

A little about me



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Visual Studio App Center

Continuous Everything – Build, Test, Deploy, Monitor, Repeat.



Obj-C



Businesses are rapidly *appifying*

“

Silicon Valley is coming. We are going to work hard to make our services as seamless and competitive as theirs.

Jamie Dimon
CEO, JP Morgan

“

We are putting 70% of our applications in the cloud to improve flexibility. And, we are launching truly game-changing applications to improve efficiency.

Jeffrey Immelt
CEO, GE

“

Walmart is re-defining the next generation of retail growth and is the best-positioned retailer to win at the convergence of digital and physical retail.

Doug McMillon
CEO, Walmart

“

It's about looking ahead to the changes coming to the automobile business, particularly from potential 'disruptors' in Silicon Valley - and preparing Ford to thrive through those changes.

Mark Fields
CEO, Ford Motor Company

J.P.Morgan



Walmart



Businesses create a multitude of apps

CUSTOMER APPS



Customer Service
Product Info
My Account
Purchases
Loyalty
Orders

...

SUPPLIER APPS



Order Management
Procurement
Dashboards
Inventory
Resellers
ERP

...

EMPLOYEE APPS



Health Services
Onboarding
Recruiting
Benefits
Payroll
Travel

...

App development challenges

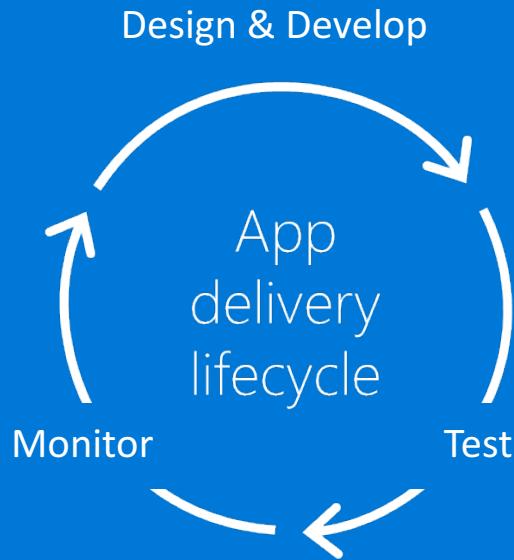
SCALE



100+ apps

Businesses need to rapidly build and deliver high-quality mobile apps

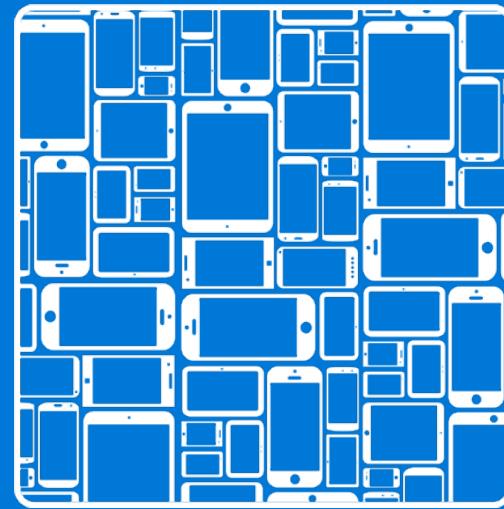
COMPLEXITY



App Delivery

The lifecycle to deliver 'just one' app involves many stages

FRAGMENTATION



1000+ Devices

Mobile ecosystems are complex with many combinations of devices



HockeyApp

Distribution • Crashes • Analytics



Xamarin Test Cloud



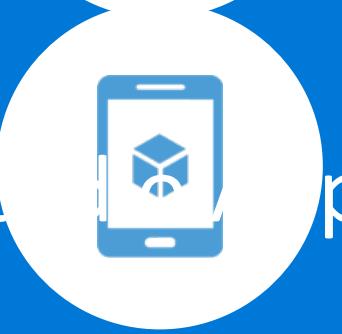
Xamarin Insights

Crashes • Analytics



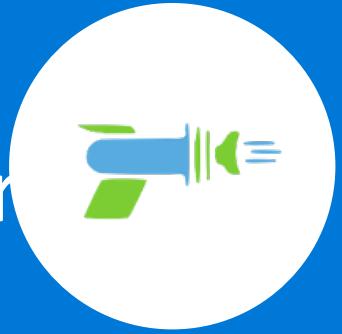
Azure Mobile Engagement

Analytics • Push



Azure App Service

Tables • Auth • Push



CodePush

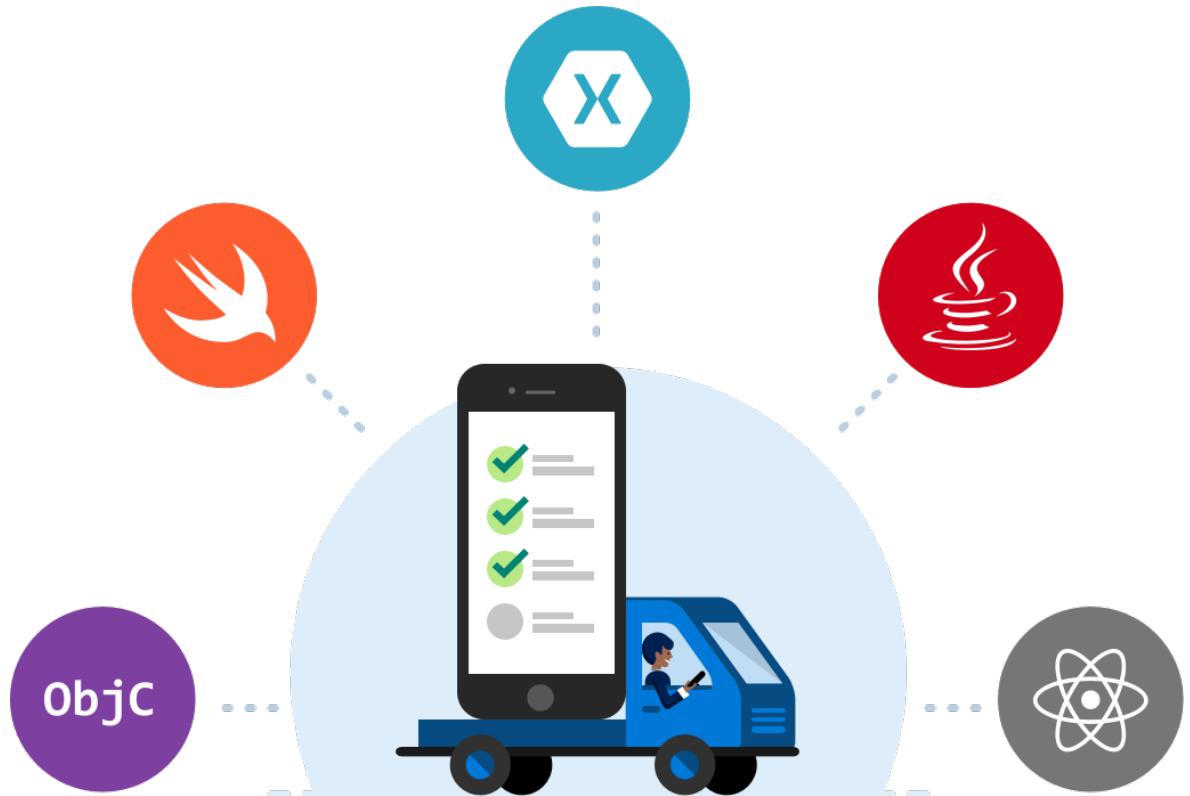
Distribution

Visual Studio App Center

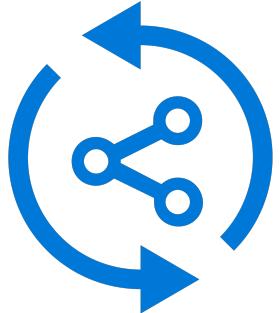
Visual Studio App Center

Continuous integration,
delivery and feedback for
iOS, Android, Windows, and
macOS apps.

Ship 5-star, higher-quality
apps faster with confidence.



Continuous integration in minutes



Build-on-push

With just a few steps automatically build apps with every commit, and generate packages to test and distribute



Work with existing tools

Connect existing repositories in GitHub, Bitbucket, and Visual Studio Team Services with just a few clicks



Build securely in the cloud

Each build is run on a separate, clean virtual machine hosted on our secure cloud servers

