



The bridge to possible

Connect, simplify and
transform your infrastructure

CISCO *Connect*

#CiscoConnect



The bridge to possible

Application platform modernisation with Cisco

Roger Dickinson
Cloud Business Solution Architect

CISCO *Connect*

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The Data Centre Fashion Stakes

Mainframes & GRUNGE

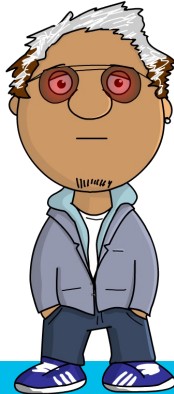


1990s

rugged, utilitarian look, with mainframes and bulky servers



Dot-Com CHIC



Influx of web-based applications and e-commerce



Virtualization VOGUE



2000s

shedding physical hardware for more streamlined virtualization



Cloud COUTURE

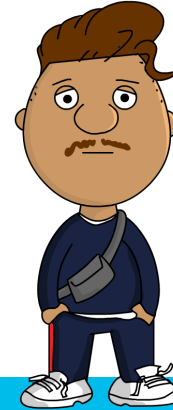


2010s

Flexible, fast-paced hyperscaler trendsetters



Sustainability ACTIVEWEAR

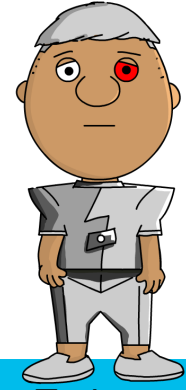


2020s

Simplicity, Eco-friendly, renewable and efficient



AI AVANT-GARDE



Today

Forefront of Innovation pushing new boundaries



“One day you are in. The next day you are out” – Heidi Klum

Applications redefining IT

DIGITAL RESILIENCE

Prevent, detect and respond

10 days average reported unplanned downtime per year at an average cost of \$87M in lost revenue and productivity⁸

010110
110010
001011

HYBRID MULTICLOUD

Intelligent Workload Placement

20% increase in cloud costs⁵ with 30% of companies moving to intelligent workload placement⁶



APPLICATION ARCHITECTURE

Hyper-distributed and AI

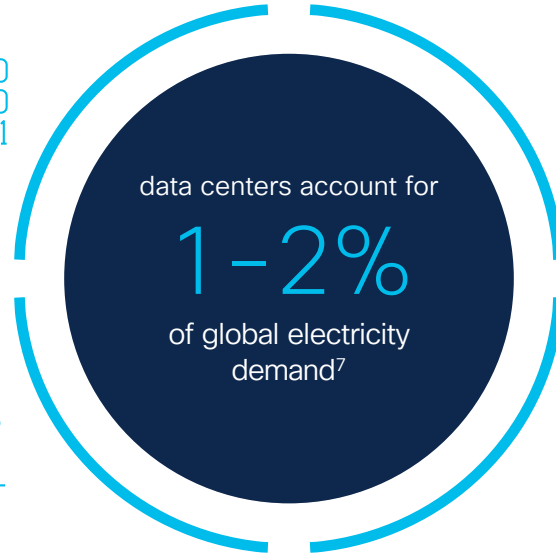
80% plan full GenAI adoption in 3 years with 50% of data being generated at the edge²



SECURITY

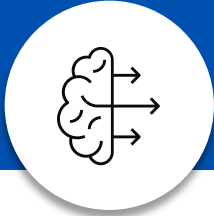
Growing Attack Surface and Vectors

125% rise in cyber threats costing \$10T in 2025⁴ with 69% experienced a cloud security breach⁴



Sources: 1. IDC 2. Gartner 3. Uptime Institute 4. Cybersecurity Ventures 5. 451 Research 6. Flexera 7. akcp 8. Splunk

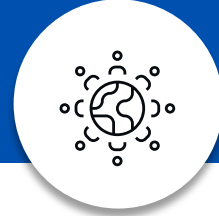
Notable disruptions 2024



Generative AI



**Server Virtualization
market**



**Platform
Engineering**

Delivering Experiences, Applications and AI across

Data Centre, edge and cloud

CLOUD ECOSYSTEM



Operations

Optimization, assurance and automation

Operations

Observability

User, app, infrastructure and business

Observability

Security

From application to infrastructure

Security

Compute

Server, data and application platforms

Compute

Networking

Connecting users to apps across all locations

Networking



Everything-as-code



Sustainability



Data center



Edge



Colocation



Public cloud



Cloud neutral software and platforms for
consistent capabilities across locations

