



Microsoft Azure

A Primer for Building Serverless Cloud Data Solutions

Rolf Tesmer

Data Solutions Architect | Azure Cloud | Data | Analytics

Linked In: <https://www.linkedin.com/in/rolftesmer/> Blog: <https://mrfoxsql.wordpress.com/>

Agenda

- [1]. Introduction to Azure Cloud
- [2]. What is "Serverless"
- [3]. Demo #1 – Streaming Data
- [4]. Demo #2 – Vision Intelligence
- [5]. More Serverless Architectures
- [6]. Getting Started in Azure
- [7]. Wrap Up and Summary

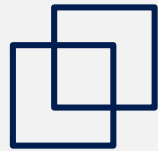
Introduction

Azure Primer

Microsoft Azure Cloud Platform



Productive



Hybrid



Intelligent



Trusted

<https://azure.microsoft.com/en-us/overview/what-is-azure/>



Productive



Hybrid



Intelligent



Trusted



42

Azure regions (*Dec 2017*)

<https://azure.microsoft.com/en-us/regions/>



Productive



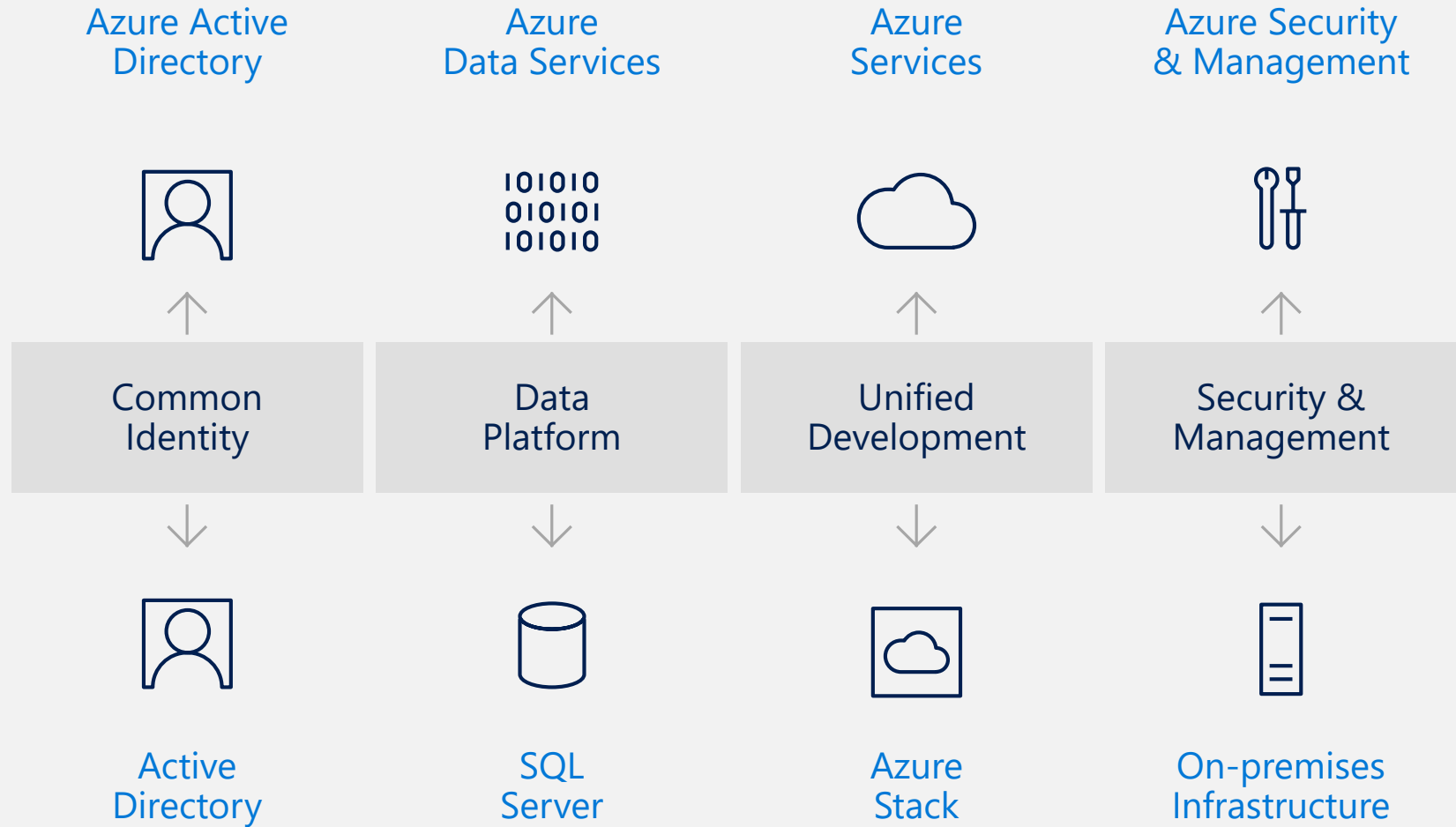
Hybrid



Intelligent



Trusted



<https://azure.microsoft.com/en-us/overview/hybrid-cloud/>

Build and innovate with choice and flexibility

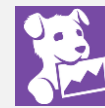
<https://azure.microsoft.com/en-us/overview/productivity/>

DevOps

Nagios®



Management



Applications



App frameworks & tools



nodeJS



Databases & middleware



cloudera



Infrastructure



Comply with industry and regional requirements

<https://www.microsoft.com/en-us/TrustCenter/Security/default.aspx>

GLOBAL



ISO 27001



ISO 27018



ISO 27017



ISO 22301



SOC 1 Type 2



SOC 2 Type 2



SOC 3



CSA STAR
Self-Assessment



CSA STAR
Certification



CSA STAR
Attestation

US GOV



Moderate
JAB P-ATO



High
JAB P-ATO



DoD DISA
SRG Level 2



DoD DISA
SRG Level 4



DoD DISA
SRG Level 5



SP 800-171



FIPS 140-2



Section 508
VPAT



ITAR



CJIS



IRS 1075

INDUSTRY



PCI DSS
Level 1



CDSA



MPAA



FACT UK



Shared
Assessments



FISC Japan



HIPAA /
HITECH Act



HITRUST



GxP
21 CFR Part 11



MARS-E



IG Toolkit UK



FERPA



GLBA



FFIEC

REGIONAL



Argentina
PDPA



EU
Model Clauses



UK
G-Cloud



China
DJCP



China
GB 18030



China
TRUCS



Singapore
MTCS



Australia
IRAP/CCSL



New Zealand
GCIO



Japan My
Number Act



ENISA
IAF



Japan CS
Mark Gold



Spain
ENS



Spain
DPA



India
MeitY



Canada
Privacy Laws

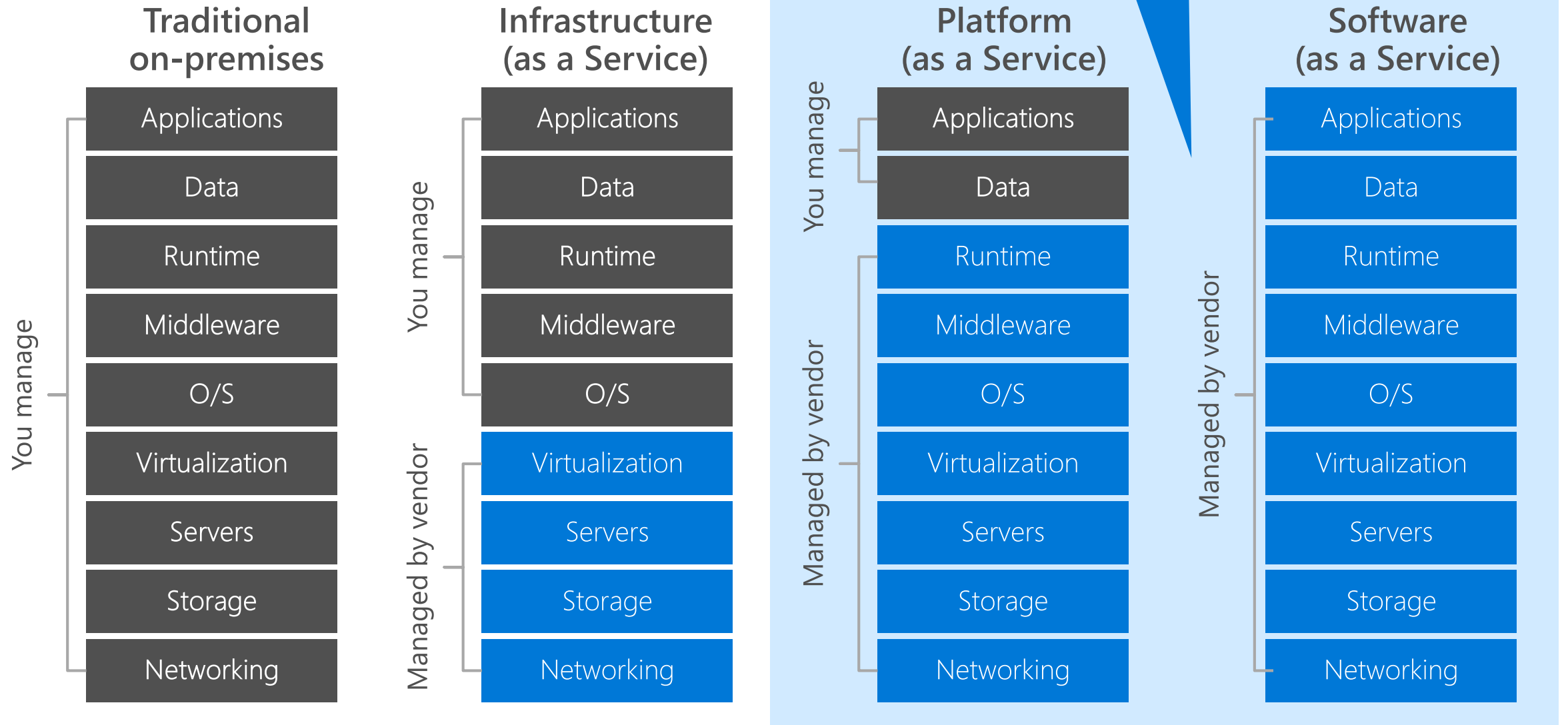


Privacy
Shield



Germany IT
Grundschutz
workbook

Cloud service models



Azure Services – Which One?

