



Enabling Open API on Azure Functions for Power Platforms

Global Automation Bootcamp 2021





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Last Year...

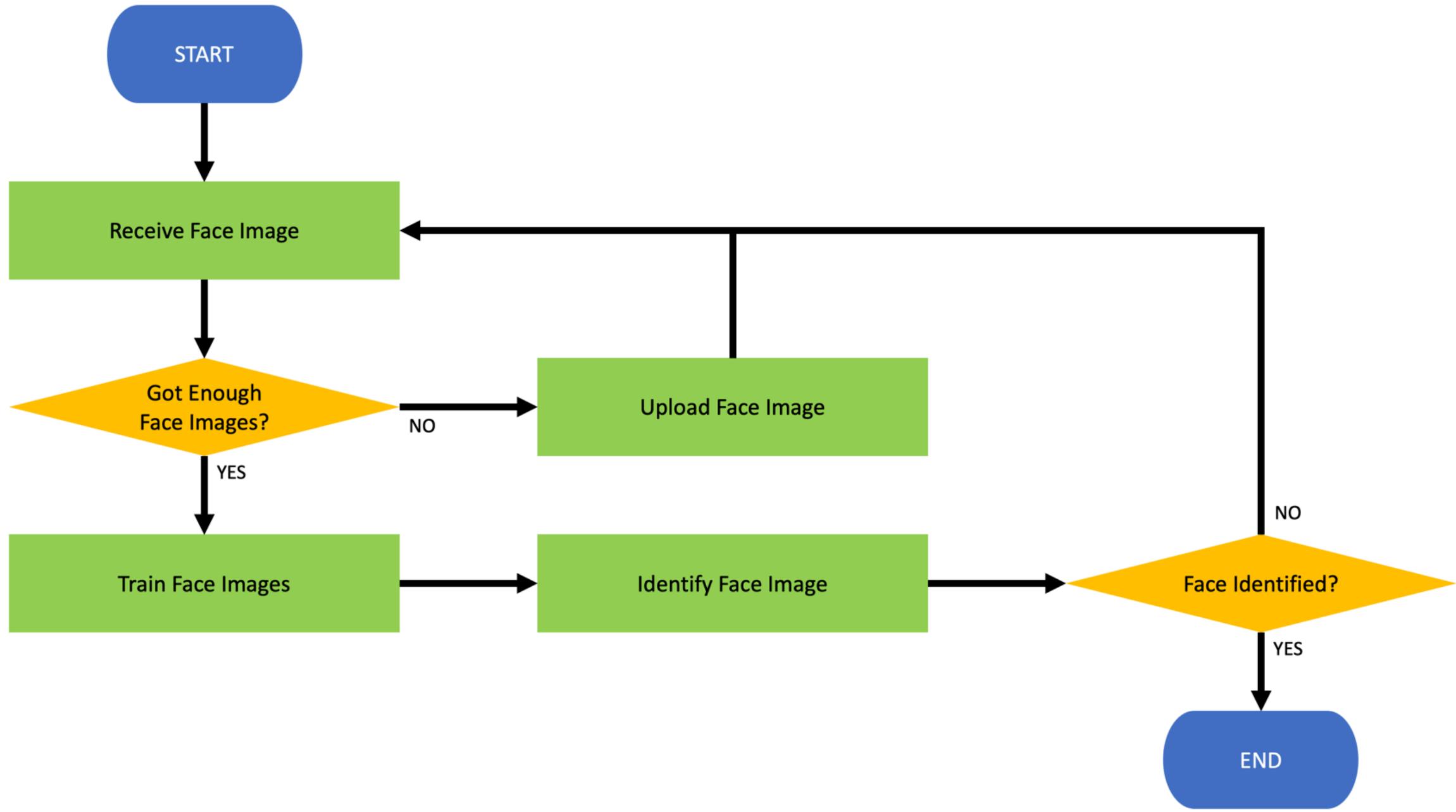


