



# Security & Administration

# Agenda

## ➤ Data Security

- ☐ Row Level Security

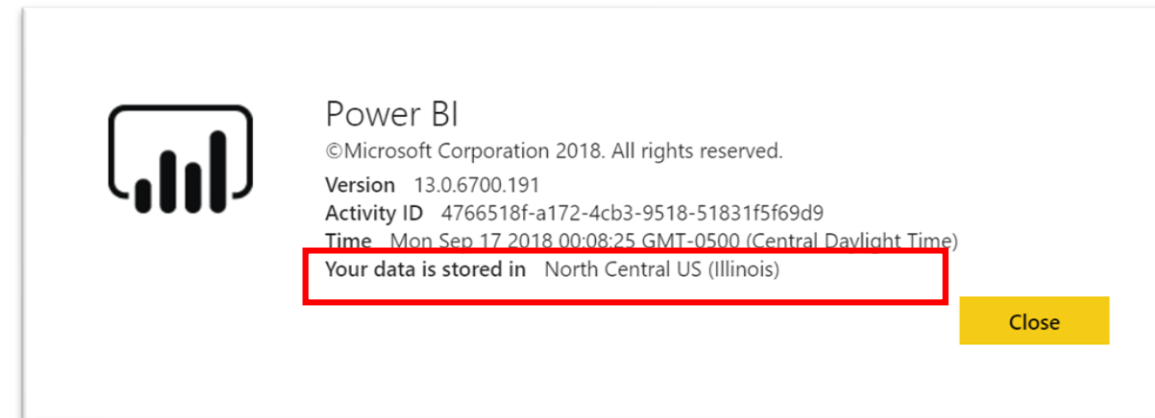
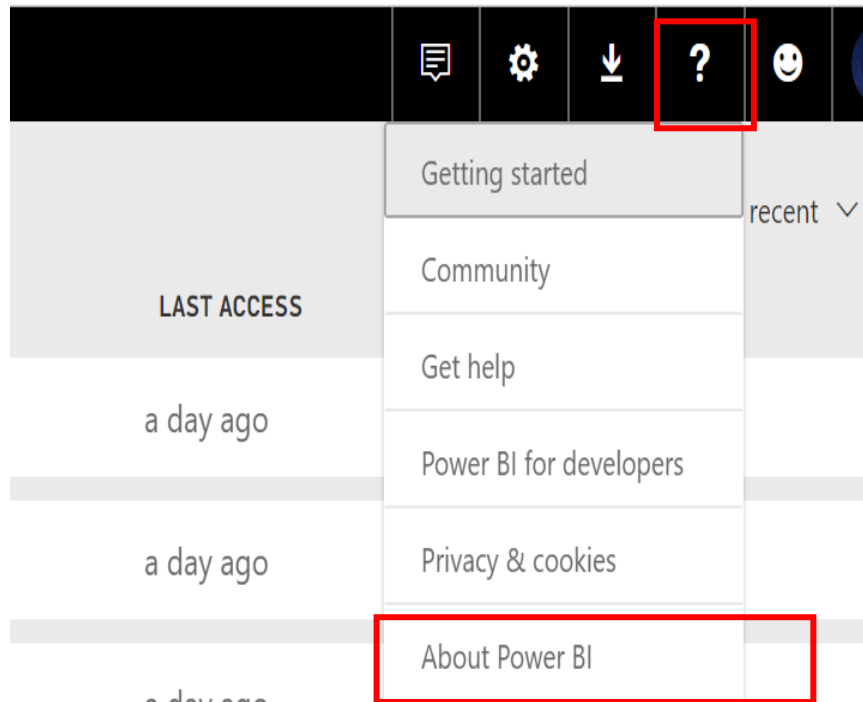
- ☐ Administration

# Types of Data

- Power BI offers three types of data
  - **Imported Data** – Data is cached in Power BI and refreshed using saved credentials
  - **Live Connected (DirectQuery)** - data is pulled into Power BI at query time.
  - **Pushed Data** - Data is pushed to Power BI by external applications using REST API
- Data phases
  - **In Transit** – moving between source, Power BI or Client (Consumer) will always be encrypted by either Azure Service Bus or HTTPS protocol
  - **In Process** – being loaded to cloud-based memory
  - **At Rest** – stored in cloud-based storage.

