

Revolutionise Troubleshooting: Unleashing the Power of Cisco AI Canvas

cisco Live !

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AI Researcher Technical Leader

Session ID: BRKCLD-2081

Cisco Webex App

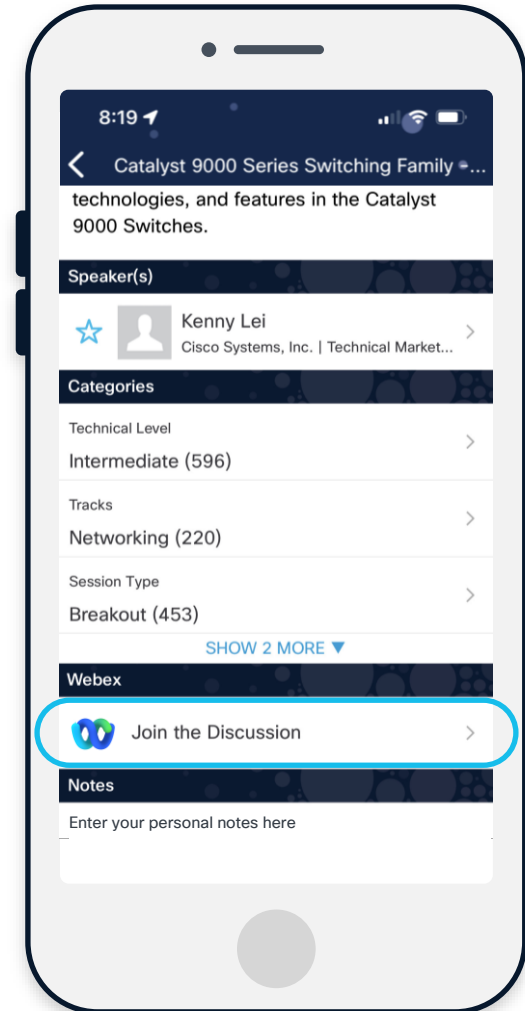
Questions?

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- 1 Find this session in the Cisco Live Mobile App
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<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKCLD-2081>

Agenda

- 01 AI Assistant
- 02 Unified AI Assistant
- 03 Agentic AI
- 04 AI Canvas
- 05 AI Canvas PowerHouse
- 06 MCP
- 07 AI Canvas Demo

Who am I?



Nikhil Ghodki  He/Him
AI Researcher Technical Leader at Cisco, AI/MLOPs

Happy to connect with you on LinkedIn
<https://www.linkedin.com/in/nikghodki/>

- **Skillsets:** MLOPs, Cybersecurity, AI Research, Infrastructure
- **Personal:** 10+ years of Security industry experience, wore hats for various roles, Double Masters (M.S. in Instrumentation, M.S. in Information Technology and Management)
- **What I do :** Architect Infrastructure for AI platform at Cisco, Design and implement MLOPs Pipeline, build AI based tools for increasing team productivity, AI Research for Canvas , Building agents, research on agents, LoRA finetuning, etc

What will you take from this session?

