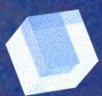


.NET Conf China
2022



使用Teams Toolkit创建基于.NET的 Teams App

张渝 Yu Zhang

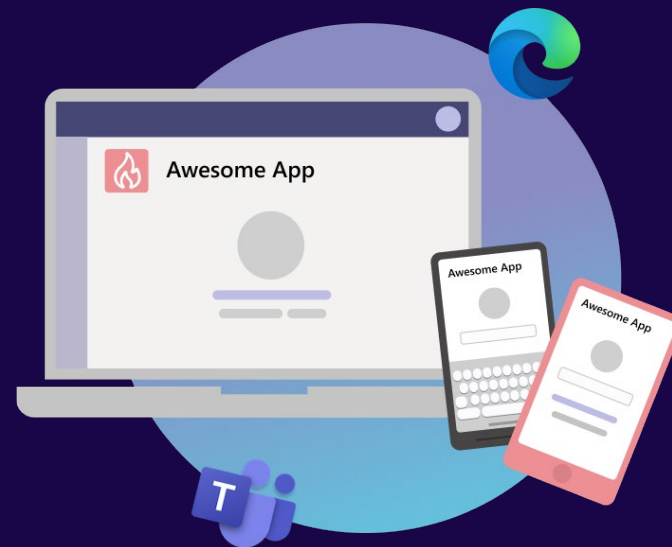
Microsoft 365 DevX Product Manager



.NET Conf China

Agenda

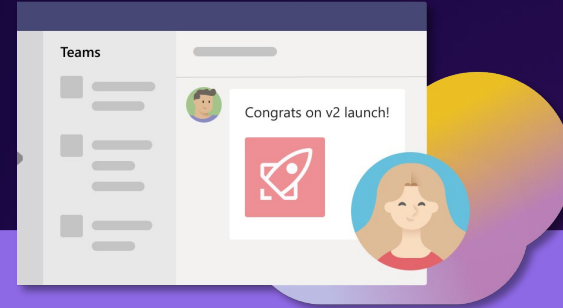
- Microsoft Teams App 概述
- Microsoft Teams App 解决方案
- Teams Toolkit for Visual Studio
- Demo
- 扩展阅读和示例应用



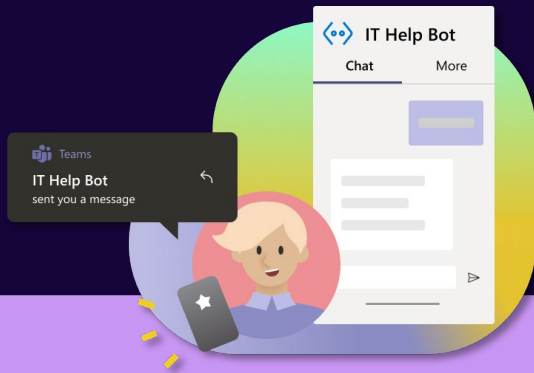
Why a Teams App?



