

# Benchmark Factory® 8.0.1

## Release Notes

Wednesday, November 15, 2017

### Contents

- [About Benchmark Factory](#)
- [New Features](#)
- [Resolved Issues and Enhancements](#)
- [Known Issues](#)
- [Third-Party Known Issues](#)
- [System Requirements](#)
- [Product Licensing](#)
- [Getting Started](#)
- [Globalization](#)
- [About Us](#)

## About Benchmark Factory

Quest Software is pleased to make available Benchmark Factory® 8.0.1 to meet your database workload testing needs. Benchmark Factory is a database performance and code scalability testing tool that simulates users and transactions on the database and replays production workload in non-production environments. With Benchmark Factory developers, DBAs, and QA teams can validate that their databases will scale as user loads increase, application changes are made, and platform changes are implemented.

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

- Simulates thousands of concurrent users with a minimal amount of hardware.
- Simulates database production workloads.
- Reports tests results with built-in reporting features.

Upon completion of a test execution, all test results are collected and stored in the repository for data analysis and reporting. Benchmark Factory collects a variety of informative and detailed statistics that include:

- Overall server throughput (measured in transactions per second/minute or bytes transferred).
- Detailed transaction executed statistics by individual agent workstations producing a load.

[Back to Top](#)

# New Features

This release of Benchmark Factory includes the following new features and enhancements.

## Benchmark Factory 8.0.1

Benchmark Factory 8.0.1 is a maintenance release and includes resolved issues and minor enhancements. See [Resolved Issues and Enhancements](#) for a complete list.

## Benchmark Factory 8.0

### Enhanced REST API

With this release the Benchmark Factory REST API has been enhanced to allow users more control of jobs, tests, test runs, etc. This includes the ability to access the transactions in tests, agents used by jobs, test results of a test run, as well as the Benchmark Factory settings.

**Support for JSON format.** Responses can now be returned in JSON format. To return data using the JSON format, specify JSON in the request Accept header. Both XML and JSON are supported response or request formats.

**Access to Additional REST Resources.** Additional resources have been added to the Benchmark Factory REST API. For a complete list of resources, see the Benchmark Factory Help or the [BMF REST API](#) on Toad World. The Help also includes a useful description of the REST resource structure and the URI hierarchy.

## Integrate Benchmark Factory into Continuous Testing Process

This release includes additional features that allow you to easily integrate Benchmark Factory into your Continuous Integration or Continuous Testing process.

### **BMFServer.exe**

This release includes a non-UI Benchmark Factory application, BMFServer.exe.

- BMFServer.exe is installed into the **bin** sub-directory of the installation directory when you install Benchmark Factory.
- To start BMFServer.exe, go to the installation directory. The default location is C:\Program Files\Quest Software\Benchmark Factory <version>\bin. Then double-click **BMFServer.exe**.
- BMFServer.exe performs the same functionality as BFactory.exe, except it has no graphic user interface.
- Use BMFServer.exe when automating your continuous improvement/testing process. You can run BMFServer.exe using a script, a custom application, or the Command Prompt window. BMFServer.exe can be used with the Benchmark Factory REST API.
- You cannot run the Benchmark Factory console and BMFServer.exe at the same time on the same machine.

### **BMFAgent.exe**

Benchmark Factory now includes a non-UI Agent, BMFAgent.exe.

- BMFAgent.exe is installed into the **bin** sub-directory of the installation directory at the time you install Benchmark Factory.

