

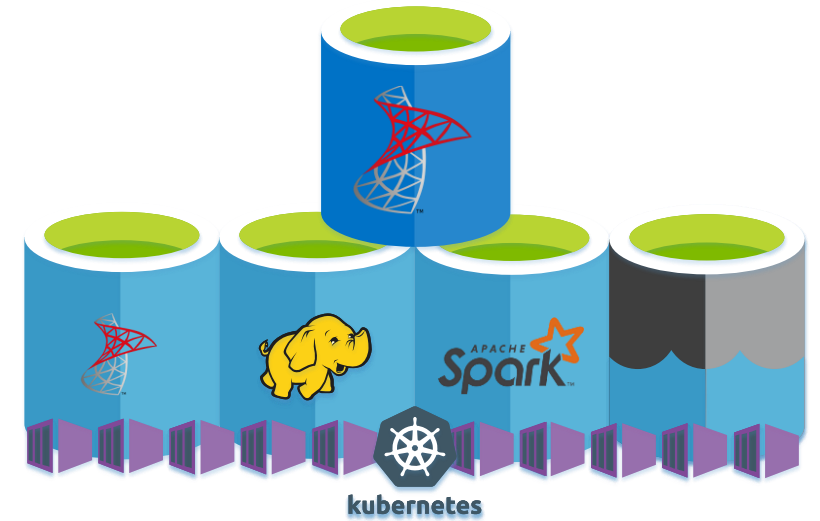
Paul Andrew

@MrPaulAndrew

Senior Data Analytics Consultant & Data Platform



# SQL Server 2019



## Big Data Clusters

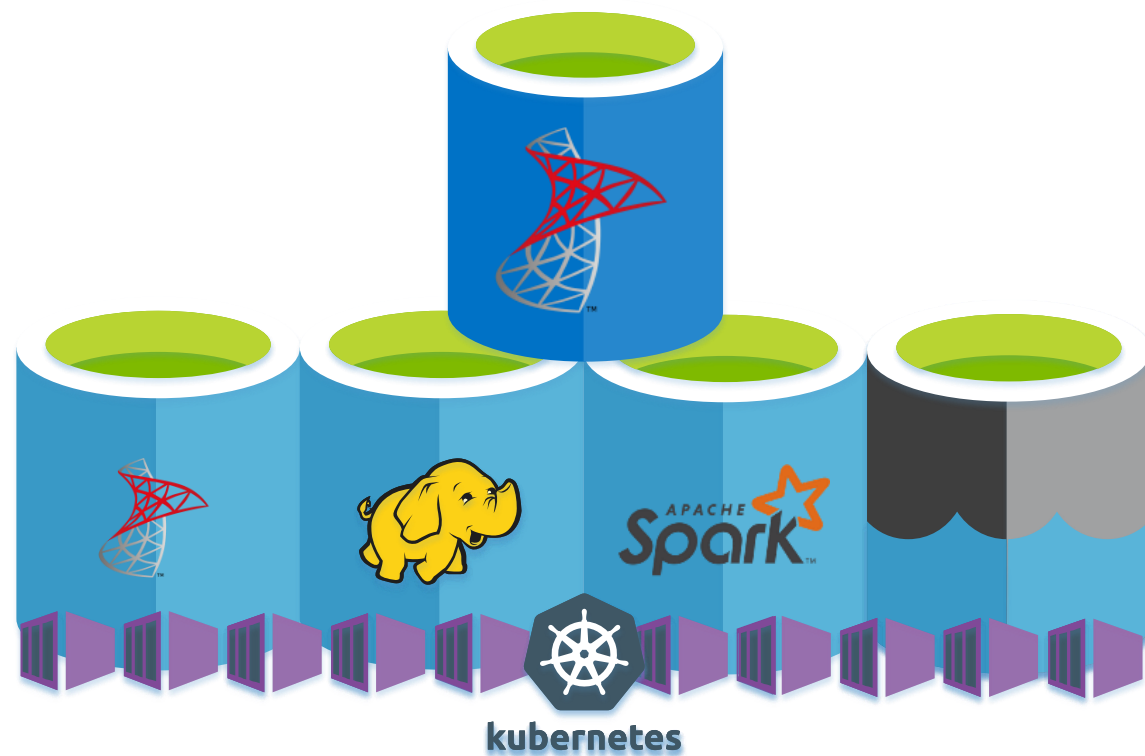


Gold Data Analytics  
Gold Data Platform  
Gold Cloud Platform



# What

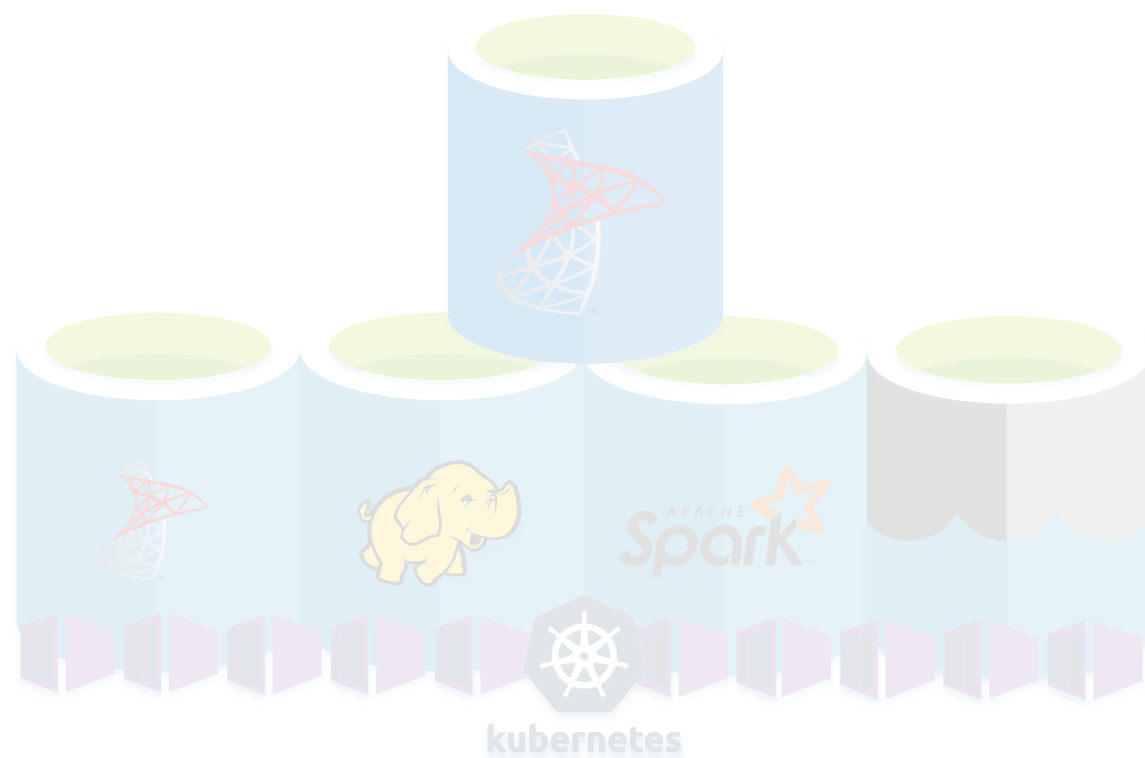
# Why



# How

What

**Why**

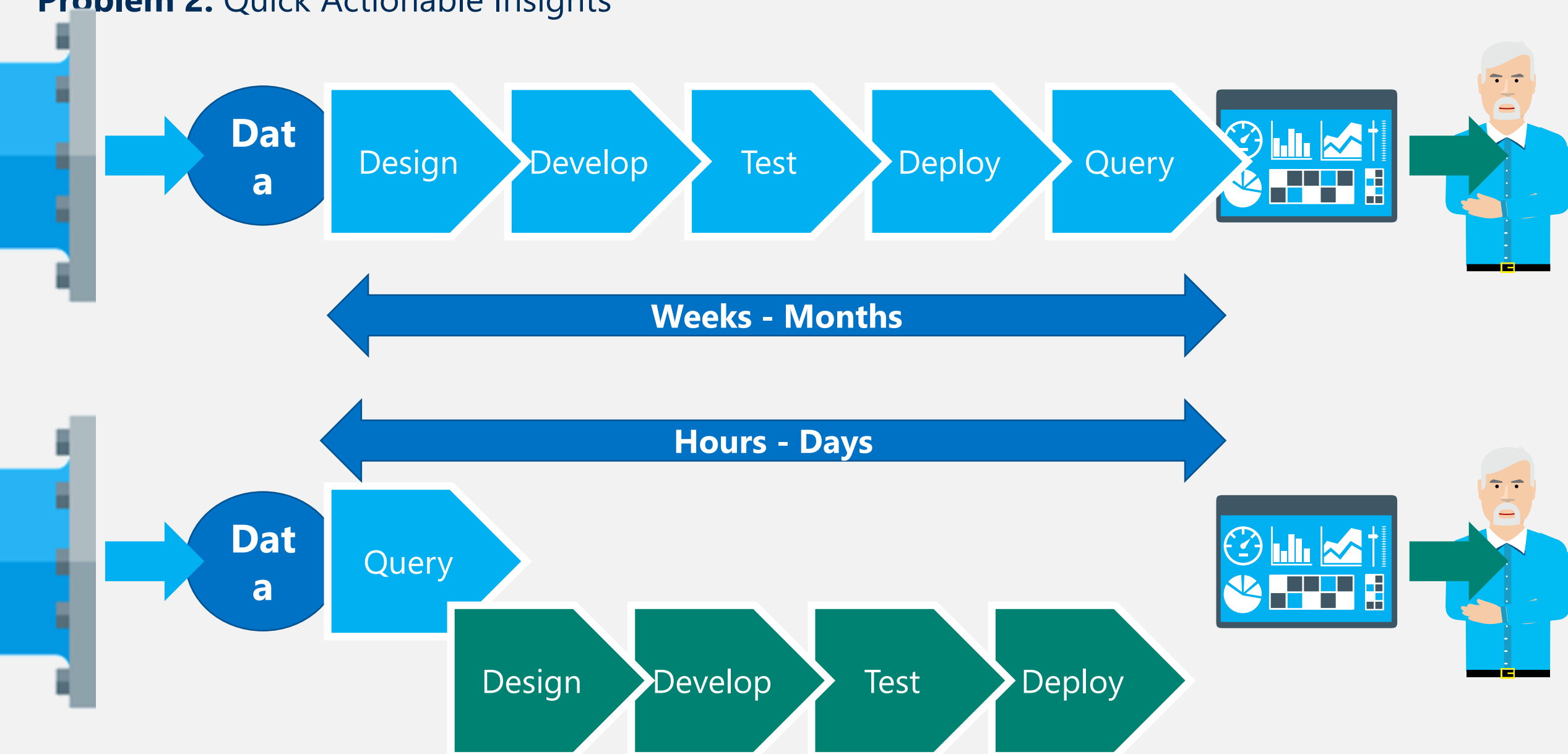


How

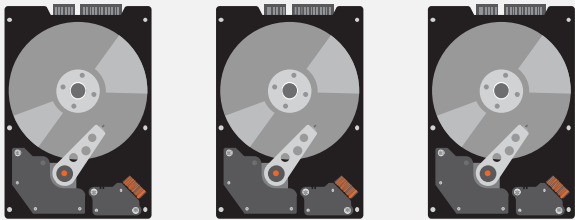
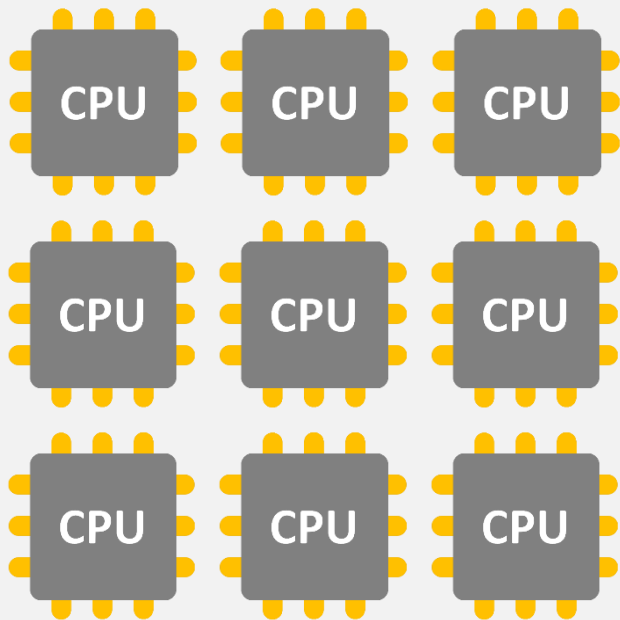
**Problem 1:** All Forms of Data Structure



