

Alanata Talks



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CISCO DATOVÉ CENTRUM

INFRASTRUKTURA

APLIKACE



Troubleshooting



Analýza



Automatizace, Správa a
Bezpečnost



Viditelnost

VÝPOČETNÍ VÝKON



DATACENTROVÁ SÍŤ



SEGMENTACE



PROCESNÍ
BEZPEČNOST



Úložiště



Kontajnery



Virtuální Stroje



Služby



APIs



Směrování

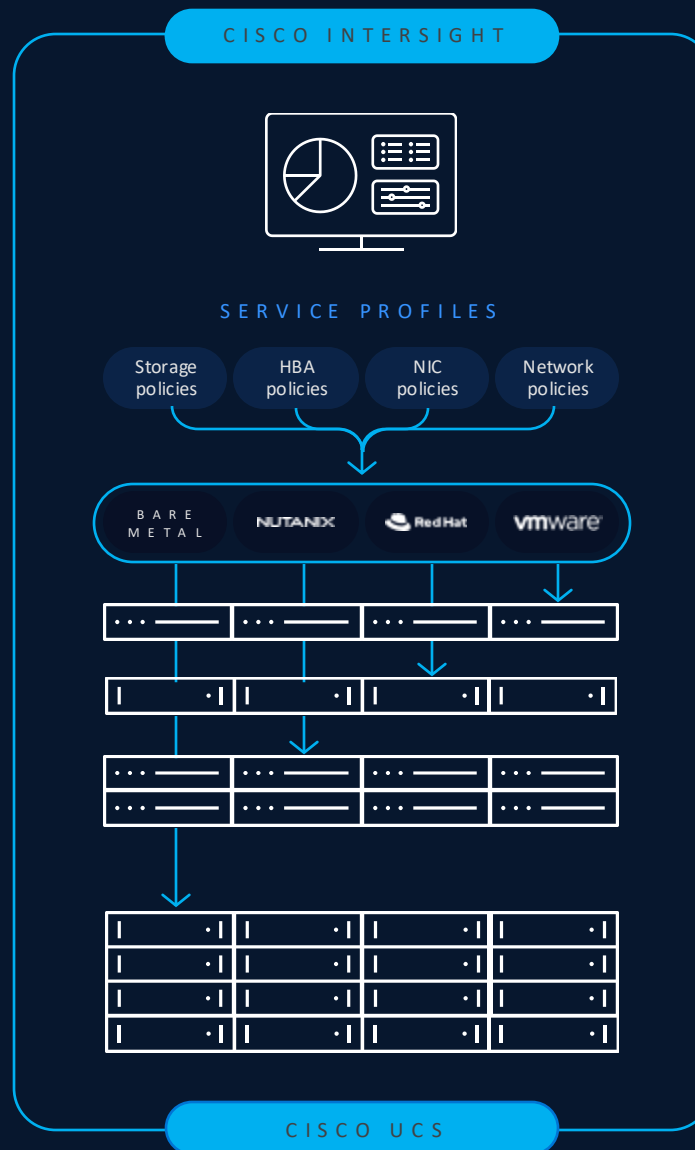
Procesní Data

Zarnitelnosti

Identita a kontext

Computing that's elastic, responsive and intelligent

Delivering industry differentiation with Cisco's SaaS-managed, fabric-based data center



WHY CUSTOMERS CARE

Elastic

Shape infrastructure to any workload, depending on business needs

Intelligent

Connect and scale from the data center to the edge with 360° visibility

Responsive

Adapt to the future with unparalleled simplicity, performance and resiliency

Simpler, smarter, more agile computing

#1 Position

Blade market
share

90,000+

Customers to
date

Award-winning

Sustainability outcomes

Cisco UCS Servers Managed by Cisco Intersight

Modular, sustainable,
easily upgradeable solution

Fabric-based architecture with
unified fabric connectivity

Cloud-based management
to automate operations

Designed with sustainability and
energy efficiency in mind



vmware®

NUTANIX



Azure Stack HCI



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Simplify with an Adaptable System

Open, modular design

New nodes

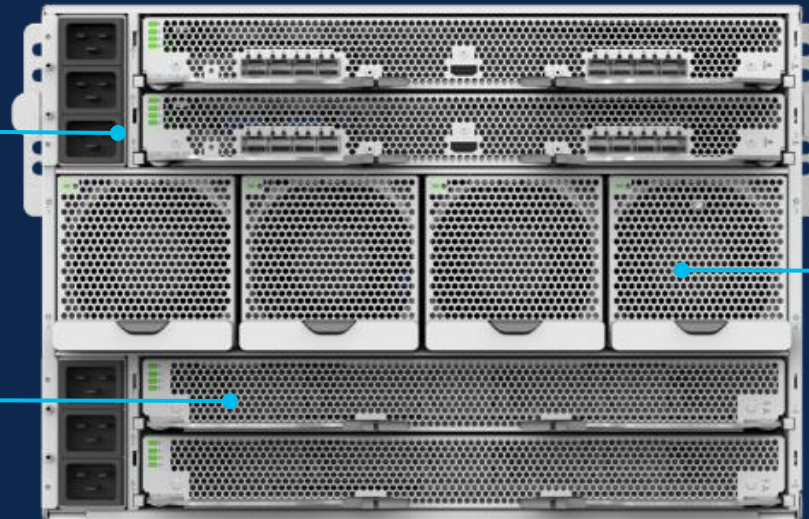
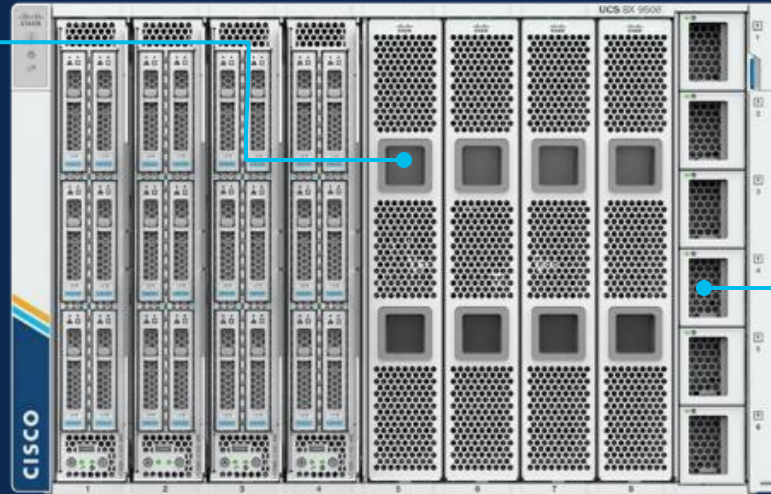
- Compute Nodes
- Storage nodes*
- Accelerator nodes
- External Persistent Memory nodes*

