

# Building Event-driven solutions with Azure Event Grid



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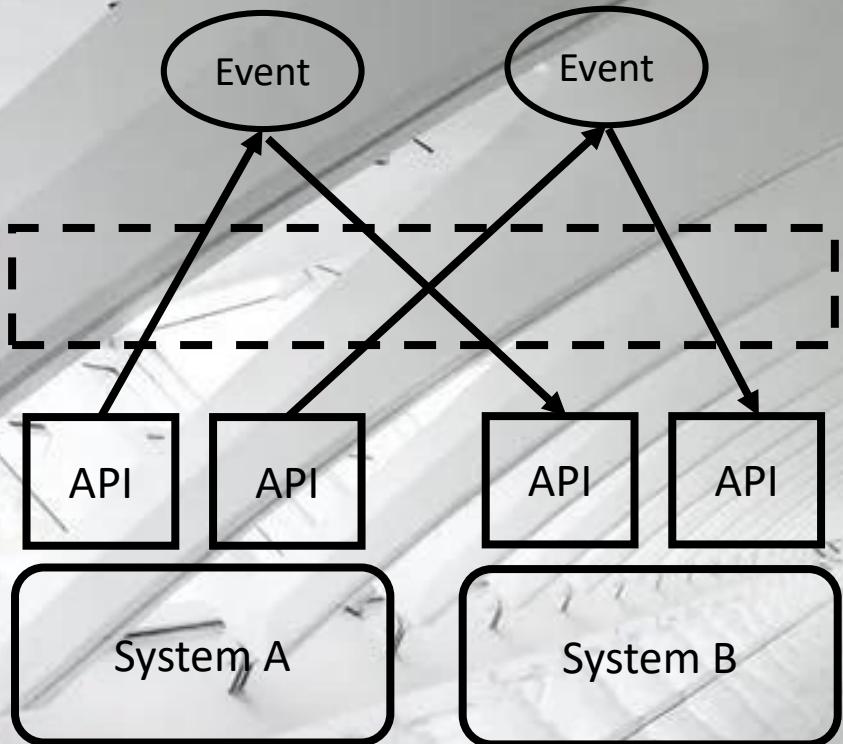
***Technical Integration Architect - HSO***

***@steefjan***



- Event driven architecture (EDA)
- Azure Event Grid
- Event driven solutions in Azure
- Use cases
- Demo's
- Azure competitors
- Takeaways

# Event-driven architecture



Event Bus

- Near real-time
- Loose coupling (decoupling)
- Plug-and-play
- Data exchange based on events



# Events



- Temperature change
- State of an object
- Change in Azure subscription



**Are events something new? Or is EDA new?**

# Event-driven architecture style

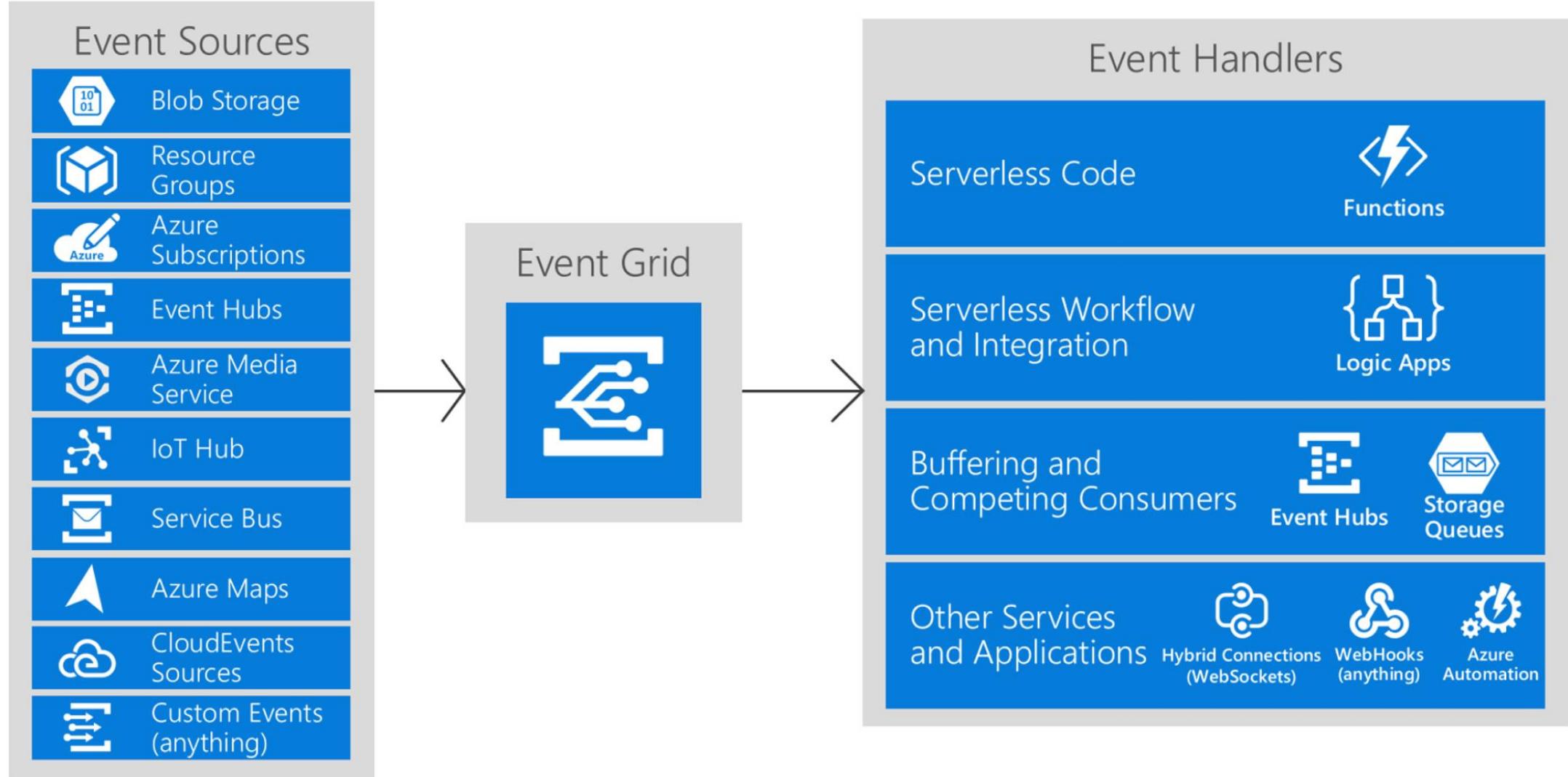
When to use this architecture:

- Multiple subsystems must process the same events.
- Real-time processing with minimum time lag.
- Complex event processing, such as pattern matching or aggregation over time windows.
- High volume and high velocity of data, such as IoT.

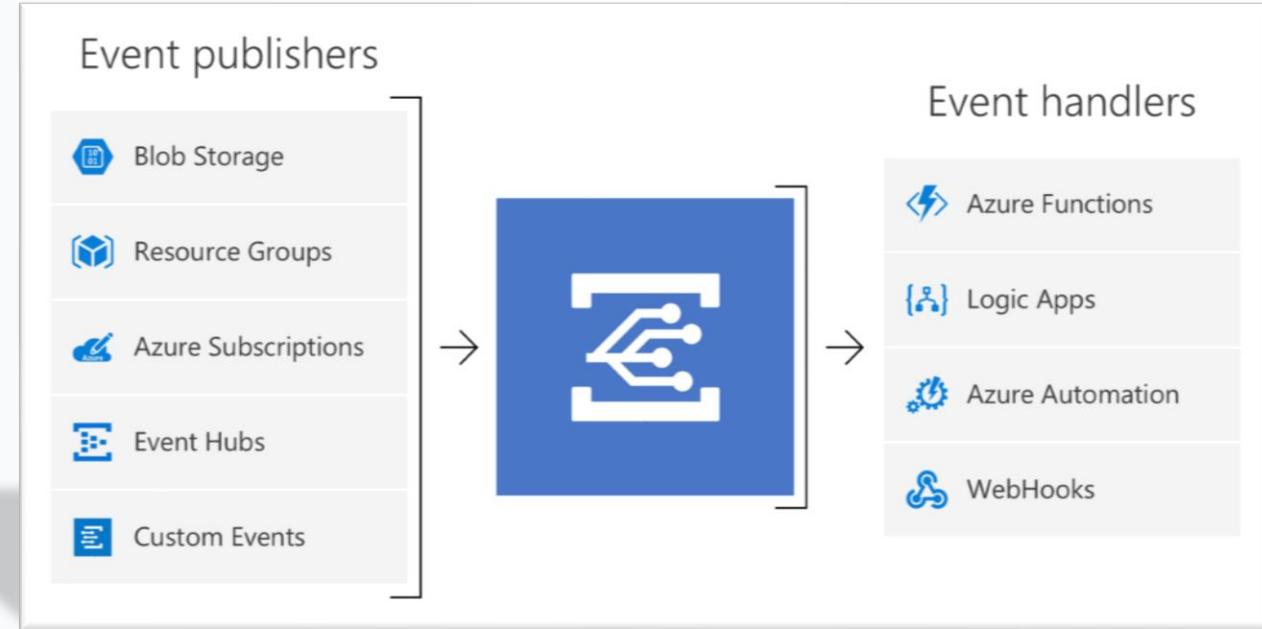


Azure Event Grid





# Concepts



1. Events: what happened
2. Event Publishers: where it took place
3. Topics: where publishers send events
4. Event Subscriptions: how you receive events
5. Event Handlers: the app or service reacting to the event

# Event Grid Schema

## Proprietary (Microsoft)

```
[  
 {  
   "topic": string,  
   "subject": string,  
   "id": string,  
   "eventType": string,  
   "eventTime": string,  
   "data":{  
     object-unique-to-each-publisher  
   },  
   "dataVersion": string,  
   "metadataVersion": string  
 }  
 ]
```

## CloudEvent (CNCF)

```
[  
 {  
   "specversion": string,  
   "type": string,  
   "source": string,  
   "id": string,  
   "time": string,  
   "subject": string,  
   "dataschema": string  
   "data":{  
     object-unique-to-each-publisher  
   },  
 }  
 ]
```

# Routing of events

The key capability of Event Grid is Intelligent routing

Routing of events **through filtering of:**

- Subject
- Type
- Data

# Examples

Event Type:

```
"filter": { "includedEventTypes": [  
    "Microsoft.Resources.ResourceWriteFailure",  
    "Microsoft.Resources.ResourceWriteSuccess" ] }
```

Subject:

```
"filter": { "subjectBeginsWith":  
    "/blobServices/default/containers/mycontainer/log", "subjectEndsWith": ".jpg"  
}
```

