TumblingWindow trigger didn't execute the pipeline

Last updated by | Ahmed Mahmoud | Jul 5, 2022 at 7:12 AM PDT

Contents

- Scenario
- Information shared by customer
- Investigating the issue
- Workaround
- Product Group Root Cause

This Troubleshooting Guide is part of a case study to find out the root cause why the Tumbling Window trigger didn't execute the pipeline.

Scenario

Customer had configured a Tumbling window trigger to execute a pipeline run every 15 minutes. He observed that the trigger status as failed at ~04/22 09:30 PM PST and pipeline didn't execute.

Information shared by customer

Trigger Run Ids:

- 08586139915838852823597470563CU31
- 08586139915846685337855758661CU08

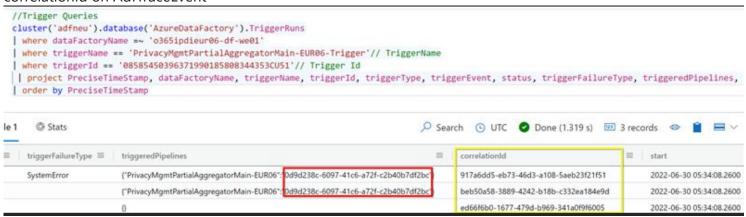**Trigger definition:**

```
"type": "TumblingWindowTrigger",
"typeProperties": {
    "frequency": "Minute",
    "interval": 15,
    "startTime": "2020-01-17T00:00:00Z",
    "delay": "00:30:00",
    "maxConcurrency": 5
```

Investigating the issue

1. Start by querying **TriggerRuns** table to find the TriggerStatus, error and TraceCorrelationId (PipelineRunId)

```
TriggerRuns
| where PreciseTimeStamp >= datetime(2020-04-23 04:25) and PreciseTimeStamp < datetime(2020-04-23 04:35:00)
| where triggerId =~ "0858613991583885282823597470563CU31"
| project PreciseTimeStamp, dataFactoryName, triggerName, triggerId, triggerType, triggerEvent, status, trigge
```

PreciseTimeStamp	dataFactoryName	triggerName	triggerId	triggerType	triggerEvent	status	triggerFailureType	triggeredPipelines	correlationId
2020-04-23 04:30:09.4051667	COSMOSSINKERV2-VISUALSTUDIO	CosmosSinkerTrigger1	0858613991583885282823597470563CU31	TumblingWindowTrigger	TumblingWindowTrigger - 2020-04-23T04:29:59.9014925Z	WaitingOnDependency		{}	5a4901f7-4f95-4234-bce9-77f1252c4af6
2020-04-23 04:30:59.2782494	COSMOSSINKERV2-VISUALSTUDIO	CosmosSinkerTrigger1	0858613991583885282823597470563CU31	TumblingWindowTrigger	TumblingWindowTrigger - 2020-04-23T04:29:59.9014925Z	Failed		{}	41495974-e5b6-4359-bce3-9e17247a2062

Note: - you can find the PipelineRunId direct on triggeredPipelines column, rather than researching by the correlationId on AdfTraceEvent

```
//Trigger Queries
cluster('adfneu').database('AzureDataFactory').TriggerRuns
| where dataFactoryName =~ 'o365ipdieur06-df-we01'
| where triggerName == 'PrivacyMgmtPartialAggregatorMain-EUR06-Trigger'// TriggerName
| where triggerId == '08585450396371990185808344353CU51'// Trigger Id
| project PreciseTimeStamp, dataFactoryName, triggerName, triggerId, triggerType, triggerEvent, status, triggerFailureType, triggeredPipelines,
| order by PreciseTimeStamp
```

le 1   Stats   Search   UTC   Done (1.319 s)   3 records

triggerFailureType	triggeredPipelines	correlationId	start
SystemError	{"PrivacyMgmtPartialAggregatorMain-EUR06": 0d9d238c-6097-41c6-a72f-c2b40b7df2bc}	917a6dd5-eb73-46d3-a108-5aeb23f21f51	2022-06-30 05:34:08.2600
	{"PrivacyMgmtPartialAggregatorMain-EUR06": 0d9d238c-6097-41c6-a72f-c2b40b7df2bc}	beb50a58-3889-4242-b18b-c332ea184e9d	2022-06-30 05:34:08.2600
	{}	ed66f6b0-1677-479d-b969-341a0f9f6005	2022-06-30 05:34:08.2600