Future I/O

- New SmartNIC Features, 100Gb+

UCS X-Fabric Technology

- PCIe Gen4/5/6
- CXL



Power and Cooling Margins

- Ready for high-watt CPUs and GPUs
- Liquid colling enabled

Architecture which enables:

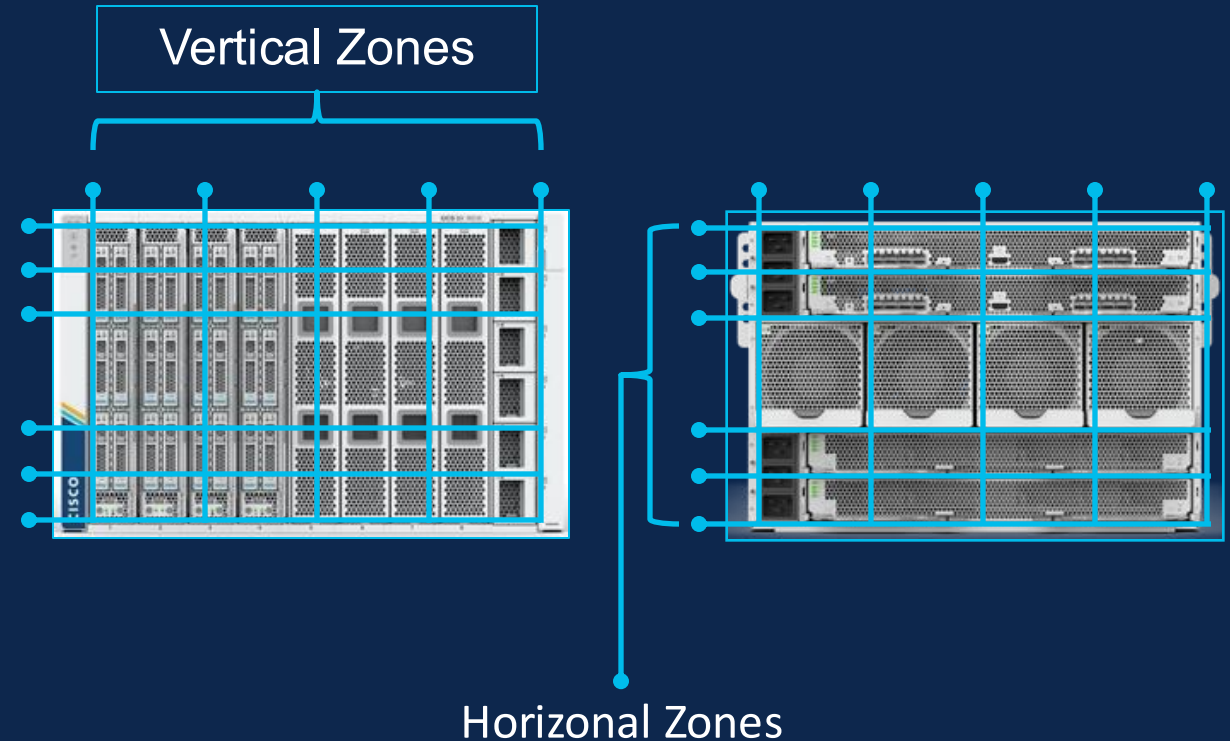
- Modularity for seamless integration of Next Innovations
- Efficiency of power and cooling
- Balanced Compute and Drive Ratios
- Optimal Failure Domains
- High Performance

