

Troubleshooting delayed Pipeline execution or stuck issue

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Issue

Lot of times we see customers experiencing issues with the execution of the pipeline. Either the pipeline execution is delayed or queued.

The issues can be due to an existing run or concurrency setting configured by the customer. Customer can achieve concurrency at the pipeline level or multiple trigger runs can also cause pipelines to run concurrently.

If you set concurrency = 1 in the pipeline, the concurrency will be respected regardless of how the pipeline was triggered (different triggers, manual trigger, ExecutePipeline, etc.)

If you set concurrency = 1 in the trigger, the trigger will execute each window individually, but different triggers will be able to trigger the same pipeline at the same time.

Resolution

In such cases, we need to isolate the issue and rule out possibilities and action accordingly. Refer to the scenarios below:

1. Is there any existing **In Progress** run which is getting delayed in finishing or completion. If yes, then we need to find out the root cause why a particular run is taking time? Based on the activity type, we need to investigate the issue further. For example, for copy activity, we may need to check the [CustomEventLogs](#) and similarly, for HDInsight we may start with CustomEventLogs and then HDInsight logs etc.
2. Are there any **In Progress** runs and **Queued** runs as well (status as Queued)? In this case check the pipeline concurrency value. If the concurrency is 1, then it may happen the other pipelines are waiting for resources to be released. Try increasing the concurrency value and check.

Note: You may query the [PipelineRuns](#) table to check the status of the pipeline runs:

```

cluster('adfcus').database('AzureDataFactory').PipelineRuns | union cluster('adfneu').database('AzureDataFacto
| where TIMESTAMP >= ago(2h)
| where dataFactoryName == "<DataFactoryName>"
| where pipelineName == "<PipelineName>"
//| where status == "Queued"
| project PreciseTimeStamp, subscriptionId, dataFactoryName, runId, pipelineName , status, failureType, start,
| order by PreciseTimeStamp desc

```

3. If there are no runs in the **queued** state, but actual **In Progress** state, then the issue is bit complex and based on the activity type we need to investigate further to find the root cause of the running runs.
4. If the run is in a **queued** state and no other run is in an **In Progress** state, means pipeline is stuck. Please work with a regional SME and engage Orchestration PG in the Ava.

IMPORTANT NOTE

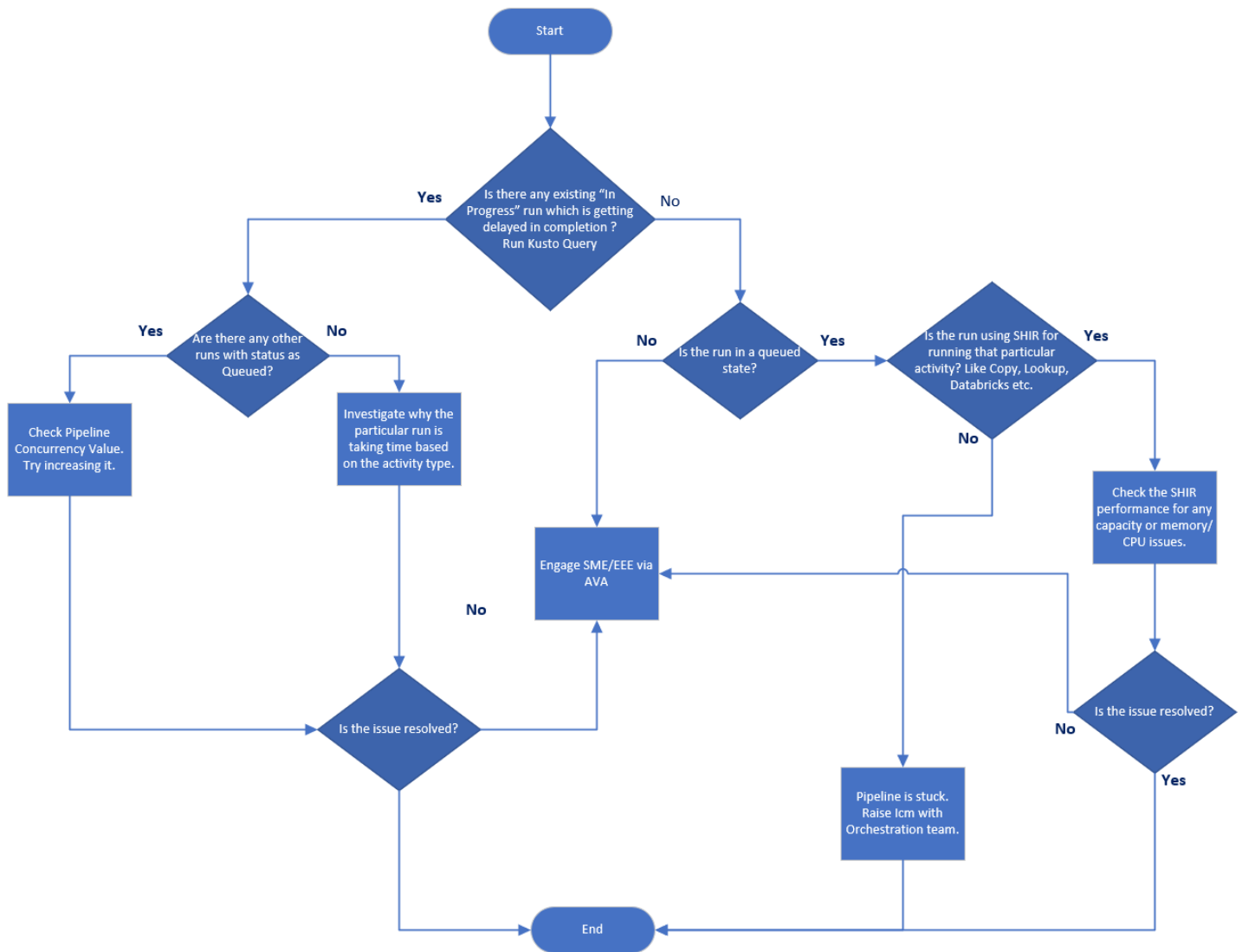
- If you notice copy activity or any other activity which is using SHIR, is queued, kindly ensure to check the SHIR performance for any capacity or memory/CPU issues.
- Suggest to use ASC -> DataMovementTroubleshooter in the Resource Explorer tab as it can give information regarding the SHIR performance, number of nodes, IR version etc..

Sample TSGs:

- **Copy Activity queued:** 1)
https://supportability.visualstudio.com/AzureDataFactory/_wiki/wikis/AzureDataFactory/295574/Pipeline-queue-long-time
 2)
https://supportability.visualstudio.com/AzureDataFactory/_wiki/wikis/AzureDataFactory/387811/Copy-Activity-being-Struck-in-Queued-Stated-while-using-the-SHIR
- **Look Activity queued:**
https://supportability.visualstudio.com/AzureDataFactory/_wiki/wikis/AzureDataFactory/286892/Lookup-activity-timeout-or-stuck
- Similarly, other activities using SHIR must be stuck or timing out due to performance issues. Rule out any potential issue because of SHIR.

Workflow

The generic workflow to troubleshoot Pipeline Execution or Stuck issue is shown below:



Additional Information

Icm References:

Keywords:

Authors: vimals

Reviewers:

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