Integrate SQL server integration services packages within Azure Data Factory

Note:

You are not required to complete the processes, tasks, activities, or steps presented in this example. The various
provided are for illustrative purposes only and it’s likely that if you try this out you will encounter issues in your

You may work in an organization where much of the transformation logic is currently held in existing SSIS packages that have been created on SQL Server. You have the ability to lift and shift SSIS package so you can execute them within Azure Data Factory, so you can make use in existing work. In order to do this you must set up an Azure-SSIS integration runtime.

Azure-SSIS integration runtime

In order to make use of the Azure-SSIS integration runtime, it is assumed that there is SSIS Catalog (SSISDB) deployed on a SQL Server SSIS instance. With that prerequisite met, the Azure-SSIS integration runtime is capable of:

- Lift and shift existing SSIS workloads

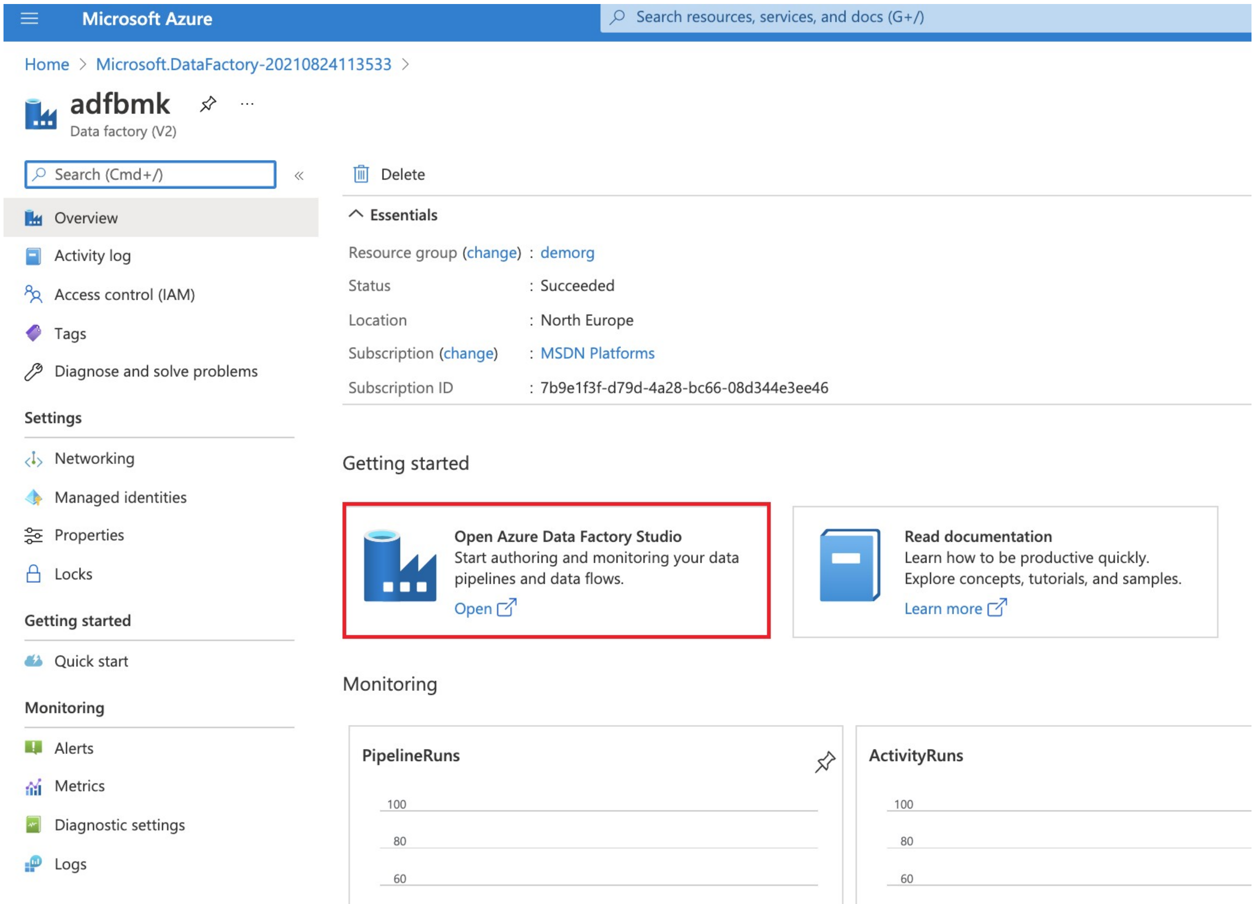
During the provisioning of the Azure-SSIS integration runtime, you specify the following options:

- The node size (including the number of cores) and the number of nodes in the cluster.
- The existing instance of Azure SQL Database to host the SSIS Catalog Database (SSISDB), and the service tier for the database.
- The maximum parallel executions per node.

With the Azure-SSIS integration runtime enabled, you are able to manage, monitor and schedule SSIS packages using tools such as SQL Server Management Studio (SSMS) or SQL Server Data Tools (SSDT).

