



Teams Interoperability

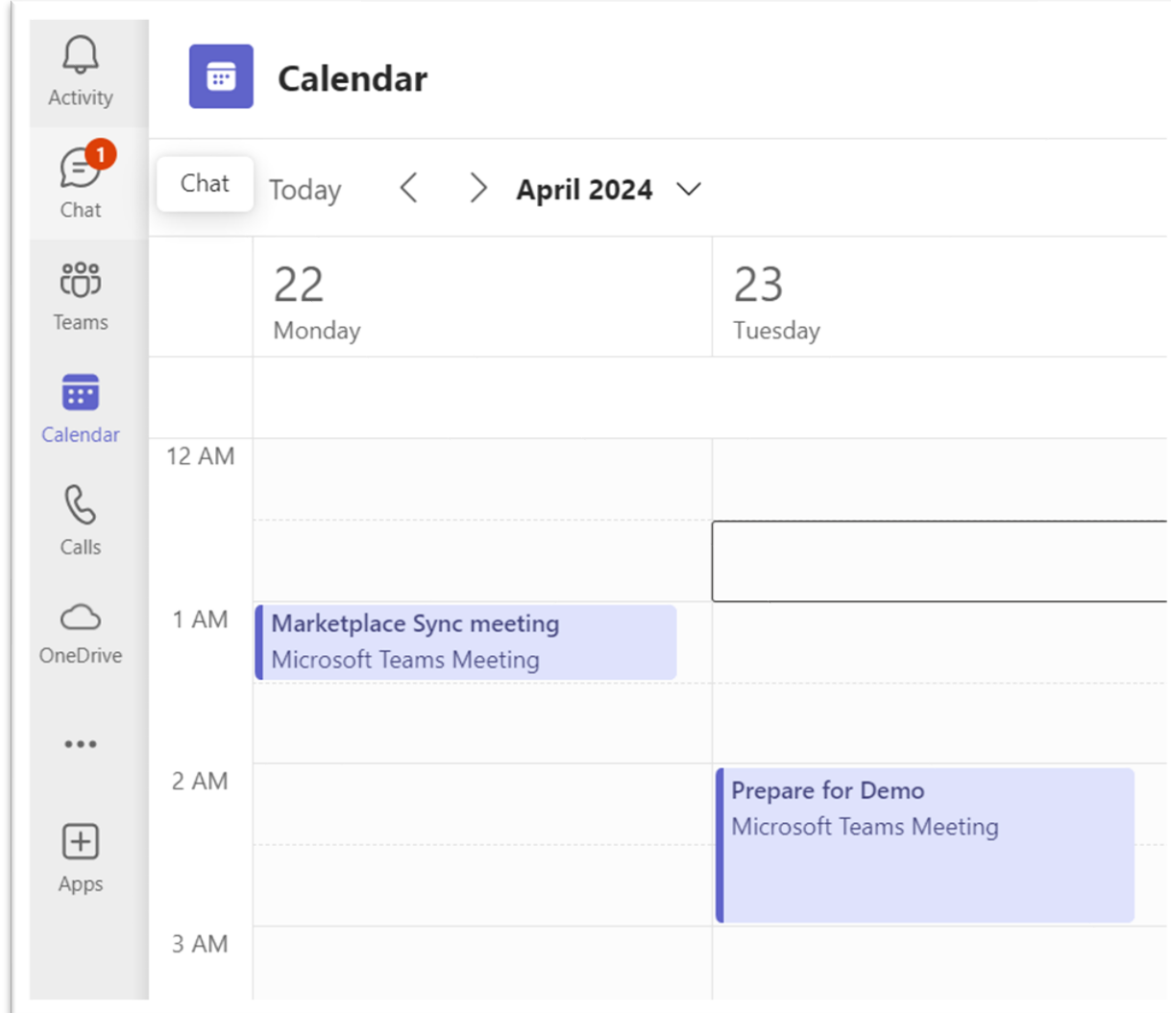
Tarun Chopra
Software Engineer



Agenda

- Overview
 - Calendar\Events
 - Files
- Graph Toolkit
- Demo

Teams UI: calendar



- ✓ Get instant visibility into planned activities, color coded and categorized automatically
- ✓ All information is synced across all your devices
- ✓ No need to check multiple calendars in different apps
- ✓ Scheduling resources like rooms, AV equipment, etc. for your events

Graph APIs: calendar



A calendar is a container for events. It can be a calendar for a user, or the default calendar of a Microsoft 365 group.