UCS X-Series Platform Power Design

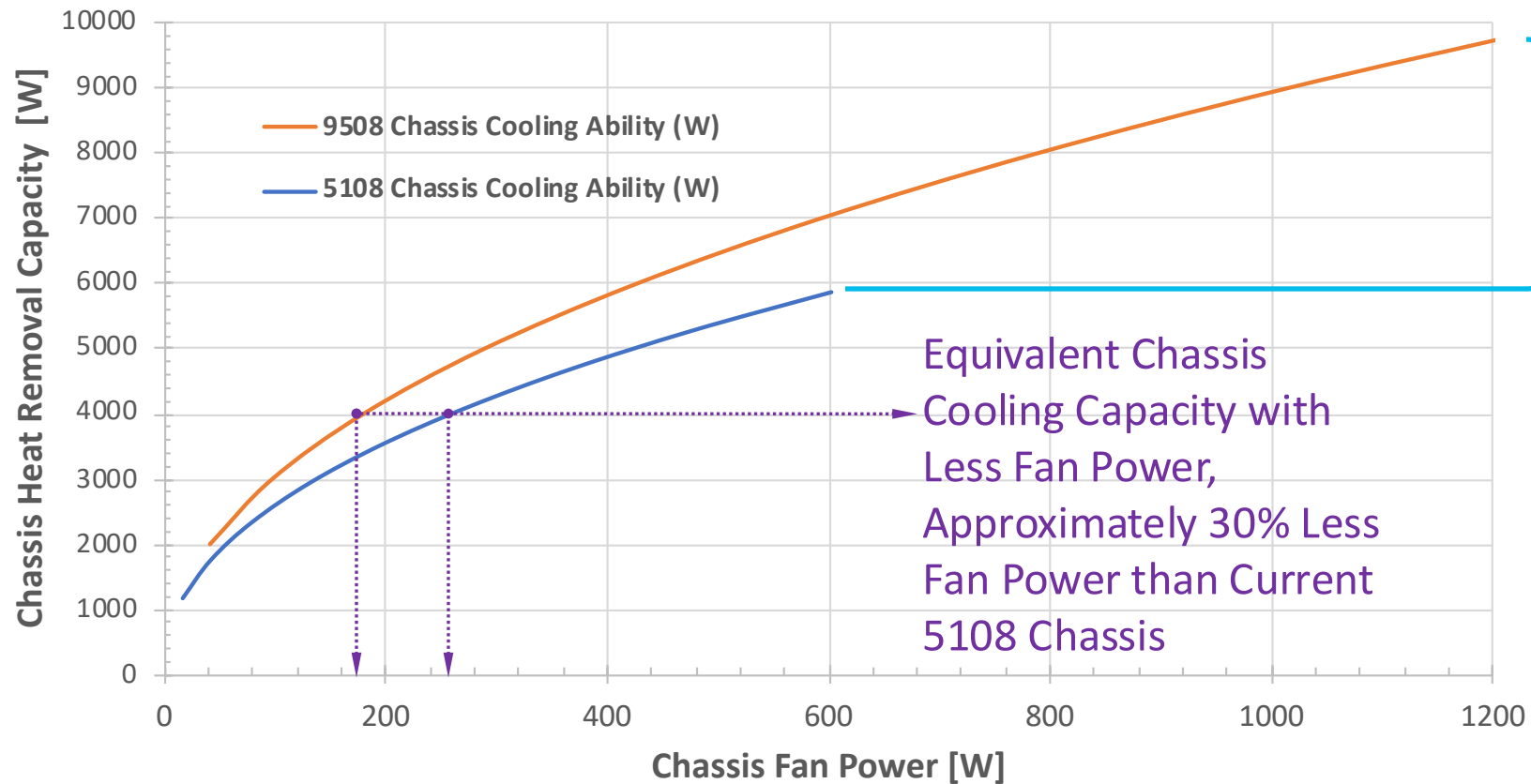
Architecture	•Reduce power by reducing number of components •Better cooling through simplified design
CPU and Memory	•Industry standard processor and memory •Offer range of Intel/AMD processors, from 60W to 600W
Infrastructure	•54V power distribution reduces conversion loss, and amperage on internal power rails •High efficiency voltage regulators •SFP+ CU cables reduce power consumption vs 10GBASE-T
Power Supply	•Titanium 90-95+% efficient •N+1 and N+N redundancy (grid) •No backplane to minimize copper traces
Cooling	•Straight through airflow no bends or turns •No midplane allows free airflow for optimum cooling •Larger dual counter rotating fans to offer redundancy with lower power
Active thermal monitoring	•Extensive monitoring and alarming •Zone based cooling algorithm that dynamically adjusts to areas of need •Sensor data aggregated by mgmt software for entire system
Power management	•Blade and chassis level power measurement sensors •Thermal sensors on all major components •Power Capping and Rebalancing

Zoned Based Cooling: Chassis

- Vertical and horizontal zones
- Independent fan speed control based on sensors participating in each zone
- Reduces fan power consumption by right-sizing air flow on a per-zone basis, and increases overall power efficiency



Cooling Capacity Comparison



More than 2X Additional Cooling Capacity to Meet Future Thermal/Power Demands

Equivalent Chassis Cooling Capacity with Less Fan Power, Approximately 30% Less Fan Power than Current 5108 Chassis

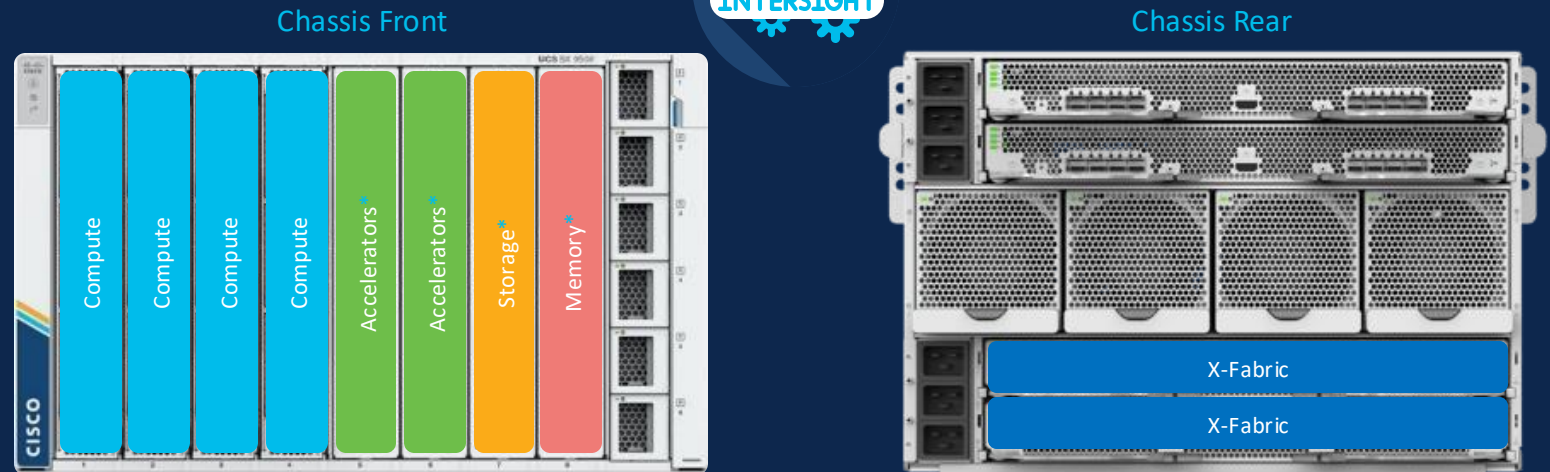
UCS X-Fabric Technology

Shape infrastructure resources to applications

Run modern apps by assembling modules into systems

Simple policy-based definition of resources from Intersight

Engineered to accommodate future technologies



UCS X-Fabric Technology

Internal Fabric interconnects nodes

Industry standard PCIe, CXL Traffic

No backplane or cables = Easily upgrades

Future-Ready Design

Engineered for the next decade

....Protect investments and focus on innovation



2021



2030+

Liquid-cooling

Silicon photonics

Next gen. fabrics

Power and cooling capacity

Future accelerators

Intel/AMD roadmap

Cisco Unified Computing System

Unified approach to Enterprise and AI workloads



Traditional

AI

Edge

Easy to buy with
Cisco AI PODs

Easy to deploy with
Cisco Validated Designs

Easy to orchestrate with
Cisco Hyperfabric

UCS Accelerated for AI

For data-intensive use cases
like model training and deep learning



Cisco UCS® C885A M8 Rack Server

NVIDIA HGX platform with
8 NVIDIA H100 NVL/H200 NVL and M300X GPUs
2 AMD 4th Gen/5th Gen EPYC processors

