Silk Performer 19.0

Release Notes

Contents

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These release notes contain information that might not appear in the Help. Read them in their entirety before you install the product.

> **Note:** This document contains a number of links to external websites. Micro Focus cannot be responsible for the contents of the website or for the contents of any site to which it might link. Websites by their nature can change rapidly and although we try to keep our links up-to-date, we cannot guarantee that they will always work as expected.

For information about installation, deployment, and licensing issues, refer to the *Silk Performer Installation Help* .

System Requirements

The following sections describe the system requirements for installing and running Silk Performer.

To run the Silk Performer agent software, or both controller and agent software, and to use the full potential of Silk Performer to run large-scale load tests, your system must meet the following minimum requirements:

Hardware Requirements

System Area	Requirement
Processor	Intel Core 2 Duo or equivalent CPU
RAM	4 GB
Hard disk space	2.2 GB for controller software installation
	1 GB for agent-only installation
	Depending on the size of your load tests, make sure you have enough space on your hard disk for result files.
Network	Network connectivity to the system under test and to all Silk Performer agent computers.

Operating System Requirements

- Both the Silk Performer controller and the Silk Performer agent can be installed on any Windows client or server operating system of version 6.1 or newer. This means Silk Performer requires Microsoft Windows 7 or newer, or Microsoft Windows Server 2008 R2 or newer.
- Installing the network emulation driver is currently not supported for Microsoft Windows 10 and Microsoft Windows Server 2016.

Software Requirements

To install and run Silk Performer, your system requires a minimum set of software components.

The required components vary based on installation type. For example, to run Silk Performer Java Explorer, your system must be equipped with the appropriate Java Development Kit. Download components from the respective websites.

- Internet Explorer 10, 11 for browser-driven load testing.
- PDF viewer to view documentation .
- Citrix Receiver for Microsoft Windows 3.x, 4.x (except 4.4, 4.10 and newer versions) to test Citrix applications. Citrix Receiver 4.4 as well as 4.10 and newer do not work due to an issue in these Citrix versions.
- Java Runtime Environment (JRE): Both 32- and 64-bit versions are required on 64-bit operating systems.
- Java Development Kit 7, 8 (32-bit) to test Java applications with Java Explorer.
- Visual Studio 2013, 2015, or 2017 for Visual Studio extension. To use Visual Studio 2012, Visual Studio 2013 needs to be installed as well.

Working with Silk Performer on a multi-user system

Silk Performer can be installed on a machine with terminal services enabled for multi-user access. In general, it is not recommended to work in multiple sessions simultaneously. If you want to do so nevertheless, keep the following in mind:

- **Recording:** The Silk Performer Recorder uses a system-wide hooking mechanism. If one user starts the Recorder, the traffic of all other users might be recorded as well.
- **Workbench:** Multiple users can work on different projects simultaneously. Working on the same project is not recommended. The project will be opened in read-only mode for the second and all further users.
- **Executing tests:** Multiple users can execute tests simultaneously from one machine. However, multiple simultaneously running tests will influence each other as they share the same resources (CPU, memory, network bandwidth).
- **Monitoring tests:** Performance Explorer does not differentiate between test metrics of multiple running tests. Therefore, real-time values of the wrong test might be displayed.

What's New in Silk Performer 19.0

Silk Performer 19.0 introduces significant enhancements and changes.

HTTP/2 Replay

Silk Performer 19.0 introduces HTTP/2 replay for web protocol scripts. HTTP/2 is a major revision of the hypertext transfer protocol (HTTP) used in the World Wide Web. It offers a number of improvements over HTTP/1.1, which results in a considerably faster communication between client and server.

These improvements include a specific header compression method, the so-called server push feature, and the single-connection approach. Silk Performer now supports these HTTP/2 features for performance and load testing. Using HTTP/2 requires no additional licenses whatsoever.

Browser-driven Load Testing with Chrome and Firefox

In addition to facilitating testing of today's modern web applications on the protocol level (HTTP), Silk Performer enables you to use real web browsers to generate load. In addition to Internet Explorer, you can now also use Chrome and Firefox to replay browser-driven scripts.