Create an Azure-SSIS integration runtime

1. In The Azure Portal select Azure Data Factory Studio.



Resource group (change) : demorg
Status : Succeeded
Location : North Europe
Subscription (change) : MSDN Platforms
Subscription ID : 7b9e1f3f-d79d-4a28-bc66-08d344e3ee46

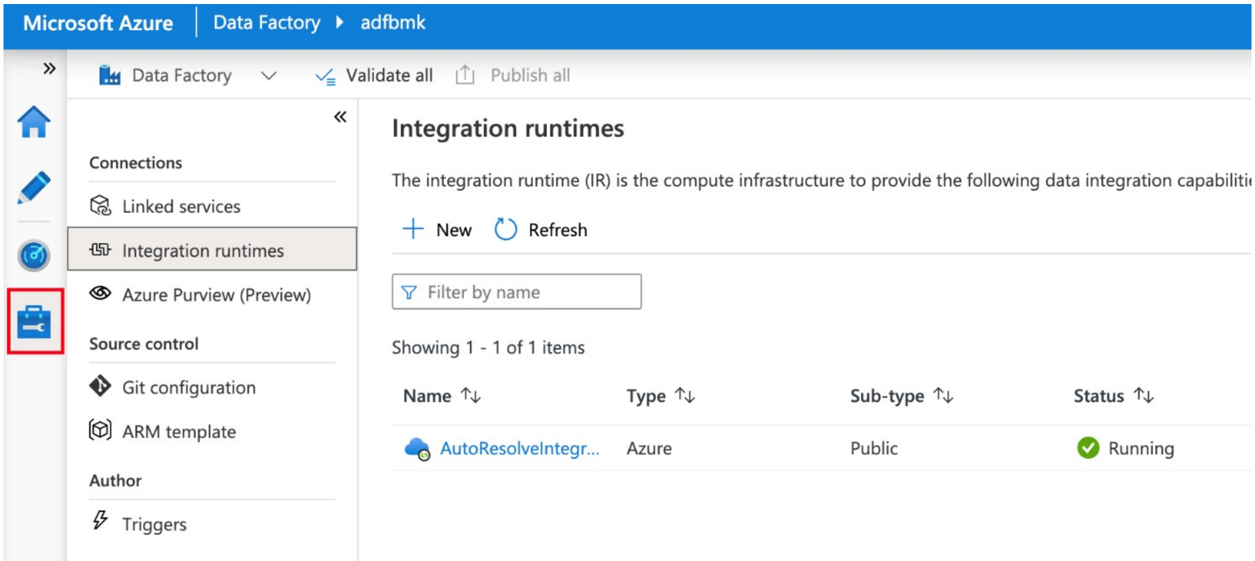
Getting started

Open Azure Data Factory Studio
Start authoring and monitoring your data pipelines and data flows.
Open

Read documentation
Learn how to be productive quickly. Explore concepts, tutorials, and samples.
Learn more

Azure Data Factory Studio

2. In Azure Data Factory Studio, select the Manage Hub in the left pane and click on Integration Runtimes to view existing integration runtimes in your data factory.



Integration runtimes

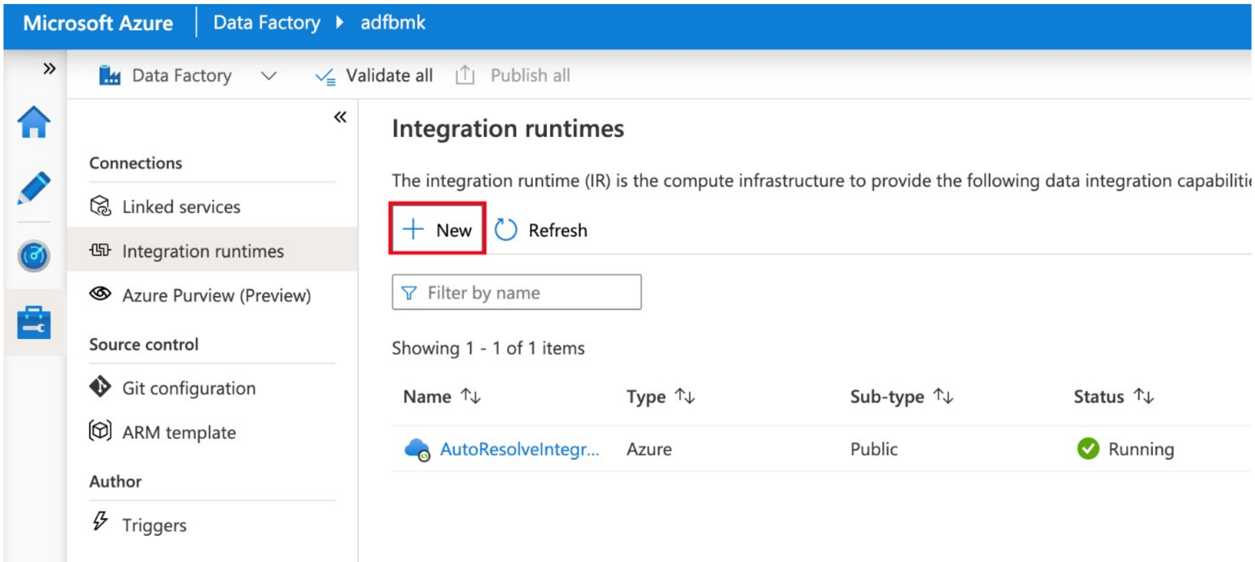
The integration runtime (IR) is the compute infrastructure to provide the following data integration capabiliti

