

Borland® SilkPerformer®

FREQUENTLY ASKED QUESTIONS

GENERAL QUESTIONS

What is Borland® SilkPerformer®?

SilkPerformer® is a powerful--yet easy to use--enterprise-class load and performance testing solution for optimizing the quality of mission-critical applications.

What is load and performance testing?

Load and performance testing is the systematic exposure of an application to real-world, expected usage conditions in order to predict system behavior and to pinpoint/diagnose errors in an application and its infrastructure before it is deployed. Load and performance testing is used to analyze the following three aspects of an application's quality of service:

- Responsiveness (response times)
- Scalability (throughput)
- Reliability (stability and functional integrity)

There are many types of load and performance testing however, regardless of the specifics, all load and performance tests aim to make an application more reliable by identifying where, when and under what circumstances the application breaks.

While the terms load and performance testing are often interchanged, load testing is simply that – loading a system with requests and analyzing the results. The most basic load testing tools often have no means of measuring system performance. Performance testing is more concerned with both providing the simulated user load and measuring the performance of system components during the test to provide feedback regarding performance issues. Because the leading commercial solutions provide both load and performance testing, the terms are used synonymously.

How is load testing related to functional testing?

Load testing is the complement to functional testing, which validates that an application provides the required functionality. Functional testing can validate proper functionality under correct usage and proper error handling under incorrect usage. It cannot, however, tell you how much load an application can handle before it breaks or performs improperly. Finding the breaking points and performance bottlenecks, as well as identifying functional errors that only occur under stress requires load testing.

How is load testing related to regression testing?

Regression testing is the selective re-testing of a software application that has been modified to ensure that problems such as functional errors or performance problems have been fixed and that no other problem in another area of the application has been introduced as a result of the code changes.

Regression testing is a quality control measure to ensure that the newly modified code still complies with its specified requirements and that unmodified code has not been affected by the maintenance activity.

Regression testing does not differentiate between functional and load testing.

What performance optimization processes does SilkPerformer support?

SilkPerformer supports two out of the three processes relevant for performance optimization:

- Load and stress testing
 - Realistic tests ensure that the applications to be deployed will provide the required performance, scalability and reliability levels with reasonable costs
- Diagnosing performance bottlenecks
 - Identify performance bottlenecks in the application or its underlying system to support efficient performance tuning activities

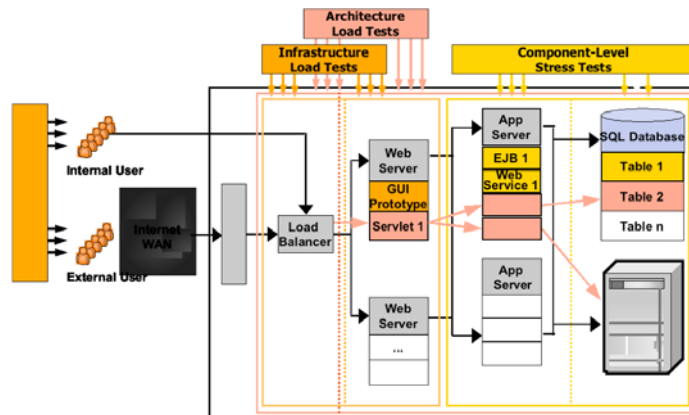
The remaining third process, management of performance test assets, is covered by Borland® SilkCentral® Test Manager.

When should I start load testing with SilkPerformer?