Recording is still Internet Explorer-based and managed through the Browser Application. You can either reuse functional tests that have been created with Silk Test, or you create your browser-driven scripts from scratch within Silk Performer.

Java Framework Support for 64-bit Java

Silk Performer now enables you to choose between 32-bit and 64-bit Java for executing Java framework projects. With the 64-bit option, a virtual user launches a separate Java process to execute your java test code.

General Enhancements

Invisible mode for Chrome and Firefox in GUI-level tests

When reusing functional tests as performance tests by importing Silk Test test assets to Silk Performer, you can now configure Chrome and Firefox browsers to run in invisible mode.

New terminology: from *Application Profiles* to *Recording Profiles*

The *application profiles* have been renamed to *recording profiles*. This update will mainly be visible within the **System Settings** > **Recorder**.

Introducing JMX datasource templates for Wildfly

Silk Performer now comes with JMX datasource templates for the Wildfly application server, formerly known as JBoss application server.

New installation folder for 64-bit binaries

Some components of Silk Performer are built as 64-bit binaries. These files are now installed into the `Program Files` folder of your operating system.

New CloudBurst regions

CloudBurst now provides two new AWS regions: Beijing and Ningxia.

Usability Enhancements

Capture analysis enhancements

The performance of the **Capture File** page has been considerably improved which results in a quicker initial display. Also, the capture analysis processing now shows the progress and you can cancel the analysis process, which can be particularly useful when working with large capture files. Moreover, Silk Performer introduces support for capture analysis in 64 bit on 64-bit operating systems.

Recorder shows icons of recorded applications

The Silk Performer Recorder now shows the icons of the applications that are being recorded. This enables you to quickly verify that the correct applications are actually being recorded. Also, the **Recording Profiles** tab, which is part of the recorder settings within the system settings, has been refurbished. It facilitates the use of the different recording methods Silk Performer provides.

Time series data settings for the detailed report

The settings for the time series data now also apply to the virtual user report, baseline test report, and detailed report. This way, you can exclude individual measure groups from the reports and temporarily hide them.

High-resolution measures for precise metrics

Silk Performer now uses high-resolution measures throughout the entire product, which results in even more precise data and metrics.

Export SNMPv3 monitor graphs to Performance Manager

Silk Performer now enables you to export SNMPv3 monitor graphs from Performance Explorer to Performance Manager.

Technology Updates

OpenSSL upgrade

OpenSSL has been upgraded to version 1.1.0g.

Support for Apache Axis 2

The Apache Axis2 web service stack in Silk Performer Java Explorer has been upgraded to version 1.7.7.

Support for Apache CXF

The Apache CXF web service stack in Silk Performer Java Explorer has been upgraded to version 3.2.4.

Support for Remedy 9.1 SP4

Silk Performer now supports Remedy 9.1 SP4.

Adapted GraniteDS support

You can now use your existing GraniteDS installation by adding the classpath in the Silk Performer system settings. GraniteDS files are no longer shipped with Silk Performer.

Updated freeRDP support

FreeRDP is used to create Windows sessions for GUI-level testing and in case virtual users are running under a particular user account. The component has been updated to support the latest Windows updates.

Resolved Issues and Customer-Driven Enhancements

The following table lists issues that have been resolved in Silk Performer 19.0 as well as enhancements that have been implemented in this version:

SI #	RPI #	Description
	1111237	The XML baseline report cannot be generated.
	1113743	The Silk Performer Recorder does not script the BDL function `BrowserSetText` for an element.
2862837	1106682	Testing applications that use asynchronous communication causes issues.
2883677	1111006	The context variable is not declared when splitting a recording session into multiple transactions.
3121624	1107942	
3106891	1109832	Calling `BrowserStart` and `BrowserStop` more than 2500 times causes the browser to crash during a load test execution.
3108887	1109946	The recording freezes when attempting to record secure Oracle Forms using Silk Performer 17.5 and Java 1.8.
3115176	1112390	Authentication is not passed to windows that are opened using JavaScript during browser-driven replay execution with the `perfBrowserHost.exe`.
3120899	1110970	Trying to record Oracle Forms with Silk Performer 18.0 fails.
3127661	1111524	When executing Silk Test Classic test cases through Silk Central, random issues occur.
3129971	1111840	Performance Explorer 18.0 occasionally crashes when loading results.
3130629	1111751	When executing a load test, the data file on the agent machine is used instead of the data file that is attached to the project.
3131898	1112130	When recording Oracle Forms 12c, the following error message appears: `Proxy server not responding.`
3132663	1111953	Silk Performer cannot generate scripts from large capture files.
3137240	1112399	Silk Performer does not support Visual Studio 2017 for GUI-level tests with Silk4NET, although stated so in the Release Notes.
3138597	1112645	Recording and replaying in Silk Performer 18.5 logs out the user immediately.
3140556	1112721	When running a load test containing large transactions, the memory consumption on agent machines increases unexpectedly.
3140566	1112762	When replaying an Oracle Forms script, an `OraFormsConnect()` error message displays.
3141758	1113089	Monitoring SNMP measures does not work in Performance Explorer 18.5.
3141877	632272	When executing a Try Script run with the Java Over HTTP transformation enabled, the Workbench returns a `LoadtestController 3317` error.
3143164	1112956	When executing a load test using the workload type **All Day**, virtual users do not increase correctly.
3145397	1113141	Java libraries defined in the class path are not found on a remote agent.

SI #	RPI #	Description
3145551	1113147	When working with projects that use the legacy recording approach in Silk Performer 18.5, the generated scripts are empty.
3145882	1113212	The **Kill All** button might be greyed out when **Stop All** has been clicked.
3145958	1113187	When executing a test within Silk Performer 18.5, data files are not copied to the `LocalData` folder on a remote agent machine.
3146256	1113278	Silk Performer 18.5 and Silk Performance Manager 18.5 cannot load the `perfRunDotNet.dll` when calling the BDL function `DotNetLoadObject()`.
3146914	1113605	When a Silk Performer project contains a large number of data files, the Workbench becomes unstable.
3147766	1113413	Executing a test with one virtual user results in `MeasureGetPercentiles` values that differ from those within the Overview Report.
3148387	1113523	TrueLog Explorer hangs when displaying a TrueLog that contains .woff files.
3148409	1113411	The BDL function `MeasureGetPercentile` might return a null value.
3148826	1113520	When using the BDL function `GetDataFilePath`, incorrect files are used.
3151524	1113663	When adjusting the workload in Silk Performer 18.5, using an All Day workload, the changes are not reflected in the Workload Configuration.
3151752	1113709	The BDL function `FileRemoveRow` removes incorrect rows from a .csv file if it contains a header row.
3151974	1113710	A Jenkins job creates a copy of an .ltp file each time it is executed.
3152809	1113819	When upgrading from Silk Performer 17.5 to 18.0, several scripts using the BDL function `ProcessSetOutputBuffer` fail during execution.
3153235	1113844	Unquoted search path or element can allow local privilege escalation.

Known Issues

You can find a list of known issues including resolutions in the Online Help: *http://documentation.microfocus.com Known Issues*

Updates and SupportLine

Our Web site gives up-to-date details of contact numbers and addresses.

Contacting Micro Focus

Micro Focus is committed to providing world-class technical support and consulting services. Micro Focus provides worldwide support, delivering timely, reliable service to ensure every customer's business success.

All customers who are under a maintenance and support contract, as well as prospective customers who are evaluating products, are eligible for customer support. Our highly trained staff respond to your requests as quickly and professionally as possible.

Visit *http://supportline.microfocus.com/assistedservices.asp* to communicate directly with Micro Focus SupportLine to resolve your issues, or email supportline@microfocus.com.

Visit Micro Focus SupportLine at *http://supportline.microfocus.com* for up-to-date support news and access to other support information. First time users may be required to register to the site.

Information Needed by Micro Focus SupportLine

When contacting Micro Focus SupportLine, please include the following information if possible. The more information you can give, the better Micro Focus SupportLine can help you.

