

# Securely Connect Cloud Services to On-premise Data with Microsoft's Data Access Gateway

Solutions for Success Education Series

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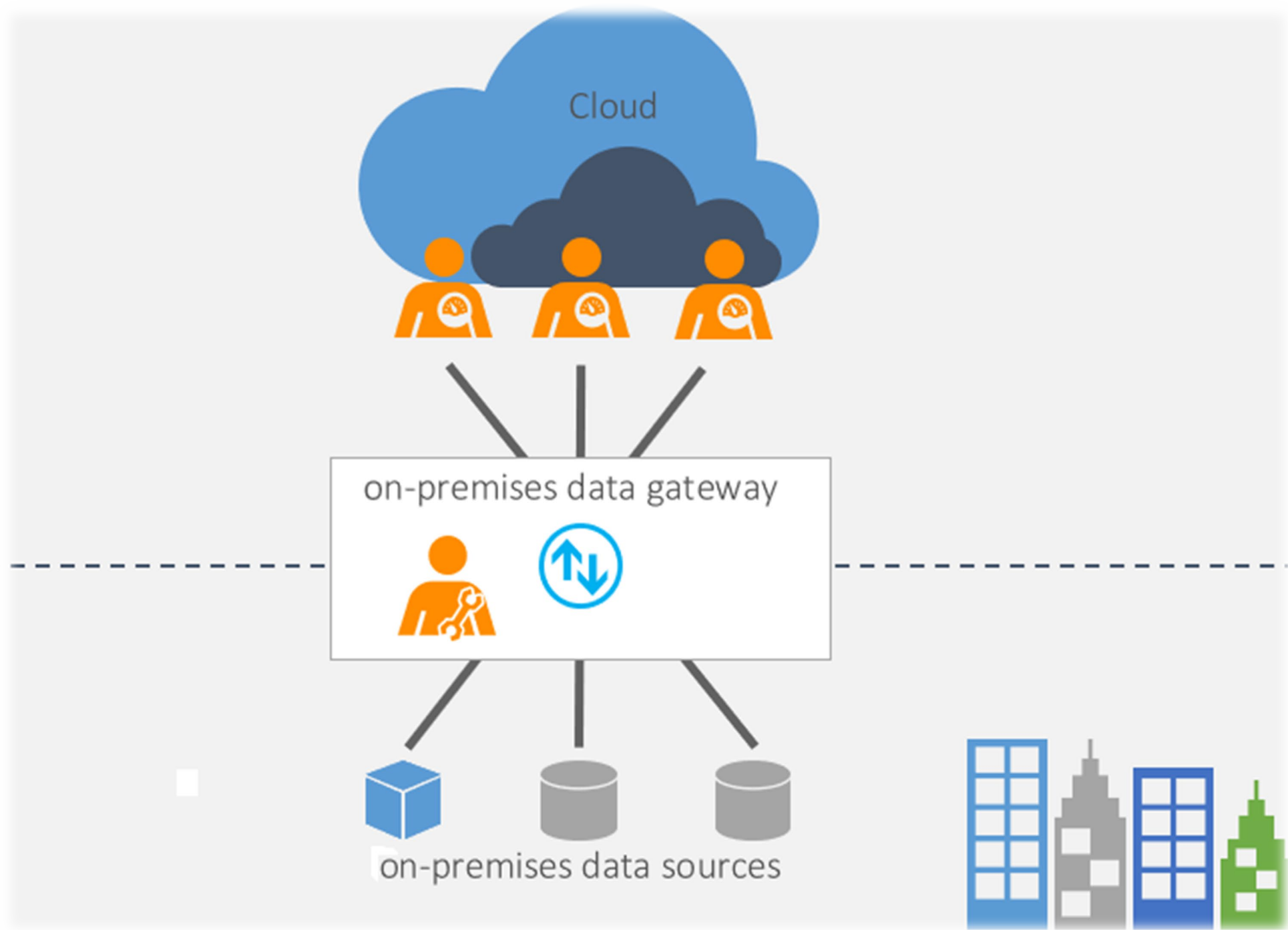


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# About Us

Point Alliance is an award-winning **Microsoft Gold Certified** partner with **8** Microsoft **competencies**.

Our consulting practice is a recognized leader in delivering proven business solutions to **Global 300** companies across many industries. Backed by over **17 years** of proven results from over 300 organizations.



