

No recording. Internal use only.

Sharing externally is not permitted



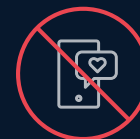
No photography



No recording



No videography



No posting on social media

Cisco's Technology Vision

Network as One and AgenticOps

Andrew MacDonell
CAI AI Solutions Engineer
CCIE #38709

Date placeholder



Agenda

- Meet Your AI Team at Cisco
- AI Foundations
- Chat with My Data
- Secure AI Factor
- Secure AI & AI Defense
- AI Canvas

Meet Your AI Team at Cisco



AI Solutions Engineers



AI Account Executives

Meet Your AI Team at Cisco



AI Solutions Engineers



AI Account Executives

Help Customer Realize the AI / Data Science Aspirations

- Ideation
- Design
- Deployment
- Security
- Governance
- Day 2 Operational

What is AI?

And what is Generative AI?

Explosion of New Service and Architectures

Types of Models

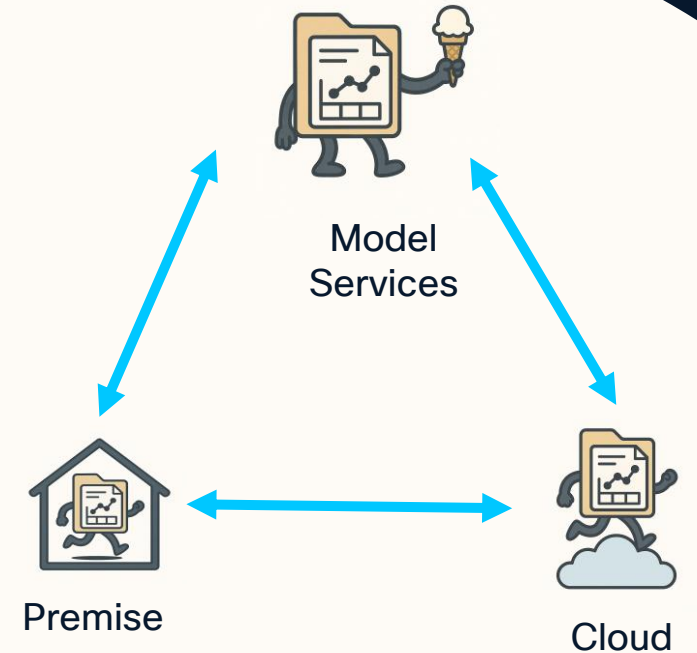
- Open-Source Models
- Close Source Models

Where to they live?

- Models as a Service and Features
- Cloud Model Hosting
- Premise Model Hosting

Agentic Designs

- Agent to Agent communications frameworks



Training

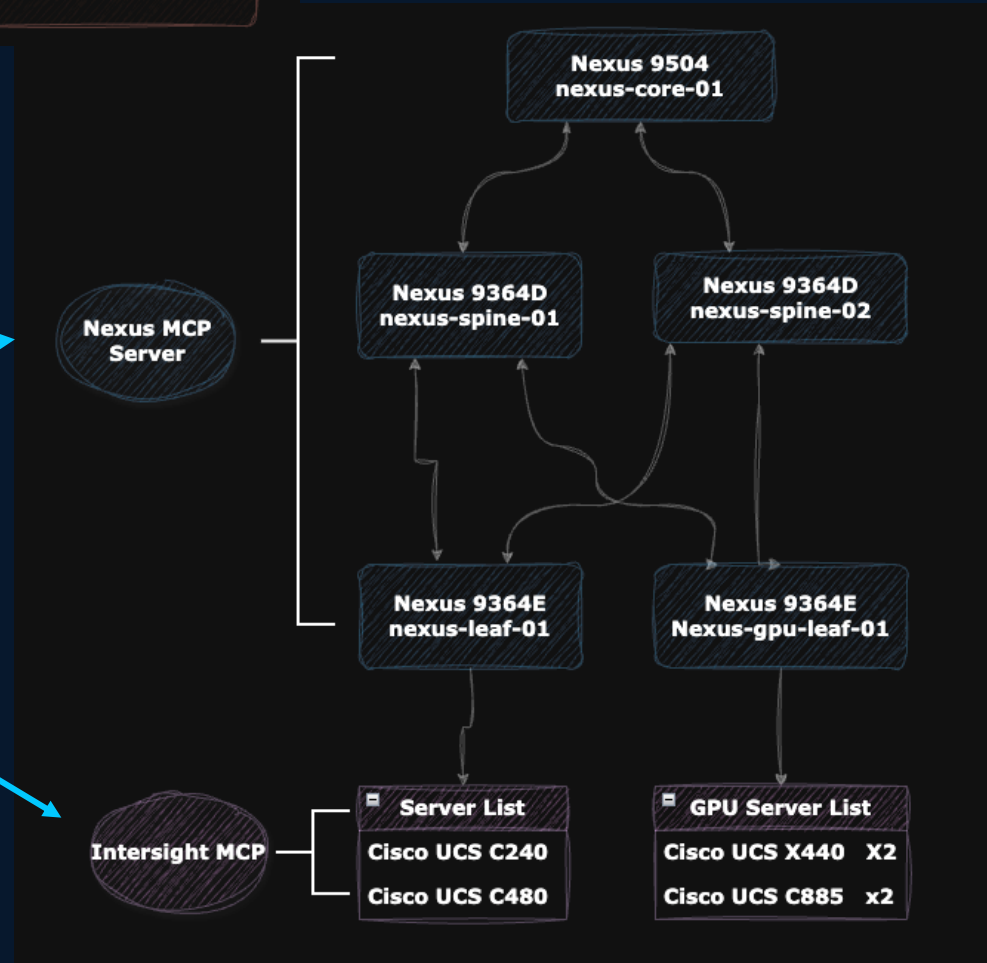
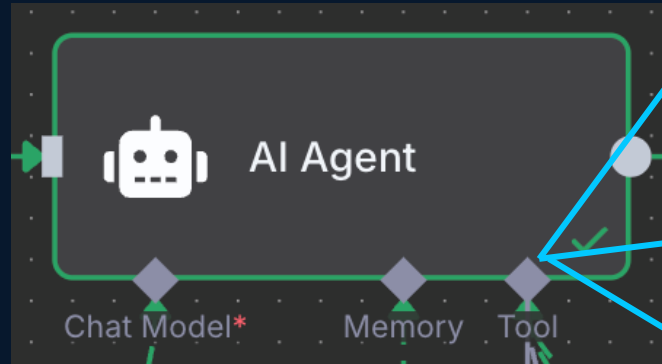
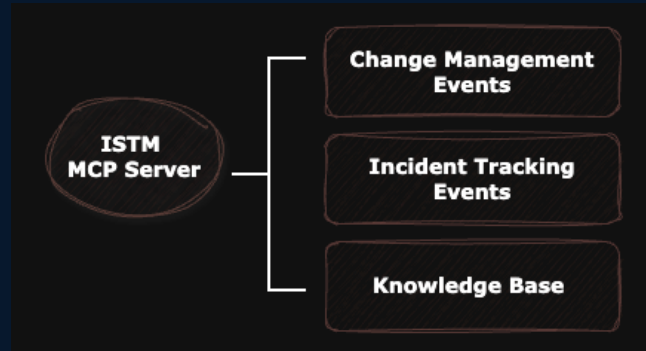


Fine Tuning



Inferencing

Agentic AI for Network Operations



Agentic AI for Network Operations

The screenshot displays the n8n Agentic AI interface. At the top, the user is logged in as 'Personal' with the workspace 'AgenticOps-Wx2' and 'WebexOne'. The interface includes a navigation sidebar on the left with 'Overview', 'Templates', 'Variables', 'Insights', 'Help', and 'What's New'. The main workspace shows a workflow diagram with an 'AI Agent' node connected to a trigger 'When chat message received'. The AI Agent is linked to five MCP (Model Context Protocol) servers: LLM System (OpenAI Chat Model), Memory System (Simple Memory), Nexus System (Nexus MCP Server), Intersight System (Intersight MCP Server), and ITSM (ITSM MCP Server). Each MCP server card provides details and advertised tools. The chat window at the bottom shows a session ID 'cd43e...' and a message input field.

