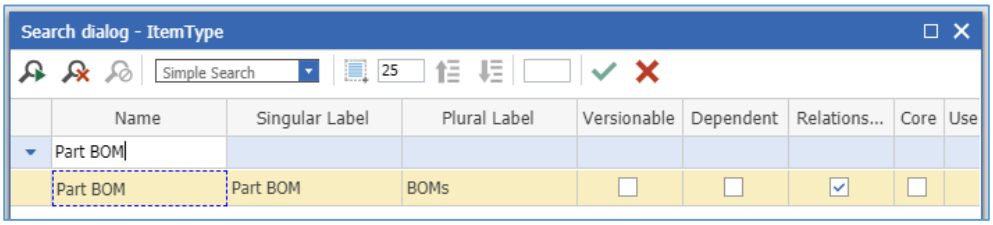


Figure 13.

5. In the **Search dialog – ItemType**, search for and select the **Part BOM** ItemType, which then appears in the **Effectivity Scope ItemType** tab.

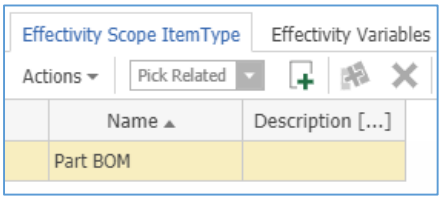


Figure 14.

6. On the **Effectivity Variables** tab, click **New relationship**.

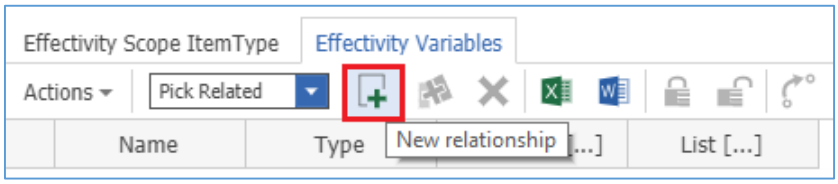


Figure 15.

The **Search dialog – Effectivity Variable** appears (see Figure 16).

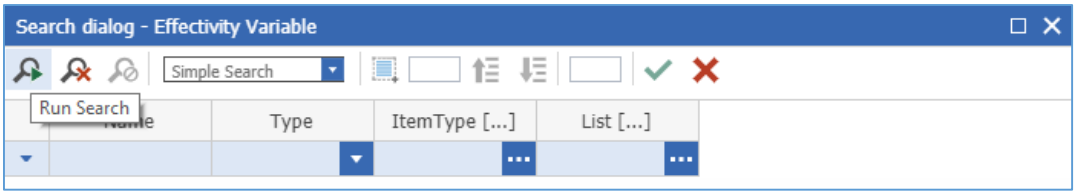


Figure 16.

7. Click **Run Search**. The **Unit**, **Production Date**, and **Model** Effectivity Variables appear.

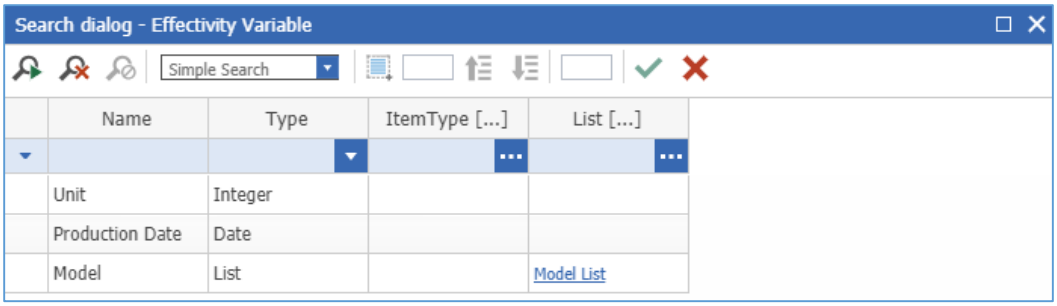


Figure 17.

8. Select the **Unit**, **Production Date**, and **Model Effectivity** Variables, which then appear on the **Effectivity Variables** tab.

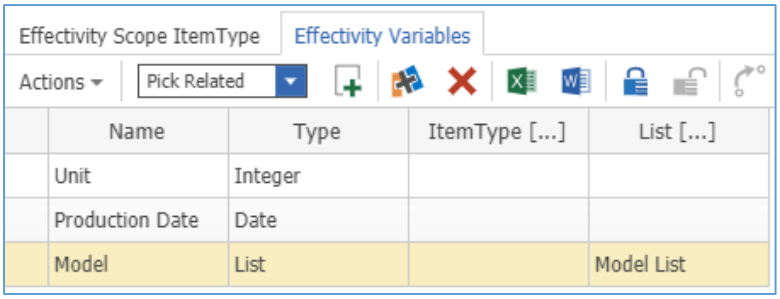


Figure 18.

9. Click **Save**, **Unlock & Close** on the **Effectivity Scope** Toolbar.

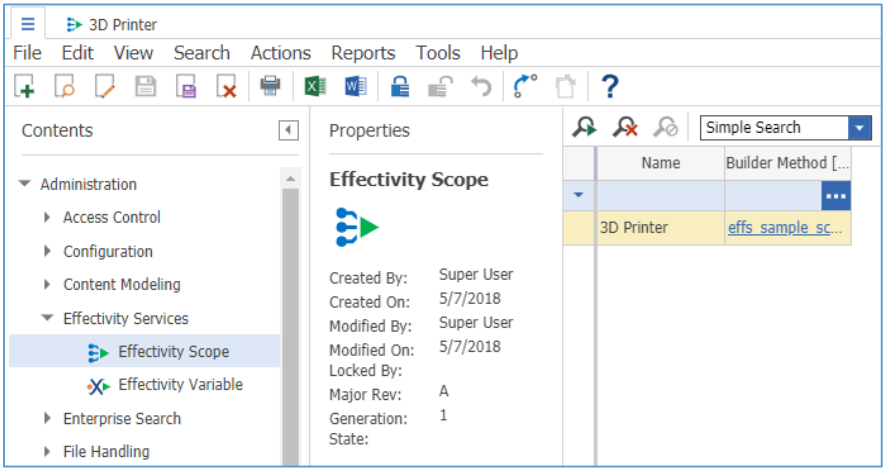


Figure 19.

The **3D Printer** Effectivity Scope is created.

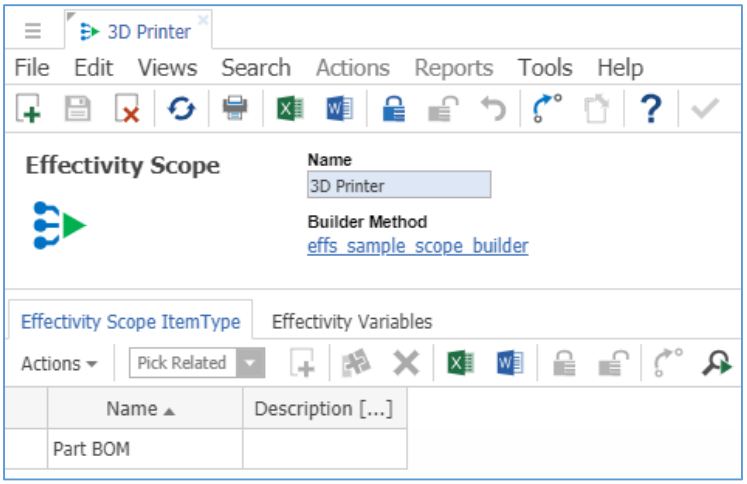


Figure 20.

4.5 Query Definition Configurations

The Aras Innovator feature **Query Builder** enables you to create a Query Definition, which is a fundamental element for retrieving data from the server. Effectivity Services is integrated with Query Builder to retrieve and filter data by effectivity.

Refer to the *Aras Innovator 11.0 – Effectivity Services Programmer's Guide* for more detailed information about:

- Process Flow Overview — sections *3.2* and *3.3*.
- Creating a Query Definition to filter by Effectivity — section *9.2*.

Tree Grid View (TGV) is a standard Aras Innovator feature that displays data retrieved from a Query Definition (QD) in a visual layout on a separate Relationship tab. For information about using Tree Grid View to create a visual representation of the data, see section 4.6.

This section describes the details of Query Definition configuration for two different dialog options:

- Effectivity Criteria Filter dialog
- TGV Parameters dialog

Note: Using the **Effectivity Criteria Filter** dialog is recommended due to its flexible configuration.

Warning If you switch between Query Definition configurations, you must also switch the corresponding TGV configuration as outlined in the corresponding sub-section of section *4.6. Tree Grid View Configurations*. Otherwise, the Application may fail.

The **effs_sample_Part_PartBOM** QD configuration is available in the Sample Application:

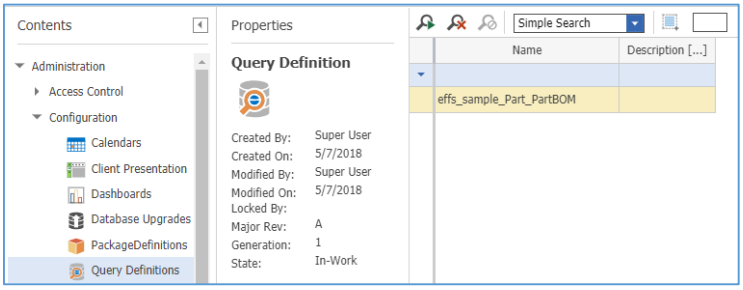


Figure 21.

1. Double-click **effs_sample_Part_BOM** in the grid to access the QD:

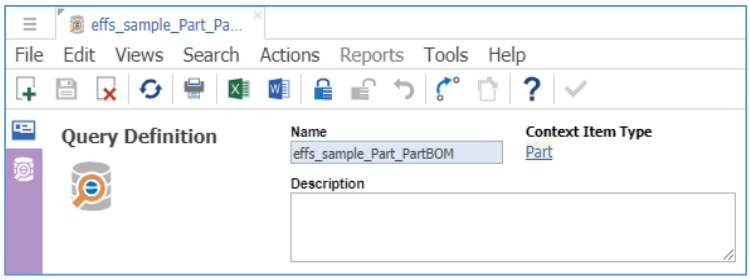


Figure 22.

2. Click **Show Editor** to access Query Items defined in the QD:

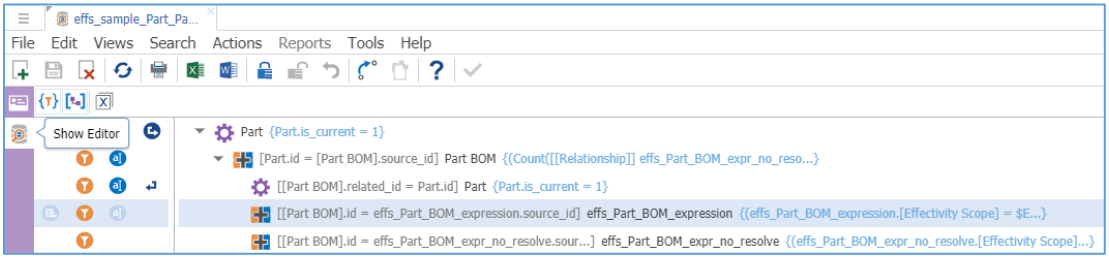


Figure 23.

4.5.1 Query Definition Configuration for the Effectivity Criteria Filter Dialog

This subsection describes the **effs_sample_Part_PartBOM** QD configuration for the **Effectivity Criteria Filter** dialog:

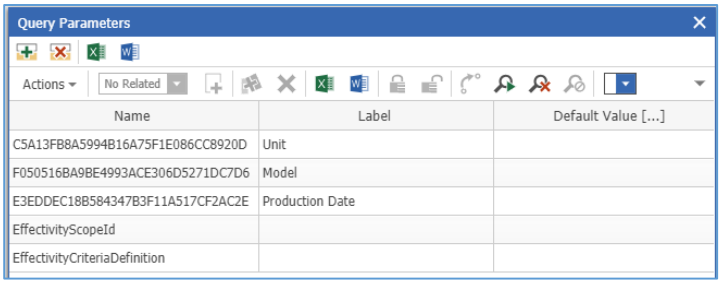


Figure 24.

The GUID for each variable appears in the **Name** column. The **Label** column displays the variable names.

The **effs_sample_Part_PartBOM** QD is configured to retrieve values from the **Effectivity Criteria Filter** dialog dynamically. To examine them, go to the **Editor** tab and explore the **Where** Conditions for the following Effectivity Relationships:

1. **effs_Part_BOM_expression** (see Figure 25):
   - `[Effectivity Scope] = $EffectivityScopeId` — the Effectivity Scope ID value is set from the **Scope** cell.
   - `Definition = '<expression>$EffectivityCriteriaDefinition</expression>'` — the Effectivity Criteria Definition value is set from the **Variables** and **Values** cells.

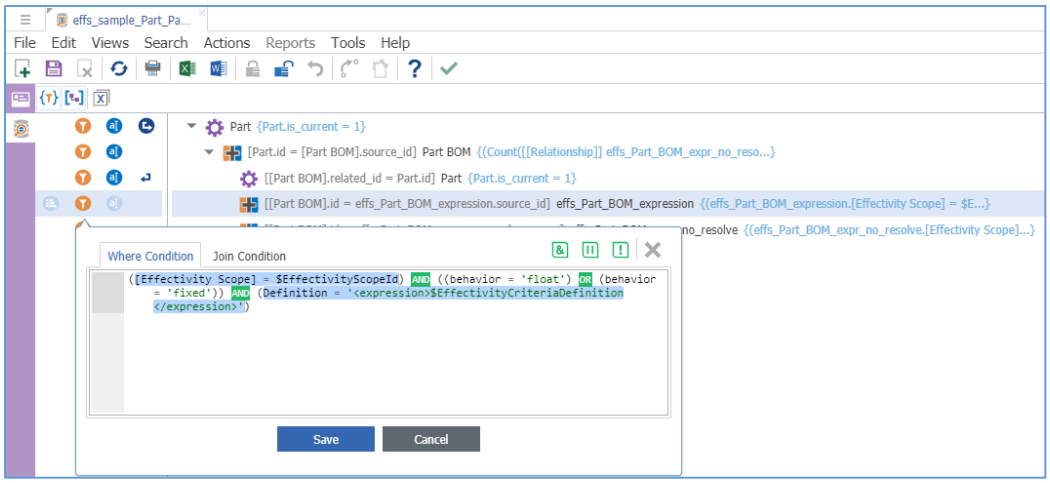


Figure 25.

2. **effs_Part_BOM_expr_no_resolve** (see Figure 26):
   - `[Effectivity Scope] = $EffectivityScopeId` — the Effectivity Scope ID value is set from the **Scope** cell.

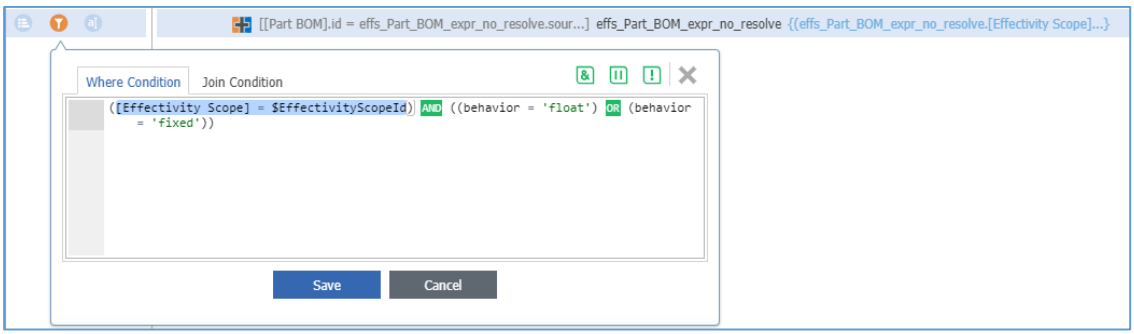


Figure 26.

