



Stop waiting to explore your data: use
Azure Data Explorer!



Jason Bonello

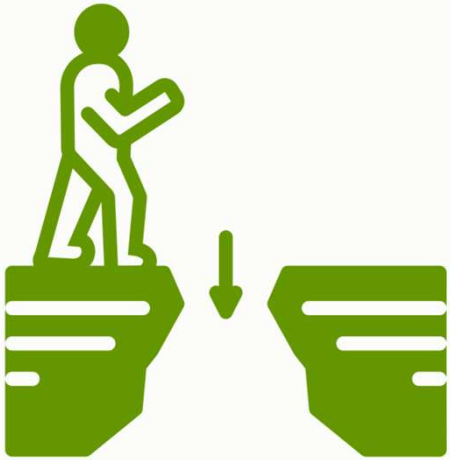
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Blog: <https://adatis.co.uk/author/jasonbonello/>

Session plan



**Why Azure
Data
Explorer?**



**What is Azure
Data
Explorer?**



**How can it be
used?**



Demo



Variety

Velocity

Volume

Veracity

Value





So why Azure Data Explorer?

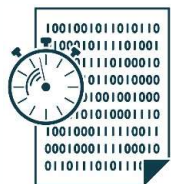
Because it allows exploration...



As big data is streaming in



Holistically

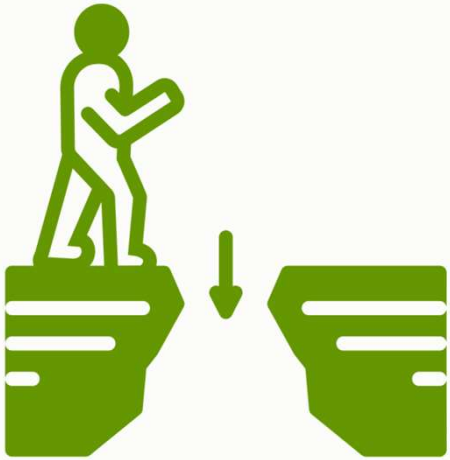


Big data, quickly



In raw format

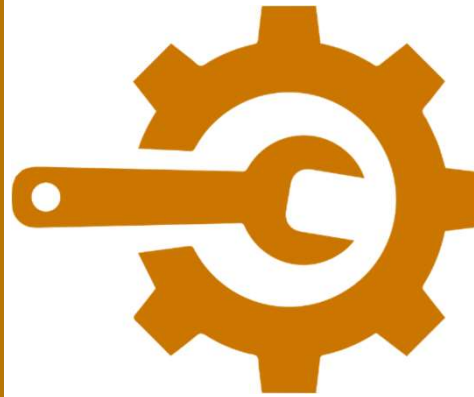
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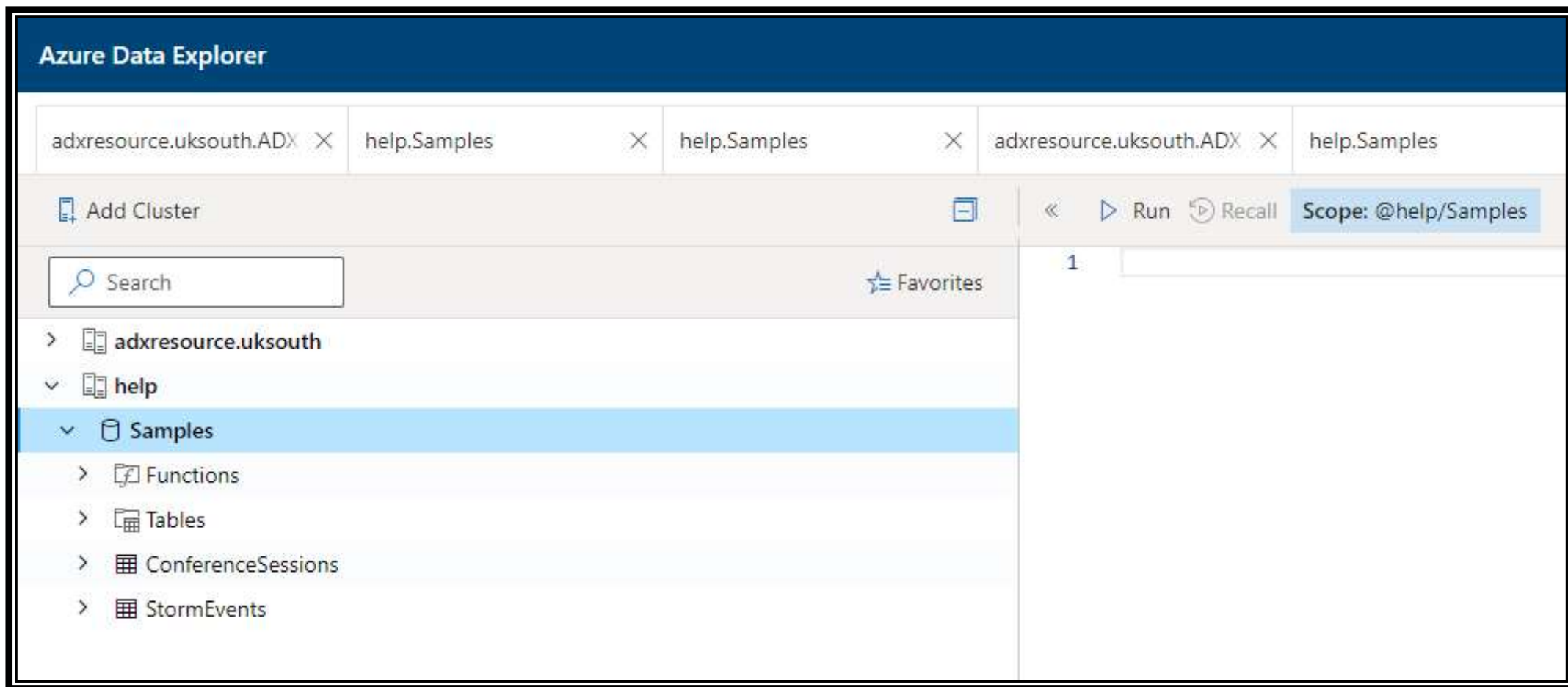