# Microsoft's Data Access Gateway

- Works as a bridge that provides quick data transfer and encryption between on premise data sources and your apps
- Use the same gateway installation with other cloud services, such as Power BI, Power Automate, Power Apps, and Azure Analysis Services
- Allows organizations to keep databases and other data sources on premise

# Two types of gateways

- Allows multiple users to connect to multiple on-premises data sources.
  - Use with all supported services, with a single gateway installation.
  - Well-suited to complex scenarios with multiple people accessing multiple data sources.
- Personal mode allows one user to connect to sources
  - Can't be shared with others
  - Can be used only with Power BI
  - Well-suited to scenarios where you're the only person who creates reports, and you don't need to share any data sources with others.

# On-premises data gateway

One gateway for multiple cloud services and experiences

## Cloud services

Azure Analysis Services

Azure Logic Apps

Power BI

Power Apps

Power Automate



### Gateway Cloud Service

- Encrypts and stores data source credentials and on-premises data gateway details
- Routes queries and results between cloud services, on-premises data gateway, and data source



### Azure Service Bus



### On-premises data gateway

- Decrypts data source credentials and connects to data source
- Sends queries to data source and returns the results to gateway cloud service

## On-premises data sources



SQL Server



SQL Server  
Analysis Services



Other  
data sources



Files, SharePoint

# On-premises data gateway application

The image displays three sequential screenshots of the 'On-premises data gateway' application interface, illustrating different configuration sections.

**Screenshot 1 (Left):** Shows the 'Status' tab selected in the left-hand navigation menu. The main content area displays a green checkmark indicating the gateway 'Mira' is online, along with the 'Gateway version number: 3000.4'. Below this, there is a checkbox for 'Help us improve the on-premises gateway to Microsoft' and a link to 'Read the privacy statement on Microsoft.com'. Three connector cards are visible: 'Logic Apps, Azure Analysis Services' (North Central US), 'Power Apps, Power Automate' (North Central US), and 'Power BI' (Default environment).

**Screenshot 2 (Middle):** Shows the 'Diagnostics' tab selected. The main content area includes sections for 'Additional logging' (with a description and a 'Learn more' link), 'Gateway logs' (with a description and an 'Export logs' link), and 'Network ports test' (with a description and links for 'Learn more' and 'Start new test').

**Screenshot 3 (Right):** Shows the 'Network' tab selected. The main content area features the 'HTTPS mode' toggle switch, which is currently turned on. Below the toggle, there is a description of HTTPS mode and a 'Learn more' link. A 'Close' button is located in the bottom right corner of the application window.



# Connecting to data sources

The screenshot displays a multi-step wizard for connecting to data sources. It is divided into four vertical panels. The first panel shows the initial selection of a data source. The second panel shows the configuration for a SharePoint connection. The third panel shows the configuration for a Microsoft SQL Server connection. The fourth panel shows the final configuration for the SQL Server connection, including authentication type, username, password, and gateway selection. Red boxes and numbers 1 through 5 highlight the key steps in the process.

**Panel 1: SharePoint IT Managed**

1 ☒ Connect using credentials

2 Username \*  
domain\farmadmin

3 Password \*  
.....

4 Choose a gateway \*  
MyNewOn-PremiseGateway

[Install a gateway](#)