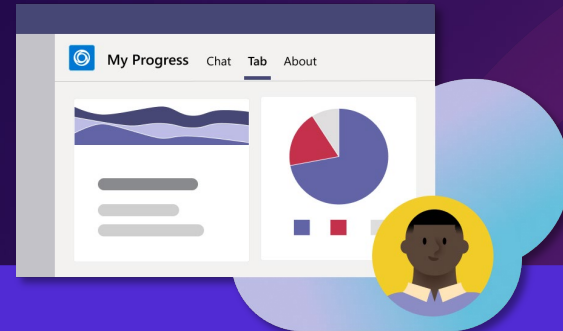
团队沟通和协作



推动组织目标



常见业务流程



集成已有的应用

Teams App 概述



Microsoft Teams平台提供了可扩展功能使用户能够提供应用来丰富Teams功能



Teams app 可以是个人应用，也可以是共享应用

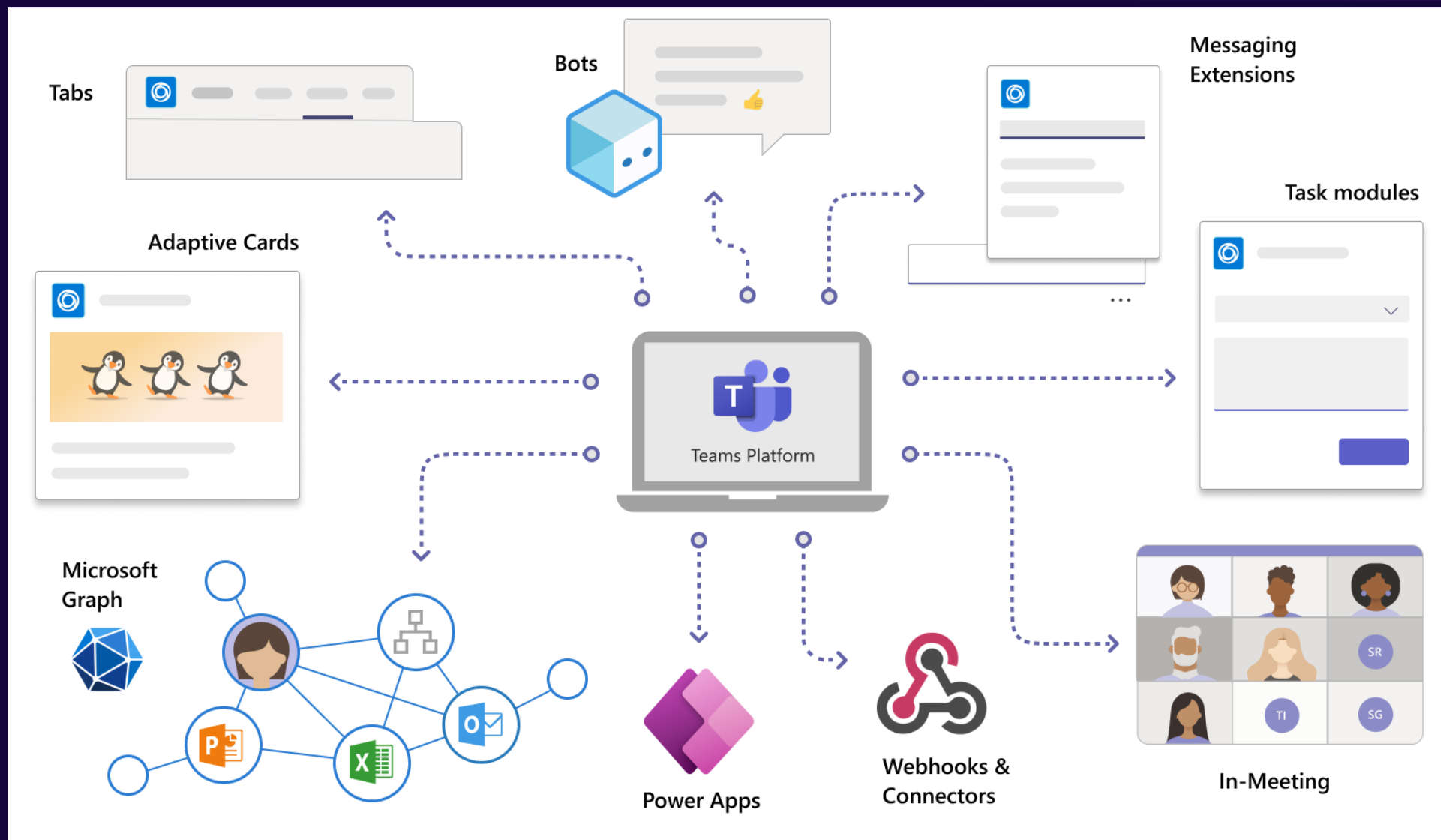


Teams app 是 web-based 应用程序



Self-hosted, surfaced in Teams

探索Microsoft Teams平台扩展功能



Teams App 定义

- manifest.json
- color.png
- outline.png

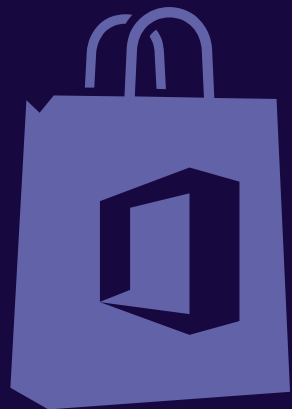
```
{
  "$schema": "https://developer.microsoft.com/json-
schemas/teams/v1.14/MicrosoftTeams.schema.json",
  "manifestVersion": "1.14",
  "version": "1.0.0",
  "id": "%MICROSOFT-APP-ID%",
  "localizationInfo": {
    "defaultLanguageTag": "en-us",
    "additionalLanguages": [
      {
        "languageTag": "es-es",
        "file": "en-us.json"
      }
    ]
  },
  "developer": {
    "name": "Publisher Name",
    "websiteUrl": "https://website.com/",
    "privacyUrl": "https://website.com/privacy",
    "termsOfUseUrl": "https://website.com/app-tos",
    "mpnId": "1234567890"
  },
  "name": {
    "short": "Name of your app (<=30 chars)",
    "full": "Full name of app, if longer than 30 characters (<=100 chars)"
  },
  "description": {
    "short": "Short description of your app (<= 80 chars)",
    "full": "Full description of your app (<= 4000 chars)"
  },
  "icons": {
    "outline": "A relative path to a transparent .png icon – 32px X 32px",
    "color": "A relative path to a full color .png icon – 192px X 192px"
  }
  ...
}
```