**How can it be
used?**



Demo

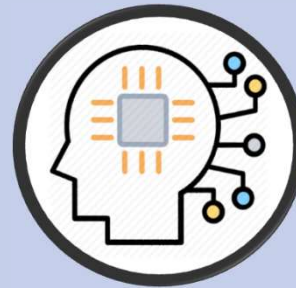
What is it like?



A solution for all problems?



Data warehousing



Machine Learning



**Application
backend**



**Exact real-time
precision**

Use Cases



IoT
telemetry
analysis



Log
analysis



Anomaly
detection

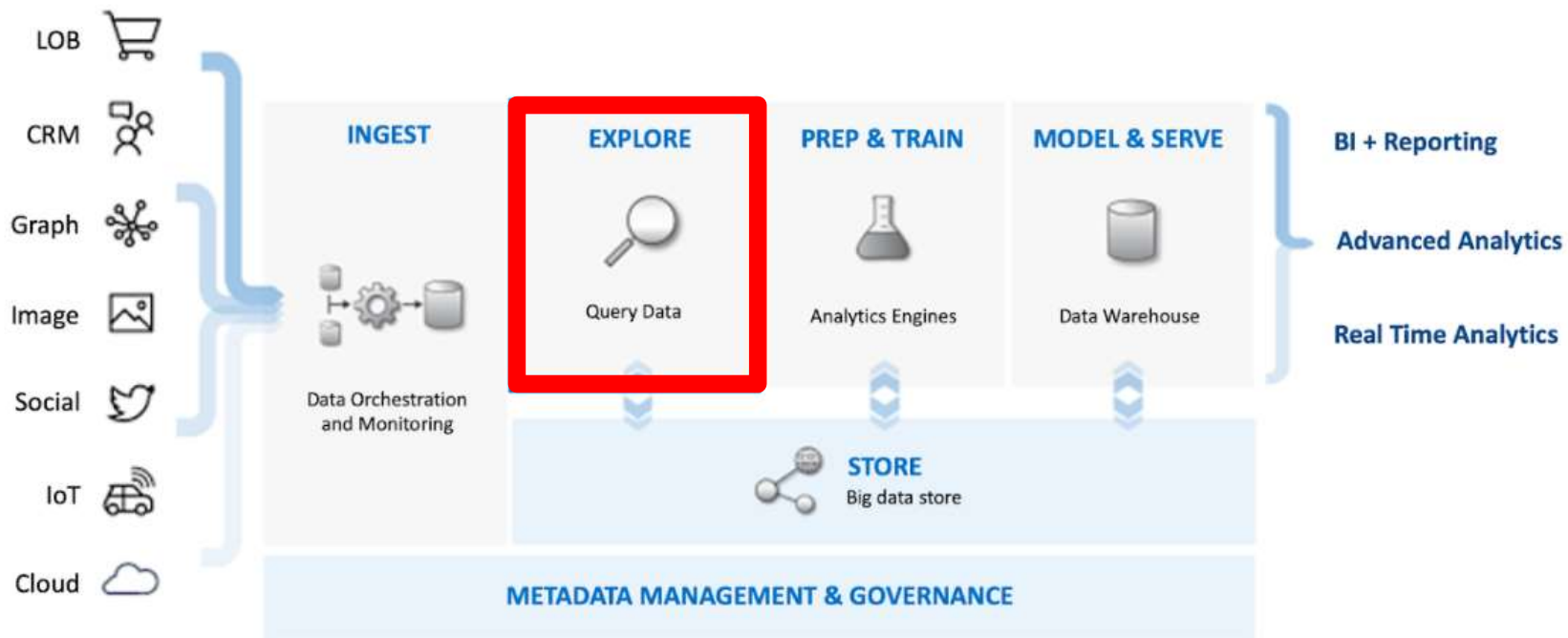


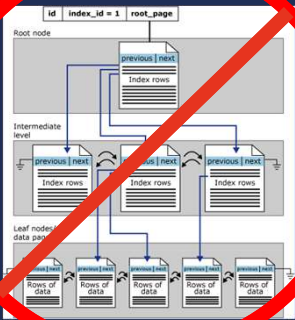
Customer
behaviour



Embed on
SaaS

Architecture

