

The Rise of Agentic AI

Harnessing Open Source for Dynamic Decision-Making

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- Are you Human or an AI?
- I want 5 Kubernetes
- Virtual Machines are Real
- Cloudy, cloudy, cloudy...
- There is storage for that!

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Agenda

- **Agentic AI Can Transform Your Apps**
- **Introduction to CrewAI**
 - **Live Demos!**
- **Enhancing CrewAI with MCP**
 - **Live Demos!**
- **Comparing CrewAI and Agent2Agent**
 - **Live Demos!**
- **Q&A**

Transform Your Apps With Agentic AI

We Have Arrived... Agentic AI

- **AI Agents:**
 - Task-Driven, Blueprint to Success
- **Agentic AI:**
 - Have Defined Goals
 - Make Autonomous Decisions
 - "Non-Deterministic" Path to Goals
- **Plan, Iterate, and Coordinate**
 - Minimal Human Intervention
 - Control Loops: Analyze, Adjust, Done?
 - They Have Memory
 - Call APIs, Search the Web, etc



What's The Big Deal?

- Automation! Automation! Automation!
 - Content Generation
 - Business Processes
 - Operational Tasks
- How Does This Work?
 - Chain of Thought Prompting
 - Creating Sub-Tasks
 - Iteration → Goal
- DYNAMIC DECISION MAKING!



Introduction to CrewAI

- Open Source Python Framework
 - Role and Task-based Orchestration
 - AI Agents Working in Teams
- "Crew" of Agents Working A Task
 - Roles, Expertise, and Goals
 - Agents in the "Crew" Collab
 - Delegate Work to Others
 - Integrate Tools
- Opinionated Framework!



Demo: CrewAI Basics...

<https://youtu.be/tsd345XGrRc>

MCP and CrewAI

Model Context Protocol

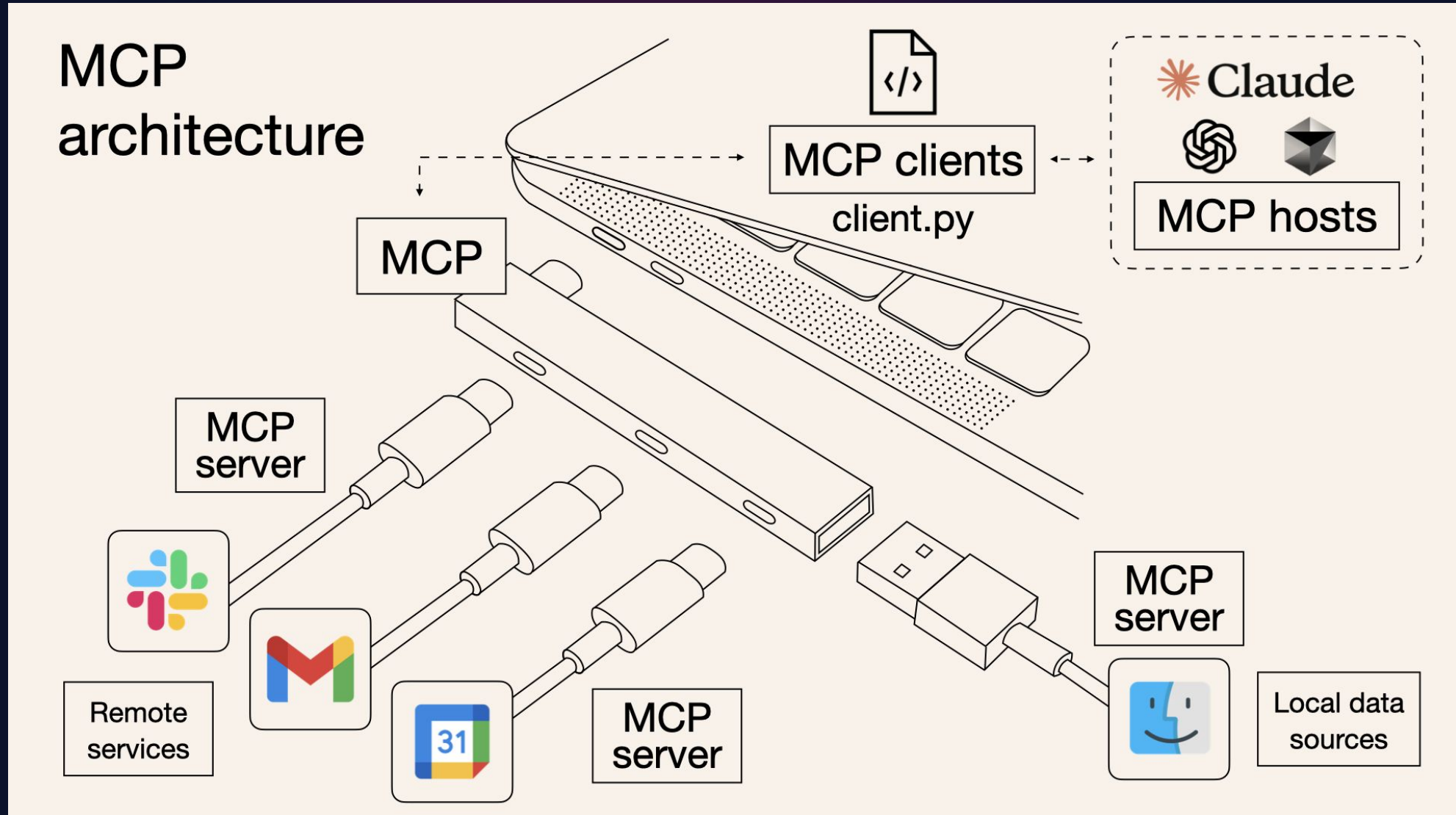
- MCP Standardizes How To Provide Content to LLMs
 - How Tools Are Connected
 - Accessing Data Sources
 - Ex: APIs, Databases, Systems
- Implement an MCP Server
 - Advertise Capabilities
 - Handshake for Communication
- Access via MCP Client
- UNIFIED PROTOCOL!