Showing 1 - 1 of 1 items

Name	Type	Sub-type	Status
AutoResolveIntegr...	Azure	Public	✓ Running

Select Management Hub

3. Click **+ New** to create an Azure-SSIS IR and open the **Integration runtime setup pane.**



Integration runtimes

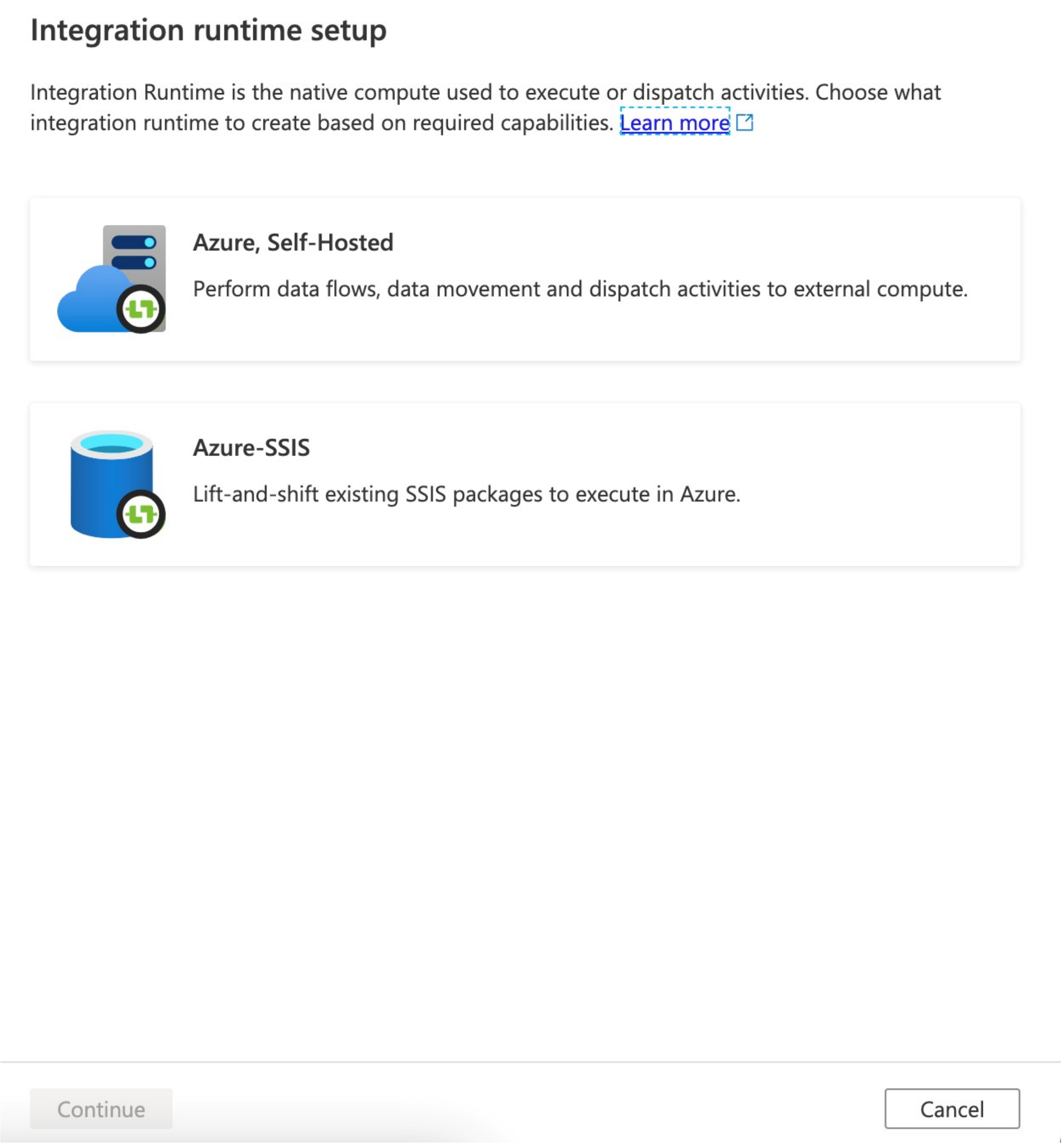
The integration runtime (IR) is the compute infrastructure to provide the following data integration capabiliti

Showing 1 - 1 of 1 items

Name	Type	Sub-type	Status
AutoResolveIntegr...	Azure	Public	✓ Running

Create an Azure-SSIS IR and open the Integration runtime setup pane.

4. In the **Integration runtime setup pane,** select the **Lift-and-shift existing SSIS packages to execute in Azure tile,** and then select Next.



Integration runtime setup

Integration Runtime is the native compute used to execute or dispatch activities. Choose what integration runtime to create based on required capabilities. Learn more

