

MCP Overview



Up to 2023

- LLMs are great at generating text



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Up to late 2024

- Function calling feature enables LLMs to do practical tasks



Up to 2023

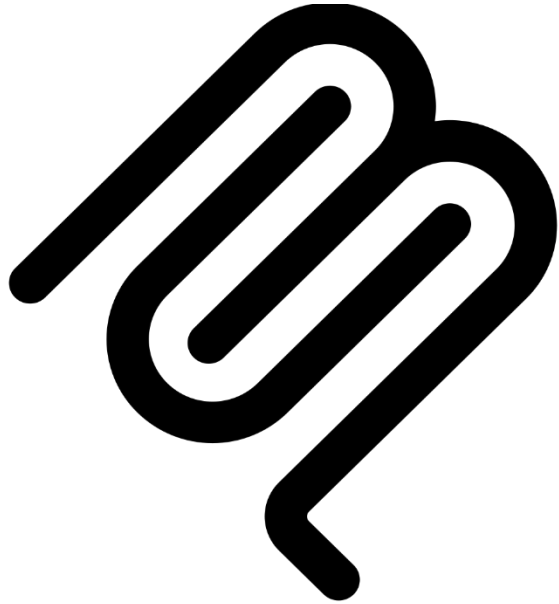
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Up to late 2024

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Present

- MCP enables LLMs to access 15000+ servers



Model Context Protocol

What is MCP

- Standardized protocol for connecting AI models to external:
 - Tools
 - Data Sources
 - APIs

MCP Components

- MCP Client
- MCP Server

MCP Client

➤ Inside the app:

- GH Copilot
- Claude Desktop
- Cursor
- ...

➤ Connects to Servers:

- DuckDuckGo
Search MCP
- Filesystem
- Github Api MCP
- ...

➤ Passes JSON schemas to LLM

MCP Server

➤ Implements features:

- Prompt templates
- Resources
- Tools

➤ Generates JSON schemas, which include:

- Description
- Parameters
- Output structure

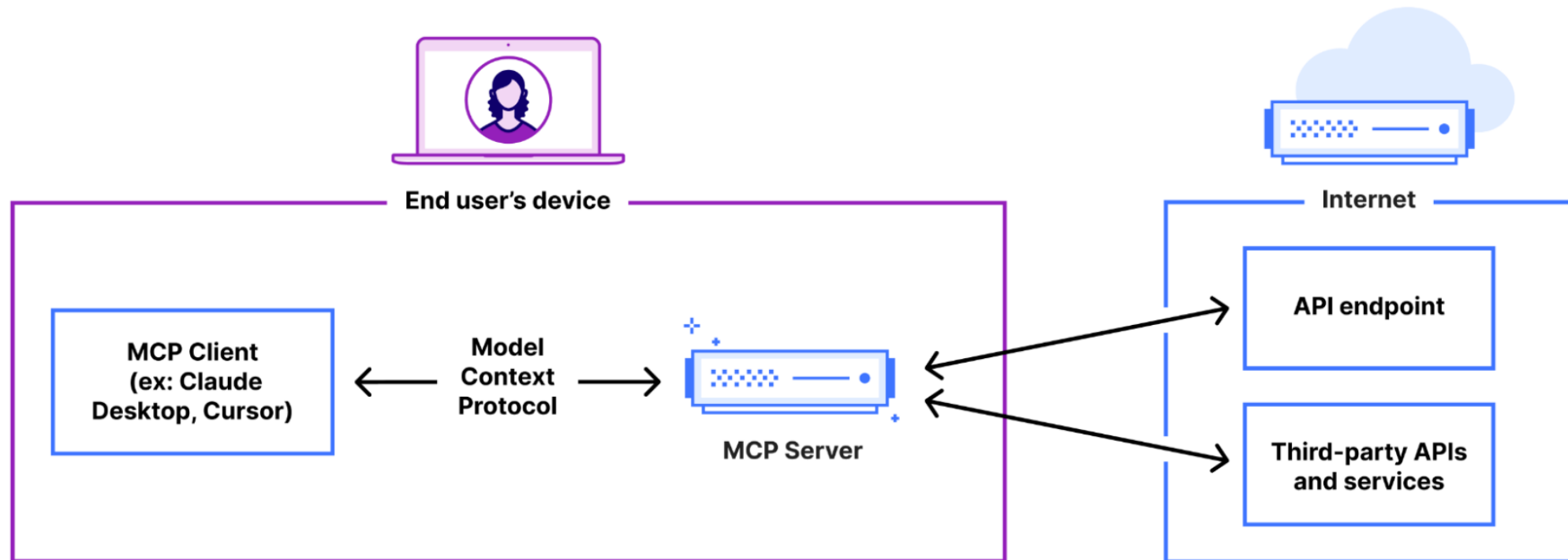
➤ Can be local (STDIO):

