Azure Architecture Recipes

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Cloud Solution Architect

Motion10

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 @egrootenboer

Setting up...

On-Premises

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?

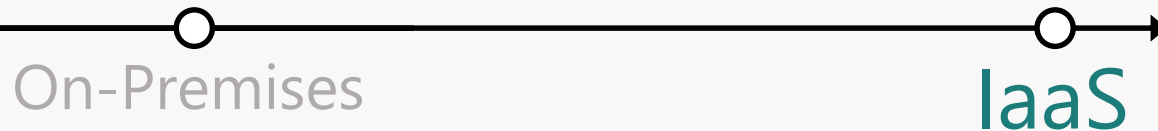How often should I **patch** my **servers**?

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

What is the right **tier** for my business needs?

How can I increase **compute** utilization?

How many **instances** do I need?

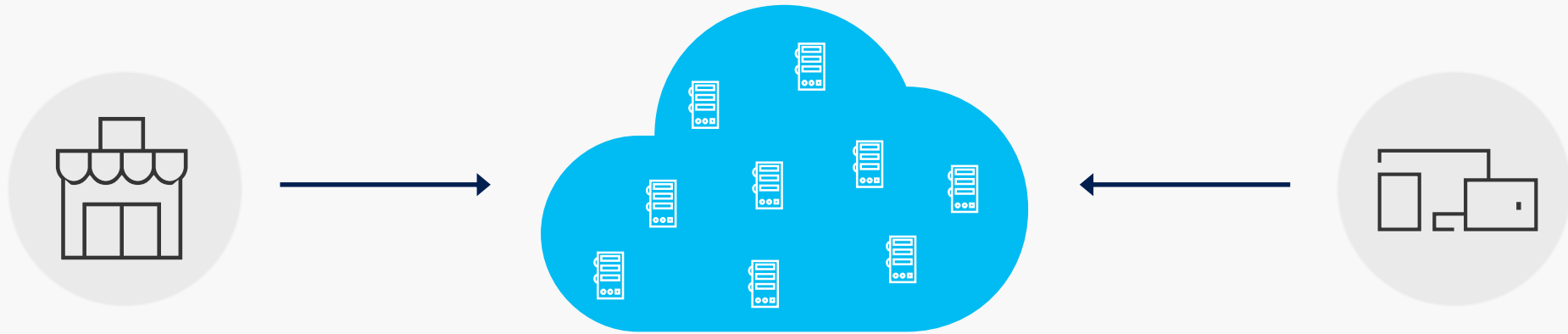How can I **scale** my app?

On-Premises   IaaS   PaaS

How do I **architect** my app?