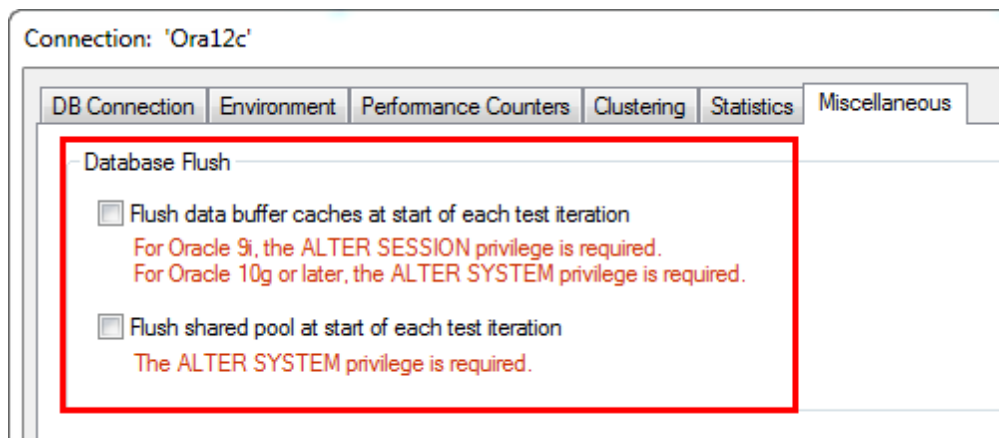
- BMFAgent.exe has the same functionality as Agent.exe, except BMFAgent.exe has no graphic user interface.
- To modify BMFAgent.exe settings, use the BMFAgent.ini file located in the ProgramData\Quest Software\BMF directory or use the Command Prompt window. Settings you can modify include the console machine name/IP and the console port number.
- You can run multiple instances of BMFAgent.exe at the same time on the same machine.

## Standard Benchmark Testing

### Clear Cached Data between Iterations

You can now instruct Benchmark Factory to clear cached data between test iterations. Because cached data can improve performance, this new feature can prevent cached data from affecting subsequent iterations.

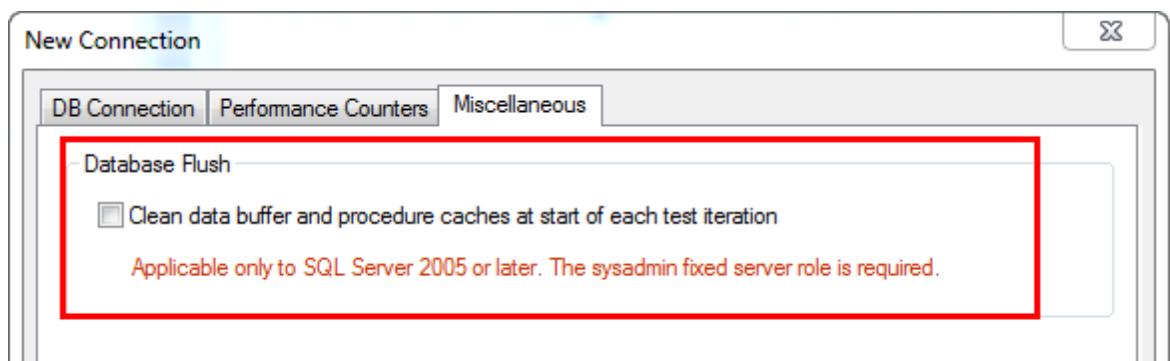
- **Oracle**—For Oracle connections, you can instruct Benchmark Factory to clear data buffer caches or shared pool (or both). To specify these options, select **Edit | Connections**. Then select a connection and click the **Edit** button. In the connection properties dialog, select the **Miscellaneous** tab. Then specify the **Database Flush** options for this connection.



**Tip:** You can also specify default values to automatically apply to Oracle connections in **Edit | Settings | Oracle**.

**Note:** Specific database privileges are required to perform this action. The privilege required is dependent on the database version and the option selected. See the online Help for more information.

- **SQL Server**®—For SQL Server connections, you can instruct Benchmark Factory to clear data buffer caches and procedure caches. To specify this option, select **Edit | Connections**. Then select a connection and click the **Edit** button. In the connection properties dialog, select the **Miscellaneous** tab. Then specify the **Database Flush** option for this connection.



**Tip:** You can also specify a default value to apply to SQL Server connections in **Edit | Settings | SQL Server**.

**Note:** This option is only applicable to SQL Server 2005 or later. The sysadmin fixed server role is required.

## Connections

**Microsoft® SQL Server 2017.** This release includes support for SQL Server 2017. Benchmark Factory has been tested against SQL Server 2017 running on Windows or Linux.

**IBM® DB2®.** This release includes support for IBM DB2 11.1 for LUW and for z/OS.

## General

### Adding Bind Parameters

It is now easier to add a bind parameter/value pair in **Test Options | Transactions**.

- When adding a new statement in the **Add SQL Transaction** dialog or when editing an existing statement, you can now simply double-click within the **Bind Parameters** tab to add a bind parameter and parameter value.

