

The Ultimate Jigsaw - Architecting Azure Synapse Analytics

» Home >

New

azure synapse analytics ×

[Azure Synapse Analytics \(workspaces preview\)](#)

[Azure Synapse Analytics \(formerly SQL DW\)](#)

[Azure Synapse Analytics \(private link hubs preview\)](#)

Recently created

- | | | |
|---|---|---|
| AI + Machine Learning |  | Ubuntu Server 18.04 LTS |
| Analytics | | Learn more |
| Blockchain |  | Web App |
| Compute | | Quickstarts + tutorials |
| Containers |  | SQL Database |
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| Developer Tools |  | Function App |
| DevOps | | Quickstarts + tutorials |
| Identity |  | Azure Cosmos DB |
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| Internet of Things |  | Kubernetes Service |
| IT & Management Tools | | Quickstarts + tutorials |
| Media | | |
| Migration |  | DevOps Starter |

 **heininsynapsesdemo** Synapse workspace
Search (Ctrl+ /)
New SQL pool
New Apache Spark pool
 Refresh
 Reset SQL admin password
 Delete
|
 Launch Synapse Studio
 Overview

Resource group (change)	:	rg-synapse-demo	Firewalls	:	Show firewall settings
Status	:	Succeeded	Primary ADLS Gen2 acco...	:	https://heininsynapsesdemodl.dfs.core.windows.net
Location	:	West Europe	Primary ADLS Gen2 file s...	:	synapsedata
Subscription (change)	:	Visual Studio Enterprise – MPN	SQL admin username	:	sqladminuser
Subscription ID	:	6bda1237-72a2-4cb9-b919-143abf0065fc	SQL Active Directory ad...	:	heini.ilmarinen@atea.fi
Managed virtual network	:	No	SQL endpoint	:	heininsynapsesdemo.sql.azuresynapse.net
Managed Identity object ...	:	70d06946-707d-48fe-ab89-ecfa4f36caa6	SQL on-demand endpoint	:	heininsynapsesdemo-ondemand.sql.azuresynapse.net
Workspace web URL	:	https://web.azuresynapse.net?workspace=%2fsubscriptions%2fheininsynapsesdemo	Development endpoint	:	https://heininsynapsesdemo.dev.azuresynapse.net
Tags (change)	:	Click here to add tags			



Synapse resources

 SQL pools

Available resources

 Search to filter items...

Name	Size	Type
No pools provisioned		

Security

 Firewalls Managed identities Private endpoint connections (pr...