4.5.2 Query Definition Configuration for the TGV Parameters Dialog

This subsection describes the **effs_sample_Part_PartBOM** QD configuration for the **TGV Effectivity Parameters** dialog:

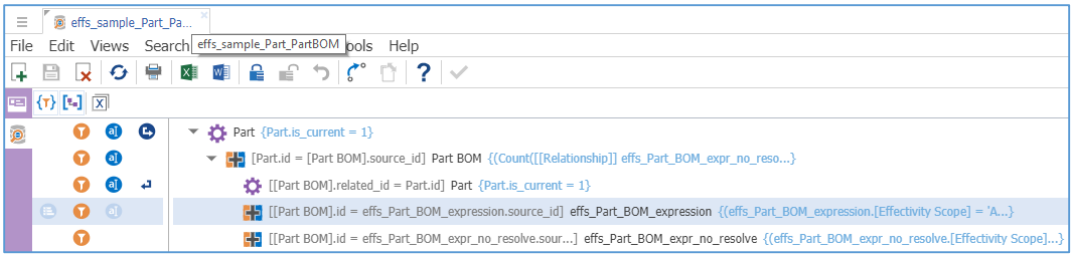


Figure 27.

The **Query Parameters** dialog is configured as shown in Figure 28.

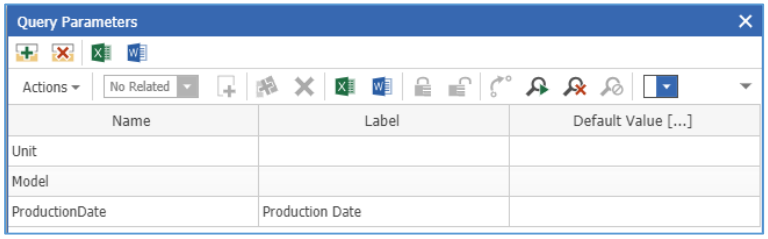


Figure 28.

The **effs_sample_Part_PartBOM** QD has hardcoded values. To examine them, go to the **Editor** tab and explore the **Where** Conditions for the following Effectivity Relationships:

1. **effs_Part_BOM_expression** — the Effectivity Scope and Effectivity Variables are set to their GUID values (see Figure 29):

```
([Effectivity Scope] = 'AC9CF6740AB249A9814DC20B76F8C57C') AND
((behavior = 'float') OR (behavior = 'fixed')) AND (Definition =
'<expression><EQ><variable
id="C5A13FB8A5994B16A75F1E086CC8920D"></variable><constant
type="int">$Unit</constant></EQ><EQ><variable
id="F050516BA9BE4993ACE306D5271DC7D6"></variable><named-constant
id="$Model"></named-constant></EQ><EQ><variable
id="E3EDDEC18B584347B3F11A517CF2AC2E"></variable><constant
type="datetime">$ProductionDate</constant></EQ></expression>')
```

Figure 29.

2. **effs_Part_BOM_expr_no_resolve** — the Effectivity Scope is set to its GUID value (see Figure 30):

```
([Effectivity Scope] = 'AC9CF6740AB249A9814DC20B76F8C57C') AND
((behavior = 'float') OR (behavior = 'fixed'))
```

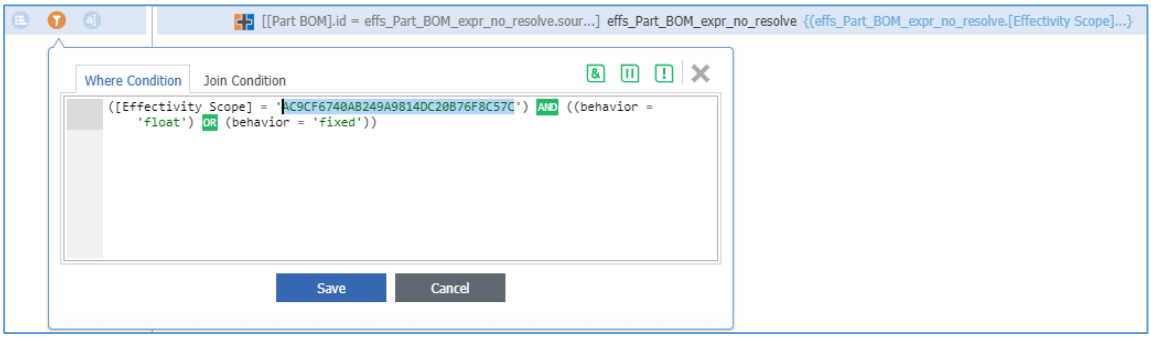


Figure 30.

4.6 Tree Grid View Configurations

Tree Grid View (**TGV**) is a standard Aras Innovator feature used to display the data retrieved from a Query Definition (QD) as a tree grid in a separate Relationship tab.

Refer to section *9.3* of the *Aras Innovator 11.0 – Effectivity Services Programmer's Guide* for information about creating a Tree Grid View for the display of Effective Items.

This section describes details of two different dialog options to change the TGV parameters to resolve structures by effectivity:

- Effectivity Criteria Filter dialog
- TGV Parameters dialog

The Sample Application has QD and TGV configured to use the **Effectivity Criteria Filter** dialog.

Note: Using the Effectivity Criteria Filter dialog is recommended due to its flexible configuration.

Warning If you switch between TGV configurations, you must also switch to the corresponding QD configuration as outlined in the corresponding sub-section of section *4.5. Query Definition Configurations*. Otherwise, the application may fail.

The **effs_sample_Part_PartBOM** TGV configuration is included in the Sample Application. It uses data from the **effs_sample_Part_PartBOM** QD.

1. Search for Tree Grid Views, and open **effs_sample_Part_PartBOM.**

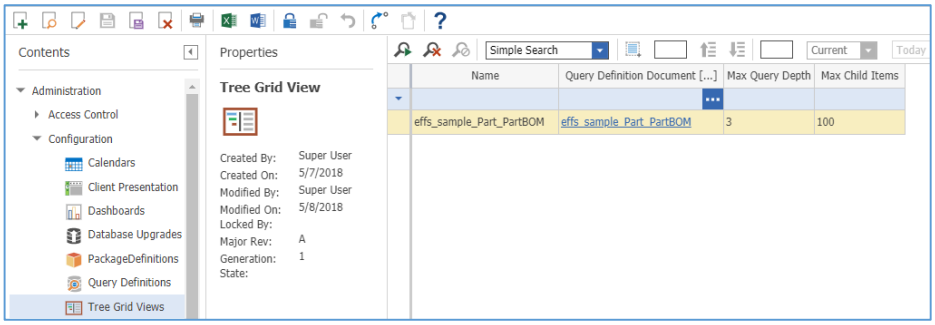


Figure 31.

2. Click **Show Editor** to access the definition of the view.

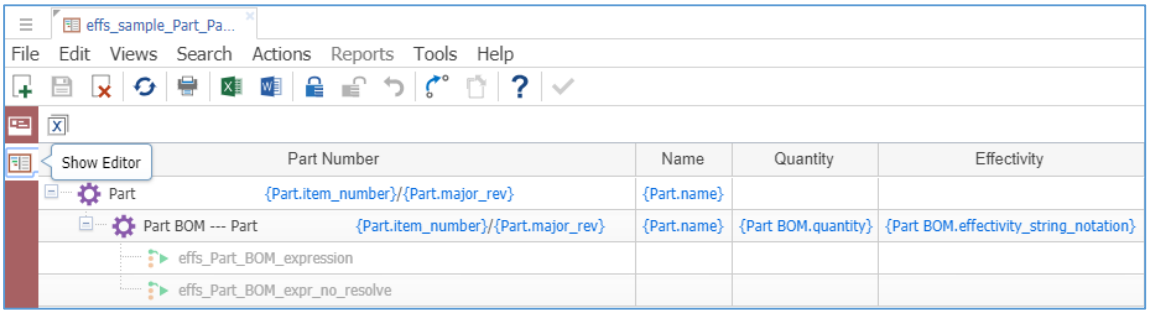


Figure 32.

4.6.1 Tree Grid View Configuration for the Effectivity Criteria Filter Dialog

This subsection describes the **effs_sample_Part_PartBOM** TGV configuration for the **Effectivity Criteria Filter** dialog.

On the **Form** tab of the **effs_sample_Part_PartBOM** TGV tab, the **Linked Toolbar/Context Menu** property contains a link to the **effs_sample** toolbar which overrides the standard TGV toolbar (see Figures 33 and 34).

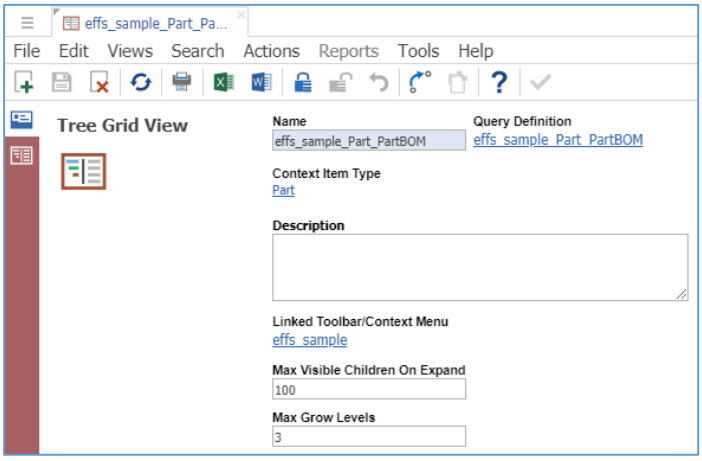


Figure 33.

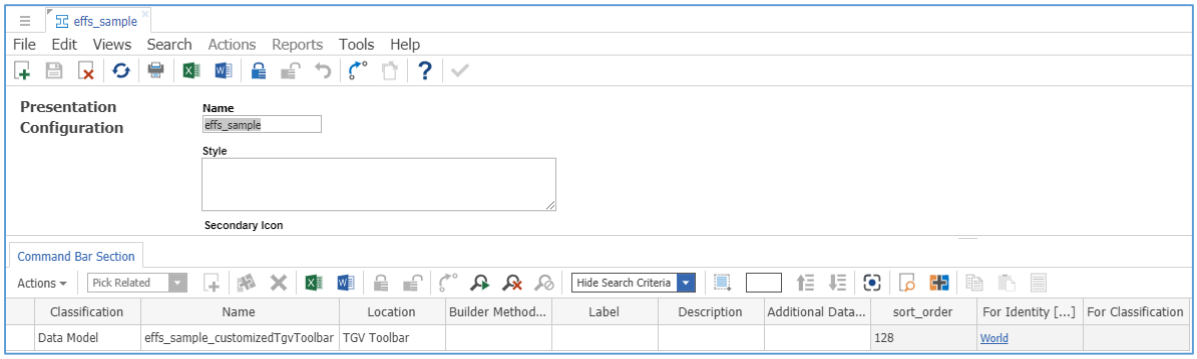


Figure 34.

The **Map Parameters** dialog is configured as shown in Figure 35. The Effectivity variables **Unit**, **Model**, and **Production Date** display the following values in the Name and Label columns:

- **Names** are GUIDs of Effectivity Variables
- **Labels** are names of Effectivity Variables

EffectivityScopeId and **EffectivityCriteriaDefinition** have individual settings.

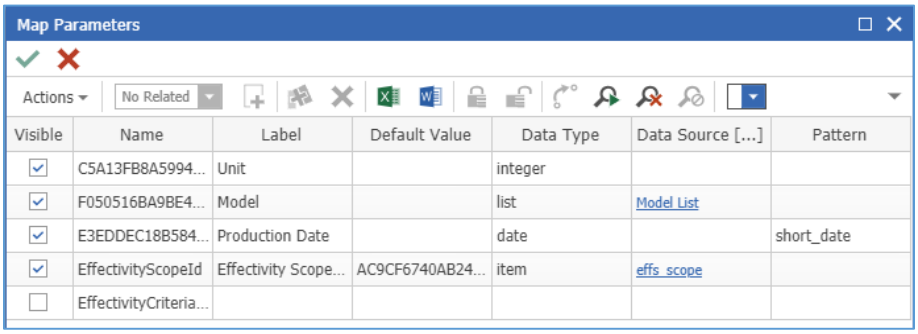


Figure 35.

4.6.2 Tree Grid View Configuration for the TGV Parameters Dialog

This subsection describes the **effs_sample_Part_PartBOM** TGV configuration for the **TGV Parameters Dialog**.

On the **Form** tab of the **effs_sample_Part_PartBOM** TGV tab, the **Linked Toolbar/Context Menu** property is empty:

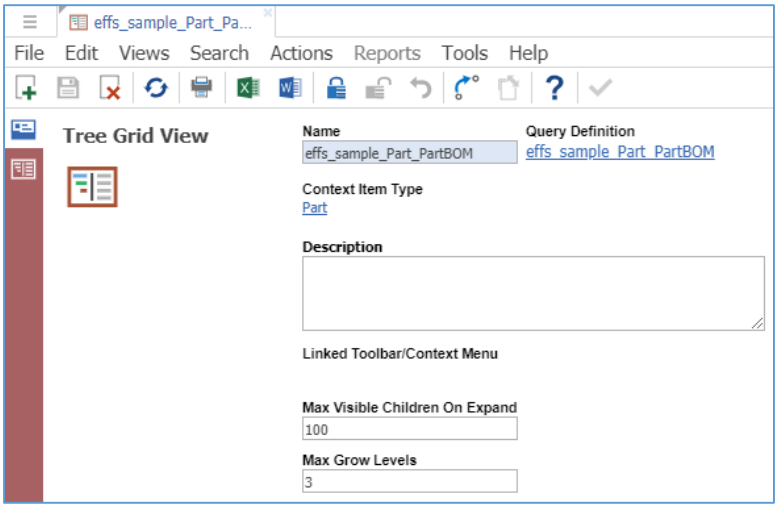
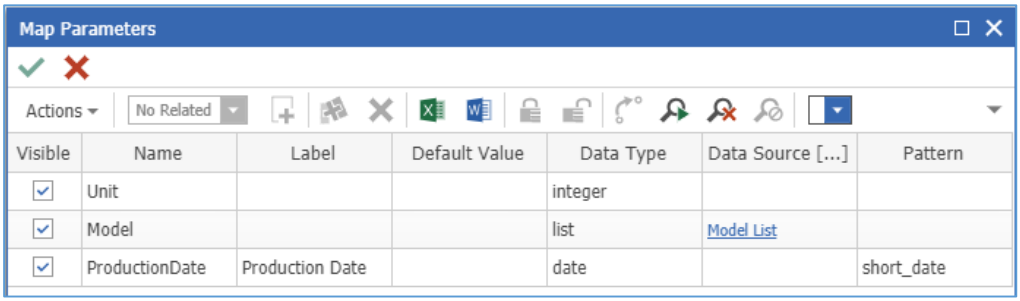


Figure 36.

The **Map Parameters** dialog is configured as shown:



Visible	Name	Label	Default Value	Data Type	Data Source [...]	Pattern
☑	Unit			integer		
☑	Model			list	Model List	
☑	ProductionDate	Production Date		date		short_date

Figure 37.

5 Working with Effectivity on Part BOM

This section describes how to work with the effectivity features implemented in the Sample Application.

5.1 Setting Effectivity on Part BOM

Use the following procedure to set Effectivity on a part:

1. Go to **TOC --> Design --> Parts**.
2. Search for part number **MP2954** with the **Extruder** Name and lock it for editing.

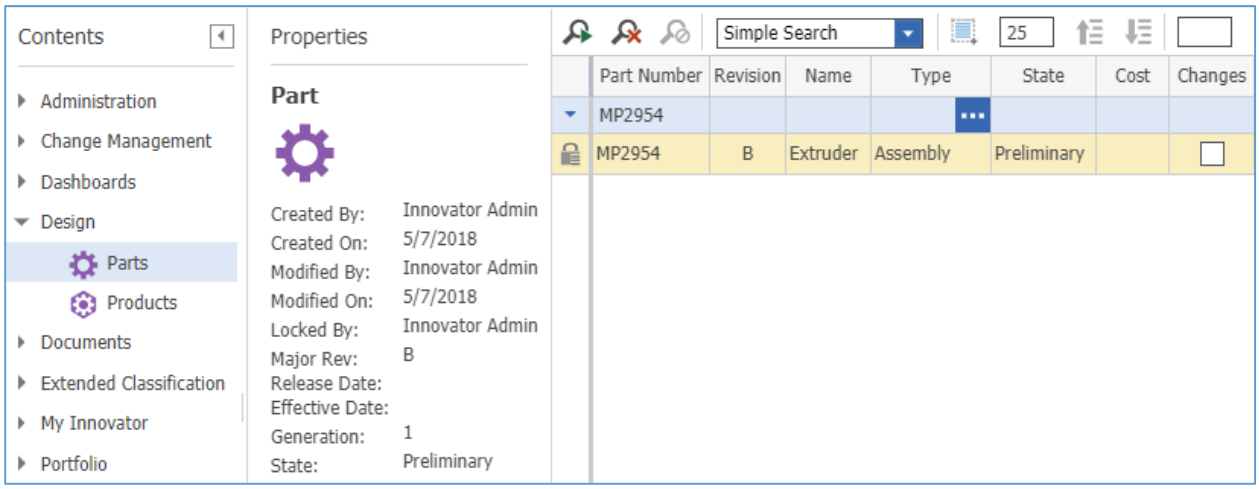


Figure 38.

