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
- Root Cause
- Resolution
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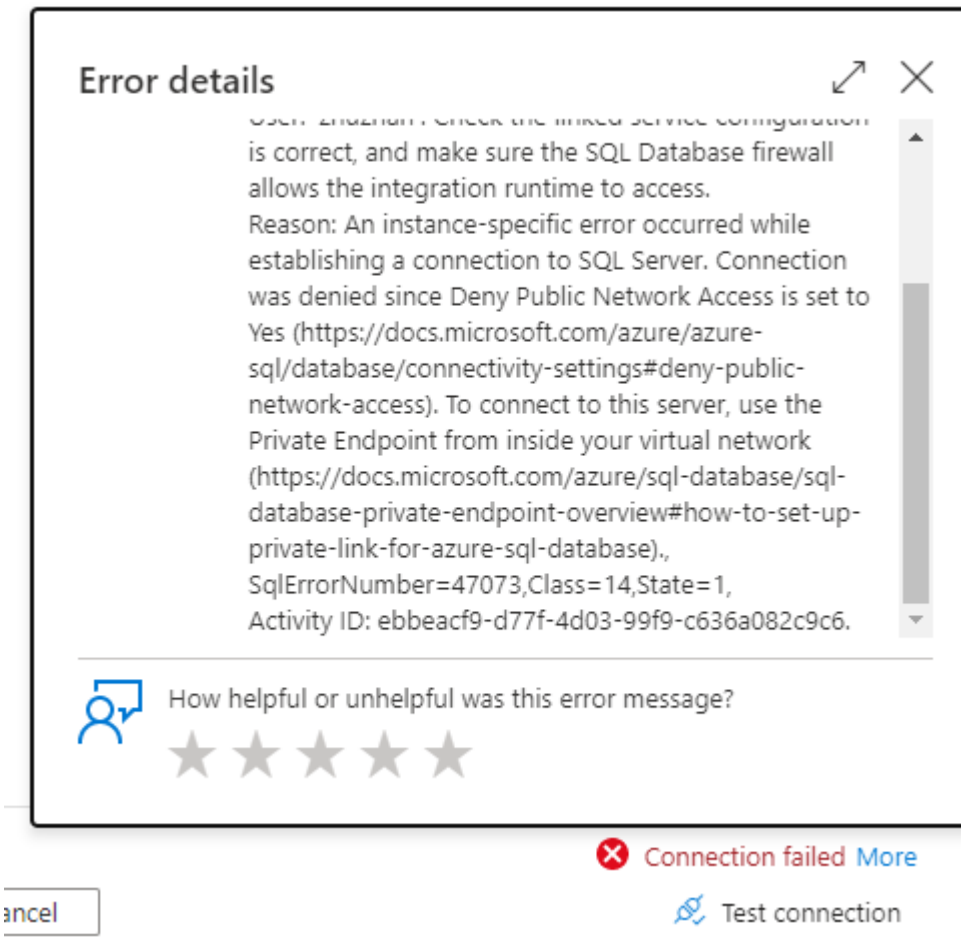
Issue

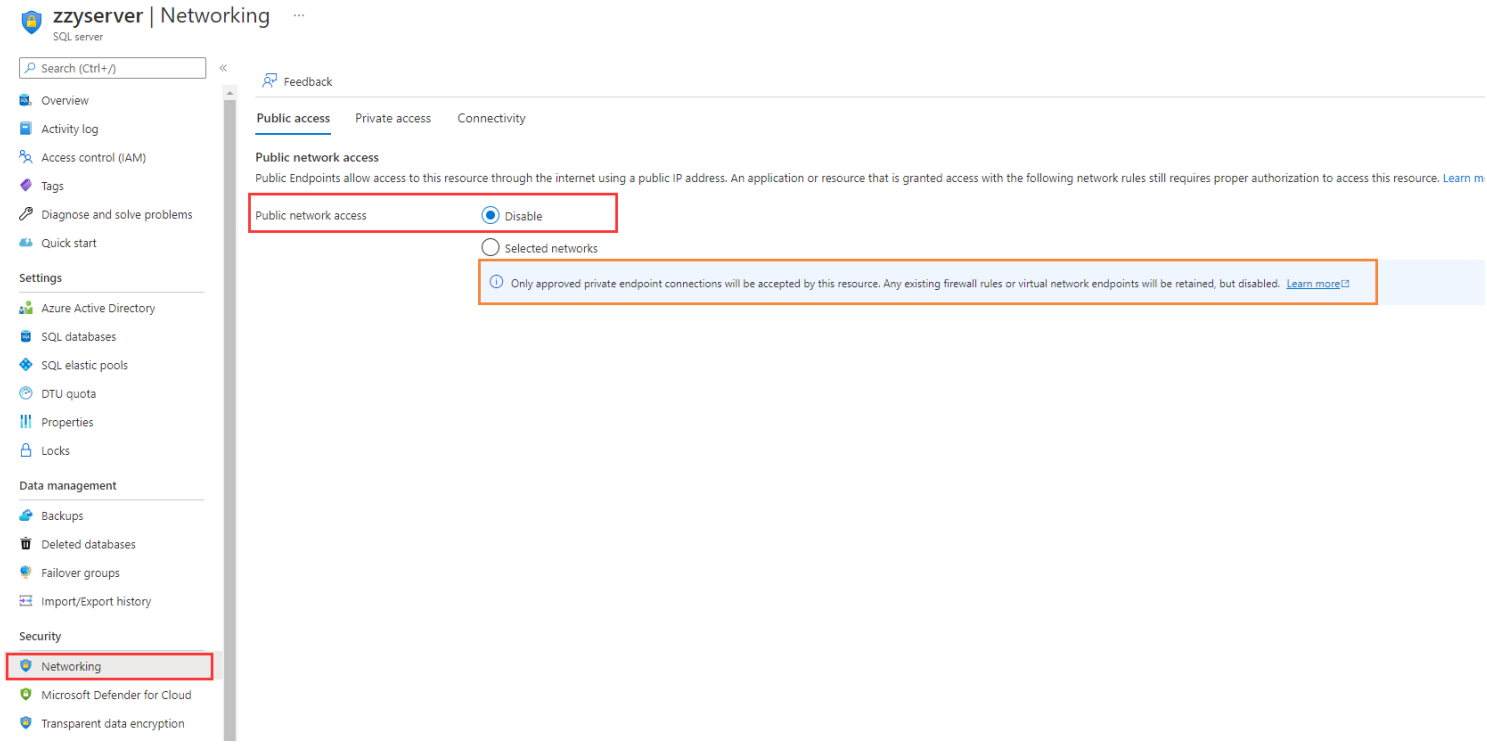
Azure SQL/SQL DW/SQL MI connector met connectivity issue in ADF with exception:

```
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
```



Root Cause

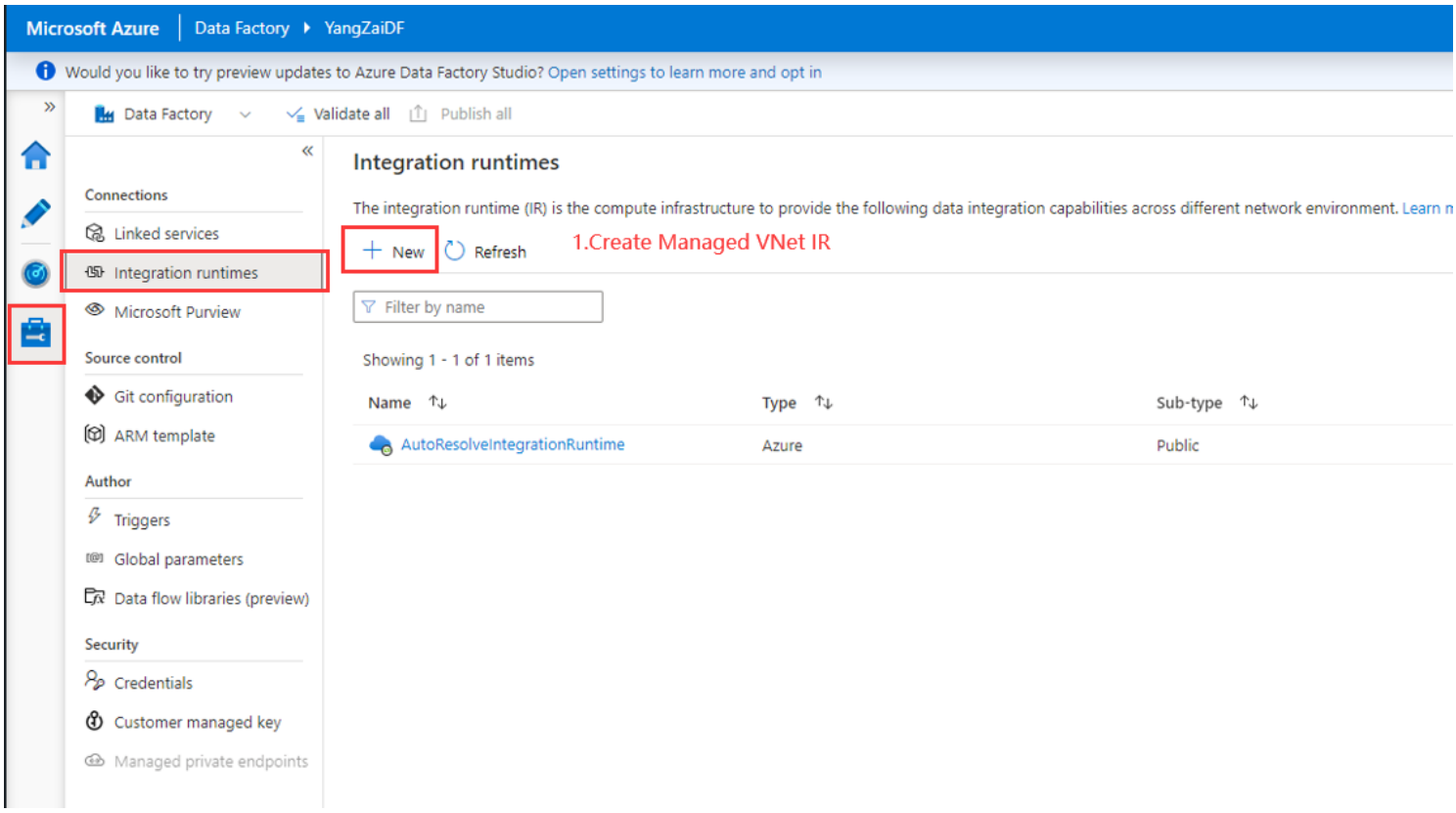
Azure SQL/SQL DW/SQL MI public endpoint is disabled, can only access by private endpoint. So in ADF, Azure SQL/SQL DW/SQL MI can't access through Azure IR.