Continuous quality on real devices



Release faster

Shrink release times significantly and push new apps out faster

Ship high-quality apps

Ensure the highest quality user experience that keeps users continuously engaged

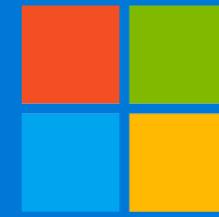
Engage a broad audience

Test on a broad range of devices to make sure apps work on your users' devices

Create new features

Spend less time fixing bugs, and more time creating value

Get Started Free Today
aka.ms/vsappcenter



Microsoft

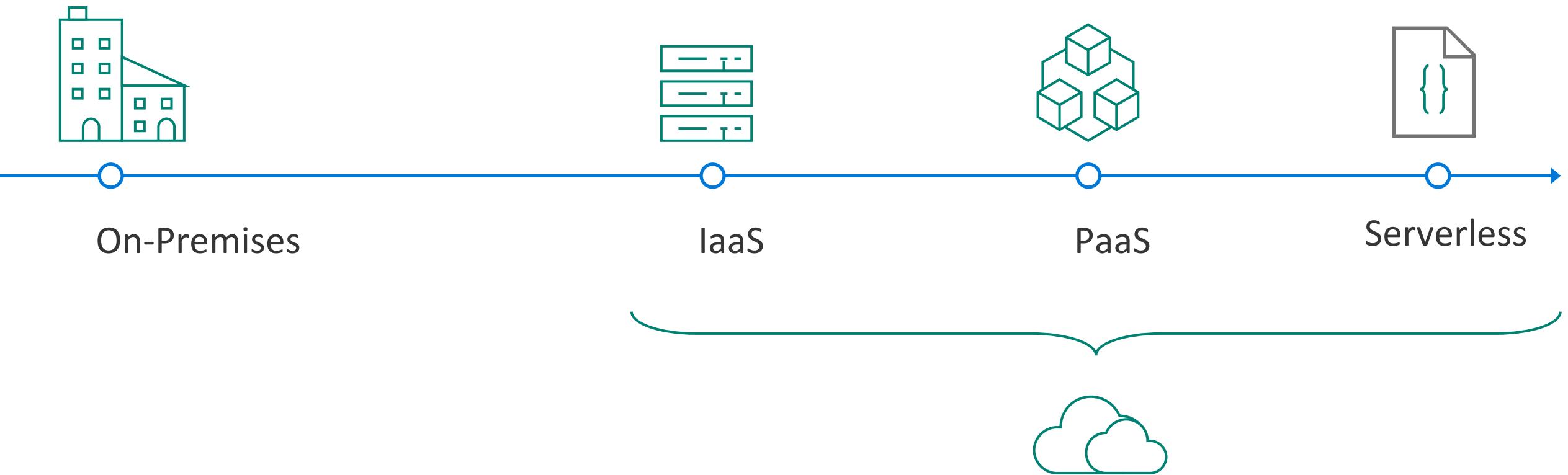
Azure Serverless and Functions Overview

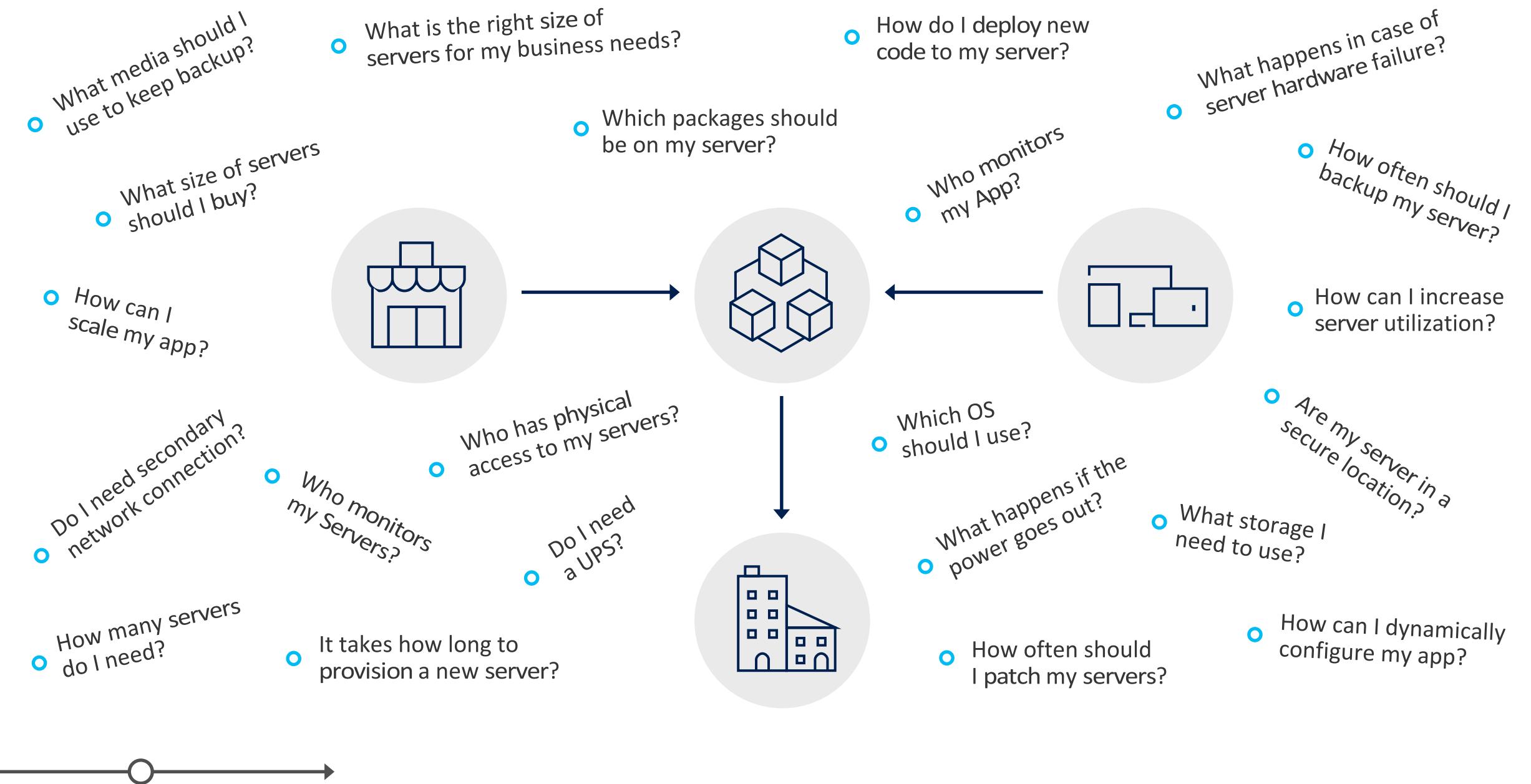
Dan Rigby
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What is Serverless?

The evolution of application platforms





On-Premises

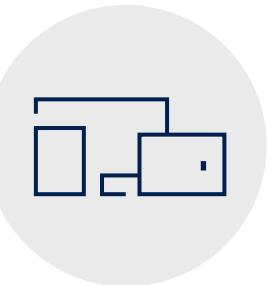
The “evolution” of application platforms

What is the right size of servers for my business needs?

How can I increase server utilization?

How many servers do I need?

How can I scale my app?



How often should I patch my servers?

How often should I backup my server?

Which packages should be on my server?

How do I deploy new code to my server?

Which OS should I use?

Who monitors my App?



On-Premises

IaaS

The “evolution” of application platforms

What is the right size of “servers” for my business needs?

How can I increase “server” utilization?

How many “servers” do I need?

How can I scale my app?



On-Premises

IaaS

PaaS

The “evolution” of application platforms

How do I architect my app?



Serverless, the platform for next gen apps

On-Premises

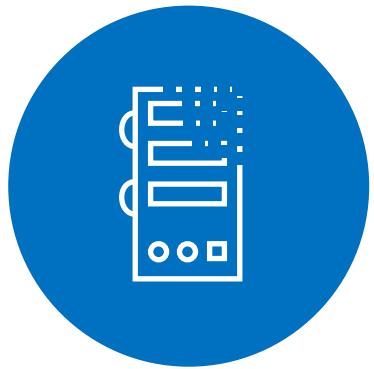
IaaS

PaaS

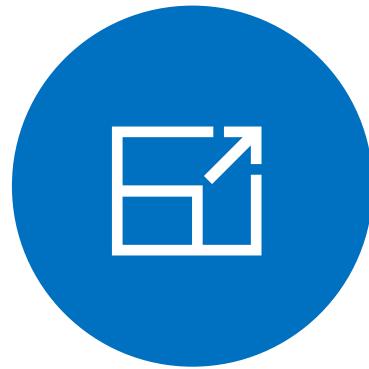
Serverless

The “evolution” of application platforms

What is Serverless?



