Activity Stuck in Queue or in-Progress state for a long time

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Contents

Please follow this new Activity Stuck Investigation Steps TSG to do investigation before involving ADMS team. This TSG will help you do investigation to find the root cause and root owner. It contains several known stuck patterns. WE WILL MAKE THIS TSG OBSOLETE IN COMING DAYS

Issue

Some activities might be stuck in queue or in-progress for a long time due to increase in number of activities in a pipeline, there is another possibility that the pipeline might be stuck even though all the activities inside them are showing as completed

Pre Check steps

Please run below query using activity run id:

- If you find 0 records returned, go to below **Troubleshooting steps** section.
- If you find more than 1 records returned, this means:

This is a known intermittent stuck issue with very low probability (1 per 1.5 million) caused by ADMS internal service platform migration, the impact is on all regions and all activity types except 'AppendVariable','Fail','Filter','ForEach','IfCondition','SetVariable','Switch','Until','Wait','ExecutePipeline'. Please suggest customer to mitigate it by cancel and rerun the activity run.

```
let activityRunId = @'df1007d6-0bba-46d4-a375-f920caee167d'; //Don't use pipeline run id
cluster('azuredmprod.kusto.windows.net').database('AzureDataMovement').query_AdfActivityRunTraceEvent(activity
| where ComponentId == 'PipelineManager'
| where Message has 'InternalServerError' and Message has 'System.ArgumentNullException: Value cannot be null'
 'Microsoft.ADF.Contract.ActivityExecutionResponseWrapper.get_Status()'
| take 10
```

Troubleshooting steps

```
cluster('adfcus.kusto.windows.net').database('AzureDataFactory').
ApiOperationEvent | union
cluster('adfneu.kusto.windows.net').database('AzureDataFactory').
ApiOperationEvent | where InternalCorrelationId == "48886aed-6a94-45eb-a980-5c7fe3ad61bd" //Activity Run Id
| project env_time, env_cloud_name, RequestTrackingId, ApiName, resultSignature, RequestUri
```

env_time	env_cloud_name	RequestTrackingId	ApiName	resultSignature
2022-02-10 07:59:31.4480918	MONSVCCinaksig	9c84b427-67cb-4073-a66d-d0e415477ca4	PUT Events/CreateOrUpdateAsync	200
2022-02-10 07:59:31.4509752	PMCinaksig	9c84b427-67cb-4073-a66d-d0e415477ca4	PUT Workflow/StartActivityAsync	200
2022-02-10 07:59:32.4087745	PMCinaksig	f67a4358-8843-4ce5-9e3f-71fdf98c1c67	POST Workflow/ExecuteActivityAsync	200
2022-02-10 09:08:11.6462535	PMCinaksig	61bbc65c-21b1-4c4c-947e-fb00acb682c5	POST Workflow/GetActivityProgressAsync	200
2022-02-10 09:08:11.9173714	PMCinaksig	33ea4faa-8c5a-4f7f-a39c-011f6ffe3245	PUT Workflow/StopActivityAsync	200

As it can be seen from the logs, Execute Activity was called to start the ADMS activity, further looking into the logs for Execute Activity, we can see that ADMS client sent a successful message back to ADF layer (**assuming that the activity was succeeded and not cancelled**)

```
cluster('adfcus.kusto.windows.net').database('AzureDataFactory').
AdfTraceEvent | union cluster('adfneu.kusto.windows.net').database('AzureDataFactory').AdfTraceEvent
| where RequestTrackingId == "<RequestTrackingId from previous Kusto query for the call POST Workflow/ExecuteA
| project env_time, env_seqNum, TraceCorrelationId, env_cloud_location, TraceLevel, ComponentId , Message , Su
| order by env_time  asc, env_seqNum asc
```