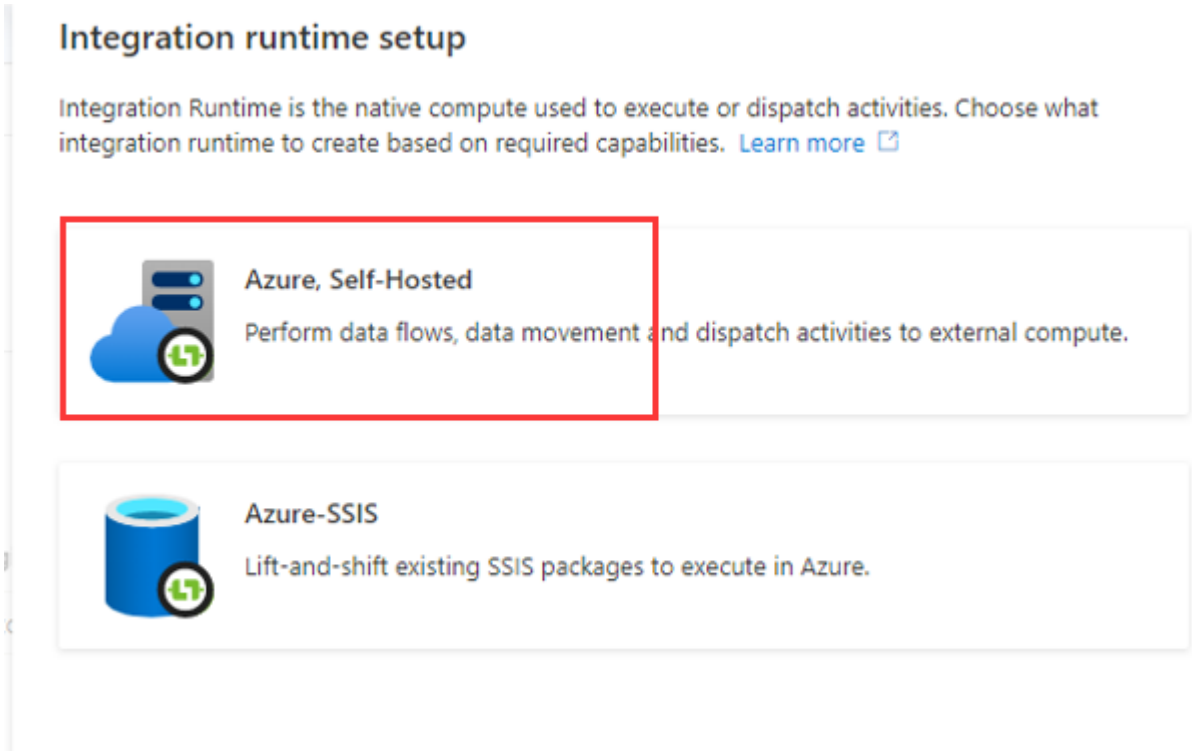


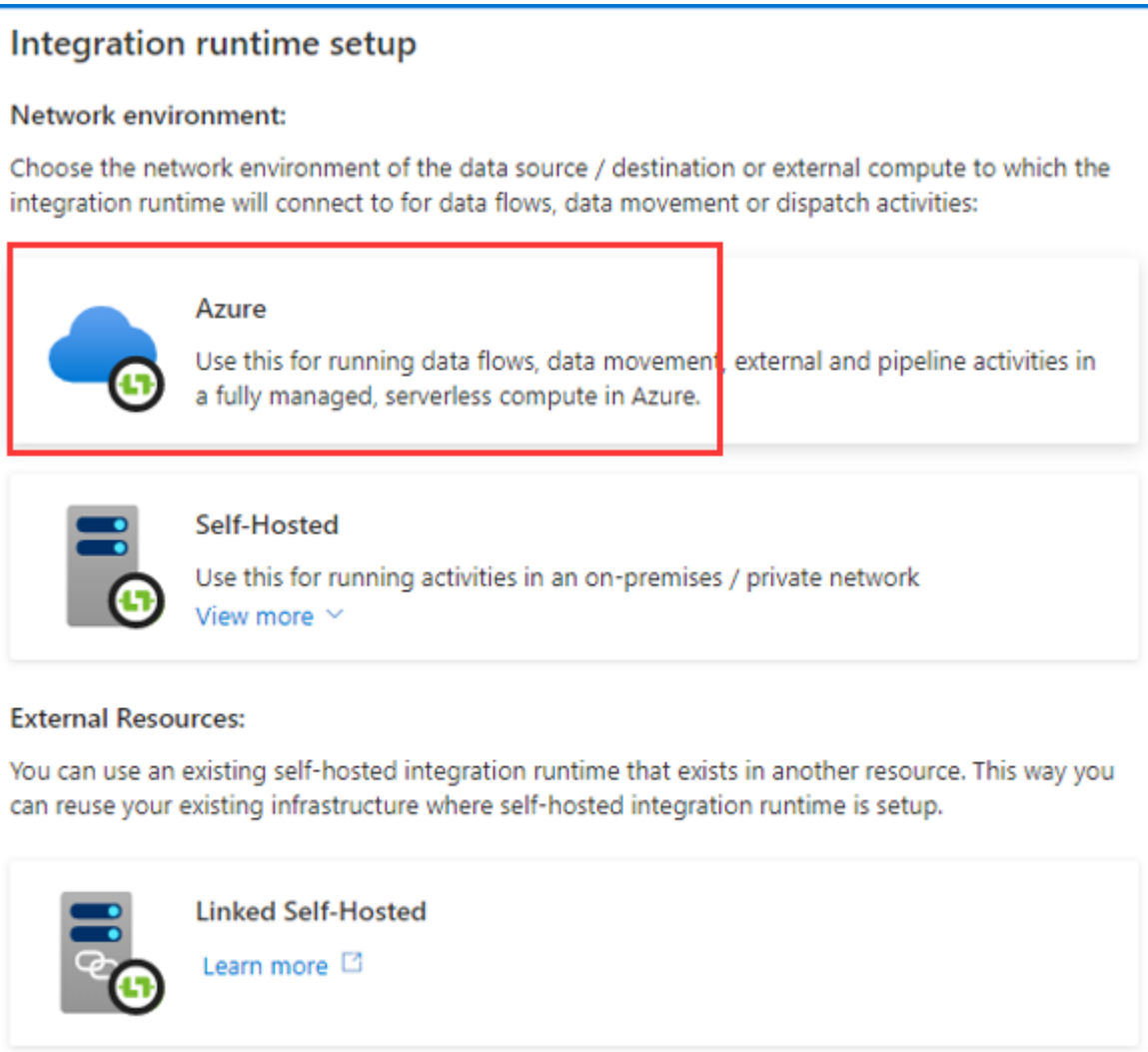
Resolution

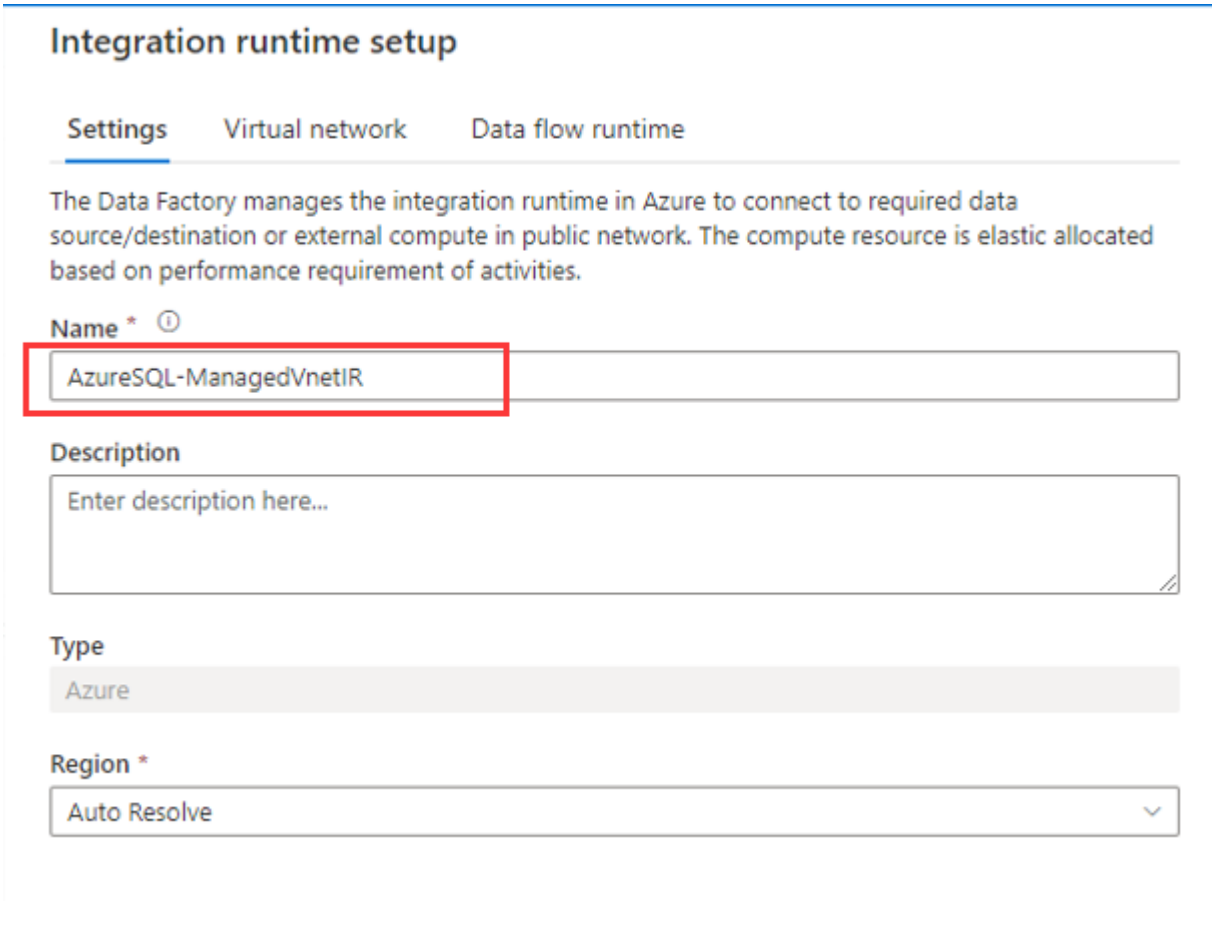
Using Azure Managed VNet IR, create PE in ADF and approve PE in SQL server.

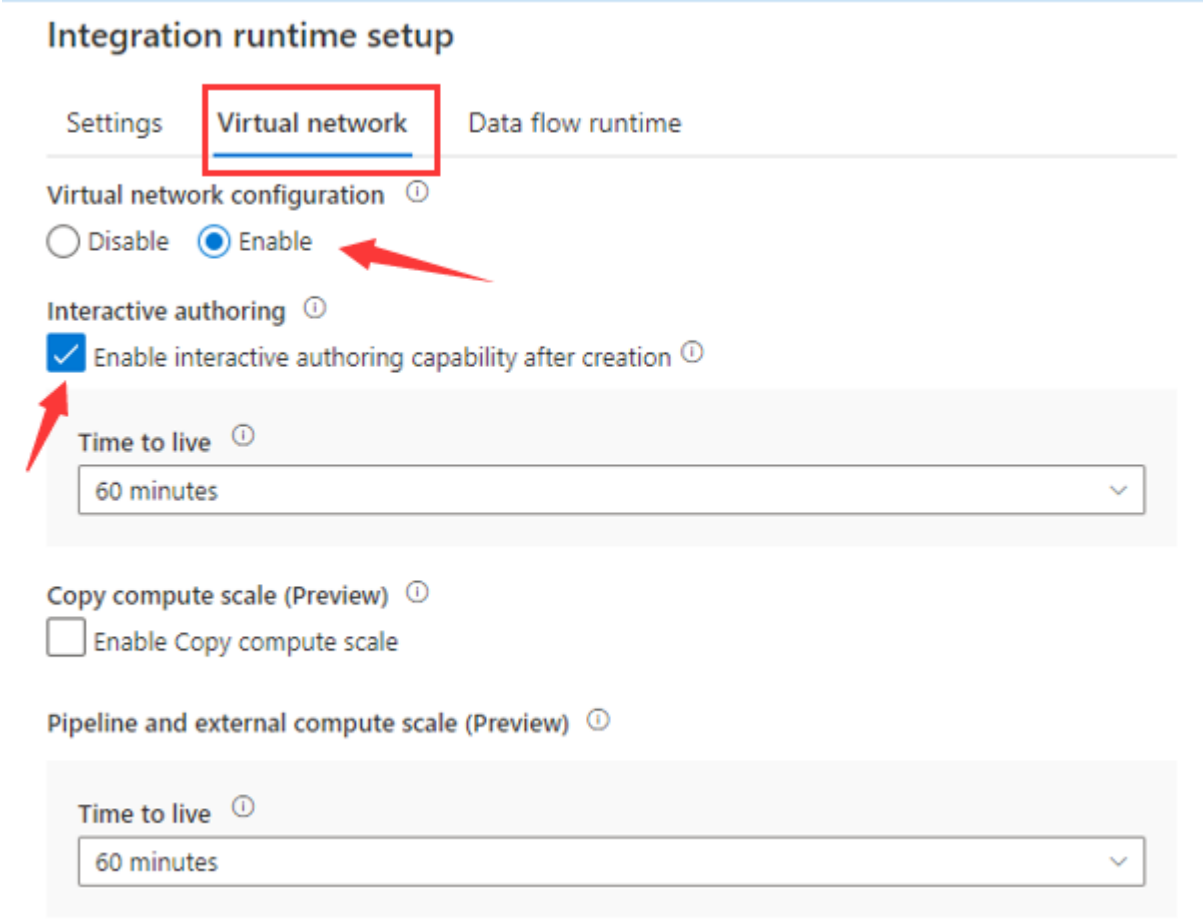
Step 1: Create ManagedVnet IR in your ADF/Synapse workspace