- Python scripts
- Docker containers

➤ Or remote via streamableHTTP

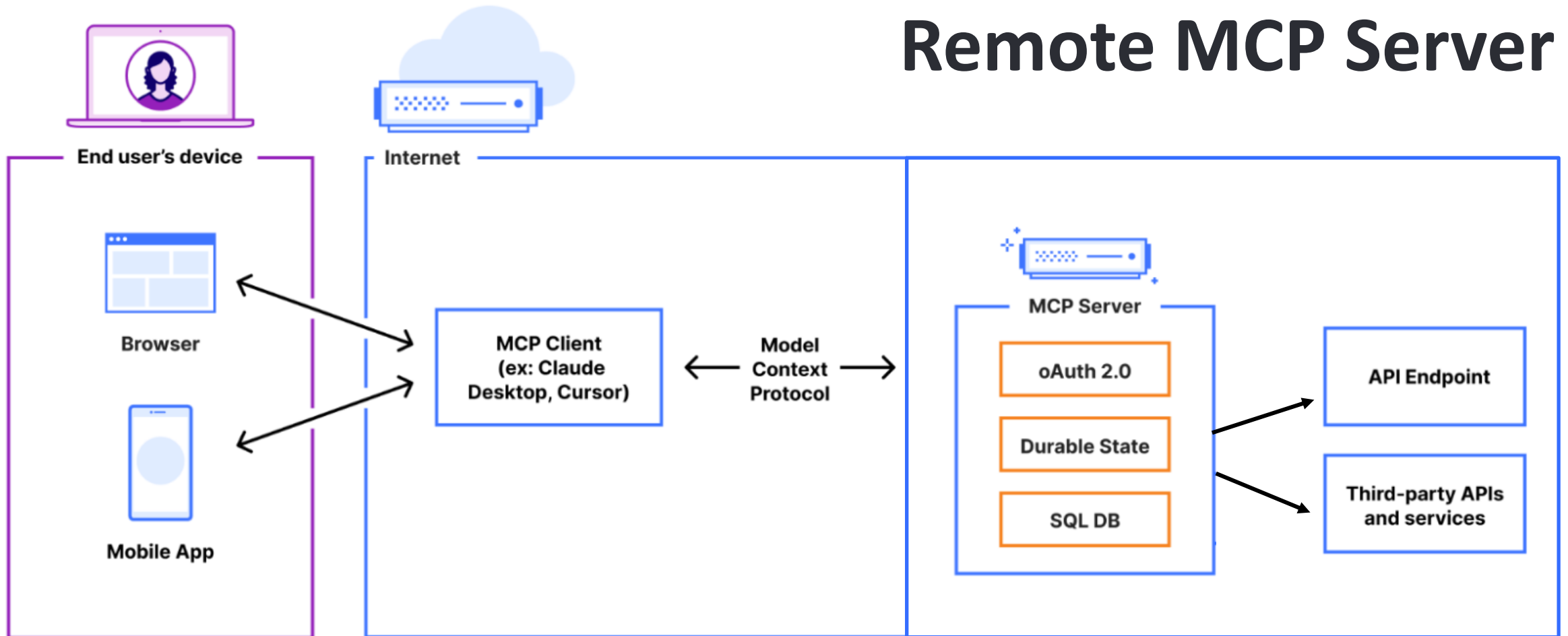


Local MCP Server





Remote MCP Server



Demo

Sources:

- [OpenAI Function Calling Release Article](#)
- [MCP Release Article](#)
- [MCP Specification](#)
- [FastMCP Python SDK](#)
- [Docker MCP Hub](#)
- [MCP.so Marketplace](#)
- [MCP Diagrams](#)