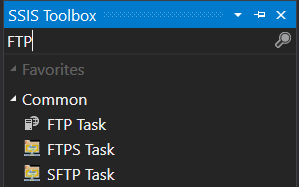
Secure File Transfer Protocol (SFTP | FTPS) SSIS Task

Purpose: This tool extends SQL Server Data Tools SSIS capabilities by allowing a user to introduce this task into a deployable package. The tool itself can be configured to download or upload individual files, or folders to and from an FTP server.

Install Requirements: Installation of this tool requires a PC that has SQL Server 2012 or later installed. As well as the Global Assembly Cache utility tool available (located at C:\Program Files (x86)\Microsoft SDKs\Windows\v10.0A\bin\NETFX 4.8 Tools).

The installer must be run as an Admin. It will check that the previous requirements are meet on the local machine. If an element is not present before installation the installer will output which element is not present and not proceed with installation.

Installation: Executing the Installer as Admin will generate an installation folder with the necessary files on at C:\. Files and directories will be created within the SQL Server 32 and 64bit program files. A batch script will run the GAC utility tool to install each dll to the GAC. After completion of file creating and GAC installation. A completion prompt will be available. Allowing the user to press “Y” to retain the installation files for reference.

Usage: After installation. This tool is available to use within Visual Studio Integration Services Projects and is in the Common section of the SSIS toolbox (right click the Control Flow background to access SSIS toolbox).

Drag and drop the SFTP | FTPS Task onto the control flow to add it to project. To the task’s properties. Double, click the task to access a GUI editor. Or else right click the task and select its properties.

Graphical user interface, text, application, email

Description automatically generatedThe Task properties has its fields set to typical default values for convenience. The label for each field can be hovered over to view a tooltip about the field. As well as further examples and explanations available by pressing the Help button on the Task Editor GUI. Save changes by pressing Done or discard changes by pressing Cancel.

Once the Task is configured. Press the start button on the top bar of Visual Studio. If problems occur or the Task has improper configuration values. Errors will be displayed to the user or may be in the execution results tab of the package.

Code Structure: The SFTP | FTPS task Visual Studio solutions consist of three class libraries and a console application.

Library one contains the logic and validation for the Task.

* Inherits from the SQL Server Dts Runtime Task class. Allowing it to be recognized by Visual Studio as an SSIS Task.
* Using WinSCP dll to perform the actual file transfers.
* Field values are for errors and warnings. Properties are for WinSCP session creation.
* ValidateProperties() checks values in the task properties are not null or improper.
* Validate() tests the intended connection is valid.
* Execute() Creates WinSCP session, performs transfer, and outputs log files.

Library two contains the task editor GUI for the SSIS Task defined in the library one.

* Uses WinForms to create Task Editor window and Help window.
* Communicates with library one using a TaskHost.
* TaskHost provides properties values into MainForm fields. And allows task properties values to be changed and updated from MainForm.

Library three contains the logic for creating the log files that are generated each time a transfer occurs.

* Long log file is generated by WinSCP.
* Formatted log file is created by parsing information from WinSCP XML log file.

Console application is a standalone application from the SSIS Task. It is the installer for the Task.

* Checks SQL Server and GAC are present on local PC. Verifies application was run as Admin before proceeding with install.
* Writes installation folder to C drive.
* VerifyAndInstall() writes installation files into their proper directories.
* Runs batch script. Batch script uses GAC util to install dlls.

File List:

* Task.dll (Contains Task logic. Must be installed in GAC and located in DTS/Task)
* TaskUI.dll (Contains Task UI. Must be installed in GAC and located in DTS/Task)
* Task\_Install.exe (Deploys and installs dlls on machine)
* SecureFTP (Contains solution for SFTP Task its UI and installer)
* FTP\_Secure (Contains solution for FTPS Task its UI and installer)