Workflow Diagram:

- Trigger: When chat message received
- AI Agent
- LLM System (OpenAI Chat Model)
- Memory System (Simple Memory)
- Nexus System (Nexus MCP Server)
- Intersight System (Intersight MCP Server)
- ITSM (ITSM MCP Server)

MCP Server Details:

- LLM System (OpenAI Chat Model):** Model
- Memory System (Simple Memory):** Memory. Simple Memory system (Key-Value Structure) that stores the last 5 LLM & MCP interaction. These are used as the glue for multiple interaction workflows.
- Nexus System (Nexus MCP Server):** Tools. This MCP Server provides access to Nexus Dashboard Cisco's Networking Management Platform.
Advertised Tools and Information Provided:
 - **Switch Configuration**
Retrieve current switch configurations including interfaces, VLANs, and routing
 - **Vlan Management**
Manage VLAN configurations, assignments, and trunk settings
 - **Network Topology**
View network topology, device connections, and link status
- Intersight System (Intersight MCP Server):** Tools. This MCP Server provides access to Intersight Cisco Compute Management Platform.
Advertised Tools and Information Provided:
 - **Device Inventory**
Retrieve current device inventory including servers, switches, and storage devices
 - **Firmware Status**
Check firmware versions and update status across all managed devices
 - **Hardware Monitoring**
Get hardware health status, temperatures, and performance metrics
- ITSM (ITSM MCP Server):** Tools. This MCP Server provides access to IT operations insights.
Advertised Tools and Information Provided:
 - **Change Management**
Manage change requests, approvals, and implementation schedules
 - **Incident Management**
Track incident reports, status updates, and resolution progress
 - **IT Knowledge Base**
Access knowledge base articles, procedures, and documentation

Chat Window: Session: cd43e...
Send a message below to trigger the chat workflow
Type a message

One Cisco

Our Story

Securely connect everything to make anything possible

AI-ready data centers

Transform data centers to power AI workloads anywhere

Public and private clouds, on-premises, edge

Future-proofed workplaces

Modernize everywhere people work and serve customers

Campuses, branches, factories, homes, cars, hospitals, stadiums, hotels, and beyond

Digital resilience

Keep your organization secure, reliable, and performing with game-changing security, assurance, and observability across the entire digital footprint



Accelerated by Cisco AI



Cisco Secure AI-Ready Data Center



Powers all workloads



Scales for growth



Unifies management



Secures the entire stack



Keeps resilient

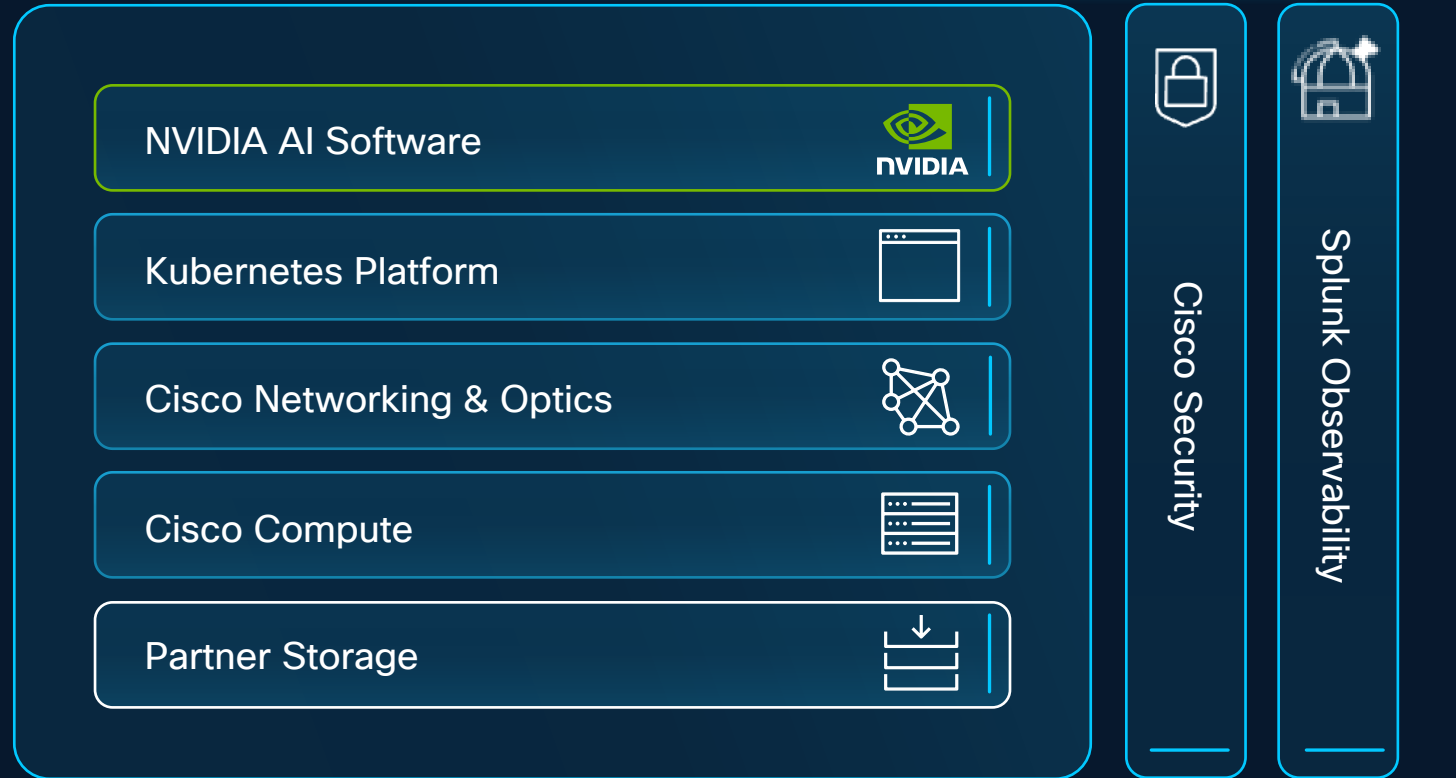
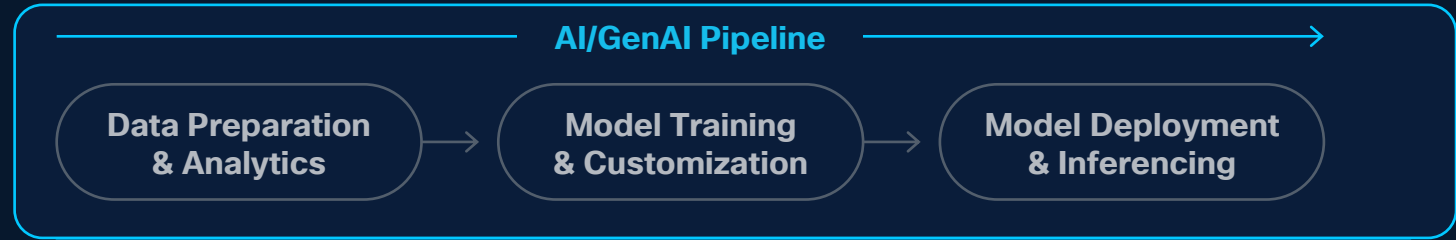
Cisco Secure AI Factory with NVIDIA

Delivering Trusted AI Outcomes

A reference design with validated architectures to accelerate AI adoption for enterprises with integrated AI infrastructure and software solutions

