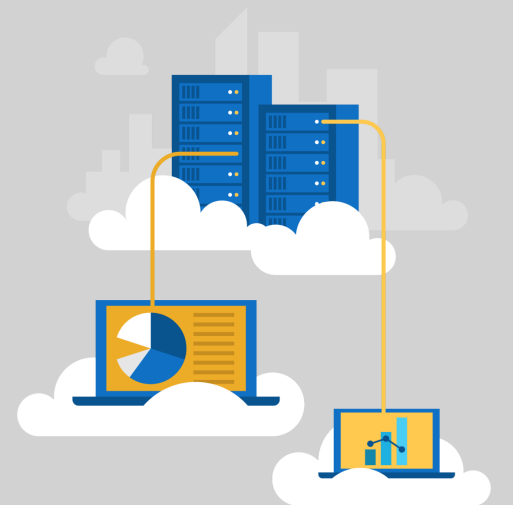# Topics

- Azure API Apps
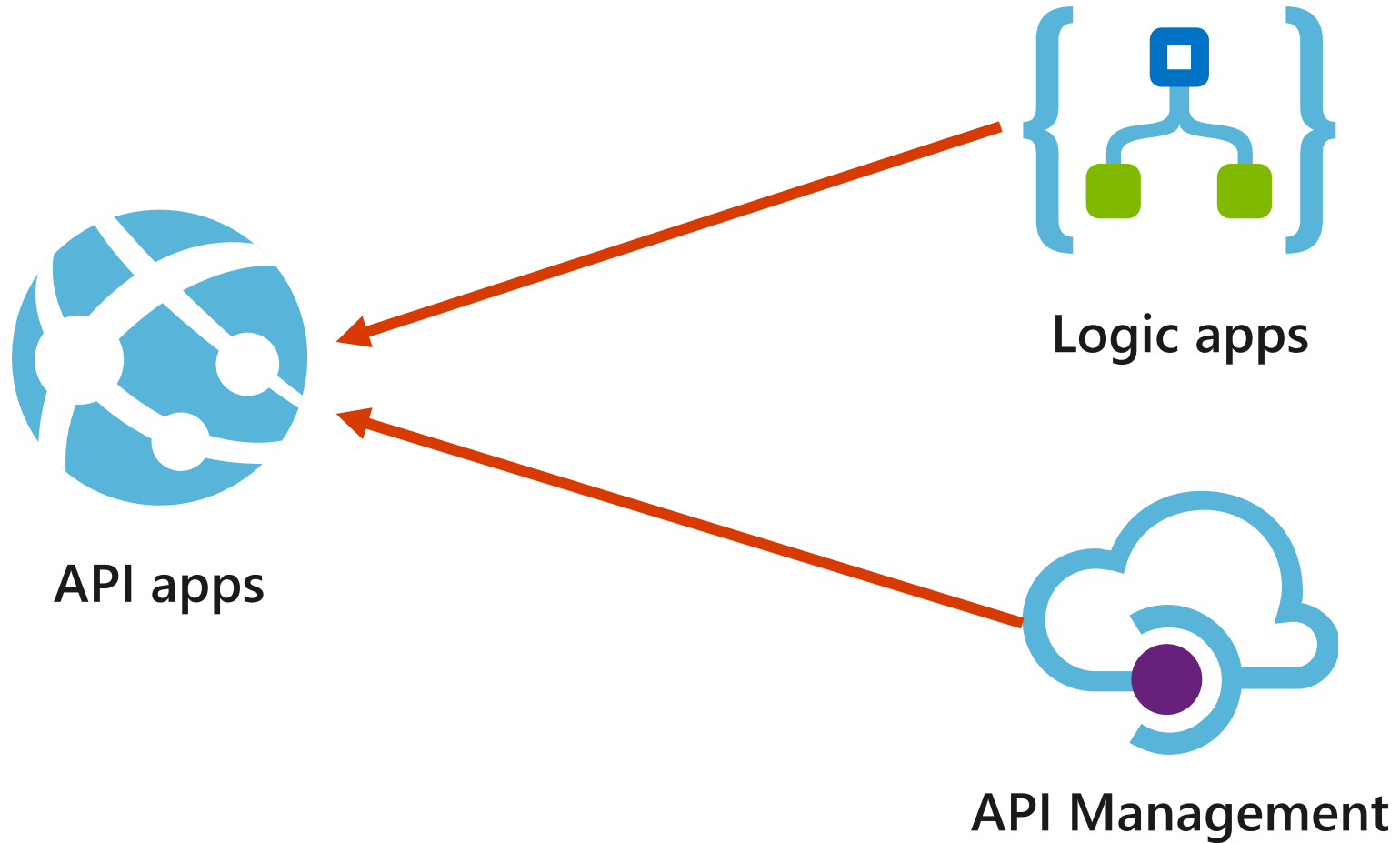- Creating API Management solutions

