CISCO Engage | Tech Day Milwaukee

Securing The Network: A look at Hybrid Mesh Firewall

Adding Security, No Matter The Location

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Date placeholder

Agenda

- ✓ What is Hybrid Mesh Firewall?
- ✓ Security Cloud Control
- ✓ Hybrid Mesh Firewall Components
- ✓ Cisco SD-WAN & SASE

Secure Cloud Control

Security Cloud Control

Define policy once and enforce anywhere

Cisco Firewalling | AI Defense | 3rd Party Firewalls

Secure Firewall | Secure Workload | Hypershield

Secure Access (FW as a service) | Secure Router NGFW

Unified AI Assistant:
Simplify policy administration **by up to 70%**

NEW

Security Cloud Control

Industry's first multi-vendor intent-based policy

Absorb and optimize existing rules

Change enforcement points, not policy

No rip and replace

What Is Hybrid Mesh Firewall

Firewalling needs to evolve to meet today's challenges

	Stateful Firewall 1990-2007	Next Generation Firewall 2008-2024	Hybrid Mesh Firewall 2025-
Drivers	Growing internet access Basic attacks Need perimeter control	Rise of SaaS/cloud apps Mobile users App layer threats	Increasingly distributed apps Rise of AI Zero trust imperative
Needs	Tracks connection state Filters by IP/port Basic traffic control	App & user aware Integrated threat prevention SSL/TLS decrypt	Hyper-distribution Integrated AI protection AI-powered management

Key challenges we’re solving

Fragmented segmentation policy can’t keep up with change

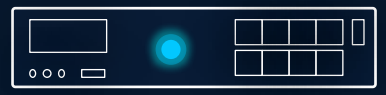
Visibility and security gaps for modern cloud and AI apps

Attackers move faster than patching cycles

Hybrid Mesh Firewall: Security at the speed of change

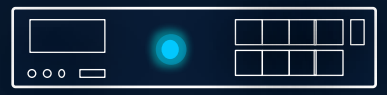
Intent-based policy in Security Cloud Control

