Joanne Klein @JoanneCKlein · Jul 9

SharePoint Team site/MIcrosoft Teams provisioning... What is your org *currently* doing in Office365?

34% Manually created by IT

35% End-users create them

27% A provisioning solution

**4%** Other - comment please

155 votes · Final results

What are we trying to solve here?

- Avoid Teams/Groups creation sprawl
- Reduce manual intervention
- Less mistakes and errors
- Enforce governance policies
- Consistency supports user adoption

Built-in templates

- Adopt Office 365
- Manage a project
- Manage an event
- Onboard employees
- Organize help desk
- Collaborate on patient care
- Collaborate on global crisis or event
- Collaborate within a bank branch
- Coordinate incident response
- Hospital
- Organize a store
- Quality and safety
- Retail – manager collaboration
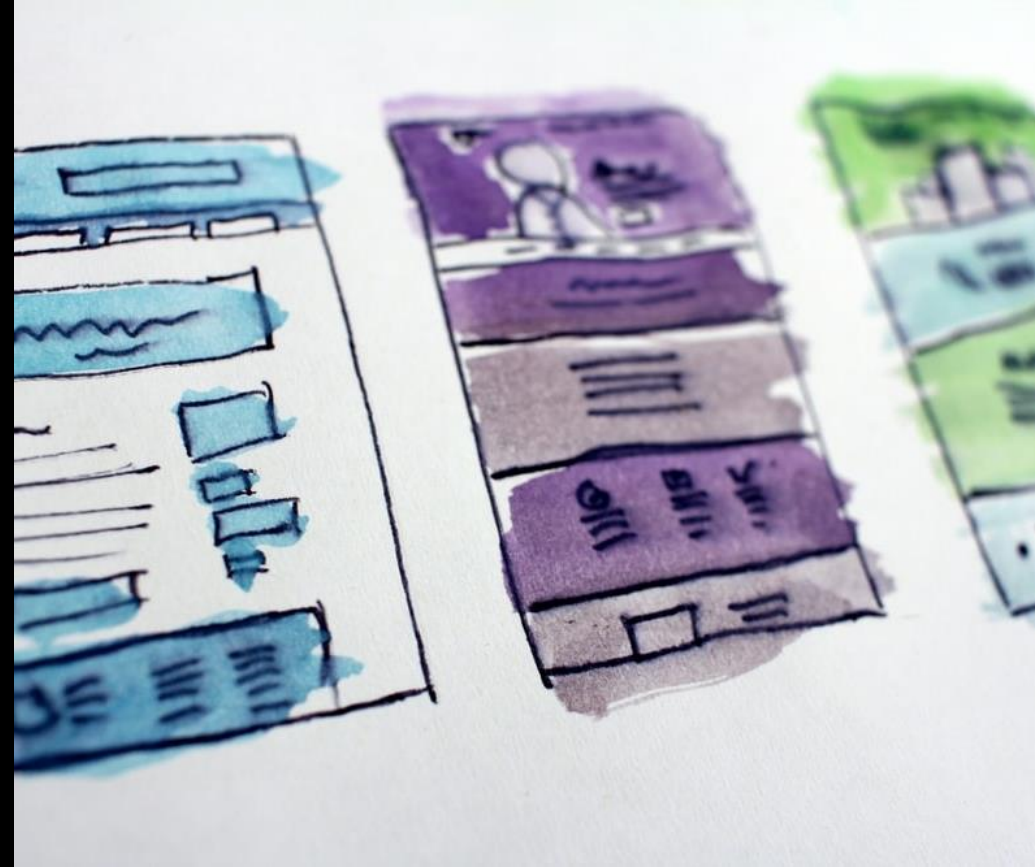
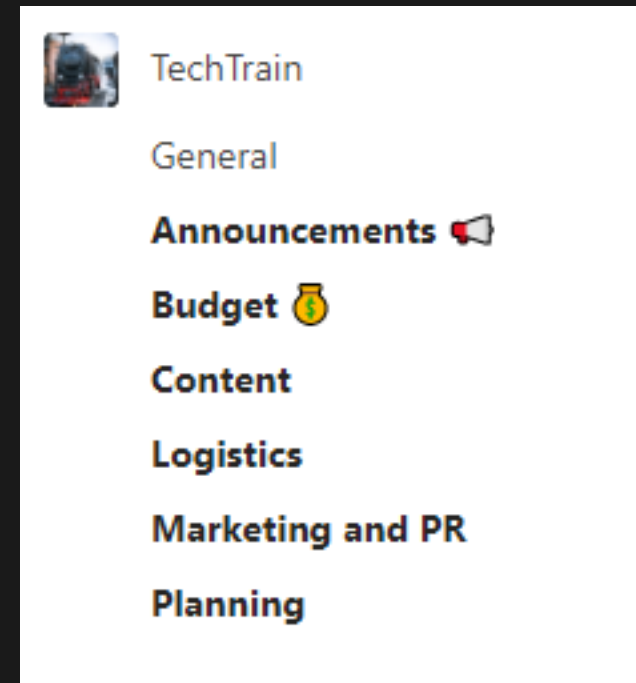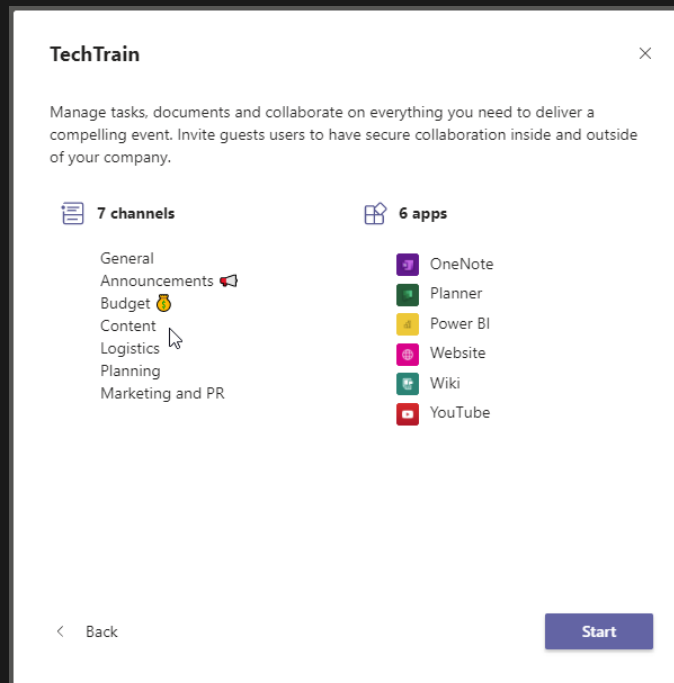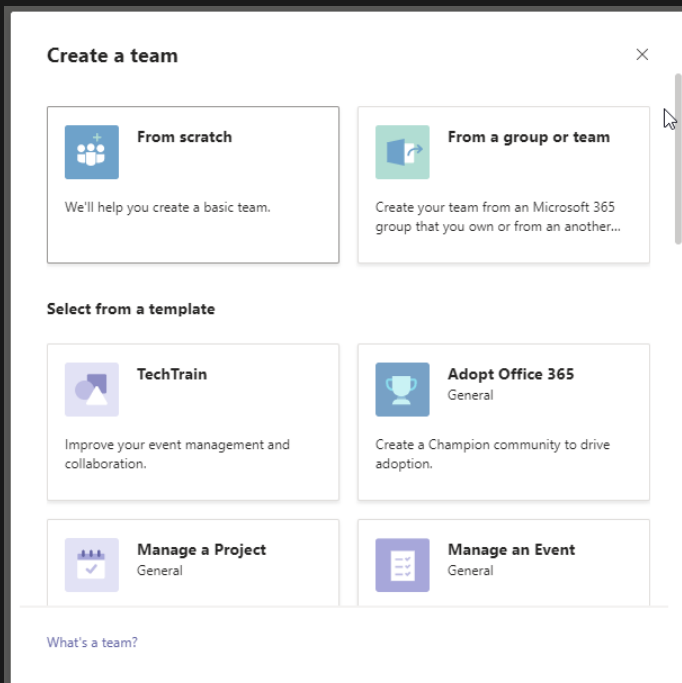# Example: "Manage an event"