Serverless, the platform for next gen apps
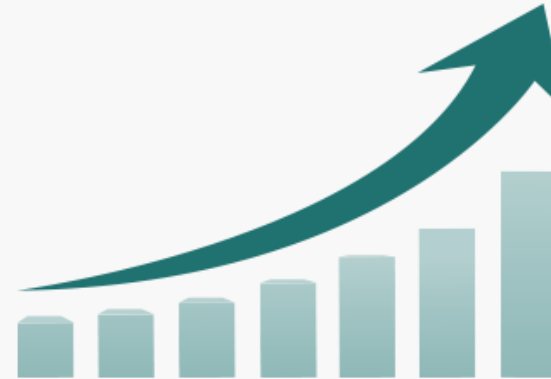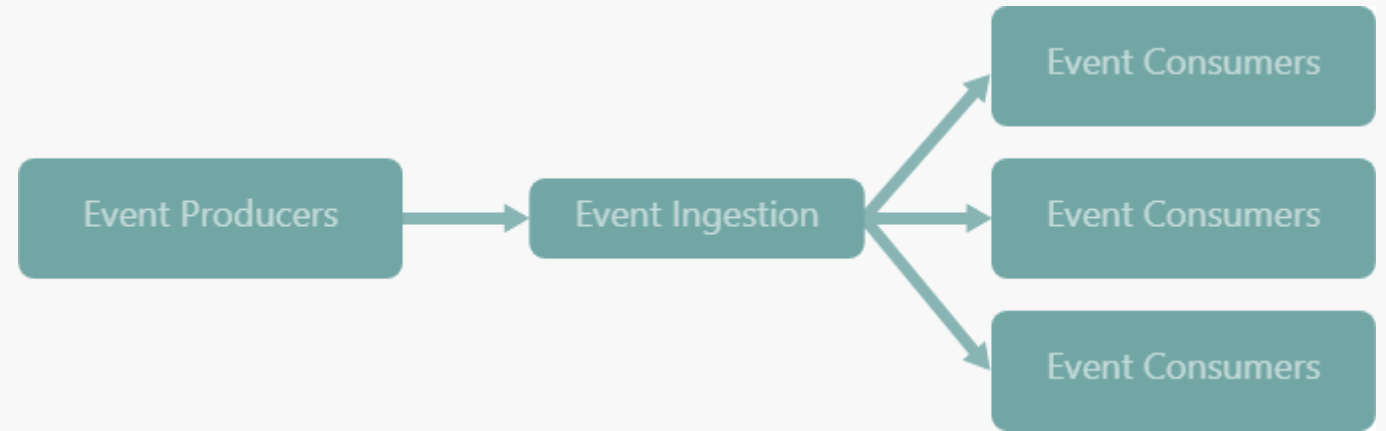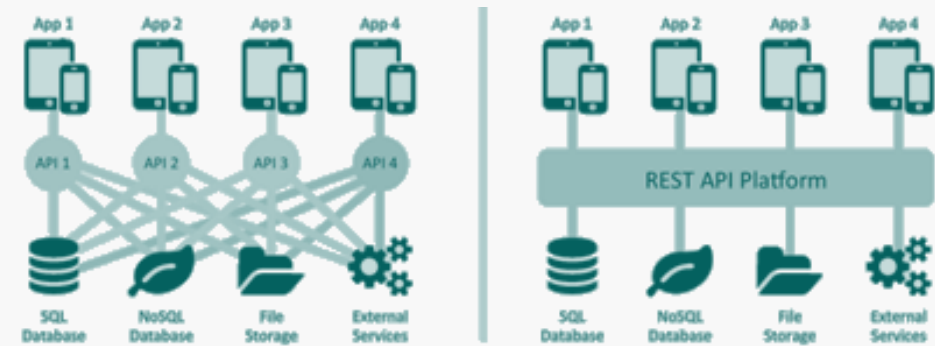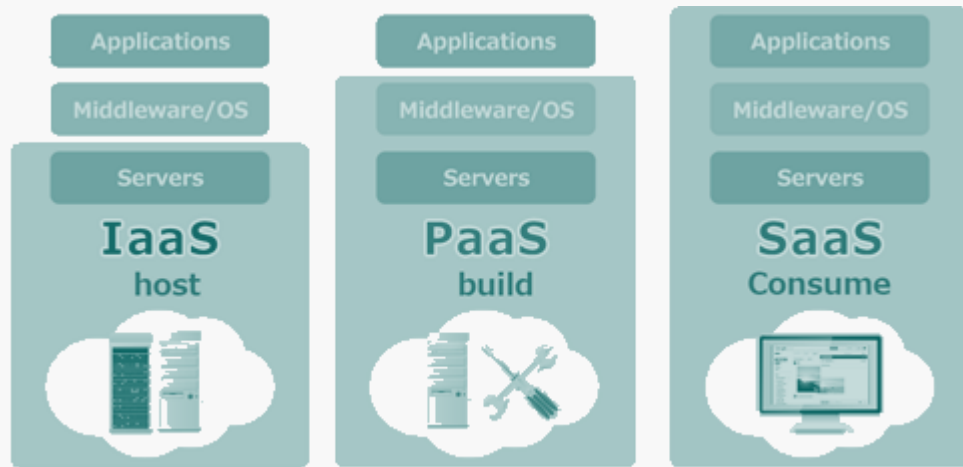
On-Premises · IaaS · PaaS · Serverless

Choosing the right components...