- The name and version number of all products that you think might be causing an issue.
- Your computer make and model.
- System information such as operating system name and version, processors, and memory details.
- Any detailed description of the issue, including steps to reproduce the issue.
- Exact wording of any error messages involved.
- Your serial number.

To find out these numbers, look in the subject line and body of your Electronic Product Delivery Notice email that you received from Micro Focus.

Silk Performer Licensing

The Silk Performer licensing model is based on virtual users (VUsers).

Starting and using the Silk Performer Workbench does not require a license. You can model and customize scripts as well as adjust many other load test settings without a license. Also, executions that are performed with only one virtual user (like try script or baseline executions) do not require a license.

Starting a load test run requires licenses for the virtual users employed in the execution.

Silk Performer offers two licensing models:

- on-premise licensing
- online licensing

When you upgrade from an older Silk Performer version, new licenses are required for executing load tests with the new version. During the upgrade process, you can keep the old licenses for a period of 90 days.

Silk Performer works with three types of VUsers. Each type allows to simulate different application types:

- Web
- Standard
- Premium

VUser Type	Application Type
Web	Web Browser-Driven
	GUI-level testing in single session mode with selected web browsers
	HTTP(S) (Web browser low level)
	HTTP(S)/HTML (Web browser high level)
	HTTP(S)/XML (Web services, SOAP)
	HTTP Live Streaming (HLS)
	Silverlight
	Mobile
	SAP NetWeaver
	WebDAV (MS Outlook Web Access)
	Email (SMTP/POP)
	FTP
	TCP/IP
	UDP
	AMF0/AMF3/FLEX
	Java over HTTP
	DLL Interface
Standard	All of *Web*, plus:
	Visual Studio Extension
	Java Add-On
	DB2-CLI Add-On

VUser Type	Application Type
Premium	OCI Add-On
	ODBC Add-On
	Visual Basic Add-On (Framework)
	Directory server (LDAP)
	CORBA Add-On
	All of *Standard*, plus:
	GUI Level Testing (Silk4J, Silk4NET, Silk Test Classic)
	Remedy Web ARS
	SAPGUI Add-On for Silk Performer
	Oracle Applications/Forms Add-On
	PeopleSoft Add-On
	Siebel Add-On
	Citrix Add-On
	Terminal Emulation (Green-Screen) Add-On
	Tuxedo/ATMI Add-On

Silk Performer SOA Edition Licensing

What is the Silk Performer SOA edition?

The Silk Performer SOA edition (Service Oriented Architecture) is specifically targeted at testing remote services and APIs, such as web services or remote Java and .NET components.

How does the SOA edition licensing work?

The SOA edition is a complete Silk Performer installation that is restricted by a SOA edition license. This license enables you to

- execute load tests with up to 5 virtual users
- perform .NET or Java testing
- perform basic web and XML testing

What can be tested with the SOA Edition?

To be able to test remote components, you need to create test clients first. Silk Performer offers the following approaches to create test clients:

- visual creation using Java Explorer (requires no programming)
- visual creation using .NET Explorer (requires no programming)
- recording an existing test client
- importing JUnit tests
- importing NUnit tests
- importing Java classes
- importing .NET classes

Tested Software

This section lists the software with which Silk Performer has been tested.

The listed software is complete in terms of supported technologies, but not in terms of supported versions and products.

System Area	Tested With
Operating systems	- Microsoft Windows Server 2008 R2 - Microsoft Windows Server 2012 - Microsoft Windows Server 2012 R2 - Microsoft Windows Server 2016 - Microsoft Windows 7 32/64bit - Microsoft Windows 8 32/64bit - Microsoft Windows 8.1 32/64bit - Microsoft Windows 10 32/64bit
Web browsers	For protocol-based load testing: - Internet Explorer - Mozilla Firefox - Google Chrome - Apple Safari For browser-driven load testing: - Internet Explorer 10, 11 - Google Chrome 66 and Mozilla Firefox 60 (for replay only) For GUI-level testing in single-session mode: - Mozilla Firefox - Google Chrome - PhantomJS For GUI-level testing in multi-session mode: - Internet Explorer - Microsoft Edge - mobile browsers
Terminal emulation products	- AttachMate Extra 8 - AttachMateWRQ 13.0 - Distinct IntelliTerm 8.1 - Ericom Powerterm Pro v8.8.1 - HummingBird_Exceed 11.0 (hooking via socks proxy) - JProtector 4.5.2.0 - MochaSoft 5.3 (hooking via socks proxy) - NetTerm 5.1.1 - Nexus Terminal 5.3 - PassportPC2Host 3 - Quick3270 3.73

