APPLIED SKILLS

Build collaborative apps for Microsoft Teams

Days	SKILL LEVEL	DELIVERY METHOD	Role	TECHNOLOGY
1	Intermediate	VILT/ILT	Developer	Microsoft 365

Course Overview

Learn how to build and distribute Microsoft Teams apps that retrieve user information using the Microsoft Graph API. Practice building and deploying apps in the guided project at the end of the learning path.

Tasks performed.

- Build a bot
- Create a messaging extension
- Build webhooks
- Create a Teams tab
- Integrate Microsoft Graph into a Teams app
- Distribute a Teams app

Prerequisites

Before attending this course, delegates must know:

- Basic understanding of Microsoft Teams apps and their components, including adaptive cards and task modules
- Ability to program with JavaScript, TypeScript, and Node.js
- Experience using Visual Studio Code at the intermediate level

- Global administrator access to a [Microsoft 365 tenant](#)
- Access to a [Microsoft Azure subscription](#)

Prepare for the assessment.

Module 1: Get started building apps for Microsoft Teams by using Teams Toolkit for Visual Studio Code

Teams Toolkit is an extension for Visual Studio Code and Visual Studio 2022. It helps developers create and deploy Microsoft Teams apps with integrated identity, cloud storage, and other services across Microsoft 365 and Azure. In this module, you'll learn how to build a Microsoft Teams app by using Teams Toolkit for Visual Studio Code.

Learning objectives

When you finish this module, you should be able to:

- Describe the basics of Teams platform apps.
- Describe the benefits of using Teams Toolkit for Visual Studio Code to build apps for Teams.
- Create and debug a Teams app by using Teams Toolkit for Visual Studio Code.

Module 2: Build conversational bots for Microsoft Teams

Learn how to create bots to enable conversational interactions with users through text, interactive cards, and task modules in Microsoft Teams.

Learning objectives

After completing this module, you should be able to:

- Create a conversational bot
- Create a bot with an adaptive card
- Create a bot that sends proactive messages to Microsoft Teams

Module 3: Build message extensions for Microsoft Teams and Microsoft Copilot for Microsoft 365

Learn how to build message extensions that allow users to interact with external services within their flow of work in Microsoft Teams and Microsoft Copilot for Microsoft 365.

Learning objectives

After completing this module, you should be able to:

- Identify the appropriate type of message extension command for an app scenario.
- Create an action-based message extension.
- Create a search-based message extension.

- Describe considerations for building message extensions to be used as plugins for Copilot for Microsoft 365.

Module 4: Build tabs for Microsoft Teams

Learn how to build tabs that provide embedded web experiences within Microsoft Teams.

Learning objectives

After completing this module, you should be able to:

- Create a tab in Teams
- Retrieve context in a Teams tab
- Create a deep link to a Teams tab.

Module 5: Connect web services to Microsoft Teams using webhooks

Learn how to create Incoming Webhooks and Outgoing Webhooks that connect web services to teams and channels in Microsoft Teams.

Learning objectives

After completing this module, you should be able to:

- Create an Incoming Webhook
- Create an Outgoing Webhook
- Process data received from an Incoming Webhook
- Send data to an Outgoing Webhook

Module 6: Retrieve Microsoft 365 data for Microsoft Teams apps using Microsoft Graph

Learn how to authenticate users with Microsoft identity platform, configure permissions, and retrieve user data for your Microsoft Teams app using the Microsoft Graph API.

Learning objectives

After completing this module, you should be able to:

- Describe how Microsoft Graph can enhance the functionality and user experience of a Teams app.
- Authenticate users to access Microsoft Graph in a Teams app.
- Configure permissions to access Microsoft Graph.
- Retrieve user information using Microsoft Graph within a Teams app.

Module 7: Deploy a Microsoft Teams app to Azure by using Teams Toolkit for Visual Studio Code

When you create applications for Microsoft Teams, depending on your requirements, you might choose to host the web app in Azure. You might also add features that require cloud resources, like Azure Key Vault or Azure Functions. If you're creating bots, you'll need to use Azure Bot.

The Teams Toolkit for Visual Studio Code extension streamlines the process of setting up and deploying cloud resources by giving you a simple way to select and provision these resources during the app development stage. It also caters to easy publishing of the app, whether you need to publish to your organization for other users to test or to create app packages that can then be uploaded manually in Teams. In this training module, you'll understand more about the infrastructure requirements and how to set up things for hosting and publishing your app in Teams.

Learning objectives

When you finish this module, you should be able to:

- Provision Azure resources by using Teams Toolkit for Visual Studio Code.

- Deploy an app to Azure by using Teams Toolkit.

- Describe different ways to publish your app to your organization's store by using Teams Toolkit.

Take the assessment.

This assessment will use an interactive lab to evaluate your performance. It will take a few minutes to load the lab, and you may do other activities while it loads. After you launch the lab, you will need to wait 72 hours to launch it again. Your mouse movements and text entered during the lab will be recorded for quality purposes. Learn more.

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