

ApexSQL Diff

Version 2018.x

Release Notes and Requirements

System requirements

Hardware	Dual Core 2.0 GHz CPU 3 GB memory 243 MB disk space
SQL Server	SQL Server 2005 and higher ^[1] Azure SQL Database ^[1] Amazon RDS for SQL Server ^[1]
Add-in integration	SQL Server Management Studio 2012 and higher ^[2] Visual Studio 2010 and higher ^[1]
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	Windows user account with administrative privileges See Minimum permissions required to install and use ApexSQL products See Minimum SQL Server permissions for ApexSQL Developer tools

See [Remote access for SQL Server instance](#)

^[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 Software

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 Diff	✓	✓	✓	✓	✓	✓	✓	✓	✓

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

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

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

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

Business intelligence				
	SSIS	SSRS	SSAS	Azure Analysis Services
ApexSQL Diff	✓			

^[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

Getting Started

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

Release Notes [\(release history\)](#)

Release: 2018.05.0829

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: 2018.05.0825

Date: May 31, 2019

Fixes:

- Created synchronization script does not contain necessary statements to synchronize Temporal tables between databases
- "Invalid object [dbo].[NVARCHAR]" error is encountered when invalid dependencies are checked before synchronization if script folder data source collation doesn't have mark about case insensitivity and SQL stored procedure has code where system datatypes
- Differences in source control project are not shown in the Results grid once new objects are committed and the Refresh button is clicked in ApexSQL Diff for the current comparison of the same source control project
- "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
- "Invalid object name 'XXX'" error is encountered during the execution of the synchronization script due to incorrectly ordered SQL views that contain the From no_dbo_schema.object_name statement
- Newly added objects are not ignored when a saved project file is run and the Ignore new objects option under the Options tab of the New project window is checked
- "Select a database to initiate schema comparison" message is shown in Visual Studio when a database is right-clicked and set as source or destination in Server Explorer or SQL Server Object Explorer
- "Select a database to initiate schema comparison" message is shown in SQL Server Management Studio when a database is right-clicked and set as source or destination in Object Explorer

- The Ignore check/default constraints value [icdc] for the /ita CLI switch is not working when a snapshot is compared against a database
- The folder path for saving the synchronization script under the Output step of the Synchronization wizard is not the one set as default under the Output tab in the Options window
- Default package name under the Package tab of the New project window is not loaded
- "The full-text index is not supported in Azure SQL Database" message is shown under the Summary and warnings step in the Synchronization wizard window
- "The full-text catalog is not supported in Azure SQL Database" message is shown under the Summary and warnings step in the Synchronization wizard window
- Full-text index object cannot be synchronized between two Azure SQL Database
- The application is integrated into all available SQL Server Management Studio and Visual Studio versions even though none of them were checked
- "Duplicate primary key" error is encountered when syncing tables in Azure with full recreating which contain primary key
- The uninstall confirmation message box appears when the /verysilent and /suppressmsgboxes options from CLI are used
- Visual Studio 2019 version is not loaded under the Script section when the C# solution is set as the Primary output type in the Automation script window
- The application can be integrated into any version of Visual Studio that is currently running
- "The 'ApexSQLDiff_InstPackage' package did not load correctly" error is encountered when any version of Visual Studio is run
- "The 'ApexSQLDiff_InstPackage' package did not load correctly" error is encountered when any version of SQL Server Management Studio is run
- The application cannot be integrated into any SQL Server Management Studio or Visual Studio version through the silent installation
- Missing the Save as dialog when the OK button is clicked in the C# solution options window under the Automation script window
- Missing the Save as dialog when the OK button is clicked in the Executable installer options window under the Automation script window
- The application doesn't integrate with SQL Server Management Studio 18 GA version
- The application can be integrated into any version of SQL Server Management Studio that is currently running
- Columns from the Results grid cannot be dragged and dropped, and unhidden from the Column chooser dialog
- The application cannot be uninstalled if any version of SQL Server Management Studio is running, even though the application is not integrated in it
- Different Table data types are displayed as equal in compare list when comparison is done between SQL Server and Azure database
- Column ordering differences in indexes are not detected when columns are located in the Include statement
- The application cannot be uninstalled if any version of Visual Studio is running, even though the application is not integrated in it

