

Azure SQL(SQL DW, SQL MI) disabled public endpoint meet connectivity issue in ADF or Synapse

Last updated by | Brian Wang | Jul 26, 2022 at 5:58 PM PDT

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Issue

Azure SQL/SQL DW/SQL MI connector met connectivity issue in ADF with exception:

Connection was denied since Deny Public Network Access is set to Yes (<https://docs.microsoft.com/azure/azure-sql/database/connectivity-settings#deny-public-network-access>). To connect to this server, use the Private Endpoint from inside your virtual network (<https://docs.microsoft.com/azure/sql-database/sql-database-private-endpoint-overview#how-to-set-up-private-link-for-azure-sql-database>)., SqlErrorNumber=47073,Class=14,State=1

Error details

Check the linked service configuration is correct, and make sure the SQL Database firewall allows the integration runtime to access.

Reason: An instance-specific error occurred while establishing a connection to SQL Server. Connection was denied since Deny Public Network Access is set to Yes (<https://docs.microsoft.com/azure/azure-sql/database/connectivity-settings#deny-public-network-access>). To connect to this server, use the Private Endpoint from inside your virtual network (<https://docs.microsoft.com/azure/sql-database/sql-database-private-endpoint-overview#how-to-set-up-private-link-for-azure-sql-database>)., SqlErrorNumber=47073,Class=14,State=1, Activity ID: ebbeacf9-d77f-4d03-99f9-c636a082c9c6.

How helpful or unhelpful was this error message?

★ ★ ★ ★ ★

Connection failed [More](#)

[Test connection](#)

Root Cause

Azure SQL/SQL DW/SQL MI public endpoint is disabled, can only access by private endpoint. So in ADF, Azure SQL/SQL DW/SQL MI can't access through Azure IR.

zzyserver | Networking

SQL server

Search (Ctrl+)

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Public access

Private access

Connectivity

Public network access

Public Endpoints allow access to this resource through the internet using a public IP address. An application or resource that is granted access with the following network rules still requires proper authorization to access this resource. [Learn more](#)

Public network access

Disable

Selected networks

Only approved private endpoint connections will be accepted by this resource. Any existing firewall rules or virtual network endpoints will be retained, but disabled. [Learn more](#)

Resolution

Using Azure Managed VNet IR, create PE in ADF and approve PE in SQL server.

Step 1: Create ManagedVnet IR in your ADF/Synapse workspace

Microsoft Azure | Data Factory > YangZaiDF

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Data Factory | Validate all | Publish all

Integration runtimes

The integration runtime (IR) is the compute infrastructure to provide the following data integration capabilities across different network environment. [Learn more](#)

+ New Refresh 1.Create Managed VNet IR

Filter by name

Showing 1 - 1 of 1 items

Name ↑↓	Type ↑↓	Sub-type ↑↓
AutoResolveIntegrationRuntime	Azure	Public

Left sidebar menu:

- Connections
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 - Managed private endpoints

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

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-premises / private network

[View more](#) ▾

External Resources:

You can use an existing self-hosted integration runtime that exists in another resource. This way you can reuse your existing infrastructure where self-hosted integration runtime is setup.



Linked Self-Hosted

[Learn more](#) 

Integration runtime setup

Settings Virtual network Data flow runtime

The Data Factory manages the integration runtime in Azure to connect to required data source/destination or external compute in public network. The compute resource is elastic allocated based on performance requirement of activities.

Name * ⓘ

AzureSQL-ManagedVnetIR

Description

Enter description here...

Type

Azure

Region *

Auto Resolve

Integration runtime setup

Settings **Virtual network** Data flow runtime

Virtual network configuration ⓘ

☐ Disable ☒ Enable

Interactive authoring ⓘ

☒ Enable interactive authoring capability after creation ⓘ

Time to live ⓘ

60 minutes

Copy compute scale (Preview) ⓘ

☐ Enable Copy compute scale

Pipeline and external compute scale (Preview) ⓘ

Time to live ⓘ

60 minutes

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Integration runtimes

The integration runtime (IR) is the compute infrastructure to provide the following data integration capabilities across different network environment. [Learn more](#)

+ New Refresh

Filter by name

Showing 1 - 2 of 2 items

Name	Type	Sub-type	Status
AutoResolveIntegrationRuntime	Azure	Public	Running
AzureSQL-ManagedVnetIR	Azure	Managed Virtual Network	Initializing

Step2: Create Managed Private endpoint for SQL server

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Managed private endpoints

Managed private endpoint uses a private IP address from within Managed Virtual Network to connect to an Azure resource or your own private link service. Connections using managed private endpoints listed below provide access to Azure resources or private link services. [Learn more](#)

+ New Refresh 2.Create Managed private endpoint for your SQL server
















Showing 0 - 0 of 0 items

Name	Provisioning state	Approval state	VNet name	Possible Linked Services
------	--------------------	----------------	-----------	--------------------------


No managed private endpoints to show
if you expected to see results, try changing your filters or create a new ma

Create managed private endpoint

New managed private endpoint

 Azure Blob Storage	 Azure Cosmos DB (MongoDB API)	 Azure Cosmos DB (SQL API)
 Azure Data Explorer (Kusto)	 Azure Data Lake Storage Gen2	 Azure Database for MariaDB
 Azure Database for MySQL	 Azure Database for PostgreSQL	 Azure Event Hubs
 Azure File Storage	 Azure Function	 Azure Key Vault
 Azure Machine Learning	 Azure Queue Storage	 Azure SQL Database

New managed private endpoint (Azure SQL Database)

 Choose a name for your managed private endpoint. This name cannot be updated later.