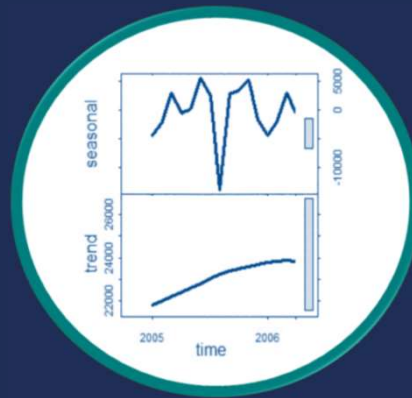




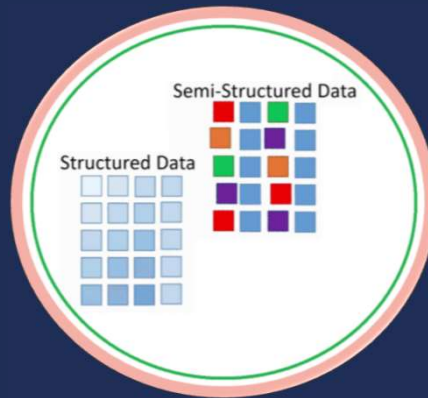
No indexing



Ad-hoc query



Time series analysis



Caters for different formats

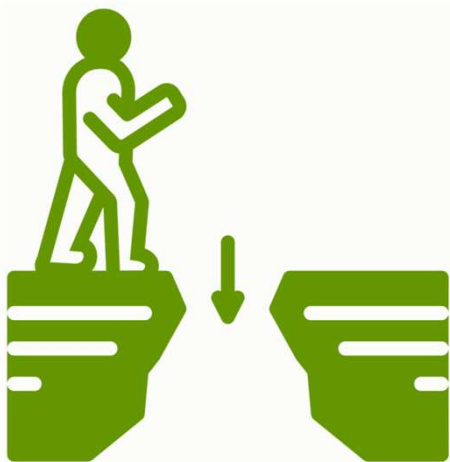


Easy query language



Visualizations

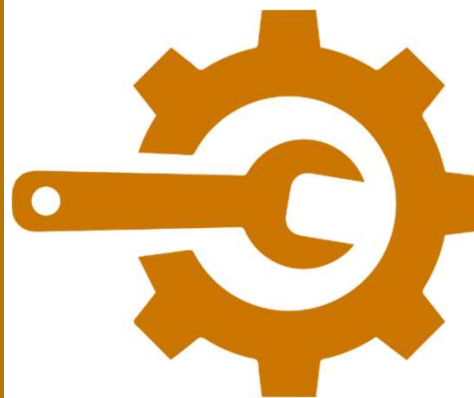
Session plan



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Demo



Create Cluster



Create ADX Database



Create Ingestion



Start Querying!

