



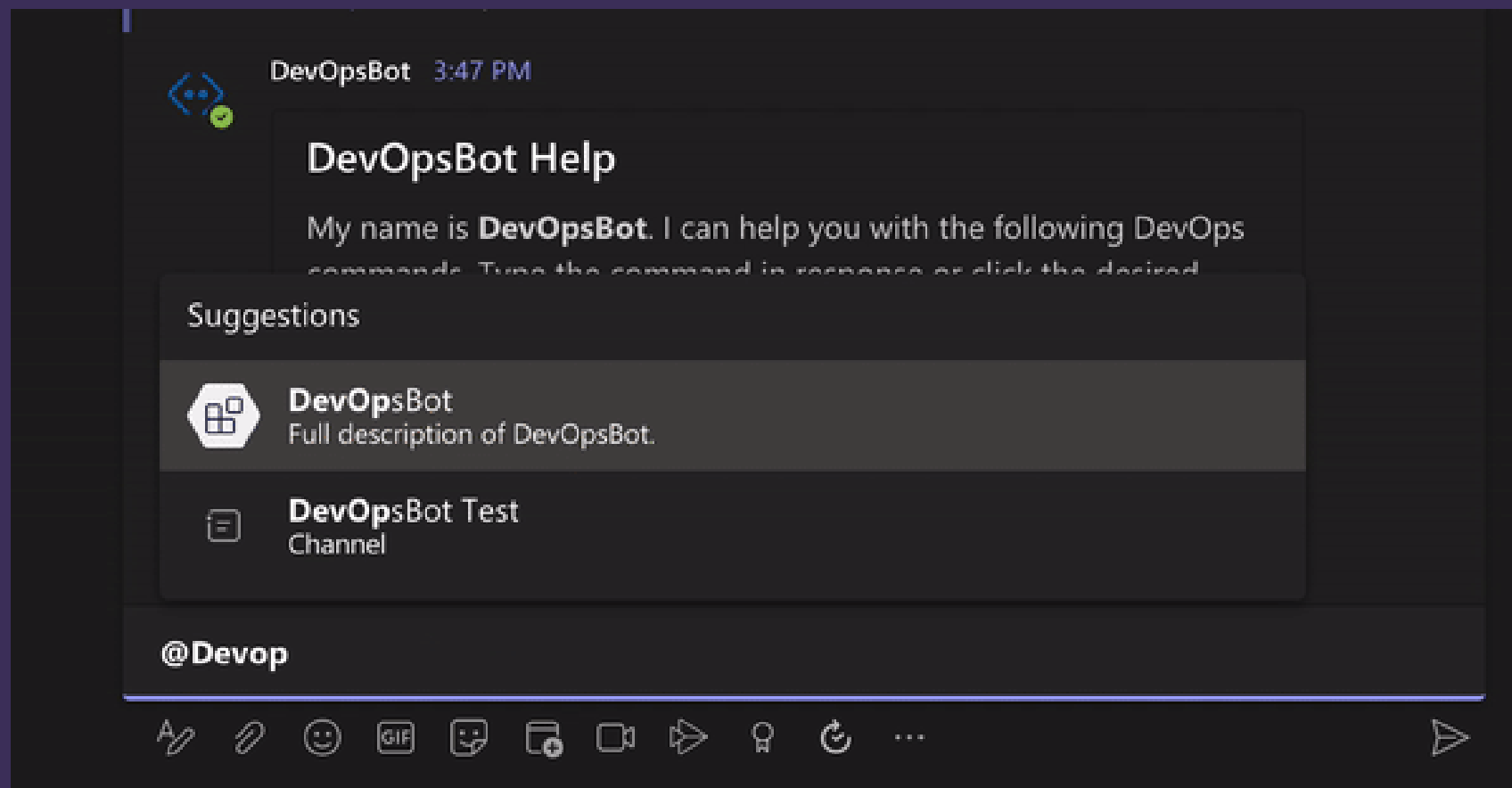
快速搭建Teams机器人应用

大纲

- 经典应用场景: ChatOps
- Teams Bot扩展能力介绍
- Demo: 使用Teams Toolkit搭建Bot应用
- 深入了解: Bot Framework SDK
- 深入了解: Adaptive Card

