Integrating On-Prem Data With Azure Apps

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Personal Details

Work

William & Mary
Chartered 1693

The University of Queensland
Australia

Education

Boston University

Oregon State University

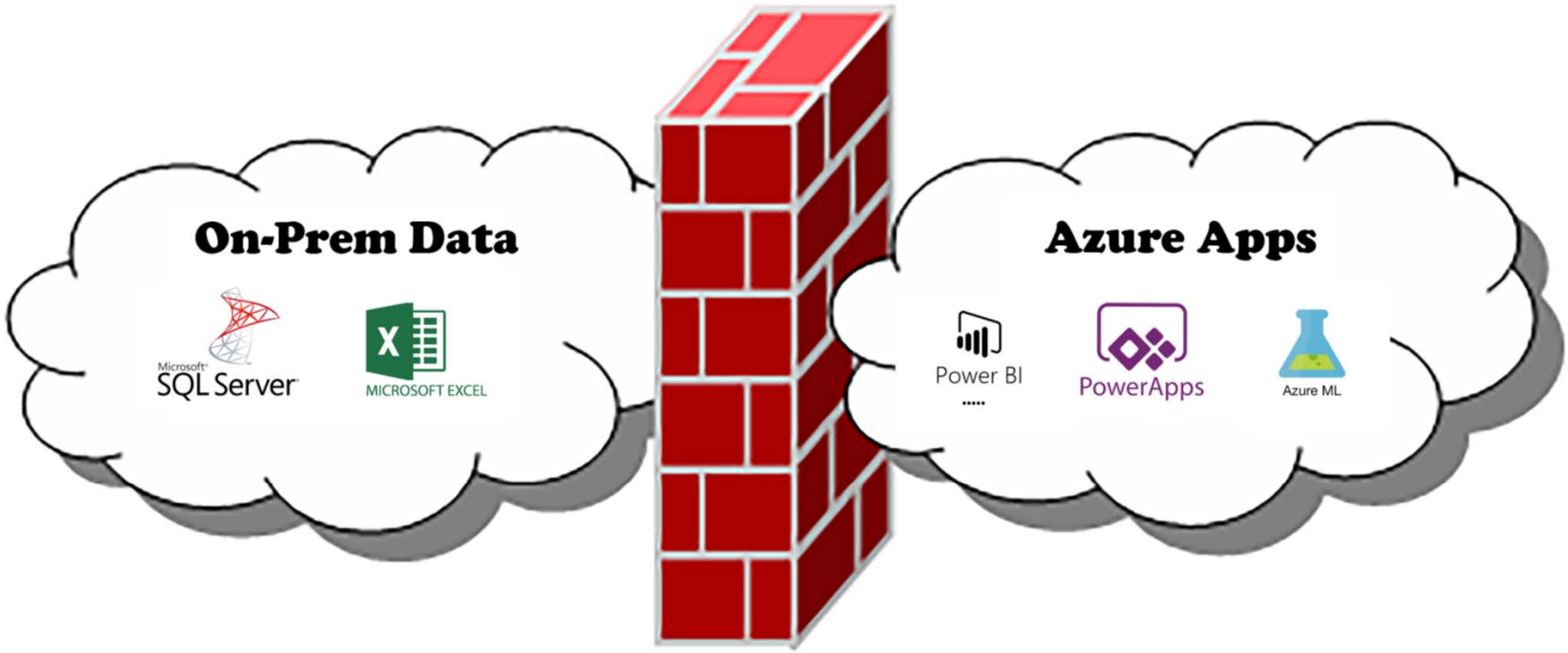
Community

RichmondSQL

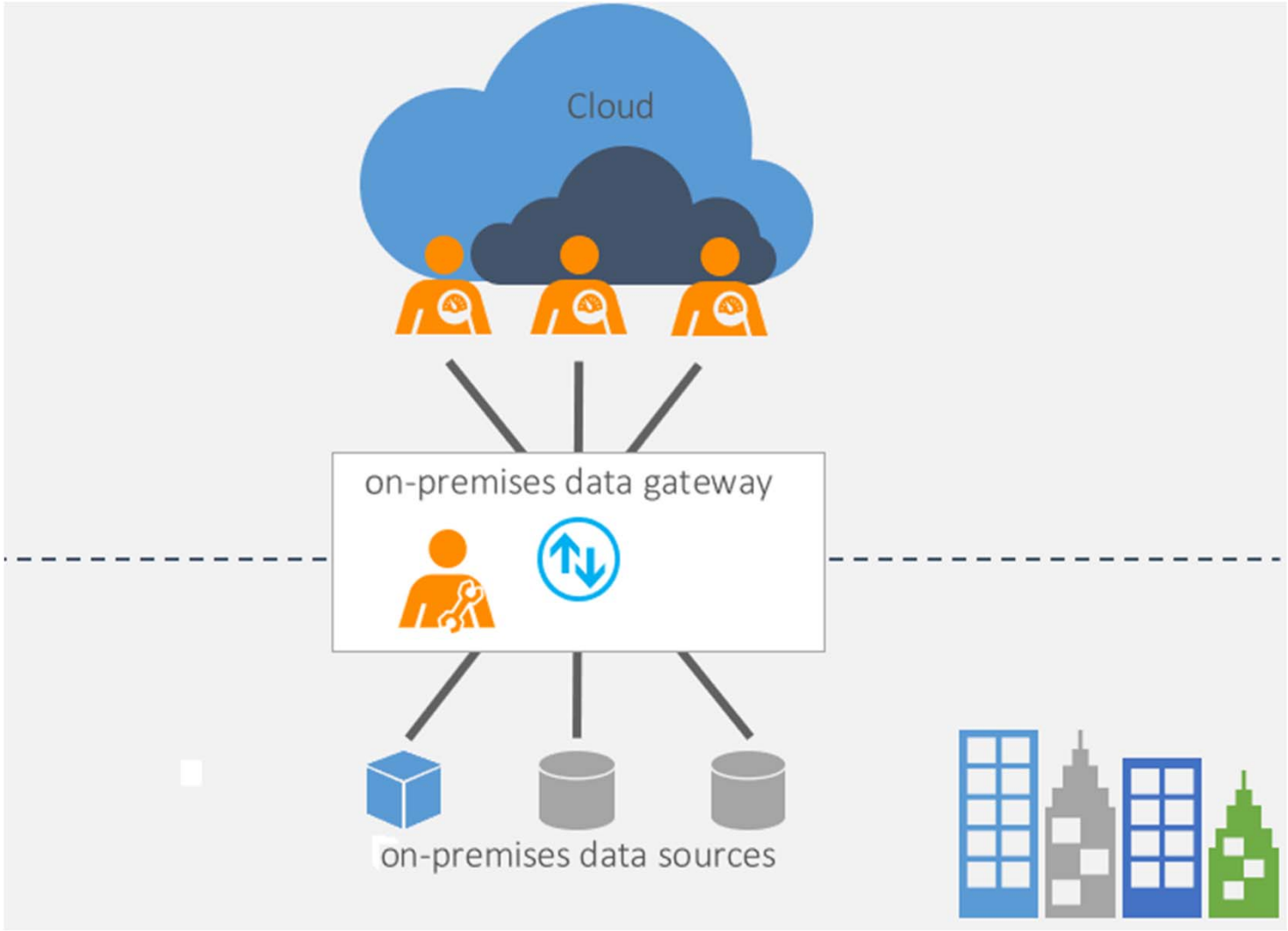
PASS SQLSaturday

Photography

The Cloud Conundrum



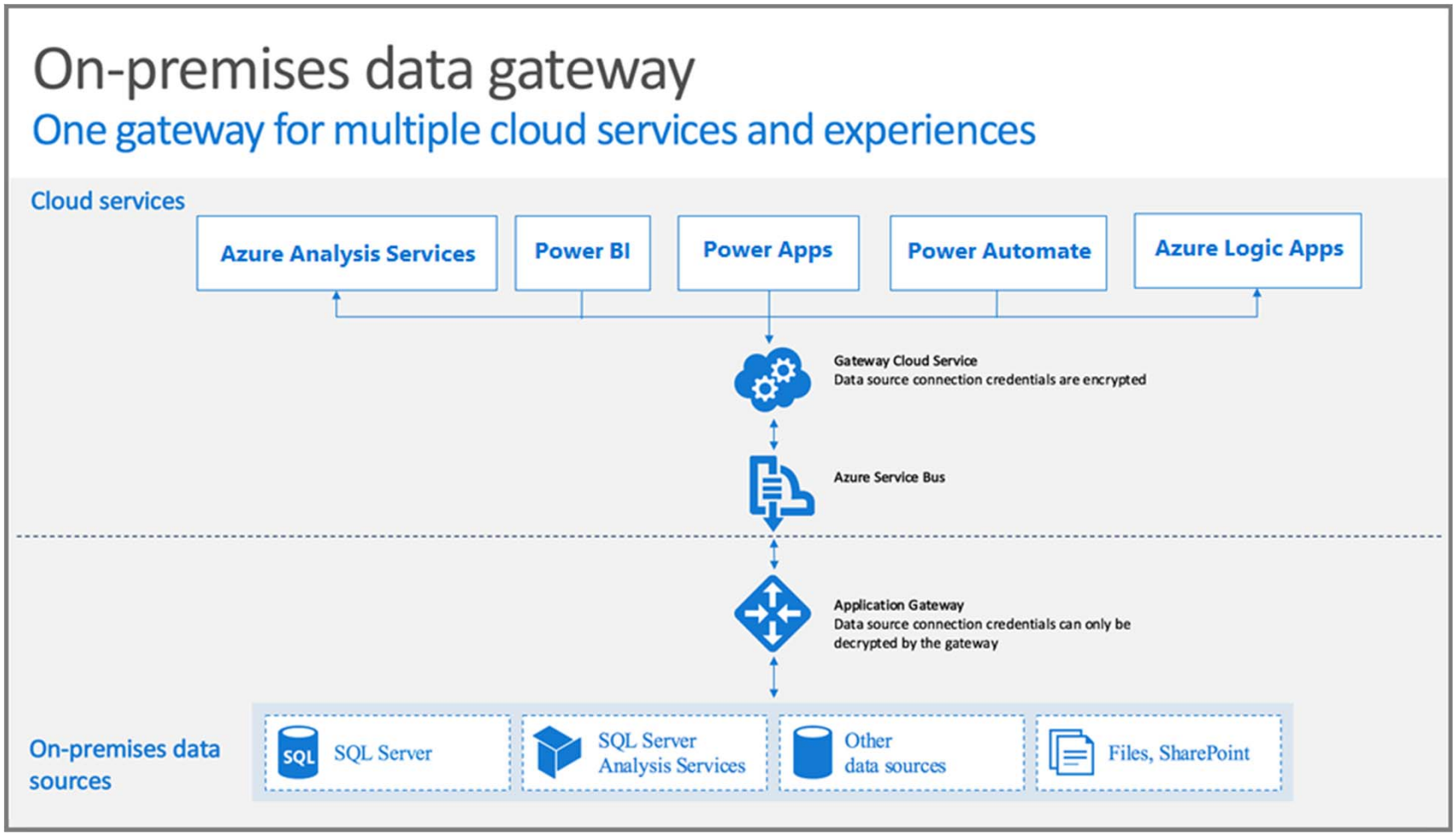
On-Premises Data Gateway



https://docs.microsoft.com/en-us/data-integration/gateway/service-gateway-onprem

How It Works

(The Azure Service Bus Magic)



https://docs.microsoft.com/en-us/data-integration/gateway/service-gateway-onprem-indepth

On-Premises Data Gateway

• **Personal mode** – For use with Power BI only. Allows one user to connect to on-prem data sources. Cannot be shared with others.

• **Standard mode** – For use with all supported Azure apps/services. Allows multiple users to connect to multiple on-prem data sources.

Requirements