Hypershield



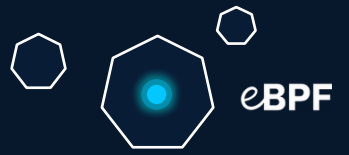
Cisco Firewalls

Physical | Virtual | Cloud | FWaaS



3rd Party Firewalls

Smart Switches



Workload Agents

Write once, proven enforcement everywhere

Single intent-based policy drives multi-domain segmentation

Modern AI app security: deep visibility and AI guardrails

Shrink exposure window with runtime shielding

Near-limitless scale for AI readiness

Cisco Secure
Firewall 6100 Series

Scales linearly to 8Tbps of L7, appID, threat inspection

Changes math per protected Gbps: 80% less space, 60% less power, 1/3 the cost

No-compromise security: encrypted traffic performance, zero-day protection

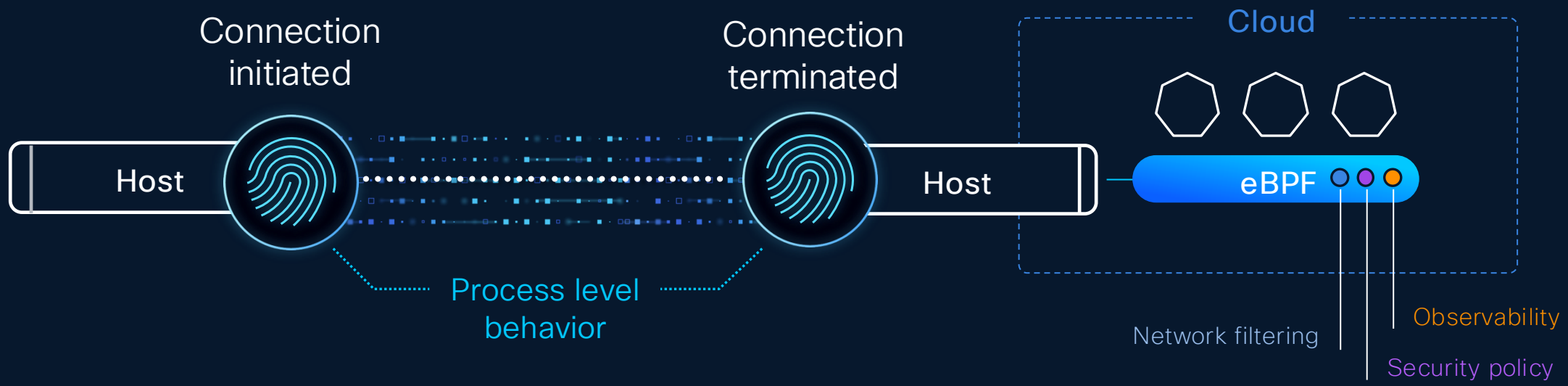
Fusing security in

Single appliance, dual personality

Greater visibility, fewer dropped packets

More easily scale security as traffic increases

Process-level visibility for cloud and containers

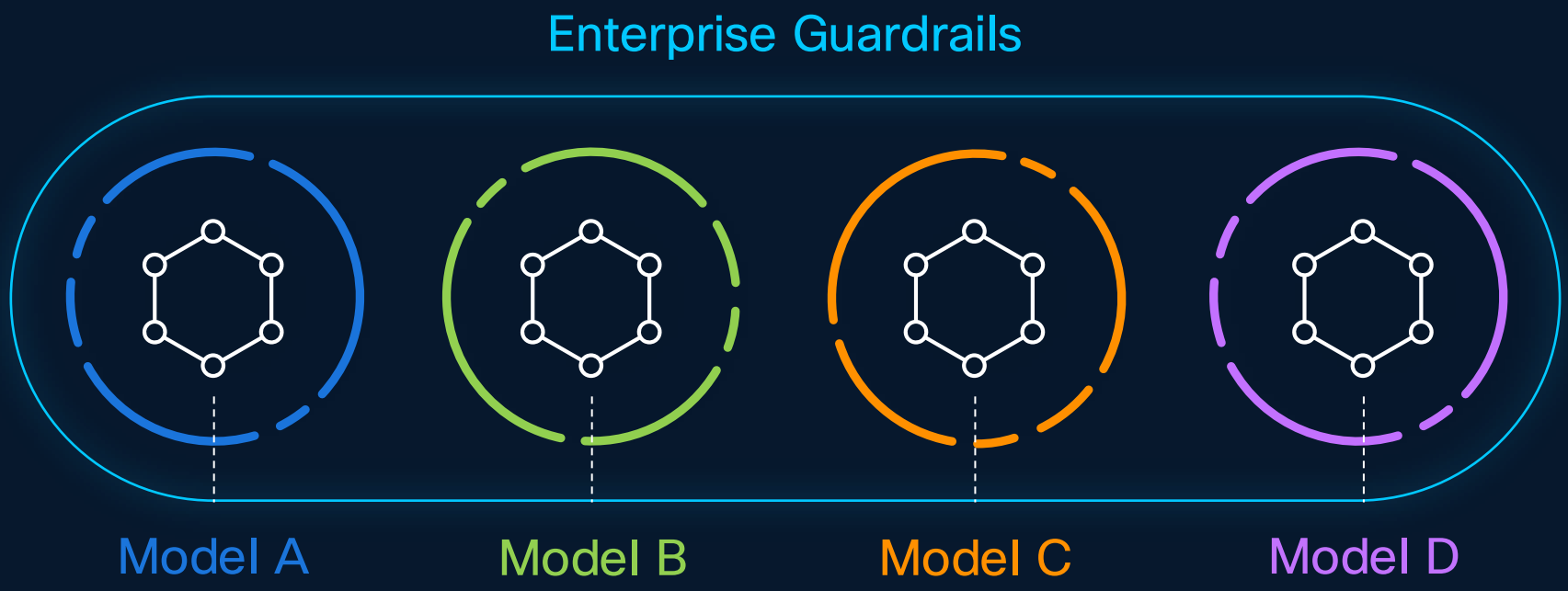


See and control the inner workings of modern apps

Segment effectively as apps change

Shield vulnerabilities while you patch

Enterprise AI guardrails provide a common security layer



Discover AI models and apps

Continuously identify AI vulnerabilities

Enforce guardrails in Hybrid Mesh Firewall

Secure Firewall Physical Platforms

Cisco Secure Firewall 200 Series

Advanced on-box threat inspection for branch

1.5 Gbps encrypted threat protection

Up to 3x price-performance

Integrated SD-WAN

AVAILABLE JAN 2026

Cisco Secure Firewall 6100 Series

Highest performance density for AI data centers

285 Gbps per rack unit

Line rate advanced threat protection

Modular scalability

AVAILABLE JAN 2026

Firewall price-performance leader

Top to bottom

Branch — Campus — Data center — Cloud

NEW

200 Series

1 Model
Firewalling + IPS

Up to 1.5 Gbps

1200 Series

6 Models
Firewalling + IPS

Up to 18 Gbps

3100 Series

5 Models
Firewalling + IPS

Up to 45 Gbps

4200 Series

3 Models
Firewalling + IPS

Up to 140 Gbps

NEW

6100 Series

2 Models
Firewalling + IPS

Up to 570 Gbps

Public/Private

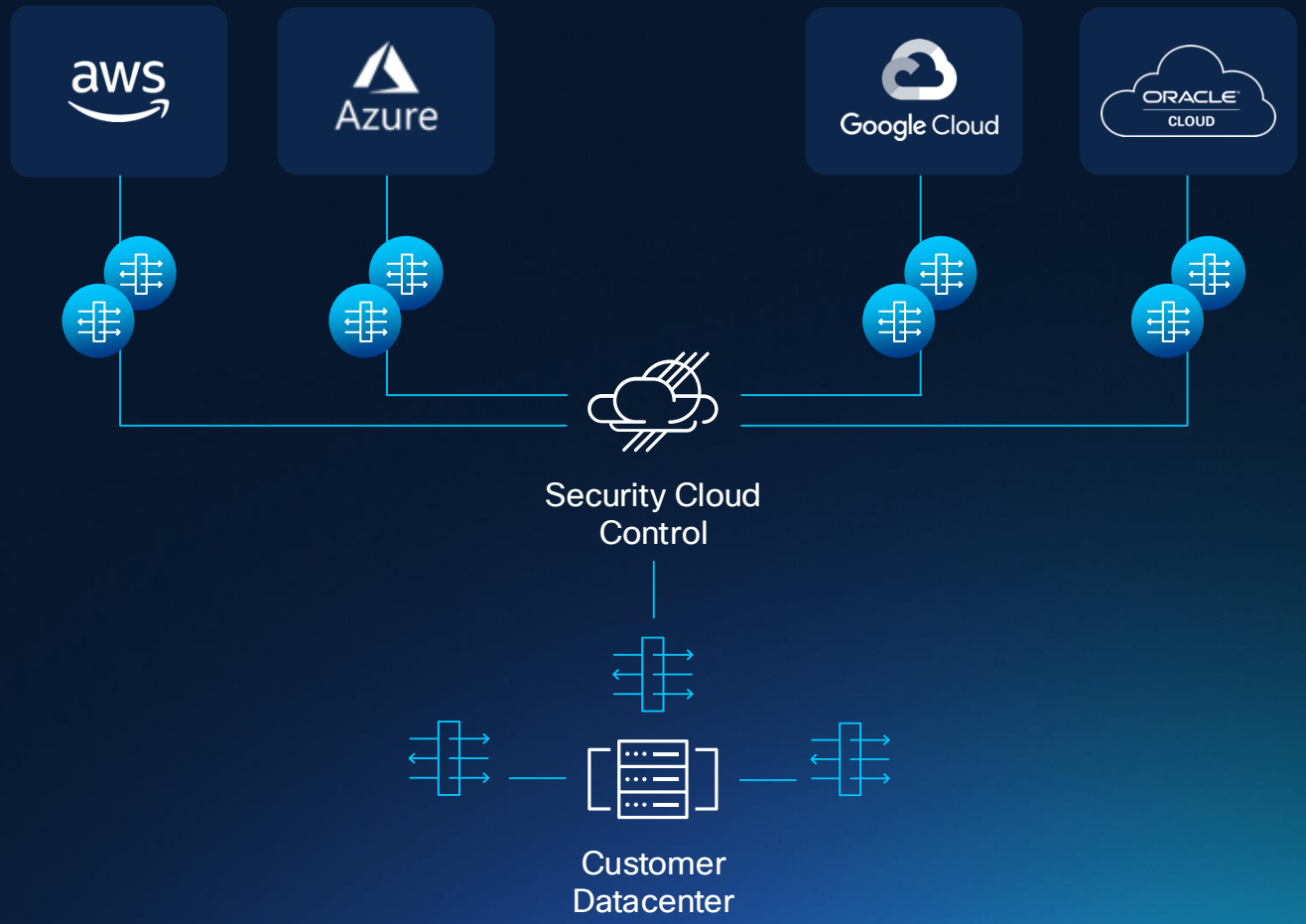
20+ cloud variants

HyperFlex
NUTANIX
KVM
openstack
vmware ESXi
aws
Microsoft Azure
Google Cloud Platform
alkira
rackspace technology.
EQUINIX
Alibaba Cloud
ORACLE CLOUD INFRASTRUCTURE

cisco

Firewalling at scale across multicloud environments

Secure Firewall is now cloud-native



Cloud agnostic automation and orchestration

Automated Deployment
Auto-scaling
Self-healing

Cisco Encrypted Visibility Engine

Visibility to malicious flows in encrypted traffic without decryption

Machine learning (ML) technology

Processes 1 B+ TLS fingerprints

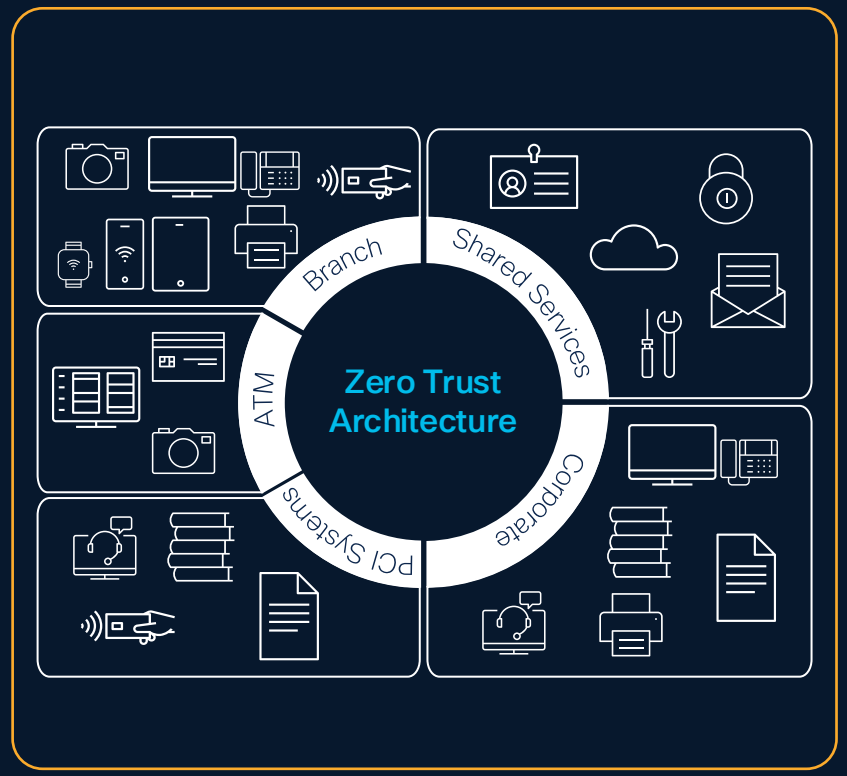
Processes 10 K+ malware samples daily

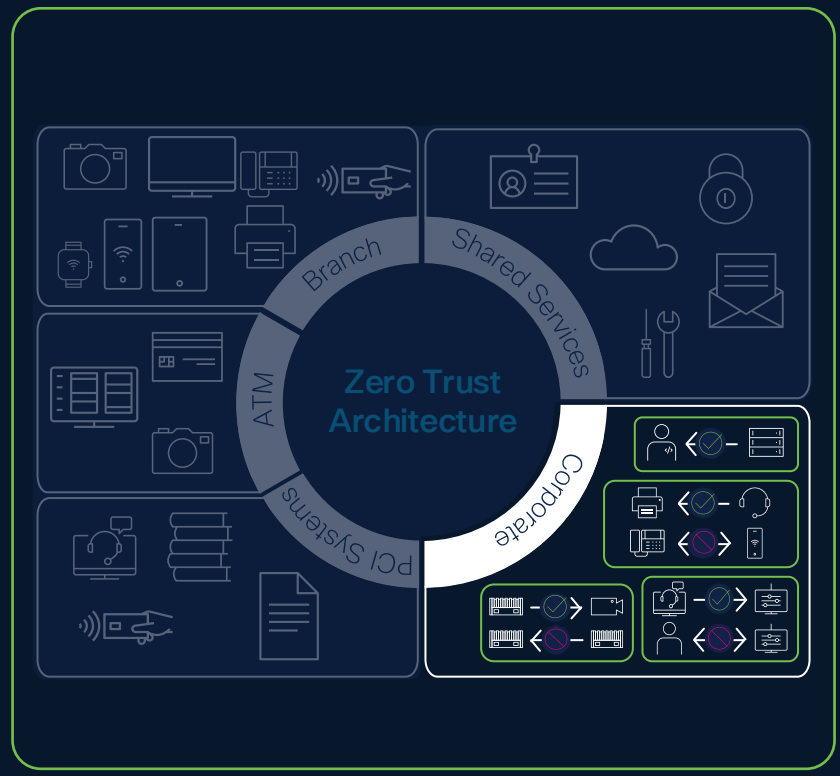
EVE changes the game on decryption

Risk-based intelligent decryption, powered by Cisco Encrypted Visibility Engine (EVE)

Cisco Secure Workload

Compliance and reduction of attack surface with Microsegmentation





Visibility → Segmentation → Microsegmentation

Top Segmentation Use Cases

Prevent and block **lateral movement**

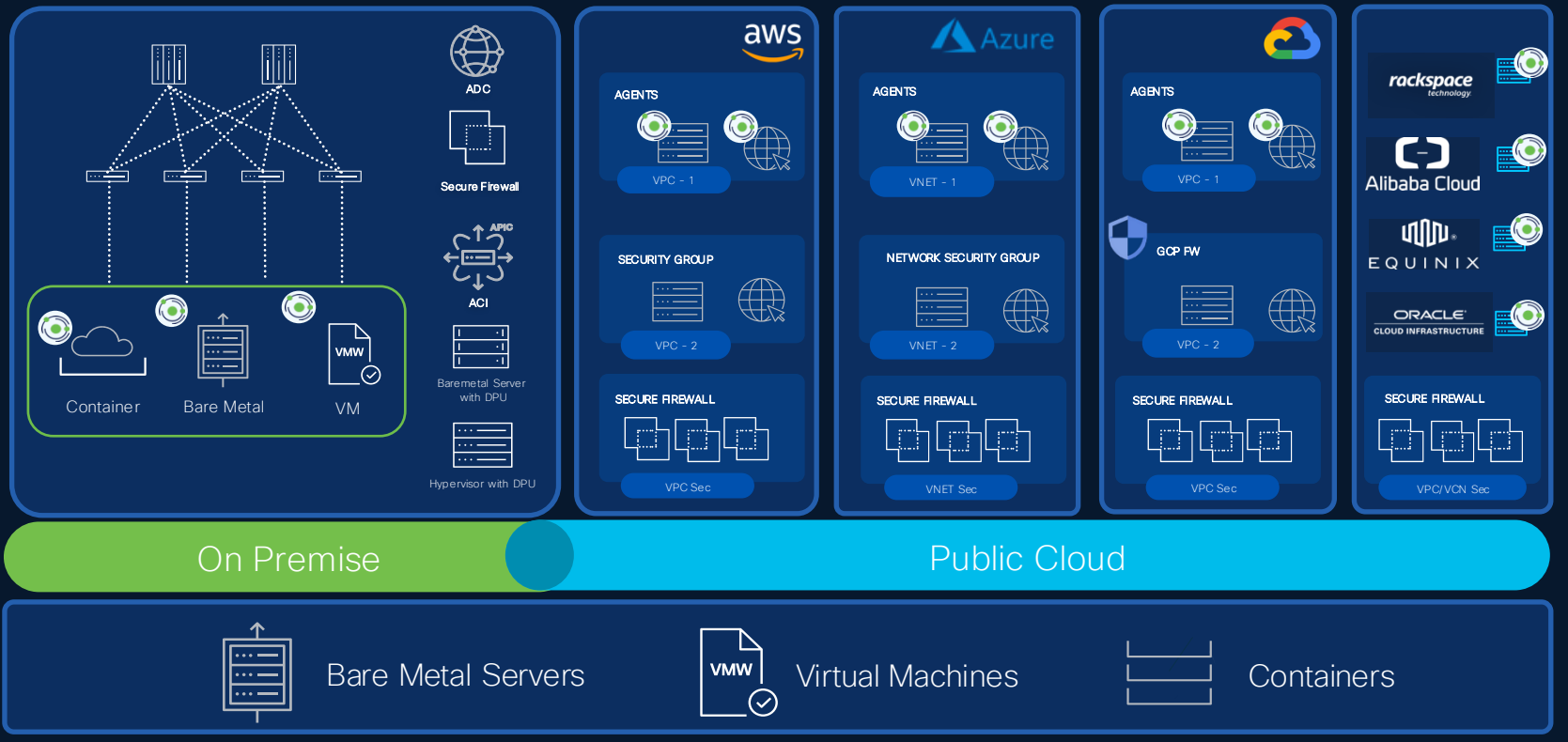
Increase operational efficiency by converting NGFWs to **SGT-based SGFWs**

