

Zero Impact Migration Service for Upgrading to SQL Server 2008 or 2012

The Challenge:

You have a mission critical production server serving thousands of users that processes 500 to 5,000 SQL requests/sec. The upgrade must occur with no impact on end-user response time. A methodology must be in place that allows measurement of the performance of the upgraded database server release prior to placing it into production. Our **Zero Impact Migration Service** does this!

MIGRATION SERVICE METHODOLOGY

- **Zero Impact Sql Capture Agent** captures **100%** of the current production server **SQL activity** for a peak business day. Captures all SQL text, bind parameters, logins, end-user response time, network time, rows returned and more. Non-intrusively sniffs the SQL packet flow. Agent does NOT connect to the monitored server NOR impact the network. Has a **low 1% overhead**. No intrusive SQL traces are used.
- Our **Agentless Bottleneck Monitor** concurrently captures the current production environment wait conditions with their wait times, I/O device stall/wait times, TempDb contention, blocking, deadlocks, poor SQL plans and performance counters.
- Next perform a **multi-threaded replay** of the captured **SQL activity** against the new SQL Server 2008 or 2012 release.
- **Zero Impact Sql Capture Agent** again captures 100% the **replayed SQL** activity with its performance during the multi-threaded replay. The end-user response time of every client replayed SQL request is captured.
- **Agentless Bottleneck Monitor** again concurrently captures the new release's wait times, device stall/wait times, TempDb contention, blocking, deadlocks, poor SQL plans and performance counters. Wait times, I/O and CPU time are captured by SQL statement, stored procedure, wait type, application, database and end-user.

ANALYSIS of the MULTI-THREADED SQL REPLAY RESULTS

- A database repository now contains the performance results from **both** environments.
- **Agentless Bottleneck Monitor** now compares the end-user **response time** of every unique SQL request. The SQL that ran faster or slower is identified. The **percentage** increase or decrease in **response time** by **unique SQL request** is now known.
- **Wait times, I/O** and **CPU time** are compared by SQL statement, stored procedure, wait type, application, database and end-user. Both decreased and **increased wait times** may be viewed for the day, by the hour, by the minute and down to a second.
- **I/O device stall/wait times** as well as TempDb contention are compared and reported.
- **Buffer cache** and **procedure cache** usage is compared and reported
- Both improved and degraded **performance counter** values are graphed in 3D charts.

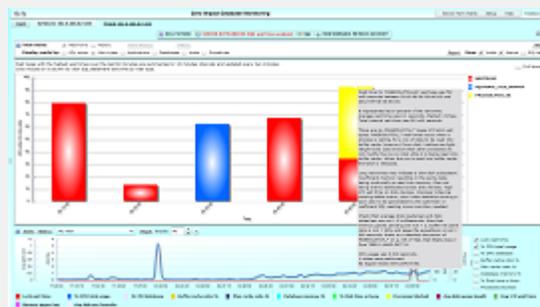
Sql Power Tools

3D Graphs of Performance



3D view of performance counters, SQL wait times and I/O stall times by data and log file. Click on above graph to view.

SQL Wait Time, I/O and CPU Time



Product knowledge base explains wait conditions and suggest course of action. Reduce **SQL wait time** -> reduces **response time** -> improves **server throughput**-> eliminates **hardware upgrades**. Click on above graph to view.

Zero Impact Migration Service Includes

- Consultant that sets up the capture of 100% of the SQL activity and performance from the current production environment.
- Consultant that sets up the multi-threaded replay of a peak day's SQL activity.
- Consultant that sets up the capture of 100% of the SQL activity and performance from the multi-threaded replay against the new release.
- Comprehensive comparison of the performance of the current production server and the new SQL Server 2008 or 2012 release.
- A product license with product training.