Applications driving modernisation



**Infrastructure
modernization**

Simple, secure and
sustainable



**Application platform
modernization**

Any application
anywhere



**AI Powered
DC Solutions**

Operations and
infrastructure for AI



Cloud neutral software and platforms for
consistent capabilities across locations

Infrastructure Modernization



Your building blocks for the data center of the future



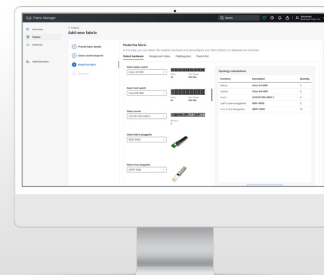
Cisco Data Center
Networking



Cisco Silicon and
Optics



Cisco Unified
Compute



Cisco Cloud
Managed AI Solution



Cisco Validated
Designs

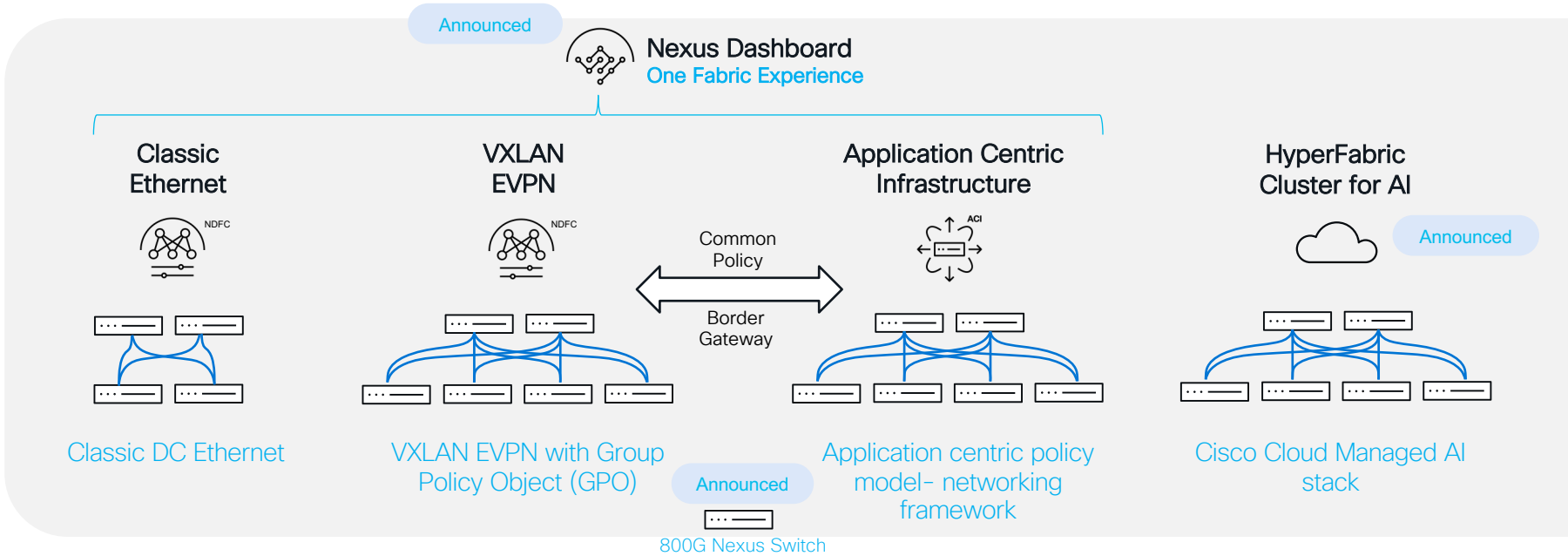
Announced

Announced

Announced

← Security →

Data Center Networking



Built on Cisco Cloud Scale and Silicon One ASICs

Fabric-Based Computing

Scale seamlessly to changing business needs

Faster deployment of applications

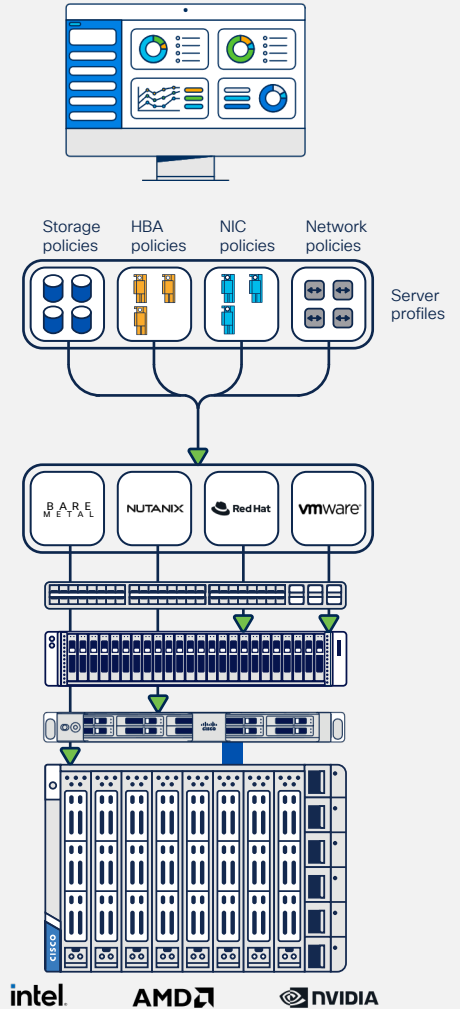
Greater control and flexibility