AI Practitioners

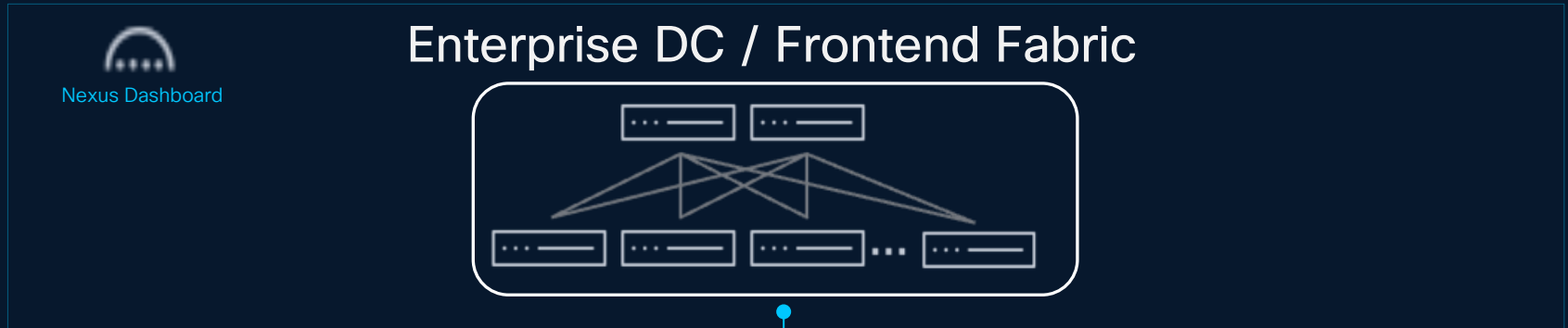
IT Infrastructure & Operations



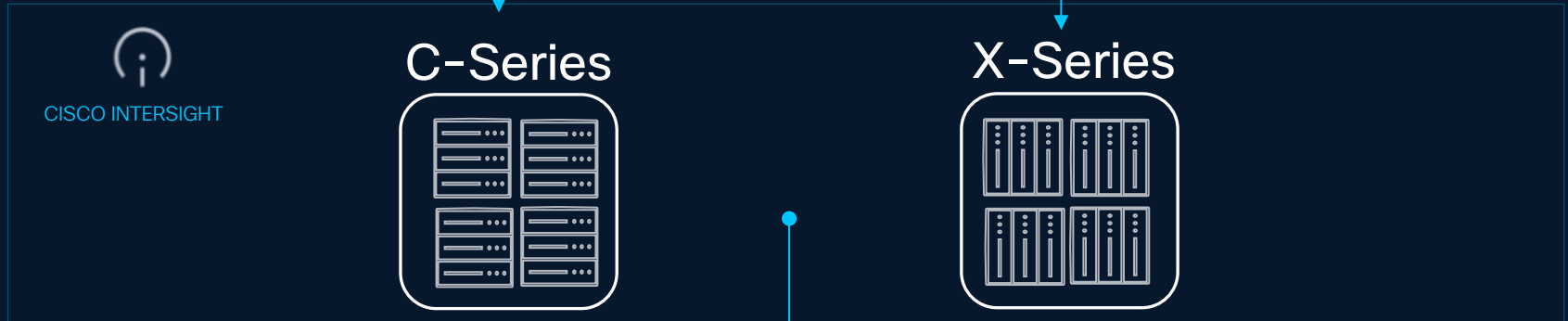
SecOps and Site Reliability Engineering

Cisco AI POD Infrastructure

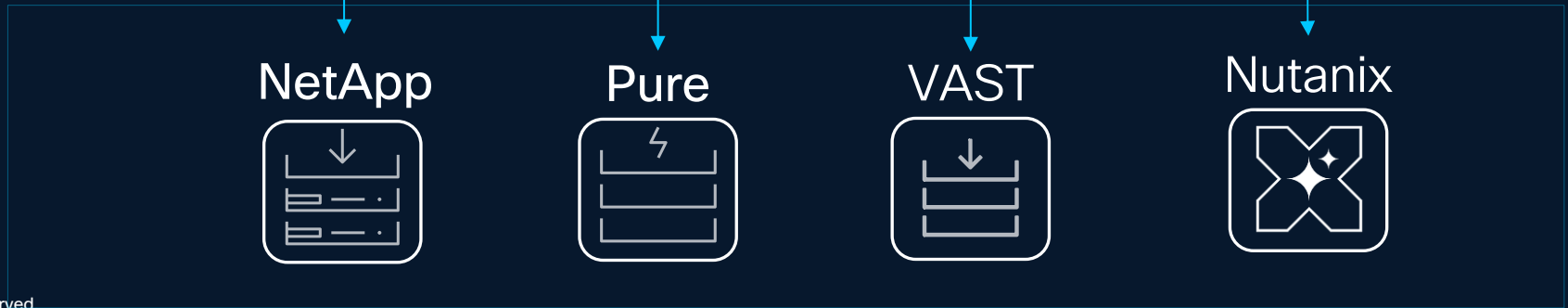
Network



Compute



Storage



Compute AI portfolio

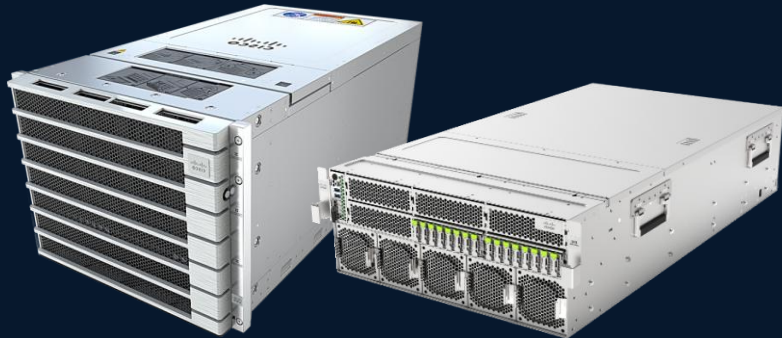
Address AI workloads with visibility, consistency, and control

