

# Microsoft Azure Developer: Implement API Management

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## INTRODUCTION TO AZURE API MANAGEMENT



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# Course Overview



Learn how to architect API integration in Azure

Understand the components of the Azure API Management

Create Azure API Management instance

Discover how to protect your APIs from unauthorized use

How to implement policies

Summary



# Module Overview



Understand Azure API Management components

Configure Azure API Management in the Azure Portal

Integrate existing API application with API Management

Setup access for developers



# Azure API Management Structure

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# Azure API Management

Azure service to create consistent and modern API gateways for existing back-end services.

It provides secure, scalable API access for your applications.



# Azure API Management Components

## **API gateway**

Accepts API calls and routes them to your backends

## **Azure portal**

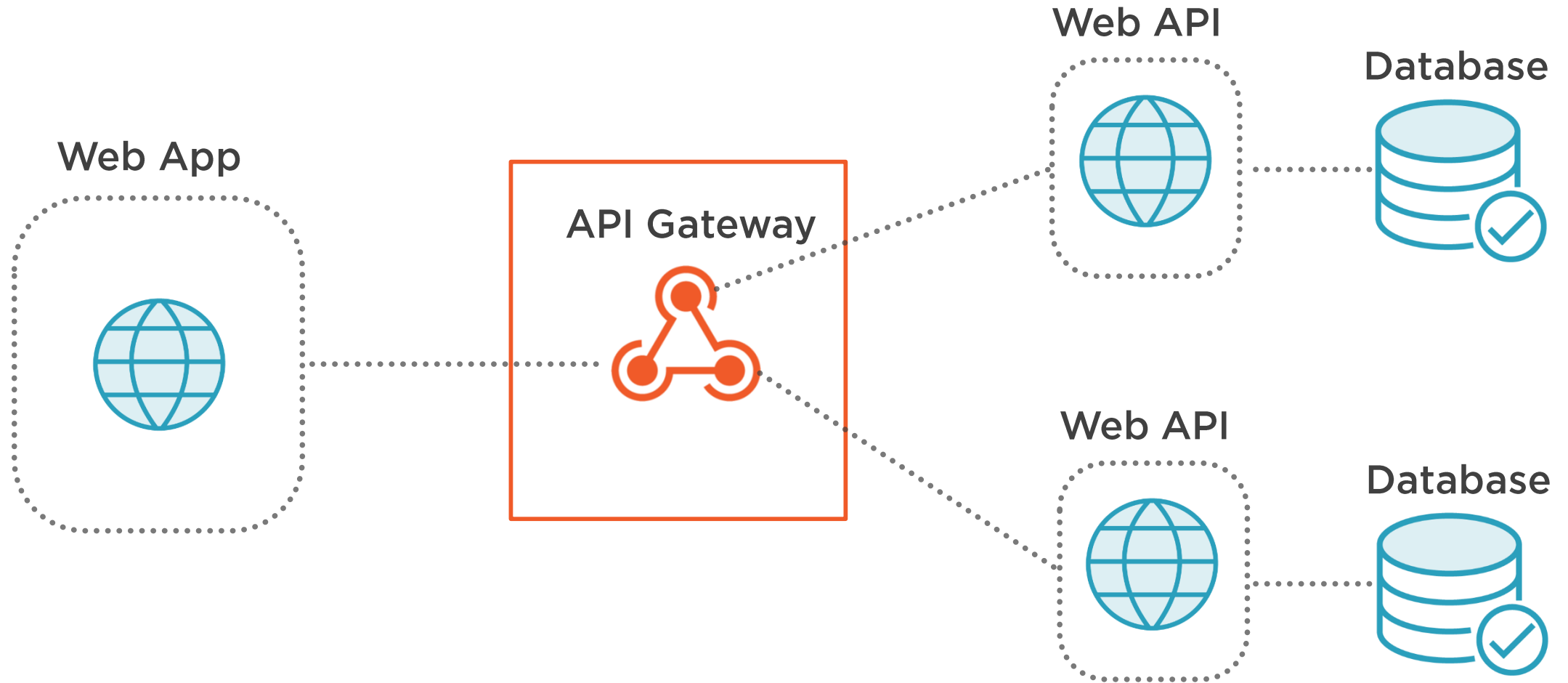
The administrative interface where you set up your API program