Architecture Principles

Azure Components

Development

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

Platform

Event Grid	Logic Apps	Functions
Manage all events that can trigger code or logic	Design workflows and orchestrate processes	Execute your code based on events you specify

Database	Storage	Security	IoT	Analytics	Intelligence

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

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

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

Monitoring + Management

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

Better Together

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Limitless Possibilities

Let's get cooking!

Let's get cooking

- Customer stories
- Client wishes
- Proposed solution
- Alternatives

Fan Out

- Routing
- Guaranteed delivery
- Single or multiple destinations

Fan Out
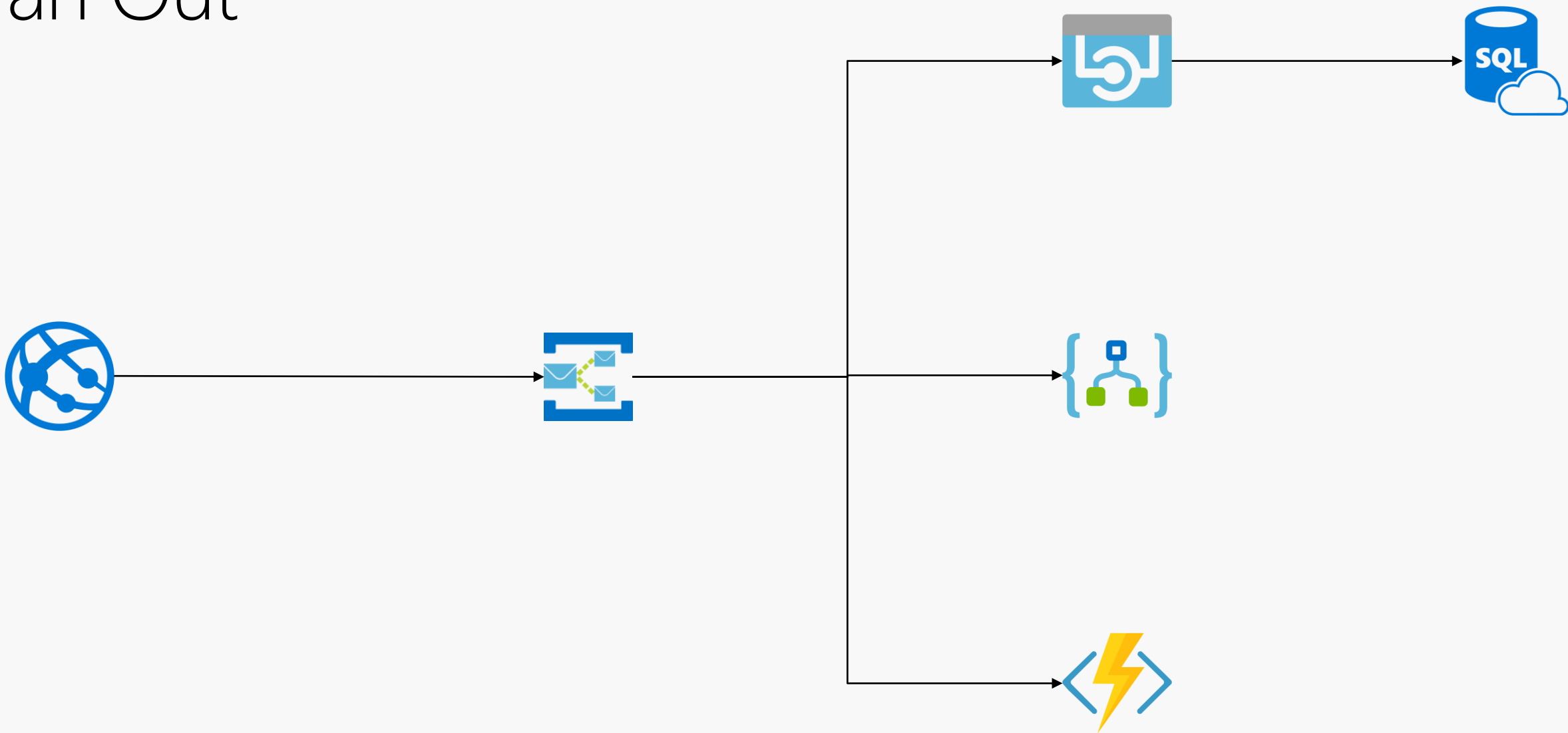
Fan Out

Service Bus Topics

- Enterprise messaging
- Advanced filtering
- Allows batching, duplicate detection, sessions, etc.

