



SWARM AI WORKSHOP

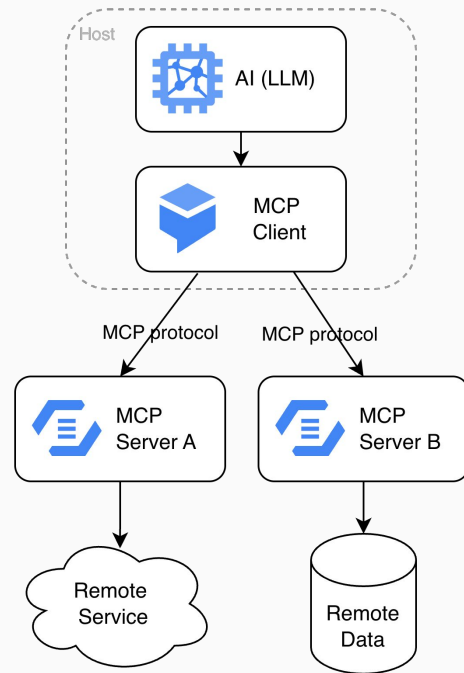
Swarm MCP: The Bridge to Decentralized AI





What is the Model Context Protocol

- A universal adapter for AI agents connecting external tools (e.g., remote DB, service API).
- How AI Agents Use It:
 - **Discovery:** MCP server returns a list of tools.
 - **Reasoning:** AI selects the best tool for the task.
 - **Execution:** AI calls the tool with parameters
 - MCP server executes the underlying function.



Why a Swarm MCP?

- **Problem:** AI agents need persistent memory. Centralization is a single point of failure.
- **Solution:** Use Swarm for resilient, private, decentralized storage.
- **The Bridge:** The Swarm MCP server handles all network complexities (like postage stamps), making it simple for the AI agent.



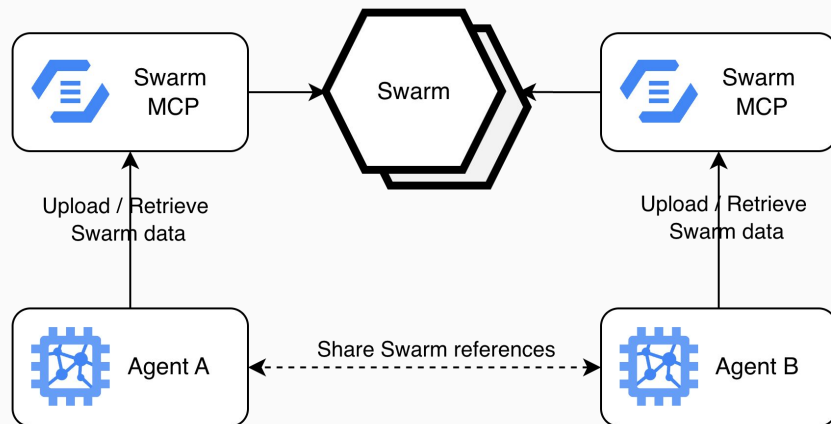


How it works

- An AI Agent uses the Swarm MCP to **upload data** to Swarm.
- Agent **gets** Swarm **reference** (hash).
- Agent shares reference with other agents to download & collaborate.