- Host System
  64-bit OS (Windows Server 2008R2+ or Windows 7) w/ .NET 4.6
- Azure Active Directory (recommended for authentication)
- Azure Subscription
- Azure Resource Group
- Azure Application Licenses (Power BI, PowerApps, Flow, etc)

Authentication

Independent

On-Premises

Active Directory

Azure

Azure Active Directory

Hybrid

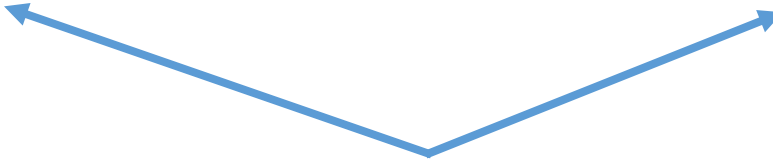
On-Premises

Active Directory

Password Hash Synchronization
User & Group Synchronization
Pass-Through Authentication

Azure

Azure Active Directory



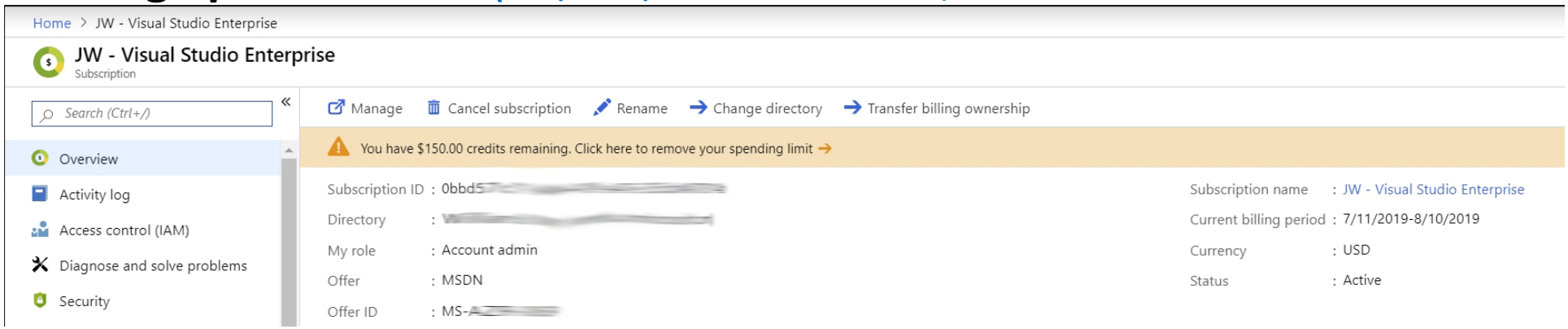
Azure AD Connect
(DirSync)

https://docs.microsoft.com/en-us/azure/active-directory/hybrid/whatis-azure-ad-connect

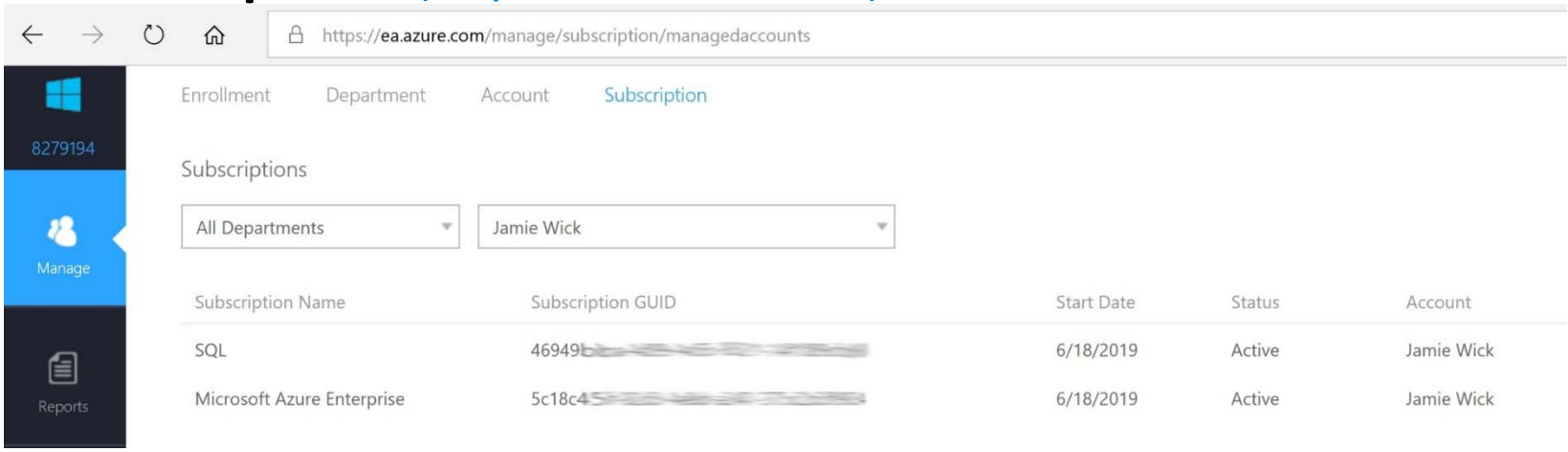
Subscription

Azure Subscription – Each Azure account can contain multiple subscriptions for management/billing purposes. Subscriptions can be grouped/nested using Azure Management Groups. Each subscription contains Azure resources.

Manage permissions (https://portal.azure.com)