AI Assistant

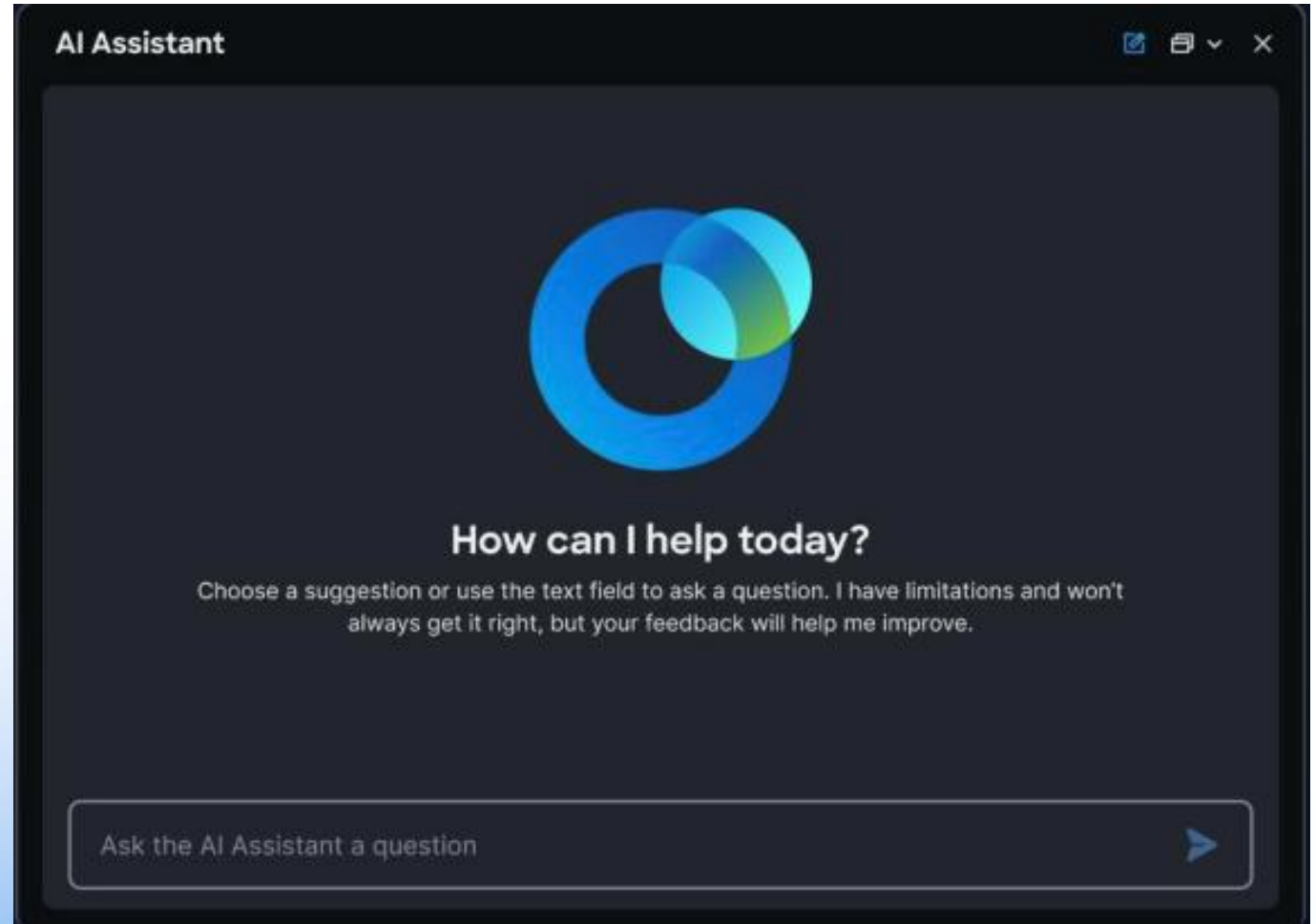
Cisco AI Assistant

Insight

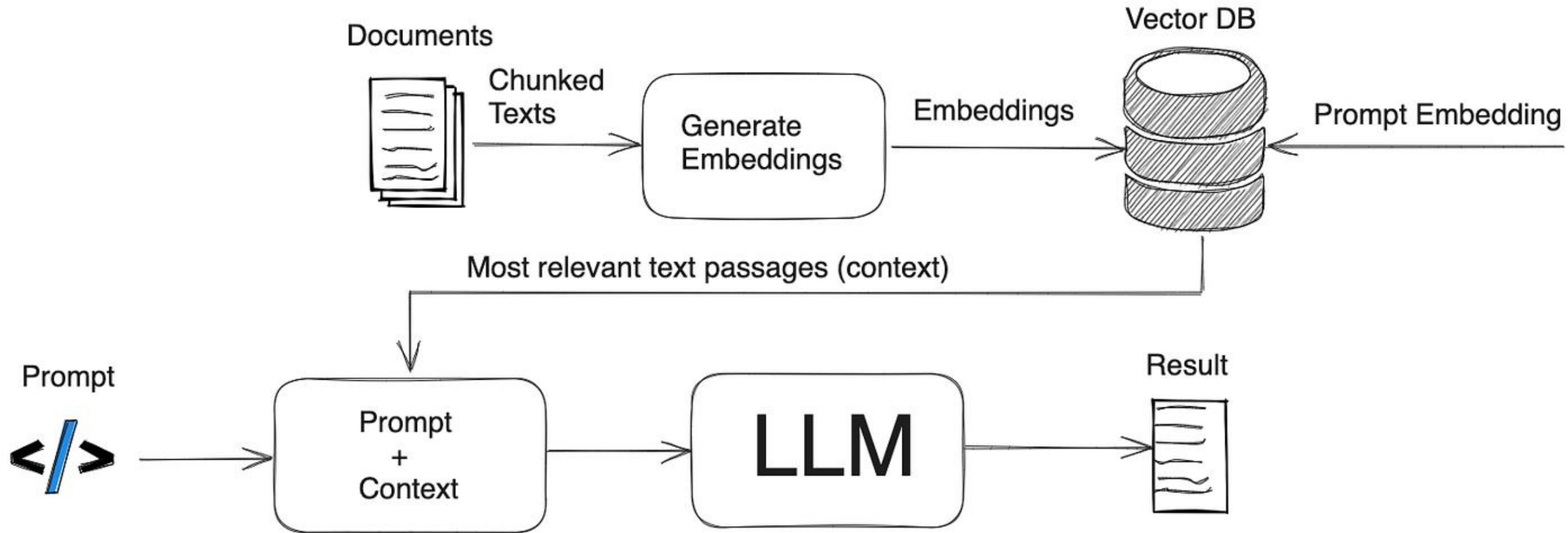
Troubleshooting

Automation

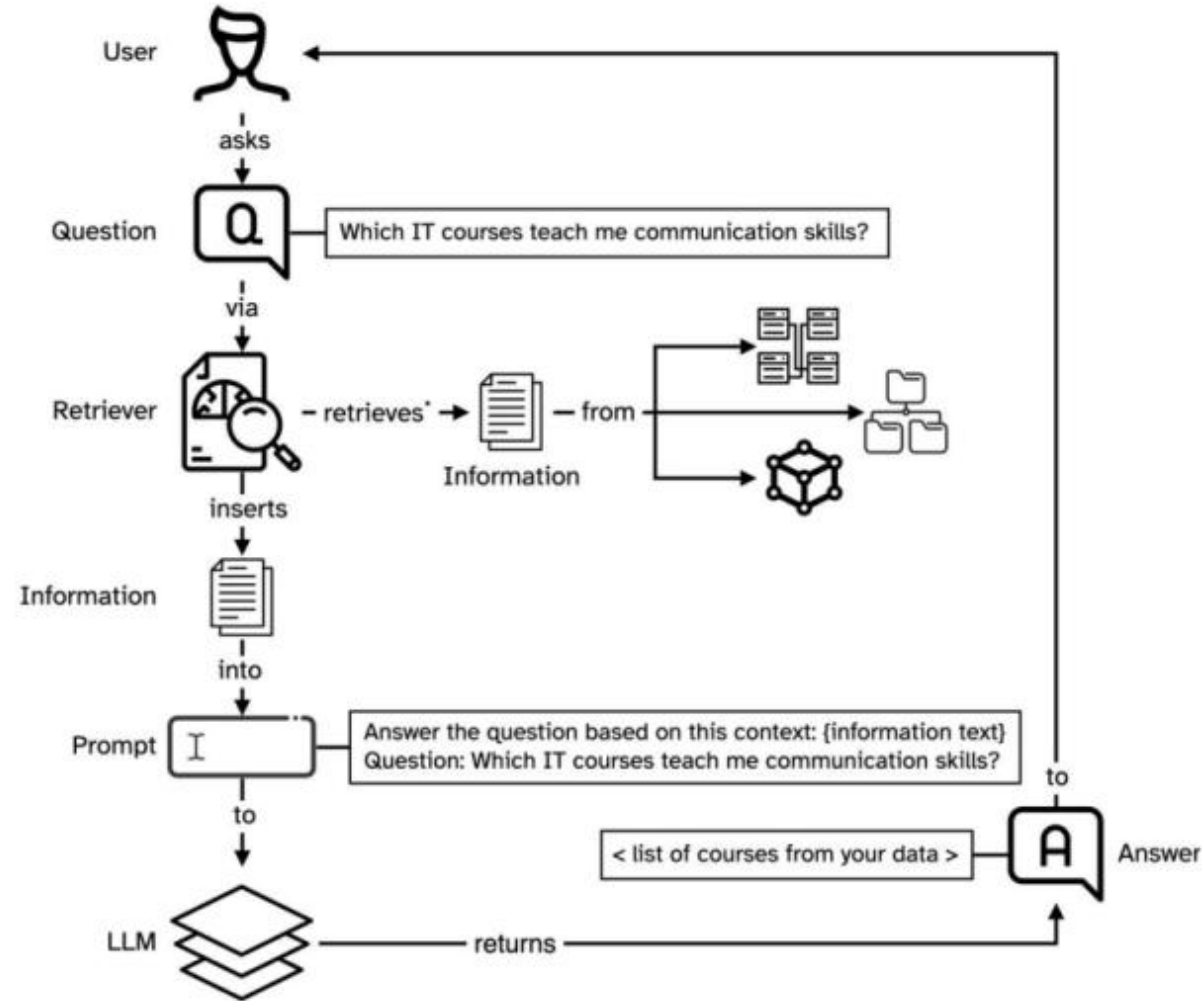
Setup & Maintenance



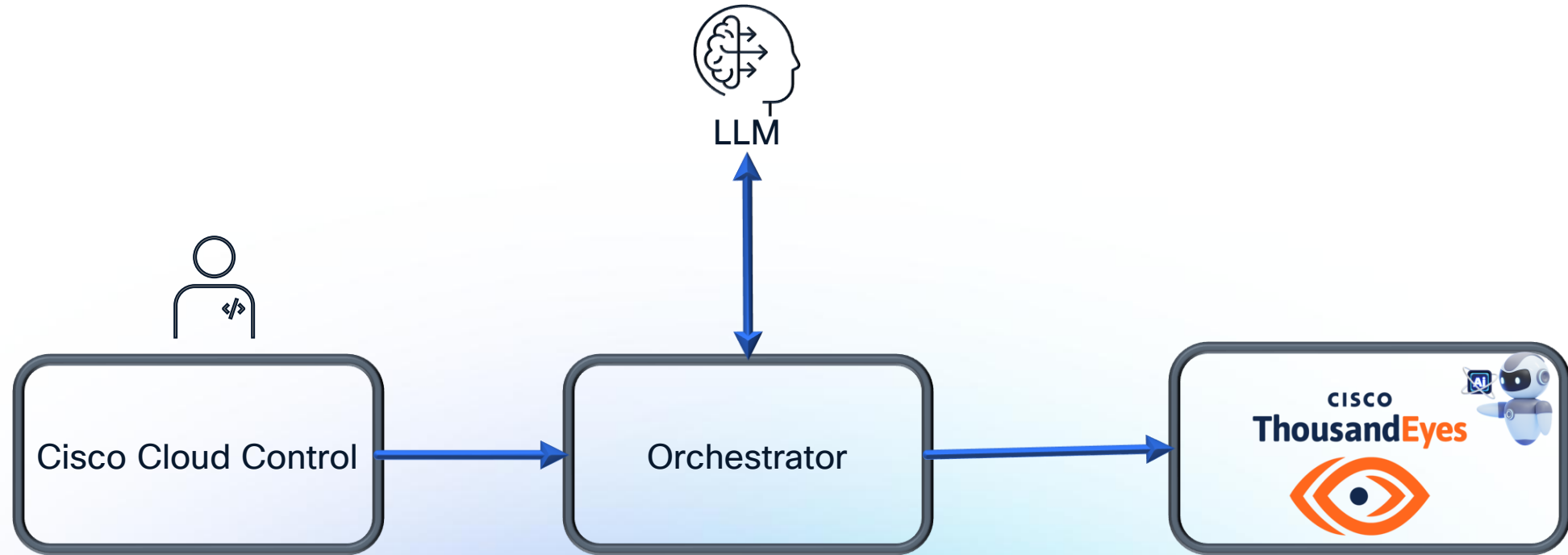
RAG (Retrieval Augmented generation)



RAG (Retrieval Augmented Generation)



High Level Block Diagram





Documentation Search

Contextual querying assistance to get answers for common questions from the public documentation



Monitoring Assistant

Visibility & monitoring of operational data including the current & historical state



Troubleshooting

Evaluating information from different sources (events, configuration, statuses, counters, KBs) to suggest the best course of action



Insights

Configuration & software version insights & compliance, security vulnerabilities, end of life affecting network hardware & software



Configuration Assistance

Automate feature configuration by assisting users interactively and providing real-time assistance



Best Practices/CVP/CVD

Recommendations for implementing, configuring, testing capabilities in the network



Case Management

Embedded assistant for TAC/support cases (Status of existing cases, open a case etc.)



Network Migration

Assess migration readiness, suggest new hardware/software, config/policy



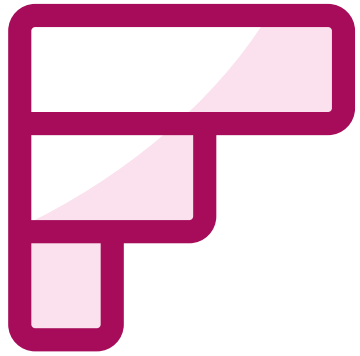
Impact Analysis

Provide analysis of locations, devices, users and apps that could be impacted by planned network changes



Sustainability

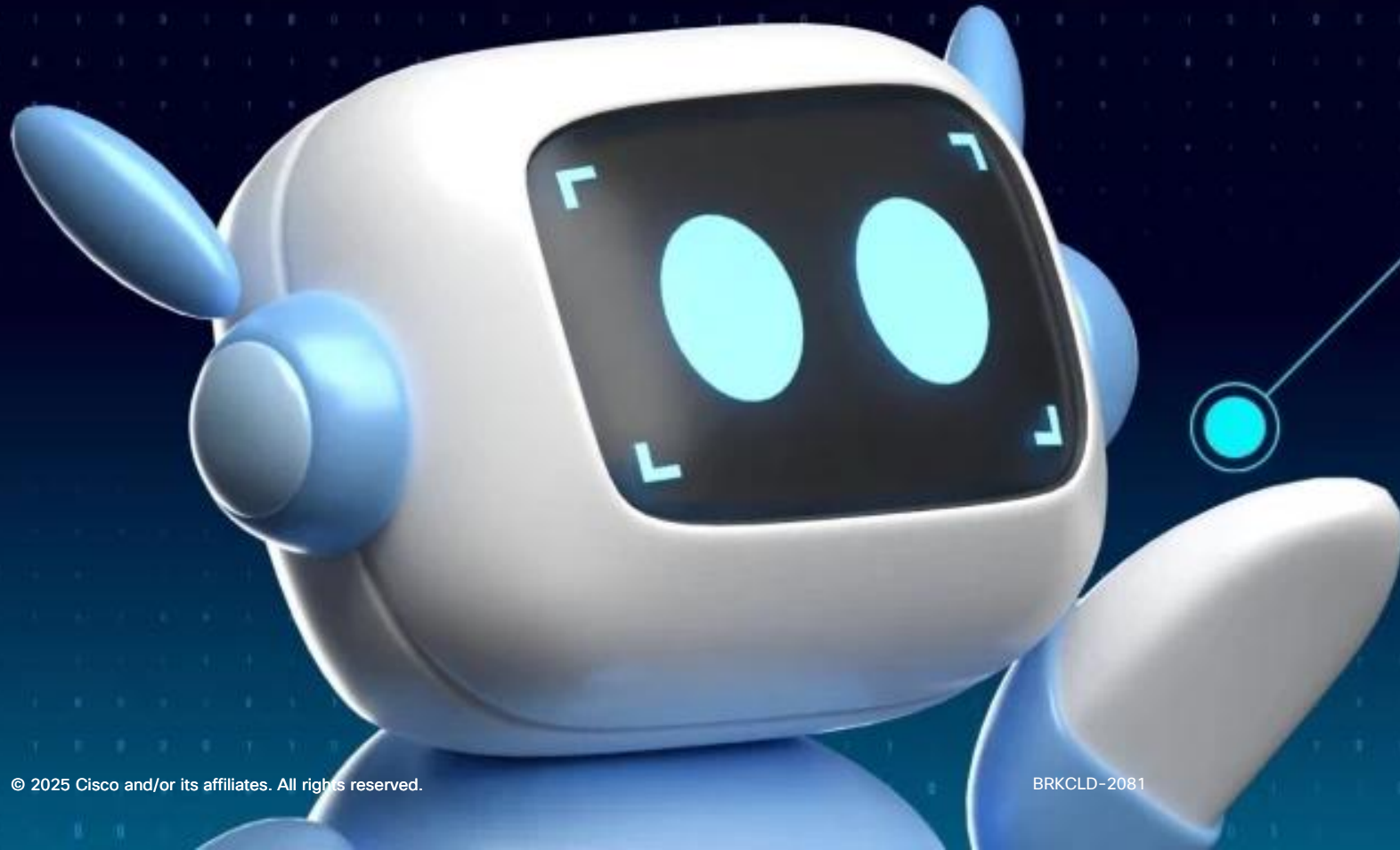
Provide assessment of sustainable operations with insights for energy consumption



