

Tutorial: Scan, Create and Attach Raw Material

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Tutorial: Scan, Create and Attach Raw Material

Estimated time to read: 2 minutes

Objective

Learn how to scan, create, and attach raw materials using barcode labels, both at:

- Resource level (flexible mode)
 - Step level (BOM-driven production mode)
-

Step 0: Validate Preconditions

Before starting, ensure the following configurations are in place:

- `/SMT/ManageRawMaterials/IsEnabled = True`
 - `/SMT/ManageRawMaterials/BarcodeRegExp` is defined
 - Example:
 - `^(?<productName>[^\|]+)\|(?<quantity>[^\|]+)\|(?<materialName>[^\|]+)$`
 - This configuration ensures the system can extract:
 - Product Name
 - Quantity
 - Material Name
-

Scenario A: Resource-Based Mode (Resource Details)

When to use

- Preparing materials before production
 - Loading feeders manually
 - No BOM validation required
-

Step 1: Open Resource

- Select and open a **Resource**
 - Click **Create & Attach**
-

Step 2: Scan Material Labels and Finish

- Scan the barcode of each material
- Confirm that the system extracts:
 - Material Name
 - Product Name
 - Quantity
- Repeat for all required materials
- Click **Finish**

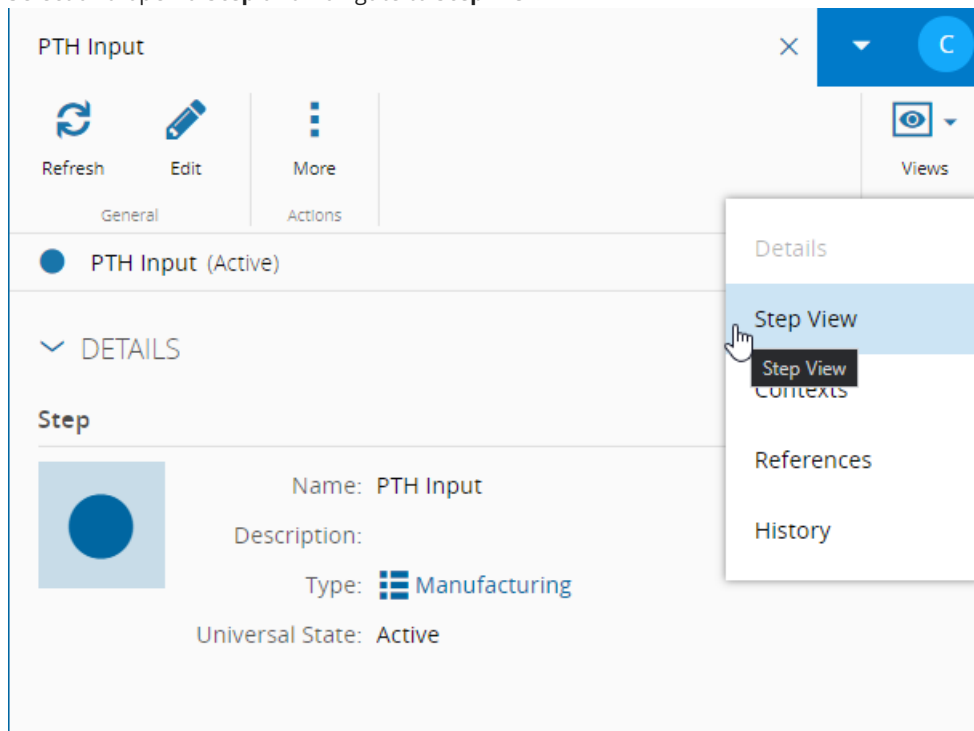
Scenario B: Production-Based Mode (Step View)

When to use

- During production
- When materials must match the BOM
- For controlled assembly execution

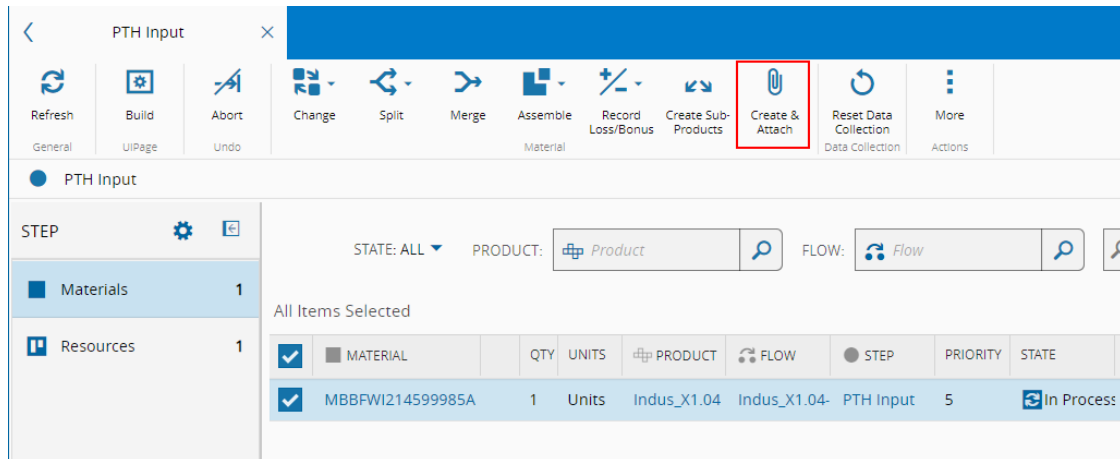
Step 1: Prepare Production Context and Open Create & Attach

