

# **Media Cloud and Microservice Architecture**

Serverless Architecture

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<https://tech.ebu.ch/groups/mcma>

# Take control of you infrastructure

- Choose **where** :
  - Select your cloud provider(s)
  - Same design model can be applied to your on-premise infrastructure
- Choose **what** :
  - Select between different services to meet a cost or performance goal
  - Expand capabilities by easily leveraging new services
- Choose **how** :
  - Provide choice of development technology (Node.js, DotNet Core)
  - Leverage Open Source component for configuration and deployment
- Choose **who** :
  - Let non cloud experts start with enterprise ready infrastructure
  - Only implement what is specific to your scenario
- Choose **when** :
  - Enable you to simply expand and provision your infrastructure as needed

# Design considerations

- Limit learning curve
- Share resources like reusable code
- Repeatable patterns
- Easily configure and deploy
- Developer friendly
- Follow opensource mentality

# MCMA Architecture Concepts

- Serverless/Microservice strategy for media
- Best practices to implement media workflows in the cloud
- Methodology to support services from most common cloud providers
- Libraries to facilitate implementation of cloud services
  - Service sequencing
  - Job management, tracking and monitoring
  - Data store and repository
  - Service registry
  - Interaction with native cloud services, open source and commercial components
  - Libraries and sample implementations available on GitHub