Date: March 12, 2019

Enhancements:

- [Visual Studio 2019 integration support](#)
- Visual Studio 2019 version option is added under the Output options step of the Synchronization wizard for the Create a C# solution and executable installer action
- CLI switches:
 - Tables with specified schemas can be filtered via the /include switch: "Schemaname.ObjectName"
 - New value for the Visual Studio /vs_ver switches: VS2019

Fixes:

- The Extend evaluation button does not open default e-mail client when clicked
- Missing information message when the Extend evaluation button is clicked and there is no default e-mail client
- The %Date% and %Time% tags are not converted to the current date and time when they are added as a part of the output file name in the /on CLI switch
- "A secure connection could not be established" message is shown when credentials are used for Git repository under the Source control wizard
- "Bitmap region is already locked" error is encountered when objects are selected in the main grid and Refresh button is used
- Randomly named project are created when an existing one is deleted from the Team Foundation Server repository
- "Some objects may not be created properly" error is encountered when object is committed from live database to the Git source control repository
- "Parse error: [Incorrect syntax near 'TABLE'] at [position: 3566, line: 92, column: 10]" error is encountered while comparing procedures that contain Truncate statement
- "Connection to project file 'C:\.\ProjectName.dtproj' failed" error is encountered while loading of SSIS project file
- Schema is shown as missing object in the Results grid, even though it exists in the destination database, if schemas from source and destination data sources have different database-level principals which own the schemas
- The generated synchronization script creates objects before creating schemas for those objects, when one of data sources is a snapshot created from Azure SQL Database
- The generated synchronization script adds a primary key in the Alter table statement even though it was already added in the previous Create table statement, when one of data sources is a snapshot created from Azure SQL Database
- Ignore comments option is not working and clears comments with other script
- Analyzing dependencies goes indefinitely when dependent objects are equal
- Missing objects are re-ordered to the bottom in the main grid when refreshing the comparison between databases
- None of the panels are shown in the main application window after updating to the latest patch

- Multiple errors are encountered during the synchronization of a database to an empty one when a snapshot is used as a source data source
- Randomly named projects are shown instead of the deleted ones, under the Choose project dialog for the Team Foundation Server repository
- Dependent Schemabinding objects cannot be changed without recreating Schemabinding object
- "Object reference not set to an instance of an object" error is encountered when comparing SSIS packages under SQL Server 2008 on Window Server 2012
- The Not for replication attribute difference is not ignored even when the Not for replication attribute of constraints, identities, foreign keys and triggers option under the Option tab is checked
- System properties are shown as differences in the Results grid even though they don't exist in loaded SSIS project deployment file
- The /synchronize switch is not generated in the Automation script window even though the Synchronize now action was chosen in the Output options step in the Synchronization wizard

Changes:

- Backup database before synchronization is now unchecked by default
- Default value for the /backup switch is set to None
- Tables with specified schemas can be included through the CLI using the /include switch
- 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

Release:	2018.03.0780
Date:	November 29, 2018

Enhancements:

- SQL Server 2019 CTP 2.0 support
- [SQL Server Management Studio 18 integration support](#)
- [High DPI and 4K resolution support](#)
- [New error handling and send logs functionality](#)
- [Improved application installer with a dark theme](#)
- [New application icon](#)
- [Save automation script as a PowerShell script](#)
- Visual Studio integration support
- [Active Directory support for:](#)
 - [Password authentication](#)
 - [Integrated authentication](#)
- 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]
 - Dependencies output [/dpo]
 - Synchronization actions output [/aco]
 - Execution results output [/ero]
 - Name of the executable installer or C# solution package [/pknm]
 - New value for the Synchronization options switch: Ignore pre-processing script failure [ippsf]

Fixes:

- Collapsed objects are expanded in the Results grid if any change is made in the Difference filter panel
- Newly added objects are not checked by default in a previously saved project file
- The inline comments are not ignored through the CLI when the /ig:icm switch is used
- The ANSI option sets the Off state in the GUI while it sets the On state in the CLI for the Set quoted_identifier statement
- All groups are collapsed in the Results grid upon the comparison or re-comparison of data sources and column sizing is changed
- The UserName folder cannot be expanded and default folder cannot be shown in the Browse window for the Synchronize now and Create a synchronization script actions in the Synchronization wizard
- The /sourcecontrol_label switch is not shown in the Batch script panel of the Save as batch window, when the Get by label option is used in the Source control wizard
- Package name tags under the Package tab of the New project window are not shown as actual server and database name by default
- Changing the column filter and refreshing the results, removes the rest of options for the selected object type from the Difference filter panel
- The View DDL for source or destination object window cannot be closed when the Esc key is pressed
- "Error details: The given path's format is not supported" error is encountered when the repository path is entered in the Project field
- The New project window under the Source control wizard cannot be closed when the Esc key is pressed
- "Some files in the C:\Users\UserName\AppData\ApexSQL\ApexSQL Diff\temp folder are read only. Overwrite?" message is shown before committing to the Team Foundation Server repository
- Sorting of options under the Difference filter panel is changed when check/uncheck all option is used

- Redundant Schema compare tab is opened in SQL Server Management Studio when the Set as destination command is clicked after the Set as source command
- "There are unsaved changes in the Object filter panel. Do you want to save changes?" message is shown when the Open button is clicked in the Object filter panel even though there were no changes in the Object filter panel
- SSIS comparison results are not shown in the HTML interactive report when everything is equal and the equal type is checked in report options
- Sorting of objects under the Results grid is changed when check/uncheck all option is used
- "Recompare after synchronization" option is not working when the Create a synchronization script action is chosen in the Synchronization wizard
- Name of data sources from the loaded recent project is shown in the Project file text field under the Save as batch window when a recent project is opened and then the New project is initiated
- "Method not found: 'ApexSql.Common.Dependency.DatabaseInfo[]'" error is encountered in the Dependencies step of the Synchronization wizard
- Project file is shown in the Recent projects list even after the Delete or Remove from list commands were used
- The Test button under the Output tab of the Options window does not open SQL Server Management Studio with default arguments
- "Parsing errors: Parse error: [Incorrect syntax near 'INDEX'] at [position: 717, line: 35, column: 54]" error is encountered during the comparison of functions in script folder or source control repository data sources that contains the Nolock statement
- Varchar data type shows incorrect (0) length in table objects when exported into HTML report
- "The Select permission was denied on the object 'sql_logins', database 'master', schema 'sys'" error is encountered when the Compare button is clicked to compare two Azure SQL Databases
- "Object reference not set to an instance of an object" error is encountered during the comparison of objects in script folder or source control repository data sources that contain the Lag or Lead window functions
- "The server principal "ServerName" is not able to access the database "master" under the current security context" error is encountered when login/user who has no permissions for master database on Azure is trying to select database from dropdown list
- "Parse error: [Incorrect syntax near 'TABLOCKX'] at [position: 1564, line: 47, column: 98]" error is encountered during the comparison of procedure in script folder or source control repository data sources that contains the Tablockx keyword
- Data sources information, objects and script differences are mixed up in the main application window upon the source and destination data sources were swapped in the Synchronization wizard and the re-comparison is finished
- "Object reference not set to an instance of an object" error is encountered when the only project from the Recent list in the Project management window is removed
- Equal graph tables are shown as different in the Results grid
- "Incorrect syntax near the keyword 'AS'" error is encountered for graph table that contains the On [Primary] file group
- "Cannot drop or disable index or constraint 'GRAPH_UNIQUE_INDEX_357C3BC6E0D9440CB767CDEF1880E3F9' because the last unique

index or constraint on '\$edge_id' cannot be dropped or disabled" error is encountered when system index is dropped

