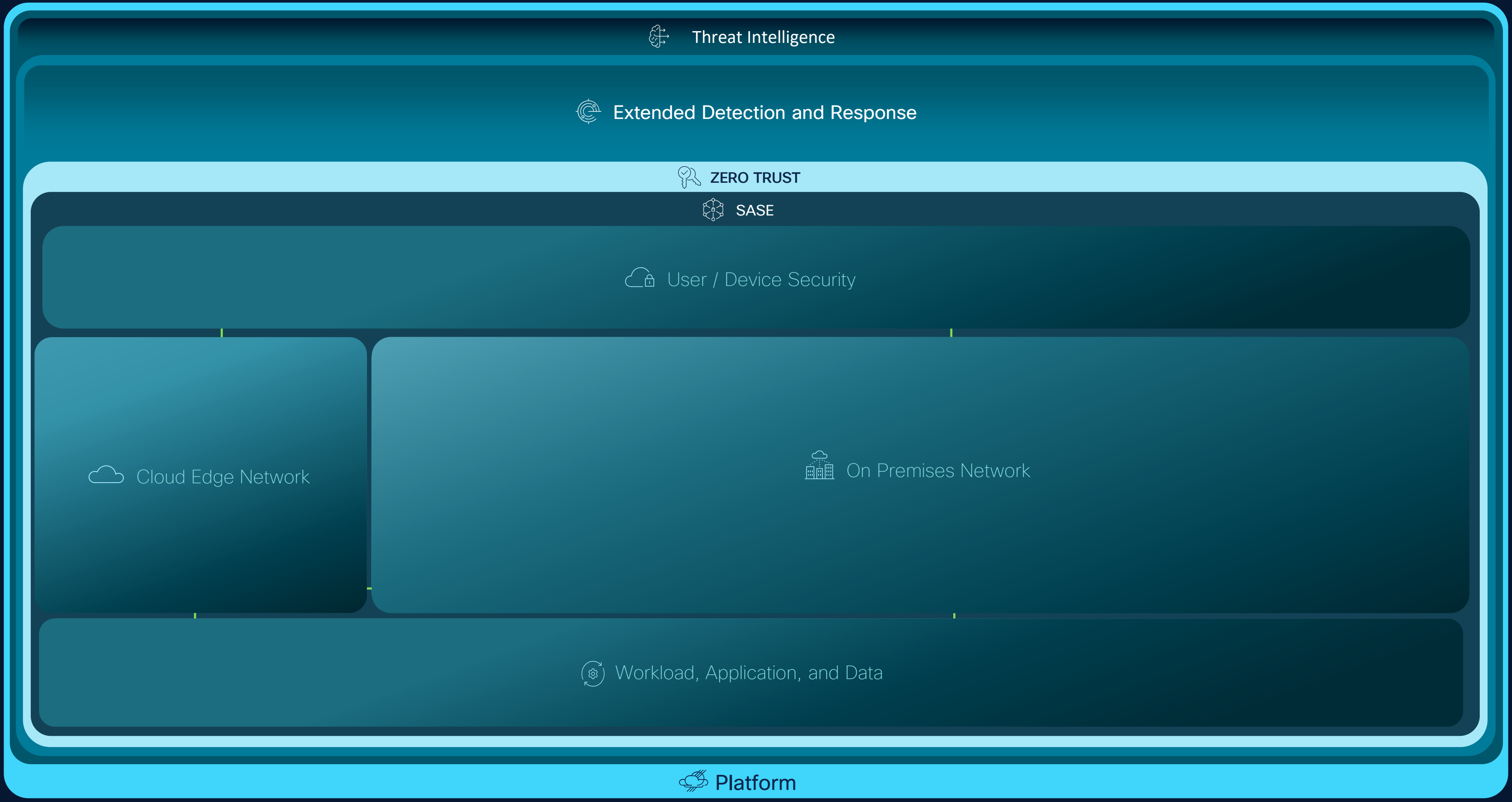
Cisco Security Reference Architecture

Architecture overview and use cases

Global Security Architecture Team

May 2024



Threat Intelligence

Extended Detection and Response

ZERO TRUST

SASE

User / Device Security

Cloud Edge Network

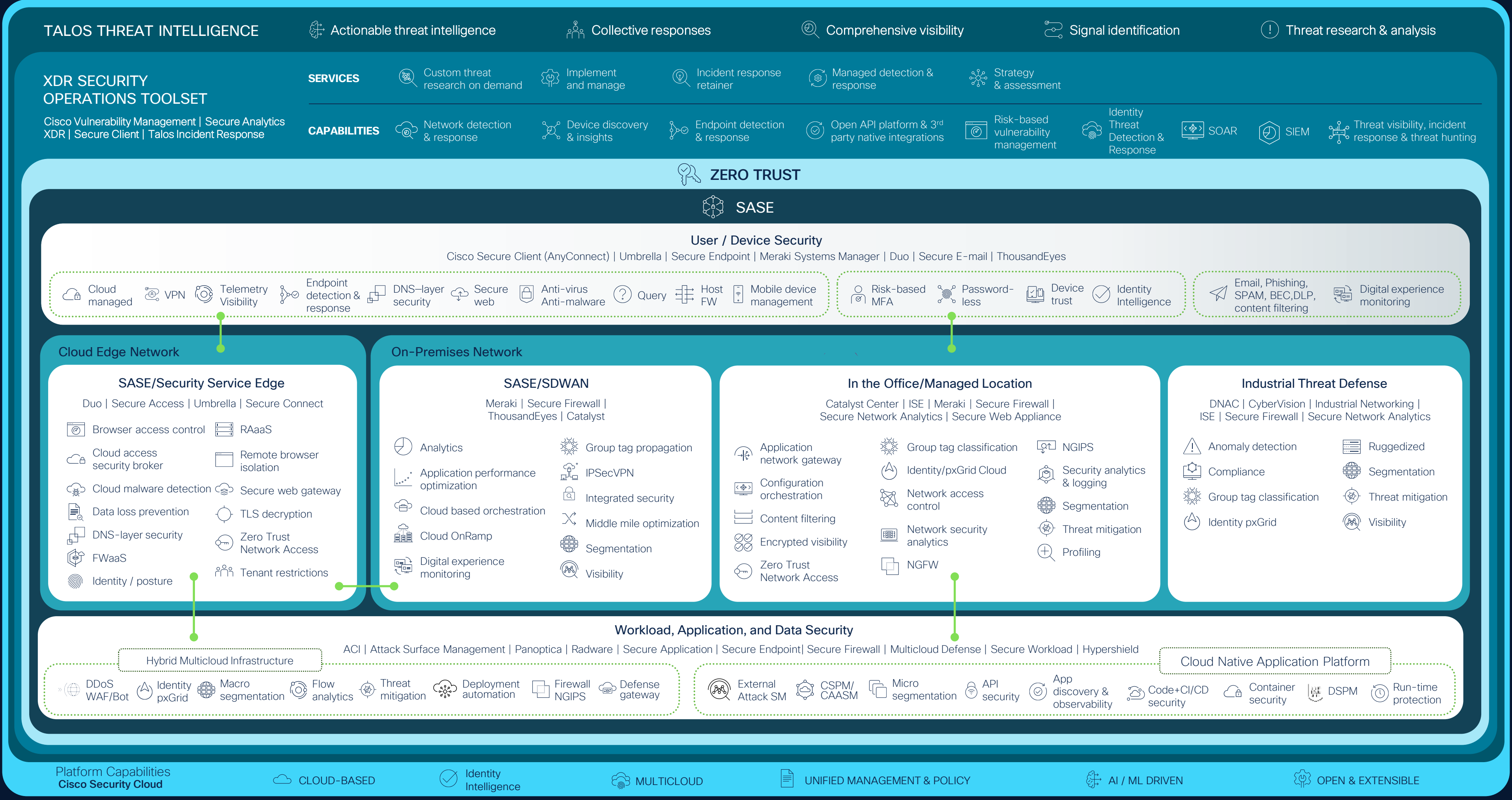
On Premises Network

Workload, Application, and Data

Platform

Security Reference Architecture

cisco.com/go/sra



TALOS THREAT INTELLIGENCE

Actionable threat intelligence | Collective responses | Comprehensive visibility | Signal identification | Threat research & analysis

XDR SECURITY OPERATIONS TOOLSET

Cisco Vulnerability Management | Secure Analytics
XDR | Secure Client | Talos Incident Response

SERVICES

Custom threat research on demand | Implement and manage | Incident response retainer | Managed detection & response | Strategy & assessment

CAPABILITIES

Network detection & response | Device discovery & insights | Endpoint detection & response | Open API platform & 3rd party native integrations | Risk-based vulnerability management | Identity Threat Detection & Response | SOAR | SIEM | Threat visibility, incident response & threat hunting

ZERO TRUST

SASE

User / Device Security

Cisco Secure Client (AnyConnect) | Umbrella | Secure Endpoint | Meraki Systems Manager | Duo | Secure E-mail | ThousandEyes

