

DevDays²⁰²³ Asia

Build your Copilot and plugins within Microsoft 365

Ares Chen | 陳 希章

Principal Product Manager of
Microsoft 365

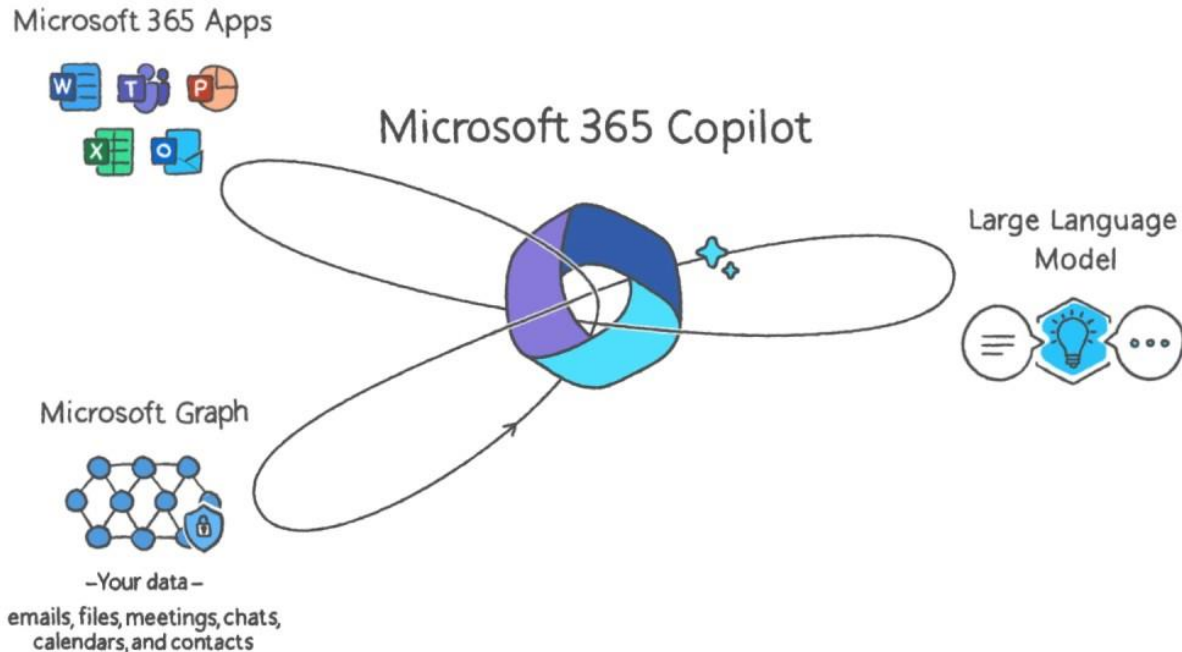


Agenda

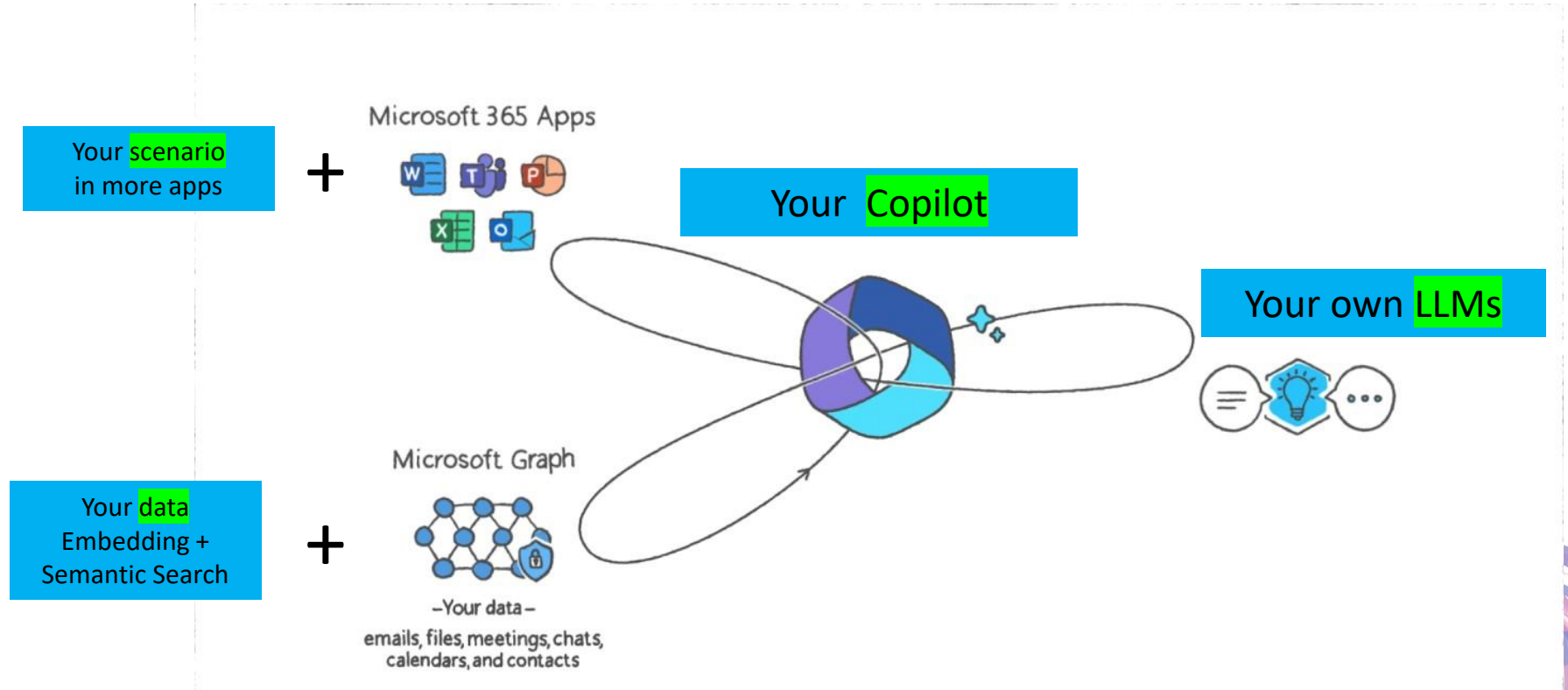
- ❑ Microsoft 365 Copilot System
- ❑ Build your Copilot (real case sharing)
- ❑ Understand Plugins for Microsoft 365 Copilot