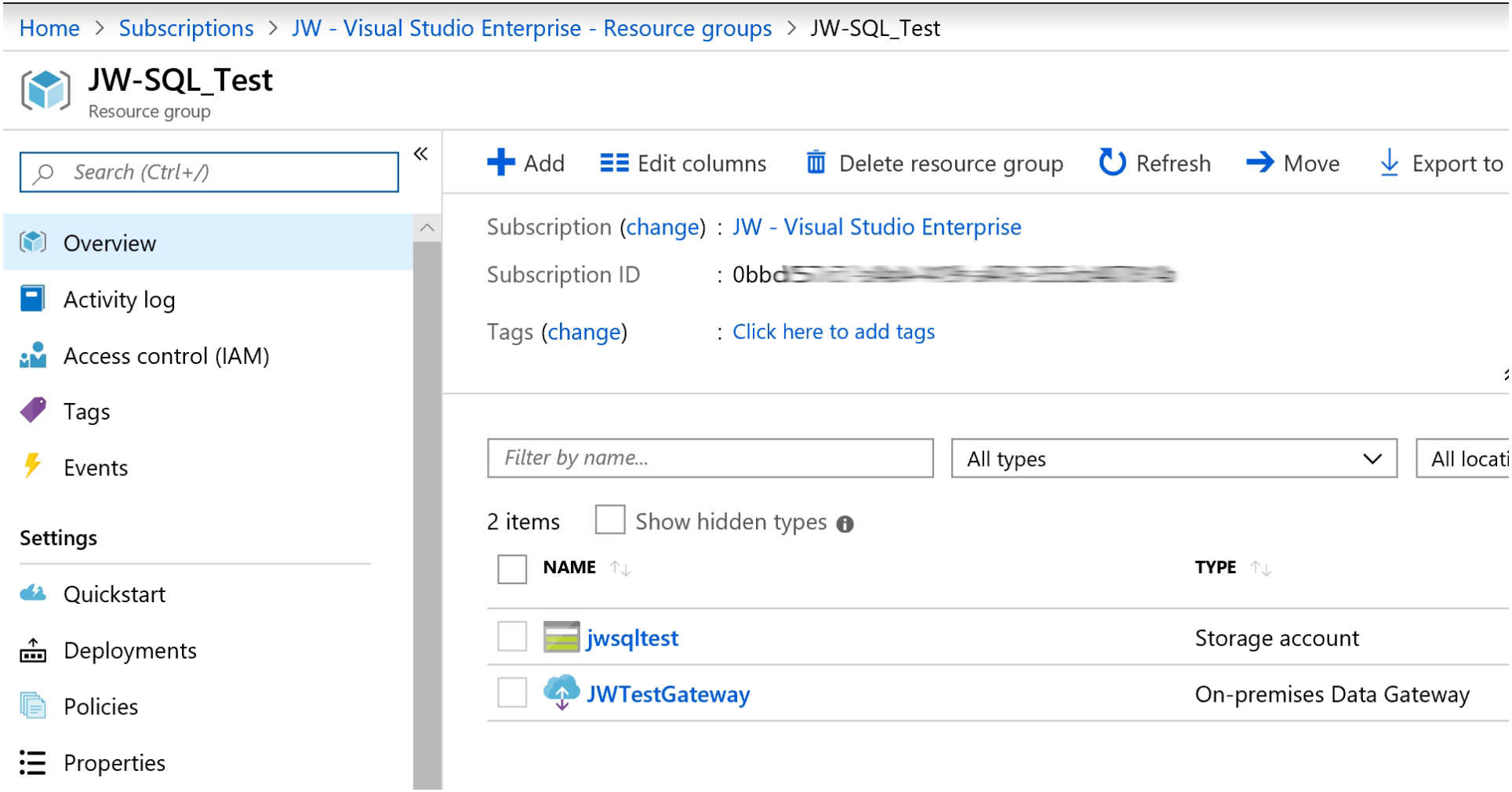


Create subscriptions (https://ea.azure.com)



Resource Group

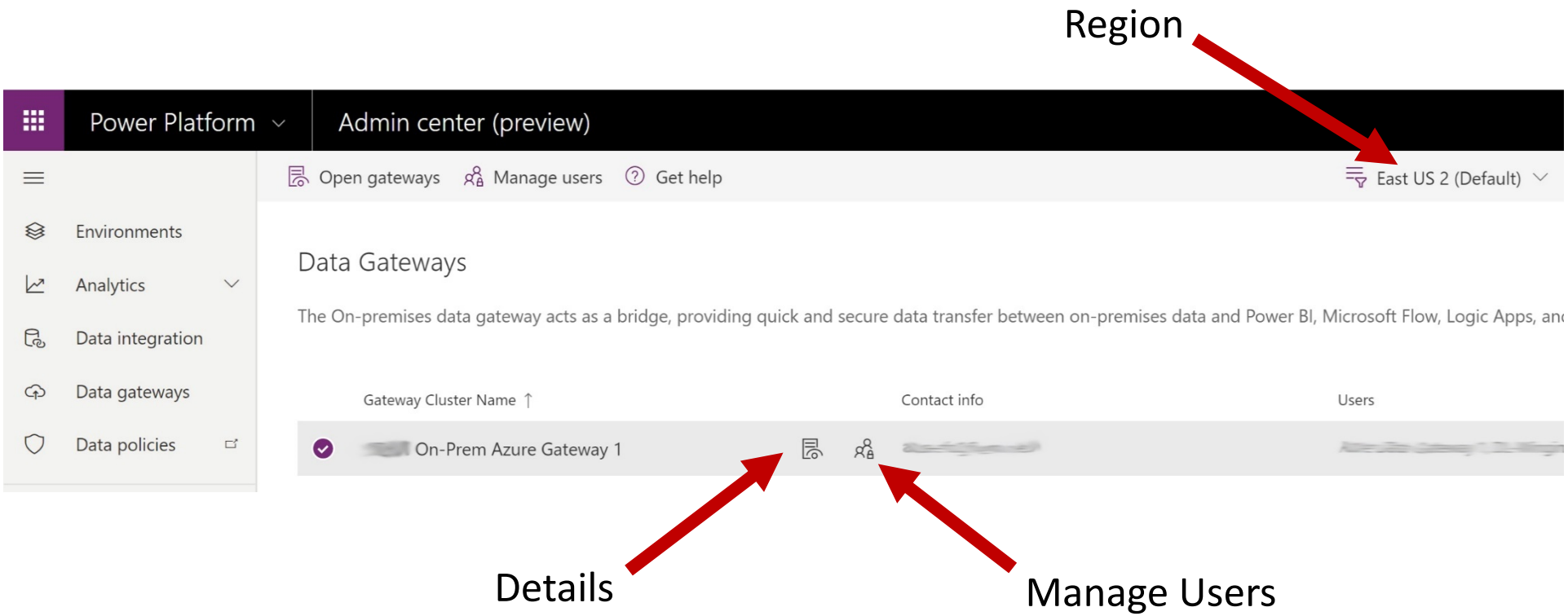
Azure Resource Group - A logical container that holds Azure resources. Resource groups can include all related resources for a project/solution, or any resources that you want to manage as a group.



Enterprise Management

PowerPlatform Admin Center - https://admin.powerplatform.microsoft.com/

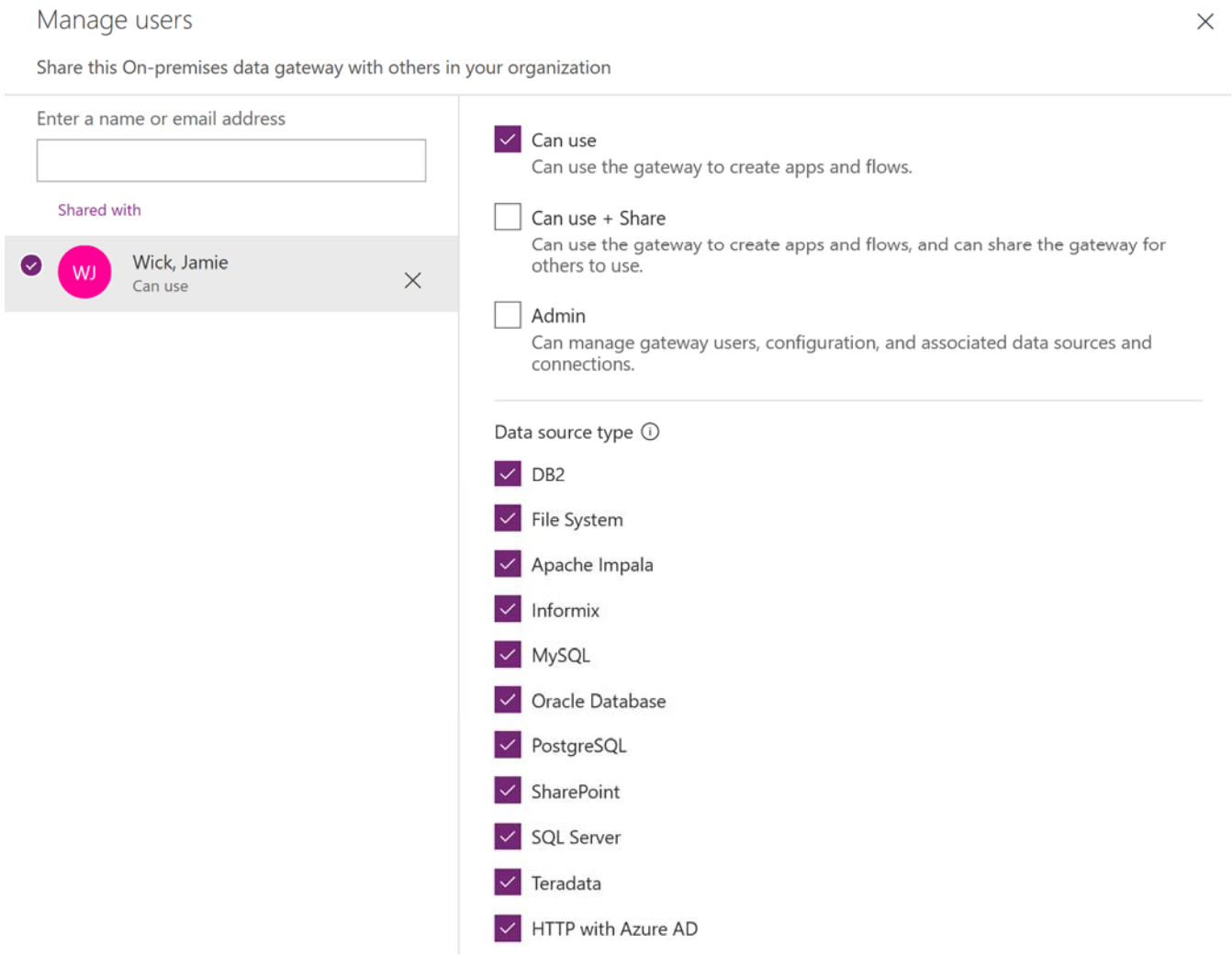
- View all Data Gateways
  Requires Global Admin (Tenant) Permission