<http://azureinteractives.azurewebsites.net/Azure101Cards/default.html>

Compute

- Virtual Machines
- Virtual Machines Scale Sets
- App Service
- Functions
- Container Service
- Container Instances
- Batch
- Service Fabric
- Cloud Services

Networking

- Virtual Network
- Load Balancer
- Application Gateway
- VPN Gateway
- Azure DNS
- Content Delivery Network
- Traffic Manager
- ExpressRoute
- Azure DDoS Protection

Storage

- Storage
- Blob Storage
- Queue Storage
- File Storage
- Disk Storage
- Data Lake Store
- StorSimple
- Backup
- Site Recovery

Enterprise Integration

- Logic Apps
- Service Bus
- API Management
- StorSimple
- SQL Server Stretch Database
- Data Catalog
- Data Factory
- Event Grid

Security + Identity

- Security Center
- Azure Active Directory for Developers
- Key Vault
- Azure Active Directory
- Azure Active Directory B2C
- Azure Active Directory Domain Services
- Multi-Factor Authentication

Developer Tools

- Visual Studio Team Services
- Azure DevTest Labs
- Application Insights
- API Management
- HockeyApp
- Developer Tools and SDKs
- Xamarin
- Storage Explorer

Web + Mobile

- App Service
- Web Apps
- Web Apps for Containers
- Mobile Apps
- API Apps
- Content Delivery Network
- Media Services
- Azure Search

Containers

- Container Service
- Container Instances
- Container Registry
- Service Fabric
- App Service
- Batch

Databases

- SQL Database
- Azure Database for MySQL
- Azure Database for PostgreSQL
- SQL Data Warehouse
- SQL Server Stretch Database
- Azure Cosmos DB
- Table Storage
- Redis Cache

Data + Analytics

- HDInsight
- Stream Analytics
- Event Hubs
- Data Lake Analytics
- Data Lake Store
- Data Factory
- Azure Analysis Services
- SQL Data Warehouse

AI + Cognitive Services

- Machine Learning
- Azure Bot Service
- Cognitive Services
- Bing Web Search API
- Text Analytics API
- Face API
- Computer Vision API
- Custom Vision Service

Internet of Things

- IoT Hub
- IoT Edge
- Stream Analytics
- Time Series Insights
- Azure Cosmos DB
- Event Grid
- Logic Apps

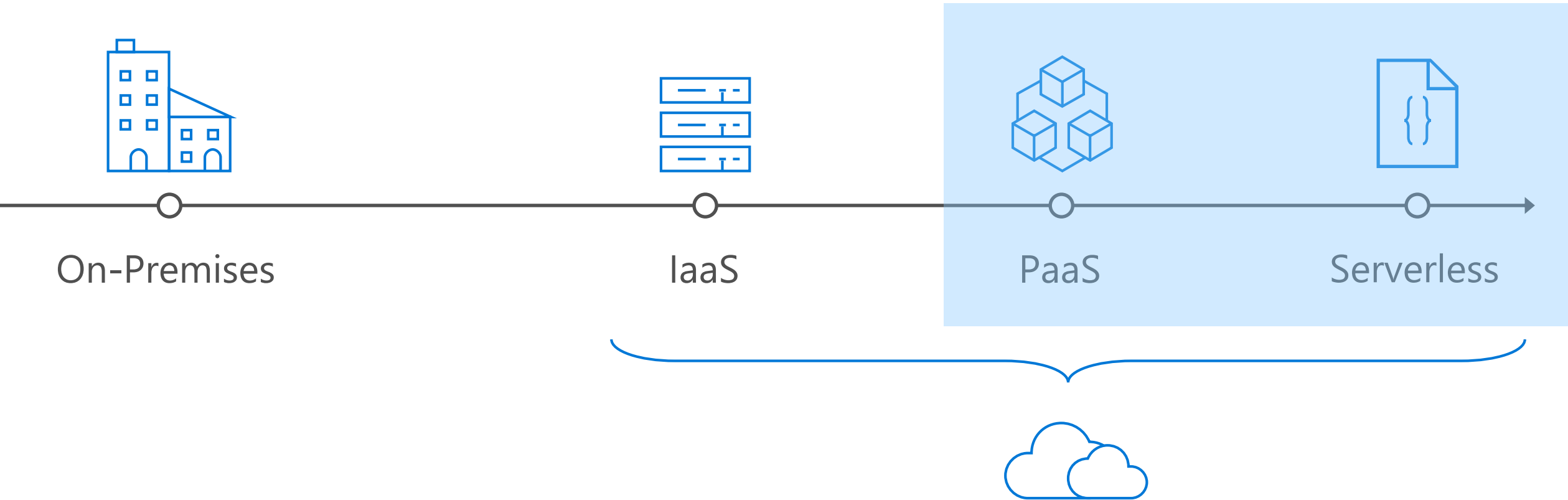
Monitoring + Management

- Site Recovery
- Backup
- Log Analytics
- Application Insights
- Azure Monitor
- Azure Policy
- Microsoft Azure portal

Modern Data Applications

What exactly is "*Serverless*"?

The “evolution” of application platforms



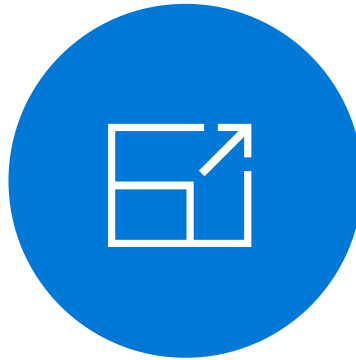
What is Serverless?

<https://azure.microsoft.com/en-us/overview/serverless-computing/>

<https://blogs.msdn.microsoft.com/appserviceteam/2017/09/19/processing-100000-events-per-second-on-azure-functions/>