# Technology stack details

- **Code**

- Node.js
- DotNet core/C#

- **Libraries**

- MCMA Core
- MCMA AWS
- MCMA Azure

- **Code orchestrator**

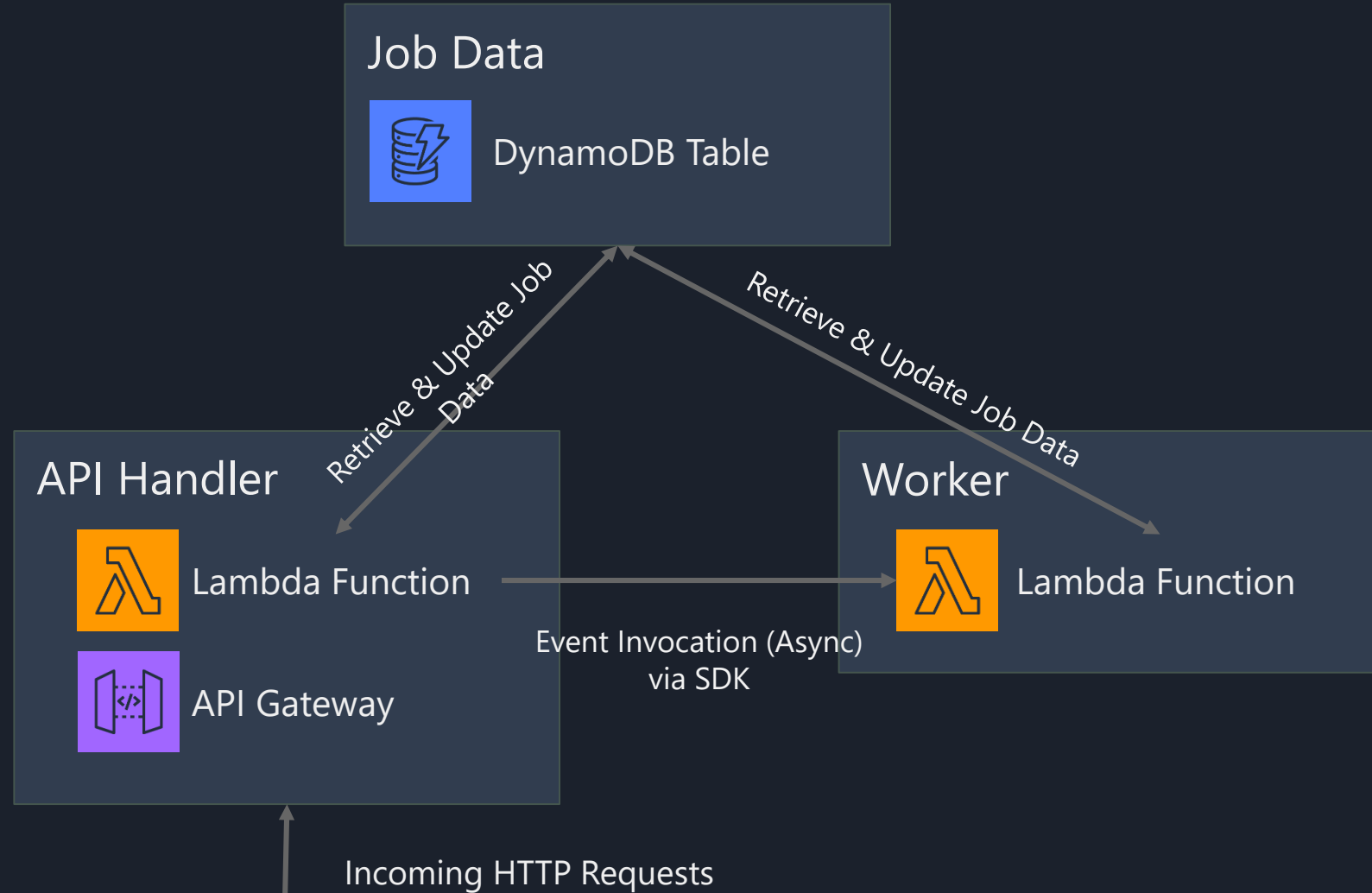
