March 28, 2019 — 8:30 AM - 5:00 PM | Detroit, Michigan

Microsoft

Introduction to Serverless Computing

Learn, architect, and develop solutions on Azure

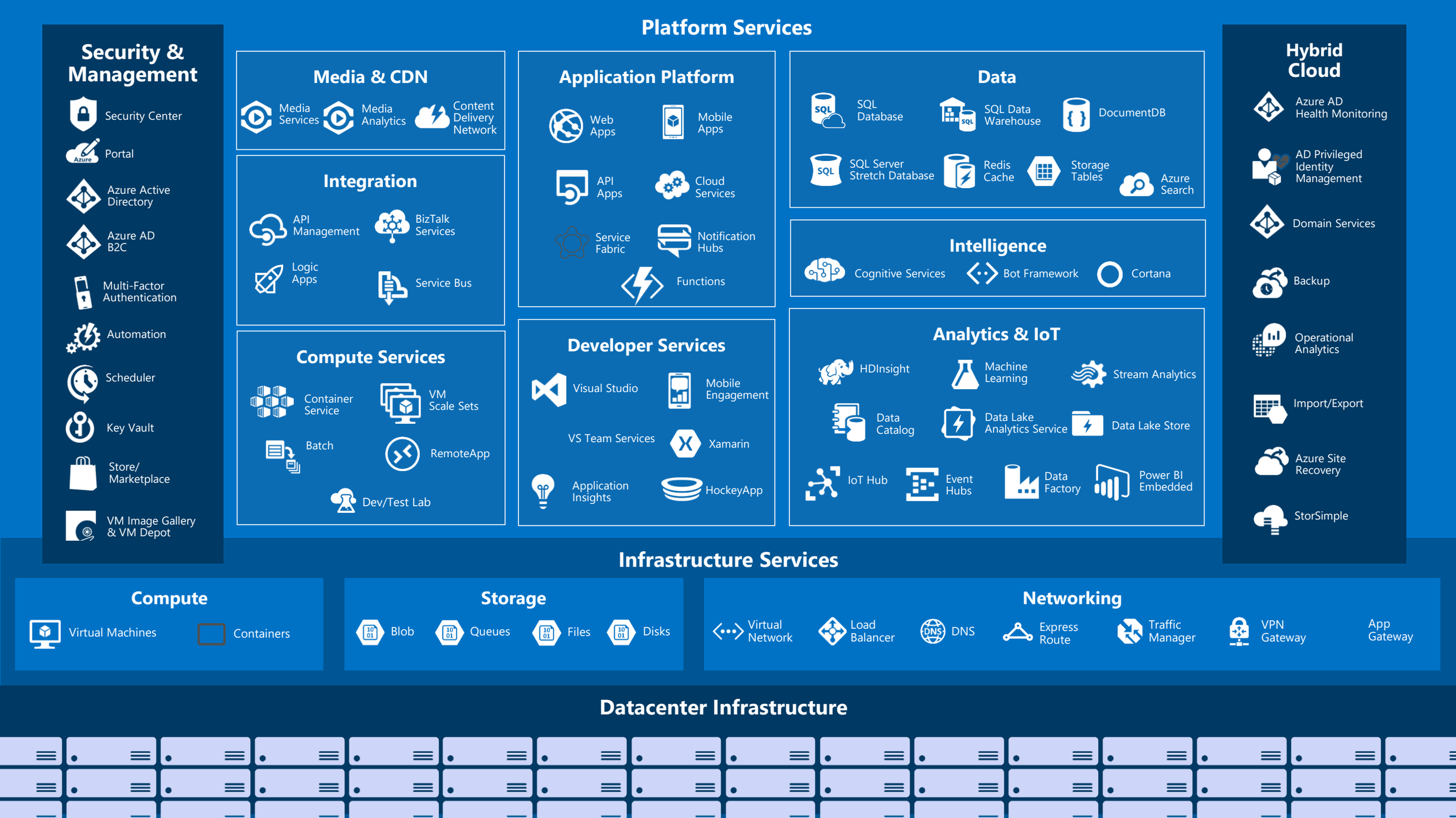
#AzureDevDays
for developers, by developers

Learn.