Enterprise Management

PowerPlatform Admin Center

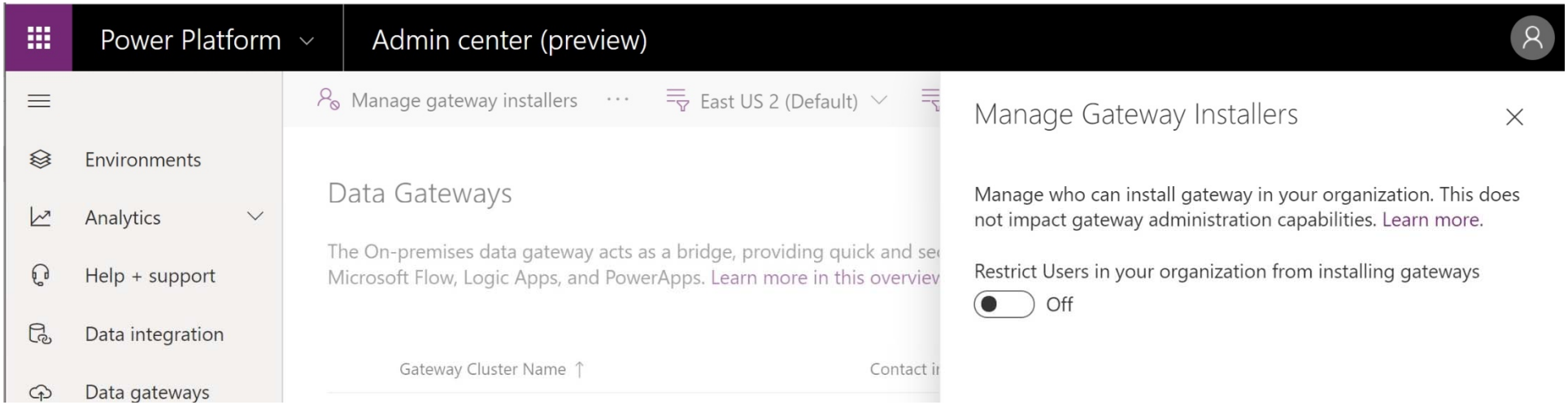
- Manage Users & Permissions



Enterprise Management

PowerPlatform Admin Center

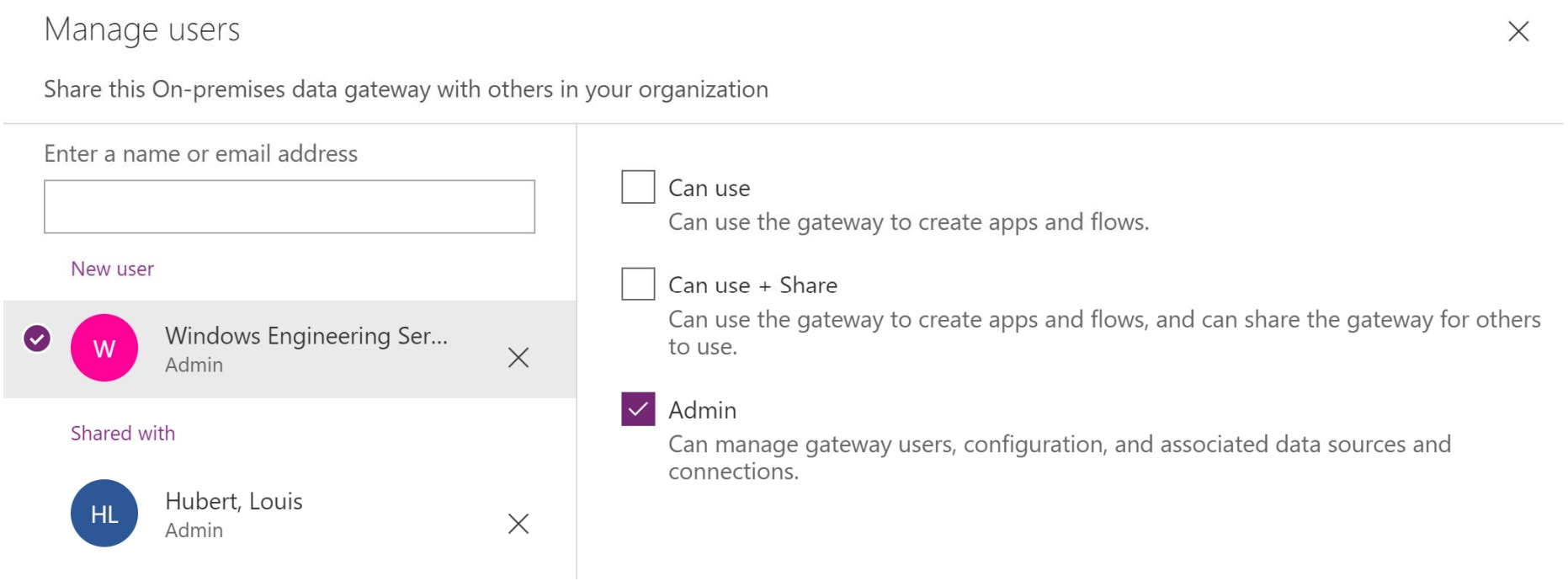
- Restrict New Installations



Enterprise Management

PowerPlatform Admin Center

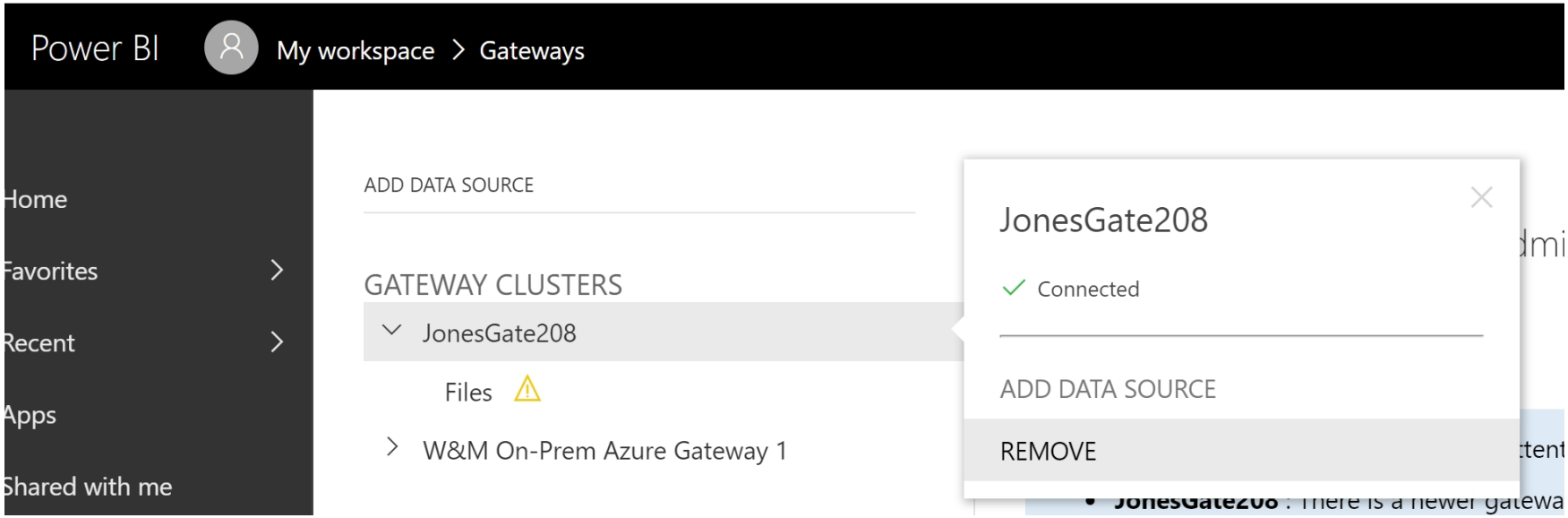
- Remove Old/Unused Gateway
    1. Take ownership



Enterprise Management

PowerPlatform Admin Center

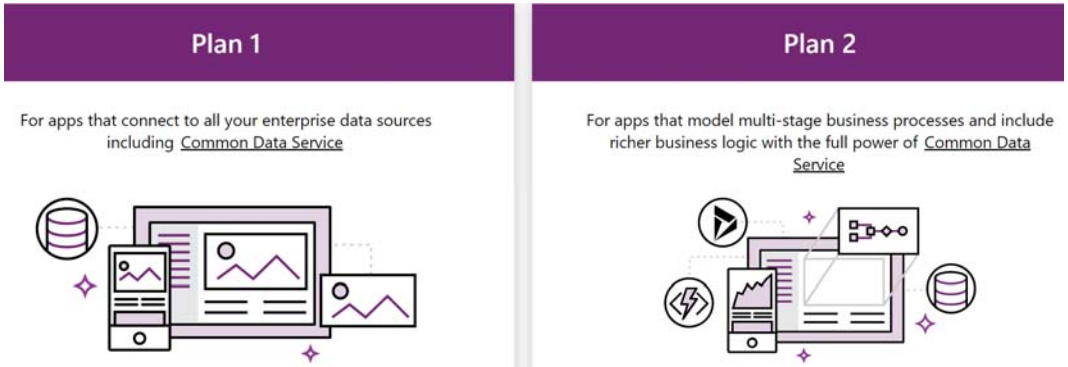
- Remove Old/Unused Gateway
    1. Take ownership
    2. Login to Azure app (ie PowerBI) using the new owner account.
    3. Use Settings menu to remove the gateway.