Cloud managed | VPN | Telemetry Visibility | Endpoint detection & response | DNS–layer security | Secure web | Anti-virus Anti-malware | Query | Host FW | Mobile device management

Risk-based MFA | Password-less | Device trust | Identity Intelligence

Email, Phishing, SPAM, BEC,DLP, content filtering | Digital experience monitoring

Cloud Edge Network

SASE/Security Service Edge

Duo | Secure Access | Umbrella | Secure Connect

- Browser access control
- RAaaS
- Cloud access security broker
- Remote browser isolation
- Cloud malware detection
- Secure web gateway
- Data loss prevention
- TLS decryption
- DNS-layer security
- Zero Trust Network Access
- FWaaS
- Tenant restrictions
- Identity / posture

On-Premises Network

SASE/SDWAN

Meraki | Secure Firewall |
ThousandEyes | Catalyst

- Analytics
- Group tag propagation
- Application performance optimization
- IPSecVPN
- Integrated security
- Cloud based orchestration
- Middle mile optimization
- Cloud OnRamp
- Segmentation
- Digital experience monitoring
- Visibility

In the Office/Managed Location

Catalyst Center | ISE | Meraki | Secure Firewall |
Secure Network Analytics | Secure Web Appliance

- Application network gateway
- Configuration orchestration
- Content filtering
- Encrypted visibility
- Zero Trust Network Access
- Group tag classification
- Identity/pxGrid Cloud
- Network access control
- Network security analytics
- NGFW
- NGIPS
- Security analytics & logging
- Segmentation
- Threat mitigation
- Profiling

Industrial Threat Defense

DNAC | CyberVision | Industrial Networking |
ISE | Secure Firewall | Secure Network Analytics

- Anomaly detection
- Compliance
- Group tag classification
- Identity pxGrid
- Ruggedized
- Segmentation
- Threat mitigation
- Visibility

Workload, Application, and Data Security

ACI | Attack Surface Management | Panoptica | Radware | Secure Application | Secure Endpoint| Secure Firewall | Multicloud Defense | Secure Workload | Hypershield

Hybrid Multicloud Infrastructure

DDoS WAF/Bot | Identity pxGrid | Macro segmentation | Flow analytics | Threat mitigation | Deployment automation | Firewall NGIPS | Defense gateway

Cloud Native Application Platform

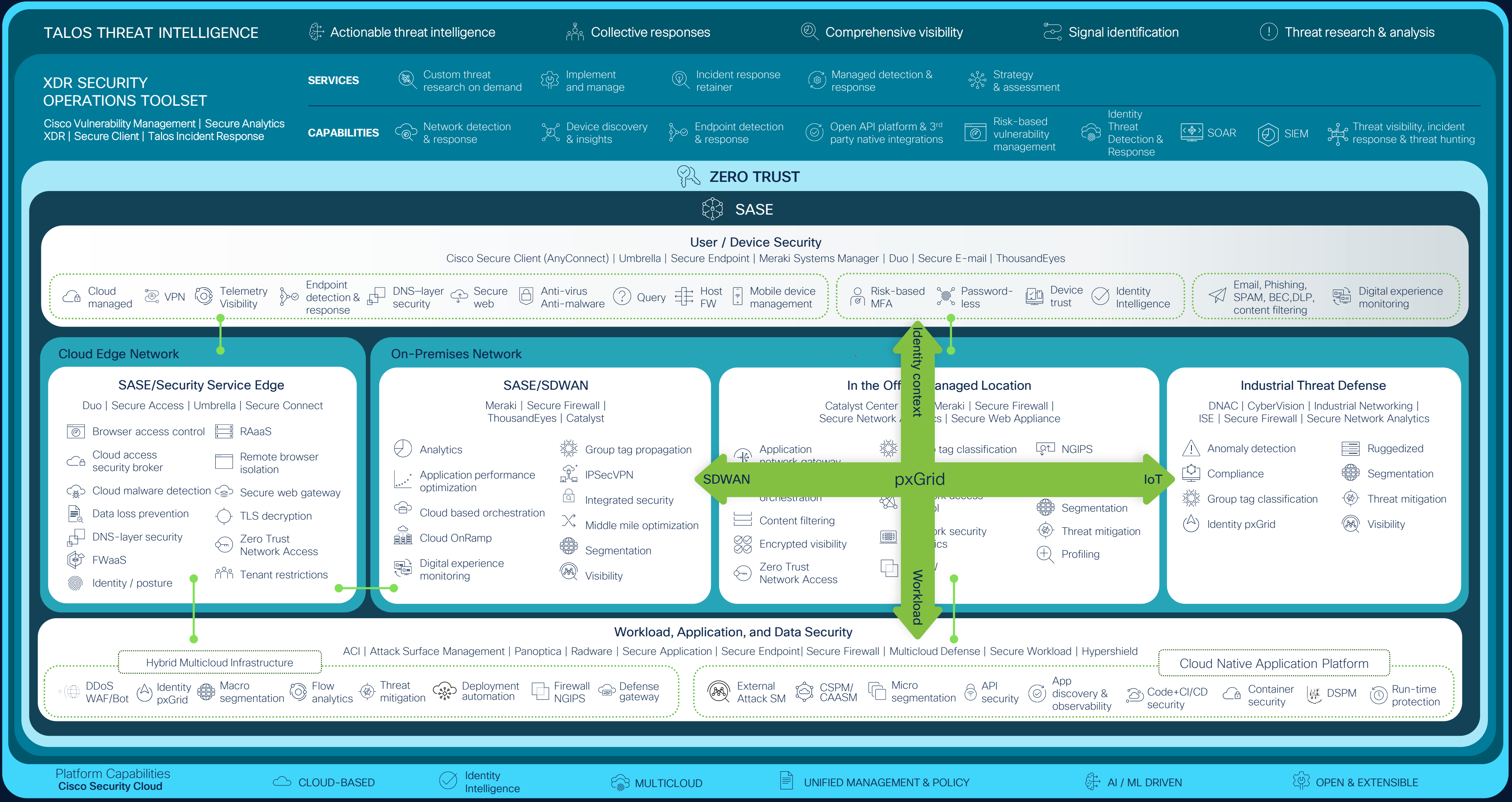
External Attack SM | CSPM/ CAASM | Micro segmentation | API security | App discovery & observability | Code+CI/CD security | Container security | DSPM | Run-time protection