Connect.

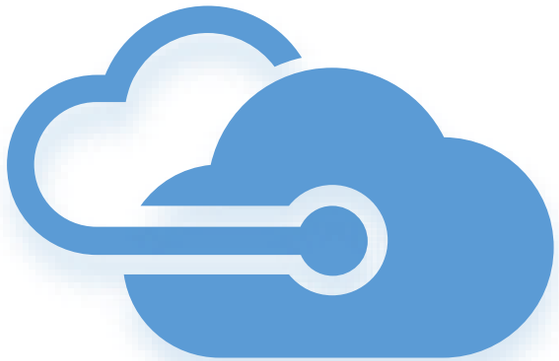
Explore.

Azure Platform


Platform Services
Security & Management
Security Center
Portal
Azure Active Directory
Azure AD B2C
Multi-Factor Authentication
Automation
Scheduler
Key Vault
Store/ Marketplace
VM Image Gallery & VM Depot
Media & CDN
Media Services
Media Analytics
Content Delivery Network
Integration
API Management
BizTalk Services
Logic Apps
Service Bus
Compute Services
Container Service
VM Scale Sets
Batch
RemoteApp
Dev/Test Lab
Application Platform
Web Apps
Mobile Apps
API Apps
Cloud Services
Service Fabric
Notification Hubs
Functions
Developer Services
Visual Studio
Mobile Engagement
VS Team Services
Xamarin
Application Insights
HockeyApp
Data
SQL Database
SQL Data Warehouse
DocumentDB
SQL Server Stretch Database
Redis Cache
Storage Tables
Azure Search
Intelligence
Cognitive Services
Bot Framework
Cortana
Analytics & IoT
HDInsight
Machine Learning
Stream Analytics
Data Catalog
Data Lake Analytics Service
Data Lake Store
IoT Hub
Event Hubs
Data Factory
Power BI Embedded
Hybrid Cloud
Azure AD Health Monitoring
AD Privileged Identity Management
Domain Services
Backup
Operational Analytics
Import/Export
Azure Site Recovery
StorSimple
Infrastructure Services
Compute
Virtual Machines
Containers
Storage
Blob
Queues
Files
Disks
Networking
Virtual Network
Load Balancer
DNS
Express Route
Traffic Manager
VPN Gateway
App Gateway
Datacenter Infrastructure