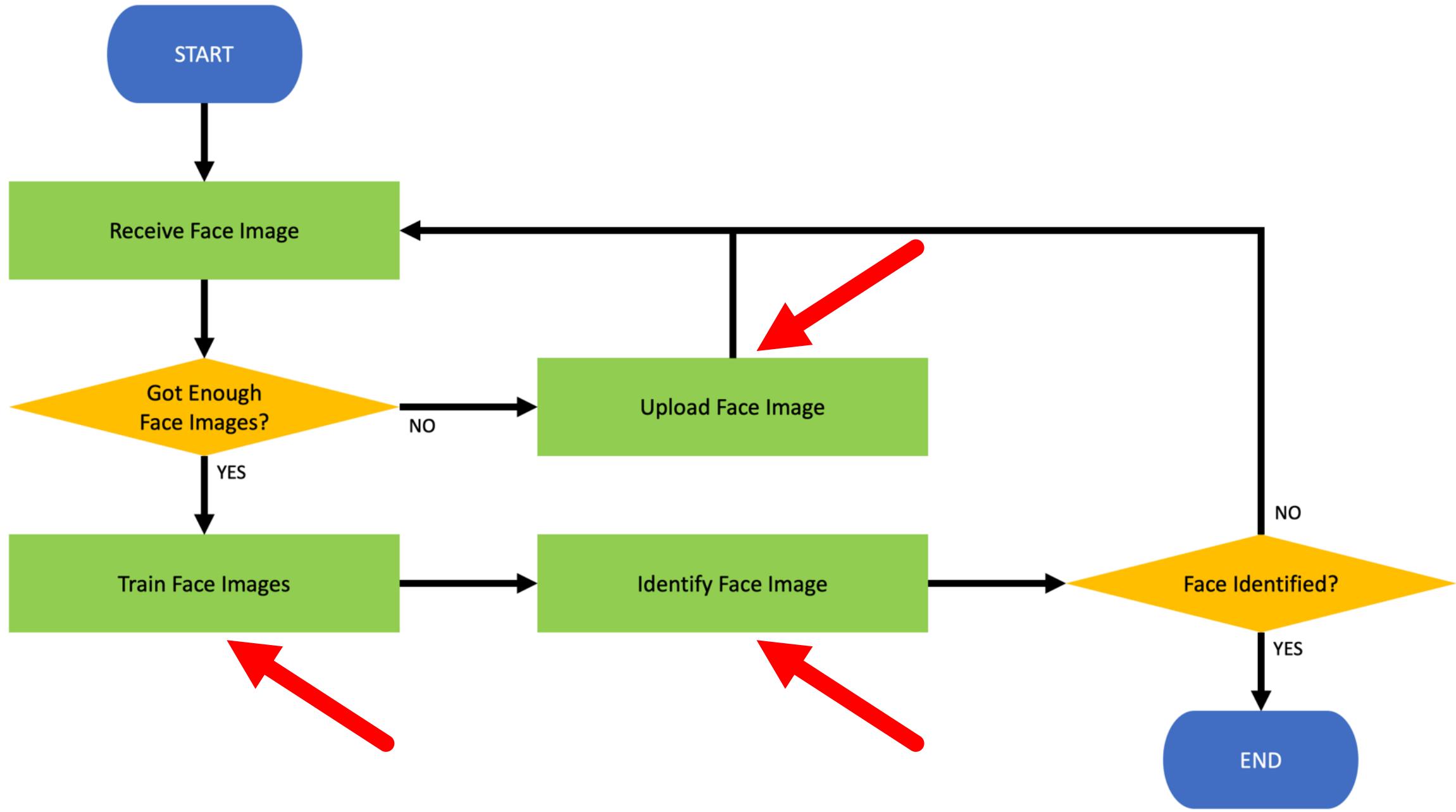
Teacher wanted a face detection app
for her class students

But she didn't know how to make it

Face Recognition App







One API endpoint rules them all

Build a backend API

Why Serverless API?