Lesson 01: Azure API Apps

Azure API Apps

- Similar functionality to Azure Web Apps
- Integrated with Azure Logic Apps and API Management
- Supports built-in authentication
- Supports built-in cross-origin resource sharing (CORS) request handling

Integrations

Authentication

- Built-in to service:
  - Requires minimal or no code
- Handled in an external module:
  - Authentication is managed before requests get to your application code
  - The module handles:
    - Authenticating users
    - Tokens
    - Sessions
    - Headers

API app

Code

Azure Active Directory
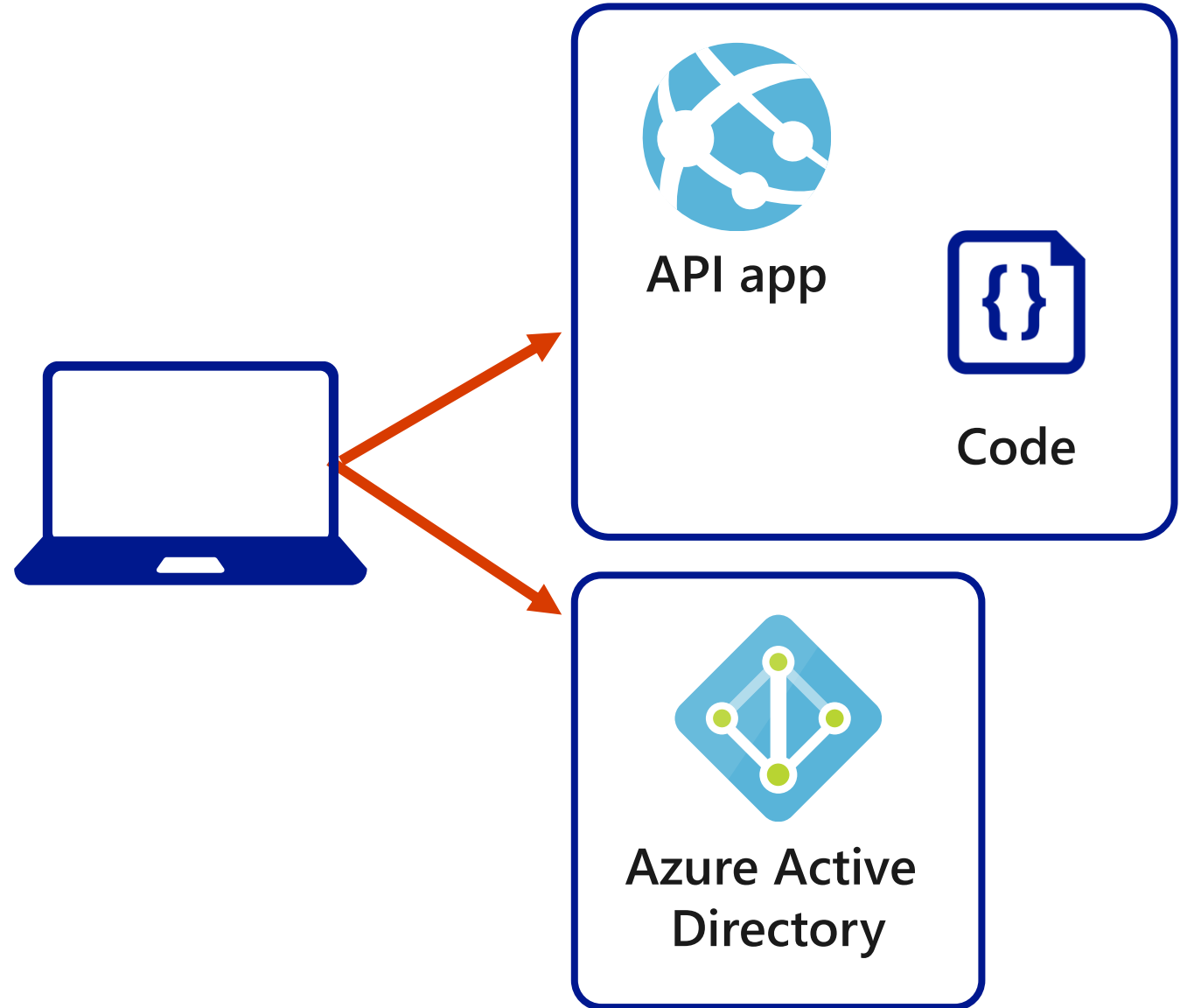
CORS

- Mechanism for servers to indicate that they support cross-site requests
  - Servers can specify:
    - Allowed HTTP verbs
    - Allowed origins
    - Allowed headers

- Directly supported by API Apps

1 Options

2 Access Control

3 Actual Request
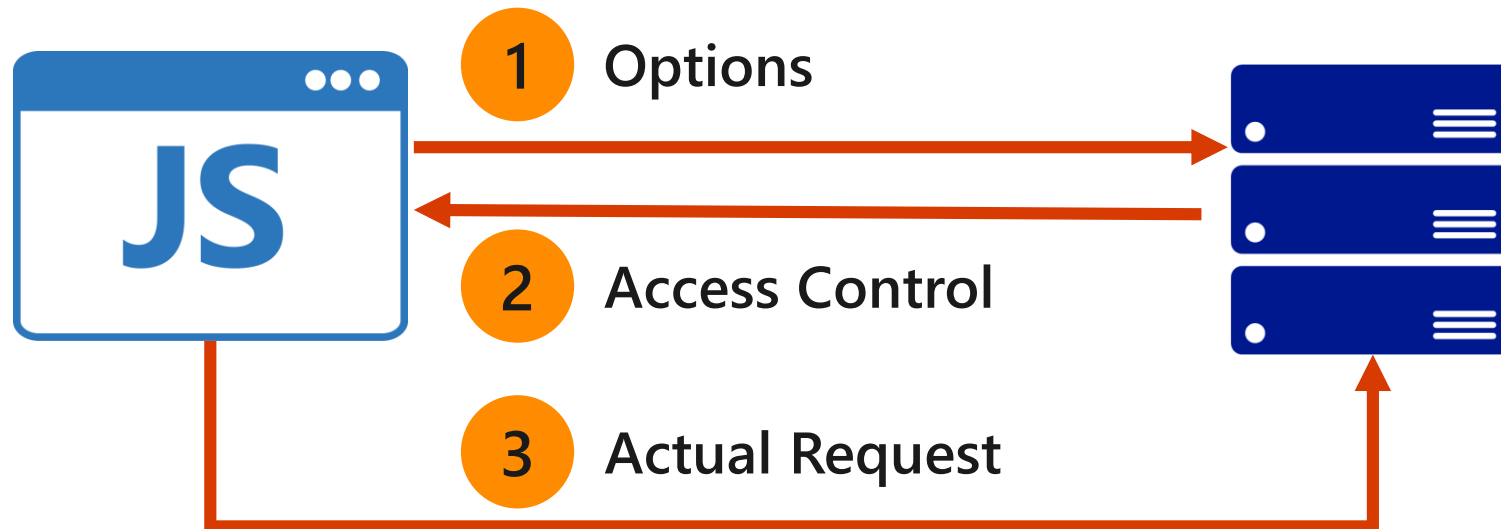
Lesson 02: Creating API Management solutions

API Management (APIM)

- Streamlines the process of common tasks necessary for creating an API for external use