`/me/events`
`/users/{id}/events`
`/me/calendar/events`
`/users/{id}/calendar/events`
`/me/calendars/{id}/events`

`/users/{id}/calendars/{id}/events/`



Microsoft Graph



List events



Create events



Check
availability

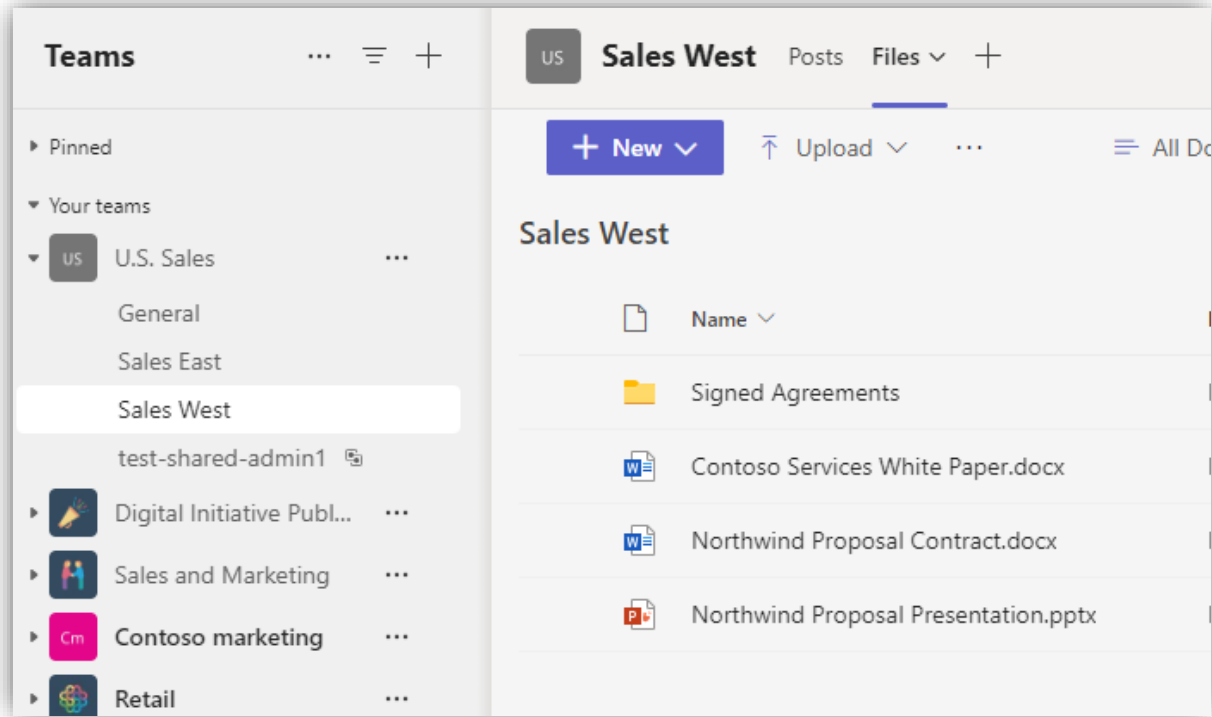


Reschedule
events



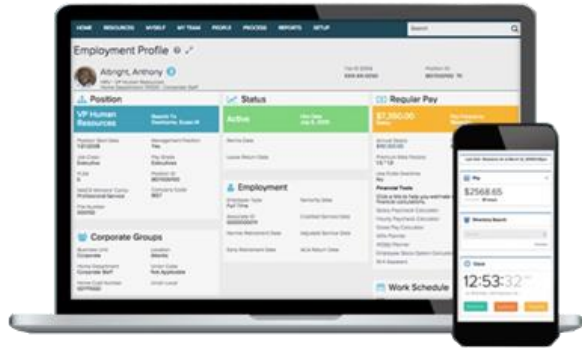
Add your attachments
to events

Teams UI: channel Files



- ✓ Built-in compliance, governance, and versioning
- ✓ Share files easily
- ✓ Co-author from mobile, desktop, and web in real-time
- ✓ Access your files offline

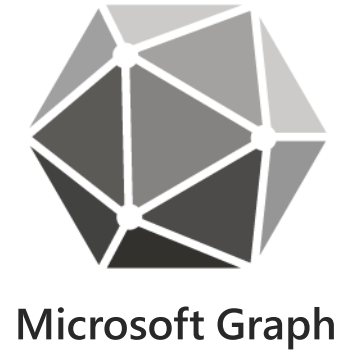
Graph APIs: Files



Files (drive/drive item) represent an item within a drive, like a document, photo, video, or folder.

