



Red Hat
Summit

Connect





Red Hat
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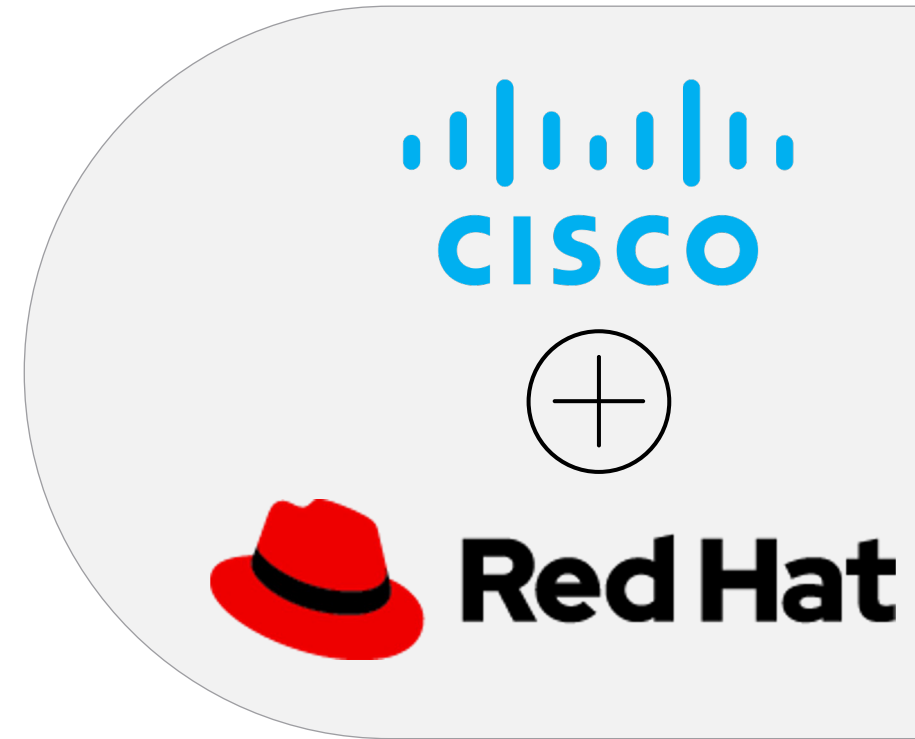
Cisco e Red Hat: una infrastruttura sostenibile e sicura per applicazioni ibride

Fabio di Niro
Technical Solution Architect,
Cisco



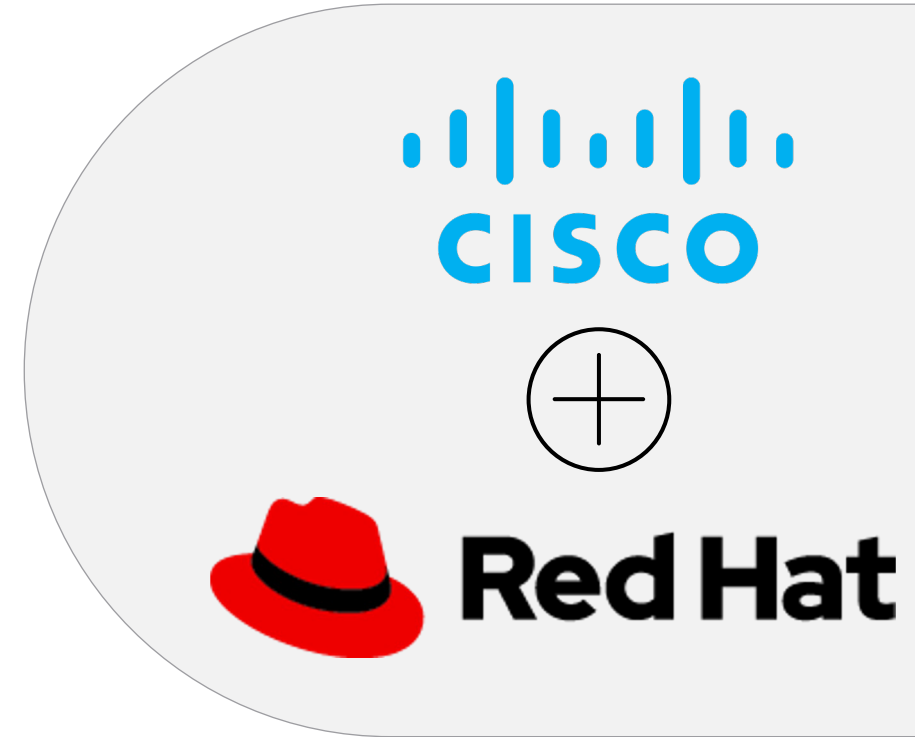
The partnership with Red Hat

- Cisco Validated Designs provide **tested architectures** for standardized, repeatable deployments.



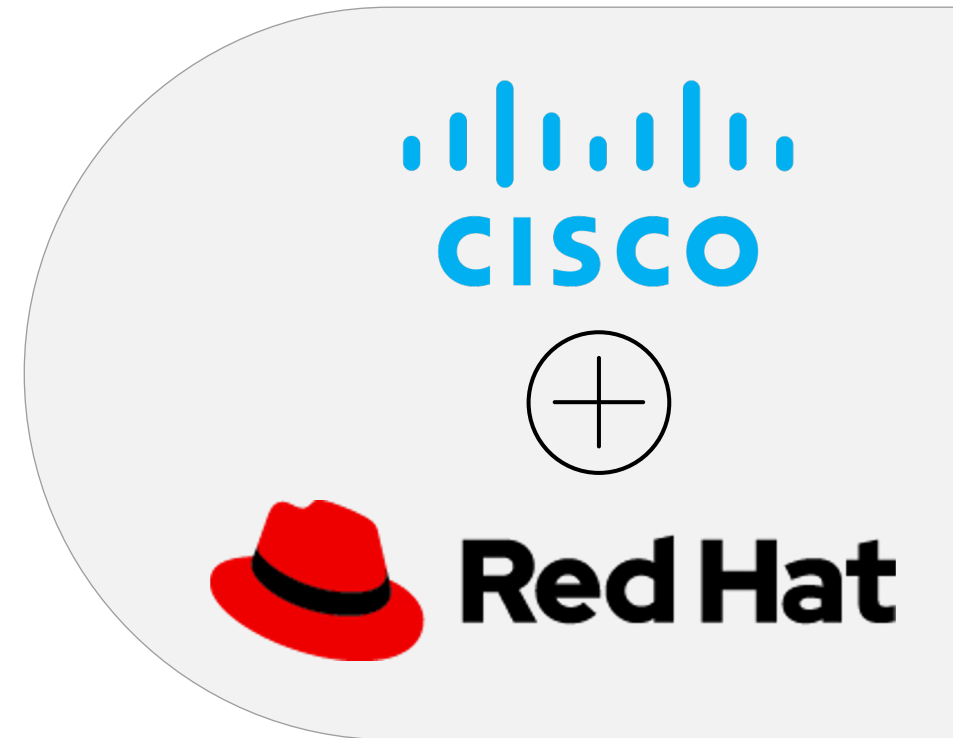
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- A guide to integrating **Red Hat OpenStack** with **Cisco ACI**
- Cisco Validated Designs for **Simplified AI Infrastructure**