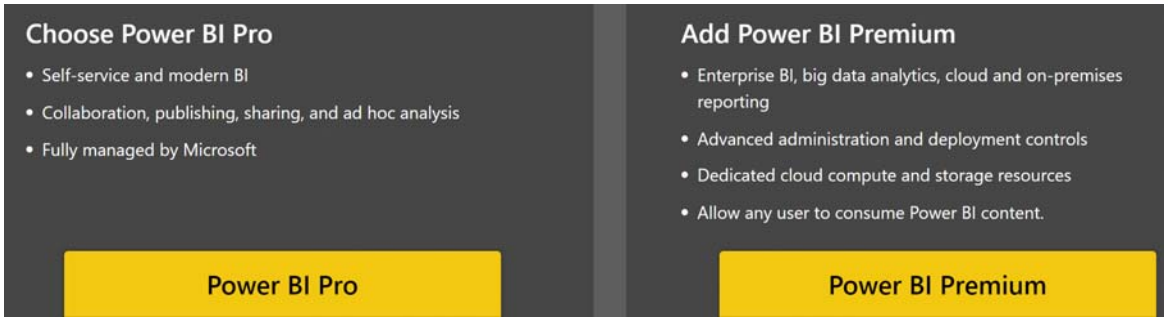


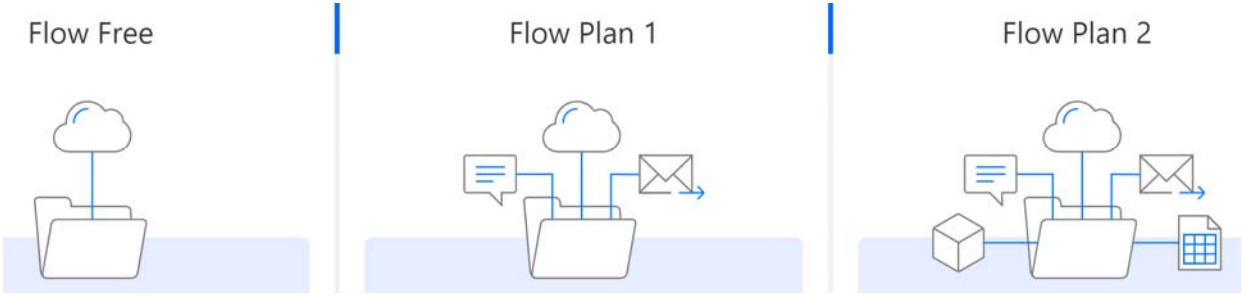
Application Licensing

Azure Application Licensing

https://powerapps.microsoft.com/en-us/pricing/
https://powerbi.microsoft.com/en-us/pricing/
https://flow.microsoft.com/en-us/pricing/



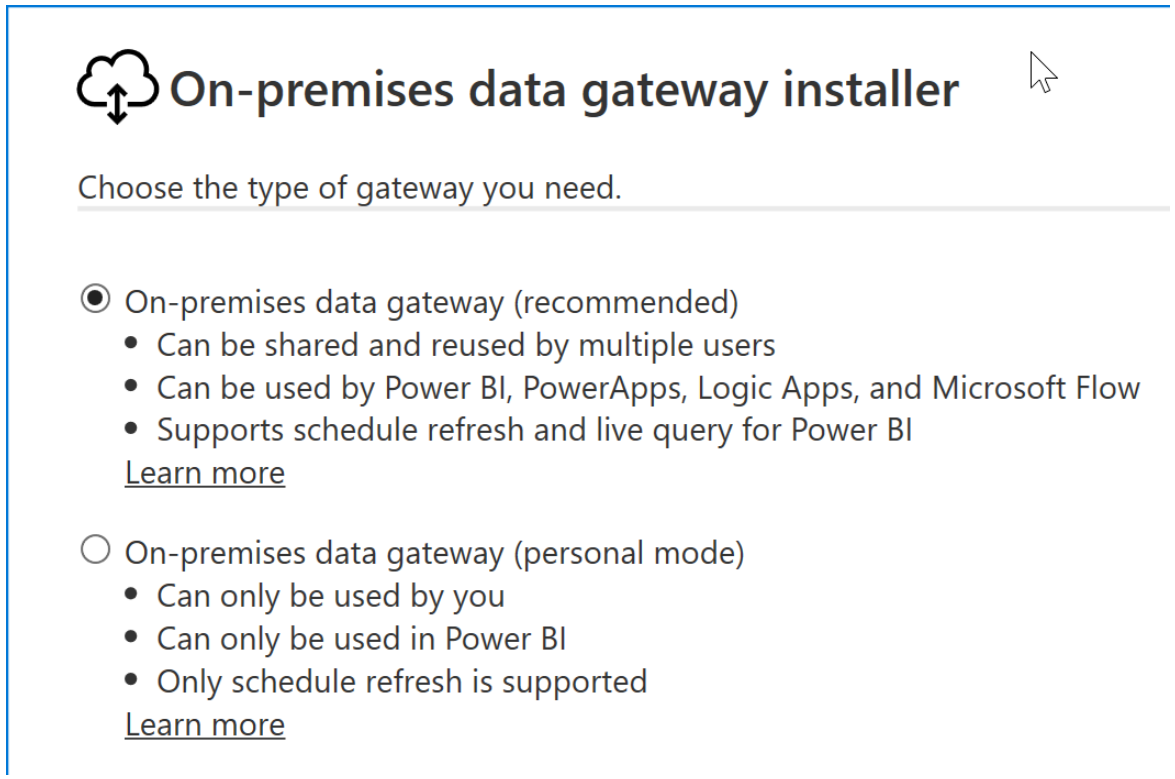




Installation

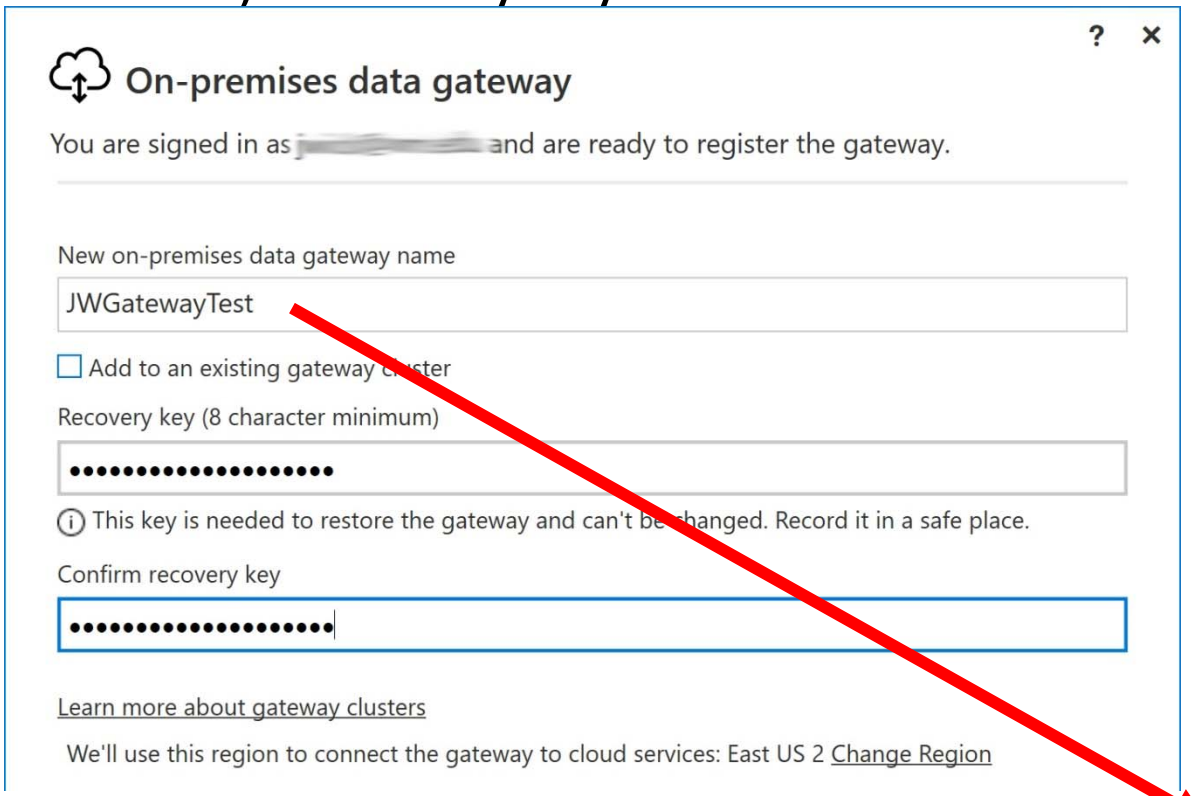
1. Download & Run Installer
   a) https://go.microsoft.com/fwlink/?LinkId=820925&clcid=0x409

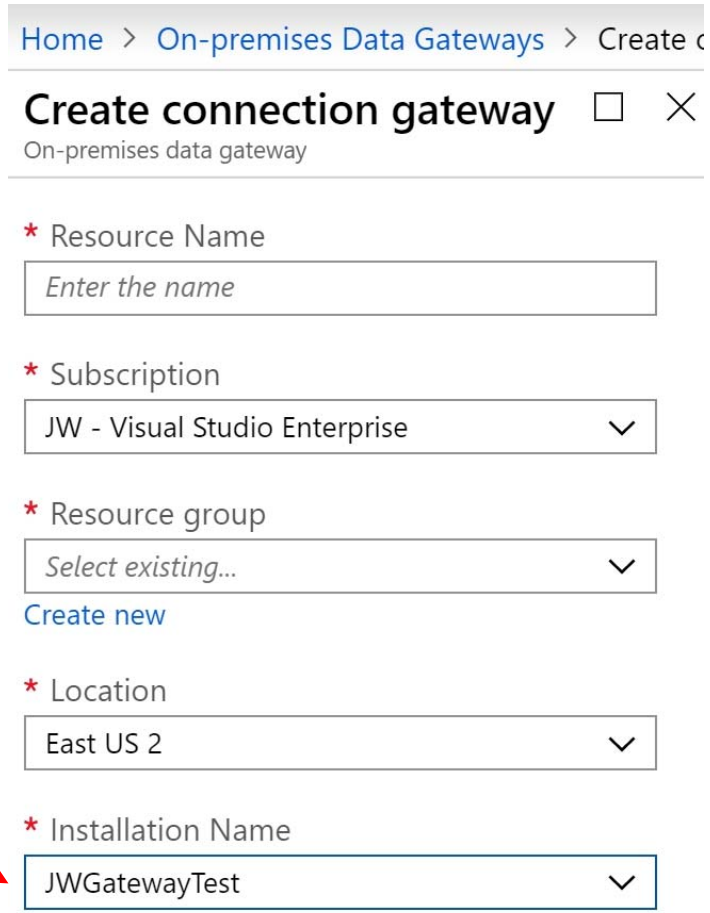
2. Choose installation type
   a) Standard mode (recommended)
   b) Personal mode