Big Picture

Agent

- Anywhere
- Windows Desktop
- Windows Server
- IBM AIX
- Oracle Solaris
- Oracle Linux
- Centos, Rocky, Alma Linux
- Ubuntu, Debian
- SUSE Linux
- RedHat Linux
- Amazon Linux
- OpenShift
- Kubernetes

Consistent microsegmentation from on-premises to the cloud



On Premise | Public Cloud

Bare Metal Servers | Virtual Machines | Containers

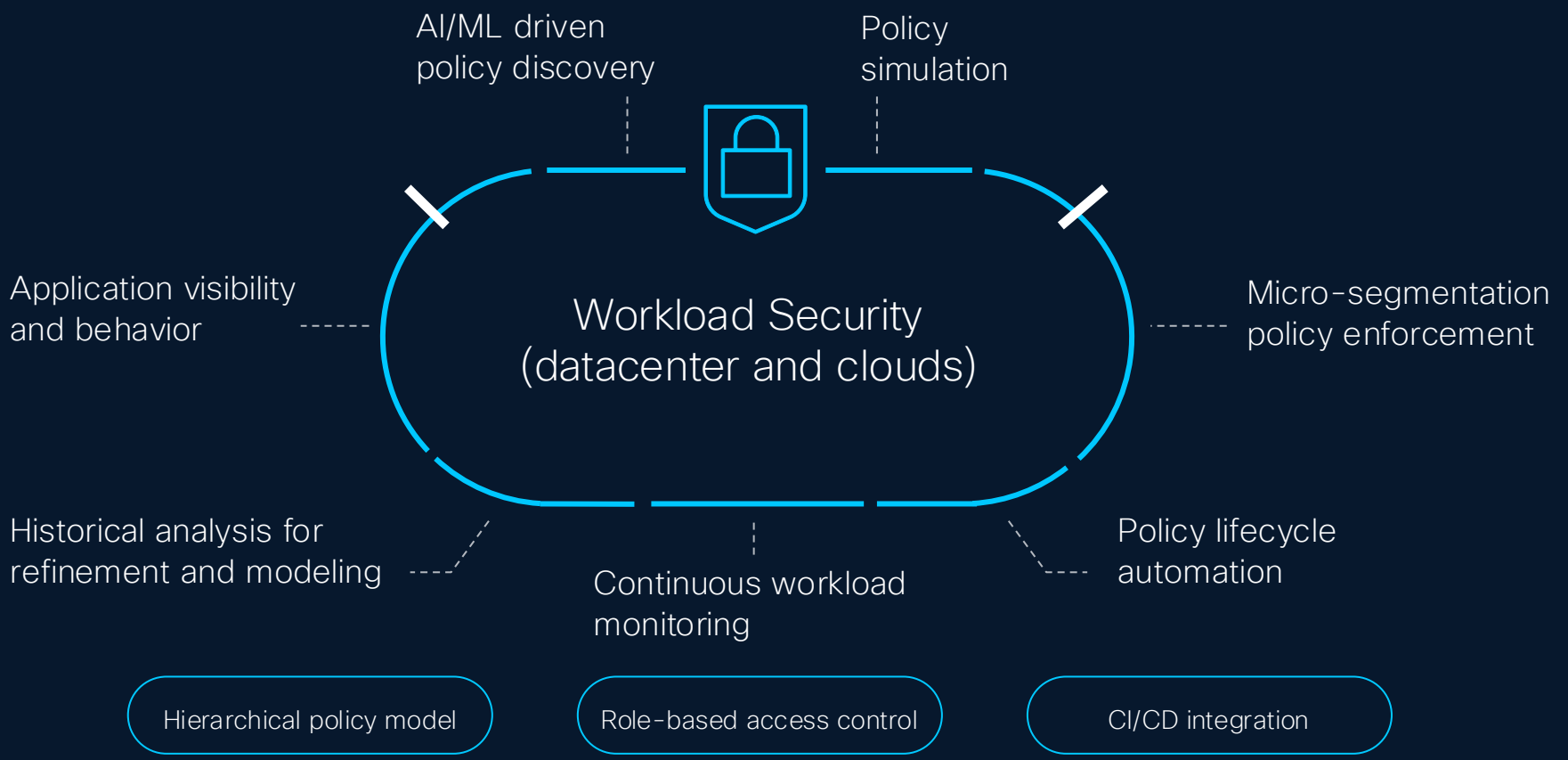
Agentless

- On-Prem
- Loadbalancer (ADC)
- Firewalls
- Data Center Fabric (SDN)
- NVIDIA Smart NIC (DPU)
- AWS, GCP, Azure
- Security Group
- Network Security Group
- Cloud Network Firewall
- Multicloud Defense*

- User Identity
- Tags and Labels
- Vulnerability
- Threat Feed
- Application Encryption
- Domain/FQDN
- Cisco Security Risk Score

* - In Roadmap

Secure Workload



Stop lateral movement

Zero trust microsegmentation protects application workloads across the data center and clouds from one solution

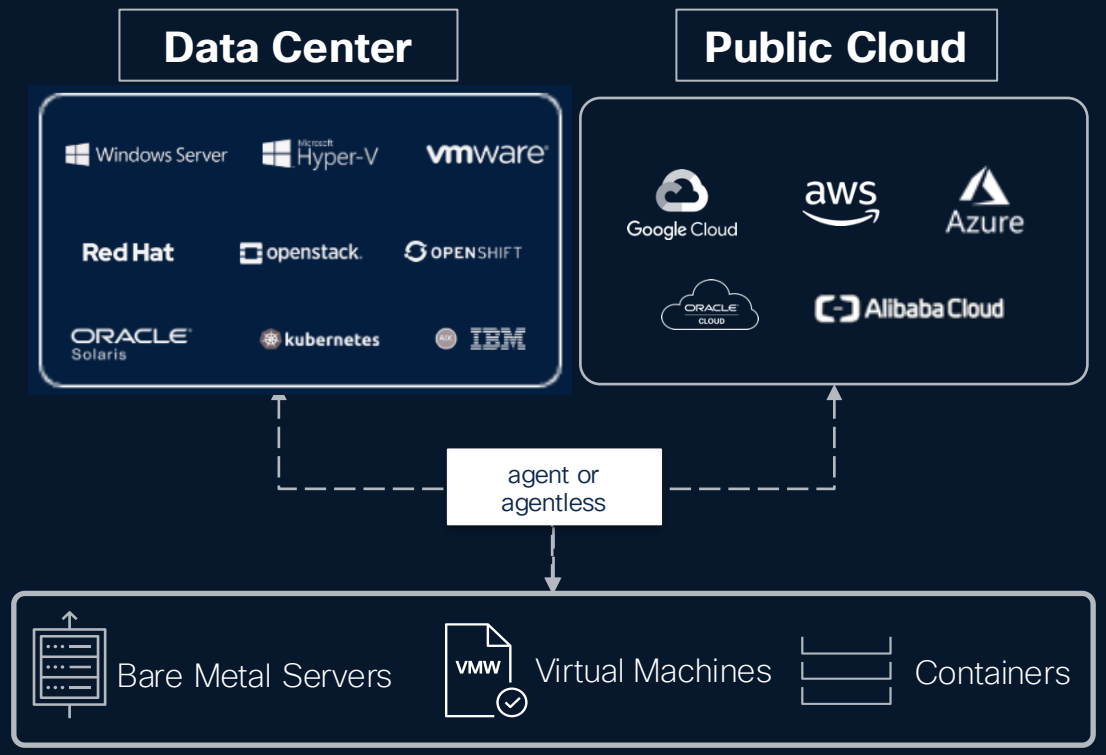
Quickly improve security posture

Understand application behavior and enact best-practice hardening policies such as blocking insecure app to app communications

AI/ML tackles tasks that are beyond human scale

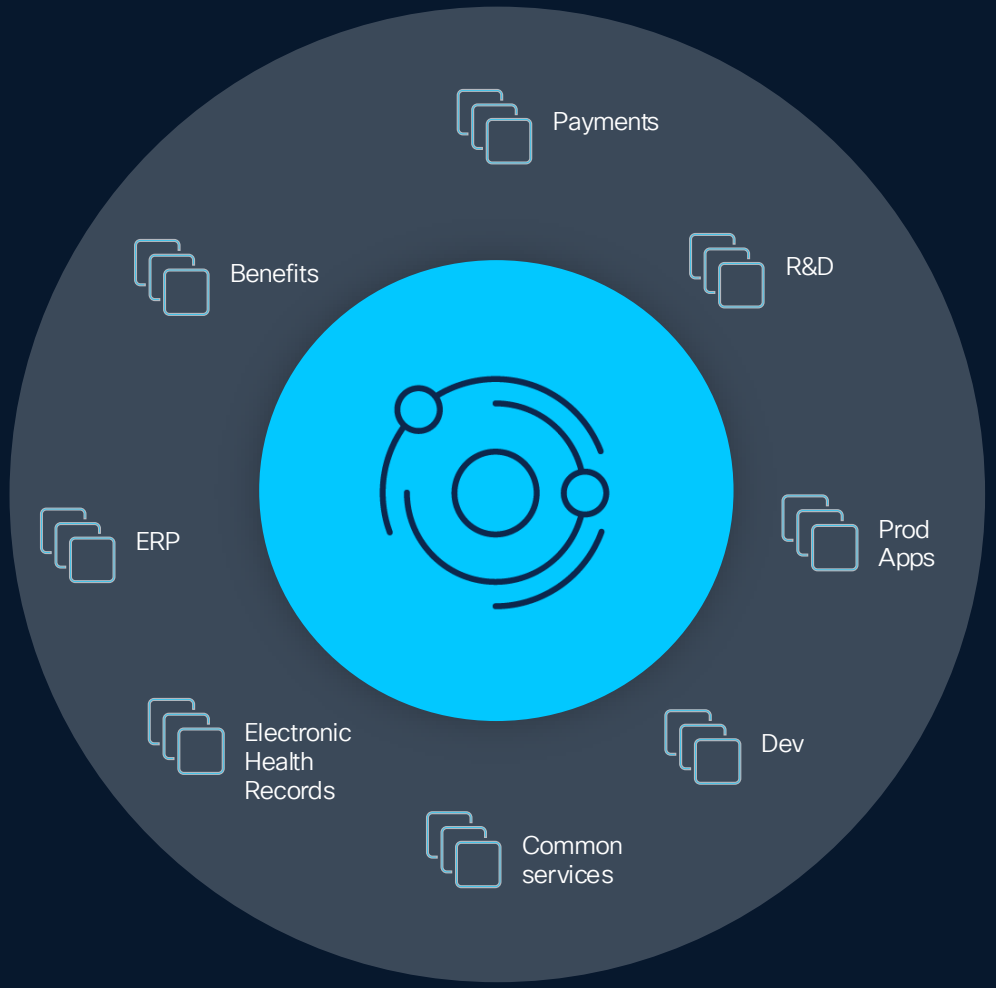
Powerful AI/ML driven policy discovery recommends policies tailored to the unique environment and automation ensures consistency and accuracy

Visibility



- ✓ Discover applications, identify interactions, and understand vulnerabilities
- ✓ Discover applications across on-prem data center, public and private cloud with agents and/or agentless approach
- ✓ Get process-level visibility into Microsoft Windows, Linux, Solaris, AIX, and Container infrastructure
- ✓ Agentless discovery through pre-built integrations with hypervisors, cloud providers, CMDB, IPAM, IDP, DNS, VMM, etc.