Monitoring

 Alerts Metrics

Support + troubleshooting

 New support request

Components of Azure Synapse Analytics

Securing Azure Synapse Analytics

How to use Azure Synapse Analytics



Heini Ilmarinen

Solutions Architect @ Atea Finland

Microsoft Certified Trainer

Passionate about architecture

Math nerd at heart



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... and a serial doodler

Components of Azure Synapse Analytics



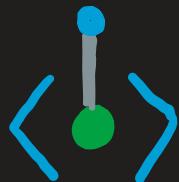
Azure Synapse Analytics



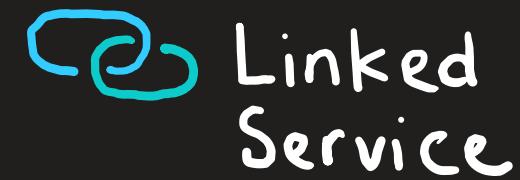
Pipelines



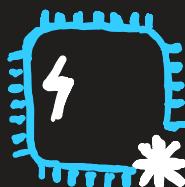
SQL
Pool



Private
Endpoint



Linked
Service



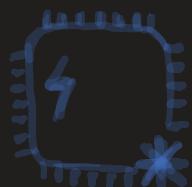
Apache Spark
Pool



SQL
On-demand



Azure Synapse Analytics



Apache Spark
Pool



Private
Endpoint



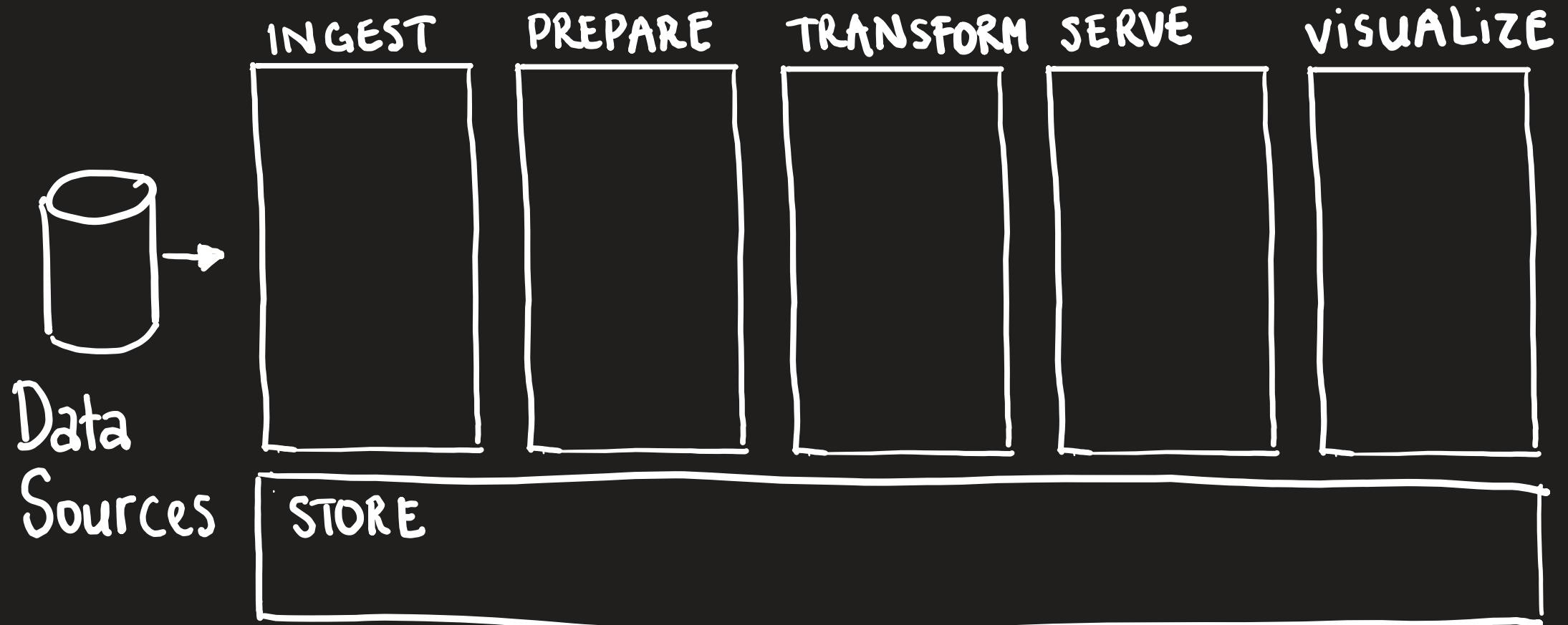
SQL
On-demand

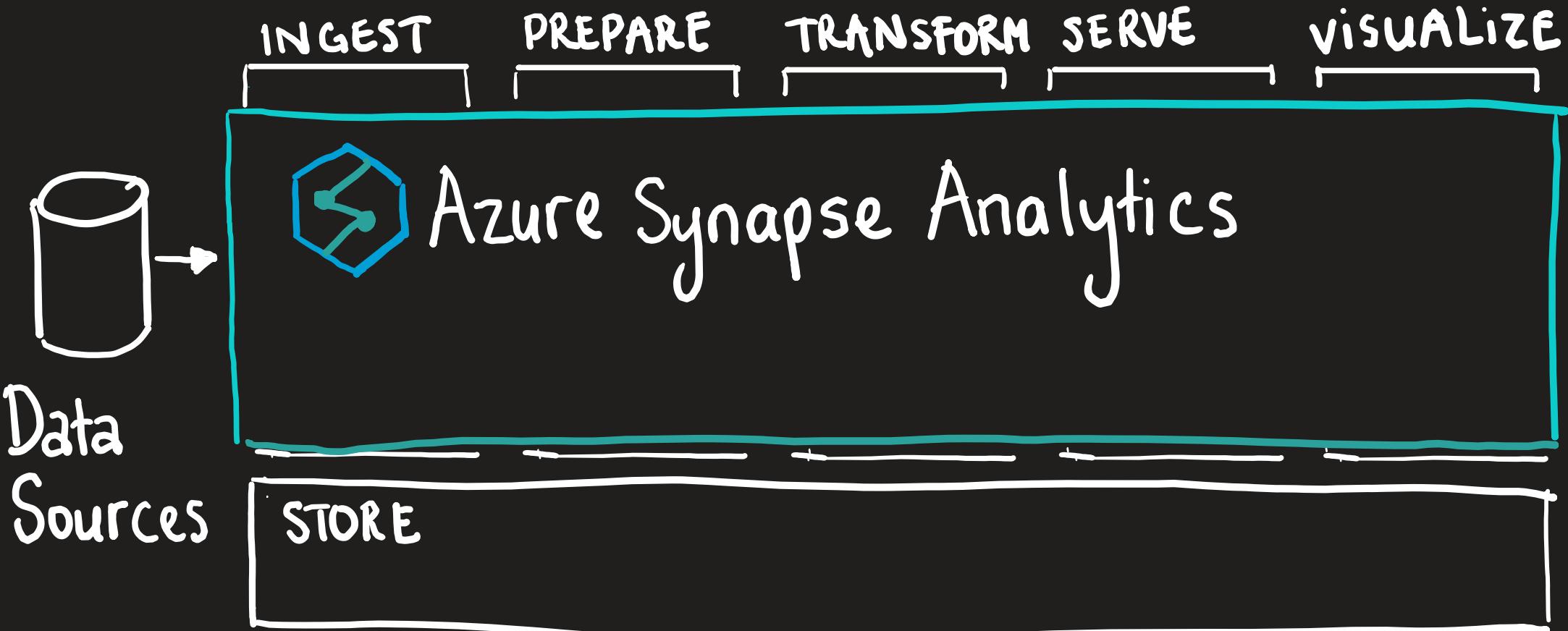


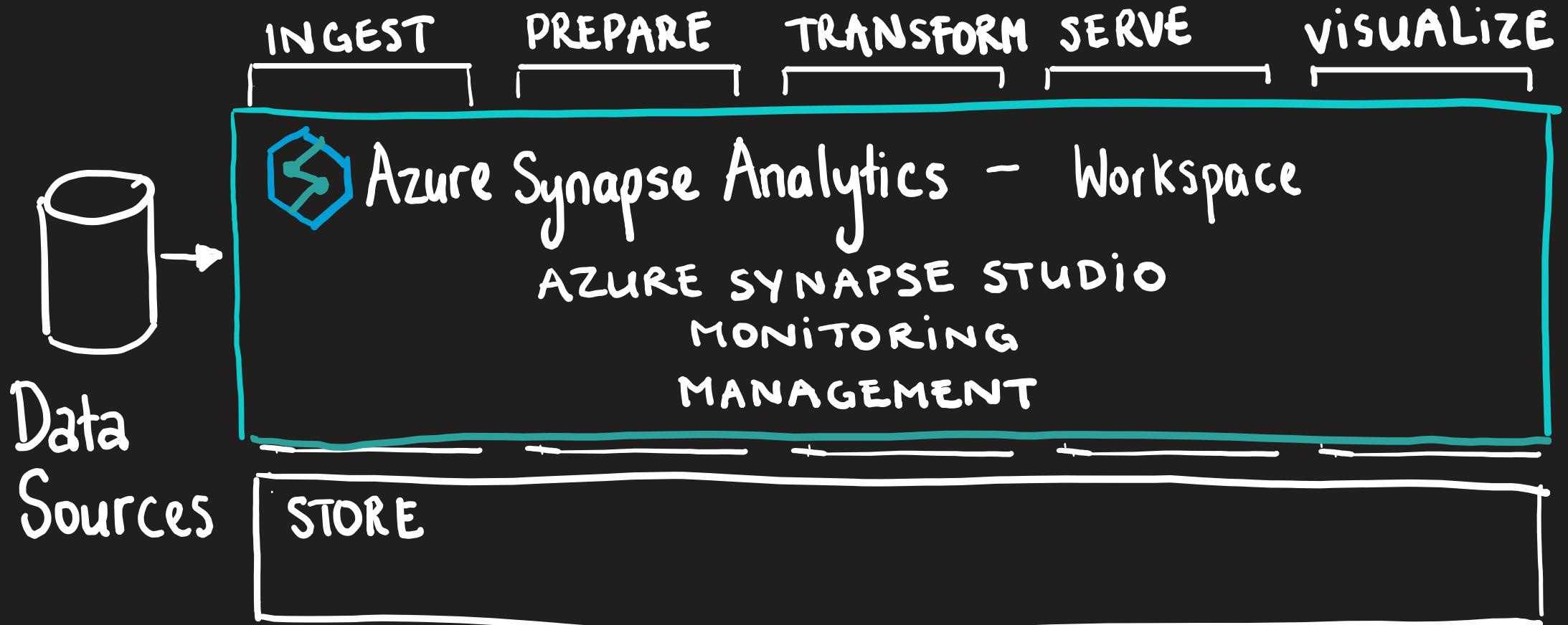
SQL
Pool



Linked
Service









Azure Synapse Analytics - Workspace

ANALYTIC ENGINES

ORCHESTRATE

DATA



Azure Synapse Analytics - Workspace

ANALYTIC ENGINES

ORCHESTRATE

DATA



Azure
Data Lake Storage



