

ApexSQL® Data Diff 2019.x

Release Notes

These release notes provide information about the ApexSQL® Data Diff 2019.x which is a patch release.

Topics:

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About ApexSQL Data Diff

ApexSQL Data Diff is a SQL Server data comparison and synchronization tool that detects data differences and resolves them without errors. It compares and synchronizes live databases, database backups, and data under source control. ApexSQL Data Diff integrates with SQL Server Management Studio and has a command line interface, to allow for unattended execution.

New Features

This version of ApexSQL Data Diff introduces the following new features, enhancements or deprecations:

Fixes:

- 199046: "Object reference not set to an instance of an object" error message is shown on SQL Server Management Studio startup after the add-in installation

- 194741: "Error 547, Severity 16, Line 7366. The ALTER TABLE statement conflicted with the FOREIGN KEY constraint" error is encountered since the Re-enable check constraints with Check option didn't work after the synchronization is finished between two SQL databases
- 188643: Objects under the Object filter tab in the New project window need to be clicked twice on the checkbox to be checked or unchecked after all objects were unchecked first
- 189678: Wrong results are shown in the Data Difference View panel for data that contains (a single quotation mark) (single quotation marks) when comparing a script folder and a SQL database
- 184173: The SQL Server Management Studio is automatically closed when the application is integrated into it

Getting Started

- For further information about installation and getting started, please check the [Quest Knowledge Base](#) or [ApexSQL Getting Started](#).

System requirements

Before installing or upgrading Short Product Name Version, ensure that your system meets the following minimum hardware and software requirements.

Hardware	Dual Core 2.0 GHz CPU 3 GB memory 191 MB disk space
SQL Server	SQL Server 2005 and higher ^[1] Azure SQL Database ^[1] Amazon RDS for SQL Server ^[1]
Add-in integration	Visual Studio 2010 and higher ^[1] Server Management Studio 2012 and higher ^[2]
OS	Windows 7 SP1/Windows Server 2008 R2 SP1 and higher ^[1]
Software	.NET Framework 4.7.2 or higher

Note	Source control integration available for Azure DevOps ^[4] , Git ^[5] , Mercurial ^[5] , Subversion ^[5] and Perforce ^[5]
Permissions and additional requirements	<p>Windows user account with administrative privileges</p> <p>See Minimum permissions required to install and use ApexSQL products</p> <p>See Minimum SQL Server permissions for ApexSQL Developer tools</p> <p>See Remote access for SQL Server instance</p>

^[1] See [Supported systems](#) for exact version support

^[2] You can use the latest full-featured backwards compatible SQL Server Management Studio for free. [Click here](#)

^[4] Azure DevOps Server (TFS) ^[5] / Azure DevOps Services

^[5] Up to the latest version

Supported platforms

Windows version				
Windows 7 SP1 & Windows Server 2008 R2 SP1	Windows Server 2012	Windows 8.1 & Windows Server 2012 R2	Windows 10 & Windows Server 2016	Windows Server 2019
✓	✓	✓	✓	✓

SQL Server version ^[4]									
	2005	2008	2012	2014	2016	2017		2019 CTP 3	
						Windows	Linux ^[3]	Windows	Linux ^[3]

ApexSQL Data Diff	✓	✓	✓	✓	✓	✓	✓	✓	✓
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SQL Server edition ^[4]						
	Express	Standard	Enterprise	Azure SQL Database		Amazon RDS for SQL Server
				Single Database, Elastic Pool	Managed Instance	
ApexSQL Data Diff	✓	✓	✓	✓	✓	✓

Visual Studio add-in integration						
	2010	2012	2013	2015	2017	2019
ApexSQL Data Diff	✓	✓	✓	✓	✓	✓

SQL Server Management Studio add-in integration					
	2012	2014	2016	17	18
ApexSQL Data Diff	✓	✓	✓	✓	✓

Source control systems					
	Azure DevOps ^[6]	Git ^[7]	Mercurial ^[7]	Perforce ^[7]	Subversion ^[7]

ApexSQL Data Diff	✓	✓	✓	✓	✓
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[3] Tested on Ubuntu 16.04

[4] Including Amazon EC2, Google Compute Engine, and Azure Virtual Machine cloud computing SQL Server instances

[6] Azure DevOps Server (TFS) [7] / Azure DevOps Services

[7] Up to the latest version

Product licensing

ApexSQL offers 2 types of licenses:

1. Individual license

For applications licensed per user, an individual license is for the use of a single user only. This means that only 1 user can use 1 license. If there are multiple users, multiple licenses are needed.