Abstraction
of servers

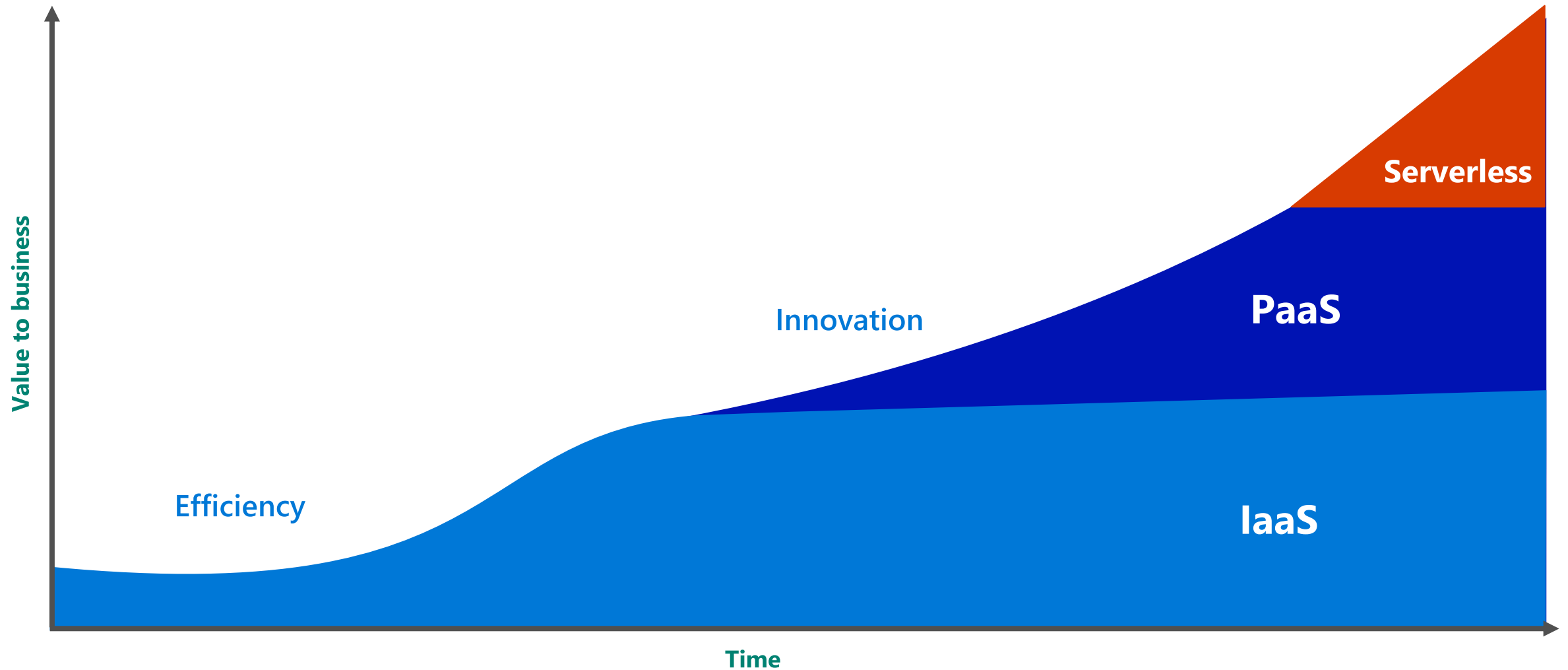


Event-driven/
instant scale

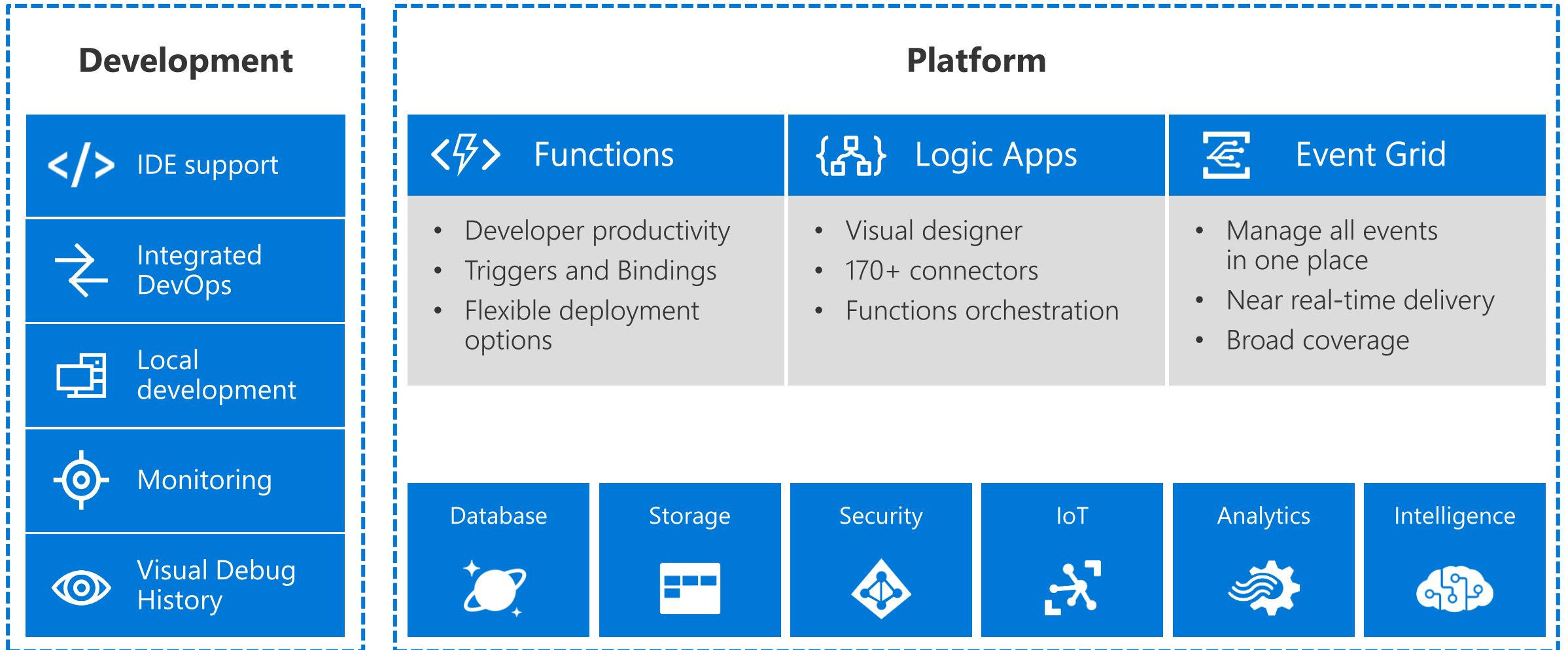


Micro-billing

Build apps faster with Serverless



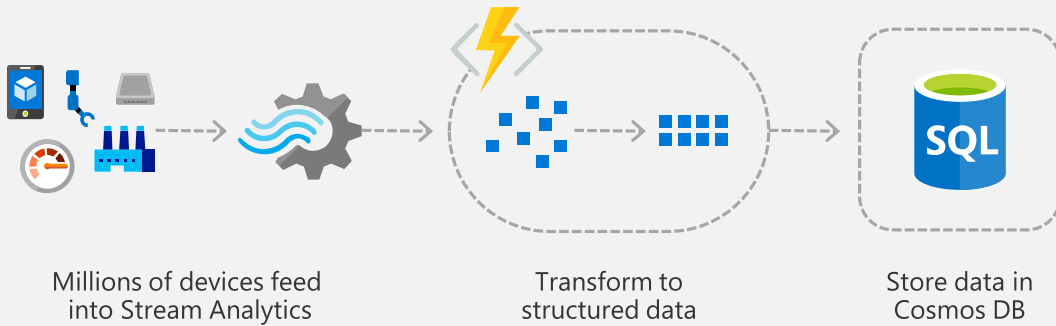
Serverless application platform components



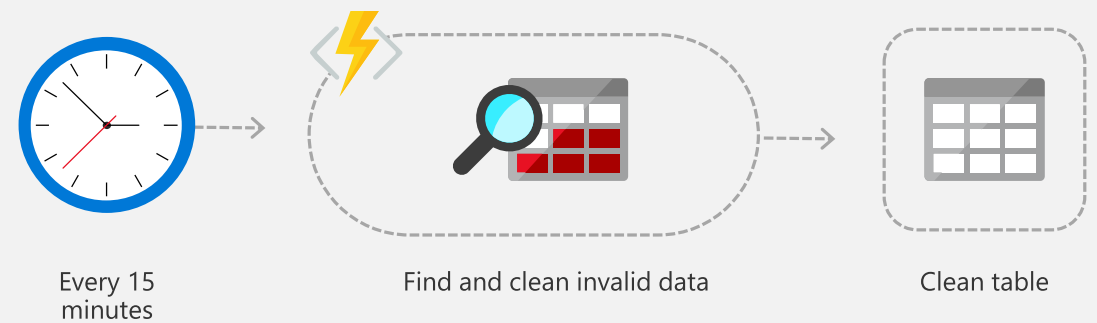
Scenarios

Anything that needs to respond to events

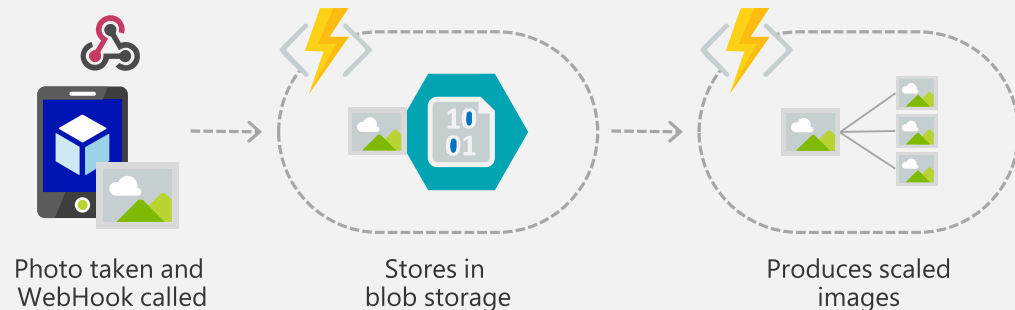
Real-time stream processing



Timer-based processing



Mobile app backends



Real-time bot messaging

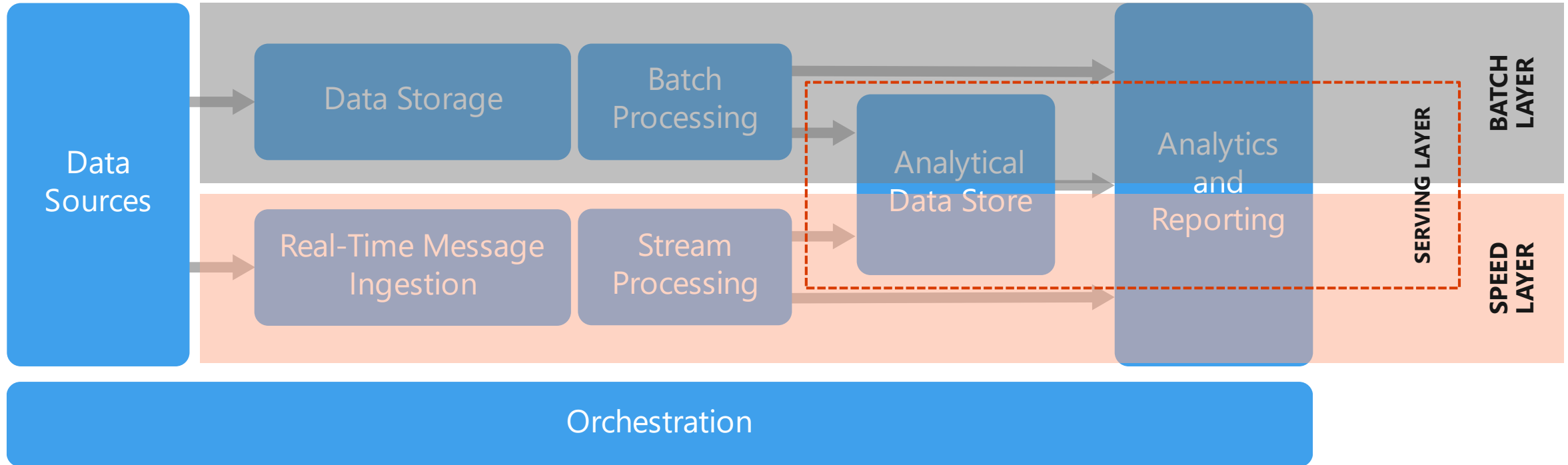


Demonstration

Scalable Streaming Data

What is the LAMBDA architecture?

*"The Objective of **Lambda Architecture** is to leverage the combined power of both **batch** & **real-time** processing to address the business scenarios where it requires both **historic view of the data** as well as getting insight into the **data in real-time** as business happens."*

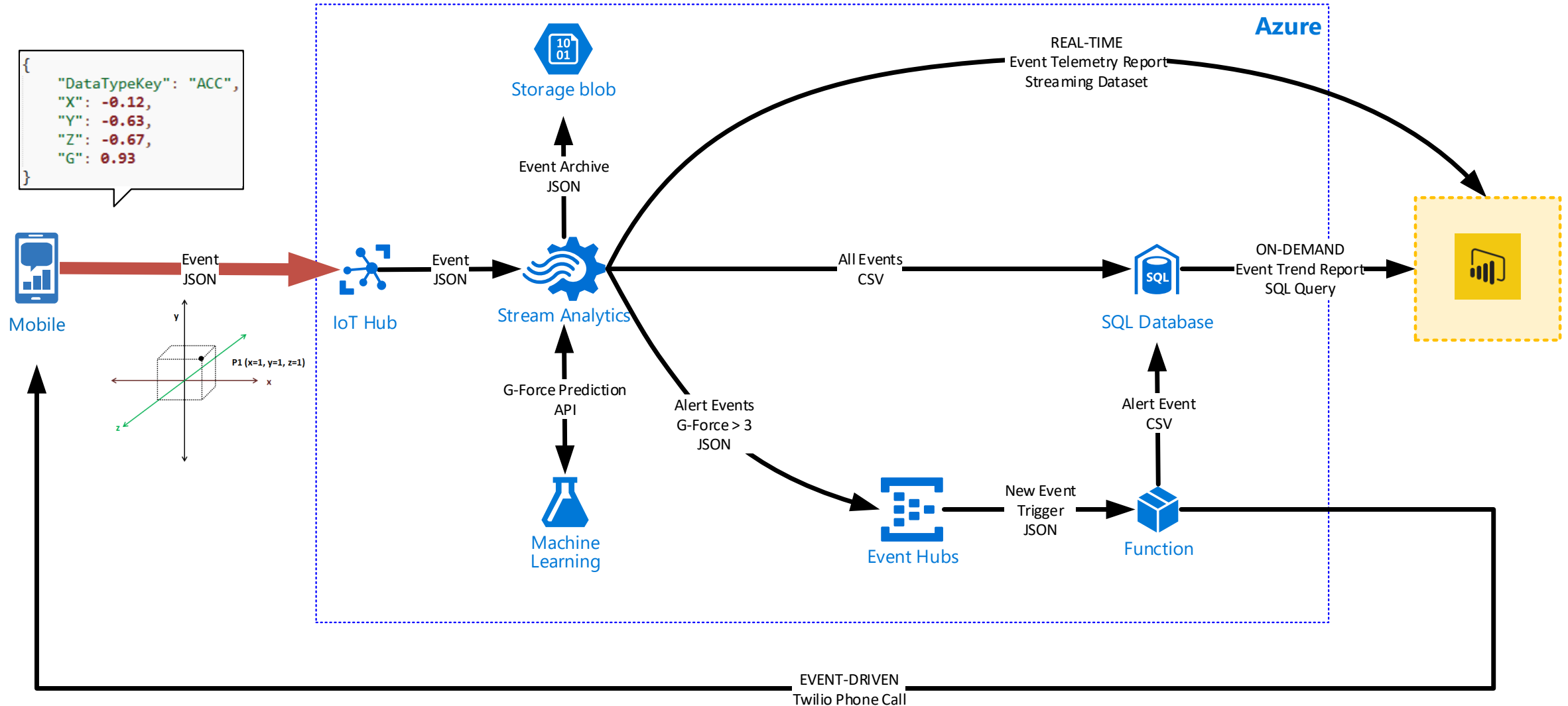


<https://social.technet.microsoft.com/wiki/contents/articles/33626.lambda-architecture-implementation-using-microsoft-azure.aspx>

<https://gallery.cortanaintelligence.com/Solution/Telemetry-Analytics>

<https://docs.microsoft.com/en-us/azure/architecture/guide/architecture-styles/big-data>

Demonstration → Mobile G-Force Solution - !