3. Search for part number **MP2505** with the **Nozzle 0.3mm** Name on the BOM tab of the MP2954 part.

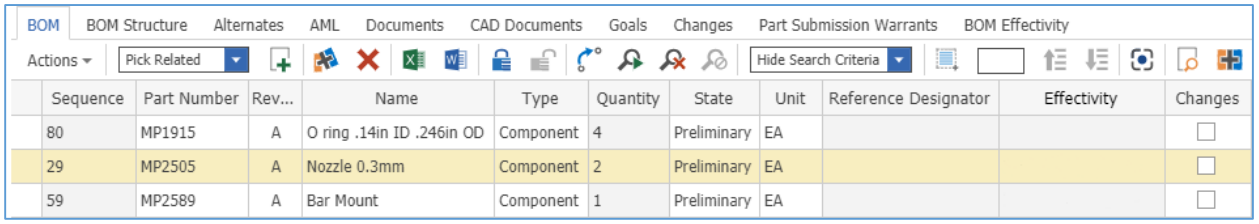


Figure 39.

4. Right-click the **MP2505** part and then click **View "BOM"**. The Part BOM tab appears for the MP2505 part.

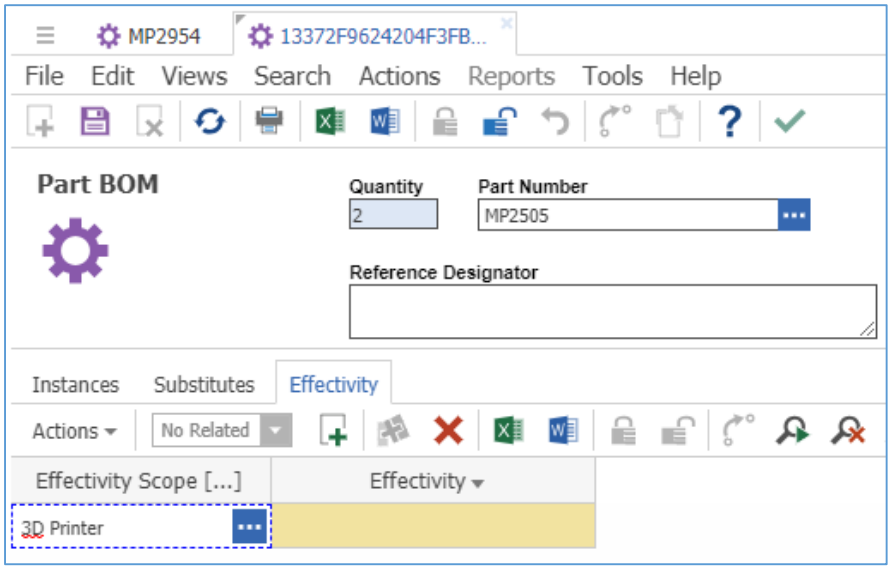


Figure 40.

5. Lock the **Part BOM** for editing
6. On the **Effectivity** tab of the **Part BOM**, create a new effectivity with the **3D Printer** Effectivity Scope.
7. Right-click the new item and then click **View** "**Effectivity**".

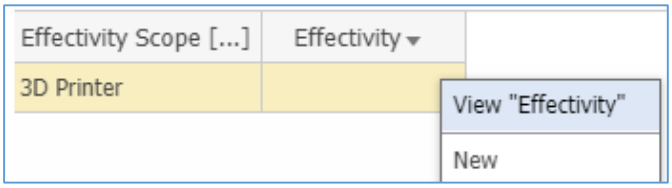


Figure 41.

The **Part BOM Effectivity** tab appears.

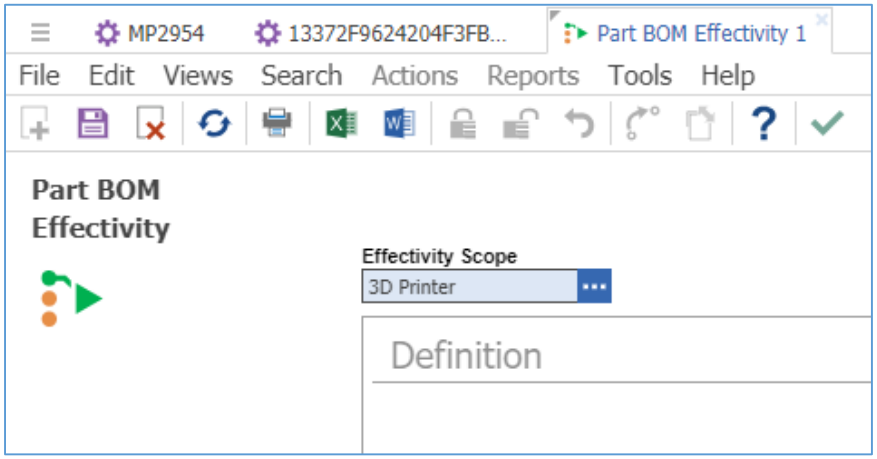


Figure 42.

8. Enter **Model = Replicator** in the **Definition** box of the **Part BOM Effectivity** tab.

9. Click **Save**, **Unlock & Close** on the **Part BOM Effectivity** tab toolbar. The **Model = Replicator** Effectivity Criteria is set on the **Part BOM** relationship of the **MP2505** part.

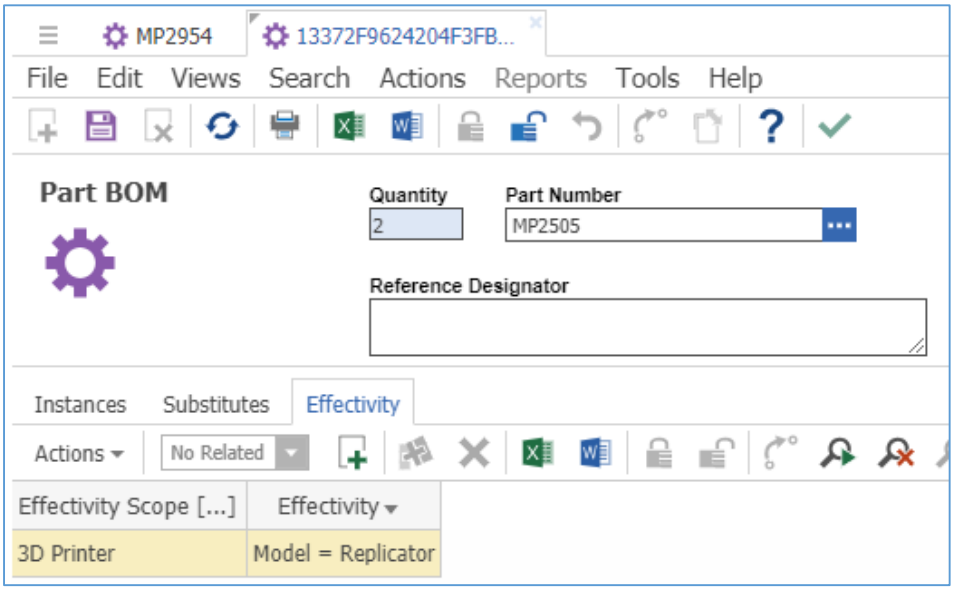


Figure 43.

10. Click **Save, Unlock & Close** on the **Part BOM** tab toolbar. The **Model = Replicator** Effectivity Condition is set between the parent **MP2954** and the child **MP2505** parts.

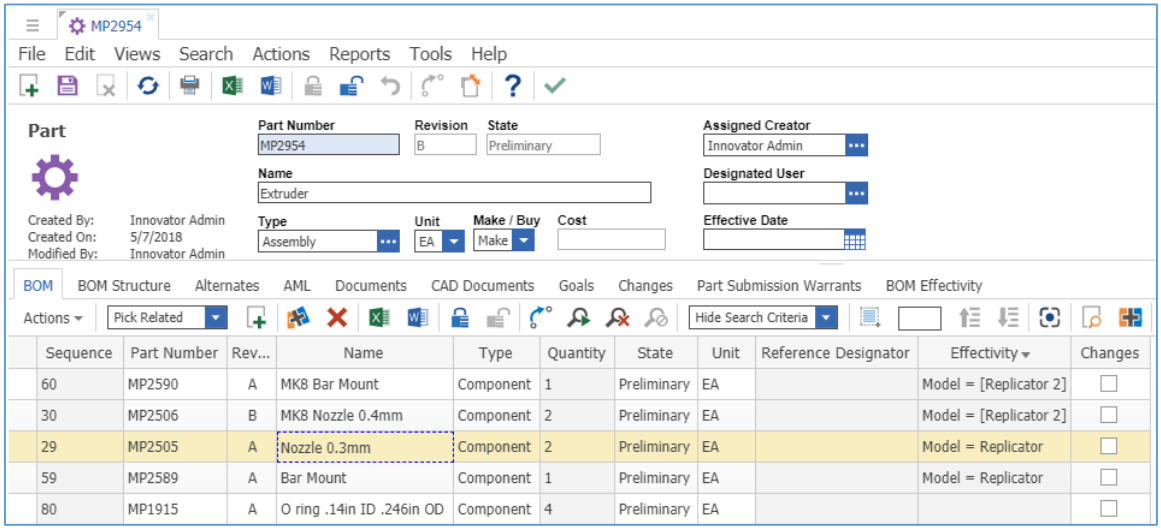


Figure 44.

11. Repeat steps 3-10 for the child parts of the **MP2954** part as specified in Table 4.
12. Click **Save, Unlock, & Close** on the **MP2954** part toolbar. The Effectivity Criteria is set on the **MP2954** part structure.

Following the previous procedure, set the Effectivity Conditions on the parts as specified in Table 4.

Table 4: Specifications of Effectivity Conditions within MP0101 and MP0103 part structures in the Sample Application

Part Level	Part Number	Name	Effectivity Condition
1	**MP2954**	**Extruder**	
2	MP2505	Nozzle 0.3mm	Model = [Replicator]
2	MP2506	MK8 Nozzle 0.4mm	Model = [Replicator 2]
2	MP2589	Bar Mount	Model = [Replicator]
2	MP2590	MK8 Bar Mount	Model = [Replicator 2]
1	**MP2943**	**Build Platform**	
2	MP2339	Thing-O-Matic 2 Aluminum Heat Spreader	Model = [Replicator]
2	MP2360	Replicator Aluminum Heat Spreader	Model = [Replicator 2]
1	**MP2952**	**Electronics**	
2	**MP2960**	**Storage Assembly**	
3	MP2988	Makerbot MightyBoard Software	Model = [Replicator]
3	MP2989	Makerbot MightyBoard Software v2	Model = [Replicator 2]
1	**MP2938**	**Additional Parts**	
2	MP2935	Filament Spool Holder	(Model = [Replicator]) OR ((Model = [Replicator 2] AND Unit <= 99))
2	MP2361	Filament Heavy Duty Spool Holder	Model = [Replicator 2] AND Unit >= 100
2	MP4000	Filament	[Production Date] >= [6/22/2018]

5.2 Updating Effectivity on Part BOM

This section describes the procedure for updating the effectivity condition on **MP4000** within **MP2938.**

1. Go to **TOC** --> **Design** --> **Parts**.
2. Search for MP2938 Part Number with Additional Parts Name and lock it for editing.

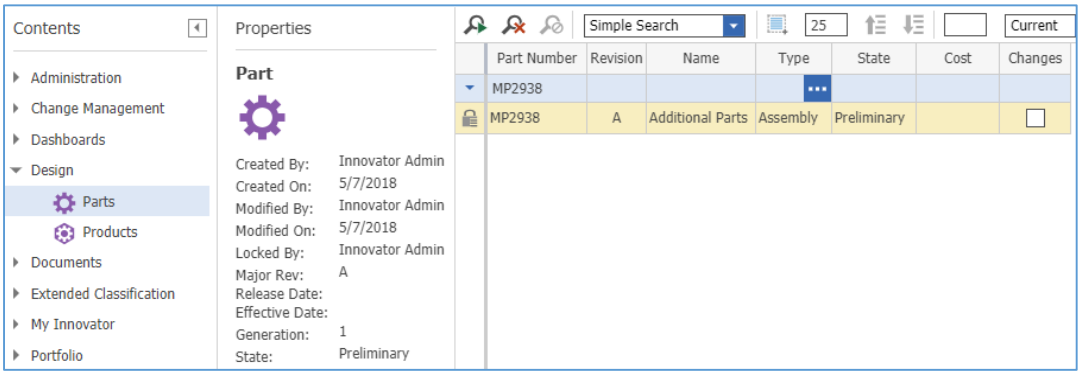


Figure 45.

3. Search for part number **MP4000** with the **Filament** Name on the **BOM** tab of the **MP2938** part.

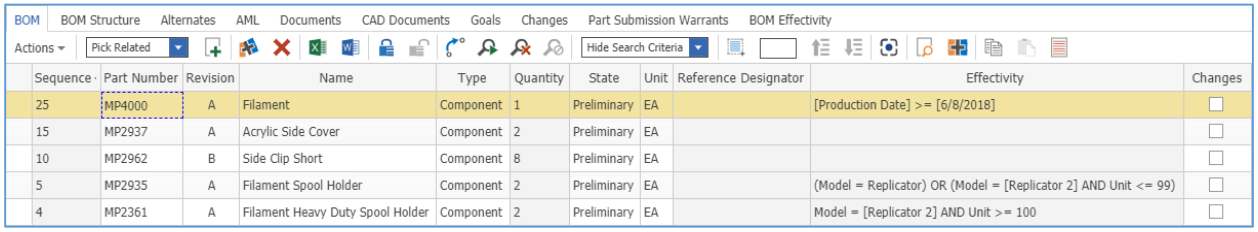


Figure 46.

4. Right-click the **MP4000** part and then click **View "BOM"**.

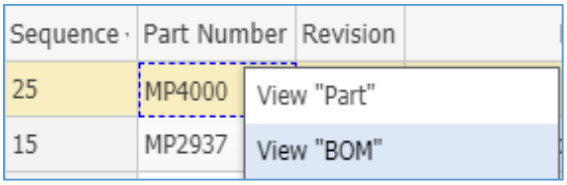


Figure 47.

The **Part BOM** tab appears for the **MP4000** part.

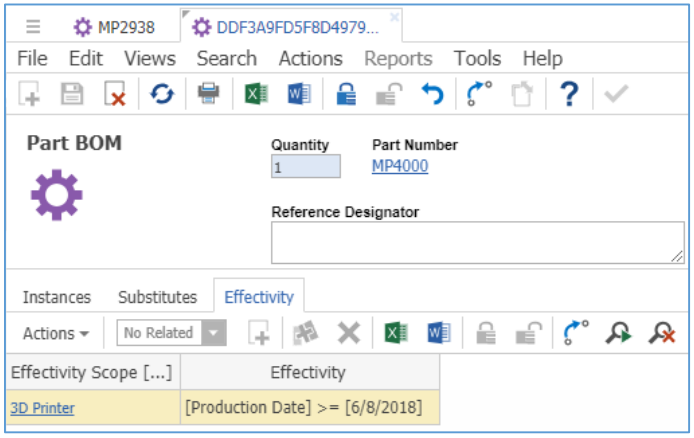


Figure 48.

5. Lock the **Part BOM** tab for editing.
6. On the **Effectivity** tab, right-click the **3D Printer** Effectivity item and then click **View** "**Effectivity**".

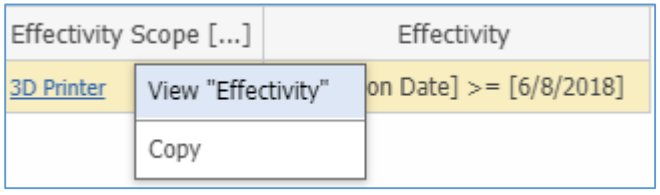


Figure 49.