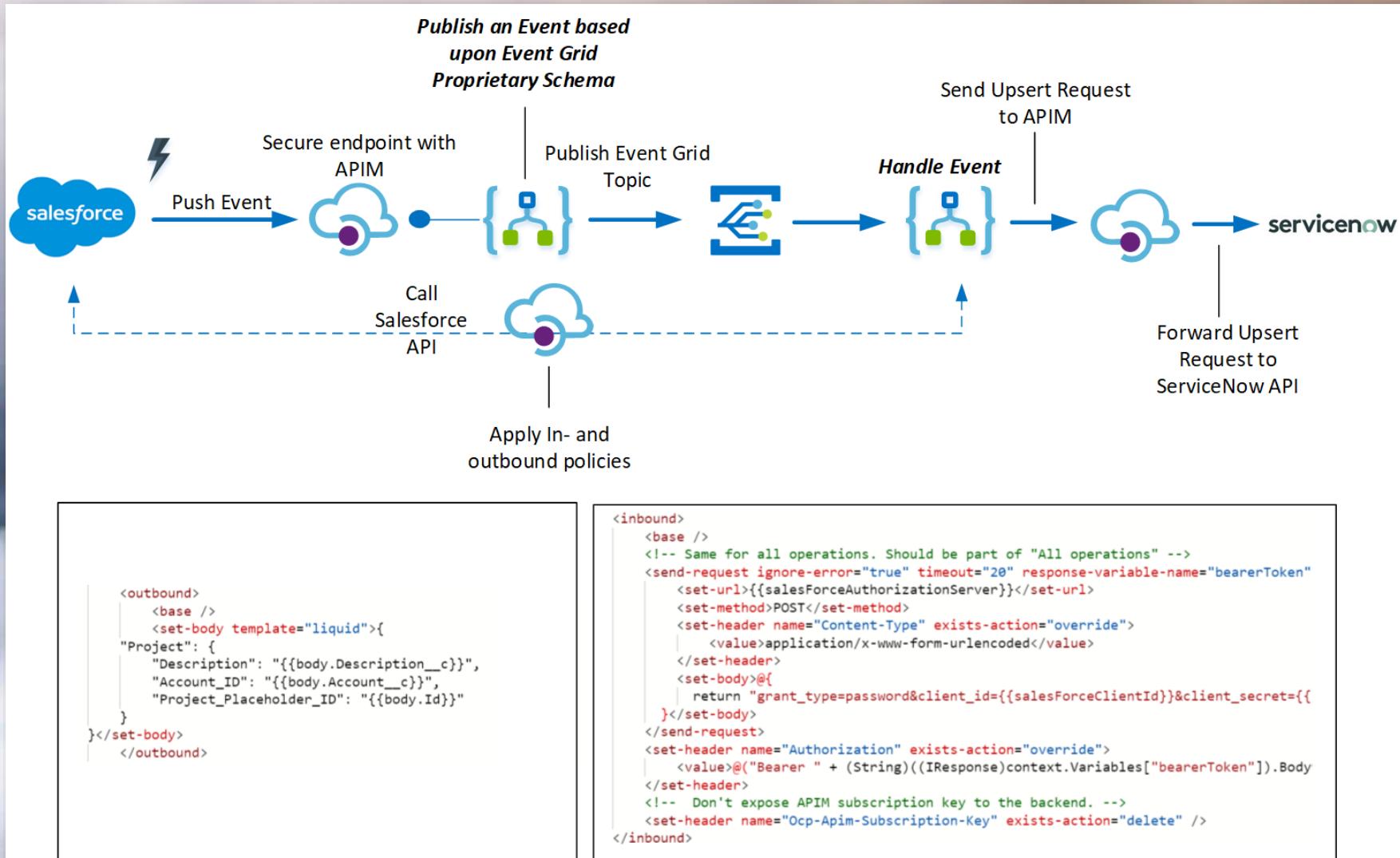
Advanced:

```
"advancedFilters": [{ "operatorType": "StringContains", "key": "data.key1",  
    "values": [ "microsoft", "azure" ] }]
```

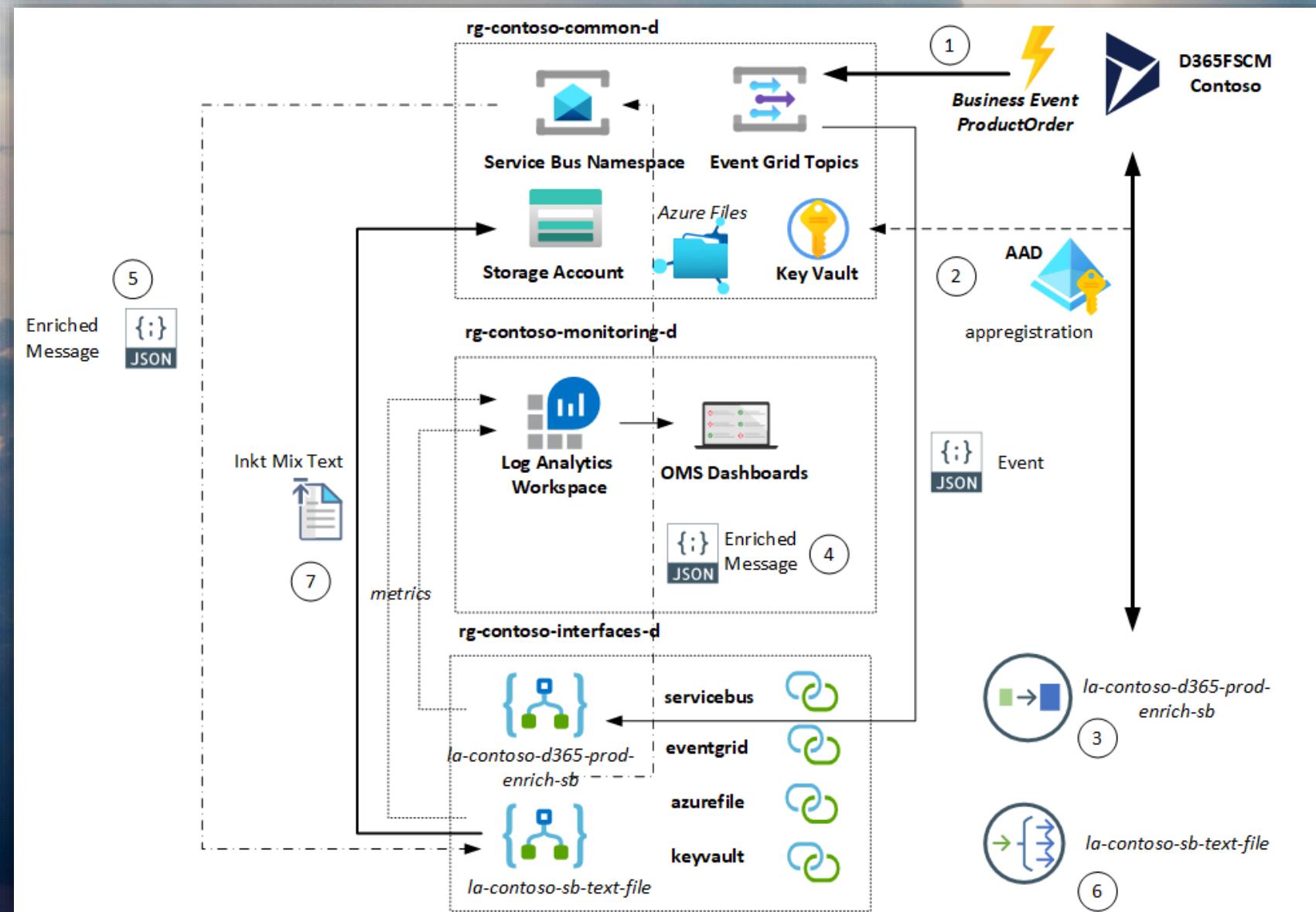
A wide-angle photograph of a sunset over a calm sea. The sky is filled with dramatic, billowing clouds bathed in warm orange, yellow, and pink hues. The horizon line is visible in the distance, where the sea meets the sky.