2. Query the **ApiOperationEvent** table to find if the trigger was started or not

```
ApiOperationEvent
| where env_time >= datetime(2020-04-23 04:25) and env_time < datetime(2020-04-23 04:35:00)
//| where operationName has "PUT TriggerEvent" and
| where RequestUri has "0858613991583885282823597470563CU31"           //TriggerRunId
| where DataFactoryName =~ "COSMOSSINKERV2-VISUALSTUDIO"               //DataFactoryName
| project env_time, operationName, DataFactoryName, RequestUri, TraceCorrelationId
```

env_time	operationName	DataFactoryName	RequestUri	TraceCorrelationId
2020-04-23 04:30:02.2573191	GET Events/GetAsync	CosmosSinkerV2-VisualStudio	GET https://monsvccentralus.svc.datafactory.azure.com/api/tenants/5ce7bb44-1f62-49e4-bb55-16605ef36659/indexes/triggerruns/events/0858613991583885282823597470563CU31?api-version=2016-11-01	5a4901f7-4f95-4234-bce9-77f1252c4af6
2020-04-23 04:30:51.4989961	PUT TriggerEvent/ReportTriggerEventStatusAsync	CosmosSinkerV2-VisualStudio	PUT https://pmcentralus.svc.datafactory.azure.com/triggerevent/TumblingWindowTrigger/‌/0858613991583885282823597470563CU31	5a4901f7-4f95-4234-bce9-77f1252c4af6
2020-04-23 04:30:53.1617543	GET Events/GetAsync	CosmosSinkerV2-VisualStudio	GET https://monsvccentralus.svc.datafactory.azure.com/api/tenants/5ce7bb44-1f62-49e4-bb55-16605ef36659/indexes/triggerruns/events/0858613991583885282823597470563CU31?api-version=2016-11-01	41495974-e5b6-4359-bce3-9e17247a2062
2020-04-23 04:30:59.2686536	PUT TriggerEvent/ReportTriggerEventStatusAsync	CosmosSinkerV2-VisualStudio	PUT https://pmcentralus.svc.datafactory.azure.com/triggerevent/TumblingWindowTrigger/‌/0858613991583885282823597470563CU31	41495974-e5b6-4359-bce3-9e17247a2062

```
ApiOperationEvent
| where env_time >= datetime(2020-04-23 04:25) and env_time < datetime(2020-04-23 04:35:00)
| where TraceCorrelationId == "41495974-e5b6-4359-bce3-9e17247a2062"   //PipelineRunId
| where DataFactoryName =~ "COSMOSSINKERV2-VISUALSTUDIO"               //DataFactoryName
| project env_time, operationName, DataFactoryName, RequestUri, TraceCorrelationId
```

env_time	operationName	DataFactoryName	RequestUri	TraceCorrelationId
2020-04-23 04:30:53.1617543	GET Events/GetAsync	CosmosSinkerV2-VisualStudio	GET https://monsvccentralus.svc.datafactory.azure.com/api/tenants/5ce7bb44-1f62-49e4-bb55-16605ef36659/indexes/triggerruns/events/0858613991583885282823597470563CU31?api-version=2016-11-01	41495974-e5b6-4359-bce3-9e17247a2062
2020-04-23 04:30:59.2686536	PUT TriggerEvent/ReportTriggerEventStatusAsync	CosmosSinkerV2-VisualStudio	PUT https://pmcentralus.svc.datafactory.azure.com/triggerevent/TumblingWindowTrigger/‌/0858613991583885282823597470563CU31	41495974-e5b6-4359-bce3-9e17247a2062
2020-04-23 04:30:59.2745322	PUT Events/CreateOrUpdateAsync	CosmosSinkerV2-VisualStudio	PUT https://monsvccentralus.svc.datafactory.azure.com/api/tenants/5ce7bb44-1f62-49e4-bb55-16605ef36659/indexes/triggerruns/events?api-version=2016-11-01	41495974-e5b6-4359-bce3-9e17247a2062

Ideally, we should be seeing the **PUT Workflow/StartPipelineAsync** after the **PUT TriggerEvent** call, but it's not there, which means the trigger failed to execute the LogicApps workflow.