`/me/drive`
`/me/drives`
`/drives/{drive-id}`

`/users/{user-id}/drive`
`/groups/{group-id}/drive`
`/sites/{site-id}/drives`



List children



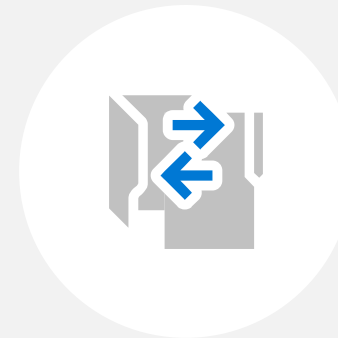
Create folder



Get thumbnails



Secured
Sharing



Store metadata
against files

Calendar

Today < > August 2023 - September 2023

28
Monday

1 PM X1050 Marketing sync
Mark 8 Project Team / General
Megan Bowen

2 PM

3 PM Design editorial sync
Design / General
Megan Bowen

Art Review
Mark 8 Project Team / Design
Megan Bowen

4 PM

5 PM

Teams

Sales West Posts Files

+ New Upload

Sales West

- Name
- Signed Agreements
- Contoso Services White Paper.docx
- Northwind Proposal Contract.docx
- Northwind Proposal Presentation.pptx

Your teams:

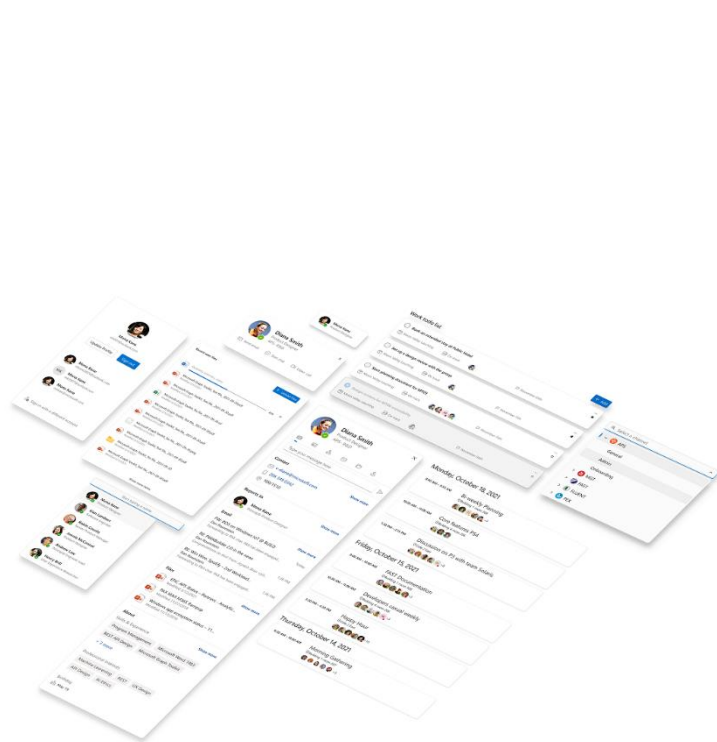
- U.S. Sales
- General
- Sales East
- Sales West
- test-shared-admin1
- Digital Initiative Publ...
- Sales and Marketing
- Contoso marketing
- Retail



Microsoft Graph Toolkit



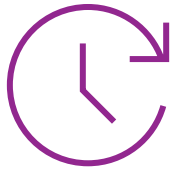
The Microsoft Graph Toolkit is a collection of reusable, **framework-agnostic components** and **authentication providers** for accessing and working with **Microsoft Graph**. The components are fully functional, customizable, and work with **any web framework** and on **all modern browsers**.



Microsoft Graph Toolkit

- ✓ Person, Person Card, People & People Picker
- ✓ Agenda
- ✓ File & File List
- ✓ To Do & Planner
- ✓ Teams Channel Picker
- ✓ Get & Generic Picker
- ✓ Conversation (1:1 & Group)

Why use Microsoft Graph Toolkit?



