

P04: 2.0 Resolving Dependencies in Power Apps Solutions

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Context

Item	Detail
Tag	Vertical Patterns DevOps Power Apps
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Version Control	V1.0
Application Use Case	Resolve missing dependencies to ensure smooth solution deployment
Reference Usage	Managing and resolving dependencies in Power Apps or Dynamics 365

Story Behind The Pattern

Item	Detail
The Problem	Missing dependencies in a solution (e.g., missing entities or attributes) cause deployment failures or runtime errors in Power Apps.
The Solution	Identify and resolve missing dependencies by ensuring all required components are present and active in the target environment.
Dependencies	Power Apps or Dynamics 365 environment, access to Solutions Explorer, internet connectivity for importing solutions, permissions to manage solutions.

The Pattern

Method: Resolving Dependencies in Power Apps Solutions

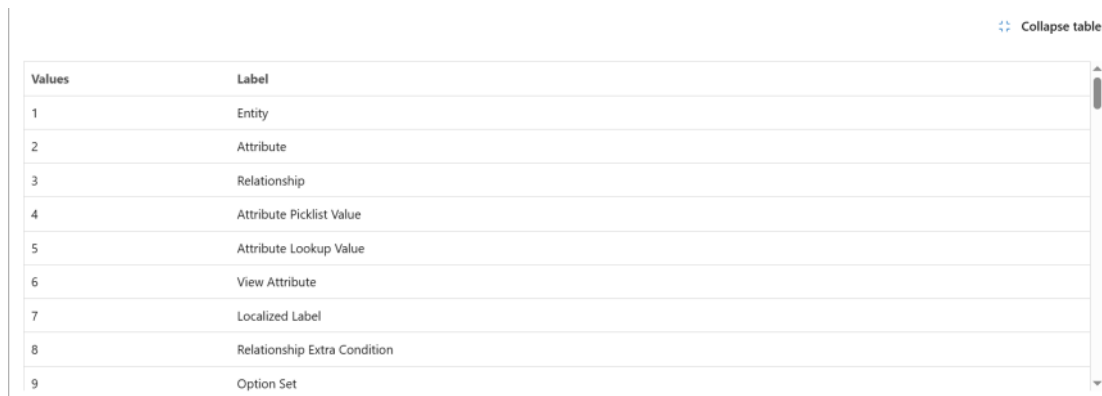
Here’s a step-by-step guide for resolving dependencies in Power Apps or Dynamics 365 to ensure smooth solution deployment and functionality:

1. Understand Dependencies
 - A "dependent" is a component (e.g., an entity, field, or process) that relies on another component to function correctly.
 - A "missing dependency" occurs when a required component is absent in the target environment, leading to errors. For example:
 - Missing Dependency Example 1: The "incident" entity (Type="1", displayName="Case") requires the "moi_investmentagreementcase" entity (Type="1", displayName="Investment Agreement Case").
 - Missing Dependency Example 2: The "incident" entity's "moi_processtype" field (Type="2", displayName="Process Type") requires the "moi_processtype" choice (Type="9", displayName="Process Type").

The reason given was: Solution manifest import: FAILURE: The following solution cannot be imported: MOI_Solution_Proces
ss. Some dependencies are missing. The missing dependencies are : <MissingDependencies> <MissingDependency>
<Required type="1" schemaName="moi_investmentagreementcase" displayName="Investment Agreement Case" solutio
n="Active" /> <Dependent type="1" schemaName="incident" displayName="Case" /> </MissingDependency>
<MissingDependency>
<Required type="9" schemaName="moi_processtype" displayName="Process Type" solution="Active" />
<Dependent type="2" schemaName="moi_processtype" displayName="Process Type" parentSchemaName="incident" pa
rentDisplayName="Case" /> </MissingDependency> </MissingDependencies> , ProductUpdatesOnly : False
Microsoft PowerPlatform CLI
Version: 1.38.3+g63c17ef

2. Identify the solutioncomponent EntityType

- Navigate to the Power Apps or Dynamics 365 environment.
- Go to the Solutions area in the Power Apps Maker Portal.
- Select the solution you are working with (e.g., "Invest UAE" or a split solution like "MOI_Solutions_Tables").
- View the solution components list, which includes entities, fields, forms, views, etc.
- Identify the componenttype attribute for each component (an integer representing the type). Common values include:
 - 1: Entity
 - 2: Attribute (Field)
 - 3: Relationship
 - 9: Choice (Option Set)
 - 24: Form
 - 60: System Form
 - 61: Web Resource
 - 62: Site Map
 - 63: Connection Role
 - 70: Field Security Profile
 - 91: Plugin Assembly
 - 92: SDK Message Processing Step



Values	Label
1	Entity
2	Attribute
3	Relationship
4	Attribute Picklist Value
5	Attribute Lookup Value
6	View Attribute
7	Localized Label
8	Relationship Extra Condition
9	Option Set

References

- [1] [solutioncomponent EntityType \(Microsoft.Dynamics.CRM\)](#)
- [2] [Solution Component \(SolutionComponent\) table/entity reference ...](#)
- [3] [solution EntityType \(Microsoft.Dynamics.CRM\) | Microsoft Learn](#)

3. Identify Missing Dependencies

- Review the solution manifest or error messages for missing dependencies.
- Example 1: The "incident" entity (Type="1") is missing the required "moi_investmentagreementcase" entity (Type="1").
- Example 2: The "incident" entity's "moi_processtype" field (Type="2") is missing the required "moi_processtype" choice (Type="9").
- Example 3: The "Lead to Opportunity Sales Process" process is missing the "Initial Meeting Conducted" table.

4. Check Existing Components in the Target Environment

- Navigate to the Solution Explorer in the target environment (e.g., "Invest UAE DEV A").
- Look for the split solution (e.g., "MOI_Solutions_Tables" or "MOI_Solution_Processes").
- Check if the required components (e.g., "moi_investmentagreementcase" entity, "moi_processtype" choice, "Initial Meeting Conducted" table) are present and active.

5. Import Required Solutions

- If a required component is missing (e.g., "moi_investmentagreementcase" entity), locate the solution that contains this component (e.g., the "Active" solution).
- Import the solution into the target environment:
 - Go to the Solutions area, click Import, and select the solution file.

- Follow the import wizard to complete the process.
 - After importing, publish all customizations by clicking Publish All Customizations to ensure the components are available.
- 6. Verify Component States
 - Ensure the imported components (e.g., "moi_investmentagreementcase" entity, "moi_processtype" choice) are in an active state.
 - If a component is inactive, select it in the Solution Explorer, click Activate, and confirm.
 - Re-test the solution deployment to verify the dependency is resolved.
- 7. Handle Specific Missing Dependencies (Example: "Initial Meeting Conducted" Table)
 - For the "Lead to Opportunity Sales Process" process missing the "Initial Meeting Conducted" table:
 - Go to the split solution containing processes (e.g., "MOI_Solution_Processes").
 - Click Add Existing, select "Table," and search for "Initial Meeting Conducted."
 - Check Include all objects to ensure all related components are added, then click Add.
 - Verify the table is now present and active in the target environment.
- 8. Validate Dependency Resolution
 - Re-deploy the solution and check for dependency errors.
 - If errors persist, revisit the solution manifest for additional missing dependencies and repeat the process.
 - Monitor logs or error messages to ensure all dependencies are resolved.