Application protection

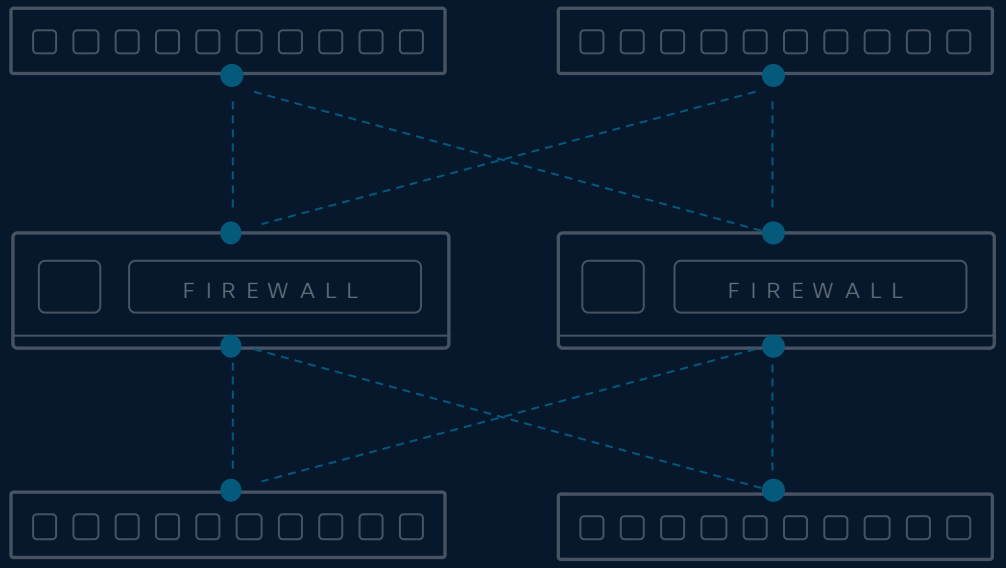


- ✓ Enforce micro-segmentation throughout the network stack: SDN, edge firewall, subnet, application
- ✓ Use vulnerability risk score for access policies to change
- ✓ AI/ML-driven policy review to eliminate stale or overlapping policies
- ✓ Use policy templates to accelerate micro-segmentation aligned with NIST and CISA frameworks