App Services

Collection of Cloud Services



Microsoft Azure

Infrastructure-as-a Service

VMs, Storage, Networks, Dev/Test Labs

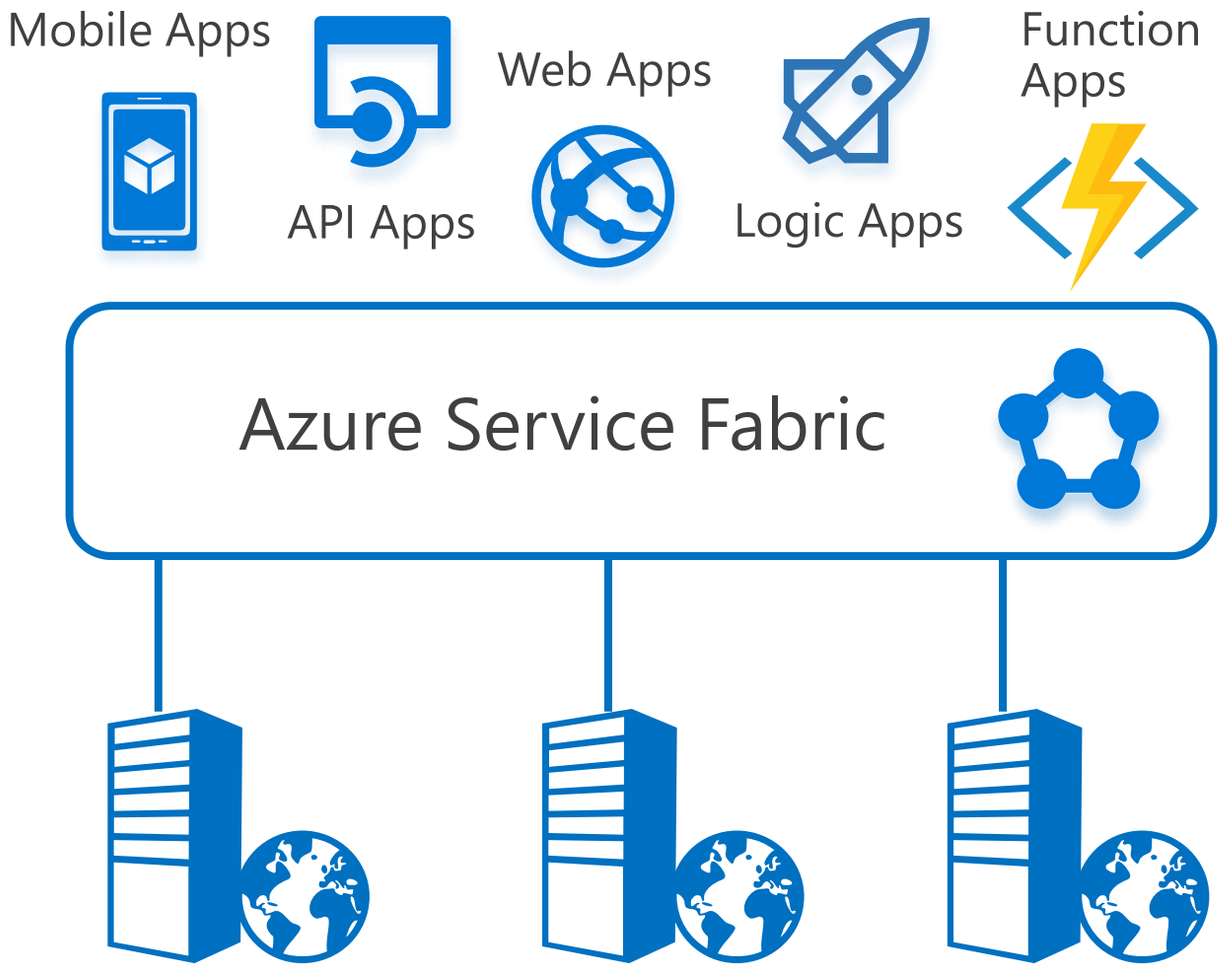
Platform-as-a Service

App Service, SQL Azure

Software-as-a Service

O365, Azure DevOps (VSTS), Cognitive Services

Azure App Service



Azure Web App

Host web applications

.NET, Node.js, Python, Java, PHP

SLA 99.95%

Custom Domains and SSL

Deployment Slots

Continuous Deployment

Scaling (Manual or Auto)

Authentication / Authorization

Traffic Mgmt

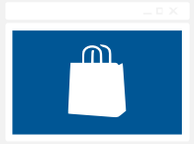
Access on-premise data

Integrated Monitoring w/ Application Insights

Load testing with Azure DevOps(VSTS)

