ADF v2.0 Pull data from on-prem database and load it into Azure SQL database

Monday, January 11, 2021 7:00

Download and install <u>Download Microsoft Integration Runtime from Official Microsoft Download Center</u> on **your local machine** Go to your Azure portal and create an instance of Azure Data Factory v2.0 In the Overview details screen, click on Author & Monitor



Click on Manage menu item on the left side of the screen



Click on Integration Runtimes



Click on + New link

Integration runtimes

The integration runtime (IR) is the compute in



Click on Azure, Self-Hosted option



Azure, Self-Hosted

Perform data flows, data movement and dispatch activities to external compute.

Click on Continue

Integration runtime setup

Network environment:

Choose the network environment of the data source / destination or external compute to which the integration runtime will connect to for data flows, data movement or dispatch activities:



Azure

Use this for running data flows, data movement, external and pipeline activities in a fully managed, serverless compute in Azure.



Self-Hosted

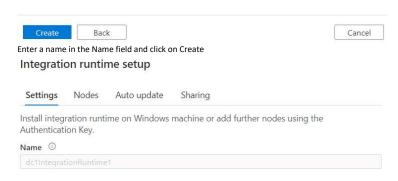
Use this for running activities in an on-premise / private network

Click on Self-Hosted and click on Continue

Integration runtime setup

Private network support is realized by installing integration runtime to machines in the same on-premises network/VNET as the resource the integration runtime is connecting to. Follow below steps to register and install integration runtime on your self-hosted machines.





Option 1: Express setup

Click here to launch the express setup for this computer

Option 2: Manual setup

Step 1: Download and install integration runtime

Step 2: Use this key to register your integration runtime



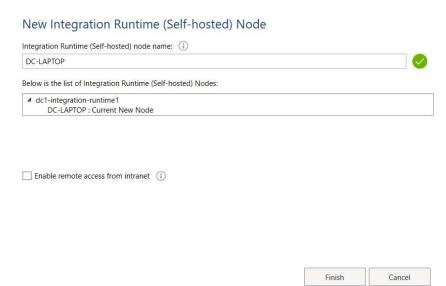
Coy the Key1 value and save it. You will need it later on.

Download and Install integration runtime (Option 2: Manual Setup)

When Integration Runtime (Self-hosted) installation completes, you will come to the Register Integration Runtime (Self-hosted) dialog box.

Register Integration Runtime (Self-hosted) Welcome to Microsoft Integration Runtime Configuration Manager. Before you start, register your Integration Runtime (Selfhosted) node using a valid Authentication Key. Show Authentication Key Learn how to find the Authentication Key **HTTP Proxy** Current Proxy: No proxy Change Register Cancel Upon successful registration, you will see the sceen shown below Microsoft Integration Runtime Configuration Manager

Paste the Key value you saved earlier into the registration box and click on Register button at the bottom



Click on Finish

Upon completion, click on Launch Configuration Manager

🍍 Microsoft Integration Runtime Configuration Manager



Register Integration Runtime (Self-hosted)

Welcome to Microsoft Integration Runtime Configuration Manager. Before you start, register your Integration Runtime (Selfhosted) node using a valid Authentication Key.

..... Show Authentication Key Learn how to find the Authentication Key

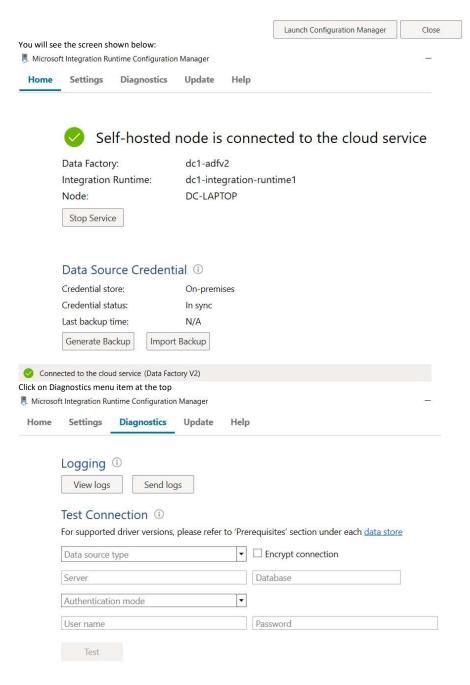


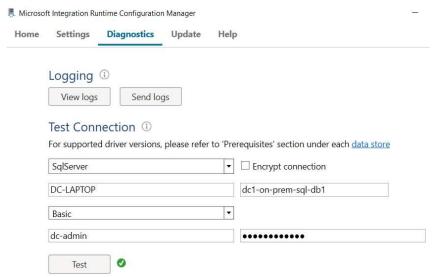
Current Proxy: Change No proxy

Integration Runtime (Self-hosted) node has been registered successfully.