## Installation

### Universal C Runtime Component

The Universal C Runtime component for Windows is required. See [Universal C Runtime Update](#) or [Visual C++ Redistributable for Visual Studio 2015](#) to download this software.

**Note:** If you encounter an error when installing this software, install the missing prerequisite software. For Windows 8.1 or Windows Server 2012 R2, install the April 2014 update: <https://support.microsoft.com/en-us/kb/2919355>. For other operating systems, see the [Universal C Runtime Update Prerequisites](#) section.

## Learn More

Remember, you can find blogs, videos, and forums at the [Benchmark Factory Community](#).

- Find answers to your questions in the forum.
- Find links to Commercial, Trial, and Freeware downloads.
- Find useful articles and product documentation.

[Back to Top](#)

# Resolved Issues and Enhancements

The following is a list of issues addressed and enhancements implemented in this release of Benchmark Factory.

## Resolved Issues in 8.0.1

Feature	Resolved Issue	Defect ID
Agent	Corrected an issue that prevented the display of agent activity in the Agent view Output tab, for example when agents are being used to load table data.	BMF-3220
BMFServer	Corrected an issue that removed existing jobs and connections from the repository after the BMFServer (BMFServer.exe) failed to successfully connect to the repository.	BMF-3377
Capture and Replay	Corrected an issue that caused an error after attempting to modify the latency value for a transaction (or user scenario) in a captured SQL file, such as an Oracle capture or an Oracle, SQL Server, or ODBC trace file.	BMF-3267
Capture and Replay	If you attempt to delete a capture while it is running (Captures tab), you can now close the warning message, as expected.	BMF-2998
REST API	When adding a new job or test, a job/test name is now required or the default value is used.	BMF-3224
REST API	Improved content and detail of the error messages returned if data is missing or incorrect in the XML or JSON provided by the user.	BMF-3223
REST API	Removed some of the unnecessary or inapplicable properties from the results that are returned when using the REST API.	BMF-2742, BMF-3271
REST API	True/False values are now displayed as "True" or "False" instead of "1" or "0" in the results returned when using the REST API.	BMF-3270
REST API	Removed unnecessary information returned from a GET request for settings/repository. Also added a warning message if user attempts to specify or modify the repository driver name through the REST API.	BMF-3266
REST API	Corrected an issue that caused a TNS error when attempting to run a job with an Oracle connection that was created through the REST API.	BMF-3263
REST API	You can no longer delete the default agent through the REST API.	BMF-2859
REST API	The REST API now returns user scenario transaction information when requested, for example when using a request such as <code>http://{server}:{port}/api/jobs/0/tests/0/Transactions/0/Transactions</code> .	BMF-2747

## Resolved Issues in 8.0

Feature	Resolved Issue	Defect ID
Agent	Corrected an issue which prevented the Agent (Agent.exe) from saving settings after the settings were modified through the Agent Settings dialog.	BMF-2128
Agent	Corrected an issue in which the number of agents was not correctly displayed in Benchmark Factory console after an agent was added (posted) using the REST API.	BMF-2354
Benchmark Testing	IBM DB2 z/OS: Corrected an issue that caused an error in the create objects step with a DB2 z/OS database connection.	BMF-2645
Benchmark Testing	Teradata: The "Distribute index creation" option is now disabled for Teradata connections to prevent errors during this step.	BMF-1500
Benchmark Testing	Test Options   Advanced tab   Database Checkpoints: You can now enter only a valid value in the "Number of Checkpoints" text box to avoid errors.	BMF-1641
Capture and Replay	If a re-capture is stopped by the user, Benchmark Factory prompts to delete the capture with no sessions, as expected. This issue was encountered during a SQL Server capture.	BMF-1183
Capture and Replay	If user started a second capture, the package file for the first and currently running capture was deleted (draft). Both captures were on the same database.	BMF-1726
Capture and Replay	Corrected an issue in which the Export Start Time was displayed as "1899-12-30 00:00:00" in the Export Status window of an aborted capture.	BMF-2061
Capture and Replay	Corrected an issue that caused the Grant Privileges dialog to open subsequent times when clicking Next in the Backup Scope page even if valid credentials had been entered. This issue was encountered when attempting to capture a SQL Server workload.	BMF-2021
Capture and Replay	SQL Server capture: If the user selects "Perform backup as part of the Capture Process" and the user does not have permissions to restore the database ("CREATE DATABASE" privilege), Benchmark Factory now displays a warning message.	BMF-2019
Capture and Replay	SQL Server capture: Corrected an issue with the Apply Privileges page in which Benchmark Factory attempted to authenticate the previously entered SQL Server credentials even though the user subsequently selected to use Windows Authentication.	BMF-2130
Connections	Added options to allow the user to instruct Benchmark Factory to clear cached data between iterations. This is useful since cached data can improve performance and therefore affect subsequent iterations.	BMF-670