- Tasks include:
  - Creating a successful and useful developer portal
  - Securing API endpoints from anonymous or unwanted access
  - Managing existing developer access through cache mechanisms, throttling, and other policies
  - Building a monitoring and analytics platform to diagnose issues and monitor adoption
  - Providing business users and developers with deep insights into how each API is specifically used
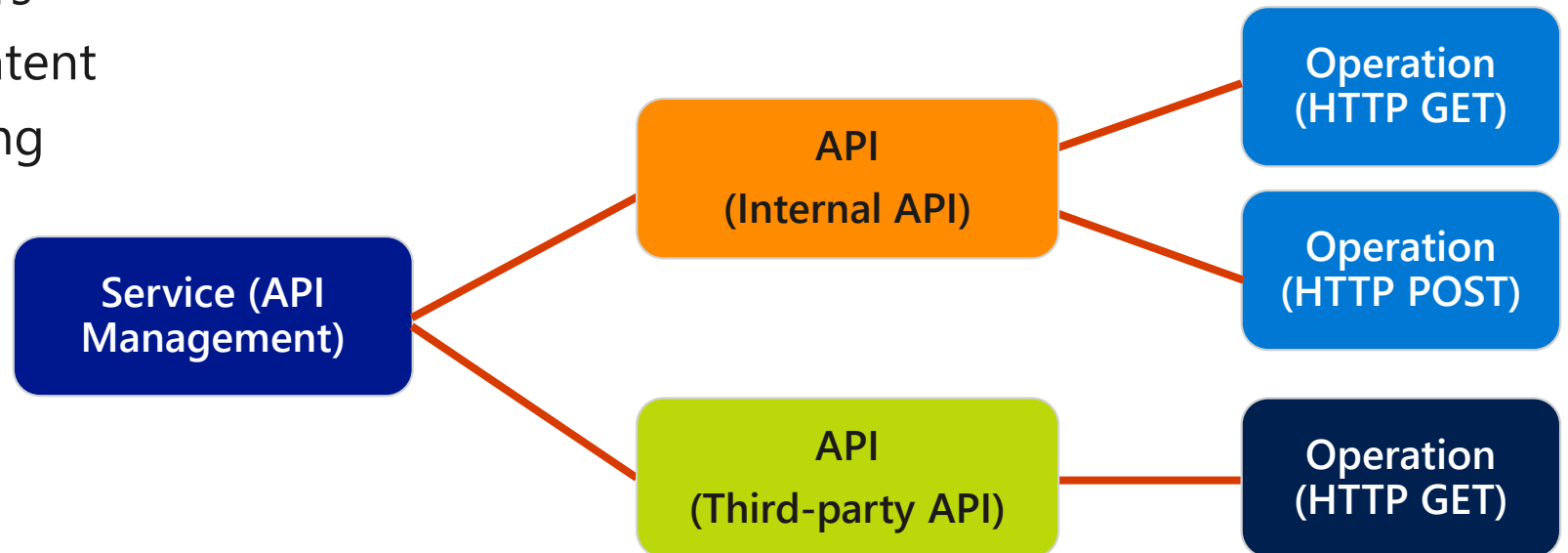
Terminology

- Backend API
  - A HTTP service that you implement with your business logic
- Frontend API
  - A HTTP service façade hosted by API Management to obfuscate your back-end API
- Product
  - One or more APIs, along with a usage quota and terms of use
- Operation
  - A specific operation in the front-end API that correlates to a specific request/response from the backend API

Terminology (continued)

- Version
  - A breaking change to the front-end API
  - Existing application will not be required to change its code as you update or change the front-end API
- Revision
  - A non-breaking change to a front-end API
- Developer portal
  - An interface that developers use to learn about your API and test operations

Service hierarchy

· Create and manage APIs

· Each API contains one or more sets of operations

· Operations are configurable, granting control over:
  · URL mapping
  · Query and path parameters
  · Request and response content
  · Operation response caching

```
Service (API Management) ── API (Internal API) ── Operation (HTTP GET)
                                               ── Operation (HTTP POST)
                        ── API (Third-party API) ── Operation (HTTP GET)
```

Products

- Contains one or more APIs in a package

- Products can be open or protected

  - Open products are free to use without any subscription

  - Protected products must be subscribed to before use

- When a product is ready for developers, it can be published for use

Policies

- Collection of statements that are executed sequentially at the request or response of an API

- A quick way to change the behavior of an API without code changes to the actual back-end API application

- A comprehensive list of policy options can be found at Microsoft Docs "API Management policies"
  - (https://aka.ms/AA4gbi5)

Application Gateway

- Enables management of traffic to your web applications
- Operates as a web traffic load balancer, which allows for more specific traffic routing than a traditional load balancer
- Can handle additional scenarios such as:
  - Custom routing
  - Session affinity
  - SSL termination
  - Firewall management
  - Redirection