Event Grid

- Event driven
- High throughput
- Serverless

Microservices

- Scalability
- Insights
- Programming language

Microservices
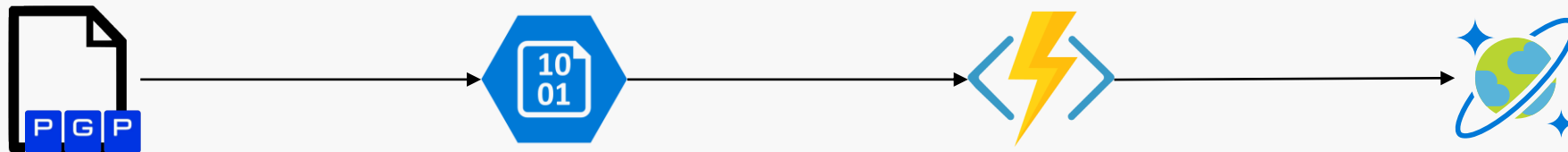
Microservices

Azure Functions

- Serverless

- Event driven

- Scalable

Azure Kubernetes Service

- Container based

- Full language stack available

- Full control

Cloud native?

Ecommerce

- Scalable
- Around the clock
- Peak loads

Ecommerce
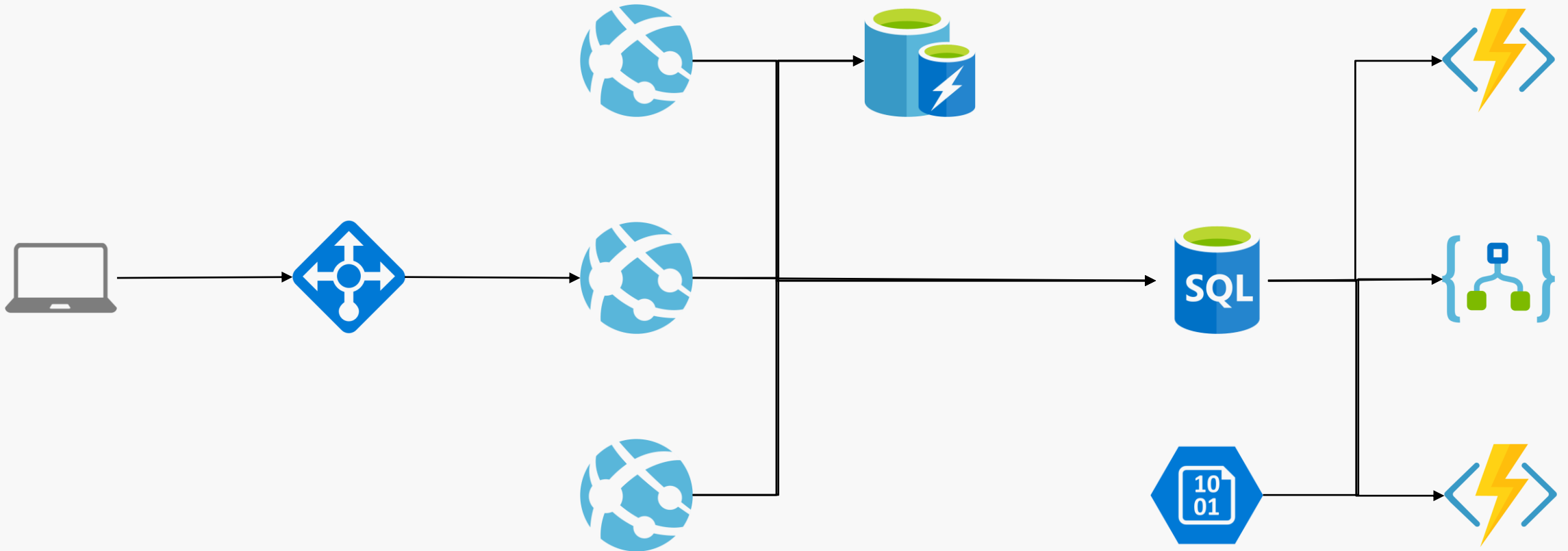
Ecommerce

Traffic Manager

- DNS level traffic distribution
- Load balancing and prioritization
- Geo redirection