<b>Feature</b>	<b>Resolved Issue</b>	<b>Defect ID</b>
Connections	This release includes support for IBM DB2 11 for LUW and z/OS.	BMF-685
General	Corrected an issue that caused a memory leak when running a custom SQL statement with BFScript in a bind parameter.	BMF-2631
General	Enhancement: It is easier to add a bind parameter/value pair in Test Options   Transactions. Double-click within the Bind Parameters tab to add a bind parameter and parameter value.	BMF-1270
General	Corrected an issue that caused Benchmark Factory to close unexpectedly when attempting to import SQL from a large number of stored procedures. In this case, the user imported the same procedures multiple times.	BMF-2060
Installation	Corrected an issue that prevented the installation of the SQL Server native provider during the installation of Benchmark Factory in a Windows Server 2008 SP2 environment.	BMF-1947
Installation	Corrected an issue that caused an error related to the SQL Server native provider for some users when uninstalling Benchmark Factory.	BMF-2148
Integration with other Quest products	Corrected an issue that caused Benchmark Factory to close unexpectedly after sending SQL from SQL Optimizer for SAP. This issue was encountered in a Windows Server 2012 R2 environment.	BMF-2297
Job Wizard	Job Wizard   Job Setup   Schedule tab: If you enter invalid scheduling details, the Edit Job Wizard no longer unexpectedly closes after you click OK in the warning message.	BMF-1842
REST API	In the REST API, connection is now a resource of Job.	BMF-1723
REST API	In the REST API, when you GET the job properties, the schedule properties are now under the Schedule object/node as expected.	BMF-1725
REST API	Enhancement: The REST API now returns more-descriptive error messages.	BMF-1853
Run Reports	Run Reports   Testbed Details: Corrected an issue in which Windows 8.1 was identified as Windows 8 in Testbed details.	BMF-1228
Run Reports	Corrected an issue which prevented the display of correct Time Phase (Sampling, Pre-Sampling) information on the Timing tab in Run Reports.	BMF-2012
Run Reports	Corrected an issue which prevented the Run Reports viewer (Tools   Run Reports) from opening if a "Run Reports" folder was open in Windows Explorer.	BMF-2190
Settings	Edit   Settings   Timing   User Startup: In the "Start a new user every" field, your specified setting is now saved, as expected.	BMF-1843

Feature	Resolved Issue	Defect ID
System Requirements	This release of Benchmark Factory has been tested with and supports Windows Server 2016.	BMF-1575
System Requirements	This release of Benchmark Factory was tested against SQL Server 2017 running on Windows or Linux.	BMF-1878
Test Results	Compare Results tab: Corrected an issue in which the best performing transaction was displayed twice after a custom scalability test was rerun.	BMF-1423
User Interface	Run Reports   Workload Details   Transactions tab: Corrected an issue which caused some overlapping of UI elements in this window when the transaction list was long.	BMF-1032
User Interface	SQL Server connection: Removed the Profile field from the Login dialog when repeating a capture from the Captures tab (right-click   Repeat Capture).	BMF-1161
User Interface	If you select multiple captures in the Captures tab and then right-click and select Delete, all selected captures are now deleted, as expected. Previously, this action deleted only one of the captures.	BMF-1727
User Interface	Capture and Replay: If you edit the Capture Thresholds fields and then move to the next page, your edits are now retained when you return to the Capture Thresholds page.	BMF-1752
User Interface	Edit   Settings   Latency: Changed "Set Transaction Rate" to "Transaction Rate."	BMF-1845
User Interface	Capture Scenario Wizard: Corrected a minor UI issue involving the placement of the warning message on the Filter Settings page.	BMF-2132

For the most recent list of resolved issues, see the Benchmark Factory 8.0.1 Release Notes at: <https://support.quest.com/benchmark-factory-for-database/technical-documents>.