Industry-leading Application PaaS Platform

Solutions



Transactional Apps

Digital Marketing

LoB App Modernization

Services

Web Apps

Web App for Containers

API Apps

Mobile Apps

IDE

Enterprise Integration

Serverless compute

Data /Storage

Intelligence

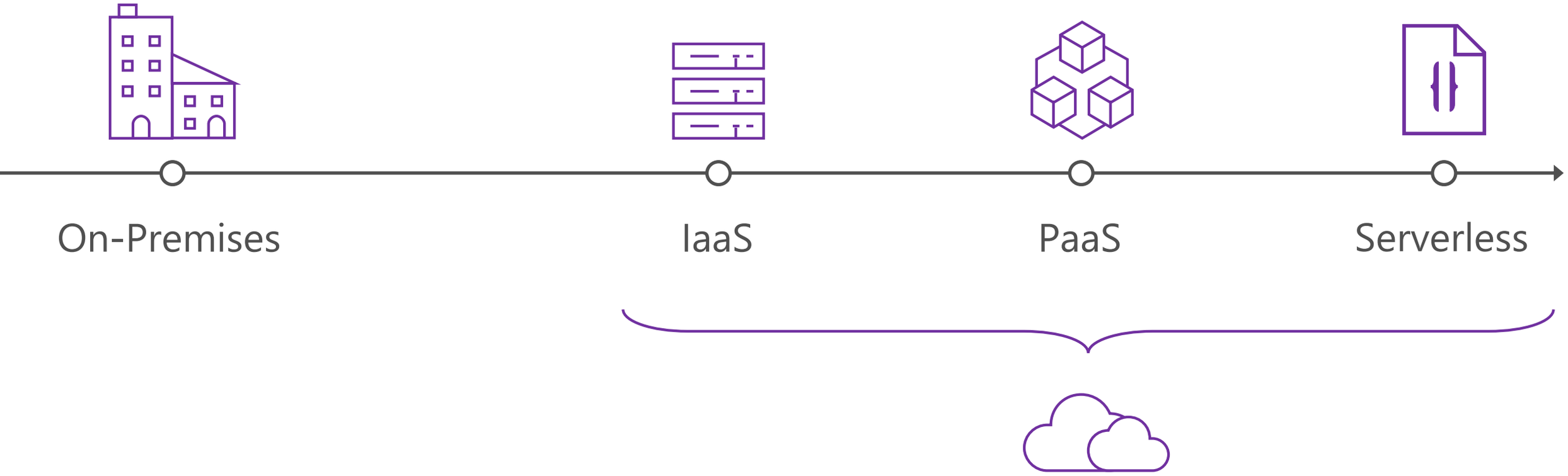