**Rank the following AI features
based on their importance to
you:**

Unified AI Assistant

AGENTIC AI



How Agentic AI works



Understanding

Agents
processes data
using LLMs



Goal Setting

Identifies
objectives and
plans strategies



Execution

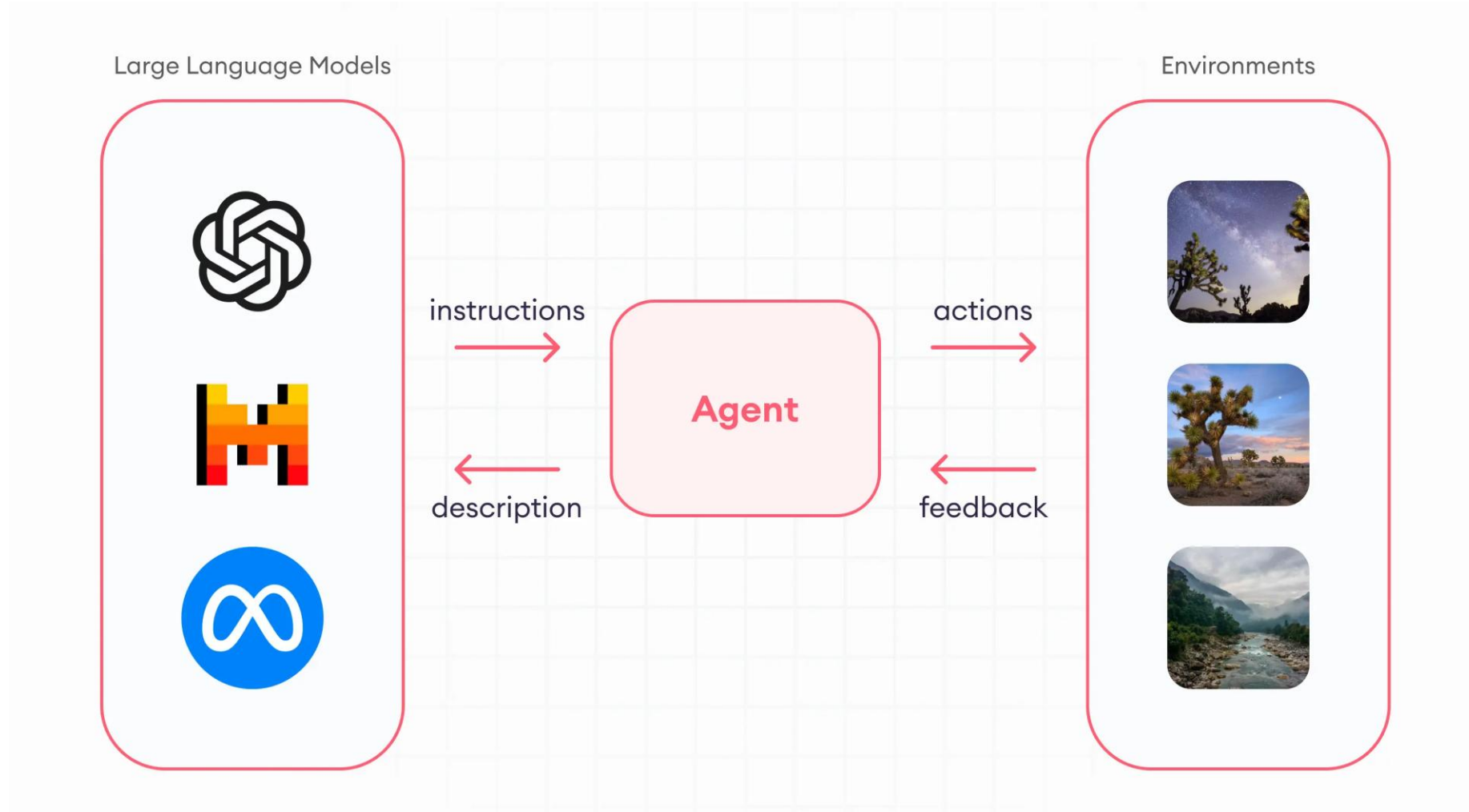
Automates and
executes
commands



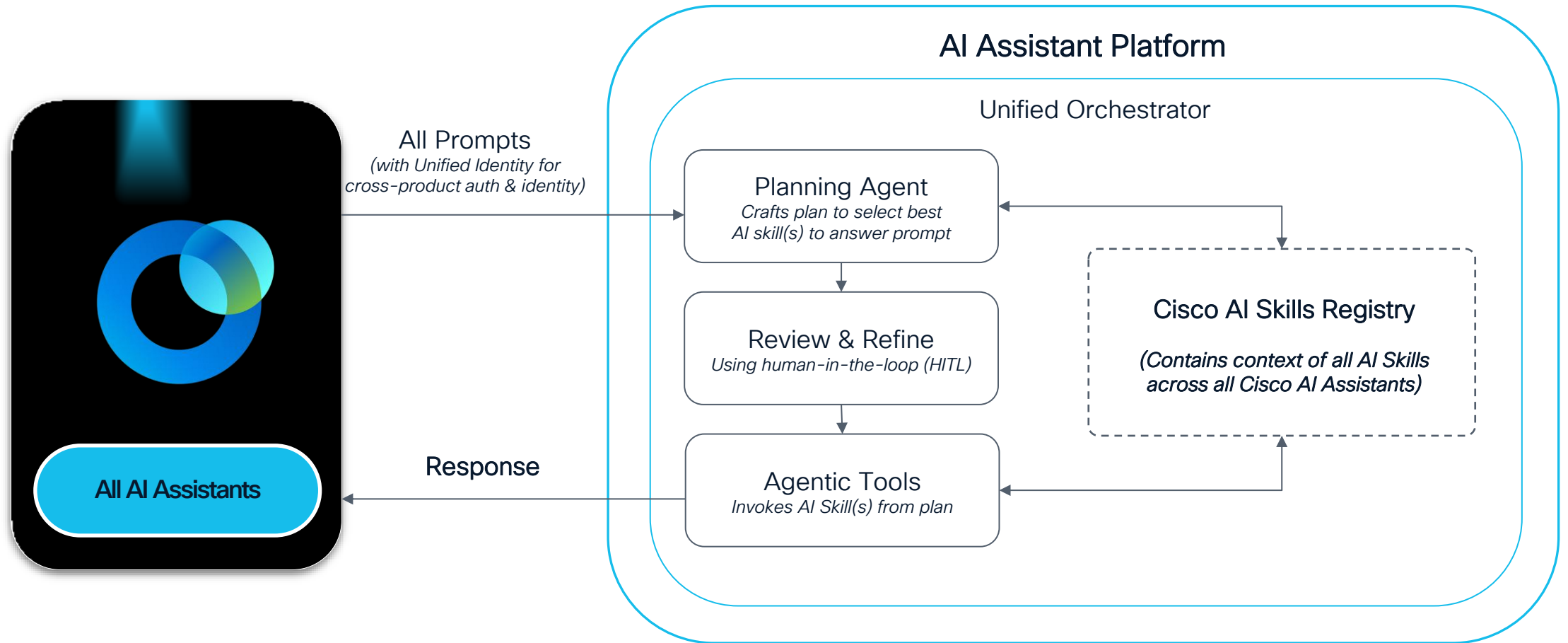
Learning

Learns from input
data as well as
other sources
provided like from
MCP servers

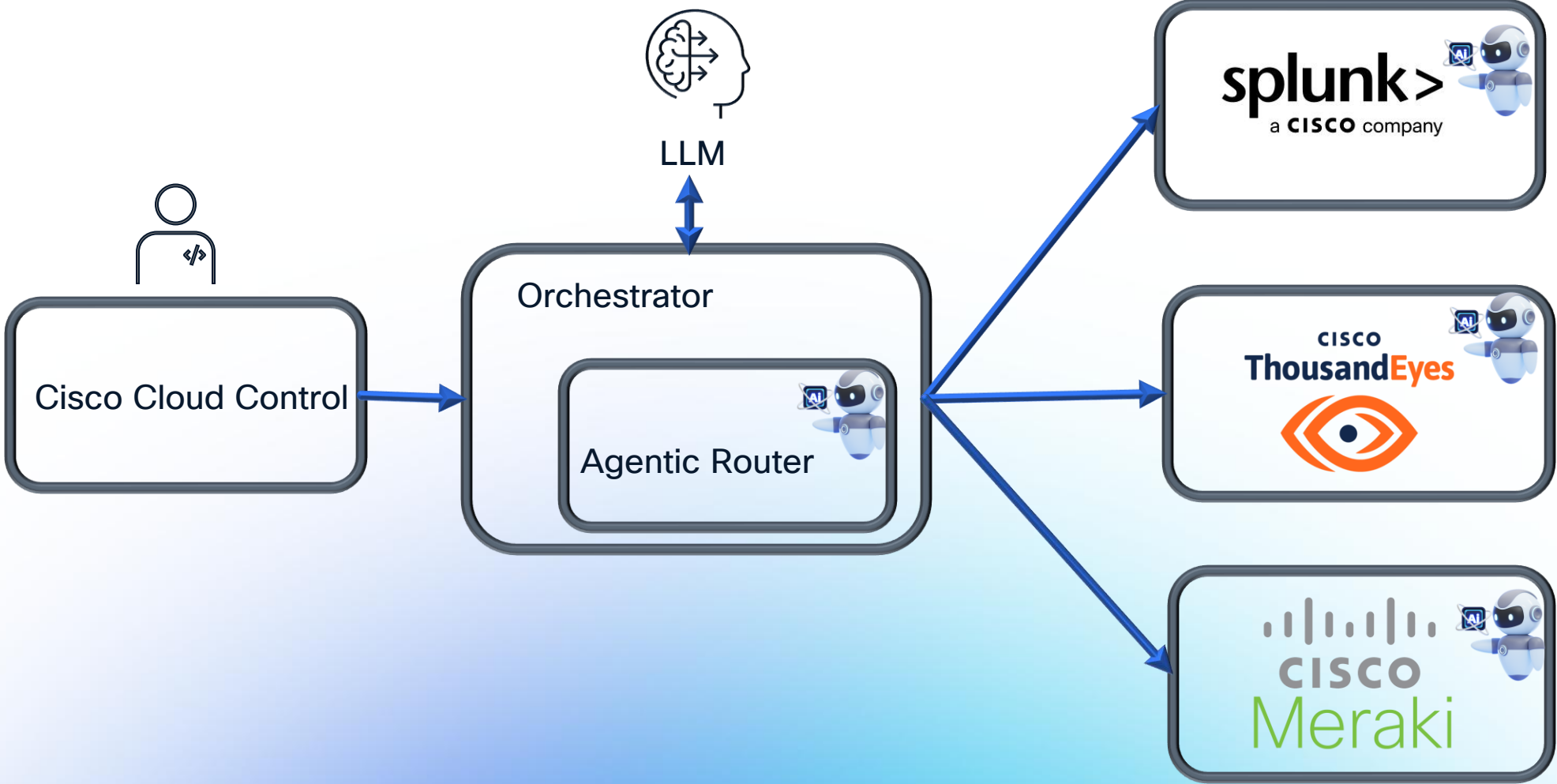
LLM Agent

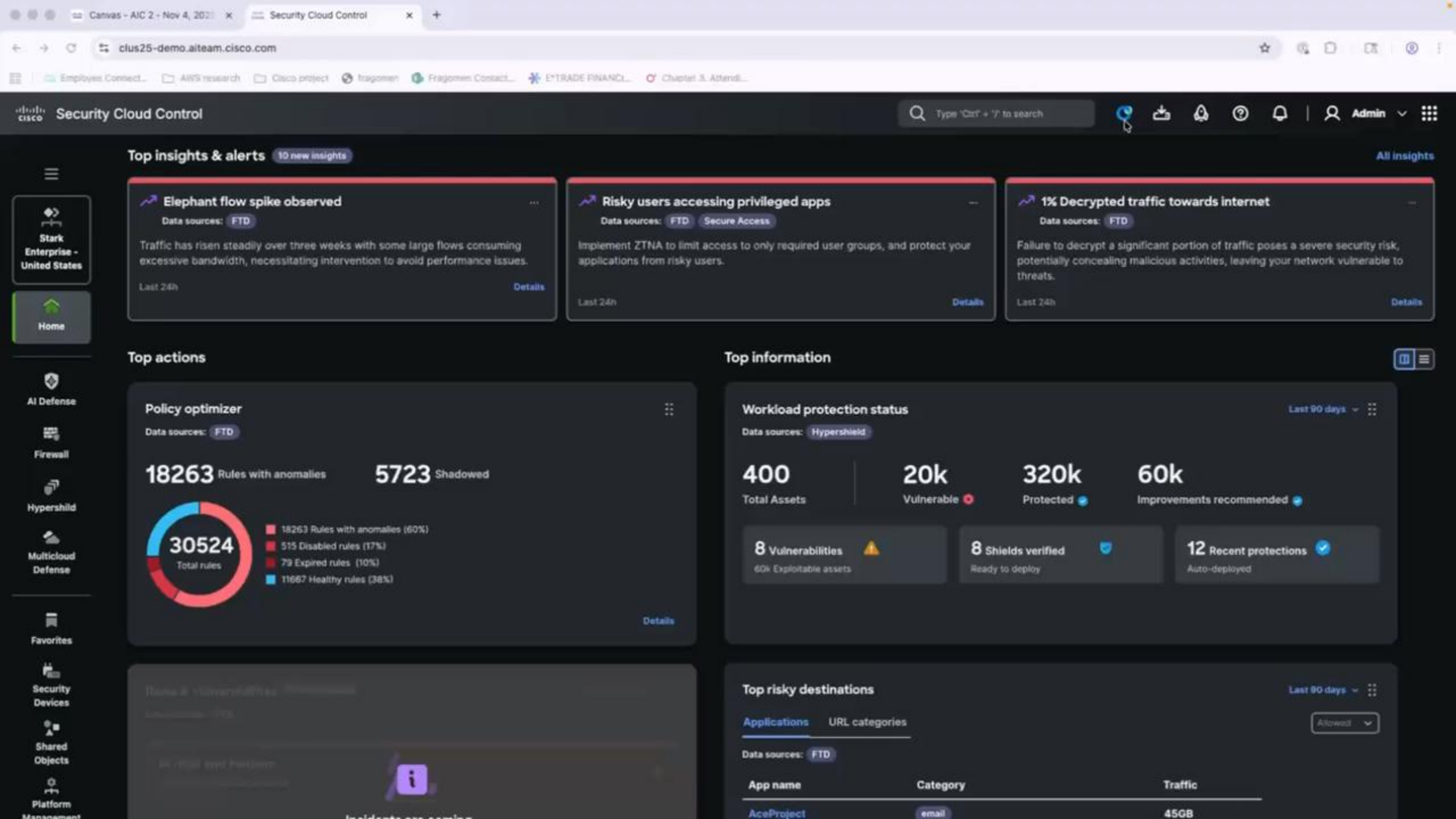


AI Assistant unification through an agentic platform-based approach



High Level Block Diagram