Azure Synapse Analytics - Workspace

ANALYTIC ENGINES

ORCHESTRATE



Pipelines

DATA

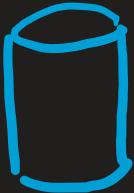


Azure
Data Lake Storage



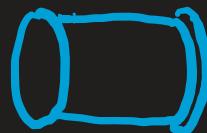
Azure Synapse Analytics - Workspace

ANALYTIC
ENGINES



SQL
On-demand

ORCHESTRATE



Pipelines

DATA

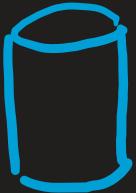


Azure
Data Lake Storage



Azure Synapse Analytics - Workspace

ANALYTIC
ENGINES



SQL
On-demand



SQL
Pool

ORCHESTRATE



Pipelines

DATA

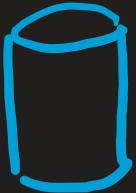


Azure
Data Lake Storage



Azure Synapse Analytics - Workspace

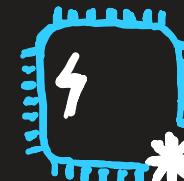
ANALYTIC
ENGINES



SQL
On-demand



SQL
Pool



Apache Spark
Pool

ORCHESTRATE



Pipelines

DATA

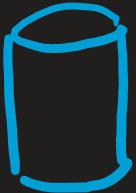


Azure
Data Lake Storage



Azure Synapse Analytics - Workspace

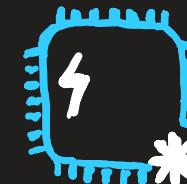
ANALYTIC
ENGINES



SQL
On-demand



SQL
Pool



Apache Spark
Pool

ORCHESTRATE



Pipelines

DATA



Azure
Data Lake Storage



Azure Synapse Analytics

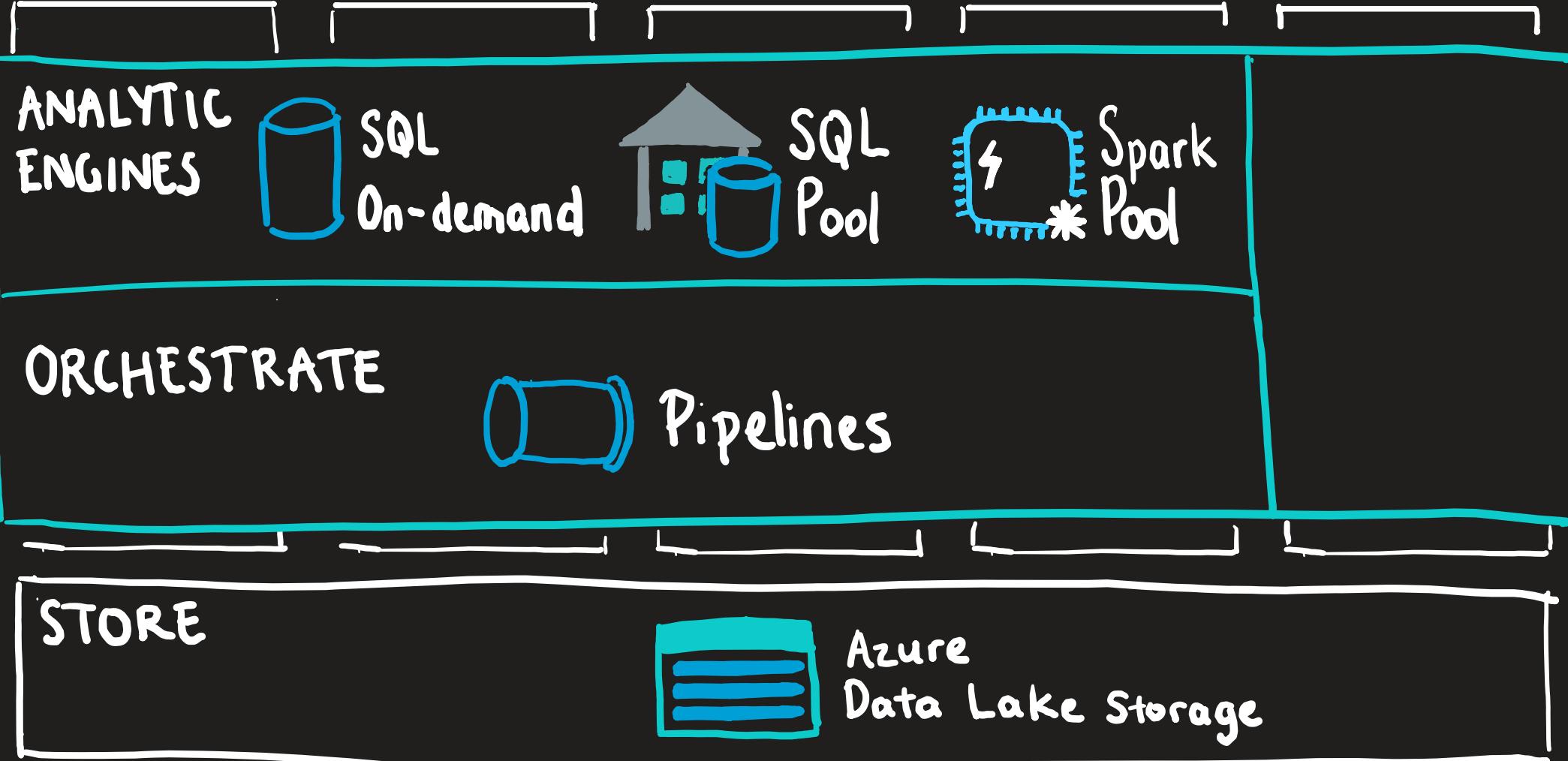
INGEST

PREPARE

TRANSFORM

SERVE

VISUALIZE





Azure Synapse Analytics