Channels

- General
- Announcements
- Budget
- Content
- Logistics
- Planning
- Marketing & PR

Apps

- Wiki
- Website
- YouTube
- Planner
- OneNote
- Employee Ideas
- Issue Reporter

If all you need is a template...

Congratulations, you're done!

Creating templates

Easy: Teams Admin Center

- From scratch

- From an existing Team

- Clone an existing template

Manually: Graph

template definition (json)

```
{
    "template@odata.bind": "https://graph.microsoft.com/beta/teamsTemplates('standard')",
    "displayName": "Finance",
    "description": "Finance Team",
    "channels":
    [
        {
            "displayName": "Private",
            "isFavoriteByDefault": true,
            "description": "Invite a more select audience for specific topics.",
            "tabs":
            [
                {
                    "teamsApp@odata.bind": "https://graph.microsoft.com/v1.0/appCatalogs/teamsApps('0d820ecd-def2-4297-a
                    "name": "OneNote"
                },
                {
                    "teamsApp@odata.bind": "https://graph.microsoft.com/v1.0/appCatalogs/teamsApps('com.microsoft.teamsp
                    "name": "Planner"
                }
            ]
        }
    ],
    "memberSettings":
    {
        "allowCreateUpdateChannels": true,
        "allowDeleteChannels": true,
        "allowAddRemoveApps": true,
        "allowCreateUpdateRemoveTabs": true,
        "allowCreateUpdateRemoveConnectors": true
    },
    "guestSettings":
    {
        "allowCreateUpdateChannels": false,
        "allowDeleteChannels": false
    },
    "funSettings":
    {
        "allowGiphy": true,
        "giphyContentRating": "Moderate",
        "allowStickersAndMemes": true,
        "allowCustomMemes": true
    },
    "messagingSettings":
    {
        "allowUserEditMessages": true,
        "allowUserDeleteMessages": true,
        "allowOwnerDeleteMessages": true,
        "allowTeamMentions": true,
        "allowChannelMentions": true
    },
    "discoverySettings":
    {
        "showInTeamsSearchAndSuggestions": true
    },
    "installedApps":
    [
        {
            "teamsApp@odata.bind": "https://graph.microsoft.com/v1.0/appCatalogs/teamsApps('0d820ecd-def2-4297-adad-7805
        },
        {
            "teamsApp@odata.bind": "https://graph.microsoft.com/v1.0/appCatalogs/teamsApps('com.microsoft.teamspace.tab.
        }
    ]
}
```

Disable group / team creation

- Create a group for users that should still be able to create groups
- Run some PowerShell to set the following property:
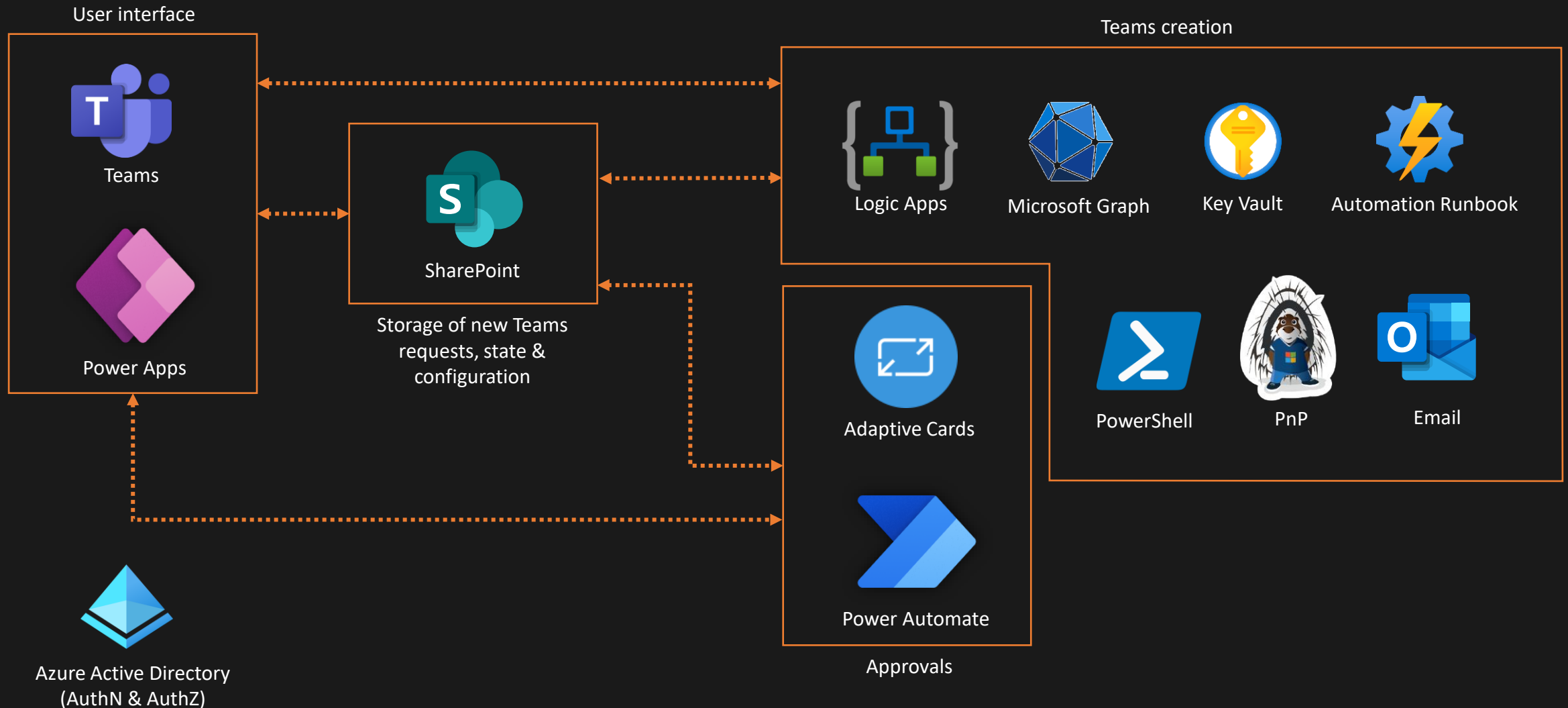
```
GroupCreationAllowedGroupId
```