Platform Capabilities
Cisco Security Cloud

CLOUD-BASED | Identity Intelligence | MULTICLOUD | UNIFIED MANAGEMENT & POLICY | AI / ML DRIVEN | OPEN & EXTENSIBLE

Common Identity

Security Reference Architecture



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- Collective responses
- Comprehensive visibility
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XDR | Secure Client | Talos Incident Response

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In the Off anaged Location

Catalyst Center Meraki | Secure Firewall |
Secure Network / cs | Secure Web Appliance

- Application network gateway
- tag classification
- NGIPS
- orchestration
- ork access
- l
- Segmentation
- Content filtering
- ork security
- ics
- Threat mitigation
- Encrypted visibility
- Profiling
- Zero Trust Network Access
- /

Industrial Threat Defense

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- API security
- App discovery & observability
- Code+CI/CD security
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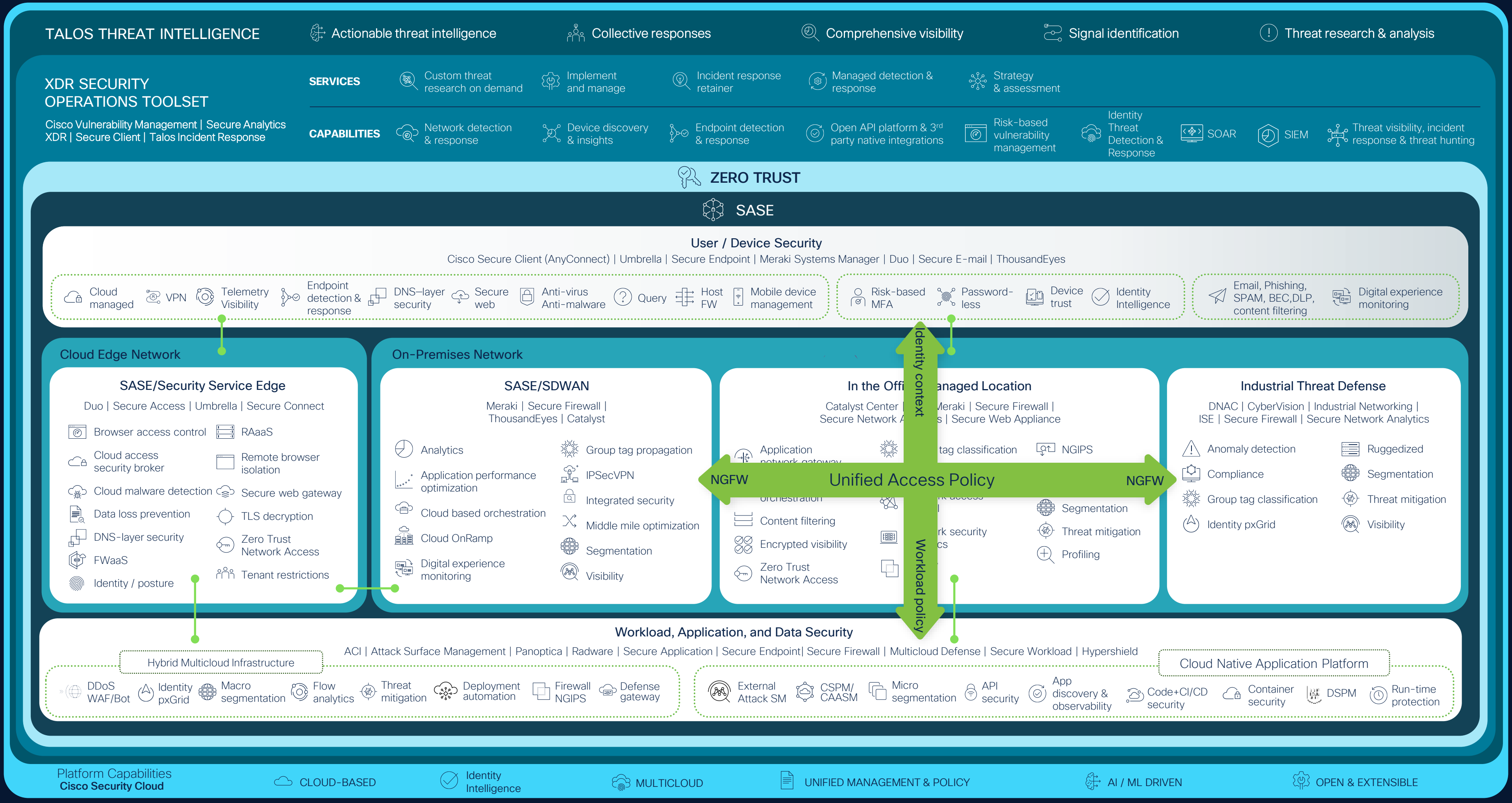
- DSPM
- Run-time protection

Platform Capabilities
Cisco Security Cloud

- CLOUD-BASED
- Identity Intelligence
- MULTICLOUD
- UNIFIED MANAGEMENT & POLICY
- AI / ML DRIVEN
- OPEN & EXTENSIBLE

Converged Multicloud Policy

Security Reference Architecture



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XDR SECURITY OPERATIONS TOOLSET

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ZERO TRUST

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Cloud Edge Network

SASE/Security Service Edge