The partnership with Red Hat

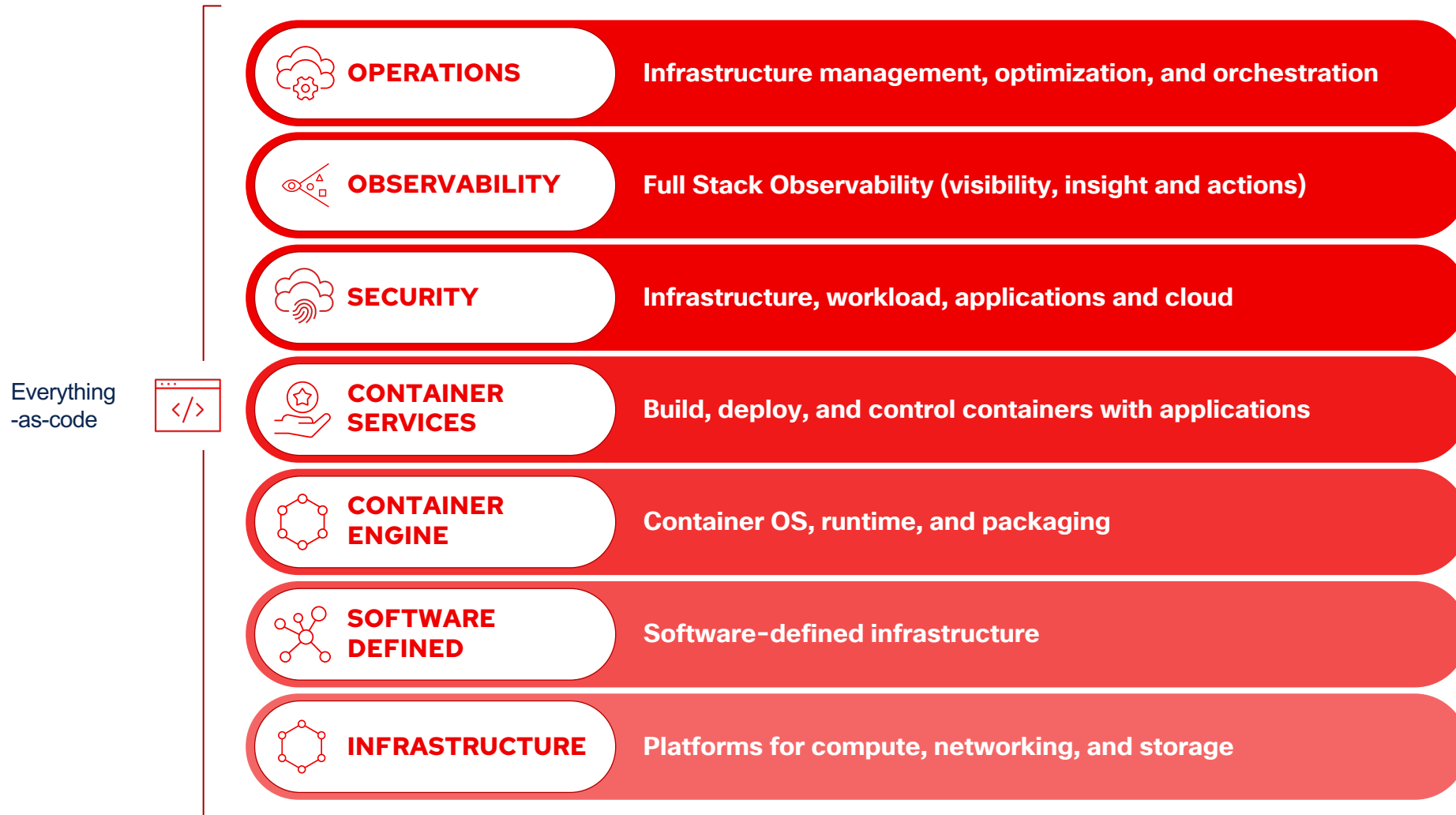
“Building on a decade of collaboration, Cisco and Red Hat are working together to help organizations realize the value of AI through improved operational efficiencies, increased productivity and faster time to market.

Cisco’s AI-focused Cisco Validated Design can help simplify, accelerate, and scale AI deployments using Red Hat OpenShift AI to provide data scientists with the ability to quickly develop, test, and deploy models across the hybrid cloud.”