No need for plumbing

Focused on domain logic

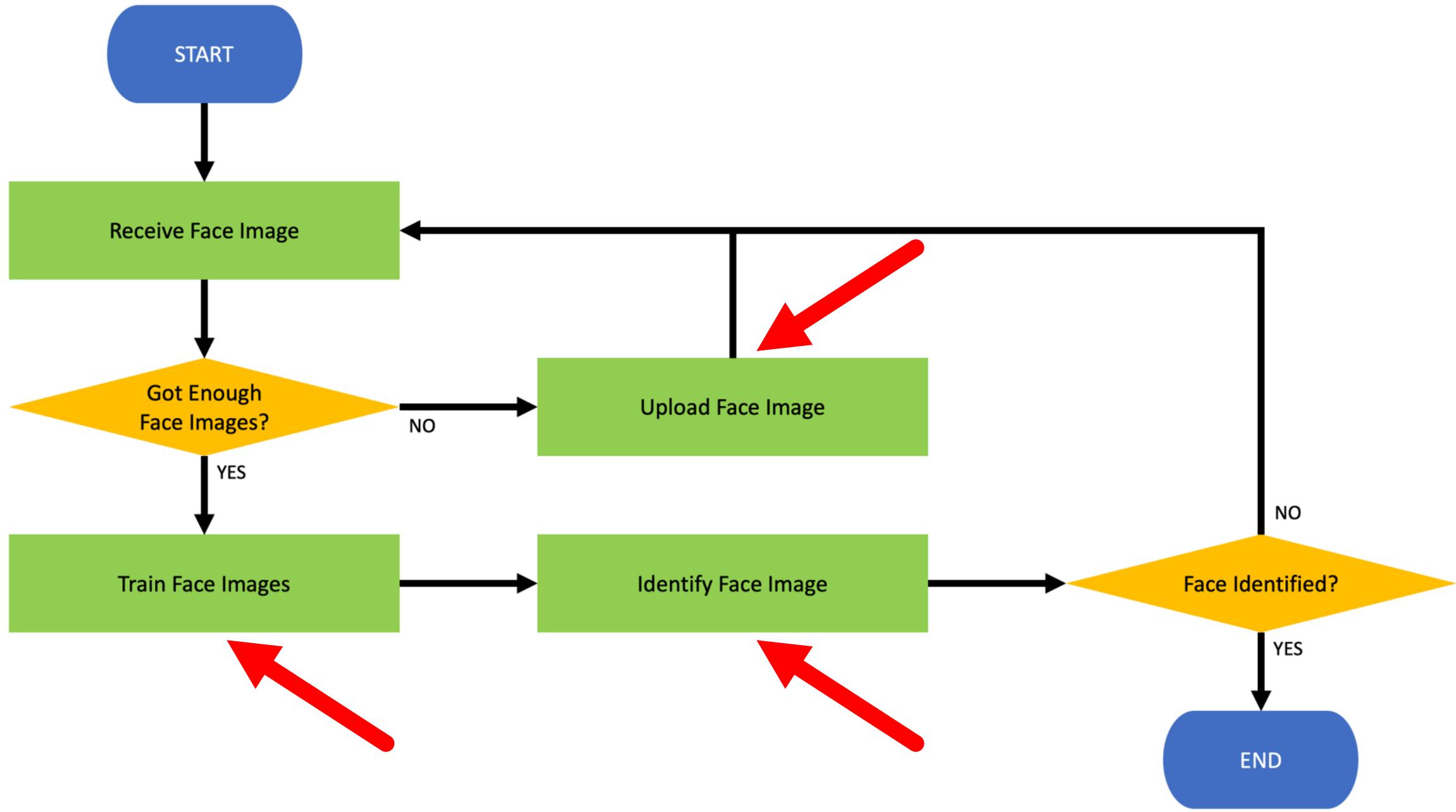
Optimised to MSA

Azure Functions as Serverless API

Sounds good? Let's build the API!