For fine tuning and scalable inference
use cases



Cisco UCS® C845A M8 Rack Server

NVIDIA MGX platform with
2/4/6/8 NVIDIA H100 NVL/H200 NVL/L40S GPUs
2 AMD 5th Gen EPYC processors

Simplified Orderability

AI PODs

Faster time to value with pre-configured bundles

ORDERABLE THIS QUARTER

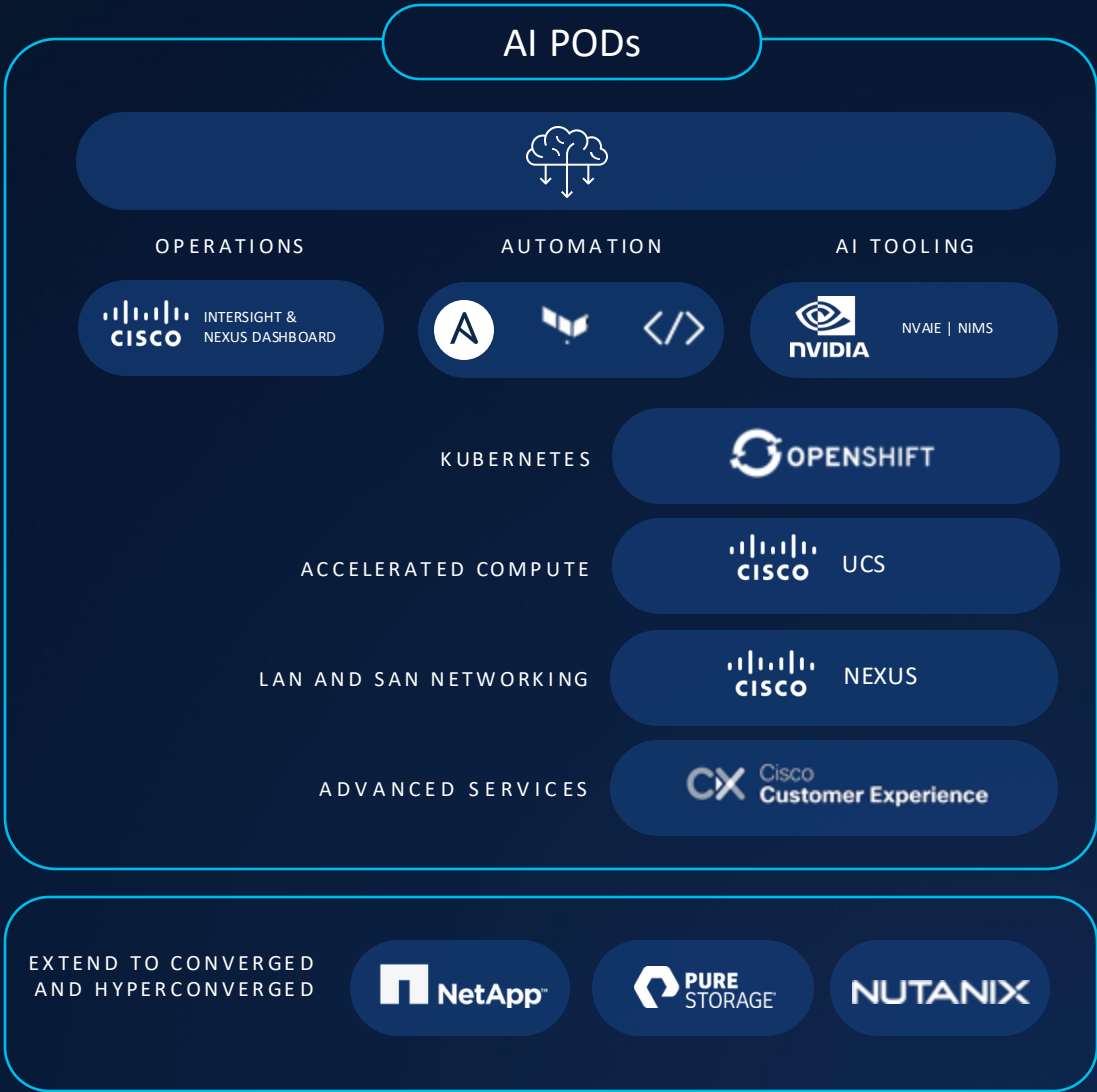
Deploy AI with confidence

Orderable, validated AI-Ready infrastructure stacks

Fully supported stack including Cisco and 3rd party components

AI Advisor tool for configuration guidance
COMING SOON

Cisco AI-Ready Infrastructure Stacks



Cisco UCS Converged Infrastructure portfolio

Offering choice and flexibility

20,000+
Customers

200+
Validated Architectures

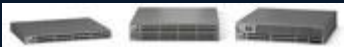
12+
Years of Innovation



Cisco UCS



Cisco Intersight

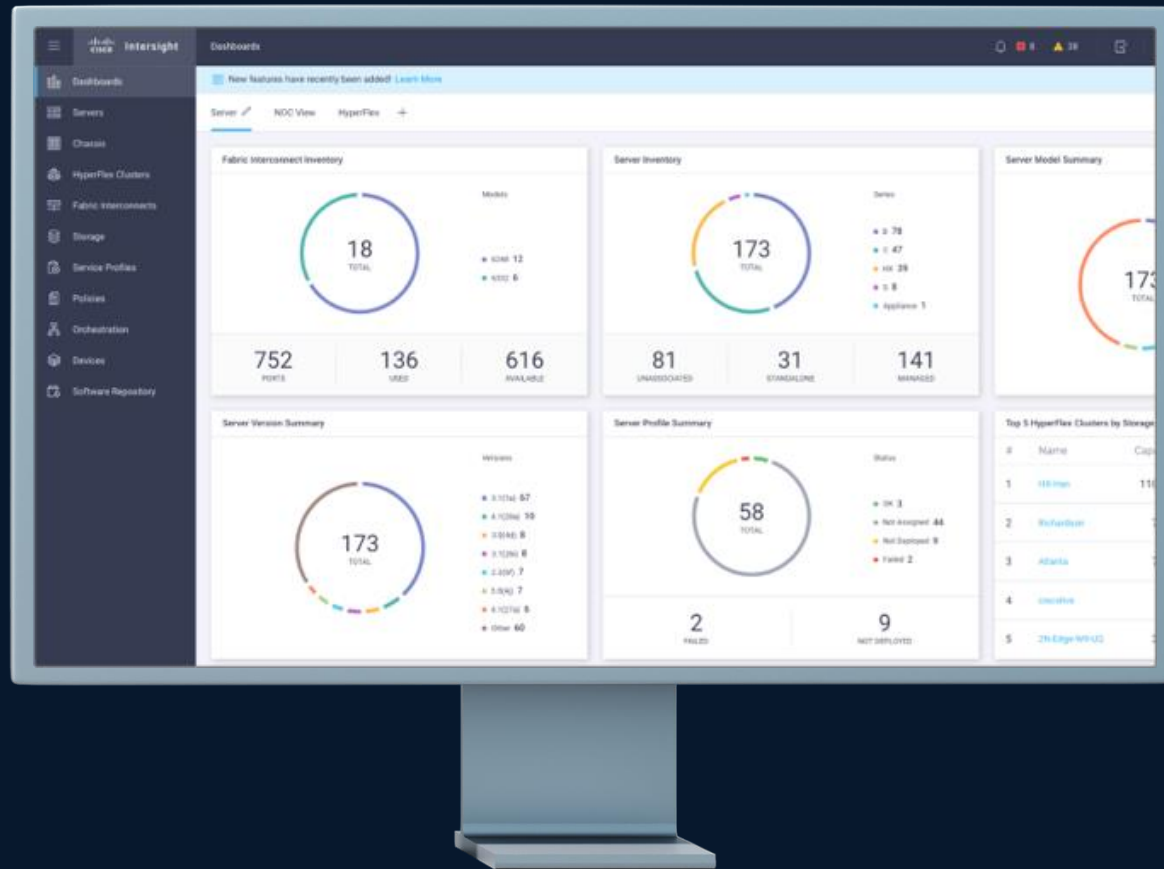


Cisco Nexus and MDS

*Assumes FlashStack revenue



Unified Experience for Infrastructure Operations



Cisco Intersight

See your global on-premises, cloud, and edge environments.

Connect your infrastructure operations across compute, storage and networking.