Expanded Architecture

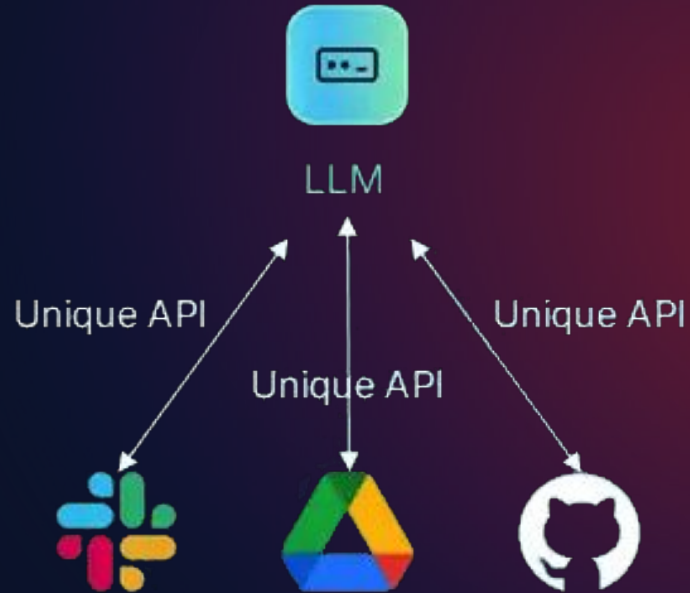
Image Credit:

[Norah Klintberg Sakal](#) - [LinkedIn Post](#)