Front Door

- SSL offload and application acceleration at the edge
- Global HTTP load balancing with instant failover
- Application firewall and DDoS protection

Workflow

- Easy but powerful design
- SaaS and PaaS connectors
- Monitoring and logging

Workflow
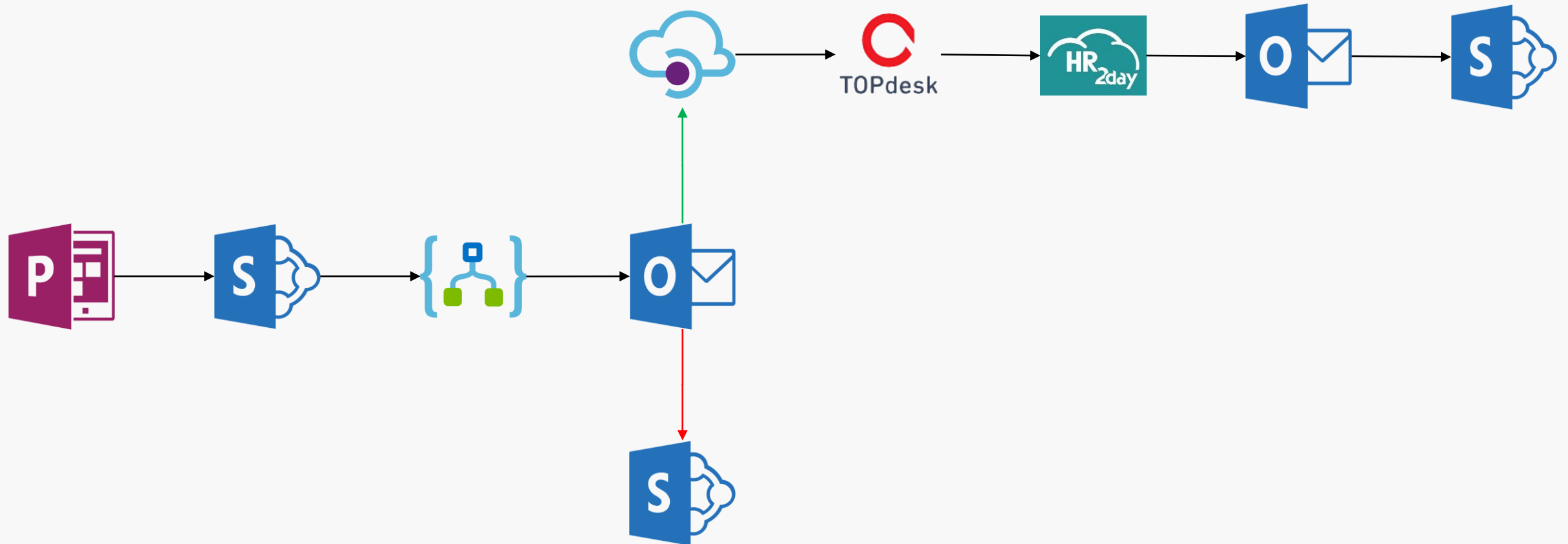
Workflow

Logic Apps

- Over 200 connectors

- Visual designer

- Rich monitoring and management
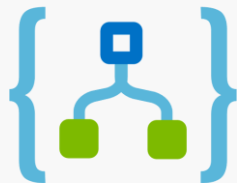
Durable Functions

- Execute code in several languages

- Portable runtime

- Serverless or App Service Plan

DevOps?