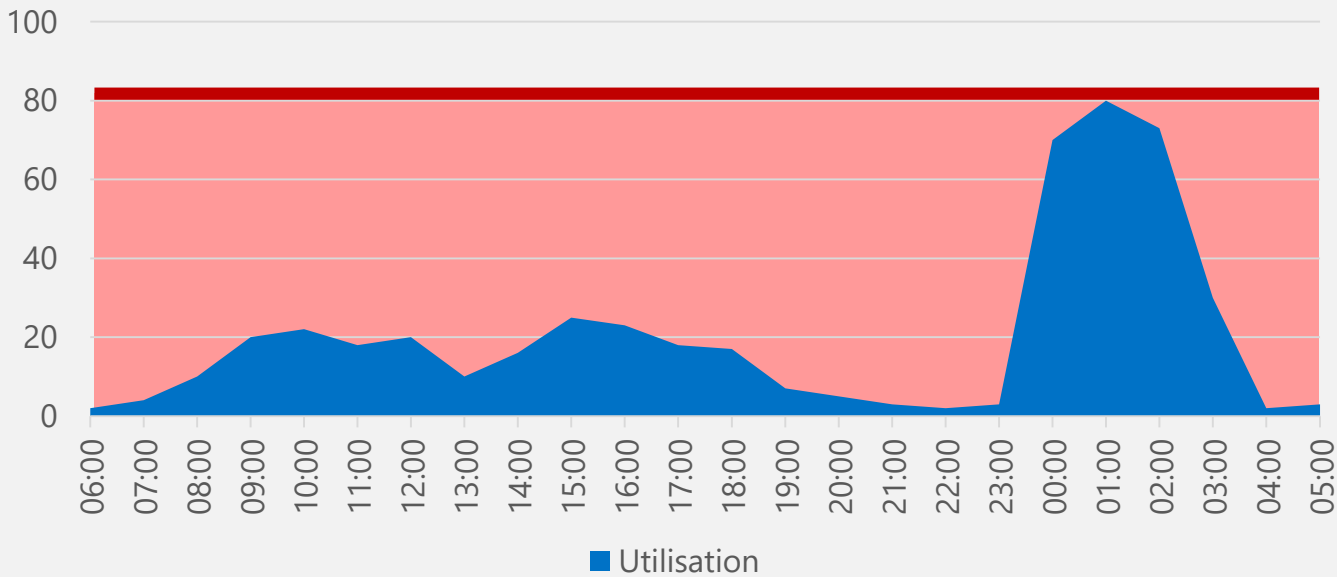
**Problem 2:** Quick Actionable Insights