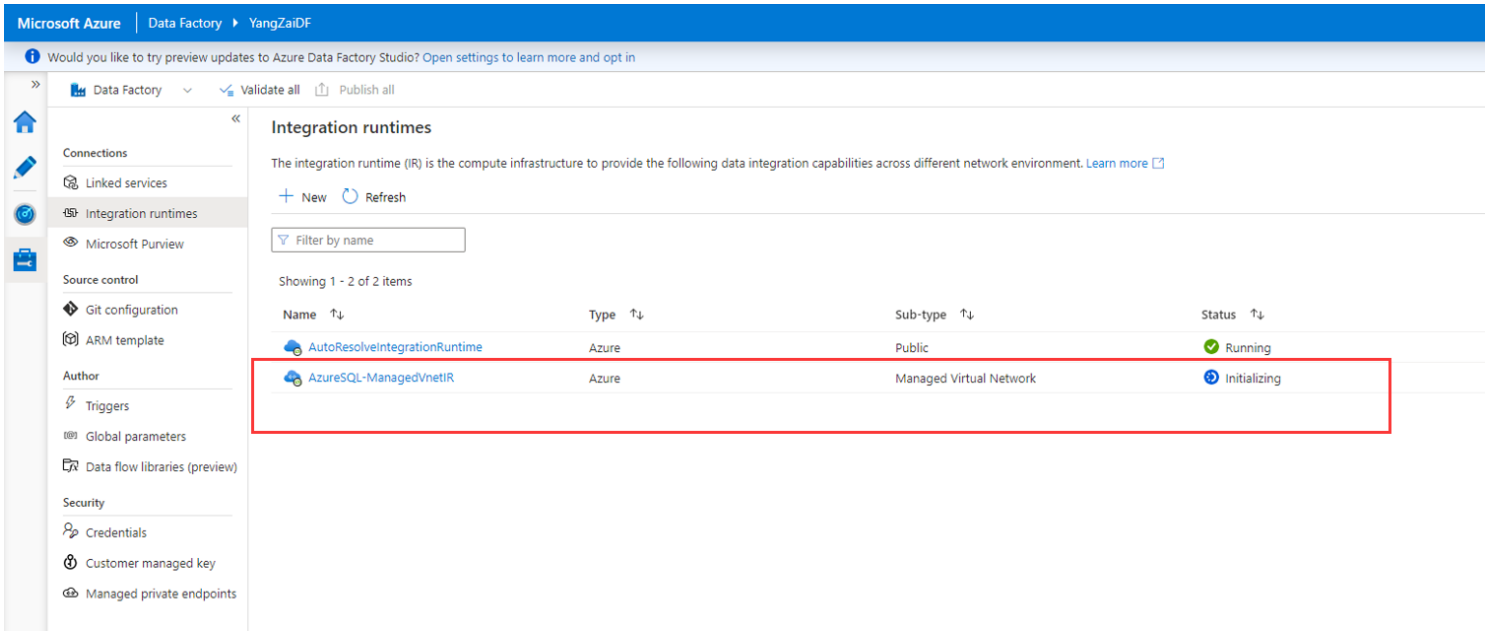




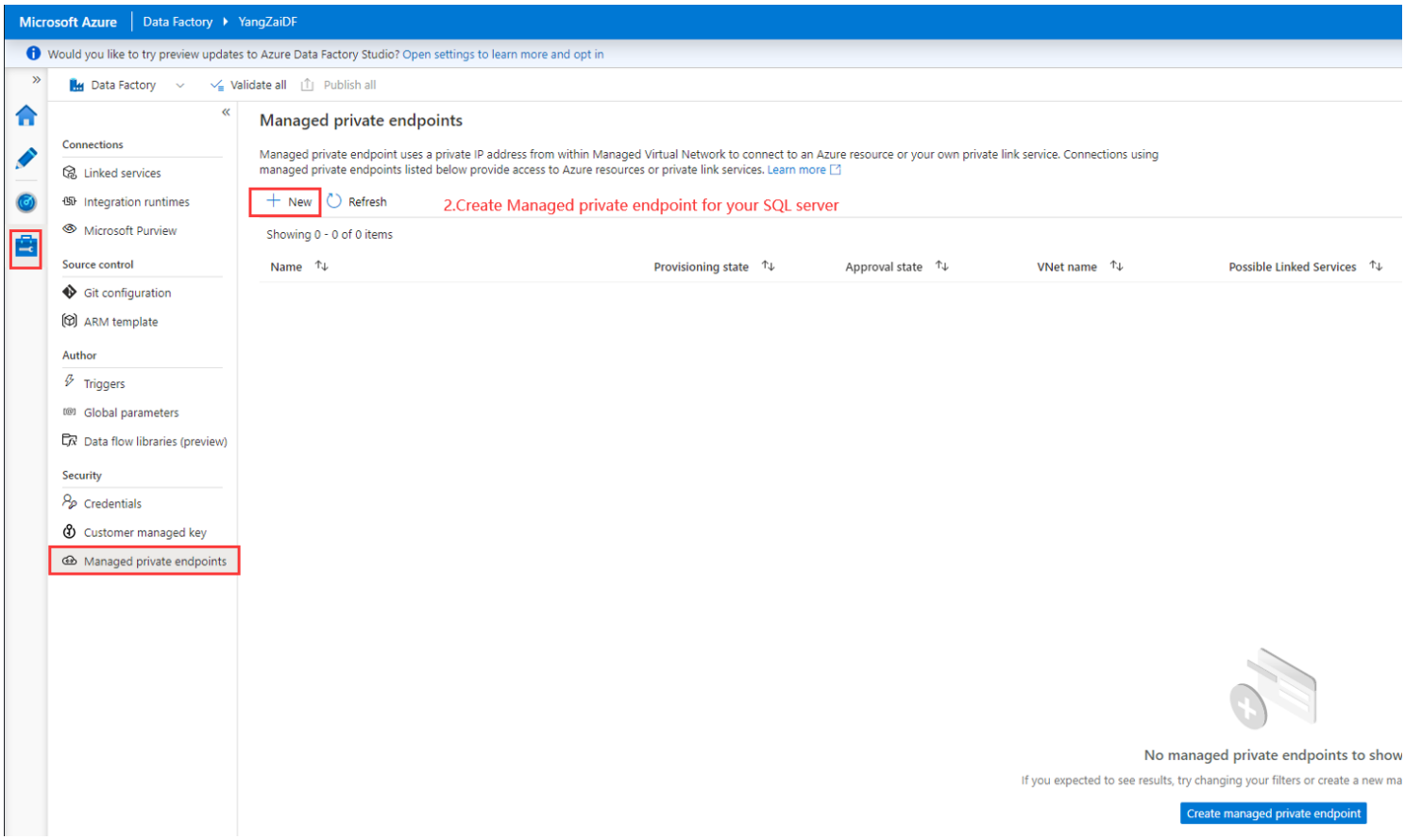

Integration runtime setup
Network environment:
Choose the network environment of the data source / destination or external compute to which the integration runtime will connect to for data flows, data movement or dispatch activities:
Azure
Use this for running data flows, data movement, external and 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

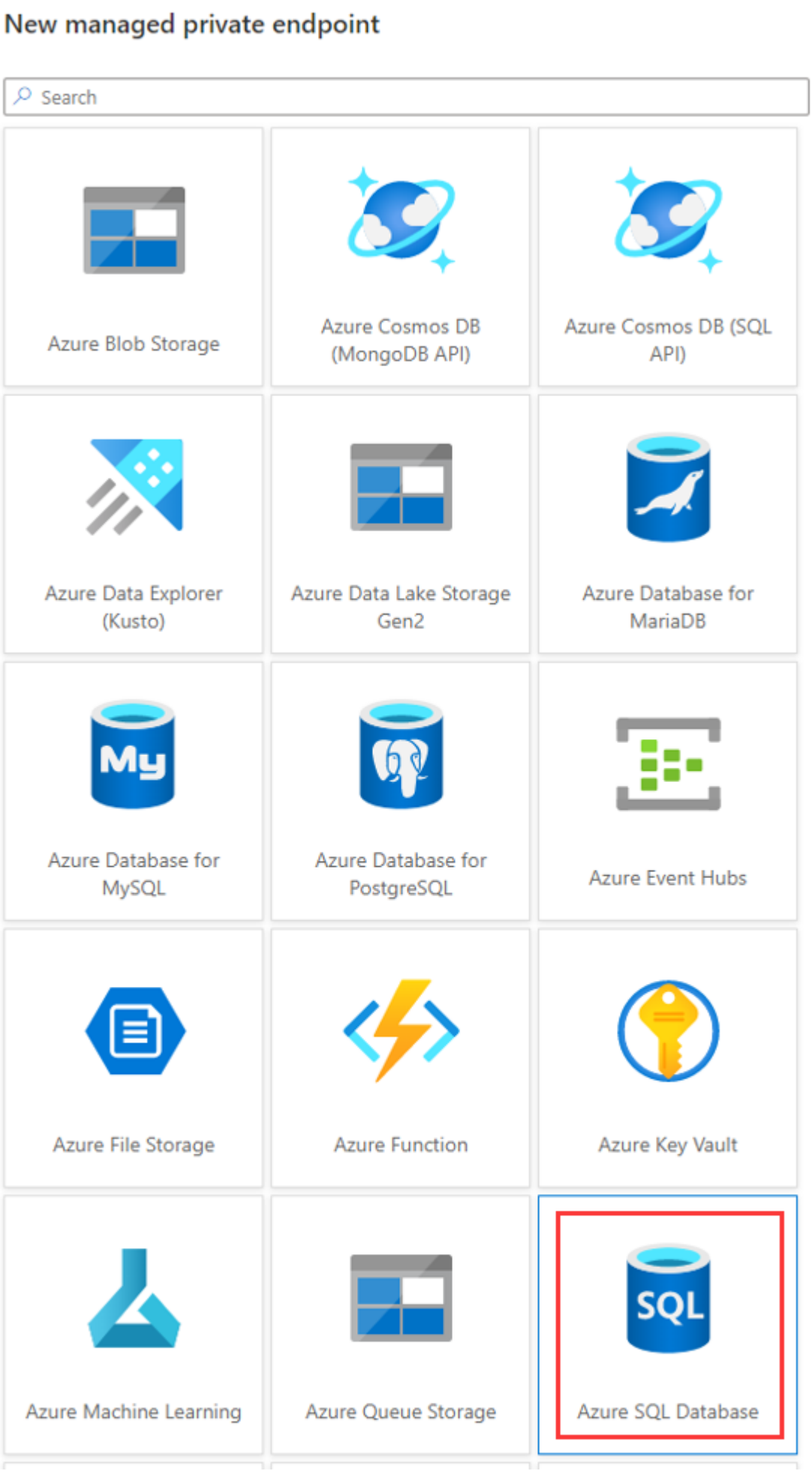

Integration runtime setup
Settings
Virtual network
Data flow runtime
The Data Factory manages the integration runtime in Azure to connect to required data source/destination or external compute in public network. The compute resource is elastic allocated based on performance requirement of activities.
Name *
AzureSQL-ManagedVnetIR
Description
Enter description here...
Type
Azure
Region *
Auto Resolve