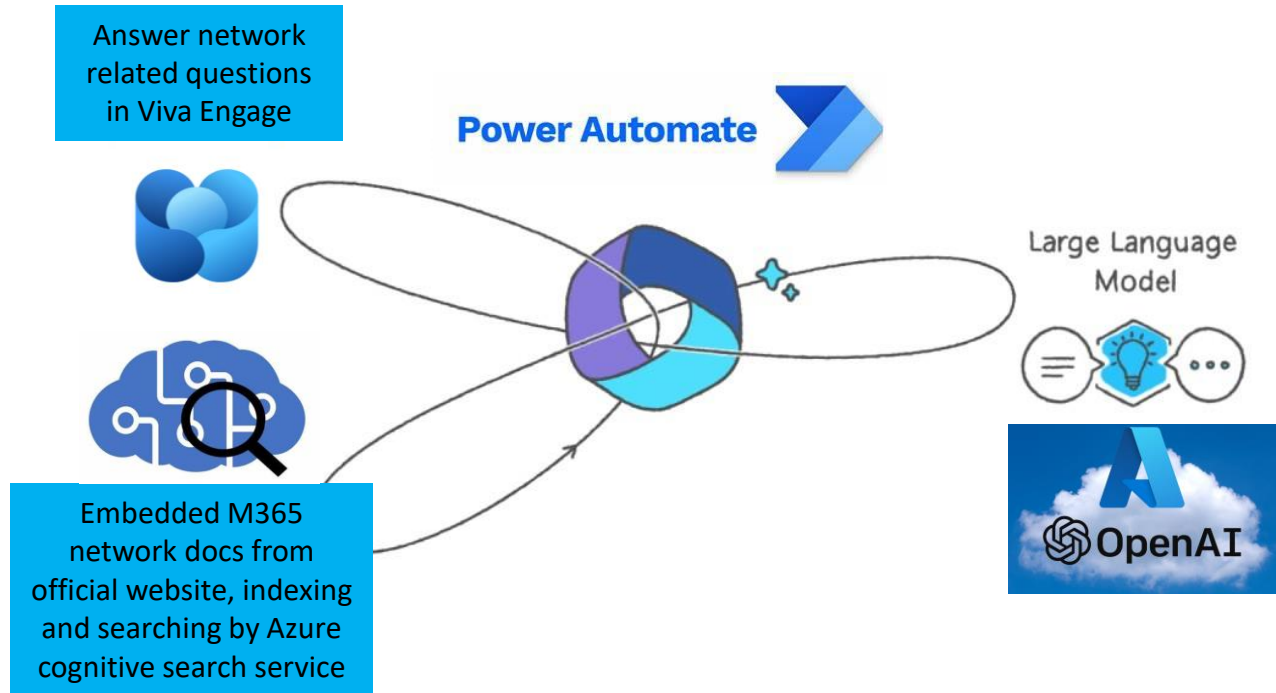
Microsoft 365 Copilot System



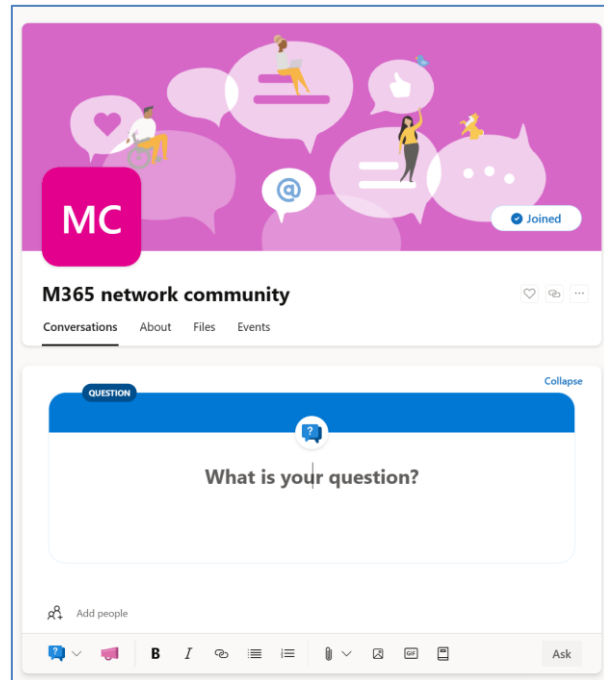
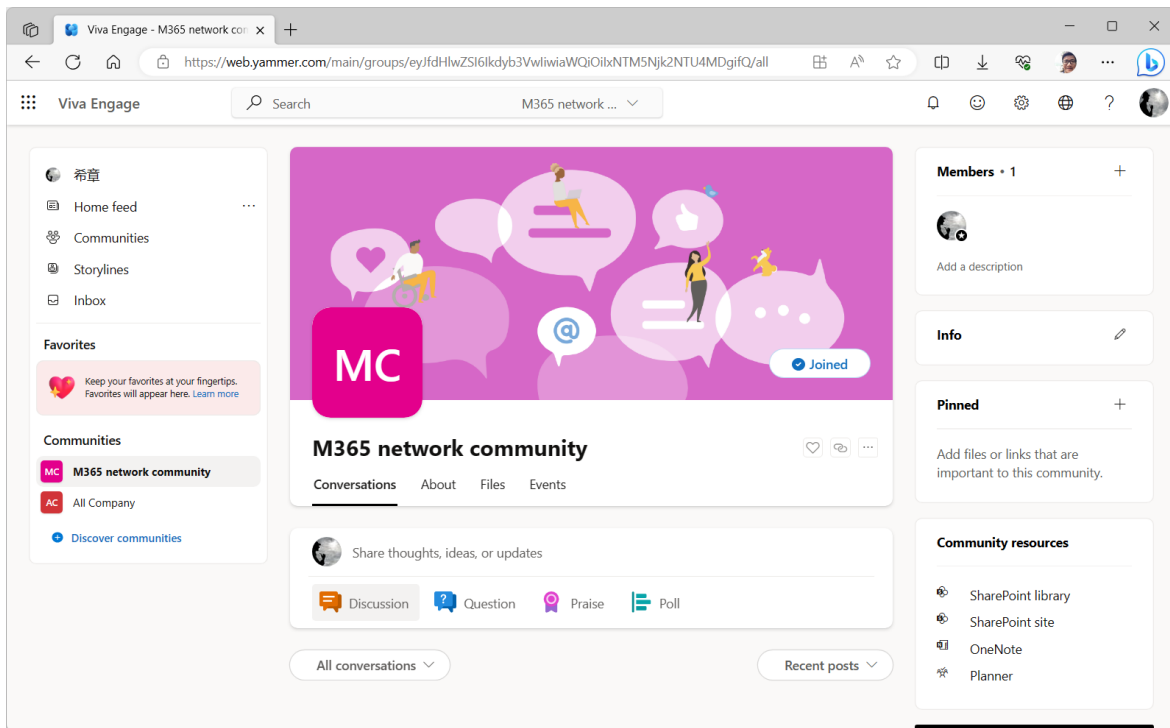
Build your Copilot within Microsoft 365



Real case study : Your Copilot for Viva Engage



1. Set up the community in Viva Engage



2. Prepare your own data

The image shows two overlapping screenshots. The background screenshot is a Microsoft Learn article titled "Networking roadmap for Microsoft 365". The foreground screenshot is a Microsoft Azure portal showing a container named "network-docs".

Microsoft Learn Article: Networking roadmap for Microsoft 365

Version: Microsoft 365

Filter by title

Microsoft 365 for enterprise documentation and resources

Microsoft 365 for enterprise overview

Networking

- Roadmap**
- Plan
 - Microsoft 365 networking connectivity overview
 - Microsoft 365 network connectivity principles
 - Assessing Microsoft 365 network connectivity
 - Plan for network devices that connect to Microsoft 365 services
 - Network and migration planning for Microsoft 365
- Deploy
 - Add a domain
 - Configure endpoints to bypass Content Delivery Network (CDN) Quickstart
 - Use the CDN with SharePoint Online
 - Optimize connectivity for remote users
 - ExpressRoute for Microsoft 365
- Manage
 - Office 365 endpoints
 - Content delivery networks
 - IPv6 support in Office 365 services
 - NAT support with Office 365
 - Network requests in Office for Mac
 - Network planning and performance tuning
 - Monitor connectivity
 - Microsoft 365 Networking Partner Program
- Tenant

In this article

Plan

Deploy

Manage

Network equipment vendors

Show 2 more

Microsoft 365 for enterprise includes collaboration and productivity cloud services, Microsoft Intune, and many identity and security services of Microsoft Azure. All of these cloud-based services rely on the security, performance, and reliability of connections from client devices over the Internet or dedicated circuits. To host these services and make them available to customers all over the world, Microsoft has designed a networking infrastructure that emphasizes performance and integration.