For applications licensed per instance, an individual license is to be used on a single SQL Server instance only. If there are multiple instances, multiple licenses are needed.

2. Enterprise license

An enterprise license can be activated on an unlimited number of instances and can be used by an unlimited number of users, without geographical limitations.

Release History (release notes)

Release: 2019.03.0535

Date: February 02, 2021

Fixes:

- 199046: "Object reference not set to an instance of an object" error message is shown on SQL Server Management Studio startup after the add-in installation
- 194741: "Error 547, Severity 16, Line 7366. The ALTER TABLE statement conflicted with the FOREIGN KEY constraint" error is encountered since the Re-enable check constraints with Check option didn't work after the synchronization is finished between two SQL databases
- 188643: Objects under the Object filter tab in the New project window need to be clicked twice on the checkbox to be checked or unchecked after all objects were unchecked first
- 189678: Wrong results are shown in the Data Difference View panel for data that contains (a single quotation mark) (single quotation marks) when comparing a script folder and a SQL database
- 184173: The SQL Server Management Studio is automatically closed when the application is integrated into it

Release: 2019.02.0527

Date: April 08, 2020

Fixes:

- "Username required" error is encountered when trying to compare databases without permissions to access the master database using SQL Server Management Studio
- "Unable to connect to SQL Server apexsqltesting.database.windows.net. One ore more errors occurred" error is encountered when trying to compare databases without permissions to access the master database
- "The destination information is missing or it is incorrect" error is encountered when trying to compare databases without permissions to access the master database

Release: 2019.01.0522

Date: January 09, 2020

Enhancements:

- [SQL Server 2019 support](#)
- Temporal tables support
- SQL graph tables support
- Pre-comparison quick-check for data differences option is added under the Object filter tab of the New project window
- Play a sound upon finished operation option is added under the General tab of the Options window

Fixes:

- "Reloading metadata failed. Invalid URI: The URI is empty" message is shown when running a project file which contains the Active Directory - Universal with MFA support authentication
- The Data compare query window is not shown when a SQL database is right-clicked and the Set as source or destination command is used in Visual Studio
- Authentication type is automatically changed to the Active Directory - Universal with MFA support authentication when changing SQL Server
- "Reloading metadata failed" error is encountered when trying to compare two Git repositories from Bitbucket.org
- "Specified cast is not valid" error is encountered when the filter option for the column is clicked in the Data Difference view panel
- The Save button is not working properly when editing project settings
- "Execution Timeout Expired. The timeout period elapsed prior to completion of the operation or the server is not responding" error is encountered while retrieving row count for the Row filter dialog
- Backspace key selects text under the condition box of the Filter editor dialog instead of deleting it
- "Item has already been added" error is encountered when all objects are unmapped under the Object mapping tab in the New project window

- The Synchronization summary in the CLI shows that different records are updated, even though the "d" (different) argument is not used in the /records_to_synchronize switch
- The application add-in is integrated in all SQL Server Management Studio and Visual Studio versions through the silent installation even though the /components switch with its values is not specified
- The application cannot be uninstalled if any version of Visual Studio is running, even though the application is not integrated into any VS
- "Value cannot be null" error is encountered when using the Copy cell value right-click command in the Data difference view panel for the Null cell value
- The application's add-in is integrated automatically in SQL Server Management Studio when installed via ApexSQL Installer
- "Check for update failed. Problem occurred connecting to the ApexSQL server" error is encountered when the Get updates button is used from the ApexSQL menu in Visual Studio 2019

Changes:

- Dark theme is now used as the default application theme
- Save as dialogs are now inheriting the application theme

Release: 2018.07.0386

Date: June 21, 2019

Changes:

- Software Transaction Agreement is added as a new step in the installation wizard and updated in accordance with <https://www.quest.com/legal/sta.aspx>

Release: 2018.07.0384

Date: June 13, 2019

Fixes:

- The application doesn't integrate with SQL Server Management Studio 18 GA version
- "Object reference not set to an instance of an object" error is encountered when the OK button is clicked in the Connection options dialog after changing value for timeout options
- The application is started in light theme, when the Data comparison is initiated from SQL Server Management Studio
- Check-boxes cannot be checked under the Object filter tab, if the New project window is resized
- The sort order is not numerical in the Data difference view panel, instead the INT columns are arranged by order of only the first digit

Known limitations:

- Data sources containing SQL tables without a unique clustered index cannot be compared against database backups

- The Get by label option is not retrieving label state and it uses the latest instead when using Mercurial repository

Release: 2018.06.0324

Date: February 05, 2019

Enhancements:

- SQL Server 2019 CTP 2.0 support
- [SQL Server Management Studio 18 integration support](#)
- [Visual Studio 2019 integration support](#)
- Active Directory authentication – Universal with MFA support
- CLI switches:
 - Tables with specified schemas can be filtered via the /include switch: "Schemaname.ObjectName"
 - New value for the Synchronization options switch: Ignore pre-processing script failure [ippsf]
 - New value for the compatibility level /cl1 and /cl2 switches: SQL2019 [2019]

Fixes:

- "Could not load file or assembly 'Microsoft.SqlServer.Smo'" error is encountered when the Browse button is clicked for the Use this directory option of the Backup the database before synchronization option in the Synchronization wizard
- The number of rows is not shown in the Rows column of the Object filter when Script folder or Source control are used as data sources
- The Get by label option is not retrieving label state and it uses the latest instead when using Team Foundation Server repository
- Server field is empty on the Destination side under the Data sources tab when the New button is clicked in the Project management window
- Incorrect comparison results are shown when rows are shown as missing and additional, instead of different, after the initial comparison key is changed
- Missing ability to include tables with specified schemas through the CLI using the /include switch
- Redundant double quotation marks around the application installation path for the generated PowerShell script under the Automation script window
- Redundant double quotation marks and output name are shown in the Automation script window
- "The specified folder does not contain the appropriate folder structure" message is shown when a selected source control project contains the Assemblies folder
- The set date format yyyyMMdd for the Apply date format option is not applied in the synchronization script
- Filters are not working when any value is entered for specified column in the Results grid
- Filters are not working when any value is entered for specified column in the Data difference view window
- Objects cannot be unchecked under the Object filter tab of the New project window when the object list is filtered by name or schema

- The custom object mapping pairs are not checked by default under the Object filter tab for the comparison process
- Memory optimized tables are not synchronized and an error is encountered when the Include transaction handling in synchronization script option is checked under the Options tab of the New project window

Changes:

- Backup database before synchronization is now unchecked by default
- Default value for the /backup switch is set to None
- The application now requires Microsoft .NET framework 4.7.2
- ApexSQL parent menu of the add-in is now located under the Extensions main menu in Visual Studio 2019

Known limitations:

- Data sources containing SQL tables without a unique clustered index cannot be compared against database backups
- The Get by label option is not retrieving label state and it uses the latest instead when using Mercurial repository

Release: 2018.05.0244

Date: September 06, 2018

Enhancements:

- [New error handling and send logs functionality](#)
- [Improved application installer with a dark theme](#)
- [New application icon](#)
- [High DPI and 4K resolution support](#)
- [Save automation script as a PowerShell script](#)
- Visual Studio integration support
- Active Directory – Password authentication support
- Active Directory – Integrated authentication support
- Comparison summary output is added under the Export options in the Home tab
- Ignore pre-processing script failure option is added under the Synchronization options
- Additional outputs are added in the Automation script window for:
 - Comparison summary
 - Synchronization actions
 - Synchronization warnings
 - Execution results
 - Synchronization summary
- CLI switches:
 - Source and destination login for Azure Active Directory authentication [/ad1 and /ad2]
 - Folder mapping settings for source and destination data sources [/fm1 and /fm2]