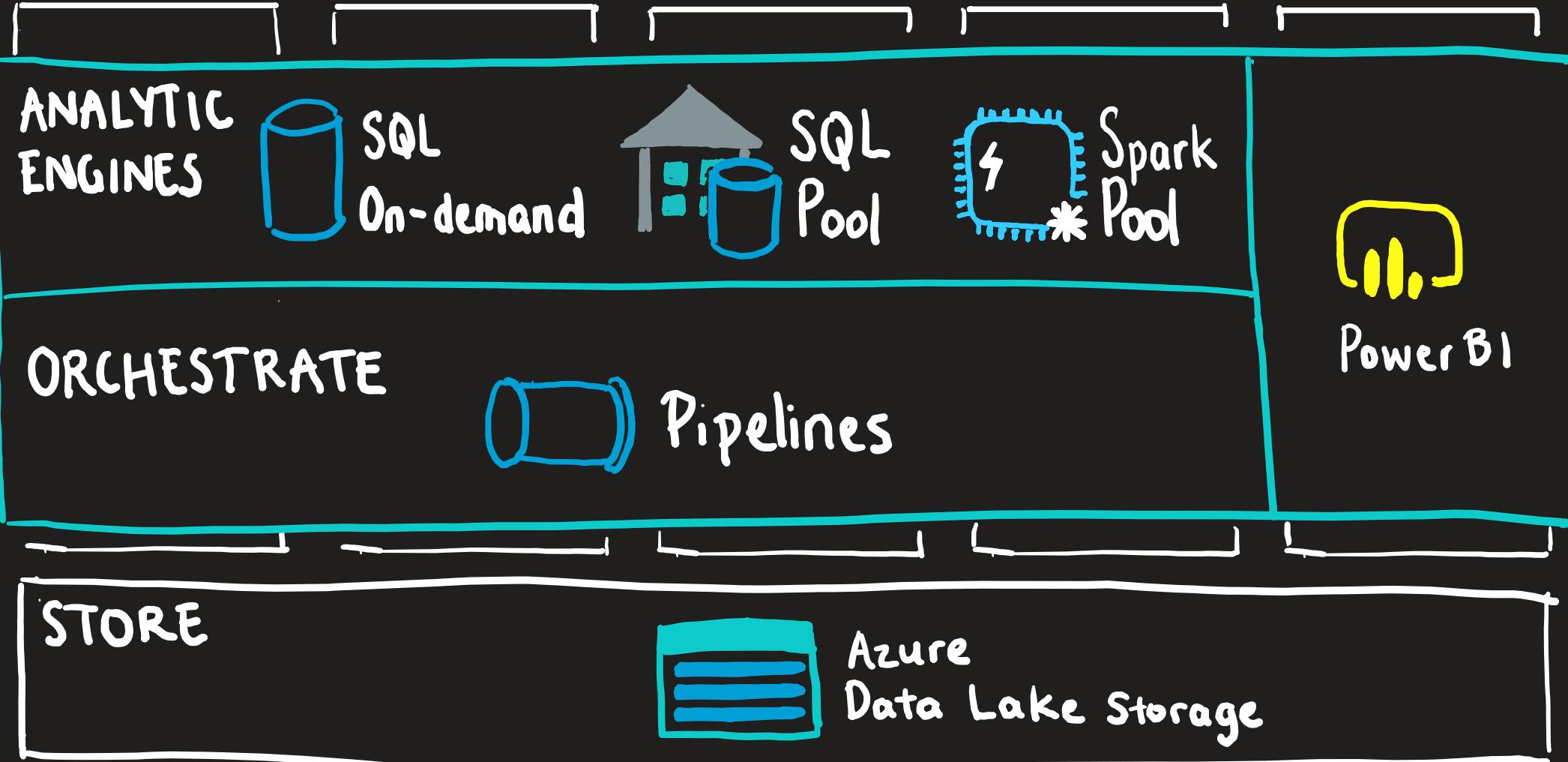
INGEST

PREPARE

TRANSFORM

SERVE

VISUALIZE



Securing Azure Synapse Analytics

Access control

Workspace details

Name your workspace, select a location, and choose a primary Data Lake Storage Gen2 file system to serve as the default location for logs and job output.

Workspace name *

heininsynapse



Region *

North Europe



Select Data Lake Storage Gen2 * ⓘ

From subscription Manually via URL



Account name * ⓘ

heininsynapse1



[Create new](#)



File system name *

heininsynapse



[Create new](#)

Assign myself the Storage Blob Data Contributor role on the Data Lake Storage Gen2 account 'heininsynapse1'.



We will automatically grant the workspace identity data access to the specified Data Lake Storage Gen2 account, using the [Storage Blob Data Contributor](#) role. To enable other users to use this storage account after you create your workspace, perform these tasks:

- Assign other users to the **Contributor** role on workspace
- Assign other users to a **Workspace, SQL, or Spark admin** role using Synapse Studio
- Assign yourself and other users to the **Storage Blob Data Contributor** role on the storage account