[Back to Top](#)

## Known Issues

The following is a list of issues known to exist at the time of this release.

Feature	Known Issue	Defect ID
Capture and Replay	Oracle workload: Capturing using the trace file method is not available and is disabled when connected to an Oracle 12c pluggable database (PDB).	N/A
Capture and Replay	Oracle workload: In Benchmark Factory 7.2 or later, if you attempt to use Oracle capture files created in an earlier version of Benchmark Factory (6.9.3 or earlier) and .NET Framework 2.0 is not installed, Windows may prompt you to install it (for example, in Windows 8 or later). <b>Workaround:</b> Install .NET Framework 2.0 (3.5).	N/A



Feature	Known Issue	Defect ID
Capture and Replay	Oracle workload: Capturing using the trace file method is not available and is disabled when connected to an Oracle RAC system.	N/A
Capture and Replay	<b>Issue:</b> If you start a trace file capture using the current version of Benchmark Factory and then start another trace file capture using version 7.2 (or earlier) on the same database, the earlier version of Benchmark Factory cannot detect the current version performing a capture. This can result in an invalid capture. <b>Solution:</b> For best results, do not perform trace file captures using both the current and an earlier version of Benchmark Factory concurrently on the same database.	N/A
Capture and Replay	SQL Server workload: After capturing activity from a user logged-in using Windows authentication, attempting to replay the capture using the ODBC profile results in the following error: "Could not obtain information about Windows NT group/user '<group/user>', error code 0x5." <b>Workaround:</b> Use a domain account to start SQL Server service and make sure the account can connect to the Active Directory of <i>Domain</i> .	N/A
Capture and Replay	Oracle workload: In an Oracle capture and replay, Benchmark Factory cannot generate the Statspack report if the local replay directory is mapped to drive "B." This is because Benchmark Factory must have drive B open to execute a background .bat file during oracle capture and replay. <b>Workaround:</b> Do not map your local replay directory to drive "B" when running an Oracle capture and replay in which you chose to generate the Statspack report.	109221
Capture and Replay	In an Oracle 12c container database (CDB), Benchmark Factory cannot replay an existing workload that was captured in an earlier version of an Oracle database. In an Oracle 12c container database, a user name (common user) is prefixed with "c##" by default.	N/A
Capture and Replay	Oracle Capture Using FGAC: When performing an Oracle Capture using the FGAC method, if the application has a trigger with a multi-schema select, additional transactions will be recorded.	N/A
Connections - Teradata ODBC	When creating or modifying a Teradata ODBC connection, if the Teradata DSN has incorrect connection information and you click <b>Test Connection</b> in the Connection dialog , Benchmark Factory might close unexpectedly.	BMF-1497
Connections - Transaction Wizard and IBM CLI Driver	When using the 64-bit version of Benchmark Factory, the Transaction Wizard stops working when using the IBM DB2 CLI Driver profile to connect the database which created objects using the ODBC Driver.	N/A
Connections - Microsoft Oracle ODBC Driver	When using Microsoft's Oracle ODBC driver for either testing or for Benchmark Factory repository access, there is an issue with the ODBC driver. It does not work with CLOB data.	N/A
Connections - Oracle ODBC driver	When using the Oracle 11g R2 Client and Oracle 32-bit ODBC driver in a Windows 64-bit environment, the Oracle 32-bit ODBC driver requires an 8-byte int data type. <b>Workaround:</b> Use the Oracle native client or Oracle 32-bit ODBC driver.	N/A

