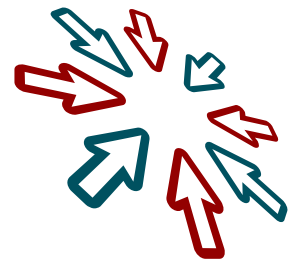


# Kelverion

Automating Infrastructure Management



## SQL Performance Diagnostics Runbook Tool

### The Answer to inefficient SQL Database Performance

Kelverion have implemented many large and complex Orchestrator implementations and have a huge amount of experience in setting up and tuning Orchestrator environments and Runbooks for optimum performance.

A re-occurring issue our consultants have identified is 'poor' or 'inefficient' Database Performance. Database Performance is fundamental to any Systems Center 2012 Orchestrator environment. Managers are sometimes faced with a difficult decision, to either persevere with the database issues (until something breaks) or make impulsive (and expensive) decisions such as purchasing more Memory. Without attention, database performance issues can severely impact your Orchestrator environment. One of the challenges is that there are many factors from CPU to Memory Pressure that contribute to the symptoms of inefficient Database Performance. Behind any of these symptoms, there can be a number of different bottlenecks that are responsible.

The Kelverion 'SQL Performance Diagnostics' runbook is a utility that identifies symptoms that indicate Database Performance issues. Once the relevant statistics are collected and correlated, the runbook produces a report to give up to date status, analysis and recommendations. This is complemented by a graphical output to support the findings.

Once the cause of the issue is established, the customer is then better placed to make informed decisions from simple Tuning to increasing the platform hardware.

The tool can be used against Orchestrator or any other database you would like to check the performance of.

The Tool is simple to set up, requiring minimal configuration or specialist knowledge. The runbook uses a number of means to obtain the required information where necessary. The runbook can be run ad-hoc or scheduled regularly in a proactive manner. This reduces the necessity to engage highly skilled staff to re-perform repetitive investigations.

DMV Attribute/Derivation/Counter	Symptom_Indicator	Value	Status	Analysis
Page Life Expectancy (sec)	Memory Pressure	1000	GREEN	No Memory Pressure Detected. The duration in which the cached page remains in Cache
BufferCacheHitRatio (%)	Memory Pressure	99.862	GREEN	No Memory Pressure Detected. Currently at Optimal Performance >98%
LazyWritesSec (sec)	Memory Pressure	0	GREEN	No Memory Pressure Detected. Lazy Writer is flushing dirty pages out of the buffer Cache
TotalServerMemory vs TargetServer...	Memory Pressure	51750	GREEN	No Memory Pressure Indicated. The current amount of RAM appears sufficient
AvgDiskSecRead (sec)	IO Pressure	0.002921	GREEN	No IO Pressure Indicated. Average time to complete a read is currently 2.921ms. Typical
AvgDiskSecWrite (sec)	IO Pressure	0.005396	GREEN	No IO Pressure Indicated. Average time to complete a write is currently 5.396ms. Typical
Max-Reuse (%)	CPU Pressure	100	GREEN	No CPU/Memory Pressure detected. Query plans are being reused and Initial Compilation
CPU Signal Waits (%)	CPU Pressure	0.01	GREEN	No CPU Pressure Detected. Your CPU Signal waits of 4112ms are a much smaller percent
TOP wait_times (ms)	IO AND Blocking Bottlenecks	18064125	GREEN	No Blocking Bottleneck or IO bottleneck is identified by a wait_type of LAZYWRITER_SUE
TOP wait_times (ms)	IO AND Blocking Bottlenecks	18064093	GREEN	No Blocking Bottleneck or IO bottleneck is identified by a wait_type of SQLTRACE_BUFFER
"OpalData" Index Fragmentation (%)	Database Maintenance	0	GREEN	DB Maintenance of Indexes is currently sufficient for the OpalData Catalogue

### Microsoft System Center 2012 Orchestrator

Orchestrator is part of Microsoft System Center 2012 suite, which provides solutions to manage both Microsoft and non-Microsoft Infrastructure covering event management, configuration management, data protection, virtual machine management, service management and IT Process Automation.

Find out more at [Microsoft System Center](#)

### Kelverion

Kelverion offer Integration Packs and Utilities to enhance the Microsoft System Center 2012 Orchestrator product, Orchestrator implementation services and a full suite of Orchestrator Training Courses.

Find out more at [www.kelverion.com](http://www.kelverion.com)

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July 2014