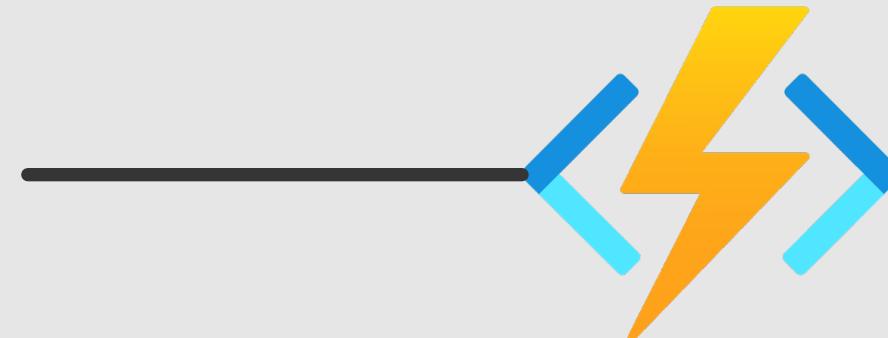
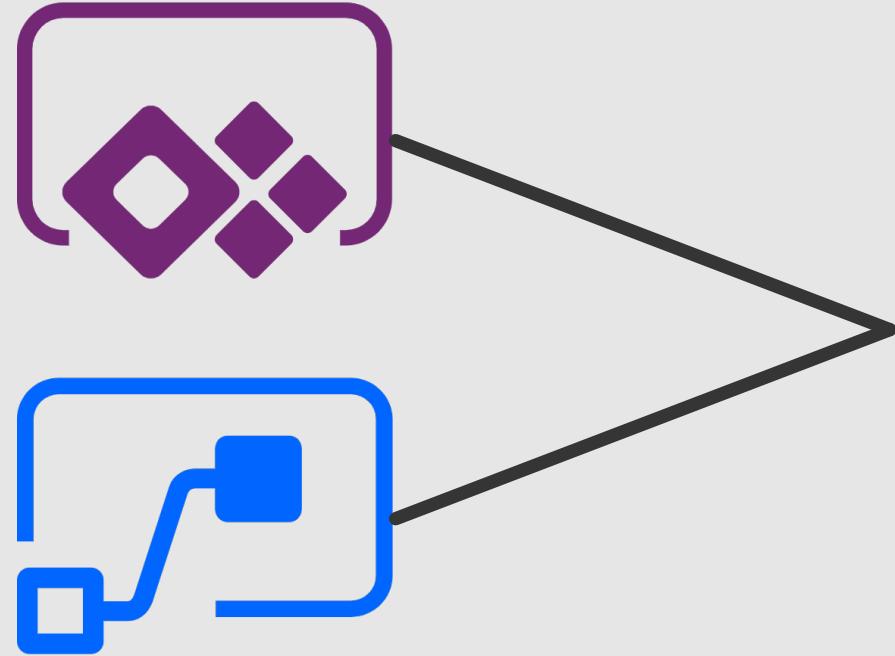
Serverless API Demo