Choices...

- Custom web app
- Power Automate
- Power Apps
- Azure Automation
- Azure Functions

- Teams apps, tabs, bots,…
- Azure Logic Apps
- PowerShell
- SharePoint
- PnP Provisioning Engine

When to use what?

flexibility • cost • complexity •
resilience • orchestration •
security • triggers • scaling •
maturity level • …

Photo: Luise Freese

"Request a Team" design elements

"Request a Team" flow

Request a new team → Provide team information → Check if the team already exists → Get approval → Team is created

Demo

Teams provisioning engine

It's free!

Request-a-team App Template
https://github.com/OfficeDev/microsoft-teams-apps-requestateam

- Scripts & assets
- Documentation
- Troubleshooting

One API to rule them all

https://docs.microsoft.com/en-us/graph

Teams and the Microsoft Graph

A typical workflow

Register your app in Azure AD

Authentication

Authorization

API / Permissions name	Type	Description	Admin consent req...	Status
∨ Microsoft Graph (8)				•••
Directory.ReadWrite.All	Application	Read and write directory data	Yes	✓ Granted for thvo.net •••
Group.ReadWrite.All	Application	Read and write all groups	Yes	✓ Granted for thvo.net •••
Team.Create	Application	Create teams	Yes	✓ Granted for thvo.net •••
Team.ReadBasic.All	Application	Get a list of all teams	Yes	✓ Granted for thvo.net •••
TeamMember.ReadWrite.All	Application	Add and remove members from all teams	Yes	✓ Granted for thvo.net •••
TeamSettings.ReadWrite.All	Application	Read and change all teams' settings	Yes	✓ Granted for thvo.net •••
User.Read	Delegated	Sign in and read user profile	-	✓ Granted for thvo.net •••
User.ReadWrite.All	Application	Read and write all users' full profiles	Yes	✓ Granted for thvo.net •••

Teams creation through the Microsoft Graph

```
POST https://graph.microsoft.com/v1.0/teams
Content-Type: application/json

{
    "template@odata.bind":"https://graph.microsoft.com/v1.0/teamsTemplates('standard')",
    "displayName":"My Sample Team",
    "description":"My Sample Team's Description",
    "members@odata.bind":[
        {
            "@odata.type":"#microsoft.graph.aadUserConversationMember",
            "roles":[
                "owner"
            ],
            "userId":"0040b377-61d8-43db-94f5-81374122dc7e"
        }
    ]
}
```

Minimal request to create a team based on a template,
with application permissions.

Teams creation through the Microsoft Graph

- Programmatically
- PowerShell

or leverage Graph support in:

- Power Automate
- Power Virtual Agents
- Power Apps
- Logic Apps

PowerShell to the rescue!