Application Insights

Platform

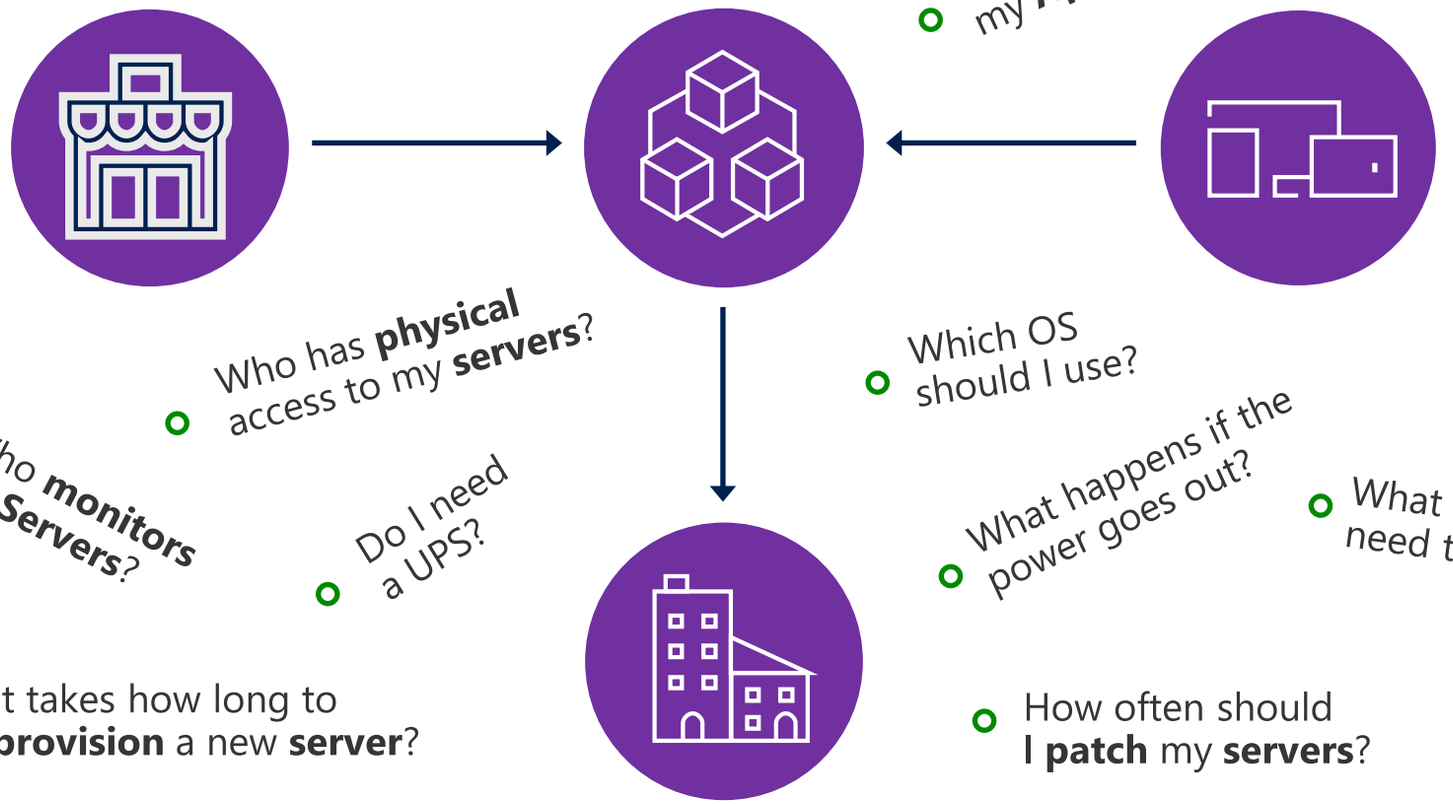
App Service

Fully Managed Platform • High Productivity Development • Enterprise Grade Apps

The “evolution” of application platforms



Before cloud



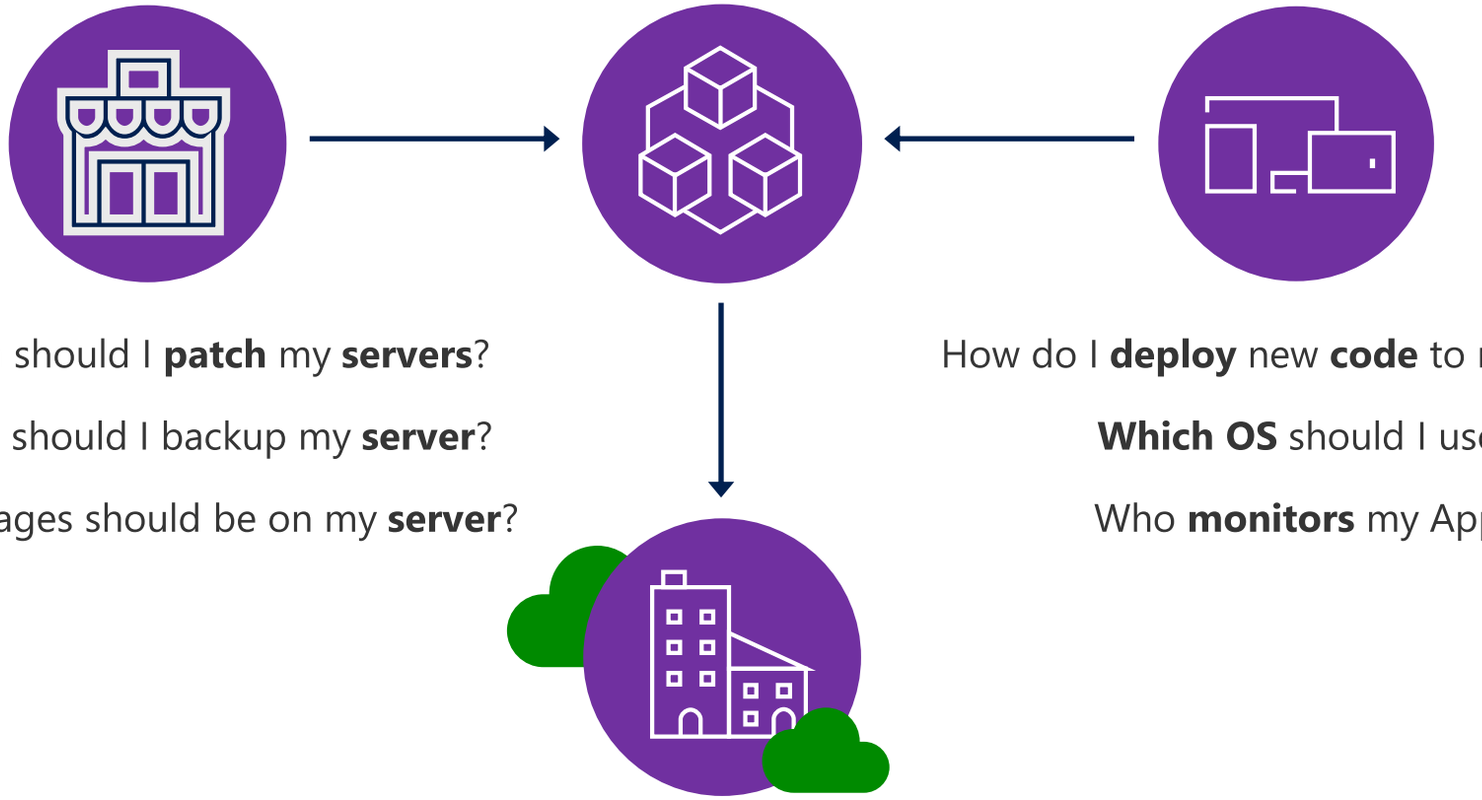
Then IaaS reduced friction for digital business