Secure operations with built-in advisories and continuous risk mitigation.

Automate workflows, APIs and SDKs to automate day 0 to day N operations

Cisco Compute Hyperconverged with Nutanix

Strategy

Complete roadmap leveraging the strengths of both companies in service of our customers

Solutions

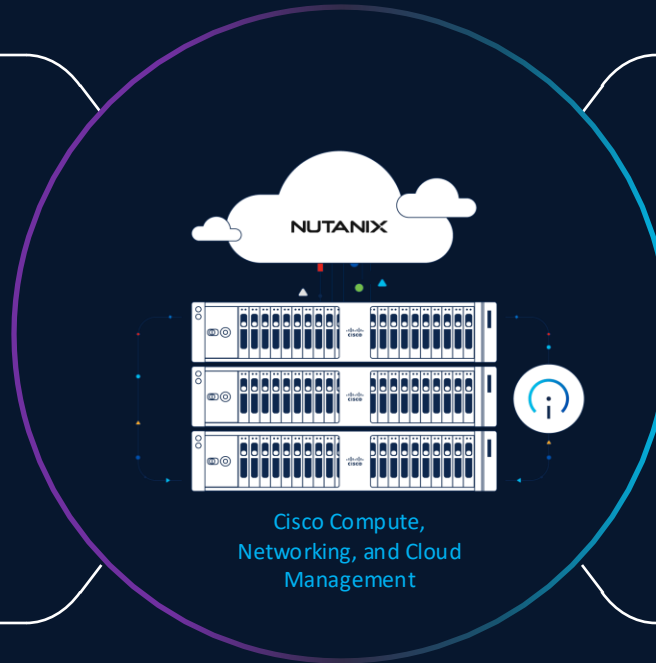
Built, managed, and supported holistically for a seamless end-to-end experience

Go to Market

A buying process focused on simplifying the seller and customer experience

Support

A joint enhanced support model built for information-sharing to ensure our customers' success



Cisco Server Virtualization and Kubernetes with Red Hat

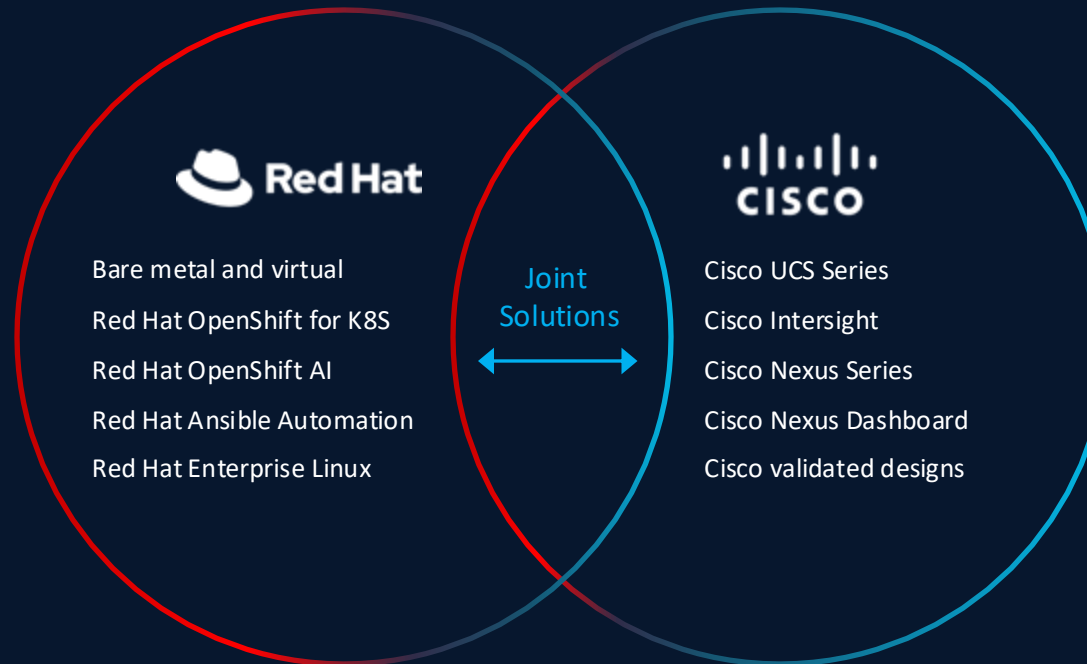
on-premise and public cloud

Open Cloud Infrastructure

platform built on open-source innovation

Accelerated Time to value

with turnkey experience and integrated automation



Simplified Operations and Support

with Cloud managed infrastructure and Cisco Solution Support across Red Hat on converged infrastructure stacks

Reduced Risk

with Cisco Validated Designs, delivering tested architectures for standardized, repeatable deployments.