- Gradle
- Jenkins
- .NetCore Script

- **Deployment and configuration**

- Terraform

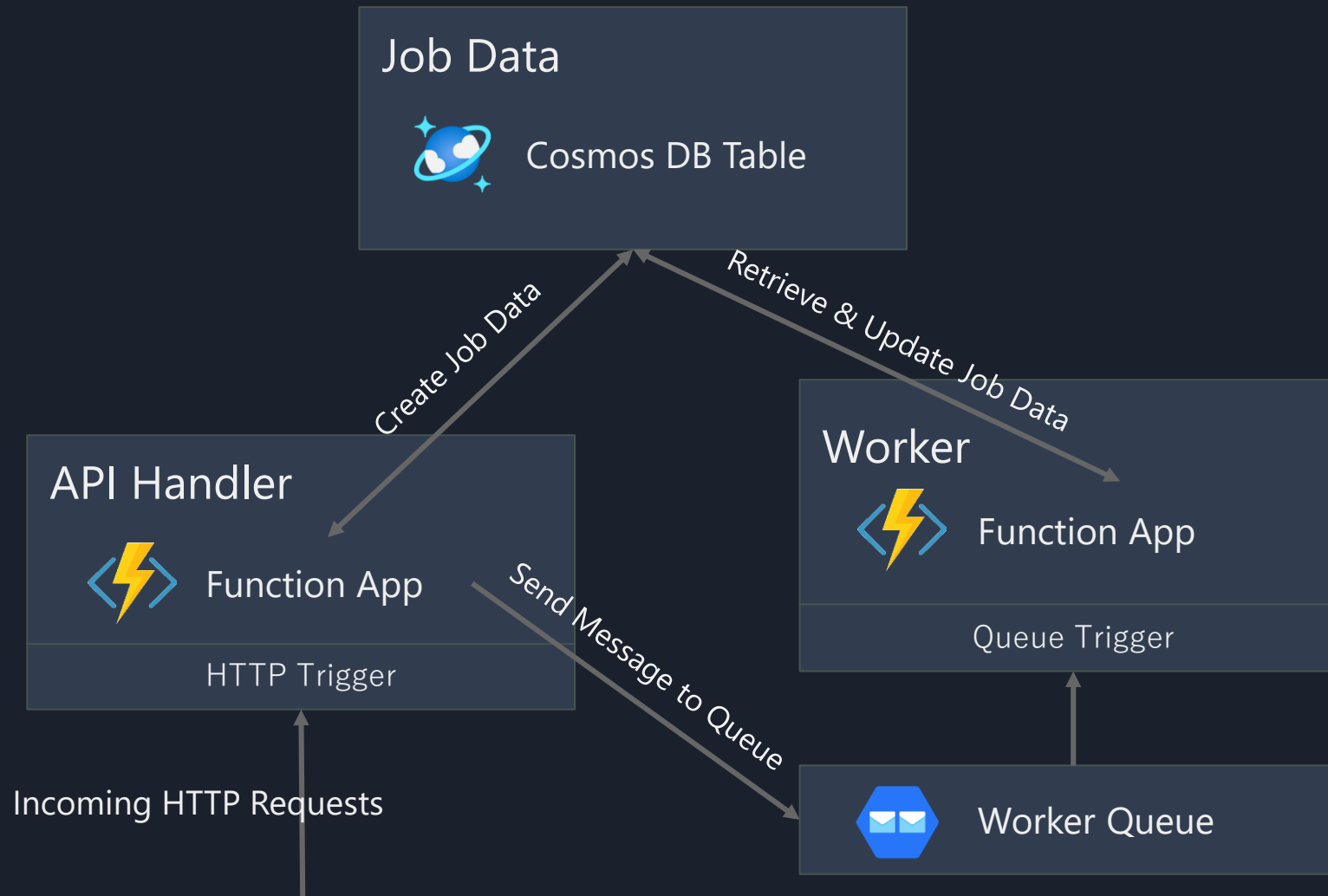
# Architecture of a Typical MCMA Service