Azure, Self-Hosted

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

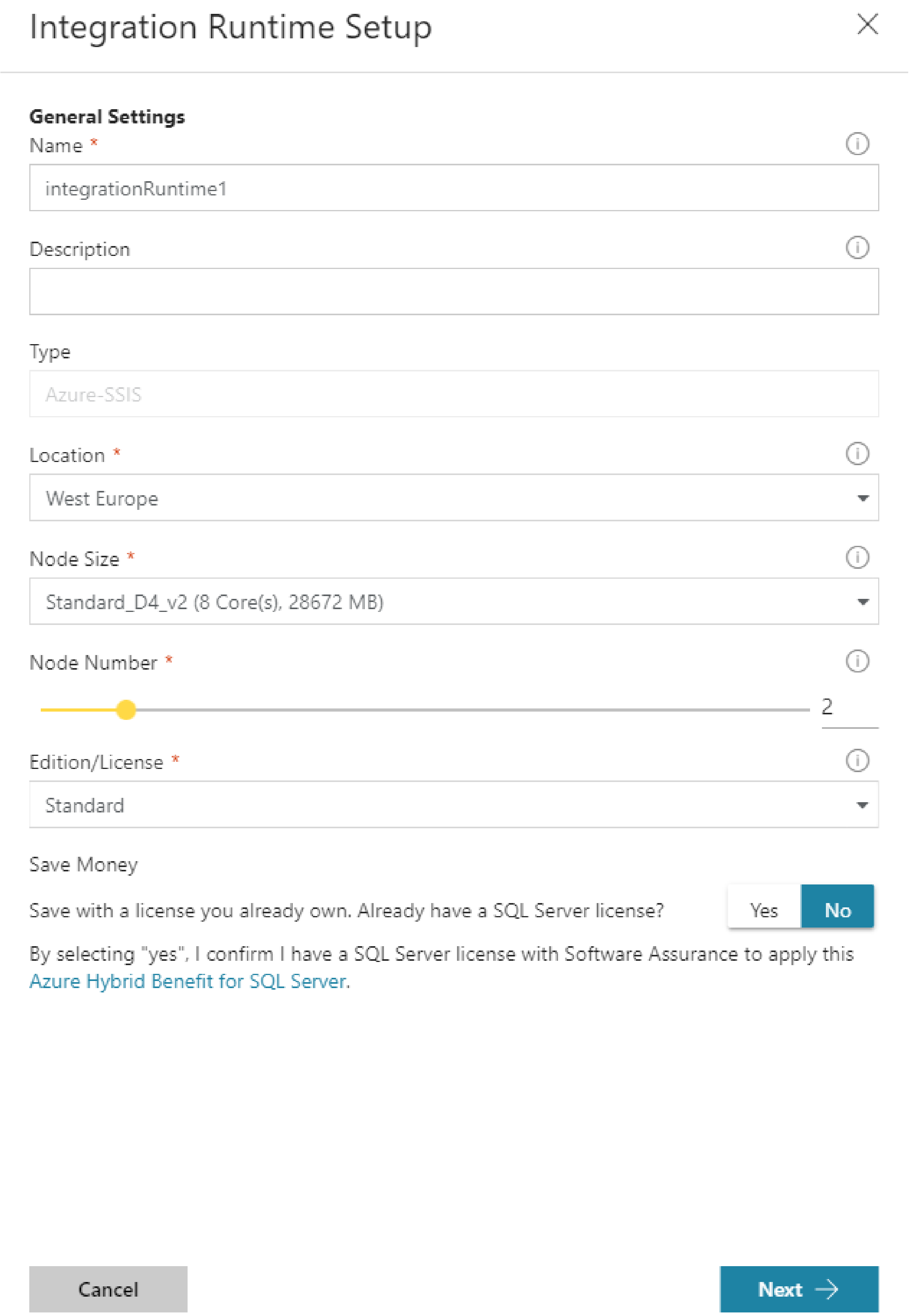
Azure-SSIS

Lift-and-shift existing SSIS packages to execute in Azure.

Integration runtime setup pane

5. On selecting this option, there are three types of settings to configure General settings page

1. On the General settings page of Integration runtime setup pane, complete the following steps.



Integration Runtime Setup

General Settings

Name *

integrationRuntime1

Description

Type

Azure-SSIS

Location *

West Europe

Node Size *

Standard_D4_v2 (8 Core(s), 28672 MB)

Node Number *

2

Edition/License *

Standard

Save Money

Save with a license you already own. Already have a SQL Server license? Yes [✓ No]

By selecting "yes", I confirm I have a SQL Server license with Software Assurance to apply this Azure Hybrid Benefit for SQL Server.