Duo | Secure Access | Umbrella | Secure Connect

Browser access control; RAaaS; Cloud access security broker; Remote browser isolation; Cloud malware detection; Secure web gateway; Data loss prevention; TLS decryption; DNS-layer security; Zero Trust Network Access; FWaaS; Tenant restrictions; Identity / posture

On-Premises Network

SASE/SDWAN

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Analytics; Group tag propagation; Application performance optimization; IPSecVPN; Integrated security; Cloud based orchestration; Middle mile optimization; Cloud OnRamp; Segmentation; Digital experience monitoring; Visibility

In the Offi anaged Location

Catalyst Center | eraki | Secure Firewall | Secure Network A s | Secure Web Appliance

Application network gateway; tag classification; NGIPS; orchestration; k access; l; Segmentation; Content filtering; rk security; cs; Threat mitigation; Encrypted visibility; Profiling; Zero Trust Network Access

Identity context

NGFW | Unified Access Policy | NGFW

Workload policy

Industrial Threat Defense

DNAC | CyberVision | Industrial Networking | ISE | Secure Firewall | Secure Network Analytics

Anomaly detection; Ruggedized; Compliance; Segmentation; Group tag classification; Threat mitigation; Identity pxGrid; Visibility

Workload, Application, and Data Security

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Cloud Native Application Platform: External Attack SM; CSPM/ CAASM; Micro segmentation; API security; App discovery & observability; Code+CI/CD security; Container security; DSPM; Run-time protection