A good alternative to "real" development
Can be leveraged with:

- Azure Automation
- Azure Functions

Microsoft Graph PowerShell SDK
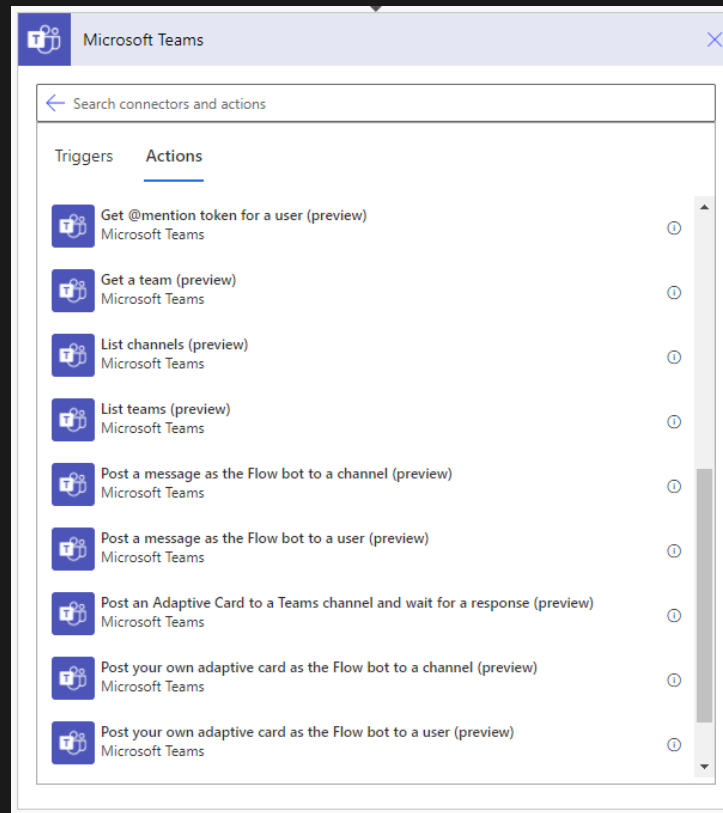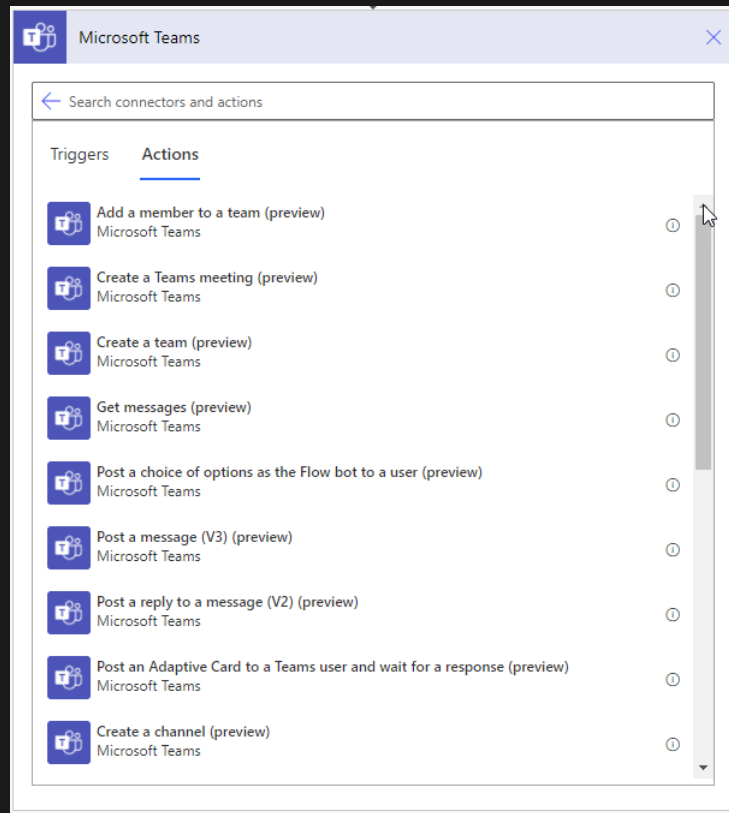`Install-Module Microsoft.Graph`

All PowerShell options

- MicrosoftTeams
    - New-Team
- PnP.PowerShell
    - New-PnPTeamsTeam
- Microsoft.Graph
    - New-MgTeam

Power Platform

Teams connector is now in preview

Key takeaways

- There's no one size fits all
- Leverage Teams as a platform to build your solution
- Get to know the Microsoft Graph
- Choose your weapons wisely, there's a lot of choice
- Dive into the Power Platform and its built-in connectors
- Don't dismiss PowerShell

Some useful reading

Request a team app on GitHub

Joanne Klein

Laura Kokkarinen (also: 30 questions to ask)

Yannick Reekmans

Bob German

Microsoft Graph Teams documentation

@thomasvochten

THANK YOU