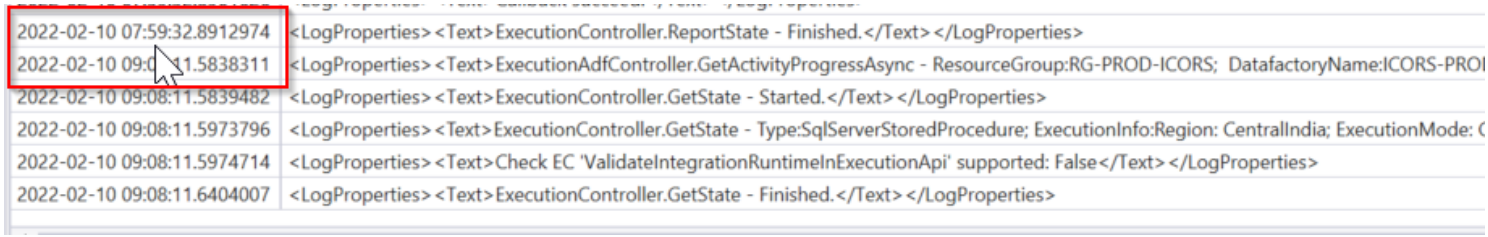
2022-02-10 07:59:32.1820667		3758fb5a-c46a-4f07-9df9-195b94789ab9	centralindia	Start	PipelineManager	DataMovementClient.SendRequest[356]: Start.
2022-02-10 07:59:32.1820947		3758fb5a-c46a-4f07-9df9-195b94789ab9	centralindia	Information	PipelineManager	Start CreateRequestMessage
2022-02-10 07:59:32.1821463		3758fb5a-c46a-4f07-9df9-195b94789ab9	centralindia	Information	PipelineManager	Stop CreateRequestMessage
2022-02-10 07:59:32.4083947		3758fb5a-c46a-4f07-9df9-195b94789ab9	centralindia	Stop	PipelineManager	DataMovementClient.SendRequest[362]: Stop - Response statusCode: OK.
2022-02-10 07:59:32.4084762		3758fb5a-c46a-4f07-9df9-195b94789ab9	centralindia	Stop	PipelineManager	DataMovementClient.ExecuteActivityAsync[115]: Stop.
2022-02-10 07:59:32.4085085		3758fb5a-c46a-4f07-9df9-195b94789ab9	centralindia	Information	PipelineManager	Stop ExecuteActivityAsync
2022-02-10 07:59:32.4085569		3758fb5a-c46a-4f07-9df9-195b94789ab9	centralindia	Stop	PipelineManager	WorkflowController.ExecuteActivityAsync[640]: Stop - ActivityRunId=48886aed-6a94-45eb-a980-5c7fe3ad61bd.
2022-02-10 07:59:32.4088003		3758fb5a-c46a-4f07-9df9-195b94789ab9	centralindia	Information	PipelineManager	RequestLoggingHandler.SetResponseHeaders[532]: Could not update response headers..

After this, as it can be seen in Fig 1, The activity was sitting idle for more than an hour. We can now check the ADMS layer to see if the job was submitted from Task Manager in a timely manner.

```
TaskHostingEvent | where ActivityId == "48886aed-6a94-45eb-a980-5c7fe3ad61bd" // Activity Run Id
| order by TIMESTAMP asc
```

TIMESTAMP	PreciseTimeStamp	Tenant	Role	RoleInstance
2022-02-10 07:59:32.3623573	2022-02-10 07:59:32.3623573	AKS	TM	tm.deployment.5db80219-d4a5-4b6f-9f54-967e0e667fbe-bfc7565fsm9r
2022-02-10 07:59:32.4016887	2022-02-10 07:59:32.4016887	AKS	TM	tm.deployment.5db80219-d4a5-4b6f-9f54-967e0e667fbe-bfc7565fsm9r
2022-02-10 07:59:32.5840757	2022-02-10 07:59:32.5840757	prod-ci-exactivities_Rolling_20220113.3_SU1	transfersharedresourced1	tvmps_1697886644637068a8435c91549adcd041cbc5d13bebd579974e71562b739510_d
2022-02-10 07:59:32.9349438	2022-02-10 07:59:32.9349438	AKS	TM	tm.deployment.5db80219-d4a5-4b6f-9f54-967e0e667fbe-bfc7565v9hn7
2022-02-10 07:59:32.9431514	2022-02-10 07:59:32.9431514	prod-ci-exactivities_Rolling_20220113.3_SU1	transfersharedresourced1	tvmps_1697886644637068a8435c91549adcd041cbc5d13bebd579974e71562b739510_d

All the activities were pulled from Task Manager successfully and executed within few seconds of the activity start time. Furthermore checking the CustomLogEvent table, we can see that ADMS callback was successful but it almost took more than an hour for ADF to acknowledge PM that the activity was successful and ADMS can terminate the process.



2022-02-10 07:59:32.8912974	<LogProperties><Text>ExecutionController.ReportState - Finished.</Text></LogProperties>
2022-02-10 09:0[illegible]1.5838311	<LogProperties><Text>ExecutionAdfController.GetActivityProgressAsync - ResourceGroup:RG-PROD-ICORS; DatafactoryName:ICORS-PROI
2022-02-10 09:08:11.5839482	<LogProperties><Text>ExecutionController.GetState - Started.</Text></LogProperties>
2022-02-10 09:08:11.5973796	<LogProperties><Text>ExecutionController.GetState - Type:SqlServerStoredProcedure; ExecutionInfo:Region: CentralIndia; ExecutionMode: (
2022-02-10 09:08:11.5974714	<LogProperties><Text>Check EC 'ValidateIntegrationRuntimeInExecutionApi' supported: False</Text></LogProperties>
2022-02-10 09:08:11.6404007	<LogProperties><Text>ExecutionController.GetState - Finished.</Text></LogProperties>

As next steps, please work with an SME to engage Orchestration team in Ava to continue troubleshooting.