Platform Capabilities
Cisco Security Cloud

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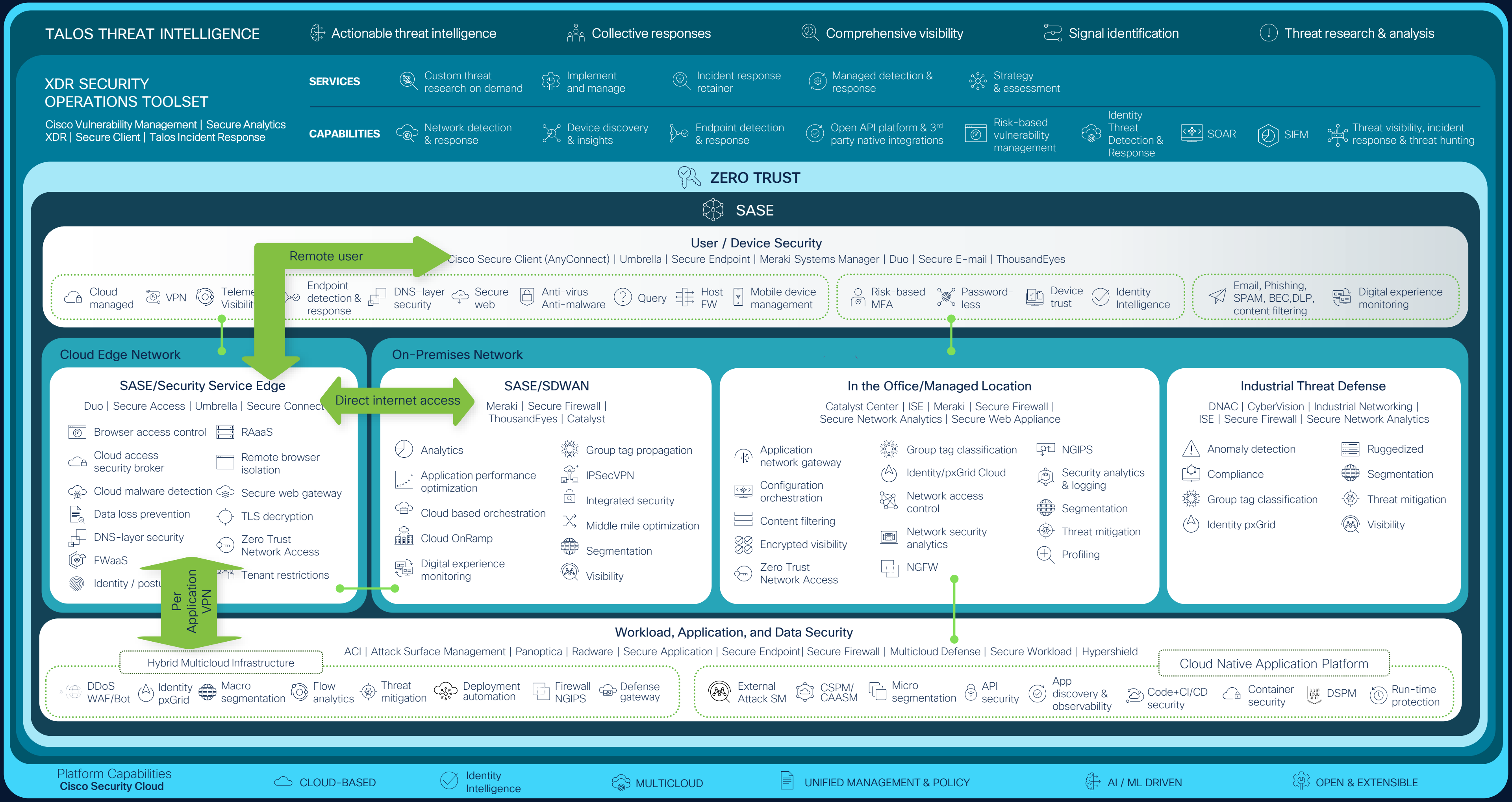
SSE/SASE

Security Reference Architecture



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- SOAR
- SIEM
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- Mobile device management
- Risk-based MFA
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- Digital experience monitoring

Remote user

Cloud Edge Network

SASE/Security Service Edge

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- Cloud access security broker
- Remote browser isolation
- Cloud malware detection
- Secure web gateway
- Data loss prevention
- TLS decryption
- DNS-layer security
- Zero Trust Network Access
- FWaaS
- Tenant restrictions
- Identity / postu…

Direct internet access

Per Application VPN

On-Premises Network

SASE/SDWAN

Meraki | Secure Firewall | ThousandEyes | Catalyst

- Analytics
- Group tag propagation
- Application performance optimization
- IPSecVPN
- Integrated security
- Cloud based orchestration
- Middle mile optimization
- Cloud OnRamp
- Segmentation
- Digital experience monitoring
- Visibility

In the Office/Managed Location

Catalyst Center | ISE | Meraki | Secure Firewall | Secure Network Analytics | Secure Web Appliance

