

P03: Splitting a Monolithic Solution into Microservices in Power Apps

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Context

Item	Detail
Tag	Vertical Patterns DevOps Power Apps
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Version Control	V1.0
Application Use Case	Split a monolithic solution (Invest UAE) into microservices for better scalability and management
Reference Usage	Setting up microservices by splitting and managing solution components

Story Behind The Pattern

Item	Detail
The Problem	A monolithic solution (e.g., Invest UAE) is difficult to scale, maintain, and update due to its large, interdependent codebase.
The Solution	Split the monolithic solution into microservices (e.g., MOI_Solution_Choices, MOI_Solution_Processes, MOI_Solutions_Tables) to improve scalability, flexibility, and deployment efficiency.
Dependencies	Power Apps or Dynamics 365 environment, access to Solutions Explorer, matching components between source and target environments, internet connectivity for imports.

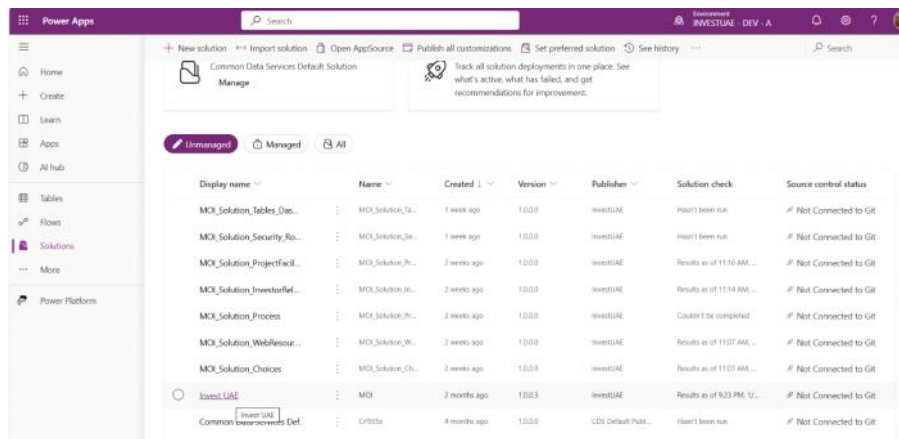
The Pattern

Method : Splitting a Monolithic Solution into Microservices

Here's a step-by-step guide for splitting a monolithic solution (Invest UAE) into microservices in Power Apps, including adding components, resolving dependencies, and validating the split:

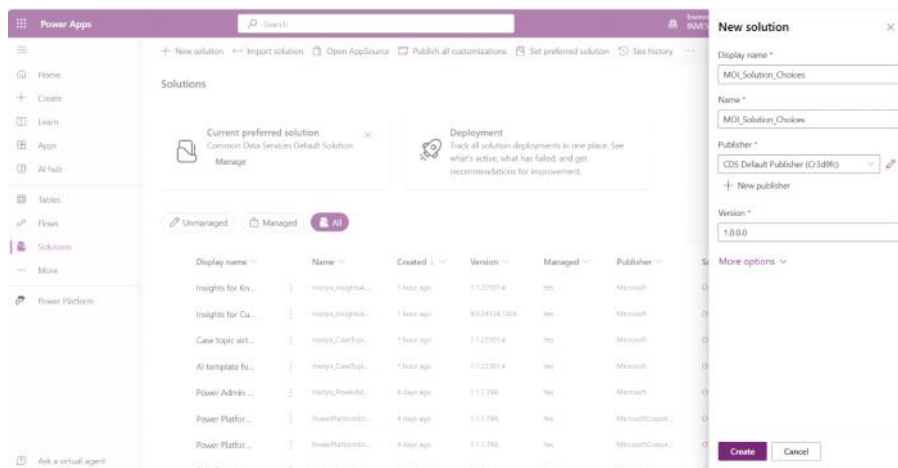
Step-by-Step Process for Splitting the Solution

1. Make Sure You Have the Main Solution in Place
 - Log in to your Power Apps or Dynamics 365 environment.
 - Navigate to the Solutions area in the Power Apps Maker Portal.
 - Verify that the main solution, "Invest UAE," is available and contains all the components (e.g., entities, processes, tables) you intend to split.
 - Ensure you have the necessary permissions to edit and export solutions.