# Problem 3: Infrastructure Costs & Scalability



Daily Server Utilisation



£££

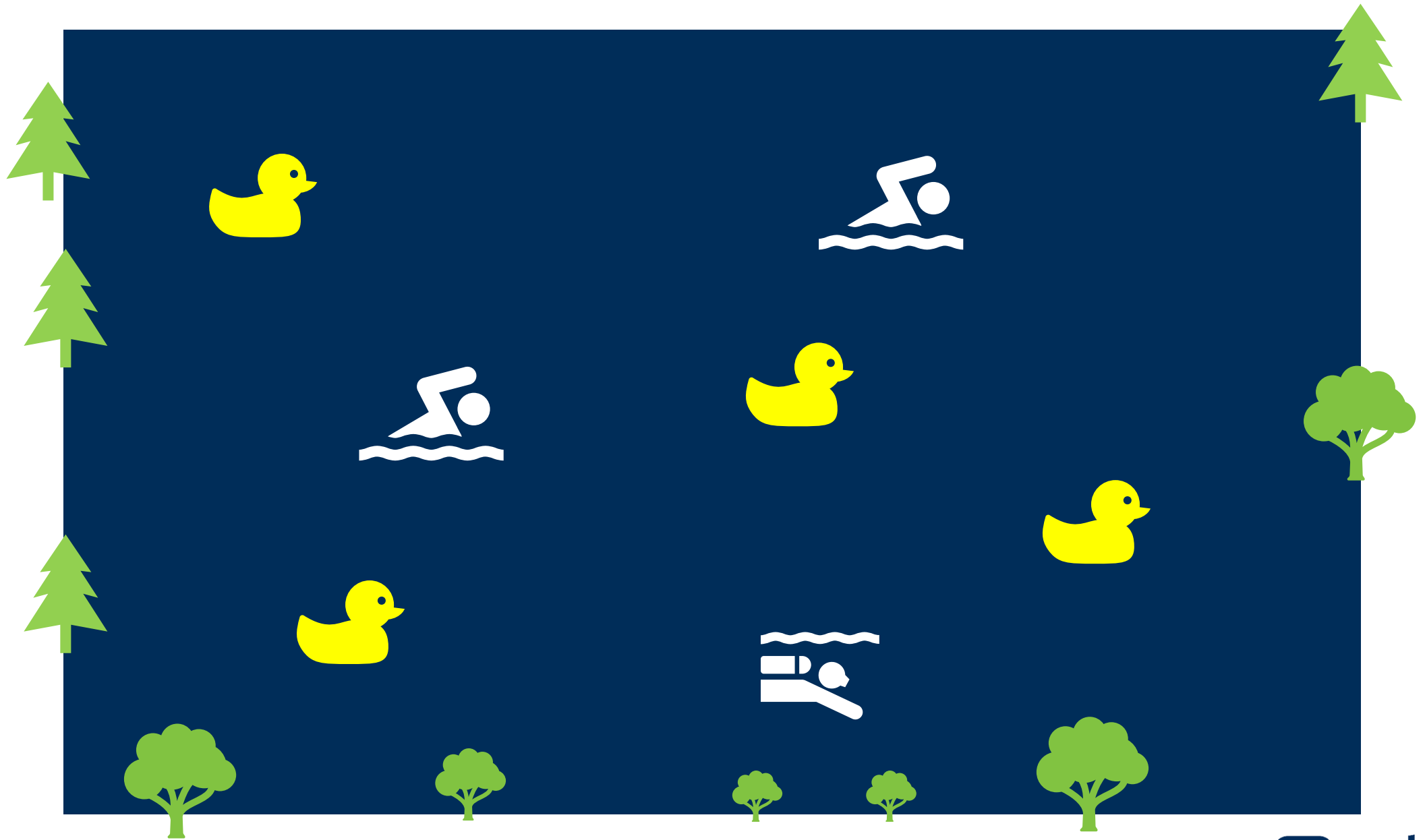


**V**olume

**V**elocity

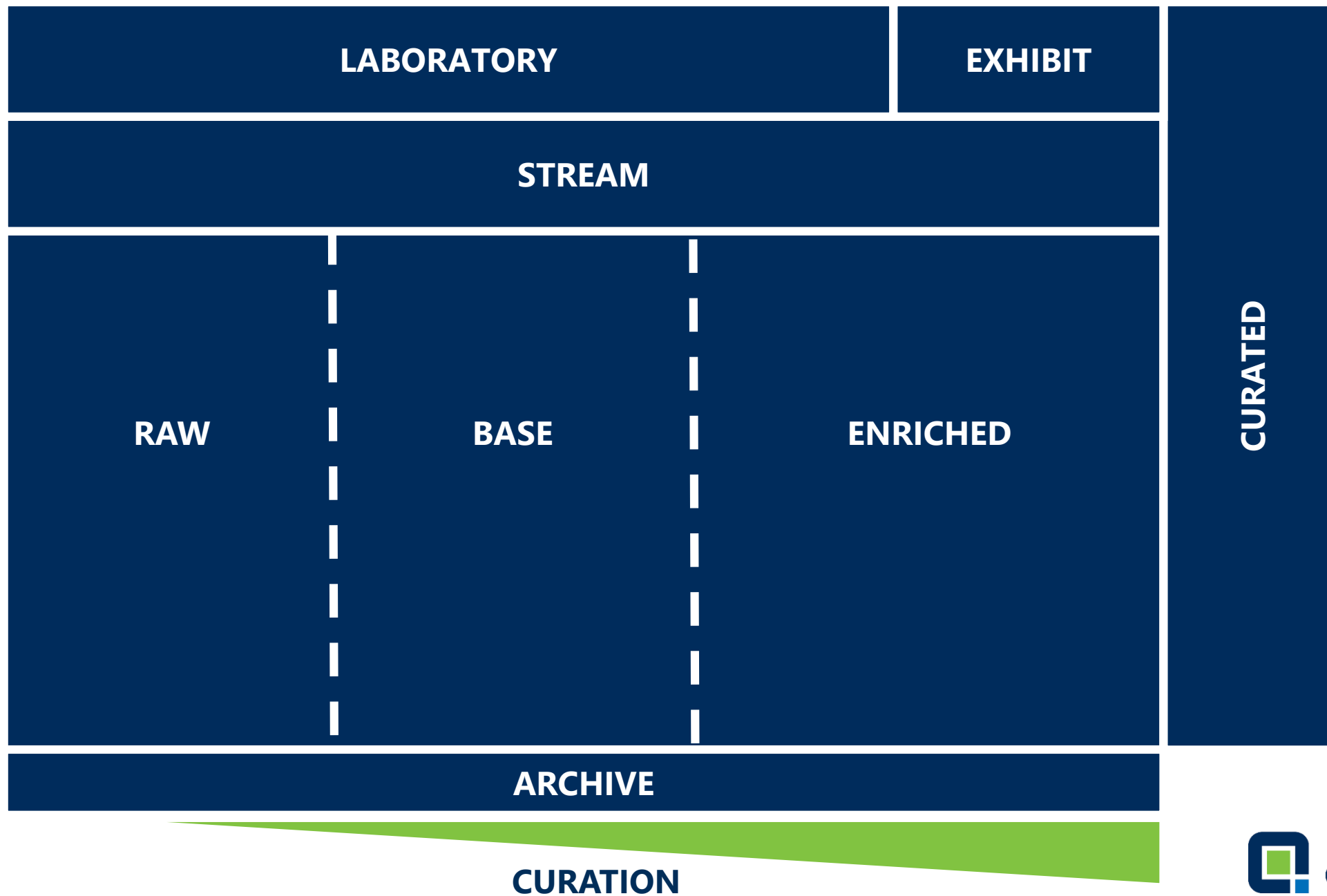
**V**ariety

**V**eracity

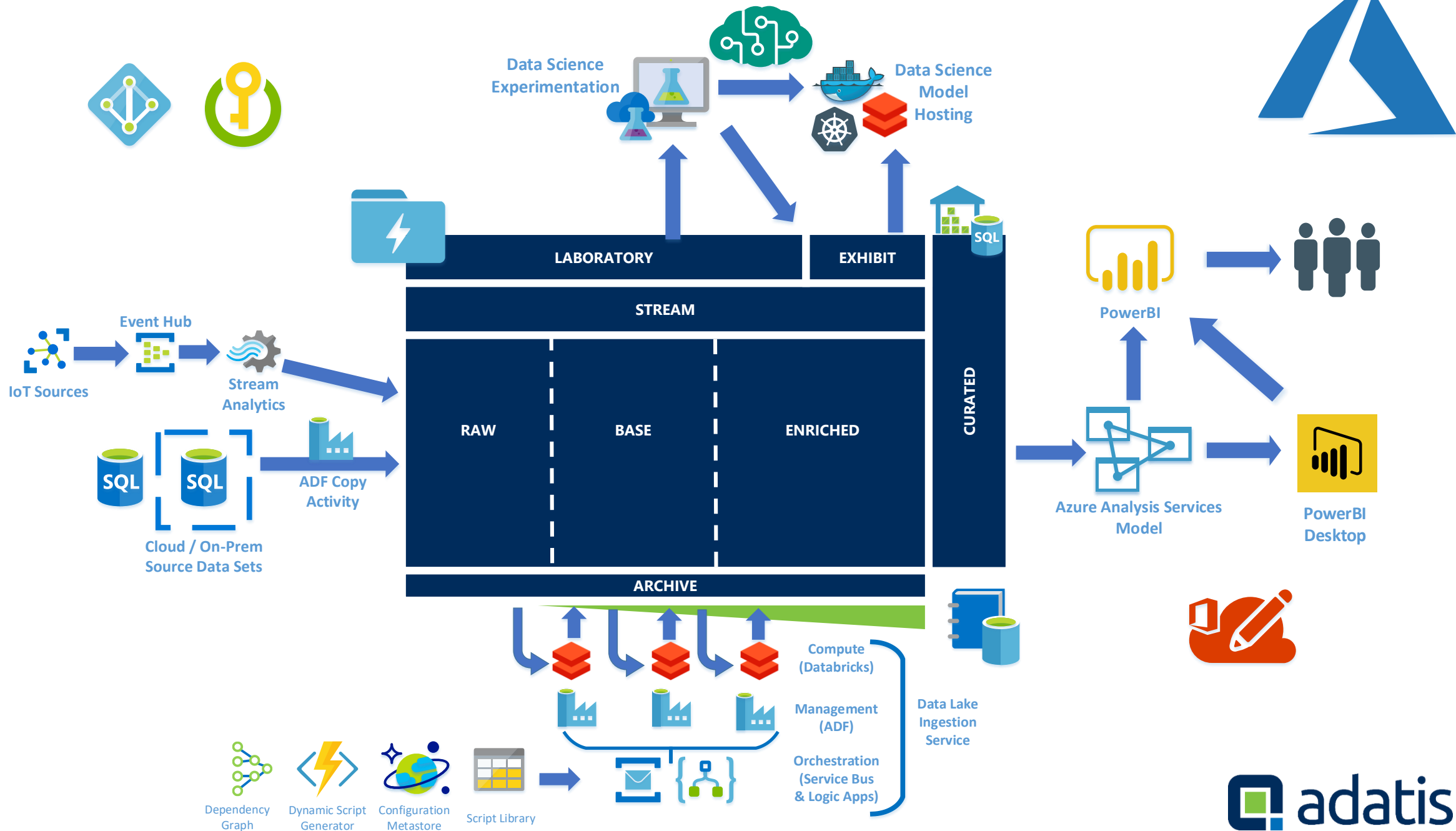




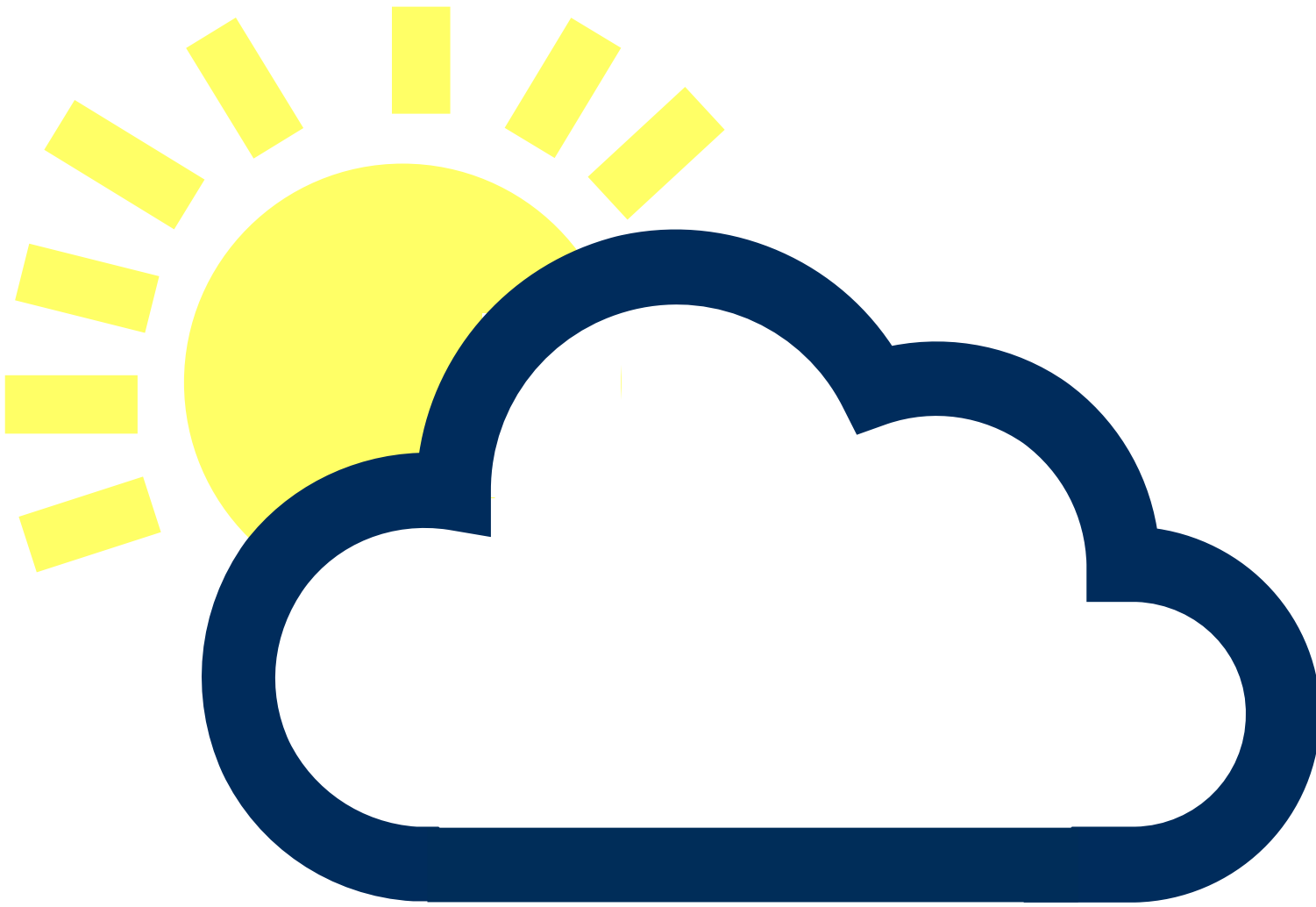




# The Modern Data Warehouse

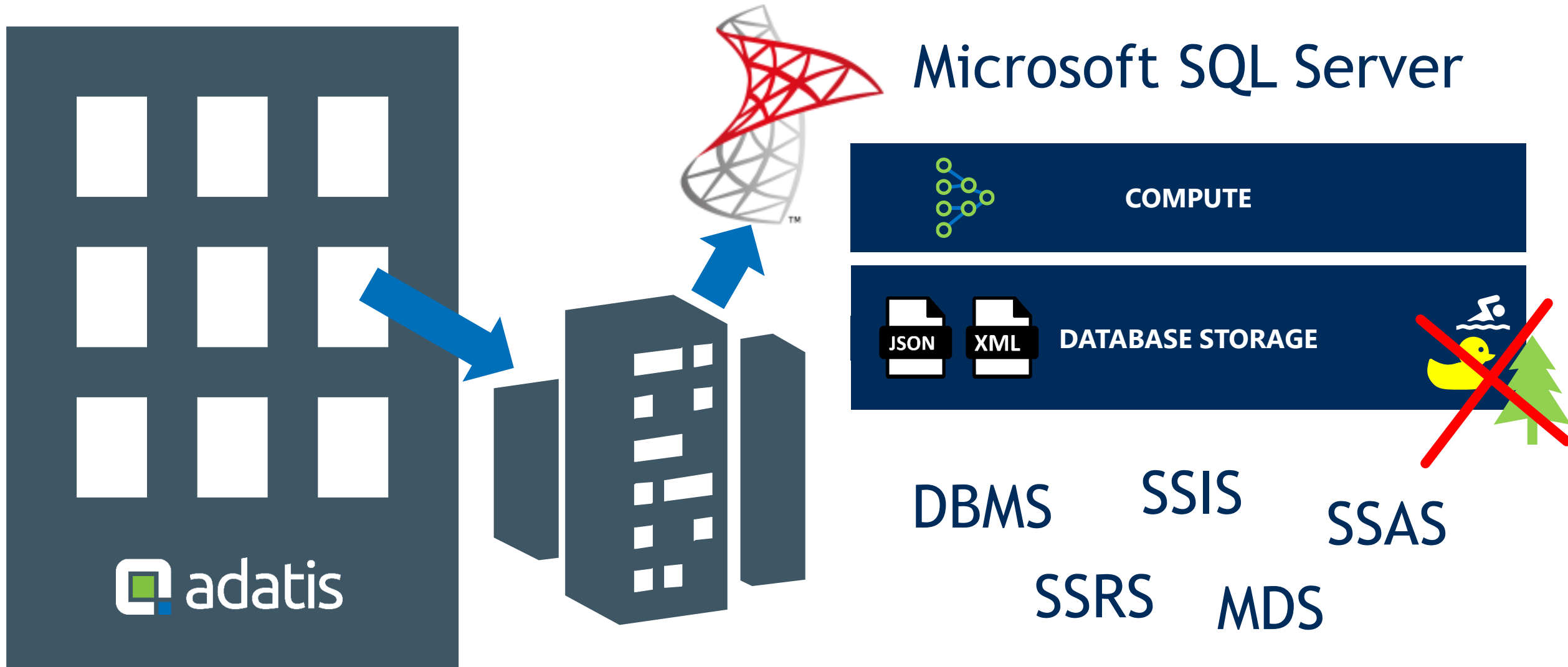


No Cloud?

