Inconsistent column count detected, row data read column count X, schema inferred column count Y

Last updated by | Veena Pachauri | Mar 8, 2023 at 11:22 PM PST

Scenario/Issue

Copy error:
ErrorCode=UserErrorSourceStructureMismatchWithPhysicalSchema,'Type=Microsoft.DataTransfer.Common.Shared.HybridDeliveryException,Message=Inconsistent column count detected, row data read column count 15, schema inferred column count 2. Please check source configuration.,Source=Microsoft.DataTransfer.ServiceLibrary,'

Validation/Publishing error: The mapping is out of synchronization, this might be due to the fact that you modified the source schema. Please re-import schemas.

Context: a pipeline contains two copy activities which use the same dataset as a source, but different tables. The dataset is parameterized for different table names. When running the copy, the error above comes up. Confirmed to be occurring with SQL Server or SQL DB sources.

Cause:

The dataset is old, thus still on the old version which uses the "structure" object instead of "schema":
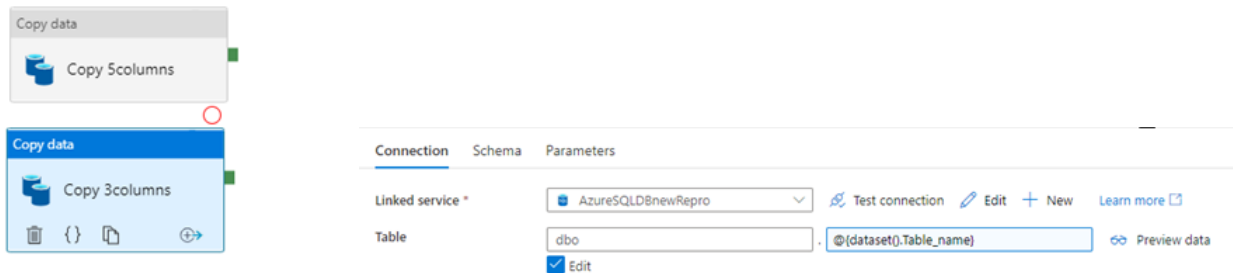

Normally, dataset schemas are only meant to be used for dataflow and do not affect copy activities, but with the structure object they are interfering with the copy runtime mapping, thus causing the issue.

Resolution:

As the dataset is paremeterised, the schema should not have been imported in the first place – the copy activity Mapping would be sufficient to import the specific table schemas. Edit the source dataset's JSON, changing the property from "structure" to "schema" and the value of the property "type" to be same value from a brand new Dataset.

Examples/more info/issue confirmation:

The issue can be checked in the copy activity Mapping. For example, this pipeline is copying from two tables in the same DB using the same parameterized source dataset, one table with 3 columns and the other with 5:

Dataset schema imported:

Azure SQL Database
AzureSQL_Param

	Column name	Type	Description
☐ ≡	column1	123 Int32 ⌄	
☐ ≡	column2	abc String ⌄	
☐ ≡	column3	abc String ⌄	
☐ ≡	column4	abc String ⌄	
☐ ≡	column5	123 Int32 ⌄	

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Import the schema for both copy activities, and then check/uncheck one of the columns to be included in one of the copy Mapping:

Import schemas   ↻ Clear

Source fields: 5 / 5 mapped   Sink fields: 5 / 5 mapped

Field / Type   **Field   Type   Include**

column1(Int32) ⌄   ————————→   column1   Int32   ☑

Source fields: 4 / 3 mapped   Sink fields: 4 / 3 mapped

Field / Type   **Field   Type   Include**

column1(Int32) ⌄   column1   Int32   ☐

Source fields: 5 / 3 mapped   Sink fields: 5 / 3 mapped

Field / Type   **Field   Type   Include**

column1(Int32) ⌄   ————————→   column1   Int32   ☑

Notice how the total number of columns inferred changed from 5 to 3 – this reflects the issue which leads to the error.

If the old dataset is being used, you can also see a difference in the UI: Old DS:

Connection   **Schema**   Parameters

Import schema   👁 Preview data   + New column   ↻ Clear   🗑 Delete

	Column name	Type	Description
☐ ≡	col1	123 Int32 ⌄	
☐ ≡	col2	abc String ⌄	
☐ ≡	col3	abc String ⌄	

New ("schema") DS:

Connection   **Schema**   Parameters

Import schema   Clear

Column name	Type
col1	Int32
col2	String
col3	String

Copy Mapping when using the old DS:

General   Source   Sink   **Mapping**   Settings   User properties

Import schemas   ⟳ Clear

Source fields: 5 / 5 mapped   Sink fields: 5 / 5 mapped

Field / Type		Field	Type	Include
column1(Int32) ⌄	→	column1	Int32	☑
column2(String) ⌄	→	column2	String	☑
column3(String) ⌄	→	column3	String	☑

Copy Mapping when using the new ("schema") DS:

General   Source   Sink   Mapping   Settings   User properties

▷ Type conversion settings

Import schemas   ⟲ Preview source   + New mapping   ⟳ Clear ⓘ   ⟳ Reset ⓘ | 🗑 Delete

Source	Type		Destination	Type
column1 ⌄	int	→	column1 ⌄	int
column2 ⌄	varchar	→	column2 ⌄	varchar

One behaviour might be that validation fails for one of the copy activity Mappings, which when corrected fails validation for the other copy activity Mapping, and then you/the customer just ends up having to ping-pong between them.

Factory validation output

Copy 5columns
The mapping is out of synchronization, this might be due to the fact that you modified the source schema. Please re-import schemas.

After re-importing the schema for Copy 5columns:

Factory validation output

Copy 3columns
The mapping is out of synchronization, this might be due to the fact that you modified the source schema. Please re-import schemas.

And then after re-importing the schema for Copy 3columns:

Factory validation output

Copy 5columns
The mapping is out of synchronization, this might be due to the fact that you modified the source schema. Please re-import schemas.

Additional Information:

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🙂 🙁