



# SmartData Fabric® Demo for Healthcare

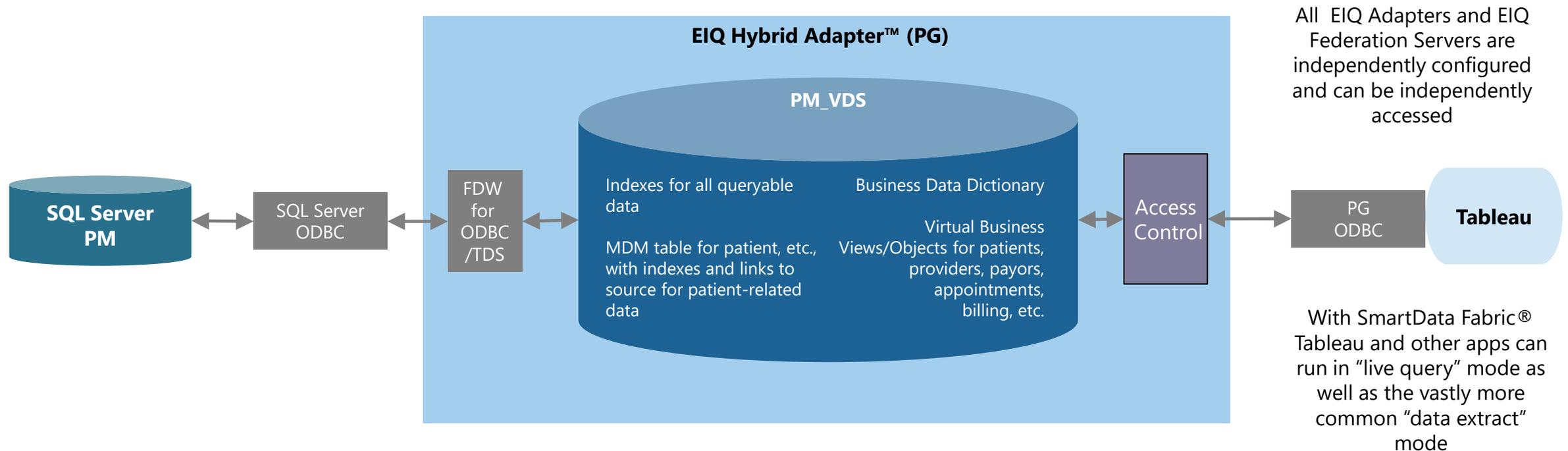
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# External Index and Query (EIQ) Hybrid Adapter™ for each data source

- Two data sources – Patient Management (PM) and EHR (Works) and typical of many data sources, each consists of:
  - Master/dimensional data, e.g., patients, providers, payors, etc. in PM, similar for Works
  - Transactional data, e.g., appointments, billing, diagnoses, etc. in PM, similar for Works
- EIQ Hybrid Adapter based on PostgreSQL (PG)
  - Master/dimensional data, or any data that was human-inputted, may need preprocessing and/or queried on
    - Build indexes in the adapter
    - Clean, transform, standardize and/or enrich data, e.g., entity extraction, before indexing
  - Transactional data
    - Leave detailed data in the source for fetching as and when needed
    - Build summary views at the adapter for query acceleration, e.g., payments by patient or amount of drugs prescribed by doctor or provider
  - Semantic mapping layer
    - Source data mapped to a standard business data dictionary
    - Standard virtual business views/objects defined using mapped data to exposes to applications/users in business-friendly terms, e.g., patients, providers, payors, appointments, billing, diagnoses, etc. in PM, similar for Works
    - Built-in data governance when combined with access control
    - Dynamic and static data masking, tokenization and/or encryption