Ingestion methods

Auto

Data Loading



Manual

Push



Pull



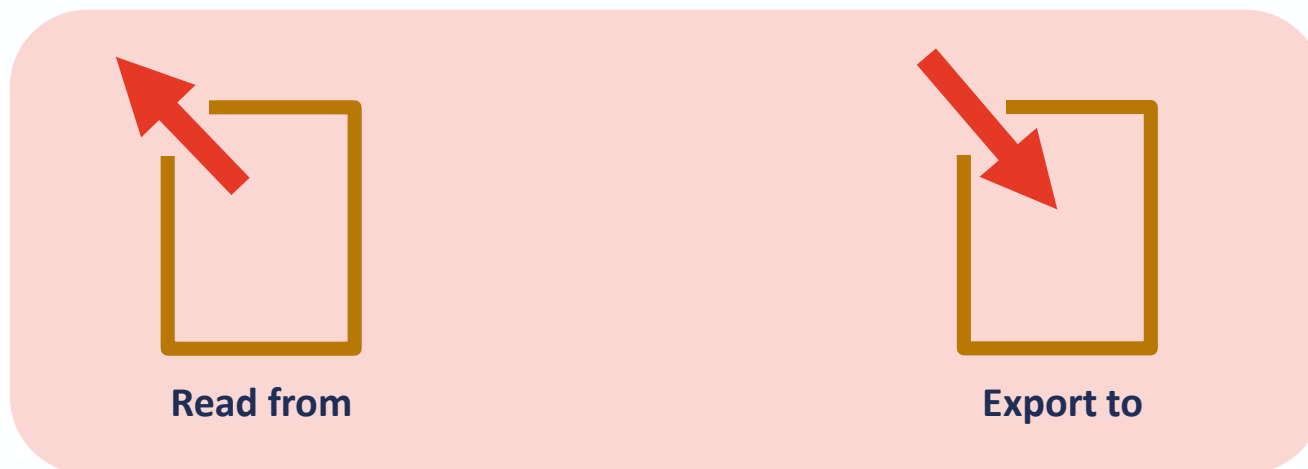
Query









Web/Azure and Desktop



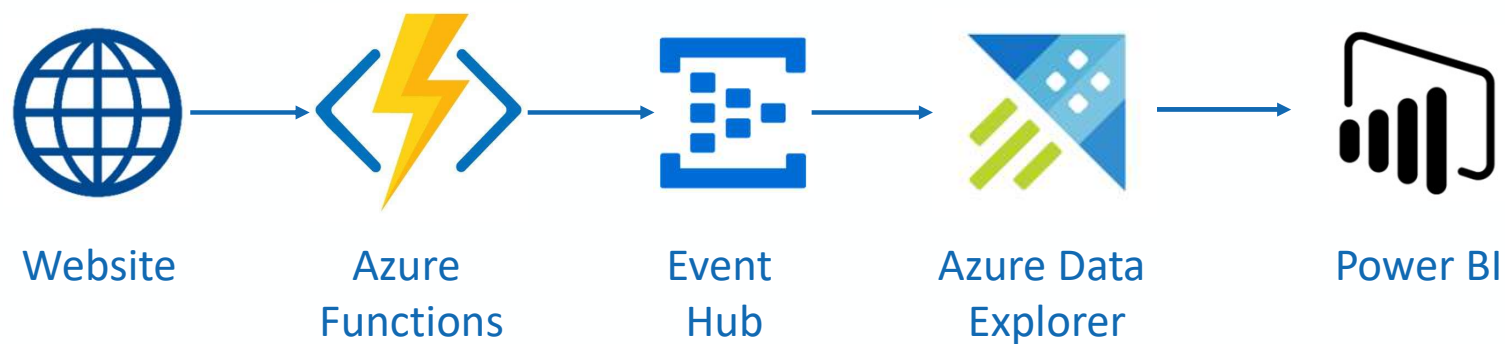
External tables



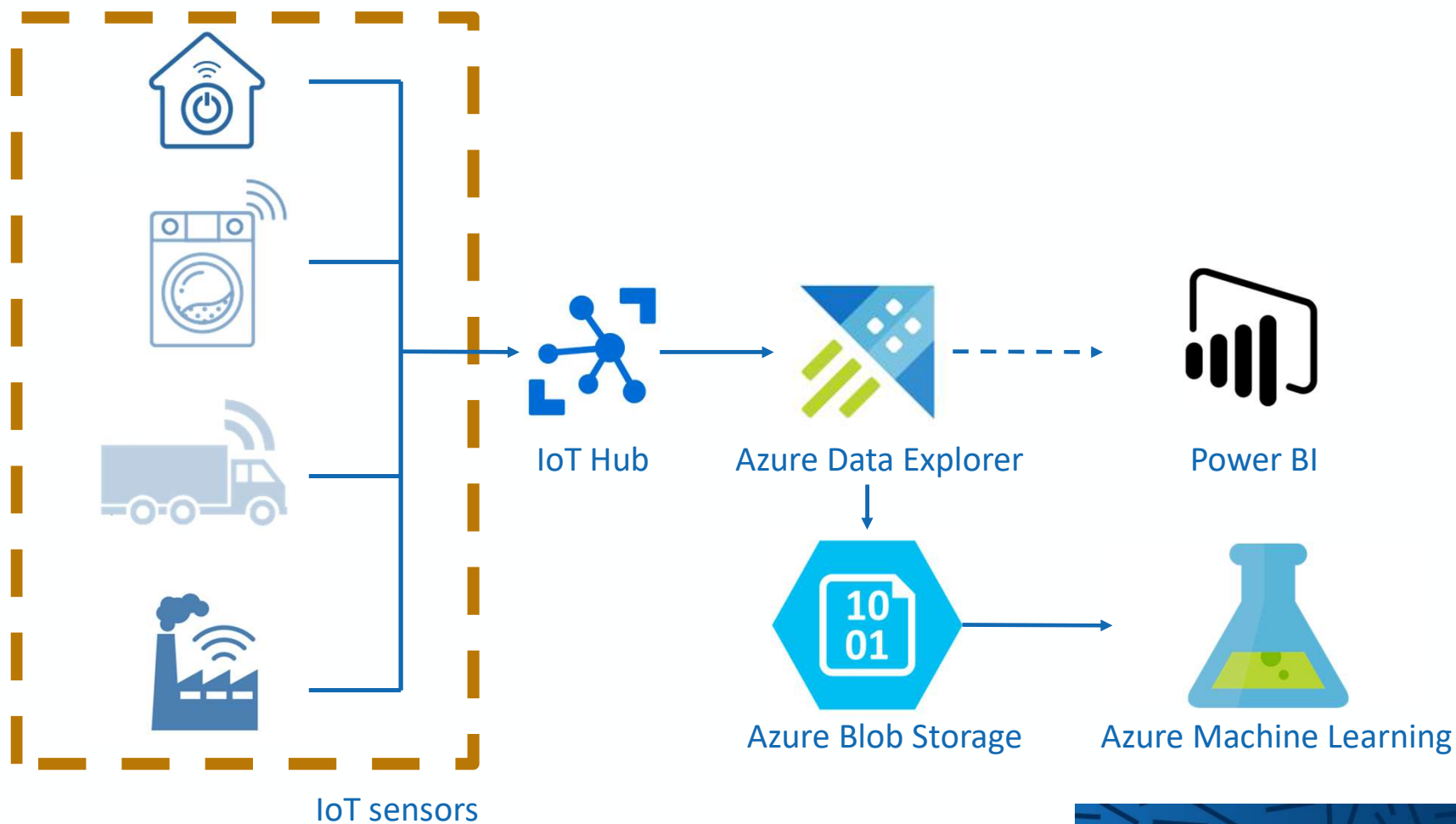
- ✓  help
- ✓  Samples
 - >  Functions
- ✓  Tables
 - >  DemoSeries
 - >  ExternalTables



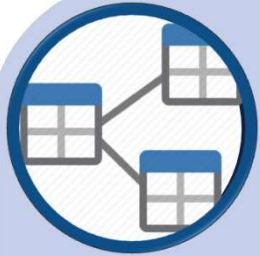
Technical use case example



Technical use case example



Kusto Query Language (KQL)



Same functions as relational database



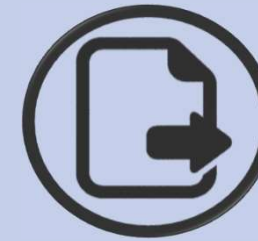
Text searching and parsing



Datotyping



Allows variables and functions



Enables exports



User-friendly

KQL Query Structure

Example:

Source Table name

Pipe before operator

DepartmentalSales

```
| summarize TotalSalesAmt = sum(SalesAmt) by Name  
| sort by Name  
| where SalesAmt > 0  
| project Name, SalesAmt, TotalSalesAmt  
| render columnchart
```

Operators

KQL Query Structure

Examples:

DepartmentalSales

```
SELECT *  
FROM DepartmentalSales
```

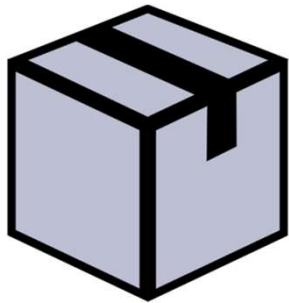
DepartmentalSales
| project Name, SalesAmt

```
SELECT Name, SalesAmt  
FROM DepartmentalSales
```

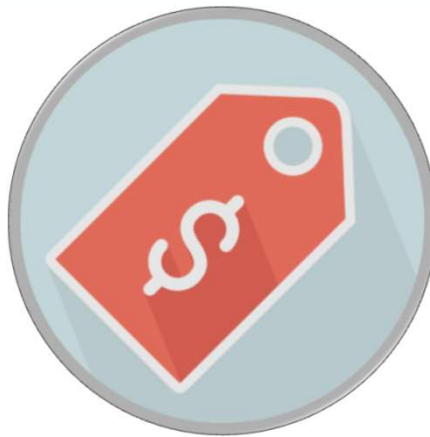
DepartmentalSales
| summarize TotalSalesAmt = sum(SalesAmt) by Name
| where TotalSalesAmt > 0

```
SELECT SUM(SalesAmt) AS  
TotalSalesAmt  
FROM DepartmentalSales  
GROUP BY Name  
HAVING SUM(SalesAmt) >0
```





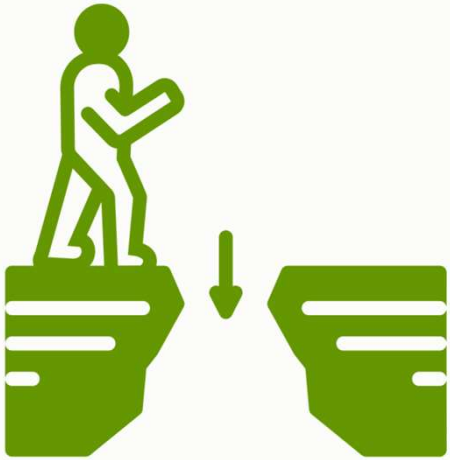
> storage
< queries



< storage
> queries

Cost Estimator: <https://dataexplorer.azure.com/AzureDataExplorerCostEstimator.html>

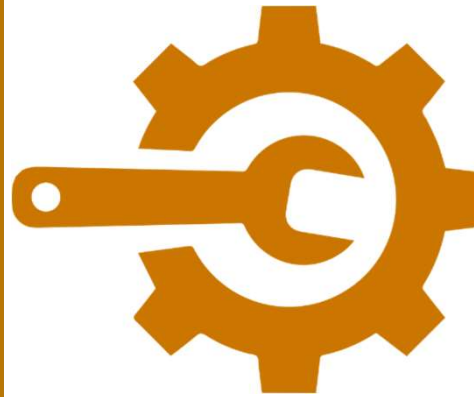
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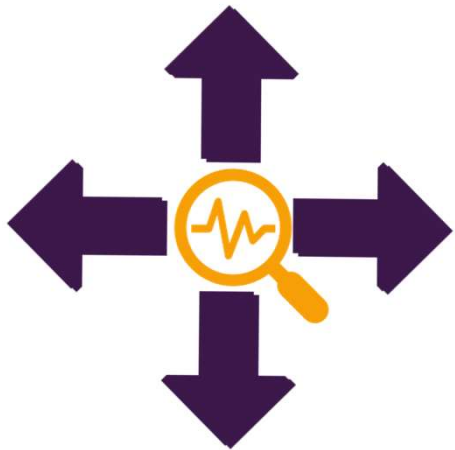


Demo

Demo



Summary – Distinctive Features



Explore huge volumes
in minimal time



Data Ingestion

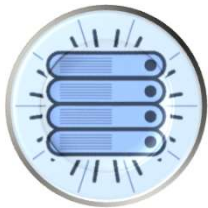


Time Series
Analysis

Summary - Advantages



Less time to explore streaming and raw data, but not at a cost of analytical features and visualization potential



Less maintenance and administration through autoscaling and with no indexing



Analysis with easy query language

Material

ADX Official Documentation

<https://docs.microsoft.com/en-us/azure/data-explorer/>

ADX Sample Cluster

<https://dataexplorer.azure.com/clusters/help/databases/Samples>

KQL

<https://www.pluralsight.com/courses/kusto-query-language-kql-from-scratch>

<https://docs.microsoft.com/en-us/azure/kusto/query/>

<https://docs.microsoft.com/en-us/azure/kusto/query/sqlcheatsheet>

Thanks!



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