经典应用场景

ChatOps (DevOps in Chat)



Teams Bot 扩展能力介绍

- 信息收发:
 - 机器人可以与用户进行1:1 对话
 - 机器人可以在群聊或者Teams Channel通过@接收信息或直接发送消息.
- 交互机制 – Bot UI
 - 指令体验 (Bot Command): 机器人响应用户指令并执行相应的操作.
 - 卡片体验 (Adaptive Card): 机器人下发消息卡片并可在卡片中定义Action.
 - 弹窗体验 (Task Module): 机器人可通过弹出任务模块来完成用户交互.

在1:1对话, 群聊和Channel中使用机器人收发信息



与用户在1:1对话中收发信息

一对一对话中的聊天机器人不需要@提及. 用户发送的所有消息将路由到自动程序.



与用户在Channel和群聊中收发信息

在频道和群聊对话中的机器人要求用户@提及机器人来在频道中调用它.

渠道	场景
1:1 对话	在业务流程中给单个用户提供消息提醒, 可替代传统邮件提醒机制.
	智能客服提供预定义的QnA问答.
	适用于对话模式的自动化业务流程. 例如工单审批.
Channel和群聊	指定特定群组可接收的消息提醒, 比如后台程序报警信息.
	适用于协作场景的工作流程, 比如创建/分配/追踪待办事项, 问卷调查等.

利用机器人开发指令, 卡片和任务弹窗与用户进行交互



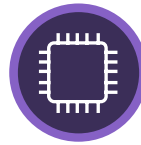
自定义机器人可响应的命令集

用于可以在消息编辑区域, 搜索框区域和消息上可以触发这些指令.



自定义消息卡片

使用Adaptive Card Designer来设计你的消息卡片



使用任务模块创建弹窗体验

这允许你创建基于iFrame的小部件或者运行自定义的HTML/JS代码, 也可以使用弹窗来展示消息卡片.

What can I say?

hello
Runs the simplest hello dialog

roster
Fetches the full roster payload for the current con...

names
Lists the names of the users for the current conver..

Type your questions here

✎ 😊 GIF 🗨 ...

Redmond 8a - 12:30 p
Belle vue 12:30 p - 3p
Seattle 8p

2:00 PM
1hr

Contoso Campaign Status Meeting
Conf Room
Bravem-2/9050

Contoso Brand Guidelines shared by

Agenda

EXPENSE APPROVAL PENDING

Trip to UAE EXPORT AS PDF
ER-13052

Submitted By: Matt Hiding
Duration: 2019-06-19 - 2019-06-21
Submitted On: 2019-04-14
Reimbursable Amount: \$400.00
Awaiting approval from: Thomas
Submitted to: David

Expense report

Publish Adaptive Card Schema

Matt Hiding
Created Tue, Feb 14, 2017

Now that we have defined the main rules and features of the format, we need to produce a schema and publish it to GitHub. The schema will be the starting point of our reference documentation.

Board: Adaptive Cards
List: Backlog
Assigned to: Matt Hiding
Due date: Not set

Set due date View

Activity update with labels

Adaptive Card design session

Conf Room 112/3377 (18)
04:30 - 05:30

Snooze for
5 minutes

Snooze I'll be late

Calendar reminder with labels

Task Module
Custom Form

Enter new customer information:

Name:
first and last

Email:
name@email.com

Favorite book:
title of book

Password:

Confirm password:

Sign up

执行自动化流程

创建视觉丰富的对话信息

在聊天中进行复杂交互

Demo: 使用Teams Toolkit快速搭建机器人应用

The screenshot displays the Microsoft Teams Toolkit for Visual Studio Code interface. On the left sidebar, the 'PROJECT' section is expanded, showing a list of actions. A red circle and arrow point to the 'Create New Project' button, with a callout box containing the text '点击创建一个新的项目' (Click to create a new project). In the center, a 'Select capabilities (2/4)' dialog box is open, listing various capabilities. A red circle and arrow point to the 'Bot Conversational Agent' option, which is checked, with a callout box containing the text '勾选机器人选项' (Check the robot option). The main area shows the 'Microsoft Teams Toolkit for Visual Studio Code' page, including a 'What is the Teams Toolkit?' section and a code editor displaying a sample bot script. The bottom status bar shows the file path 'Azure: teams-app-tryout@modsddevx.onmicrosoft.com'.