Operate across hybrid
multicloud

More choice and
flexibility

20+ Cisco Validated
Designs

Consistent app dev
experience

Increased
sustainability



Cisco compute
Security

Cisco UCS Bezpečnost

Od Návrhu po Správu – Ochrana na každé úrovni



Cisco programová
bezpečnostní
opatření



Fyzické mitigace



Multi-tier
ochrana koncových
bodů



Přístup a
autentizace



Bezpečnostní
komunikace



Řízení a
odpovědnost řízené
politikami



Intersight/
Cisco
advisories



**Zabezpečení je
navrženo od
začátku**

**Ochrana serverů
před škodlivými
aktivitami**

**Bezpečnostní
kontroly a zásady
na každé úrovni
infrastruktury**

UCS zapadá do
osvědčených
postupů zabezpečení

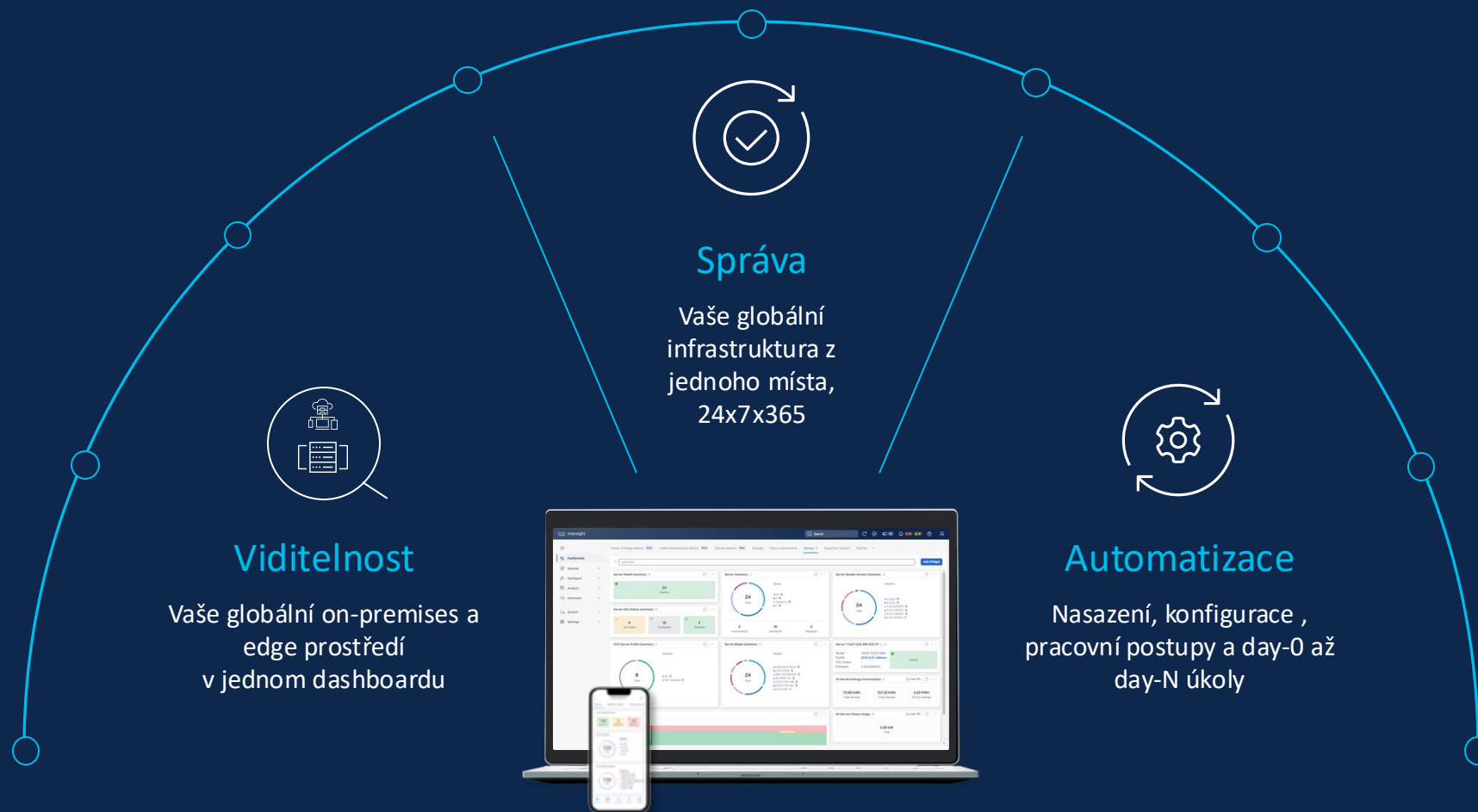
UCS poskytuje
přizpůsobitelnou,
zabezpečenou a
auditovatelnou
interní komunikaci v
rámcí systému

**Snížená příležitost
pro škodlivé nebo
chybné expozice**

**Zvýšení situačního
povědomí a zkrácení
okna zranitelnosti**

IT správa, zjednodušeně.