Hypershield

Unprecedented ROI

6 boxes



2 boxes

Cisco Smart Switch

Power ↓

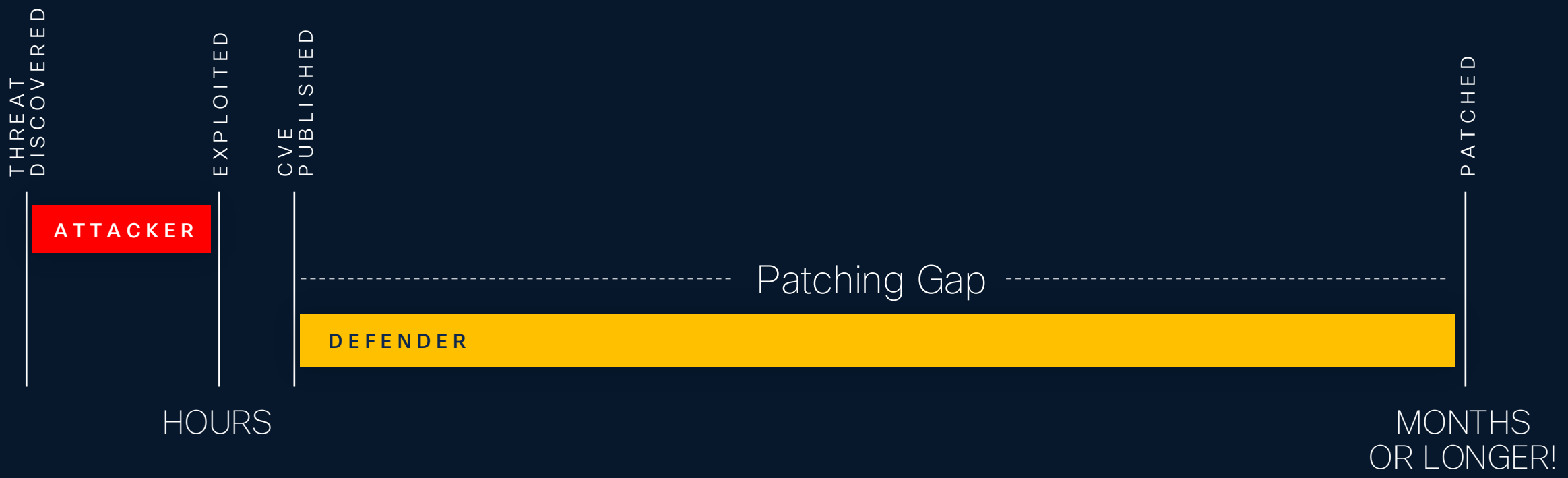
Software licenses ↓

Optics ↓

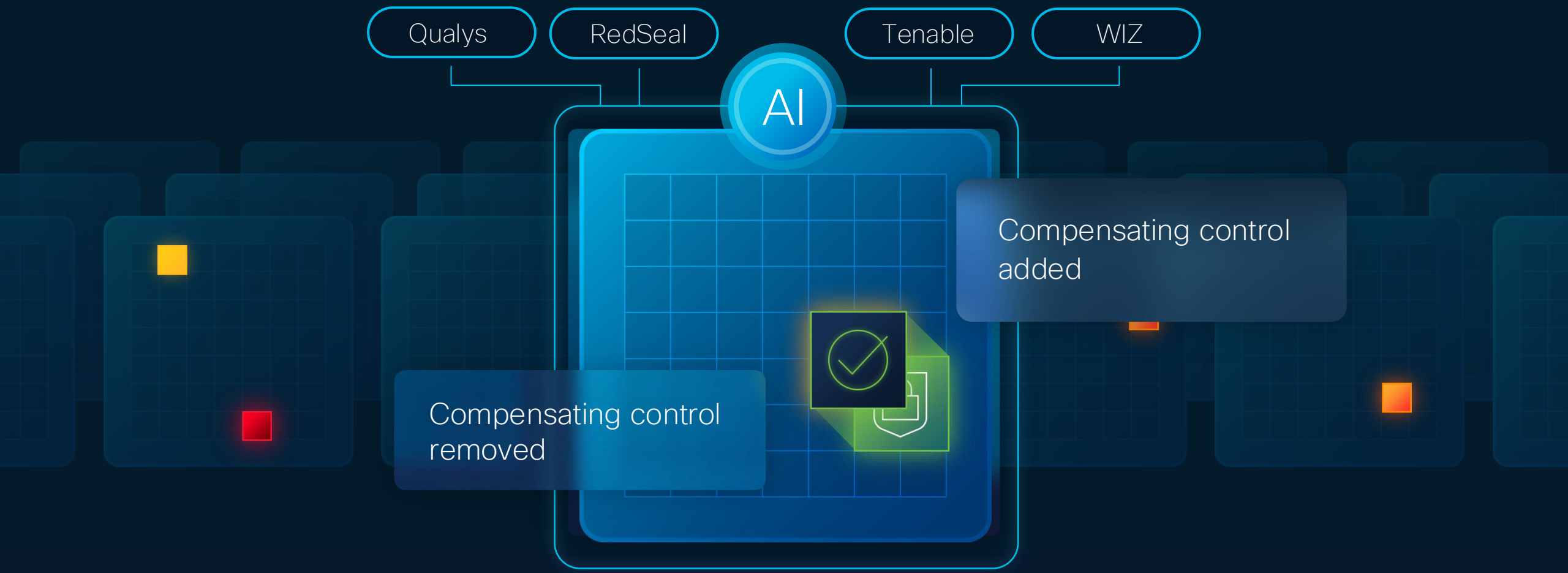
Support contracts ↓

Cables ↓

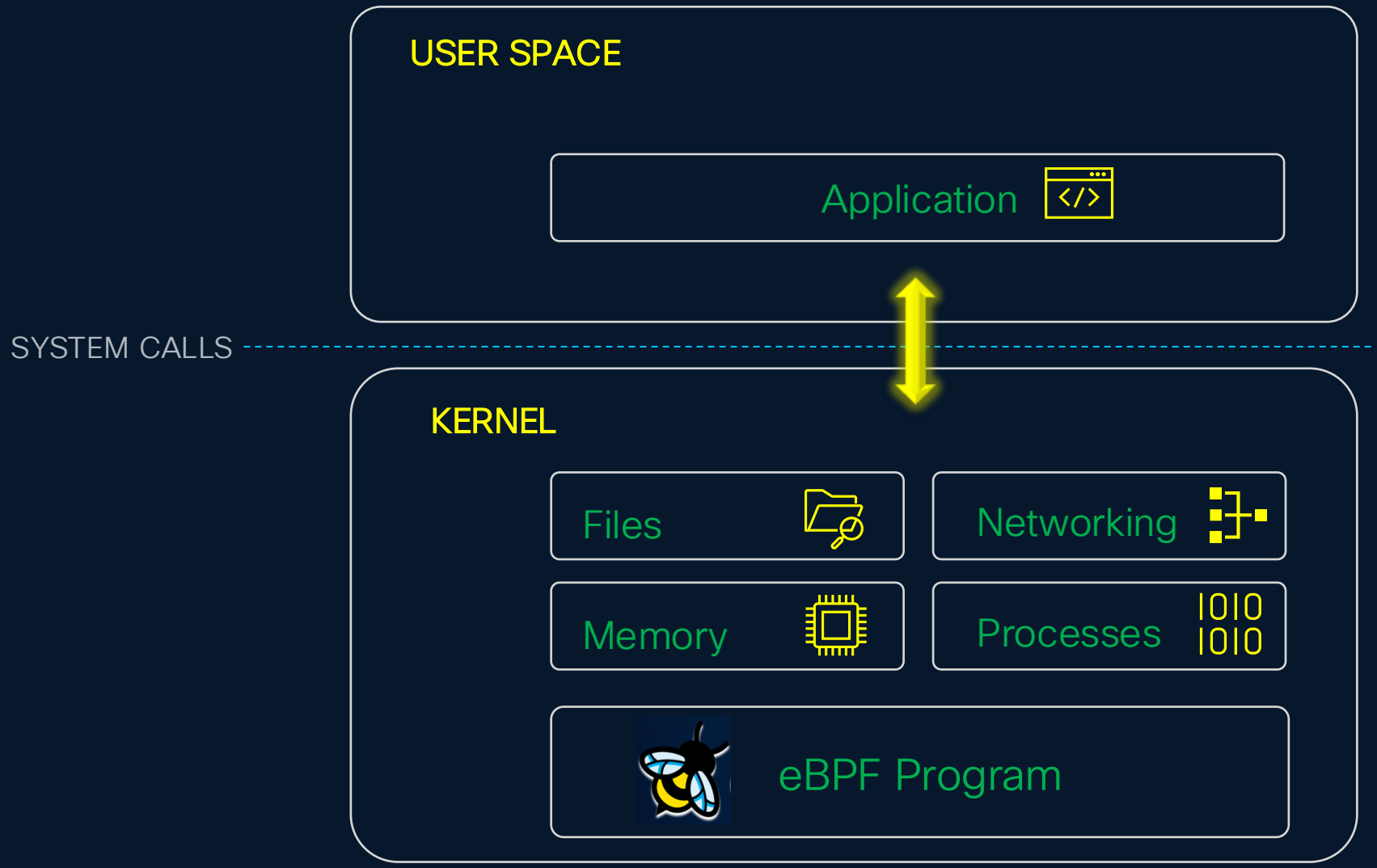
Patching is hard



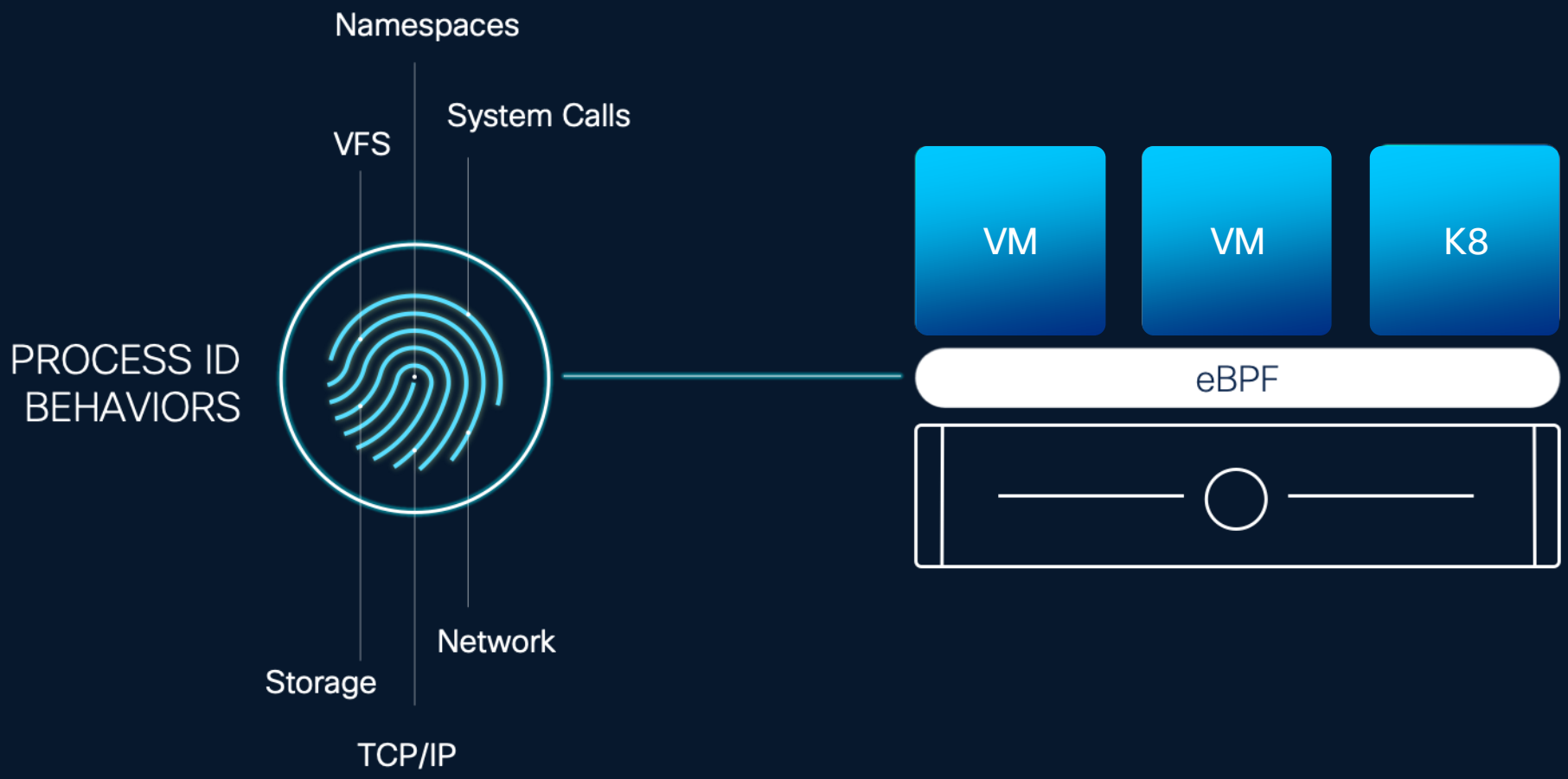
Distributed Exploit Protection



Hypershield Building Blocks – eBPF



eBPF Provides Visibility Deep into the Workload



We also understand things

OS version | Mac ID | OPSWAT checks | DHCP | Traffic flows | DNS and certificate

Hypershield Building Blocks – eBPF

Source: https://isovalent.com/blog/post/2021-08-ebpf-foundation-announcement/

Customers in every industry use eBPF in production

Google uses eBPF for security auditing, packet processing, and performance monitoring

Netflix uses eBPF at scale for network insights

Android uses eBPF to monitor network usage, power, and memory profiling

S&P Global uses eBPF through Cilium for networking across multiple clouds and on-prem

Shopify uses eBPF through Falco for intrusion detection

Cloudflare uses eBPF for network security, performance monitoring, and network observability

Security fused into the Network

Catalyst SD-WAN & SASE

New threats attack networks directly

Attacks on Infrastructure

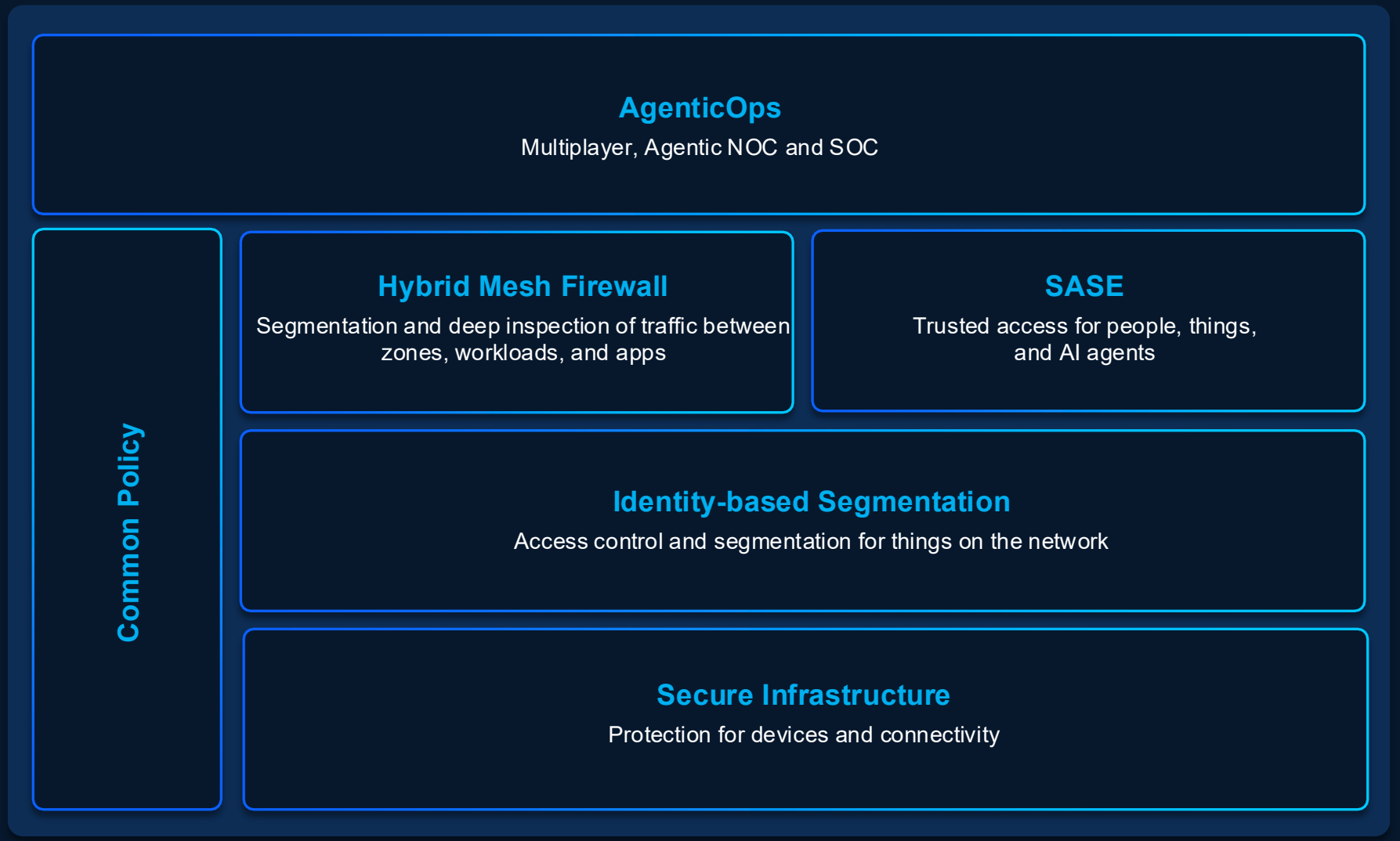
Exploits like Salt Typhoon that target unpatched software on key infrastructure

Attacks on Encryption

“Harvest now, decrypt later” attacks where encrypted data is extracted and stored, anticipating quantum computing.