Validated solutions for AI with compute, network, storage, and software

Build the model
Training

Optimize the model
Fine-tuning and RAG

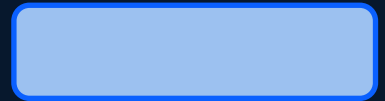
Use the model
Inferencing



UCS Dense GPU Servers



UCS Blade (w/GPU Expansion) and Rack



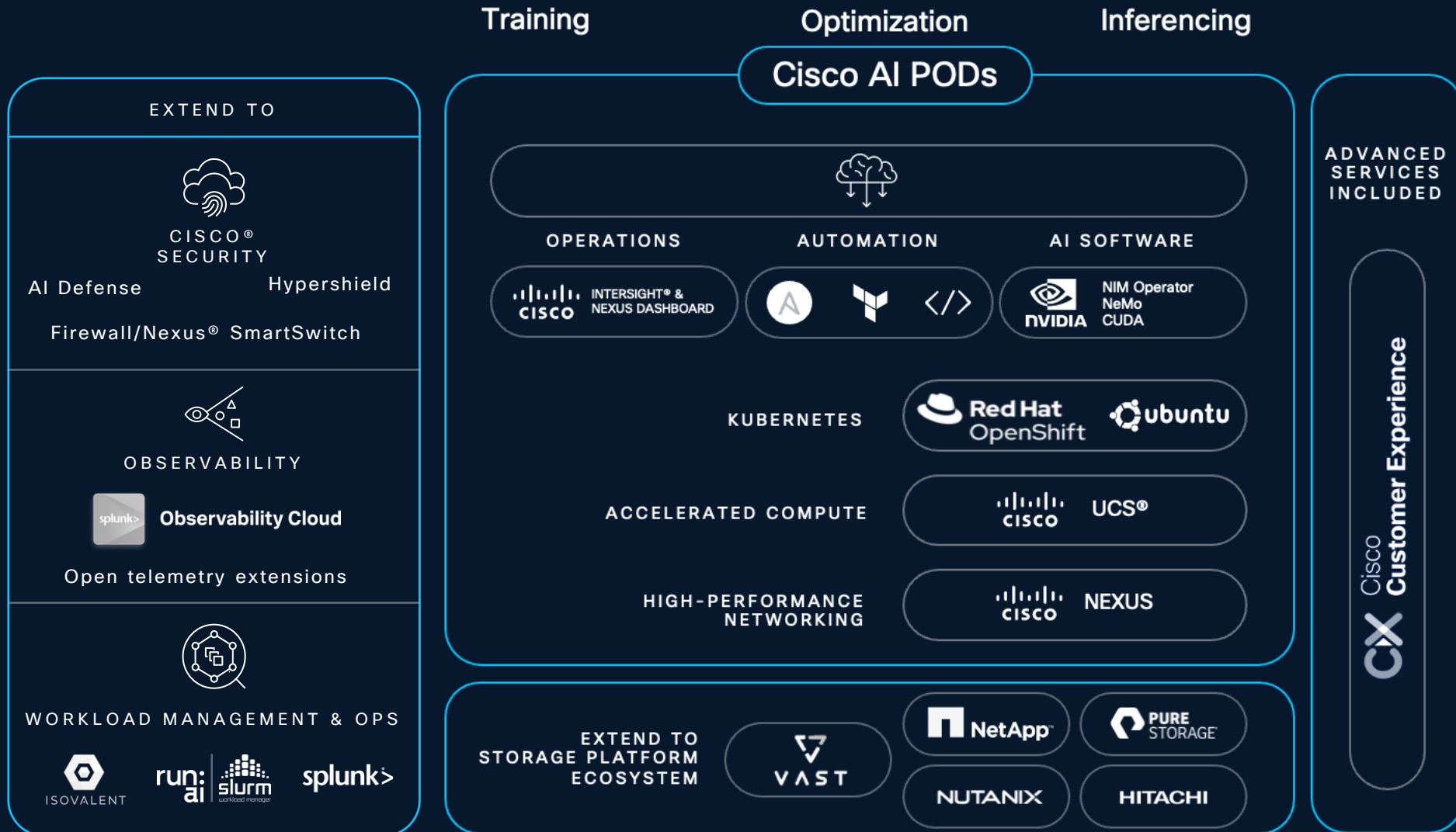
Enterprise AI Edge

Dense compute for demanding AI

Full stack AI with compute and networking

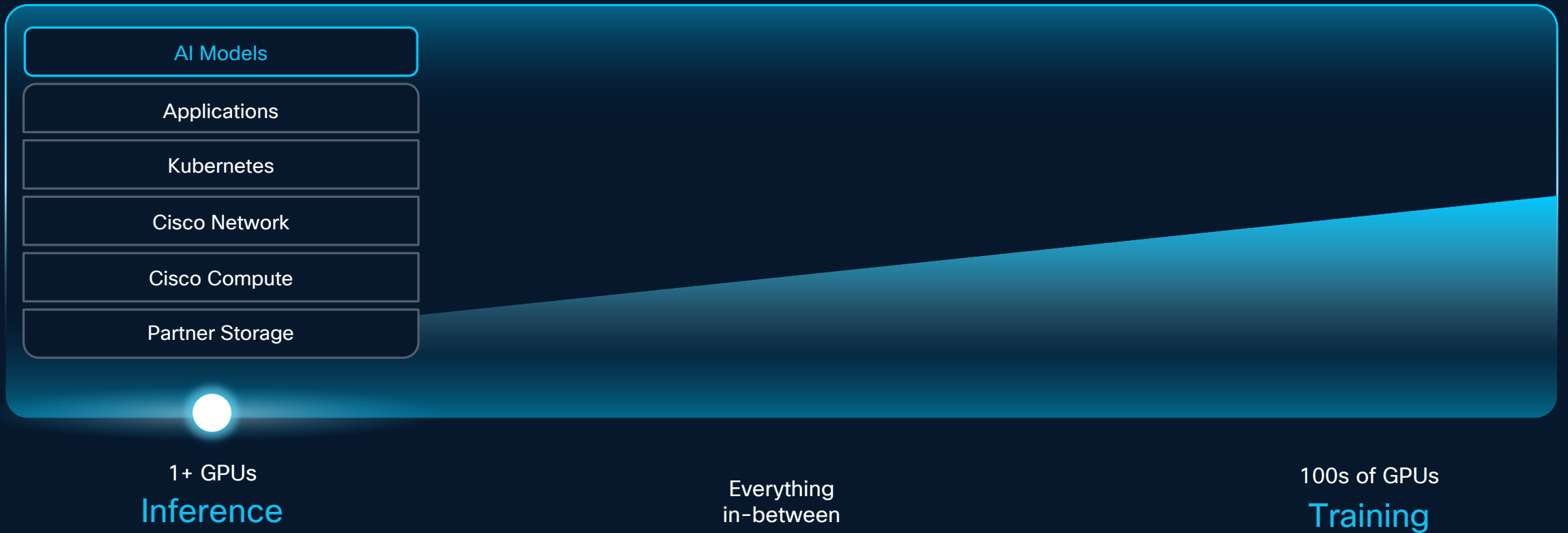
Cisco AI PODs

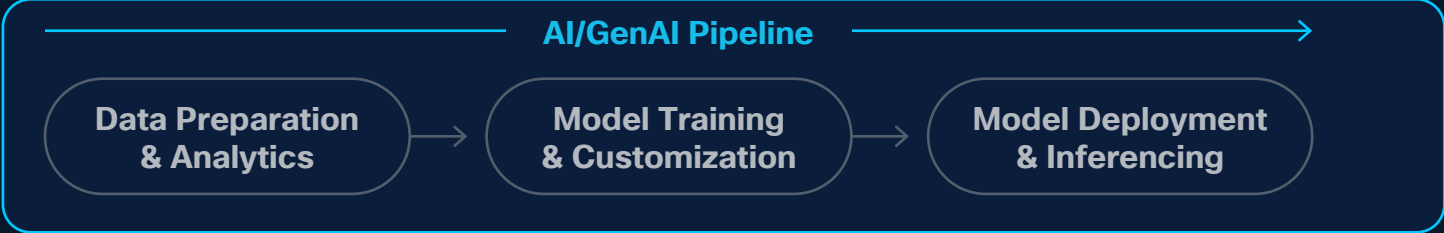
A scalable architecture, built to support any AI workload simply & efficiently