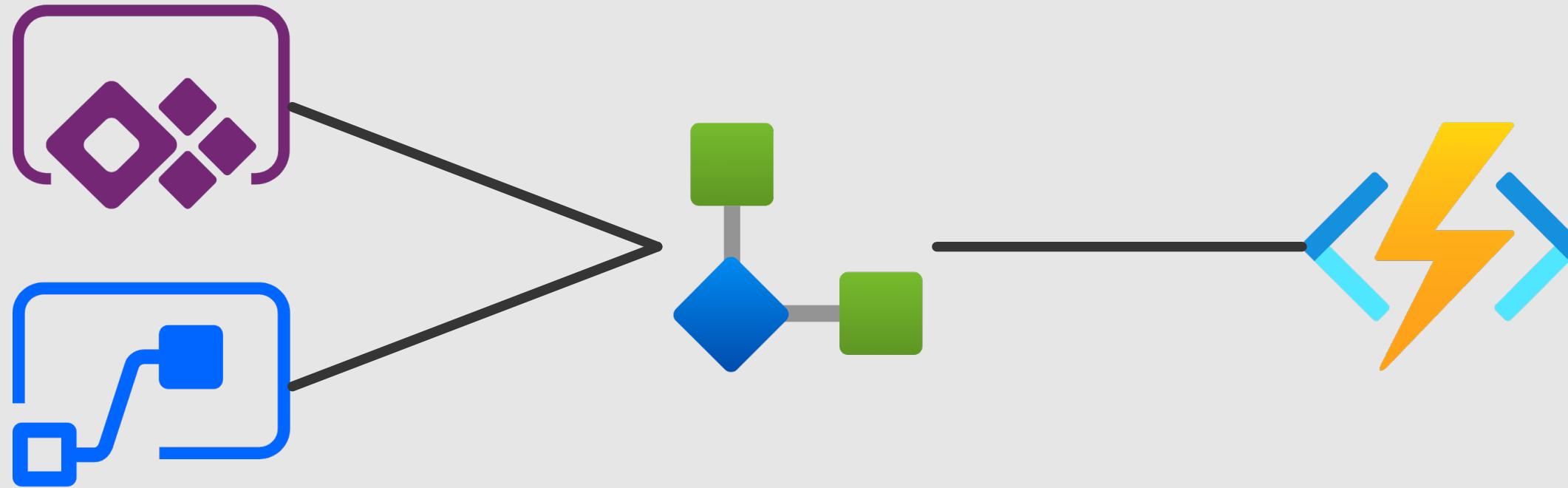




Demo Screen

API needs to be connected to Power Platform







Data ^

Tables

Choices

Dataflows

Export to data lake

Connections

Custom Connectors

Gateways

Custom connectors

+ New custom connector ▾

Create from blank

Create from Azure Service (Preview)

Import an OpenAPI file

Import an OpenAPI from URL

Import a Postman collection

Import from Github

...



Data



Tables

Choices

Dataflows

Export to data lake

Connections

Custom Connectors

Gateways

Flows

Chatbots



Create

List

AI Builder



Build

Custom connectors

+ New custom connector

Create from Azure Service (Preview)