1 点击创建一个新的项目

2 勾选机器人选项

Extension: Teams Toolkit (Preview)

Select capabilities (2/4)

Select at least 1 capability 1 Selected OK

- Tab UI-based app
- Teams-aware webpages embedded in Microsoft Teams
- ☒ Bot Conversational Agent
Running simple and repetitive automated tasks through conversations
- Messaging Extension Custom UI when users compose messages in Teams
Inserting app content or acting on a message without leaving the conversation

Details Feature Contributions Changelog Dependencies Runtime Status

Microsoft Teams Toolkit for Visual Studio Code

What is the Teams Toolkit?

The Teams Toolkit helps developers create and deploy Teams apps with integrated identity, access to cloud storage, data from [Microsoft Graph](#), and other services in [Azure](#) and [M365](#) with a "zero-configuration" approach to the developer experience.

```
teams Toolkit
  take > app > components > sample > 0 Graph > 0 Graph
  1 Quick Start
  2 Samples
  3 Bot
  4 Bot
  5 Bot
  6 Bot
  7 Bot
  8 Bot
  9 Bot
  10 Bot
  11 Bot
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  99 Bot
  100 Bot
```

PROBLEM OUTPUT DEBUG CONSOLE TERMINAL

Completed successfully!

You can now view Teams app template in the browser.

Level: https://localhost:3000

On Your Network: https://localhost:3000

Note that the development build is not optimized. To create a production build, use run build.

What are Teams app "Capabilities"?

Teams apps are a combination of [capabilities](#) and [entry points](#). For example, people can chat with your app's bot (capability) in a channel (entry point).

Tab

Azure: teams-app-tryout@modsddevx.onmicrosoft.com

AWS: (not connected)

4

深入了解: Bot Framework SDK

Bot Framework SDK



包含模块化和可扩展的 SDK，用于构建 Teams Bot应用



Bot Framework Service (BFS)，用于在机器人和后端Channel（如Teams）之间发送和接收消息和事件

使用Bot Framework 可以实现以下功能：

➤ 发送消息

```
await context.sendActivity(`Add your response here!`);
```

➤ Bot事件 ([文档](#))

```
onMembersAdded( )                      onAdaptiveCardInvoke( )
```