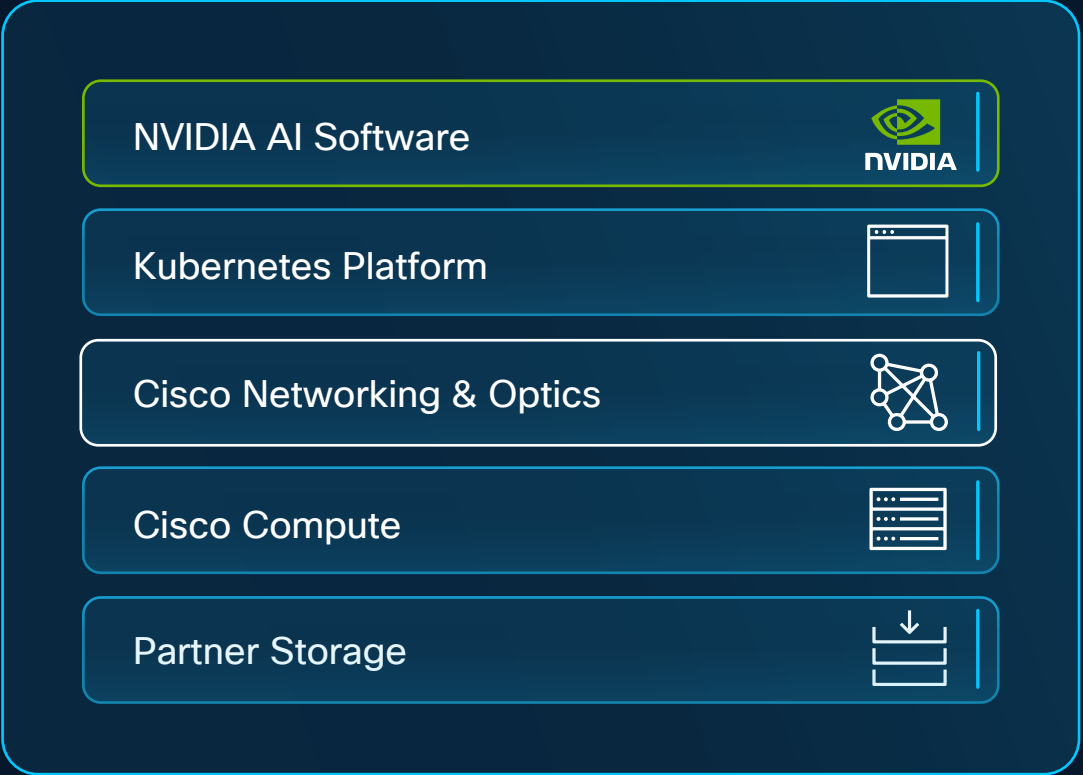
AI PODs for your entire AI lifecycle

A scalable architecture, built to support any AI workload





AI Practitioners



IT Infrastructure & Operations



SecOps and Site Reliability Engineering

Cisco Networking with Hyper Shield AI



NXOS

ACI

**Nexus
Dashboard**

Hyper Fabric

Hyper Shield AI

- Autonomous Segmentation
- Distributed Exploit Protection



**Better
Together**

Cisco Hypershield

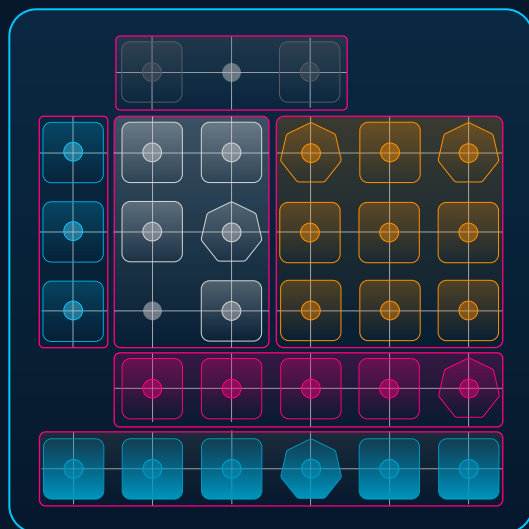
Effect

Principals

Actions

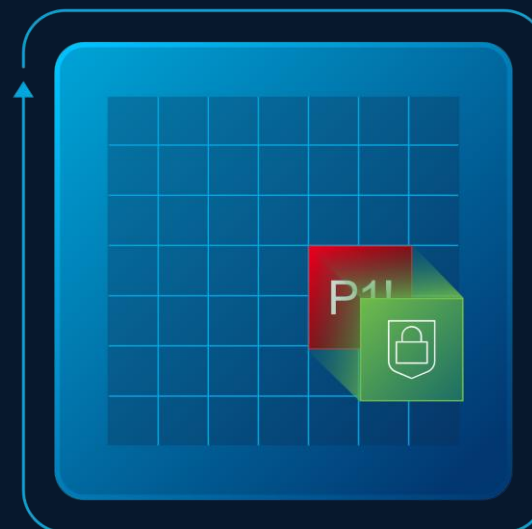
Resources

Conditions



Autonomous Segmentation

- Deep understanding of app behavior
- Comprehensive inputs for policy creation
- Constantly adapting to changing apps



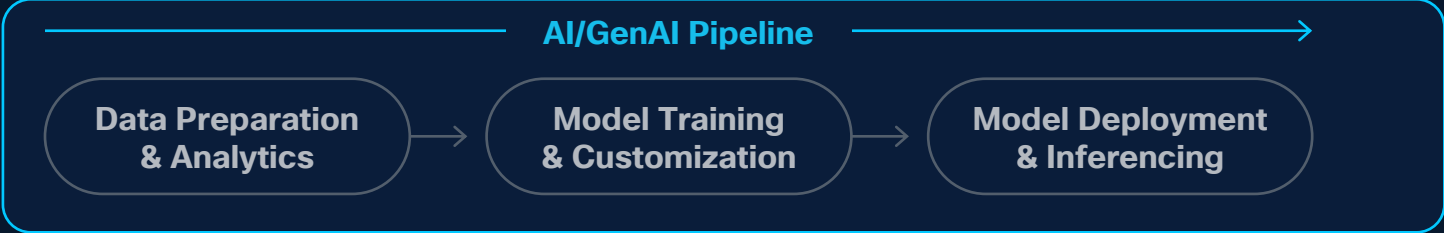
Distributed Exploit Protection

- Mitigate known and unknown vulnerabilities
- Surgical mitigating controls
- Protection within minutes, while app keeps running

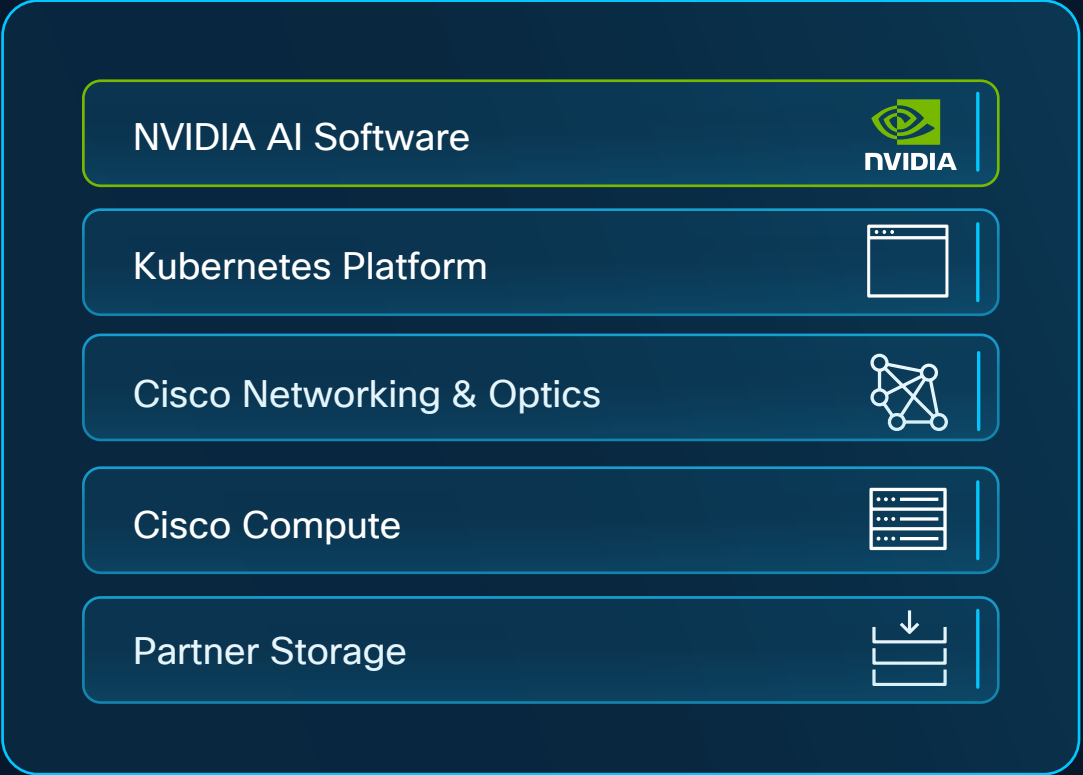
Enforcement
Network, VMs, K8s and Bare Metal