Connector name

Add a name

Azure subscription

Azure service

Choose a service

Choose a service

API Management

Functions

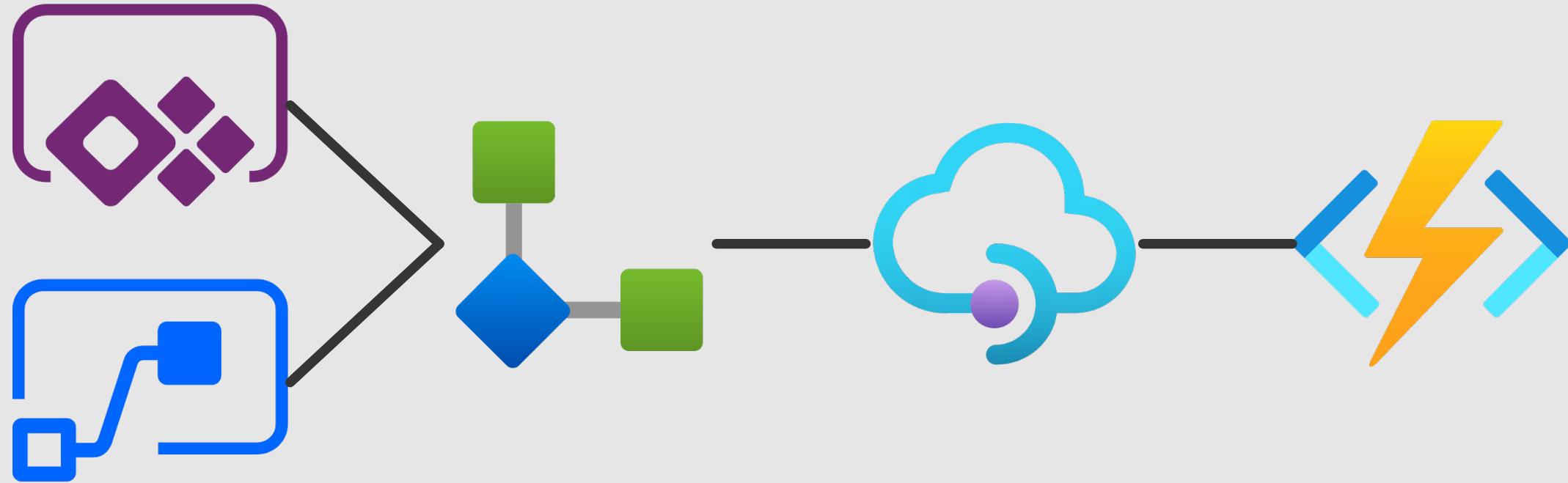
Logic Apps

Continue

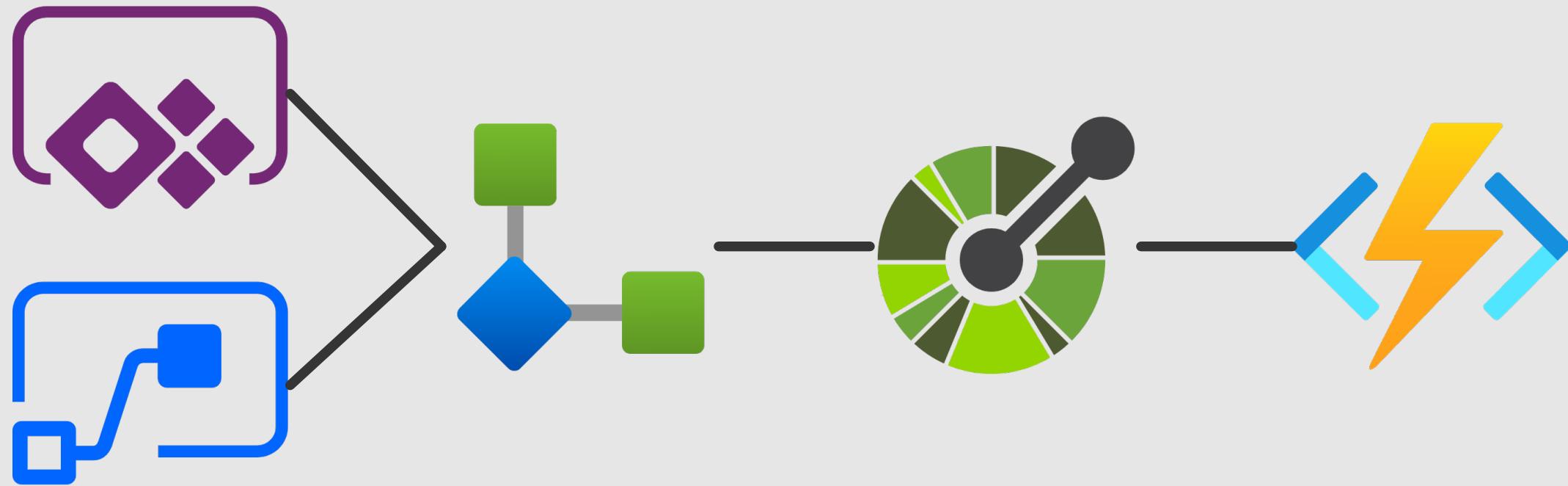
Cancel

Direct connection to Functions/Logic Apps

Direct connection to API Management



Connection through Open API document



API app needs to be discovered

API Discovery





API Management

API Management + Manual Integration

Manual Integration API Management + Direct Function Integration

API Management + Direct Function Integration

Manual Integration

Open API Integration



Wait, can we enable Open API
onto my Azure Functions app?





YES,
WE CAN!

Azure Functions Open API Extension

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aka.ms/azfunc-openapi

[Add file](#) ▾[Code](#) ▾

About



This extension provides an Azure Functions app with Open API capability for better discoverability to consuming parties

www.nuget.org/packages/microsoft.azure.functions.openapi-extension/

[azure-functions](#) [swagger-ui](#) [open-api](#)

[Readme](#)

[MIT License](#)

Releases

No releases published

[Create a new release](#)

Used by 5



```
dotnet add package Microsoft.Azure.WebJobs.Extensions.OpenApi
```

```
[FunctionName(nameof(IdentifyFaceHttpTrigger.Identify))]
```

1 reference

```
public async Task<IActionResult> Identify(  
    [HttpTrigger(AuthorizationLevel.Function, "post", Route = "api/faces/identify")] HttpRequest r  
{
```

