

Troubleshooting Custom Activity (Batch) issues

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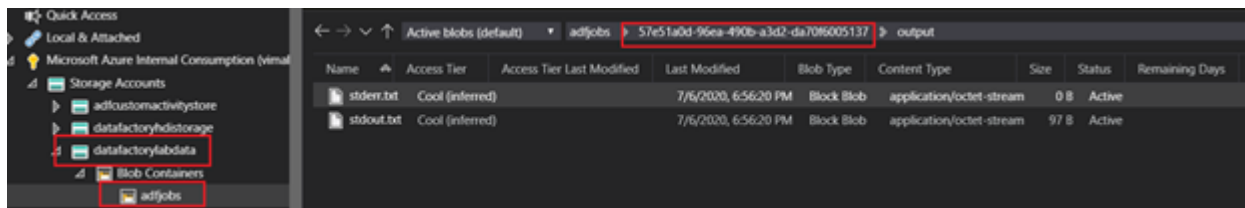
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This TSG will help in troubleshooting custom activity scenarios.

Data Collection

- To start investigating Custom Activity, capture the Pipeline RunId or failing HDInsight Activity RunId from the customer.
- It is also advisable to capture the Pipeline Logs from the customer when working on such cases to have better understanding of the pipeline configured.
 - Refer the following TSG to capture Pipeline logs: https://supportability.visualstudio.com/AzureDataFactory/_wiki/wikis/AzureDataFactory/290044/Capture-Pipeline-Logs
- Capture the logs from the storage accounts in the **adfjobs** container. Look for the folder with the Activity RunId GUID folder:



The **stderr.txt** can give a good information about the job failure. The stdout.txt will contain the output of your application.

Troubleshooting

- Usually, we can look at the customer's Batch account and the job progress when troubleshooting batch issues. The stderr.txt should be the first reference to investigate custom activity failure, as it can tell the job progress and also the error thrown during the failure.
 - Refer this TSG to check job progress in the Batch account: [Monitoring job progress in Azure Batch](#)
- To investigate using Kusto, start by looking at the **PipelineRuns** table to check the status of the Pipeline. This table can show you the status of the pipeline execution:

```
cluster('adfcus').database('AzureDataFactory').PipelineRuns | union cluster('adfneu').database('AzureDataFacto
| where TIMESTAMP >= ago(1d)
| where runId == "pipelineRunId" //PipelineRunId
| project PreciseTimeStamp, dataFactoryName, runId, pipelineName, ['location'], status, failureType, start, e
| order by PreciseTimeStamp asc
```

| PreciseTimeStamp | dataFactoryName | runId | pipelineName | location | status | failureType | start | end | predecessors |
|-----------------------------|-----------------|--------------------------------------|------------------------|----------|-----------|-------------|-----------------------------|-----------------------------|----------------------------|
| 2020-07-06 13:26:23.5933568 | DATAFACTORYLABS | 1cbd4f32-fb9b-4de9-8ae8-1d4f81350129 | CustomActivityPipeline | eastus | Succeeded | | 2020-07-06 13:25:59.9977757 | 2020-07-06 13:26:23.5141823 | [{"Name":"Manual","Id":"ea |

- Query the **ActivityRuns** table to show the status of the various activities in that pipeline

```
cluster('adfcus').database('AzureDataFactory').ActivityRuns | union cluster('adfneu').database('AzureDataFacto
| where TIMESTAMP >= ago(15d)
//| where dataFactoryName == ""
//| where pipelineName == ""
//| where activityRunId == "activityRunId" //ActivityRunId
| where pipelineRunId == "pipelineRunId" //PipelineRunId
| project PreciseTimeStamp, location, Tenant, dataFactoryName, pipelineName, activityName, activityType, statu
| order by PreciseTimeStamp asc
```

| PreciseTimeStamp | location | Tenant | dataFactoryName | pipelineName | activityName | activityType | status | errorCode | pipelineRunId | activityRunId |
|-----------------------------|----------|--------------|-----------------|------------------------|----------------|--------------|------------|-----------|--------------------------------------|--------------------------------------|
| 2020-07-06 13:26:02.8057992 | eastus | MONSVCeastus | DATAFACTORYLABS | CustomActivityPipeline | CustomActivity | Custom | Queued | | 1cbd4f32-fb9b-4de9-8ae8-1d4f81350129 | 57e51a0d-96ea-490b-a3d2-da70f6005137 |
| 2020-07-06 13:26:04.5116640 | eastus | MONSVCeastus | DATAFACTORYLABS | CustomActivityPipeline | CustomActivity | Custom | InProgress | | 1cbd4f32-fb9b-4de9-8ae8-1d4f81350129 | 57e51a0d-96ea-490b-a3d2-da70f6005137 |
| 2020-07-06 13:26:21.8212257 | eastus | MONSVCeastus | DATAFACTORYLABS | CustomActivityPipeline | CustomActivity | Custom | Succeeded | | 1cbd4f32-fb9b-4de9-8ae8-1d4f81350129 | 57e51a0d-96ea-490b-a3d2-da70f6005137 |

You can query the ActivityRuns table either with the ActivityRunId or PipelineRunId. Each successful activity will have status like Queued -> InProgress -> Succeeded and failed activity will have status like Queued -> InProgress -> Failed.