Installation

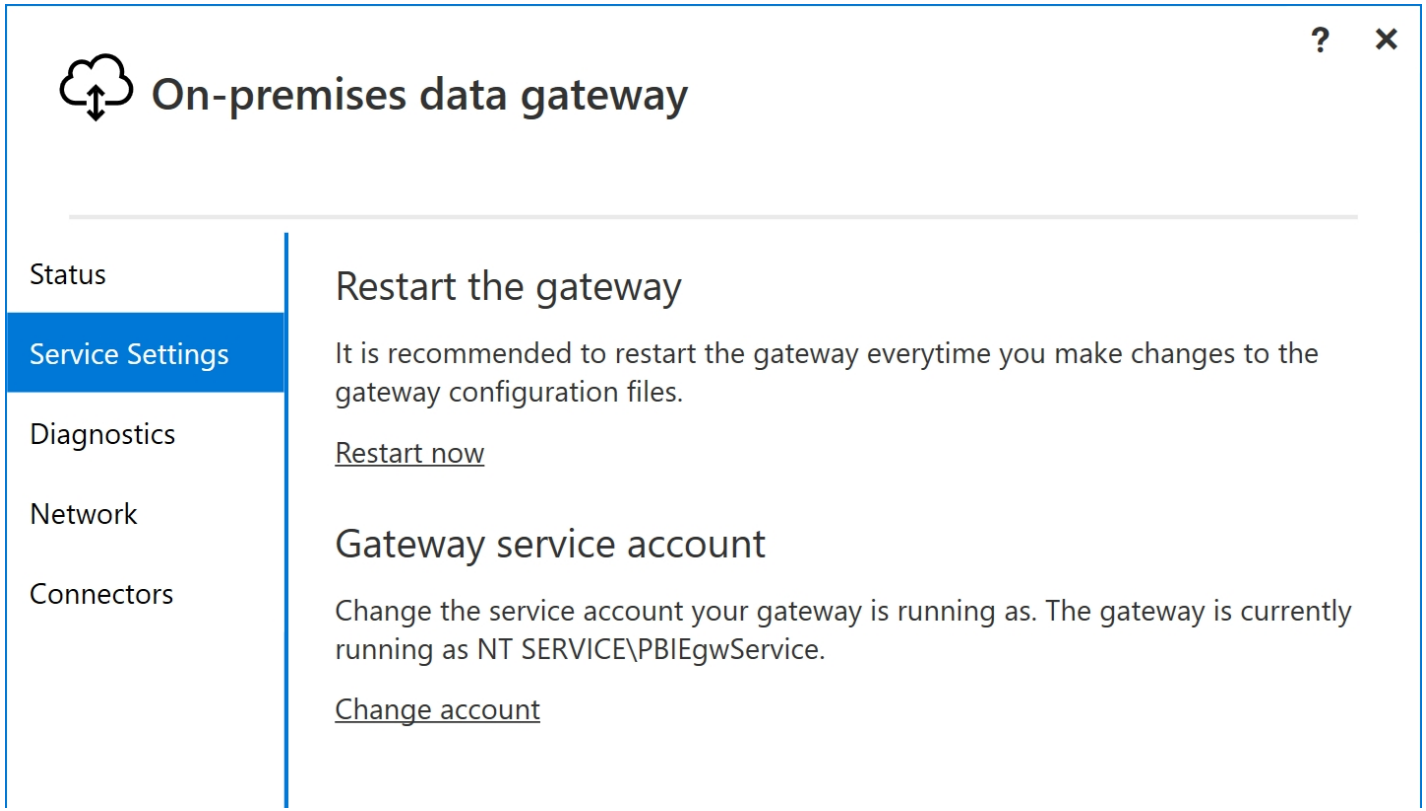
3. Register the gateway in Azure
   a) Account to register gateway in Azure tenant
   b) Gateway name
   c) Recovery key