# Example EIQ Hybrid Adapter™ for PM

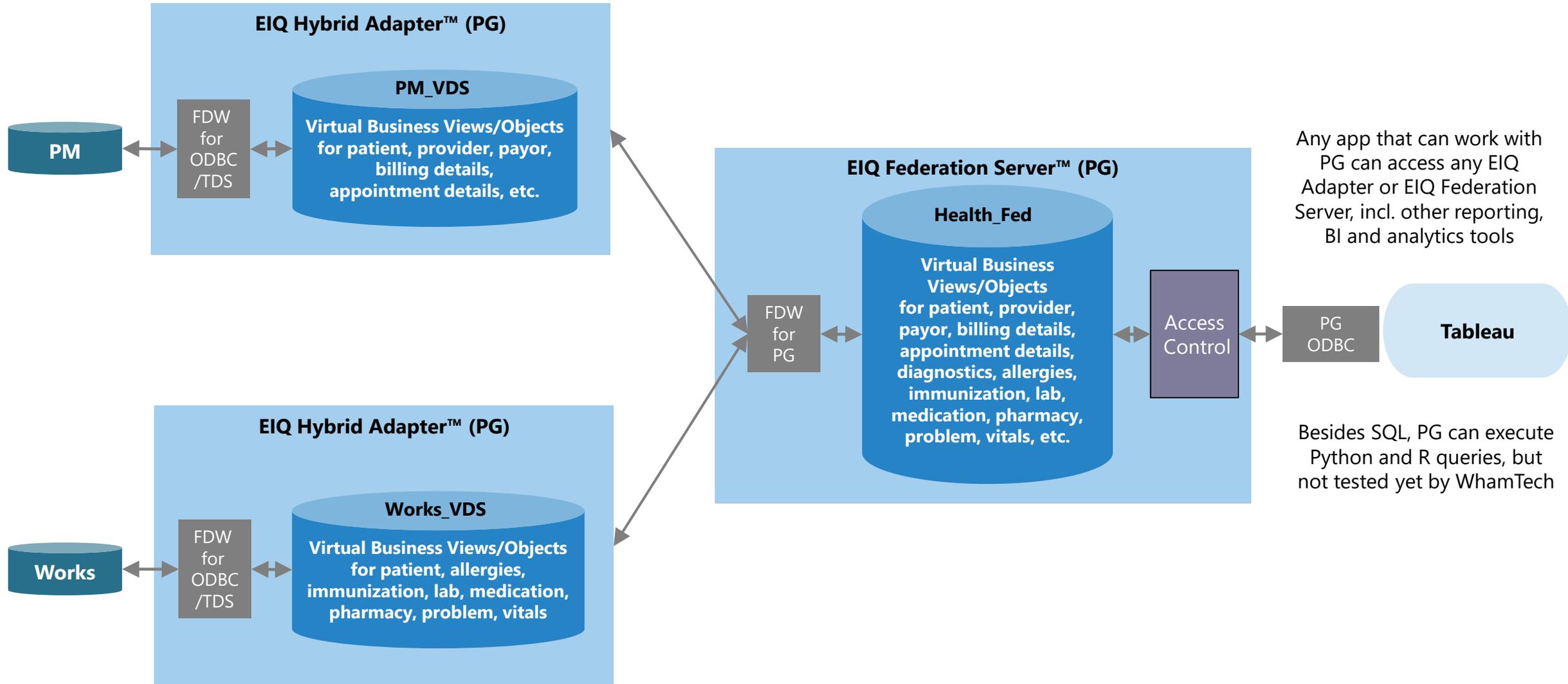




# Federation of sources, with MPI using distributed MDM

- EIQ Federation Server™ configured across two data sources: PM and Works
- Virtual business views/objects built on standard business data dictionary - basis for adapter and federation schema and queries
  - Patient, provider, payor, appointment, billing, diagnosis, vitals, pharmacy, medications, etc.
- Master Patient Index (MPI) using distributed Master Data Management (MDM) through federation
  - Uses cleansed, transformed and standardized data with fuzzy data matching for improved probabilistic entity matching
  - Distributed MDM:
    - MDM data stored in adapters – improves performance and security, and appeases local healthcare providers that own their part of the patient's data
    - MDM data linked to operational data locally at adapters, e.g., master patient data, organization and health provider
    - MDM data available to users of adapters also - not just federation users
  - Can also work with third-party centralized MDM and data governance systems
- Access control
  - View, table and column-level security
  - Row-level security (RLS)
  - Domain controller – AD/Kerberos
  - Enforced at federation and/or adapter-level(s)
- EIQ Federation Servers are seen as EIQ Adapters by other EIQ Federation Servers – allows multiple federation-levels, e.g., department, hospital, organization and payor, and supports data mesh

# Federation of PM and Works, with distributed MPI





# Demo

1. Indexing source data
2. EIQ Hybrid Adapter configuration
3. EIQ Federation Server configuration
4. Building Master Data/MPI
5. Reporting and analytics using Tableau (other reporting, BI or analytics apps can be used)



# The End



# Demo detail ( 1 of 2)

## 1. Indexing source data

- Adding tables and columns to the RTI Map
- Applying cleansing, transformations, standardization and enrichment algorithms
- Building the indexes

## 2. EIQ Hybrid Adapter configuration

- Registering a data source
- Creating a Virtual Data Source (VDS) through a data source – EIQ Index pairing
- Viewing the Business Data Dictionary
- Mapping VDS data to the Business Data Dictionary
- Creating virtual Business Views/Objects

## 3. EIQ Federation Server configuration

- Registering a VDS as a data source
- Configuring an EIQ Federation Server



## Demo detail (2 of 2)

### 4. Building Master Data/MPI

- Editing entity data definitions
- Building Master Data/MPI
- Creating a Business View/Object for the Master Data/MPI
- Mapping Master Data/MPI to a virtual Business Data View/Object

### 5. Reporting and analytics using Tableau (other reporting, BI or analytics apps can be used)

- Running Tableau