Better performance, resiliency, high availability

Less cost and complexity with fewer components

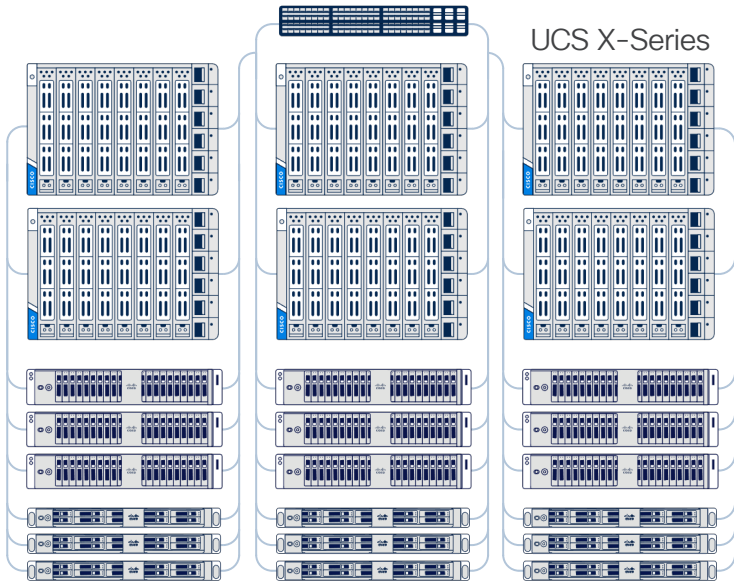
Innovative stateless server configuration

Infrastructure shapes to your specific workloads



Connect and scale from the data center to the edge

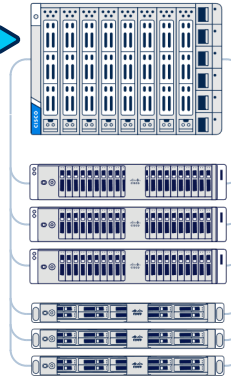
Scale the **Enterprise**



Scale at the **Edge**

Announced
AMD blade for UCS-X

UCS
X-Series
Direct



Intersight



Optimize for smaller scale
Decrease components, operating costs, and management complexity

Drive sustainable outcomes
Reduce power, cooling, and physical footprint

Announced

Run any workload
From transactions to AI inferencing

Application Platform Modernization



“The server virtualization market is facing its most significant disruption in over a decade. I&O leaders will be forced to question their underlying assumptions for current and future workloads” - Gartner