AWS



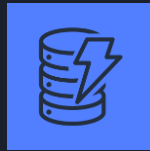
# Architecture of a Typical MCMA Service

Azure



# MCMA Main Resources Overview

## AWS



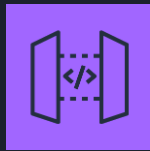
DynamoDB



S3



Lambda  
Functions



API  
Gateway



Step  
Functions

## Azure



Cosmos DB



Blob  
Storage



Queue  
Storage



Function  
Apps

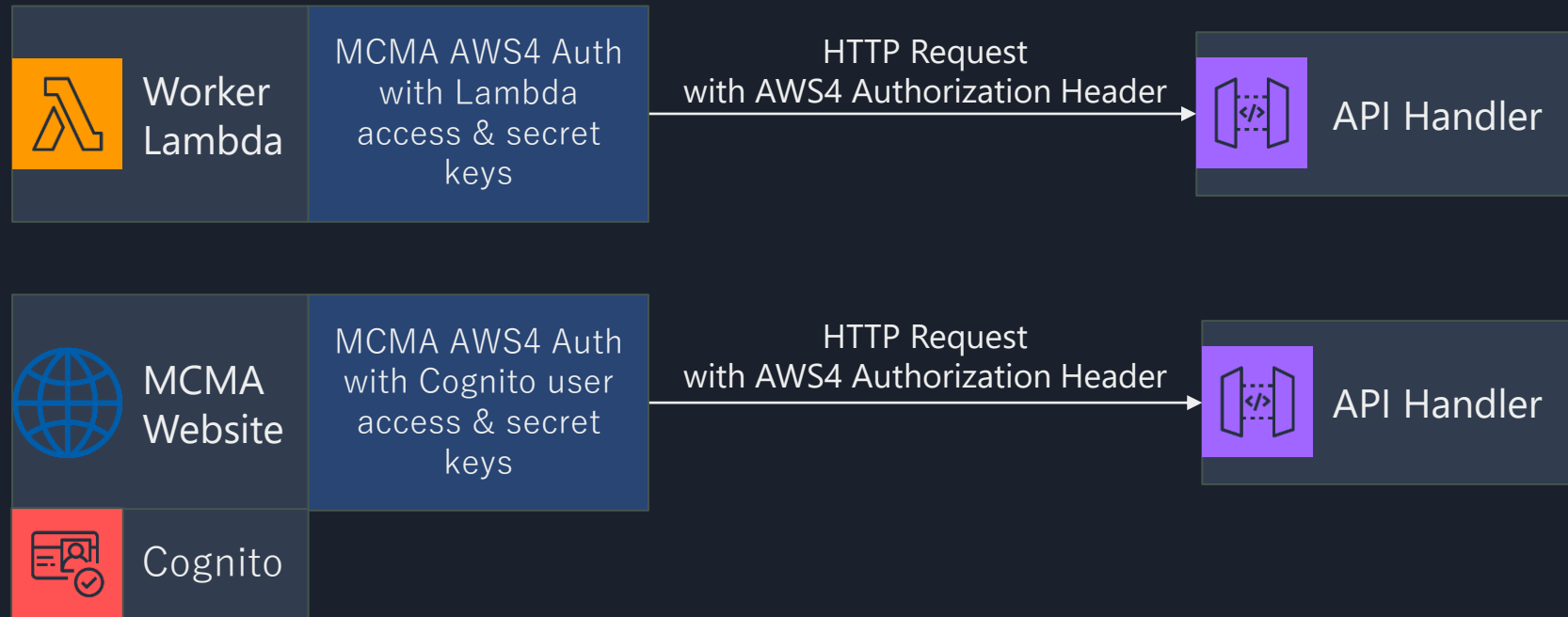


Logic Apps



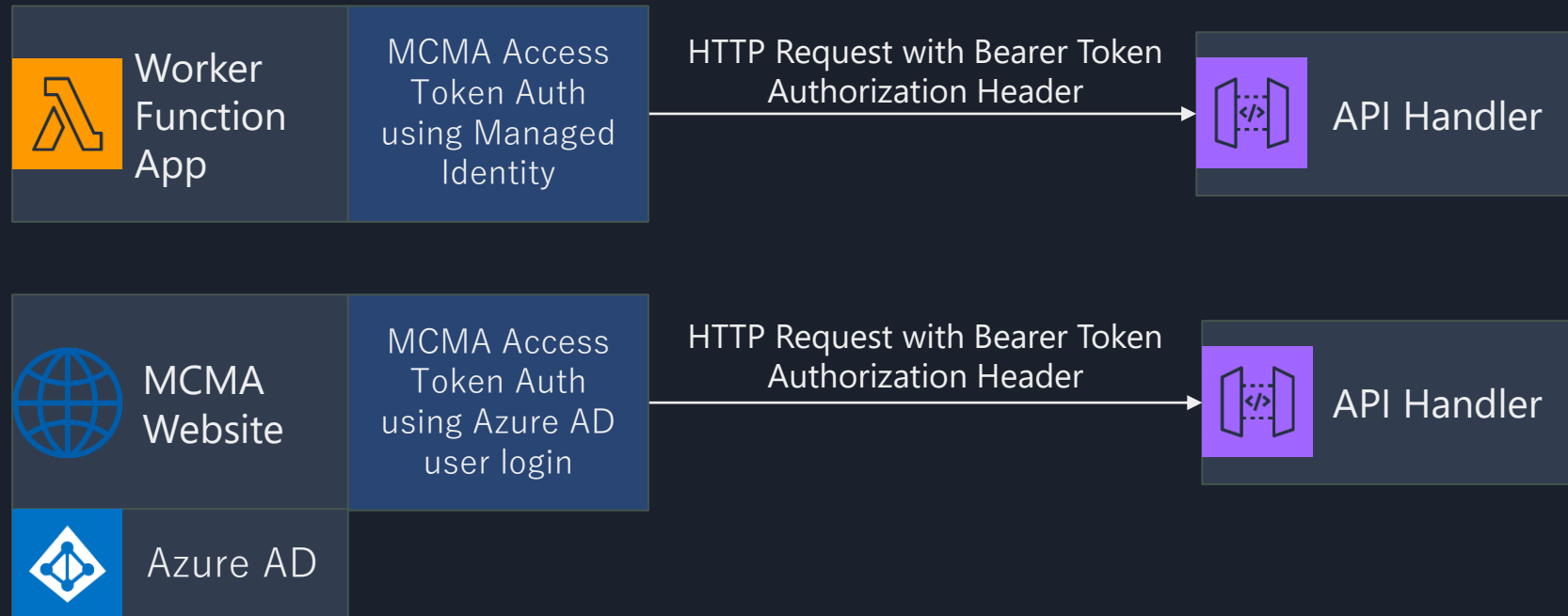
# MCMA Service Authentication and Security

