SSAS metrics

SQL BI Manager monitors several type of metrics to provide accurate information about the status and health of the Analysis Services and the instances hosting these services. The metrics are classified in the following categories:

Server Performance

This category contains the following server-related performance metrics:

- Disk
 - Includes the following charts: Disk transactions, Average Seconds per Transaction, Current Disk Queue Length, and Percent Idle Time.
- Network
- Includes Data Transfer (bytes/sec) and Network Output Queue Length charts.
- ° Cache
- Includes Cache Copy Read Hits Percent, Cache Copy Reads per Second, and Cache Faults charts. CPU

Displays **CPU Thread Switching** (threads waiting vs. thread switches), **Percent Process Time** (Percent Privileged Time vs. Percent User Time), **Percent Processor Time** (Processor Time vs. SSAS Processor Time), and **Interrupts per Second** charts.

- Processing Displays a Process Working Set (Memory Working Set Vs. SSAS Working Set) chart
- Memory

Includes the following charts: Memory Overall Usage, Available Memory, and Page Transactions.

SSAS Performance

This category contains the following SSAS related performance metrics:

SSAS Processing

Displays charts for: Rows Written, Aggregation Rows, and Index Processing.

- Query Activity (Active Queries & All Queries)
 - Active Queries, displays a list of all currently executing MDX/DAX queries. The list can be filtered by User and Session SPID.
 All Queries, displays charts for Cell Activity (Cells Calculated vs. Recomputes), Calculation Covers, Sonar subcubes, and N
 - on-Empty Algorithm Utilization (Un-optimized vs. Calculated Members).
- SSAS Memory

Includes charts for **Memory Utilization** (Overall Usage, Low Limit, High Limit, Shrinkable, Non Shrinkable), **Vertipaq Memory** (Vertipaq Paged vs. Vertipaq Non Paged), and **Vertipaq Mapped Memory** (Vertipaq Memory Mapped vs. Memory Limit Vertipaq).

SSAS Cache

Displays charts for Cache Transactions (evictions/sec vs. inserts/sec) and Rate of Memory Added to Cache.

• SSAS Formula Engine Cache

Includes the following charts: Query Pool Threads, Query Pool Job Queue Length, Processing Pool Threads (Idle vs. Busy), Proces sing Pool Job Queue Length, Flat Cache Activity (Cache Lookups vs. Cache Hits), and Calculation Cache Activity (Cache Lookups vs. Cache Hits).

• SSAS Storage Engine Cache

Displays the following charts: Data File Activity (Bytes Read vs. Logical Reads vs. Queries From File), Cache Copy Reads, Queries Answered from Cache, Filtered Queries Answered from Cache, Average Time per Query, Dimension Cache Activity (Cache Hits vs. Cache Lookups), and Measure Group Cache Activity (Cache Hits vs. Cache Lookups).

Session

This category displays a list of user sessions within the BI environment with the following columns:

- ° Session ID
- Status
- Session SPID
- Connection ID
- ° User
- Database
- Start Time
- Command Count
- Last Command Start
- Last Command End
- Last Command
- CPU Time (ms)
- Reads (KB)
- Writes (KB)
- Used Memory

The items displayed in this list can also be filtered by Status, Session SPID, Connection ID, User, and Database.

Object Utilization

This category displays a list of all objects within the cube or tabular model with the following columns:

- BISM
- ° Type
- Object ID
 CPU Time (ms)
- Object Hit
- Object Miss
- Aggregation Hit
- Aggregation Miss
- Reads (KB)
- Writes (KB)
- Rows Returned
- Rows Scanned
- Object Type

The items displayed in this list can also be filtered by BISM, Object Type, and Object ID.

SSAS Model Name

This category displays a list with general information about SSAS Models found within the BI environment with the following columns:

- SSAS Model Name
- Last Schema Update
- ° Last Data Update
- Write Enabled
- SQL Enabled
- Drill Through Enabled

User activity

This category displays a list of all Users' activities within the BI environment. The list includes the following information:

- User Name (clicking on a Session will display all activity from the user)
- Sessions
- CPU Utilization (ms)
- Memory Usage (KB)

Click the User name to display the Sessions category list with more detailed information about all sessions performed by the user. You can also export the contents of the list to a PDF, XLS, or XML file.

You can modify the time frame for the information and the scale (minute, hour, day, week, or month) used in the charts and export the views to \odot an XLS or XML file. You can also print a specific chart or download it as a PNG, JPEG, PDF, or SVG file.

The information displayed in the lists can also be exported to a PDF, XLS, or XML file.

SQL Business Intelligence Manager identifies issues within the SQL BI environment to help optimize BI service performance. Learn more >>