[Gartner Server Virtualisation Guide](#)

Risk

- Do nothing
- Alternative vendor

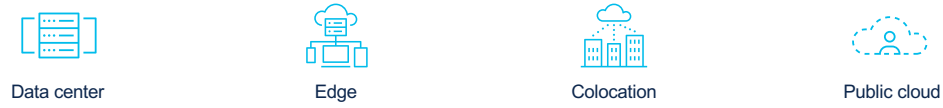
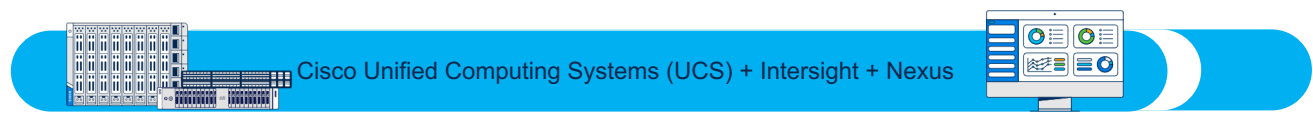
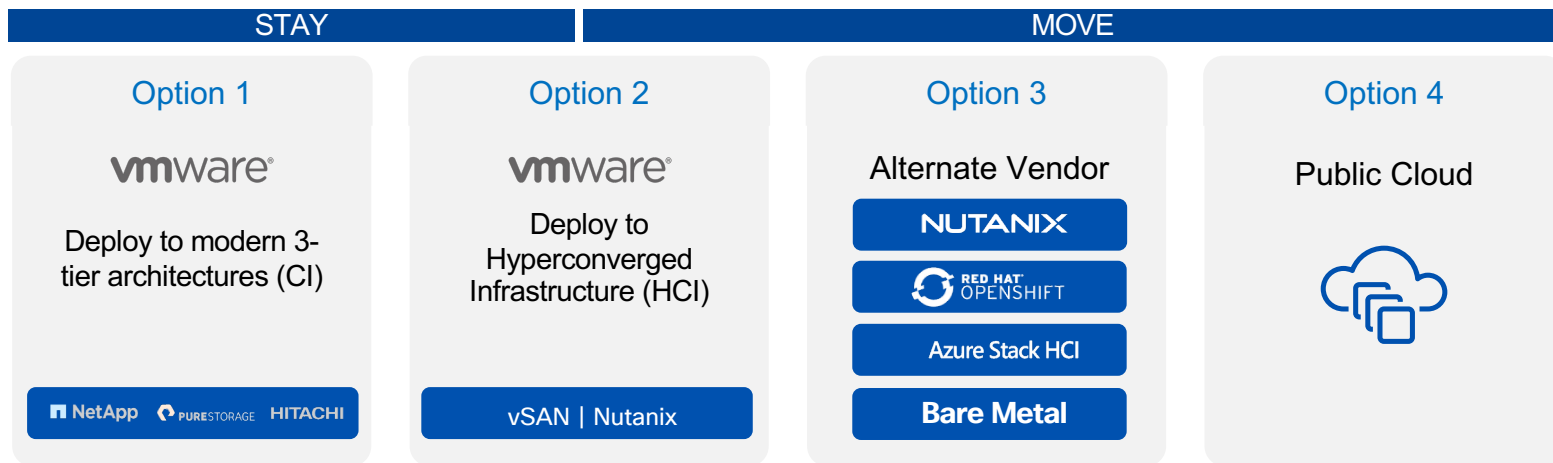
Opportunity

- Diversify platforms
- Accelerate transformation

Considerations

- Cost/Ease of migration
- Supported applications
- Partner Ecosystem
- Operational model(s) and skills

Decision Crossroads



3-tier architecture Hyperconverged (HCI) Hybrid Cloud Cloud Native

AI Powered DC Solutions



AI is the single biggest disruption to the data center since public cloud

Most organizations realize this disruptive nature of this trend , and are looking for new ways to harness it