## **Developer portal**

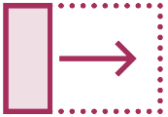
Web user interface for developers where they can read API documentation



# API Gateway



# API Gateway Capabilities



Accepts API calls and routes them to your backends



Verifies API keys, JWT tokens, certificates, and other credentials



Enforces usage quotas and rate limits



Caches backend responses





# Azure Portal Capabilities



Define or import API schema



Set up policies like quotas or transformations on the APIs



Package APIs into products



Manage users



# Developer Portal Capabilities



Read API documentation



Create an account and subscribe to get API keys



Try out an API via the interactive console



Access analytics



# Versions and Revisions



# Versions

Versions allow to present groups of related APIs to the developers.

You can use versions to handle breaking changes in your API safely.

<https://apis.cars-island.com/car/all/v1>

<https://apis.cars-island.com/car/all/v2>



# Revisions

Revisions allow you to make changes to the APIs in a controlled and safe way, without disturbing your API consumers.

<https://apis.cars-island.com/car/all;rev=3>



Each version can have multiple revisions, just like a non-versioned API. You can use revisions without using versions, or the other way around



Typically versions are used to separate API versions with breaking changes, while revisions can be used for minor and non-breaking changes to an API



# Managing APIs with Products and Groups

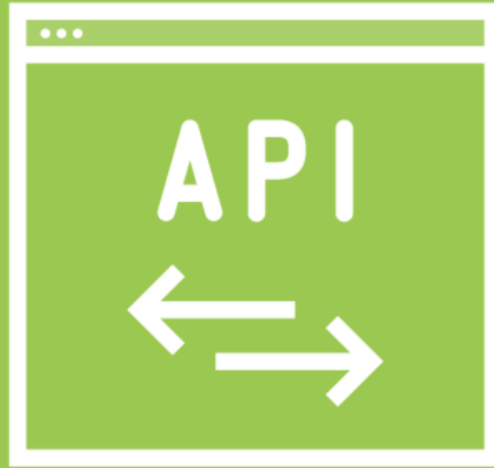
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APIs are the foundation of  
an Azure API Management  
service





# APIs and their operations

Each API in the Azure API Management contains a reference to the back-end service that implements the API and its operations



# Products and Groups

## Products

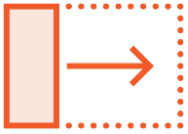
Products are how APIs are surfaced to developers, and have one or more APIs, title, description, and terms of use

## Groups

Groups are used to manage the visibility of products to developers



# Products Overview



Products can be Open or Protected. Protected products must be subscribed to before they can be used



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



Subscription approval is configured at the product level. Developers need this subscription to access products

# Azure API Management Groups

## Administrators

Manage API Management service instances, creating the APIs, operations, and products

## Developers

Developers are granted access to the developer portal and build applications that call the operations of an API

## Guests

Unauthenticated developer portal users with certain read-only access, such as the ability to view APIs but not call them



Administrators can also  
create custom groups or  
leverage external groups in  
associated Azure Active  
Directory tenants



# Developers



Developers can be created or invited to join by administrators, or they can sign up from the Developer portal



Each developer is a member of one or more groups, and can subscribe to the products that grant visibility to those groups

