Best hack with Microsoft Graph and Microsoft Graph Toolkit

Microsoft sponsored prize will be awarded for best use of [Microsoft Graph APIs](#) and the [Microsoft Graph Toolkit](#).

👓 Overview

Imagine a productivity hub that helps you manage your calendar ([Calendar API](#)), reminds you of unfinished tasks ([To Do API](#)), connects you with people you work frequently with ([People](#)). You can join your online classes with one click to open Microsoft Teams ([onlineMeeting](#)). You can even add [bots](#) to help manage notifications about COVID-19.

What about building an app to help manage remote learning classrooms ([education APIs](#))? You can create breakout sessions for smaller group discussions ([Teams API](#)), access files shared among your group ([Files API](#)), assign tasks for members to complete, retrieve sections of information from OneNote notebook ([OneNote API](#)), and more!

What if I tell you that Microsoft Graph can also be used to help solve one of the biggest challenges facing security professionals today – connecting the diverse ecosystem of security solutions to improve the speed and accuracy of cyber defense. You would have the opportunity to directly solve that challenge with the [Microsoft Graph Security API](#) today.

All of the above can be enabled through Microsoft Graph. The possibilities are endless! With unified API access to these services in the Microsoft 365 suite, you can now consume data through a single public endpoint (https://graph.microsoft.com) - Using simple REST calls or with an SDK available on about any platform. Authentication models are standardized. Permissions are secure, granted using OAuth protocols.

❓ What's Microsoft Graph?

Microsoft Graph is the gateway to data and intelligence in Microsoft 365. It provides a unified programmability model that you can use to access the tremendous amount of data in Microsoft 365, Windows 10, and Enterprise Mobility + Security. Use the wealth of data in Microsoft Graph to build apps for organizations and consumers that interact with millions of users.

🧑‍⚖️ How will projects be judged?

- **Functionality:** Participating projects will build a functioning Microsoft Graph-powered solution that leverages one or more Microsoft Graph services (users, groups, mail, messages, etc.), entities or data. Enabling the solution and its authentication strategy through Microsoft Graph Toolkit is highly recommended.
- **Originality:** Solutions should be authentic that address emerging problems with creative and original functionalities and designs.

- **Technicality:** Includes how well the idea was executed by the team and developers, including the user experience, the complexity of the scenarios, use of Microsoft Graph entities or data or APIs, and whether it performs as expected.
- **Teamwork:** Projects indicate students solve the problems as a team and share the required work equally.
- **Bonus**: Those solutions that incorporate the use of Microsoft platforms (such as Microsoft Teams, Visual Studio Code, or GitHub) or Microsoft cloud services (Azure services) will get extra credit in judging!

🏆 What's the prize?

Surface Go for each member of the winning team (up to 4)

__Keep reading to learn more and get ideas!__

🏗️ What can we build with Microsoft Graph?

Use Microsoft Graph to build experiences around the user's unique context to help them be more productive. Imagine an app that...

- Looks at your next meeting and helps you prepare for it by providing profile information for attendees, including their job titles and managers, as well as information about the latest documents they're working on, and people they're collaborating with.
- Scans your calendar, and suggests the best times for the next team meeting.
- Fetches the latest sales projection chart from an Excel file in your OneDrive and lets you update the forecast in real time, all from your phone.
- Subscribes to changes in your calendar, sends you an alert when you're spending too much time in meetings, and provides recommendations for the ones you can miss or delegate based on how relevant the attendees are to you.
- Helps you sort out personal and work information on your phone; for example, by categorizing pictures that should go to your personal OneDrive and business receipts that should go to your OneDrive for Business.
- Analyzes at-scale Microsoft 365 data so that decision makers can unlock valuable insights into time allocation and collaboration patterns that improve business productivity.
- Brings custom business data into Microsoft Graph, indexing it to make it searchable along with data from Microsoft 365 services.

Picking the first scenario about researching meeting attendees as an example. With the Microsoft Graph API, you can:

1. Get the email addresses of the meeting event attendees.
2. Look them up individually as a user in Azure Active Directory to get their profile information.

You can then navigate to other resources using relationships:

- Connect to their manager through a [manager relationship](#).
- Get valuable insights and intelligence including the popular files [trending around](#) the user.
- [Get the most relevant people](#) around the user.
- Extend the scenario to get to the user's groups through a [memberOf](#) relationship
- [Reach other members in each group](#).
- Tap into other scenarios enabled by [groups](#), such as [education](#) and [teamwork](#).

Microsoft Graph continues to open up the Microsoft 365 platform for developers, and always only with the appropriate permissions.

⊕ How do I get started?

Registering your app with AAD:

- Docs [tutorial](#)
- Microsoft Graph Toolkit step by step [blog post](#)

Free Azure subscription: https://azure.microsoft.com/en-us/free/

Microsoft Graph
- [Microsoft Graph Developer Center](#) (You can navigate to other MS Graph resources from here)
- [Microsoft Graph documentation](#)
- [Graph Explorer](#)
- [Microsoft Graph get-started guides](#)
- [Join Microsoft 365 developer program](#)

Microsoft Graph Toolkit
- [Microsoft Graph Toolkit documentation](#)
- [Microsoft Graph Toolkit get-started guides](#)
- [Microsoft Graph Toolkit repo](#)
- [Microsoft Graph Toolkit samples](#)
- [A Lap around Microsoft Graph Toolkit blog series](#)
- [A quick get-started video](#)

Microsoft 365 User Scenarios
- [Manage Your Life with M365](#)

Look for the Hack OHI/O Microsoft Graph workshop close to the hackathon weekend and come to the Microsoft online room during the hackathon for tips and mentoring!