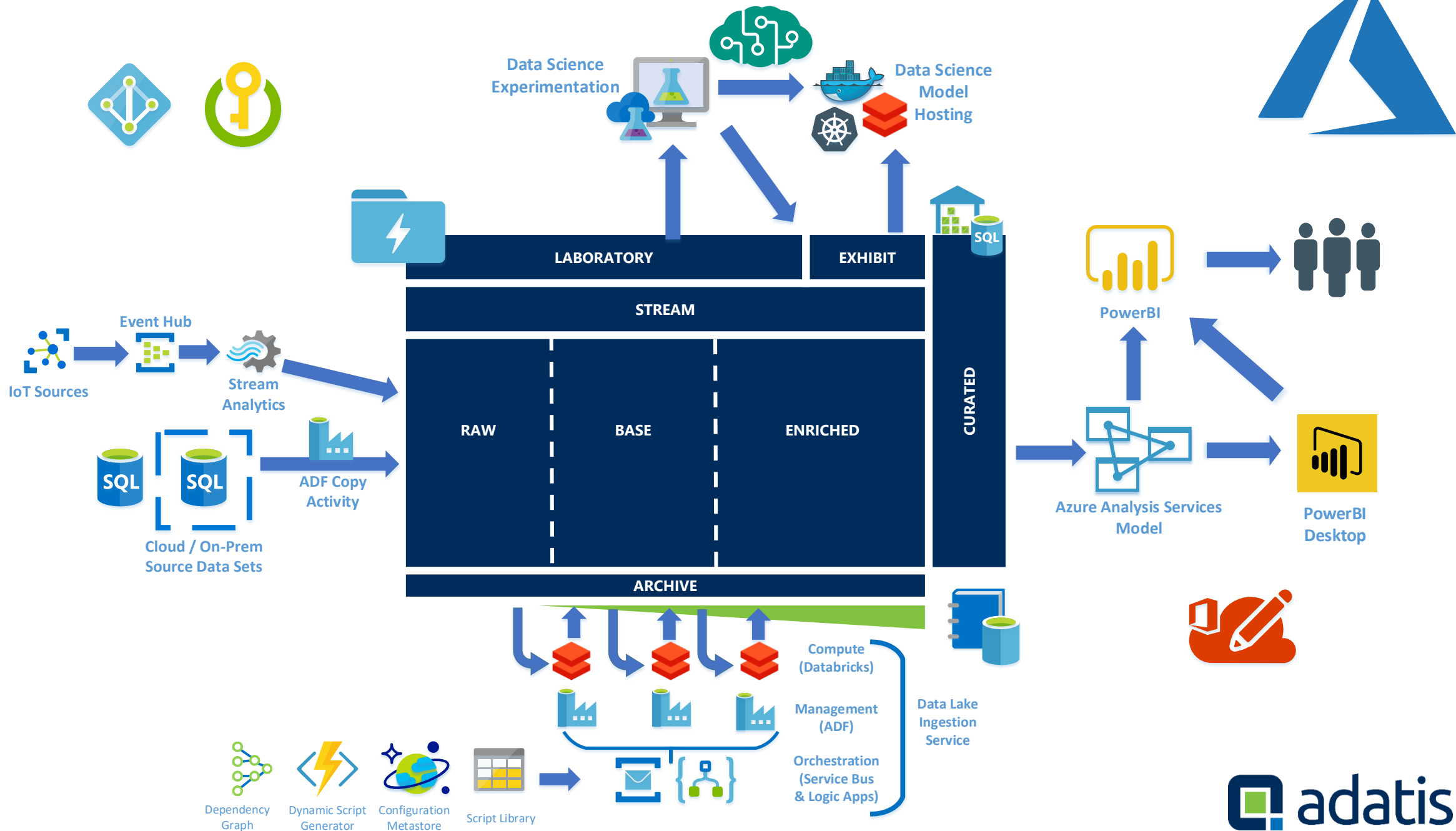




# On Premises

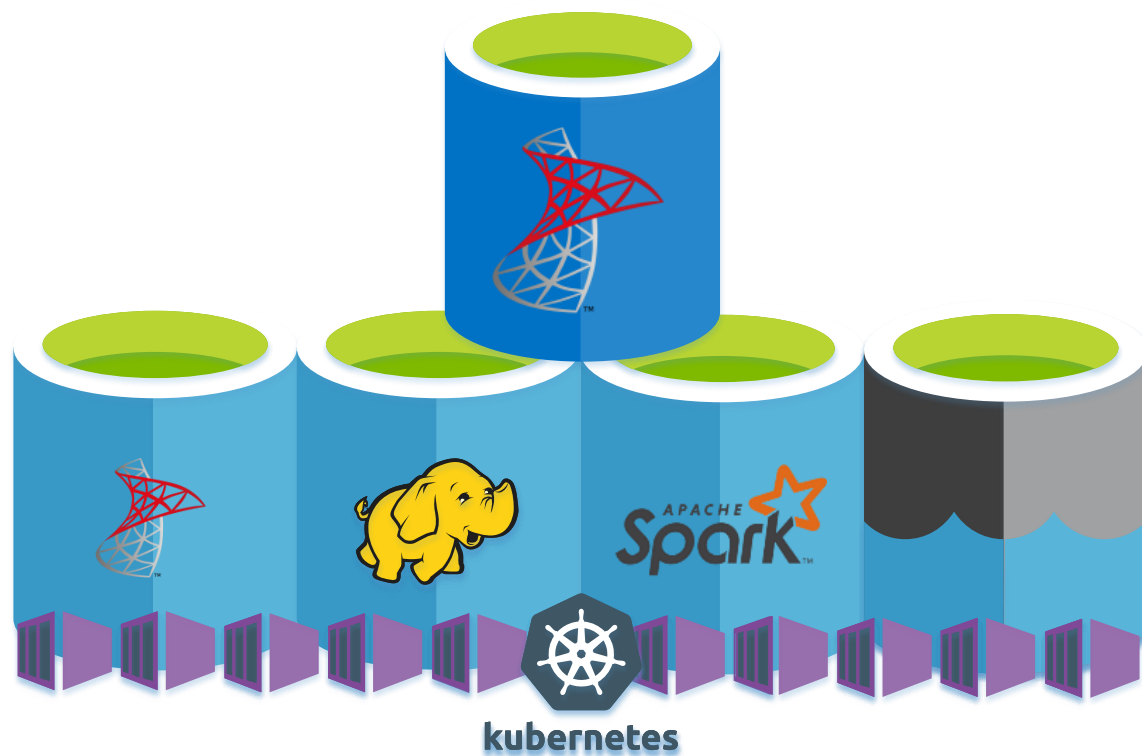


# The Modern Data Warehouse



What

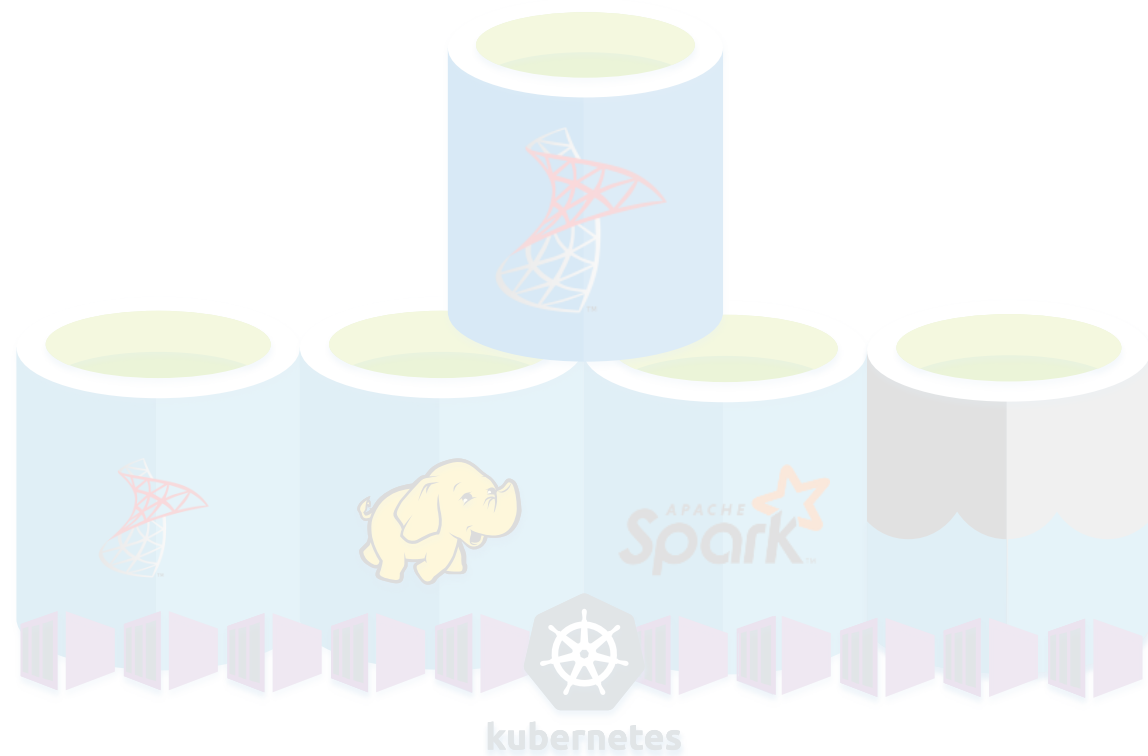
Why



How



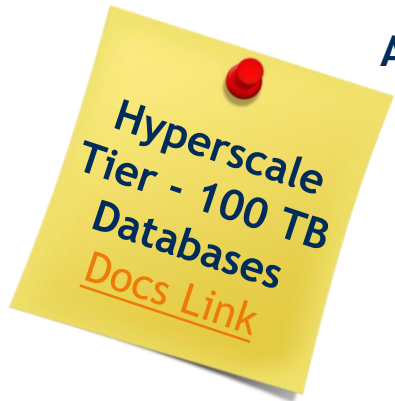
# What



# Why

# How

# SQL Server - Product Evolution



## Azure SQL Database (SQLDB)



T-SQL

Compute

Compute Node

Data

Database Storage

Scale Up Compute

## Azure SQL Data Warehouse (SQLDW)



D-SQL

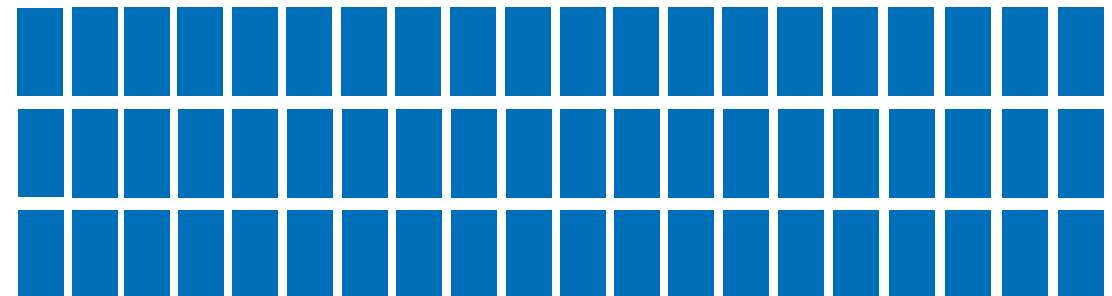
Control Node

Compute Node

Compute Node

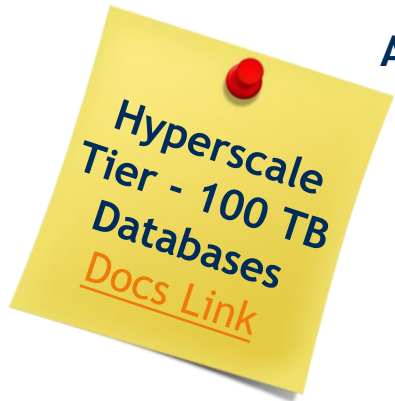
Compute Node

Compute Node

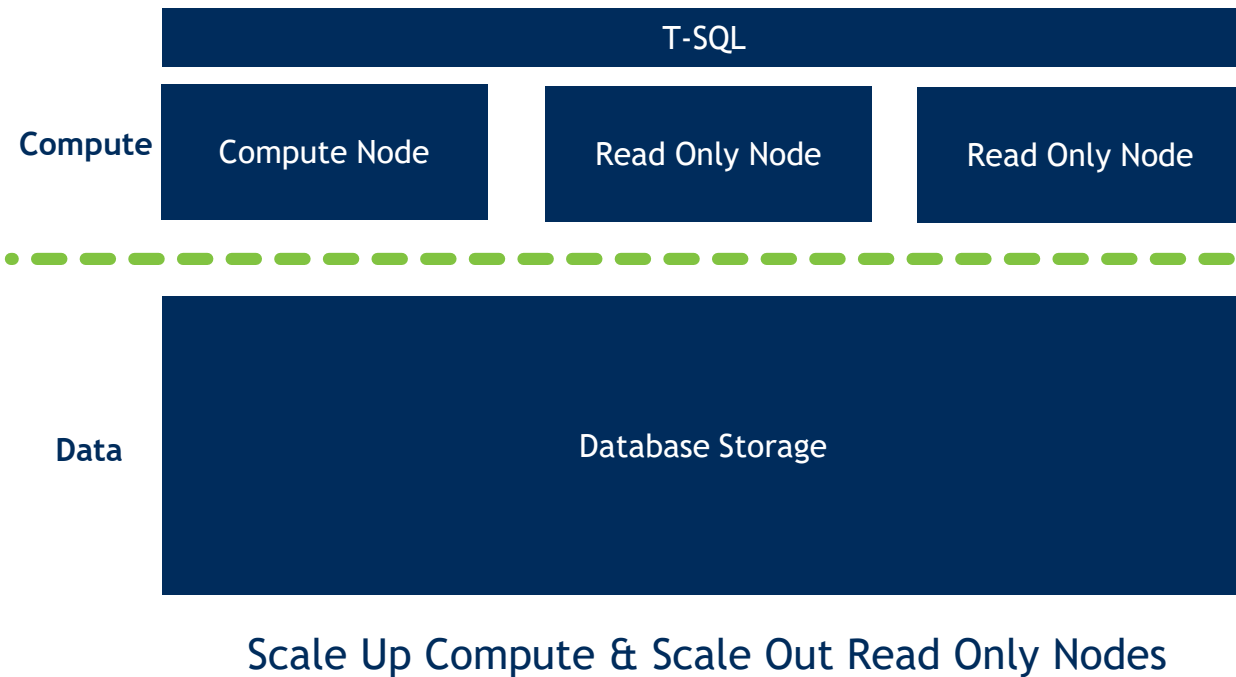


Scale Out Compute & Distributed Storage