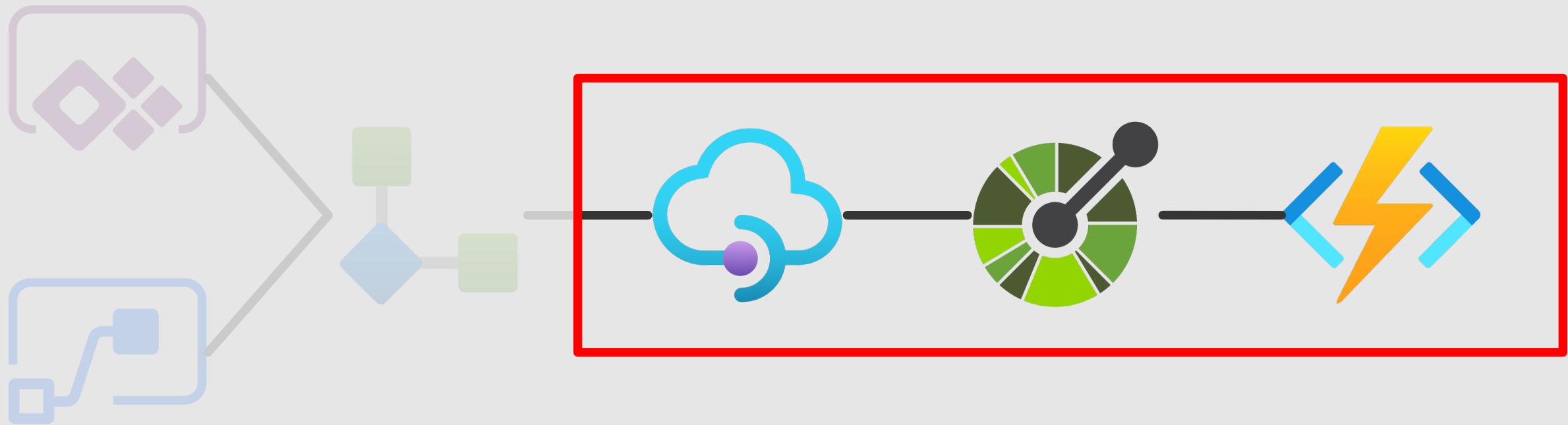
```
[FunctionName(nameof(IdentifyFaceHttpTrigger.Identify))]  
[OpenApiOperation(operationId: "Identify", tags: new[] { "identify" }, Summary = "Identify face",  
[OpenApiSecurity("function_key", SecuritySchemeType.ApiKey, Name = "x-functions-key", In = OpenApi  
[OpenApiRequestBody(contentType: "application/json", bodyType: typeof(EmbeddedRequest), Description = "The request body contains an EmbeddedRequest object.", Required = true)  
[OpenApiResponseWithBody(statusCode: HttpStatusCode.OK, contentType: "application/json", bodyType: typeof(EmbeddedResponse), Description = "The response body contains an EmbeddedResponse object.")]
```

1 reference

```
public async Task<IActionResult> Identify(  
    [HttpTrigger(AuthorizationLevel.Function, "post", Route = "api/faces/identify")] HttpRequest r  
{
```