Secure Networking

Reference design for fusing security into the network



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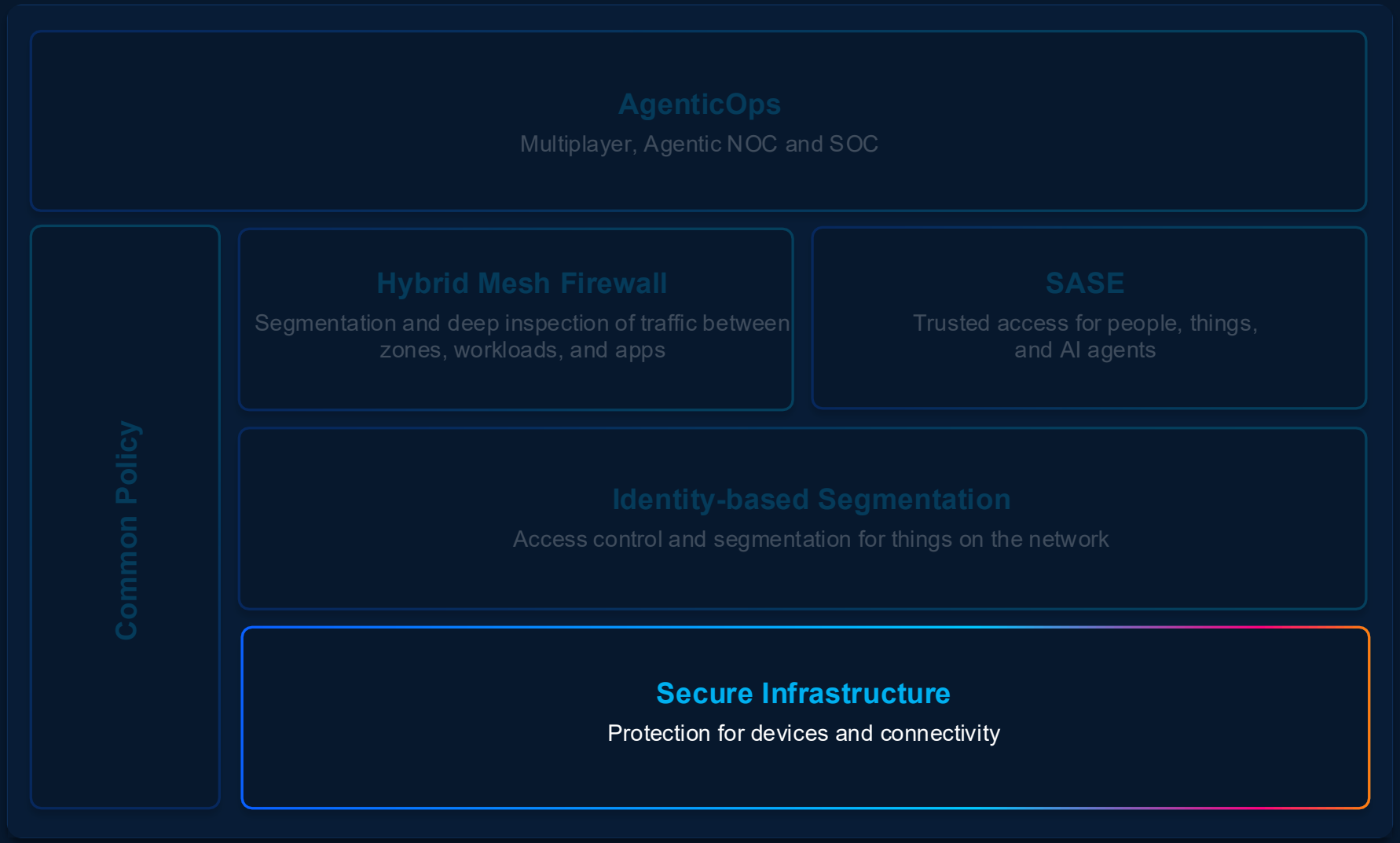
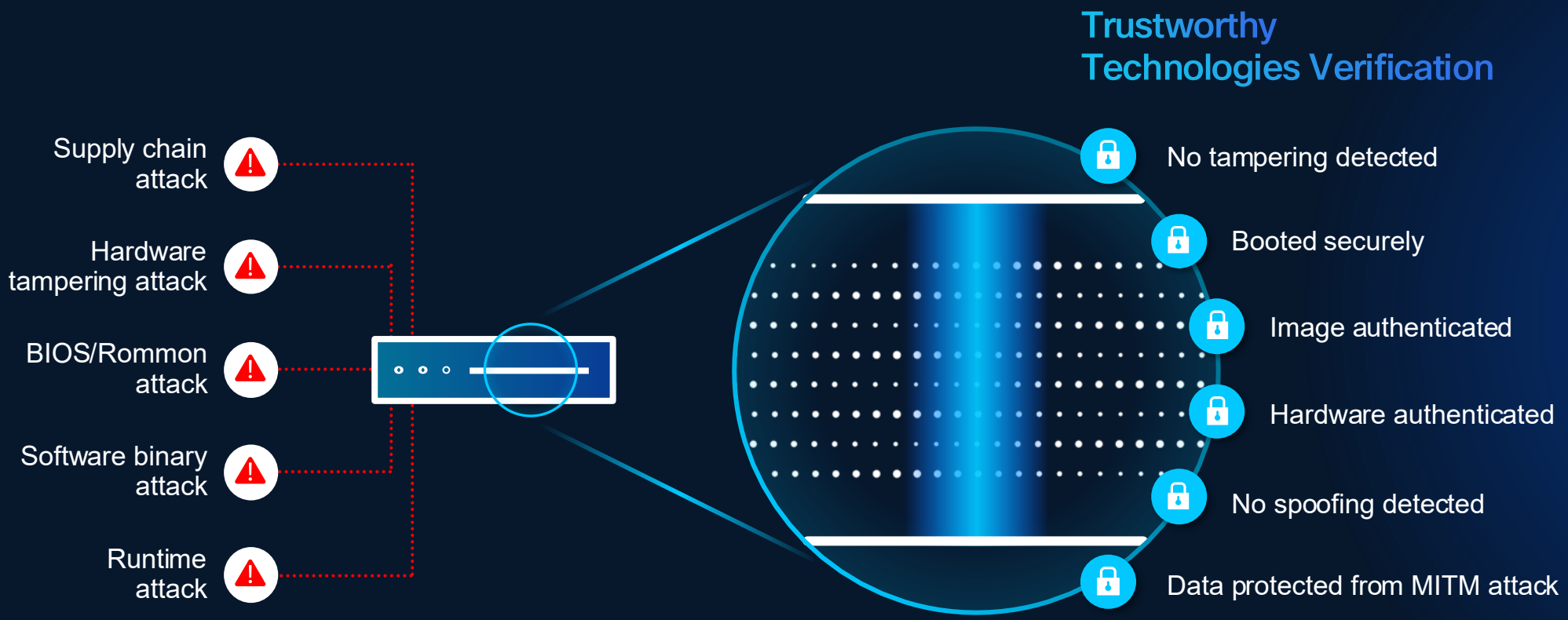
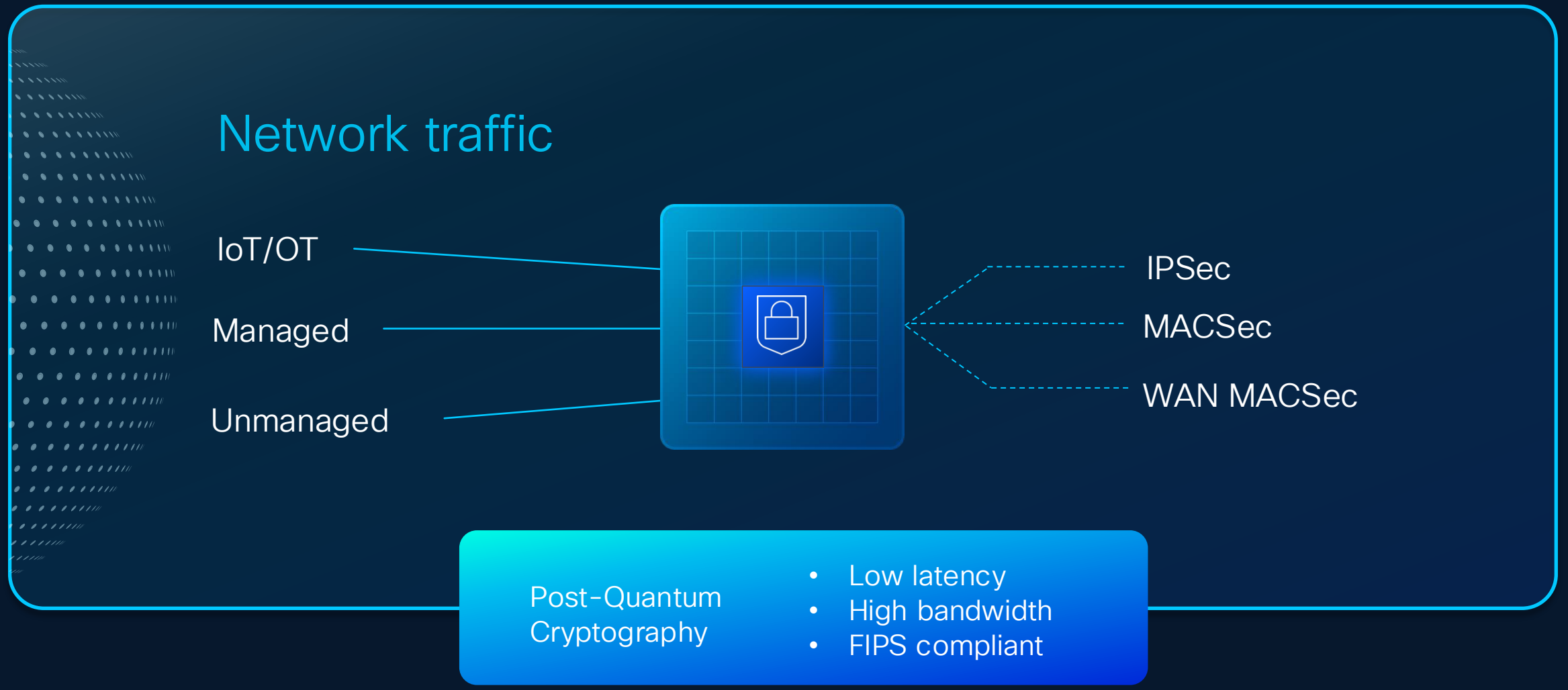