 $Note: You \ can \ associate \ up \ to \ 4 \ physical \ nodes \ with \ a \ Self-hosted \ Integration \ Runtime. \ This \ enables \ high \ availability \ and$ scalability for the Self-hosted Integration Runtime.

We recommend you setup at least 2 nodes for higher availability. See Integration Runtime (Self-hosted) article for details.

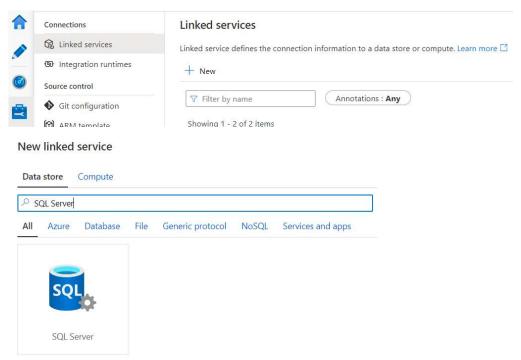




Fill the screen with appropriate values and click on Test. If you see Green checkmark next to Test button, the Integration Runtime setup is complete.

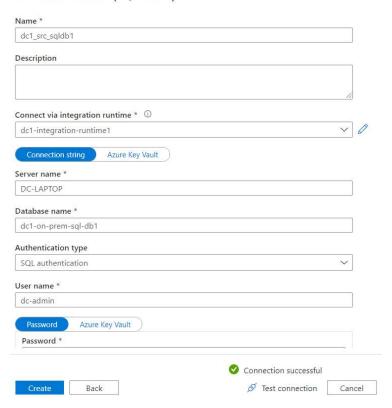
Go back to your Azure portal and go to the Author & Monitor of your ADFv2 instance you created earlier.

Click on the Manage icon on the left --> Linked services --> + New



Search for SQL Server, select it and click on Continue button at the bottom

New linked service (SQL Server)



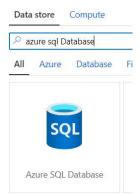
Fill out all the fields. Please pay special attention to Connect via integration runtime. Make sure you select the Integration Runtime you created earliear. Click in Test Connection. If all goes well, you will see Green checkmark Connection successful.

Linked services

Linked service defines the connection information to a data store or compute. Learn more \square + New

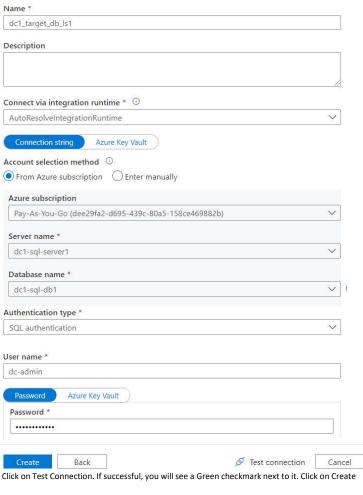
Click on the + New link on the Linked services screen to create the target linked service

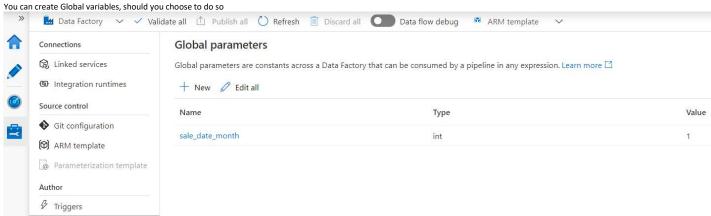
New linked service



Search for Azure SQL Database and select it. Click on Continue

New linked service (Azure SQL Database)





Click on Author (pencil) icon

Right click on Datasets, click on New dataset

@ Global parameters

New dataset

In pipeline activities and data flows, refer data within a data store. Learn more ☐