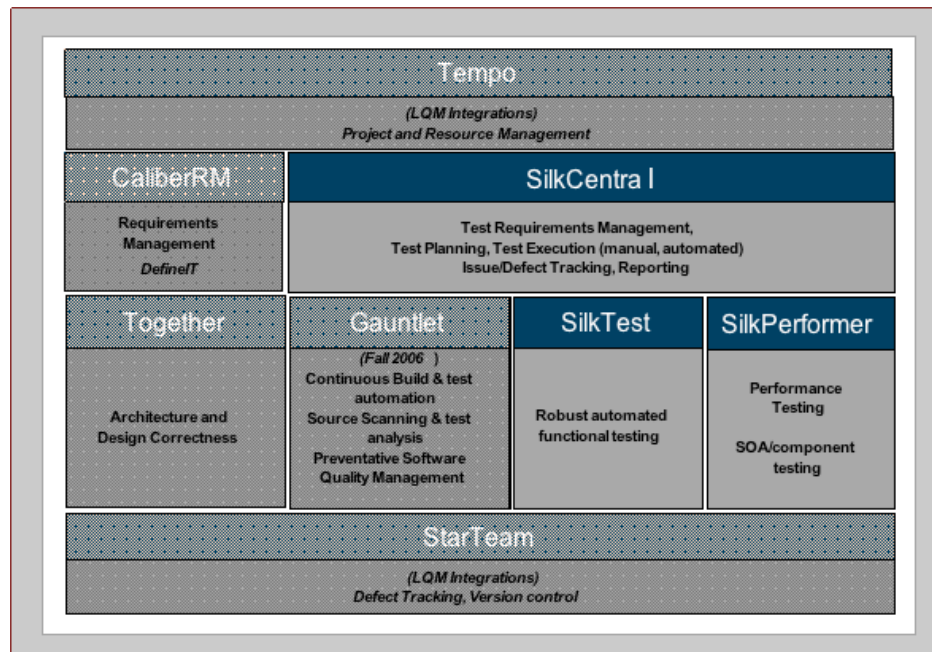
The earlier load testing starts in the application development process, the earlier software defects or architectural problems will be found. Knowing that the cost for correcting issues grows exponentially for each downstream phase of the development lifecycle in which they remain undiscovered, it is imperative that load testing start as early as possible.

Given today's typical multi-tier applications with separate tiers for presentation, business and data logic, as well as the often necessary layer for the integration of legacy applications, the following phases in the development process are the phases (see Figure below) in which SilkPerformer load testing capabilities can be leveraged:

1. Component-level stress tests
2. Infrastructure load tests
3. Architecture load tests
4. End-to-end load tests



How does SilkPerformer fit into the Borland Lifecycle Quality Management (LQM) Solution?



How do I buy SilkPerformer?

US:

Please visit the following site to find out where to buy SilkPerformer:

http://www.borland.com/us/company/where_to_buy.html

International:

Please click on the “purchase” button followed by the “Where to buy” link displayed in your local language in the top header line on the right side of the Borland home page.

Where can I find more information on SilkPerformer?

More information about SilkPerformer is available on the Borland website at:

<http://www.borland.com/us/products/silk/silkperformer/index.html>

INTEGRATION QUESTIONS

Is SilkPerformer integrated with other Borland LQM tools?

Yes, SilkPerformer is integrated with Borland SilkCentral Test Manager and Borland® SilkTest®.

SilkCentral Test Manager (SCTM)

Integration of SilkPerformer projects into SCTM test plans

- Supports manual or automated (unattended) executions of test definitions

- Maps test results to performance requirements for requirements verification
- Increases productivity through bi-directional GUI integration
 - SCTM Web GUI: Integration of SP projects with SCTM test definitions
 - SP Workbench GUI: SCTM's test plans can be directly accessed, edited, created and linked with SilkPerformer projects

Link tests to discovered issues:

- Links SilkPerformer projects to an issue stored in an internal or external defect management software in case it is discovered during a SilkPerformer test run.

Test results stored in Test Manager Repository:

- Stores all data generated during load test runs (time series data, TrueLog files, result files, and summary data) in the central SCTM database repository, which is easily accessible via Test Manager's Web GUI

Performance regression reports:

- When used in combination with SCTM, SilkPerformer's Performance Explorer offers a cross load-test comparison report facility. Simply browse through your SC-TM test plans via Performance Explorer and select up to four load test runs for comparison. Heat fields and rankings help you to analyze the results of your optimization efforts across runs.

SilkTest

While you build your functional GUI testing script with SilkTest, you can also generate a load testing script for SilkPerformer using SilkTest's integrated SilkPerformer script recorder.

Does SilkPerformer integrate with other Borland ALM tools?

Yes, SilkPerformer integrates with Borland® StarTeam® for source code control with direct check-out and check-in from the SilkPerformer Workbench GUI.

How does SilkPerformer integrate with 3rd party tools?