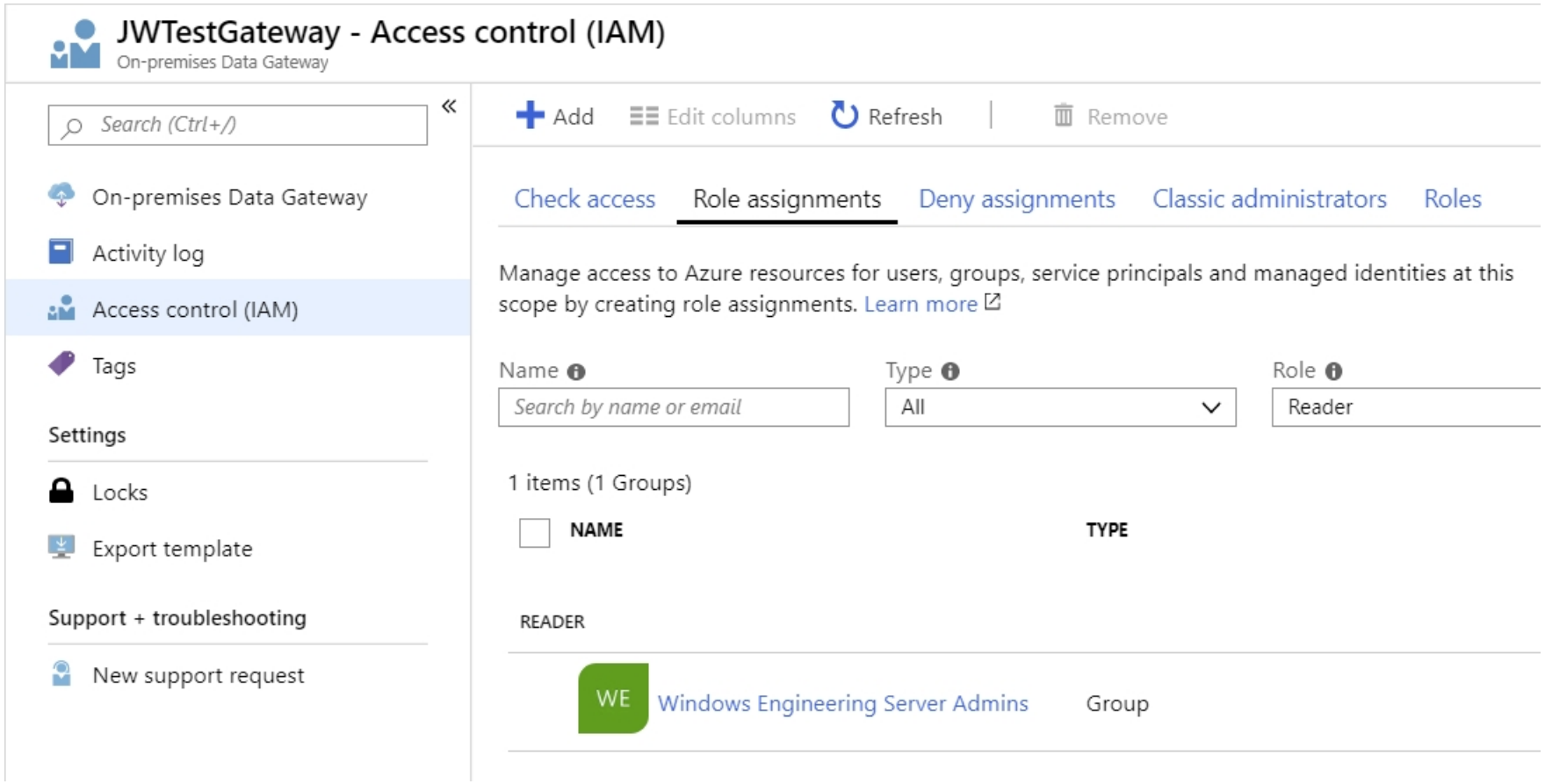
Installation

4. Service Account
   a) Local account (default)
   b) AD User
   c) AD Managed Service Account



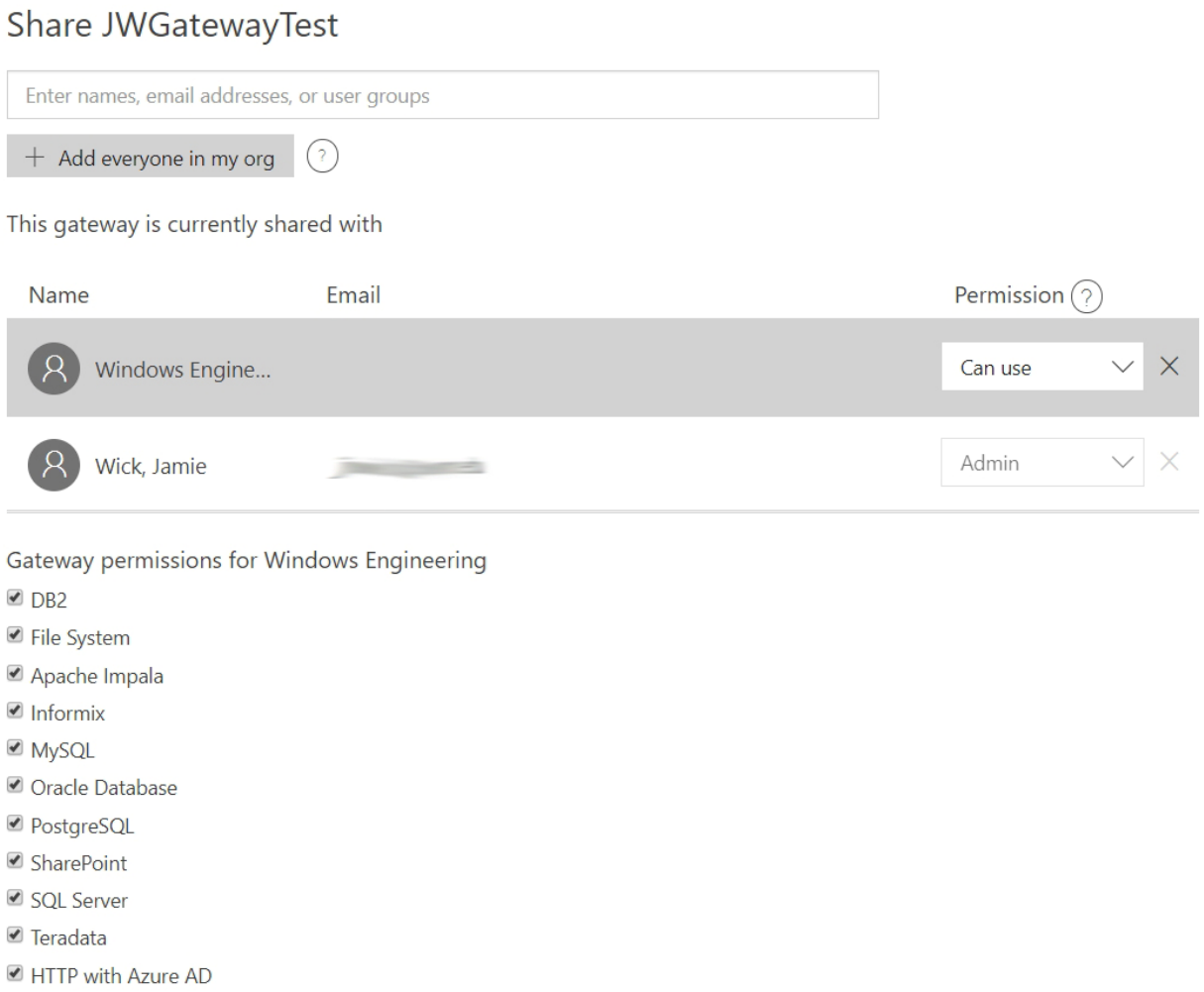
Installation

5. Share access to the Gateway
   a) Azure portal
      Subscription, Resource Group, Gateway



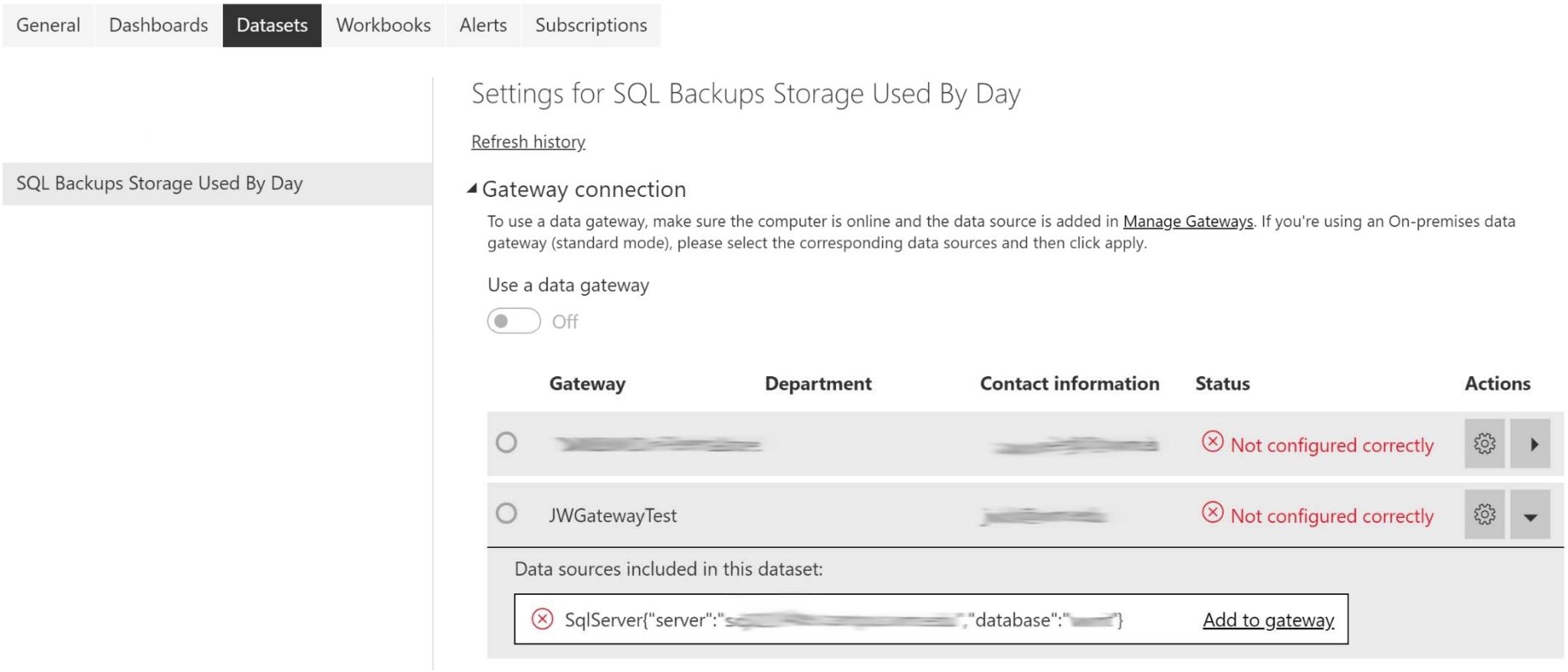
Installation

5. Share access to the Gateway
   b) Azure application (PowerBI, PowerApps, etc.)



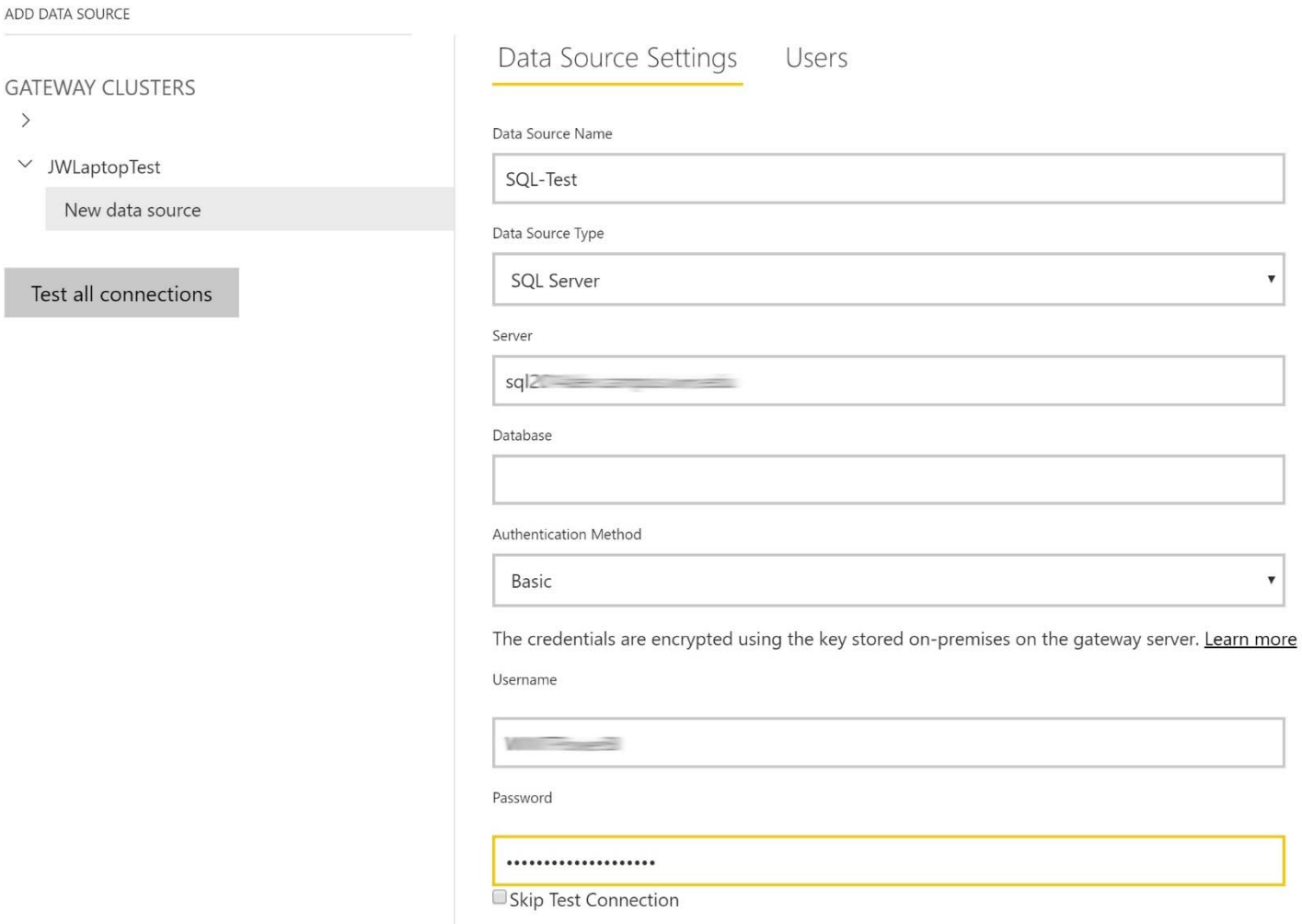
Installation

6. Configure datasets to use Gateway
