

Model Context Protocol (MCP)

Deploying MCP Servers on the Cloudflare Edge

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Connect:

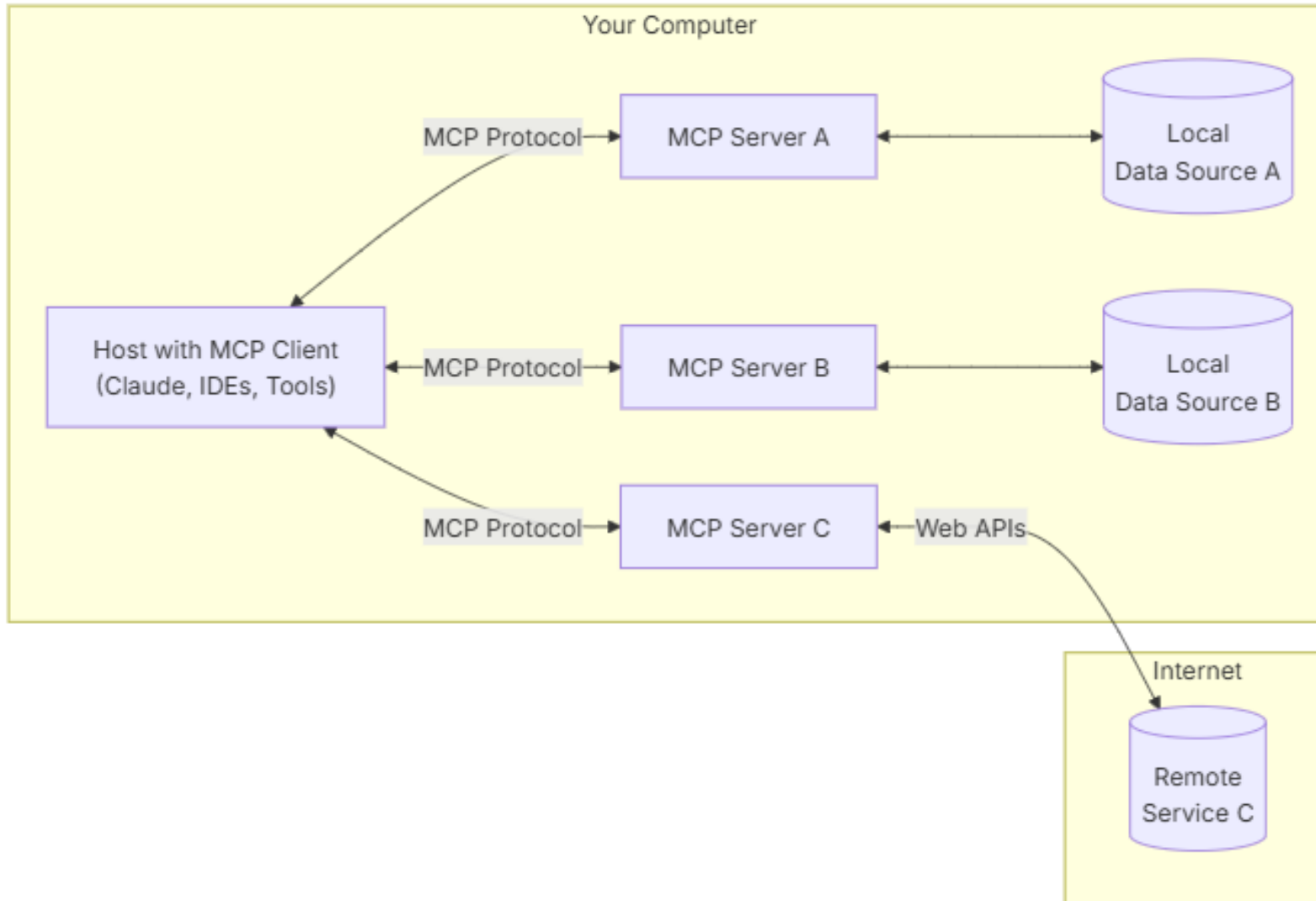


What is MCP?