AI Canvas

Today's IT environments are more complex, noisy, and fragmented than ever



Cross-Product Troubleshooting is Complex

Individual products don't scale to triage across domains effectively.



Cross-Team Collaboration Has High Overhead

Effort is required across siloed teams and tools, which is time consuming.



Cross-Team Handoffs Lack Full Context

Root cause analysis is a challenge because of insufficiently detailed handoffs.

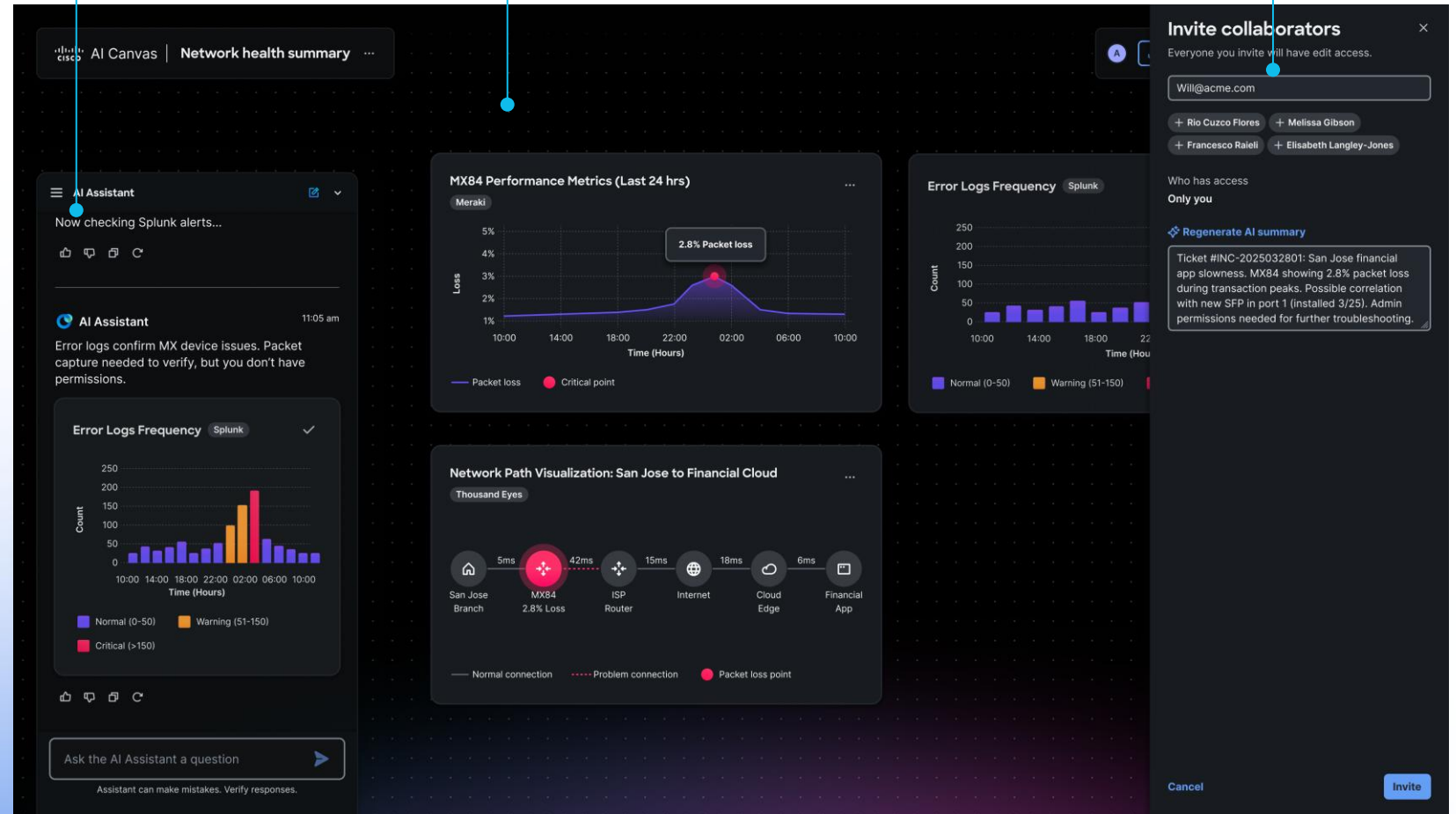
Introducing AI Canvas

- Single canvas for cross domain troubleshooting
- Generative UI with reasoning built-in
- Keeps NetOps, SecOps, IT and execs on the same page

