

SQL Sentry Performance Metrics

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This article provides a directory of the many sample and historical performance metrics displayed by the **Performance Analysis Dashboard** and **Performance Analysis Overview** across SQL Sentry monitoring solution.

Note: Some metrics, such as Windows metrics appear not only for Windows targets, but also for SQL Server targets. This article shows you where to find the definitions for those metrics across the documentation.

Metrics Article	Included Metrics
SQL Server	<ul style="list-style-type: none">• SQL Server Activity : User Connections• SQL Server Activity : Blocked Processes• SQL Server Activity : Batches• SQL Server Activity : Transactions• SQL Server Activity : Compiles• SQL Server Activity : Recompiles• SQL Server Activity : Key Lookups• SQL Server Activity : Forwarded Records• SQL Server Activity : Backup MB/sec• SQL Server Activity : Send Queue / Redo Queue• SQL Server Waits : CPU percent of Total Waits• SQL Server Waits : Wait Time: by Category• SQL Server Waits : Wait Time: by Class• SQL Server Memory : Buffer Cache Size• SQL Server Memory : Plan Cache Size (SQL)• SQL Server Memory : Plan Cache Size (Objects)• SQL Server Memory : Other Cache Size• SQL Server Memory : In-Mem OLTP• SQL Server Memory: Query Grants• SQL Server Memory: Columnstore• SQL Server Memory : Plan Cache Hit Ratio (SQL)• SQL Server Memory : Plan Cache Hit Ratio (Objects)• SQL Server Memory : Stolen Buffer• SQL Server Memory : Page Reads• SQL Server Memory : Page Writes• SQL Server Memory : Page Life Expectancy• SQL Server Memory : Memory Grants Pending• Database IO : Read Latency by Database File• Database IO : Write Latency by Database File• Database IO : Checkpoint Pages• Database IO : Lazy Writes• Database IO : Log Flushes
	<p>Includes Windows & Hyper-V metrics.</p> <p>Windows</p>

Metrics Article

Windows

- Network : Total network utilization
- Network : Utilization by SQL Server/SSAS Instance
- Network : Utilization by Network Adapter
- Network : Network Output Queue Length
- CPU Usage : Total Processor Time
- CPU Usage : User Time by CPU
- CPU Usage : Kernel Time by CPU
- CPU Usage : Processor Time by SQL Server / SSAS Process
- CPU Usage : Percent Guest Runtime*
- CPU Usage : vCPU Wait Time*
- CPU Usage : Context Switches
- CPU Usage : Processor Queue Length
- System Memory : Memory by SQL Server / SSAS instance
- System Memory : Other Processes Memory
- System Memory : File Cache Memory
- System Memory : Ballooned memory**
- System Memory : Available Memory
- System Memory : Read Faults
- System Memory : Write Faults
- System Memory : Page File Usage
- Disk IO : Read Latency by Physical Disk
- Disk IO : Write Latency by Physical Disk

* Metric will only be visible for targets that are Hyper-V Hosts.

** Metric will only be visible for targets that are VM guests whose host is also watched.

Hyper-V Host

- Network (VM) : Utilization by Virtual Machine Guest
- CPU Usage (VM) : Usage Time by Guest
- CPU Usage (VM) : vCPU Root Usage Time
- CPU Usage (VM) : Percent Guest Runtime
- CPU Usage (VM) : vCPU Wait Time
- System Memory (VM) : Memory by Virtual Machine Guest
- Disk IO (VM) : IOPS (Read)
- Disk IO (VM) : IOPS (Write)
- Disk IO (VM) : Read Throughput
- Disk IO (VM) : Write Throughput

Includes VMware Host and Guest metrics.

VMware Host

- Network In
- Network Out
- CPU Usage Total CPU
- CPU Usage Co-stop %
- CPU Usage Ready Time %
- System Memory Active
- System Memory Consumed
- System Memory Overhead
- System Memory Granted
- System Memory Available
- System Memory Swap In
- System Memory Swap Out
- Disk IO ms/Read by Datastore
- Disk IO ms/Write by Datastore

VMware

Metrics Article

- Disk IO MB/sec Read by Datastore
- Disk IO MB/sec Write by Datastore

VMware Guest

- Network (VM) In per Guest
- Network (VM) Out per Guest
- CPU Usage (VM) Utilization per Guest
- System Memory (VM) Utilization per Guest
- Disk IO (VM) ms/Read per VM
- Disk IO (VM) ms/Write per VM
- Disk IO (VM) MB/sec Read per VM
- Disk IO (VM) MB/sec Write per VM

Includes SSAS, Tabular, and Multidimensional metrics.