Feature	Known Issue	Defect ID
Connections - Microsoft SQL Server (Obsolete DB-Library) Connection	<p>If you run a benchmark test using a Microsoft SQL Server (Obsolete DB-Library) connection to SQL Server 2014, and you have the "Recreate objects and reload data every execution" option selected, you might encounter the following error:</p> <p>"DB-Library Message - Insert bulk is not supported over this access protocol"</p> <p><b>Workaround:</b> Use the Microsoft SQL Server ODBC driver.</p>	N/A
Connections - IBM CLI Driver	A profile created with a DB2 ODBC data source may crash Benchmark Factory if the IBM DB2 client catalog becomes broken/corrupted.	N/A
Connections	In Windows 10, if you open a New Connection dialog, create an SAP data source and then attempt to create a SQL Server data source, Benchmark Factory might close unexpectedly.	BMF-555
General - Benchmark Factory Console	Benchmark Factory does not support data types that are created by the user.	N/A
Industry Standard Benchmark Testing	<p><b>Background:</b> This issue applies to benchmark testing using a SQL Server or SAP native connection when the Refresh data retention option is selected in the Test Options tab.</p> <p><b>Issue Description:</b> In a test where the connection is lost while tables are loading, if you reconnect and attempt to rerun the job, Benchmark Factory might error with the following messages: "The Expected Total rows are not the same as the Actual Total rows," or "a duplicate key was found" (when creating an index). The test is then canceled due to errors.</p> <p><b>Resolution:</b> Recreate and run a new job against your selected database using the native connection.</p>	N/A
Industry Standard Benchmark Testing	If testing against a database other than Oracle, SQL Server, DB2, SAP, or MySQL, and using the Object/Data Retention option <b>Refresh data using backup sets</b> , backup sets might not be created resulting in a canceled test.	114266
Installation	<p>When installing in a Windows Vista 32-bit environment as a limited user (not Administrator), installation fails.</p> <p><b>Workaround:</b> Install Benchmark Factory as Administrator.</p>	N/A
Installation (uninstall)	<p>Beginning with release 7.1.1 in Windows Vista or later, if you have multiple editions of Benchmark Factory installed side-by-side (e.g., a Beta and a Commercial edition), and then uninstall one edition, you might encounter the following error when attempting to run a job:</p> <p>" This object does not represent an OLE control"</p> <p><b>Workaround:</b> Do one of the following:</p> <ul style="list-style-type: none"> <li>• Open the Benchmark Factory application directory for the edition that is displaying the error. Then right-click the Benchmark Factory executable (BFactory.exe) and select <b>Run As Administrator</b>.</li> <li>• Or run the installer in Repair mode. To do this, right-click the .msi installer used to install the edition that is displaying the error and select <b>Repair</b>.</li> </ul>	ST115773
Integration with other Toad products	Applies in Toad for Oracle suites (12.5 or later): When the database connection or the SQL statement contains Chinese characters, attempting to send SQL from SQL Optimizer for Oracle to Benchmark Factory results in an error. This issue only occurs when Spotlight on	N/A

Feature	Known Issue	Defect ID
	Oracle is launched prior to the other applications mentioned here. <b>Workaround:</b> Always launch Benchmark Factory and SQL Optimizer for Oracle prior to launching Spotlight on Oracle if sending SQL from SQL Optimizer to Benchmark Factory.	
Licensing	License keys compatible with Benchmark Factory 5.8.1 (or earlier) are no longer supported. See <a href="#">Product Licensing</a> for instructions on how to upgrade an earlier-version license key.	N/A
Licensing	If your current Benchmark Factory license key is a 21-digit format (x-xxxxx-xxxxx-xxxxx-xxxxx) and you want to use the 64-Bit installation, you will need to request a new license key. Please obtain the new key before installing the new release. To obtain a new key, please refer to the Licensing Assistance page on our support portal: <a href="https://support.quest.com/licensing-assistance">https://support.quest.com/licensing-assistance</a> .	N/A
Oracle Database Privileges	In Oracle 12c, the RESOURCE role no longer includes the UNLIMITED TABLESPACE system privilege. Therefore, Benchmark Factory users with the RESOURCE role must also be granted the UNLIMITED TABLESPACE privilege.	N/A
Repository	In a new installation (not an upgrade) of Benchmark Factory 7.2 or later, a Standard (Limited) user may encounter a Repository error when attempting to launch the application. The issue involves the SQLite database that is used as the default database in a new installation of Benchmark Factory 7.2 or later. <b>Workaround:</b> Do one of the following: <ul style="list-style-type: none"> <li>• Run Benchmark Factory using an Administrator account.</li> <li>• In the directory containing the SQLite database file, grant <i>Write</i> permission to all users. This directory is located in the following location in Windows 7: C:\ProgramData\Quest Software\BMF\Repository.</li> </ul>	BMF-202
Repository	If you created a Data Source Name for the BMF MySQL ODBC Driver in a previous release (6.9.3 or 7.0), attempting to edit this DSN results in an error.	N/A