Teams App 定义

- manifest.json
- color.png
- outline.png

```
"staticTabs": [  
  {  
    "entityId": "unique Id for the page entity",  
    "scopes": [  
      "personal"  
    ],  
    "context": [  
      "personalTab",  
      "channelTab"  
    ],  
    "name": "Display name of tab",  
    "contentUrl": "https://contoso.com/content (displayed in Teams  
canvas)",  
    "websiteUrl": "https://contoso.com/content (displayed in web browser)",  
    "searchUrl": "https://contoso.com/content (displayed in web browser)"  
  },  
  {  
    "bots": [  
      {  
        "botId": "%MICROSOFT-APP-ID-REGISTERED-WITH-BOT-FRAMEWORK%",  
        "scopes": [  
          "team",  
          "personal",  
          "groupchat"  
        ],  
        "needsChannelSelector": false,  
        "isNotificationOnly": false,  
        "supportsFiles": true,  
        "supportsCalling": false,  
        "supportsVideo": true,  
        "commandLists": [  
          {  
            "scopes": [  
              "team",  
              "groupchat"  
            ]  
          }  
        ]  
      }  
    ]  
  }  
],  
...  
}
```

发布 Teams App



发布到Teams 应用商店

全球数百万Teams用户可以访问该应用



发布到组织

特定组织中的用户可以访问该应用，需要
获得特定组织IT admin的批准从而发布



上传到Teams客户端

无需发布即可在Teams客户端中使用应用，
通常用于开发人员测试或是一小部分用户
使用该应用

Teams应用商店

Apps

Apps

Built for your org
Built with Power Platform

Featured

Popular on Teams
Top picks
What's new
Best selling
Manage tasks
Recognize your team

Categories

Microsoft
Education
Productivity
Image & video galleries
Project management
Utilities
[See more](#)

Industries

Agriculture
Distribution
Education
Finance
Government
Health care and life sciences
[See more](#)

Workflows

[Manage your apps](#)

Popular on Teams

Added and used the most on Microsoft Teams

Forms
Microsoft Corporation

Easily create surveys, quizzes and polls.

Power BI
Microsoft Corporation

Use Power BI to discover actionable insights in your data and make data-driven decisions by sharing and collaborating everyday using Microsoft Teams, Microsoft Outlook, and...

Polly
Polly

Polly is an engagement app that captures instant, contextual feedback from your team in seconds. Just about anyone can get started with Polly to quickly reach their colleagues and...

Power Automate
Microsoft Corporation

Automate time-consuming and repetitive tasks by integrating your favorite apps and services with Microsoft Power Automate.

Tasks by Planner and To Do
Microsoft Corporation

Tasks makes it easy to stay organized across all your Planner and To Do tasks. Create, assign, and track tasks individually or collaboratively with your team, and see everything come...

Channel calendar
Microsoft Corporation

Access all events in the channel from one place. All members—except guests—can add events to the calendar and view event details.

YouTube
Microsoft Corporation

Share a YouTube video with other members of the channel. Simply search for the video you want or paste its URL.

Power Apps
Microsoft Corporation

Help your team work smarter by creating apps that connect to the data they use most. Add those apps to your channel so your team can quickly find them.

Polls
Microsoft Corporation

Easily create choice polls, quizzes and word cloud polls before or during your meeting. Collect responses in real-time.

Azure Boards
Microsoft Corporation

Azure Boards enables you to plan, track and discuss work across your teams. Azure Boards app for Microsoft Teams lets you monitor work item activity in your projects, create new...

Miro
Miro

Miro is the online whiteboard platform that helps you co-create and bring meetings to life. Instantly open a Miro board right in any Teams meeting to brainstorm ideas, take notes, o...

Jira Cloud
Atlassian

The new Jira Software for Teams app anchors real-time communication to a single, shared view of the work ahead. With the power of two tools in one view, conversations have...

Remind
88 Ventures Limited

Never forget a thing. Remind yourself or your team members of important meetings, to-do items or even birthdays. Set **personal reminders**, **group chat reminders** or **chann...

Trello
Atlassian

Trello for Microsoft Teams lets you work more collaboratively, get more done, and organize your projects in a fun, flexible, and rewarding way. Trello app for Teams links your Trello...