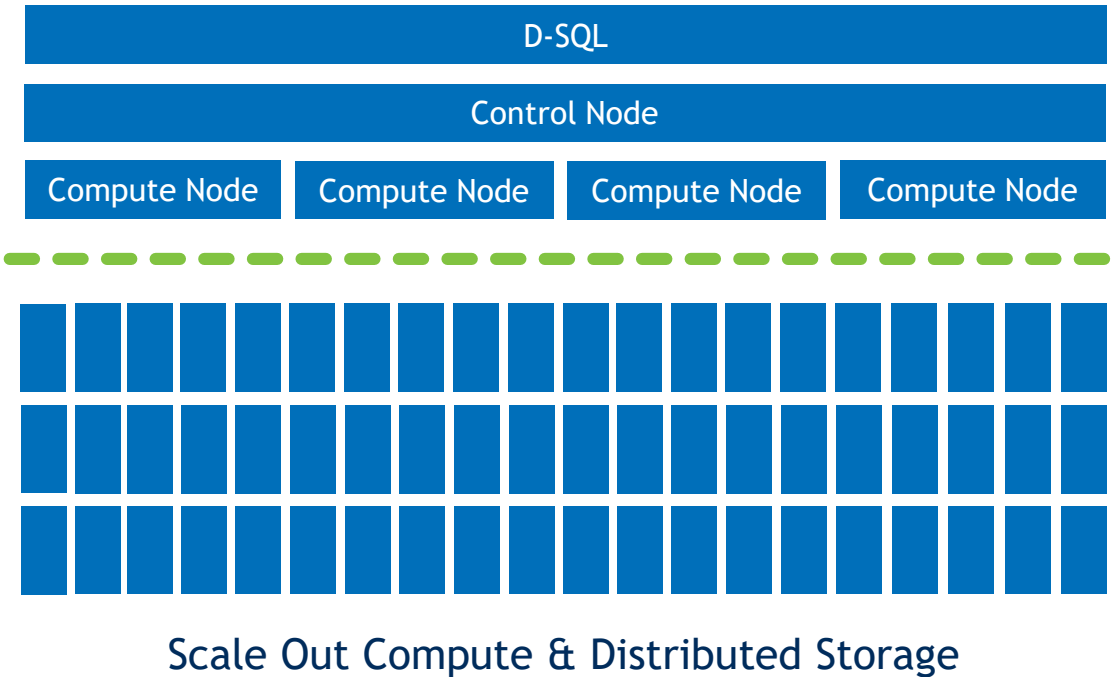
# SQL Server - Product Evolution



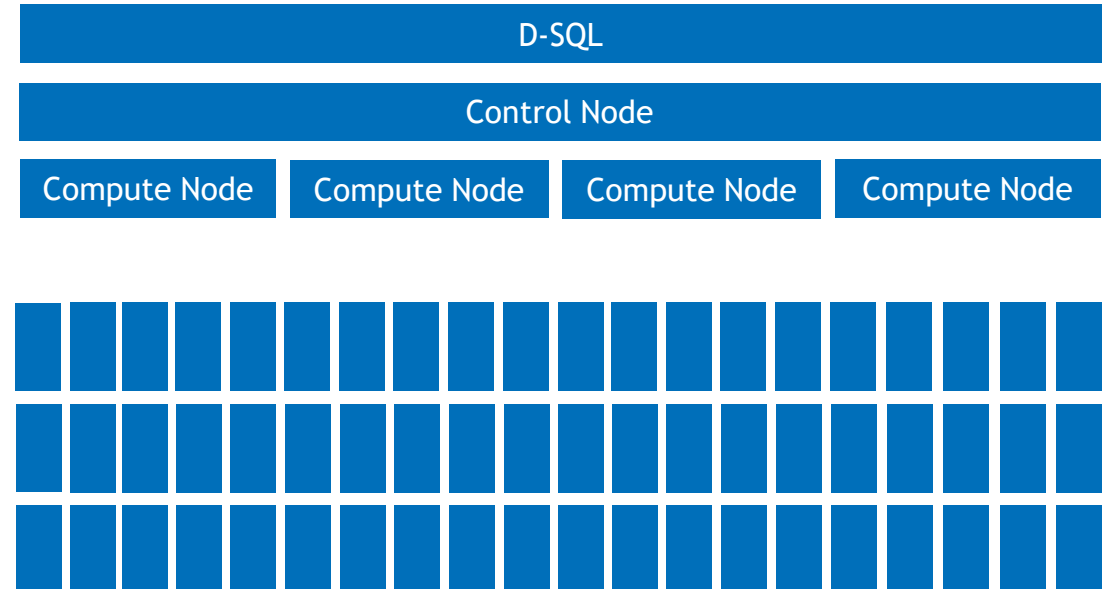
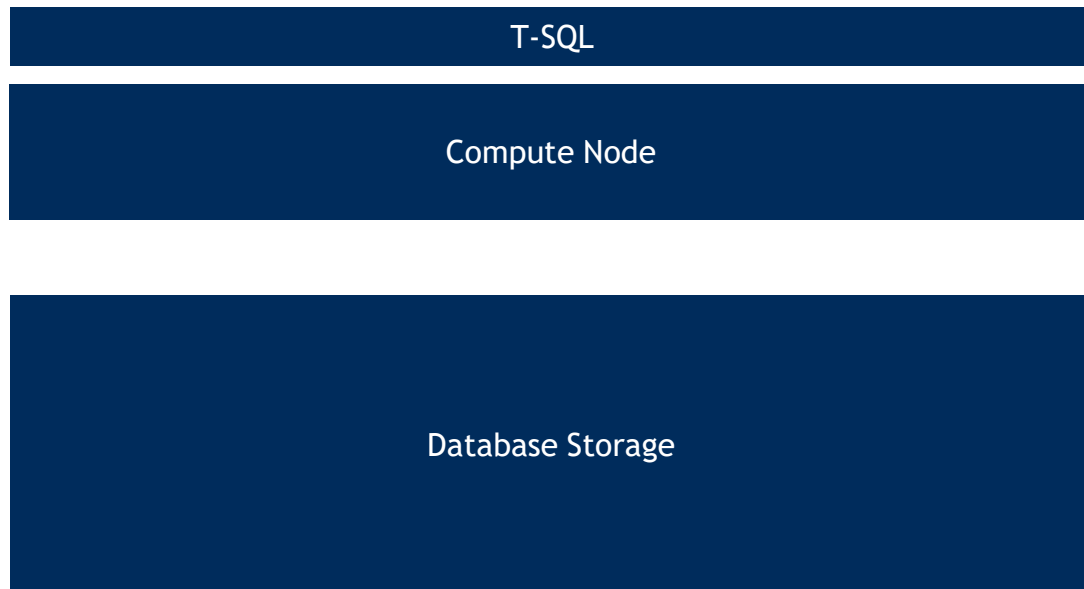
## Azure SQL Database (SQLDB)



## Azure SQL Data Warehouse (SQLDW)

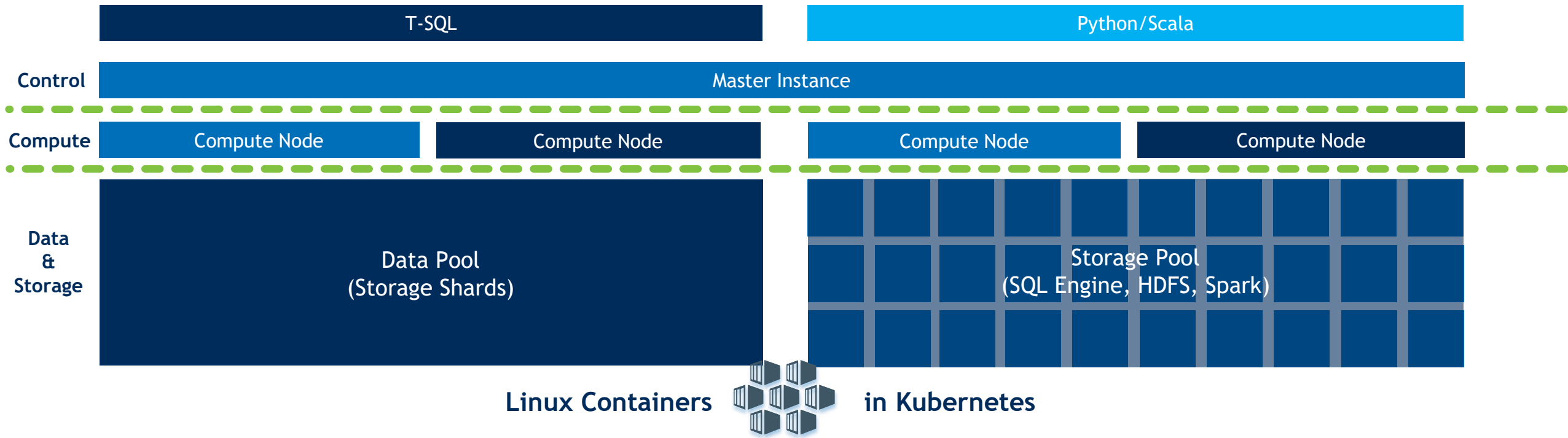
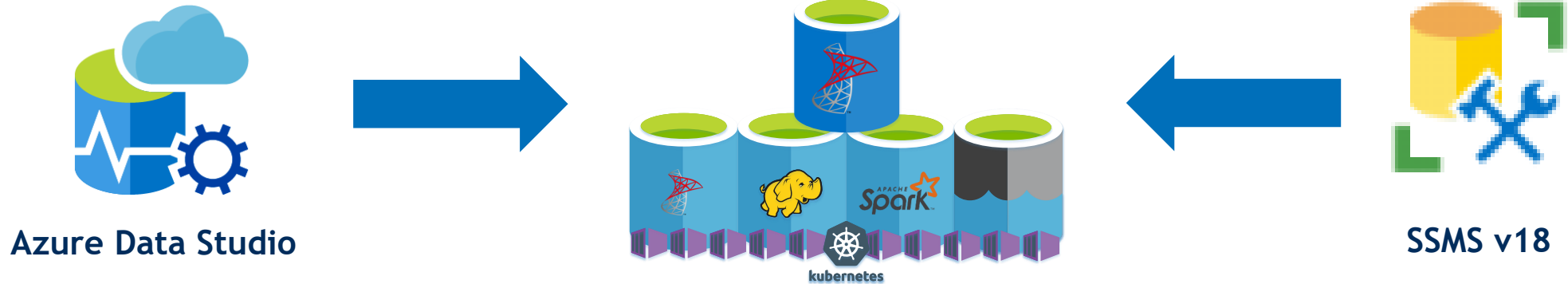


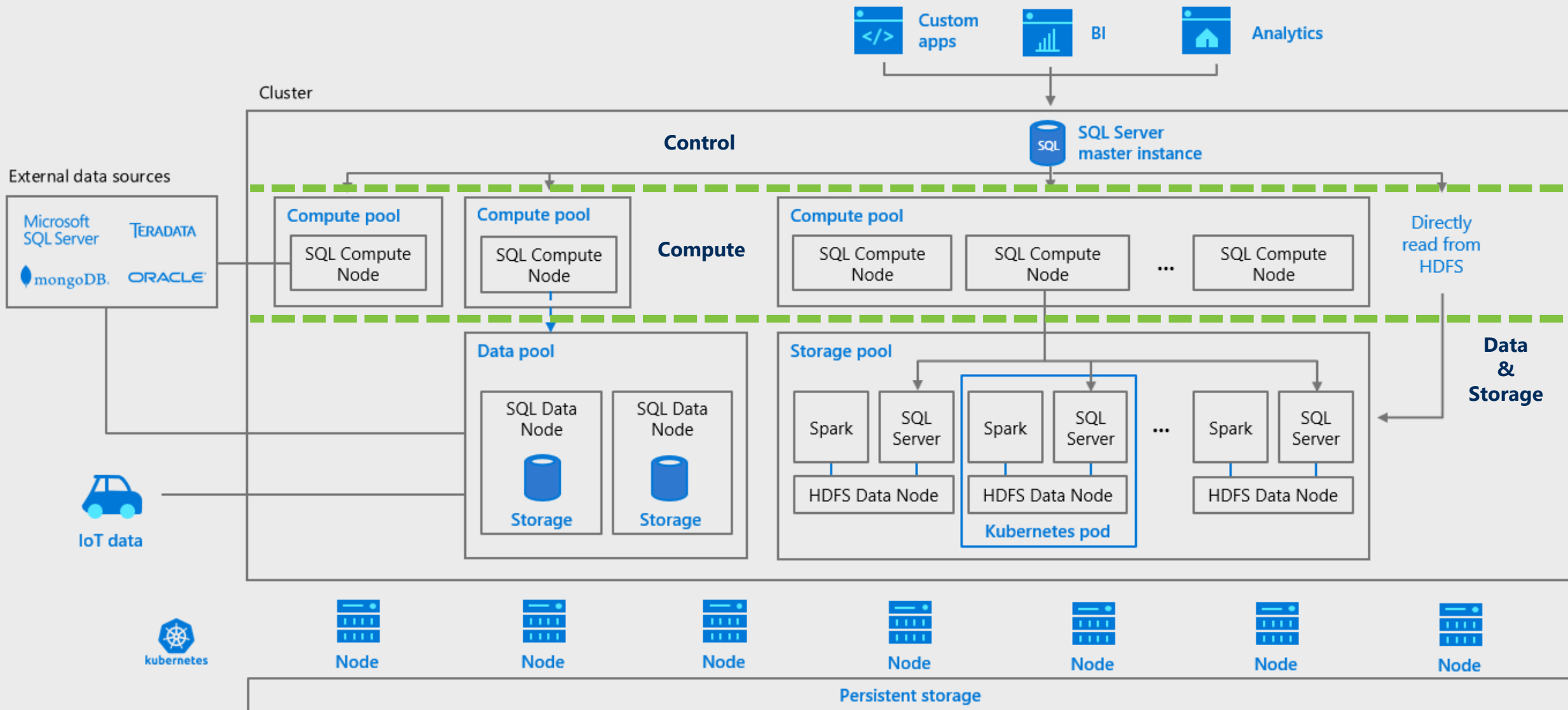
# SQL Server - Product Evolution



# SQL Server - Product Evolution

## SQL Server 2019 Big Data Cluster

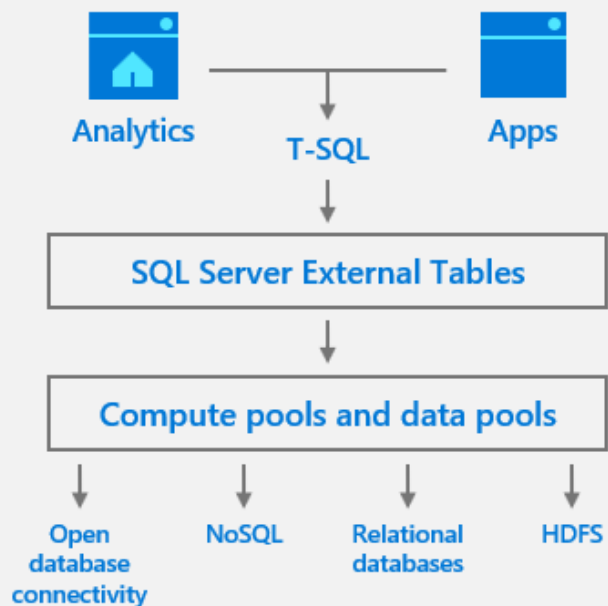




## SQL Server 2019 Big Data Cluster

<https://cloudblogs.microsoft.com/sqlserver/2018/09/25/introducing-microsoft-sql-server-2019-big-data-clusters/>

