

[Azure Synapse Analytics] - Serverless pool (SQL on-demand) related issues

Last updated by | Jackie Huang | Jan 4, 2022 at 12:24 AM PST

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Issue

When customer using Azure Synapse Analytics as source and the linked service actually is a Synapse serverless pool (former named as SQL on-demand pool, it can be distinguished by the server name contains "ondemand", e.g. "[space-ondemand.sql.azuresynapse.net](#)"), he may face with several unique failures.

1. When customer wants to use Synapse serverless pool as Sink.

Sink results in 0 output columns. Please ensure at least one column is mapped

2. When customer selects 'enable staging' in Source.

shaded.msdataflow.com.microsoft.sqlserver.jdbc.SqlServerException: Incorrect syntax near 'IDENTITY'.

or

shaded.msdataflow.com.microsoft.sqlserver.jdbc.SqlServerException: Incorrect syntax near 'HADOOP'.

3. When customer wants to fetch data from an external table.

shaded.msdataflow.com.microsoft.sqlserver.jdbc.SqlServerException: External table 'dbo' is not accessible




4. When customer wants to fetch data from Cosmos DB through Serverless pool by query/from view.

Job failed due to reason: Connection reset

5. When customer creates an Azure Synapse Analytics Linked Service for an Azure SQL DB:

```
sErrorCode=SqlOperationFailed, 'Type=Microsoft.DataTransfer.Common.Shared.HybridDeliveryException,Message=,
```


Explanation: The "HEAP" is a reserved term in Synapse SQL, but if you create an Azure Synapse Analytics linked service for an Azure SQL linked service, we will take it as Synapse SQL and use the "HEAP" in the sql statement, but it's actually an Azure SQL DB and get the error. So, customer need to correct the linked service type from "Azure Synapse Analytics" to "Azure SQL Database". Full discussion on this [AVA](#) , response by Shawn Xiao (shawnxia).

6. When customer wants to fetch data from a view, he may face with different error.

Root Cause

1. Serverless pool cannot be used as sink. It doesn't support write data into database.
2. Serverless pool doesn't support polybase, so 'enable staging' is not supported.
3. The authentication method customer uses doesn't have correct permission to the external data source where the external table referring.
4. There is a known limitation in Synapse serverless pool, blocking user to fetch Cosmos DB data from dataflow.
5. View is a virtual table based on an SQL statement. The root cause is inside the statement of the view.

Resolution

1. Suggest customer not to use serverless pool as Sink.
2. Do not use 'enable staging' in Source for serverless pool.
3. Only linked service with authentication method service principal/managed identity which has permission to the external table data can query it. Please ask customer to grant 'Storage Blob Data Contributor' permission for the authentication (Managed identity/Service principal) used in related linked service, in the external data source (say Gen2/Blob). Note user-password auth cannot query external table. [Synapse doc](#) 
4. Suggest customer to use copy activity to fetch Cosmos DB data from serverless pool. Synapse team promised to fix the bug in February.
5. Suggest customer to provide the SQL statement which creates the view. And analysis if the statement hits authentication issue or something else.

Additional Information:

- Icm Reference: N/A
- Author: Xiaojin Wang
- Reviewer: Shawn Xiao
- Keywords: Synapse, Serverless, SQL on-demand

How good have you found this content?



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