

Exercise: Build a product configuration model

Create components for product configuration models

As a product designer in **USMF**, you need to create components before a product model can be built. Constraint-based product configuration models use components as building blocks to establish the product model structure.

1. Go to **Product information management > Products > Product configuration models**.
2. Click **Components**.
3. Click **New**.
4. In the **Name** field, type 'eBook'.
5. In the **Description** field, type 'Guide to Constraint-based configuration'.
6. Click **Save**.

Create a product configuration model

1. Go to **Product information management > Products > Product configuration models**.
2. Click **New**.
3. In the **Name** field, type 'eBook II'.
4. Click **Ok**.
5. In the **Reuse configurations** field, select 'Yes'.
6. Expand the **Attributes** tab.
7. Click **Add**.
8. In the **Name** field, type 'Case color'.
9. In the **Solver name** field, type 'CaseColor'.
10. In the **Description** field, type 'Available colors for eBook'.
11. In the **Attribute type** field, enter or select **Cabinet finish**.
12. Select the **Set default** check box.
13. In the **Default value** field, enter or select **Oak**.
14. Select the **Include in reuse** check box.

15. Select the **Include in reuse** check box.
16. Click **Add**.
17. In the **Name** field, type '**Front grill**'.
18. In the **Solver name** field, type '**FrontGrill**'.
19. In the **Description** field, type '**Select the type of front grill for your eBook**'.
20. In the **Attribute type** field, enter or select **Front grill**.
21. Clear the **Set default** check box.
22. Select the **Include in reuse** check box.
23. ~~In the **Default value** field, enter or select **Black**. Click **Add**.~~
24. In the **Name** field, type '**Corner protection**'.
25. In the **Solver name** field, type '**CornerProtection**'.
26. In the **Description** field, type '**Should the eBook have corner protection?**'.
27. In the **Attribute type** field, enter or select **Corner protection**.
28. Select the **Include in reuse** check box.
29. Collapse the **Attributes** tab.

Add sub components

1. Expand the **Subcomponents** section.
2. Click **Add**.
3. In the **Name** field, type **Insurance**.
4. In the **Solver name** field, type **Insurance**.
5. In the **Description** field, type **Do you need Insurance?**
6. In the **Component** field, enter or select **Insurance**.
7. Click **Save**.
8. Collapse the **Subcomponents** section.

Add sub BOM lines

1. Expand the **BOM lines** section.
2. Click **Add**.
3. In the **Name** field, type **M0055**.
4. In the **Description** field, **M0055**.
5. Click **Save**.
6. Click **BOM line details**.
7. In the **Item number** field, enter or select **M0055**.
8. Click the Calculation checkbox, and select **Yes** in the **Calculation** field.
9. Click the **Setup** tab.
10. Set **Quantity** to '1.0000'.
11. Set **Per series** to '1'.
12. Click the **Dimension** tab.
13. In the **Warehouse** field, type '11'.
14. Click **OK**.
15. Collapse the **BOM lines** section.

Add an expression constraint to a product configuration model

1. Expand the **Constraints** section.
2. Click **Add**.
3. In the **Constraints** field select **Expression constraint**.
4. Click **Create**.
5. In the name field type **eBook Oak**.
6. Click **Save**.
7. Click **Edit expression**.
8. In the **Expression** type **Implies[FrontGrill != "Metal",!CornerProtection]**
9. Click **Validate**.

10. Ensure there are no errors.
11. Click **Close**.
12. Click **OK**.
13. From the **MODEL** action pane, click **Validate**.
14. Click **Close**.
15. From the **MODEL** action pane, click **Test**.
16. In the **Case color** select **Rosewood**.
17. In the **Front grill** select **White**.
18. Note that the **Corner protection** is not available and is set to **false**.
19. In the **Front grill** select **Metal**.
20. Note that the **Corner protection** can be set to either **true** or **false**.
21. Click **Next**.
22. Click **OK**.
23. Close all pages.