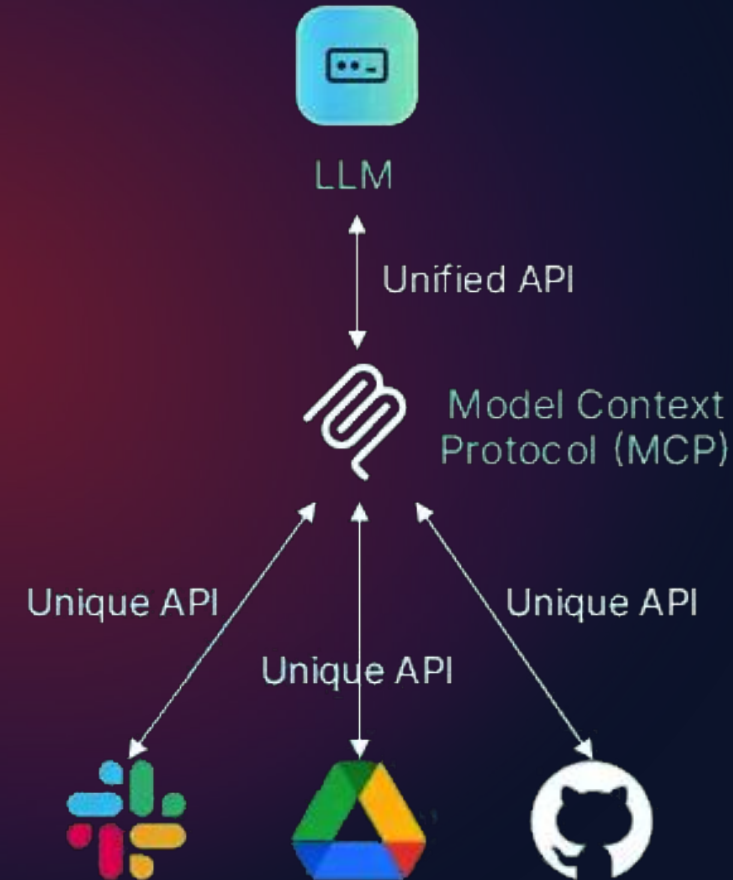


MCP Architecture

Before MCP



After MCP



Enhancing CrewAI with MCP

- Simple Tooling → Everything Tooling Kit
 - New Functional Capabilities via MCP Servers
- LLMs Don't Need to Know All
 - Delegate Specialized Tasks
