

Enhancing Operational Efficiency and Improve Security Posture with AIOps for Cisco Firewall

CISCO Live !

Gayathri Nagarajan

Leader, Product Management, Cloud + Network Security, Cisco Speaker

Cisco Webex App

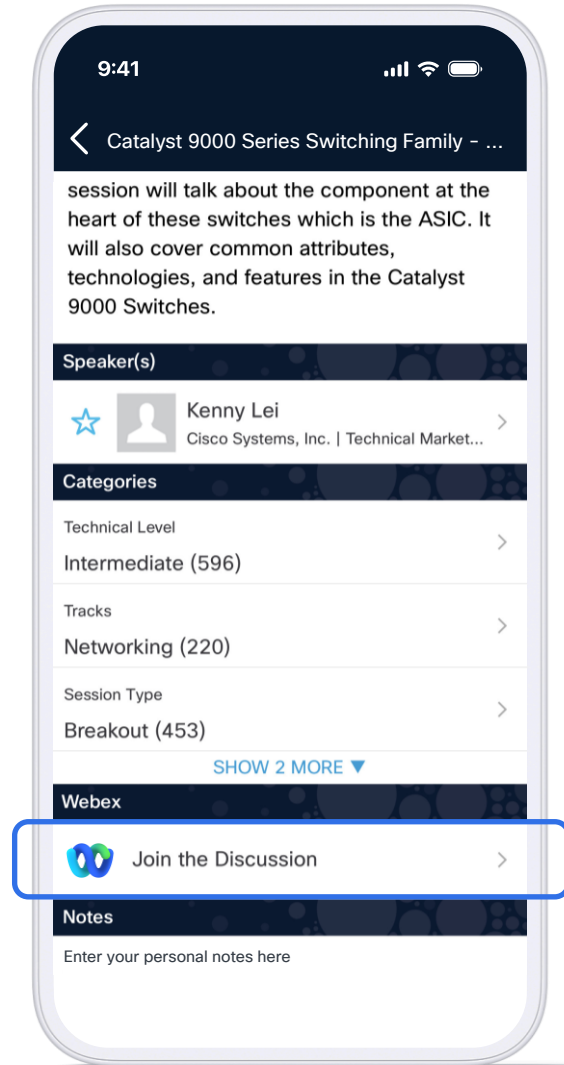
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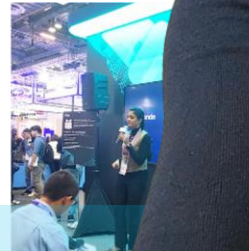
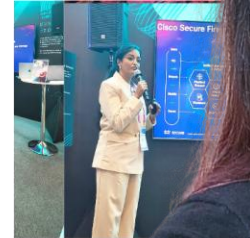
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Your speaker
throughout this journey....



Gayathri Nagarajan

Leader, Product Management

Cloud + Network Security Management Portfolio

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Agenda

- 01 Navigating complexities of Firewall management
- 02 Simplifying Operations with AIOps: The How and Why
- 03 Charting the Future : Vision & Roadmap
- 04 Real-world Use cases & Outcomes
- 05 AgenticOps – The next evolution of AIOps