SilkPerformer — Code-level Performance Diagnostics solutions

SilkPerformer provides a plug-in framework for third-party, best-of-breed, code-level diagnostics tools to provide top-down analysis of errors and performance problems starting from the end user view down to the individual component/line of the application code.

SilkPerformer— JUnit/NUnit

Directly import unit test scripts for testing server-side Java™ and .NET components under concurrent access, simulating realistic server conditions.

SilkPerformer — Microsoft® Visual Studio® 2005

Develop and test SilkPerformer .NET test scripts directly from within Visual Studio, allowing .NET developers to stay within their well-known programming environment and clearly separating developer tasks (building component test scripts) from QA tasks (managing, executing and analyzing tests).

SilkPerformer — Application Performance Management solutions

Application Performance Management solutions from various major vendors can reuse SilkPerformer test scripts as is to actively monitor the end-user experience of mission-critical applications in production.

To achieve the highest possible ease-of-use in this respect, SilkPerformer directly integrates with BMC TM-ART.

PRODUCT VERSION RELATED QUESTIONS

What is the latest release of SilkPerformer?

The latest release is SilkPerformer 2006, which was released on September 6, 2006.

What is new in the latest release of SilkPerformer?

Plug-in interface for integration with code-level diagnostics tools

SilkPerformer 2006 introduces a plug-in framework for third-party code-level diagnostics tools to provide top-down analysis of errors and performance problems starting from the end user view down to the individual component/line of the application code. Analysis of single execution paths (single VU) can be started from within TrueLog Explorer. Analysis of aggregated execution paths (across VUs) can be started from within Performance Explorer.

Borland StarTeam integration

SilkPerformer 2006 now integrates with StarTeam allowing you to efficiently manage and share your SilkPerformer test assets such as project files and test scripts. Features like file check-in, check-out, and get-latest-version are directly accessible from within the SilkPerformer Workbench GUI.

Updated platform/technology support

SilkPerformer 2006 and its .NET Explorer as well as its .NET Framework now support .NET 2.0. SilkPerformer add-in for Visual Studio now supports Visual Studio 2005.

PACKAGING AND LICENSING QUESTIONS

What licenses are available for SilkPerformer?

SilkPerformer is licensed based on Virtual Users (VUs), which are available as three different additive types, providing different levels of support for the target application environments:

- Web
- Standard
- Premium

Various Virtual User levels are available for each VU-type, both in node-locked and concurrent use license models.

What SilkPerformer Editions are available?

- SilkPerformer, for powerful, enterprise-class load testing of mission-critical applications
- SilkPerformer SOA Edition, for testing server-side application components early and efficiently in the development cycle

SilkPerformer SOA Edition is a separately available subset of SilkPerformer. SilkPerformer includes all the functionality of SilkPerformer SOA Edition, plus additional capabilities.

TECHNICAL QUESTIONS

What are the system requirements for SilkPerformer?

Software

- Microsoft® Windows® NT4 (Service Pack 5 or higher - SP6a recommended), 2000 (Service Pack 2 or later), XP, 2003
- Internet Explorer 5.0 or higher (5.5 or higher recommended)

Hardware

- Intel® Pentium II equivalent CPU or higher
- 256 MB RAM minimum
- 150 MB disk space minimum

How many virtual users can SilkPerformer run per box?

This greatly depends on the application to be tested. For Web applications, the numbers are as follows:

Agent Type	Maximum Virtual Users (HTTP/HTML) per Agent
2xPIV, 3GHz, 4 GByte RAM	7000
1xPIV, 3GHz, 2 GByte RAM	4000
2xPIII, 1GHz, 2 GByte RAM	3600
1xPIV, 2GHz, 1 GByte RAM	1900
1xPIV, 2GHz, 512 MByte RAM	800
1xPIII, 600Mhz, 512 MByte RAM	800

For HTTP(S) applications, the numbers are 35% less. For numbers regarding other application environments, please check with support.

Can SilkPerformer also do functional testing?

SilkPerformer does not do functional testing on GUI-level, but it can do functional testing on API-level even during a full scale load test – e.g., content verifications of a server response such as an HTTP/HTML page or a SOAP response. All functional verifications are either generated automatically or can simply be added visually using TrueLog script customization.