Virtual Boston Azure

Azure Functions 101

About Me

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Agenda

1. Azure Functions Overview

    ✓ What is Azure Functions?

    ✓ Why do we need it ?

    ✓ How does Azure Functions work?

2. Tools

3. Demo

    ✓ Creating Azure Function Apps

    ✓ Creating, Testing and Monitoring - Azure Functions using Azure Portal

    ✓ Creating & Deploying Azure Functions - Visual Studio 2019

    ✓ Testing Azure Functions - Postman & Visual Studio 2019

1. Azure Functions Overview

CODE

What is Azure Functions ?

Azure functions is a solution for easily running small pieces of code in the cloud or "functions" in the cloud.

➢Event driven

➢Serverless

➢Azure Platform as a Service

➢Scalable

➢Lightweight

CODE

 Functions is a serverless solution that allows you to write less code, maintain less infrastructure, and save on costs.

Why Do we need it ?

1. Azure Platform as a service (PaaS)

2. Execute small peace of code without worried about infrastructure

3. Easily integrate with Azure Data Solution, Azure Apps solutions, IOT solutions

4. Easily integrate with 3d party Services

5. Choice of Languages (C#, F#, Java, JavaScript, PowerShell, Python, etc.)

6. Cost effective

HOW AZURE FUNCTIONS WORK?

Table Storage

Azure Blob Storage

Cosmo DB

INPUT

Trigger (Http Request Trigger)

INPUT

Code

Triggers and bindings in Azure Functions | Microsoft Docs

OUTPUT

OUTPUT

Cosmo DB

Azure Blob Storage

Azure Blob Storage

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2. Tools

TOOLS

➢ Azure Portal

➢ Visual Studio 2019

➢ Visual Studio Code

➢ Azure PowerShell
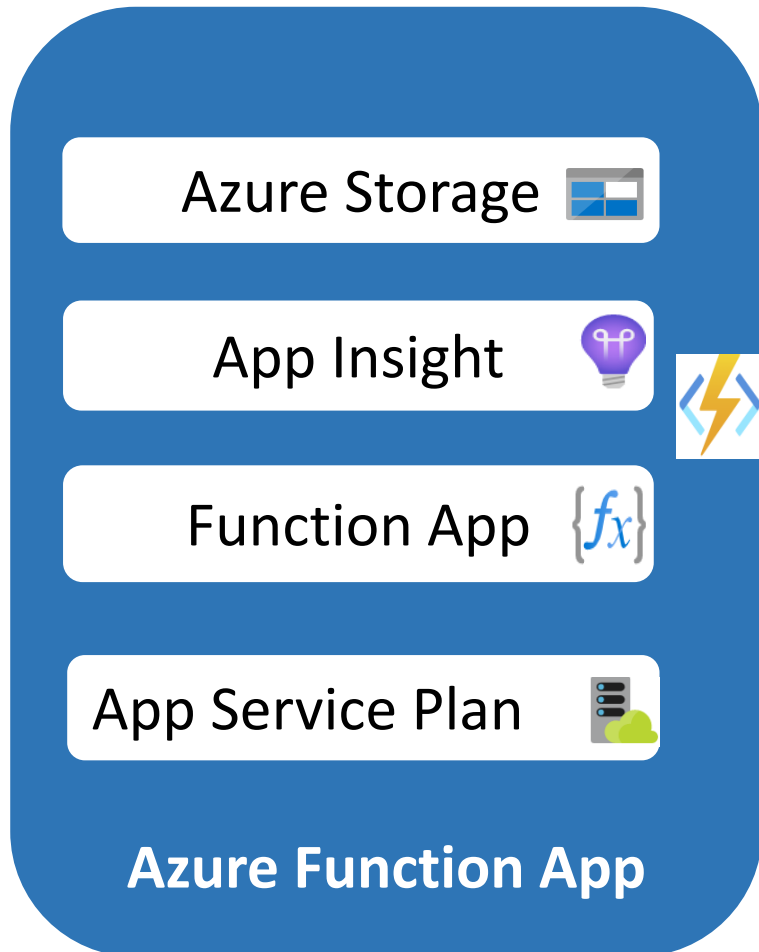
➢ Azure CLI (Command Line)