 - Specialized LLMs → RAG!
 - Truly an Agent-based Arch
- Dynamic Real-World Actions!
 - Swiss Army Knife, But...
 - Completely Distributed!



Demo: CrewAI + MCP

<https://youtu.be/ASrk48VGHrI>

CrewAI vs Agent2Agent

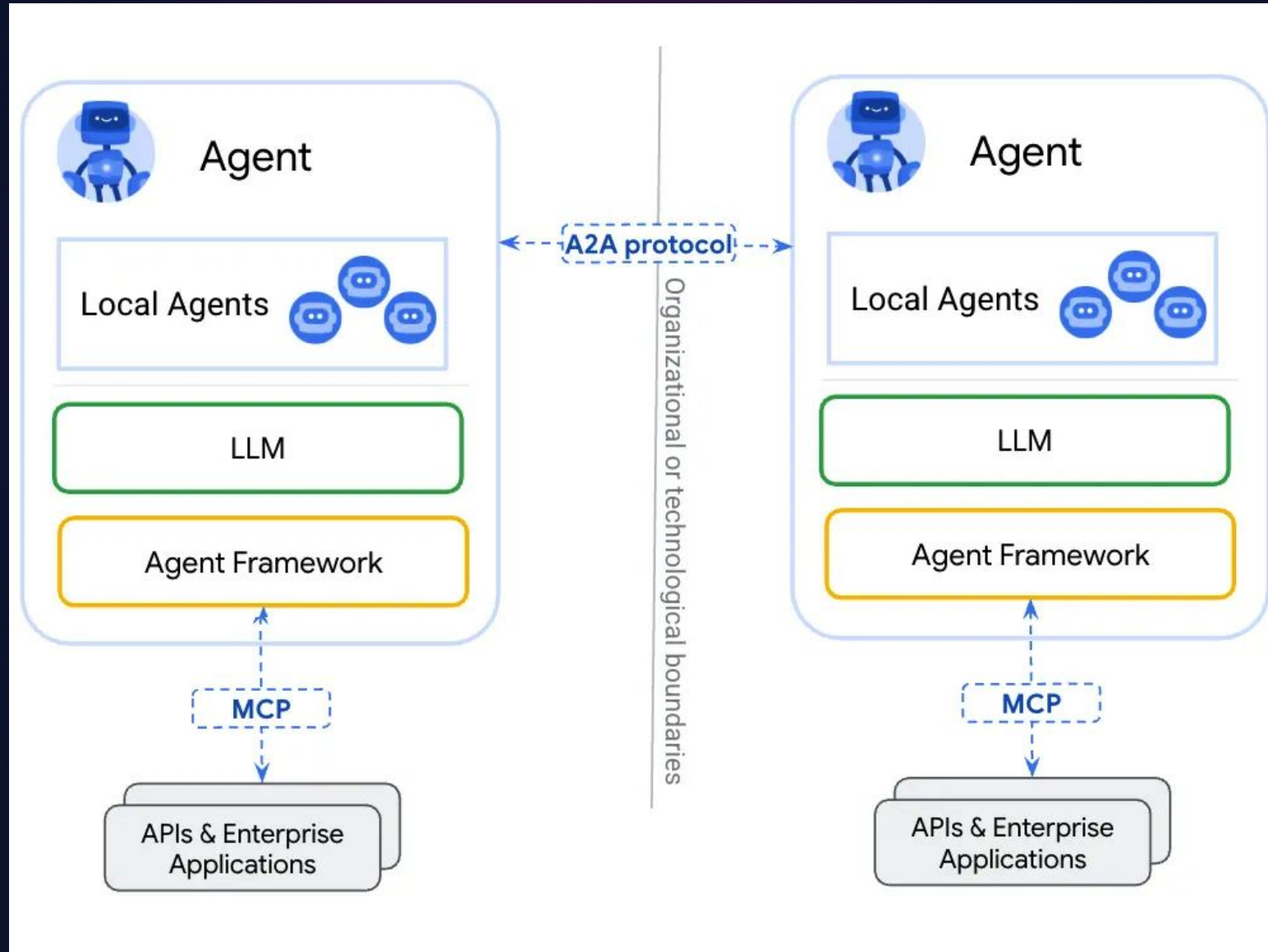
What is Agent2Agent Protocol?

