Understand high bill or bill spike

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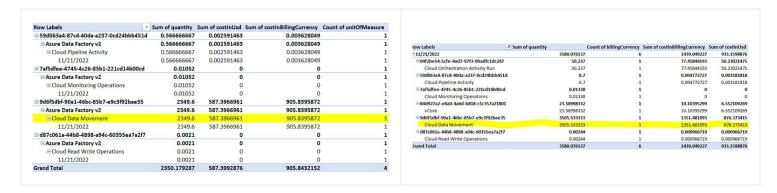**Contents**

Issue background

Sometimes we receive customer tickets asking why they see a billing spike on a specific day. Or customer think ADF billing is a bit higher than they expect and simply want to understand how the billing quantity got generated.

Pre-steps

1. You need to work with billing team to break down into which ADF billing **meter**(s) contribute to the majority of the total bill. Usually billing team can help to export a Excel file in which we can drill down to see which meter costs most (something similar as below).

For all meter metadata, you can check with this query.

```
(In Kusto cluster - https://admstelemetry.eastus.kusto.windows.net/admstelemetry)

AllAdfMeterIds
| distinct MeterId,MeterName, MeterDescription, MeterType
```

2. Double check the aggregated billing quantity in Excel is consistent with the quantity in ADF billing kusto tables. For detailed steps, please refer to step 2 of Troubleshooting in this TSG. Usually this should be consistent unless there was a billing outage which needs to be further checked by billing team.

Troubleshooting

If you have completed pre-steps #1 and #2 and can verify there really exits a high quantity of billing meter on a specific date, then next step is to break down how high quantity of that meter got accumulated from pipeline and activities level.

Below Kusto query is helpful for this.

```
CompleteActivityRuns
| where SubscriptionId =~ '<subscription_id>'
| extend Duration = EndTS - StartTS
| summarize dcount(ActivityId), sum(Duration) by bin(StartTS, 1d), ActivityType, JobStatus
```

From query result, you could see the total number and total duration of activities of different types on each day. Below is an example that we can clearly see an increased number of copy activity runs on that day when customer see a billing spike.

StartTS ▲	ActivityType ▲	JobStatus	dcount_ActivityId	sum_Duration
2022-11-16 00:00:00.0000000	Copy	Succeeded	71	00:51:27.6800370
2022-11-17 00:00:00.0000000	Copy	Succeeded	3	00:07:37.0485981
2022-11-18 00:00:00.0000000	Copy	Succeeded	3	00:36:13.6019951
2022-11-19 00:00:00.0000000	Copy	Succeeded	3	00:36:32.3099239
2022-11-20 00:00:00.0000000	Copy	Succeeded	3	00:08:10.3506377
2022-11-21 00:00:00.0000000	Copy	Failed	25995	3.15:17:24.2579...
2022-11-21 00:00:00.0000000	Copy	Succeeded	26704	8.02:41:05.2202...
2022-11-21 00:00:00.0000000	Copy		2	00:00:58.9032032
2022-11-22 00:00:00.0000000	Copy	Succeeded	3	00:07:37.5038944
2022-11-23 00:00:00.0000000	Copy	Succeeded	3	00:07:43.0054788
2022-11-24 00:00:00.0000000	Copy	Succeeded	3	00:08:16.5563573
2022-11-25 00:00:00.0000000	Copy	Succeeded	3	00:07:48.2941396
2022-11-26 00:00:00.0000000	Copy	Succeeded	3	00:08:00.2190117
2022-11-27 00:00:00.0000000	Copy	Succeeded	3	00:08:24.7299337