Abstraction
of servers



Event-driven/
instant scale

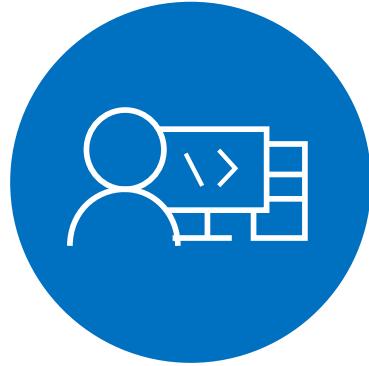


Micro-billing

Benefits of Serverless



Manage apps
not servers



Reduced
DevOps



Faster time
to market

Serverless application platform components

Functions

Execute your code based on
events you specify

Serverless application platform components

{ } Logic Apps

Design workflows and
orchestrate processes

<⚡> Functions

Execute your code based on
events you specify

Serverless application platform components



Event Grid

Manage all events that can trigger code or logic



Logic Apps

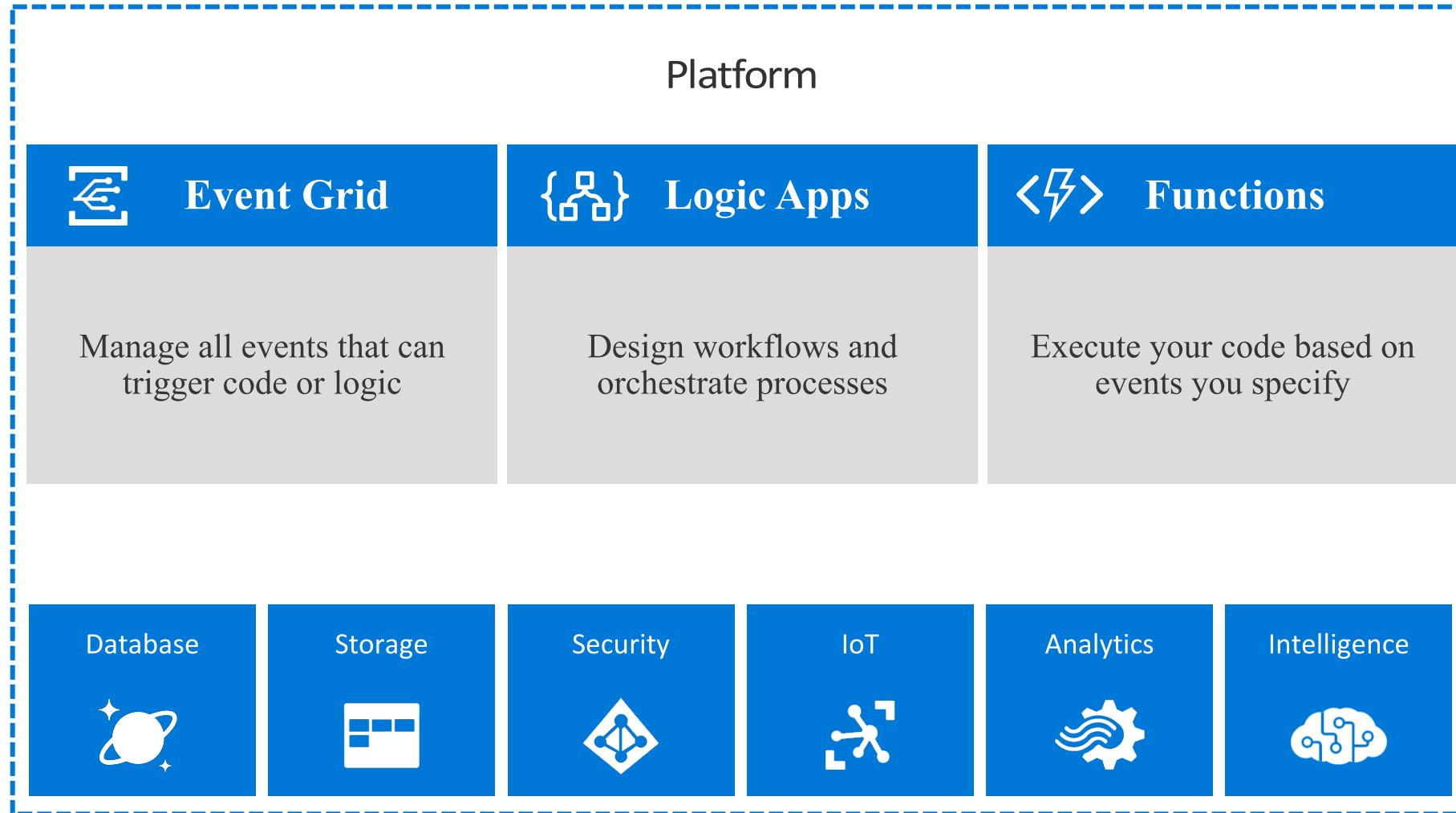
Design workflows and orchestrate processes



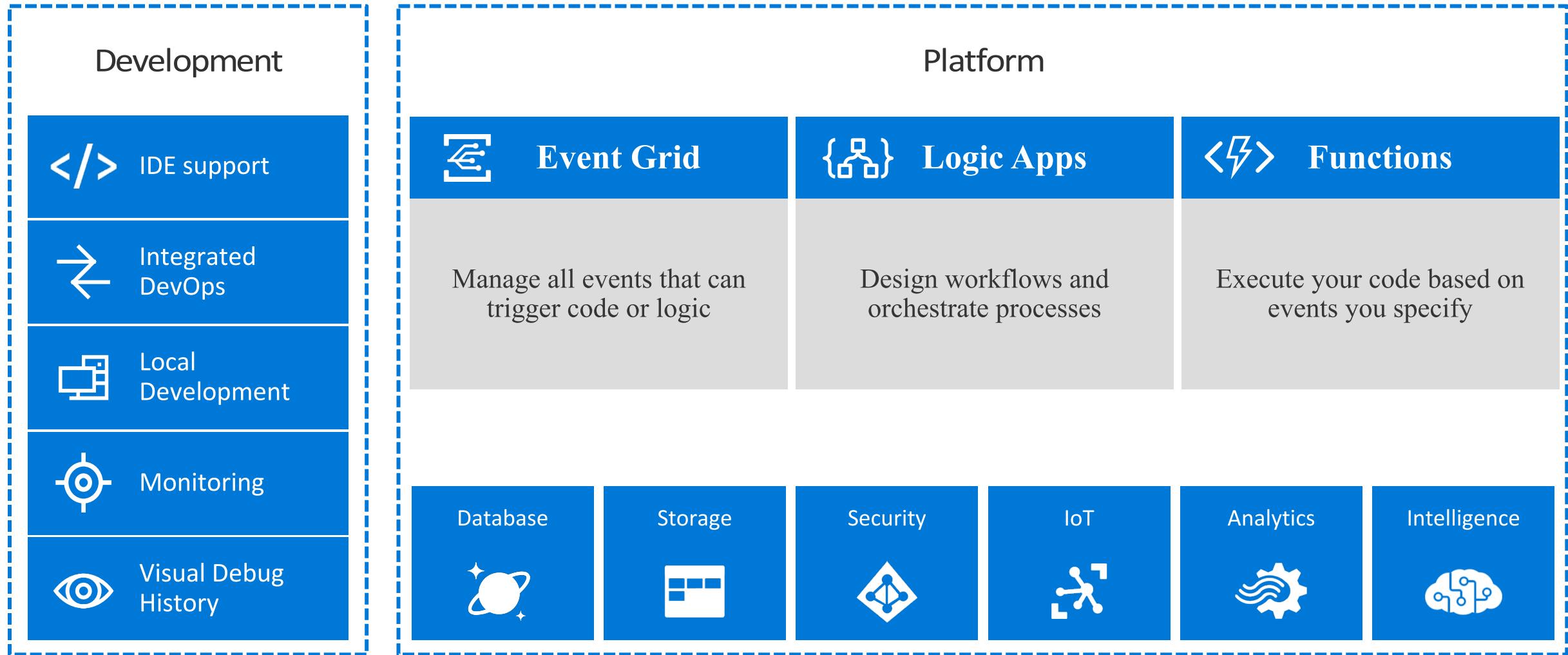
Functions

Execute your code based on events you specify

Serverless application platform components



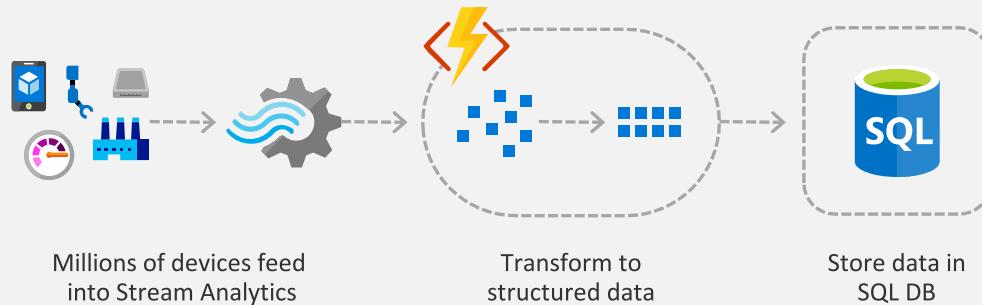
Serverless application platform components