➢ Azure ARM Templates

Azure Subscriptions

Components of Azure Function Apps

Azure Function App

- Azure Storage
- App Insight
- Function App
- App Service Plan

Azure Function App

1 It contains Folder having same name as Azure Function App with Function Code

2 Monitor and troubleshoot functions

3 Host Functions which are in same Runtime & same version e.g. .net 3.2

4 It defines a set of compute resources for a web app to run. One or more apps can be configured to run on the same computing resources/An App Service Plan
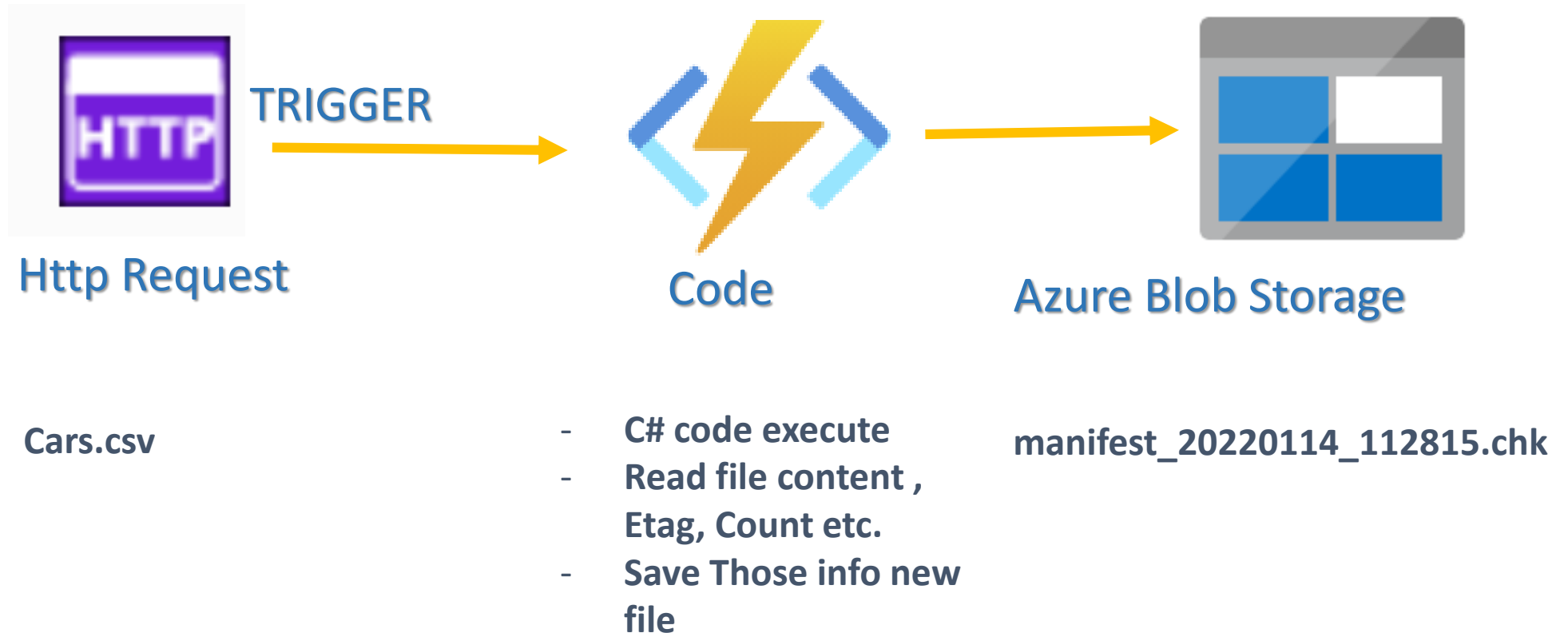
12

DEMO-1

Scenarios 1-
1. **Read File from Blob storage**
2. **Generate Manifest file**
3. **Save Manifest file to storage**