41.6%

Have gen AI as top priority for infra investments over next 18 months¹

13%

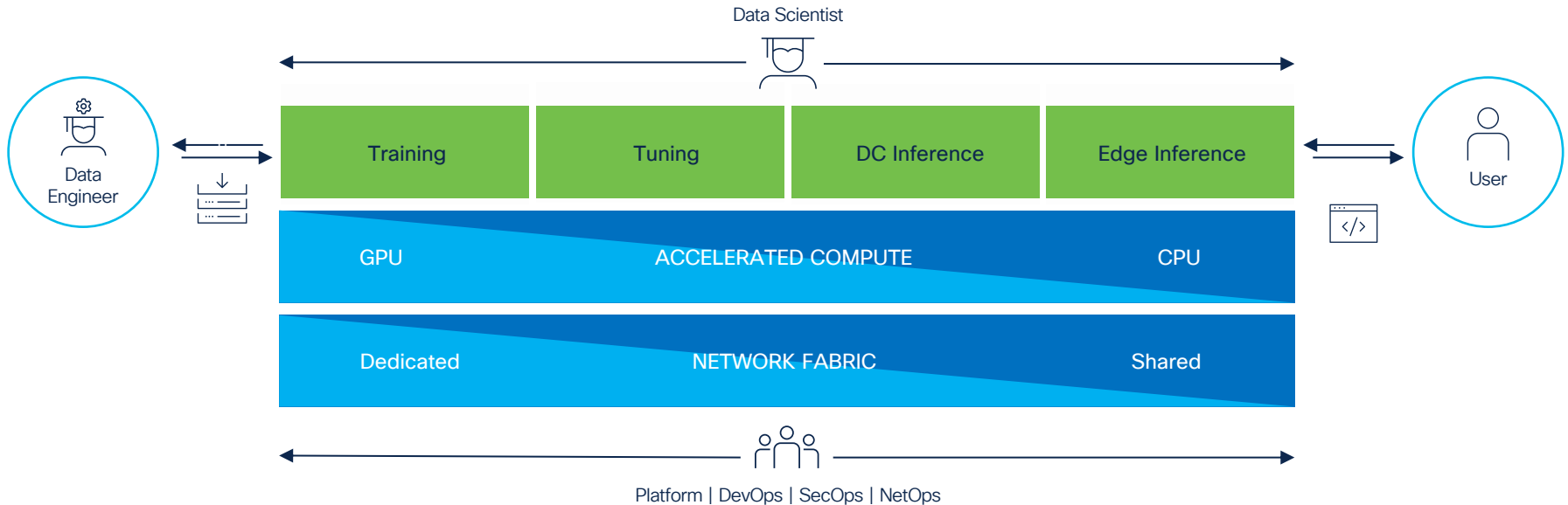
IT organizations with infrastructure prepared for AI today²

