

# Module 7

Development with Power BI

# Module Overview

- The Power BI API
- Custom visuals

# Lesson 1: The Power BI API

- What is the Power BI API?
- Embedding Power BI content in your applications
- Embedding for your organization
- Embedding for your customers
- The Power BI Embedded Playground
- Demonstration: Using the Power BI Embedded Playground

# What is the Power BI API?

- REST APIs to interact with Power BI
- Three forms:
  - Power BI REST API
  - Power BI .NET SDK
  - Power BI JavaScript API
- Typical tasks performed using Power BI APIs:
  - Pushing data to a Power BI dashboard
  - Embedding tiles into an app
  - Embedding reports into an app
  - Importing Power BI Desktop (PBIX) files
  - Authenticating Power BI web apps

# Embedding Power BI content in your applications

- For your organization:
  - Configure embedding in SharePoint Online, Microsoft Teams, and Microsoft Dynamics
  - Use Power BI APIs to embed in custom applications, accessing content as the user
- For your customers
  - Use Power BI APIs with Power BI Embedded to embed in custom applications, accessing content with a master account

# Embedding for your organization

1. Register your application with Azure Active Directory at <http://dev.powerbi.com/apps>:
  - Server-side web application
  - OR
  - Client-side native application
2. Make Power BI content accessible to your application
3. Code your application
4. If required, assign your app workspace to dedicated capacity

# Embedding for your customers

1. Register your application with Azure Active Directory at <http://dev.powerbi.com/apps>:
  - Client-side native application
2. Grant admin consent to your content
3. Make Power BI content accessible to your application
4. Code your application
5. Assign your app workspace to a dedicated capacity

# The Power BI Embedded Playground

- Purpose of the Power BI Embedded Playground:
  - As a learning resource
  - For trying out Power BI REST API operations without writing code
  - To use API calls to perform specific tasks
- Access the playground at <https://microsoft.github.io/PowerBI-JavaScript/demo/v2-demo/index.html>



# Demonstration

You will see how to:

- Use the Power BI API through the Power BI Embedded Playground

## Lesson 2: Custom visuals

- Using custom visuals
- Creating custom visuals
- Demonstration: Importing and using a custom visual

# Using custom visuals

- Custom visual files:
  - .pbviz files containing code
  - May be a privacy or security risk
- Organizational visuals:
  - Custom visuals that a Power BI admin has approved for your organization
  - Cannot be displayed in emails or exported to PowerPoint
- Marketplace visuals:
  - Tested and approved for functionality and quality
  - Certified visuals—more rigorously tested subset that are supported in email and PowerPoint
- Importing organizational and marketplace visuals

# Creating custom visuals

- Microsoft Power BI visuals project from GitHub:
  - Open-source project
  - Compiles into JavaScript for browser compatibility
- Power BI Embedded Playground:
  - Review a custom visual
  - Test your own custom visuals

# Demonstration and Exercise 1

You will see how to:

- Import a custom visualization into the Power BI Desktop
- Use a custom visualization in a report