A crucial part of your Microsoft 365 onboarding is to ensure that your network and Internet connections are set up for optimized access. Configuring your on-premises network to access a globally distributed Software-as-a-Service (SaaS) cloud is different from a traditional network that is optimized for traffic to on-premises datacenters and a central Internet connection.

Use these articles to understand the key differences and to modify your edge devices, client computers, and on-premises network to get the best performance for your on-premises users.

Plan

In the planning phase of your networking implementation:

- Understand how Microsoft 365 networking works
- Learn about network connectivity principles
- Assess your current network connectivity
- Plan for your network devices
- Get your network set up for migration

Microsoft Azure

Home > domorewithless,1692776837392 | Overview > domorewithless | Containers >

network-docs

Container

Search

Upload Change access level Refresh Delete Change tier Acquire lease Break lease View snapshots

Authentication method: Access key (Switch to Azure AD User Account)

Location: network-docs

Search blobs by prefix (case-sensitive)

Add filter

Name	Modified	Access tier	Archive status
<input type="checkbox"/> Add a domain to Microsoft 365 - Microsoft 365 admin - Mic...	8/23/2023, 3:49:35 PM	Hot (Inferred)	
<input type="checkbox"/> Additional network security requirements for Office 365 GC...	8/23/2023, 3:49:34 PM	Hot (Inferred)	
<input type="checkbox"/> Assessing Microsoft 365 network connectivity - Microsoft 36...	8/23/2023, 3:49:36 PM	Hot (Inferred)	
<input type="checkbox"/> Azure ExpressRoute for Microsoft 365 - Microsoft 365 Enter...	8/23/2023, 3:49:32 PM	Hot (Inferred)	
<input type="checkbox"/> Common VPN split tunneling scenarios for Microsoft 365 - ...	8/23/2023, 3:49:34 PM	Hot (Inferred)	
<input type="checkbox"/> Content delivery networks - Microsoft 365 Enterprise - Mic...	8/23/2023, 3:49:30 PM	Hot (Inferred)	
<input type="checkbox"/> DNS records for Office 365 DoD - Microsoft 365 Enterprise - ...	8/23/2023, 3:49:35 PM	Hot (Inferred)	
<input type="checkbox"/> DNS records for Office 365 GCC High - Microsoft 365 Enterp...	8/23/2023, 3:49:34 PM	Hot (Inferred)	
<input type="checkbox"/> Implementing ExpressRoute for Microsoft 365 - Microsoft 3...	8/23/2023, 3:49:32 PM	Hot (Inferred)	
<input type="checkbox"/> Implementing VPN split tunneling for Microsoft 365 - Micro...	8/23/2023, 3:49:33 PM	Hot (Inferred)	
<input type="checkbox"/> IPv6 support in Microsoft 365 services - Microsoft 365 Enter...	8/23/2023, 3:49:30 PM	Hot (Inferred)	
<input type="checkbox"/> Managing Microsoft 365 endpoints - Microsoft 365 Enterpri...	8/23/2023, 3:49:31 PM	Hot (Inferred)	
<input type="checkbox"/> Microsoft 365 endpoints - Microsoft 365 Enterprise - Micro...	8/23/2023, 3:49:32 PM	Hot (Inferred)	
<input type="checkbox"/> Microsoft 365 global tenant performance optimization for C...	8/23/2023, 3:49:33 PM	Hot (Inferred)	
<input type="checkbox"/> Microsoft 365 Network Connectivity Overview - Microsoft 3...	8/23/2023, 3:49:36 PM	Hot (Inferred)	
<input type="checkbox"/> Microsoft 365 network connectivity principles - Microsoft 36...	8/23/2023, 3:49:36 PM	Hot (Inferred)	
<input type="checkbox"/> Microsoft 365 Network Provider Program - Microsoft 365 En...	8/23/2023, 3:49:30 PM	Hot (Inferred)	
<input type="checkbox"/> Monitor Microsoft 365 connectivity - Microsoft 365 Enterpri...	8/23/2023, 3:49:49 PM	Hot (Inferred)	
<input type="checkbox"/> NAT support with Office 365 - Microsoft 365 Enterprise - MI...	8/23/2023, 3:49:30 PM	Hot (Inferred)	
<input type="checkbox"/> Network and migration planning for Office 365 - Microsoft 3...	8/23/2023, 3:49:35 PM	Hot (Inferred)	
<input type="checkbox"/> Network planning and performance tuning for Microsoft 36...	8/23/2023, 3:49:49 PM	Hot (Inferred)	
<input type="checkbox"/> Network requests in Office for Mac - Microsoft 365 Enterpris...	8/23/2023, 3:49:30 PM	Hot (Inferred)	

3. Set up azure cognitive search

The image shows two side-by-side screenshots of the Microsoft Azure portal. The left screenshot displays the 'Create a search service' wizard, and the right screenshot displays the 'Semantic search (Preview)' overview page.