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?

Then PaaS removed a lot of infrastructure ops

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

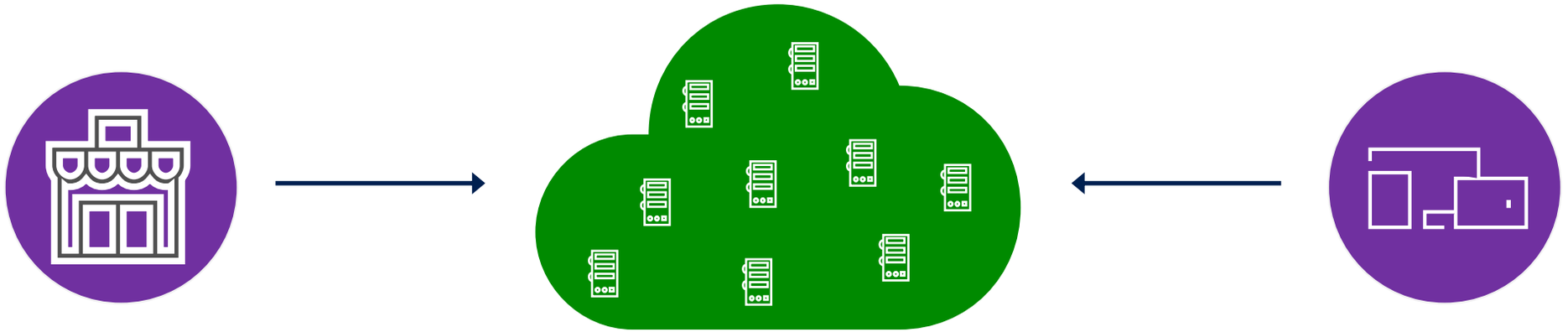
How can I increase **“server”** utilization?

How many **“servers”** do I need?

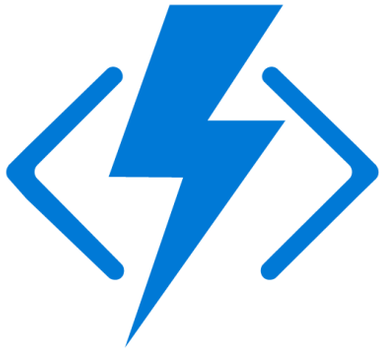
How can I **scale** my app?

Now Serverless lets us focus on our apps

How do I **architect** my app to become Serverless?

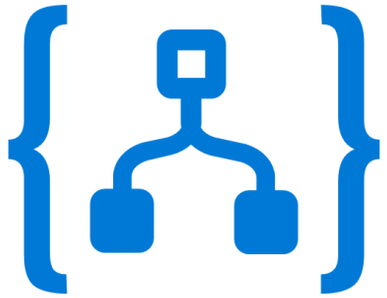


Microsoft Serverless services



Functions

Serverless compute



Logic Apps

Serverless workflow

Event Grid

Serverless events

What is serverless?

Full abstraction of servers

Developers can just focus on their code—there are no distractions around server management, capacity planning, or availability.

