

PRIVATE PREVIEW

Getting Started with Fabric MCP Server

Enabling AI agents to interact with Microsoft Fabric

Microsoft Fabric | February 2026

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Welcome

Thank you for being part of a select group helping shape how AI agents interact with Microsoft Fabric.

What This Guide Covers

This guide will get you connected and productive with Fabric MCP Server.

Under 15 minutes to get started

TL;DR - 2-Minute Setup

VS Code + GitHub Copilot

- 1 **Cmd+Shift+P** (or Ctrl+Shift+P)
Type "MCP: Add Server" > HTTP

- 2 Enter URL:

```
https://api.fabric.microsoft.com/v1/mcp
```

Recommended: Also add Microsoft Graph MCP to enable commands like "Add john@contoso.com to my workspace"

- 3 Sign in when prompted (browser-based)

- 4 Ask Copilot: "List all my Fabric workspaces"

What is MCP?

Model Context Protocol (MCP) is an open standard that enables AI agents to access external data and perform real actions, moving beyond conversation to actual system control.



Standardized

One protocol works across all agents

Secure

Auth, RBAC, and audit trails built in

Typed

Defined schemas reduce errors

Discoverable

Agents explore capabilities

Local vs. Remote MCP Servers

Local MCP Server

Runs on your machine

Typically as a subprocess. Requires local installation and hosting.

File system access, local databases

Try our local Fabric MCP: aka.ms/FabricMCP/local-server

Remote MCP Server

Cloud-hosted via HTTPS

FABRIC MCP

No local installation required. Just point your agent to the endpoint.

Fabric MCP Server, Microsoft Graph MCP

What is Fabric MCP Server?

Fabric MCP Server is a remote, cloud-hosted MCP endpoint that exposes Microsoft Fabric's public APIs as typed tools. Any MCP-compatible AI agent can safely discover and execute Fabric operations.

Remote Server

Cloud-hosted via HTTPS, no local installation required

Public API Tools

Each tool maps to a Fabric REST API for workspaces, items, permissions

OAuth2 Auth

Automatic authentication via Entra ID, inherits existing permissions

Interactive Login

VS Code supports browser-based sign-in when connecting

RBAC Enforced

All operations respect your Fabric role-based access

Audit Logged

Every action is recorded in Fabric Audit Logs

Prerequisites

Before you begin, ensure you have:

Requirement	Details
Private Preview Access	You should have received confirmation of your enrollment
Microsoft Fabric Access	An active Fabric tenant with at least one workspace you can access
MCP-Compatible Agent	VS Code with GitHub Copilot (recommended), Claude Desktop, or any MCP client
Entra ID Account	Your Microsoft work or school account with Fabric permissions

Quick Start: VS Code + GitHub Copilot

Recommended setup with interactive authentication

1 Open MCP Server Configuration

Press Cmd+Shift+P (macOS) or Ctrl+Shift+P (Windows)

Type "MCP: Add Server" and select HTTP

2 Enter the Fabric MCP Server URL

```
https://api.fabric.microsoft.com/v1/mcp
```

Name it "fabric" when prompted

3 Authenticate

VS Code will open your browser for sign-in. Use your Entra ID account.

4 Verify Connection

Ask Copilot: "List all my Fabric workspaces"

Manual Config Alternative

Add to .vscode/mcp.json:

```
{
  "servers": {
    "fabric": {
      "type": "http",
      "url": "https://api.fabric.microsoft.com/v1/mcp"
    }
  }
}
```

Quick Start: Claude Desktop & Other Clients

Claude Desktop Config

Add to your config file:

```
macOS: ~/Library/Application  
Support/Claude/clause_desktop_config.json  
Windows: %APPDATA%\Claude\claude_desktop_config.json
```

```
{"mcpServers": {  
    "fabric": {  
        "type": "http",  
        "url": "https://api.fabric.microsoft.com/v1/mcp",  
        "headers": {  
            "Authorization": "Bearer YOUR_TOKEN"  
        }  
    }  
}}
```

Other MCP Clients

Connection details:

Endpoint URL <https://api.fabric.microsoft.com/v1/mcp>

Auth Type OAuth2 Bearer Token

Auth Scope <https://api.fabric.microsoft.com/.default>

Identity Provider Microsoft Entra ID

Get token: az account get-access-token --resource
<https://api.fabric.microsoft.com>

Recommended: Add Microsoft Graph MCP

To enable user and group resolution (e.g., adding users by email address), also connect the **Microsoft Graph MCP Server**.

Why Add Graph MCP?