The following screenshot shows all the activities which are called as part of the pipeline execution. You can check the status of each activity in the status column.

| PreciseTimeStamp | location | Tenant | dataFactoryName | pipelineName | activityName | activityType | status | errorCode | pipelineRunId | activityRunId |
|-----------------------------|----------|--------------|-----------------|------------------------|----------------|--------------|------------|-----------|--------------------------------------|--------------------------------------|
| 2020-07-06 13:26:02.8057992 | eastus | MONSVCeastus | DATAFACTORYLABS | CustomActivityPipeline | CustomActivity | Custom | Queued | | 1cbd4f32-fb9b-4de9-8ae8-1d4f81350129 | 57e51a0d-96ea-490b-a3d2-da70f6005137 |
| 2020-07-06 13:26:04.5116640 | eastus | MONSVCeastus | DATAFACTORYLABS | CustomActivityPipeline | CustomActivity | Custom | InProgress | | 1cbd4f32-fb9b-4de9-8ae8-1d4f81350129 | 57e51a0d-96ea-490b-a3d2-da70f6005137 |
| 2020-07-06 13:26:21.8212257 | eastus | MONSVCeastus | DATAFACTORYLABS | CustomActivityPipeline | CustomActivity | Custom | Succeeded | | 1cbd4f32-fb9b-4de9-8ae8-1d4f81350129 | 57e51a0d-96ea-490b-a3d2-da70f6005137 |

- You can then review the **CustomEventLog** table for detailed logs on the job execution. Get the activityRunId from the ActivityRuns table and query the CustomEventLog table.

```
cluster('Azuredmprod').database('AzureDataMovement').CustomLogEvent
| where PreciseTimeStamp >= ago(5d)
| where ActivityId == "activityRunId"
| project PreciseTimeStamp, Role, TraceMessage, Message, EventName, TraceComponent, StatusCode, SubscriptionId
| sort by PreciseTimeStamp asc
```

| PreciseTimeStamp | location | Tenant | dataFactoryName | pipelineName | activityName | activityType | status | errorCode | pipelineRunId | activityRunId |
|-----------------------------|----------|--------------|-----------------|------------------------|----------------|--------------|------------|-----------|--------------------------------------|--------------------------------------|
| 2020-07-06 13:26:02.8057992 | eastus | MONSVCeastus | DATAFACTORYLABS | CustomActivityPipeline | CustomActivity | Custom | Queued | | 1cbd4f32-fb9b-4de9-8ae8-1d4f81350129 | 57e51a0d-96ea-490b-a3d2-da70f6005137 |
| 2020-07-06 13:26:04.5116640 | eastus | MONSVCeastus | DATAFACTORYLABS | CustomActivityPipeline | CustomActivity | Custom | InProgress | | 1cbd4f32-fb9b-4de9-8ae8-1d4f81350129 | 57e51a0d-96ea-490b-a3d2-da70f6005137 |
| 2020-07-06 13:26:21.8212257 | eastus | MONSVCeastus | DATAFACTORYLABS | CustomActivityPipeline | CustomActivity | Custom | Succeeded | | 1cbd4f32-fb9b-4de9-8ae8-1d4f81350129 | 57e51a0d-96ea-490b-a3d2-da70f6005137 |