Left Screenshot: Create a search service

The wizard is titled 'Create a search service' and has tabs for 'Basics', 'Scale', and 'Networking'. The 'Basics' tab is active.

Project details

- Subscription: [selected]
- Resource Group: [selected]

Instance Details

- Service name: [networkdocs]
- Location: [selected]
- Pricing tier: [Standard]

Select a search service

Select a search service * **Connect to your data** Add a new data source

Create and load a search index using data from an external data source. [Learn more](#)

Data Source: Azure Blob Storage

Data source name: networkdocs

Data to extract: Content and metadata

Parsing mode: Text

Connection string: DefaultEndpointsProtocol=https;AccountName=networkdocs;AccountKey=[key];EndpointSuffix=core.windows.net

Managed identity authentication: ☒ None ☐ System assigned

Container name: network-docs

Blob folder: your/folder/here

Description: (optional)

Select a search service

We provided a default search service for you. You can change it later.

Index name: networkdocs

Key: metadata_storage_path

Suggester name: [empty]

+ Add field + Add field

Field name

- content
- metadata_storage_container
- metadata_storage_size
- metadata_storage_last_modified
- metadata_storage_content_type
- metadata_storage_name
- metadata_storage_path
- metadata_storage_file_extension

Right Screenshot: Semantic search (Preview)

The page is titled 'domorewithless | Semantic search (Preview)'. It shows the search service overview.

Search

Search

Overview

Semantic search uses deep neural networks to provide relevant results and answers based on semantics, not just lexical analysis. Additional charges may be applicable.

Availability

Free	Standard
1,000 requests per month	250,000 requests per month \$2.00 per 1,000 additional requests.
\$0.00/month	\$499.72/month
Selected Plan	Select Plan

Learn more

- [Availability and pricing](#)
- [Multilingual support for semantic search](#)
- [Bringing more meaningful results to Azure Cognitive Search](#)
- [Create a query that invokes semantic ranking and returns semantic captions](#)

4. Test semantic search

The screenshot shows the Microsoft Azure Search Explorer interface. The search query is "How can I plan network for Microsoft 365". The results are displayed in a table with columns for document ID, score, and content. The first result is a document titled "How can I plan network for Microsoft 365" with a score of 1.9368094. The content of the document is "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int...". The interface also shows options for query language, semantic search, and spell correction.

Microsoft Azure

Search resources, services, and docs (G+)

Home > search-service-domorewithless | Overview > chenwizhang > domorewithless | Knowledge Center >

Search explorer

domorewithless

Index: networkdocs

API version: 2023-07-01-Preview

Query string: How can I plan network for Microsoft 365

Query options (Preview)

Query language: English (United States) (en-US)

Semantic search (Preview): On

Semantic configuration: domorewithless

Spell correction (Preview): Off

Request URL: https://domorewithless.search.windows.net/indexes/networkdocs/docs?api-version=2023-07-01-Preview&search=How%20can%20I%20plan%20network%20for%20Microsoft%20365&queryLanguage=en-US&queryType=semantic&captions=extractive&answers=extractive%7Ccount=3&semanticConfiguration=domorewithless

Results

Document ID	Score	Content
214	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
215	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
216	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
217	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
218	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
219	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
220	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
221	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
222	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
223	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
224	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
225	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
226	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
227	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
228	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
229	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
230	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
231	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
232	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
233	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
234	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
235	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
236	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
237	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."
238	1.9368094	"text": "example: add teams media ip subnets into the route table \$intindex = \"\\\" # index of the int..."

<https://domorewithless.search.windows.net/indexes/networkdocs/docs?api-version=2023-07-01-Preview&search=How%20can%20I%20plan%20network%20for%20Microsoft%20365&queryLanguage=en-US&queryType=semantic&captions=extractive&answers=extractive%7Ccount=3&semanticConfiguration=domorewithless>

5. Prepare your azure OpenAI resources

Azure AI | Azure AI Studio

Azure OpenAI

Playground

Chat

Completions

DALL-E (Preview)

Quotas

Content filters (Preview)

Management

Deployments

Models

Data files

Quotas

Content filters (Preview)

Azure AI Studio

Chat playground

Assistant setup

System message

Specify how the chat should act

Use a template to get started, or just start writing your own system message below. Want some tips? [Learn more](#)

Select a template

System message

Examples

Add examples to show the chat what responses you want. It will try to mimic any responses you add here so make sure they match the rules you laid out in the system message.