**–Steven Huels,
General Manager,
Artificial Intelligence Business, Red Hat.**



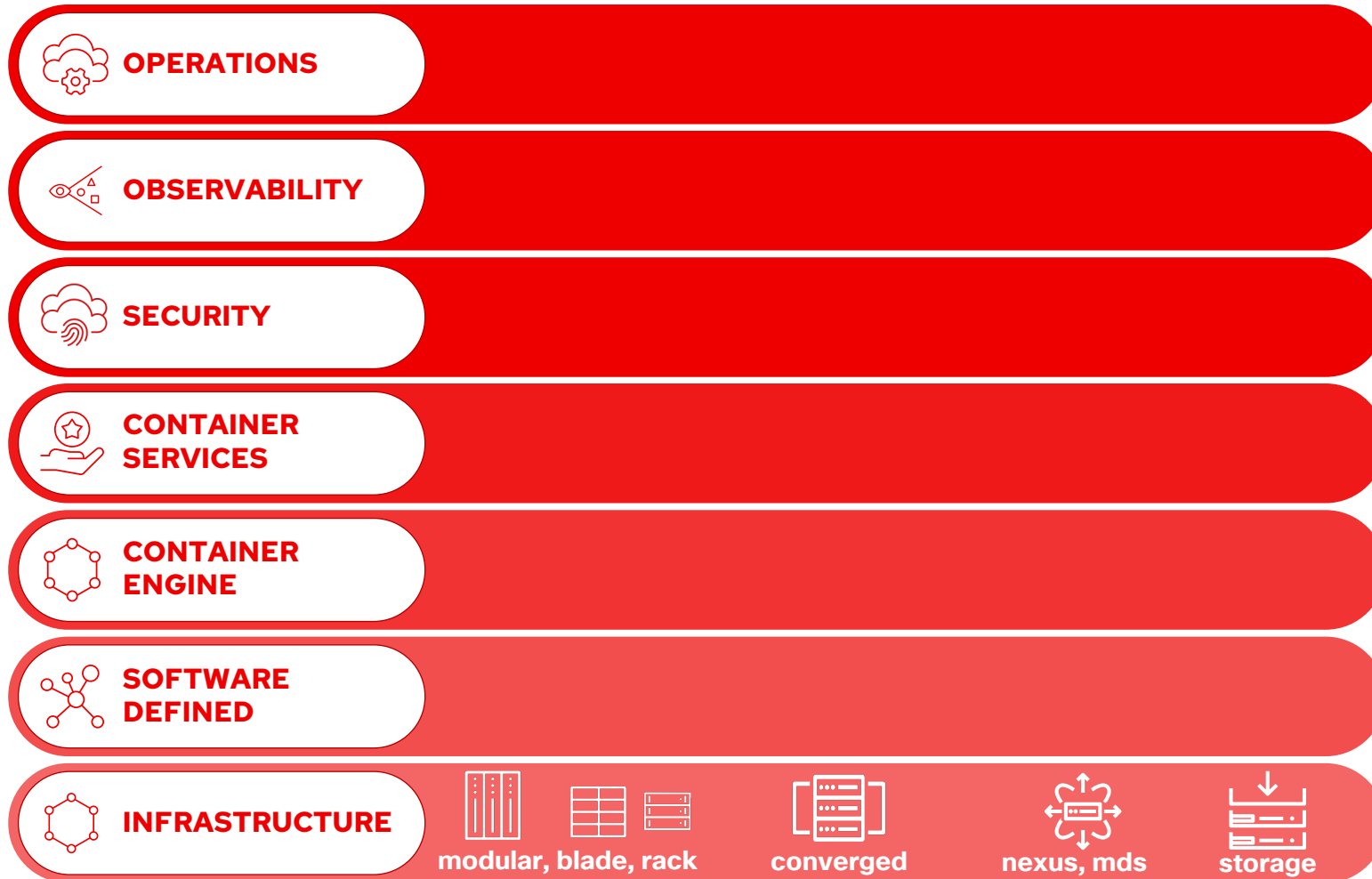
Architecture & Solution Components



SUSTAINABILITY



Architecture & Solution Components



Consistent cloud-native experience across edge, data center, and the cloud

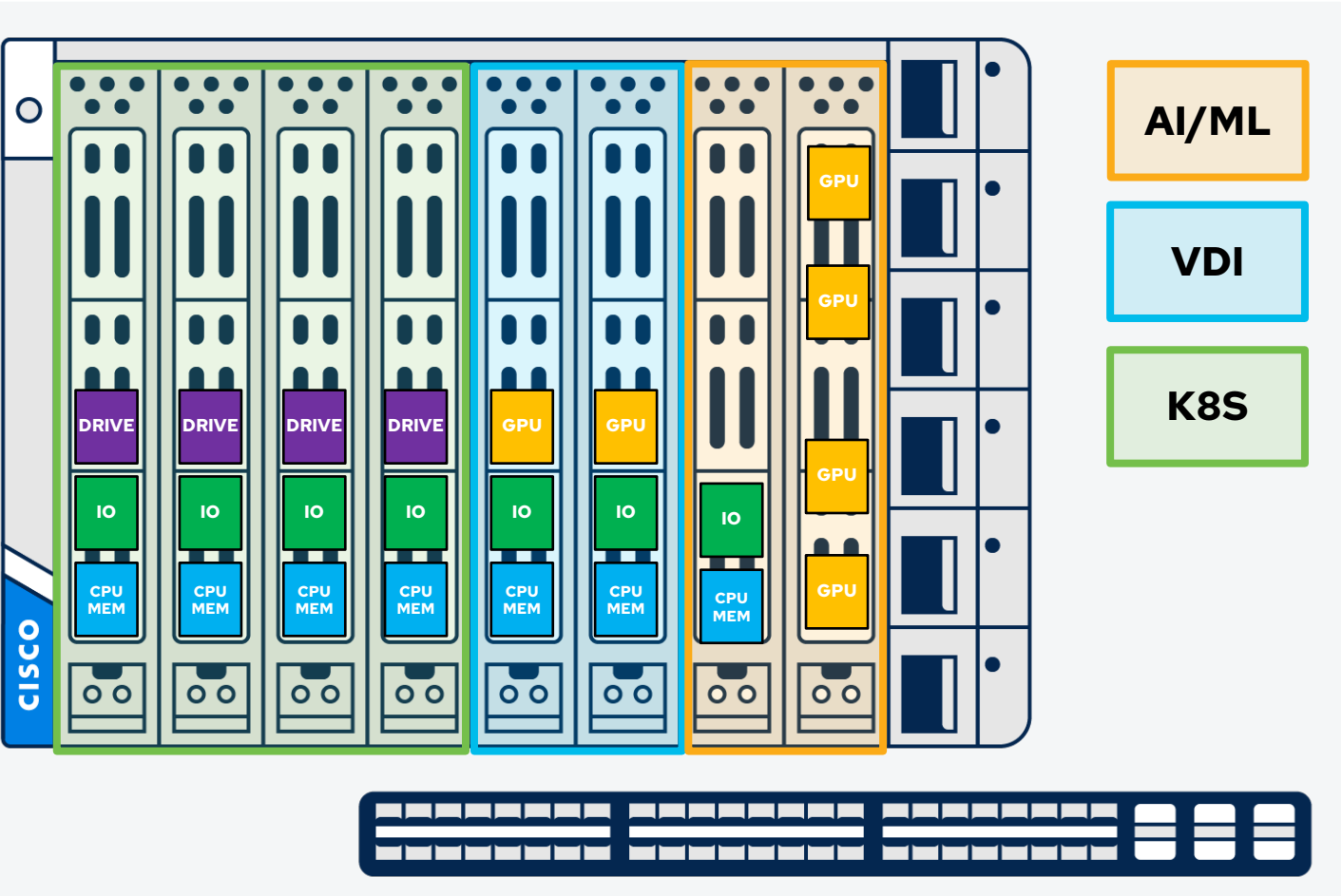
Run traditional or new applications with **containers on bare metal** or virtual machines using the industry's leading blade architecture.

Optimized for AI/ML, accelerated VDI, and big data applications

SDN storage with local NVMe or external



Reduce complexity with a **flexible**, modular architecture...



Production-ready Kubernetes platform

Cisco UCS® X-Series platform **engineered for future** connectivity innovations via a simple UCS X-Fabric module upgrade whenever technology is ready

Scales up to:



960 cores
per chassis

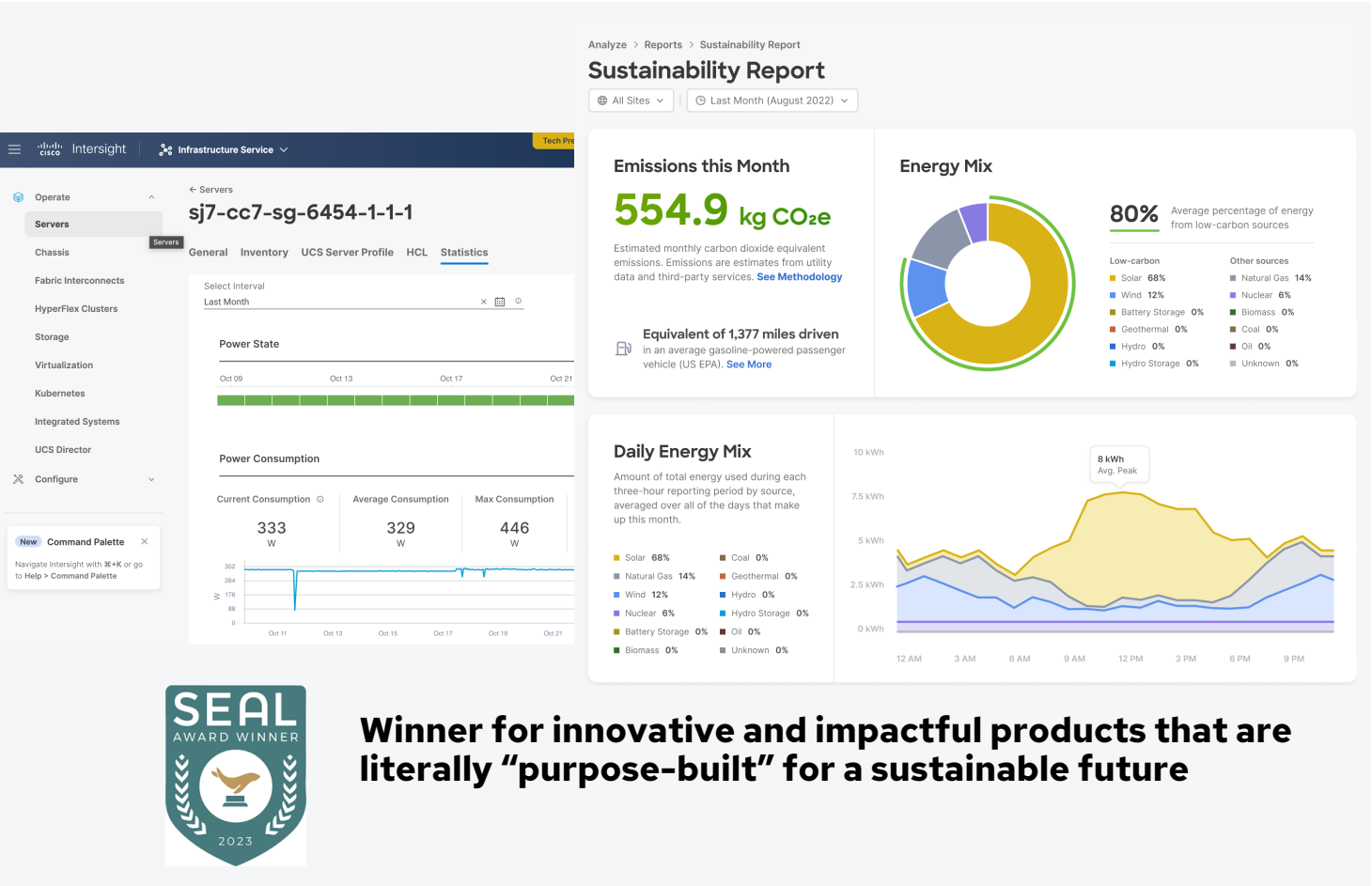
24 GPU
per chassis

200-Gbps to
compute node

1-PB storage
per chassis



Reduce complexity with a **flexible**, modular architecture that helps lower **costs and emission**



Winner for innovative and impactful products that are literally "purpose-built" for a sustainable future

Sustainable by design

- Sustainable packaging
- Efficient Components
- Recycled materials

Sustainable through product lifecycle

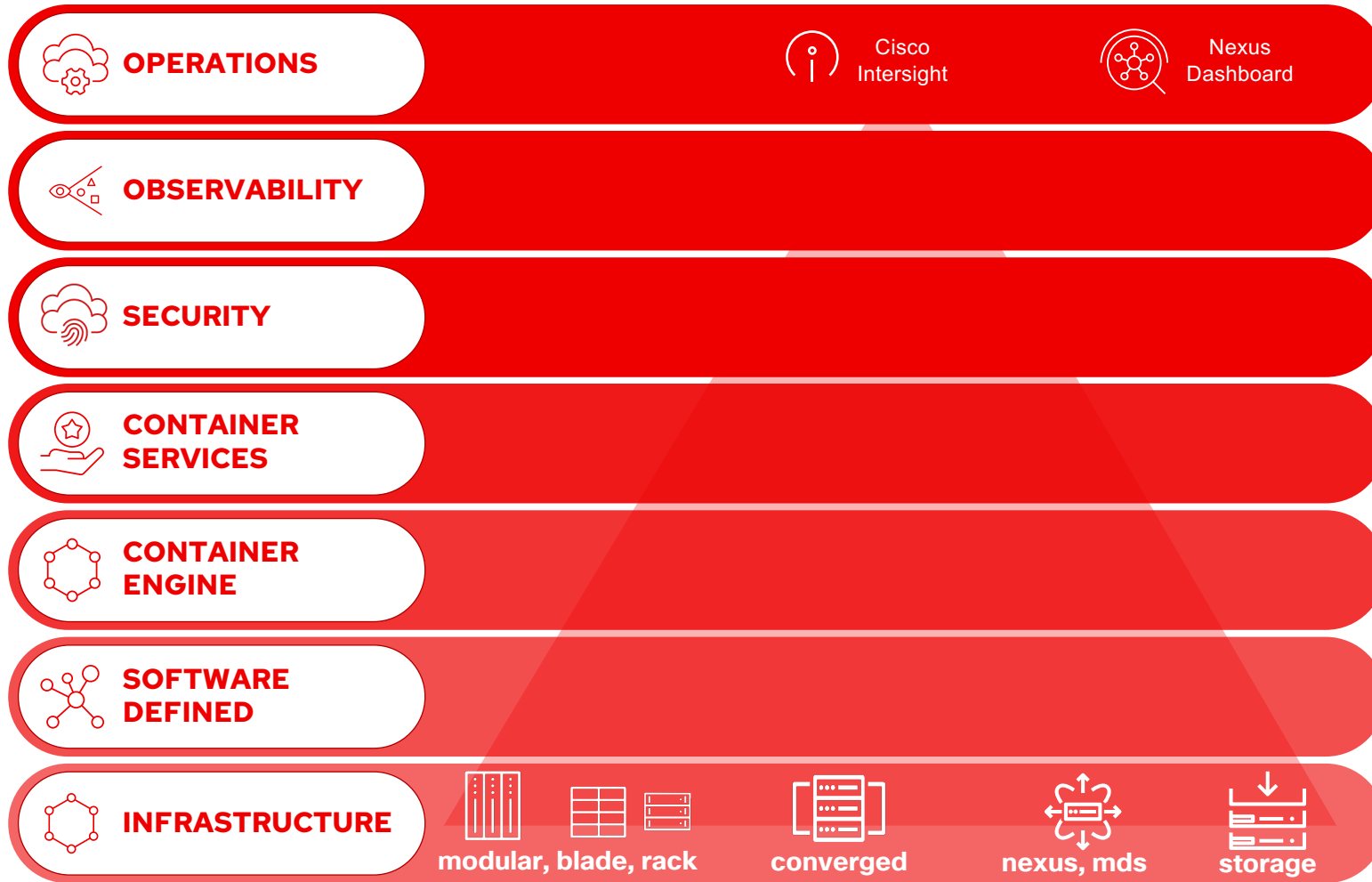
- Product takeback and reuse
- Supply chain sustainability

Consolidation could result in:

- 31% reduction in power consumption**
- 27% reduction in recurring software costs**
- 39% reduction in hardware maintenance cost**



