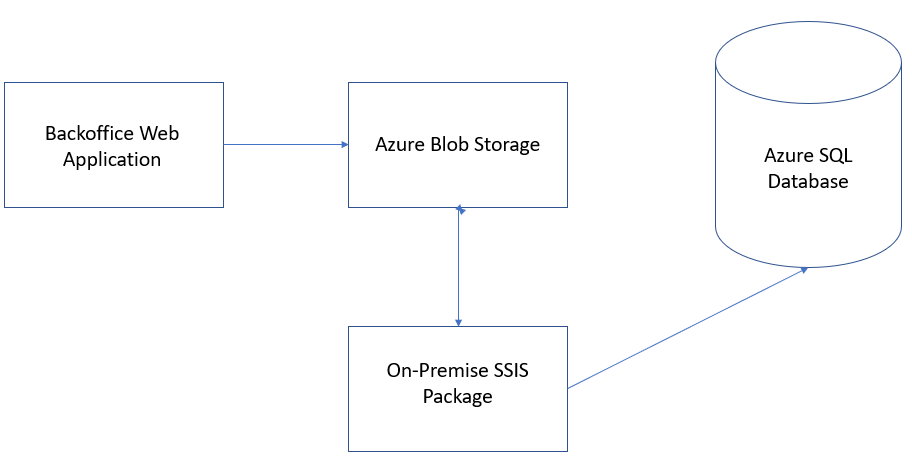
# Create a Hybrid Environment for SSIS Development

##### Problem

I am starting a new data warehousing project for a new client where I will use SQL Server Integration Services (SSIS) for the Extract, Transform and Load (ETL) operations. The client wants to create a hybrid environment for development where I will only install SQL Server Data Tools (SSDT) and SQL Server Management Studio (SSMS) on my laptop. The goal is to leverage Azure for file storage and the SQL Server database. Since this is a development environment, I will use Azure SQL Database for my staging and data warehouse databases. Ultimately my client wants to transition this ETL application to Azure Data Factory [CHANGE TO LINK] at some point in the future. Can you walk me through the steps to accomplish this?

##### Solution

The following diagram shows the simple solution to be built in this tip:



The main points are:

* The Backoffice Web Application writes pipe-delimited files to Azure Blob Storage on a daily basis for the various types of transactions that are processed
* The On-Premise SSIS package reads the pipe-delimited files from Azure Blob Storage and inserts the records into staging tables in the Azure SQL Database
* This tip will read 1 pipe-delimited file from Azure Storage and insert the records into a single staging table in the Azure SQL Database

## Prerequisites

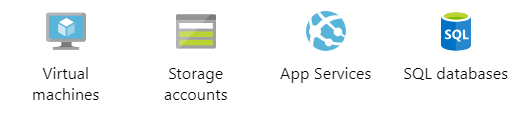
There are a couple of things that we need to take care of before we walk through building the on-premise SSIS package:

* Azure Subscription
* Azure Storage Account
* Azure SQL Database
* SQL Server Data Tools
* Azure Feature Pack for SQL Server Integration Services (SSIS)
* SQL Server Management Studio

I will provide a brief description of the setup steps assuming that you are starting from scratch.

#### Azure Subscription

Go to <https://azure.microsoft.com/> and setup an account. You can probably get a free subscription for a period of time or sign up for a pay-as-you-go plan. After you have an Azure Subscription, go to <https://portal.azure.com/> and sign in. You will see the following on the home page (just the relevant portion of the page is shown):



#### Azure Storage Account

Click on the Storage accounts icon on the Azure Home Page shown above to create an Azure Storage Account. Follow the steps in [Create a storage account](https://docs.microsoft.com/en-us/azure/storage/common/storage-quickstart-create-account?tabs=azure-portal) to get your storage account created.

#### Azure SQL Database

Click on the SQL databases icon on the Azure Home Page shown above to create an Azure SQL Database. Follow the steps in [Quickstart: Create a single database in Azure SQL Database using the Azure portal](https://docs.microsoft.com/en-us/azure/sql-database/sql-database-single-database-get-started) to get your Azure SQL Database created.

#### SQL Server Data Tools

#### Azure Feature Pack for SSIS

Download and install the [Azure Feature Pack for SSIS](https://docs.microsoft.com/en-us/sql/integration-services/azure-feature-pack-for-integration-services-ssis?view=sql-server-2017) which includes a handful of components for working with Azure from SSIS.

#### SQL Server Management Studio

## File Management

I also need a folder where CSV files will be dropped and retrieved for ETL processing. My plan is to use Azure files for the “drop” folder.

To use this file as a template directly in Word, save the file to Root\Users\Your\_Profile\Documents\Custom Office Templates. Then when you open Word you can access the file as a Personal Theme.

For the file name of your tip, do not save with any spaces. Please use dashes instead of spaces.

For any long scripts, backups, SSRS Reports, Project files, etc. Please save them as an \*.zip file and submit them with this file.

Images no longer need to be saved as separate files.

## Tip Formatting

In terms of formatting, use the Emphasis and Strong Styles in the Home ribbon.

For URLs, highlight the text, right click on the text and select the Hyperlink option. In the interface that loads, enter the URL in the Address field.

## Image Example

Save the image directly into this document, do not save the image files separately.

Click on each image and then click on the Image Styles in the Home ribbon to properly mark the image.

Images need to be 7.5 inches wide or less.

Add a title to each image by right clicking on the image and select Format Picture. On the Format Text Effects interface select the Layout & Properties option. Then click on Alt Text to enter the Title and Description.



## Table Example

If a table is needed in your tip, please use the table below as a starting point and adjust the rows and columns by right clicking on the table then selecting the Insert or Delete options.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## Code Example

Once you have your code completed in Management Studio. Copy and paste it into this file and mark the section as a Code Style in the Home ribbon.

For a new line, use the Shift + Enter to go to a new line.

Do not use Font Styles for code colors. This will be handled by the style sheet for T-SQL code.

SELECT T.\*, A.\*   
FROM dbo.TestT T  
INNER JOIN dbo.TestA A  
ON T.ID = A.ID  
WHERE T.Column1 = 'MSSQLTips'  
GO

##### Next Steps

* Please outline the next steps for the reader to implement the tip.
* Reference as many existing tips as possible that the reader should review.