Cisco Intersight®



Správa infrastrukturní bezpečnosti

Postavena

s důrazem na bezpečnost

- Podpora standardizovaných bezpečnostních protokolů včetně HTTPS, TLS, and AES
- V souladu s Cisco® InfoSec bezpečností a standardy se zacházení s daty včetně šifrování veškerých dat
- ISO 27001 certifikace, SOC 2 Type 2 certifikace
- Trusted Cloud Provider Cloud Security Alliance se STAR Level One security trust assurance

Pracuje

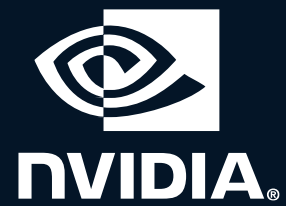
s důrazem na bezpečnost

- Bezpečnostní doporučení identifikovaná týmem Cisco Product Security Incident Response Team vás upozorňují na možná rizika a poskytují doporučená řešení
- Audit logy zaznamenávají všechny akce provedené v infrastruktuře pro usnadnění vyšetřování SecOps týmy
- Integrace s Security Information and Event Management (SIEM) platformami jako přes Cisco Intersight® API
- Integrace s webhooky pro umožnění automatických upozornění, když jsou identifikovány hrozby nebo zranitelnosti ve vaší infrastruktuře



„S tím, jak se hrozby pro kybernetickou bezpečnost organizací stávají sofistikovanějšími a úspěšné kybernetické útoky jsou stále běžnější, vaše firma potřebuje (nyní, více než kdy jindy) implementovat strategii správy životního cyklu infrastruktury, která klade důraz na bezpečnost vaší IT infrastruktury.“*

*Infrastructure Lifecycle Management Best Practices, IT Infrastructure



Bringing AI to the Enterprise.

Cisco and NVIDIA expand partnership to accelerate AI adoption in the enterprise

Partnership focus

Private
data centers

Backend
AI networks

Full-stack AI
infrastructures

Cisco's switching/control plane/security
and infrastructure stack

How are we partnering?



Cisco will be part of NVIDIA's
Enterprise Reference Architecture



Cisco will be part of NVIDIA's
Cloud Partner Reference Architecture



Deliver AI Factory with
customer choice: Cisco Silicon One[®]
or NVIDIA Spectrum-X Silicon



Security-first architecture enables safe Enterprise AI



Security at
all layers
of the stack

Securing the Applications

Cisco AI Defense—Robust testing and runtime security of LLMs and generative AI applications.

Securing the Workloads

Cisco Hypershield—Protection against adversary lateral movement and proactive vulnerability mitigation without the need for patching, all from a single management interface.

Integration with NVIDIA Bluefield-3's DOCA AppShield for intrusion detection in AI-focused virtual machines and containers.

Future

Securing the Infrastructure

Cisco Hybrid Mesh Firewall—Unified security management and consistent and pervasive policy across multiple enforcement points.

To include management of **NVIDIA BlueField®-3 DPUs** for enabling **AI Cluster perimeter firewalls**.