- New value for the Synchronization options switch: Ignore pre-processing script failure [ippsf]
- Name of the executable installer or C# solution package [/pknm]

Fixes:

- "Column 'ColumnName' does not belong to table" error is encountered when the custom mapped tables and columns are selected in the Results grid to view data differences
- "Object reference not set to an instance of an object" error is encountered when SQL Server 2005 database is compared with a SQL Server 2014 database
- Data source information are not remembered when the Edit button is clicked for the currently compared data sources
- Tables and columns with different names are not shown in the Object filter tab, even though they were mapped in the Object mapping tab
- Project file is shown in the Recent projects list even after the Delete or Remove from list commands were used
- Project file is not shown in the Recycle bin when the Delete right-click command is used in the Project management window
- The /records_to_synchronize switch does not contain any value if all objects are unchecked and the Save as batch feature is initiated
- Missing the "n" value in the /output_elements switch under the Save as batch window, when none of the Output elements options is checked
- The /on switch is not shown in the Batch script for the C# solution and Executable installer, even though the Package name from the Package tab is checked
- The shortcut (Ctrl + E) for the Edit current project settings command does not work
- The shortcut (F5) for the Refresh command does not work
- Missing the Last value for the /backup_set1 and /backup_set2 switch value to choose the last backup set
- "The type initializer for 'ApexSql.Common.UI.Forms.MetroMessage' threw an exception" error is encountered when activating the application through add-in in SQL Server Management Studio
- Wrong values are specified in the /records_to_synchronize switch when only different/missing/additional rows checked
- "The custom key must contain at least one checked field" message is shown when the Save button is clicked after a click on the Reset button in the Customize comparison key
- The data comparison process cannot be initiated from SQL Server Management Studio when SQL Server authentication is used in the Data compare query
- SQL Server Management Studio stops working when SQL Server instance is not chosen and Database list is used from Database drop-down list in Data compare query window
- SQL Server Management Studio stops working when the Setup button is clicked in the Data compare query window to initiate the Source control setup wizard
- SQL Server Management Studio stops working when SQL Server instance is not chosen and Database list is used from Database drop-down list in Data compare query window
- SQL Server Management Studio stops working when use the Data compare option on a SQL Server Analysis Services instance

- "There is not enough space on the disk" error is encountered while comparing data sources and there is no more space on disk
- "Source control error: Delete failed for 'Item 'ItemName' is obsoleted" error is encountered when trying to delete folder in the Subversion source control repository
- "Reloading metadata failed" error is encountered when comparing data source against a Team Foundation Server repository label
- Release and patch update application error issue when the updating gets canceled on 0% of download, and then started again
- Wrong values are specified in the /records_to_synchronize switch when only different/missing/additional rows checked
- "Cannot connect to '(local)'" error is encountered when there is no default named instance (local) on a machine where the application is installed
- Errors are not shown in the top of the Results window if any is encountered during the synchronization process
- The Results window does not contain information about how much rows is updated/deleted/added to a synchronized object(s) when synchronizing to a database
- The missing rows are wrongly shown in the Additional column in the Comparison summary when using the CLI
- Missing the information about executing Pre and Post processing scripts in the Actions tab
- "Package executed successfully" message is shown in the Execution results window of an executable installer even when the execution is canceled upon first error
- Missing an information message when mapping newly added objects to the save project in the CLI
- The copy row values command from the right-click context menu of the Data difference view panel pastes inverted row order

Changes:

- Save as batch is now Automation script

Known limitations:

- Data sources containing SQL tables without a unique clustered index cannot be compared against database backups
- The Get by label option is not retrieving label state and it uses the latest instead when using Mercurial repository

Release: 2018.04.0216

Date: July 31, 2018

Fixes:

- "Could not load file or assembly 'file:///Windows-Drive:¥WINDOWS¥Microsoft.Net¥assembly¥GAC_MSIL¥ApexSQL.Engine.Controller'" error is encountered when a backup is loaded as a data source in the Data sources tab of the New project window

- "Unknown error has occurred. Please see %AppData%\Local\ApexSQL\ApexSQL AppName>\crash.txt" error is encountered when ApexSQL Log or ApexSQL Recover are started while ApexSQL Data Diff is installed