+ Add an example

Chat session

Sample Code

You can use the following code to start integrating your current prompt and settings into your application

```
https://chenxizhang-azure-openai.azure.com/ curl
```

```
1 curl "https://chenxizhang-azure-openai.azure.com/openai/deployments/gpt-35-turbo-16k/chat/completions?api-version=2023-03-15-preview" \
2 -H "Content-Type: application/json" \
3 -d '{ "key": "YOUR_API_KEY" }' \
4 -d '{
5   "messages": [
6     { "role": "system", "content": "You are a M365 network expert, you help me to answer the network related questions in Viva Engage. I will provide the context, please try to answer based on the context. If you don't know, please just say 'I don't have the knowledge, please visit: https://learn.microsoft.com/en-us/microsoft-365/enterprise/networking-roadmap-microsoft-365 to learn more.'" },
7     { "role": "user", "content": "How can I plan network for M365?" },
8     { "role": "assistant", "content": "" }
9   ]
10 }' \
11 -X POST
```

Endpoint

https://chenxizhang-azure-openai.azure.com/openai/deployments/gpt-35-turbo-16k

Key

You should use environment variables or a secret management tool like Azure Key Vault to prevent accidental exposure of your key in applications. [Learn more here](#)

Copy Close

User message

Type user query here. (Shift + Enter for new line)

Configuration

Deployment

Deployment *

gpt-35-turbo-16k

Session settings

Past messages include 10

Current token count 534/16000

Input tokens progress indicator

and deployment s

del deprecation d

5/2024

/2024

/2024

/2024

/2024



Home feed
Communities
Storylines
Inbox

Favorites
Keep your favorites at your fingertips. Favorites will appear here. [Learn more](#)

Communities
M365 network community
All Company
[Discover communities](#)

All conversations

QUESTION

How can I plan network for my company?

Like Answer Share

Be the first to like this

Answer by Copilot.

To plan the network for your company in the context of Microsoft 365, you can follow these steps:

1. Understand how Microsoft 365 networking works: Learn about the principles and requirements for network connectivity with Microsoft 365 services. This will help you design the most optimal network for your organization.
2. Learn about network connectivity principles: Familiarize yourself with the key concepts and best practices for network connectivity in Microsoft 365, including topics such as DNS, VPN split tunneling, and ExpressRoute.
3. Assess your current network connectivity: Evaluate your existing network infrastructure to identify any gaps or areas that need improvement. This assessment will help you determine if your network is ready for Microsoft 365 or if modifications are needed.
4. Plan for your network devices: Determine the network devices and configurations required to provide optimized connectivity for Microsoft 365 services. Make sure your on-premises network is prepared for the transition to a cloud-based SaaS model.
5. Get your network set up for migration: Take the necessary steps to prepare your network for migration to Microsoft 365. This may include configuring DNS domains, optimizing connectivity for remote workers using VPN split tunneling, and configuring CDN to improve network performance.

By following these steps, you can effectively plan your company's network for Microsoft 365 and ensure optimized access to the cloud-based services. For more detailed guidance, it is recommended to refer to the Microsoft 365 networking documentation and engage with a qualified network expert.

see less

Answer this question

Members 1

M365 network community
Edit description

Info

Pinned

Add files or links that are important to this community.