Eventing

- No polling
- Scalability
- Stability

Eventing
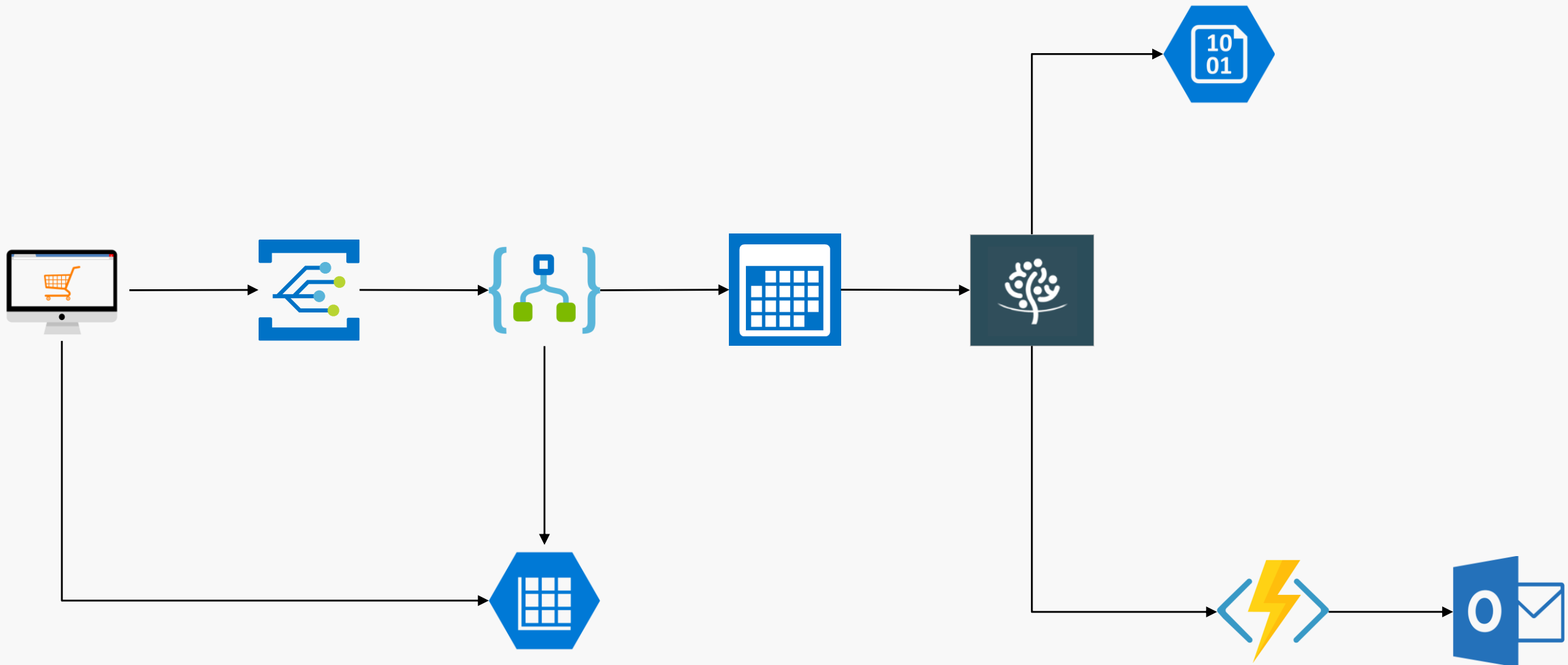
Eventing

Event Grid

- Event driven
- Auto-retry, dead lettering
- Cross cloud

Event Hubs

- Streaming, real-time and batch processing
- Kafka support
- Capture and auto-inflate