The **Part BOM Effectivity** form appears.

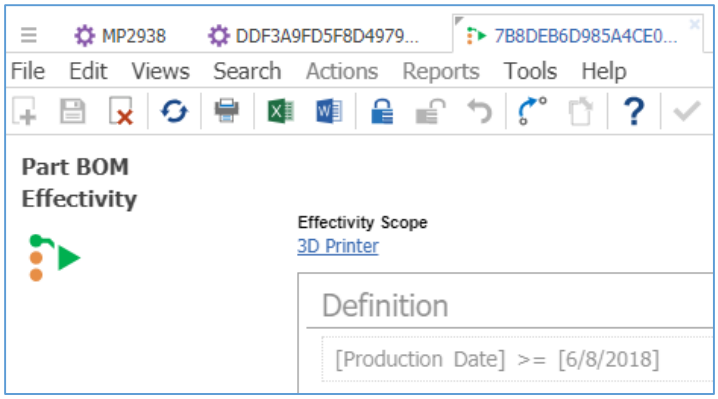


Figure 50.

7. Lock the **Part BOM Effectivity** tab for editing.
8. Change the date to **[6/15/2018]** In the **Definition** box of the **Part BOM Effectivity** tab.

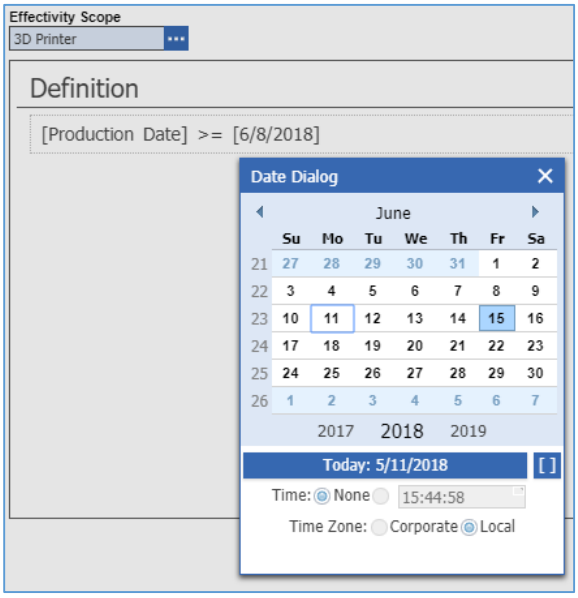


Figure 51.

9. Click **Save, Unlock, & Close** on the **Part BOM Effectivity** tab toolbar.

   The effectivity condition on the **MP4000** part is updated to **[Production Date] >= [6/15/2018]**.

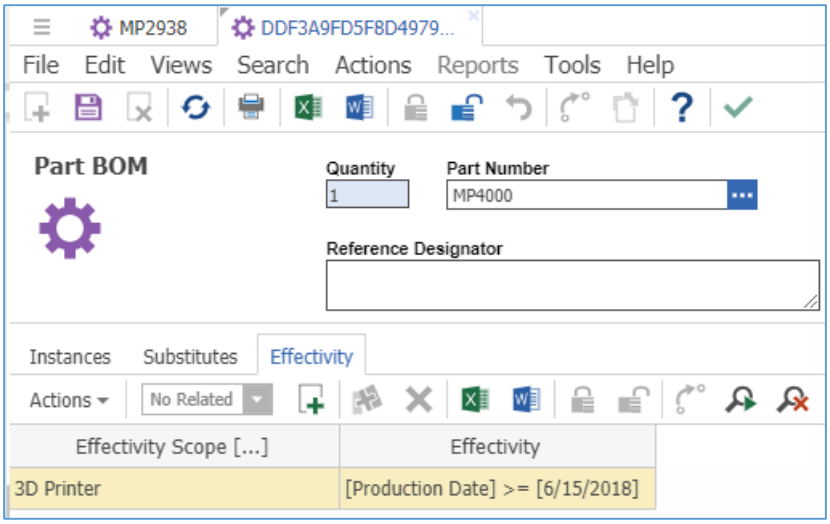


Figure 52.

10. Click **Save**, **Unlock & Close** on the **Part BOM** tab toolbar.

    The effectivity condition is updated between the parent **MP2938** and the child **MP4000** parts.

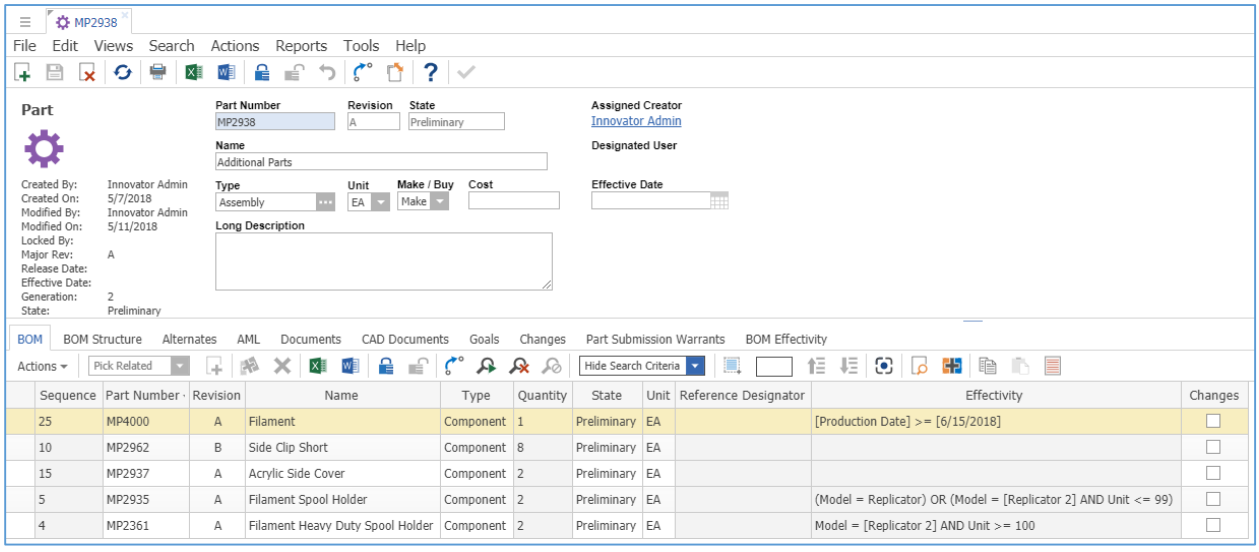


Figure 53.

11. Click **Save, Unlock & Close** on the **MP2938** part toolbar.

    The effectivity condition is updated on the **MP2938** part structure.

5.3 Removing Effectivity on Part BOM

This section describes the procedure for removing an existing effectivity condition on **MP2977** within **MP2960**.

1. Go to **TOC** --> **Design** --> **Parts**
2. Search for **MP2960** Part Number with **Storage Assembly** Name and open it.

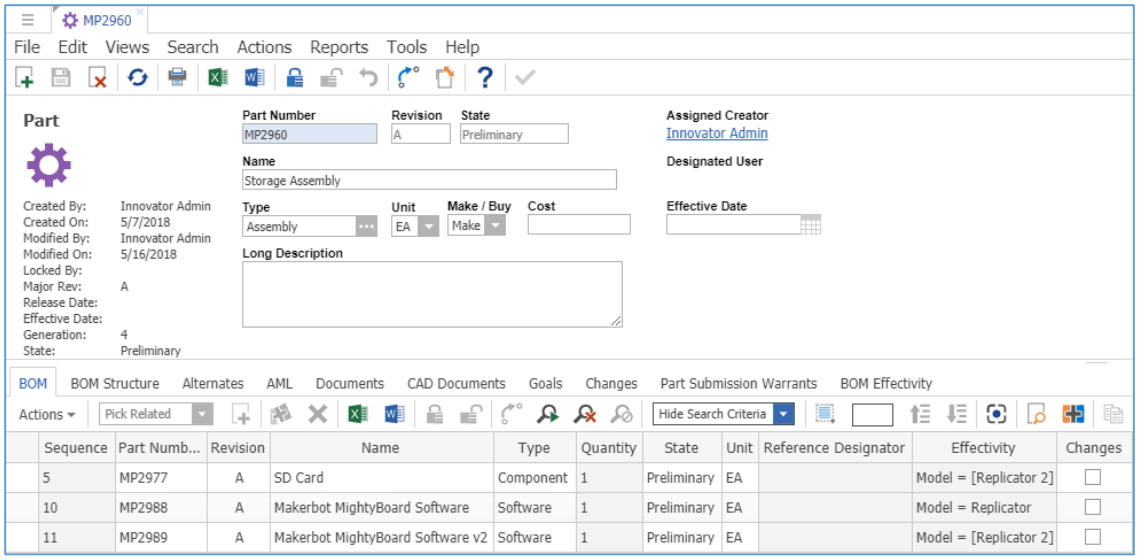


Figure 54.

3. Lock the **MP2960** part for editing.
4. Right-click the **MP2977 Part Number** with **SD Card Name** and then click **View "BOM"**.

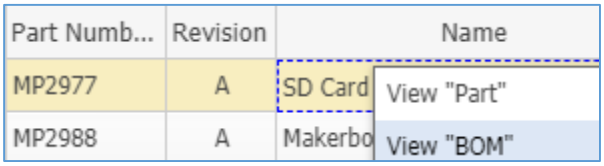


Figure 55.

The **Part BOM** tab appears for the **MP2977** part.

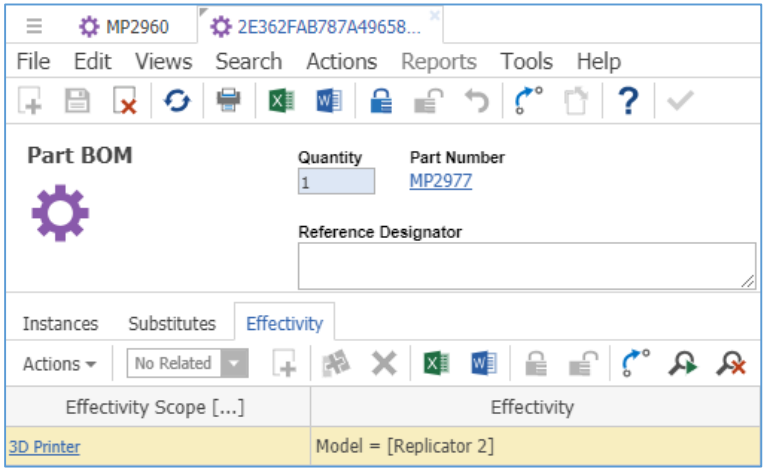


Figure 56.

5. Lock the **Part BOM** for the **MP2977** part.
6. Select the **Model = [Replicator 2]** effectivity on the **Effectivity** tab.
7. Click **Delete Relationship** on the **Effectivity** tab.

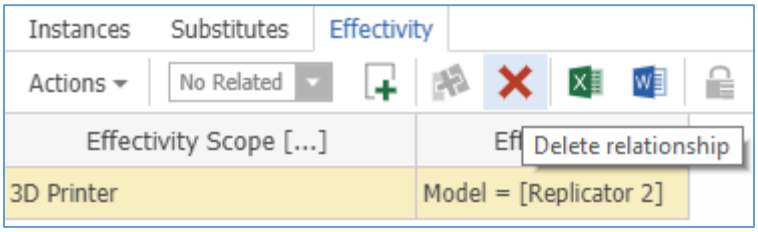


Figure 57.

8. Click **Save, Unlock, & Close** on the Part BOM toolbar.
9. On the **MP2960** toolbar, click **Refresh Item**.

   The **Model = [Replicator 2]** Effectivity is removed from the **MP2977** part.

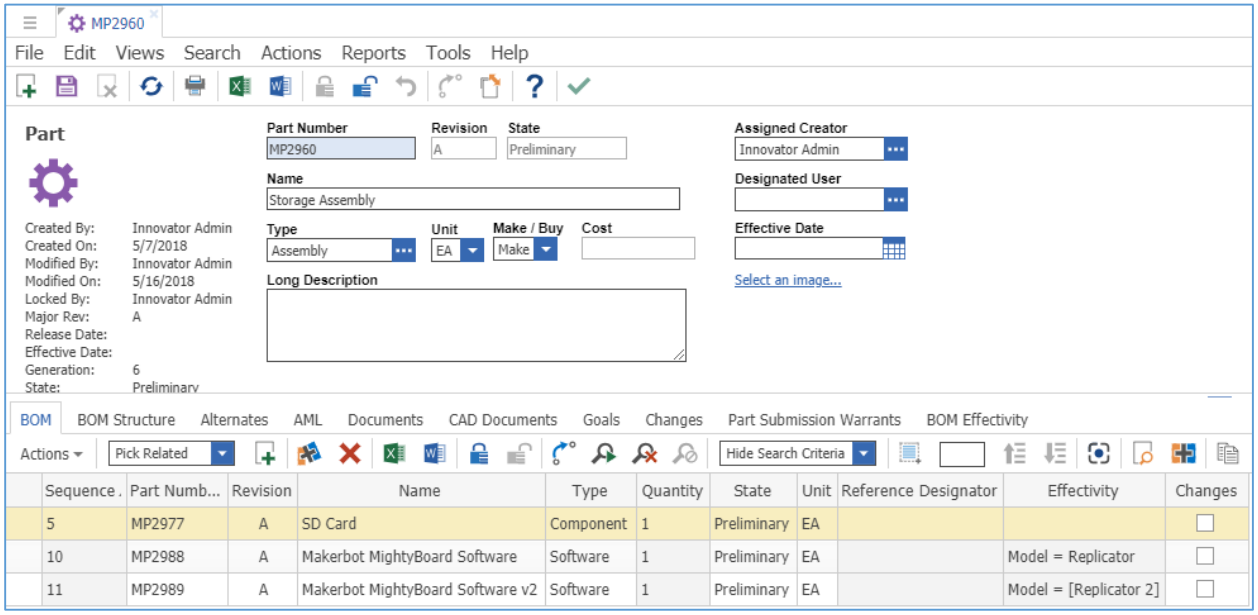


Figure 58.

10. Click **Save, Unlock, & Close** on the **MP2960** toolbar.

    The **Model = [Replicator 2]** effectivity on the **MP2977** part is removed from the **MP2960 BOM Structure**.

5.4 Viewing Effectivity on Part BOM

Now that Effectivity Conditions are set up, you can view BOM Effectivity and resolve Part BOM Structure by Effectivity.

If an Effectivity(s) is set on a **Part BOM** relationship at any level of a multi-level structure, this Effectivity(s) is displayed in the propositional form on the corresponding child item's row.

When multiple effectivities are set on a child part, the display format is (…) OR (…) OR (…).

You can view Effectivity on three different tabs:

- BOM

- BOM Structure
- BOM Effectivity

Let us have a closer look at these options.

5.4.1 Viewing Effectivity on the BOM tab

Use the following procedure:

1. Go to **TOC** --> **Design** --> **Parts**.
2. Search for **MP2938** Part Number with **Additional Parts** Name and double-click it.

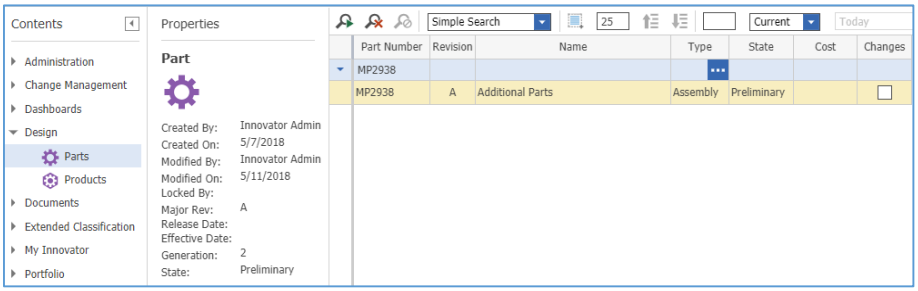


Figure 59.

The **MP2938** part tab appears.