**Panel 2: Microsoft SQL Server IT Managed**

1 ☒ Connect using credentials

2 SQL server name  
SQL server\...

3 SQL database name  
.....

**Panel 3: SQL Server IT Managed**

1 Authentication Type  
Windows

2 Username \*  
domain\admin

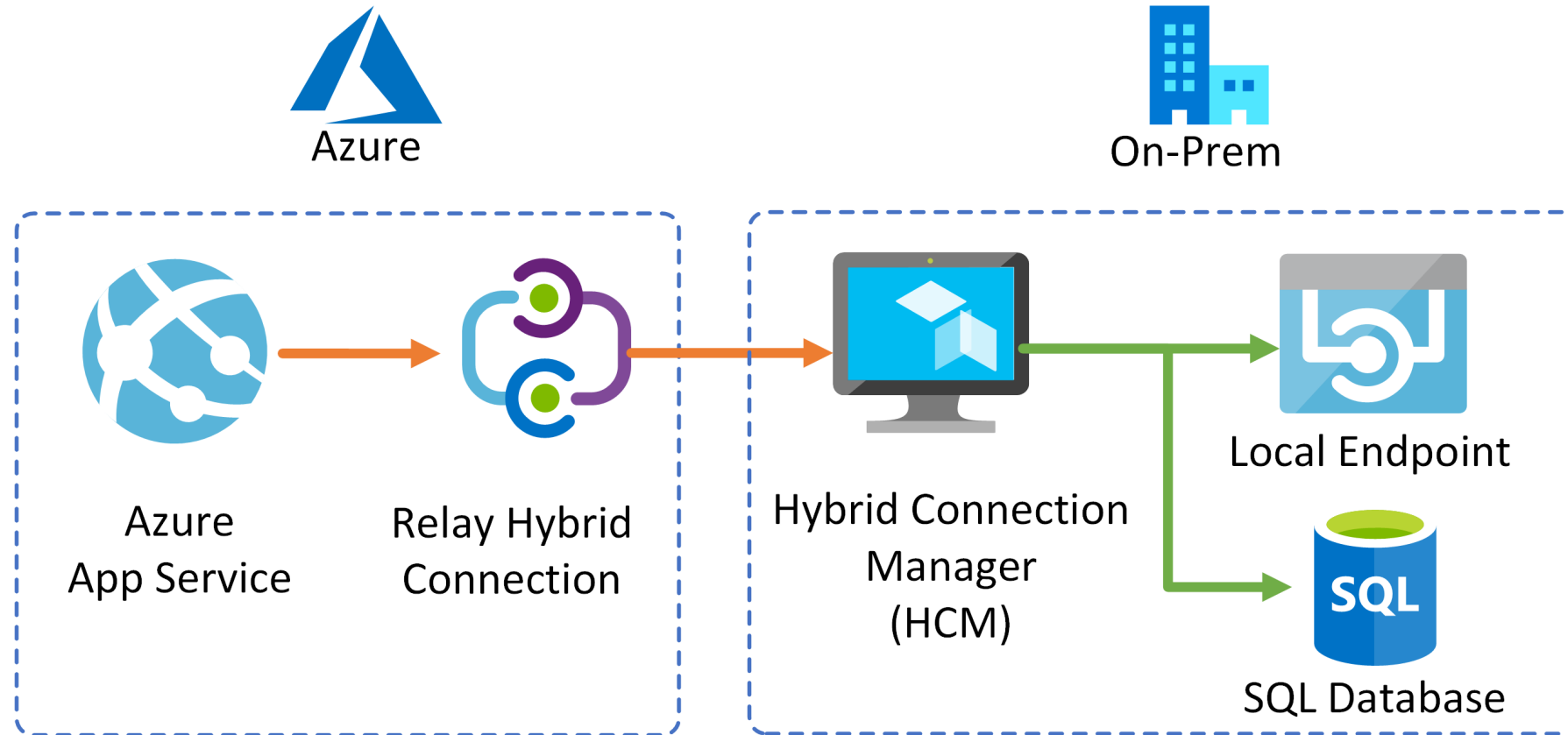
3 Password \*  
.....

4 Choose a gateway \*  
MyNewOn-PremiseGateway

5



# Azure Hybrid Connections



# Hybrid Connection Manager

The screenshot displays the Hybrid Connection Manager application interface. The main window, titled "Hybrid Connection Manager", features a table with the following columns: NAME, AZURE STATUS, SERVICE NAME, and ENDPOINT. A button with a plus icon and the text "Add a new Hybrid Connection" is located below the header. The table contains one entry: "magnapoc" with an Azure Status of "Not Found" and a Service Name of "magnapoc".

An overlay window titled "Hybrid Connection Details" is open, showing the details for the "magnapoc" connection. It includes a "Remove" button and the following fields:

Field	Value
Name	magnapoc
Namespace	magnapoc
Endpoint	
Status	Not Found
Service Bus Endpoint	magnapoc.servicebus.windows.net
Azure IP Address	Name could not be resolved.
Azure Ports	80, 443
Created On	
Last Updated	

At the bottom right of the main window, there are two buttons: "Enter Manually" and "Refresh". A "Close" button is located at the bottom right of the details window.

# App Service Hybrid Connection Benefits

- Apps can access on-premises systems and services securely.
- Does not require an internet-accessible endpoint.
- Quick and easy to set up. No gateways required
- Each Hybrid Connection matches to a single host:port combination
- It normally does not require firewall holes. The connections are all outbound over standard web ports.
- Because the feature is network level, it is agnostic to the language used by your app and the technology used by the endpoint.
- It can be used to provide access in multiple networks from a single app.
- It is supported in GA for Windows apps and is in preview for Linux apps.

# Things you cannot do with Hybrid Connections

- Mount a drive.
- Use UDP.
- Access TCP-based services that use dynamic ports, such as FTP Passive Mode or Extended Passive Mode.
- Support LDAP, because it can require UDP.
- Support Active Directory, because you cannot domain join an App Service worker.



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