- The last used collapse/expand setting is not remembered in the Results grid
- The object is synchronized from one database to another one and shown as equal, even though the selected object exists in the destination database
- Datetime2 data types, with non-default scale setting, are shown as different after the synchronization, even though there are no differences, when the script folder is used as data source
- The "Include dependent objects" option is checked in the Synchronization wizard even though the "Include dependent objects" option is unchecked under the Synchronization option section in the Options tab of the New project window
- Variables are not ignored during the SSIS comparison even when the "Variables" option is checked to be ignored under the Options tab of the New project window
- Variables are not removed from the Results grid after being unchecked in the Package difference filter panel
- Objects from a database are not committed to the Git source control repository when using the CLI
- Objects are not selected in a saved project when using Open button in the Project management window
- Redundant ApexSQL Diff menu is shown in SQL Server Management Studio
- Position and size of panels in the main application window are not remembered after closing the application
- The application goes into the not responding state for a short period of time after creating the synchronization script when there are 40,000+ objects
- "A network-related or instance-specific error occurred while establishing a connection to SQL Server" error is encountered when the Compare now button is clicked in the Project management window for a selected project file
- Custom sub-folder names cannot be set for object types in the Mapping configuration window
- Script folder path is not remembered in the Data sources tab of the New project window after the comparison when the Edit button from the Home tab is clicked
- "No differences were detected. There are no objects to synchronize" incomplete message is shown when using CLI to synchronize objects
- Incorrect order of dependent objects is generated in synchronization script when synchronizing views with the With nolock inner join clause
- "The specified folder does not contain the appropriate folder structure" message is shown when a selected source control project contains the Assemblies folder
- 'Parse error: [Incorrect syntax near 'c'] at [position: 268, line: 16, column: 47]' error is encountered in the CLI when parsing stored procedure that contains the Nolock keyword
- "Parse error: [Incorrect syntax near 'at']; [Incorrect syntax near 'ON']; [Incorrect syntax near 'INNER']; [Incorrect syntax near '(']" errors are encountered when comparing procedures and views with the At identifier as keyword
- "Parsing errors: Parse error: [Incorrect syntax near '[PRIMARY]'] at [position: 585, line: 14, column: 29]" error is encountered while comparing a table that contains the Textimage_on [Primary] filegroup

- "Parsing errors: Parse error: [Incorrect syntax near '('] at [position: 837, line: 22, column: 6]" error is encountered during the re-comparison of a database and script folder due to incorrectly created script in a script folder data source with two With statements for temporal and memory optimized table
- False differences are shown in the Results grid when comparing indexes and dataspace for memory optimized tables in a database against a script folder data source

Changes:

- Save as batch is now Automation script
- Aliases for the /excel_report_options and /excel_report_options2 CLI switches are now /exco and /exco2

Release: 2018.02.0660

Date: July 13, 2018

Fixes:

- "The Community edition can connect only SQL Server Express, Azure SQL Database and Amazon RDS for SQL Server" message is shown upon start of the comparison process, even though the entered credentials are for connecting to Azure SQL Database
- "The Community edition can connect only SQL Server Express, Azure SQL Database and Amazon RDS for SQL Server" message is shown upon start of the comparison process, even though the entered credentials are for connecting to Amazon RDS for SQL Server database
- "The Community edition can connect only SQL Server Express, Azure SQL Database and Amazon RDS for SQL Server" message is shown upon start of the comparison process, even though snapshots were selected for the comparison
- "The Select permission was denied on the object 'sql_logins', database 'master', schema 'sys'" error is encountered during the comparison of Azure SQL Database
- The saved Object filter settings are not applied when loaded in the Object filter panel in the main application window
- The Object filter panel settings are not applied when the data sources of the current project are edited
- "Parsing errors: Parse error: [Incorrect syntax near 'NOEXPAND'] at [position: 857, line: 22, column: 34]" error is encountered while comparing database with script folder which contains the script with Noexpand in it
- "Parsing errors: Parse error: [Incorrect syntax near 'tv_products'] at [position: 8795, line: 150, column: 32]" error is encountered while comparing a source control project with a database that contain a procedure with the With (nolock) statement

Release: 2018.01.0646

Date: June 13, 2018

Enhancements:

- Export dependencies, actions, warnings and executions results into 6 different output types:
 - Text file (*.txt)
 - Web page (*.html)
 - PDF (*.pdf)
 - CSV (Comma delimited) (*.csv)
 - Excel workbook (*.xlsx)
 - XML file (*.xml)
- [Visual themes](#)
- [Visual Language Dictionary for Visual Studio for iconography and other imagery concepts applied](#)
- [New UI features and functionality](#)
- SQL Server Management Studio 17 version is added as an option to open the synchronization script in the Options window under the Output tab
- SSIS package store for SQL Server 2017 is added under the Add integration services packages window
- The dataspace [ids] and data compression [idc] attribute values are added for the /ignore_table_attributes CLI switch