Event-driven solutions

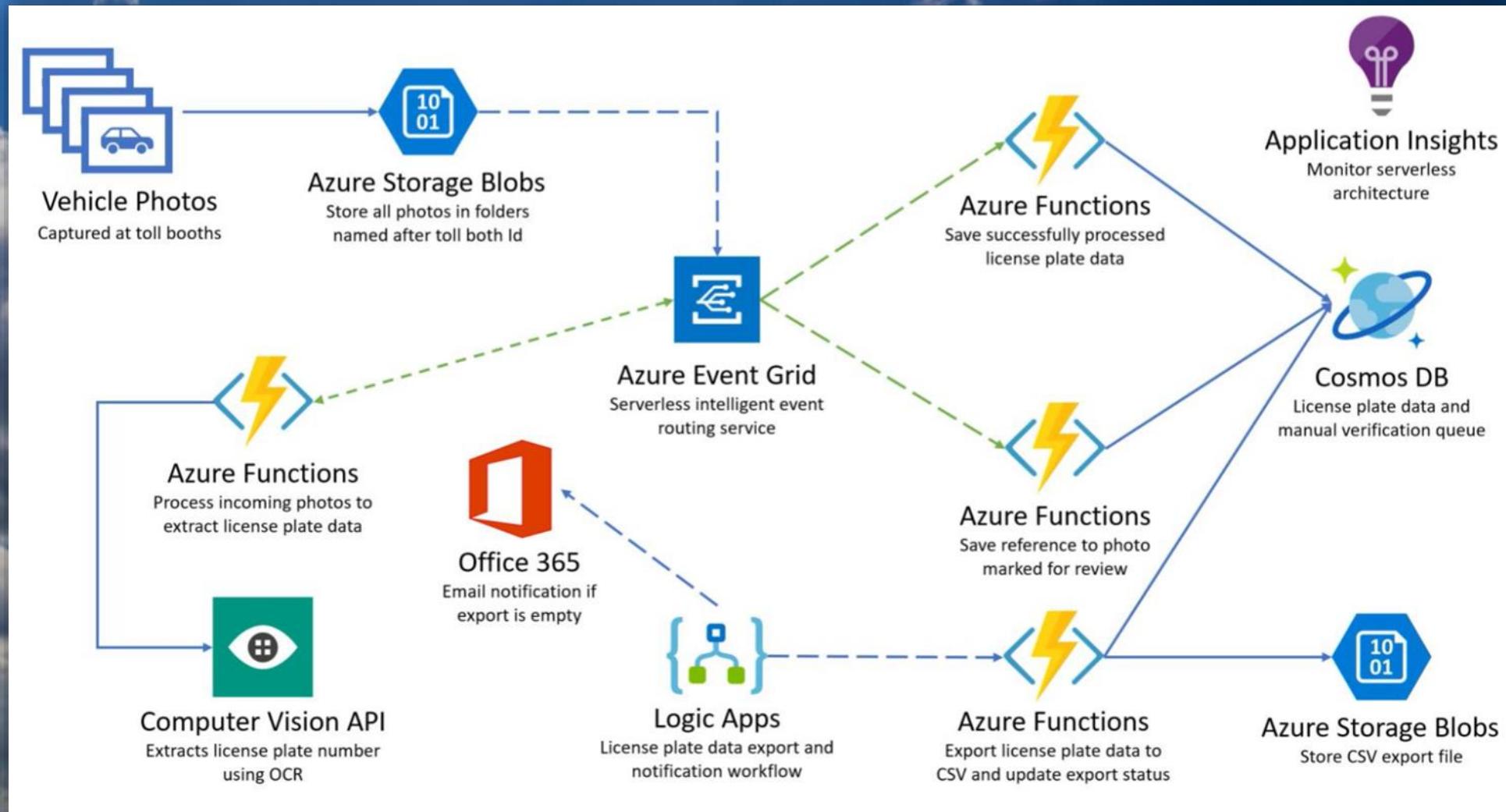
# Cloud-native integration - SaaS



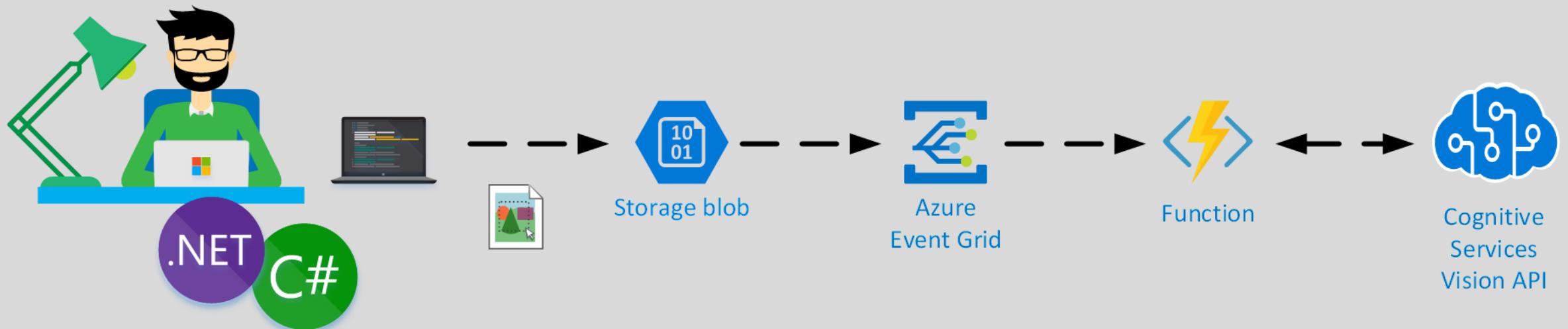
# Cloud-native integration – D365FSCM



# Serverless Event-driven solution



# Demo – Azure Eventgrid



# Don't forget

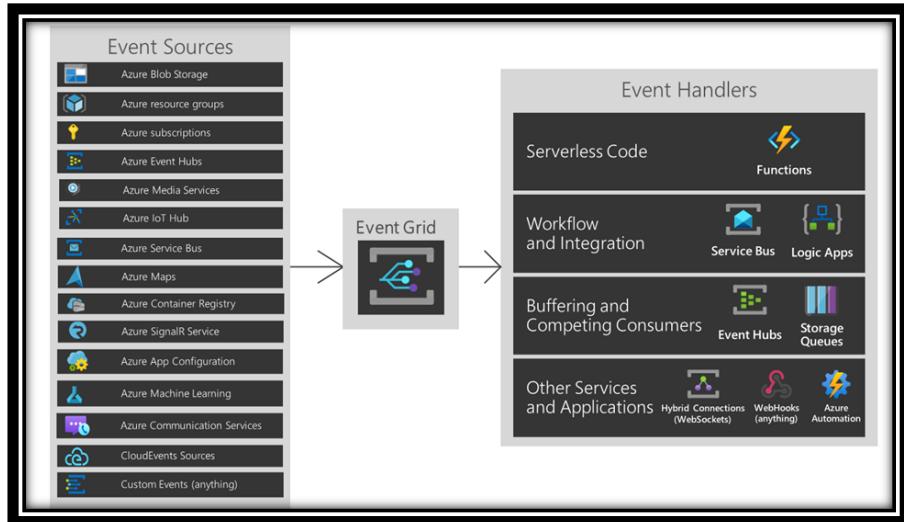
- With subscriptions [enable](#) dead-letter through integration with storage account
- Use [Event Grid Viewer](#) for troubleshooting
- Batch size limit for events sent to Event Grid as a JSON array is still [1MB](#) – each event is [64kb max!](#)
- Serverless technology – [service fabric](#) under the hood
- Event Grid [domains](#) to manage the flow of custom events to your various business organizations, customers, or applications
- Difference in [system](#), [custom](#) and [partner](#) topic.