Integrati

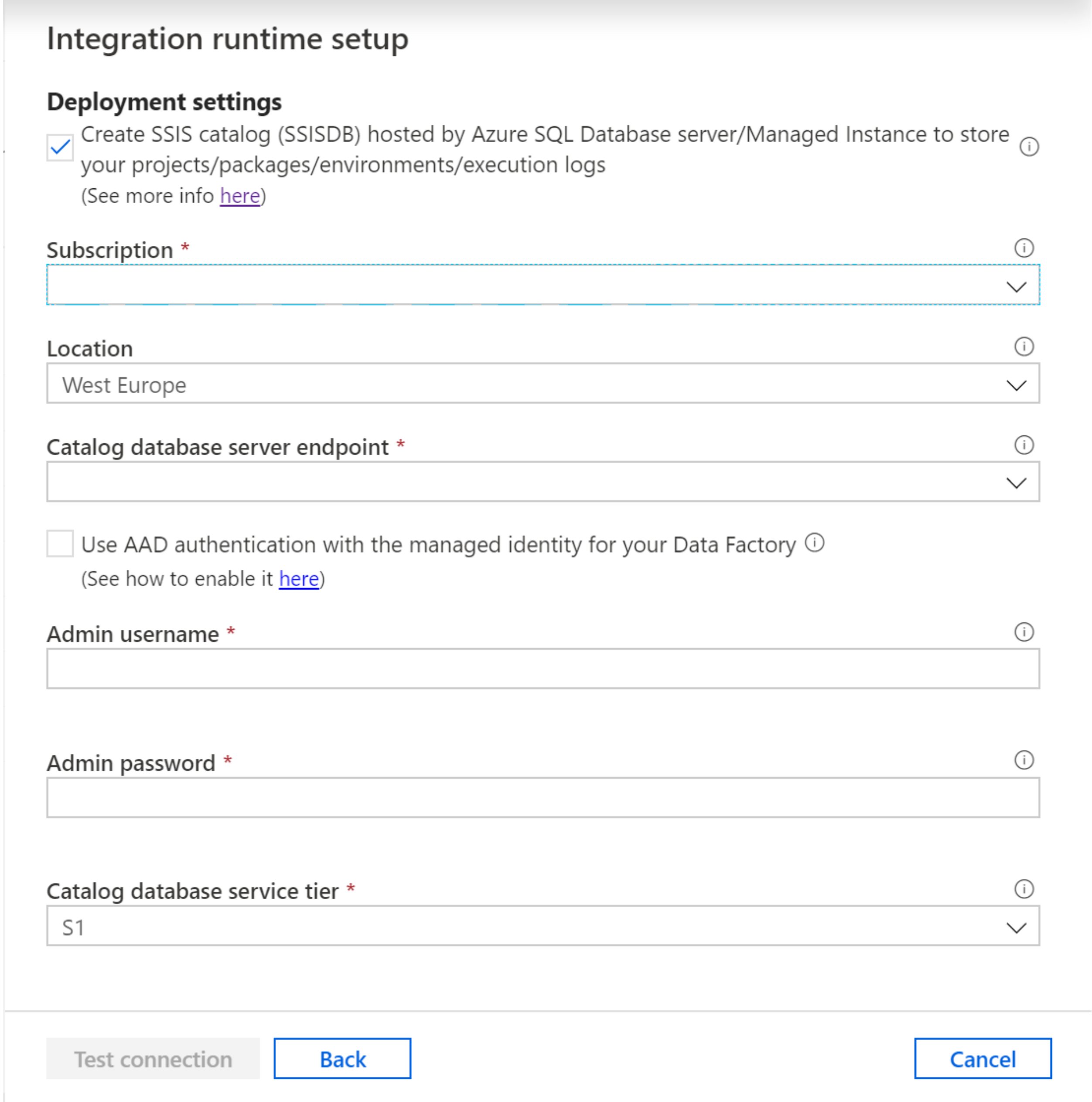
on Runtime General settings page

2. In Name, enter the name of your integration runtime. 3. For Description, enter the description of your integration runtime. 4. For Location, select the location of your integration runtime. It is recommended that you select the same location of your database server to host SSISDB. 5. For Node Size, select the size of node in your integration runtime cluster. 6. For Node Number, select the number of nodes in your integration runtime cluster. 7. For Edition/License, select the SQL Server edition for your integration runtime. 8. For Save Money, select the Azure Hybrid Benefit option for your integration runtime: Select Yes if you want to bring your own SQL Server license with Software Assurance to benefit from cost savings with hybrid use. 9. Select Next.

Deployment settings page

1. On the Deployment settings page of Integration runtime setup pane, complete the following steps.

2. Click the Create SSIS catalog (SSISDB) hosted by Azure SQL Database server/Managed Instance to store your projects/packages/environments/execution logs check box to choose the package deployment mode.



Integration runtime setup

Deployment settings

☑ Create SSIS catalog (SSISDB) hosted by Azure SQL Database server/Managed Instance to store your projects/packages/environments/execution logs
(See more info here)

Subscription *

Location
West Europe

Catalog database server endpoint *

□ Use AAD authentication with the managed identity for your Data Factory
(See how to enable it here)