Architecture & Solution Components



Deploy and configure infrastructure in minutes

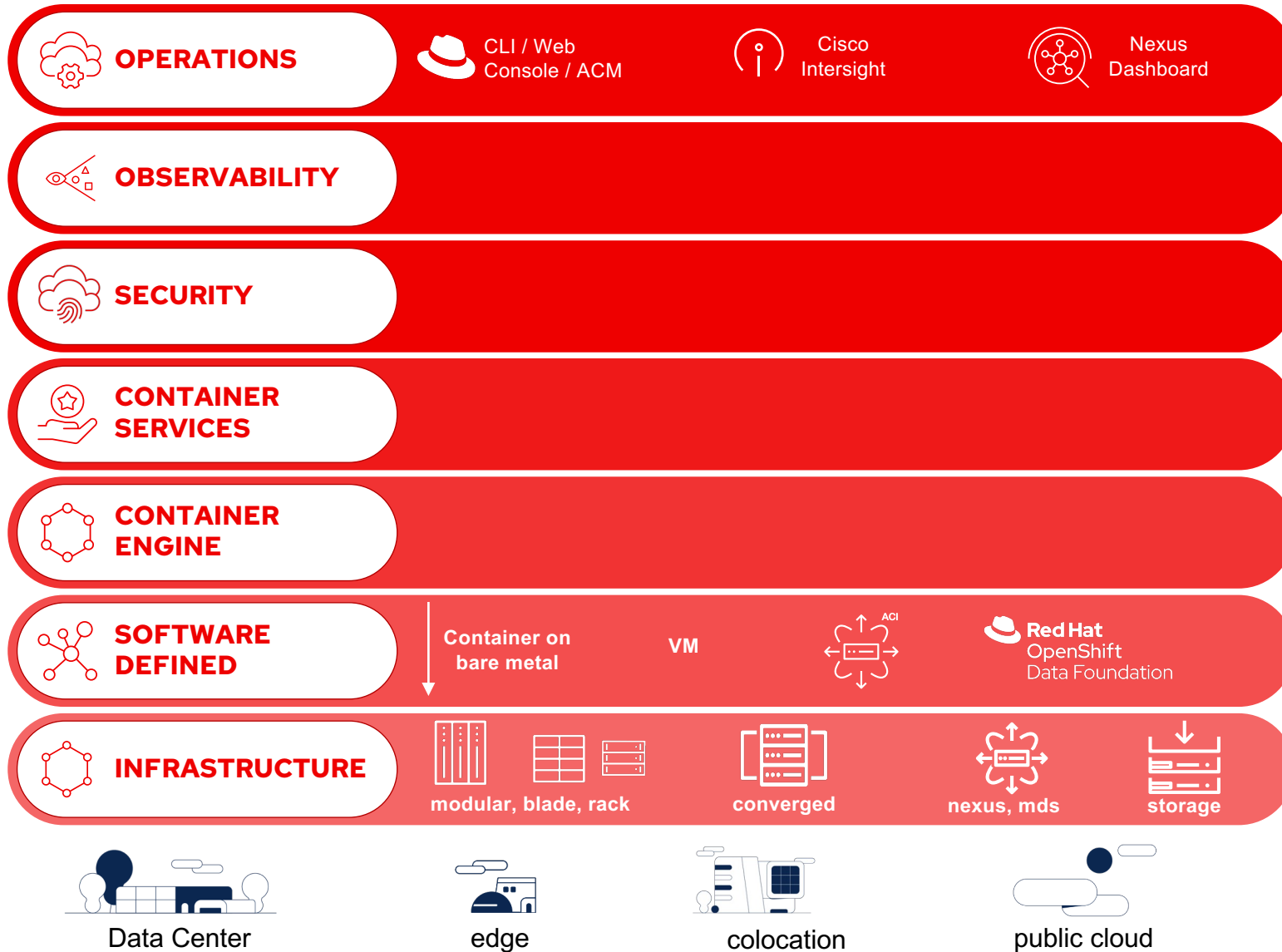
Automated advisories and continuous risk mitigation

Orchestrate workflows, APIs, and SDKs for day 0 -N operations

Future-proof with high performance compute, network, and storage



Architecture & Solution Components



Secure multi-tenancy

Software-defined storage optimized for containers

Automated connectivity and integration

Containers can run on bare metal, in virtual machines (VMs), or alongside VMs



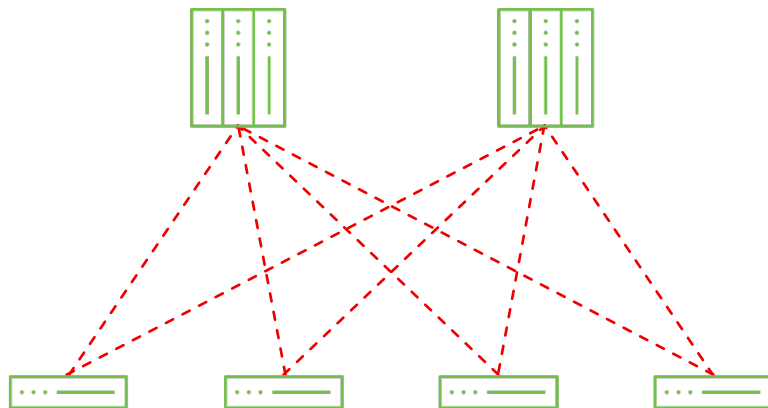
Red Hat Ansible with Cisco ACI

An infrastructure-as-code practice



ANSIBLE

140+ Ansible
modules for ACI



Automate fabrics end-to-end with Ansible

Comprehensive coverage of the ACI REST API with a common configuration management language

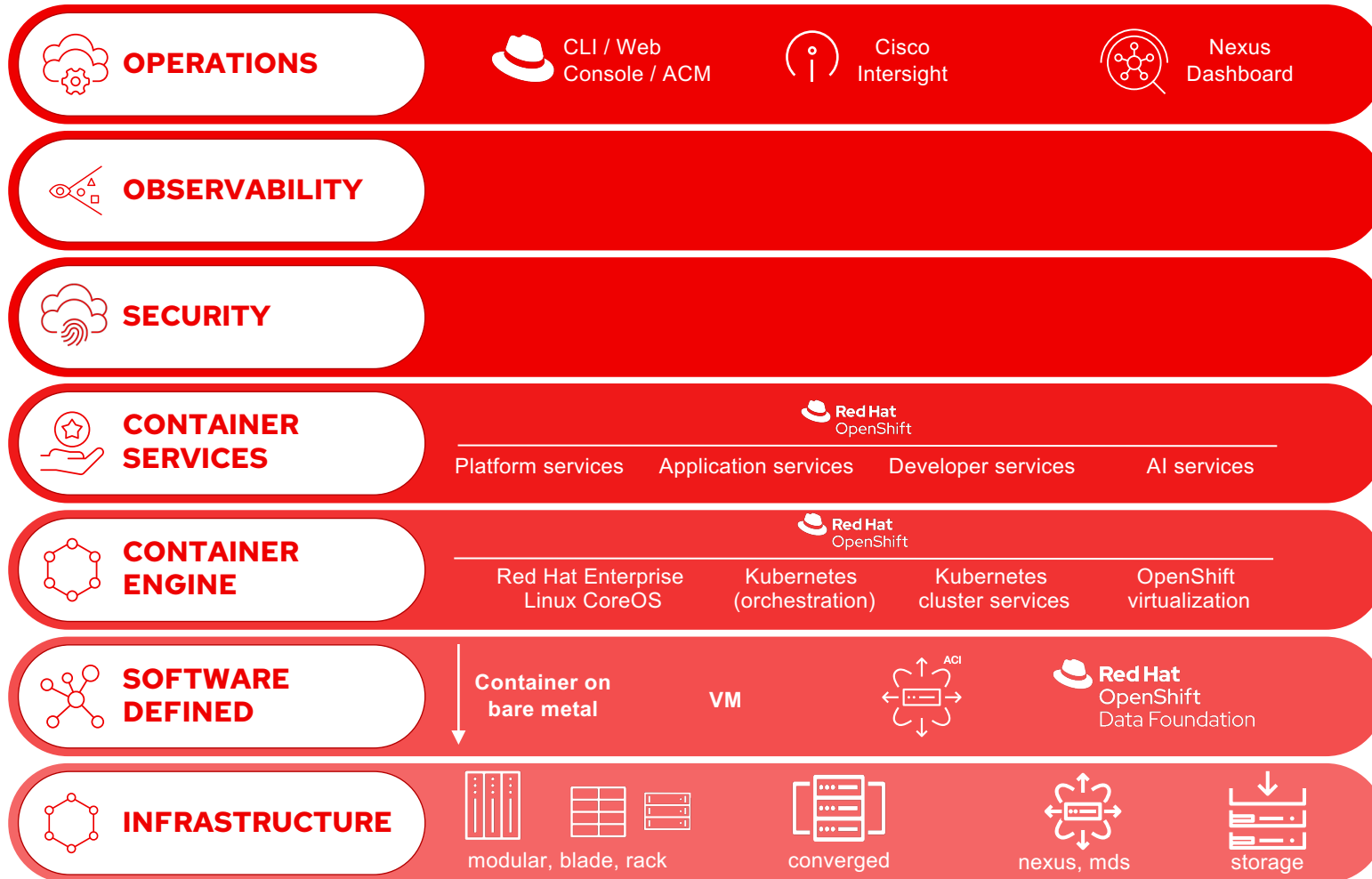
Leverage ACI's object model and single configuration API for 100s of Nexus 9000s