36.2%

IT staff/skill recruitment/training is highest priority to support gen AI¹

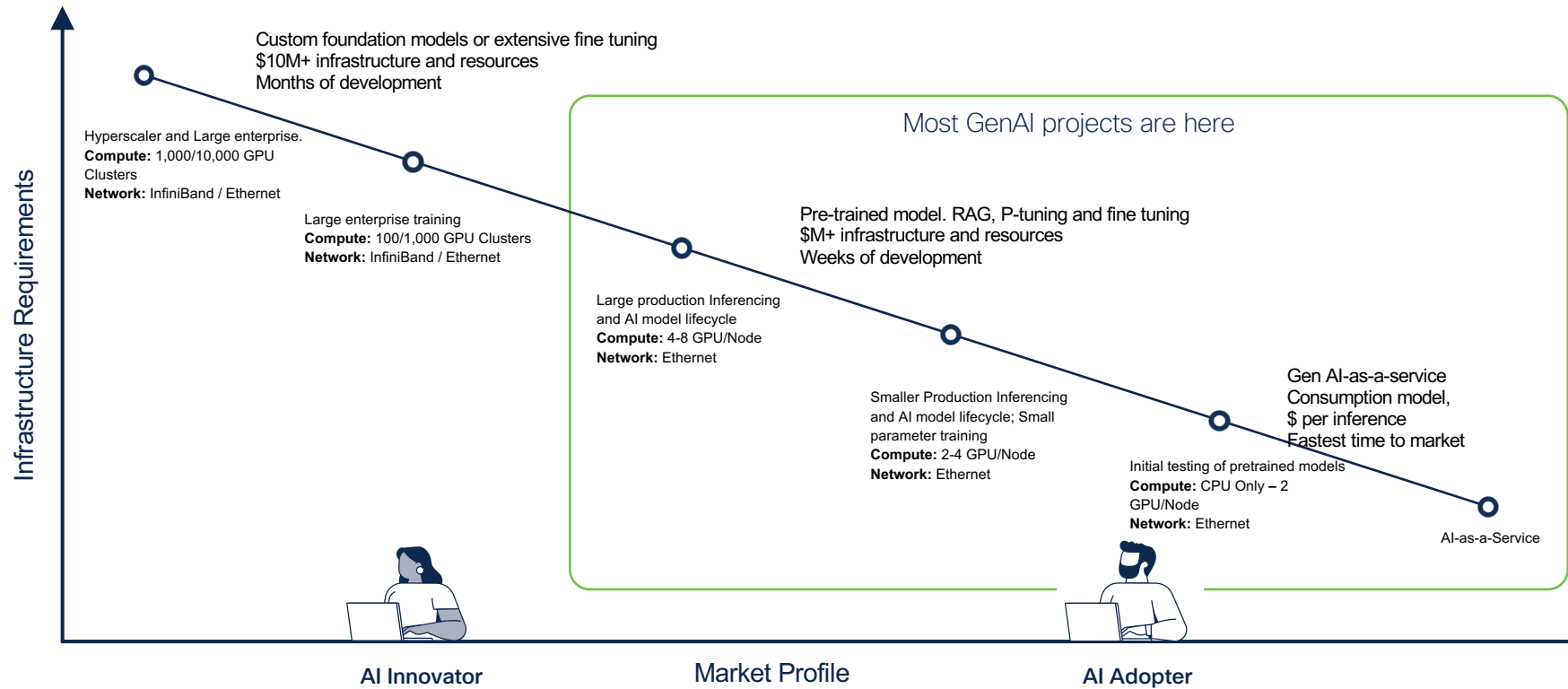
1. IDC: Future of Enterprise Resiliency & Spending Survey Wave 7, Generative AI Infrastructure Spending Sentiments, November 2023 2. Cisco Global AI Readiness Index, December 2023

Accelerated AI Infrastructure



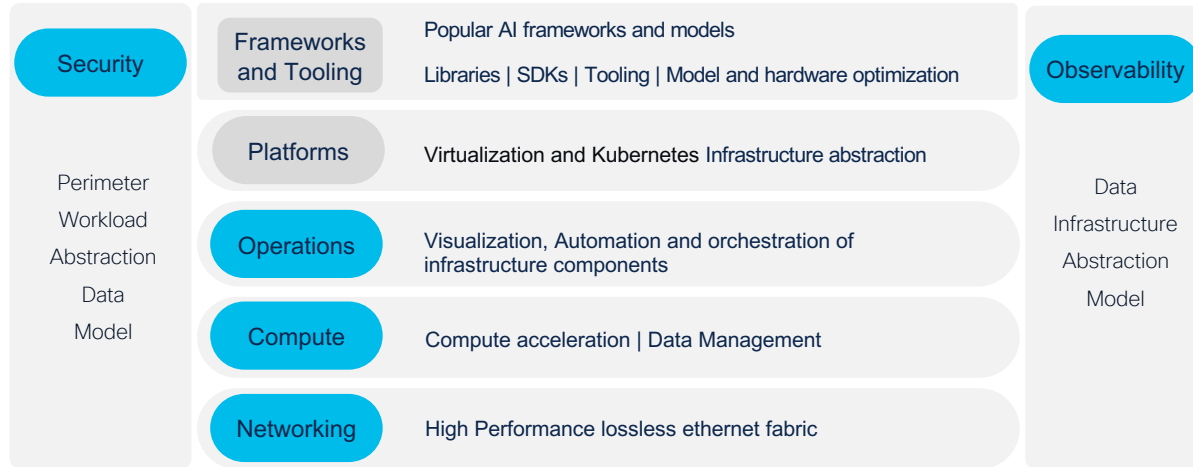
Model performance tightly coupled to infrastructure

