# ApexSQL Generate

Version 2019.x

Release Notes and Requirements

## System requirements

| Hardware | Dual Core 2.0 GHz CPU<br>3 GB memory<br>104 MB disk space |
|---|---|
| SQL Server | SQL Server 2005 and higher [1]<br>Azure SQL Database [1]<br>Amazon RDS for SQL Server [1] |
| Add-in integration | SQL 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 |
| Permissions and additional requirements | Windows user account with administrative privileges<br><br>See Minimum permissions required to install and use ApexSQL products<br><br>See Minimum SQL Server permissions for ApexSQL Developer tools<br><br>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

# 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 [3] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 2017 | | 2019 CTP 3 | |
| | 2005 | 2008 | 2012 | 2014 | 2016 | Windows | Linux [2] | Windows | Linux [2] |
| ApexSQL Generate | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |

| SQL Server edition [3] | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Azure SQL Database | | Amazon RDS for SQL Server |
| | Express | Standard | Enterprise | Single Database, Elastic Pool | Managed Instance | |
| ApexSQL Generate | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ |

| SQL Server Management Studio add-in integration |
|---|

| | 2012 | 2014 | 2016 | 17 | 18 |
|---|:---:|:---:|:---:|:---:|:---:|
| ApexSQL Generate | ✔ | ✔ | ✔ | ✔ | ✔ |

[2] Tested on Ubuntu 16.04

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

# 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: | 2019.01.0338 |
| Date: | December 10, 2019 |

## Enhancements:

- SQL Server 2019 support
- Save automation script as a PowerShell script
- Preview original and generated data
- Generate same row number as column has
- Backup database before the data generation

## Fixes:

- "Object reference not set to an instance of an object" error is encountered upon starting the application and the Open last project option is set in the Options window
- The SQL database connection is not established when a project file is used with the CLI execution
- "The ApexSQL Generate_InstPackage package did not load correctly" error is encountered when SQL Server Management Studio 2012 is started and the add-in was previously integrate in it
- Missing the Active Directory authentication under the Alias connection window
- "Cannot open the SQL database" requested by the login. The login failed" error is encountered when trying to connect to an offline database in the Setup connection window
- A negative value can be entered in the Column index box for the CSV file type

- "Invalid parameter: Random(8-12)" message is shown in the Messages panel when minimum and maximum values are changed for the tinyint data type in the Random generator panel
- Values are not applied on a column when using the Regular expression generator if data type is set to bit

| | |
|---|---|
| Release: | 2018.04.0320 |
| 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: | 2018.04.0315 |
| Date: | May 30, 2019 |

# Enhancements:

- Active Directory support for:
  - Password authentication
  - Integrated authentication
  - Universal with MFA support authentication

# Fixes:

- The application doesn't integrate with SQL Server Management Studio 18 GA version
- The Preview shows twelve digits before and four after the comma, when the Random generator is used in the Generator panel, for the column that is defined as Decimal (13,0)
- The Directory generator under the Predefined type in the Generator panel inserts <empty> values when the Include subfolders option is checked
- When the Allow null option in generator is checked and the Fit grid columns to window is selected as the way of displaying columns in the Data Preview panel, once % of null value is changed it restarts to Auto-size grid columns
- "Failed to get a database list" error is encountered when the drop-down list for the SQL database is clicked in the New project window after reinstalling the application
- Wrong path is opened for the output file in the Save as batch window when the Browse button is clicked
- The Allow null option is checked by default for each column, even though it's unchecked in the Generator panel for a database and table
- "Loop option is being checked so unique option cannot be used" message is shown four times in a row in the main application grid when trying to check the Unique option, while the Loop option is already checked in the Generator panel

- The application goes in to the non-responding state when the remote connection is set and saved under the Setup connection dialog in the Alias management window
- Slowness in application responsiveness is encountered when the Messages, Preview and Dependencies panels are closed in the main application grid
- The application goes into non-responding state when two arithmetic operators are used in the Regular expression generator in the Generator panel
- Preview panel in the main application grid is not showing generated SQL data when SQL database is refreshed
- The application is going into non-responding state when switching to alias connection tab under the SQL query generator in the Generator panel
- The login password is remembered in the saved project file, even if the Remember password option is not checked under the Data source tab in the New project window
- The Random generator in the Generator panel is used instead of the Predefined generator for the Surname column in the SQL table
- The Random generator in the Generator panel is used instead of the Predefined generator for the Cell number column in the SQL table
- The Random generator in the Generator panel is used instead of the Predefined generator for the Mobile number column in the SQL table
- The Random generator in the Generator panel is used instead of the Predefined generator for the Home number column in the SQL table
- The amount of test SQL data cannot be inserted into the SQL database, if the Time execution in the Generator panel is set below 15 seconds