Instant, event-driven scalability

Application components react to events and triggers in near real-time with virtually unlimited scalability; compute resources are used as needed.

Pay-per-use

Only pay for what you use: billing is typically calculated on the number of function calls, code execution time, and memory used.*

*Supporting services, like storage and networking, may be charged separately.

What are the benefits?

Focus

Solve business problems—not technology problems related to undifferentiated heavy lifting

Efficiency

Shorter time to market
Fixed costs converted to variable costs
Better service stability
Better development and testing management
Less waste

Flexibility

Simplified starting experience
Easier pivoting means more flexibility
Easier experimentation
Scale at your pace—don't bet the farm on Day 1
Natural fit for microservices

Focus on code, not plumbing

No infrastructure management

Auto-scale based on your workload

No wasted resources, pay only for what you use

Full integration with Azure ecosystem

Development

- IDE support
- Integrated DevOps
- Local development
- Monitoring
- Visual Debug History

Platform

Functions

- Developer productivity
- Triggers and Bindings
- Flexible deployment options

Manage all events that can trigger code or logic

Logic Apps

- Visual designer
- 200+ connectors (e.g. Twitter, Blob storage)
- Functions orchestration

Execute your code based on events you specify

Event Grid

- Manage all events in one place
- Near real-time delivery
- Broad coverage

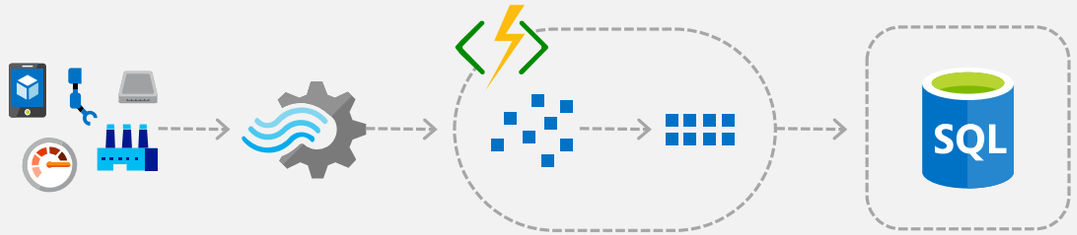
Design workflows and orchestrate processes

Database | Storage | Security | IoT | Analytics | Intelligence

What can you build with Serverless?