AI Infrastructure Requirements



Source: [IDC: Enterprise Solutions for AI](#) [precedenceresearch - artificial-intelligence-market](#)

AI Stack



Sustainability



Data center



Edge



Colocation



Public cloud

Data Center Networking for AI

Networking for AI at any scale

network for shared or dedicated architectures

with AI fabric automation, congestion scoring and dynamic avoidance

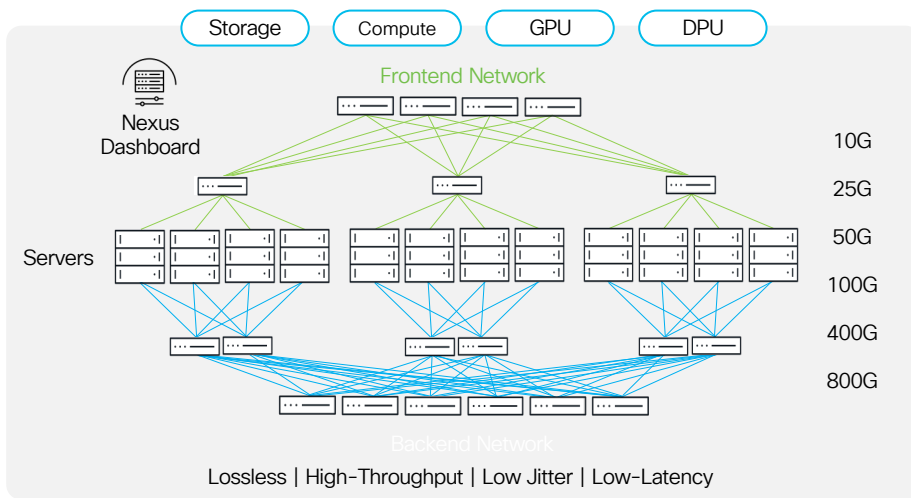
VXLAN EVPN Nexus fabric for training and inference at any scale

offering 61% less power consumption than previous generation

Add reference

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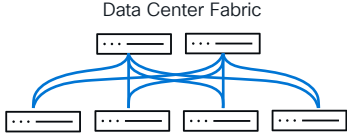
Data center



Colocation

Cisco AI Infrastructure

Cisco AI Infrastructure
Inference

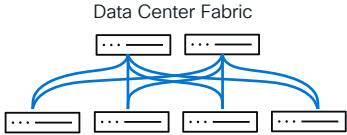


NVAIE | NIMs

UCS-X INTERSIGHT NEXUS
•• FlexPod ⚡ FlashStack

Built on Cisco Unified Computing System

Cisco AI Infrastructure
RAG

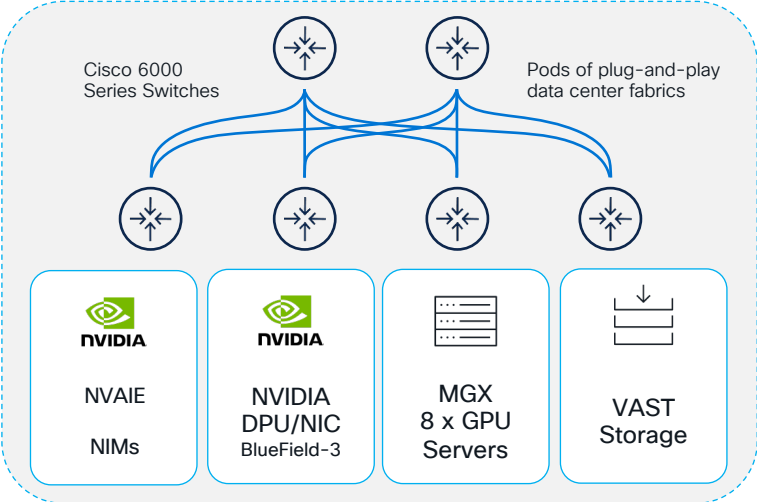


NVAIE | NIMs

UCS-X INTERSIGHT NEXUS
•• FlexPod ⚡ FlashStack

scale

Cisco Nexus HyperFabric Cluster
Training | Fine Tuning | Inference | RAG



Built on Cisco Silicon One and Optics innovations

Solutions to Simplify and Automate AI Infrastructure

Cisco Validated Designs (CVDs)