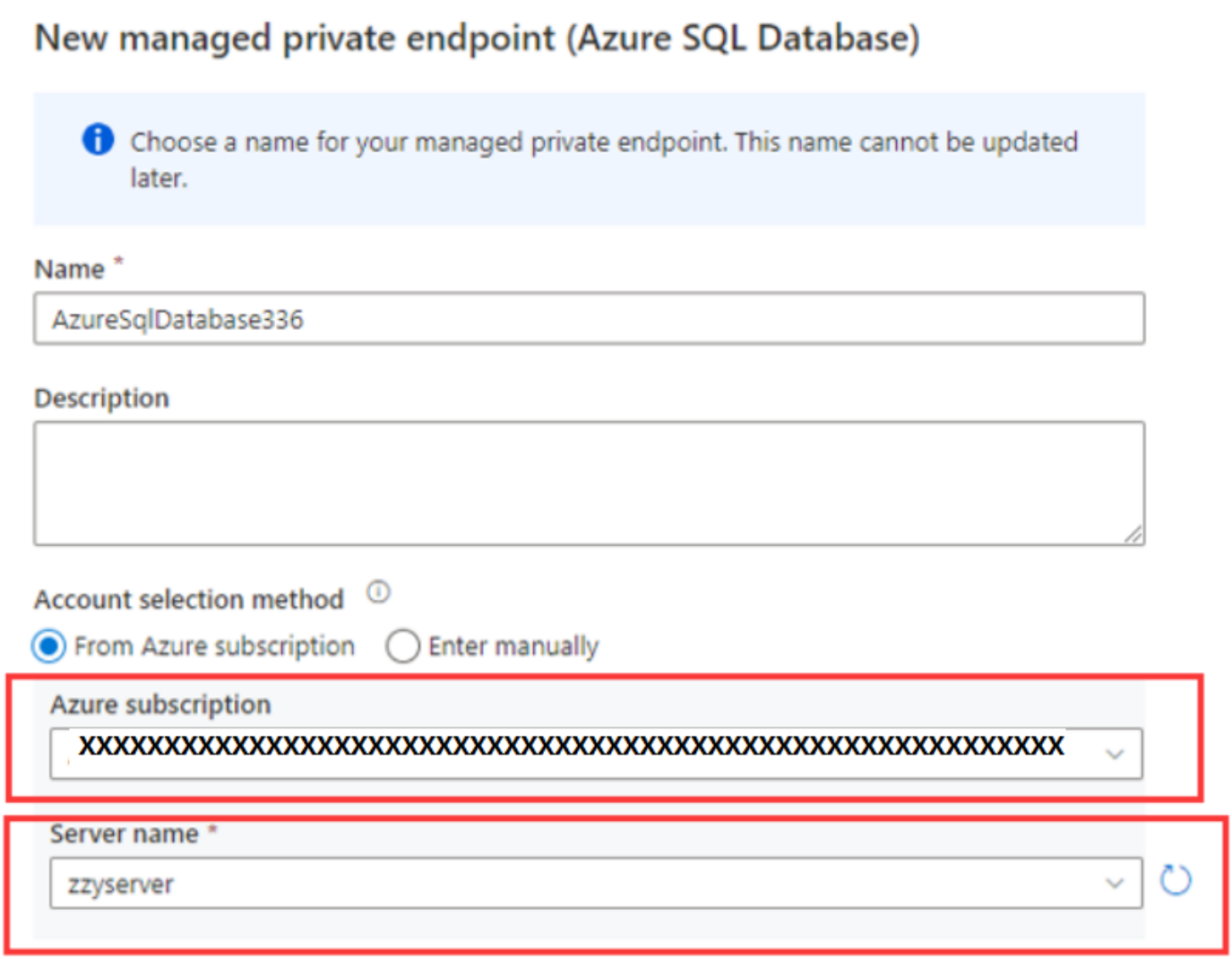

Integration runtime setup
Settings
Virtual network
Data flow runtime
Virtual network configuration
Disable
Enable
Interactive authoring
Enable interactive authoring capability after creation
Time to live
60 minutes
Copy compute scale (Preview)
Enable Copy compute scale
Pipeline and external compute scale (Preview)
Time to live
60 minutes



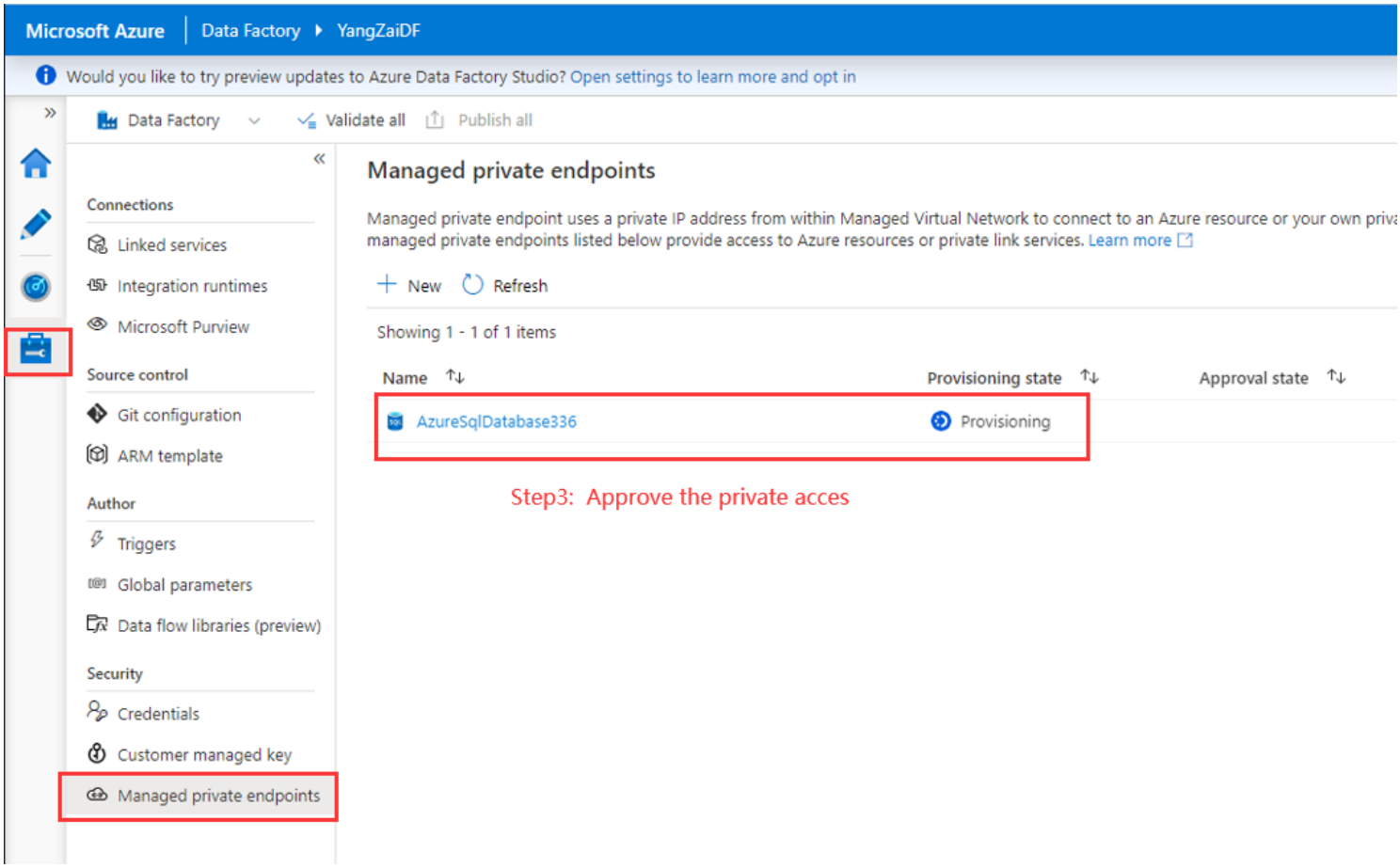
Step2: Create Managed Private endpoint for SQL server