Scenarios for Serverless

Anything that needs to respond to events

Real-time stream processing



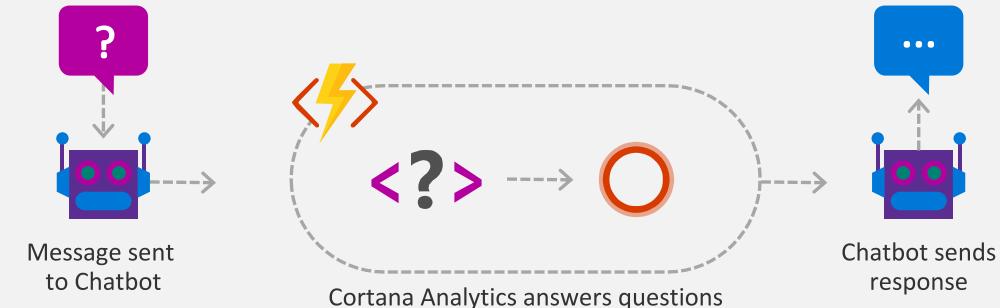
Timer-based processing



Backends (Mobile/IoT/Web)



Real-time bot messaging



Event Grid

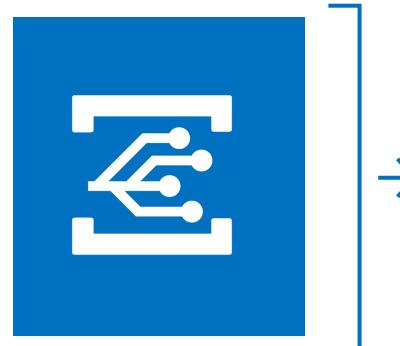
Manage all events in one place

Unlock new scenarios for your apps

Ensure reliability and performance for your apps

Event publishers

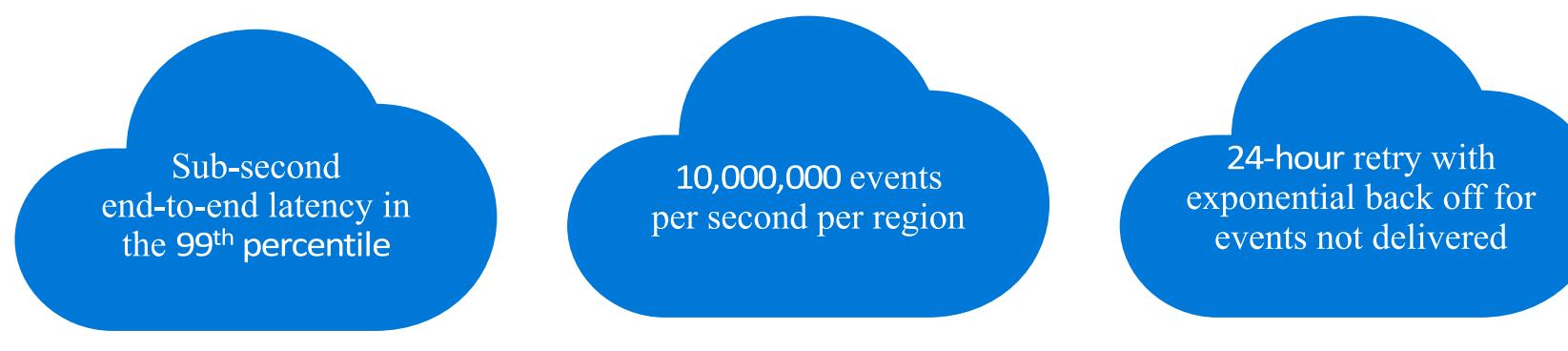
-  Blob Storage
-  Resource Groups
-  Azure Subscriptions
-  Event Hubs
-  Custom Events