ACI as an on-prem anchor for hybrid cloud

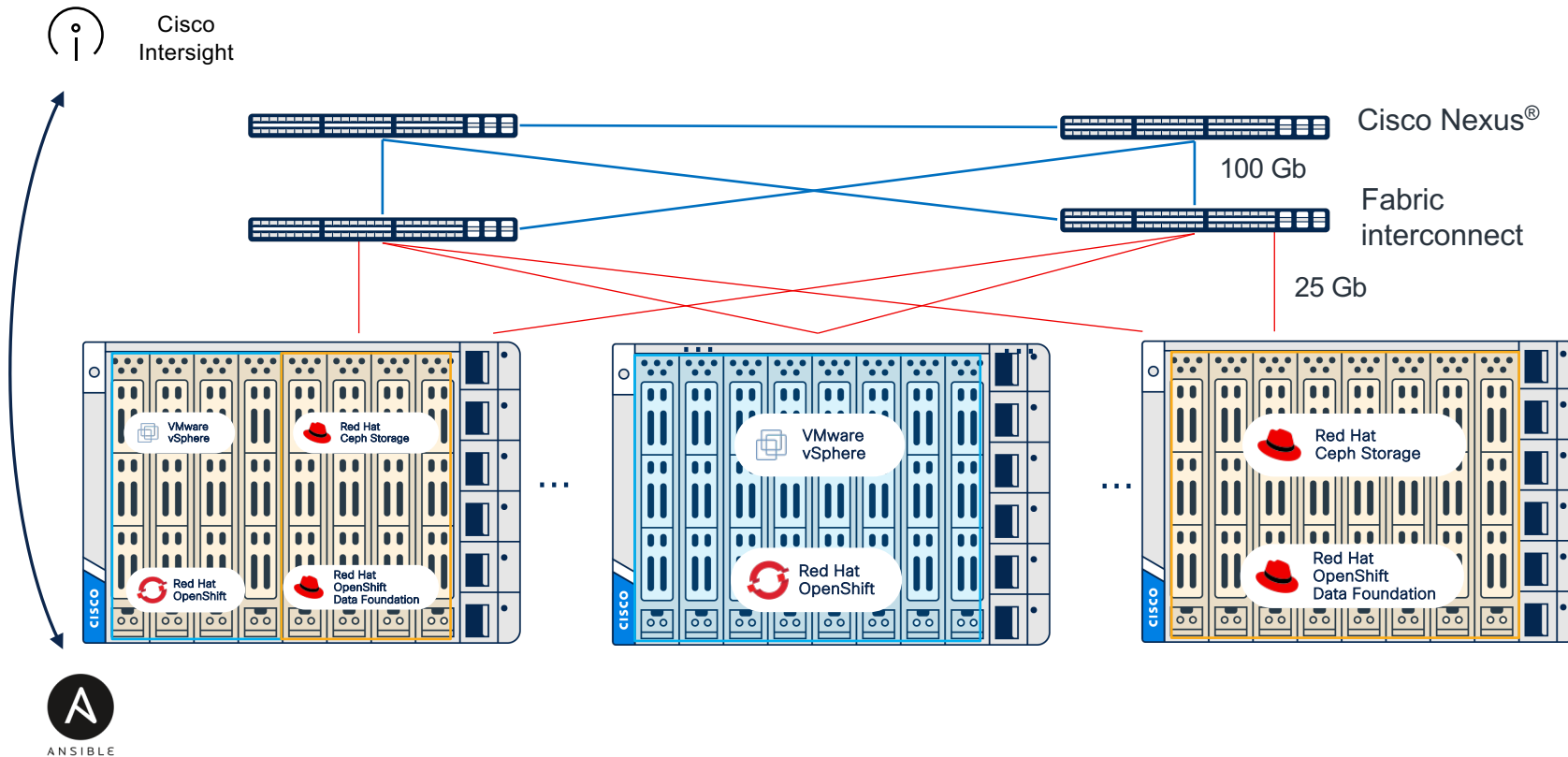
Certified by both RedHat and Cisco Cloud Networking BU



Combined Solution



UCS X-Series CVD with OpenShift and OpenShift Data Foundation



Complete solution **in just 7RU** with all the power you need

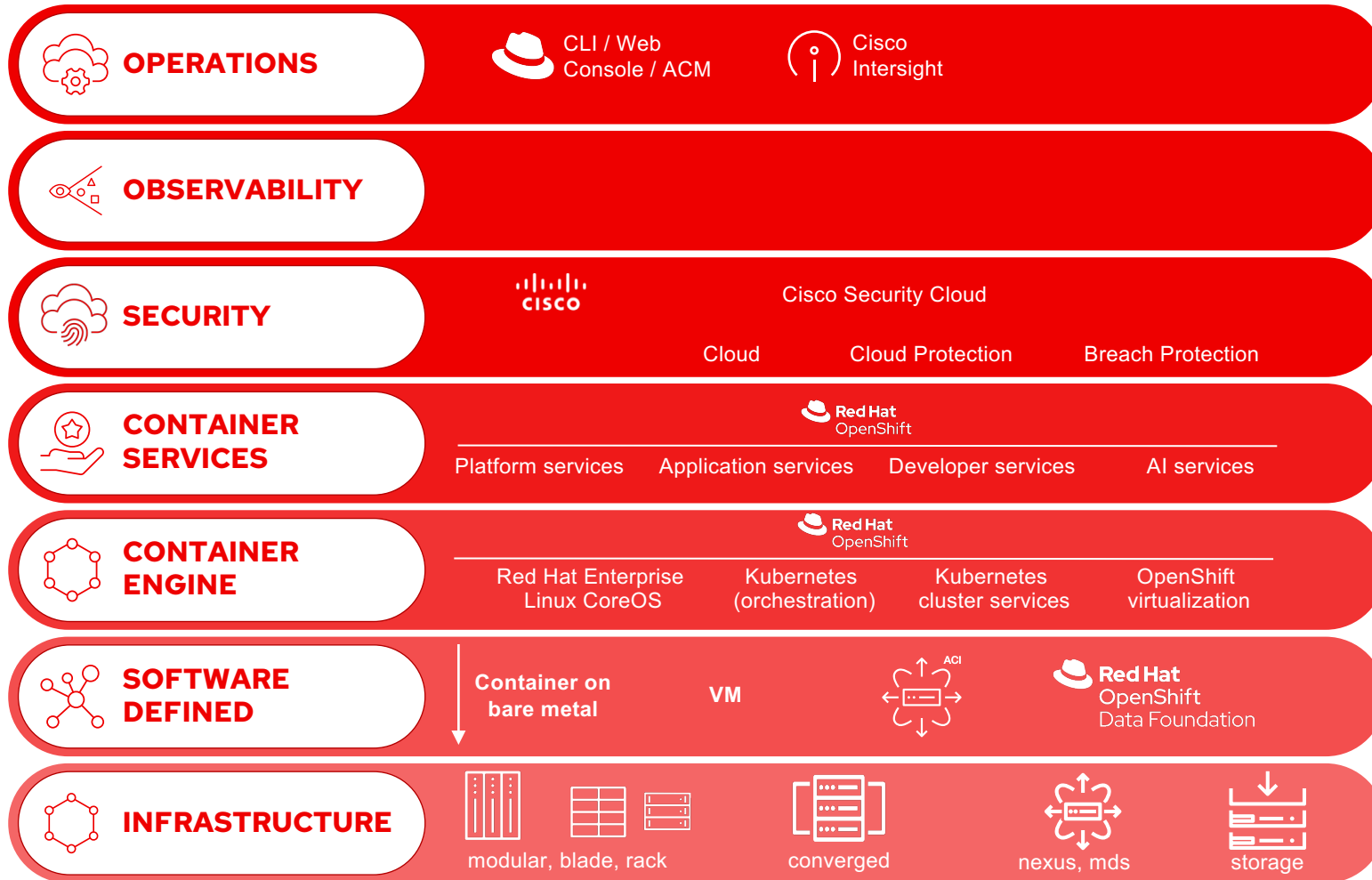
Quickly deploy and manage through **Cisco Intersight and Ansible**