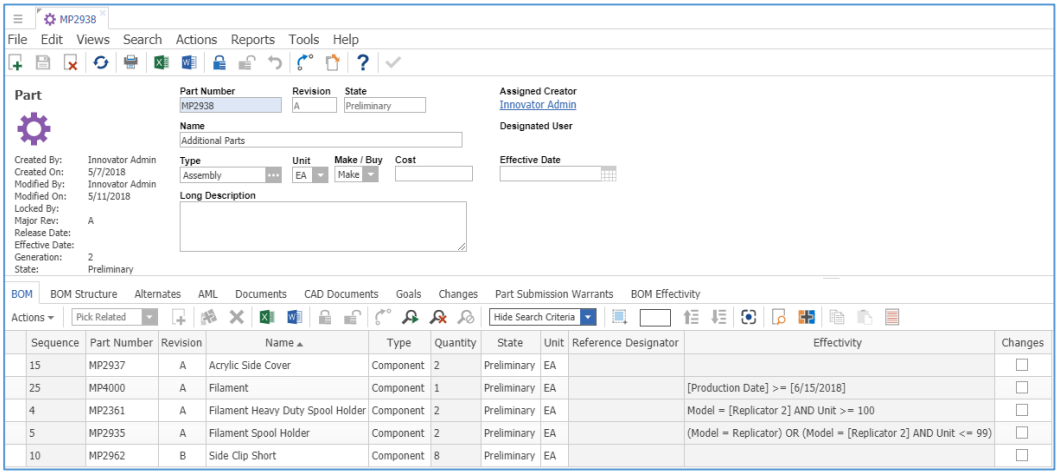


Figure 60.

3. On the **Effectivity** column, on the **BOM** tab of the **MP2938** part, view the Effectivities set on the **MP4000, MP2361** and **MP2935** parts.

5.4.2 Viewing Effectivity on the BOM Structure tab

Use the following procedure:

1. Go to **TOC** --> **Design** --> **Parts**.
2. Search for **MP2952** Part Number with **Electronics** Name and double-click it.

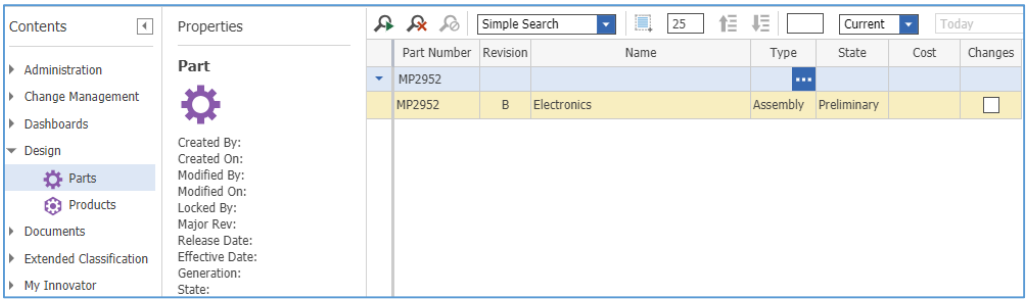


Figure 61.

The **MP2952** part tab appears.

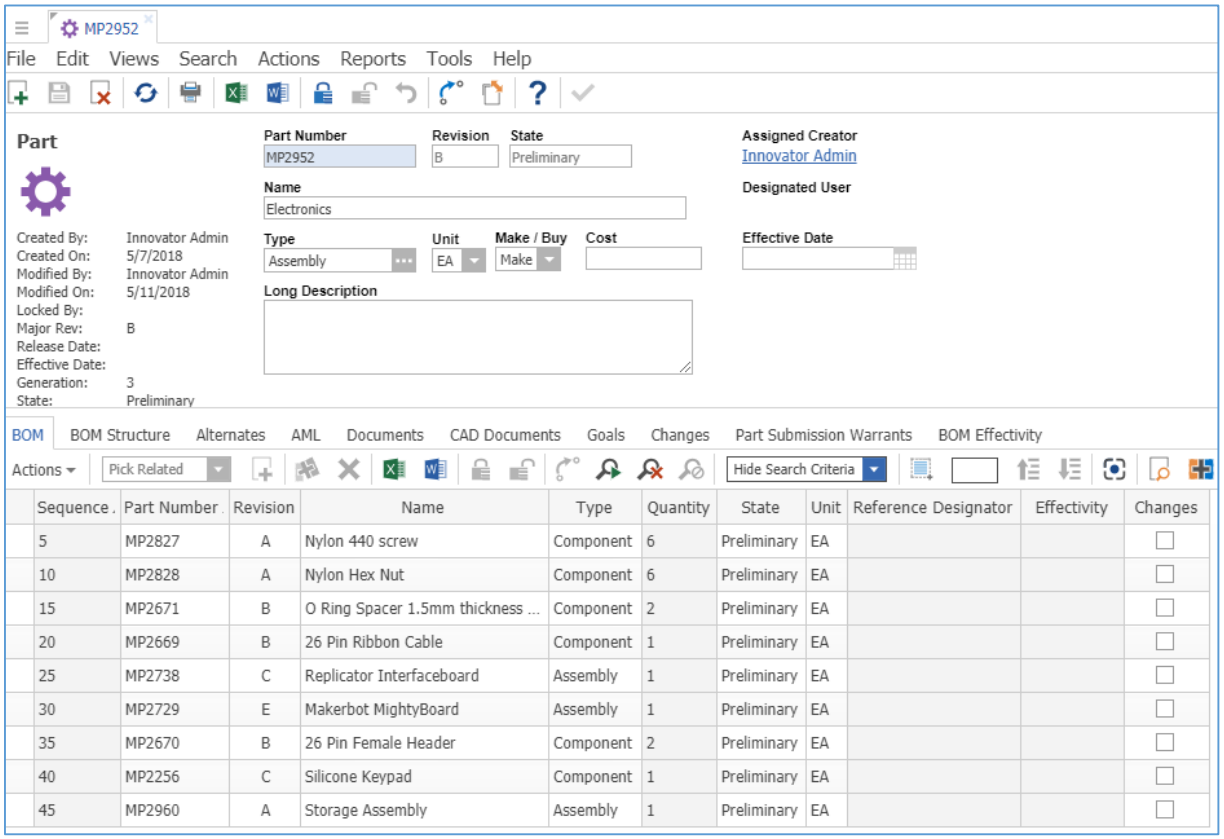
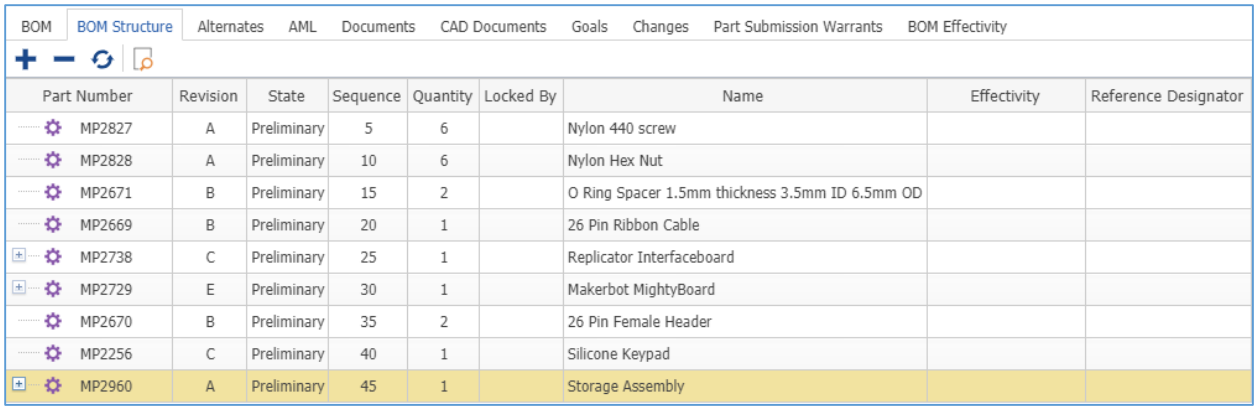


Figure 62.

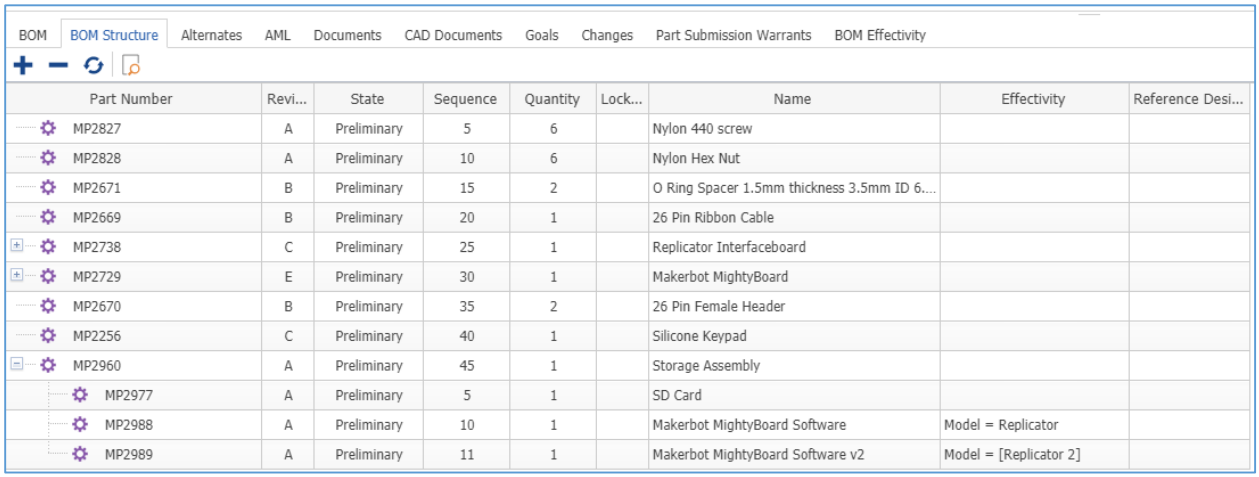
3. Click the **BOM Structure** tab.



Part Number	Revision	State	Sequence	Quantity	Locked By	Name	Effectivity	Reference Designator
MP2827	A	Preliminary	5	6		Nylon 440 screw		
MP2828	A	Preliminary	10	6		Nylon Hex Nut		
MP2671	B	Preliminary	15	2		O Ring Spacer 1.5mm thickness 3.5mm ID 6.5mm OD		
MP2669	B	Preliminary	20	1		26 Pin Ribbon Cable		
MP2738	C	Preliminary	25	1		Replicator Interfaceboard		
MP2729	E	Preliminary	30	1		Makerbot MightyBoard		
MP2670	B	Preliminary	35	2		26 Pin Female Header		
MP2256	C	Preliminary	40	1		Silicone Keypad		
MP2960	A	Preliminary	45	1		Storage Assembly		

Figure 63.

4. Click **Expand** on the **MP2960** Part Number. The **BOM** of the **MP2960** part appears.



Part Number	Revi...	State	Sequence	Quantity	Lock...	Name	Effectivity	Reference Desi...
MP2827	A	Preliminary	5	6		Nylon 440 screw		
MP2828	A	Preliminary	10	6		Nylon Hex Nut		
MP2671	B	Preliminary	15	2		O Ring Spacer 1.5mm thickness 3.5mm ID 6....		
MP2669	B	Preliminary	20	1		26 Pin Ribbon Cable		
MP2738	C	Preliminary	25	1		Replicator Interfaceboard		
MP2729	E	Preliminary	30	1		Makerbot MightyBoard		
MP2670	B	Preliminary	35	2		26 Pin Female Header		
MP2256	C	Preliminary	40	1		Silicone Keypad		
MP2960	A	Preliminary	45	1		Storage Assembly		
MP2977	A	Preliminary	5	1		SD Card		
MP2988	A	Preliminary	10	1		Makerbot MightyBoard Software	Model = Replicator	
MP2989	A	Preliminary	11	1		Makerbot MightyBoard Software v2	Model = [Replicator 2]	

Figure 64.

5. View the Effectivities set on the **MP2988** and **MP2989** parts on the **Effectivity** column.

5.4.3 Viewing Effectivity on the BOM Effectivity tab

This section describes the viewing of Effectivity on the **BOM Effectivity** tab. For detailed information about Tree Grid View features and options, refer to sections *4.5* and *4.6* of the *Aras Innovator 11.0 – Tree Grid View Administrator Guide*.

Note: This viewing option becomes available only after a **Part BOM** structure is resolved by Effectivity as described in section *5.5 Resolving Part BOM Structure by Effectivity*.

Use the following procedure:

1. Resolve the **Part BOM** Structure of the **MP0101** part for effectivity criteria such as **Unit = 100 AND Model = Replicator 2 AND Production Date = 6/15/2018** Effectivity (refer to Section *5.5 Resolving Part BOM Structure by Effectivity*).

   On the **BOM Effectivity** tab of the **MP0101** part, the **Part BOM** Structure resolved by the Effectivity appears.

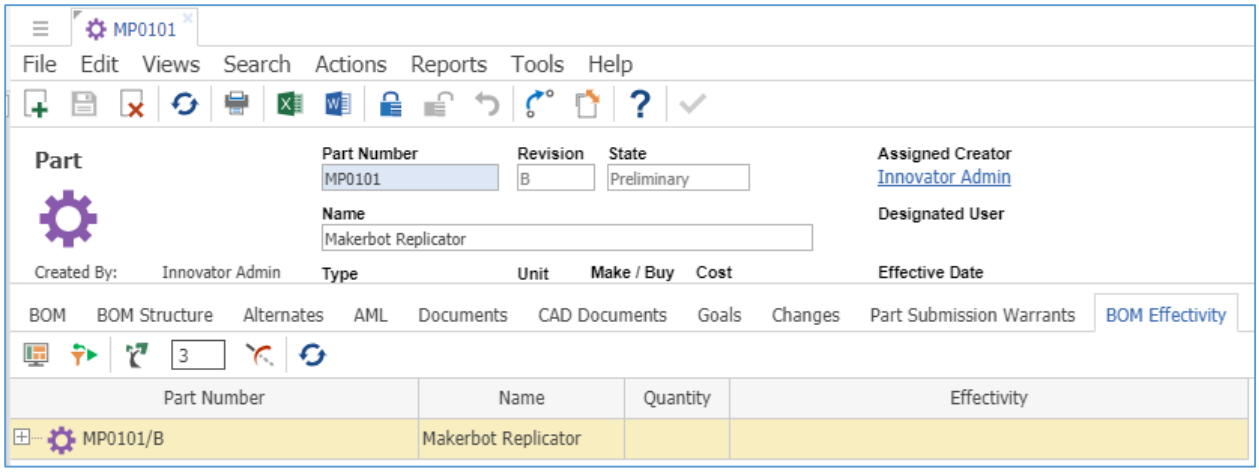


Figure 65.

2. On the **BOM Effectivity** toolbar, in the **Grow Depth** box, enter **2** to set the Grow depth from the selected level to two levels.

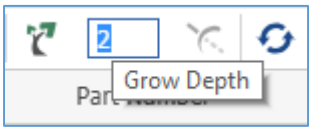


Figure 66.

3. On the **BOM Effectivity** toolbar, click **Grow** to reveal the Part BOM Effectivity structure to two levels deep from the current (top) level.

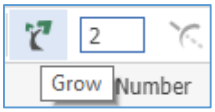


Figure 67.

The resolved Part BOM Effectivity structure is revealed to two levels deep from the initial level.

Part Number	Name	Quantity	Effectivity
MP0101/B	Makerbot Replicator		
MP2942/B	Body	1	
MP2667/B	Spacer Black 5-16 in length .14in ID .25in OD	1	
MP2322/C	RGB LED Strip Common Anode	1	
MP2660/B	Spacer Black 1-2 in length .14in ID .25in OD	2	
MP2939/A	Body Fan Assembly	1	
MP2940/A	Body Hardware	1	
MP2941/B	Body Panels	1	
MP2963/A	Stepper Motor Assembly	1	
MP2453/A	Thing-O-Matic 2 Radial Ball Bearings	4	
MP2944/A	Cable Hardware	1	
MP0979/D	Mechanical Endstop	2	
MP2954/B	Extruder	1	
MP1705/B	MK7 Thermal Core	2	
MP2607/D	Cartridge Heater 40W 24V Right Angle Exit	2	
MP2966/C	Wire-Filament Extruder Guide	1	
MP2959/C	Nylon Spacer with Flange	1	
MP2506/B	MK8 Nozzle 0.4mm	2	Model = [Replicator 2]
MP1708/B	MK7 Heatsink	2	
MP2685/C	Spacer Black 16.5mm length 3.2mm ID 7mm OD	4	
MP2675/A	Tube Fitting .45in Tube	2	
MP2350/C	Fan 24V 40x40x10 Hi Performance	2	
MP2953/D	Extruder Hardware	1	
MP2590/A	MK8 Bar Mount	1	Model = [Replicator 2]

Figure 68.