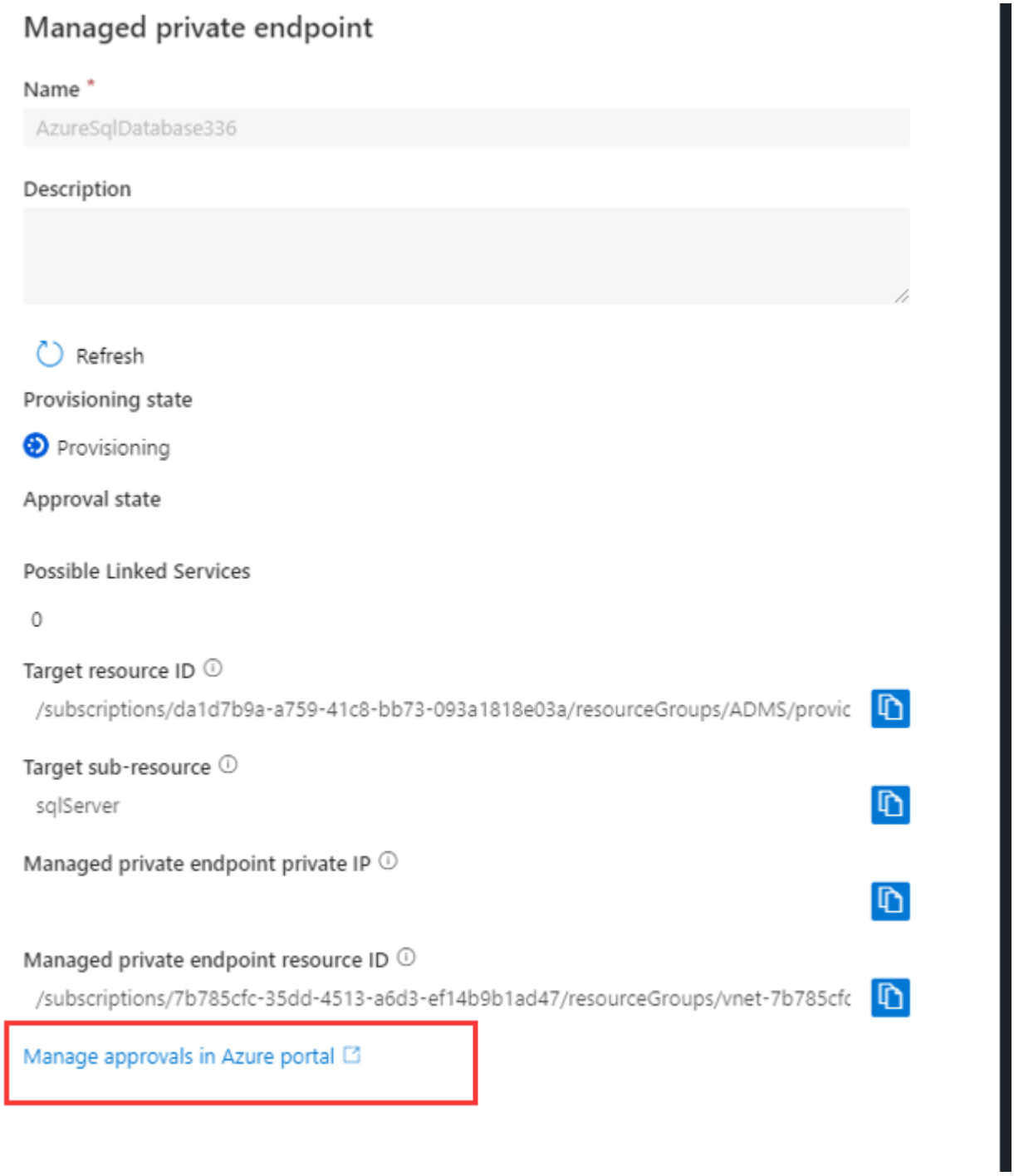


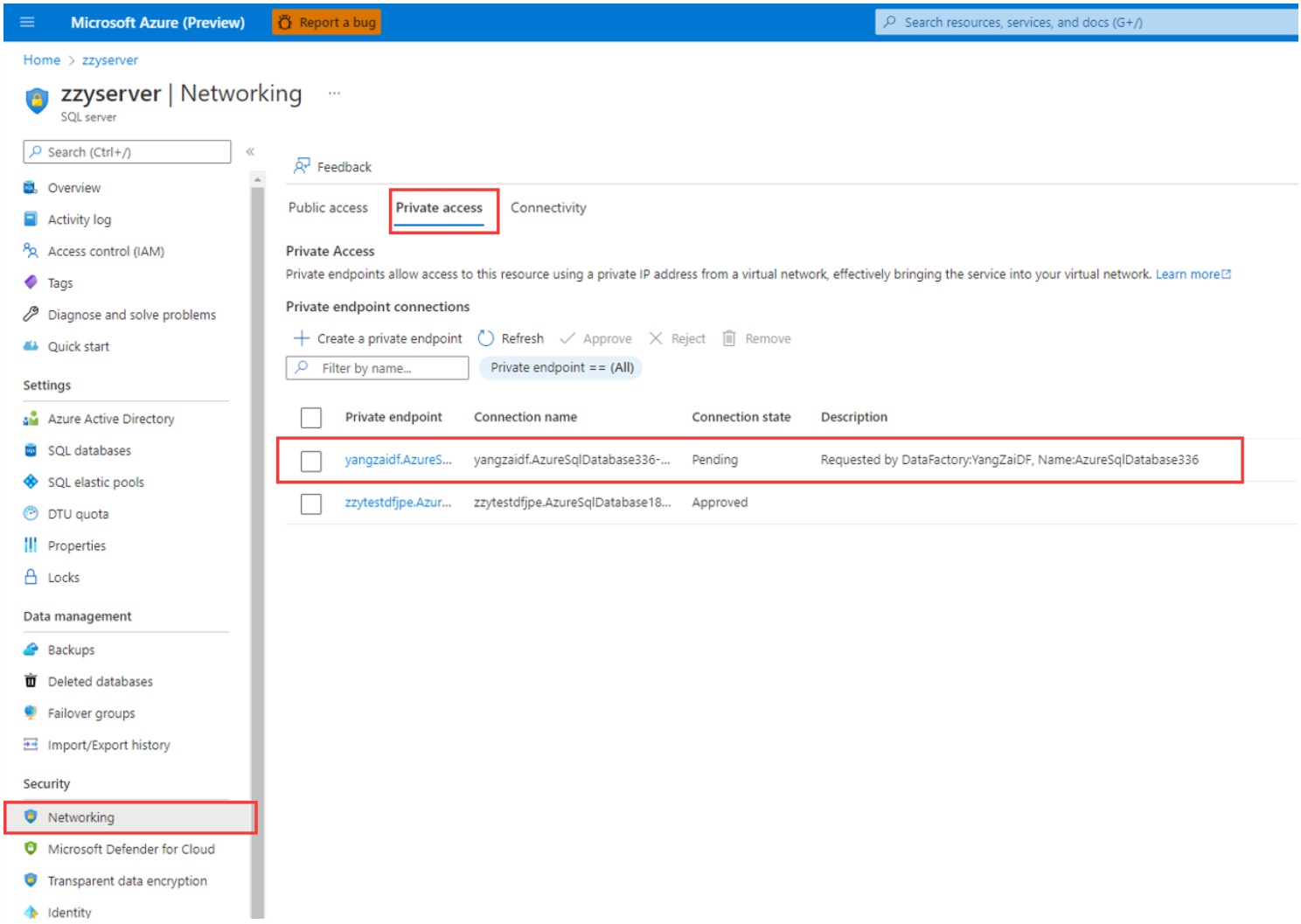

New managed private endpoint
Search
Azure Blob Storage
Azure Cosmos DB (MongoDB API)
Azure Cosmos DB (SQL API)
Azure Data Explorer (Kusto)
Azure Data Lake Storage Gen2
Azure Database for MariaDB
Azure Database for MySQL
Azure Database for PostgreSQL
Azure Event Hubs
Azure File Storage
Azure Function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