Event handlers

-  Azure Functions
-  Logic Apps
-  Azure Automation
-  WebHooks

Event Grid delivers at massive scale



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

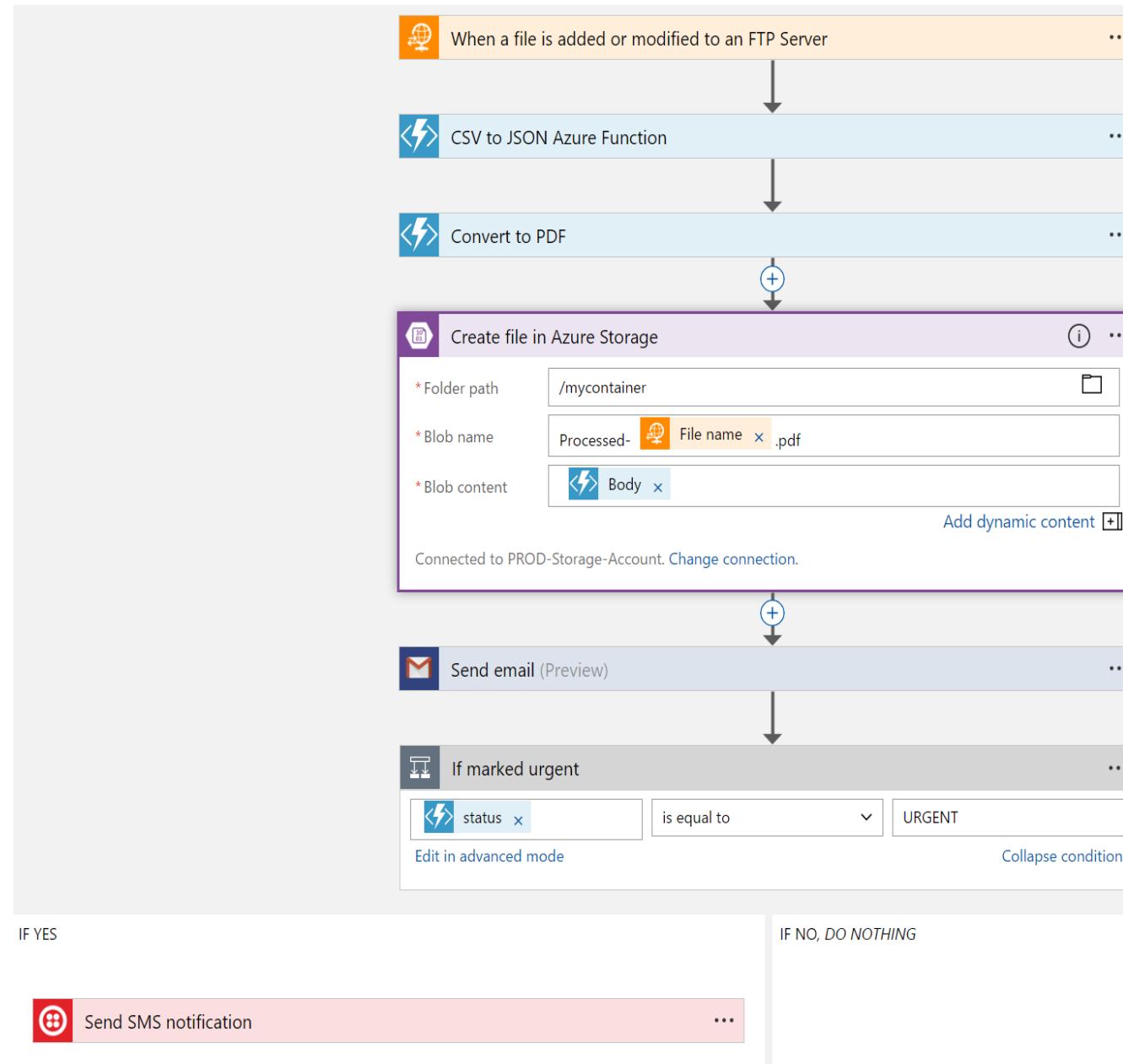
Logic Apps

Visually design workflows in the cloud

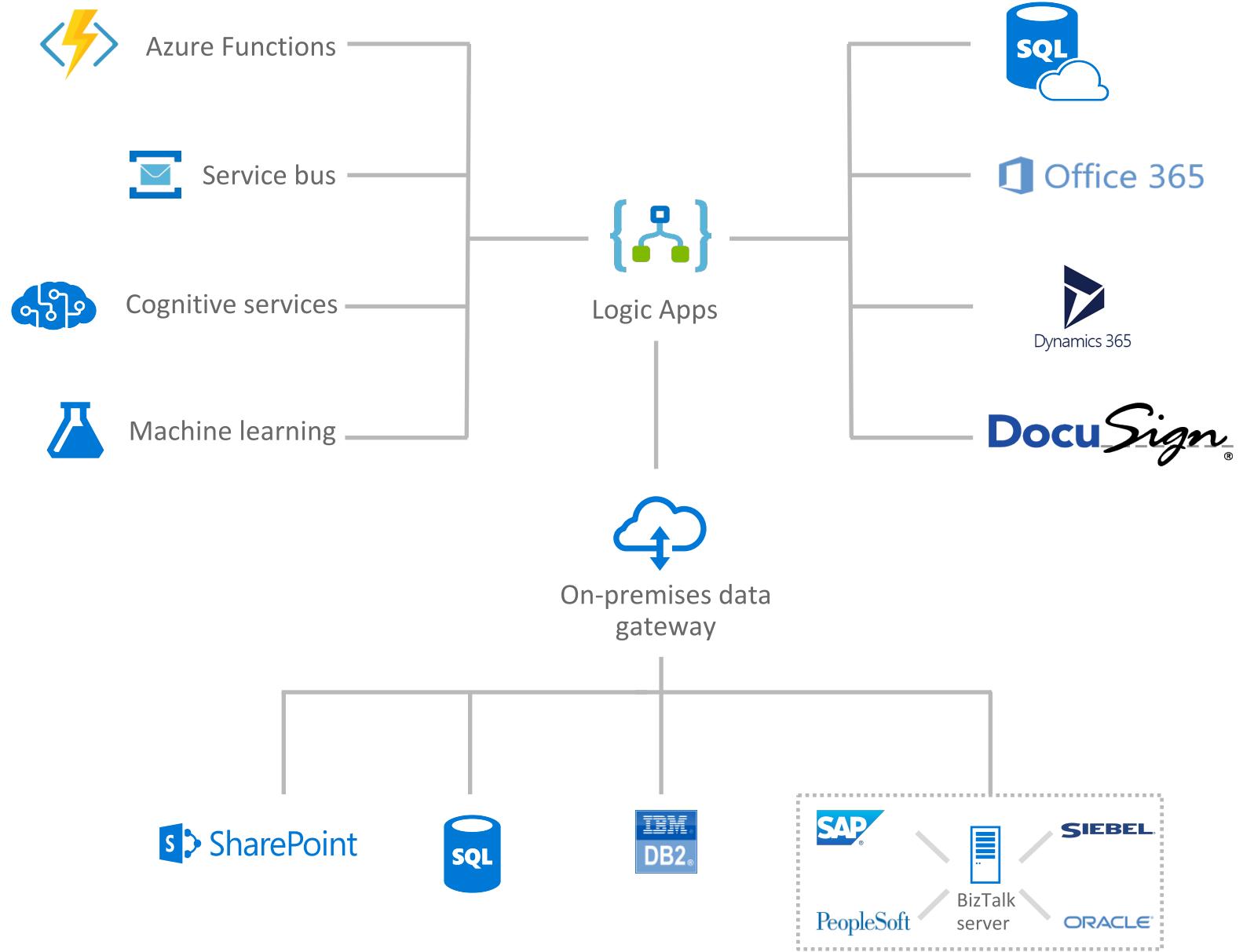
Express logic through powerful control flow