Segmentation
Control Lateral movement

Distributed Protection
Automate exploit protection



AI Practitioners



IT
Infrastructure
& Operations



SecOps and Site
Reliability Engineering

Secure AI & AI Defense

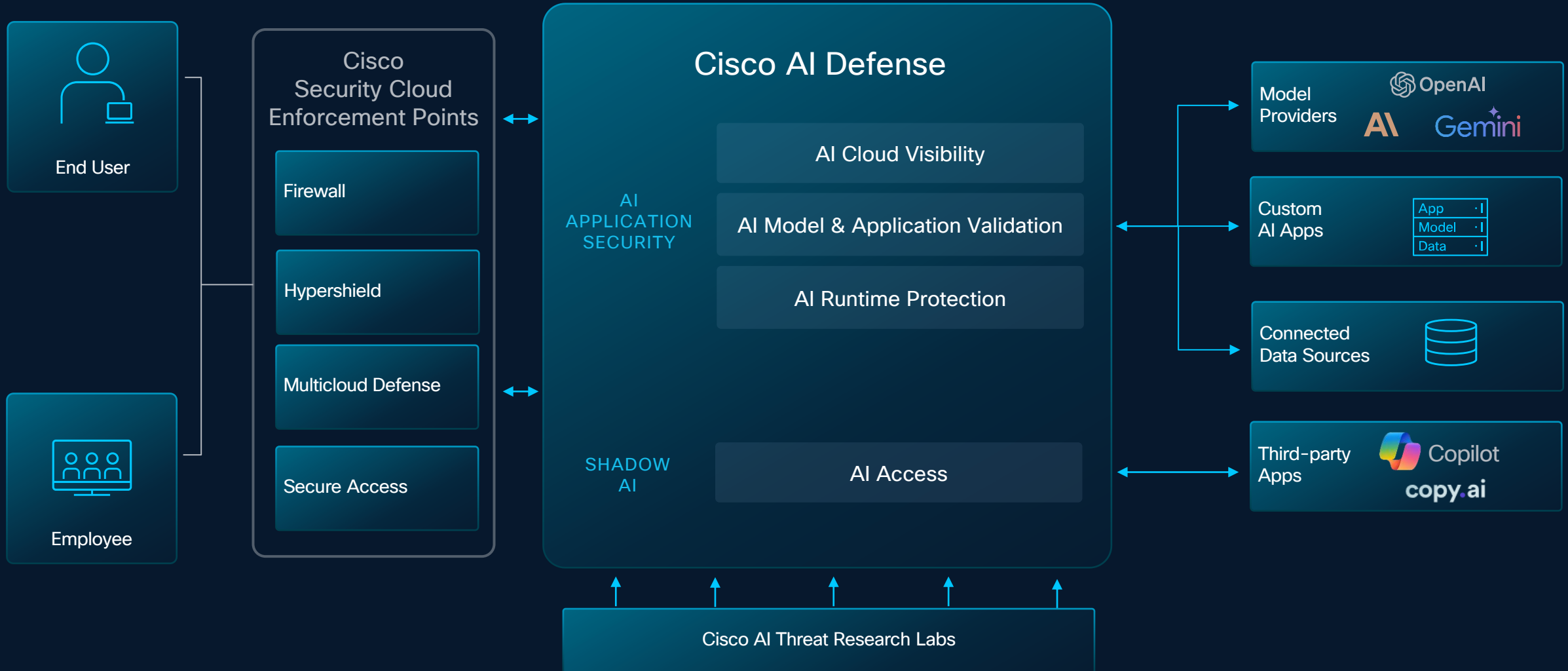


AI Defense



Secure AI

The AI Defense Solution



Cisco Secure AI with Secure Access

- Security for AI | Accessing AI Apps

Discovery

Find use of shadow AI apps across organization

Detection

Assess risk of third-party apps and get context around devices, location, network, and more

Protection

Control access and protect prompts and answers from exposing sensitive data and propagating threats, using best-in-class ML models

AI App Discovery Secure Access

Leverages Secure Access to identify 3rd party generative AI applications, their usage, risk score and protection status. [Learn more](#)

Risk First detected date 48 results

Application name	Risk score	First detected	Total web traffic
AI Assistant	New Very high	Jan 2, 2025	14 GB
Code Copilot	New Very high	Jan 1, 2025	1337 MB
Helper AI	High	Dec 23, 2024	768 MB
AI Creator	High	Dec 22, 2024	126 MB
GrammarAI	Medium	Dec 12, 2024	70 MB
WriterBot	High	Nov 30, 2024	109 MB
Customer Assistant	High	Nov 23, 2024	109 MB
Code Creator	Medium	Nov 22, 2024	70 MB
MyAI	High	Nov 14, 2024	126 MB
Codepilot	Medium	Oct 21, 2024	80 MB