- Protocol for Multi-Agent Interoperability
 - Communication via HTTP
 - Agent Can Delegate Sub-Tasks
- Agent Development Kit (ADK)
 - Implementation of A2A
- Local or Remote/Cloud Agents
- Decoupled vs Single Environment
 - Multiple Agent Services
 - Agents Talking to Agents



A2A with MCP?

Image Attribution
Xin Cheng - [Hello World to Agent2Agent Protocol](#)

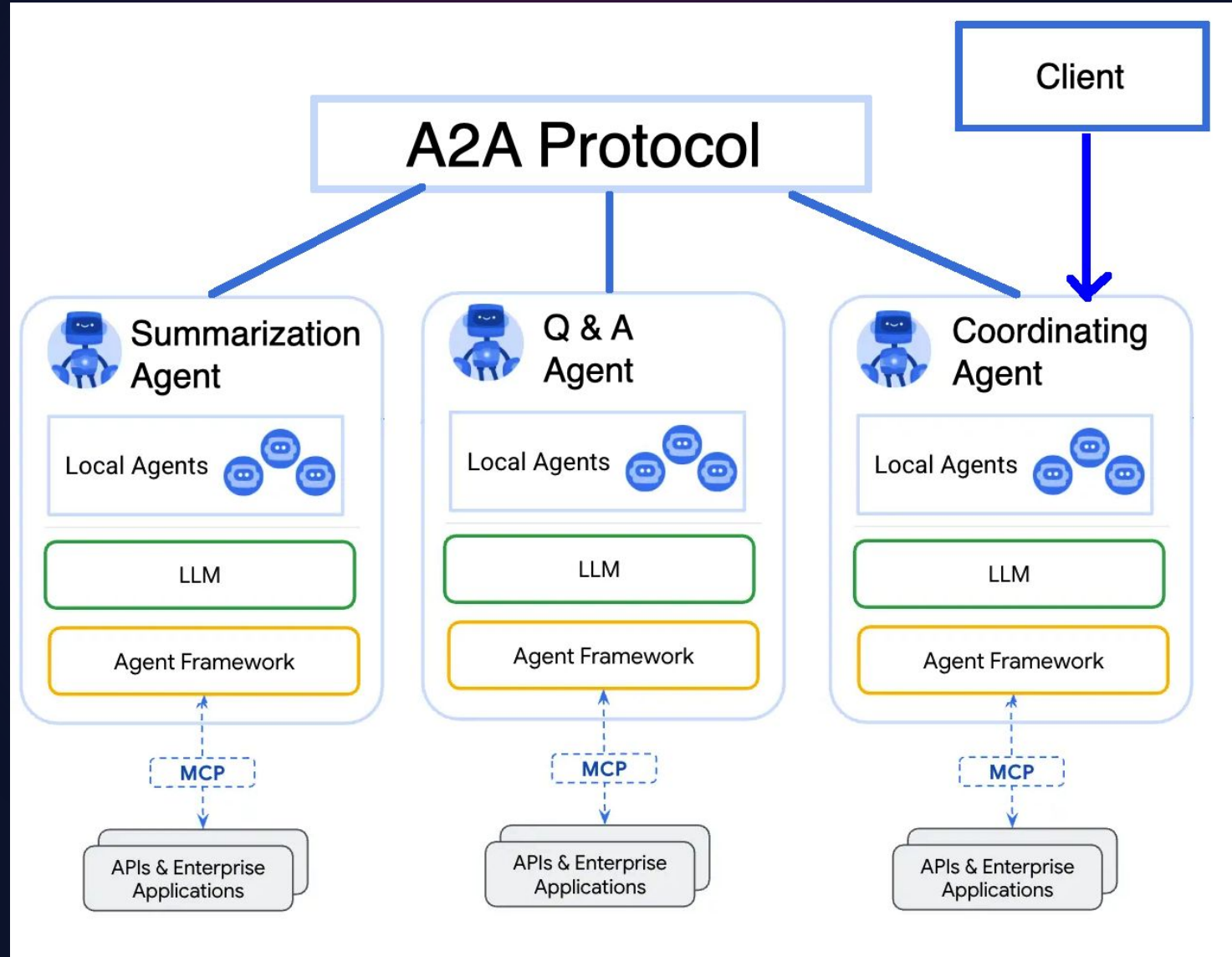


A2A and CrewAI: Differences?