Community resources

- SharePoint library
- SharePoint site
- OneNote
- Planner

Create live event



DevDays²⁰²³ Asia

UNDERSTAND PLUGINS FOR MICROSOFT 365 COPILOT

Understand Plugins for Microsoft 365 Copilot

Microsoft 365 Copilot



Plugins



Teams Toolkit for
Visual Studio Code



API endpoint

Microsoft 365 Copilot



Plugins

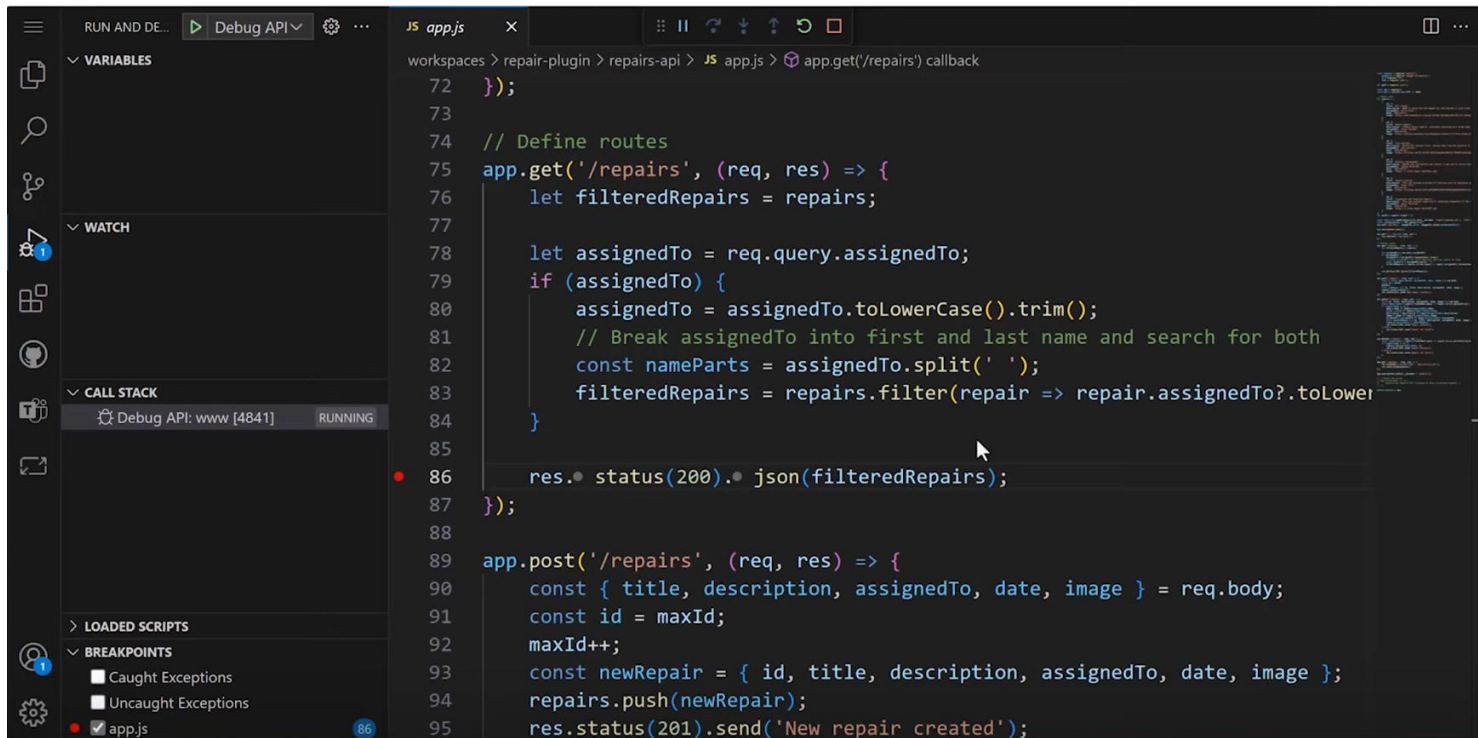


How to build a plugin for Microsoft 365 Copilot

1. Prepare your API
 - create new or use your existing API
2. Create a manifest for your plugin (.json)
3. Integrate with Microsoft 365 Copilot
 - Currently supports Teams by message extension