4. Under the **MP2952/B** part, click the **MP2729/E** part.

MP2952/B	Electronics
MP2827/A	Nylon 440 screw
MP2828/A	Nylon Hex Nut
MP2671/B	O Ring Spacer 1.5mm thickness 3.5mm ID 6.5m...
MP2669/B	26 Pin Ribbon Cable
MP2738/C	Replicator Interfaceboard
MP2729/E	Makerbot MightyBoard

Figure 69.

5. On the **BOM Effectivity** toolbar, click **Grow**. The Part BOM Effectivity structure displays two levels deep from the **MP2729/E** part level.

MP2952/B	Electronics
MP2827/A	Nylon 440 screw
MP2828/A	Nylon Hex Nut
MP2671/B	O Ring Spacer 1.5mm thickness 3.5mm ID 6.5m...
MP2669/B	26 Pin Ribbon Cable
MP2738/C	Replicator Interfaceboard
MP2729/E	Makerbot MightyBoard
MP3598/E	Makerbot MightyBoard - bare board
MP2343/E	Botstep 17
MP387...	Botstep 17 - bare board
MP345...	Capacitor .1uF
MP342...	Capacitor .22 uF
MP390...	LED Green
MP385...	Header 8x1
MP354...	Resistor 4.7K
MP345...	Resistor 6.8K
MP329...	Resistor 6.8K
MP354...	Resistor .27K
MP350...	Resistor 33K
MP381...	Resistor 0K
MP388...	Resistor 12K
MP349...	Controller Stepper Motor
MP3458/A	Reset Switch
MP3065/A	Powerswitch

Figure 70.

6. Click **Trim** in the **BOM Effectivity** toolbar.

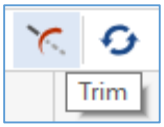


Figure 71.

The resolved Part-BOM Effectivity structure is concealed two levels up to the **MP2729/E** part level.

MP2952/B	Electronics
MP2827/A	Nylon 440 screw
MP2828/A	Nylon Hex Nut
MP2671/B	O Ring Spacer 1.5mm thickness 3.5mm ID 6.5m...
MP2669/B	26 Pin Ribbon Cable
MP2738/C	Replicator Interfaceboard
MP2729/E	Makerbot MightyBoard
MP2670/B	26 Pin Female Header
MP2256/C	Silicone Keypad
MP2960/A	Storage Assembly
MP2967/A	Wiring

Figure 72.

5.5 Resolving Part BOM Structure by Effectivity

To change the TGV parameters while resolving a structure by effectivity, the Sample Application includes the following dialog boxes:

- Effectivity Criteria Filter
- TGV Parameters

By default, the Sample Application is configured to use the **Effectivity Criteria Filter** dialog.

Note: To switch between the dialogs, set up both the Tree Grid View and Query Definition configurations for a target dialog as outlined in the corresponding sections:
4.5. Query Definition Configurations
4.6. Tree Grid View Configurations

Warning Both the Tree Grid View and Query Definition configurations must correspond to the same dialog. Otherwise, the application may fail.

This section explains:

- Resolving a structure using the **Effectivity Criteria Filter** dialog.
- Resolving a structure using the **TGV Parameters** dialog.
- How to set a default value for an effectivity variable.

5.5.1 Resolving a Structure using the Effectivity Criteria Filter dialog

Use the following procedure to resolve a structure using the **Effectivity Criteria Filter** dialog box:

1. Click **TOC → Design→ Parts**.
2. Search for the **MP0101** Part Number with **Makerbot Replicator** Name and double-click it.

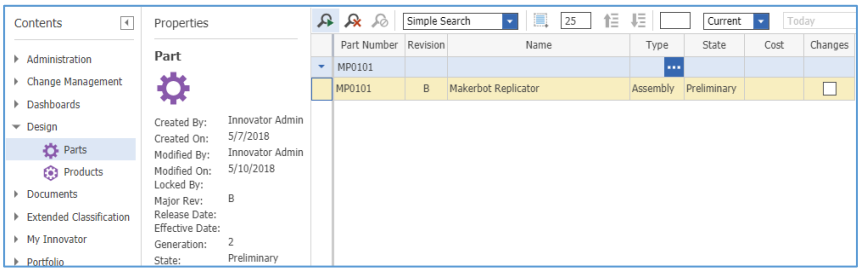


Figure 73.

The **MP0101** part tab appears.

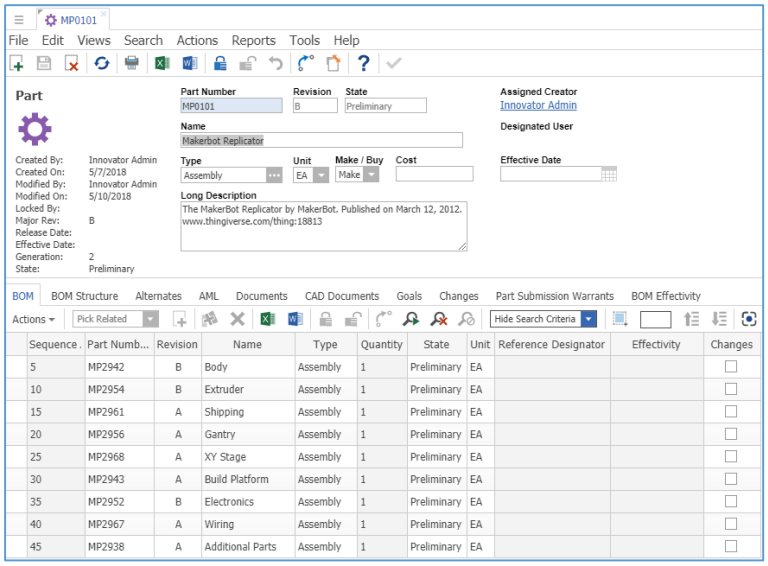


Figure 74.

3. Go to the **BOM Effectivity** tab for the **MP0101** part.

4. Set **Grow Depth** value to **2** and then click the **Grow** toolbar button.

   Since no effectivity criteria is specified yet, the unfiltered structure is displayed. For example, **MP2505/A** and **MP2506/B** for two different models are both included.

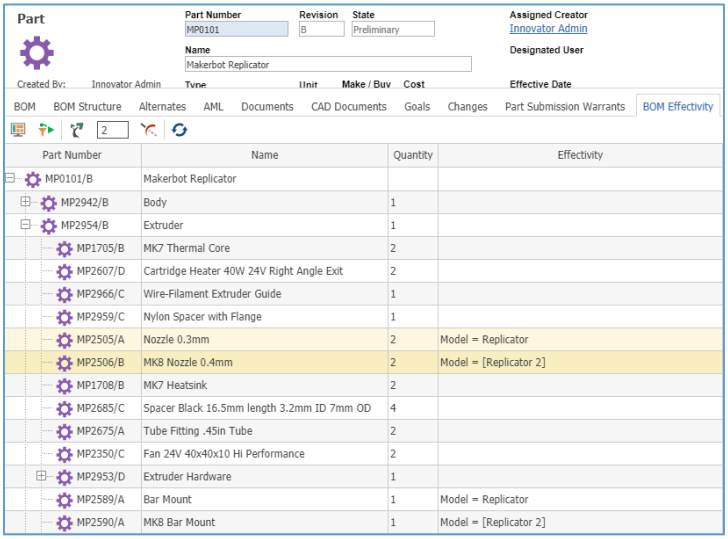


Figure 75.

5. Click the **Set Effectivity Criteria** toolbar button on the **BOM Effectivity** tab of the **MP0101** part.

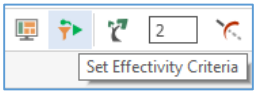


Figure 76.

The **Effectivity Criteria Filter** dialog appears.

Note: By default, the **current date** is set as the **Production Date** effectivity variable. To change the default values, refer to section *5.5.3 Setting the Default Value of a TGV Effectivity Parameter in a Dialog*.

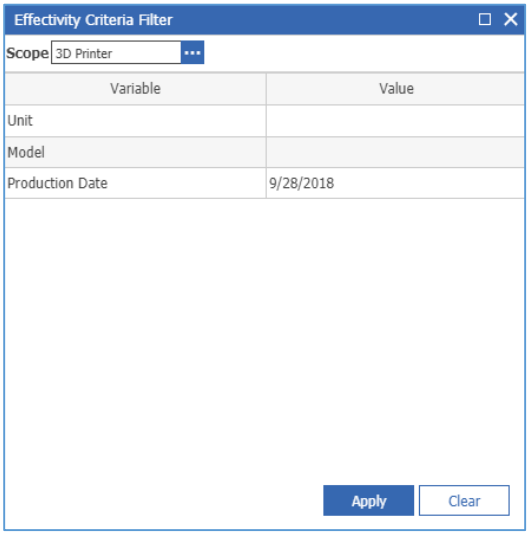


Figure 77.

6. Select **Replicator** in the **Value** cell in the **Model** row of the **Effectivity Criteria Filter** dialog.

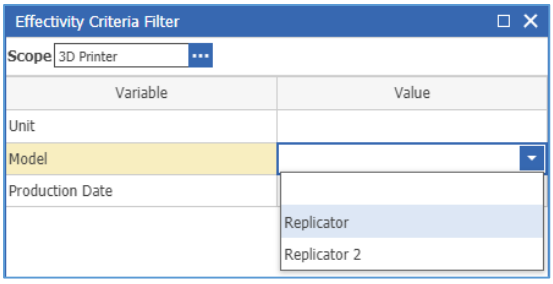
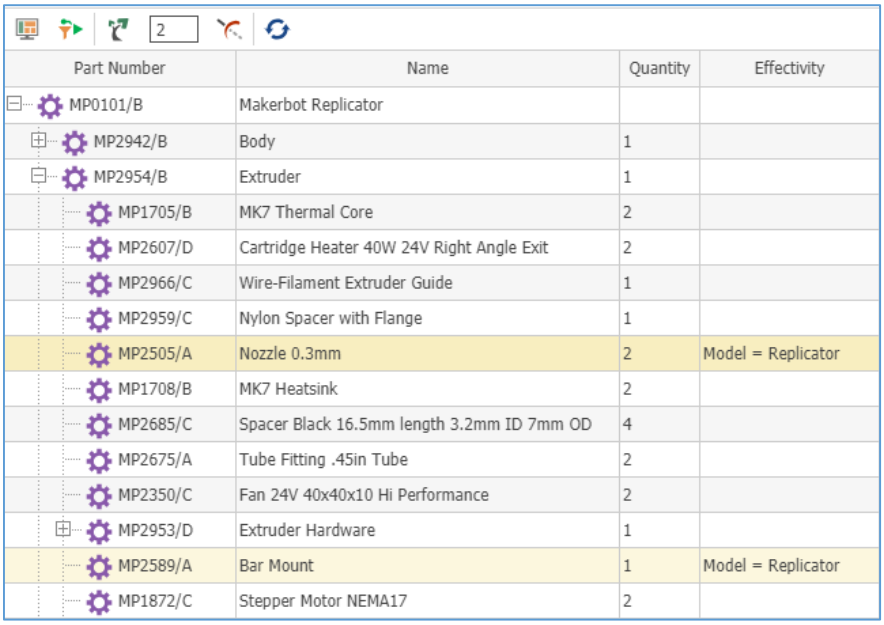


Figure 78.

7. Click **Apply** in the **Effectivity Criteria Filter** dialog.

   The **Part BOM** Structure is resolved by criteria **Model = Replicator AND Production Date = [9/28/2018]**. While parts for the **Replicator** model, such as **MP2505/A** and **MP2589/A,** are included, parts for **Replicator 2** model, such as **MP2506/B** and **MP2590/A** are filtered out in the resolved structure.

Note: In the **Effectivity Criteria Filter** dialog, not all variables must have a value to resolve the Structure by Effectivity.



Part Number	Name	Quantity	Effectivity
MP0101/B	Makerbot Replicator		
MP2942/B	Body	1	
MP2954/B	Extruder	1	
MP1705/B	MK7 Thermal Core	2	
MP2607/D	Cartridge Heater 40W 24V Right Angle Exit	2	
MP2966/C	Wire-Filament Extruder Guide	1	
MP2959/C	Nylon Spacer with Flange	1	
MP2505/A	Nozzle 0.3mm	2	Model = Replicator
MP1708/B	MK7 Heatsink	2	
MP2685/C	Spacer Black 16.5mm length 3.2mm ID 7mm OD	4	
MP2675/A	Tube Fitting .45in Tube	2	
MP2350/C	Fan 24V 40x40x10 Hi Performance	2	
MP2953/D	Extruder Hardware	1	
MP2589/A	Bar Mount	1	Model = Replicator
MP1872/C	Stepper Motor NEMA17	2	

Figure 79.

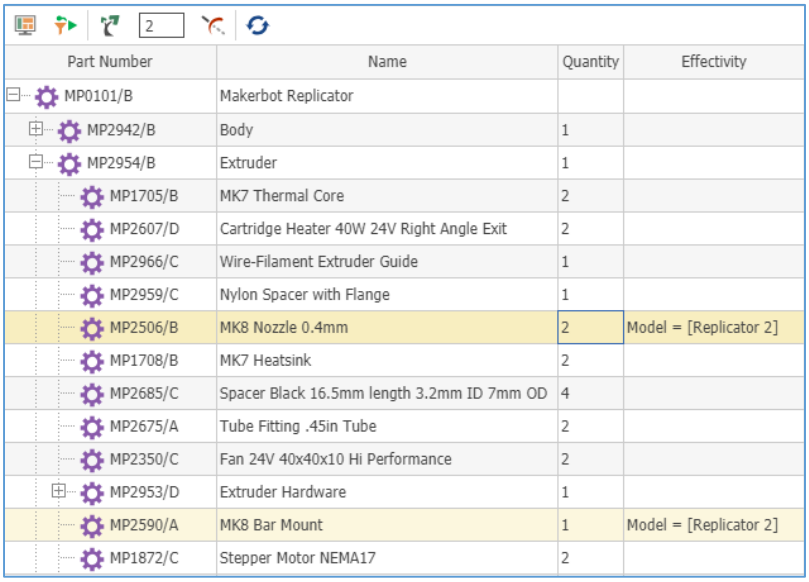
8. Click the **Set Effectivity Criteria** toolbar button on the **BOM Effectivity** tab of the **MP0101** part.

   The **Effectivity Criteria Filter** dialog appears.

9. Select **Replicator 2** in the **Value** cell in the **Model** row of the **Effectivity Criteria Filter** dialog.

10. Click **Apply** in the **Effectivity Criteria Filter** dialog.

    The **Part BOM** Structure is resolved by criteria **Model = Replicator 2 AND Production Date = [9/28/2018]**. While parts for the **Replicator 2** model, such as **MP2506/B** and **MP2590/A,** are included, parts for **Replicator** model, such as **MP2505/A** and **MP2589/A** are filtered out in the resolved structure.



Part Number	Name	Quantity	Effectivity
MP0101/B	Makerbot Replicator		
MP2942/B	Body	1	
MP2954/B	Extruder	1	
MP1705/B	MK7 Thermal Core	2	
MP2607/D	Cartridge Heater 40W 24V Right Angle Exit	2	
MP2966/C	Wire-Filament Extruder Guide	1	
MP2959/C	Nylon Spacer with Flange	1	
MP2506/B	MK8 Nozzle 0.4mm	2	Model = [Replicator 2]
MP1708/B	MK7 Heatsink	2	
MP2685/C	Spacer Black 16.5mm length 3.2mm ID 7mm OD	4	
MP2675/A	Tube Fitting .45in Tube	2	
MP2350/C	Fan 24V 40x40x10 Hi Performance	2	
MP2953/D	Extruder Hardware	1	
MP2590/A	MK8 Bar Mount	1	Model = [Replicator 2]
MP1872/C	Stepper Motor NEMA17	2	

Figure 80.