"Add john@contoso.com as a Contributor to my Dev workspace"

Without Graph MCP: You need the user's principal ID

With Graph MCP: Agent resolves email to ID automatically

Example Commands

"Add the Marketing team to Sales Analytics as Viewers"

"Grant john@contoso.com Contributor access"

"Who are the members of Finance Admins group?"

Setup: learn.microsoft.com/graph/mcp-server

Available Tools: Workspaces & Roles

Workspace Management

```
list_workspaces - List all workspaces  
get_workspace - Get workspace details  
create_workspace - Create new workspace  
update_workspace - Update name/description  
delete_workspace - Delete workspace
```

Workspace Role Assignments

```
add_workspace_role - Grant access  
list_workspace_roles - List all assignments  
get_workspace_role - Get role details  
update_workspace_role - Change role  
delete_workspace_role - Revoke access
```

Roles: Admin, Member, Contributor, Viewer

Available Tools: Items & Folders

Item Management

```
list_items - List items in workspace  
get_item - Get item metadata  
create_item - Create new item  
update_item - Update item metadata  
delete_item - Delete item  
get_item_definition - Get item schema  
update_item_definition - Update definition  
bulk_move_items - Move items to folder
```

Supported Types: Report, SemanticModel, Lakehouse, Notebook, DataPipeline, Warehouse, Dashboard, Dataflow, KQLDatabase, MLExperiment, and 20+ more

Folder Management

```
create_folder - Create folder  
list_folders - List folders  
get_folder - Get folder metadata  
update_folder - Rename folder  
delete_folder - Delete empty folder  
move_folder - Move to new parent
```

Capacity & Operations

```
list_capacities - List capacities  
get_operation_state - Check async op  
get_operation_result - Get op result  
get_knowledge - Get item guidelines
```

Example Workflows

1. Explore Your Environment

READ-ONLY DISCOVERY

"List all my Fabric workspaces"

"Show me all items in Sales Analytics"

"What Lakehouses exist here?"

"Get the definition of CustomerData model"

2. Create Dev Environment

CLONE PRODUCTION FOR DEVELOPMENT

"Create workspace Sales Analytics Dev"

"Create Lakehouse CustomerData_Dev"

"Add john@contoso.com as Contributor"

3. Manage Permissions

AUDIT AND UPDATE ACCESS

"List all role assignments for Finance"

"Who has Admin access?"

"Change Marketing to Contributor"

Troubleshooting

"Invalid workspace ID"

IDs must be valid UUIDs

Solution

Use list_workspaces or list_items first to get correct IDs

Authentication Failed (401/403)

Token expired or wrong scope

Solution

Disconnect and reconnect MCP server in VS Code. For manual tokens: az account get-access-token --resource <https://api.fabric.microsoft.com>

"Workspace not found"

Exists but you can't access it

Solution

Ask workspace Admin to grant you at least Viewer access

Long-running operation timeout

Some ops are async

Solution

Use get_operation_state with operationId, then get_operation_result once it succeeds

Providing Feedback

What to Report

Tool Accuracy

Does the agent pick the right tool? Are parameters correct?

Auth/Permissions

Is sign-in smooth? Any RBAC confusion?

Success Rate

Do multi-step workflows complete? Where do they fail?

Trust and Guardrails

Do you feel in control? Want approval steps?

Coverage Gaps

What Fabric operations did you expect but couldn't find?

How to Submit

Contact Channels

Form **Microsoft Forms (preferred)**

Email **habos@microsoft.com**

Teams **Ping Hasan Abo-Shally**

Include "Fabric MCP Feedback" in email subject

Roadmap

CURRENT

Private Preview

Jan 2026

Core platform, workspace/item CRUD,
permissions

Public Preview

Mar 2026

TBD based on your feedback

GA Release

TBD (2026)

Full production readiness

Quick Reference

CONNECTION

Endpoint api.fabric.microsoft.com/v1/mcp
Auth OAuth2 via Microsoft Entra ID
VS Code Cmd+Shift+P > "MCP: Add Server"

WORKSPACES

list_workspaces get_workspace create_workspace
update_workspace delete_workspace

ROLES

add_workspace_role list_workspace_roles
update_workspace_role delete_workspace_role

ITEMS

list_items get_item create_item update_item delete_item
get_item_definition bulk_move_items

FOLDERS

create_folder list_folders get_folder update_folder
delete_folder move_folder

OTHER

list_capacities get_operation_state get_operation_result
get_knowledge

Thank You

Your early feedback is invaluable in making Fabric MCP Server
the best way for AI agents to work with Microsoft Fabric.

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