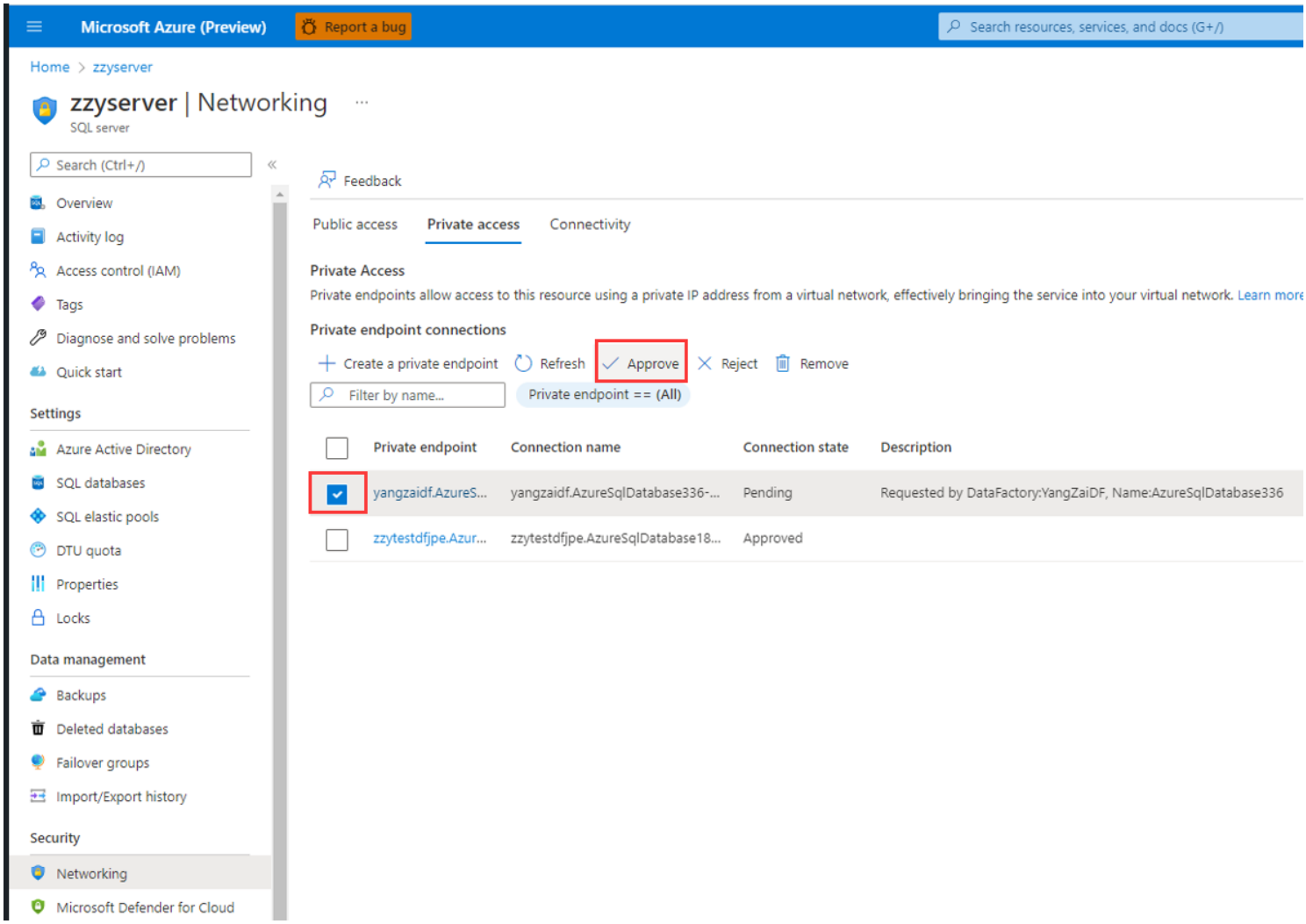


Step3: Approve the private access


Microsoft Azure
Data Factory
YangZaiDF
Would you like to try preview updates to Azure Data Factory Studio? Open settings to learn more and opt in
Data Factory
Validate all
Publish all
Connections
Linked services
Integration runtimes
Microsoft Purview
Source control
Git configuration
ARM template
Author
Triggers
Global parameters
Data flow libraries (preview)
Security
Credentials
Customer managed key
Managed private endpoints
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 priva
managed private endpoints listed below provide access to Azure resources or private link services. Learn more
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+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Quick start
Settings
Azure Active Directory
SQL databases
SQL elastic pools
DTU quota
Properties
Locks
Data management
Backups
Deleted databases
Failover groups
Import/Export history
Security
Networking
Microsoft Defender for Cloud
Transparent data encryption
Identity
Feedback
Public access
Private access
Connectivity
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 endpoint
Refresh
Approve
Reject
Remove
Filter by name...
Private endpoint == (All)
Private endpoint
Connection name
Connection state
Description
yangzaidf.AzureS...
yangzaidf.AzureSqlDatabase336-...
Pending
Requested by DataFactory:YangZaiDF, Name:AzureSqlDatabase336
zzytestdfjpe.Azur...
zzytestdfjpe.AzureSqlDatabase18...
Approved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zzyserver | Networking
SQL server
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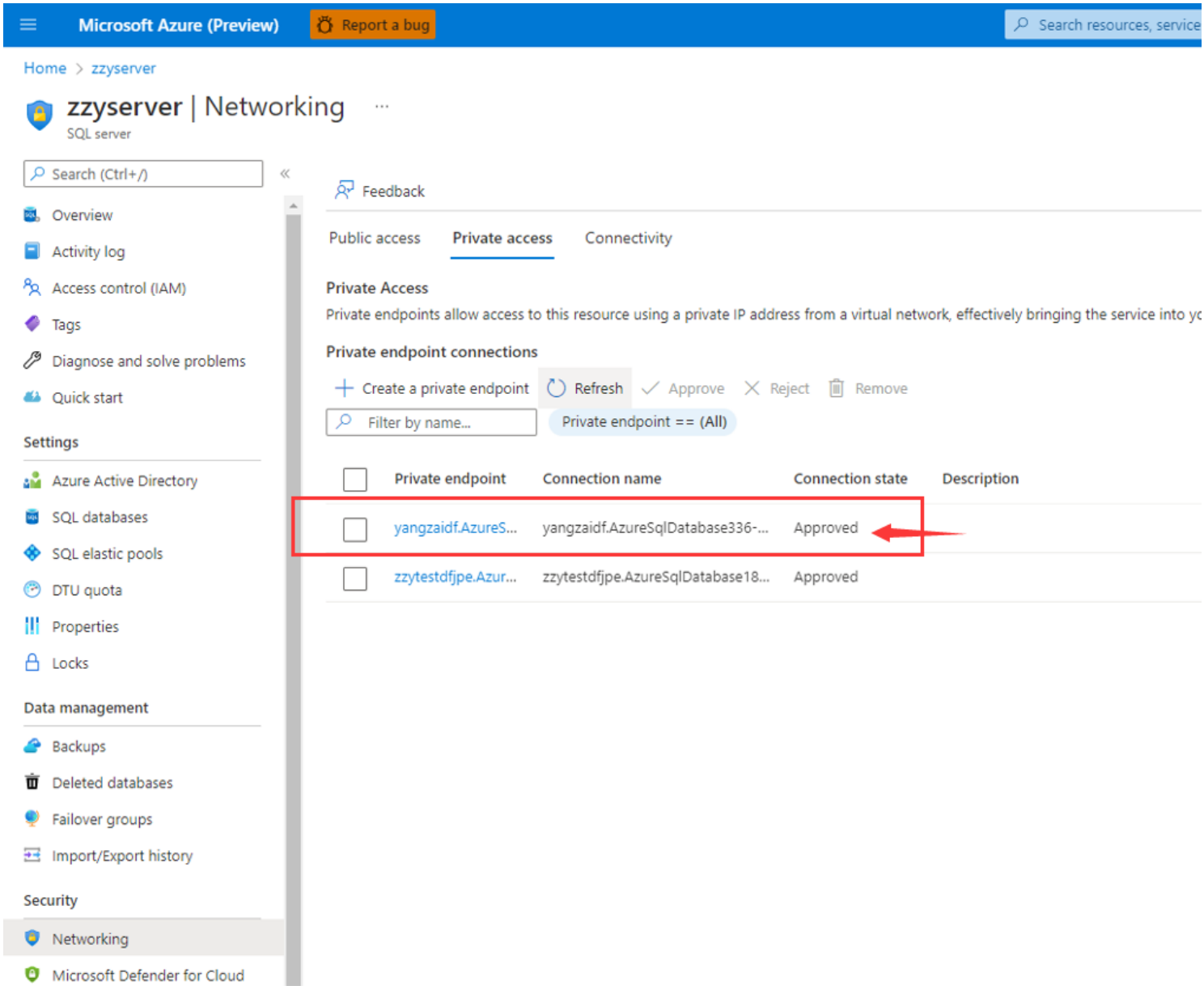
Approve
Reject
Remove
Filter by name...
Private endpoint == (All)
Private endpoint
Connection name
Connection state
Description
yangzaidf.AzureS...
yangzaidf.AzureSqlDatabase336-...
Pending
Requested by DataFactory:YangZaiDF, Name:AzureSqlDatabase336
zzytestdfjpe.Azur...
zzytestdfjpe.AzureSqlDatabase18...
Approved