Adobe Acrobat
Adobe

With Adobe Acrobat, you can now collaborate on and make changes to your PDFs right from within Microsoft Teams. The PDFs from your Teams Chats, OneDrive etc. are now centrally...

Kudos
Kudos Inc

Kudos is the fun and effective solution for boosting morale, employee engagement and teamwork in your organization! Kudos for Teams connects your recognition messages in the...

Bookings
Microsoft

Enables professionals and administrators to schedule bookings with Microsoft Teams Meetings. Use this scheduling tool to send appointment reminders from your business or...

Workday
Workday

With Workday for Microsoft Teams, you can empower your people to collaborate with less friction and complete everyday HR and Finance tasks right within Teams. **Manage Time Off...

MURAL
MURAL

MURAL is a collaborative intelligence company. We connect teams to unlock their potential, increasing the innovation capacity of the enterprise. MURAL creates a culture of effect...

GitHub
Microsoft Corporation

GitHub is the leading software development platform. Microsoft Teams is one of the most popular communication platforms where modern development teams come together...

Azure Repos
Microsoft Corporation

Azure Repos is a set of version control tools that helps you manage your code. Azure Repos app for Microsoft Teams allows you to monitor activities in your repositories, search...

Project
Microsoft Corporation

Tackle anything from small projects to large initiatives. Track a project to completion on grid, timeline, and board views using tasks with dependencies, assignments, and more. *Project ap...

Breakthru
Breakthru

Take tiny breaks in your day with Breakthru. Clear your head, find inspiration, breathe, with a guided system of two-minute movement-based breaks. Choose to feel joy, energy...

Stack Overflow for Teams
Stack Overflow

Stack Overflow for Teams is a private, secure home for your team's questions and answers. No more digging through stale wikis and lost emails—give your team back the time it needs...

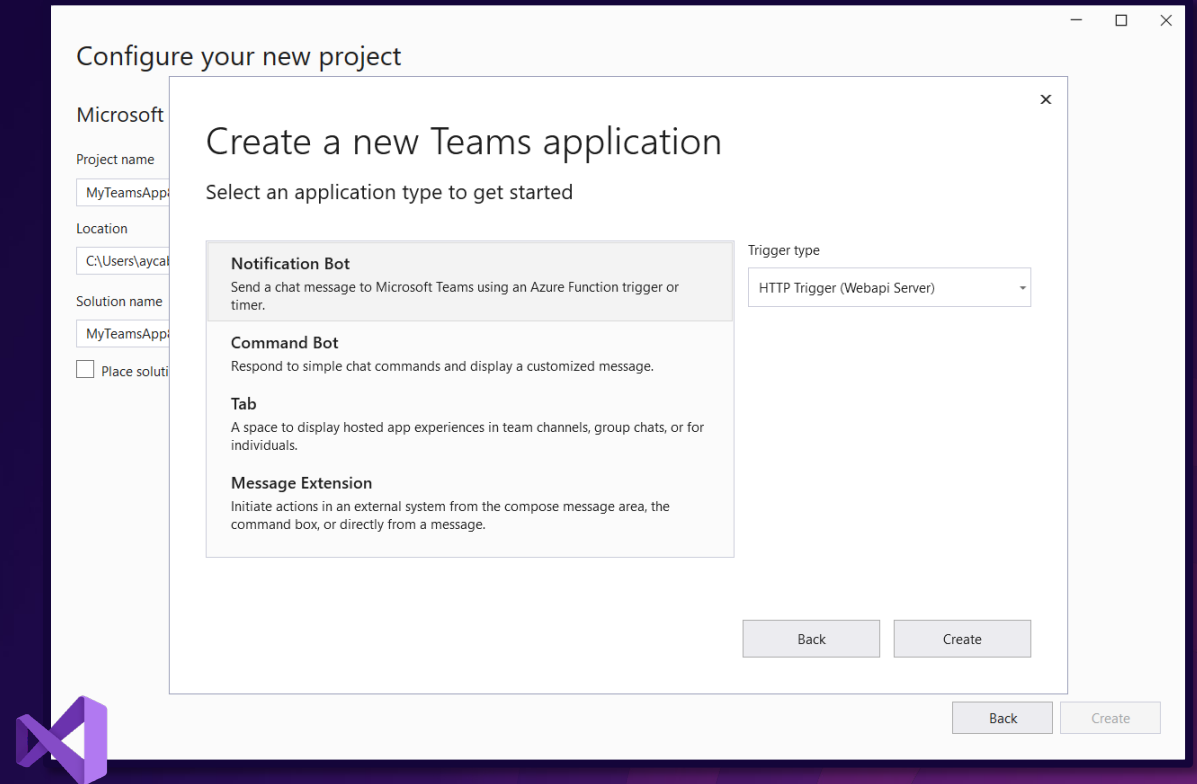
[Filter apps](#)