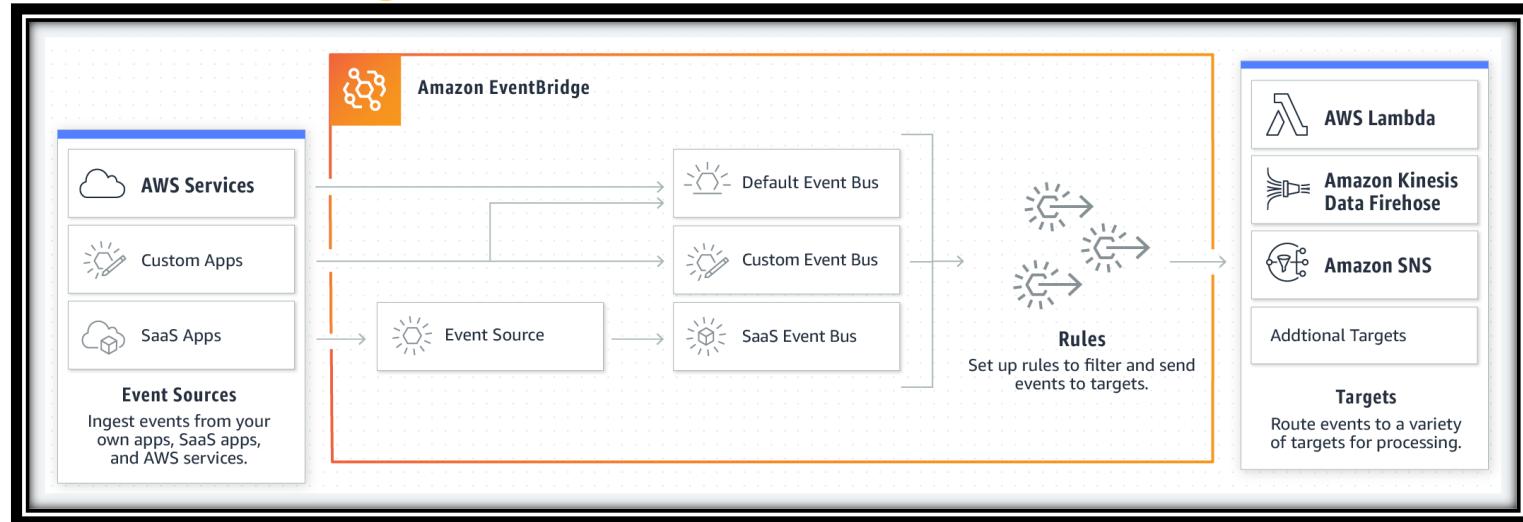
# The Competition



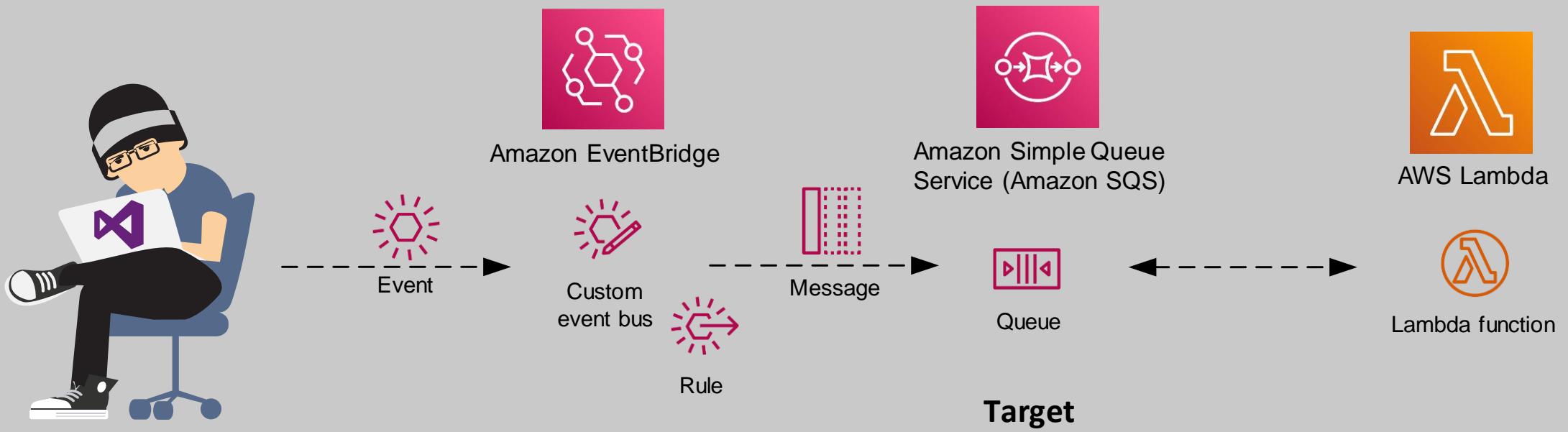
## Azure Event Grid

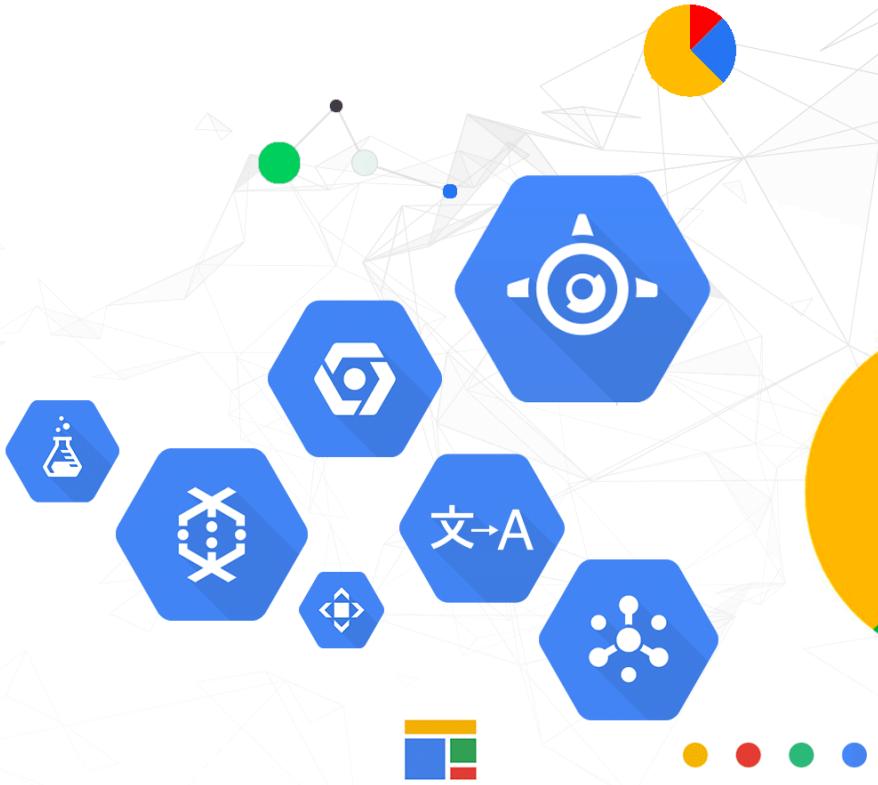


## EventBridge

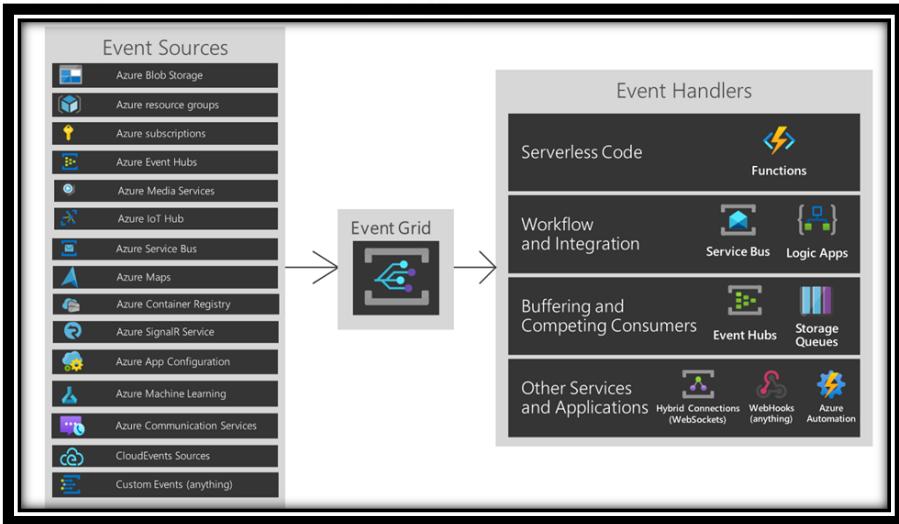


# Demo – AWS EventBridge

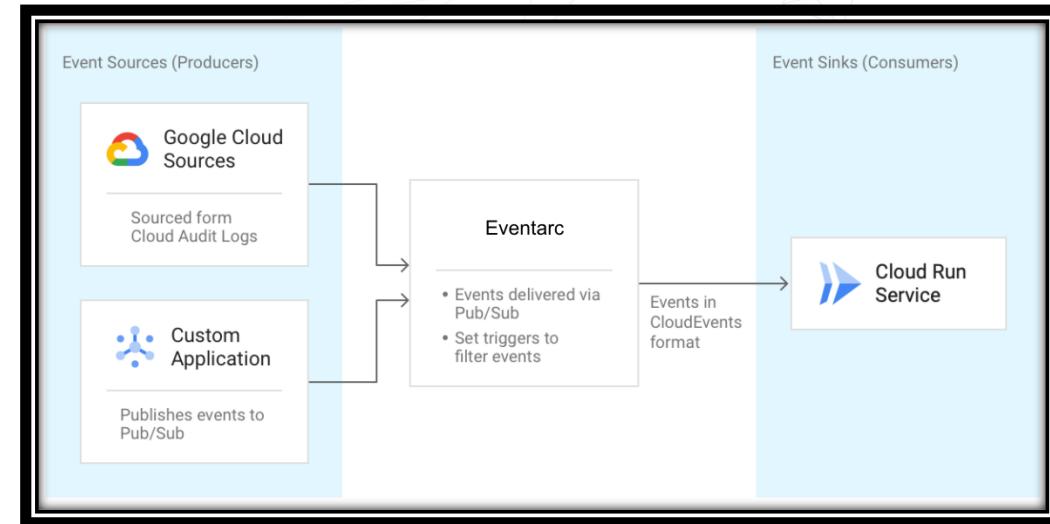


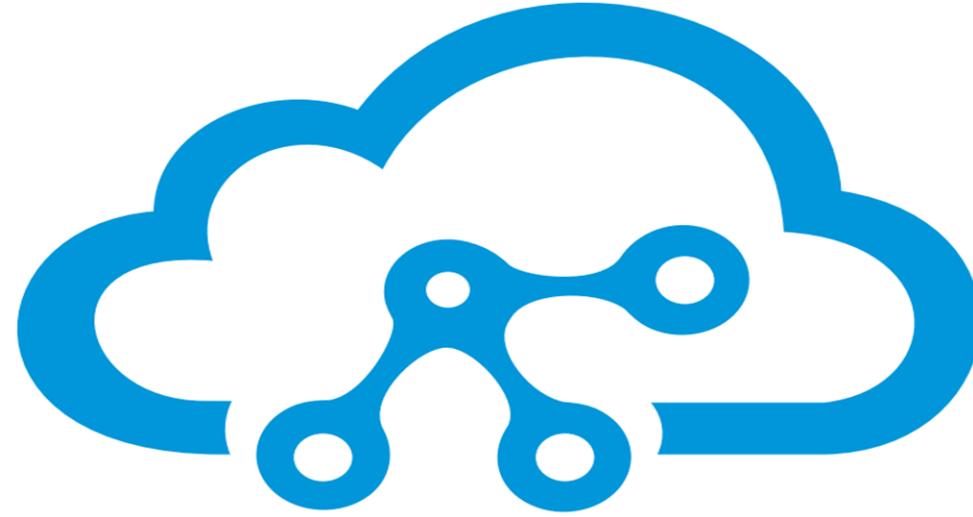


# Azure Event Grid



# Eventarc

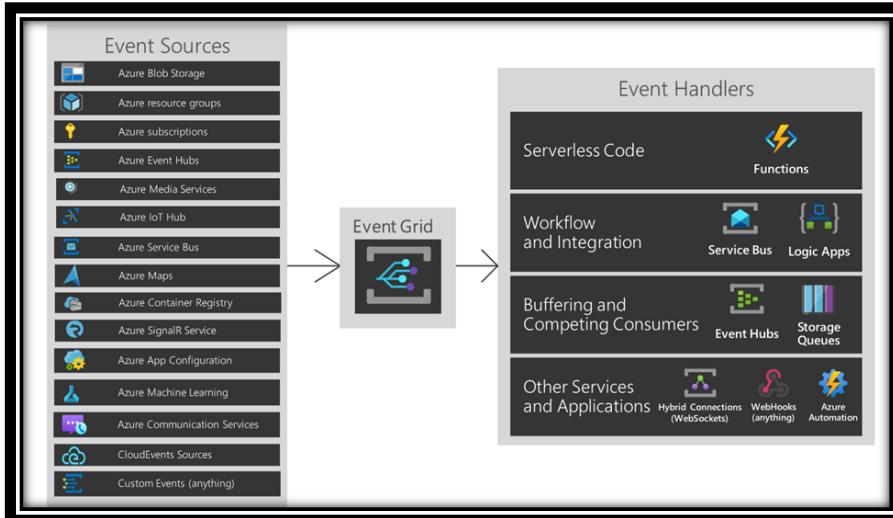