Demonstration → Mobile G-Force Solution - !



Ask a question about your data

Total Events

12.85K

Last g-force

0.92

Avg g-force
REFRESHED: NOW

0.95

Max g-force
REFRESHED: NOW

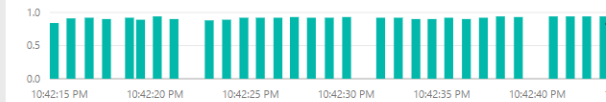
3.45

Count of g-force > 3.00
REFRESHED: NOW

26

g-force reading

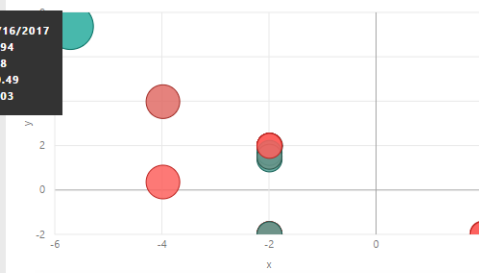
BY SECOND OVER A 1 MINUTE OBSERVATION WINDOW



AEHCREATEDDATETIME
G
X
Y
Z

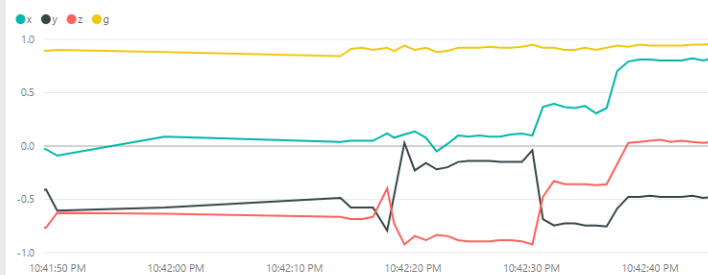
g-force events by x, y, z locations

REFRESHED: NOW

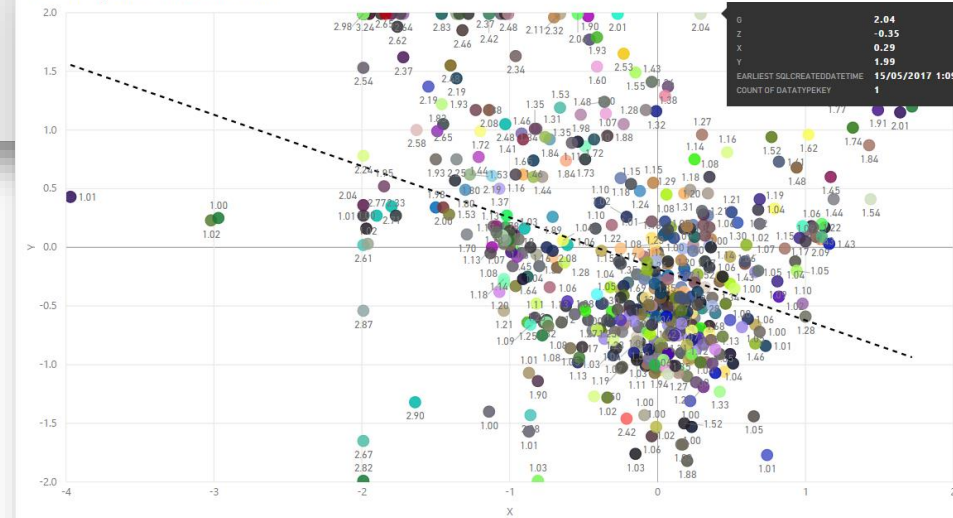


g-force readings by x, y, z

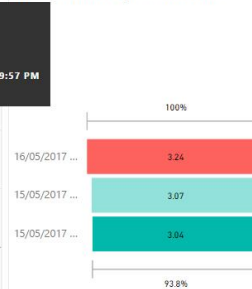
BY SECOND OVER A 1 MINUTE OBSERVATION WINDOW



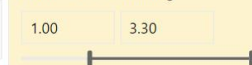
X,Y Events by G-Force and Z Locations



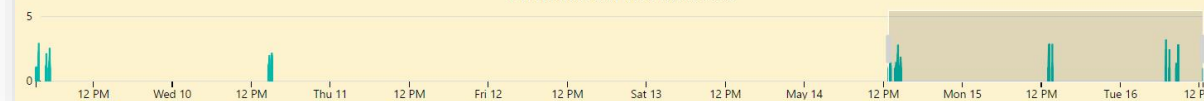
Max of G Alert by Created Date



FILTER: G-Force Reading



FILTER: Date and Time Event Scale



Demonstration

Cognitive Vision Intelligence

Demonstration

Intelligent Kiosk

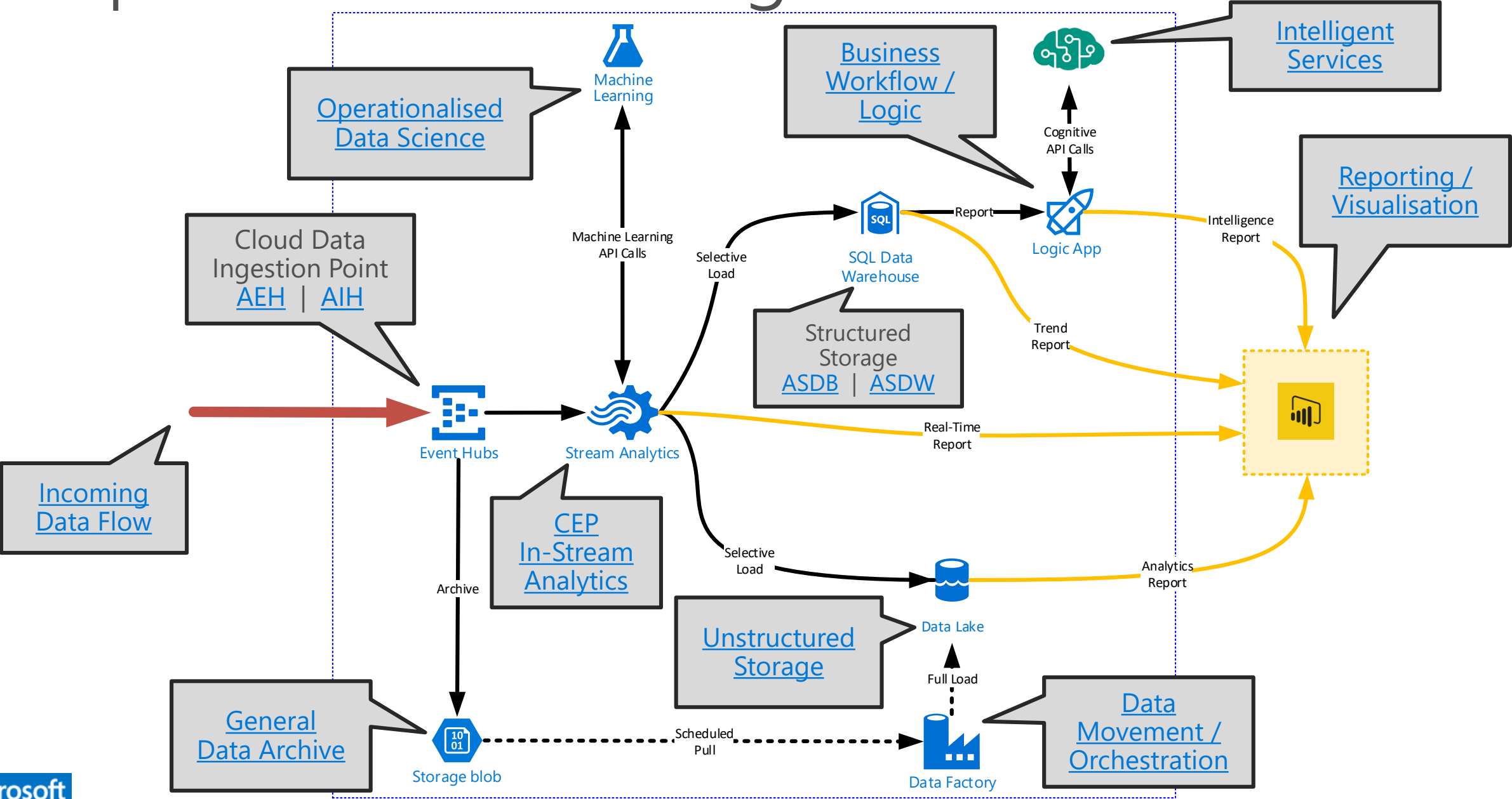
Intelligent Kiosk (github) - <https://github.com/Microsoft/Cognitive-Samples-IntelligentKiosk>

Intelligent Kiosk (Win 10 App) - <https://www.microsoft.com/store/apps/9nblggh5qd84>