[Back to Top](#)

## Third-Party Known Issues

Feature	Known Issue	Defect ID
Connections - Oracle	If you have multiple Oracle clients installed, after connecting using one Oracle home, attempting another connection using a different Oracle home results in an error. <b>Workaround:</b> Close and then re-open Benchmark Factory.	N/A
Connections - SAP	When creating a new SAP connection, if you partially define an SAP ASE ODBC DSN, then click "Cancel," and then switch to the Native tab of the New Connection dialog (or select a different connection	N/A

Feature	Known Issue	Defect ID
	<p>type), Benchmark Factory quits unexpectedly. This is a known issue with the SAP ASE ODBC driver.</p> <p>To create a native SAP connection, use the Native tab of the New Connection dialog. To create an SAP ODBC connection, finish defining the SAP ODBC DSN in the ODBC tab of the New Connection dialog.</p>	

[Back to Top](#)

# System Requirements

Before installing Benchmark, ensure your system meets the following minimum hardware and software requirements:

Requirement	Details
<b>Repository</b>	Benchmark Factory cannot run without a repository, and during installation a SQLite file-based repository is installed. After installation, you can select a repository of your choice. Benchmark Factory supports the following databases: <ul style="list-style-type: none"><li>• Oracle®</li><li>• SQL Server®</li><li>• MySQL</li><li>• SQLite</li><li>• SAP SQL Anywhere® (Adaptive Server® Anywhere)</li></ul>
<b>Memory</b>	512 MB of RAM recommended <b>Note:</b> The memory required may vary based on the following: <ul style="list-style-type: none"><li>• Applications that are running on your system.</li><li>• Size and complexity of the database.</li><li>• Amount of database activity.</li><li>• Number of concurrent users accessing the database.</li></ul>
<b>Platform</b>	1.0 GHz x86 or x64 compatible CPU
<b>Browser Requirements</b>	Benchmark Factory requires Internet Explorer® 9 or later.
<b>Hard Disk Space</b>	120 MB of disk space for installation <b>Note:</b> The disk space required may vary based on options selected for installation.
<b>Operating System</b>	Microsoft® Windows Server® 2008 Service Pack 2 Microsoft Windows Server 2008 R2 Service Pack 1 Microsoft Vista® Service Pack 2 Microsoft Windows® 7 Service Pack 1 Microsoft Windows 8 Microsoft Windows 8.1 (Update) Microsoft Windows Server 2012 Microsoft Windows Server 2016 Microsoft Windows 10
<b>.NET Framework</b>	.NET Framework 2.0 is required to use Oracle workloads captured using Benchmark Factory 6.9.3 or earlier.
<b>Additional Software</b>	The Universal C Runtime component for Windows is required. See <a href="#">Universal C Runtime Update</a> or <a href="#">Visual C++ Redistributable for Visual Studio 2015</a> to download this software. <b>Note:</b> If you encounter an error when installing this software, install the missing prerequisite software. For Windows 8.1 or Windows Server 2012 R2, install the April 2014 update: <a href="https://support.microsoft.com/en-us/kb/2919355">https://support.microsoft.com/en-us/kb/2919355</a> . For other operating systems, see the <a href="#">Universal C Runtime Update Prerequisites</a> section.
<b>SQL Server Native Provider</b>	For a list of operating systems that support the SQL Server native provider distributed with Benchmark Factory (native client 11.0), see

Requirement	Details
	<a href="https://msdn.microsoft.com/en-us/library/cc280356(v=sql.120).aspx">https://msdn.microsoft.com/en-us/library/cc280356(v=sql.120).aspx</a> .
<b>Database Server</b>	<p>Oracle®: 9i, 9.2, 10g, 11g, and 12c (requires Oracle 9 client libraries or higher.) Benchmark Factory has been tested on Oracle Exadata 2.0 running Oracle database 11g R2.</p> <p><b>Note:</b> Oracle Capture/Replay of workloads must use Oracle 9i or higher.</p> <p>SQL Server®: 2000 (ODBC only), 2005, 2008, 2008 R2, 2012, 2014, 2016, and 2017</p> <ul style="list-style-type: none"> <li>Benchmark Factory has been tested against SQL Server 2017 running on Windows or Linux.</li> </ul> <p>SQL Azure™: Benchmark Factory provides limited support of SQL Azure.</p> <p>SAP® ASE: 12.5, 15, 15.5, 15.7, 16</p> <p>IBM® DB2® for LUW: 9.x through 10.x, 11.1</p> <p>IBM® DB2® for z/OS: 9.x through 10.x, 11.1</p> <p>MySQL: 4.5 and 5.x</p> <p><b>Note:</b> The 32-bit version of Benchmark Factory requires the 32-bit versions of the client libraries (including ODBC drivers). The 64-bit version requires 64-bit client libraries.</p>
<b>ODBC Database Server</b>	Benchmark Factory supports almost all databases that you can connect to using an ODBC 3.0 or later driver.
<b>Cloud Database Service</b>	Oracle Database as a Service