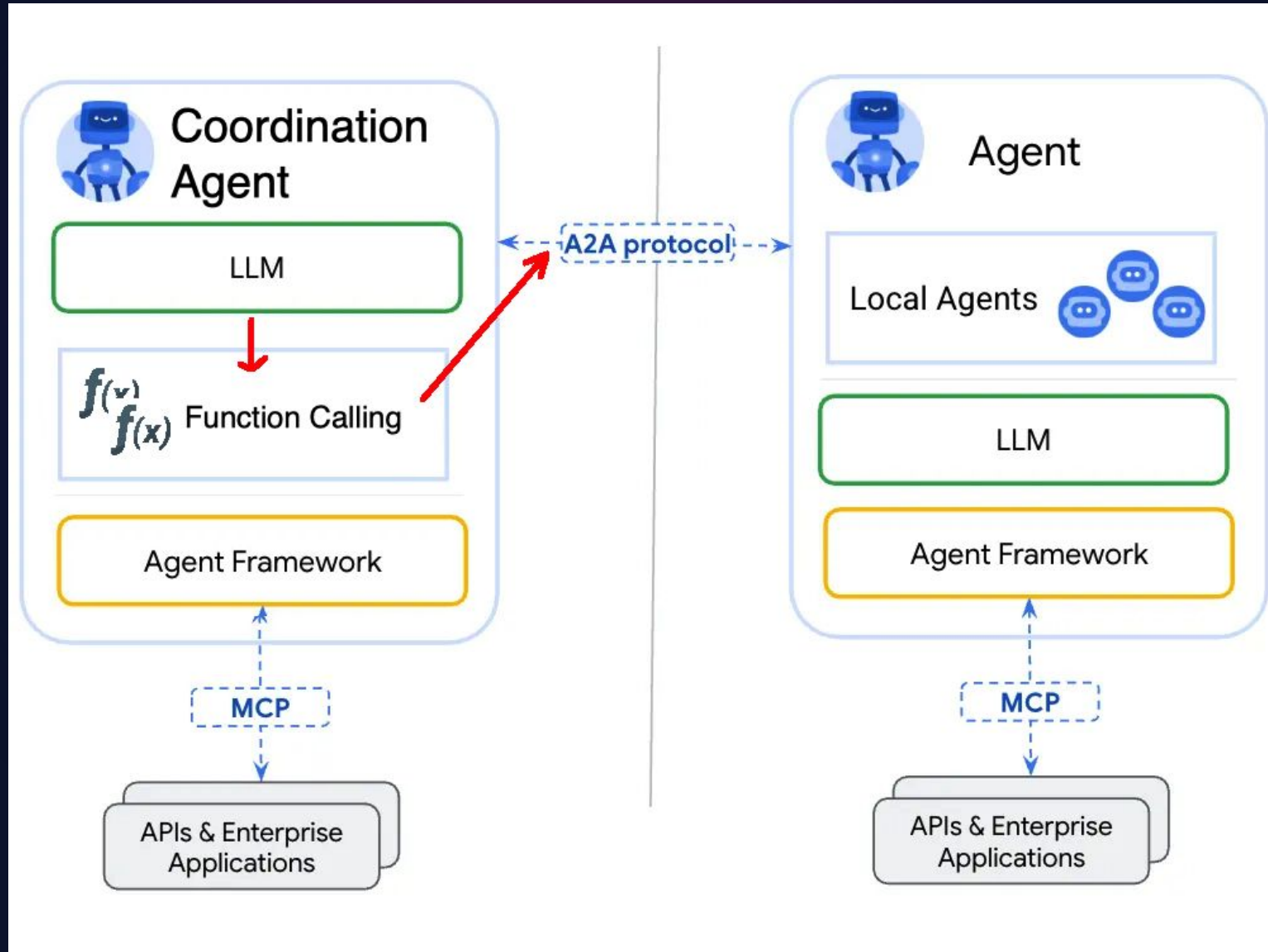
- CrewAI is a Opinionated Framework
 - Role and Task Based
 - Multi-Agent, But Single-System
 - Accessing Tools (Plus, MCP)
- Predefined Workflow Centric
 - Start Very Quickly, But...
 - Scaling Can Be Difficult
- What About...
 - CrewAI with A2A?
 - And MCP?