“The USB-C for AI Applications”

- **Model Context Protocol (MCP)** is an open standard developed by Anthropic in late 2024
- Acts as a bridge between large language models (LLMs) and external systems (JSON-RPC 2.0)
- Standardizes how AI models interact with:
 - External data sources
 - Tools and applications
 - Context providers
- Uses a client-host-server architecture for flexible integration
- Enables two-way communication between AI models and the external world

MCP Architecture



Benefits of MCP

- **Standardized Integration:** Eliminates custom code between AI models and systems
- **Agentic Workflows:** Enables agents to dynamically build workflows via prompt
- **Modular Architecture:** Allows building scalable AI applications
- **Enhanced Context Awareness:** Enables access to real-time data and specialized tools
- **Improved Security:** Enforces best practices for handling sensitive data
- **Simplified Development:** Provides a common framework for AI integration
- **Cross-Platform Compatibility:** Works across different environments and platforms
- **Reduced Development Time:** Accelerates AI application development

Core MCP Concepts

MCP servers can provide three main types of capabilities:

- **Resources:** File-like data that can be read by clients (like API responses or file contents)
- **Tools:** Functions that can be called by the LLM (with user approval)
- **Prompts:** Pre-written templates that help users accomplish specific tasks

Current State of MCP

Growing ecosystem with multiple companies adopting MCP:

- Claude Desktop
- Cursor
- Block (formerly Square)
- Replit
- [Full list of MCP clients](#)

Active GitHub repositories with SDKs for TypeScript, Python, and Kotlin

Current limitations:

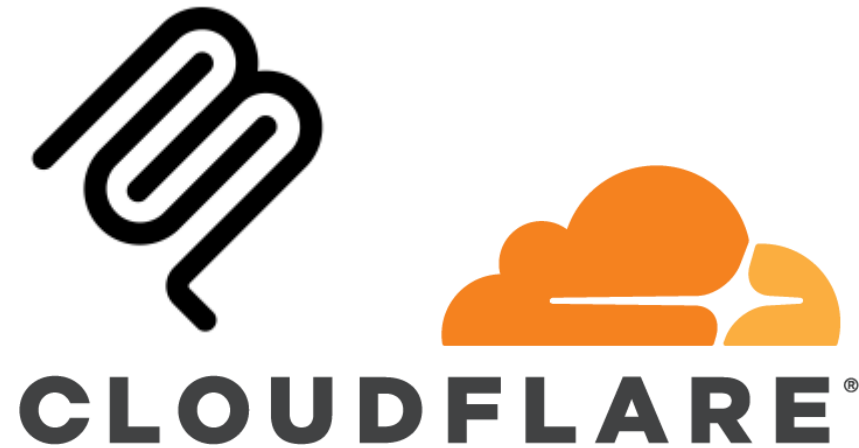
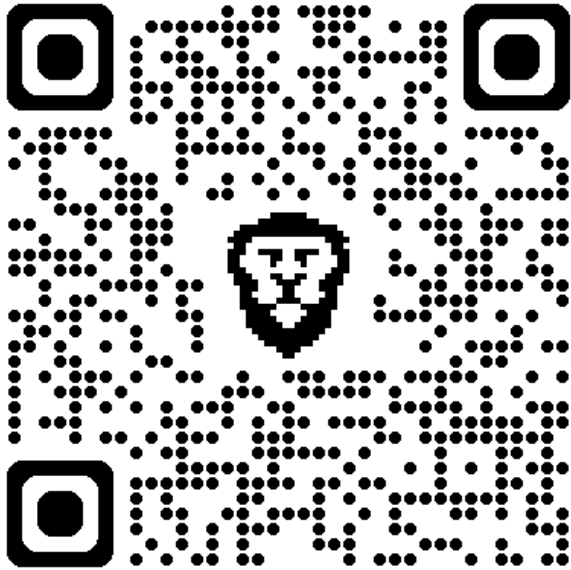
- Authentication and authorization standards are a work in progress
- Limited number of MCP clients outside of IDEs
- Limited discovery options for new MCP servers
- Emerging but still maturing ecosystem

Next Steps for MCP Maturity

Remote MCP Support (2025):

- **Authentication & Authorization**: Adding standardized auth capabilities, particularly focused on OAuth 2.0 support.
- **Service Discovery**: Defining how clients can discover and connect to remote MCP servers.
- **Stateless Operations**: Thinking about whether MCP could encompass serverless environments too, where they will need to be mostly stateless.

Tutorial - Follow Along



<https://cameronrohn.com/docs/discover/Tutorials/MCP/Claude%20Desktop/Overview>

Official Resources

Official MCP Documentation

- [MCP Overview](#)
- [MCP Specification](#)

Cloudflare MCP Resources

- [Docs - Cloudflare MCP Server Documentation](#)
- [Blog - Introducing Model Context Protocol](#)
- [Video - Cloudflare MCP Tutorial](#)