11. Enter **100** in the **Value** cell of the **Unit** row in the **Effectivity Criteria Filter** dialog.

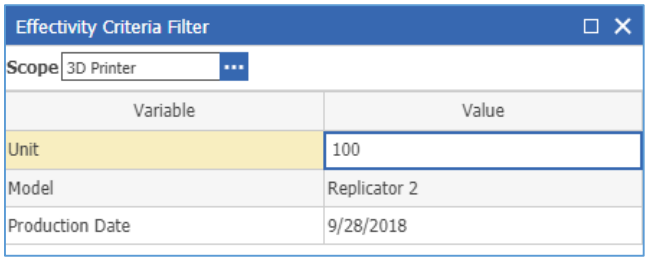


Figure 81.

12. Enter **6/15/2018** in the **Value** cell of the **Production Date** row of the **Effectivity Criteria Filter** dialog.

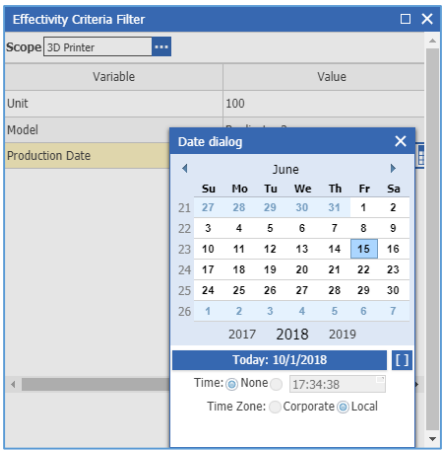


Figure 82.

13. Click **Apply** in the **Effectivity Criteria Filter** dialog.

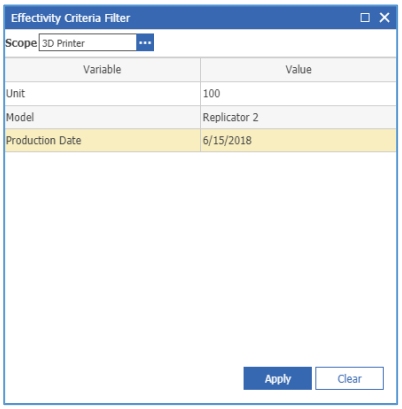
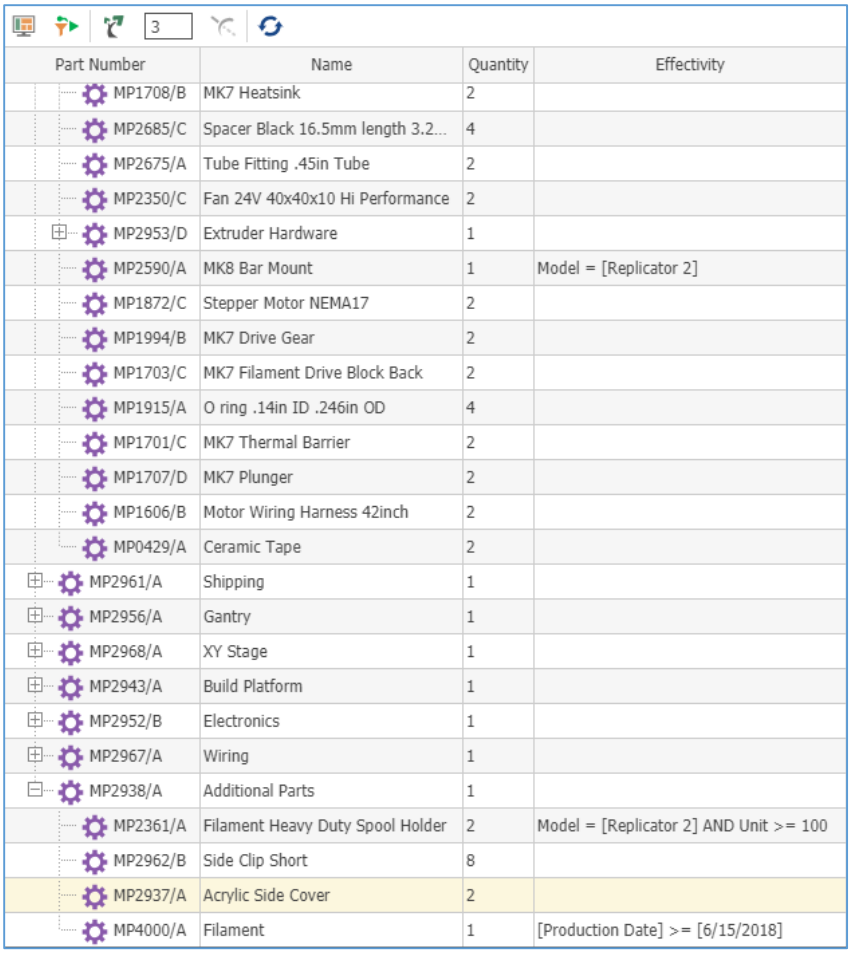


Figure 83.

The **Part BOM** Structure is resolved by criteria **Unit = 100 AND Model = [Replicator 2] AND Production Date = [6/15/2018]**.



Part Number	Name	Quantity	Effectivity
MP1708/B	MK7 Heatsink	2	
MP2685/C	Spacer Black 16.5mm length 3.2...	4	
MP2675/A	Tube Fitting .45in Tube	2	
MP2350/C	Fan 24V 40x40x10 Hi Performance	2	
MP2953/D	Extruder Hardware	1	
MP2590/A	MK8 Bar Mount	1	Model = [Replicator 2]
MP1872/C	Stepper Motor NEMA17	2	
MP1994/B	MK7 Drive Gear	2	
MP1703/C	MK7 Filament Drive Block Back	2	
MP1915/A	O ring .14in ID .246in OD	4	
MP1701/C	MK7 Thermal Barrier	2	
MP1707/D	MK7 Plunger	2	
MP1606/B	Motor Wiring Harness 42inch	2	
MP0429/A	Ceramic Tape	2	
MP2961/A	Shipping	1	
MP2956/A	Gantry	1	
MP2968/A	XY Stage	1	
MP2943/A	Build Platform	1	
MP2952/B	Electronics	1	
MP2967/A	Wiring	1	
MP2938/A	Additional Parts	1	
MP2361/A	Filament Heavy Duty Spool Holder	2	Model = [Replicator 2] AND Unit >= 100
MP2962/B	Side Clip Short	8	
MP2937/A	Acrylic Side Cover	2	
MP4000/A	Filament	1	[Production Date] >= [6/15/2018]

Figure 84.

Note: If a variable(s) is not available on an effectivity condition, then the criteria for that variable(s) will be ignored during the evaluation of that effectivity condition.

For example, for the previous effectivity criteria (**Unit = 100 AND Model = [Replicator 2] AND Production Date = [6/15/2018]**), a part with the following effectivity condition will:

Effectivity Condition	**Presence in the resolved BOM**
Model = [Replicator 2]	Yes
Model = Replicator	No
(Model = [Replicator]) OR ((Model = [Replicator 2] AND Unit <= 99))	No
Model = [Replicator 2] AND Unit >= 100	Yes
Production Date >= 6/15/2018	Yes

Let us examine the Part BOM structure of **MP0101/B** Part Number with **Makerbot Replicator** Name resolved for the effectivity criteria: **Unit = 100 AND Model = [Replicator 2] AND Production Date = [6/15/2018].**

Under **MP2954/B** Part Number with **Extruder** Name, we see that two parts with the effectivity condition **Model = [Replicator 2]** appear:

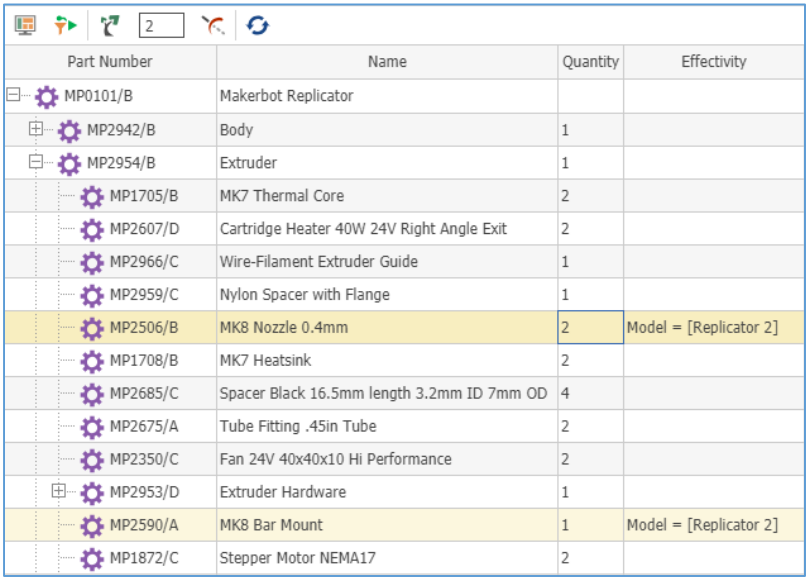
- **MP2506/B** Part Number with MK8 Nozzle 0.4 mm Name
- **MP2590/A** Part Number with MK8 Bar Mount Name

The parts with effectivity condition **Model = [Replicator]** are filtered out:

- **MP2505/A** Part Number with Nozzle 0.3 mm Name
- **MP2589/A** Part Number with Bar Mount Name

The parts with no effectivity condition are displayed, for example:

- **MP1708/B** Part Number with MK7 Heatsink Name
- **MP1872/C** Part Number with Stepper Motor NEMA17 Name



Part Number	Name	Quantity	Effectivity
MP0101/B	Makerbot Replicator		
MP2942/B	Body	1	
MP2954/B	Extruder	1	
MP1705/B	MK7 Thermal Core	2	
MP2607/D	Cartridge Heater 40W 24V Right Angle Exit	2	
MP2966/C	Wire-Filament Extruder Guide	1	
MP2959/C	Nylon Spacer with Flange	1	
MP2506/B	MK8 Nozzle 0.4mm	2	Model = [Replicator 2]
MP1708/B	MK7 Heatsink	2	
MP2685/C	Spacer Black 16.5mm length 3.2mm ID 7mm OD	4	
MP2675/A	Tube Fitting .45in Tube	2	
MP2350/C	Fan 24V 40x40x10 Hi Performance	2	
MP2953/D	Extruder Hardware	1	
MP2590/A	MK8 Bar Mount	1	Model = [Replicator 2]
MP1872/C	Stepper Motor NEMA17	2	

Figure 85.

Under **MP2952/B -> MP2960/A** Part Number with **Storage Assembly** Name, we see that the part with effectivity condition **Model = [Replicator 2]** is displayed:

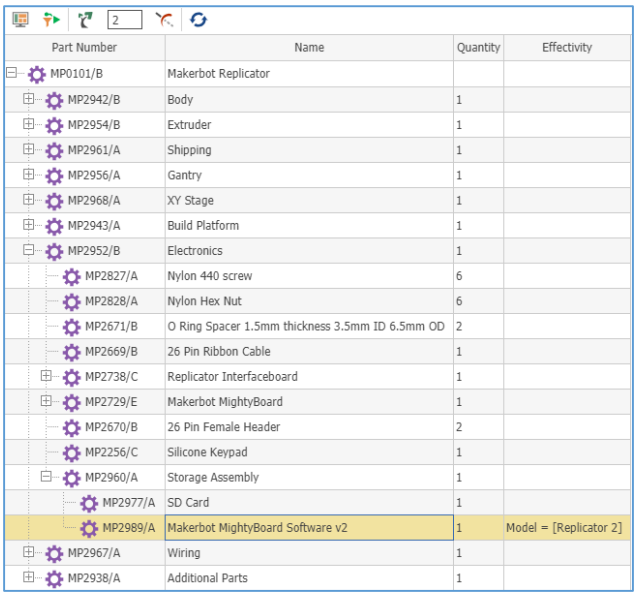
- **MP2989/A** Part Number with Makerbot MightyBoard Software v2 Name

The part with effectivity condition **Model = [Replicator]** is filtered out:

- **MP2988/A** Part Number with Makerbot MightyBoard Software Name

The part with no effectivity condition is displayed:

- **MP2977/A** Part Number with **SD Card** Name



Part Number	Name	Quantity	Effectivity
MP0101/B	Makerbot Replicator		
MP2942/B	Body	1	
MP2954/B	Extruder	1	
MP2961/A	Shipping	1	
MP2956/A	Gantry	1	
MP2968/A	XY Stage	1	
MP2943/A	Build Platform	1	
MP2952/B	Electronics	1	
MP2827/A	Nylon 440 screw	6	
MP2828/A	Nylon Hex Nut	6	
MP2671/B	O Ring Spacer 1.5mm thickness 3.5mm ID 6.5mm OD	2	
MP2669/B	26 Pin Ribbon Cable	1	
MP2738/C	Replicator Interfaceboard	1	
MP2729/E	Makerbot MightyBoard	1	
MP2670/B	26 Pin Female Header	2	
MP2256/C	Silicone Keypad	1	
MP2960/A	Storage Assembly	1	
MP2977/A	SD Card	1	
MP2989/A	Makerbot MightyBoard Software v2	1	Model = [Replicator 2]
MP2967/A	Wiring	1	
MP2938/A	Additional Parts	1	

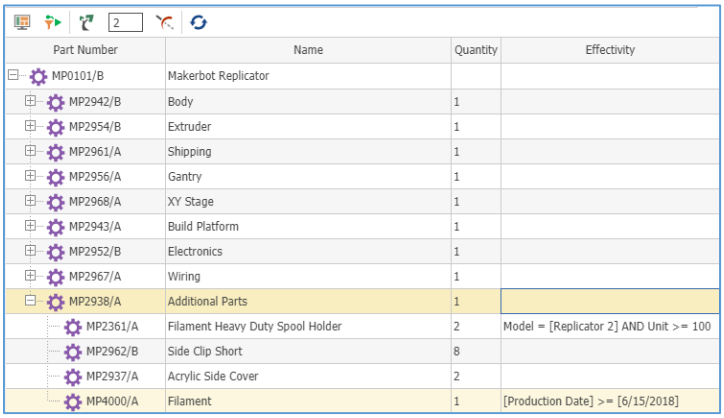
Figure 86.

Under **MP2938/A** Part Number with **Additional Parts** Name, we see that two parts with effectivity conditions that fulfill the criteria are displayed:

- **MP2361/A** Part Number with **Filament Heavy Duty Spool Holder** Name and with condition Model = [Replicator 2] AND Unit >= 100
- **MP4000/A** Part Number with **Filament** Name and with [Production Date] >= [6/15/2018]

The parts with no effectivity conditions are also displayed:

- **MP2962/B** Part Number with **Side Clip Short** Name
- MP2937/A Part Number with Acrylic Side Cover Name



Part Number	Name	Quantity	Effectivity
MP0101/B	Makerbot Replicator		
MP2942/B	Body	1	
MP2954/B	Extruder	1	
MP2961/A	Shipping	1	
MP2956/A	Gantry	1	
MP2968/A	XY Stage	1	
MP2943/A	Build Platform	1	
MP2952/B	Electronics	1	
MP2967/A	Wiring	1	
MP2938/A	Additional Parts	1	
MP2361/A	Filament Heavy Duty Spool Holder	2	Model = [Replicator 2] AND Unit >= 100
MP2962/B	Side Clip Short	8	
MP2937/A	Acrylic Side Cover	2	
MP4000/A	Filament	1	[Production Date] >= [6/15/2018]

Figure 87.

Whenever different resolution criteria are entered in the **Effectivity Criteria Filter** dialog, the multi-level Part BOM structure is resolved meeting these criteria.

5.5.2 Resolving a Structure using the TGV Parameters dialog

This subsection describes only the procedural difference of resolving Part BOM structures by effectivity criteria using the standard **TGV Parameters** dialog.

Note: Using the Effectivity Criteria Filter dialog is recommended due to its support for partial resolution and flexibility in QD and TGV configurations.

1. Go to **TOC** --> **Design** --> **Parts**.
2. Search for **MP0101** Part Number with **Makerbot Replicator** Name and double-click it.
3. Click Modify Parameters on the **BOM Effectivity** tab of the **MP0101** part.