Service Repository

- Abstract backend services
- Near real-time insights
- Smarter services

Service Repository
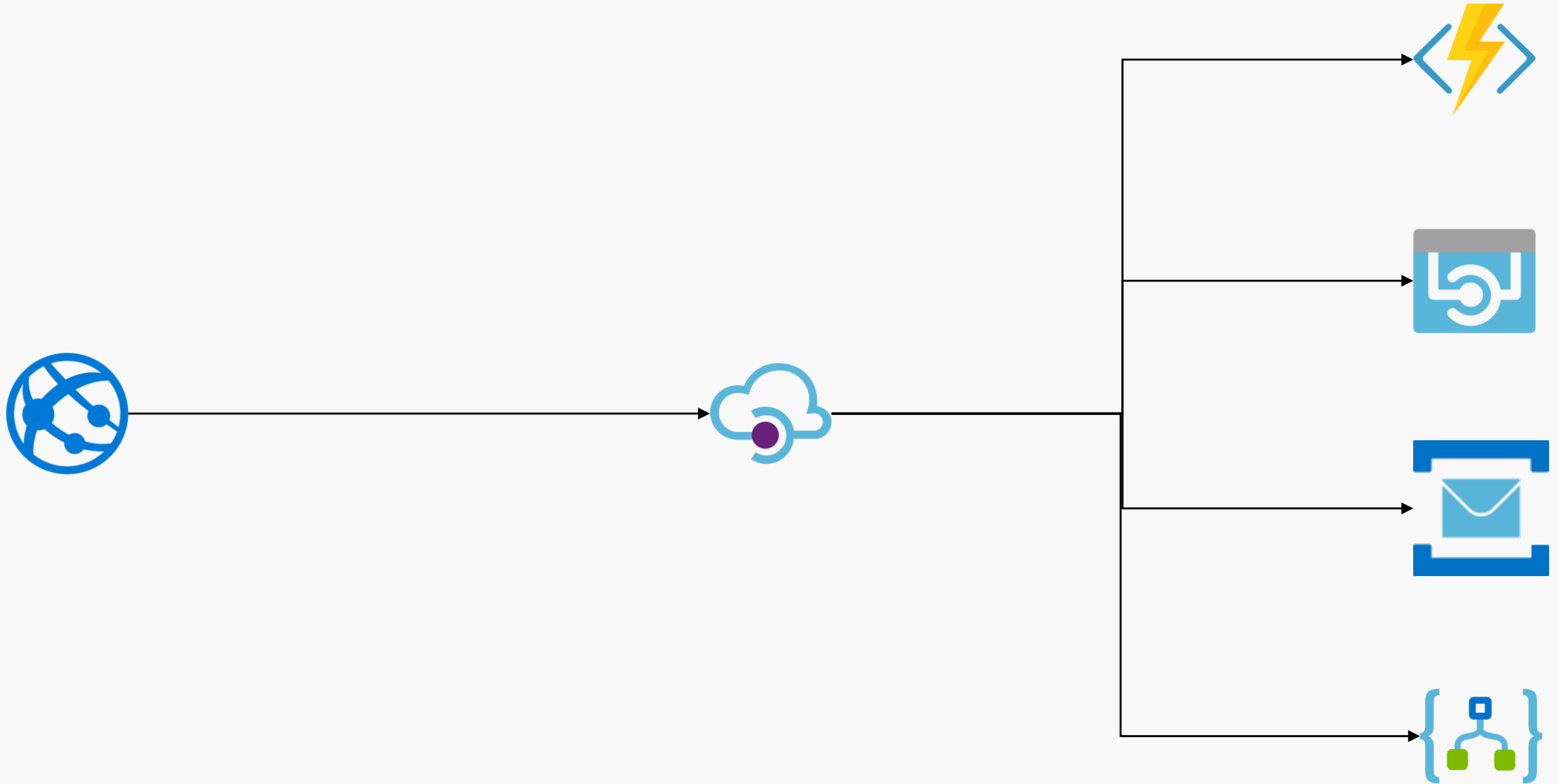
Service Repository

API Management

- Policies

- Security

- Developer portal

Azure Functions

- Routing

- Lightweight

- Cost effective

Almost done…

Key Takeaways

Cloud computing	Focus on value
Cost Efficient	Keep pricing in mind when choosing components
Better Together	Combine services to create powerful scenarios

Thank You

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Track 1

- 15:35 – 16:20
- Skynet Is Talking - Microsoft Bot Framework
- Kris van der Mast

Track 2

- 15:35 – 16:20
- Enter The Matrix: Securing Azure's Assets
- Mike Martin