AI Assistant

Shared Workspace

Users

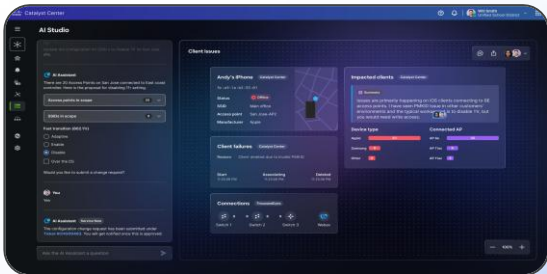
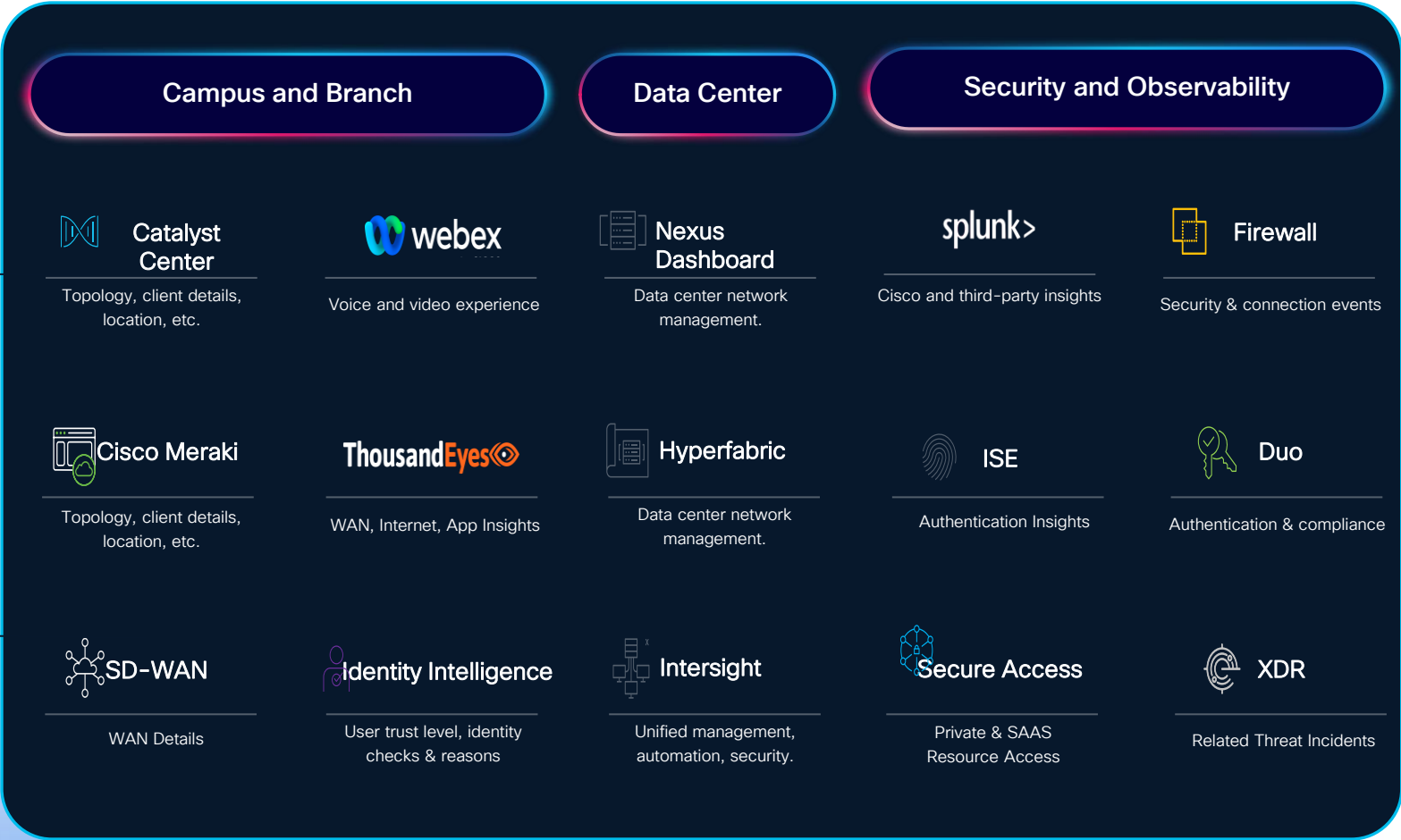


Agentic Ops Across IT and SecOps

AI Assistant



AI Canvas



Clients - Meraki Dashboard

n398.dashboard.meraki.com/Assurance-applia/n/fZNa5aog/manage/clients

Employee Connect...AWS researchCisco projectfragomenFragomen Contact...E*TRADE FINANCI...Chapter 3. Attendi...

Meraki

Search

View old version

+ Add client

AI Canvas

New

AI Canvas

Overview

Settings

+ Create canvas

Recent

Online

Network Assurance

Secure Connect

Network-wide

Assurance

Security & SD-WAN

Switching

Wireless

Insight

Organization

Security

Automation

Access Manager

Find in Menu

WAN appliances

1 total

All

Online

Switches

1 total

All

Online

Usage and clients

All clients

Last day

Applications

Usage 280.72 GB (↓12.7 MB, ↑280.71 GB)



Search for clients

Filters 4 results

Download

	Status	Description	Connected to	IPv4 address	MAC address	Usage	Device
☐	Wired	RasPi-ClientA	Assurance Switch	172.33.10.100	2c:cf:67:20:96:09	280.71 GB	Raspberry
☐	Wired	Avery Mitchell - wired	Assurance Switch	172.33.1.5	00:ce:39:d3:3b:1b	7.82 MB	Other
☐	Wired	Tom Thunder	Assurance Switch	172.33.1.6	00:ce:39:d3:3a:e3	2.94 MB	Other
☐	Wired	RasPi-ClientB	Assurance Switch	172.33.10.101	2c:cf:67:20:96:bc	329 KB	Raspberry

Rows per page 30 1

Applications details

An opportunity to address the load on ITOps and SecOps



Unified Data with Cross-Product Skills

Cross-product skills unify data to assess issues more quickly across siloed tools and systems.



Lowered MTTR Across Incidents

Enhanced capabilities of AgenticOps enables users to identify, link and resolve incidents faster.



Accelerated Productivity for Teams

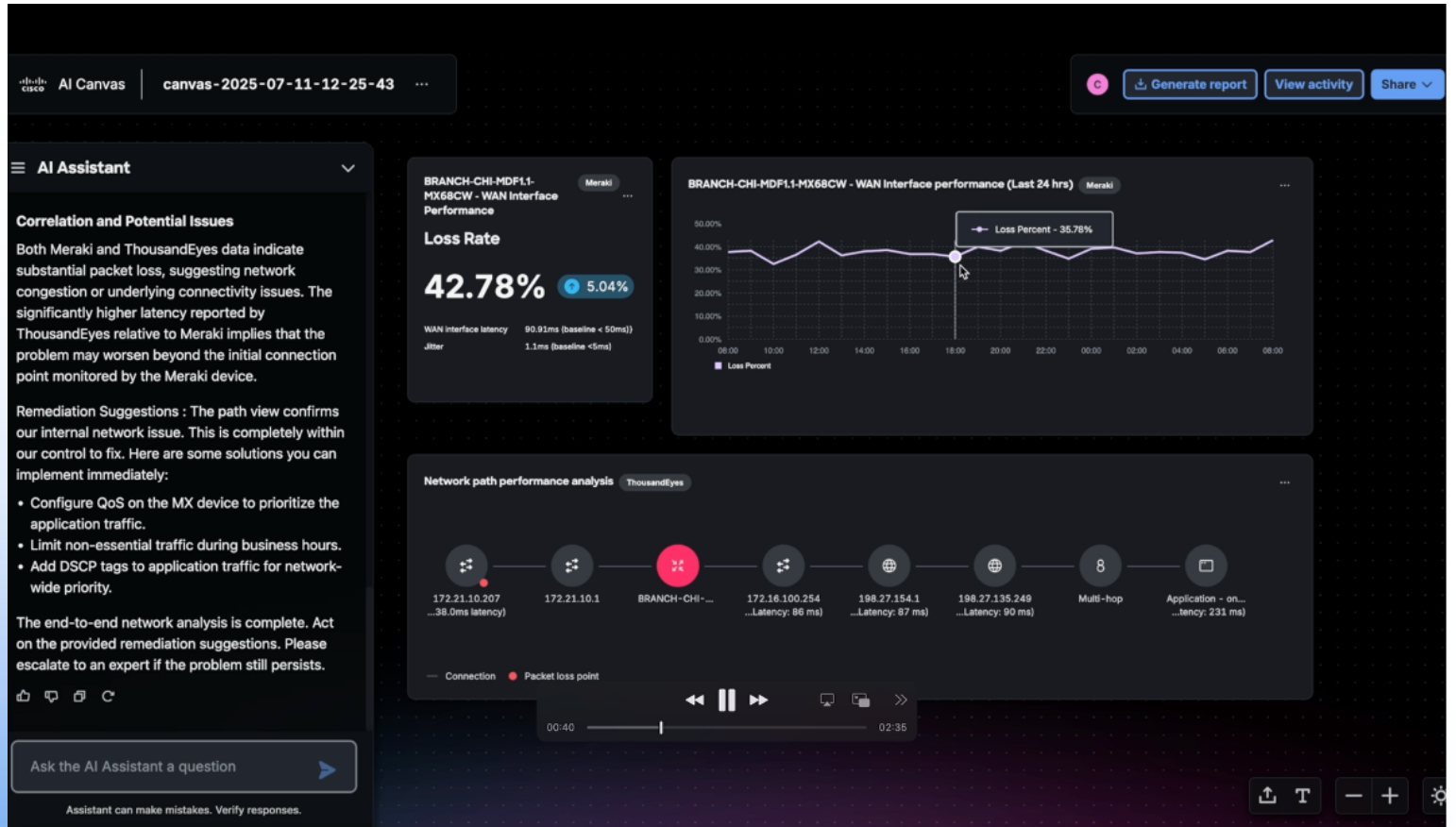
Collaborative investigation and triaging across teams leads to more effective troubleshooting.