Validated architecture could be replicated to deploy additional Cisco UCS X-Series chassis containing only **compute nodes**, or **storage nodes**, or a **mix of both**.

Solution available as **Cisco Validated Design** and on **GitHub**



Combined Solution



Protect every imaginable application workload - on-prem and in the cloud

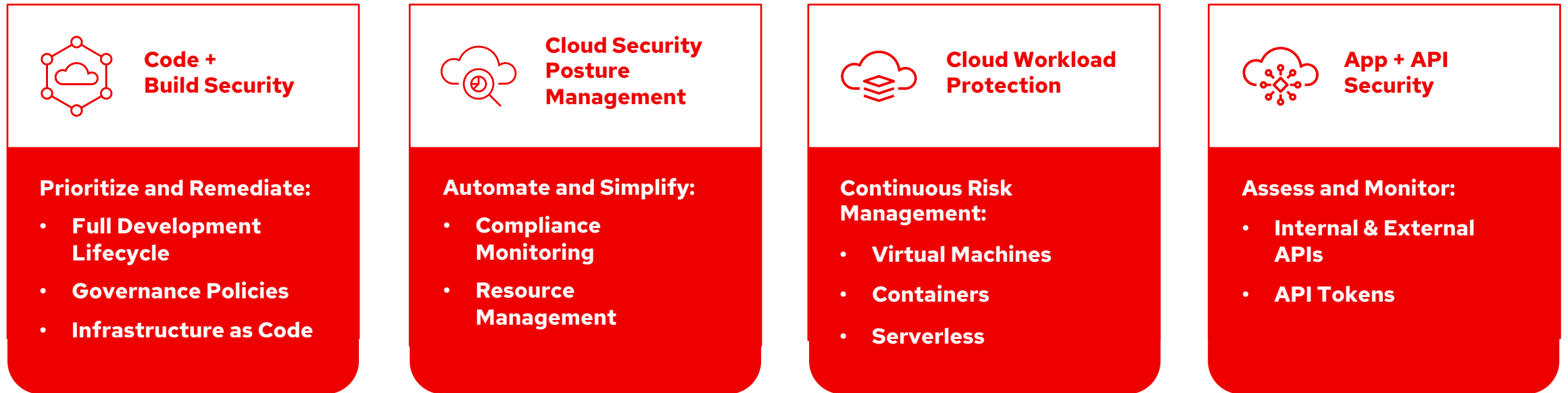
Provides CNAPP protection to multi-cloud workloads using graph-based context

Discover and protect all your cloud assets

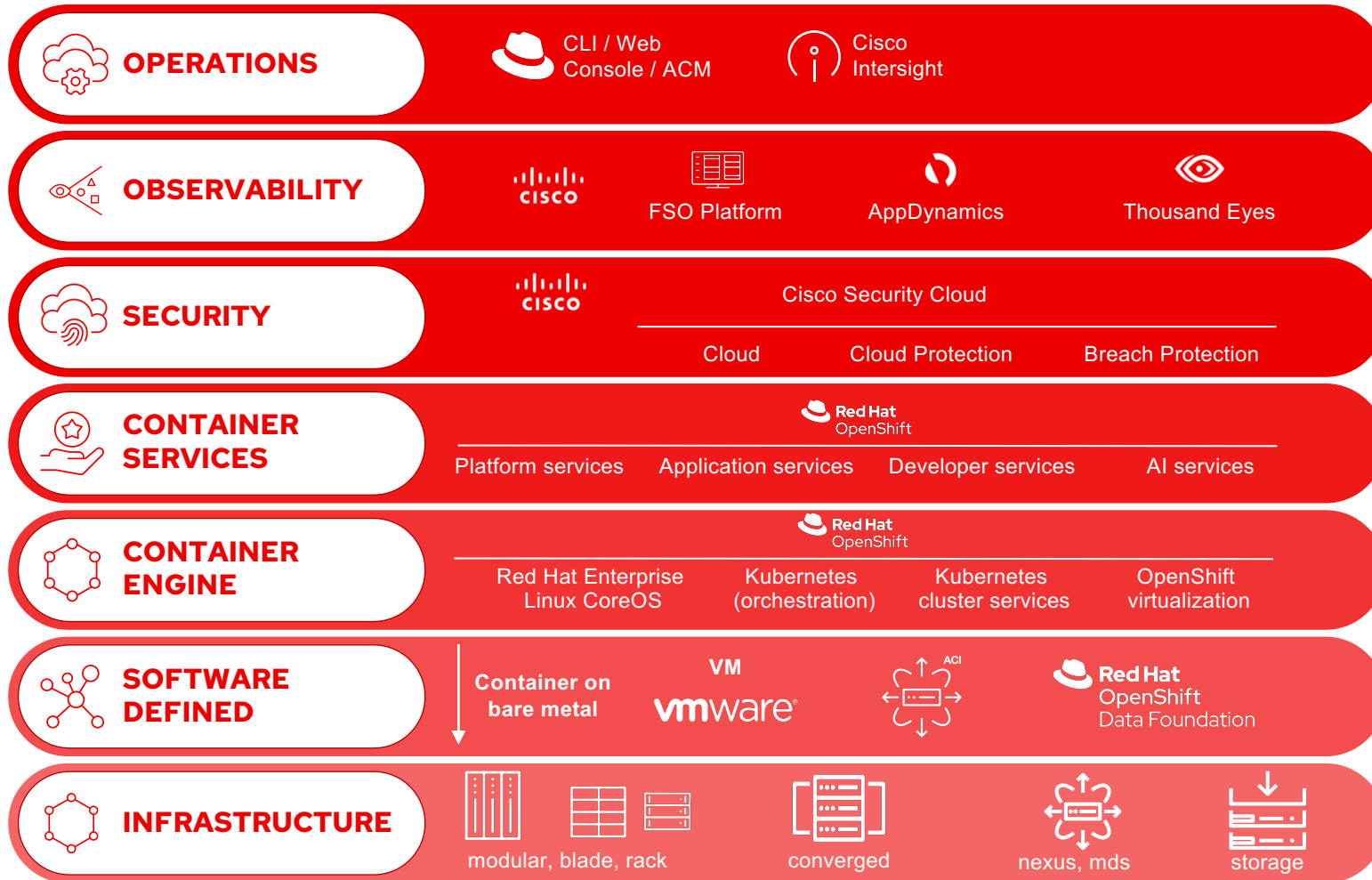
Zero-trust protection for hybrid-cloud workloads utilizing machine-driven policy lifecycle automation