Cisco AI Defense on AI POD - Summary



End-to-end security



Continuous visibility and governance



Sovereign ready

DATA CONTROL

SECURITY

USE CASES

MODEL AND CUSTOMIZATION

Beta

Available after GSX

Controlled Availability

Expected in 90 days

Cisco AI Defense



SaaS / Cloud

Security Cloud Control
Management

FAST ITERATIONS



On-Prem

Validation & Runtime
Services
AI App & Models Security

FULL CONTROL

SMALL

MEDIUM

LARGE

Cisco AI PODs

Software
Compute
Networking
Storage

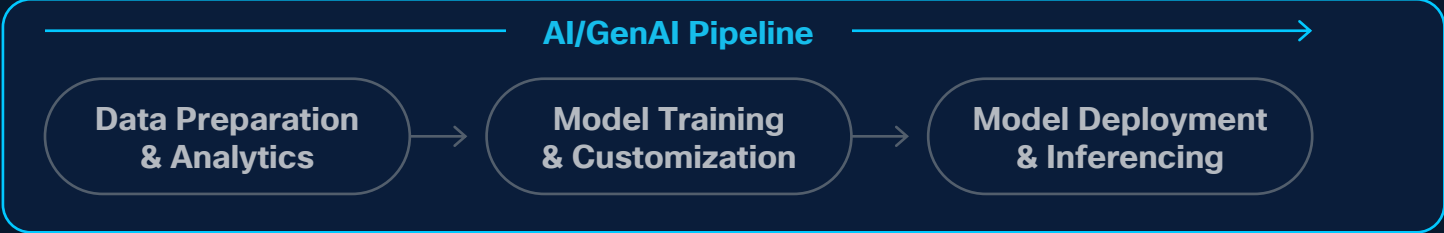
Full Application Security



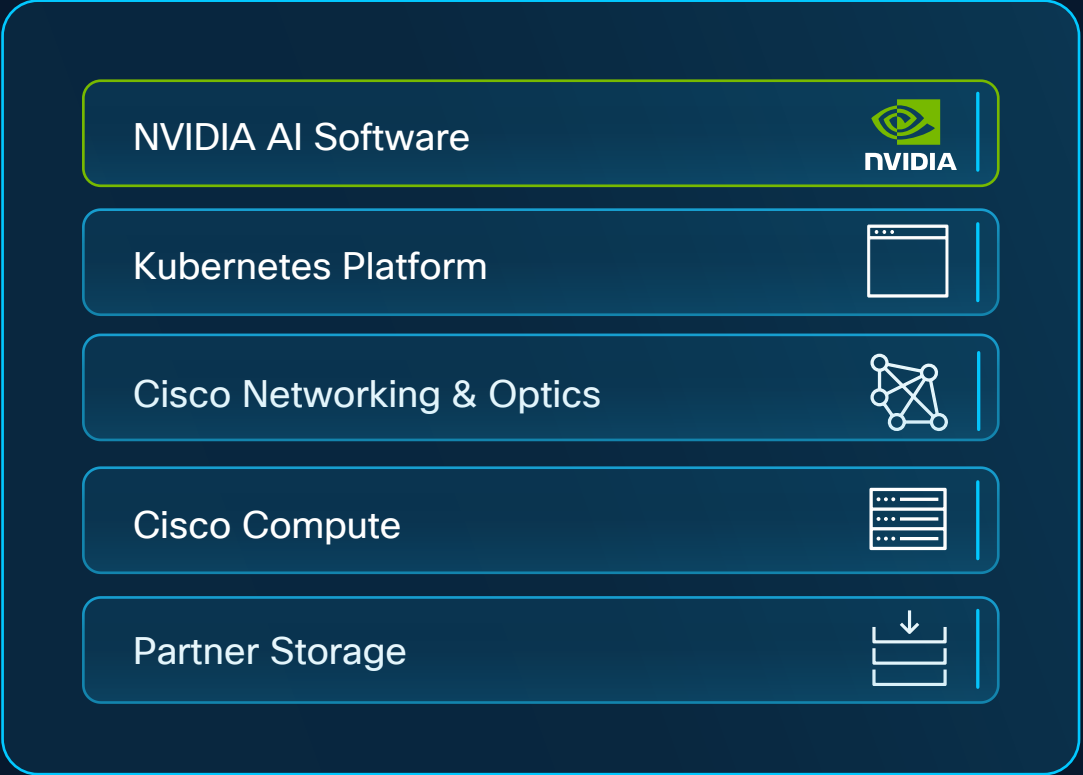
AI Application and Model Validation



AI Runtime Application Protection



AI Practitioners



IT Infrastructure & Operations



SecOps and Site Reliability Engineering

Splunk Observability Cloud

Improve Ops Efficiency, Reliability and Insights

- OpenTelemetry-native

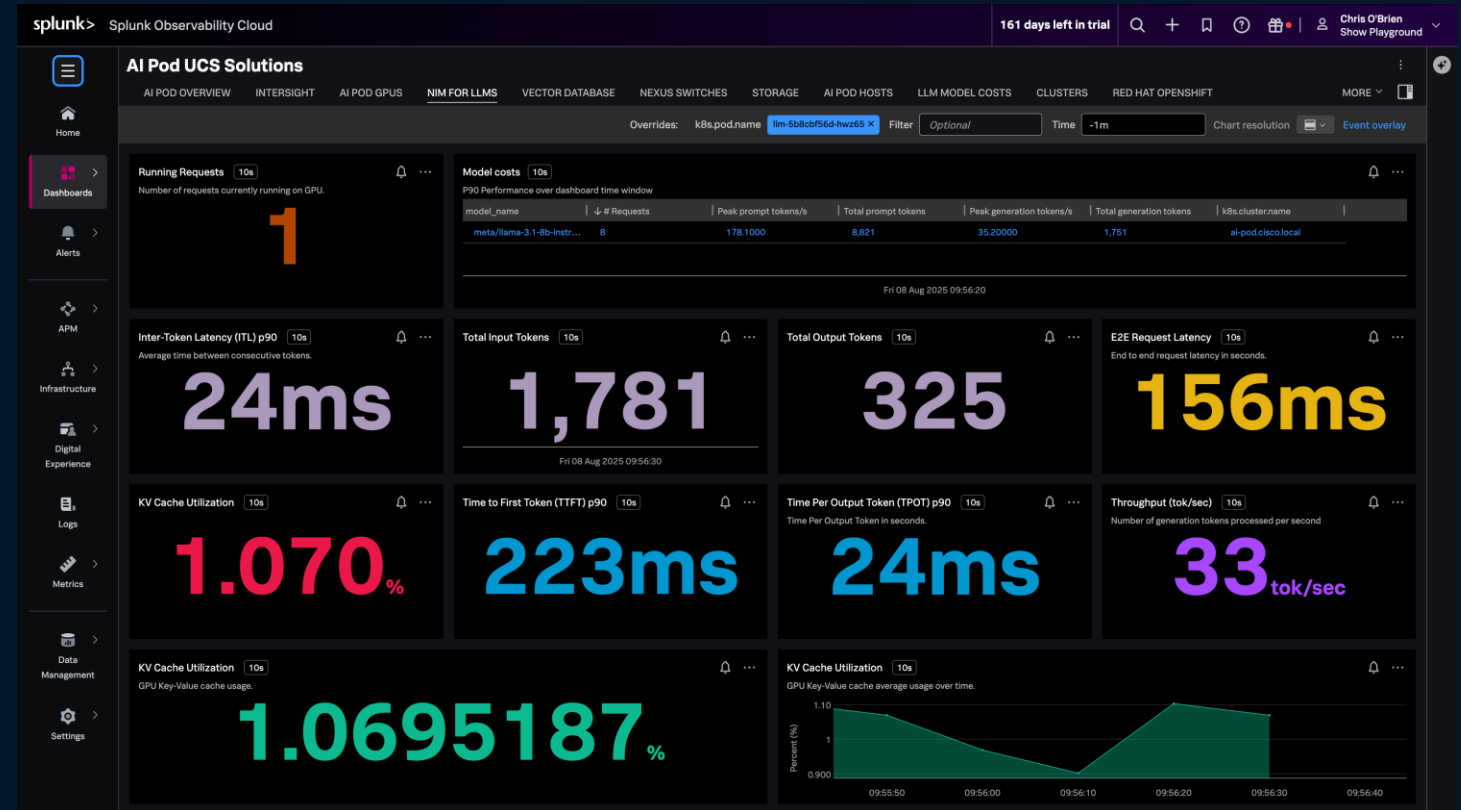
Own and control your data, avoid vendor lock-in and instrument only once on a common standard as you build new applications.

- AI powered analytics and guidance

AI/ML driven features like Service Maps and Trace Analytics provide directed guidance that helps you resolve issues faster.

- No data sampling

Eliminate blind spots by collecting and analyzing 100% of your data with Splunk's NoSample™ tracing.



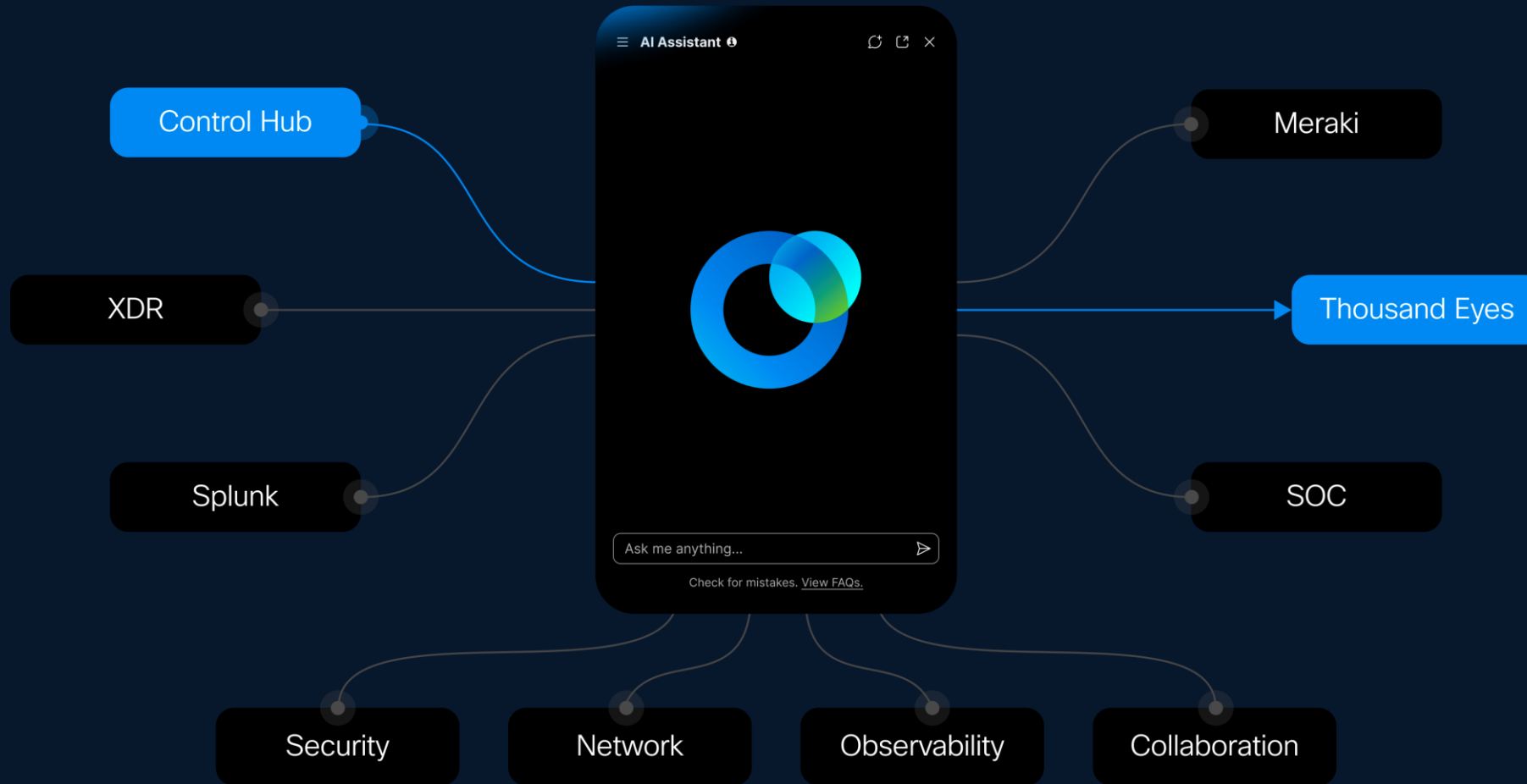


AgenticOps

AIOps

Cisco AI Assistant

Bringing together “Skills” across Cisco to 10x customer experience



AI Canvas: Cisco's AgenticOps Platform

AI Canvas | Application performance degradation

Generate report View activity Share

ServiceNow SRTK0023941

Reported by: System Administrator on 03/28/2025 at 09:45 AM PST

Description: Received a ThousandEyes alert and reached out to Maria Chen to confirm. She said users at San Jose branch experiencing 3-5 second delays when processing financial transactions in EFP. Started approximately 30 minutes ago. Affects all 24 users at the branch. No recent changes reported.

ServiceNow Ticket SRTK0023941

SJ-MX105-01 WAN interface performance

Loss rate: **16.4%** (↓ 2.3%)

WAN interface latency: 87ms (baseline <50ms)
Jitter: 15ms (baseline <5ms)

SJ-MX105-01 performance (last 24 hrs)

Time (Hours)	Packet Loss (%)
20:00	0
24:00	0
04:00	0
08:00	0
11:00	16.4
16:00	0
20:00	0

Network segment performance analysis

```
graph LR; Enterprise[Enterprise network 16.4% loss] --- Gateway[Gateway]; Gateway --- Internet[Internet]; Internet --- Application[Application financeapp.com];
```

AI Assistant

Jackie shared this canvas with you. Here is the background:

Ticket #SRTK0023941: San Jose financial app failures. Cisco Meraki dashboard shows MX105 with significant packet loss on WAN1 interface. ThousandEyes Test ID 895623 segment visualization shows packet loss (16.4% total). Financial transactions experiencing frequent failures and timeouts, Maria Chen's email included and she is asking for a status update.