Admin username *

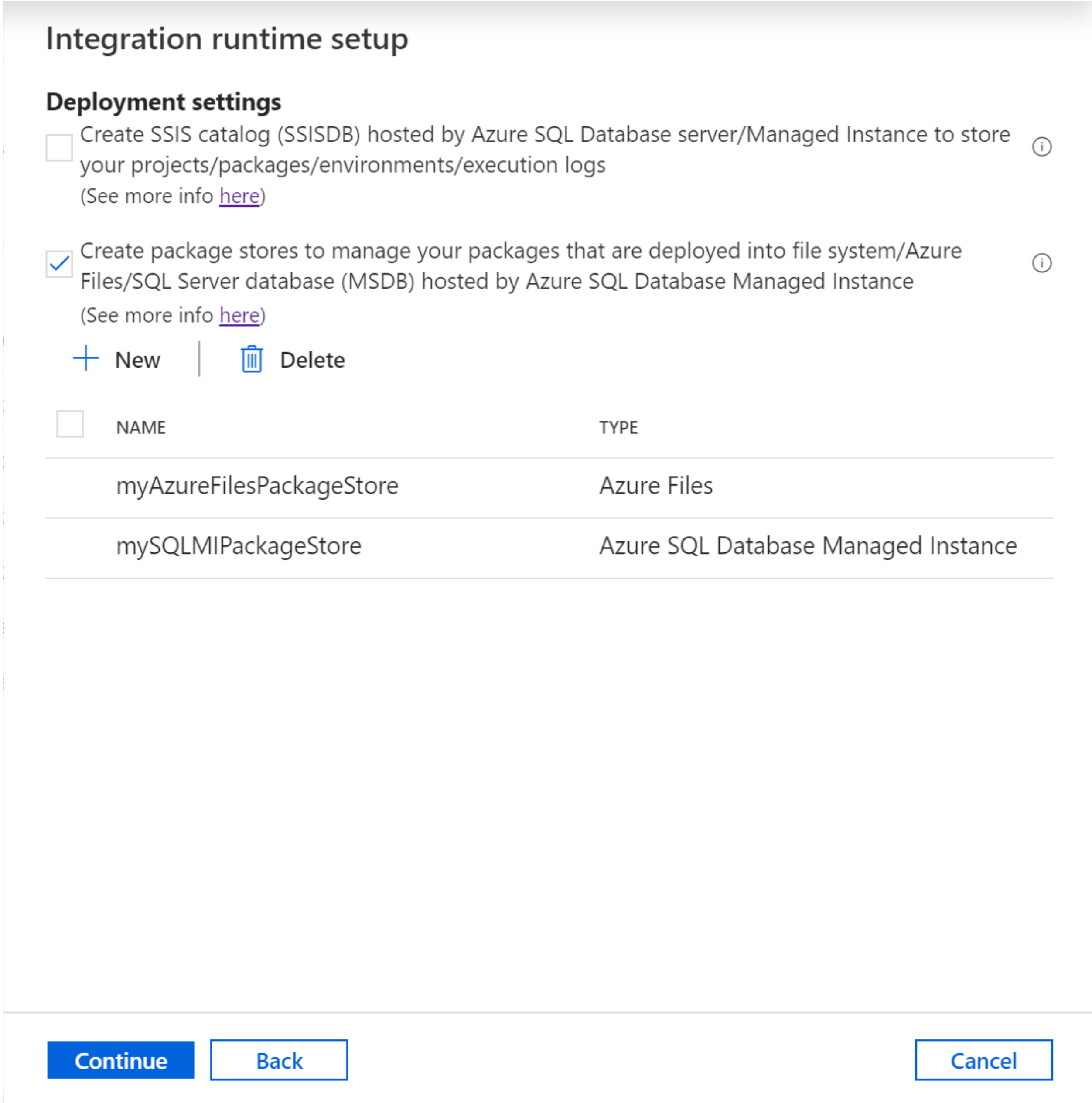
Admin password *

Catalog database service tier *
S1

create SSIS catalog

3. For Subscription, select the Azure subscription that has your database server to host SSISDB. 4. For Location, select the location of your database server to host SSISDB. We recommend that you select the same location of your integration runtime. 5. For Catalog Database Server Endpoint, select the endpoint of your database server to host SSISDB. 6. Select the Use Azure Active Directory (Azure AD) authentication with the managed identity for your ADF check box to choose the authentication method for your database server to host SSISDB. 7. For Admin Username, enter the

SQL authentication username for your database server to host SSISDB. 8. For **Admin Password**, enter the SQL authentication password for your database server to host SSISDB. 9. For **Catalog Database Service Tier**, select the service tier for your database server to host SSISDB. Select the Basic, Standard, or Premium tier, or select an elastic pool name. The alternative approach is to: 1. Select the **Create package stores to manage your packages that are deployed into file system/Azure Files/SQL Server database (MSDB) hosted by Azure SQL Managed Instance** check box to choose whether you want to manage your packages that are deployed into MSDB, file system, or Azure Files (Package Deployment Model) with Azure-SSIS IR package stores.



Integration runtime setup

Deployment settings

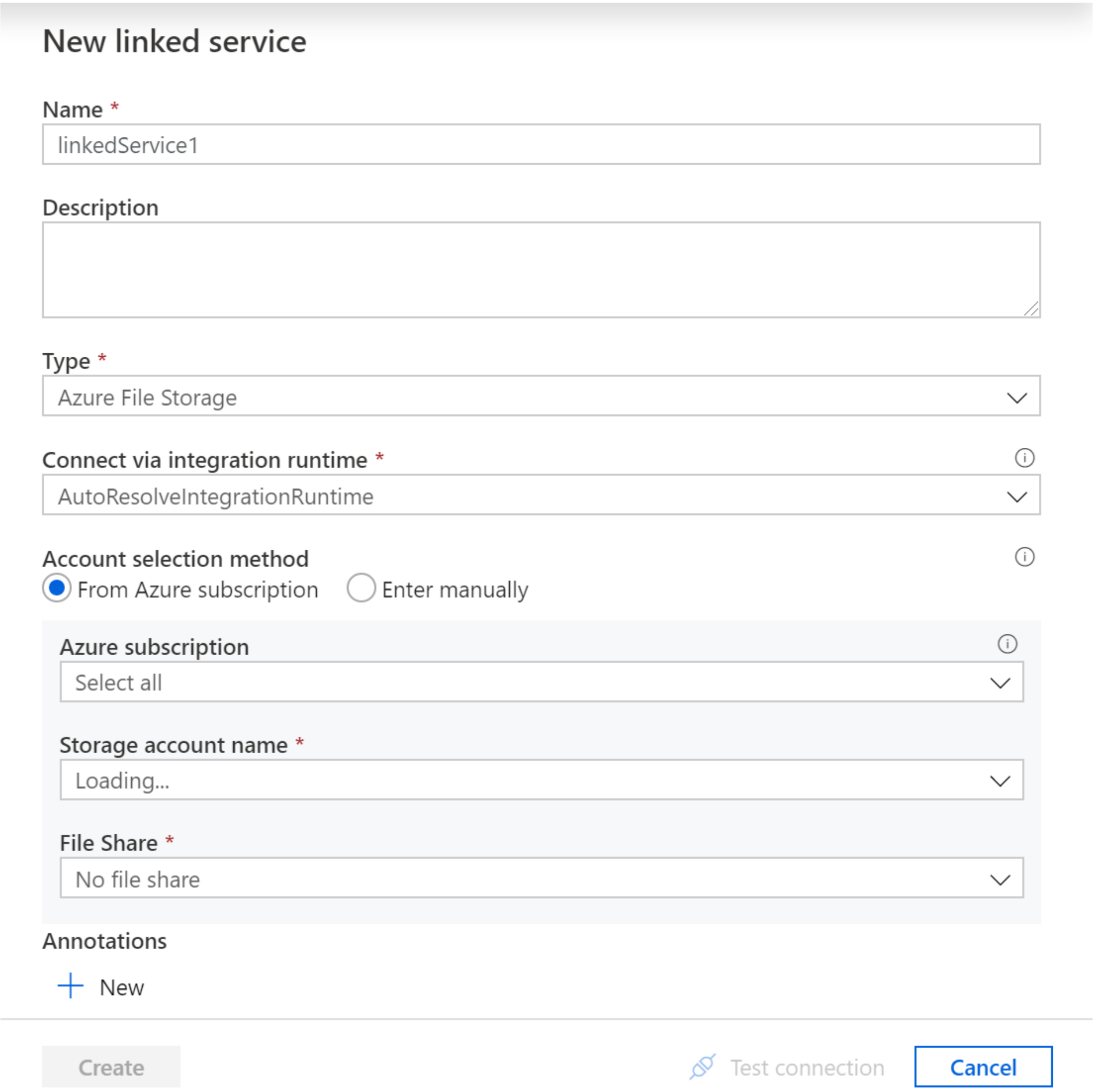
□ Create SSIS catalog (SSISDB) hosted by Azure SQL Database server/Managed Instance to store your projects/packages/environments/execution logs
(See more info here)