Cisco Cloud Application Security



Combined Solution



Cisco FSO provides **real-time visibility**, insights, and recommended actions **enriched with business context**

Bring the **data that matters to your business** and see it in a **single, live UI**

Correlate telemetry (oTel) from across domains that impact your business



Full Stack Observability



Understand hybrid app performance

Understand modern app performance

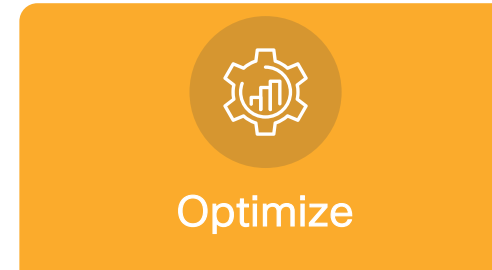
See how network and app performance impact customers

Uncover gaps in network visibility



Understand where hybrid apps are vulnerable

Understand modern app performance



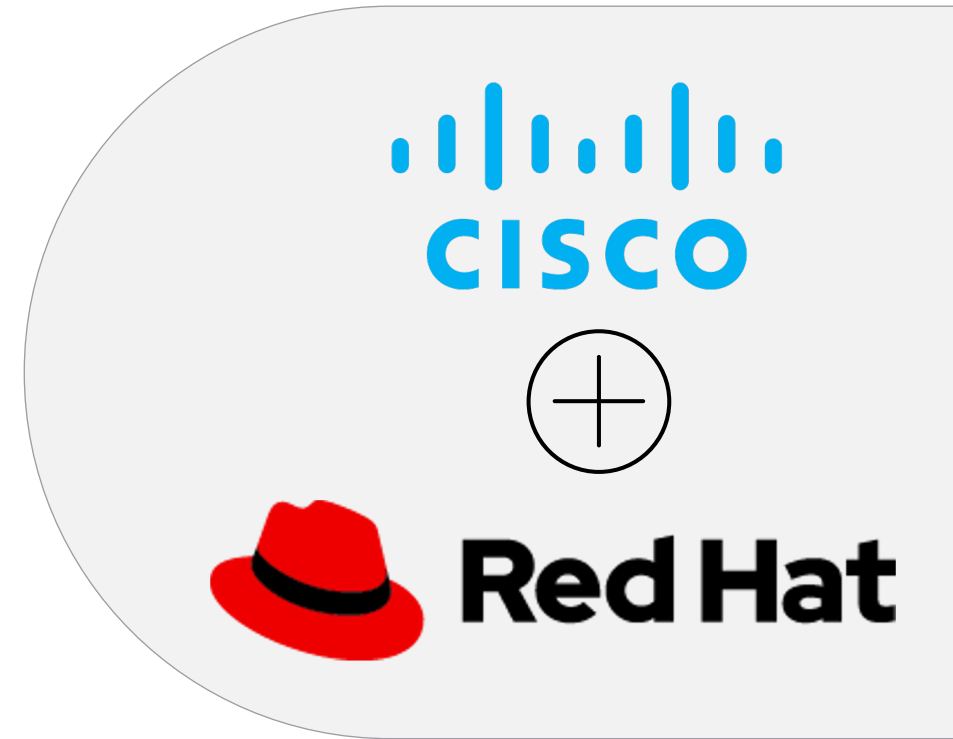
See how resources are allocated

Understand how to optimize costs








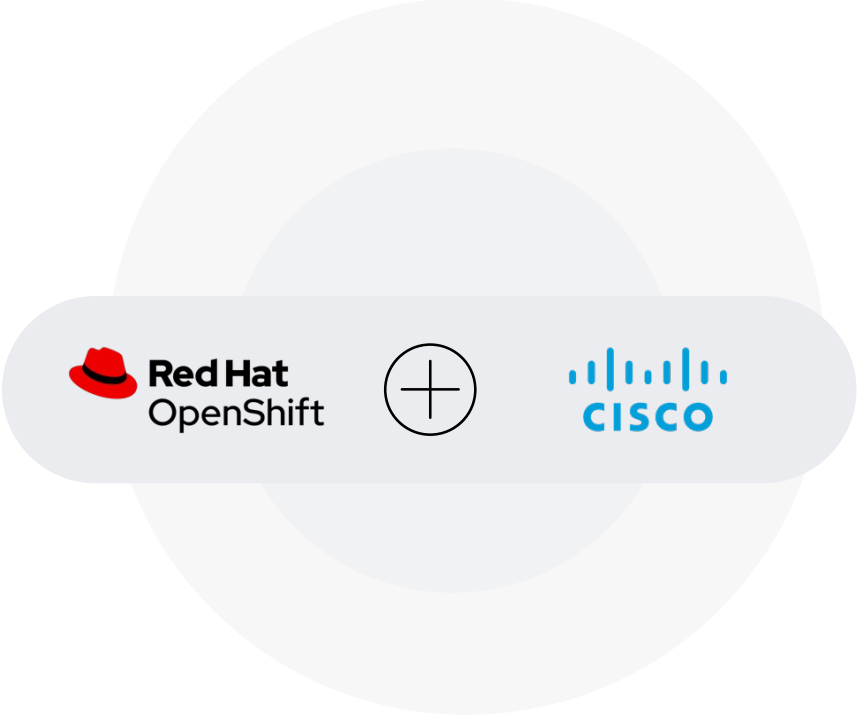
Summary






- The **Cisco Validated Design (CVD) solution** helps organizations simplify the deployment and management of their container infrastructure.
- A **rich collection of Ansible automation playbook** managed and supported by Cisco:
 - Cloud and on-prem networking
 - Compute
- **Sustainable and modular infrastructure** to support any workload, managed by Intersight
- **Future-proof platform** architecture with simplified operations



Cisco + Red Hat deliver measurable business value

- 636%**
ROI of five years 
- 20%**
higher developer productivity 
- 54%**
reduction in operational costs 
- 3x**
more features per year 
- US\$21.6M**
higher revenue per year per organization 



-  **27%**
reduction in recurring software cost
-  Up to **73%**
reduction in hardware operating costs
-  **39%**
reduction in hardware maintenance costs
-  **50%**
lower consumption of raw materials
-  **30%**
lower total energy consumption

Source: IDC White Paper, sponsored by Red Hat, "[The Business Value of Red Hat OpenShift](#)", doc # US47539121, March 2021.



Cisco Validated Design



Cisco ACI and OpenShift integration: APIC Containers Plug-in



Cisco ACI and OpenStack integration: APIC OpenStack Plug-in



FlexPod Datacenter with Red Hat OpenShift Container Platform and NetApp Astra Design Guide



FlashStack for Cloud Native with Cisco Intersight, Red Hat OpenShift, and Portworx Enterprise Design



Cisco Validated Design



Red Hat OpenShift Container Platform with OpenShift Data Foundation on Cisco UCS X-Series



Automation for Hybrid and Multicloud from Cisco and Red Hat White Paper



Data Center Automation Solution from Cisco and Red Hat Ansible White Paper



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Q&A?



intel.



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Grazie!



intel.