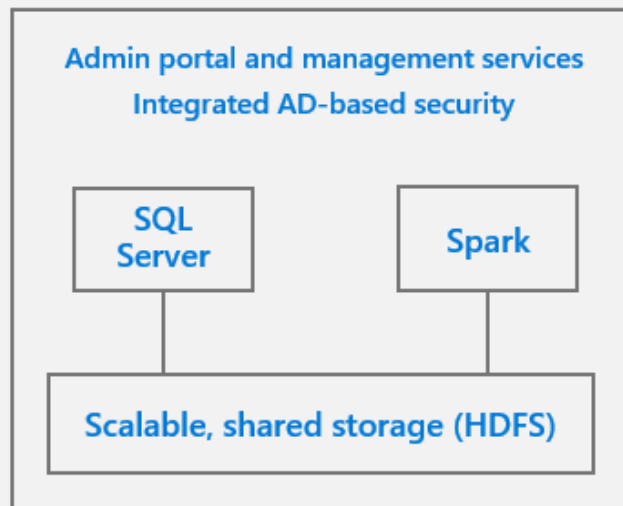
## Data virtualization



Combine data from many sources without moving or replicating it

Scale out compute and caching to boost performance

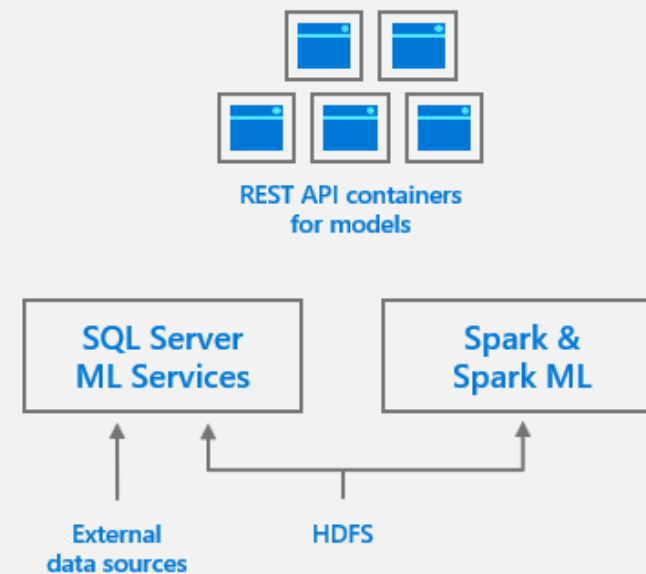
## Managed SQL Server, Spark, and data lake



Store high volume data in a data lake and access it easily using either SQL or Spark

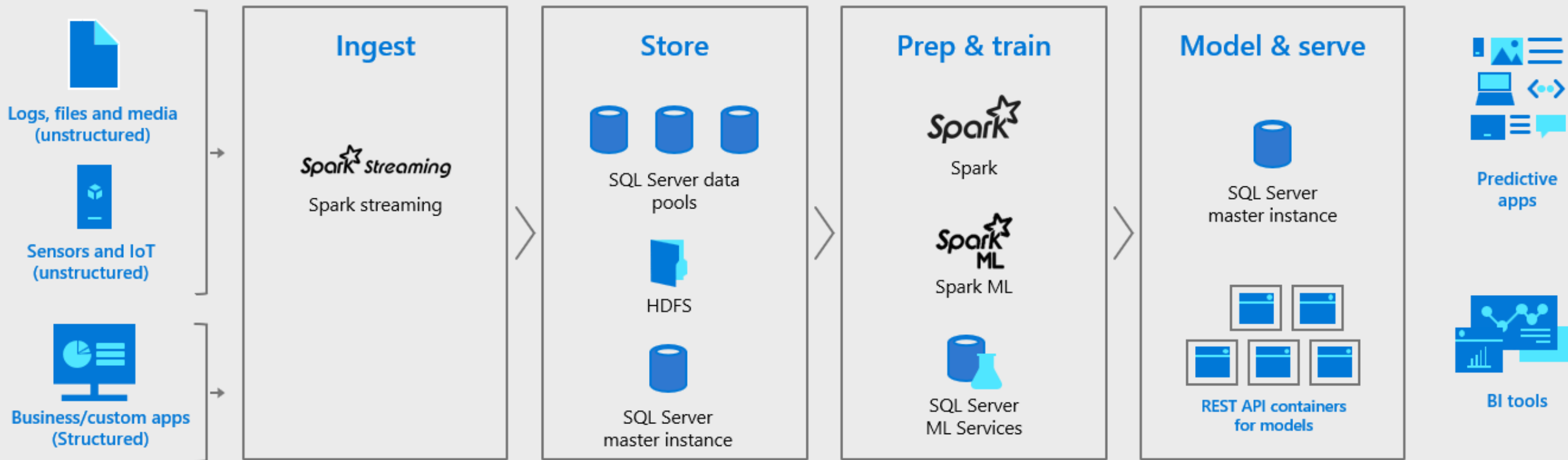
Management services, admin portal, and integrated security make it all easy to manage

## Complete AI platform



Easily feed integrated data from many sources to your model training

Ingest and prep data and then train, store, and operationalize your models all in one system



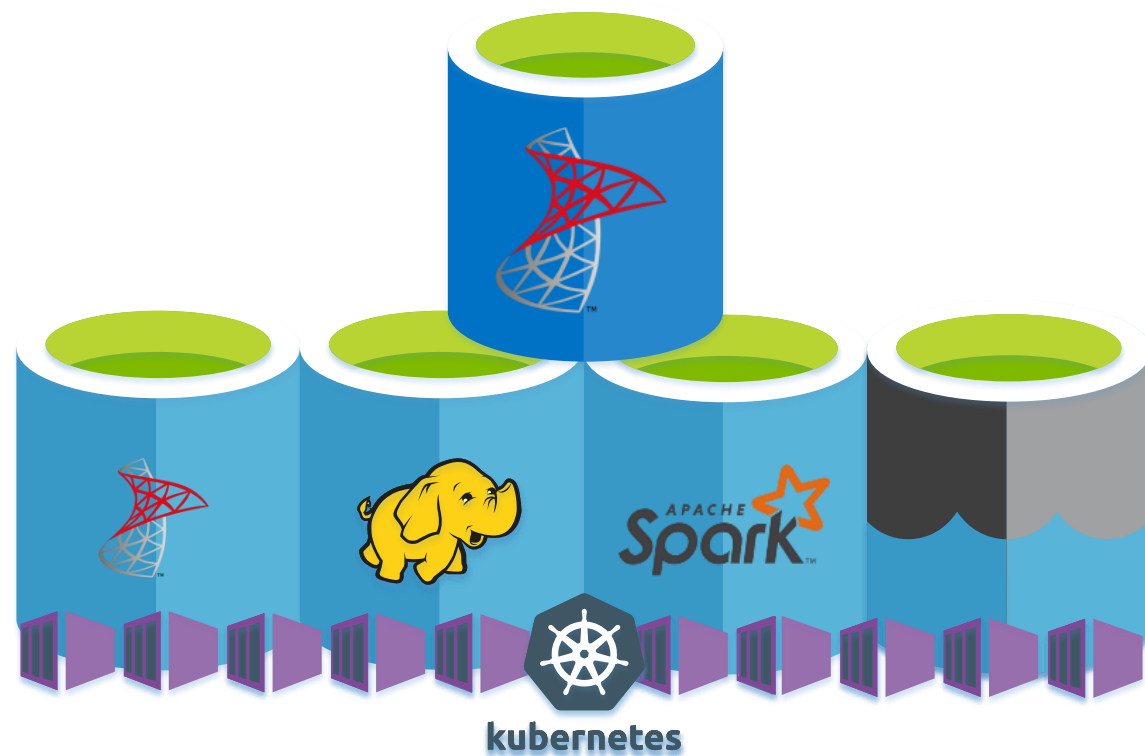
## SQL Server 2019 Big Data Cluster

<https://cloudblogs.microsoft.com/sqlserver/2018/09/25/introducing-microsoft-sql-server-2019-big-data-clusters/>