Securing the device

Secure from hardware to software, from boot time to runtime

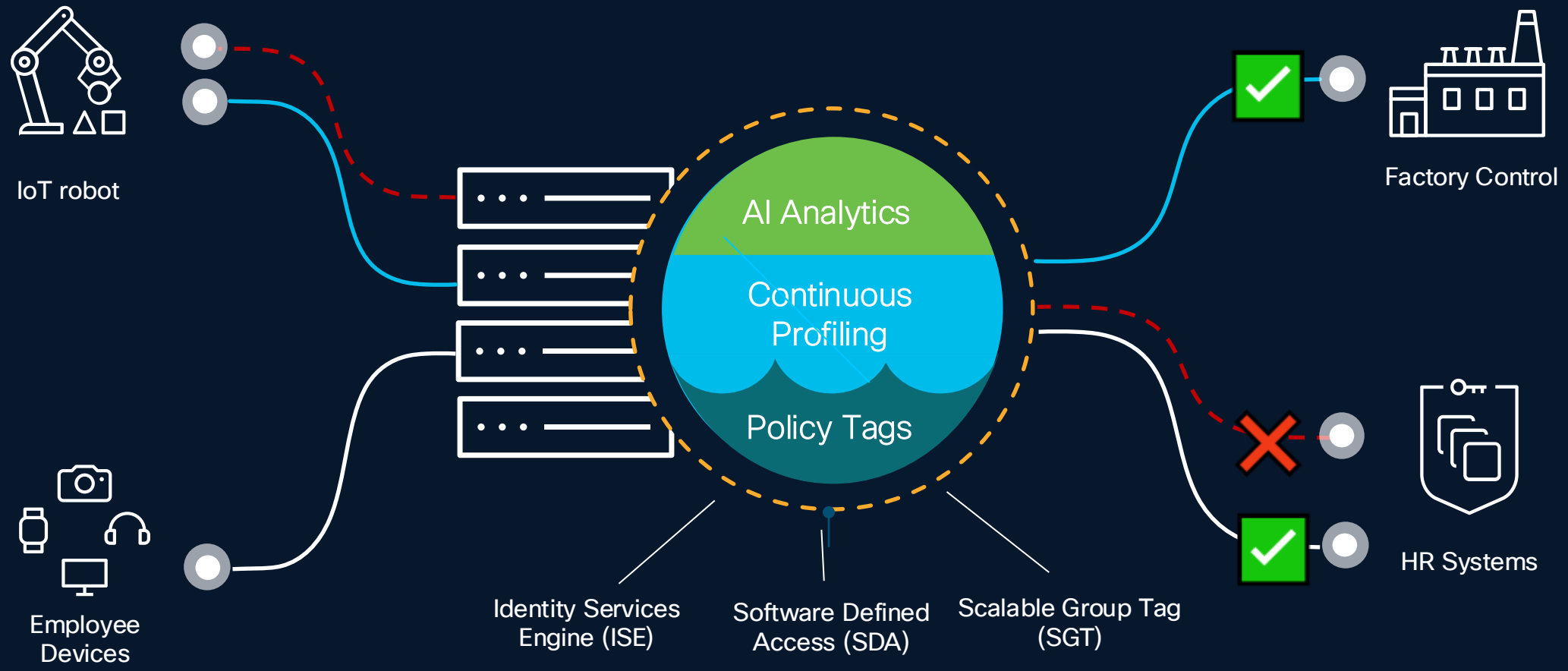


Securing network connectivity



Securing network access

Scalable microsegmentation to protect every connection



Simple Secure WAN

Journey to simplified Secure WAN portfolio

Market leading enterprise routers

ASR / ISR

Continued investment in current portfolio

Catalyst 8000

MX

Converged portfolio

NEW

8000 Series Secure Router

cisco

More throughput to support increased traffic to data center

Advanced embedded NGFW for secure branch connectivity

Post-quantum secure

DevOps style Branch-as-code for rapid deployment

Introducing

Secure Routers for the AI-powered unified branch

Cisco 8000 Secure Routers

Cisco 8000 Series Secure Routers for every size location

Small Branch: 8100

4 Variants

IPsec:
Up to 1.5 Gbps

SD-WAN:
Up to 1 Gbps

Threat Protection:
Up to 1 Gbps

Medium Branch: 8200

2 Variants

IPsec:
Up to 5 Gbps

SD-WAN:
Up to 4 Gbps

Threat Protection:
Up to 2.5 Gbps

Large Branch: 8300

2 Variants

IPsec:
Up to 20 Gbps

SD-WAN:
Up to 15 Gbps

Threat Protection:
Up to 7 Gbps

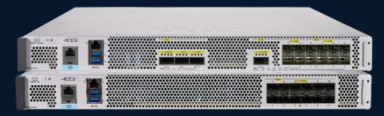
Campus: 8400

3 Variants

IPsec:
Up to 45 Gbps

SD-WAN:
Up to 23 Gbps

Threat Protection:
Up to 11 Gbps



Data Center: 8500

2 Variants

IPSec:
Up to 45 Gbps

SD-WAN:
Up to 23 Gbps

Route Scale up to 8M

Secure WAN Portfolio Transition

Branch

Small

8100 Secure Router

ISR1000

MX 67/68/75

Medium

8200 Secure Router

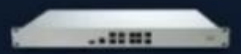
Catalyst 8200

MX 85/95/105

Large

8300 Secure Router

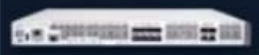
Catalyst 8300



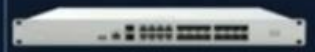
MX 250/450

Campus / Datacenter

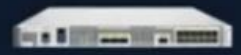
8400 Secure Router 8500 Secure Router



Catalyst 8500L



Net-New MX Scale



Catalyst 8500

Cloud

Red Hat Virtualization

vmware ESXi

Azure

aws

Catalyst 8000V

SRIOV Hypervisor/Cloud

vMX

Cellular

CG522

MG41/E
MG52/E

Use Cases – Cisco 8000 Series Secure Router

IP Connectivity

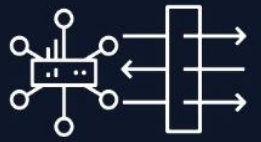
MSPs to offer reliable and sustainable connectivity with simplified management

Routing VPN

Future-proof your data center & branch with high-performance, secure connectivity

SD-WAN

Seamless, secure, and scalable connectivity for modern offices



Secure SD-WAN w/ NGFW

Consistent enforcement of network and security policy by NetOps and SecOps

SASE

Empower hybrid workers with secure, reliable remote access

Meeting customers where they are

Flexible management options

On-Prem or Cloud

Cisco SD-WAN Manager

Use cases require on-prem delivery, or advanced configuration

Cloud

Meraki Dashboard

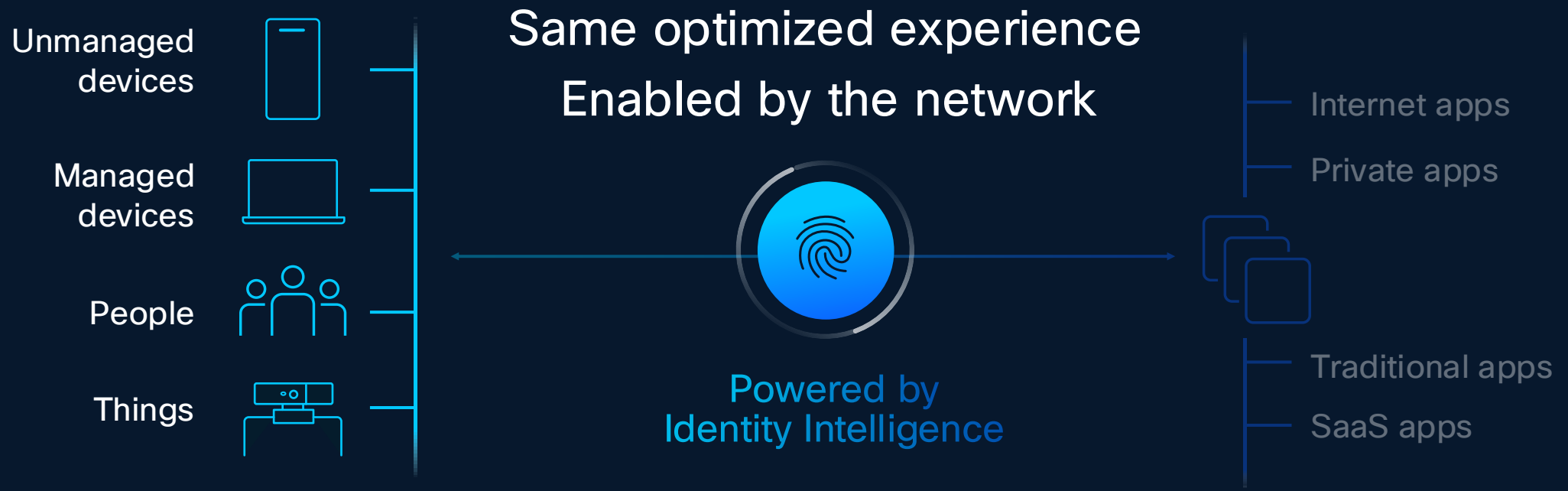
Prefer cloud-enabled delivery for full stack with Agentic Ops

Delivering optimized, simplified experiences for all customers.

Secure Networking

Reference design for fusing security into the network

Securing Users, Device access to Apps with Universal ZTNA from Cisco

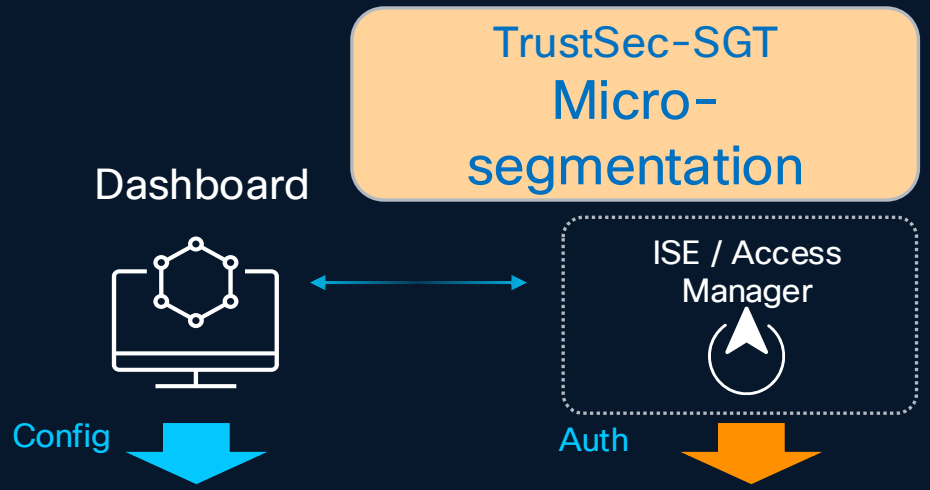


Remote

Remote | Campus | Branch | Airplane | Oil rig | Stadium | Field | ...