   3. We can further debug this by querying the **AdfTraceEvent** table

```
AdfTraceEvent
| where env_time >= datetime(2020-04-23 04:25) and env_time < datetime(2020-04-23 04:35:00)
| where TraceCorrelationId == "41495974-e5b6-4359-bce3-9e17247a2062"
| where ComponentId in ("PipelineManager","MonitoringServiceClient")
| project ComponentId ,env_cloud_role, env_time, Message , TraceCorrelationId
```

ComponentId	env_cloud_role	env_time ▲	Message
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.0619548	Start RunTokenValidationFilter:OnAuthorization
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.0619548	RunTokenValidationFilter:OnAuthorization. Controller TriggerEvent expects Service Token
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.0619548	Stop RunTokenValidationFilter:OnAuthorization
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.0619548	TriggerEventController.ReportTriggerEventStatusAsync[229]: Start - for TriggerName=CosmosSinkerTrigger1, TriggerId=0858613991583885282359747056631 with SystemProp
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.0619548	Start TriggerFactoryHandler.ReportTriggerEventToMonitoring
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.0619548	TumblingWindowTriggerHandler.ReportTriggerEventToMonitoring[263]: Start.
MonitoringServiceClient	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.0619548	DataFactoryMonitoringServiceClient.GetTriggerRunAsync - starting for dataFactoryId 5ce7bb44-1f62-49e4-bb55-16605ef36659, id 0858613991583885282359747056631CU31.
MonitoringServiceClient	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.0813891	DataFactoryMonitoringServiceClient.GetRunAsync - started for dataFactoryId 5ce7bb44-1f62-49e4-bb55-16605ef36659, id 0858613991583885282359747056631
MonitoringServiceClient	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.1718657	DataFactoryMonitoringServiceClient.GetRunAsync - finished for dataFactoryId 5ce7bb44-1f62-49e4-bb55-16605ef36659, id 0858613991583885282359747056631CU31. Run: Partitio
MonitoringServiceClient	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.1718657	DataFactoryMonitoringServiceClient.GetTriggerRunAsync - finished for dataFactoryId 5ce7bb44-1f62-49e4-bb55-16605ef36659, id 0858613991583885282359747056631CU31. Resul

PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.1718657	TumblingWindowTriggerHandler.ReportTriggerEventToMonitoring[283]: Retrieved triggerRun status: WaitingOnDependency, # of runs for triggered pipeline: 0, triggerName: Cos
			"name": "Trigger_421B8CAF-BE66-42CF-83DA-E3028693F304",
			"inputs": {
			  "delay": "PT30M"
			},
			"outputs": {
			  "windowStartTime": "2020-04-23T03:45:00Z",
			  "windowEndTime": "2020-04-23T04:00:00Z"

PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.1718657	TumblingWindowTriggerHandler.ReportTriggerEventToMonitoring[307]: ==Updated triggerRun.Status => Failed.==
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.1718657	TumblingWindowTriggerHandler.ProcessUpstreamDependencyAsync[389]: Start.
MonitoringServiceClient	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.1718657	DataFactoryMonitoringServiceClient.CreateOrUpdateTriggerRunAsync - starting for dataFactoryId 5ce7bb44-1f62-49e4-bb55-16605ef36659, run Partition , Id: 0858613991583885
MonitoringServiceClient	PipelineManager.PipelineWebRole	2020-04-23 04:30:53.1718657	DataFactoryMonitoringServiceClient.CreateOrUpdateRunAsync - started for dataFactoryId 5ce7bb44-1f62-49e4-bb55-16605ef36659, run Partition , Id: 0858613991583885282359
MonitoringServiceClient	PipelineManager.PipelineWebRole	2020-04-23 04:30:59.2686536	DataFactoryMonitoringServiceClient.CreateOrUpdateRunAsync - finished for dataFactoryId 5ce7bb44-1f62-49e4-bb55-16605ef36659, run Partition , Id: 0858613991583885282359
MonitoringServiceClient	PipelineManager.PipelineWebRole	2020-04-23 04:30:59.2686536	DataFactoryMonitoringServiceClient.CreateOrUpdateTriggerRunAsync - finished for dataFactoryId 5ce7bb44-1f62-49e4-bb55-16605ef36659, run Partition , Id: 0858613991583885
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:59.2686536	TumblingWindowTriggerHandler.ProcessUpstreamDependencyAsync[410]: Stop - the triggerRun is not waiting on dependencies.
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:59.2686536	TumblingWindowTriggerHandler.ReportTriggerEventToMonitoring[361]: Stop.
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:59.2686536	Stop TriggerFactoryHandler.ReportTriggerEventToMonitoring
PipelineManager	PipelineManager.PipelineWebRole	2020-04-23 04:30:59.2686536	TriggerEventController.ReportTriggerEventStatusAsync[241]: Stop.

Kindly raise an Icm with ADF Orchestration team to find out the root cause for this issue. In this case, product group provided the root cause as below:

Workaround

You may try to increase the tumbling trigger maxConcurrency on advanced settings to avail more threads than the stuck ones.

Product Group Root Cause

The issue turned out to be a backend issue. Pipeline wasn't dispatched due a high load network issue and the user retries only apply after the pipeline run has dispatched

Additional Information:

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

How good have you found this content?