Open API Integration Demo





Demo Video

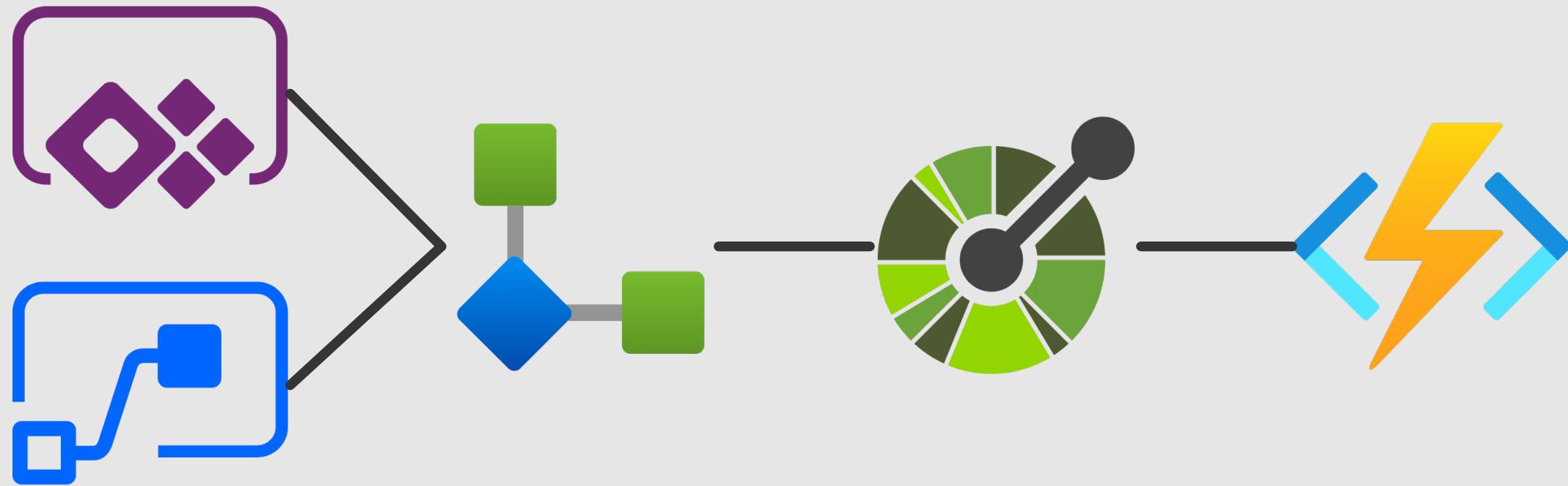
API Management is too big!

Need more security
Need more complex communication



Use API Management

If you need a simple connection...



Custom Connector Demo



Demo Video

Putting Altogether



Demo Video

Summary



Why Serverless API Azure Functions API API Discovery Power App Build

GUIDANCE FROM EXPERTS

Microsoft Docs

Explore overviews, tutorials,
code samples, and more.

aka.ms/gatmb21/docs

The screenshot shows the Microsoft Docs homepage. At the top, there's a navigation bar with the Microsoft logo, a 'Docs' button, and links for 'Documentation', 'Learn', 'Q&A', and 'Code Samples'. Below the header, the URL 'docs.microsoft.com' is displayed, followed by a tagline: 'The home for Microsoft documentation and learning for developers and technology professionals.' A search bar with the placeholder 'Search for articles, training, and code samples...' and a 'Search' button are present. Three main call-to-action boxes are shown: 'Documentation' (with a book icon), 'Learn' (with a computer monitor icon), and 'Q&A' (with a speech bubble icon). Below these, a 'FEATURED' section highlights 'Microsoft Learn', with a sub-tagline: 'Whether you're just starting or an experienced professional, our hands-on approach helps you arrive at your goals faster, with more confidence and at your own pace.' To the right, a small cartoon character is holding a selfie stick.

KEEP ON WITH

Microsoft Learn

Complete interactive learning exercises, watch videos, and apply your new skills.

aka.ms/gatmb21/learn

The screenshot shows the Microsoft Learn website on a tablet device. The top navigation bar includes the Microsoft logo, Docs, Documentation, Learn (which is underlined), Q&A, and Code Samples. Below the navigation are links for Learn, Products, Roles, Learn TV, Certifications, and FAQ & Help. A large central callout box says "WELCOME TO MICROSOFT LEARN" and "Discover your path". It states: "Whether you're just starting or an experienced professional, our hands-on approach helps you arrive at your goals faster, with more confidence and at your own pace." A blue button labeled "Customize my path" is at the bottom of this box. To the right, there's a stylized map of the word "LEARN" where each letter is formed by a winding path of colored lines (purple, blue, green, yellow). Below the main box are two sections: "LEARNING PATHS" with a "Learn on your own schedule" icon and "CERTIFICATIONS" with a "Become Microsoft certified" icon. Both sections have descriptive text and small icons.

Questions?





Thank you!

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