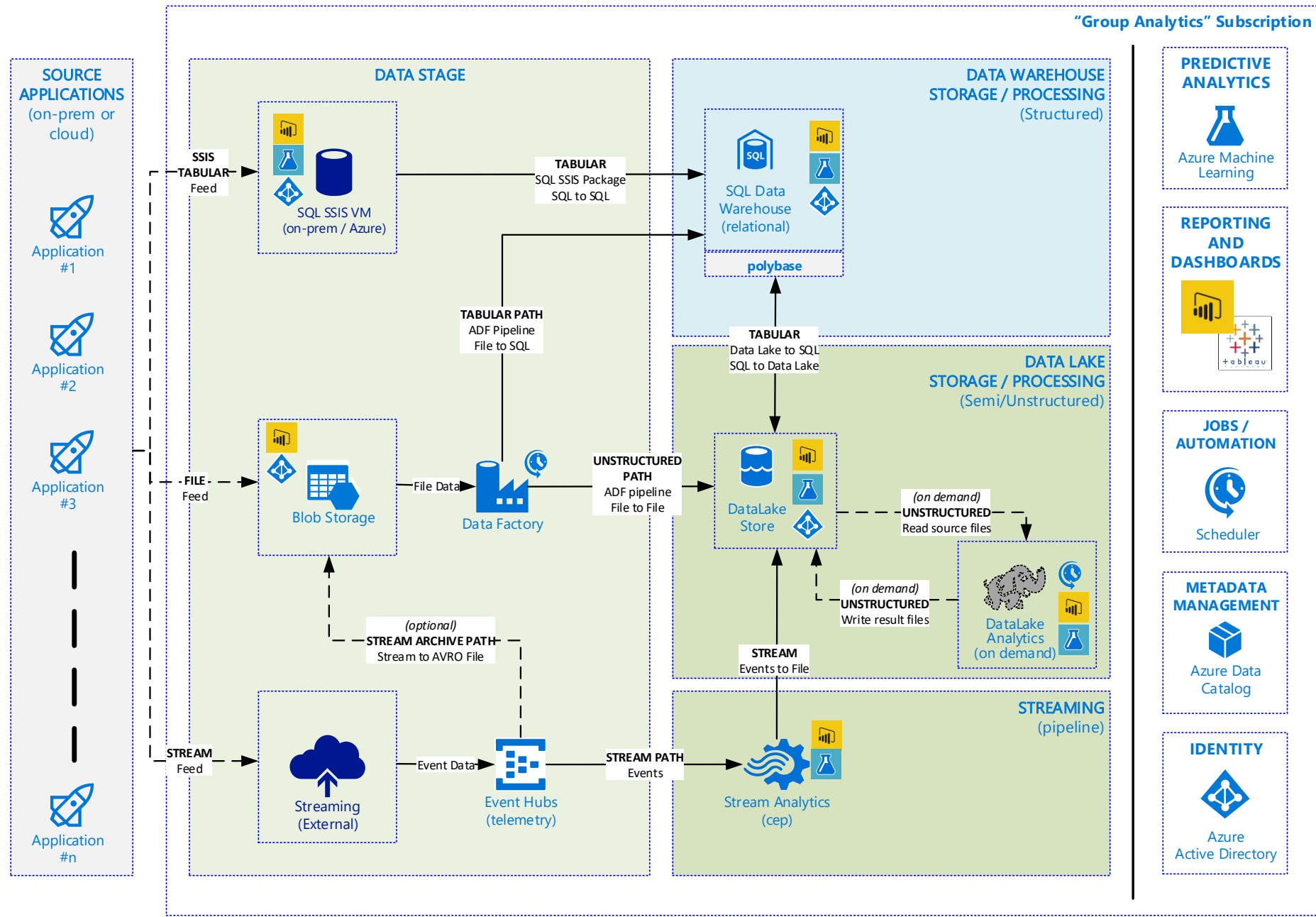
Other Serverless Samples...

Azure Solution Architectures

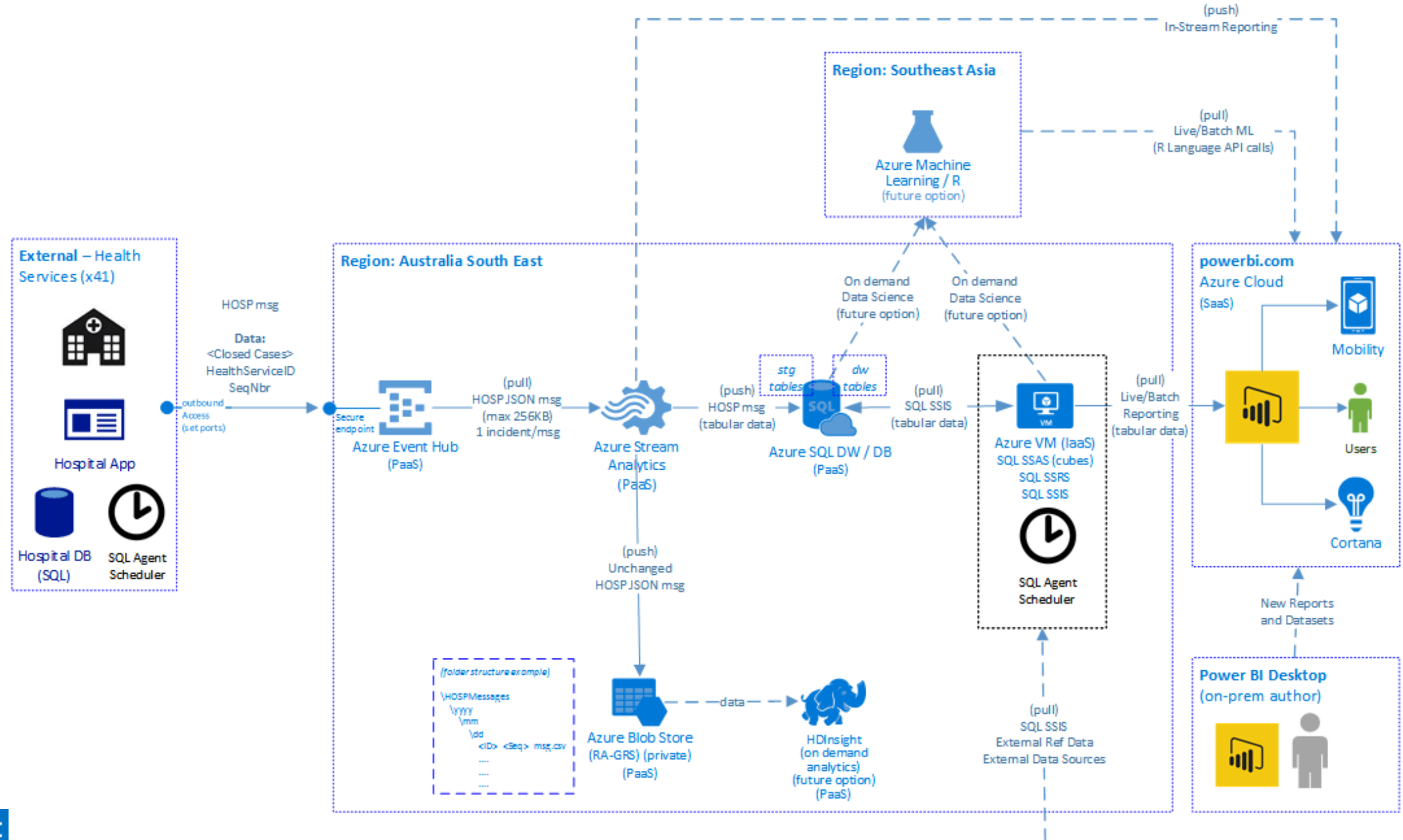
Components of Streaming Solutions



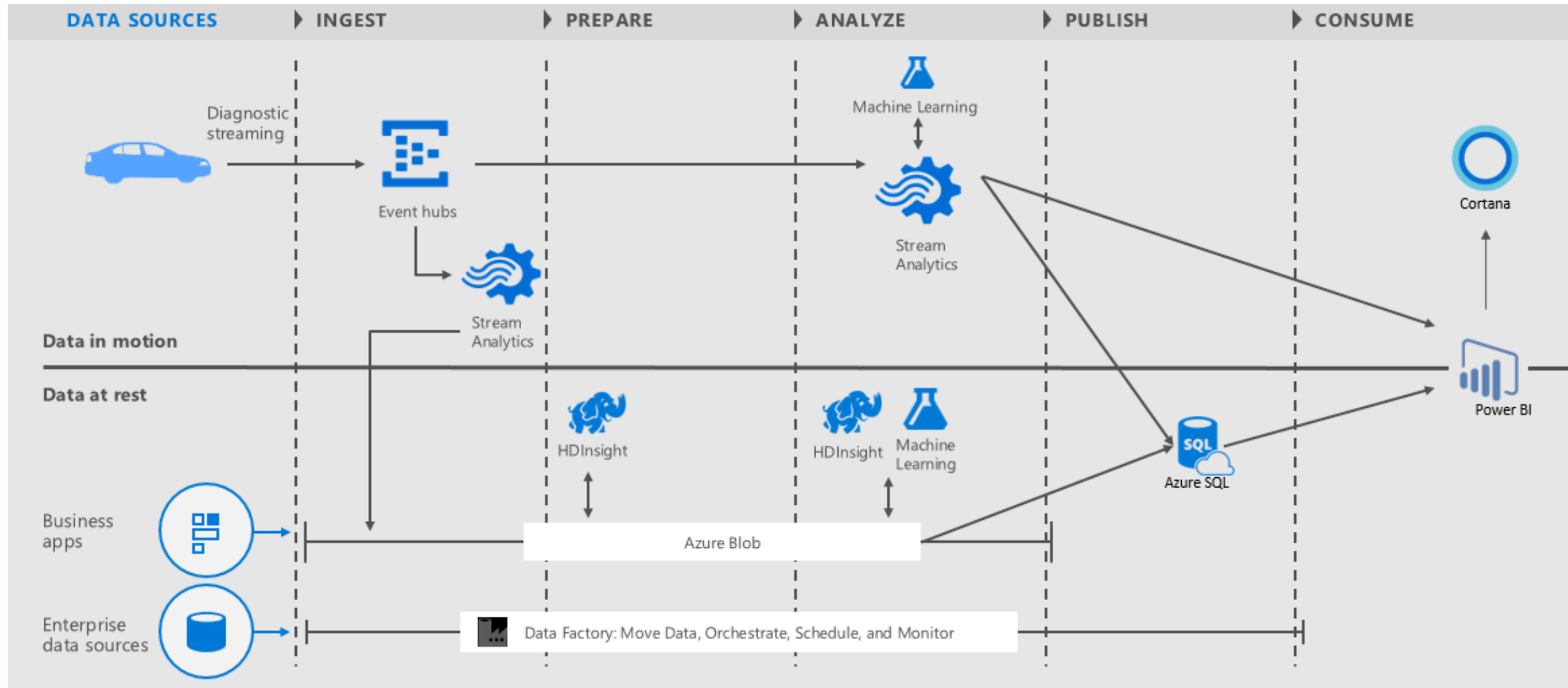
Example Architecture – 1 – Modern DW (simple)



Example Architecture – 3 – Streaming Event DW



Example Architecture – 4 – IoT Streaming Analytics



<https://gallery.cortanaintelligence.com/Solution/Vehicle-Telemetry-Analytics-9>

<https://docs.microsoft.com/en-us/azure/machine-learning/cortana-analytics-playbook-vehicle-telemetry>

<https://docs.microsoft.com/en-us/azure/machine-learning/cortana-analytics-playbook-vehicle-telemetry-deep-dive>

Cortana Intelligence Gallery – Deploy EVEN MORE Solutions!

