## [Diagnostic] Copy activity failed for racing operations

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## **Symptoms**

Customer met the copy failures when writing data into binary data stores (e.g. Blob/ADLS Gen1/ADLS Gen2), and the error message is like

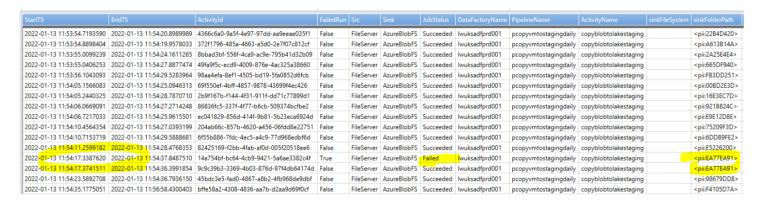
- "BadOffsetException" for ADLS Gen1
- "Invalid block blob list" for Blob
- "LeaseIdMismatch" or "LeaseLost", "LeaseNotPresentWithLeaseOperation" for ADLS Gen2
- "A lease ID was specified, but the lease for the resource has expired" for ADLS Gen2
- "Error occurred when trying to upload a file. It's possible because you have multiple concurrent copy activity runs writing to the same file '{0}'. Please check your ADF configuration. Detailed error message: {1}."
- UserErrorFileWriteFailedForConcurrentWrite
- AzureStorageOperationFailedConcurrentWrite

## **Root Cause**

Mostly such error is caused by the customer has concurrent copy activity runs that are writing into same files, which would lead to conflict.

If the activity run is happened in recent 30 days, please run below query by provide right activity run id (Note: pipeline run id is not supported). diag\_query\_RacingCopyActivityRuns('{activity run id}') The query will list out all activity run ids that with same subscription and same data sink in related time period, you can if there are any activity runs with same setting as failed activity run. Since folder path, file name are PII data, you will see a hashed value, if two value are the same, their hashed value are the same. Take below racing as an example:

You can see a activity run id was trigger in same time period with same sink folder path, that is potential racing, after check RunPayload column of these two activity run, we found they have same source setting, we can further confirm racing issue.



## Resolution

- Suggest the customer to fix the configuration to avoid such racing usage.
- If the customer claims that they didn't trigger the concurrent runs, you need to further file an ICM to ADF Orchestration team to investigate where such runs come from.