- Application network gateway
- Configuration orchestration
- Content filtering
- Encrypted visibility
- Zero Trust Network Access
- Group tag classification
- Identity/pxGrid Cloud
- Network access control
- Network security analytics
- NGFW
- NGIPS
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- Segmentation
- Threat mitigation
- Profiling

Industrial Threat Defense

DNAC | CyberVision | Industrial Networking | ISE | Secure Firewall | Secure Network Analytics

- Anomaly detection
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Hybrid Multicloud Infrastructure

- DDoS WAF/Bot
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- Flow analytics
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Cloud Native Application Platform

- External Attack SM
- CSPM/ CAASM
- Micro segmentation
- API security
- App discovery & observability
- Code+CI/CD security
- Container security
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Platform Capabilities
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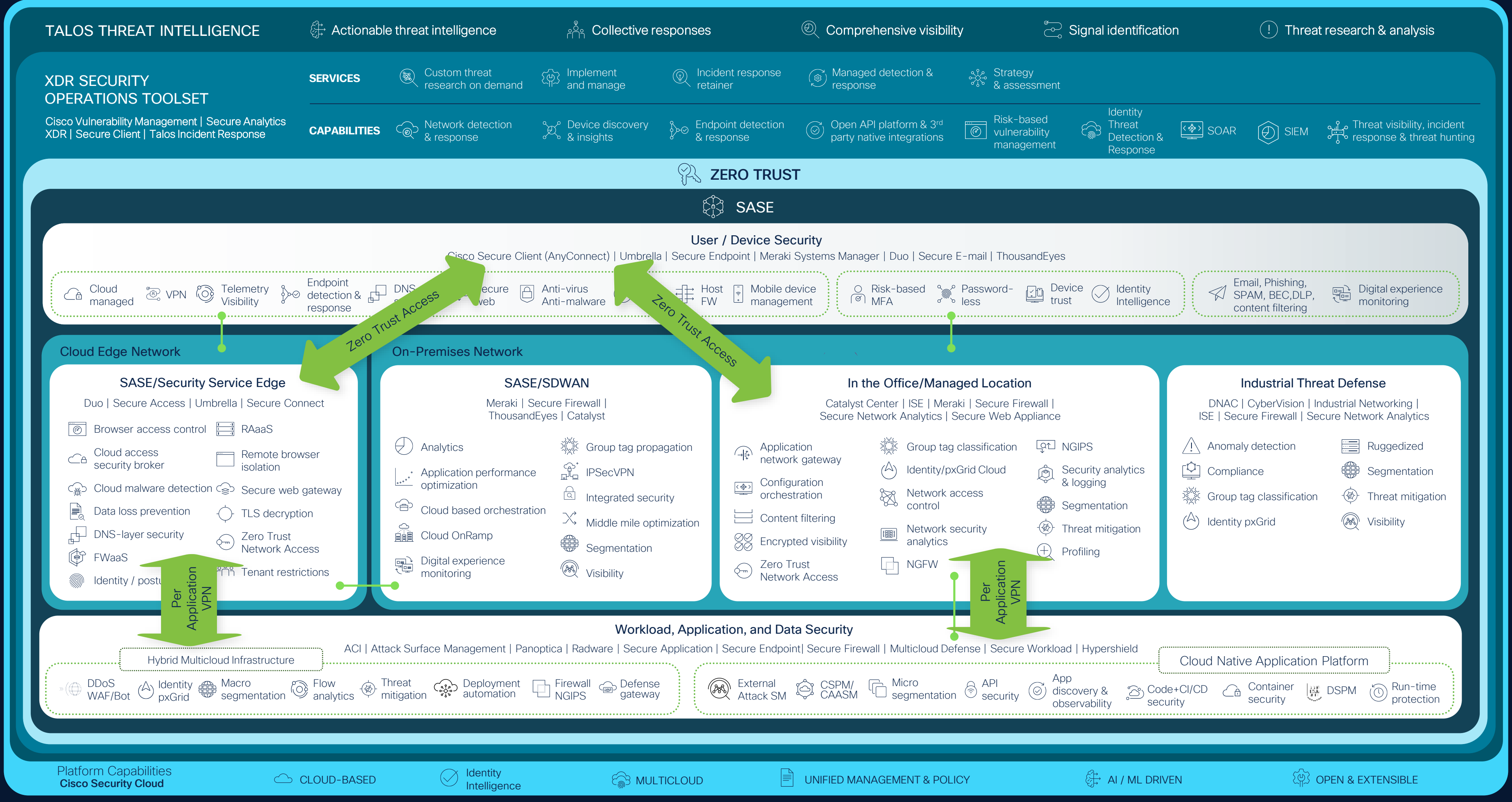