Investigate an open ticket from ServiceNow

The AI Assistant guides interactions with the network in natural language

AI Canvas reads the ticket and reasons how to solve the problem

Collects information from tools like ThousandEyes, Meraki, and Splunk to troubleshoot the issue

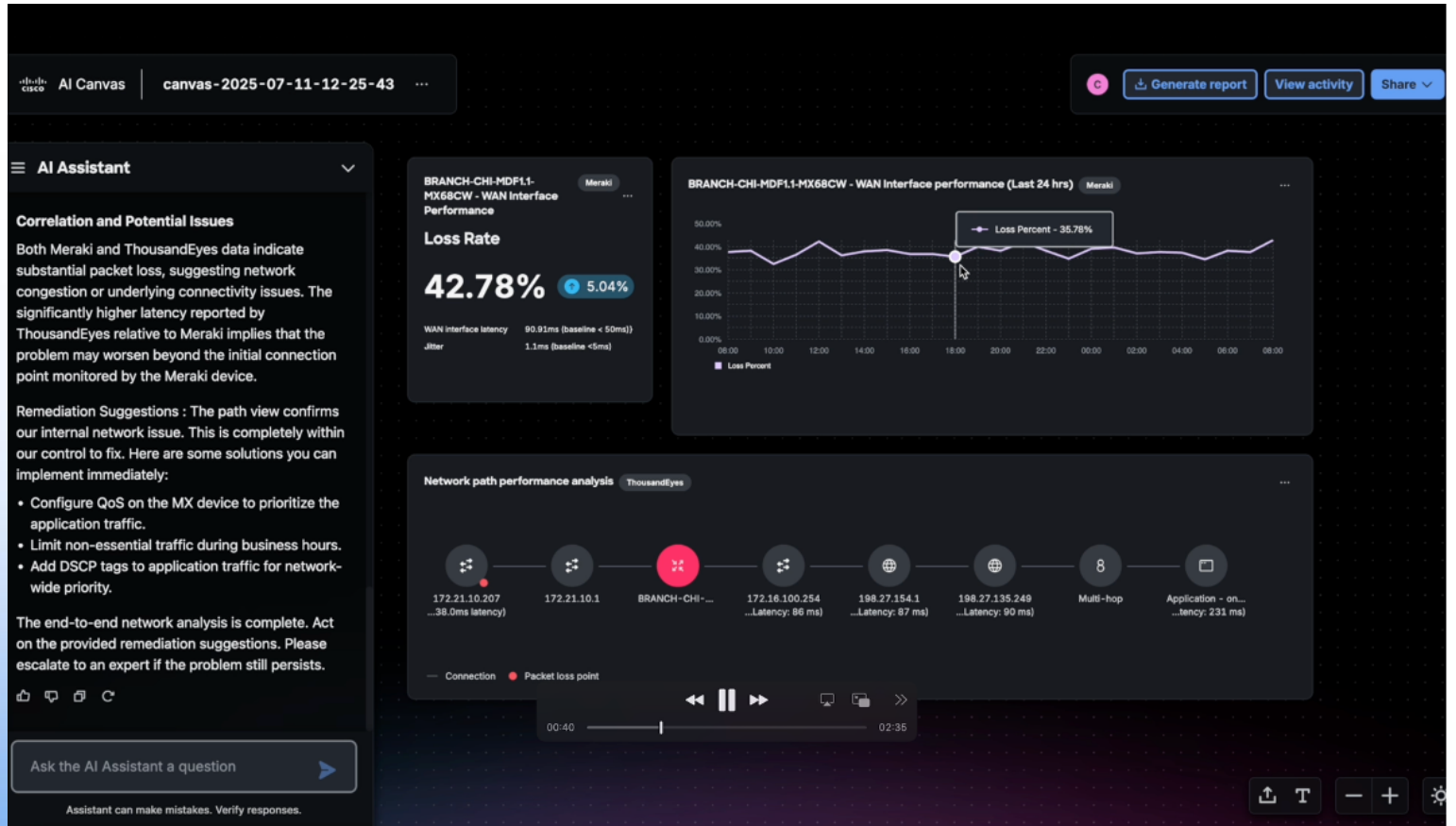


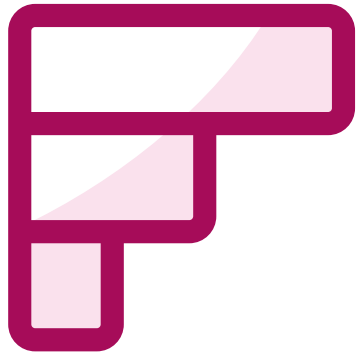
Collaboration Across Multiple Teams and Users