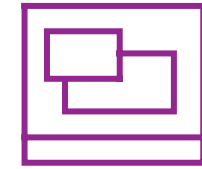
Cuts development time

Easily add UI components to access Microsoft Graph to your app with just a few lines of code



Beautiful, but flexible

Built to look like an M365 experience, but fully customizable



Works everywhere

Based on web standards and works with any web framework and modern browser


Authentication: mgt-login

Color mode: Light html js css

Sign In

```
1 <mgt-login></mgt-login>
2
```

Color mode: Light html js css


 **Megan Bowen**
MeganB@M365x214355.onmicrosoft.com

```
1 <mgt-login></mgt-login>
2
```


calendar: mgt-agenda


Color mode: Light


html js css

3:00 PM - 4:30 PM **Project Tailspin**
📍 Conference Room - Baker


8:30 AM - 11:00 AM **Company Meeting**
AE

8:00 AM - 9:30 AM **Project Team Meeting**
📍 Conference Room - Stevens


10:00 AM - 11:00 AM **Tailspin Project Discussion**
📍 My Office


10:30 AM - 12:30 PM **Market Segment Performance Update**
📍 Conf Room Rainier
PL 

```
1 <mgt-agenda></mgt-agenda>
```

calendar: mgt-agenda contd

The screenshot displays a calendar interface with a meeting titled "Project Tailspin" scheduled for 3:00 PM - 4:30 PM in the "Conference Room - Baker". A contact card for "Adele Vance" is overlaid on the calendar, showing her profile picture, name, title "Product Marketing Manager Sales & Marketing", and communication icons for email, chat, video call, and voice call. Below the contact card is a "Send a quick message" input field. The calendar also shows other time slots: 8:30 AM - 11:00 AM, 8:00 AM - 9:30 AM, 10:00 AM - 11:00 AM (labeled "Contact"), 10:30 AM - 12:30 PM (labeled "Reports to"), and 12:00 PM - 1:00 PM (labeled "Miriam Graham").

Color mode: Light


html js css

```
1 <mgt-agenda></mgt-agenda>
```

calendar: mgt-agenda contd

The following example changes the behavior of the component to fetch data for a specific date and up to three days.


HTML

 Copy

```
<mgt-agenda group-by-day date="May 7, 2019" days="3"></mgt-agenda>
```

The following example changes the behavior of the component to fetch data from a specific query.

HTML

 Copy

```
<mgt-agenda event-query="/me/events?orderby=start/dateTime"></mgt-agenda>
```

teams: mgt-teams-channel-picker

The image shows a screenshot of a Teams channel picker interface on the left and its corresponding HTML code on the right. The interface is titled "Select a channel" and displays a list of channels grouped by team. The teams are "HR Taskforce", "Business Development", and "X1050 Launch Team". Each team has a dropdown arrow and a list of channels. The "HR Taskforce" team has channels: General, publicChannelName, publicChannelName, Facilities, publicChannelName, Benefits, and Onboarding. The "Business Development" team has channels: Opportunities, Knowledge Share, Pipeline, and General. The "X1050 Launch Team" team has channels: Design, Web and Social Trends, General, Digital Assets Web, Go to Market Plan, and Legal and Compliance. The interface also includes a "Color mode" toggle set to "Light".

The HTML code on the right is as follows:

```
1 <mgt-teams-channel-picker></mgt-teams-channel-picker>
```

files: mgt-file-list

The image shows a screenshot of a web-based file explorer and code editor. The left pane displays a file system with various folders and files, including folders like 'CR-227 Project', 'Notebooks', and 'Presentation Documents', and files like 'All Japan Revenues By City.xlsx' and 'Annual Financial Report (DRAFT).docx'. The right pane shows a code editor with a file named 'mgt-file-list.html' open, containing a single line of HTML code: `<mgt-file-list></mgt-file-list>`. The code editor has tabs for 'html', 'js', and 'css', with 'html' selected. The code is highlighted in red.

Modified 8/7/2017

CR-227 Project
Modified 8/7/2017

Notebooks
Modified 9/14/2017

Presentation Documents
Modified 8/7/2017

Private Info
Modified 8/7/2017

TestBatchingFolder
Modified 3/27/2018

All Japan Revenues By City.xlsx
Modified 8/7/2017

Annual Financial Report (DRAFT).docx
Modified 8/7/2017

Audit of Small Business Sales.xlsx
Modified 8/7/2017

BrokenPipe.jpg
Modified 8/7/2017

Business Card.pdf
Modified 9/1/2017

Contoso Patent App 150219a.docx
Modified 12/2/2021

Contoso Patent Template.docx
Modified 8/7/2017

html js css

```
1 <mgt-file-list></mgt-file-list>
```


Graph Toolkit Playground

Teams Demo App



Demo



Summary

- Microsoft Teams, among other M365 applications, is developed with a strong emphasis on interoperability and extensibility
- Developers can access data from a range of Microsoft 365 services through Microsoft Graph, a unified API endpoint
- To delve into the world of M365, create a developer account
- Leverage and contribute to Graph Toolkit, which is open source, to speed up your app development

Thank you