## Virtualization Support

Before installing Benchmark Factory, review the following for virtualization support:

Requirement	Details
<b>Application Virtualization</b>	<p>Benchmark Factory has been tested with the following:</p> <ul style="list-style-type: none"> <li>Citrix XenApp 6.5</li> </ul>

[Back to Top](#)

## Product Licensing

### *To activate a trial license*

- In the Licensing dialog, enter your license (Authorization) key.
- Enter the site message included with the license key.

### *To activate a purchased commercial license*

- In the Licensing dialog, enter your license (Authorization) key.
- Enter the site message included with the license key.

**Note:** To enter a virtual user key (for additional virtual users), select the Virtual User Pack tab of the Licensing dialog and enter your license key and site message.

# Earlier-Version License Keys

License keys compatible with Benchmark Factory 5.8.1 and earlier versions are no longer supported.

## To upgrade your license key

1. In your current version of Benchmark Factory, go to **Help | Licensing** to find your license *number* . If not explicitly listed, it may be included as part of the Site Message associated with your key.

**Example:** ACCOUNTNAME-*nnn-*nnn-*nnn***

2. Then go to the License Key Upgrade page at: <http://license.quest.com/upgrade>.
3. Enter your e-mail address and your existing license number, and follow the prompts.

If you need help finding your license number or an upgrade key, please contact the License Administration team at: <https://support.quest.com/licensing-assistance>.

# Getting Started

## Contents of the Release Package

The Benchmark Factory release package contains the following products:

1. Benchmark Factory version 8.0.1
2. Product Documentation, including:
  - User Guide
  - Online Help
  - Release Notes

[Back to Top](#)

# Globalization

This section contains information about installing and operating this product in non-English configurations, such as those needed by customers outside of North America. This section does not replace the materials about supported platforms and configurations found elsewhere in the product documentation.

This release is Unicode-enabled and supports any character set. In this release, all product components should be configured to use the same or compatible character encodings and should be installed to use the same locale and regional options. This release is targeted to support operations in the following regions: North America, Western Europe and Latin America, Central and Eastern Europe, Far-East Asia, Japan.

[Back to Top](#)

# About Us

## We are more than just a name

We are on a quest to make your information technology work harder for you. That is why we build community-driven software solutions that help you spend less time on IT administration and more time on business innovation. We help you modernize your data center, get you to the cloud quicker and provide the expertise, security and accessibility you need to grow your data-driven business. Combined with Quest's invitation to the global community to be a part of its innovation, and our firm commitment to ensuring customer satisfaction, we continue to deliver solutions that have a real impact on our customers today and leave a legacy we are proud of. We are challenging the status quo by transforming into a new software company. And as your partner, we work tirelessly to make sure your information technology is designed for you and by you. This is our mission, and we are in this together. Welcome to a new Quest. You are invited to Join the Innovation.

## Our brand, our vision. Together.

Our logo reflects our story: innovation, community and support. An important part of this story begins with the letter Q. It is a perfect circle, representing our commitment to technological precision and strength. The space in the Q itself symbolizes our need to add the missing piece—you—to the community, to the new Quest.

## Contact Quest

For sales or other inquiries, visit [www.quest.com/contact](http://www.quest.com/contact).

## Technical Support Resources

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at <https://support.quest.com>.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

- Submit and manage a Service Request
- View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
- View how-to-videos
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product

[Back to Top](#)



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### **Patents**

This product includes patent pending technology. For the most current information about applicable patents for this product, please visit our website at [www.quest.com/legal](http://www.quest.com/legal).

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[Back to Top](#)