   a) Add dataset to gateway



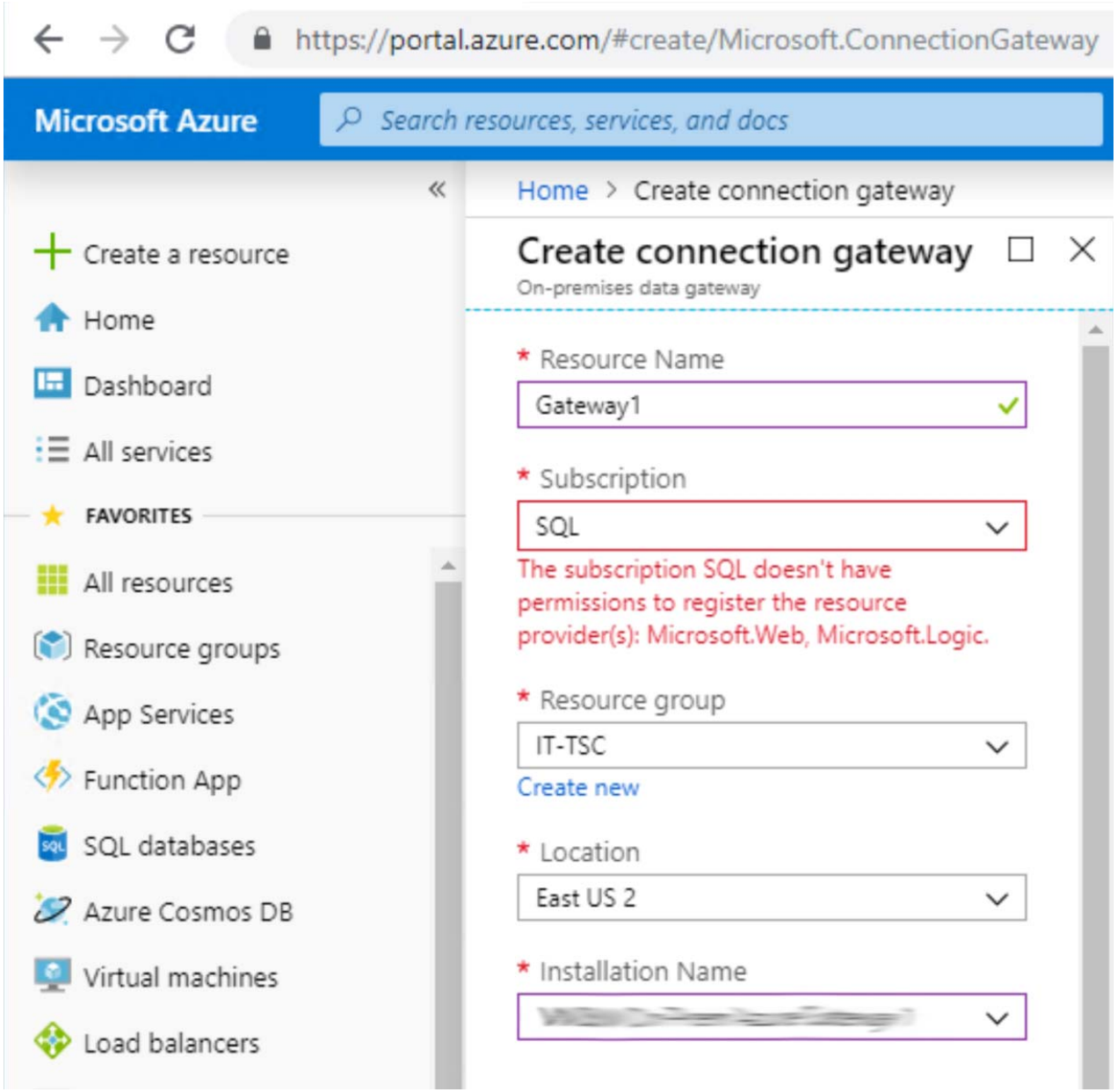
Installation

6. Configure datasets to use Gateway
   b) Create Data Source



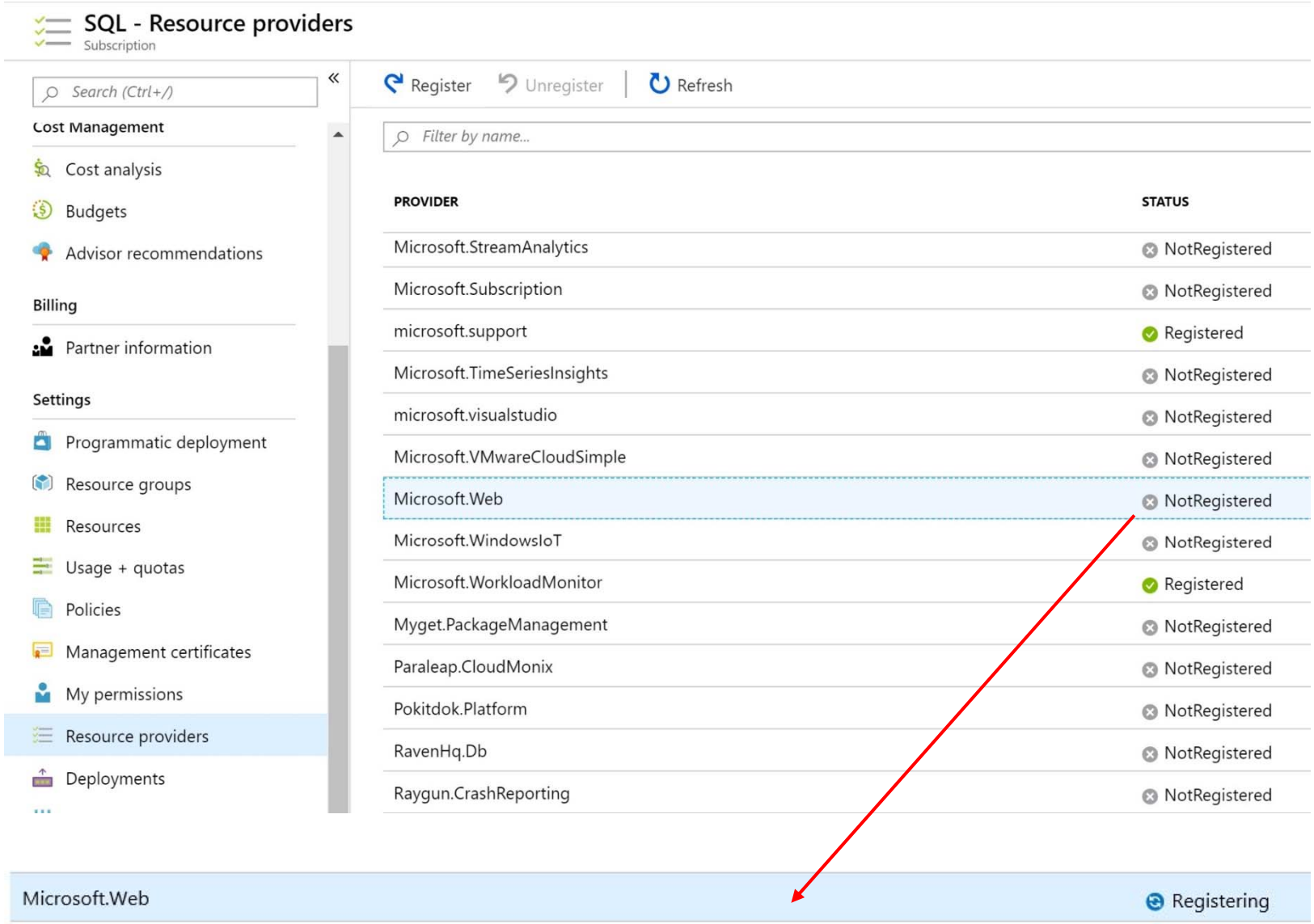
Troubleshooting

Subscription Error



Troubleshooting

Solution



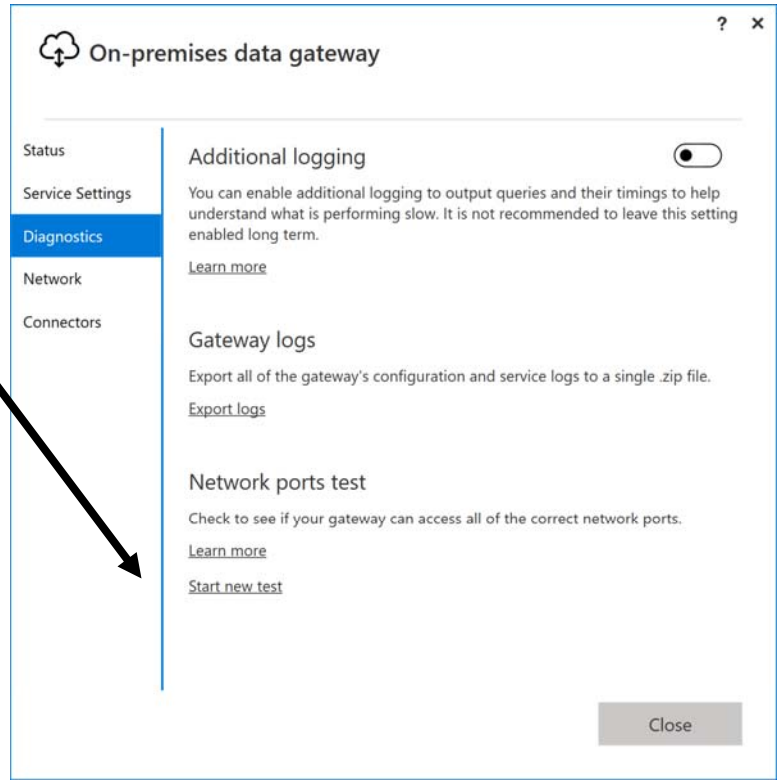
Troubleshooting

Connectivity Issues

Newly registered gateway does not appear in Azure portal.

Solution

1. Be patient (registration & changes can take a while to populate.)
2. Run a port test



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