Simple Agent2Agent Architecture



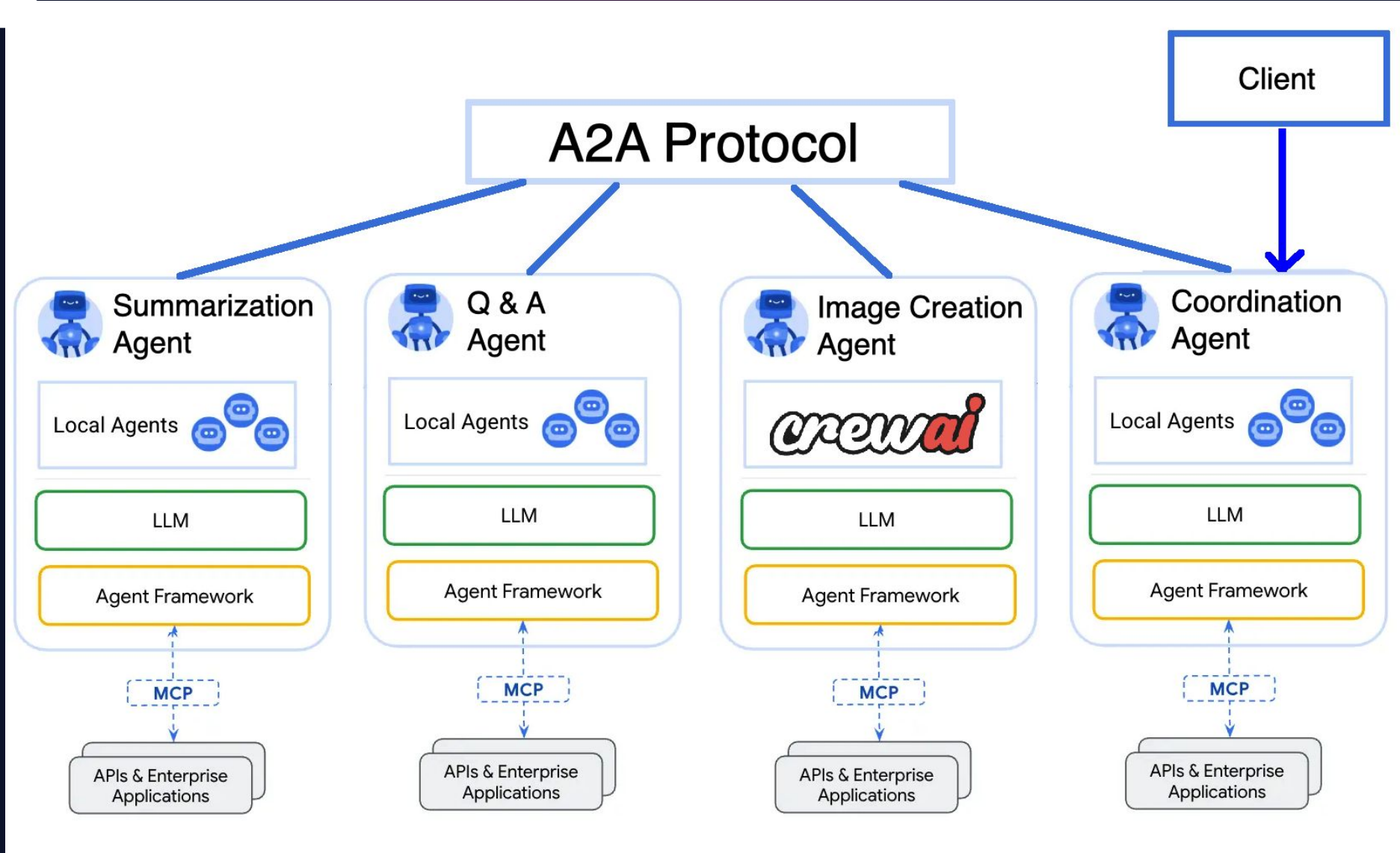
Coordination Agent Internals...



Demo: A2A Simple

https://youtu.be/_XB2gmy9Gq0

Enhancing CrewAI with A2A and MCP



Demo: CrewAI + A2A + MCP

<https://youtu.be/kl9D4WMY19Y>

The Big Takeaway...

- **CrewAI for Workflow Oriented Use Cases**
 - Prototypes, Standalone Agentic Systems
 - Build Multi-Agent Apps Quickly
 - Shared Resources Among Agents
 - Leverage MCP Endpoints
- **Model Context Protocol**
 - Think Toolkits of Functionality
- **Agent2Agent Protocol**
 - Distributed Agent Collaboration
- **Better Together!**



A2A protocol



Resources

Resources

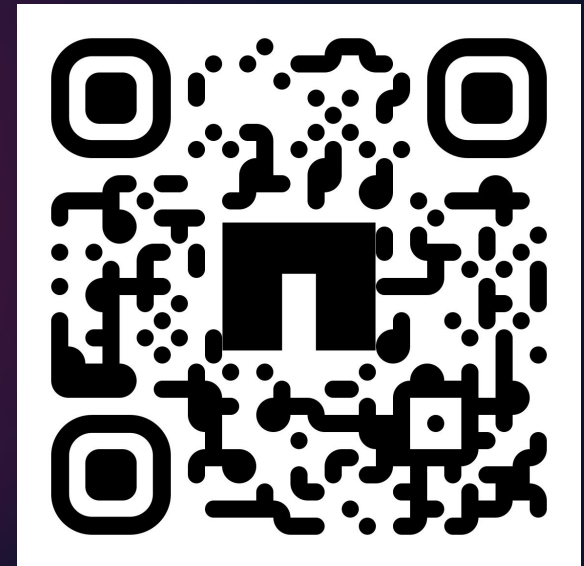
All Materials/Code:

github.com/davidvonthenen/2025-devoux-uk

Let's Chat on Discord: discord.gg/NetApp

Topics:

- CrewAI - github.com/crewAIInc/crewAI
- MCP - modelcontextprotocol.io
 - [JAVA MCP SDK](#)
- Agent2Agent - github.com/google/A2A



Thank You!

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