SSAS Metrics for Tabular and Multidimensional Modes

- SSAS Activity : Rows Transferred: Query Rows Sent/sec
- SSAS Activity : Rows Transferred: Proc Rows Read/sec
- SSAS Activity : Threads: Formula Engine: Busy
- SSAS Activity : Threads: Formula Engine: Job Rate
- SSAS Activity : Threads: Formula Engine: Queued
- SSAS Activity : Threads: Storage Engine: Job Rate
- SSAS Activity : Threads: Storage Engine: Queued
- SSAS General : Average Time (ms): Formula Engine
- SSAS General : Average Time (ms): SE Cached
- SSAS General : Average Time (ms): SE Non-Cached
- SSAS General : Average Time (ms): Serialization
- SSAS General : Average Time (ms): SQL Queries
- SSAS General : Average Time (ms): Processing
- SSAS General : MDX: Cells Calculated
- SSAS General : MDX: Calculated Covers
- SSAS General : MDX: Sonarsubcubes
- SSAS General : MDX: Recomputes
- SSAS General : MDX: NE Unopt
- SSAS General : MDX: NE Calc Memb
- SSAS Memory : Memory Usage (MB): Shrinkable
- SSAS Memory : Memory Usage (MB): Nonshrinkable
- SSAS Memory : Cache Activity: Cache Inserts
- SSAS Memory : Cache Activity: Cache Evictions
- SSAS Memory : Cache Activity: KB Added
- SSAS Memory : Cache Activity: KB Shrunk
- SSAS Storage : File Reads KB: by Category
- SSAS Storage : File Writes KB: by Category
- SSAS Activity : Connections
- SSAS Activity : Sessions
- SSAS Activity : Requests/sec
- SSAS Activity : Failures/sec
- SSAS General : Current Locks
- SSAS General : Current Lock Waits
- SSAS Memory : Cache Hit Ratio: Dim Percent
- SSAS Memory : Cache Hit Ratio: Calc Percent
- SSAS Memory : Cache Hit Ratio: Flat Percent
- SSAS Storage : File Cache Hit Ratio: Read Percent
- SSAS Storage : File Cache Hit Ration: Write Percent

SSAS

<p>Metrics Article</p>	<p>SSAS Metrics for Tabular Only Included Metrics</p> <ul style="list-style-type: none"> • SSAS Memory : Mem Usage (MB): VertiPaq Paged • SSAS Memory : Mem usage (MB): VertiPaq Nonpaged • SSAS Memory : Cache Activity: Dim Cache Lookups • SSAS Memory : Cache Activity: Calc Cache Lookups <p>SSAS Metrics for Multidimensional Only</p> <ul style="list-style-type: none"> • SSAS General : Processing: Proc Rows Written/sec • SSAS General : Processing: Index Rows Created • SSAS General : Processing: Aggregate Rows Created • SSAS Memory : Cache Lookups: Dimension • SSAS Memory : Cache Lookups: Measure Grp • SSAS Memory : Cache Lookups: Calc • SSAS Memory : Cache Lookups: Flat • SSAS Memory : Cache Activity: Flat Cache Inserts • SSAS Storage : File Queries by Category • SSAS Storage : Current Partitions by Category
<p>Azure SQL Database</p>	<ul style="list-style-type: none"> • DTU Usage : Total DTU Percent • DTU Usage : CPU • DTU Usage : Data IO • DTU Usage : Log IO • Memory Usage : Allocated Memory Usage • Database Size : Size in GB • SQL Server Activity : User Connections • SQL Server Activity : Blocked Processes • SQL Server Activity : Transactions • SQL Server Activity : Backup MB/sec • SQL Server Waits : CPU Percent of Total Waits • SQL Server Waits : Wait Time: by Category • SQL Server Waits : Wait Time: by Class • SQL Server Memory : Buffer Cache Size • SQL Server Memory : Page Life Expectancy • Database IO : Read Latency by Database File • Database IO : Write Latency by Database File • Database IO : Log Flushes
<p>Azure SQL Data Pool</p>	<ul style="list-style-type: none"> • Distribution Activity : Data Movement CPU (ms) • Node Activity : Data Movement CPU (ms) • Distribution Activity : Elapsed Time (ms) • Node Activity : Elapsed Time (ms) • Distribution Activity : Rows Processed • Node Activity : Rows Processed • Distribution Activity : MB Processed • Node Activity : MB Processes • Distribution Activity : MB/sec • Node Activity : MB/sec
	<ul style="list-style-type: none"> • Processor Time : DMS • Processor Time : SQL Server • Data Movement Read/Writer Buffers : Sender Queued Buffers • Data Movement Read/Writer Buffers : Writer Queued Buffers • Distribution Activity : Data Movement CPU (ms) • Node Activity : Data Movement CPU (ms) • Distribution Activity : Elapsed Time (ms) • Distribution Activity : Rows Processed

- Included Metrics**
- Node Activity : Rows Processed
 - Distribution Activity : MB Processed
 - Node Activity : MB Processed
 - Distribution Activity : MB/sec
 - Node Activity : MB/sec