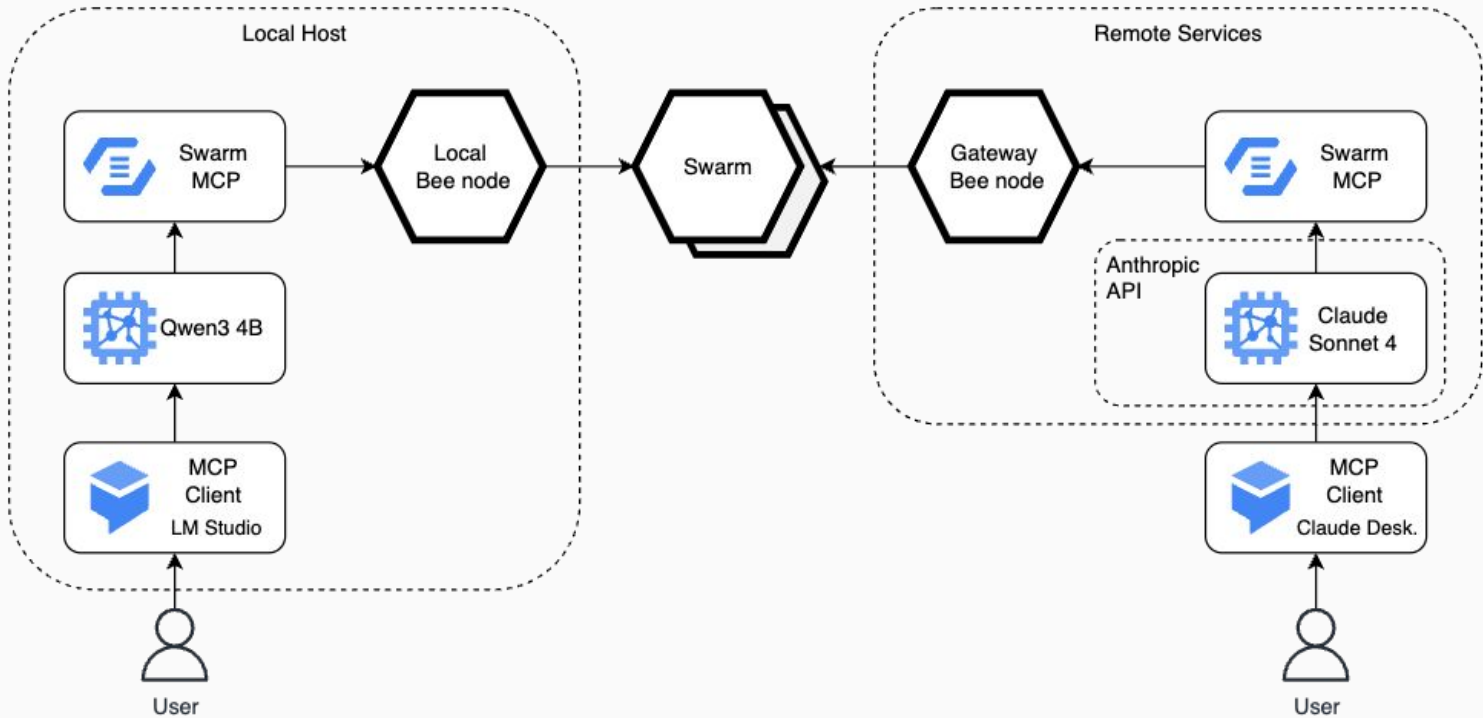
Capabilities:

- Upload/download text, files, folders.
- Use Swarm Feed as memory.
- Manage storage costs.





How it works: Demo use-case



Roadmap & research

- **Advanced Agents:**

- ERC-8004: Agent discovery & reputation on Swarm.
- Full autonomy with x402 (economic layer).
- Sharing access-controlled private data (ACT).
- Direct agent-to-agent communication (A2A transport).

- **Wider Adoption:**

- Integrations with major AI frameworks (including Hashgraph, ElizaOS).



Workshop contents

- **Equip Your Agent:** Connect a standard AI tool to Swarm's unstoppable storage.
- **Complete Missions:** Guide your agent through three challenges to unlock new abilities.
- **Climb the Leaderboard:** See your progress and learn how to create a decentralized AI agent with Swarm.

Get ready to build the future of AI.



Workshop contents

Mission 1: First Upload

- *Goal:* Store agent's first content on Swarm.
- *Task:* Command agent to write and save a story to Swarm.
- *Learn:* Swarm provides immutable storage for AI data.

Mission 2: The Agent's Logbook

- *Goal:* Agent identity and an updatable log.
- *Task:* Agent uses its private key to create a "logbook" via a Swarm Feed.
- *Learn:* Agents can own and manage verifiable records.

Mission 3: The Living Memory

- *Goal:* Enable agent to learn and update knowledge.
- *Task:* Command agent to add a new entry to its logbook.
- *Learn:* Swarm Feeds enable dynamic data on a decentralized infrastructure.



Workshop pre-flight checklist

Before we begin, make sure you have your toolkit ready:

1. AI Agent Tool Installed (MCP client)

You should have one of the following applications installed:

Claude Desktop, **Windsurf**, **Cursor** or **Antigravity**

2. Prerequisites

Make sure you have **Node.js** (v18+) installed.

You will also need **Git** if you want to clone the *swarm-mcp* repository.

