Quest®

Benchmark Factory®
for Databases

DATABASE WORKLOAD AND SCALABILITY TESTING

Implementing new applications and troubleshooting production database performance issues, when SLAs may be in place, are important responsibilities for today's DBAs. Unfortunately, they take time away from other critical tasks. What if you could reduce the amount of time you spend troubleshooting production database performance problems? What if you could predict, diagnose and resolve production performance scalability in a test environment?

Benchmark Factory® for Databases simulates users and transactions on the database, enabling your developers, database administrators and quality assurance teams to:

- Replay production or synthetic activity in test or development environments

- Easily perform load tests on SQL scripts, PL/SQL, T-SQL code and stored procedures under different concurrent user configurations

- Simulate real database application workloads using out-of-the-box industry-standard benchmarks

- Determine system throughput and find database breaking points

Benchmark Factory is available for Oracle, SQL Server, IBM DB2, SAP, MySQL, PostgreSQL and supports other databases via ODBC connectivity.

Database workload generation — Take production or synthetic activity and replay it in test or development environments to simulate real-world production loads. This empowers you to understand future performance problems and do what-if analyses using actual transaction workloads.
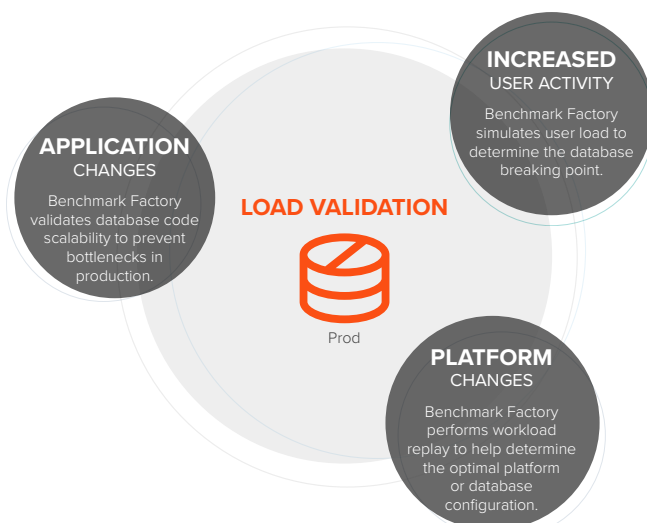
Database code scalability testing — Perform load tests on SQL scripts, PL/SQL, T-SQL code and stored procedures under different concurrent user configurations to evaluate how applications perform when deployed with real activity. Benchmark Factory also integrates with

> "With Benchmark Factory, we were able to diagnose and resolve potential system issues without impacting our business. The tool provided an immediate return on our investment."
>
> *Eric Herfield, Vice President and Chief Technical Architect, e-Rewards Market Research*

BENEFITS:

- Predict performance problems and intervene proactively

- Make changes with confidence using an easy, wizard-driven workflow

- Validate performance and scalability improvements through reportable metrics

- Capture workload subsets, as opposed to the entire database workload

- Execute automated performance testing as part of your DevOps pipeline via REST API

APPLICATION CHANGES
Benchmark Factory validates database code scalability to prevent bottlenecks in production.

INCREASED USER ACTIVITY
Benchmark Factory simulates user load to determine the database breaking point.

LOAD VALIDATION

Prod

PLATFORM CHANGES
Benchmark Factory performs workload replay to help determine the optimal platform or database configuration.

SYSTEM REQUIREMENTS

REPOSITORY

Oracle

SQL Server

MySQL

SQLite

SAP SQL Anywhere (Adaptive Server Anywhere)

MEMORY

512MB of RAM recommended

PLATFORM

1.0GHz x86 or x64 compatible

CPU operating system

HARD DISK SPACE

120MB

OPERATING SYSTEM

Microsoft Windows Server 2003, 2008, 2012

Microsoft XP Professional

Microsoft Vista

Microsoft Windows 7, 8, 8.1, 10

Linux (BMF Agent only): Red Hat 7.x (64-bit), CentOs 7.x (64-bit), and Oracle Linux 7.x (64-bit). PostgreSQL testing only.

DATABASE CLIENT/ SERVER VERSIONS

Oracle 10g R2, 11g and 12c

SQL Server 2000, 2005, 2008, 2008 R2, 2012 and 2014

SQL Azure (limited support)

SAP ASE 15.5, 15.7, 16

IBM DB2 LUW 9.x through 11.1

IBM DB2 z/OS: 9.x through 11.1

MySQL 4.5 and 5.x

PostgreSQL 9.4, 9.5, 9.6 and 10 and Enterprise DB Postgres 10

Note: For a complete list of hardware and software requirements, please refer to the Release Notes.

Quest's SQL Optimizer products to fix any code performance issues found prior to production deployment.

Industry-standard benchmark testing — Simulate real database application workloads using out-of-the-box industry-standard benchmarks (TPC-H, TPC-C, TPC-D, TPC-E, AS3AP and scalable hardware) to evaluate database scalability, test hardware/configurations and determine system throughput.

Virtual user and transaction load simulation — Propagates user and transaction workloads on the system under test to quantify application or server performance, determine system throughput and find database breaking points. Each user and transaction acts as a separate, independent thread with its own connection and statistics, including run times and transactions per second.

Configurable Agents - Enable user and workload propagation via Agents which can be deployed on remote machines (Windows or Linux) to spread the load and reduce desktop console bottlenecks.

PRACTICAL APPLICATIONS

- **Evaluates Oracle Real Application Cluster (RAC) configurations to help determine the correct number of RAC nodes to deploy** — a major challenge when deploying RAC environments. By replaying real production activity, you can balance workload and evaluate scalability thresholds in already-implemented environments. Through integration with Quest's Spotlight on RAC, you have detailed performance metrics. This solution minimizes implementation and maintenance costs of Oracle RAC environments.

- **Facilitates migration to Microsoft SQL Server and Oracle**. By replaying production workload from your previous SQL Server or Oracle version on a new version test database, you can determine user and transaction load capacity and processing speed before you deploy to production. Using Benchmark Factory with Quest's Toad for Oracle, SQL Server, DB2 and SAP Solutions, you can also tune database code for optimal performance to increase the success of migrations.

ABOUT QUEST

At Quest, our purpose is to solve complex problems with simple solutions. We accomplish this with a philosophy focused on great products, great service and an overall goal of being simple to do business with. Our vision is to deliver technology that eliminates the need to choose between efficiency and effectiveness, which means you and your organization can spend less time on IT administration and more time on business innovation.

Quest