☑ Create package stores to manage your packages that are deployed into file system/Azure Files/SQL Server database (MSDB) hosted by Azure SQL Database Managed Instance
(See more info here)

□ NAME	TYPE
myAzureFilesPackageStore	Azure Files
mySQLMIPackageStore	Azure SQL Database Managed Instance

create package stores

2. On the **Add package store pane**, complete the following steps. 3. For **Package store name**, enter the name of your package store. 4. For **Package store linked service**, select your existing linked service that stores the access information for file system/Azure Files/Azure SQL Managed Instance where your packages are deployed or create a new one by selecting **New**. On the New linked service pane, complete the following steps.



New linked service

Name *
linkedService1

Description

Type *
Azure File Storage

Connect via integration runtime *
AutoResolveIntegrationRuntime

Account selection method
● From Azure subscription ○ Enter manually

Azure subscription
Select all

Storage account name *
Loading...

File Share *
No file share

Annotations
+ New

New linked service page

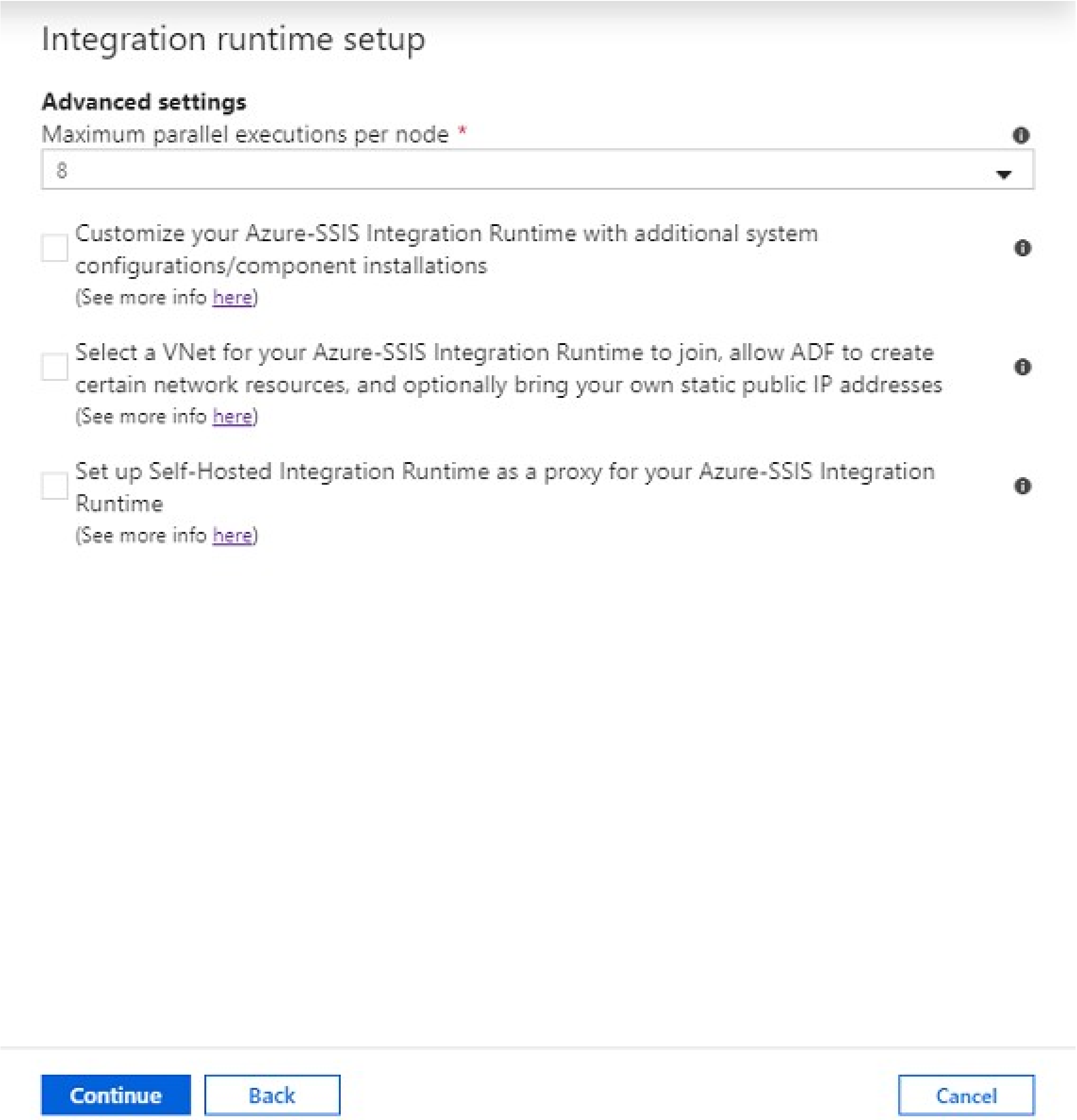
5. For **Name**, enter the name of your linked service. 6. For **Description**, enter the description of your linked service. 7. For **Type**, select **Azure File Storage, Azure SQL Managed Instance,** or **File System**. 8. You can ignore **Connect via integration runtime**, since we always use your Azure-SSIS IR to fetch the access information for package stores. 9. If you select **Azure File Storage**, complete the following steps. 10. For **Account selection method**, select **From Azure subscription** or **Enter manually**. 11. If you select From **Azure subscription**, select the **relevant Azure subscription,**