Select a data store

✓ sql server

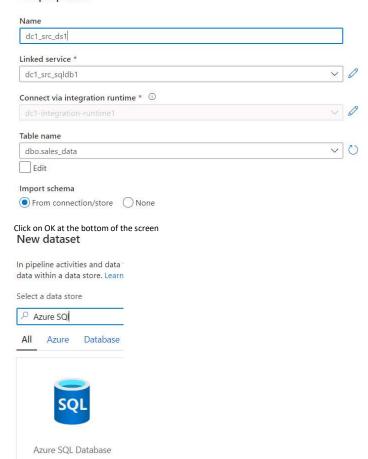
All Azure Database File

SQL

SQL Server

Select SQL Server and click on Continue

Set properties



Search for Azure SQL Database, select it and click on Continue at the bottom

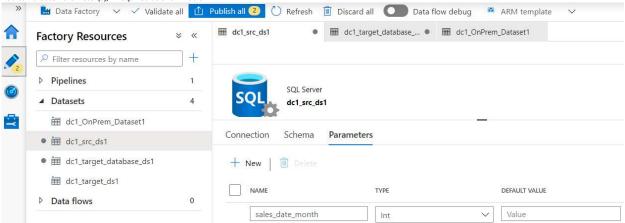
Set properties





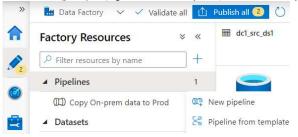
Enter the name, target database linked service and the name of the target table. Click on $\ensuremath{\mathsf{OK}}$

You can create Parameter(s), if required as shown below:

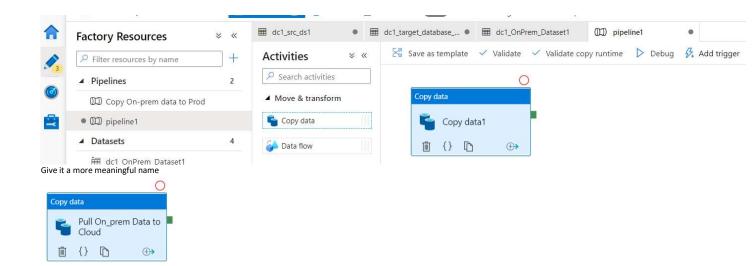


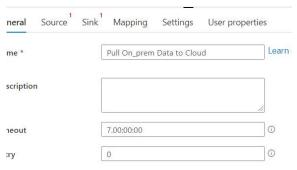
Now it is tie to create a pipeline.

Click on Author (pencil) icon, right mouse click on Pipelines, and click on New Pipeline



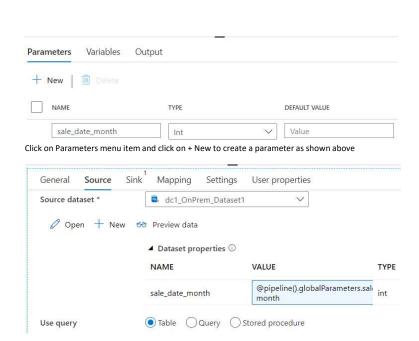
You will see:



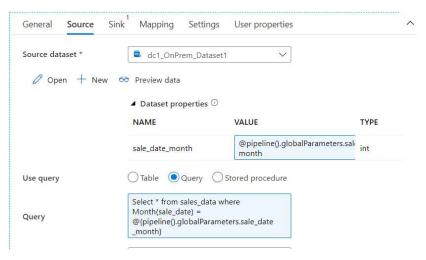


Click in the area below pipeline (Copy data) icon and you will see:

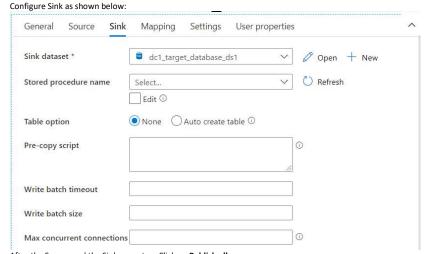




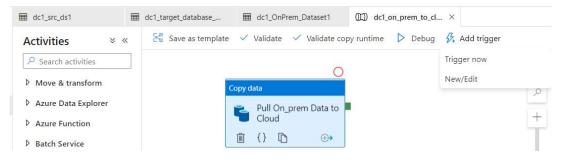
Click on Dynamic content



Click on Source Menu item at the bottom half of the screen Select Source dataset, dynamic value of the parameter field, e.g., sale_date_month Create query in the query box. **Please sure to note the parameter format.**



After the Source and the Sink are setup, Click on **Publish all**. After all components are published, click on Add trigger, click on Trigger now



That is it. You can verifiy the results on the Azure SQL Database.