| Release: | 2018.03.0303 |
|---|---|
| Date: | March 13, 2019 |

# Fixes:

- "There is no row at position 0" error is encountered when the Add button is used multiple times under the Weighted list (nested) generator in the Generator panel
- "Object reference not set to an instance of an object" error is encountered when any value is added under the Weighted list (ranged) generator in the Generator panel
- "Object reference not set to an instance of an object" error is encountered when adding values for the VarBinary data type under the Weighted list (regex) generator in the Generator panel
- The application goes into non responding state when SQL table generator is used in the Generator panel
- The original value is restored, if one of the two labels is modified under the Weighted list generator in the Generator panel
- Drop-down menu for the column section is not showing the correct columns from provided SQL table when using Foreign key (manual) generator in the Generator panel
- The percent value remains 50% even if the new weight is applied under the Weighted list (nested) generator in the Generator panel
- Selected generator is not properly loaded from the list under the User defined generator in the Generator panel

- Item value column under the Weighted list (nested) in the Generator panel is not editable
- "Object reference not set to an instance of an object" error is encountered when any value is entered for the Start date box under the Incremental generator in the Generator panel
- Incremental generator values in the Generator panel are not implemented into the database when the generation process is done
- Incremental generator under the Generator panel is not saving the values entered for the current column when switching between current and other columns
- Values for data type VarBinary and Binary are not saved under the Incremental generator in the Generator panel when a different column is selected from the current one
- Incremental generator under the Generator panel for data types Date, DateTime, SmallDate, Time, DateTimeOffset, Binary, VarBinary does not save the Increment value when project is saved and reopened
- The application goes into non responding state when re-establishing the connection under the Generator panel
- Cross column AddMonths generator under the Generator panel does not work in conjunction with another column having Incremental date
- Cross column calculations generator under the Generator panel does not work with numeric data types
- "Cross thread operation detected" error is encountered when randomize data by seed value is changed in the SQL table under the Random generator in the Generator panel

| Release: | 2018.02.0291 |
|---|---|
| Date: | January 31, 2019 |

## Enhancements:

- SQL Server 2019 CTP 2.0 support
- SQL Server Management Studio 18 integration support
- New application icon
- New error handling and send logs functionality
- Improved application installer with a dark theme

## Fixes:

- "Cross-thread operation not valid: Control 'MainForm' accessed from a thread other than the thread it was created on" error is encountered while when column generation settings are changed and the Generate button is used
- "Object reference not set to an instance of an object." error is encountered when connect button to the SQL query generator is used
- "The user does not have permission to perform this action" error is encountered when trying to connect to a remote server in the Table mapping feature for the second time during the session
- Cross-column data generation is not working when using datetime cross reference with value addition

- Inserting rows into tables using the Generate button inserts only default value no matter if a change is made under the Generator panel
- Server and Database fields are empty in the SQL table or view tab under the Table mapping window
- Username and password are not saved for SQL Server authentication for the created alias
- The information message is missing when data is not generated when only two tables with multiple constraints are selected from the entire database
- Missing feature that will avoid conflicts between existing data and the ones that are being generated
- The information message is missing when trying to generate more than maximum possible unique values based on user settings

# Changes:

- The application now requires Microsoft .NET framework 4.7.2

| | |
|---|---|
| Release: | 2018.01.0263 |
| Date: | July 26, 2018 |

# 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
- CLI there are no empty tables in database return code [104]
- CLI switches:
  - Output elements [/oe]
  - Loop [/lp]

# Fixes:

- "No tables are found in database 'master'" message is shown when trying to load previously saved project where SQL script was used as source of metadata
- The latest loaded project file is not loaded when project where SQL script is used as data source is loaded, and then another saved project is opened, only the title name of the project changes
- "Value cannot be null" error is encountered when loading saved project is being canceled in the process of loading and the Generate button is clicked
- Data is not loaded in the Table mapping window when the same table is selected from another database
- Nothing is exported when one table is checked and the export to CSV is selected
- Nothing is exported when one table is checked and the export to JSON is selected
- Missing the Add value button for the Weighted list (regex) generator