# Data Storage Location

- Location of your data



# Compliance

Global	US Government	Industry	Regional
CSA-STAR-Attestation	CJIS	23 NYCRR Part 500	CCSL/IRAP (Australia)
CSA-Star-Certification	DoD DISA L2	FFIEC	EU-Model-Clauses
ISO 27001	DoD DISA L4	FISC (Japan)	EU-U.S. Privacy Shield
ISO 27018	DoD DISA L5	GLBA	GB 18030 (China)
	DoD DISA L2, L4, L5	HIPAA/HITECH	GDPR (EU)
	FedRAMP	HITRUST	MeitY (India)
	FERPA	PCI DSS	NZ CC Framework (New Zealand)
	FIPS 140-2	SOX	UK-G-Cloud

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# Row Level Security (RLS)

- RLS – schema based security on named roles
  - Roles can be defined in SQL Server (Tabular Model)
  - Power BI Desktop – Project Based
- Roles defined using DAX Expressions

The image illustrates the process of defining Row Level Security (RLS) roles in Power BI Desktop. It shows the 'Manage View as Roles' button in the ribbon, which is highlighted with a red box. An arrow points from this button to the 'Manage roles' pane. In the 'Manage roles' pane, the 'Create' button is highlighted with a pink box. Another arrow points from the 'Create' button to a detailed view of the role configuration. This view shows a role named 'United States' with a DAX expression filter: `[Region] = "United States"`.

Manage roles

Roles

Create Delete

Manage roles

Roles

United States

Create Delete

Tables

Customer Orders

Date

Table Filter DAX Expression

`[Region] = "United States"`

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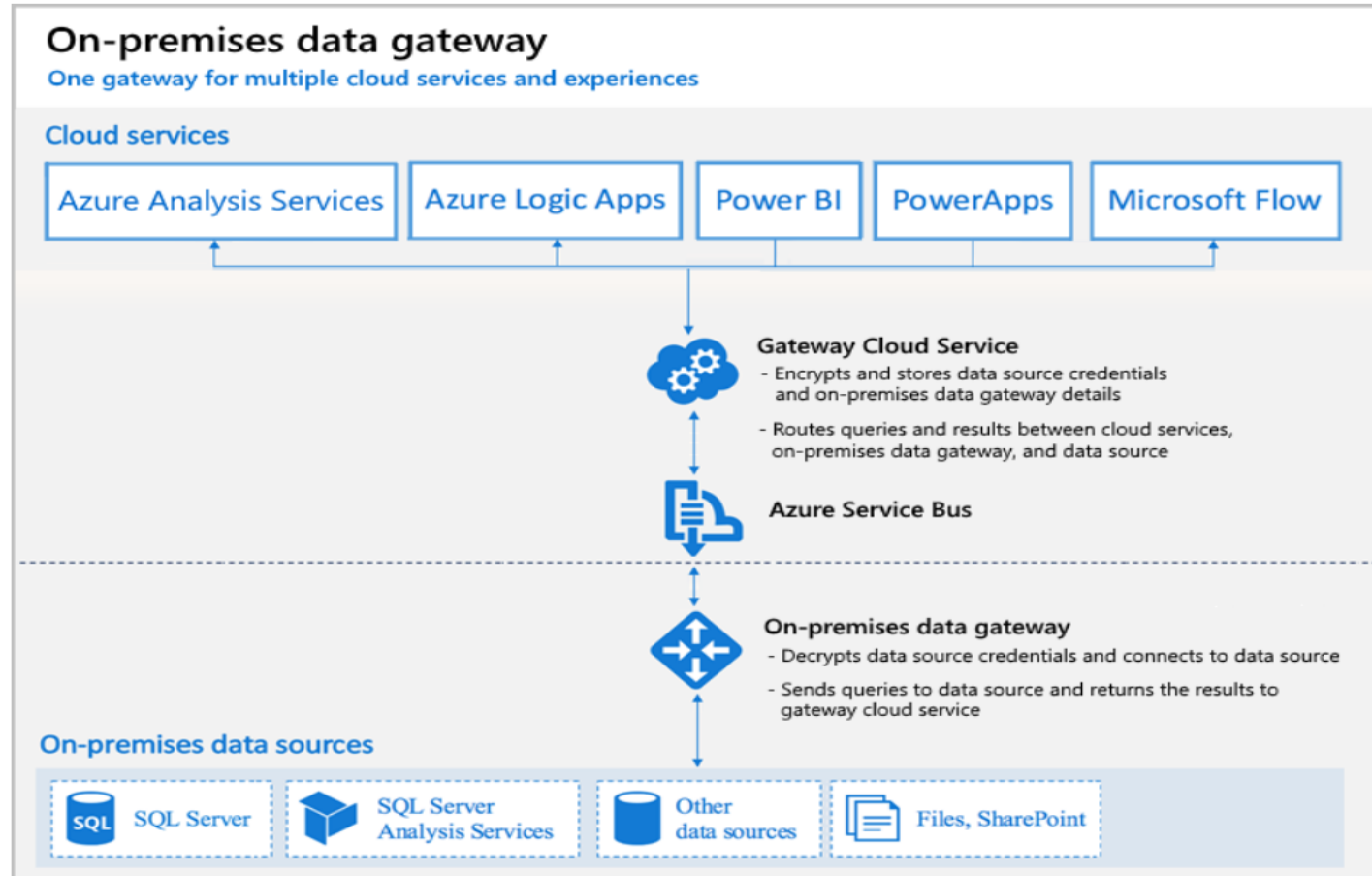
# Data Limitations