[Learn more](#)

Azure RBAC

- Owner
- Contributor
- Reader

Azure RBAC

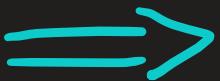
- Owner
- Contributor
- Reader



Azure Synapse Analytics
- Workspace

Azure RBAC

- Owner
- Contributor
- Reader



Azure Synapse Analytics

- Workspace



SQL
On-demand



SQL
Pool



Spark
Pool

Azure Synapse Workspace Roles

- Workspace Admins
- SQL Admins
- Spark Admins

Azure Synapse Workspace Roles

- Workspace Admins



Azure Synapse Analytics
- Workspace



Pipelines



Development
SQL & Spark

Azure Synapse Workspace Roles

- SQL Admins



Azure Synapse Analytics
- Workspace



Development
SQL

Azure Synapse Workspace Roles

- Spark Admins



Azure Synapse Analytics
- Workspace



Development
Spark

How to use Azure Synapse Analytics

Components

Components

Access
Management

Networking

Components

Access
Management

Networking

How do
we use
all this?



Small
team



Few
Data
Sources

From
SaaS
Applications
& Open Data

Predictive
Data for
Custom
App



Azure Synapse Analytics

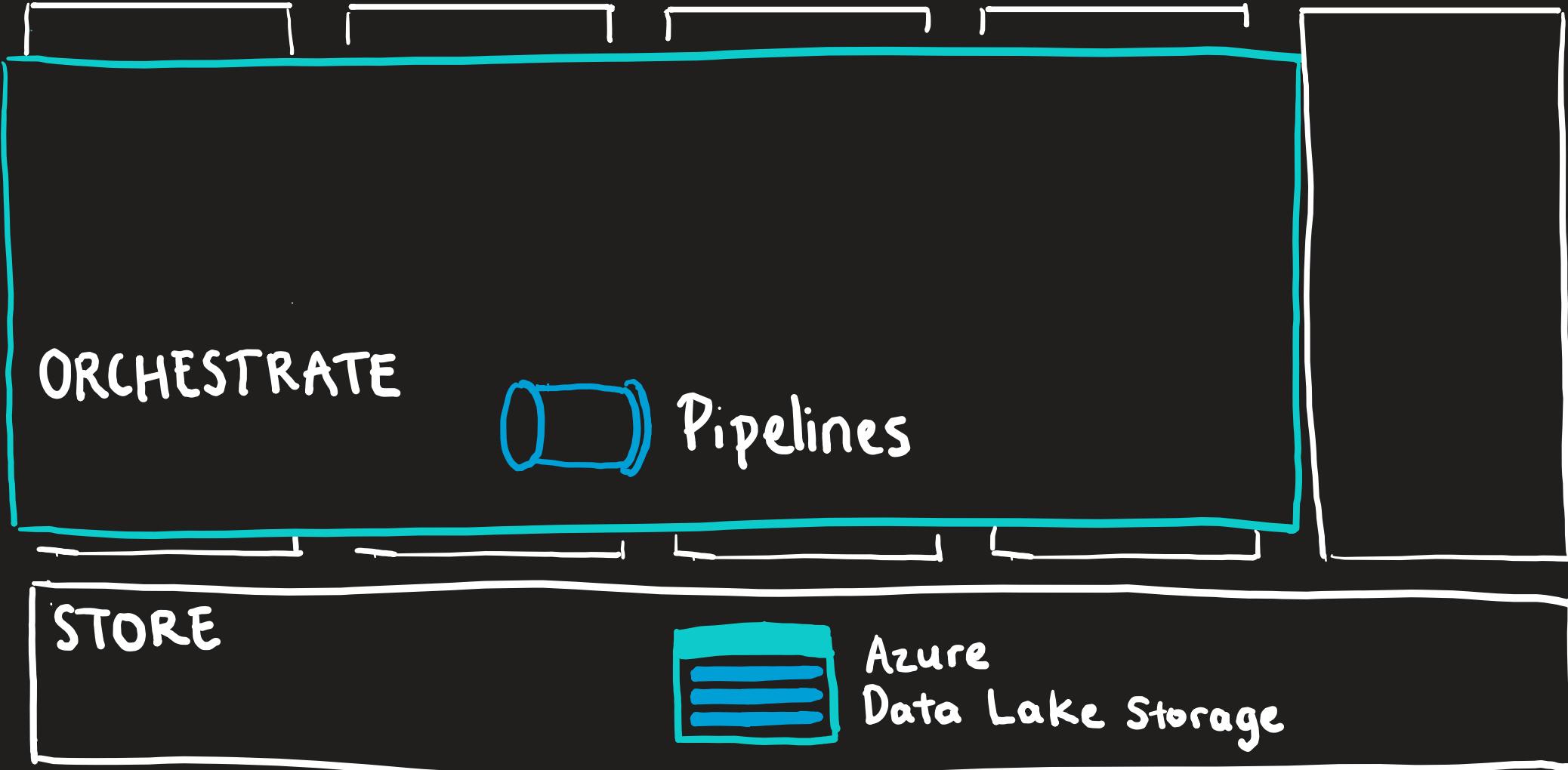
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PREPARE