- SQL Server login information are not remembered and the Authentication type is changed to Windows authentication, when a project is saved with SQL Server login information
- "A previous version of ApexSQL Generate was found" message is shown when upgrading to a newer version and the Yes button needs to be clicked multiple times to continue the installation
- "Object reference not set to an instance of an object" error is encountered when the Column selection is clicked after loading another database
- Data from views is not loaded when selected in the Table mapping window
- "Object reference not set to an instance of an object" error is encountered when the Remove button is clicked while saving the Shared generator for IronPython
- "The SELECT permission was denied on the object 'table_types', database 'mssqlsystemresource', schema 'sys'" error is encountered while loading a database from Amazon RDS for SQL Server
- The application freezes when bracket is introduced in the Expression once Cross column generator is selected and calculations are set
- The Excel preview panel is empty and it doesn't contain any test data when its button is clicked in the View tab
- "Object reference not set to an instance of an object" error is encountered when an expression is inserted in the Weighted list (regex) generator and the Delete button is clicked to remove the expression from the list
- "Index was out of range" error is encountered when exporting table to CSV and opening it through the CSV file tab in the Table mapping window, and then doing the same export to CSV of the same table and opening it again
- "Object reference not set to an instance of an object" error is encountered when selecting object inside the table without checking it, and then using the Cross column generator and switching to Calculations
- "Requested value 'value' was not found" error is encountered when a value is typed into the Category or Type list for the Predefined generator
- SQL Server name is not remembered when the current project is edited
- Missing CLI switches in the Save as batch window for all options that were set in the current project
- "Object reference not set to an instance of an object" error is encountered when SQL script is loaded as a data source and then the Edit button is clicked
- "Object reference not set to an instance of an object" error is encountered when SQL script is selected as a data source and the Table mapping command is clicked from the right-click context menu
- "Object reference not set to an instance of an object" error message is encountered when loading database for the second time from another server
- "String must be exactly one character long" error is encountered when value is inserted into the CSV delimiter text box
- "Path to the SQL script file is invalid. Choose a valid path" message is shown when choosing SQL script as source of metadata
- Wrong data source name is shown in the loading information message when using SQL script as a data source

- "Path to the SQL script file is invalid. Choose a valid path" message is shown when SQL script is loaded as a data source and then the New project is created, where the source is defined to be a database
- The Table mapping feature can be initiated from the right-click context menu in the main grid even when the selected table is unchecked
- A database is not loaded at the first click on the Load button when alias is used for that database
- Tables are not shown after connecting to a database for the SQL table or view generator until connection to another database is established and then connect to the first one
- "Object reference not set to an instance of an object" error is encountered when opening a saved project, clicking on table to preview it and then going to Edit the project and selecting different database with same schema
- Duplicated rows are shown in the Table mapping window when connected to a database
- When the Create one SQL script per object option is selected in the Script tab of the Options window and the OK button is clicked, the setting is not saved and it's reverted back to the Create one SQL script option
- Missing the SQL script file name when the Create one SQL script granularity option is used to export to SQL
- The given time frame is not applied in the Test data preview for the datetimeoffset data type when assigned with the Random generator
- Dependent objects turn into unchecked ones, when the selection is moved away and brought back to a table for which dependent objects where checked
- When a different Category is selected the last Type that is selected stays the same in the Predefined generator type
- The Seed option should not allow users to add negative numbers, when using the Randomize data by option in the Random type generator
- "Index was out of range. Must be non-negative and less than the size of the collection" error is encountered when using Export to Excel and selecting random drive to export to
- "Could not find file" message encountered when using Export to Excel and creating a new folder to save on desktop
- The application goes into the Not responding state when the Dependent objects panel is turned on from the View tab while the Wide World Importers database is loaded
- The Export window shows information that multiple SQL scripts are generated even though only one SQL script is generated
- The Windows taskbar is not shown on hover, when the Auto-hide the taskbar option is checked, and the application is maximized
- Column generators are used for column names under the Table mapping feature when CSV file is used
- The application is not automatically closed upon finished update process which causes the installation process to be stopped
- The application is integrated in all available SQL Server Management Studio versions even into the ones that were not checked during the installation process
- "Loop option is checked, so Unique option cannot be used" message is shown multiple times when both Unique and Loop options are checked and both options stay checked
- The User defined generator is not shown in the generator list when shared user defined generators are loaded

- Missing the Save as window when saving the user defined generator
- Date and time and Granularity SQL script export options are not properly set as CLI switches in the Save as batch window causing error in the batch script
- None of the checked database options are shown as CLI switches in the batch script
- Incontinences between Live database and SQL script Community edition notices
- "The alias doesn't exist anymore" warning message is encountered when using the Table mapping feature on SQL Azure Database and connecting to SQL Azure Database
- "Cannot connect to 'DatabaseName'" message is shown when a project file is loaded from the Recent project and the window is closed without prompting the user to enter the password
- The SQL Server Management Studio stops working when Generate test data option is used on a SQL Server Analysis Services instance
- 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 application add-in update window is not shown when SQL Server Management Studio is run and new update is available

# Changes:

- The application now requires Microsoft .NET framework 4.7.1
- Windows Vista and Windows Server 2008 are no longer supported
- Header options under the Script tab in the Options window are now unchecked by default
- The Comments and Print statements options under the Script tab in the Options window are now checked by default
- CLI switch Legal tag [/lt] is now Legal [/leg] switch
- CLI switch Author name [/an] is now Author [/auth] switch
- CLI switches Date time [/dt], Comments [/cmt] and Print statements [/pt] are now values [dt|cmt|pt] of the Output elements [/oe] switch