# Demo



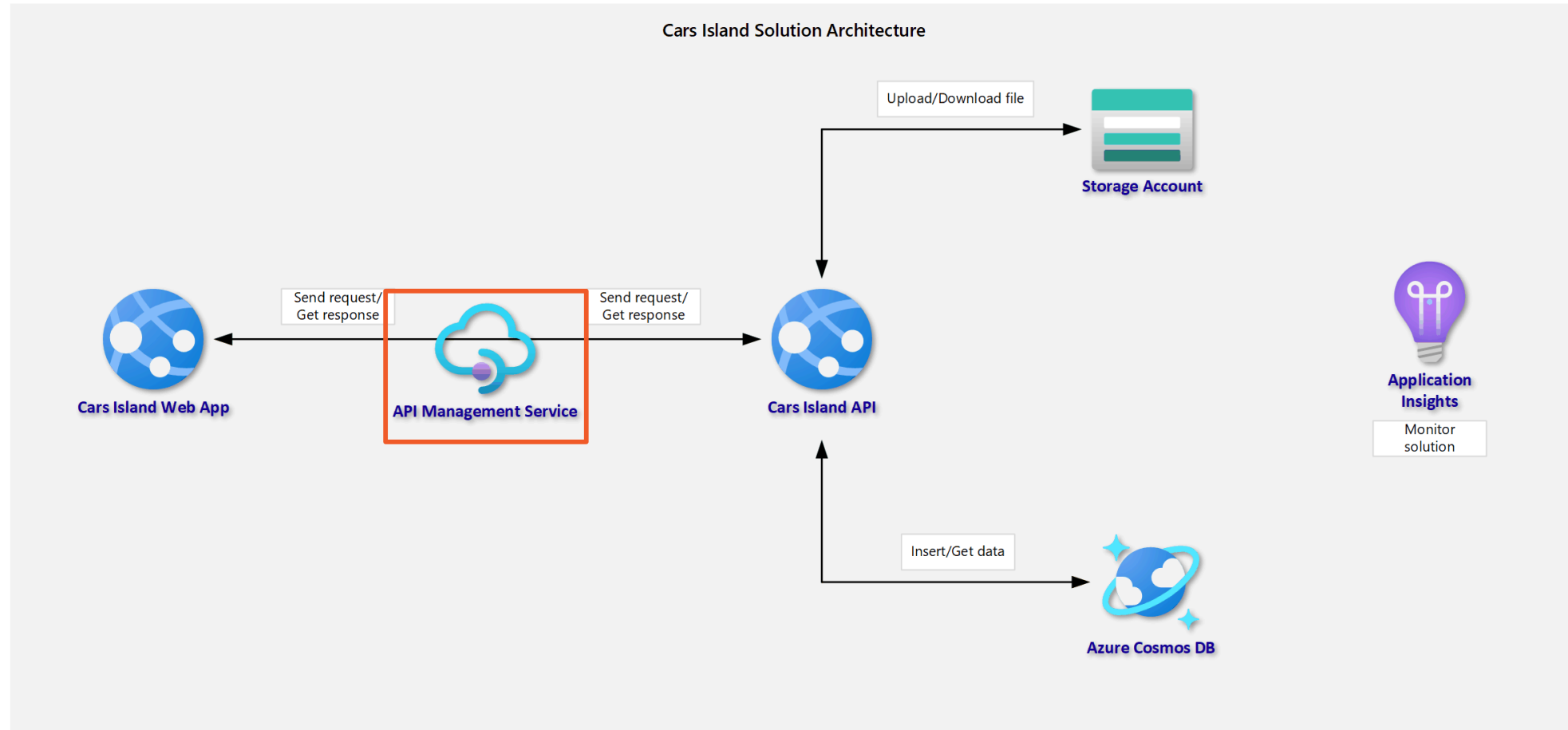
## Setup Azure API Management service

- Create an API Management in the Azure portal
- Integrate existing API application with API Management
- Setup access for developers





# Solution Architecture



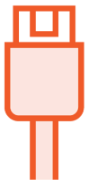
# Before We Begin



Source code link: [github.com/Daniel-Krzyczkowski/Pluralsight](https://github.com/Daniel-Krzyczkowski/Pluralsight)



We will use Visual Studio 2019 (16.5.x)



Solution requires the .NET Core 3.1



# Summary



Azure API Management structure and its capabilities

Control APIs access with groups and products

Create API Management instance and integrate it with existing API

Access APIs using Developer portal

