MonWiQdsWaitStats (QDS wait stats)

Last updated by | Radhika Shah | May 31, 2022 at 7:01 AM PDT

Contents

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6:29 PM

Type of data

Wait statistics per query plan over time, classified in wait categories

Included info

- Wait category
- Total query wait time
- Average query wait time
  - Execution count could be calculated as total / average
- Max query wait time
- Min query wait time
- Sum of squares of query wait time

Notable columns to summarize by

- originalEventTimestamp/TIMESTAMP
- Wait_category
- Query_id - id of the query in QDS
- Plan_id - id of the plan in QDS
- Query_hash - represents the hash value of the query shape
- Query_plan_hash - represents the hash value of the plan shape
- Statement_sql_hash - represents the hash value of the query text

The mapping of SQL Server wait types to wait categories could be found at https://docs.microsoft.com/en-us/sql/relational-databases/system-catalog-views/sys-query-store-wait-stats-transact-sql# wait-categories-mapping-table

Note: Waits lower than 1 millisecond per 15-minute interval are not shown

Sample queries

Get total wait time per category over the past 7 days

```
MonWiQdsWaitStats | where LogicalServerName == "nc-bacmpshardprod12" and database_name == "Campaign_AdGroupShard_P1183" | where originalEventTimestamp > now(-7d) | summarize sum(total_query_wait_time_ms) by wait_category | order by sum_total_query_wait_time_ms desc
```

wait_category	sum_total_query_wait_time_ms
PARALLELISM	71272718
CPU	43428540
BUFFERIO	34433696
NETWORKIO	24100441
UNKNOWN	16220469
IDLE	5869700
MEMORY	3781721
BUFFERLATCH	2493798
LATCH	988904
LOCK	885690
COMPILATION	793345
PREEMPTIVE	713264
OTHERDISKIO	506389
LOGRATEGOVERNOR	287183
TRANLOGIO	148444
REPLICATION	72784

Find the top 10 queries by total wait time

https://sqlazurencus3.kusto.windows.net:443/sqlazure1 [Run in Kusto.Explorer] [Run in Kusto.Explorer on SAW] [Run in Kusto.WebExplorer]

```
MonWiQdsWaitStats | where LogicalServerName == "nc-bacmpshardprod12" and database_name == "Campaign_AdGroupShard_P1183" | summarize sum(total_query_wait_time_ms) by query_id | top 10 by sum_total_query_wait_time_ms desc
```

query_id	sum_total_query_wait_time_ms
24985984	9878626
24298949	7613362
21008344	7588659
407109	7483397
405789	5624953
405792	5338135
378358	4592639
407263	4503821
25054993	4483691
24273009	4399113

Drill down the waits by wait category for a query

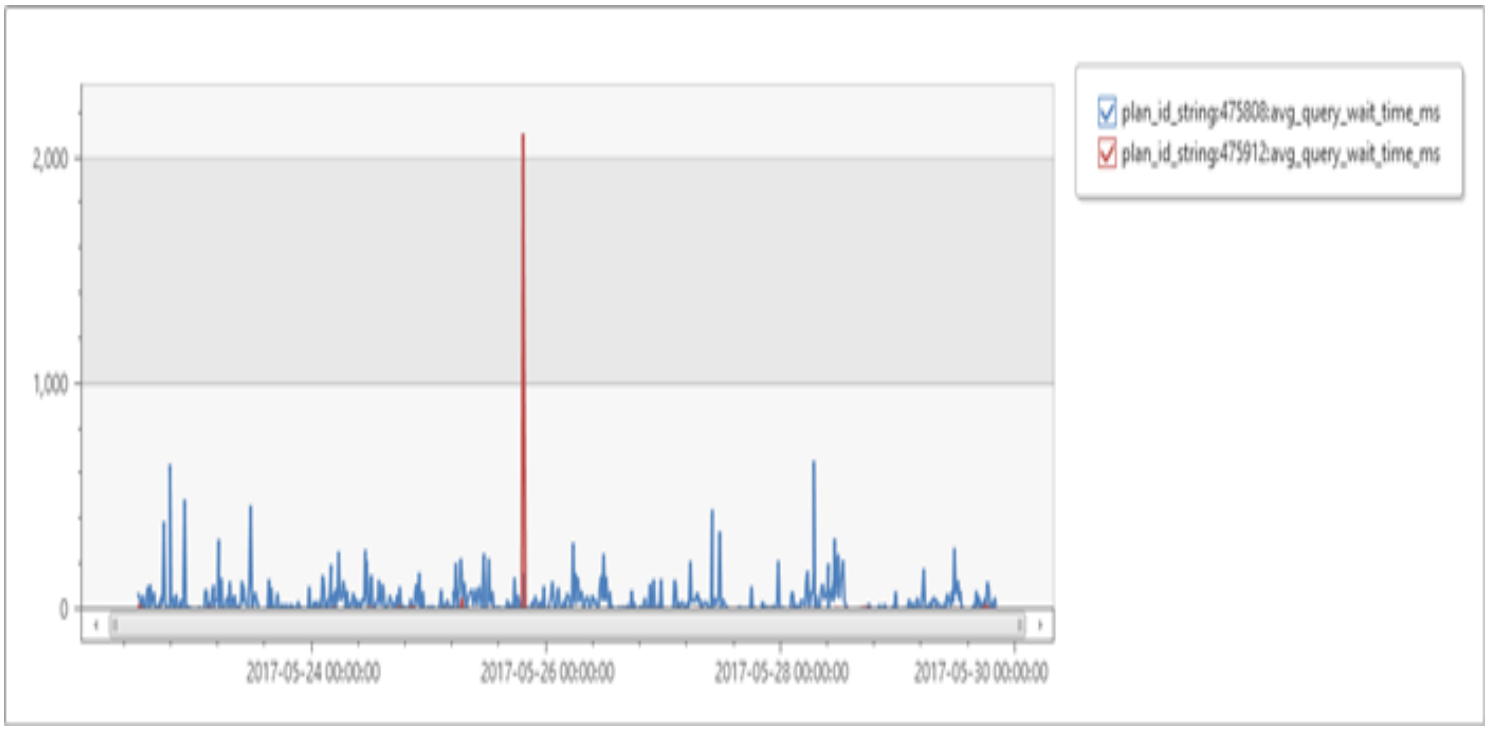
https://sqlazurencus3.kusto.windows.net:443/sqlazure1 [Run in Kusto.Explorer] [Run in Kusto.Explorer on SAW] [Run in Kusto.WebExplorer]

```
MonWiQdsWaitStats | where LogicalServerName == "nc-bacmpshardprod12" and database_name == "Campaign_AdGroupShard_P1183" | where query_id == 24985984 | summarize sum(total_query_wait_time_ms) by wait_category | order by sum_total_query_wait_time_ms desc
```

wait_category	sum_total_query_wait_time_ms
NETWORKIO	5164269
BUFFERIO	4401779
CPU	221487
MEMORY	67811
UNKNOWN	23229
IDLE	49
BUFFERLATCH	2

Plot the average BUFFERIO waits for each plan of a query over time

```
MonWiQdsWaitStats | where LogicalServerName == "nc-bacmpshardprod12" and database_name == "Campaign_AdGroupShard_P1183" | where query_id == 24985984 | where wait_category == "BUFFERIO" | extend plan_id_string = tostring(plan_id) | project originalEventTimestamp, avg_query_wait_time_ms, plan_id_string | render timechart
```



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