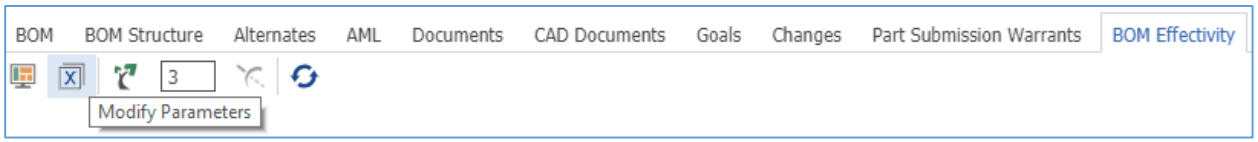


Figure 88.

The **Parameters** dialog appears.

Note: By default, the Parameters dialog shows the current date for the Production Date variable. To change the default dialog configuration, refer to section 5.*5.3 Setting the Default Value of a TGV Effectivity Parameter in a Dialog*.

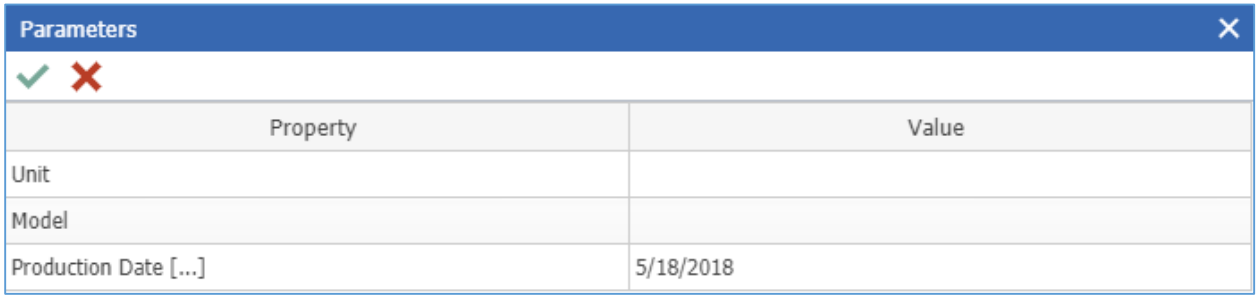


Figure 89.

4. Type **100** in the **Value** cell of the **Unit** row of the **Parameters** dialog.

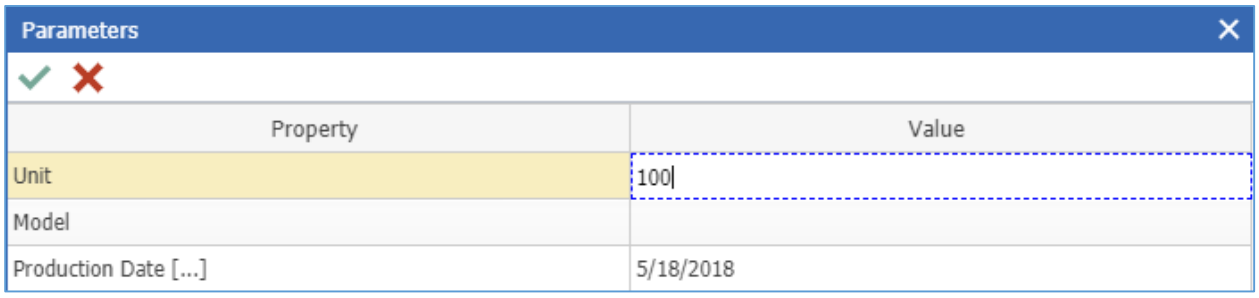


Figure 90.

5. Select **Replicator 2** in the **Value** cell in the **Model** row of the **Parameters** dialog.

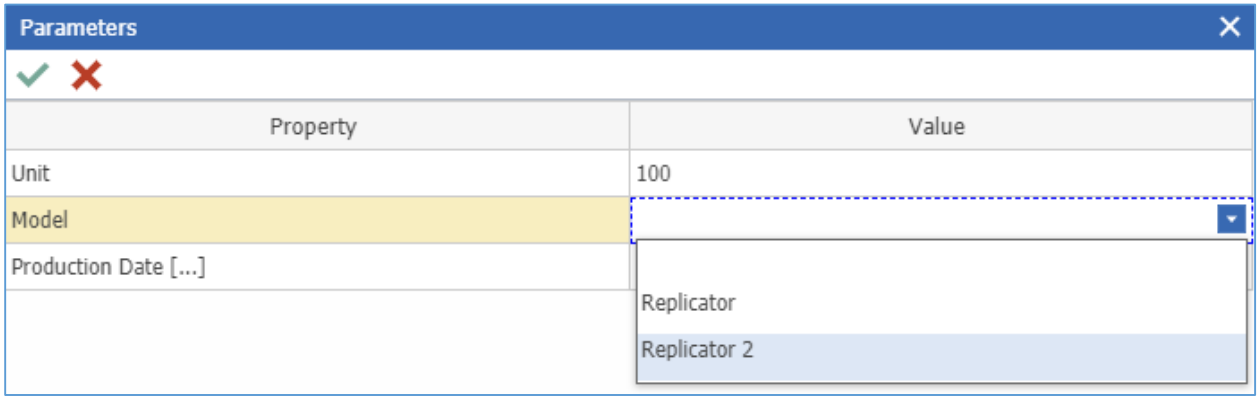


Figure 91.

6. Enter **6/15/2018** in the **Value** cell of the **Production Date** row of the **Parameters** dialog.

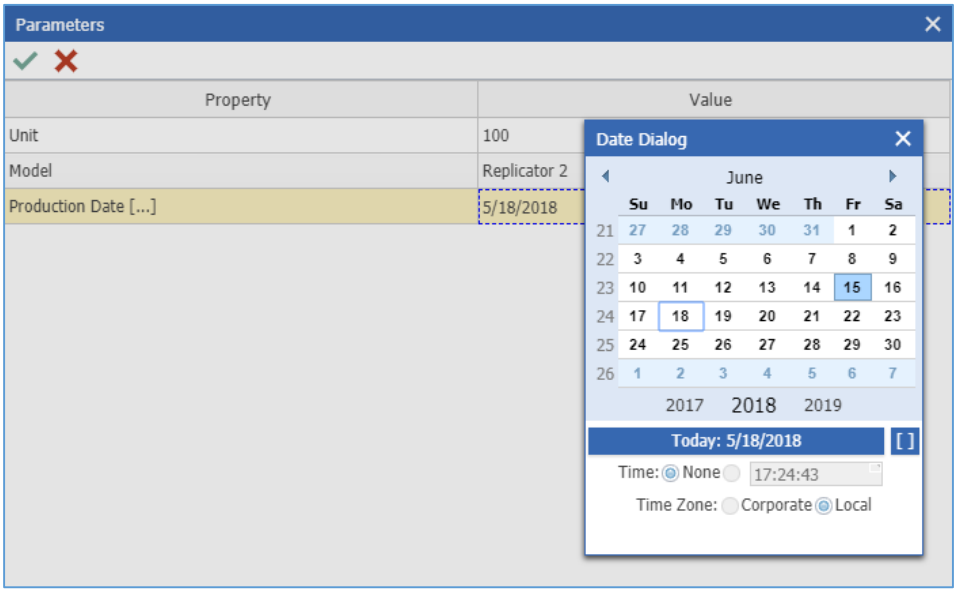


Figure 92.

7. Click Apply in the **Parameters** dialog.

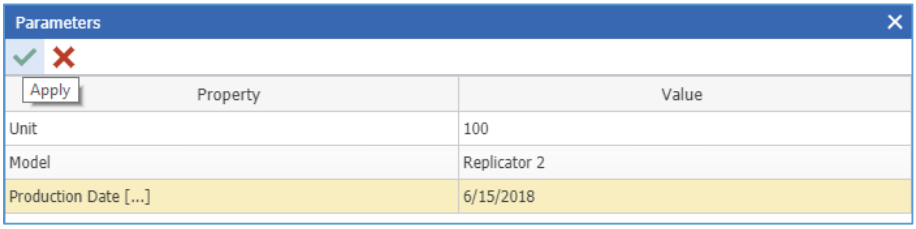


Figure 93.

The **Part BOM** Structure is resolved by criteria **Unit = 100 AND Model = [Replicator 2] AND Production Date = [6/15/2018]**.

Note: When using the **TGV Parameters** dialog, every parameter must have a value to resolve the Structure by Effectivity.

5.5.3 Setting a Default Value for a Parameter

A default value can be set for a variable in both the **Effectivity Criteria Filter** and **TGV Parameters** dialogs. If this value is static, it can be set via the standard Tree Grid View configurations.

In the Sample Application, the default value of the **Production Date** effectivity variable is dynamically set to the current date.

The procedures described below are the same for both the **Effectivity Criteria Filter** and **TGV Effectivity Parameters** dialogs *with one difference noted at the end of this section*. The example shown in the following procedure uses the former.

To disable setting the current date as the default for the **Production Date** effectivity variable:

1. Close Aras Innovator.
2. Go to the folder where the Aras Innovator instance is installed. In this example, it is 110SP15_7177.
3. In this 110SP15_7177 Innovator folder go to the Scripts subfolder following this path: \110SP15_7177\Innovator\Client\Modules\aras.innovator.EffectivityServicesSample\Scripts\
4. In the Scripts folder, open the BomEffectivityTab.js file for editing.

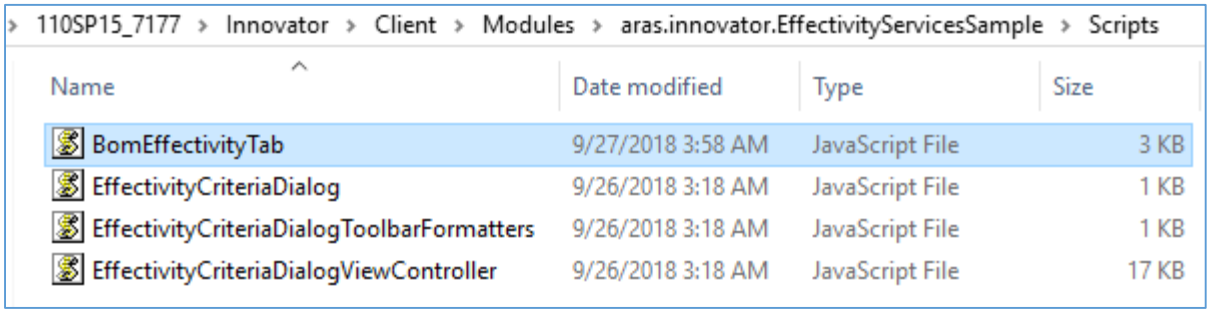


Figure 94.

5. In the *BomEffectivityTab* file, find the `window.CustomParametersProvider = function()` function, which should be at lines 20-39.

```
20  window.CustomParametersProvider = function() {
21      let parameters = {};
22
23      this.getParameters = function() {
24          return parameters;
25      };
26
27      this.setParameter = function(name, value) {
28          //TreeGridView sets and updates parameter values using this setParameter() method.
29          //"Production Date" parameter is named as ID of the "Production Date" effectivity variable ("E3EDDEC18B584347B3F11A517CF2AC2E") in order
30          //to be able to provide default values for the Effectivity Criteria Dialog using standard TreeGridView parameters functionality.
31          //However, it is required to set dynamic default value (current date) for the "Production Date" parameter which is not supported out of the box.
32          //So we should replace parameter value with current date once during default parameter values initialization when corresponding property does not exist.
33          if (name === 'E3EDDEC18B584347B3F11A517CF2AC2E' && !parameters.hasOwnProperty(name)) {
34              value = window.getCurrentDate();
35          }
36
37          parameters[name] = value;
38      };
39  };
```

Figure 95.

6. In this function, find the `this.setParameter = function(name, value)` nested function, which should be at lines 27-38:

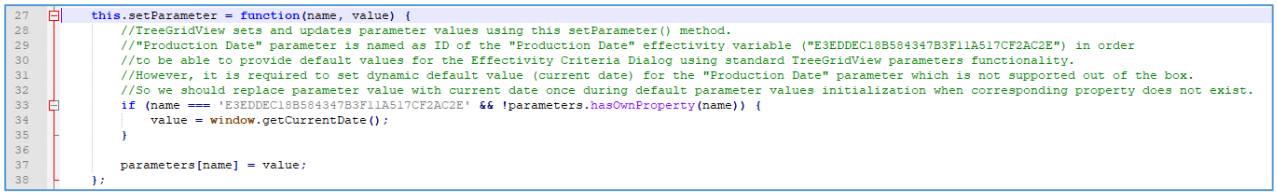


Figure 96.

```
this.setParameter = function(name, value) {
        //TreeGridView sets and updates parameter values using this setParameter() method.
        //"Production Date" parameter is named as ID of the "Production Date" effectivity variable ("E3EDDEC18B584347B3F11A517CF2AC2E") in order
        //to be able to provide default values for the Effectivity Criteria Dialog using standard TreeGridView parameters functionality.
        //However, it is required to set dynamic default value (current date) for the "Production Date" parameter which is not supported out of the box.
        //So we should replace parameter value with current date once during default parameter values initialization when corresponding property does not exist.
        if (name === 'E3EDDEC18B584347B3F11A517CF2AC2E' && !parameters.hasOwnProperty(name)) {
        value = window.getCurrentDate();
        }

        parameters[name] = value;
};
```

7. In this nested function, delete the if (name === 'E3EDDEC18B584347B3F11A517CF2AC2E' && !parameters.hasOwnProperty(name)) statement, which should be at lines 33-35:

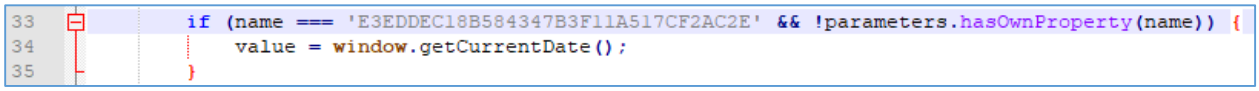


Figure 97.

```
if (name === 'E3EDDEC18B584347B3F11A517CF2AC2E' && !parameters.hasOwnProperty(name)) {
        value = window.getCurrentDate();
}
```

8. Save and close the *BomEffectivityTab.js* file.
9. Start Aras Innovator.
10. Open the Effectivity Criteria Filter dialog, which appears without the current date set as default.

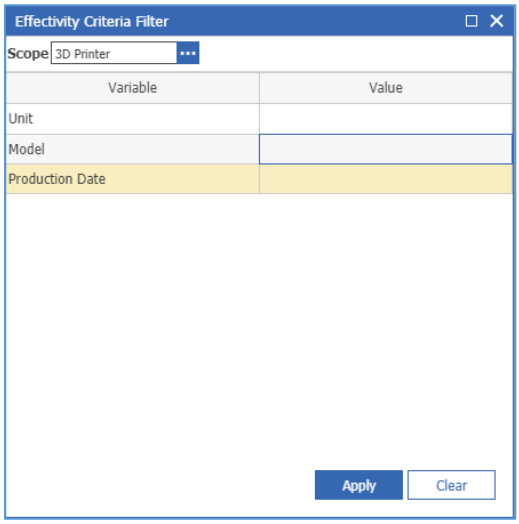


Figure 98.

To re-enable setting the current date as default for the **Production Date** effectivity variable:

- Take the steps of the previous procedure except in step 7, insert back the if (name === 'E3EDDEC18B584347B3F11A517CF2AC2E' && !parameters.hasOwnProperty(name)) statement.

Note: In the if (name === 'E3EDDEC18B584347B3F11A517CF2AC2E' && !parameters.hasOwnProperty(name)) statement, the `name` is evaluated to be the Production Date object. Thus, using:
- The **Effectivity Criteria Filter** dialog, the 'E3EDDEC18B584347B3F11A517CF2AC2E' GUID is used.
- The **TGV Effectivity Parameters** dialog, the 'ProductionDate' ItemType name is used.

```
27  this.setParameter = function(name, value) {
28      //TreeGridView sets and updates parameter values using this setParameter() method.
29      //"Production Date" parameter is named as ID of the "Production Date" effectivity variable ("E3EDDEC18B584347B3F11A517CF2AC2E") in order
30      //to be able to provide default values for the Effectivity Criteria Dialog using standard TreeGridView parameters functionality.
31      //However, it is required to set dynamic default value (current date) for the "Production Date" parameter which is not supported out of the box.
32      //So we should replace parameter value with current date once during default parameter values initialization when corresponding property does not exist.
33      if (name === 'ProductionDate' && !parameters.hasOwnProperty(name)) {
34          value = window.getCurrentDate();
35      }
```

Figure 99.