Known limitations:

- Data sources containing SQL tables without a unique clustered index cannot be compared against database backups
- The Get by label option is not retrieving label state and it uses the latest instead when using Mercurial repository
- Labels cannot be compared for the Team Foundation Server repository

Release: 2018.03.0215

Date: June 15, 2018

Fixes:

- SQL Server Management Studio stops working when ApexSQL Data Diff 2018 R2 add-in is installed alongside ApexSQL Diff 2018 add-in and any Schema compare command is initiated

Known limitations:

- Data sources containing SQL tables without a unique clustered index cannot be compared against database backups
- The Get by label option is not retrieving label state and it uses the latest instead when using Mercurial repository
- Labels cannot be compared for the Team Foundation Server repository

Release: 2018.02.0205

Date: January 26, 2018

Fixes:

- The add-in icons disappear in SQL Server Management Studio 2012 and 2014 when installed in parallel with any other ApexSQL add-in product released after January 22, 2018
- The application repeatedly asks for the activation key when it is started on an Amazon EC2 instance after the virtual machine resources were deallocated and allocated again
- The silent installer is stopped when the application needs to automatically download and install .NET Framework, even when the /verysilent switch is used

Known limitations:

- Data sources containing SQL tables without a unique clustered index cannot be compared against database backups

- The Get by label option is not retrieving label state and it uses the latest instead when using Mercurial repository
- Labels cannot be compared for the Team Foundation Server repository

Release: 2018.01.0193

Date: December 27, 2017

Enhancements:

- [High DPI and 4K resolution support](#)
- [Applied concepts of Visual Language Dictionary for Visual Studio for iconography, imagery, colors, menus, fonts, formatting and other GUI elements](#)
- Check/Uncheck all missing/different/additional rows context menu and Home tab options are added for SQL tables and views in the Results section
- Copy row values option is added to the right-click menu in the Data difference panel

Fixes:

- "HTML option is already selected as secondary output type. Select another primary output type" message is shown even when the Secondary output type is unchecked in the Save as batch window
- The cursor is always back to the beginning of the text box for the Package name option when the tag buttons are clicked
- The warnings output file cannot be created without its dependent switch /synchronize
- The progress bar for the comparison process is not showing the exact percentage while comparing
- The /indicate_default_db switch does not contain quotation marks in the Save as batch window
- Total number of rows is shown in the Comparison process window even when the Row filter is used to narrow down the amount of rows
- The View tab in the Object filter and Object mapping tabs is not shown even though the View option is selected in the Options tab of the New project window under the Objects to compare section
- The Project management window is opened in front of the Update window when new update is available
- The number of mapped columns is not changed until the selection is changed to another object
- The number of the columns is not changed in the Object filter for the edited object, but the number of columns is changing for other objects, when the Filter editor is applied
- "Attempt by method" error is encountered when the Refresh button is clicked for branches when the Mercurial source control system is chosen
- SQL Server Management Studio 2016 and 17 stops working when a database backup is loaded in the Data compare query window
- The title and source and destination data sources are not shown in exported reports if none of the Header options is checked under the Options tab in the New project window
- Nothing is shown at the top of the exported report when one or two header options are checked under the Options tab in the New project window

- Tables with text columns are missing in the Results panel and their number is shown as excluded in the status bar, even though they are mapped and checked for the comparison, when the Ignore case in the text data types option is checked
- The license file disappears when virtual machine is stopped and then run on Amazon AWS
- "The selected source control project does not have a corresponding folder structure for tables/views" message is shown when the Test or Finish button is clicked for the Perforce source control depot
- "Make sure that correct username and password are specified" message is shown when specifying local folder as repository for the Git source control system, which doesn't require username and password
- "The selected source control project does not have a corresponding folder structure for tables/views" message is shown when the Browse button is clicked to select a project for a Git repository hosted by Visual Studio Online

Known limitations:

- Data sources containing SQL tables without a unique clustered index cannot be compared against database backups
- The Get by label option is not retrieving label state and it uses the latest instead when using Mercurial repository
- Labels cannot be compared for the Team Foundation Server repository

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Legend

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