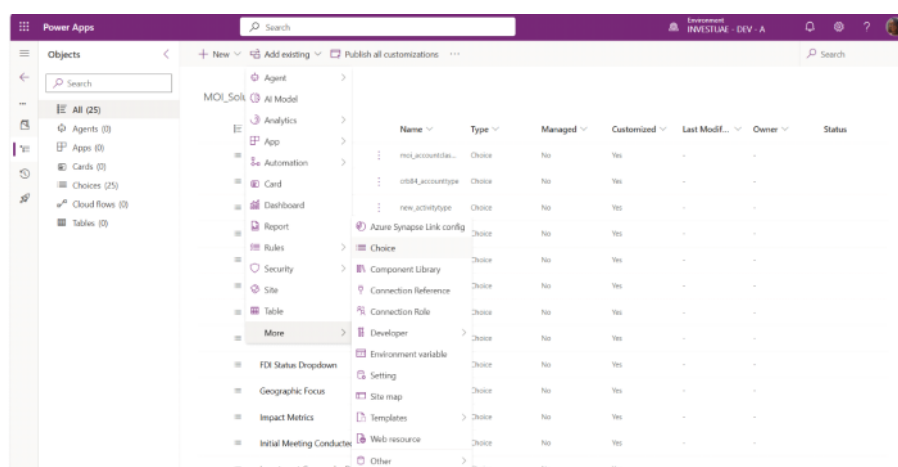
2. Create the Target Solution Based on the Objects to Be Split

- In the Solutions area, click New to create a new solution.
- Name the target solution (e.g., "MOI_Solution_Choices" for choice components, "MOI_Solution_Processes" for processes, or "MOI_Solutions_Tables" for tables).
- Provide a publisher and version (e.g., V1.0) and save the solution.
- Note: The number of components in the objects of the main solution (Invest UAE) must match the number of components in the target environment to avoid mismatches.



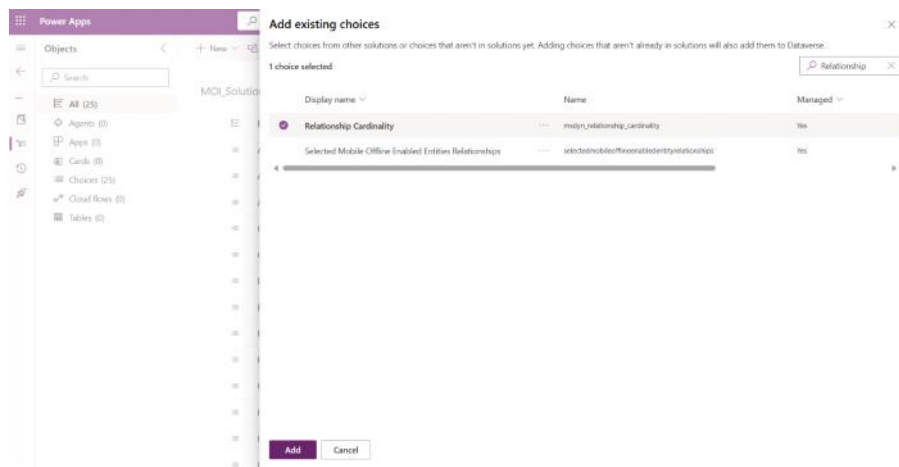
3. Go to the Target Solution and Add Components from the Main Solution

- Open the target solution (e.g., "MOI_Solution_Choices").
- Click Add Existing to add components from the "Invest UAE" solution.
- Use the dropdown menu to select the component type (e.g., "Choice" for "MOI_Solution_Choices").