1. Prepare your API



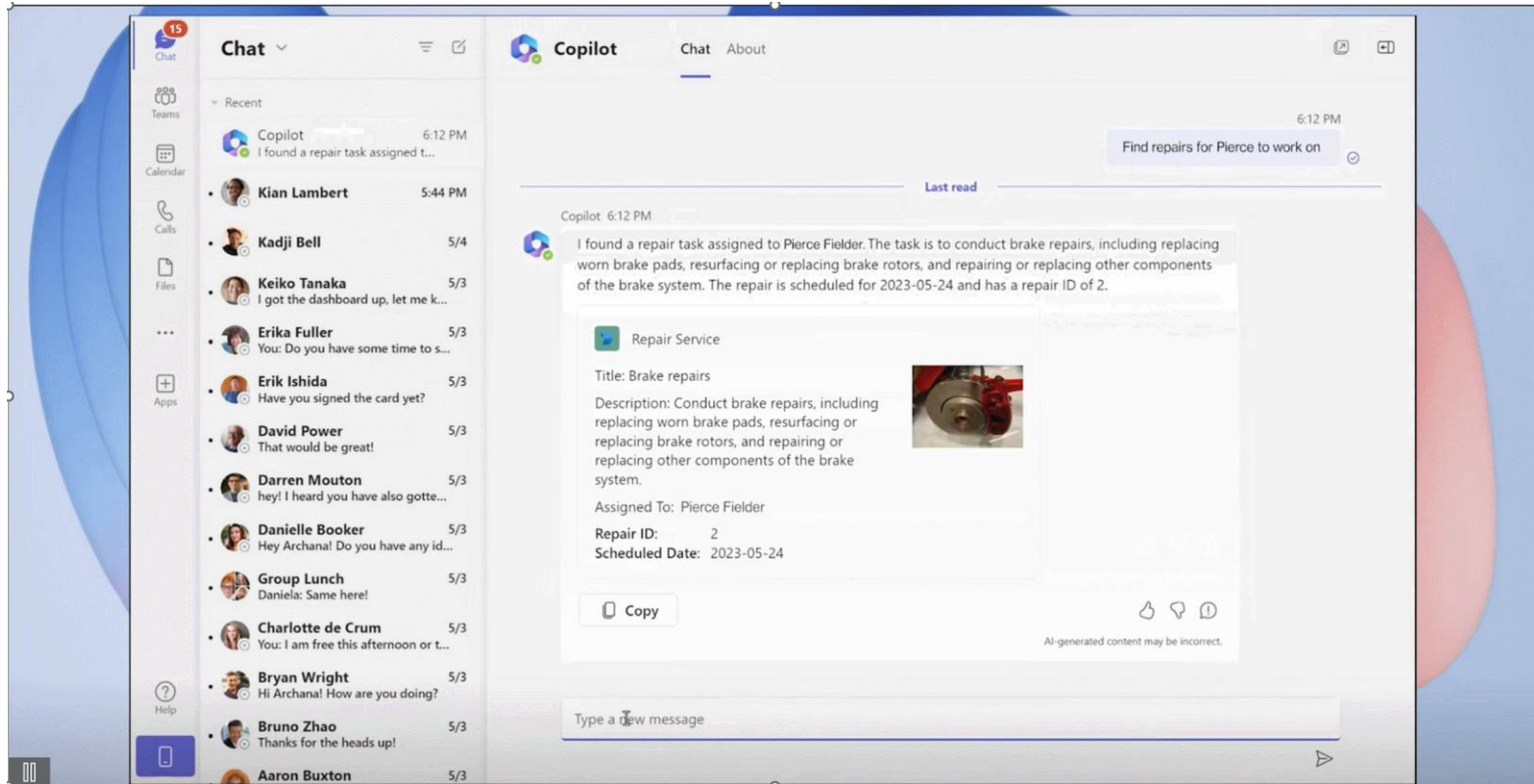
```
72 });
73
74 // Define routes
75 app.get('/repairs', (req, res) => {
76   let filteredRepairs = repairs;
77
78   let assignedTo = req.query.assignedTo;
79   if (assignedTo) {
80     assignedTo = assignedTo.toLowerCase().trim();
81     // Break assignedTo into first and last name and search for both
82     const nameParts = assignedTo.split(' ');
83     filteredRepairs = repairs.filter(repair => repair.assignedTo?.toLowerCase().includes(nameParts[0]));
84   }
85
86   res.status(200).json(filteredRepairs);
87 });
88
89 app.post('/repairs', (req, res) => {
90   const { title, description, assignedTo, date, image } = req.body;
91   const id = maxId;
92   maxId++;
93   const newRepair = { id, title, description, assignedTo, date, image };
94   repairs.push(newRepair);
95   res.status(201).send('New repair created');
```

2. Plugin manifest

```
! repairs-openapi.yaml X
1 openapi: 3.0.1
2 info:
3   title: Repair Plugin
4   description: A plugin that allows the user to search repair items and show the
5 servers:
6   - url: http://localhost:5003
7 paths:
8   /repairs/{username}:
9     get:
10      operationId: getRepairs
11      summary: Get the list of repair
12      parameters:
13        - in: path
14          name: username
15          schema:
16            type: string
17          required: true
18          description: The name of the user.
19      responses:
20        "200":
21          description: OK
22          content:
23            application/json:
24              schema:
25                $ref: '#/components/schemas/getRepairsResponse'
```

```
{ } manifest.json X
appPackage > { } manifest.json > ...
18   "short": "Repair Service",
19   "full": "Repair Service"
20 },
21 "description": {
22   "short": "A simple service to manage repairs for various items",
23   "full": "A simple service to manage repairs for various items"
24 },
25 "accentColor": "#FFFFFF",
26 "composeExtensions": [
27   {
28     "type": "apiSpecification",
29     "apiSpecFile": "../apiSpecFiles/repairs-openapi.yaml",
30     "commands": [
31       {
32         "id": "listRepairs",
33         "type": "query",
34         "context": [
35           "compose",
36           "commandBox"
37         ],
38         "title": "List all repairs",
39         "description": "Returns a list of repairs with their details and images",
40         "parameters": [
41           {
```

3. Integrate with Microsoft 365 Copilot



Join the early access program

<https://aka.ms/plugins-dev-waitlist>

Microsoft 365 Copilot plugin development early access

By submitting this form, you are registering your interest to get early access to the Microsoft 365 Copilot plugin development program. We will use this information to email you if you are selected for the program. This program will not grant you access to the program before public availability. This program will not grant you access to the program before public availability.

For more information on extending Copilot, visit <https://aka.ms/copilot>.

Microsoft respects your privacy. You can contact ExtendM365@microsoft.com to have your data deleted sooner than 12 months. To learn more, visit [us/privacystatement](https://aka.ms/privacystatement).

New and existing plugin partners



2023 DevDays Asia

Case study sharing, feedback and questions

<https://github.com/chenxizhang/m365copilotplugins>

Learn more about Microsoft 365 Copilot

<https://adoption.microsoft.com/en-us/copilot/>

Thank You