The screenshot displays the Cortana Intelligence Gallery interface. At the top, there's a navigation bar with links: [Browse all](#), Industries, Solutions, Experiments, Machine Learning APIs, Custom Modules, Learning, and More. Below this, a 'Refine by' section on the left allows filtering by categories (Solution, Experiment, Machine Learning API, Competition, Tutorial, Collection, Notebook, Custom Module, Classroom Training, Video Training) and tags (R, Classification, Python, test, Linear Regression). It also shows algorithms used (Two-Class Boosted Decision Tree, Two-Class Support Vector Machine, Two-Class Logistic Regression, Linear Regression, Two-Class Averaged Perceptron) and languages (R, Python2). The main area, titled 'Results', shows a grid of solution cards. Each card includes an icon, a title, a brief description, view/download counts, and the date. The solutions shown are: 'Predicting Length of Stay in Hospitals', 'Vehicle Telemetry Analytics', 'Energy Demand Forecasting', 'Marketing Campaign Optimization', 'Predictive Maintenance for Aerospace', 'IT Anomaly Insights', and 'Data Warehousing and Data Science with SQL Data Warehouse'. All solutions are provided by Microsoft.

Refine by

CATEGORIES

- ☒ Solution
- ☐ Experiment
- ☐ Machine Learning API
- ☐ Competition
- ☐ Tutorial
- ☐ Collection
- ☐ Notebook
- ☐ Custom Module
- ☐ Classroom Training
- ☐ Video Training

SHOW

- ☐ Microsoft content only

TAGS

- ☐ R
- ☐ Classification
- ☐ Python
- ☐ test
- ☐ Linear Regression

[Show all](#)

ALGORITHMS USED

- ☐ Two-Class Boosted Decision Tree
- ☐ Two-Class Support Vector Machine
- ☐ Two-Class Logistic Regression
- ☐ Linear Regression
- ☐ Two-Class Averaged Perceptron

[Show all](#)

LANGUAGE

- ☐ R
- ☐ Python2

Results

You've selected: [Solution](#) [Clear all](#)

Sort by: [New and Noteworthy](#)

Predicting Length of Stay in Hospitals

This solution enables a predictive model for Length of Stay for in-hospital admissions. Length of Stay (LOS) is defined in number of days from the initial admit date to the date that the patient is discharged from any ...

4883 510 27 days ago

Microsoft

Vehicle Telemetry Analytics

Super computers have moved out of the lab and are now parked in our garage! These cutting-edge automobiles contain a myriad of sensors, giving them the ability to track and monitor millions of events every second.

5169 793 18 days ago

Microsoft

Energy Demand Forecasting

Accurately forecasting spikes in demand for products and services can give a company a competitive advantage. This solution focuses on demand forecasting within the energy sector.

5551 1180 20 days ago

Microsoft

Marketing Campaign Optimization

This solution demonstrates how to build and deploy a machine learning model with SQL Server 2016 with R Services to recommend actions to maximize the purchase rate of leads targeted by a campaign.

4885 780 20 days ago

Microsoft

Predictive Maintenance for Aerospace

This Predictive Maintenance solution monitors aircraft and predicts the remaining useful life of aircraft engine components.

6636 1370 20 days ago

Microsoft

IT Anomaly Insights

Cortana Intelligence IT Anomaly Insights solution helps IT departments within large organizations quickly detect and fix issues based on underlying health metrics from IT infrastructure (CPU, Memory, etc.) services.

Data Warehousing and Data Science with SQL Data Warehouse

Most enterprises require a centralized data warehouse for the purpose of advanced analytics and reporting. Traditionally, this required IT organizations to manually set up a number of data warehouses.

Getting Started in Azure

Get Azure...?

- **Your Enterprise Agreement (EA)**
 - Various options – best option/model currently being discussed with your Microsoft AM
 - Would be linked to your corporate identity/login/account
- **Azure 30 day free account up to \$260 (time boxed to 30 days)**
 - <https://azure.microsoft.com/en-au/free/>
 - Would be linked to your personal identity/login/account
- **MSDN**
 - There are free monthly Azure credits within MSDN subscriptions. Rolls over month to month
 - <https://azure.microsoft.com/en-us/pricing/member-offers/msdn-benefits-details/>
 - Would be linked to your corporate identity/login/account
- **Research Programs and Grants**
 - Free credits available for specific research programs = <https://www.microsoft.com/en-us/research/academic-program/microsoft-azure-for-research/>
 - You can apply for a Microsoft Azure for Research Grant = <http://research.microsoft.com/en-us/projects/azure/default.aspx>

Learn Azure...? Free Online-Training

edX – Free online courses on Microsoft Azure

45+ Free Azure Courses = https://www.edx.org/course?search_query=azure

- Introduction to Azure - <https://www.edx.org/course/introduction-microsoft-azure-microsoft-azure201x>
- Architecting Azure Solutions - <https://www.edx.org/course/architecting-microsoft-azure-solutions-microsoft-dev205bx-3>
- Developing Azure Solutions - <https://www.edx.org/course/developing-microsoft-azure-solutions-microsoft-dev233-1>
- Developing Apps and Bots - <https://www.edx.org/course/developing-intelligent-apps-bots-microsoft-dat211x-1>
- Deliver a DW in the Cloud - <https://www.edx.org/course/delivering-data-warehouse-cloud-microsoft-dat220x-0>
- Delivery Big Data Solutions with Machine Learning - <https://www.edx.org/course/developing-big-data-solutions-azure-microsoft-dat228x>
- Provision SQL Databases in Azure - <https://www.edx.org/course/provisioning-databases-azure-sql-server-microsoft-dat219x-0>

Learn Azure...? Free 1x day In-Person Training

<https://azure.microsoft.com/en-us/community/events/?Country=Australia&query=azure+discovery+day>



Azure Discovery Days

Reserve your spot. Accelerate your learning.

Microsoft Azure is a growing collection of integrated cloud services – analytics, computing, database, storage, mobile, networking, the web – to help you move faster, work smarter and achieve more.

Its potential is unlimited if you know how to unlock it. Which is why we offer Azure Discovery Days; free sessions led by Microsoft Azure experts and built to help you extract extra value out of Azure.

Think big, then delve deeper

Each Discovery Day offers an Azure overview, plus primers on security, billing, identity, storage, networking and compute. We'll also cover these core topics.

- Administer Azure via the Azure Portal & PowerShell
- Create & configure VMs in Azure to connect securely to On-Premises
- Monitoring & Recovery Services
- Monitoring and operational Insights
- Automation and Azure Quick Start Templates
- MyApps portal & Self Service capabilities
- Multi Factor Authentication
- Protecting, encrypting, and tracking documents

Pick your city. Start your journey.

Learn Azure...? *Full In-Person Training*

Course & Link	Description
<u>Implementing Microsoft Azure Infrastructure</u>	This training explores Microsoft Azure Infrastructure Services (IaaS) and several PaaS technologies such as Azure Web Apps and Cloud Services from the perspective of an IT Professional. This training provides an in-depth examination of Microsoft Azure Infrastructure Services (IaaS); covering Virtual Machines and Virtual Networks starting from introductory concepts through advanced capabilities of the platform.
<u>Developing Microsoft Azure Solutions</u>	This course is intended for students who have experience building ASP.NET and C# applications. Students will also have experience with the Microsoft Azure platform and a basic understanding of the services offered. This course offers students the opportunity to take an existing ASP.NET MVC application and expand its functionality as part of moving it to Azure. This course focuses on the considerations necessary when building a highly available solution in the cloud.
<u>Infrastructure and Architecture Bootcamp for OSS Experts</u>	This training explores Microsoft Azure Infrastructure Services (IaaS) and several PaaS technologies such as Azure Web Apps and Cloud Services from the perspective of an IT Professional that specializes in open source technologies. This training provides an in-depth examination of Microsoft Azure Infrastructure Services (IaaS); covering Virtual Machines and Virtual Networks starting from introductory concepts through advanced capabilities of the platform. The student will learn best practices for configuring virtual machines for performance, durability, and availability using features built into the platform.
<u>Architecting Azure IaaS and Hybrid Solutions</u>	The Azure IaaS and Hybrid Architect workshop is designed to prepare the architect to design solutions with Microsoft Azure. This workshop is focused on designing solutions using Infrastructure as a Service (IaaS) and other technologies to enable hybrid solutions such as data centre connectivity, hybrid applications, and other hybrid use cases such as business continuity with backup and high availability. Individual case studies will focus on specific real-world problems that represent common IaaS and Hybrid scenarios and practices. Students will also experience several hands-on labs to introduce them to some of the key services available

Learn Azure...? Azure Architecture References

Azure Architecture Centre

- <https://docs.microsoft.com/en-au/azure/architecture/>
 - Reference Architectures - <https://docs.microsoft.com/en-us/azure/architecture/reference-architectures/>
 - Application Architectures - <https://docs.microsoft.com/en-us/azure/architecture/guide/>
 - Azure Design Patterns - <https://docs.microsoft.com/en-au/azure/architecture/patterns/>
 - Azure Service Releases / Updates - <https://azure.microsoft.com/en-us/updates/>
 - Azure Service Roadmap - <https://azure.microsoft.com/en-us/roadmap/>

Global Azure Blog

- <https://azure.microsoft.com/en-us/blog/>

Azure Ideas and Feedback

- <https://feedback.azure.com/forums/34192--general-feedback>

Brand Management Solution Templates

.....This is your homework assignment for today!.....