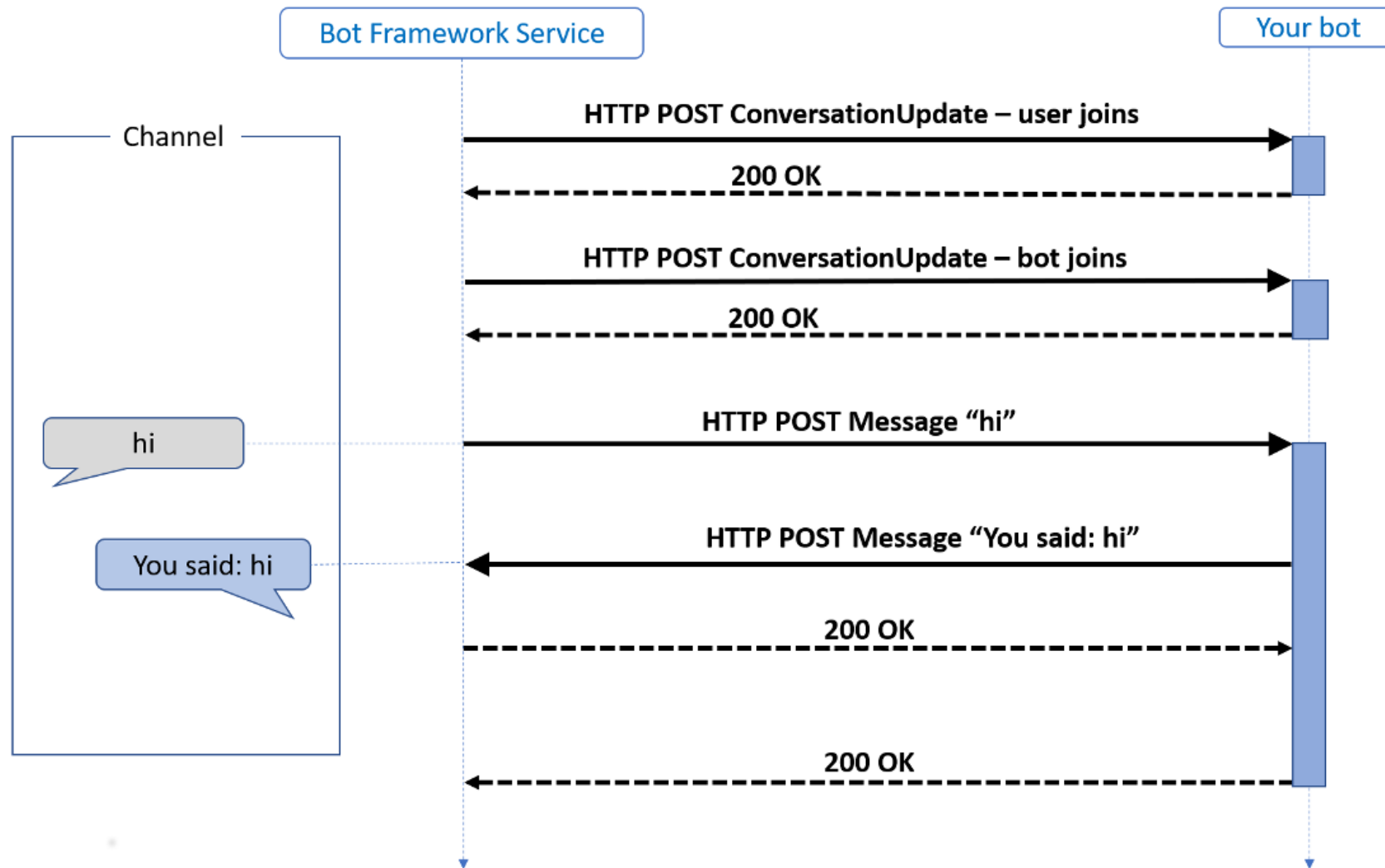
➤ Bot命令

```
"welcome"                      "learn"
```

➤ 添加卡片和按钮，使用除文本以外的媒体（例如图形、菜单和卡片）来增强用户体验

➤ 添加自然语言处理，Q&A 知识库等更多功能，请参考 [Bot Framework SDK 教程](#)