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SERVE

VISUALIZE





Azure Synapse Analytics

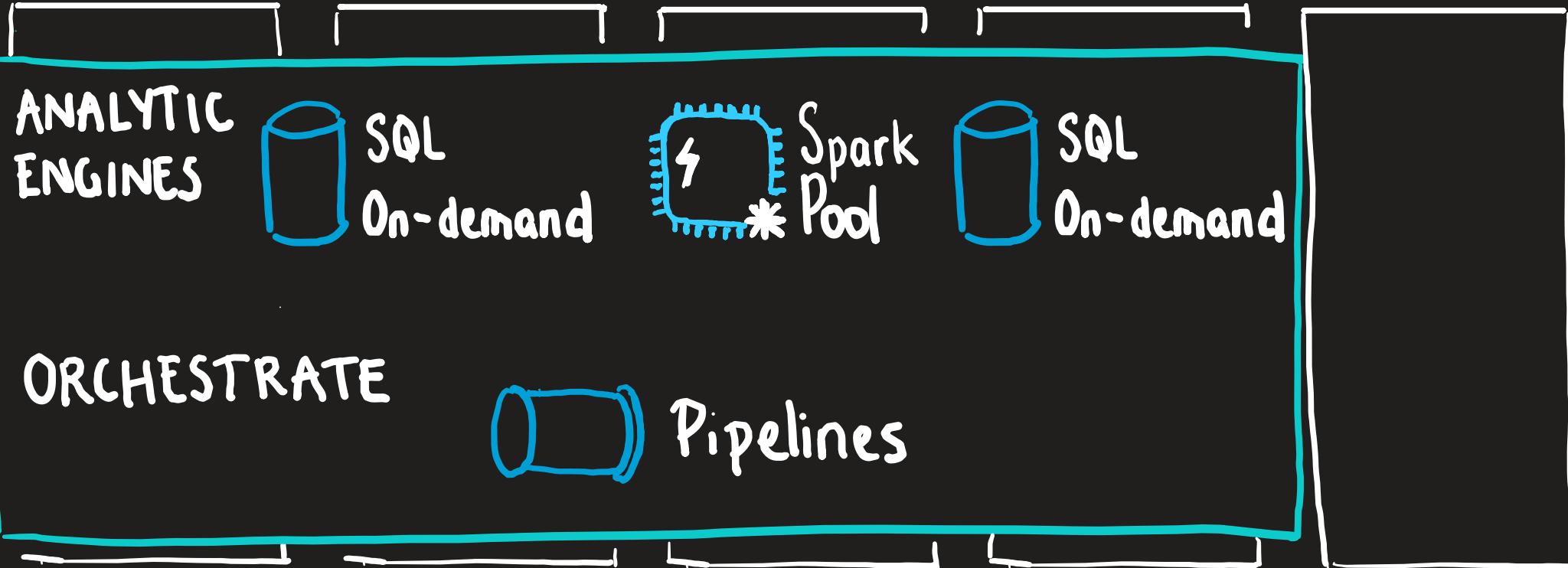
INGEST

PREPARE

TRANSFORM

SERVE

VISUALIZE



STORE



Azure
Data Lake Storage



Azure Synapse Analytics

INGEST

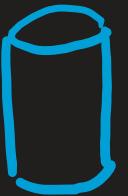
PREPARE

TRANSFORM

SERVE

CONSUME

ANALYTIC
ENGINES



SQL
On-demand



Spark
Pool



SQL
On-demand