AWS

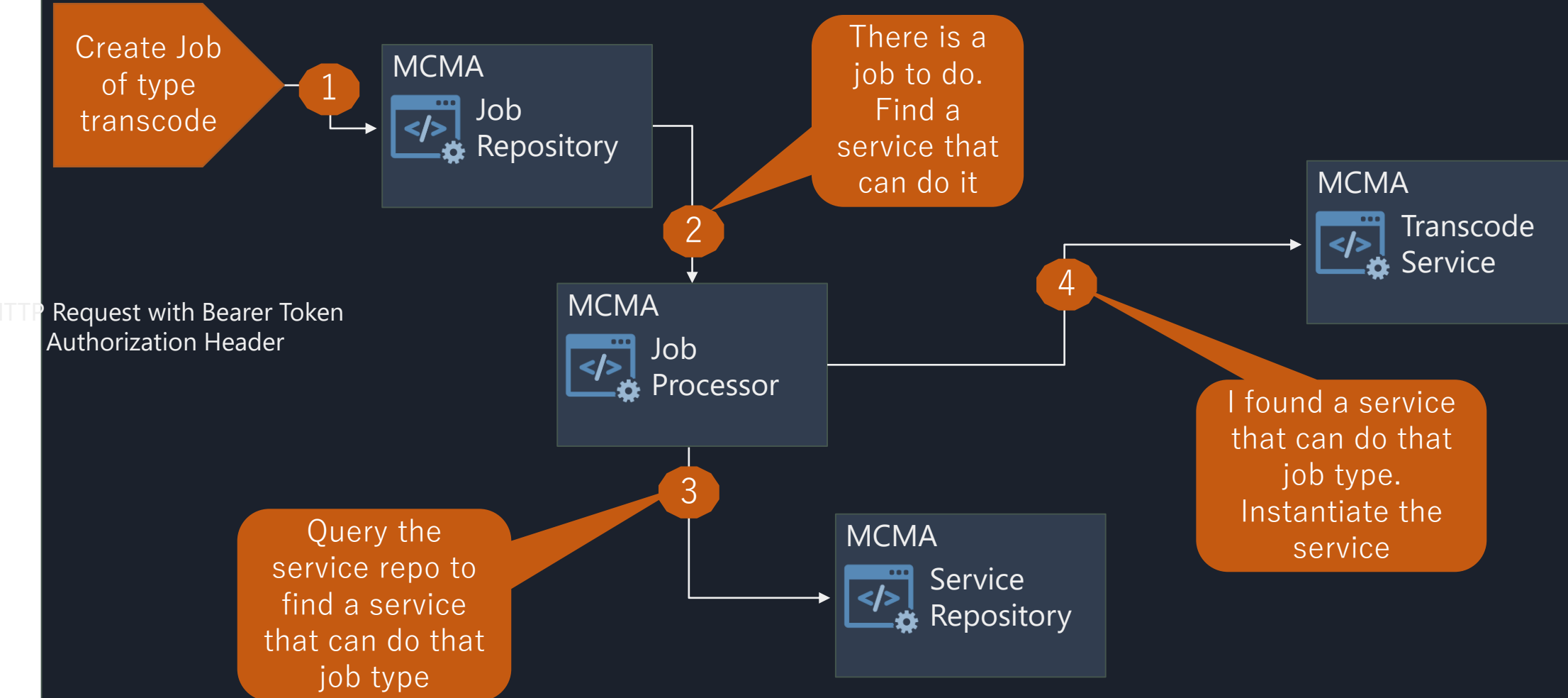


# MCMA Service Authentication and Security

Azure



# MCMA Service Instantiation Model



# MCMA Service Instantiation Model : Workflow