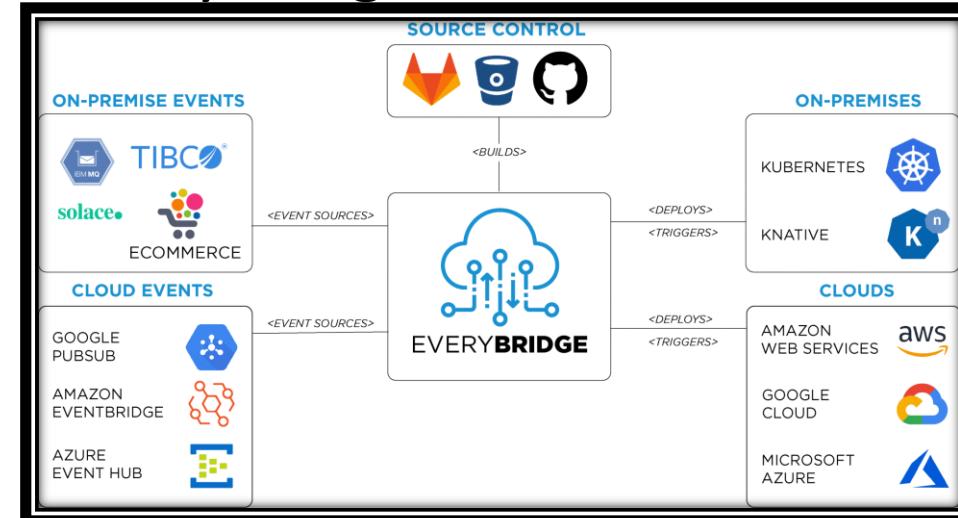
# TRIGGERMESH

## CLOUD NATIVE SERVERLESS INTEGRATION

Azure Event Grid



EveryBridge

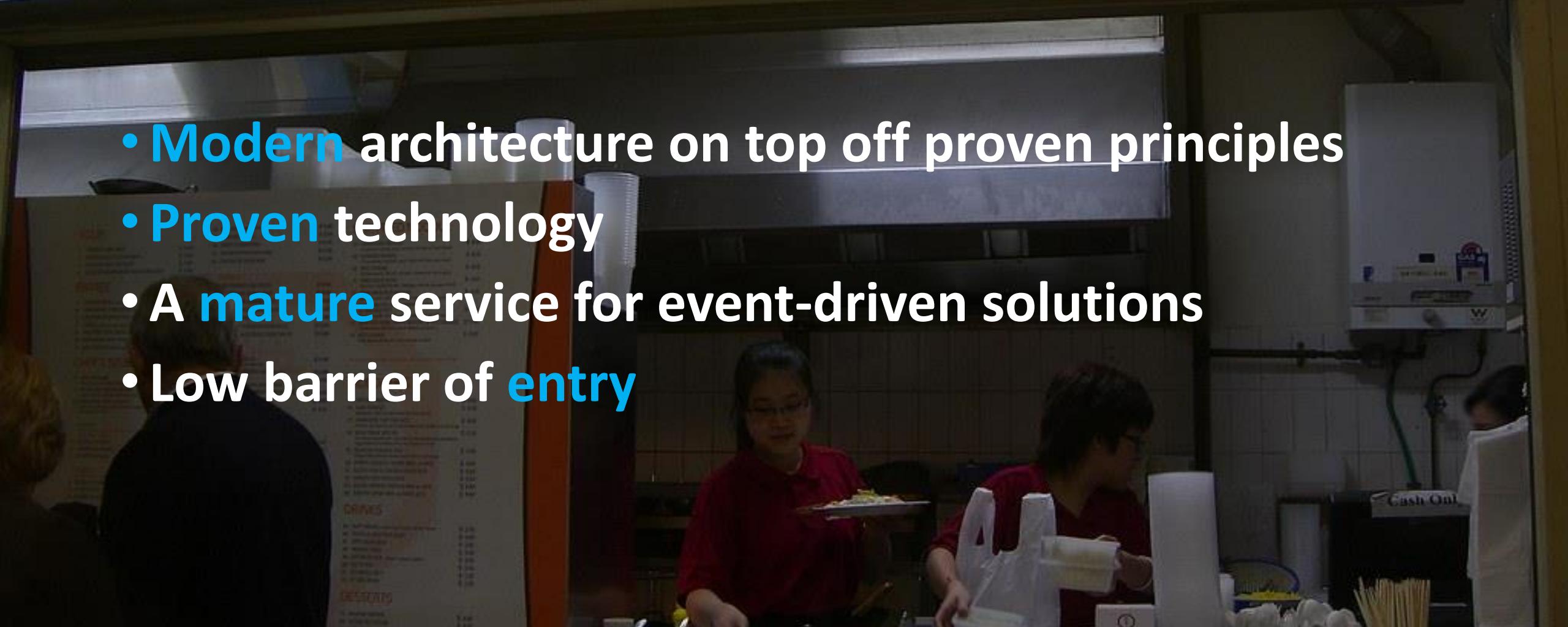


# Takeaways

# LAKSA KING

*Authentic Malaysian Chinese Food*

- Modern architecture on top off proven principles
- Proven technology
- A mature service for event-driven solutions
- Low barrier of entry



# Resources

- [Azure Event Grid](#)
- [Azure Architecture Center](#)
- [Serverless Notes](#)
- [InfoQ](#)
- [Microsoft Docs](#)
- [Medium Blog](#)

# Managing Events in the Cloud with Azure Event Grid

## When to Choose Event Grid?



With Azure, no event services are as well-suited for messaging: Event Hubs, Event Grid, and Service Bus. Each service has characteristics, capabilities

Focus on Event Grid, and it's one case for the service is available at the end, rather than the various services are used simultaneously or sequentially.

- Always available with an SLA of 99.99%, availability guaranteed from operator to regional failure.
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Discover about the missing piece in the Azure Integration puzzle

<https://www.serverless360.com/ebook/managing-events-in-the-cloud-with-azure-event-grid>



Questions  
**Answers**