Fixes:

- "Could not load file or assembly" error is encountered when the Browse button is clicked to select a project for a Git repository hosted by Visual Studio Online
- The application freezes when the package comparison is stopped during the comparison process
- "The following URL is invalid:git@bitbucket.org:UserName/RepositoryName.git" error is encountered when the comparison is initiated to compare a Git repository using SSH key with any other data source
- "Parsing errors: 'Parse error: [Incorrect syntax near 'AT']'" error is encountered during the comparison of a objects that contain the At alias in the script
- The branch name is not loaded and it's reverted to the master branch when a saved project file is loaded
- Wrong return code - 16 is shown when the provided path for the output file does not exist
- The silent installer is stopped and the message is shown when the application needs to download and install .NET Framework, even when the /verysilent switch is used
- The help is not initiated when the F1 key is pressed
- Missing backup options for creating rollback script and snapshot in the Save as batch window next to the Synchronize now button when destination is database, script folder and source control
- The application is loading one package more than 30 minutes, if only one package from SSISDB Catalog is selected that has more than 100 packages in storage
- False differences are shown for the Value properties of the StartingEvent elements in the Results grid for SSIS comparison

- Incorrect If statement is created in the synchronization script when synchronizing database extended properties and the Check for object existence with If exists/If not exists option is checked
- Missing the Last value for the /backup_set1 and /backup_set2 switch value to choose the last backup set
- "Unexpected error code 1" error is encountered when generating a synchronization script in CLI, but the folder where a script should be created does not exist
- Redundant log files are attached in e-mail when the Send logs command is clicked in SQL Server Management Studio
- "The project file requires an ".axds" extension" message is shown in the CLI when a wrong extension is specified for the /dsn switch
- "ALTER TABLE ALTER COLUMN start failed because one or more objects access this column" message is shown in the Results window due to not recognizing constraint which is dependent on table the columns which are being altered
- Procedure [dbo].[ProcedureName] references an invalid object [INFORMATION_SCHEMA].[TABLES] error is encountered during the synchronization when a procedure references a system table and the Ignore system objects option is checked/added as a switch value
- "Unhandled exception has occurred in your application" error is encountered when the broken snapshot file is loaded as a data source
- Recently created projects for SSIS comparison are not shown in the Recent projects list
- Wrong return code (2 - Invalid switch) is shown when a wrong value is set for the /compatibility_level switch
- "Comparison has failed. Make sure that username and password are correct" error is encountered when comparing two Git repositories hosted on Bitbucket
- URL and password are remembered in the SSH tab when setting up source control under the HTTP tab in the Source control wizard
- "The following URL is invalid" error is encountered when setting up source control for comparison using the SSH protocol
- "The comparison has failed" error is encountered when comparing Team Foundation repository hosted on Azure DevOps with a Git repository hosted on Bitbucket
- "The given path's format is not supported" error is encountered when not supported path is provided for the project field in the Source control setup wizard
- The Windows taskbar is not shown on hover, when the Auto-hide the taskbar option is checked and the application is maximized
- Wrong backup options are shown in the Save as batch window next to the Synchronize now button when destination is script folder or source control
- Export will overwrite the files in this folder. Continue the export? message is shown when exporting database for the first time into the Team Foundation Server repository
- The cursor is not automatically shown in the Find field of the Find and Replace windows in the Integrated editor
- "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
- The Tab key is not working properly when switching between options in all windows
- The standard Windows keyboard shortcuts for manipulating application window don't work

- Errors are shown in the execution results when synchronizing the AdventureWorks2016 database with an empty database
- Inability to create non-existing folder where file(s) will be exported via the CLI
- The External difference viewer window is not closed when the Esc key is pressed
- The Options window is not closed when the Esc key is pressed
- The Filter editor window is not closed when the Esc key is pressed
- The Add integration service packages window is not closed when the Esc key is pressed

Changes:

- The application now requires Microsoft .NET framework 4.7.1
- Windows Vista and Windows Server 2008 are no longer supported
- The /sync_options CLI switch with its values is replaced with the /destination_to_source CLI switch