Name *

AzureSqlDatabase336

Description

Account selection method 

☒ From Azure subscription ☐ Enter manually

Azure subscription

XX

Server name *

zzyserver

Step3: Approve the private access

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Home <<

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+ New Refresh

Showing 1 - 1 of 1 items

Name ↑↓	Provisioning state ↑↓	Approval state ↑↓
AzureSqlDatabase336	Provisioning	


Step3: Approve the private acces

Managed private endpoint

Name *

AzureSqlDatabase336

Description

 Refresh

Provisioning state

 Provisioning

Approval state

Possible Linked Services

0

Target resource ID ⓘ

/subscriptions/da1d7b9a-a759-41c8-bb73-093a1818e03a/resourceGroups/ADMS/provic



Target sub-resource ⓘ

sqlServer



Managed private endpoint private IP ⓘ



Managed private endpoint resource ID ⓘ

/subscriptions/7b785cfc-35dd-4513-a6d3-ef14b9b1ad47/resourceGroups/vnet-7b785cfc



[Manage approvals in Azure portal](#) 

Microsoft Azure (Preview)

Report a bug

Search resources, services, and docs (G+)

Home > zzyserver

zzyserver | Networking

SQL server

Search (Ctrl+ /)

Feedback

Public accessPrivate accessConnectivity

Private Access

Private endpoints allow access to this resource using a private IP address from a virtual network, effectively bringing the service into your virtual network. [Learn more](#)

Private endpoint connections

Create a private endpointRefreshApproveRejectRemove

Filter by name...Private endpoint == (All)

Private endpoint	Connection name	Connection state	Description	
<input type="checkbox"/>	yangzaidf.AzureS...	yangzaidf.AzureSqlDatabase336-...	Pending	Requested by DataFactory:YangZaiDF, Name:AzureSqlDatabase336
<input type="checkbox"/>	zzystestdfjpe.Azur...	zzystestdfjpe.AzureSqlDatabase18...	Approved	

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Create a private endpoint

Refresh

Approve

Reject

Remove

Filter by name...

Private endpoint == (All)

	Private endpoint	Connection name	Connection state	Description
<input checked="" type="checkbox"/>	yangzaidf.AzureS...	yangzaidf.AzureSqlDatabase336-...	Pending	Requested by DataFactory:YangZaiDF, Name:AzureSqlDatabase336
<input type="checkbox"/>	zzytestdfjpe.Azur...	zzytestdfjpe.AzureSqlDatabase18...	Approved	

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Private endpoint connections

+ Create a private endpoint

Refresh

✓ Approve

✗ Reject

🗑 Remove

Filter by name...

Private endpoint == (All)

<input type="checkbox"/>	Private endpoint	Connection name	Connection state	Description
<input type="checkbox"/>	yangzaidf.AzureS...	yangzaidf.AzureSqlDatabase336-...	Approved	
<input type="checkbox"/>	zzytestdfjpe.Azur...	zzytestdfjpe.AzureSqlDatabase18...	Approved	

[https://supportability.visualstudio.com/AzureDataFactory/_wiki/wikis/AzureDataFactory/651619/Azure-SQL\(SQL-DW-SQL-MI\)-disabled-public-endp...](https://supportability.visualstudio.com/AzureDataFactory/_wiki/wikis/AzureDataFactory/651619/Azure-SQL(SQL-DW-SQL-MI)-disabled-public-endp...) 13/17

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+ New Refresh

Showing 1 - 1 of 1 items

Name ↑↓	Provisioning state ↑↓	Approval state ↑↓	VNet name ↑↓
AzureSqlDatabase336	Succeeded	Pending More	default

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Showing 1 - 1 of 1 items

Name ↑↓	Provisioning state ↑↓	Approval state ↑↓	VNet name ↑↓
AzureSqlDatabase336	Succeeded	Approved	default

Check "Approval State", only when updating to "Approved", continue to next step.

Step 4: In Linked Service page, Select Managed Vnet IR created in step1, then test connection, it should be success


Edit linked service

 Azure SQL Database [Learn more](#) 

Name *

AzureSqlDatabase1


Description

Connect via integration runtime * 

AutoResolveIntegrationRuntime

+ New

AutoResolveIntegrationRuntime

 AzureSQL-ManagedVnetIR (Managed Virtual Network)

Fully qualified domain

zzyserver.database.wi

AzureSQL-ManagedVnetIR (Running (Limited))

Database name *

zzytest

Authentication type *

SQL authentication


User name *

zhuzhan

Password

Azure Key Vault

Password *

Always encrypted 

☐

Additional connection properties

+ New


Annotations

+ New

> Parameters

> Advanced 


Edit linked service

 Azure SQL Database [Learn more](#) 



Name *

AzureSqlDatabase1

Description

Connect via integration runtime * 

 AzureSQL-ManagedVnetIR (Managed Virtual Network)  

 Interactive authoring enabled 

Connection string

Azure Key Vault

Account selection method 

☐ From Azure subscription ☒ Enter manually

Fully qualified domain name *

zzyserver.database.windows.net

Database name *

zzytest

Managed private endpoint

--

Authentication type *

SQL authentication 

User name *

zhuzhan

Password

Azure Key Vault

Password *

Always encrypted 

☐

Additional connection properties

 New

Annotations

 New

Additional Information:

- Icm Reference: N/A
- Author: Zhuoyang Zhang
- Reviewer: Zhuoyang Zhang
- Keywords: On-Prem SQL

Apply

Cancel



Connection successful



Test connection