# What

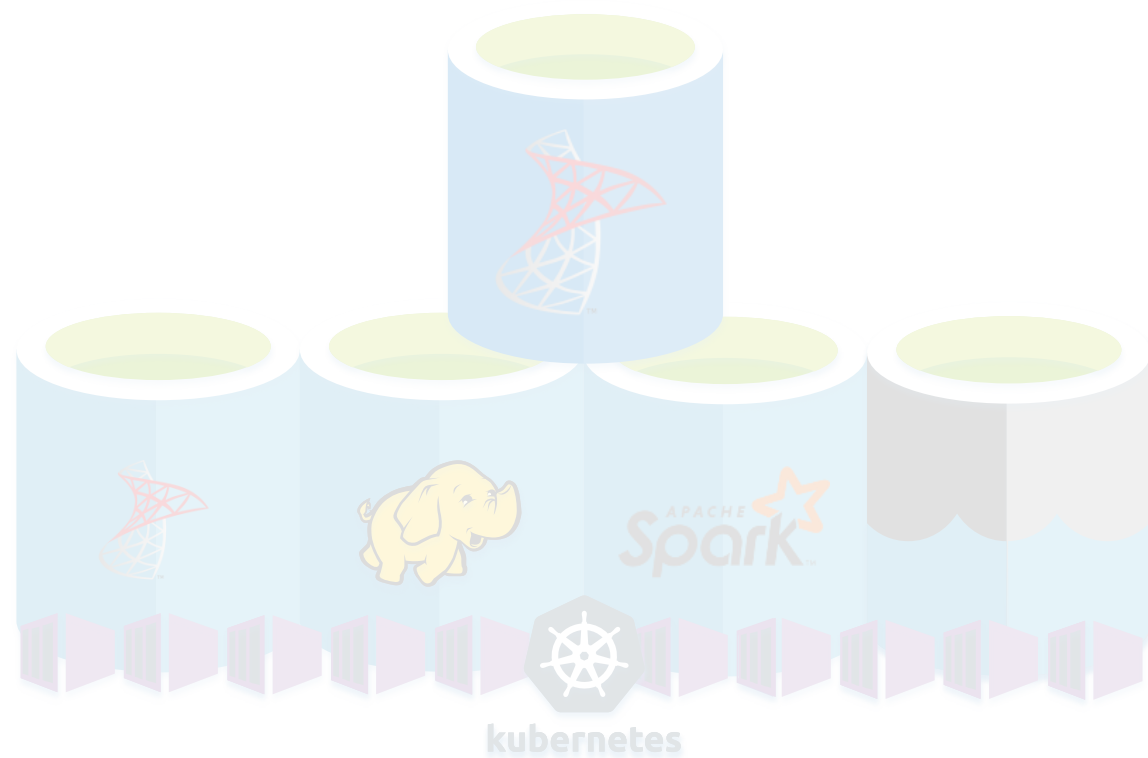
# Why



# How

What

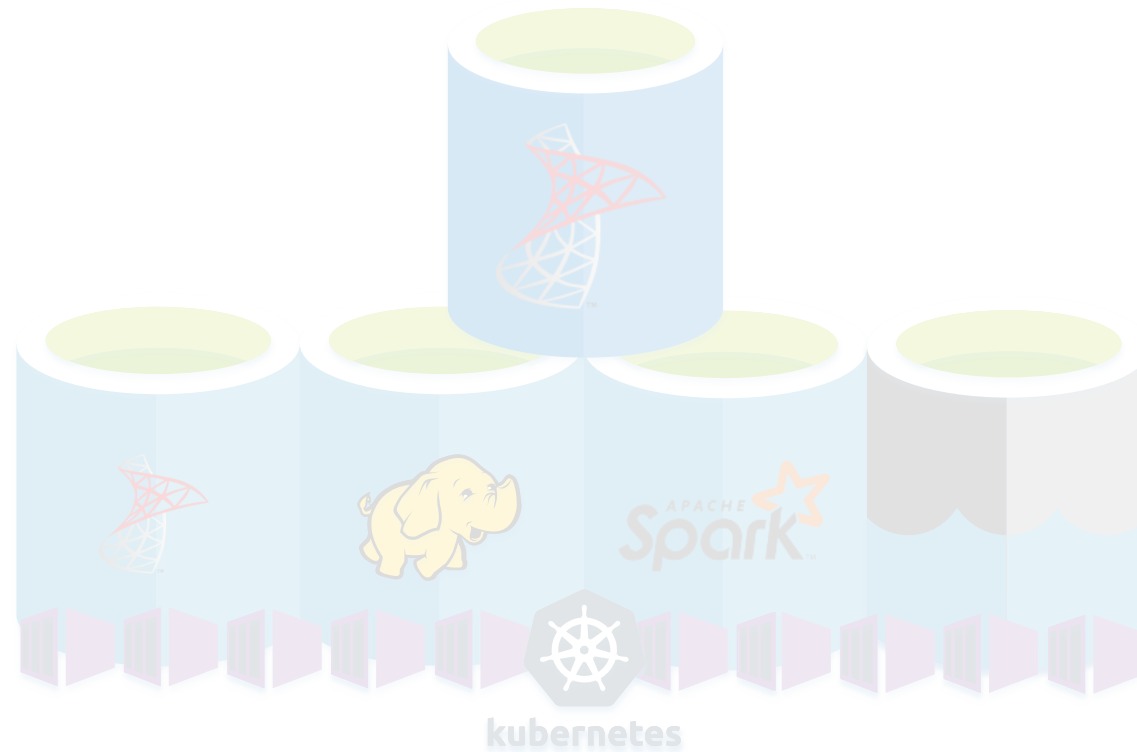
Why



How

What

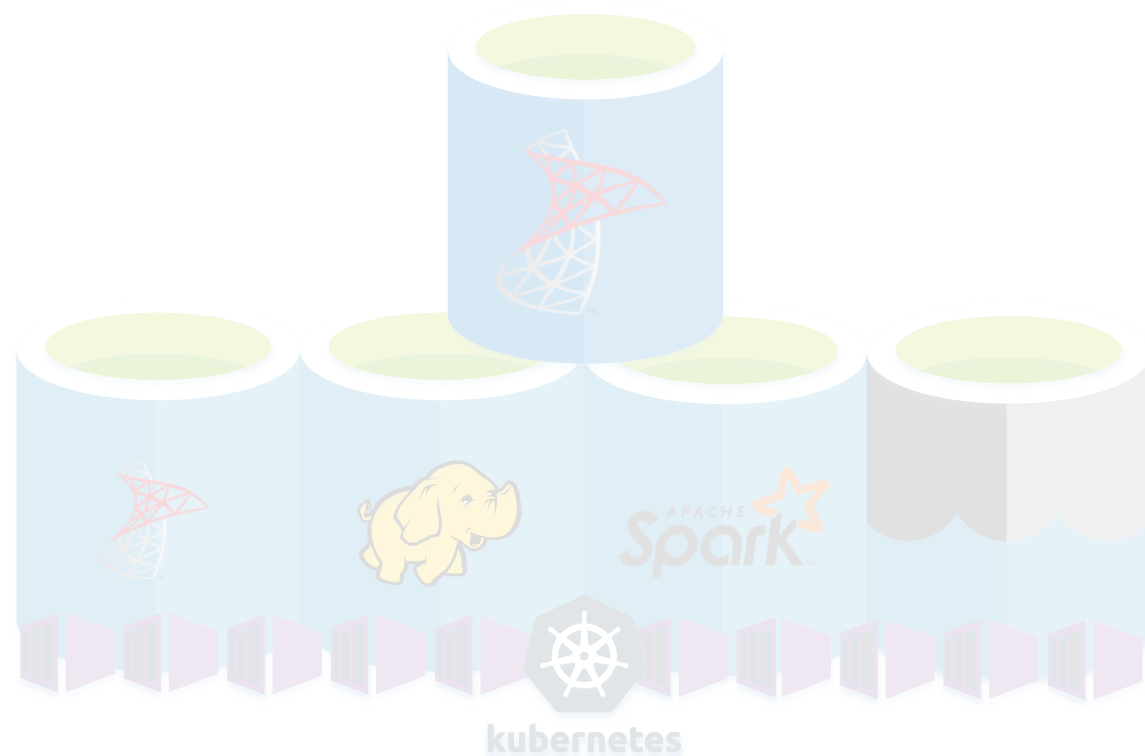
Why



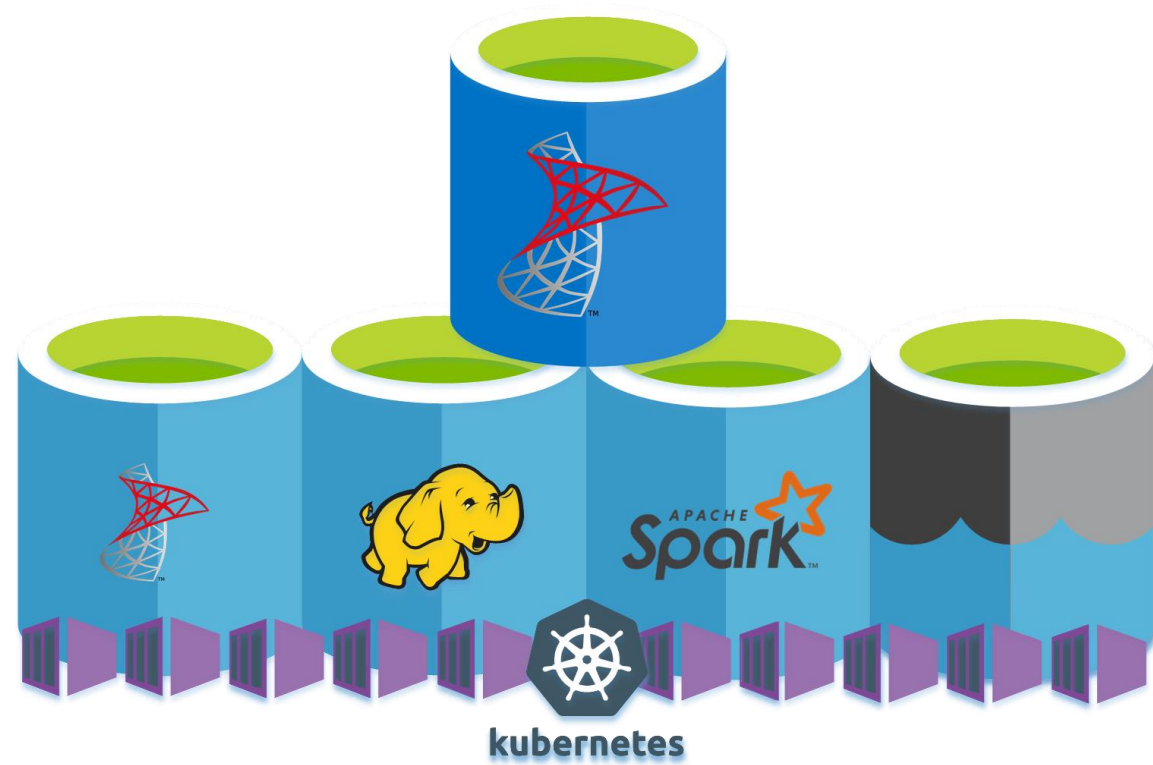
**How...** does a SQL Server Big Data Cluster address our big data problems?  
do we implement this new product architecture?

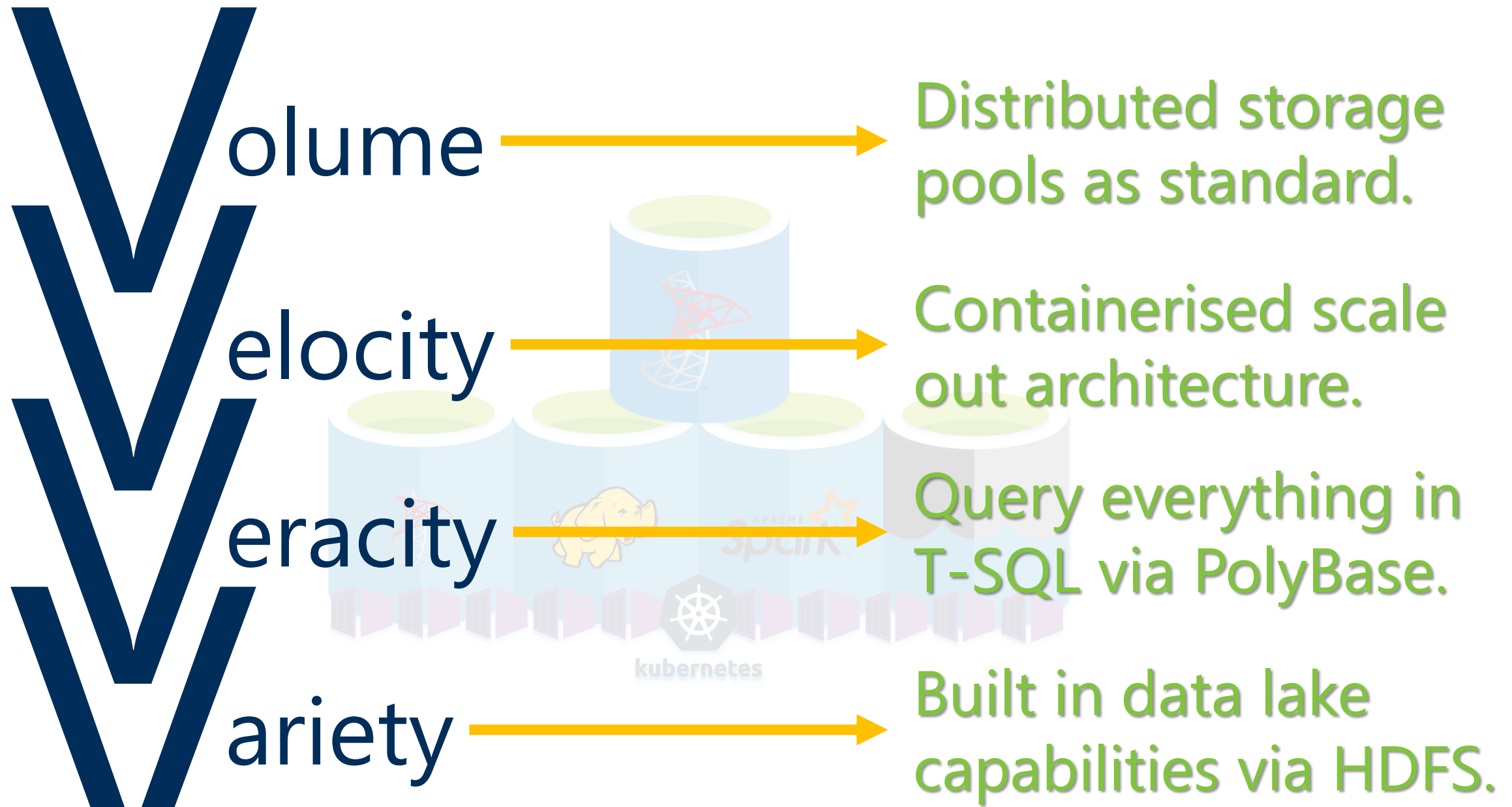
What

Why



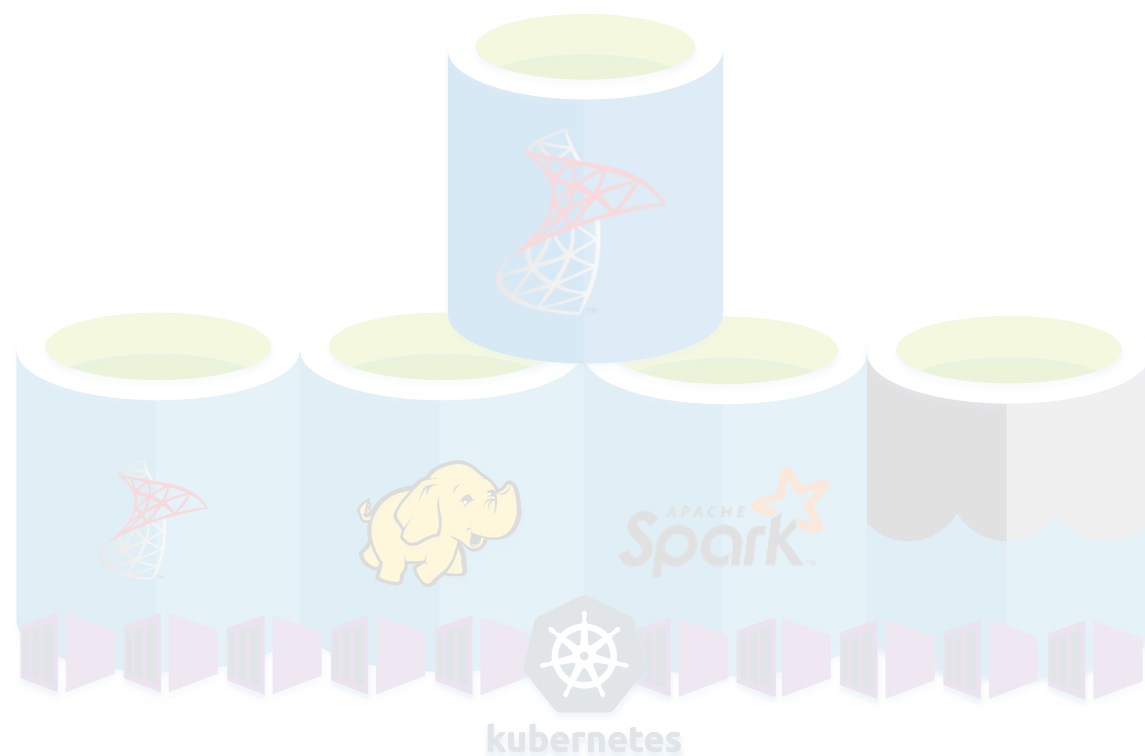
**How...** does a SQL Server Big Data Cluster address our big data problems?  
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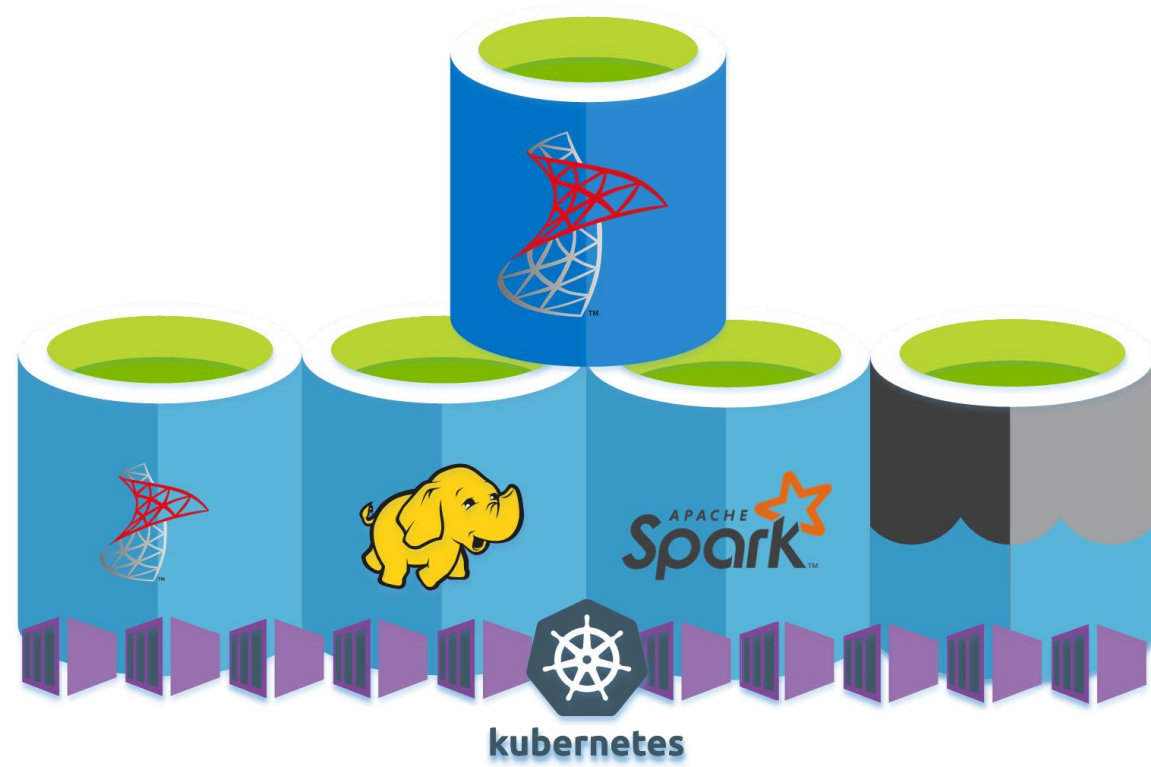
What