Ask the AI Assistant a question

Assistant can make mistakes. Verify responses.

Email Thread

From: Maria Chen <mchen@company.com>
To: IT Support <itsupport@company.com>
Cc: Will Jenkins <wjjenkins@company.com>, Jackie Torres <jtorres@company.com>
Mon 03/24/2025 18:26

URGENT: Status Update Needed on Financial Application Performance Issues

Hello Team,

I'm following up regarding the ongoing performance issues with the Enterprise Financial Platform (EFP) affecting our San Jose branch. This performance degradation is severely impacting our ability to serve customers. We have end-of-month financial processing scheduled for tomorrow, and we need reassurance that this issue will be resolved by then.

Could you please provide an immediate status update on troubleshooting efforts and expected resolution timeframe? If there's a workaround we can implement in the meantime, that would be extremely helpful.

Thank you for your urgent attention to this matter.

Best regards, Maria Chen
Senior Director, Financial Operations

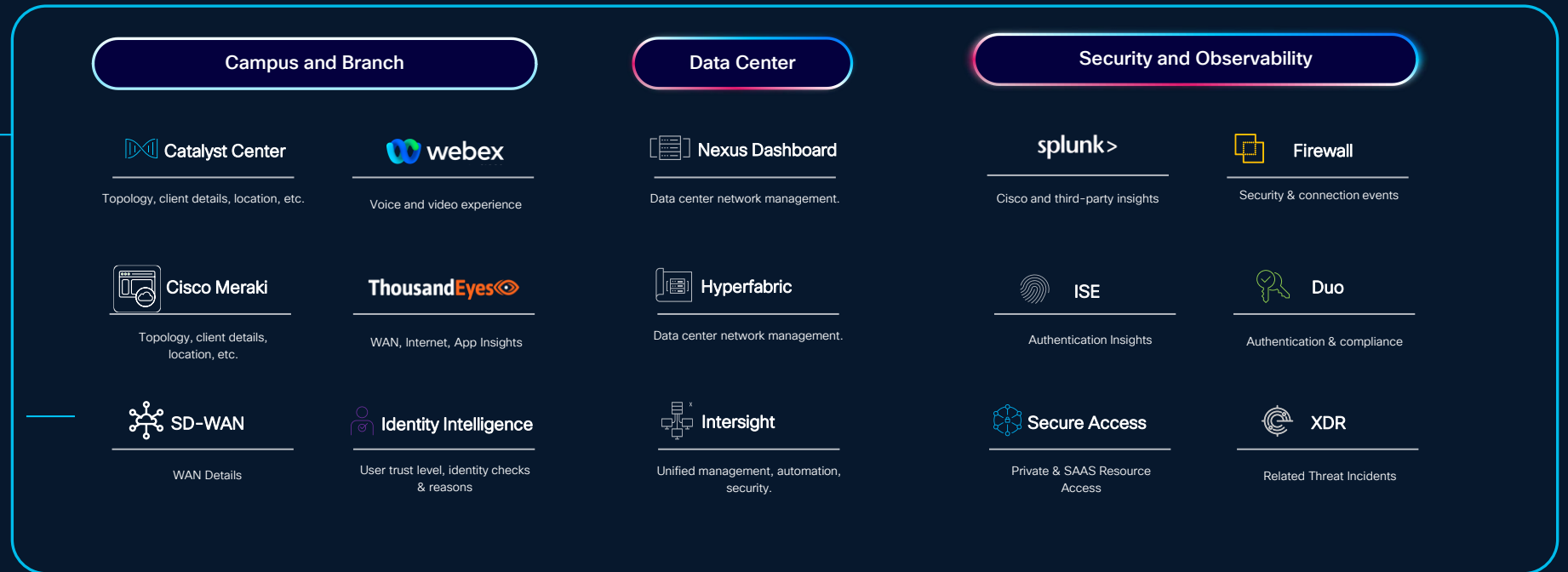
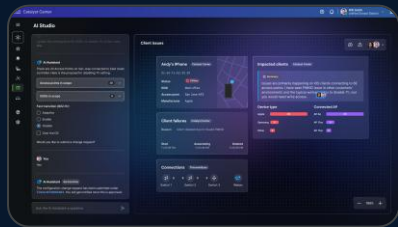
AI Canvas: Cisco AgenticOps Platform

Improve Ops Efficiency, Reliability and Insights

AI Assistant



AI Canvas

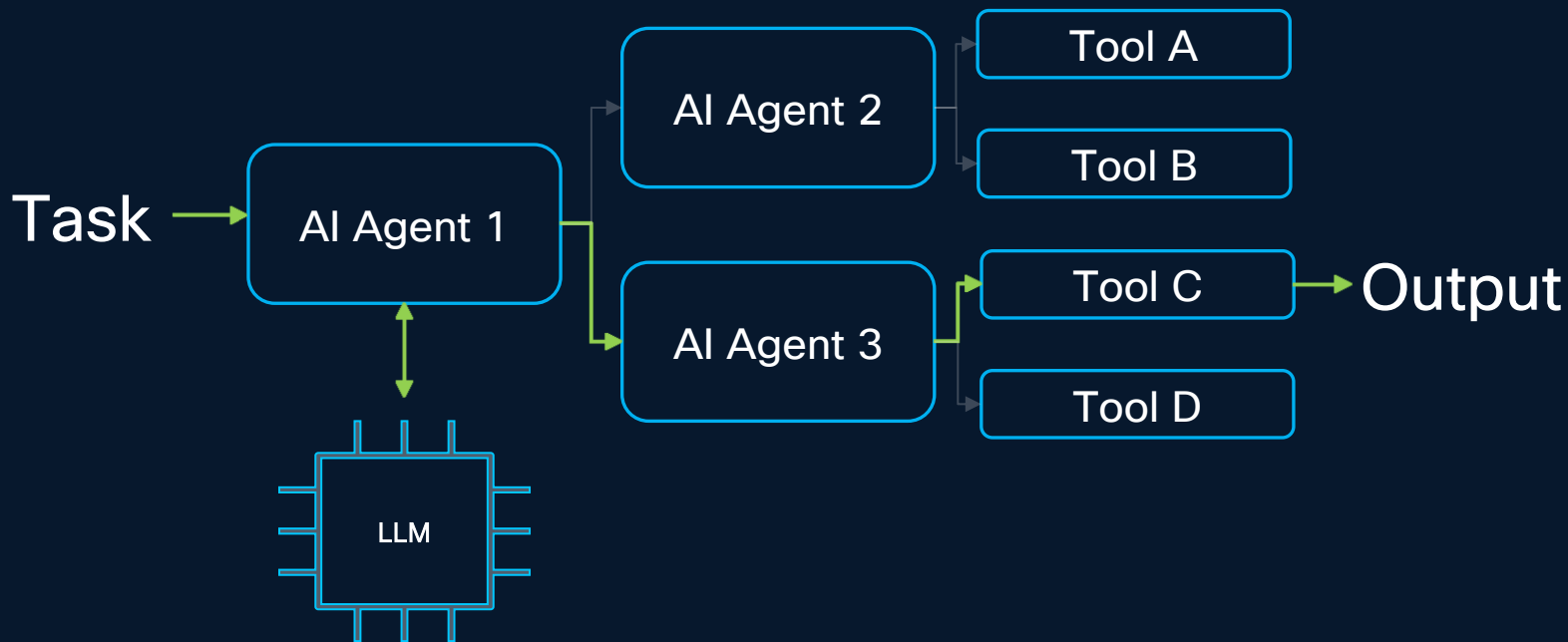


Agents Empower LLMs to Solve Real-World Problems

AI Agents reason on problems and use tools to solve them

AI Agent Experience

Agents LLMs, and Tools →



Capabilities

Reason and
Troubleshoot

Works with
Agents & Tools

Automate Your
Network

Talk to Your
Network

Questions and Answers

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7 SIGNAL[®]



Thank you

If you have question, please reach out to your Account Manager.