- Data Size Limit – Data size is limited to 1 GB for each dataset in Power BI Service
- Row Limit –
  - 2 Billion Rows for dataset not using DirectQuery
  - 1 Million Rows for dataset using DirectQuery
- Column Limit – 16,000 columns in both Power BI Desktop and Service

# Gateway

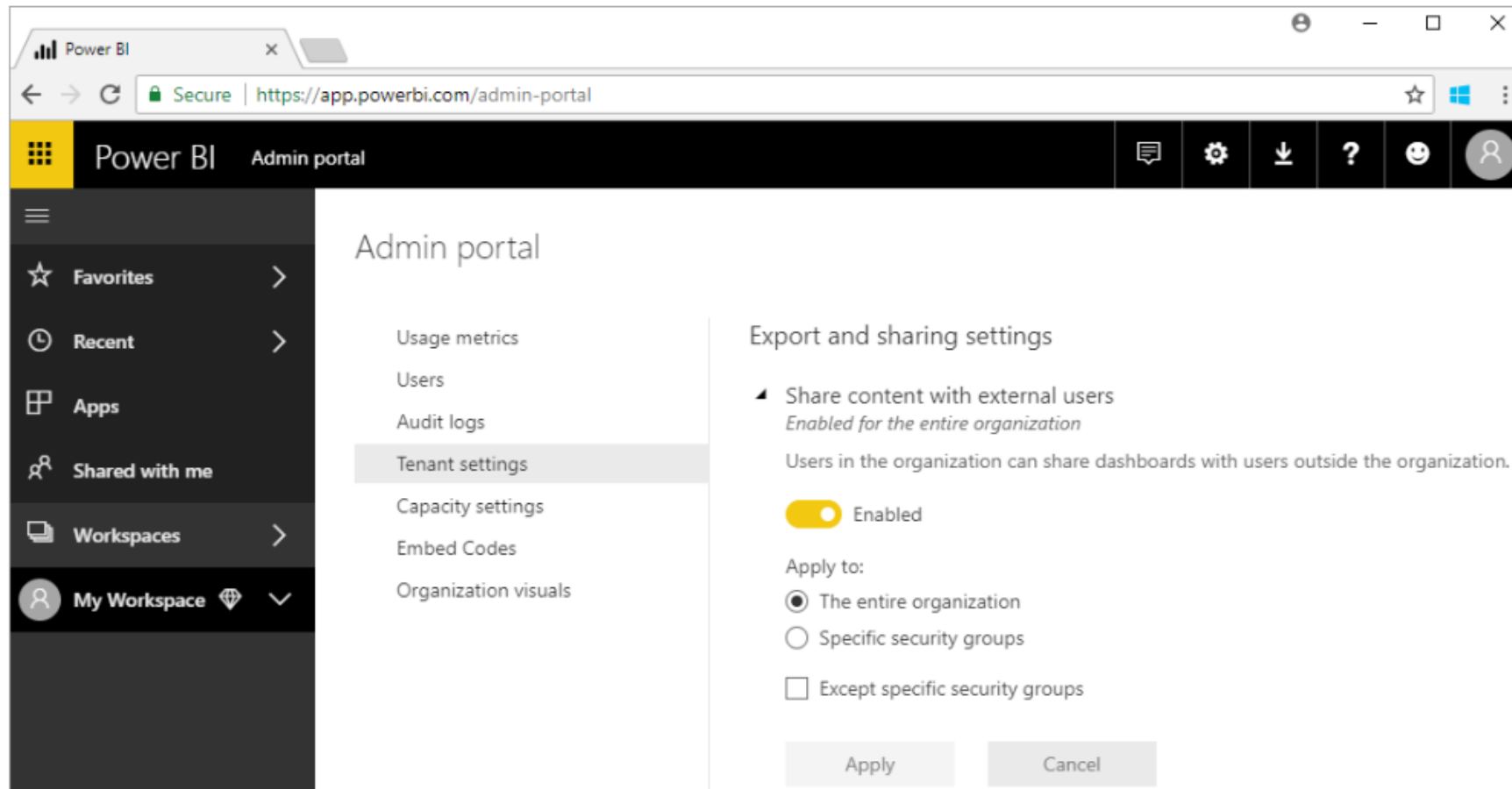
- Power BI Gateway – secure tunnel between On-premise network and Cloud
- Facilitates data access in the network – keeping data secure
- Gateway Types
  - Personal Mode – personal, cant be shared.
  - Enterprise Mode – enterprise, connects multiple on-premise sources. Can be used by Power BI, PowerApps, Flow, Azure Analysis and Logic Apps.

# Gateway



- Cloud Service Requests Data
- Gateway (cloud service) analyzes request pushes it to Service Bus
- On-Prem polls Service Bus, decrypts connection and connects to data source
- Query Sent to data source
- Results sent to Cloud

# Other Administration





# Administration DEMO

# Agenda

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- ✓ Row Level Security
- ✓ Administration