Why



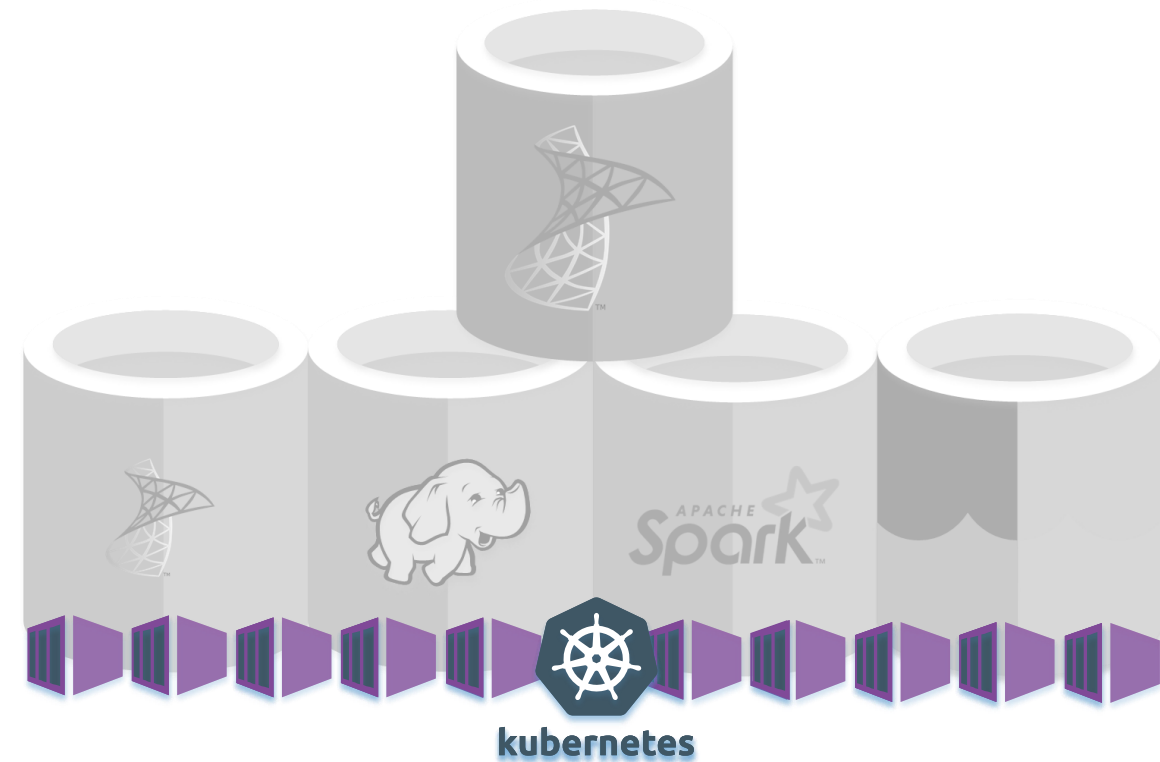
**How...**

does a SQL Server Big Data Cluster address our big data problems?  
do we implement this new product architecture?





kubernetes   minikube

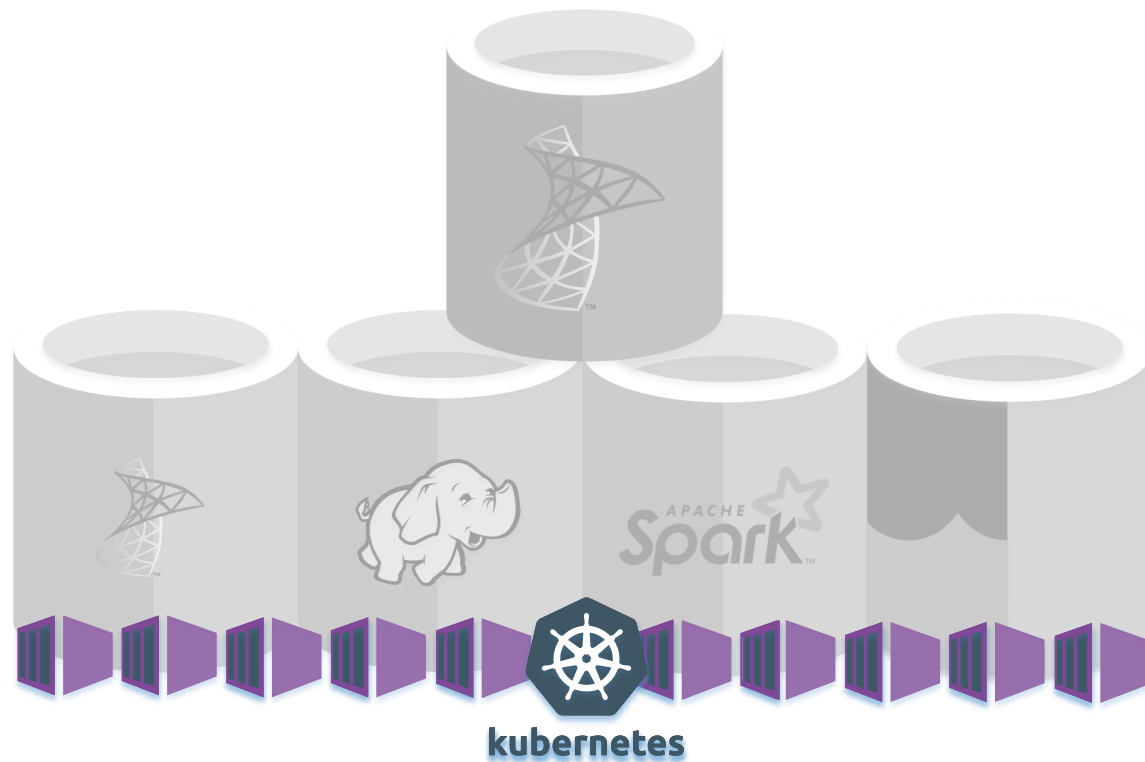


  
Windows

  
ubuntu

  
Mac OS

kubernetes   minikube

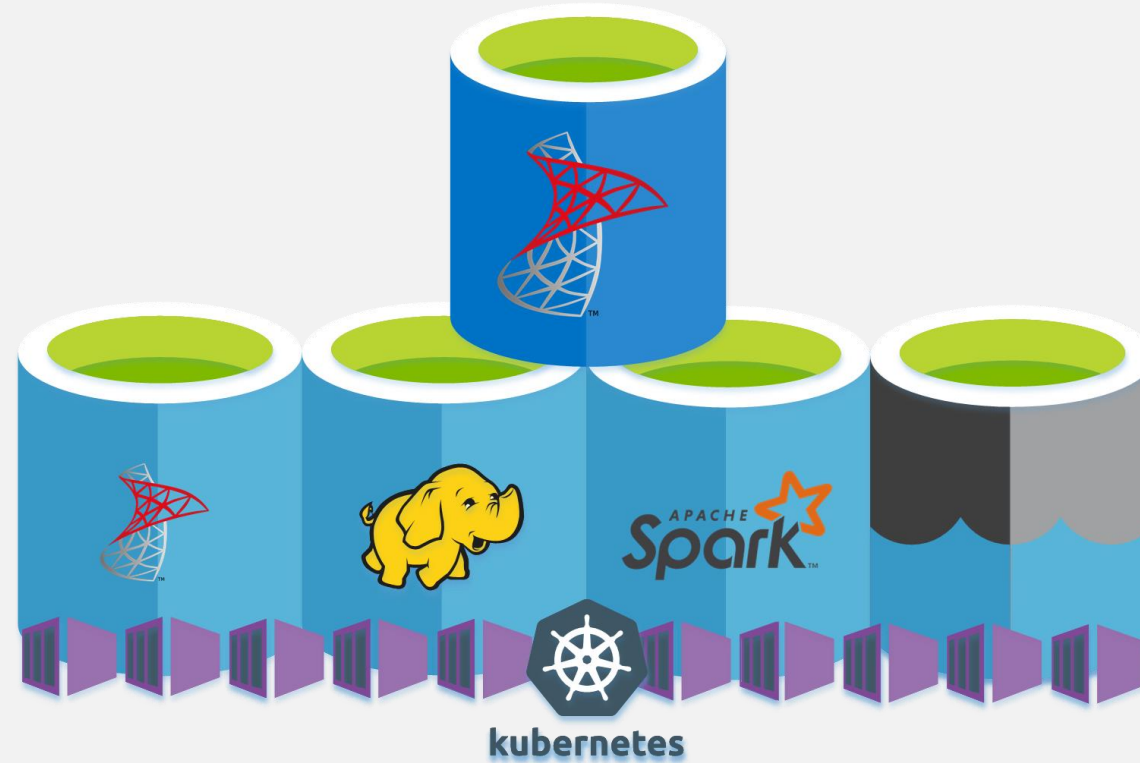




# SQL Server 2019 Big Data Clusters

Cloud tech, using cloud concepts, now available on premises.

Not only cloud.



# Reference Material

What's new in SQL Server 2019?

<https://docs.microsoft.com/en-us/sql/sql-server/what-s-new-in-sql-server-ver15?view=sql-server-ver15>

SQL Server 2019 White Paper

<https://info.microsoft.com/ww-landing-SQLDB-Microsoft-SQL-Server-WhitePaper.html>

Introducing SQL Server 2019 Big Data Clusters – Travis Wright

<https://cloudblogs.microsoft.com/sqlserver/2018/09/25/introducing-microsoft-sql-server-2019-big-data-clusters/>

MS Ignite Session – The future of querying big data with PolyBase and SQL Server

<https://myignite.techcommunity.microsoft.com/sessions/66201>

MS Ignite Session – Deep dive on SQL Server and big data

<https://myignite.techcommunity.microsoft.com/sessions/65967>

How to deploy SQL Server big data cluster on Kubernetes

<https://docs.microsoft.com/en-us/sql/big-data-cluster/deployment-guidance?view=sql-server-ver15>

Deploy SQL Server big data cluster on Azure Kubernetes Service

<https://docs.microsoft.com/en-us/sql/big-data-cluster/quickstart-big-data-cluster-deploy?view=sql-server-ver15>

# Thanks for Listening

## Paul Andrew

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**Blog:** [mrpaulandrew.com](http://mrpaulandrew.com)

**GitHub:** [github.com/mrpaulandrew](https://github.com/mrpaulandrew)