Deploys via wizard
Takes ~10 mins

~\$200 / month



<https://appsource.microsoft.com/en-us/product/web-apps/microsoft-powerbi.pbisotemplate cmpgnbrandmngt twitter?tab=Overview>



<https://appsource.microsoft.com/en-us/product/web-apps/microsoft-powerbi.pbisotemplate cmpgnbrandmngt facebook?tab=Overview>



<https://appsource.microsoft.com/en-us/product/web-apps/microsoft-powerbi.pbisotemplate cmpgnbrandmngt news?tab=Overview>



Appendix

Build apps faster

Functions

- Consumption and provisioned options
- Local development and advanced DevOps with detailed monitoring
- Bindings to first and third-party services
- Open source runtime

Logic Apps

- Rich portal visual designer and Visual Studio integration
- Switch statements and loops
- 120+ connectors to SaaS and PaaS, with custom connector support
- ARM template-based for easy reuse

Event Grid

- Manage all events in one place
- Near real-time delivery
- Broad coverage of publishers and subscribers

Appendix - Azure Functions

Introducing Functions

Code



Azure Functions



Events + data



Use bindings in your code

Input Trigger (data)

```
module.exports = function(context, req) {  
  if (req.query.name || (req.body && req.body.name)) {  
    context.res = {  
      // status: 200, /* Defaults to 200 */  
      body: "Hello " + (req.query.name || req.body.name)  
    };  
    context.log('Person entity name: ' + context.bindings.inputTable.Name);  
  }  
  else {  
    context.res = {  
      status: 400,  
      body: "Please pass a name on the query string or in the request body"  
    };  
  }  
  context.done();  
};
```

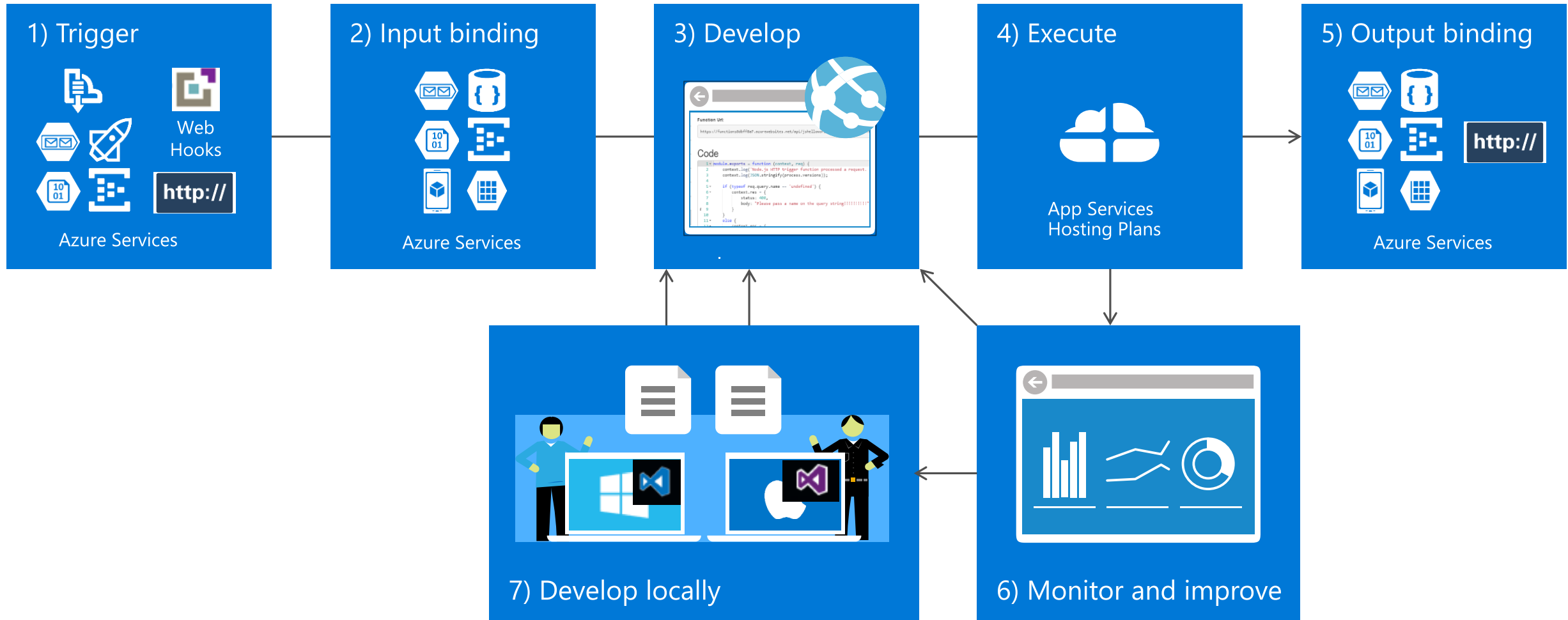
Output

```
"bindings": [  
  {  
    "authLevel": "function",  
    "type": "httpTrigger",  
    "direction": "in",  
    "name": "req"  
  
    "type": "http",  
    "direction": "out",  
    "name": "res"  
  
    "type": "table",  
    "name": "inputTable",  
    "tableName": "inTable",  
    "connection": "AzureWebJobsDashboard",  
    "direction": "in"  
  }  
]
```


Triggers and Bindings

Type	Service	Trigger	Input	Output
Schedule	Azure Functions	✓		
HTTP (REST or webhook)	Azure Functions	✓		✓
Blob Storage	Azure Storage	✓	✓	✓
Events	Azure Event Hubs	✓		✓
Queues	Azure Storage	✓		✓
Queues and topics	Azure Service Bus	✓		✓
Storage tables	Azure Storage		✓	✓
SQL tables	Azure Mobile Apps		✓	✓
No-SQL DB	Azure DocumentDB		✓	✓
Push notifications	Azure Notification Hubs			✓
Twilio SMS Text	Twilio			✓
SendGrid email	SendGrid			✓

Seamless DevOps experience with Functions



Appendix - Azure Logic Apps

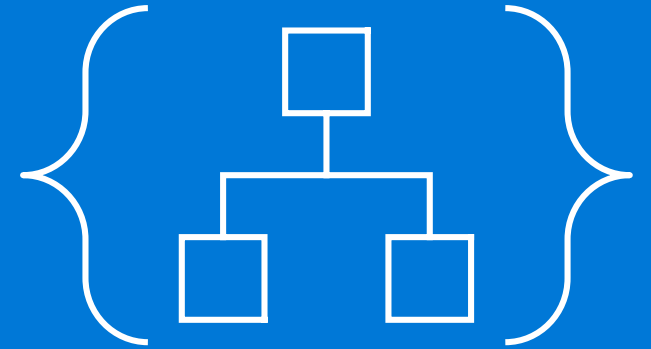
Azure Logic Apps

Powerful Integration
and Workflow Engine born in Azure

Fast integrations using a visual designer
and workflow creation with triggers and actions

Connect applications, data and services

Connect and orchestrate Azure Functions



Logic Apps Workflow Designer

Workflow in the cloud

Powerful control flow

Connect disparate
applications

No code designer
for rapid creation

Also works within Visual
Studio for added CI/CD



Logic Apps

Cloud APIs and platform functionality

- Over 170 built-in connectors
- Hosted and managed within the platform
- Scales to meet your needs
- First class designer experience
- Rapid development

API connections

- Authenticate once and reuse
- Differentiate connection configuration
- Simple to deploy
- Portal experience for managing API Connections

SaaS

- appFigures
- Asana

- Azure API Management
- Azure App Services
- Azure Automation
- Azure Cognitive Face API
- Azure Cognitive LUIS
- Azure Cognitive Text Analytics
- Azure Cognitive Vision
- Azure Data Lake Store
- Azure Document DB
- Azure Event Hub
- Azure Functions
- Azure Machine Learning
- Azure Resource Manager
- Azure Service Bus
- Azure SQL
- Azure Storage Blob
- Azure Storage Queues

- Basecamp
- Bing Search
- BitBucket
- Bitly
- Blogger
- Box
- Buffer
- Campfire
- Chatter

- Common Data Service
- Disqus
- DocuSign
- Dropbox

- Dynamics AX Online
- Dynamics CRM Online
- Dynamics CRM Service Bus

- Dynamics Financials
- Dynamics Operations

- Easy Redmine
- Eventbrite
- Facebook
- FreshBooks
- Freshdesk
- GitHub
- Gmail
- Google Calendar
- Google Contacts
- Google Drive
- Google Sheets
- Google Tasks
- GoTo Meeting
- GoTo Training
- GoTo Webinar
- Harvest
- HelloSign
- Infusionsoft
- JIRA
- Insightly
- Instagram
- Instapaper
- MailChimp
- Mandrill
- Medium

- Microsoft Project Online
- Microsoft Translator
- MSN Weather
- Muhimbi PDF

- Office 365
- Office 365 Users
- Office 365 Video
- OneDrive

- OneDrive for Business
- OneNote
- Outlook.com
- Outlook Tasks

- PagerDuty
- Pinterest
- Pipedrive
- Pivotal Tracker

- Power BI
- Project Online

- Redmine
- Salesforce
- Salesforce Chatter
- SendGrid

- SharePoint Online

- Slack
- SmartSheet
- SparkPost
- Stripe
- Survey Monkey
- Todoist
- Toodledo
- Trello
- Twilio
- Twitter
- Typeform
- UserVoice

- VS Team Services

- Webmerge
- Wordpress

- Wunderlist
- Yammer

- YouTube
- Zendesk

Protocols/native

- HTTP, HTTPS
- HTTP Webhook
- FTP, SFTP
- SMTP
- RSS
- Compose, Query, Parse JSON
- Wait
- Terminate
- Workflow

XML and EDI

- XML Validation
- Transform XML (+Mapper)
- Flat File Encode
- Flat File Decode
- X12
- EDIFACT
- AS2
- Integration Account Artifact Lookup