Teams Bot应用工作原理



5

深入了解: Adaptive Card

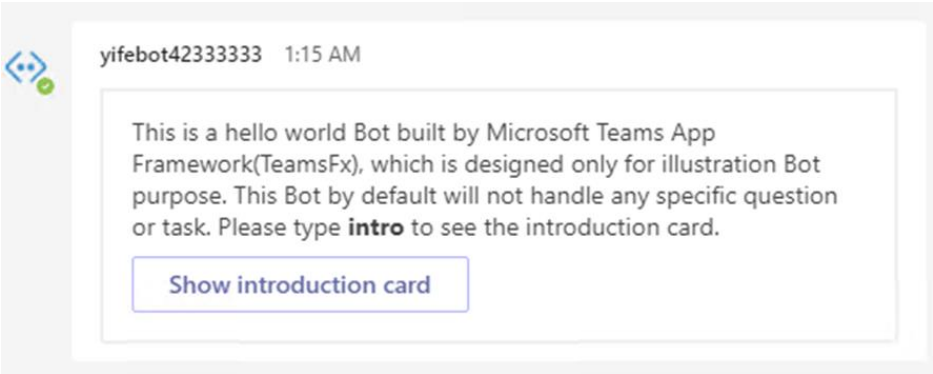
Cards in Teams Bot

Cards 种类	描述
Animation Card	可以播放gif动画或短视频的卡片。
Audio Card	一种能播放音频文件的卡片。
Hero Card	通常包含一个大图像、一个或多个按钮和文本的卡片。
Thumbnail Card	通常包含一个缩略图图像、一个或多个按钮和文本的卡片。
Receipt Card	一种使机器人能够向用户提供收据的卡。它通常包含收据、税收和总信息以及其他文本中的项目列表。
Signin Card	允许机器人请求用户登录的卡片。它通常包含文本和一个或多个按钮，用户可以单击这些按钮来启动登录过程。
Adaptive Card	一种可定制的卡片，可以包含文本、语音、图像、按钮和输入字段的任何组合。

代码示例:

```
const cardButtons = [
  {
    type: ActionTypes.ImBack,
    title: "Show introduction card",
    value: "intro",
  },
];

const card = CardFactory.heroCard("", null, cardButtons, {
  text: `This is a hello world Bot built with Microsoft Teams Framework, which is designed`
});
```

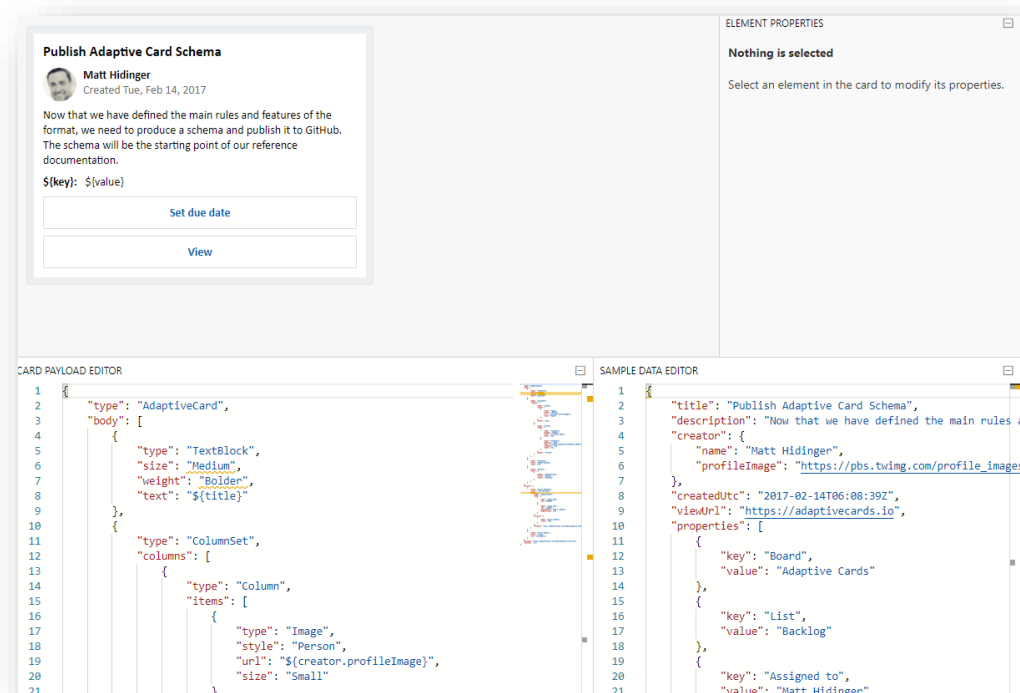


Adaptive Card

Adaptive Card是一种可定制的卡，可以包含文本、语音、图像、按钮和输入字段的任何组合。

[Adaptive Card 视频简介](#)

一. 设计Adaptive Card [Designer | Adaptive Cards](#)



二. 在 Teams Bot 中发送 Adaptive Card

```
const rawWelcomeCard = require("./adaptiveCards/welcome.json");
const ACData = require("adaptivecards-templating");
```

```
const cardTemplate = new ACData.Template(rawCardTemplate);
const cardWithData = cardTemplate.expand({ $root: dataObj });
const card = CardFactory.adaptiveCard(cardWithData);
```



Thank you