DEMO - 1

Http Request   **Code**   **Azure Blob Storage**

Cars.csv

- C# code execute
- Read file content , Etag, Count etc.
- Save Those info new file

manifest_20220114_112815.chk

Azure Resources

➢ Azure Resource group

➢ Azure Function Apps
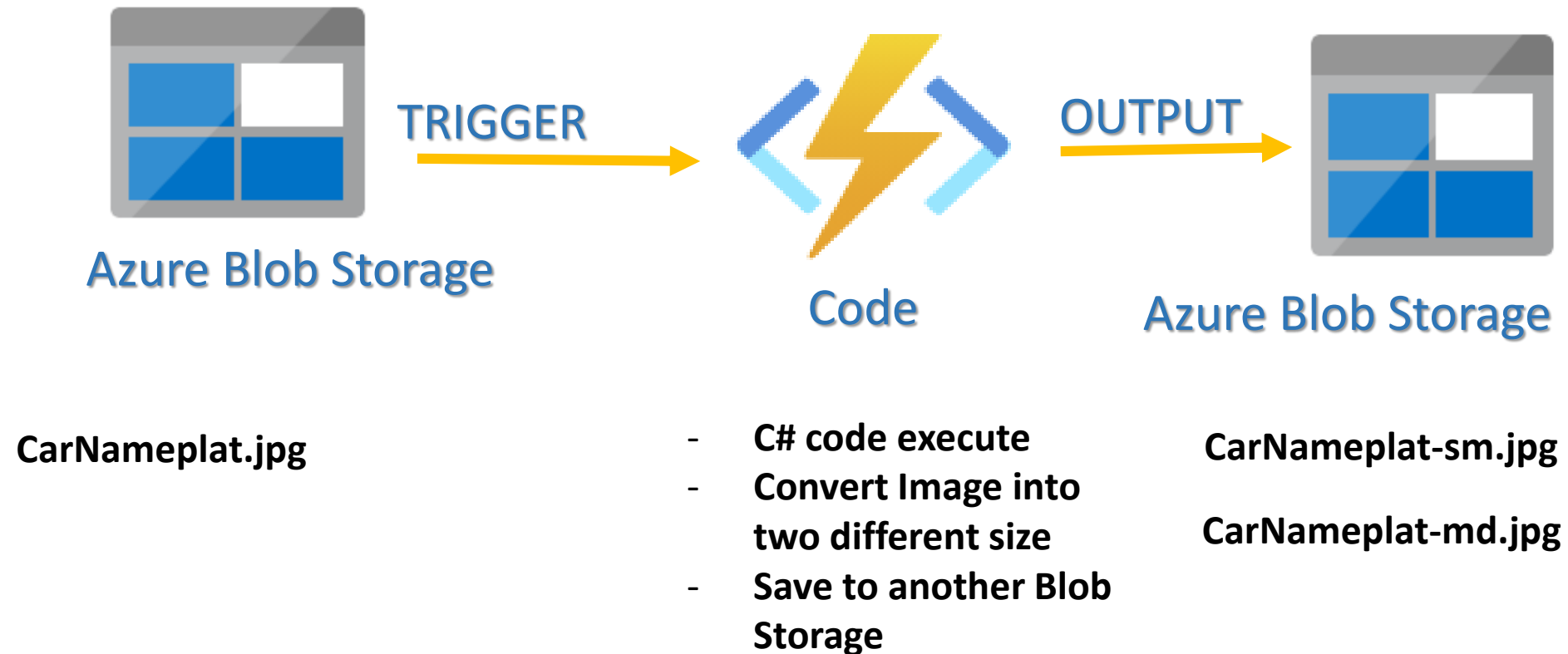
➢ Azure Functions

➢ Azure Blob Storage

Demo-2

Scenarios 2-

1. **Resizing Image from larger to small and medium**

2. **Move image file to another blob container**

Demo - 2

Azure Blob Storage

TRIGGER

Code

OUTPUT

Azure Blob Storage

CarNameplat.jpg

- **C# code execute**
- **Convert Image into two different size**
- **Save to another Blob Storage**

