Extracting Data from SAP ECC

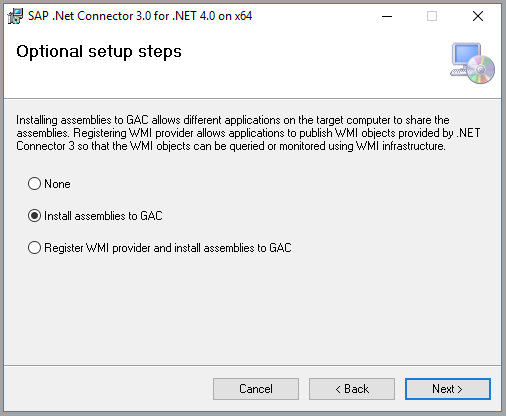
using Azure Data Factory Sap Table Connector

# Prerequisites:

1. Download the Private self-Hosted IR from [Here](https://wenbofdemo.blob.core.windows.net/sapselfir/saptablepreview/IntegrationRuntime_3.15.7004.17%20(64-bit).msi?st=2019-03-14T08%3A12%3A54Z&se=2019-04-15T08%3A12%3A00Z&sp=rl&sv=2017-07-29&sr=b&sig=MYsoAmBclWUbQVll09UsT7DG%2FvgUVYGO%2BGsskVYbK%2BM%3D)[[1]](#footnote-1)
2. Supported Version: SAP products on Netweaver version 7.01 or higher (in a recent SAP Support Package Stack released after the year 2015).
3. SAP user needs to have following permissions:
   1. Authorization for RFC and SAP BW.
   2. Permissions to the “Execute” Activity of Authorization Object “S\_SDSAUTH”.
4. [download the SAP .NET Connector 3.0](https://support.sap.com/en/product/connectors/msnet.html)  from SAP’s website using the following link. Please use the 64-bit one since our self-hosted IR only has 64 bit.

[SAP .NET Connector 3.0](https://support.sap.com/en/product/connectors/msnet.html)

1. Install the Sap .NET Connector 3.0 on the same machine as where the self-hosted IR is installed. When installing, in the optional setup steps window, please make sure you select the Install Assemblies to GAC option as shown in the following image.



# Private Entry URL of ADF Portal for SapTable Preview

Go to Author & Monitor of the Data Factory, append the flag as below into the url of the ADF authoring page.

&feature.saptable=true

//the URl will look like below:

https://ms-adf.azure.com/authoring/pipeline/pipeline1?factory=%2Fsubscriptions%<xxxxxxxx>%2FresourceGroups%2F<xxxxxxx>%2Fproviders%2FMicrosoft.DataFactory%2Ffactories%2F<xxxxxx>&feature.saptable=true

# Payload Definition

**SapTable Linked service Properties**

|  |  |  |
| --- | --- | --- |
| **Property** | **Description** | **Required** |
| type | The type property must be set to SapTable. | Yes |
| server | Name of the server on which the SAP instance resides. | Yes |
| systemNumber | System number of the SAP system. Allowed value: two-digit decimal number represented as a string. | Yes |
| clientId | Client number of the system. Allowed value: three-digit decimal number represented as a string. | Yes |
| language | Language that the system uses. By default, it is EN for English. | No |
| userName | The user name used in Basic authentication type. | Yes |
| password | The password used in Basic authentication type. | Yes |
| connectVia | The [Integration Runtime](https://docs.microsoft.com/en-us/azure/data-factory/concepts-integration-runtime) to be used to connect to the data store.  A self-hosted Integration Runtime is required for this connector. | Yes |

**SapTableResource Dataset Properties**

|  |  |  |
| --- | --- | --- |
| **Property** | **Description** | **Required** |
| type | The type property must be set to SapTableResource. | Yes |
| tableName | The name of the SAP Table. | Yes |

**SapTableSource Properties**

|  |  |  |
| --- | --- | --- |
| **Property** | **Description** | **Required** |
| type | The type property must be set to SapTableSource. | Yes |
| rowCount | The number of rows to be retrieved. | No |
| rowSkips | The number of rows that will be skipped. | No |
| rfcTableFields | The fields of the SAP table that will be retrieved. For example, “column0, column1”. | No |
| rfcTableOptions | The options for the filtering of the SAP Table. For example, “COLUMN0 EQ ‘SOME VALUE’” | No |

# Coming Enhancement

since there  is performance latency brought by reading batch after batch when splitting the whole table by hard-coded row count, I will provide the partition options such as below for you to split the table so that the data can be read by partitions. It can also support read multiple partitions in parallel. Will update once it is ready for you to try out. Please stay tuned.

There are four partition options you can choose:

SapPartitionOnInt

SapPartitionOnCalendarYear

SapPartitionOnCalendarMonth

SapPartitionOnCalendarDate

|  |  |
| --- | --- |
| Properties | Description |
| partitionColumnName | The name of the column that will be used for proceeding range partitioning. |
| partitionUpperBound | The maximum value of column specificed in partitionColumnName that will be used for proceeding range partitioning. |
| partitionLowerBound | The minimum value of column specificed in partitionColumnName that will be used for proceeding range partitioning. |
| maxPartitionsNumber | The maximum value of partitions the table will be splitted into.  Better to keep the average row count for each partition to be equal with the batch size you would like to set. |

Here is a sample usage payload

|  |
| --- |
| "type": "Copy",  "typeProperties": {    "source": {      "type": "SapTableSource",      "rfcTableOptions": "COLNAME EQ '122460' ",  "partitionOption": "SapPartitionOnCalendarMonth",  "partitionSettings": {      "partitionColumnName": "CALMONTH",      "upperBound": "201212",      "lowerBound": "201201",  "maxPartitionsNumber": 6  }    },    "sink": {      "type": "BlobSink"    },    "parallelCopies": 3  } |

1. Last versions of IR: [Version0](https://wenbofdemo.blob.core.windows.net/sapselfir/IntegrationRuntime_3.15.6995.1%20(64-bit).msi?st=2019-03-05T06%3A36%3A05Z&se=2019-04-04T06%3A36%3A00Z&sp=rl&sv=2017-07-29&sr=b&sig=ZF4X9bNWq0l5AFEe9Xl1IAs0iUmerojDayDimyWjjB0%3D), [Version1](https://wenbofdemo.blob.core.windows.net/sapselfir/saptablewithbatch0307/IntegrationRuntime_3.15.6997.10%20(64-bit).msi?st=2019-03-07T07%3A46%3A42Z&se=2019-03-08T07%3A46%3A42Z&sp=rl&sv=2017-07-29&sr=b&sig=gW9cR7auqTFChFwYtgwgr4bHCPfDcT6%2FvJyjZ901d9U%3D), [Version2](https://wenbofdemo.blob.core.windows.net/sapselfir/saptablewithbatch0307/IntegrationRuntime_3.15.6998.6%20(64-bit).msi?st=2019-03-07T13%3A52%3A23Z&se=2019-04-01T13%3A52%3A00Z&sp=rl&sv=2017-07-29&sr=b&sig=G490uno8phdjPYrV%2Fj2rg%2FoWvUHfOEqlHTzOacXVHfE%3D)，[Version3](https://wenbofdemo.blob.core.windows.net/sapselfir/saptablepreview/IntegrationRuntime_3.15.7003.2%20(64-bit).msi?st=2019-03-13T02%3A57%3A48Z&se=2019-04-14T02%3A57%3A00Z&sp=rl&sv=2017-07-29&sr=b&sig=0Csh6shEr3%2BtrrQ%2F1MDryv445PMwILwaiA7NBfWWyXA%3D) [↑](#footnote-ref-1)