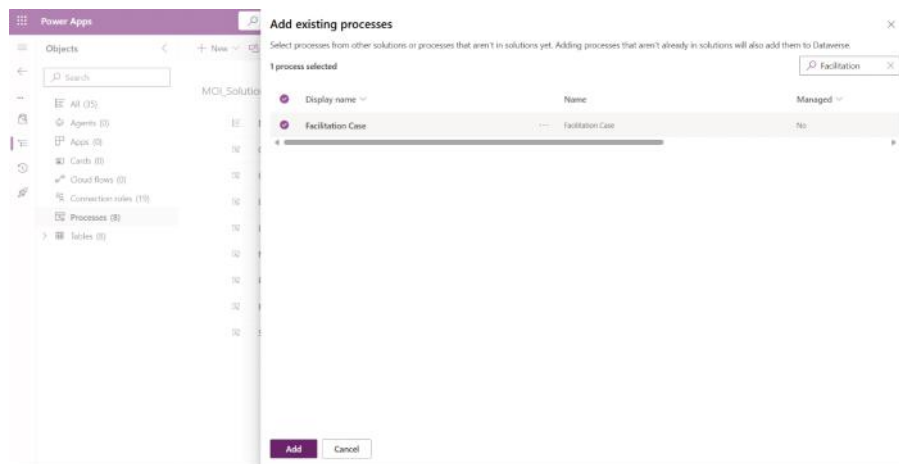
4. Search for and Add a Specific Component

- In the "Add Existing" dialogue, search for the component present in the main solution. For example, search for "Relationship Cardinality" (a choice or relationship type).
- Select the component and click Add to include it in the target solution (e.g., "MOI_Solution_Choices").
- Repeat this process for other components as needed.



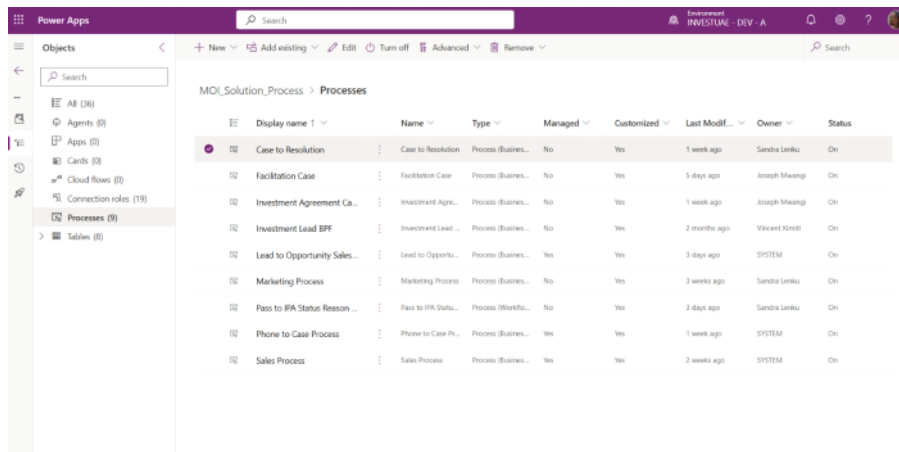
5. Add Processes from the Monolithic Solution to the Split Process Solution

- Open the target split solution for processes (e.g., "MOI_Solution_Processes").
- Click Add Existing and select the "Process" component type from the dropdown.
- Search for a specific process, such as "Facilitation Case," and click Add to include it in the split solution.



6. Verify the Process and Associated Table

- After adding a process (e.g., "Case to Resolution"), verify that it appears in the "MOI_Solution_Processes" solution.
- Note that the process may automatically include its associated table (e.g., "Case to Resolution" table) due to dependencies.
- Reason: Processes come with their own tables for isolation, modularity, data integrity, and independent operation.



7. Add Tables from the Monolithic Solution to the Split Table Solution

- Open the target split solution for tables (e.g., "MOI_Solutions_Tables").
- Click Add Existing and select the "Table" component type.
- Search for the desired table (e.g., a table related to "Invest UAE") and click Next.

8. Include All Objects for the Table

- In the "Add Existing" dialogue, check the box for Include all objects.
- This ensures comprehensive inclusion of related components, maintains consistency across environments, simplifies management, and includes entity metadata for functionality.
- Click Add to finalize the table addition.