System Area	Tested With
	• Rumba 9 • SDI TN3270 Plus v2.4 • SecureCRT 1.0 • TeraTermPro 2.3 • TN5250_sourceforge 0.17.3 • TNBridge
ERP/CRM solutions	**SAPGUI Clients:** • SAPGUI client 740 **PeopleSoft Systems:** PeopleSoft 8.0, 8.3, 8.4, 8.8, 9.0 **Siebel Systems:** • Siebel 6.3 using MS SQL Server • Siebel 6.3 using IBM DB2 • Siebel 6.3 using Oracle • Siebel 7 • Siebel 8.0, 8.1 **Remedy Web ARS:** Remedy Web ARS 7.5, 7.6, 7.6.04 SP4 and SP5, 8.0, 8.1 SP1, 9.0, 9.1, 9.1 SP2, SP3, and SP4 **Oracle Forms:** • Oracle Forms 6i, 9i, 10g, 11g, 12c • Oracle EBS 11i, 12.x • Oracle Fusion 10g, 11g, 12c
Citrix clients	• Citrix XenApp Client 12.x • Citrix Web Interface 5.1, 5.2, 5.3, 5.4 • Citrix StoreFront / Netscaler Gateway • Citrix Receiver for Microsoft Windows 3.x, 4.x (except 4.4, 4.10 and newer versions)
SOAP stacks	• Microsoft SOAP Toolkit 2.0 Service Pack 2 (SP2), Internet Information Server 5 • Apache-SOAP Version 2.1, TOMCAT Version 3.1
WebService frameworks	• Axis 1.x • Axis2 1.7.7 • GlassFish Metro 1.5 • Apache CXF 3.2.4
Database products	• IBM Universal Database Systems 5.2, 6.1, 7.1 • Microsoft SQL Server 2008, 2008 R2, 2012 • Oracle Database 10g Release 2 • Oracle Database 11g Release 2 • Oracle Database 12g • Sybase SQL Anywhere Network Server 5.5.04

System Area	Tested With
Corba products	• Oracle WebLogic Enterprise • Micro Focus VisiBroker • Micro Focus Orbix • IBM WebSphere
Tuxedo	• Oracle TUXEDO Server 6.3, 6.4, 7.0, 7.1, 8.0, 9.0 • Oracle WebLogic Enterprise 4.2
Jolt	Oracle Jolt 1.1 (including Oracle TUXEDO Server 6.4), 1.2
Java support	• Java Development Kit 7, 8 • IBM Java Development Kit • Eclipse
.Net-based technologies	• Microsoft .NET Framework 2.0, 3.0, 3.5, 4.0, 4.5, 4.6, 4.7 • Microsoft Visual Studio 2013, 2015, 2017 • WCF Web Services
Rich Internet applications (Web 2.0)	• Microsoft Silverlight 4, 5 • Apache Flex 2, 3, 4 • GraniteDS 2.3.2 • BlazeDS 3.2.0 • Google Web Toolkit • ExtJS • Eclipse RAP • script.aculo.us
SNMP	• SNMPv2-MIB • RFC1213-MIB • RDBMS-MIB • ORADB-MIB • httpServer-MIB • ftpServer-MIB • SUN-MIB • BEA-WEBLOGIC-MIB • APPSRV_MIB (NetDynamics) • SQUID-MIB Note: To find RFCs and vendor MIBs on the Web, visit *The Internet Engineering Task Force*.
Proxy servers for firewall tunneling	• WinGate • Squid • Dante • Microsoft ISA Server