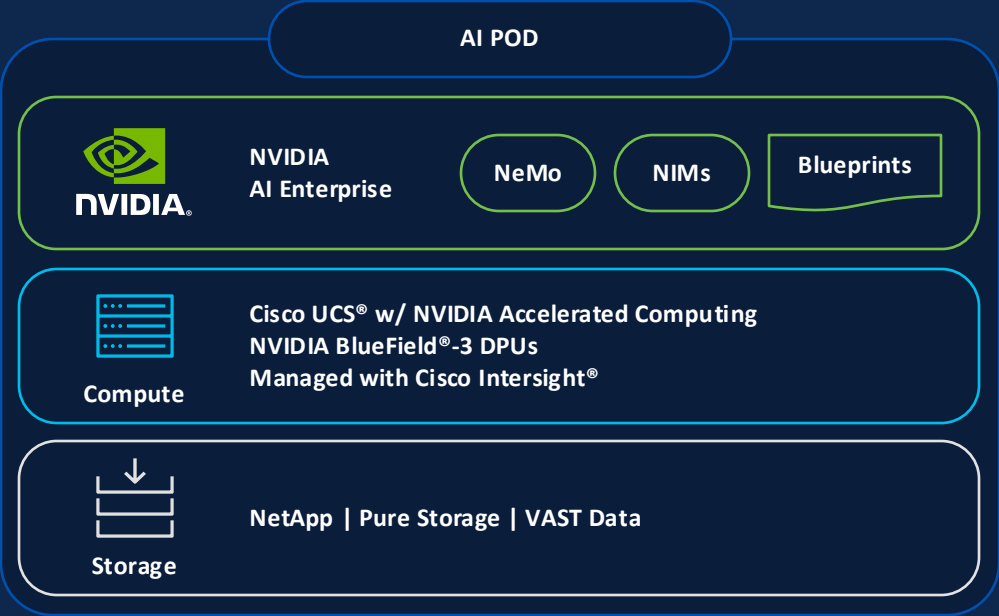
Future

Modular system

Cisco Secure AI Factory with NVIDIA



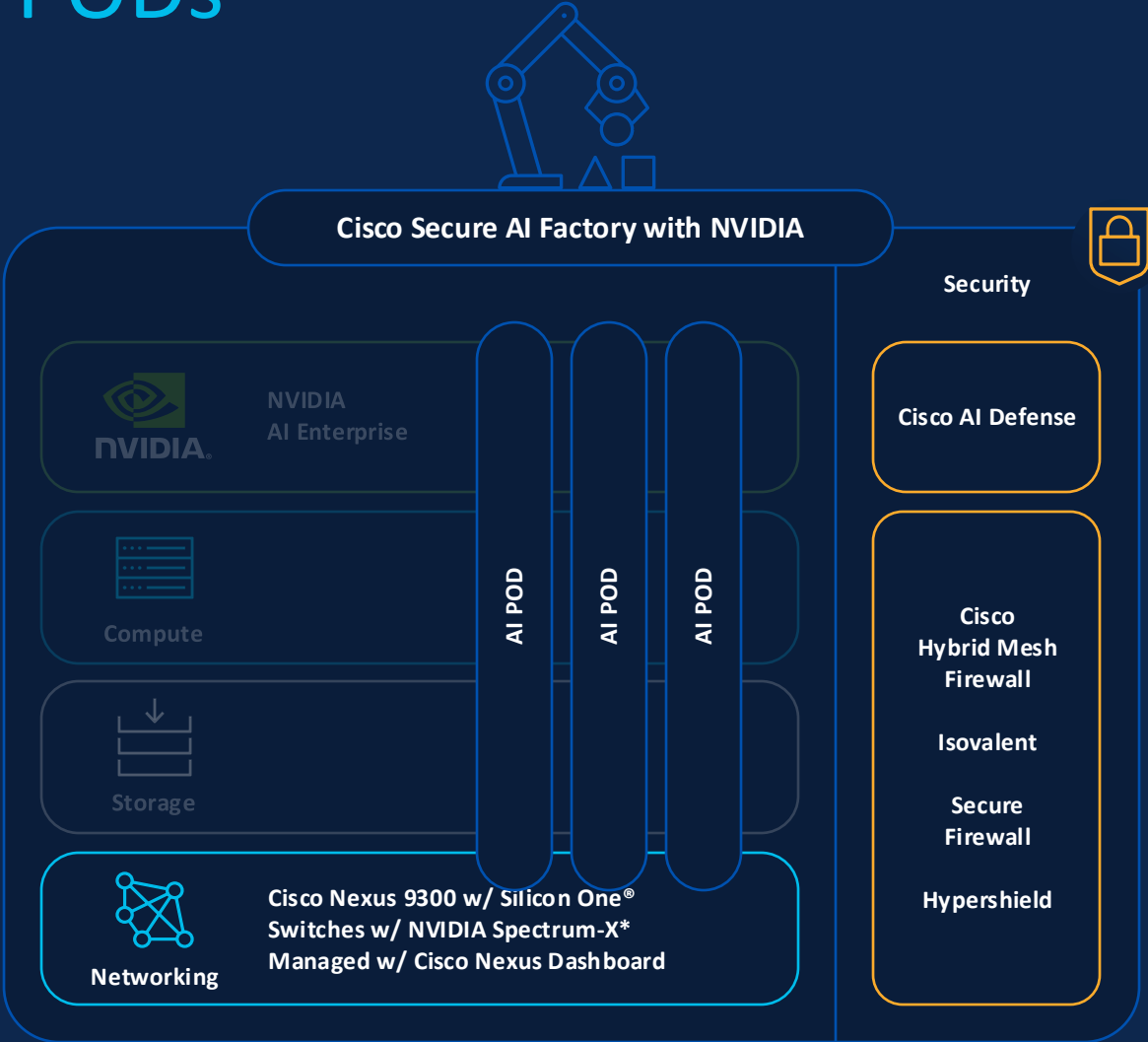
Modular system deployment and scaling with AI PODs



Atomic unit of Secure AI Factory with NVIDIA

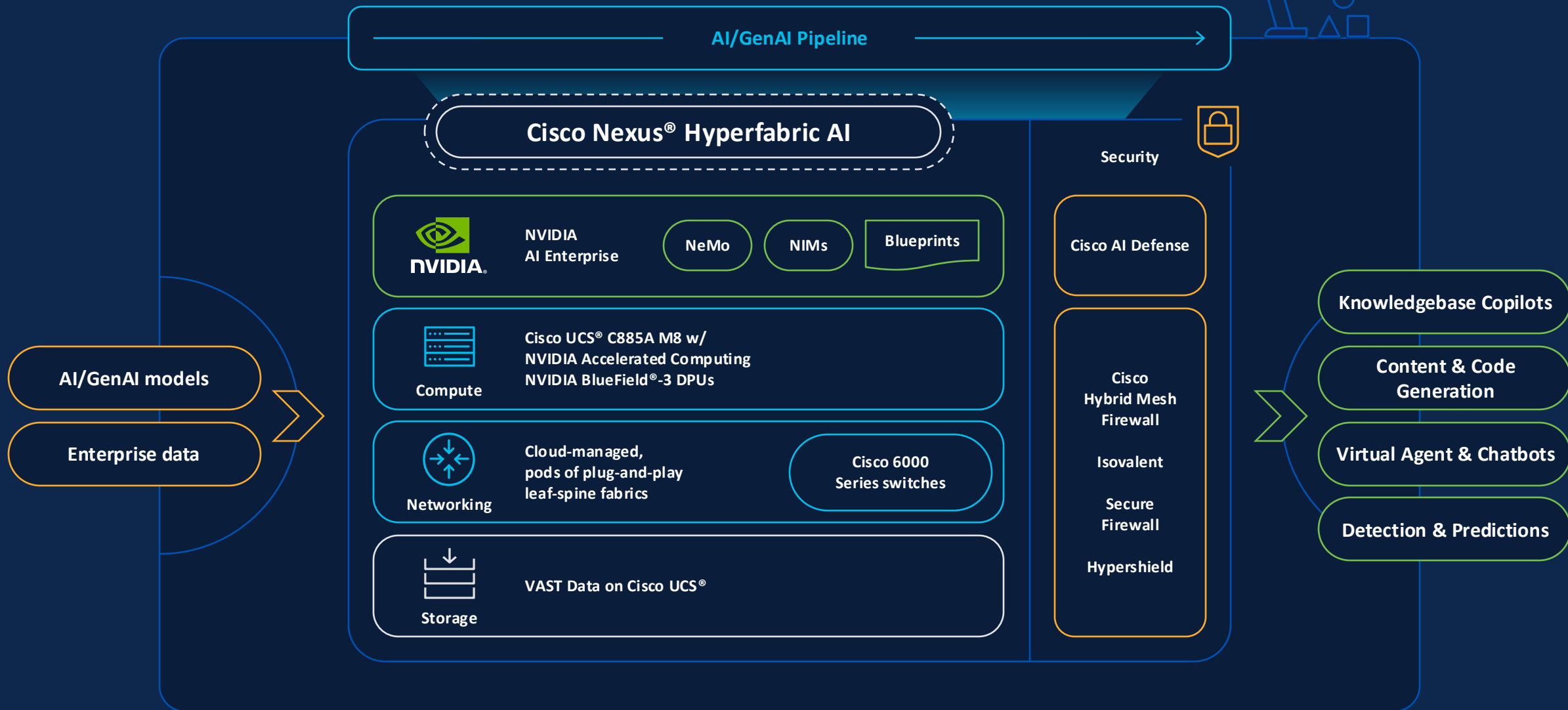


Scale the Secure AI Factory to meet your business needs



Vertically integrated solution

Cisco Secure AI Factory with NVIDIA



Thank You

The background features a series of overlapping, wavy lines in various shades of blue and cyan. These lines flow from the left side towards the right, creating a dynamic, three-dimensional effect. The lines are closely spaced and follow a similar sinusoidal path, with some lines appearing more prominent than others due to the layering. The overall composition is clean and modern, with a focus on geometric and organic forms.