# Previous features and fixed issues

This build includes many fixed issues, including the following updates from previous releases.

### 3.5 New features

#### Reviewed and enhanced recommendations

SQL Doctor 3.5 comes with new and enhanced recommendations to improve your SQL Server performance. In addition, links within recommendations associated to online content have been reviewed and updated for this release.

### Full support for SQL Server 2014

SQL Doctor 3.5 fully supports monitoring of SQL Server 2014 instances.

#### SQL Server 2016 experimental support

SQL Doctor 3.5 is SQL Server 2016 compatible. This version of SQL Doctor is not certified against newer builds of SQL Server and should not be used with these builds in a production environment. IDERA provides experimental support while you use your installation in a testing environment to ensure the features you rely on most are working as or better than expected.

# Help documentation

SQL Doctor Help (User Guide and Release Notes) is now wiki-hosted and available at **w iki.idera.com** > **SQL Doctor**.

### 3.5 Fixed issues

#### General

An issue preventing some users with system administration permissions from adding a SQL Server instance for analysis in SQL Doctor no longer occurs.

#### 3.1 New features

### SQL Doctor no longer part of the SQL Toolbox

With this release, SQL Doctor is independent of the SQL Toolbox. New installations of SQL Doctor no longer require you to install SQL Toolbox.

## **Check for updates to SQL Doctor**

SQL Doctor now allows you to quickly check for updates to the product from within the user interface. You can check for new versions of SQL Doctor by clicking **Help > Check for Updates**.

### **SQL Server 2012 support**

SQL Doctor 3.1 fully supports the use of SQL Server 2012.

### 3.1 Fixed issues

- This release fixes two broken links provided by SQL Doctor when displaying recommendations.
- Two issues preventing some users from properly activating and verifying SQL Doctor licenses in their environment is fixed.
- Column sizing and alignment is improved in this release.
- Users no longer receive an unhandled object reference when attempting to view details for a recommendation to address a blocking condition.
- The SDR-Q6 "Inconsistent procedure execution times" recommendation now appears only
  when a very sizable difference exists in the number of reads between executions of a
  stored procedure. The recommendation informs the user that they should test to see if
  different stored procedure parameters are causing different execution plans.
- This release improves the recommendation provided when SQL Doctor displays "No join predicate detected" for a query that contains explicit joins. The recommendation now displays the estimated cost of the missing join predicate, suggests that the user adjust the query, and provides the approximate performance improvement percentage.
- An issue with a recommendation attempting to use invalid text columns in an index no longer occurs.
- SQL Doctor now displays the correct unit of measure for the Unit Allocation Size.
- SQL Doctor now supports Page Life Expectancy counters on NUMA systems.
- The SDR-D11 "Inconsistent procedure execution times" recommendation now appears
  only when a very sizable difference exists in the number of reads between executions of a
  stored procedure. The recommendation informs the user that they should test to see if
  different stored procedure parameters are causing different execution plans.
- SQL Doctor no longer generates recommendations for its own hypothetical indexes.

### 3.0 New features

### Redesigned user interface

A new dashboard provides a summary of all previously executed server analyses, with instant access to the corresponding recommendations.

### **New Server Overview**

The Server Overview displays a summary of key SQL Server metrics, warns you of issues that need to be addressed, and provides quick findings based on your current server health.

### **New analysis for Query Plan Statistics**

Tune your query plans by viewing real-time query plan performance metrics and quick findings along side the T-SQL code.

### **New analysis for Wait Stat Statistics**

Identify and fix any bottlenecks by viewing real-time statistics and quick findings for waits on your server.

#### **New analysis for Session Statistics**

Track session performance by viewing the commands, wait times, elapsed times, affected databases, and much more.

#### More crucial server information

Keep tabs on your processes, network interface cards, processors, cache, memory, physical and logical disk performance, disk partitions and system properties.

### **SQL Server 2012 compatible with experimental support**

SQL Doctor 3.0 is SQL Server 2012 compatible. This version of SQL Doctor is not certified against newer builds of SQL Server and should not be used with these builds in a production environment. IDERA provides experimental support while you use your installation in a testing environment to ensure the features you rely on most are working as, or better than, expected.

#### 3.0 Fixed issues

There are no fixed customers issues in this release.

### 2.0.1 New features

Improved the user experience with enhanced recommendation content and layout.

### 2.0 New features

# New backup recommendations

The server analysis now checks the age and location of your database backups and, if needed, provides information about how you can ensure your backup data sets are both recent and easily accessible.

### **New wait statistics recommendations**

The server analysis now checks the following wait statistics:

- CXPACKET. This typically occurs when a query is parallelized and the parallel
  threads are not given equal amounts of work. One thread may require more time to
  complete, which results in "cxpacket" waits for the remaining threads which are
  "waiting" for the longest running thread to complete.
- ASYNC\_NETWORK\_IO. This typically occurs when a client application that is not
  efficiently processing results from SQL Server over the network. This results in an
  increase in async\_network\_io waits because SQL Server is waiting for the client
  application to process the result set.
- PAGEIOLATCH. This typically occurs when SQL Server waits for a data page to be read from disk into memory. This can be an indication of contention on the same pages by concurrent selects, inserts, updates and deletes, which can be magnified by IO subsystem performance issues, insufficient memory, missing indexes, out of date statistics or inefficient queries.

#### **New index recommendations**

The server analysis now checks the following index configurations:

- Overlapping indexes. This typically occurs when one or more indexes contain the same data in some key columns and included columns. Although these indexes are not identical, maintaining these separate indexes can incur unnecessary performance overhead for data modifications on the database.
- Non-clustered index key matches clustered index key. This typically occurs when a non-clustered index contains the same key columns as the clustered index. Although these indexes are not technically duplicates, the non-clustered index rarely provides a data access advantage over the clustered index. SQL Server will maintain both indexes, creating performance overhead for data modifications which and increasing the database size.

### **Undo scripts**

Now, when you perform a DDL or DML optimization from within SQL Doctor, you can run an undo script that reverts any changes that were made by the original optimization script.

# Selective category analysis

Easily direct SQL Doctor to a specific area of concern for analysis, such as memory, disk, network, security, processor, and deadlocks.

### Recommendation state persistence

Remember where you left off by flagging recommendations and returning to them later for follow-up.

#### Diagnose queries

Evaluate any query to obtain recommendations that improve its performance without running a full server analysis

### 1.1.1 New features

#### **System Specific Resources**

Resources included with recommendations are now applicable to the operating system and SQL Server version being analyzed.

#### 1.1.1 Fixed issues

• The server analysis is now able to analyze sysjobhistory tables that contain a very large number of rows.

SQL Doctor provides complete SQL performance tuning. Learn more >>

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