Connect disparate functions and APIs

Utilize declarative definition to work with CI/CD



Logic Apps connects everything



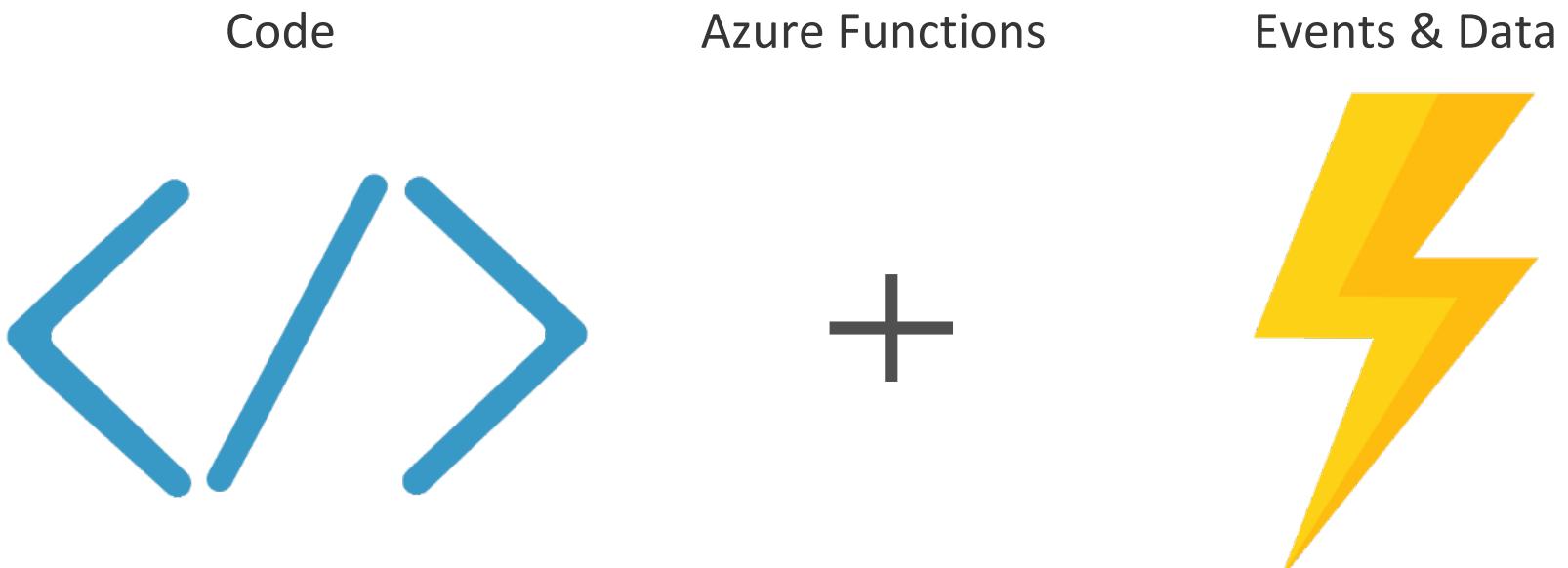
Logic Apps
connectors—
Over 170 and
growing



....and more!

Functions

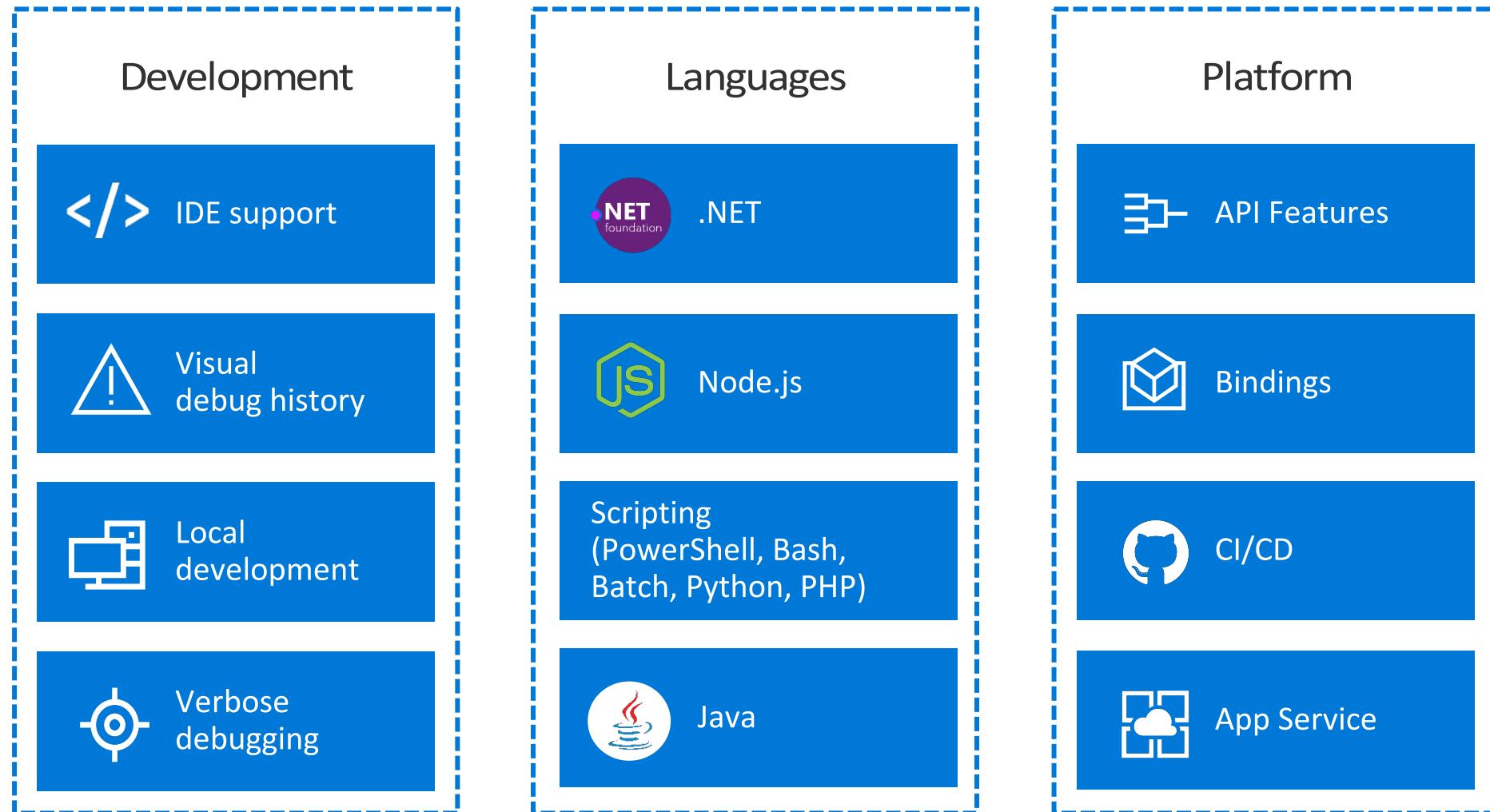
- Develop locally using best of class developer tools
- Boost productivity through triggers and bindings
- Choose from a variety of programming languages
- Integrate with existing DevOps processes



Functions 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		✓	✓
NoSQL DB	Azure Cosmos DB	✓	✓	✓
Push Notifications	Azure Notification Hubs			✓
Twilio SMS Text	Twilio			✓
SendGrid email	SendGrid			✓