Reference architectures for simplified AI-ready infrastructure



RAG for FlexPod and FlashStack with NVIDIA AI Enterprise



MLOps with Red Hat OpenShift AI



Nexus 9000, Cisco Optics, and Intel Gaudi 2



GPT-in-a-box with Cisco Compute Hyperconverged



Gen-AI with Cloudera Data Platform



RedHat OpenShift AI with Intel AI Enterprise



CVD Playbooks for deploying common AI models



Large language models (GPT, BERT, T5)



Computer vision models (ResNet, EfficientNet, YOLO)



Generative models (GANs, VAEs)



Hugging Face



MODELHUB



NGC



Developer Cloud


Case Study: Large Financial Services Organization

Energy and cost reduction through modernization


By replacing previous generation hardware with Cisco's latest technology, a typical customer can expect:




70% reduction in total footprint



49% reduction in total power consumption from M7 to M4 UCS servers



61% reduction in total power consumption for Nexus 9K compared to Nexus 7K



More modernization benefits for customers

90% ↓
reduction in hardware operating costs

72% ↓
reduction in hardware maintenance costs

75% ↓
reduction in recurring software support costs

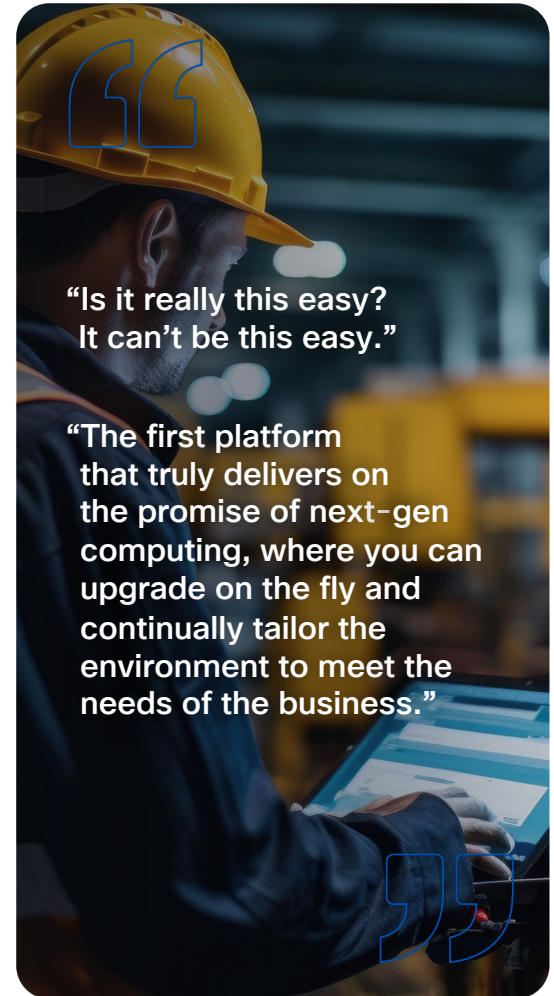
Case Study: Industrial Manufacturing Solutions Provider

Simplifying and accelerating data center operations

Combination of Cisco Intersight,
UCS X-Series and Cisco ACI

75% Faster deployment
of physical and
virtual infrastructure

50% Reduced data
center footprint



“Is it really this easy?
It can't be this easy.”

“The first platform
that truly delivers on
the promise of next-gen
computing, where you can
upgrade on the fly and
continually tailor the
environment to meet the
needs of the business.”

Your building blocks for the data center of the future



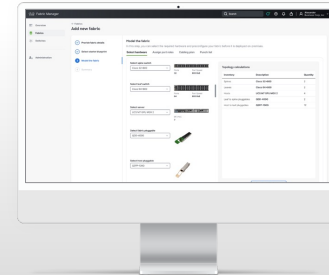
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Cisco Cloud
Managed AI Solution



Cisco Validated
Designs

Cisco sustainability
programs



AI Readiness
Assessment Tool



Cisco certifications and
validated designs



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Let's go

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