Microsoft Azure (Preview)
Report a bug
Search resources, service
Home > zzyserver
zzyserver | Networking
SQL server
Search (Ctrl+/)
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Quick start
Settings
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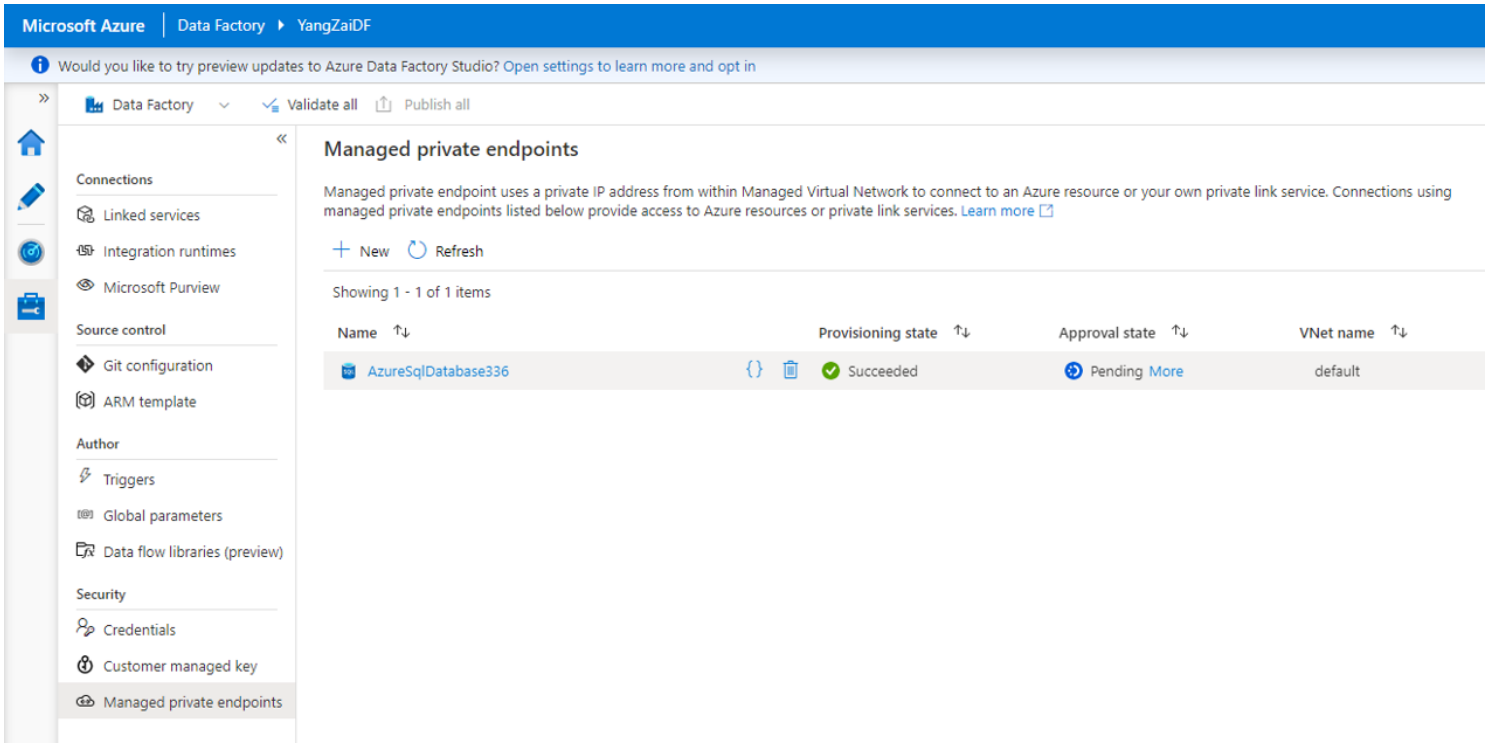
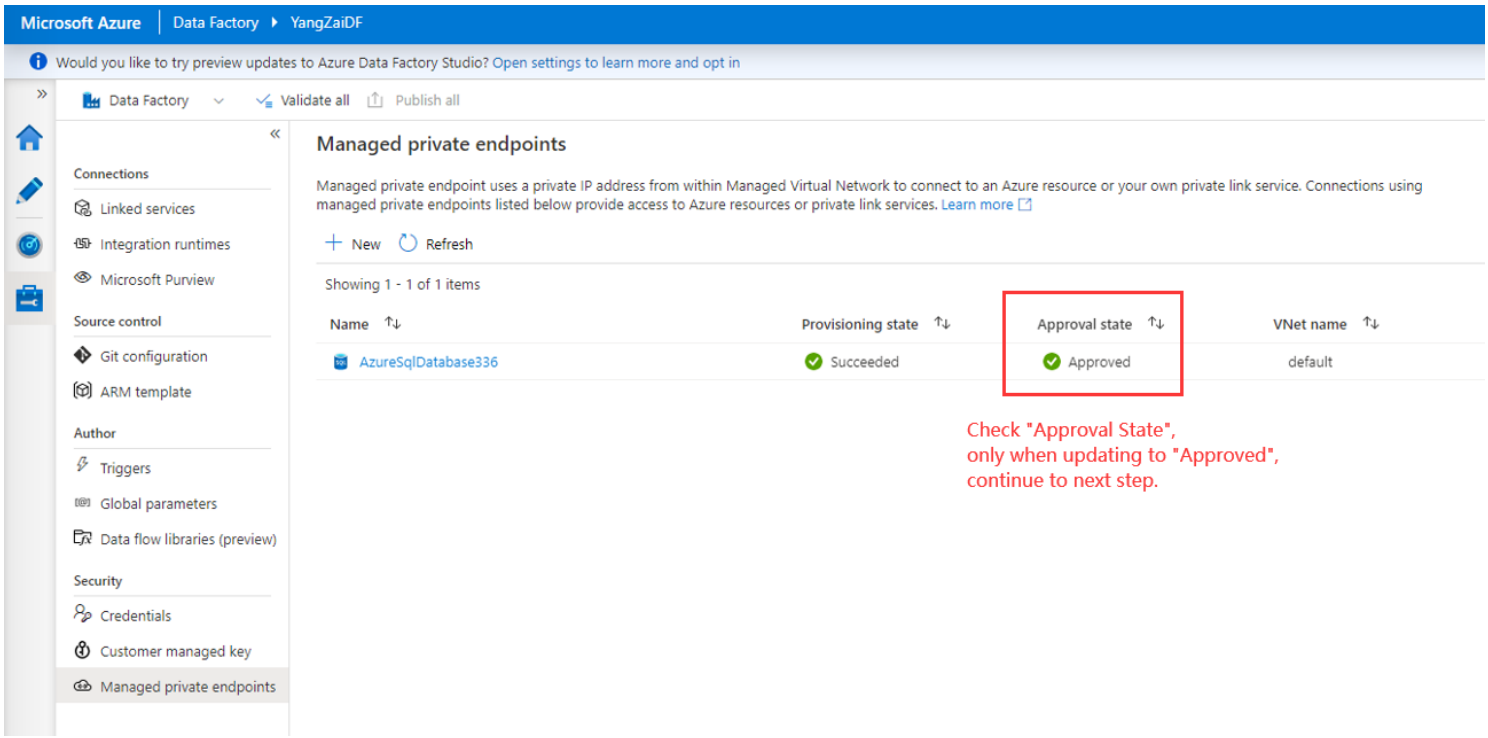
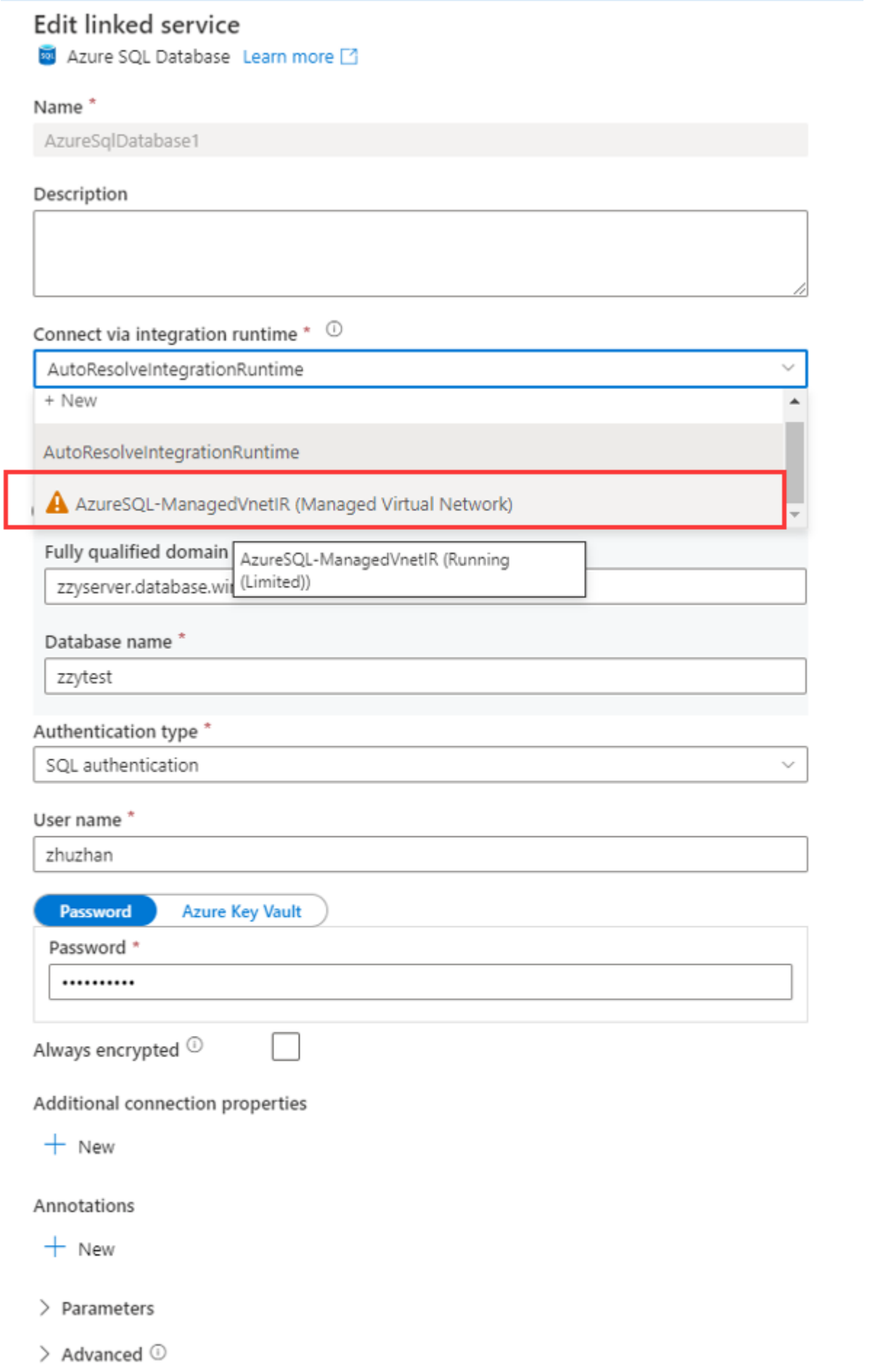
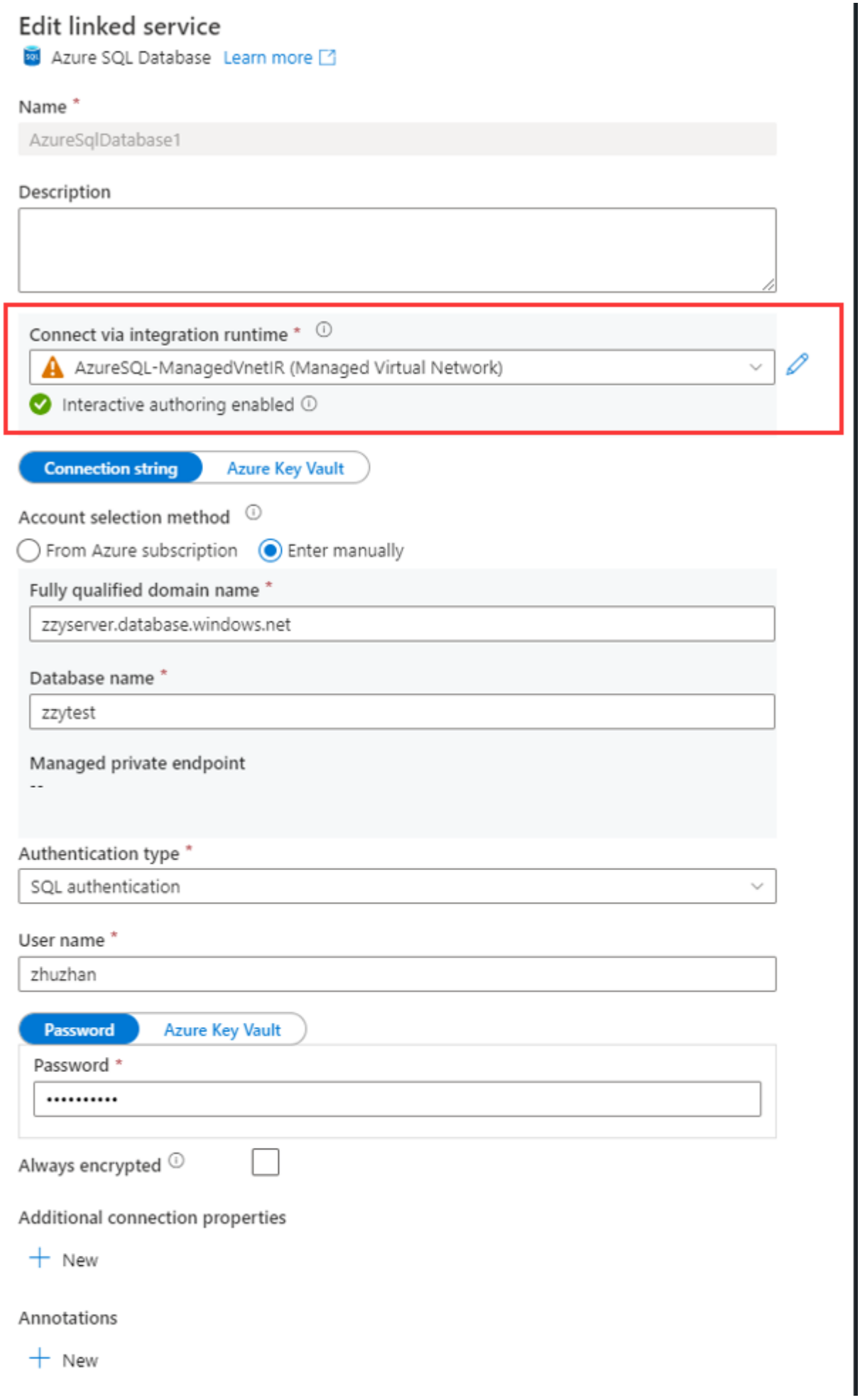
Private endpoint connections
Create a private endpoint
Refresh
Approve
Reject
Remove
Filter by name...
Private endpoint == (All)
Private endpoint
Connection name
Connection state
Description
yangzaidf.AzureS...
yangzaidf.AzureSqlDatabase336-...
Approved
zzytestdfjpe.Azur...
zzytestdfjpe.AzureSqlDatabase18...
Approved





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)
AzureSQL-ManagedVnetIR (Running (Limited))
Fully qualified domain
zzyserver.database.wi
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