Application Gateway (continued)
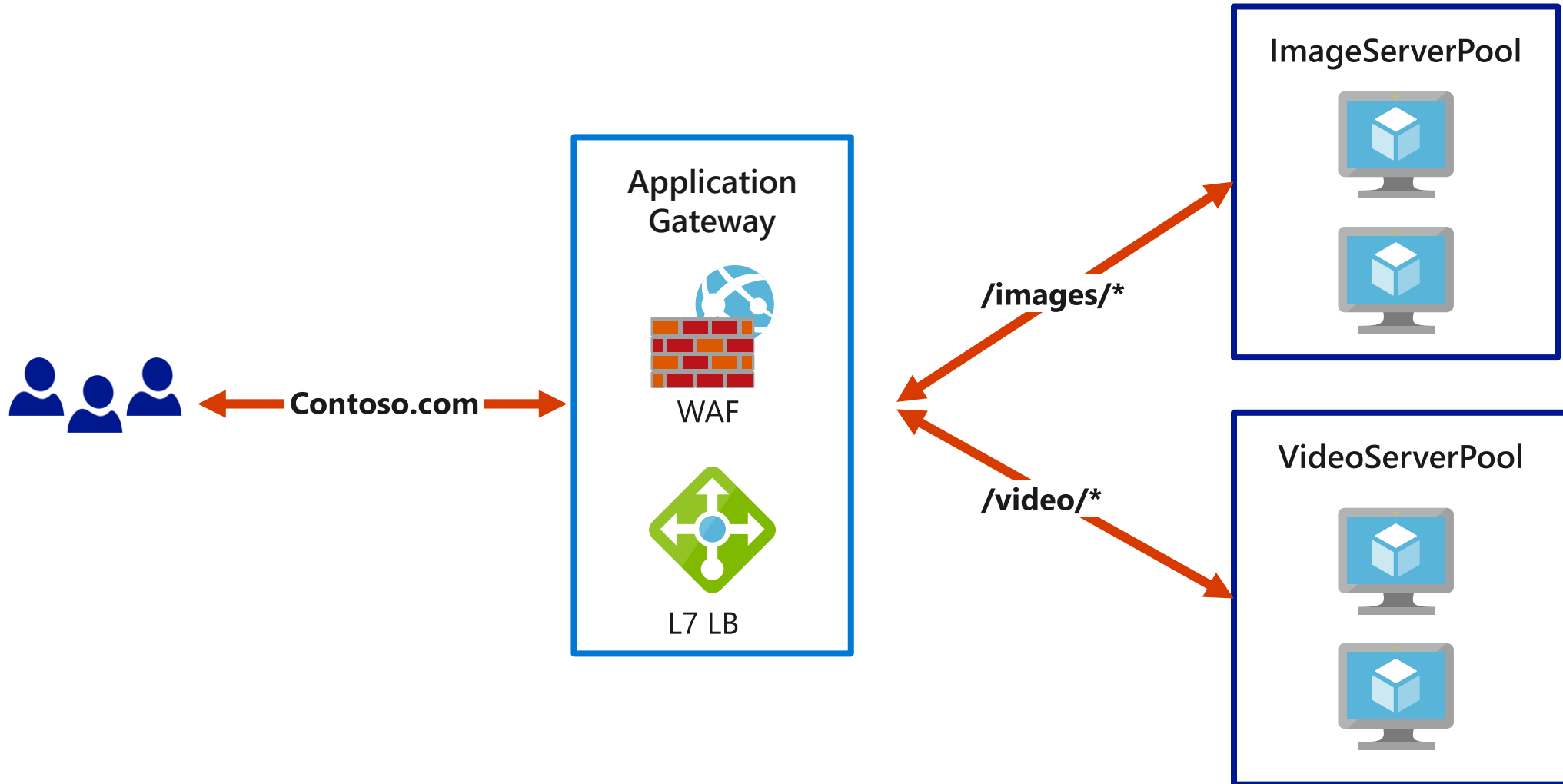
Demo: Create an Azure API Management service instance and an API

Demo: Create and publish a product

Microsoft

Review

- Azure API Apps
- Creating API Management solutions