One shared workspace for
NetOps, SecOps, IT and execs

Drag and drop findings to persist
and share with the team

AI evolves Canvas with every
question, insight and action

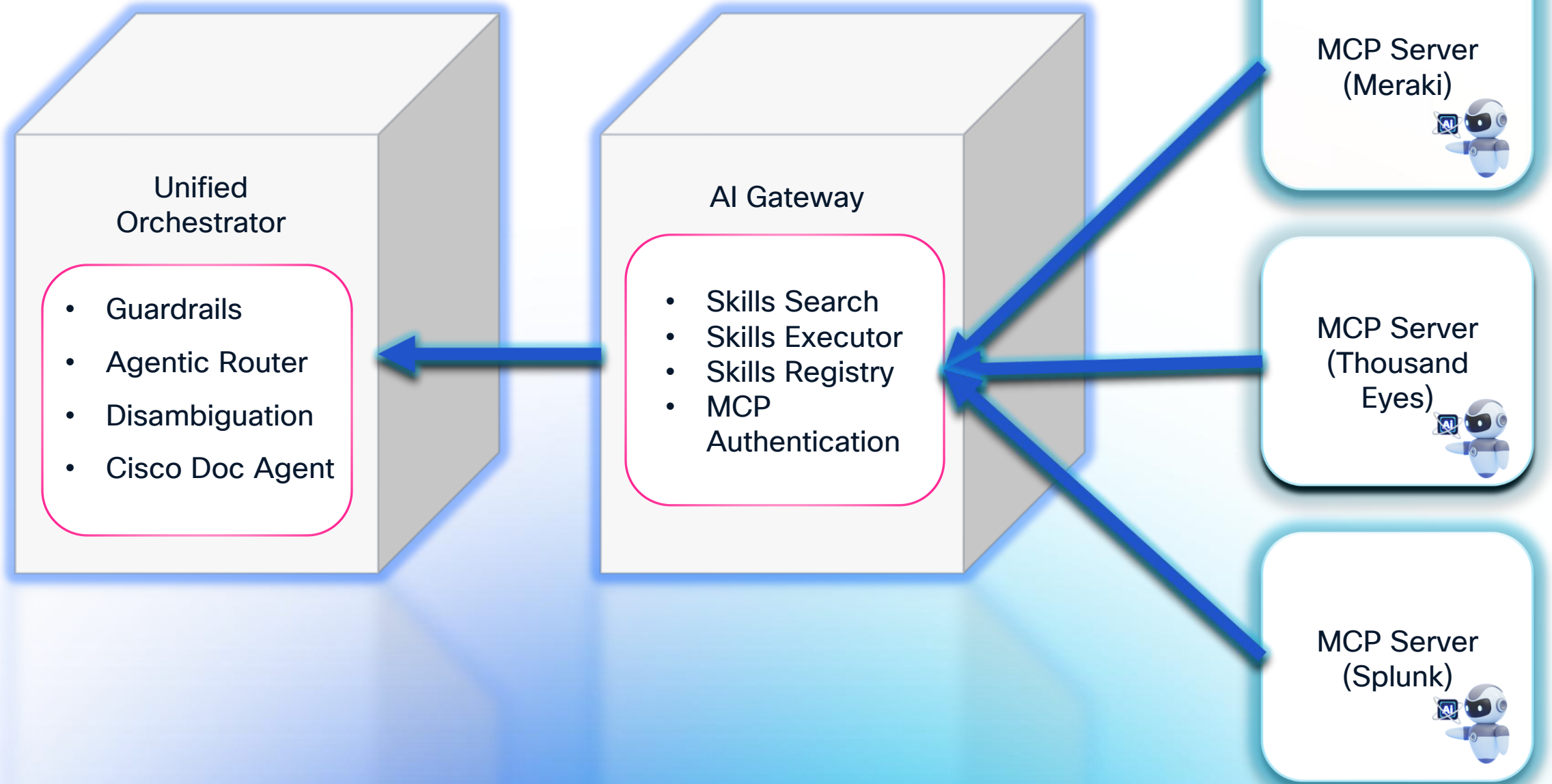




**What features of the AI Canvas
are you most excited about?
Please rank.**

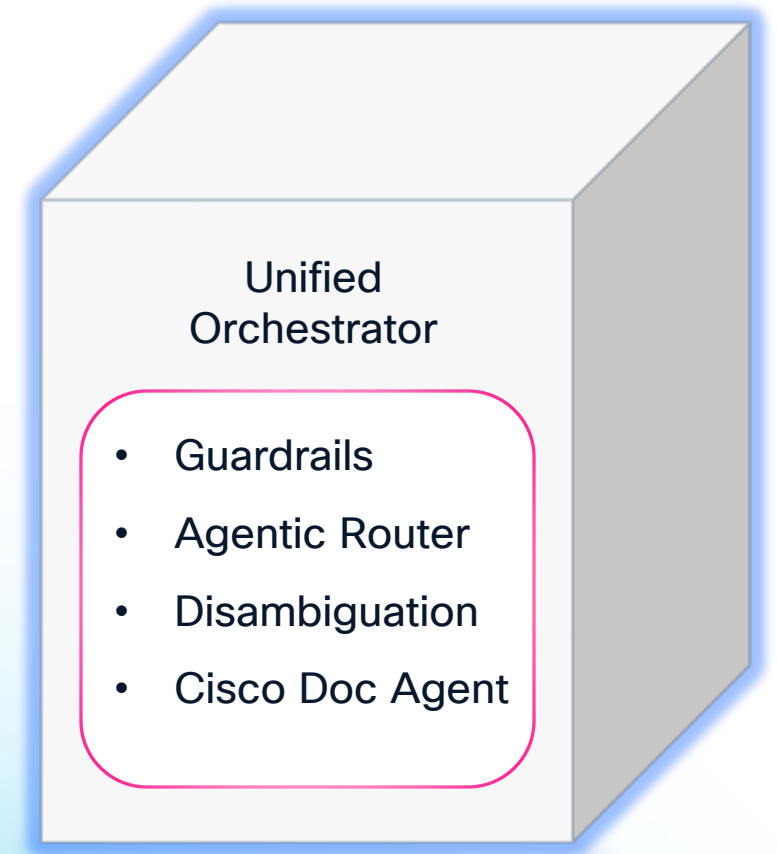
AI Canvas Powerhouse

AI Agents, MCP Servers, AI Gateway & Orchestrator



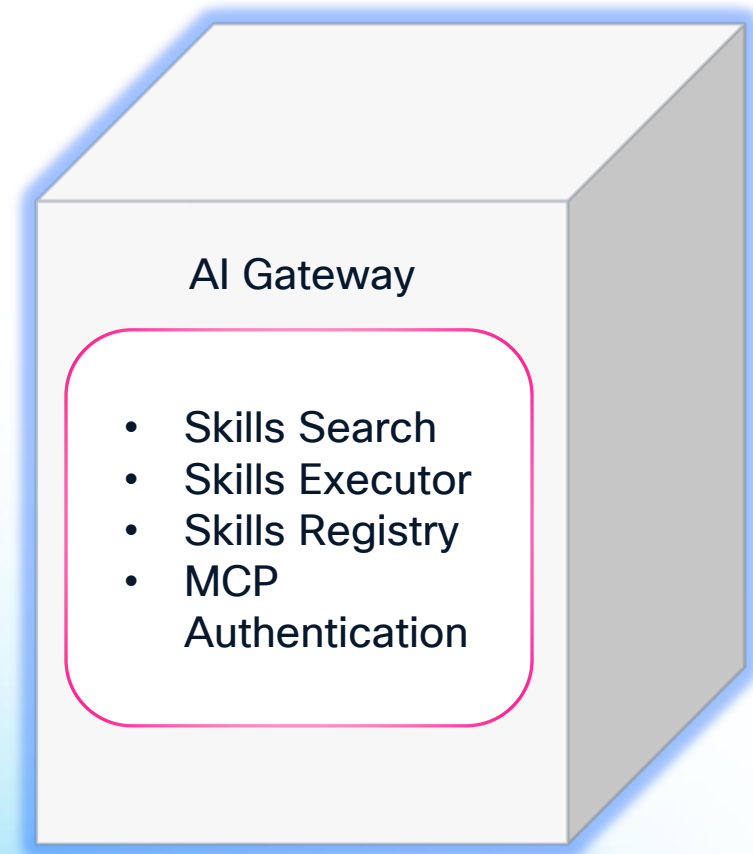
Unified Orchestrator

- Centralized Request Processing
- Reasoning Traces Automation Engine
- Intelligent Document Interaction
- Agentic router
- Follow-up and disambiguation agent
- Semantic and LLM based Guardrail Agent

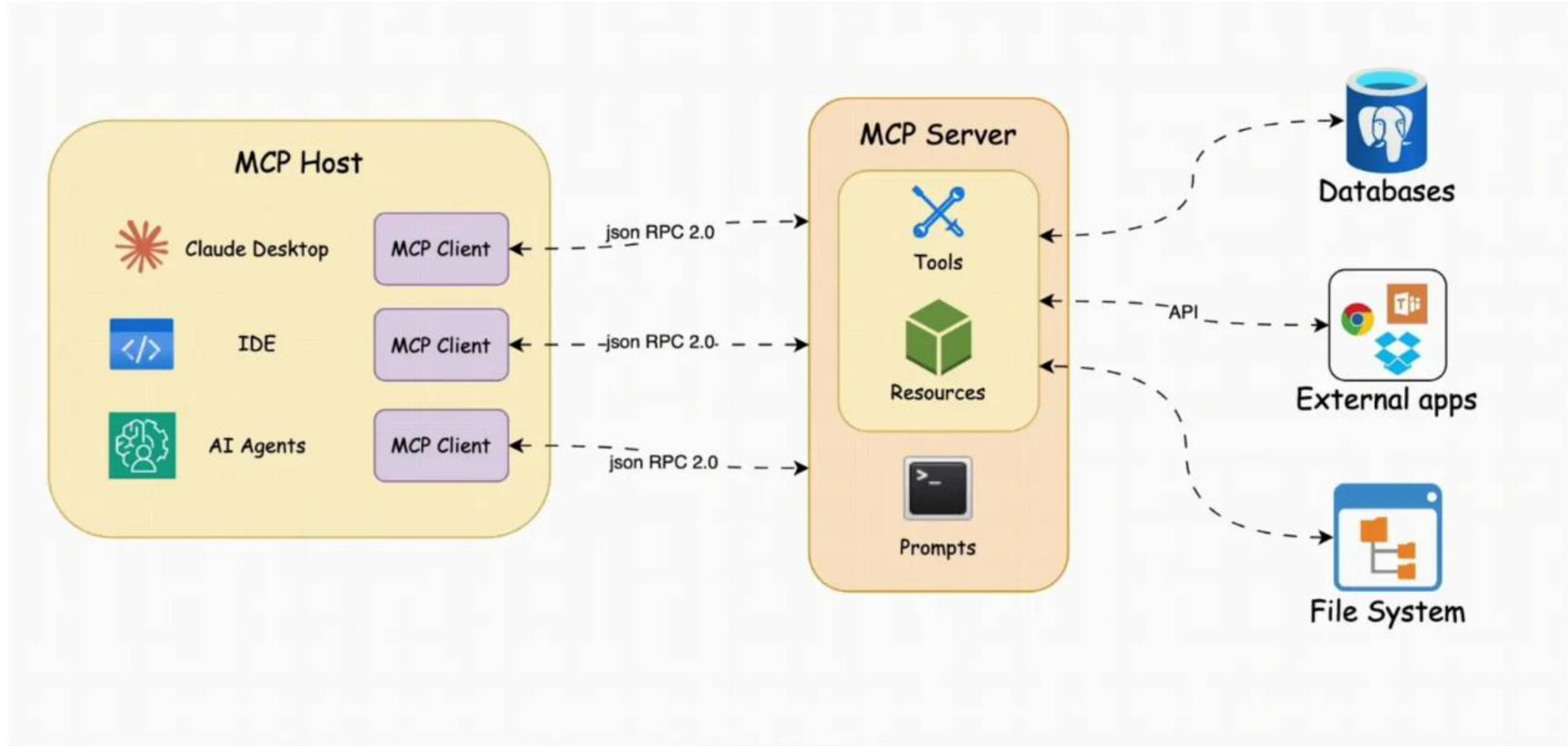


AI Gateway

- Centralized Skills/Tools registry
- MCP Servers Lifecycle Management
- MCP Secure Access and Execution
- Skill Execution