| | Role | TraceMessage | Message |
|------------|---------------------------|---|---|
| 4.5129384 | HDISScaleUnitWebRoleGroup | ExecutionRuntimeReportInProgress | <LogProperties> <Text>Report task inprogress status. Duration in queue: 1</Text> </LogProperties> |
| 4.5586499 | transfersharedresourced1b | ExecutionCustomActivityBatchTaskUploadFiles | <LogProperties> <Text>Upload files to staging storage: https://datafactorylabdata.blob.core.windows.net/adfjobs</Text> </LogProperties> |
| 4.5788879 | transfersharedresourced1b | ExecutionCustomActivityBatchTaskUploadFiles | <LogProperties> <Text>File activity.json uploaded to staging storage: https://datafactorylabdata.blob.core.windows.net/adfjobs/57e51a0d-96ea-49b0-8000-000000000000</Text> </LogProperties> |
| 4.5897228 | HDISScaleUnitWebRoleGroup | ExecutionRuntimeReportInProgress | <LogProperties> <Text>Activity run picked up, details: {}</Text> </LogProperties> |
| 4.5897630 | HDISScaleUnitWebRoleGroup | ExecutionRuntimeReportInProgress | <LogProperties> <Text>Pickup info is not posted correctly from client</Text> </LogProperties> |
| 4.5946964 | transfersharedresourced1b | ExecutionCustomActivityBatchTaskUploadFiles | <LogProperties> <Text>File linkedServices.json uploaded to staging storage: https://datafactorylabdata.blob.core.windows.net/adfjobs/57e51a0d-96ea-49b0-8000-000000000000</Text> </LogProperties> |
| 4.6101597 | transfersharedresourced1b | ExecutionCustomActivityBatchTaskUploadFiles | <LogProperties> <Text>File datasets.json uploaded to staging storage: https://datafactorylabdata.blob.core.windows.net/adfjobs/57e51a0d-96ea-49b0-8000-000000000000</Text> </LogProperties> |
| 4.6150336 | HDISScaleUnitWebRoleGroup | ExecutionRuntimeCommon | <LogProperties> <Text>ExecutionControllerBase.GetExecutor - Type:Custom.</Text> </LogProperties> |
| 4.6300447 | HDISScaleUnitWebRoleGroup | ExecutionRuntimeReportFinish | <LogProperties> <Text>ExecutionController.ReportState - Finished.</Text> </LogProperties> |
| 4.7814744 | transfersharedresourced1b | ExecutionCustomActivityBatchTaskSubmit | <LogProperties> <Text>Task submit succeed: task id: 57e51a0d-96ea-49b0-a3d2-da70f6005137</Text> </LogProperties> |
| 4.8164332 | transfersharedresourced1b | ExecutionCustomActivityExecutorGetStatus | <LogProperties> <Text>Task state: Active</Text> </LogProperties> |
| 4.8165688 | transfersharedresourced1b | ExecutionTaskReportProgress | <LogProperties> <Text>Report job progress: </Text> </LogProperties> |
| 4.8193824 | HDISScaleUnitWebRoleGroup | ExecutionRuntimeReportFinish | <LogProperties> <Text>ExecutionController.ReportState - Started.</Text> </LogProperties> |
| 4.8277810 | HDISScaleUnitWebRoleGroup | ExecutionRuntimeCommon | <LogProperties> <Text>ExecutionControllerBase.GetExecutor - Type:Custom.</Text> </LogProperties> |
| 4.8554551 | HDISScaleUnitWebRoleGroup | ExecutionRuntimeReportFinish | <LogProperties> <Text>ExecutionController.ReportState - Finished.</Text> </LogProperties> |
| 9.8461851 | transfersharedresourced1b | ExecutionCustomActivityExecutorGetStatus | <LogProperties> <Text>Task state: Completed</Text> </LogProperties> |
| 9.8462061 | transfersharedresourced1b | ExecutionCustomActivityBatchTaskCheckStatus | <LogProperties> <Text>Task 57e51a0d-96ea-49b0-a3d2-da70f6005137 Complete.</Text> </LogProperties> |
| 20.2835583 | transfersharedresourced1b | ExecutionCustomActivityBatchTaskUploadFiles | <LogProperties> <Text>Upload files to staging storage: https://datafactorylabdata.blob.core.windows.net/adfjobs/57e51a0d-96ea-49b0-8000-000000000000</Text> </LogProperties> |
| 20.2992608 | transfersharedresourced1b | ExecutionCustomActivityBatchTaskUploadFiles | <LogProperties> <Text>File stdout.txt uploaded to staging storage: https://datafactorylabdata.blob.core.windows.net/adfjobs/57e51a0d-96ea-49b0-8000-000000000000</Text> </LogProperties> |
| 20.3061400 | transfersharedresourced1b | ExecutionCustomActivityBatchTaskUploadFiles | <LogProperties> <Text>File stderr.txt uploaded to staging storage: https://datafactorylabdata.blob.core.windows.net/adfjobs/57e51a0d-96ea-49b0-8000-000000000000</Text> </LogProperties> |

If you noticed the task submitted successfully to the Batch Service, after which it failed, you'll have to work with the Batch team to understand the reason for failure.

Additional Information:

- **Icm References:**
- **Author:** vimals
- **Reviewer:** vimals
- **Keywords:**

How good have you found this content?