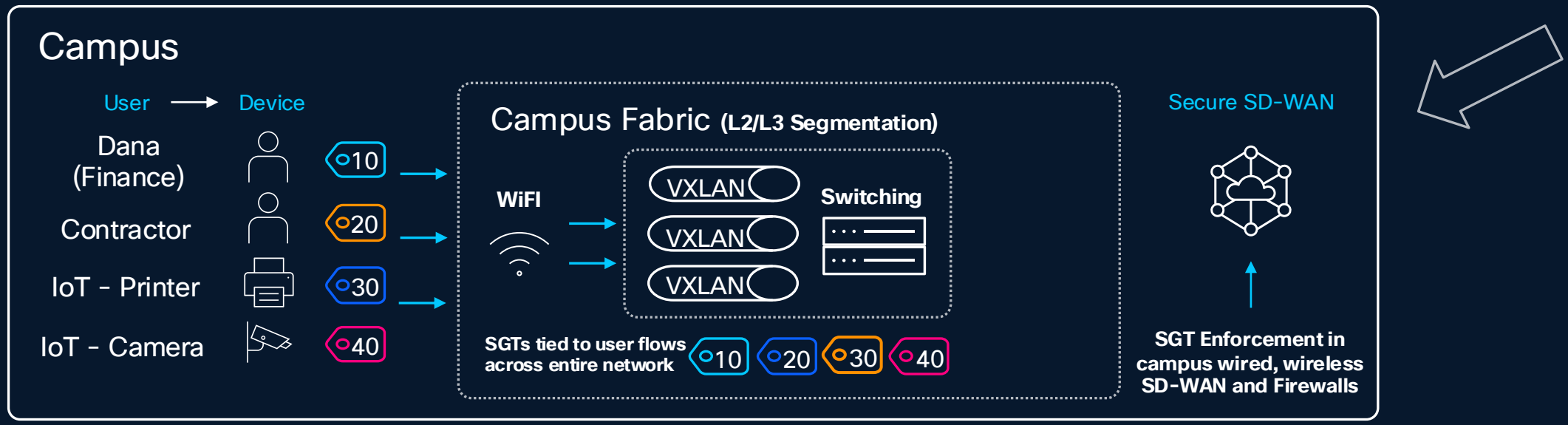
Cisco Zero Trust Segmentation

Campus and Unified Branch User to App



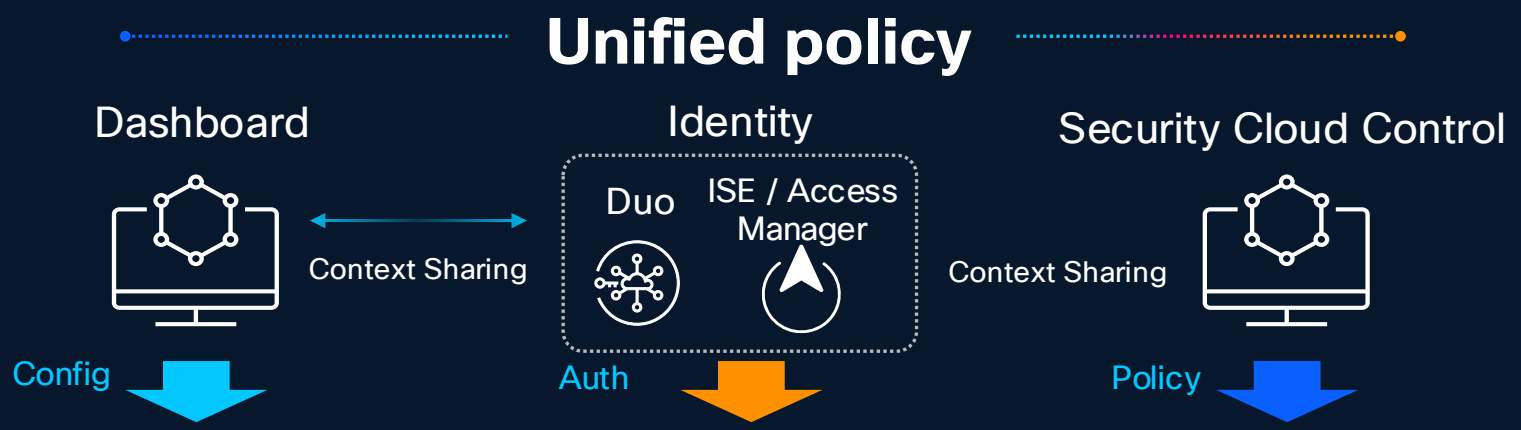
Campus Fabric:

- Macro Segmentation with VRF / VXLAN
- Integrated Wired, Wireless and SD-WAN policies



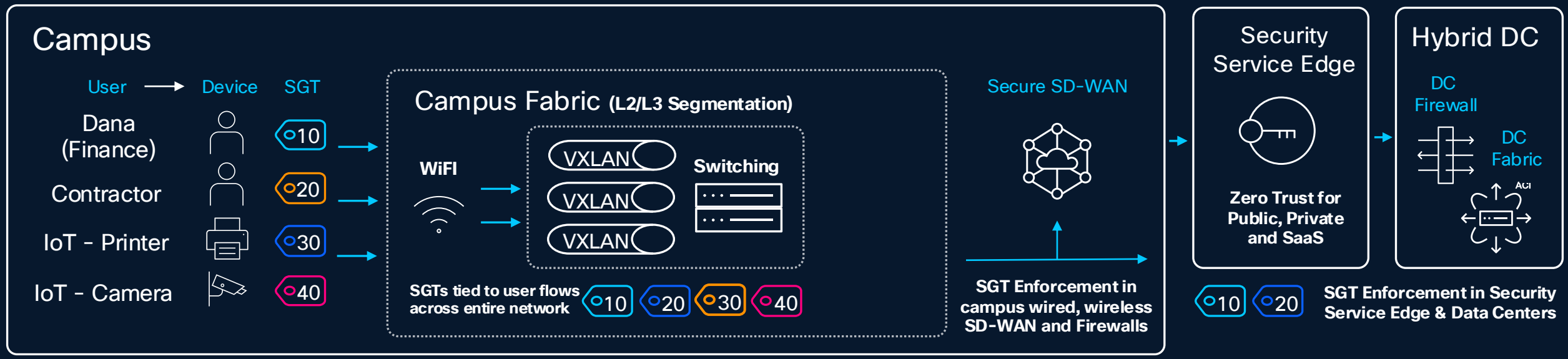
Cisco Zero Trust Segmentation

Campus and Unified Branch User to App



Security Cloud Control

- Unified policy between network, firewalls, SSE and Hybrid DC fabric
- User identity trust



Secure Networking

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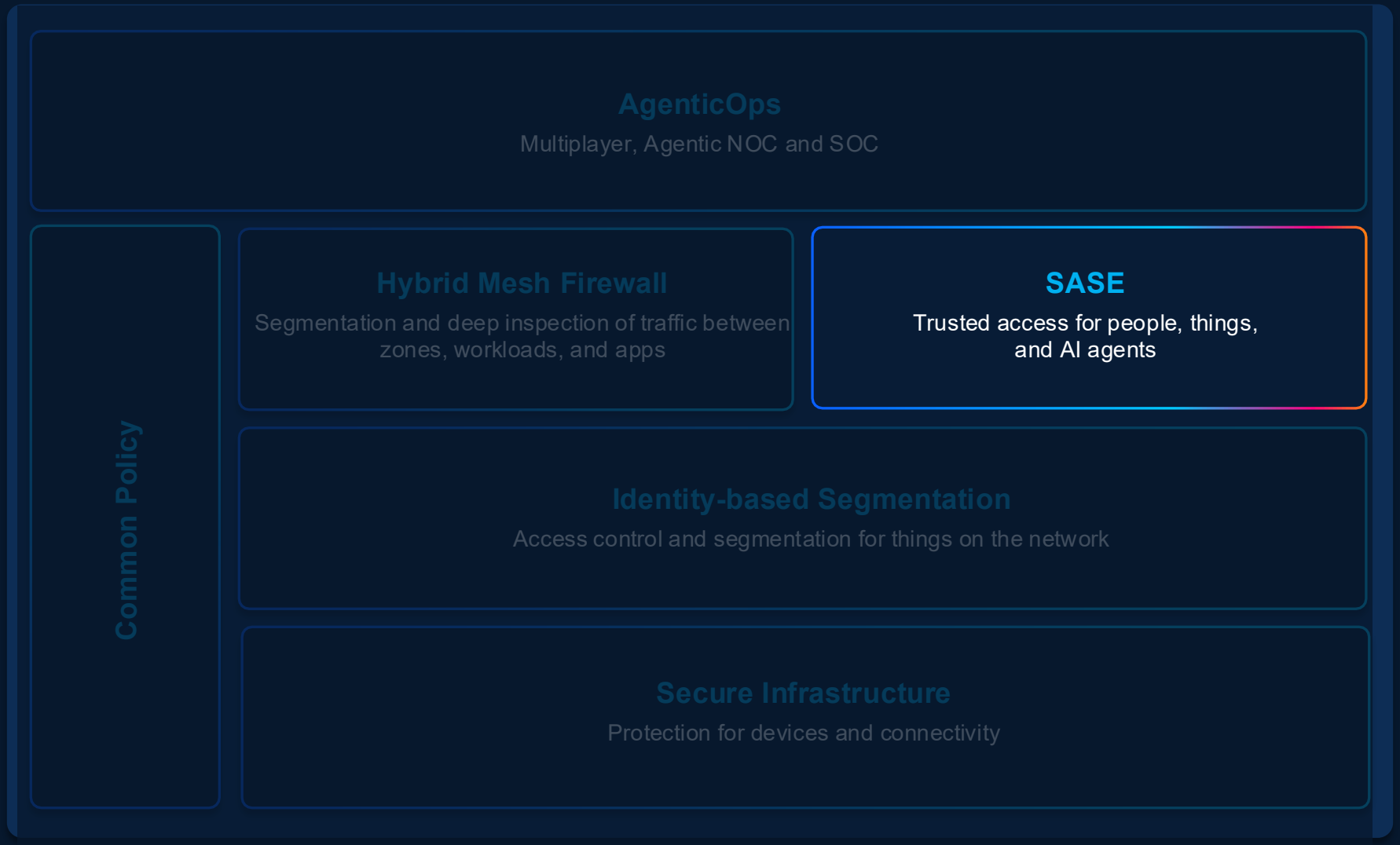

Securing users, devices and apps with Cisco SASE

Secure Router

L3 – L7 FW
Manage traffic traversing the branch

IPS/IDPS
Protect assets from bad actors

AMP
Protect against malware

Sandboxing
File Analysis using Threat Grid

URL-F
Filter Internet traffic

TLS Decryption
Inspect encrypted traffic

DNS Security
Inspect risky domains

Cisco SASE

Solutions designed to meet you on your journey to secure connectivity, anywhere

Cisco SASE

Powerful, flexible, and intelligent

Branch

Cisco Secure SD-WAN

+

Cloud

Cisco SSE

Microsegmentation

Distributed Enforcement

Open SASE

Open, validated integrations

Cisco SD-WAN

+

3rd Party SSE

or

Cisco SSE

+

3rd Party SD-WAN

Cisco eases your journey to a future proof secure branch

*when combined this is known as SASE architecture

Where we're going?

Secure Routers on Dashboard
Cloud Management

Hardware convergence
Secure Router Consolidating Portfolio

Unified SASE experience
Security Cloud Control

AI ops
Troubleshooting and remediation by agents

Thank you