Model Context Protocol MCP

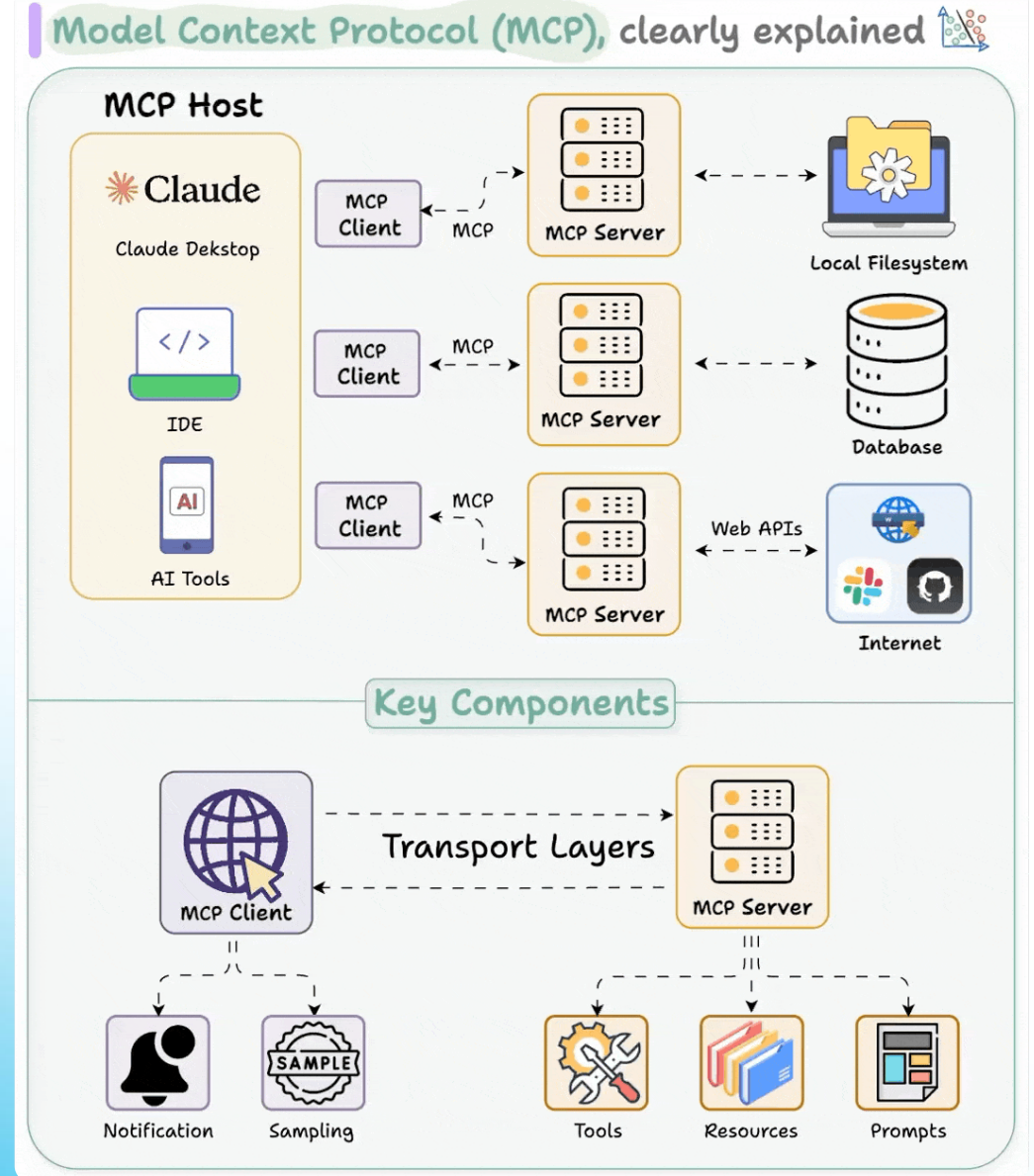




A quick fact check: When do you think MCP – the open standard for connecting AI models to external systems – was first introduced?

MCP Key Components

- MCP Client/Host
- MCP Server
- Transport Layer
- MCP Gateway



MCP Transport

Stdio Transport

Local Transport

Uses standard input/output streams

Ideal for local process communication

Used in command-line tools and integrations

Limited to same-machine operations

HTTP with SSE

Original Remote Transport

Server-Sent Events for server→client streaming

HTTP POST for client→server messages

Enabled remote MCP servers

Requires maintaining constant connection state

Streamable HTTP

Released March 2025

Enables stateless server architecture

No requirement for long-term connections

More flexible for cloud and serverless deployment

Ideal for modern web architecture patterns

Key Benefit: Streamable HTTP enables cloud-native MCP implementations without persistent connections, making it possible to create serverless MCP servers that scale elastically with demand and reduce operational complexity.

MCP Servers (Cisco Products)

- Product-Specific Capability Hosting
- Local Tool Execution Environment
- Remote Execution Command Receiver
- Modular and Scalable Product Integration



Deep Network Model – 10K Foot View

Summary

- Purpose-built LLM for Networking, trained on Cisco proprietary data.
- Designed to reason like a seasoned network operator - not just respond like a chatbot.
- Foundation for autonomous network operations and assistant-driven automation.

Key Innovations

- DNM-LAPSE: 42X better latency and 100% more accuracy and reliability over SoTA models for large time series data.
- DNM-ACE: "Unlimited" context window for hybrid data (language + structured data).

Sample Data Snapshot

- Cisco U. course material, RFCs, Meraki & Catalyst documentation.
- Troubleshooting root-cause analyses documents.
- Ansible playbooks (IOS-XE, NX-OS, Catalyst, Meraki).
- Q&A pairs from CiscoU certification content (ENCOR, CCIE).
- Continuously updated based on novel data sources and learning from internal usage on curated network telemetry and failures.

Powering AI-Canvas Use-Cases for Thousand Eyes, Meraki, and Splunk



App Performance



Client Onboarding



Wireless Experience



Wired Experience



Splunk Search and
Investigation (GA Focus)

Issue debugging using AI Canvas

Canvas - AIC 2 - Nov 9, 2025

n398.dashboard.meraki.com/o/d029Cc/manage/organization/ai-canvas/boards/8a4006f9-4b76-4a39-8150-4262590838a8

Employee Connect...AWS researchCisco projectfragomenFragomen Contact...E*TRADE FINANCIAL...Chapter 3: Attend...

Meraki

STAGING

AI Canvas New

Network London

Secure Connect

Network-wide

Assurance

Security & SD-WAN

Switching

Wireless

Systems Manager

Cameras

Sensors

Insight

Organization

Security New

Automation

Access Manager New

Find in Menu

AI Canvas | AIC 2 - Nov 9, 2025 10:32 PM

A

Generate report

View activity

Share

There are users in london reporting webex application is facing degradation

AI Canvas can make mistakes. Verify responses. Learn how AI Canvas handles personal data at [AI Canvas Data Privacy](#).

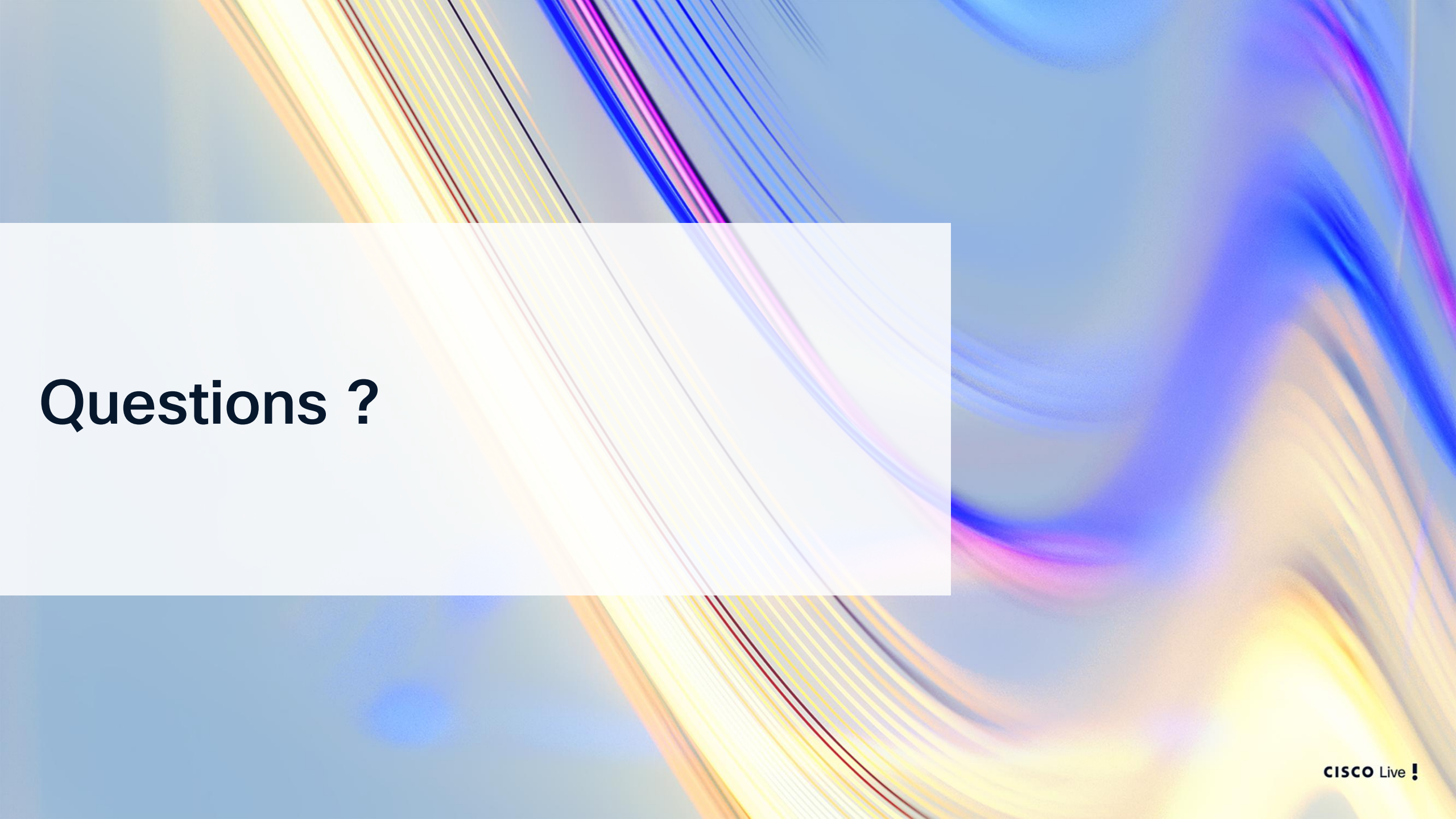
STAGING

T

70%

Key Takeaways:

- Unified & Intelligent Workspace:** Cisco AI Canvas cuts through IT complexity, providing a single, intelligent workspace for cross-domain troubleshooting and operations.
- Powered by Advanced AI:** Leveraging Agentic AI and Cisco's purpose-built Deep Network Model (DNM) for expert-level reasoning, precision, and automation.
- Transforms Operational Efficiency:** Dramatically lowers Mean Time To Resolution (MTTR), accelerates team productivity, and fosters seamless cross-team collaboration.
- Seamless Integration:** Unifies AI assistants and data from across your Cisco ecosystem through the Model Context Protocol (MCP), breaking down silos.
- Future-Ready Operations:** Paving the way for more autonomous, proactive, and efficient management of your network and security infrastructure.

The background of the slide is an abstract composition of numerous thin, flowing lines in shades of blue, yellow, orange, and purple, creating a sense of motion and energy. A large, semi-transparent white rectangle is positioned on the left side of the slide, serving as a backdrop for the text.

Questions ?

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Thank you

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