Demo – 创建一个 Teams bot 应用

Teams Toolkit for Visual Studio and .NET

Teams Toolkit for Visual Studio

- 简单易上手
- 常用的应用模板
- 无需人工注册Teams app
- 智慧集成Azure云端主机
- 基于 .NET框架的web 应用



TeamsFx .NET SDK

TeamsFx .NET SDK可以有效帮助开发者简化源代码

辅助开发Microsoft Teams单点登录，访问Bot服务，或访问Azure云资源等

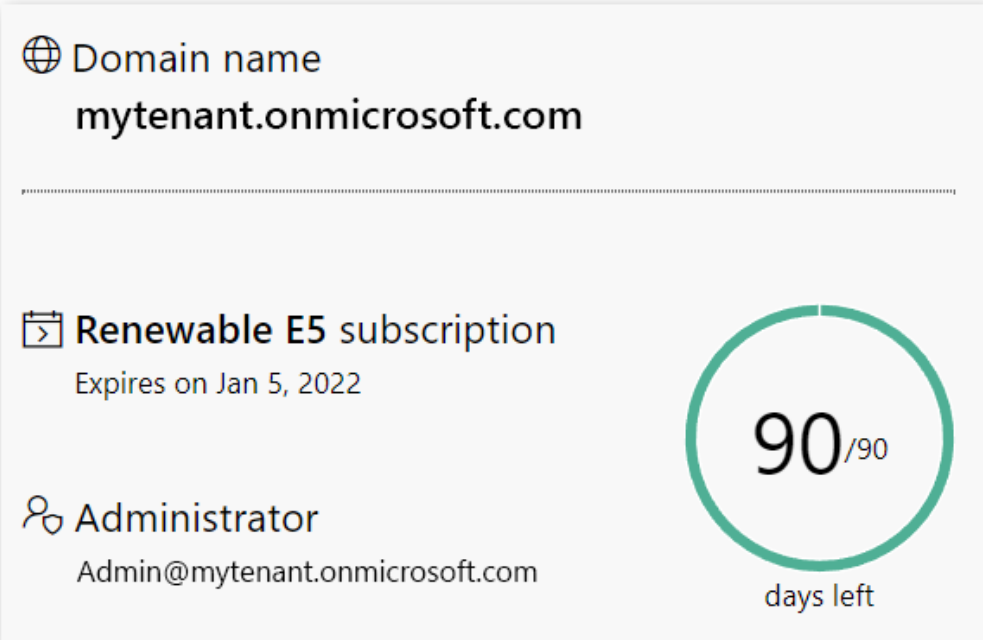
发布于NuGet

```
public void ConfigureServices(IServiceCollection services)
{
    ...
    services.AddTeamsFx(Configuration.GetSection("TeamsFx"));
}
...

await teamsUserCredential.GetTokenAsync(
    new TokenRequestContext(new string[] { "User.Read" }),
    new System.Threading.CancellationToken());
```

Microsoft 365 developer program

加入开发人员计划，以获取免费的Microsoft 365 E5 开发人员订阅, 可以用于创建sandbox环境，以构建独立于生产环境的Team App或任何Microsoft 365 解决方案。



The screenshot displays the details of a Microsoft 365 developer program subscription. It includes the domain name, the subscription type (Renewable E5), the expiration date (Jan 5, 2022), and the administrator (Admin@mytenant.onmicrosoft.com). A circular progress indicator shows 90 days left.

Domain name	mytenant.onmicrosoft.com
Renewable E5 subscription	Expires on Jan 5, 2022
Administrator	Admin@mytenant.onmicrosoft.com
90/90 days left	

扩展阅读

Teams Toolkit for Visual Studio 开发人员文档:
<https://aka.ms/teams-toolkit-vs/docs>

TeamsFx GitHub:
<https://aka.ms/github/teamsfx>

TeamsFx 示例应用:
<https://aka.ms/github/teamsfx-samples>

[教程 ]

使用Teams Toolkit for Visual Studio构建用于获取股票价格
浮动通知的Teams Bot App:
<https://aka.ms/teams-toolkit-vs/bot-tutorial>

.NET 开发人员,
让我们听到你的
声音!

分享你的想法 🗣️

<https://aka.ms/teams-toolkit-vs/feedback>