- Select and open a **Step** and navigate to **Step View**



- Select a Material in the following conditions:
 - System State must be **In Process**
 - A **Current BOM Instance** is available

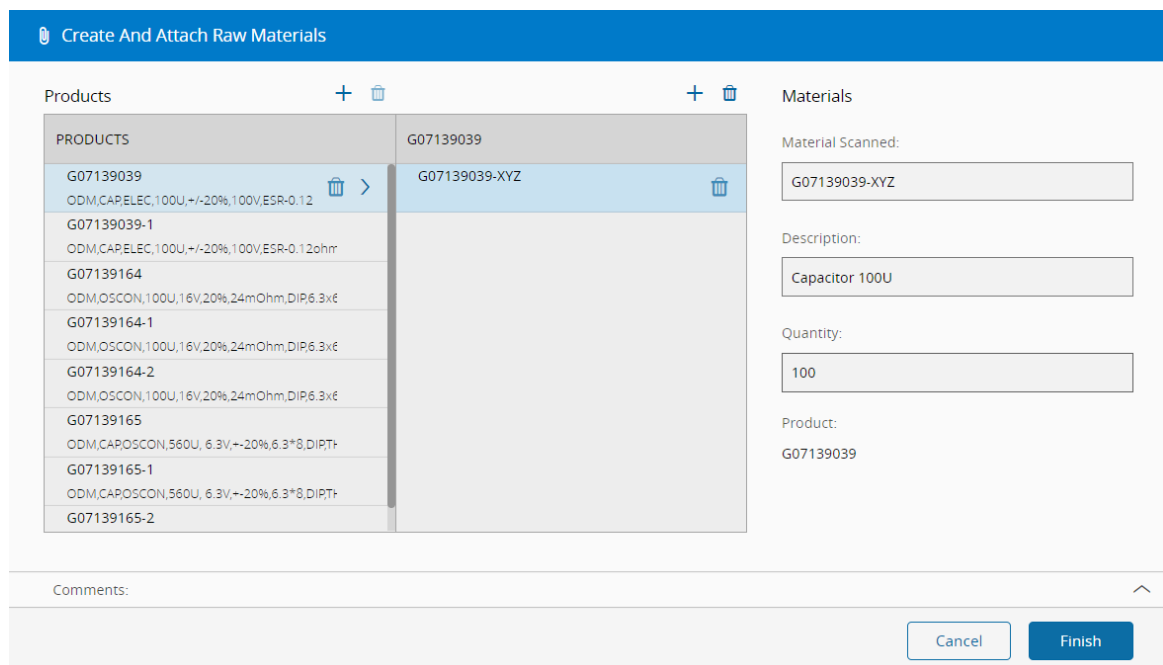
- Click **Create & Attach**



The screenshot shows the 'PTH Input' window. The top toolbar contains buttons for Refresh, Build, Abort, Change, Split, Merge, Assemble, Record Loss/Bonus, Create Sub-Products, **Create & Attach** (highlighted with a red box), Reset Data Collection, and More. Below the toolbar, the 'PTH Input' section shows a list of items. The 'Materials' tab is selected, showing a table with columns: MATERIAL, QTY, UNITS, PRODUCT, FLOW, STEP, PRIORITY, and STATE. The first row is selected, showing 'MBBFW1214599985A' with a quantity of 1 unit, product 'Indus_X1.04', and state 'In Process'.

Step 2: Select BOM Product

- The wizard displays required **BOM materials**
- Select one product
- Scan the label
- Verify extracted data:
 - Material Scanned
 - Description
 - Quantity



The screenshot shows the 'Create And Attach Raw Materials' wizard. The 'Products' list on the left contains several items, with 'G07139039' selected. The 'Materials' form on the right displays the following information:

- Material Scanned: G07139039-XYZ
- Description: Capacitor 100U
- Quantity: 100
- Product: G07139039

At the bottom, there is a 'Comments' field and two buttons: 'Cancel' and 'Finish'.

Step 3: Repeat for All Materials

- Repeat scanning for all required BOM products
 - Click **Finish**
-

Expected Result

- Materials are created from scanned labels
 - Materials are validated against the BOM
 - Materials are attached to the production step
 - Assemble is now ready to be performed
-

Frequent Configuration Questions

Why is the barcode not being recognized?

Validate that the `/SMT/ManageRawMaterials/BarcodeRegExp` configuration is correctly defined and matches the structure of the scanned barcode.

Why can't I proceed with the assembly process?

Ensure that all materials required by the Bill of Materials (BOM) have been provided and successfully identified.

Why are materials not being created?

Confirm that the feature is enabled by verifying the `IsEnabled` setting.

Why are the extracted values (such as name or quantity) incorrect?

Review the barcode structure and verify that the RegExp mapping is correctly configured to extract the expected information.



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