ORCHESTRATE



Pipelines



Custom
App

STORE



Azure
Data Lake Storage



Many
Teams



Many
Data
Sources

In internal
Network

Reporting
and ML



Azure Synapse Analytics

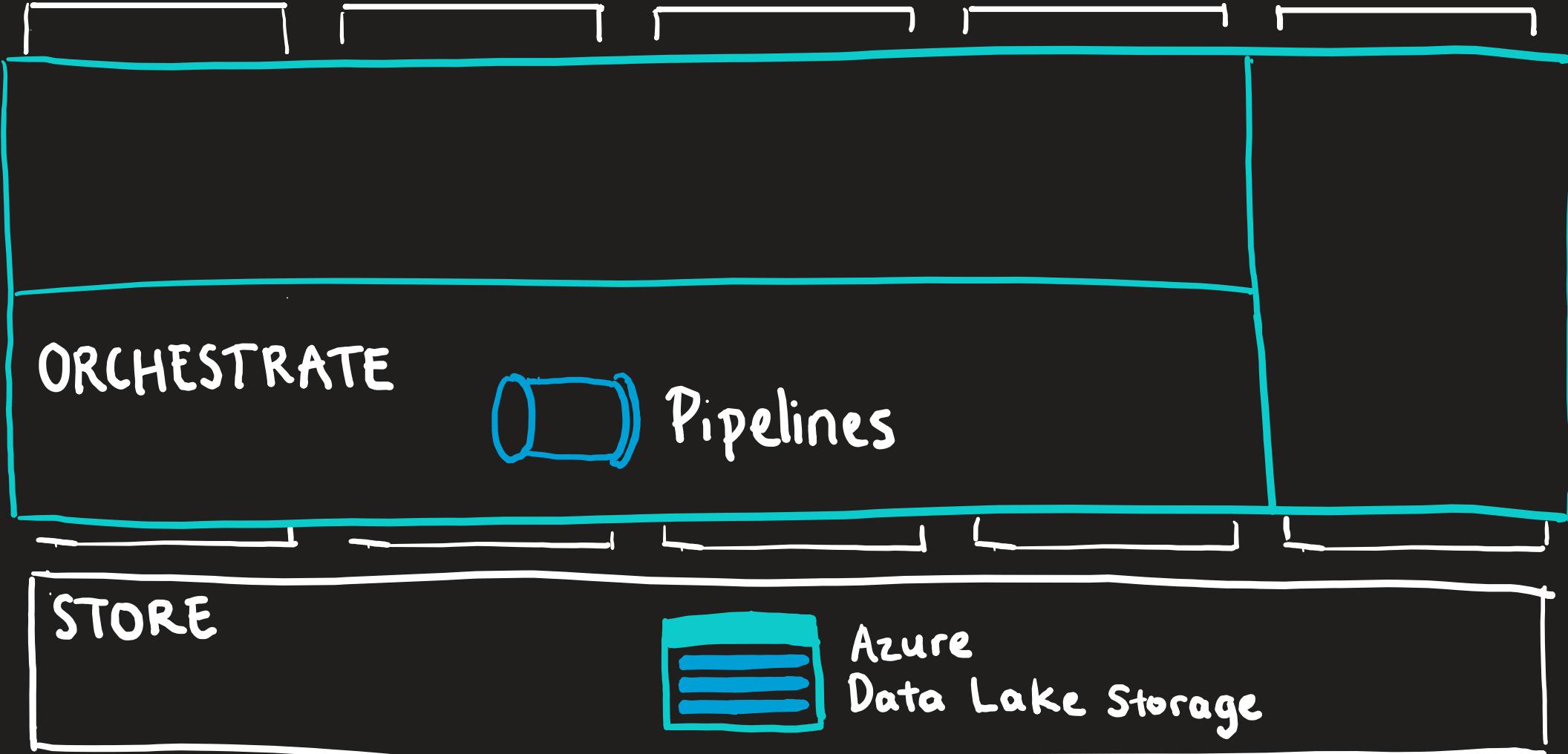
INGEST

PREPARE

TRANSFORM

SERVE

VISUALIZE





Azure Synapse Analytics

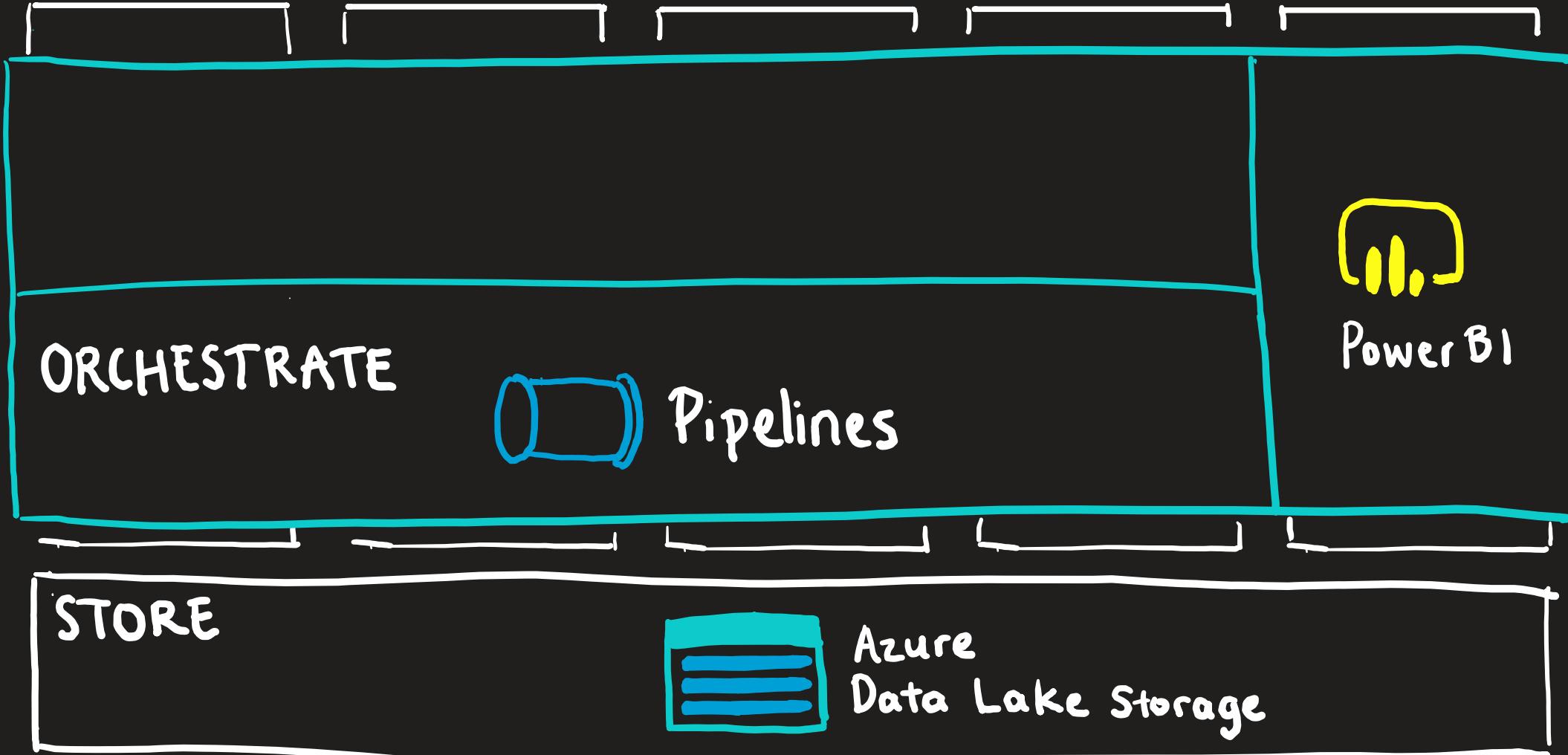
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Azure Synapse Analytics