CarNameplat-sm.jpg
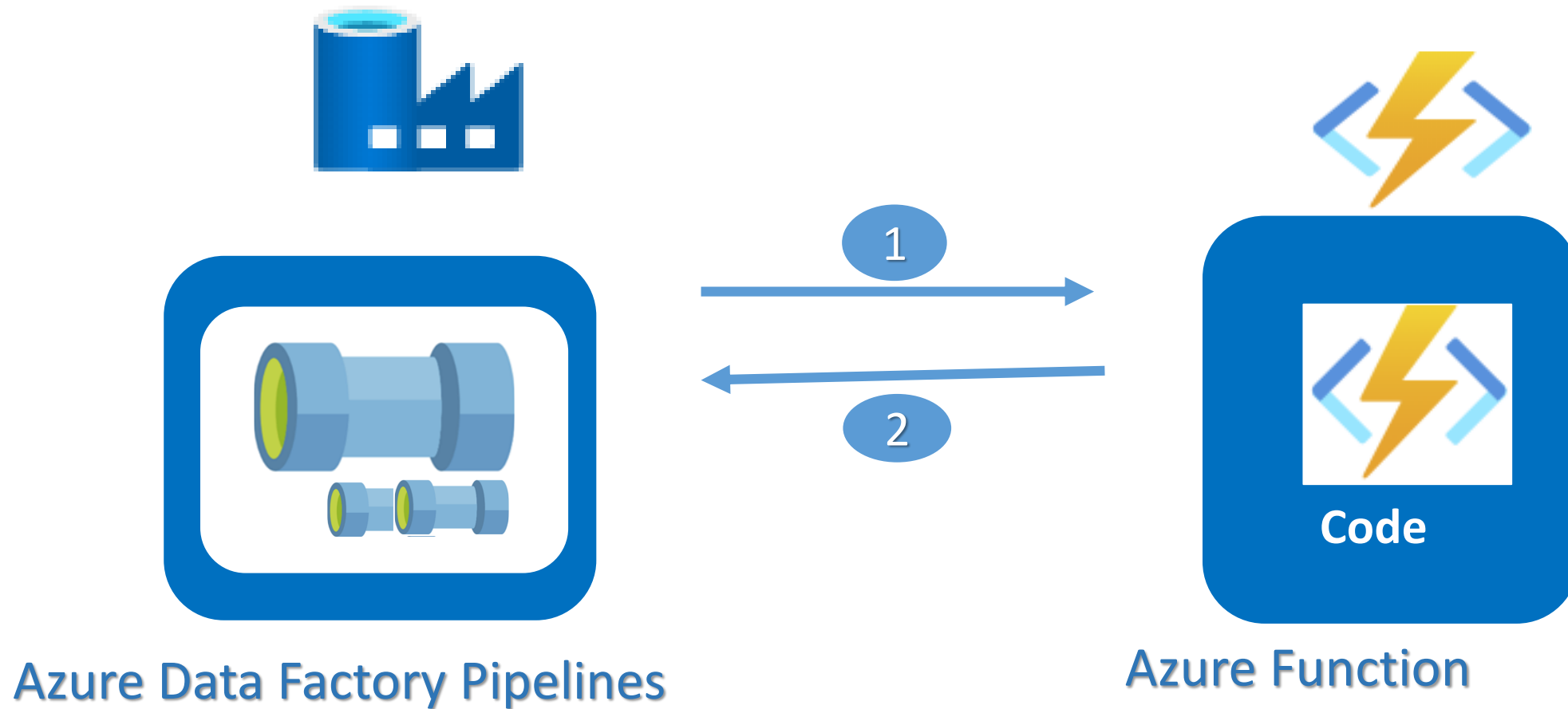
CarNameplat-md.jpg

Azure Resources

➤ Azure Resource group

➤ Azure Function Apps

➤ Azure Functions

➤ Azure Blob Storage

➤ Azure Key Vault

How to integrate Azure Functions with ADF

Azure Data Factory Pipelines

Azure Function

Code

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Conclusion

1. What is Azure Function & Why it needs? How does it works?
   - Small peace of code in C#, Python, Java, etc
   - It trigger based on events e.g Timer Trigger, Http Trigger, Blob Trigger, etc
   - Azure Platform as a service (PaaS)
   - Easy to integrate with other services e.g Azure Data Factory, Event Grid, Azure Logic Apps and many more
   - Azure AD Security
2. Tools
3. Demos

Thank you !!!

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Q & A

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