Hybrid

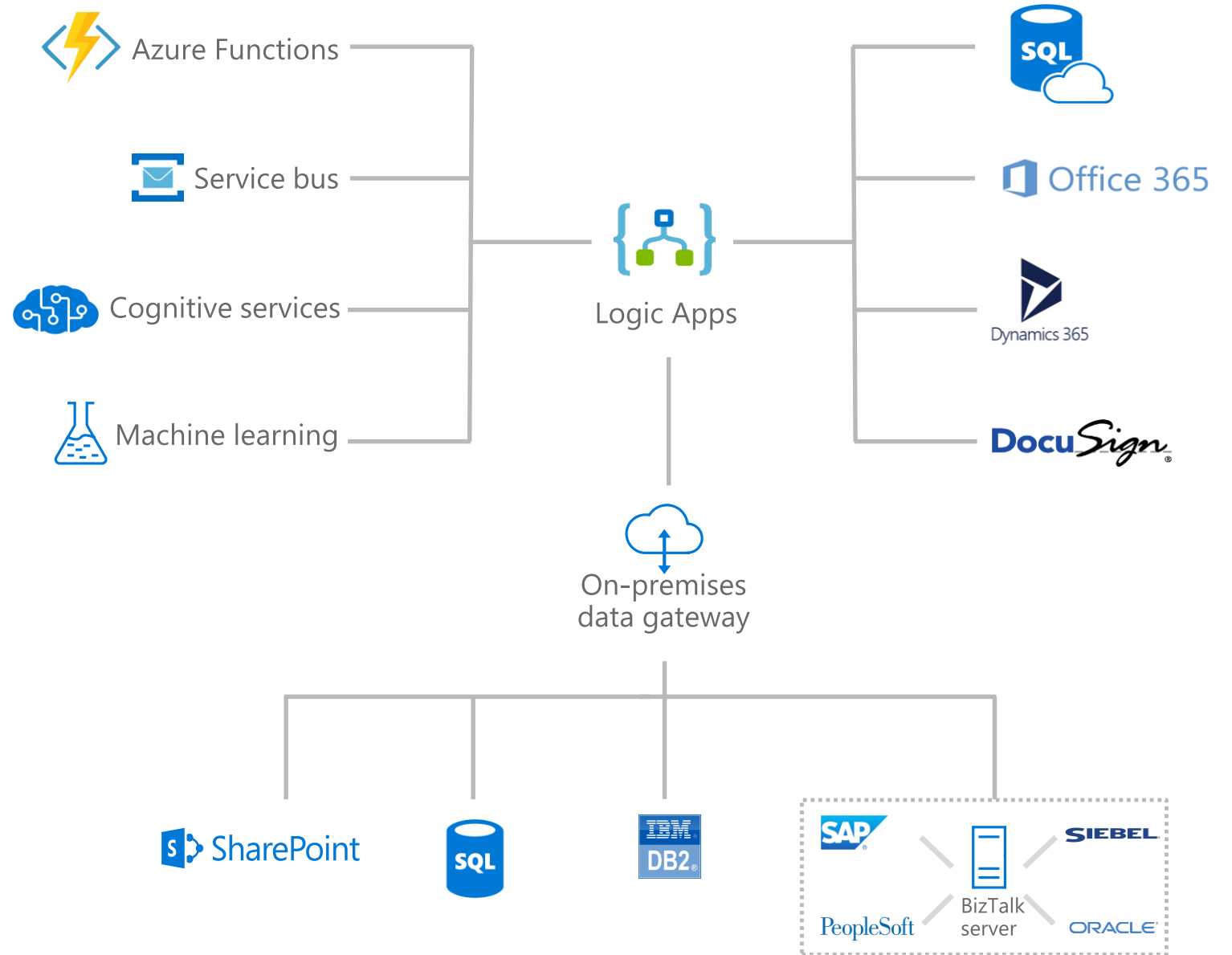
- BizTalk Server
- File System
- IBM DB2
- Informix
- Oracle DB
- SharePoint Server
- SQL Server
- SAP
- Websphere MQ

Logic Apps
connectors—
Over 170
and growing



....and more!

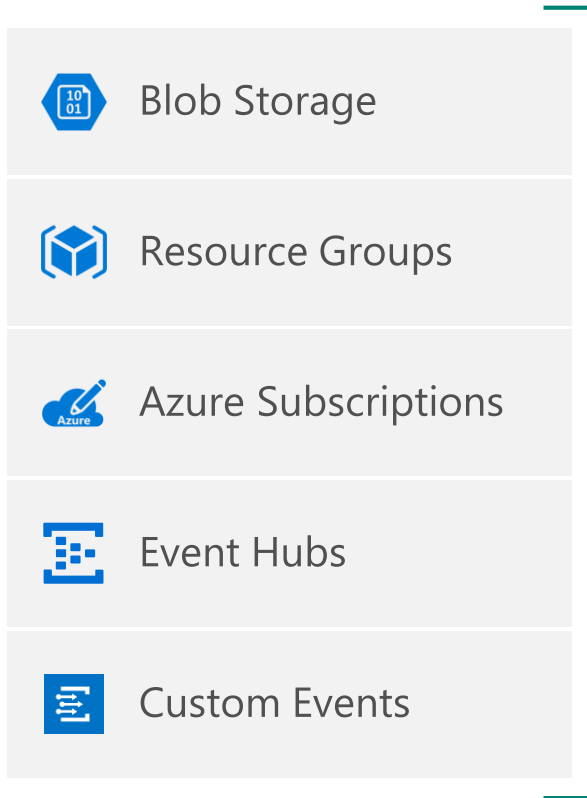
Logic Apps connects everything



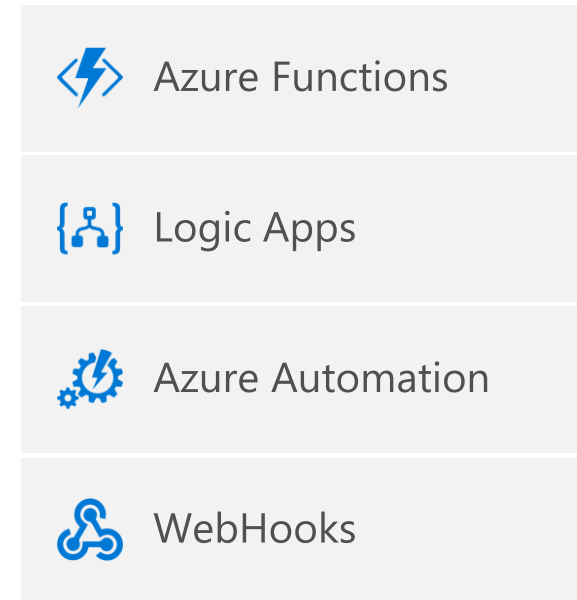
Appendix - Azure Event Grid

Manage all events in one place

Event publishers

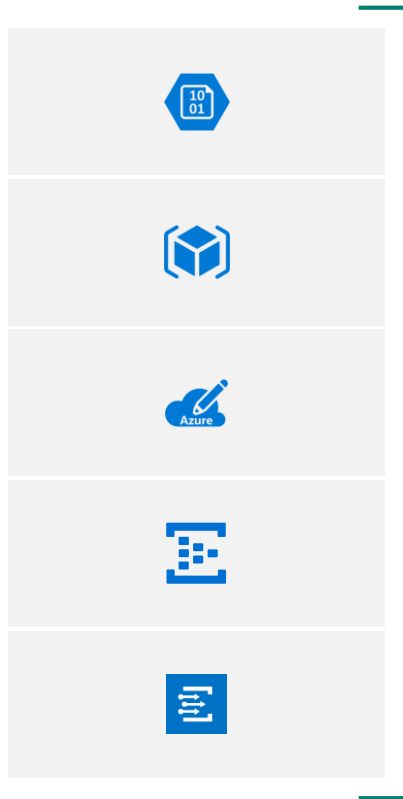


Event handlers



Manage all events in one place

Event publishers



Subscribe to pre-defined system events in Azure or create your own custom topics



Route events to any end-points, Azure or even beyond



Enable filtering and efficient routing of events



Create Event Subscription

Event Grid - PREVIEW

Name

Subscription

Resource group ☐ Use existing

Topic Type

Event Types

Subscriber Type

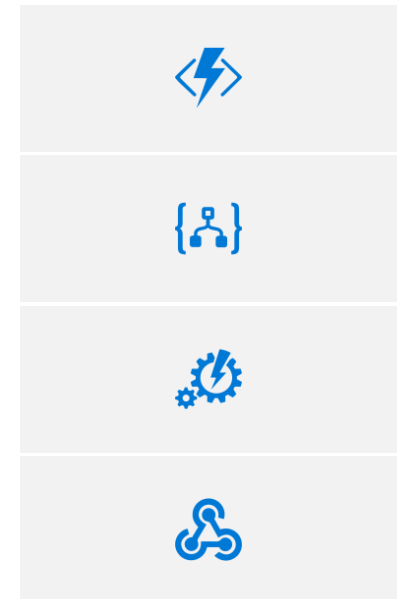
Prefix Filter Optional

Suffix Filter Optional

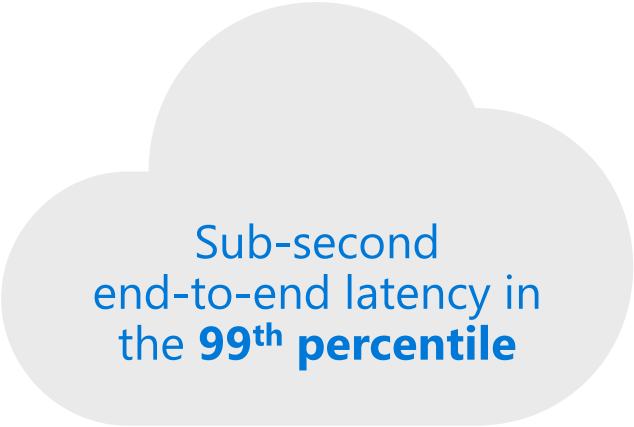
☐ Filter Case Sensitive

Create

Event handlers



Ensure reliability and performance in your apps




Sub-second
end-to-end latency in
the **99th percentile**

Near real-time



10,000,000 events
per second per
region

Massive scale-out



24-hour retry with
exponential back off
for events not
delivered

High reliability

Benefit from broad coverage



Publishers

Immediately available

- ☒ Blob Storage
- ☒ Resource Groups
- ☒ Azure Subscriptions
- ☒ Event Hubs
- ☒ Custom Events

Coming soon

Azure Automation, Azure Active Directory, API Management, Logic Apps, IoT Hub, Service Bus, Azure Data Lake Store, Cosmos DB



Subscribers

Immediately available

- ☒ Azure Functions
- ☒ Logic Apps
- ☒ Azure Automation
- ☒ WebHooks

Coming soon

Fabric Controller, Service Bus, Event Hubs, Azure Data Factory, Storage Queues

APPENDIX AND REFERENCES

- Online Azure Interactive Services Diagram - <http://azureplatform.azurewebsites.net/en-us/>
- Azure Time Series Insights Service - <https://azure.microsoft.com/en-au/blog/announcing-azure-time-series-insights/>
- Service Bus Explorer – Github - <https://code.msdn.microsoft.com/windowsapps/Service-Bus-Explorer-f2abca5a>
- Cortana Intelligence Gallery - <https://gallery.cortanaintelligence.com/>
- Predictive Maintenance - <https://docs.microsoft.com/en-us/azure/machine-learning/cortana-analytics-playbook-predictive-maintenance>
- Anomaly Detection - <https://docs.microsoft.com/en-us/azure/machine-learning/machine-learning-apps-anomaly-detection-api>
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- Azure Stream Analytics Query Windowing Functions - <https://msdn.microsoft.com/en-us/library/azure/dn835019.aspx>
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- Azure Storage Explorer - <http://storageexplorer.com/>
- Intelligent Kiosk (github) - <https://github.com/Microsoft/Cognitive-Samples-IntelligentKiosk>
- Intelligent Kiosk (App) - <https://www.microsoft.com/store/apps/9nblggh5qd84>