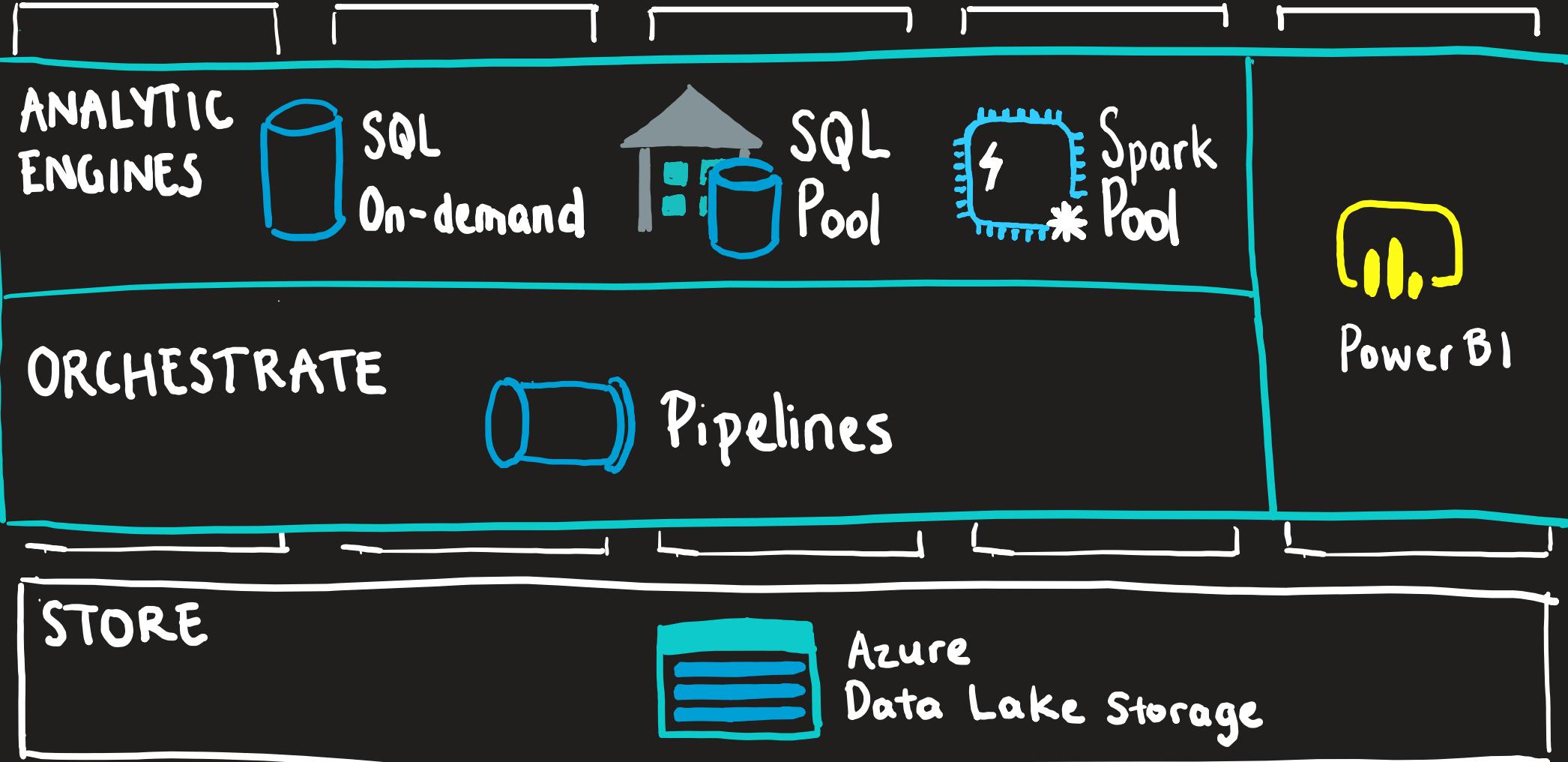
INGEST

PREPARE

TRANSFORM

SERVE

VISUALIZE



Demo

Components of Azure Synapse Analytics

Securing Azure Synapse Analytics

How to use Azure Synapse Analytics



Thank you!



@Heinillmarinen