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Zero Trust Access

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Per Application VPN

On-Premises Network

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In the Office/Managed Location

Catalyst Center | ISE | Meraki | Secure Firewall | Secure Network Analytics | Secure Web Appliance

Application network gateway; Configuration orchestration; Content filtering; Encrypted visibility; Zero Trust Network Access; Group tag classification; Identity/pxGrid Cloud; Network access control; Network security analytics; NGFW; NGIPS; Security analytics & logging; Segmentation; Threat mitigation; Profiling

Per Application VPN

Industrial Threat Defense

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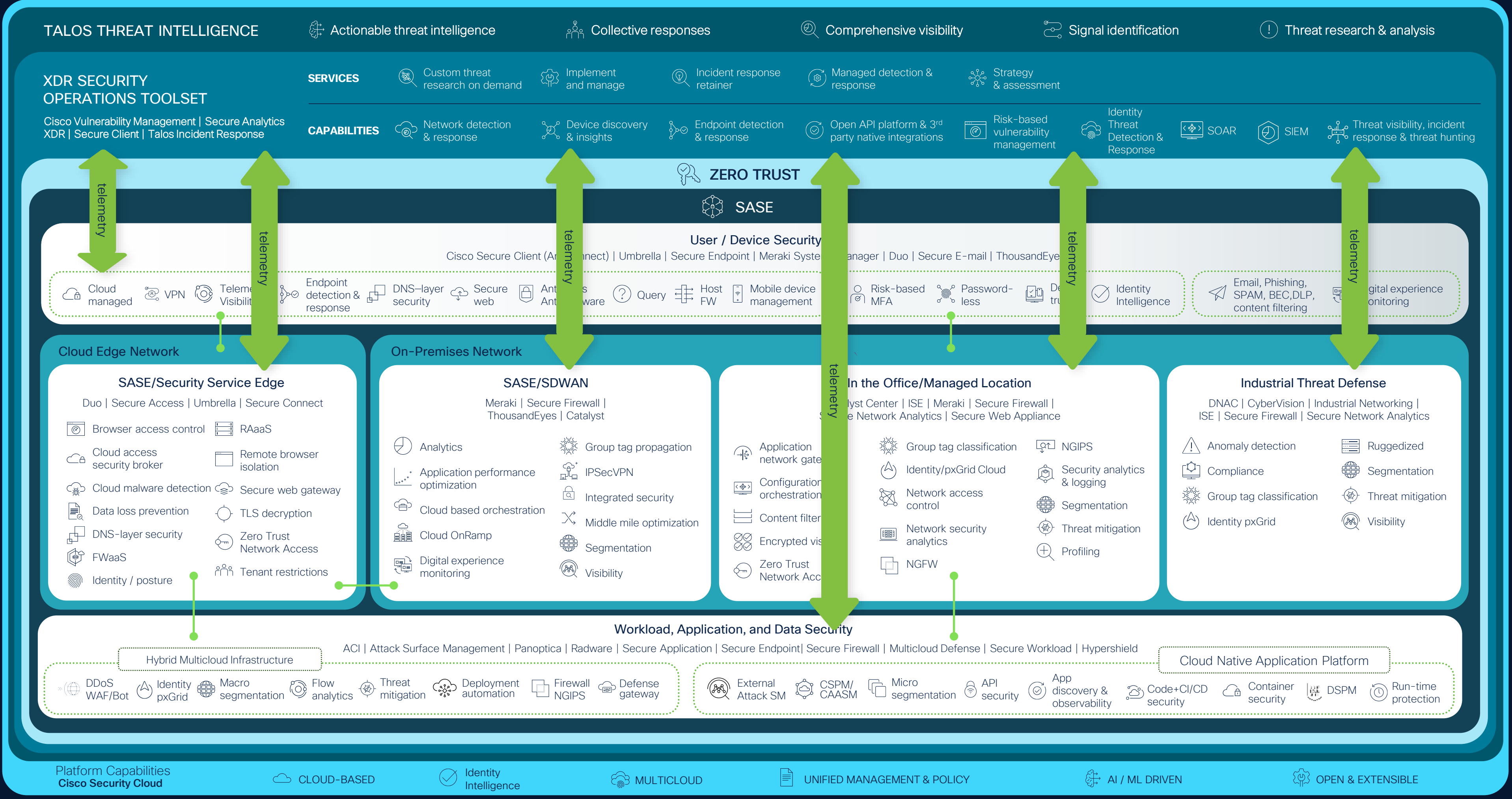

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