Storage account name, and **File share.** 12. If you select **Enter manually**, enter `\.file.core.windows.net<file share name>` for **Host**, Azure`<storage account name>` for **Username**, and for **Password** or select your **Azure Key Vault** where it's stored as a secret.

Note: There are different settings if you select Azure SQL Managed Instance, or File System 13. Select **Test connection** when applicable and if it's successful, select **Next**.

Advanced settings page

1. On the **Advanced settings** page of **Integration runtime setup pane**, complete the following steps.



Integration runtime setup

Advanced settings

Maximum parallel executions per node *

8

□ Customize your Azure-SSIS Integration Runtime with additional system configurations/component installations
(See more info here)

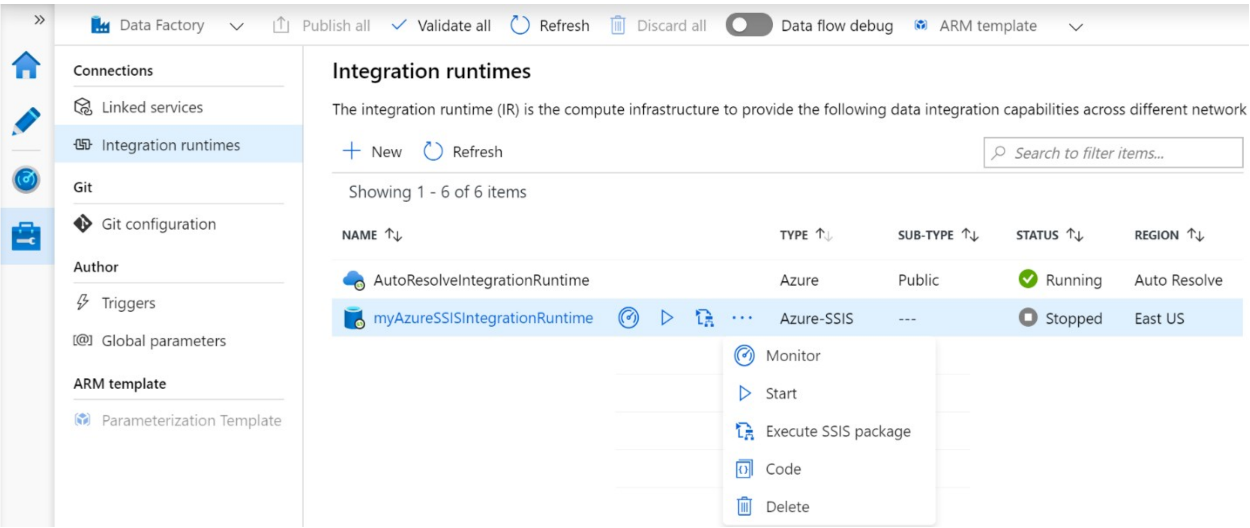
□ Select a VNet for your Azure-SSIS Integration Runtime to join, allow ADF to create certain network resources, and optionally bring your own static public IP addresses
(See more info here)

□ Set up Self-Hosted Integration Runtime as a proxy for your Azure-SSIS Integration Runtime
(See more info here)

Integration runtime setup advanced settings

2. For **Maximum Parallel Executions Per Node**, select the maximum number of packages to run concurrently per node in your integration runtime cluster. 3. Select the **Customize your Azure-SSIS Integration Runtime with additional system configurations/component installations** check box to choose whether you want to add standard/express custom setups on your Azure-SSIS IR. 4. Select the Select a **VNet for your Azure-SSIS Integration Runtime to join, allow ADF to create certain network resources, and optionally bring your own static public IP addresses** check box to choose whether you want to join

your Azure-SSIS IR to a virtual network. 5. Select the **Set up Self-Hosted Integration Runtime as a proxy for your Azure-SSIS Integration Runtime** check box to choose whether you want to configure a self-hosted IR as proxy for your Azure-SSIS IR. For more information. 6. Click **Continue**. 7. On the **Summary**, review all provisioning settings, and select **Finish** to start the creation of your integration runtime. 8. On the **Connections** pane of **Manage** hub, switch to the **Integration runtimes** page and select **Refresh**.



Integration runtimes

The integration runtime (IR) is the compute infrastructure to provide the following data integration capabilities across different network

Showing 1 - 6 of 6 items

NAME	TYPE	SUB-TYPE	STATUS	REGION
AutoResolveIntegrationRuntime	Azure	Public	✓ Running	Auto Resolve
myAzureSSISIntegrationRuntime	Azure-SSIS	---	● Stopped	East US