Anything that needs to respond to events

Serverless applications

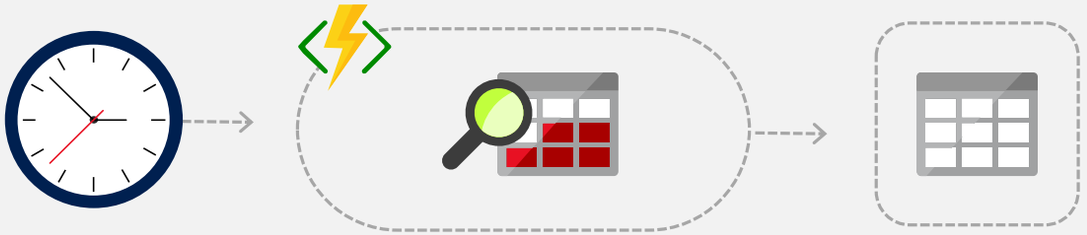


Millions of devices feed into Stream Analytics

Transform to structured data

Store data in Cosmos DB

Timer-based processing

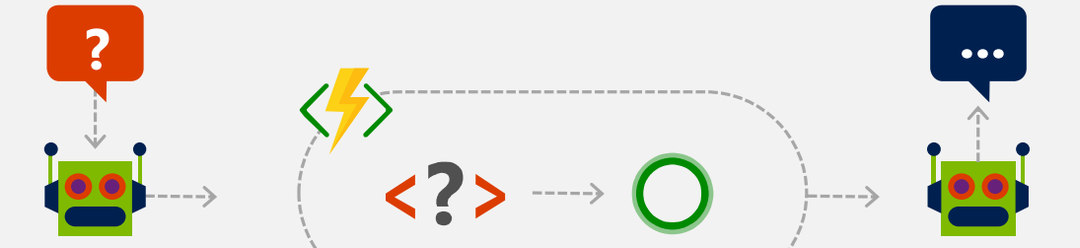


Every 15 minutes

Find and clean invalid data

Clean table

Real-time bot messaging



Message sent to Chatbot

Cortana Analytics answers questions

Chatbot sends response

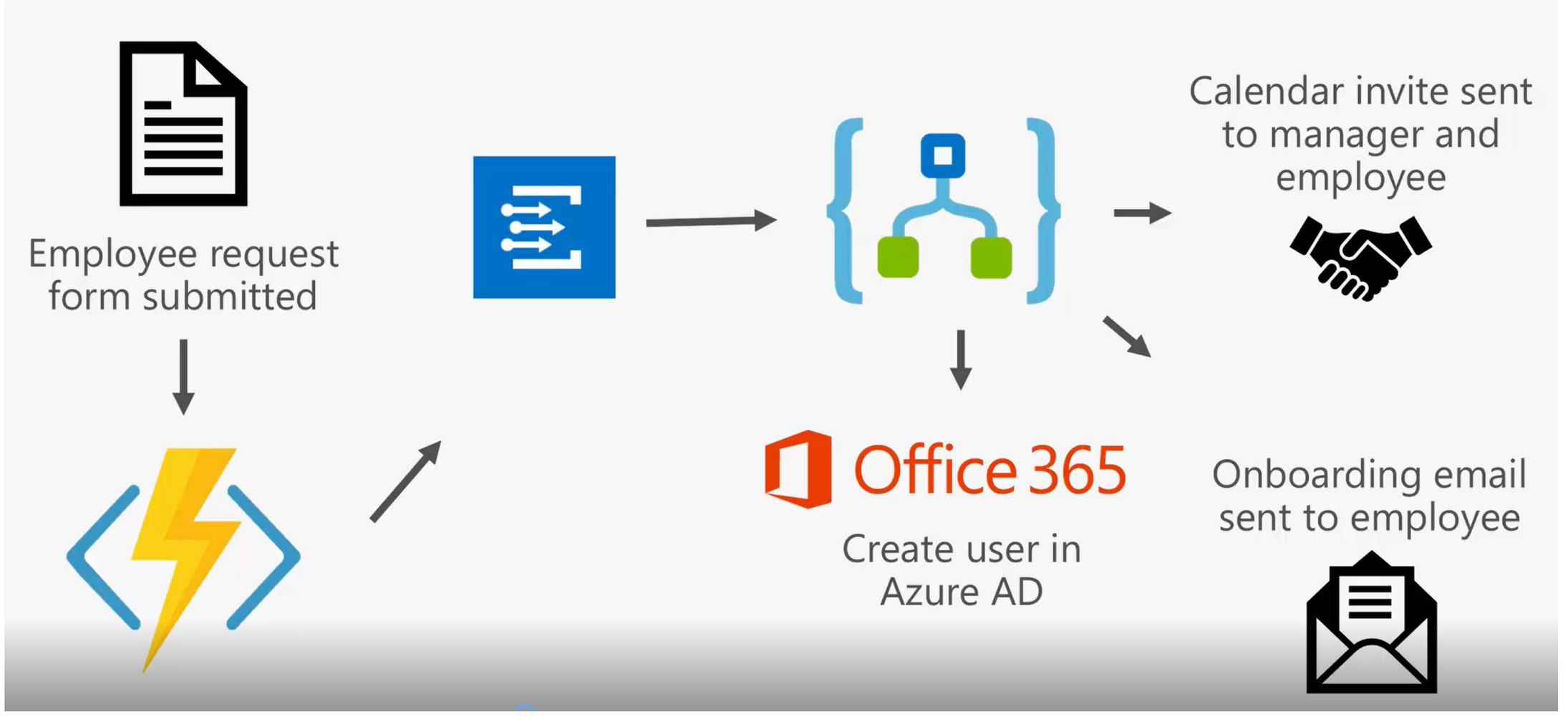
App backends

Photo taken and WebHook called

Stores in blob storage

Produces scaled images

Logic app, functions and event grid together




Microsoft