Azure Functions platform features



What's new in Azure Functions



Develop functions locally on Linux, MacOS, Windows

<⚡> Functions

Execute your code based on events you specify



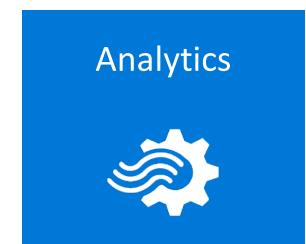
Monitor serverless applications using Application Insights



Trigger a function based on changes in Cosmos DB



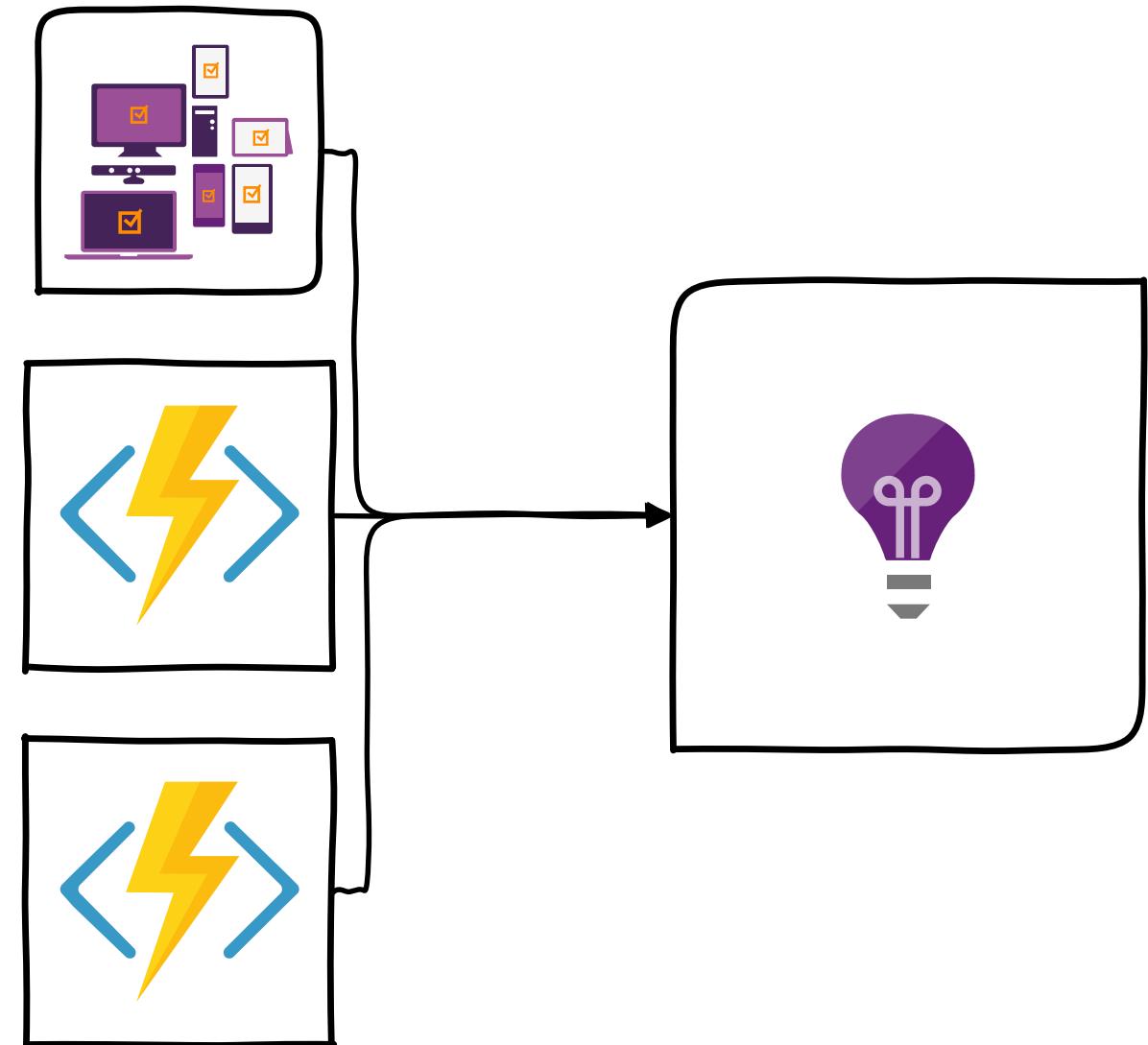
Securely provide access to information in Microsoft Graph through a function



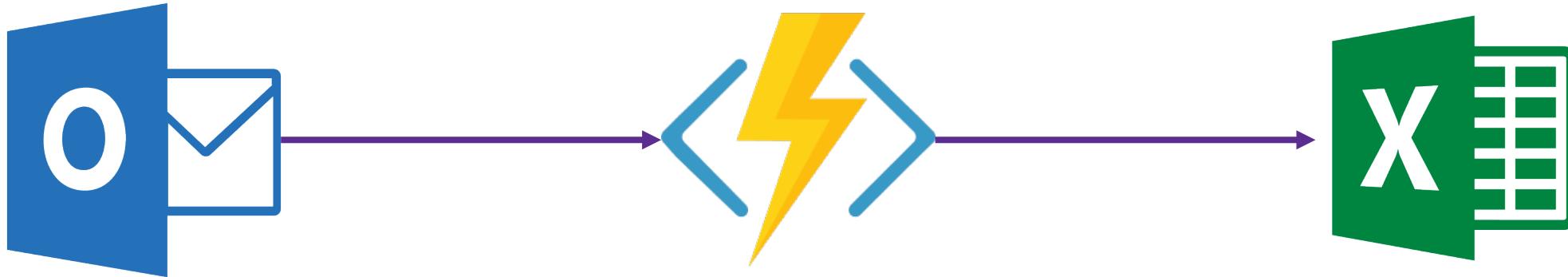
Trigger a function from a real-time analytics pipeline in Stream Analytics

Functions + Application Insights

- Extensible Application Performance Management (APM)
- Rich data: Metrics, Traces, Exception tracking, Dependencies, Page Views, User data, custom events
- Easy to use graph/alerts, powerful analytics portal, integration with PowerBI and other analytics services



Microsoft Graph bindings for Functions



React to:

- Mail messages
- Calendar events
- Personal contacts
- OneDrive items

Read from:

- Excel
- OneDrive

Write to:

- Excel
- OneDrive
- Outlook messages

+ more with identity support for API calls

Demo

In review...

Serverless = focus on your business logic not infrastructure

Event Grid – manage all events in one place

Logic Apps – compose serverless workflows

Azure Functions – author serverless code

- ✓ Secure access
- ✓ Work with your data
- ✓ Integrate with existing business apps
- ✓ Manage no servers