Navigating complexities of Firewall Management

Voice of a firewall admin

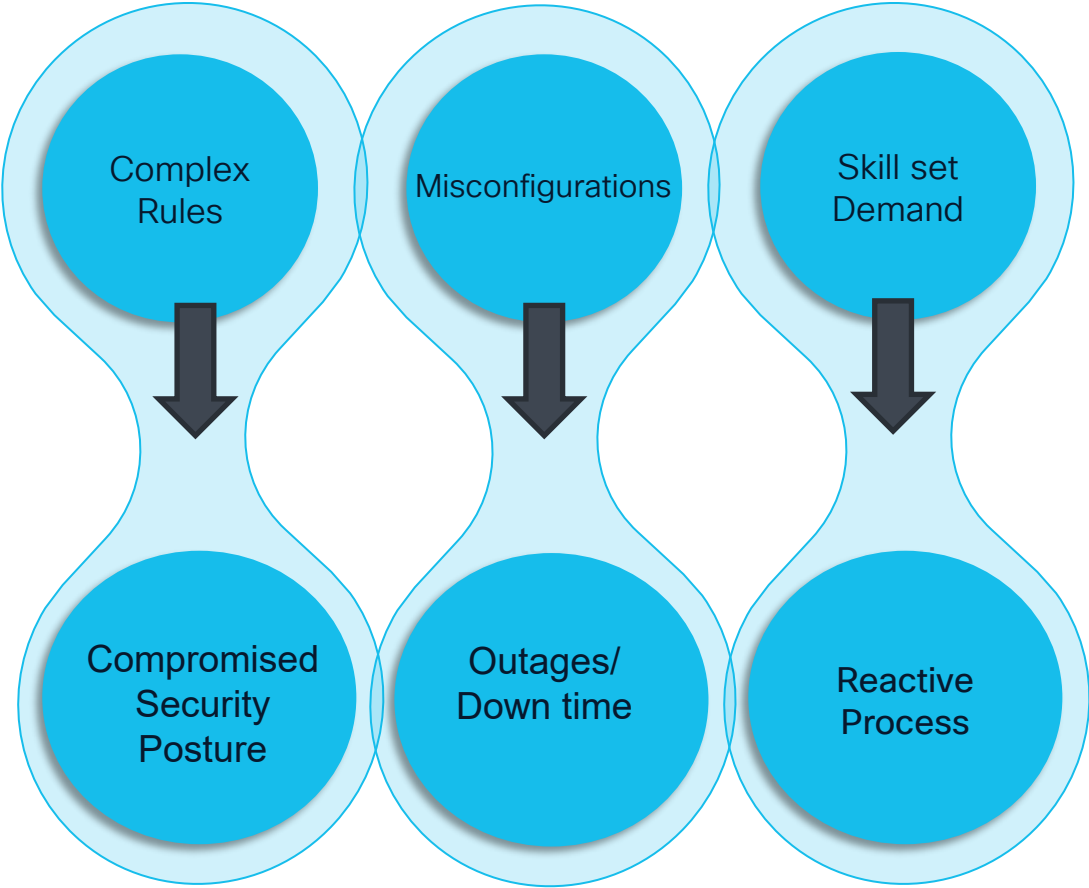
"You know, they say firewalls are essential for security, but with all the tech out there, it's hard to know if you're actually getting your money's worth. Like, is this fancy firewall gizmo really stopping attacks, or are we just throwing money at the problem?"

"Ugh, firewalls are giving me a headache again. You hear about these big breaches in the news, and half the time it's because some poor shmuck left a port open or forgot to tighten down a rule. One little mistake, that's all it takes! Here we are guarding the castle gates, and a single loose brick could let the whole thing crumble."

Managing Firewalls and keeping rules organized.
"Hi everyone, I need your opinion about managing firewalls. I am in a team which manages lots of customer firewalls and doing daily configuration. Customer creates a ticket to our system and they request for a permission and the team does the configuration. But after some time rule numbers increases dramatically and becomes really hard to manage. I'm in this team my role is not about doing daily configuration mostly architecture side. My manager asked me figure out a way to keep firewall rules organized and keeping the numbers low. If only 1 person does all configuration it will be easy like guiding him a few times but 8 people in that L1 team. I hope, i was clear. Looking for some help, thanks :)"

"Hey all, I've been tasked with finding unused, overlapping and outdated firewall rules. I'm 4 days new to this job and there are 900 rules on this main FW. Any ideas on how I can quickly find these rules?"

Complexity **breeds** security blind spots



The average cost of network downtime is **\$300,000** per hour



Create Report

Summary Dashboard [\(switch dashboard\)](#)

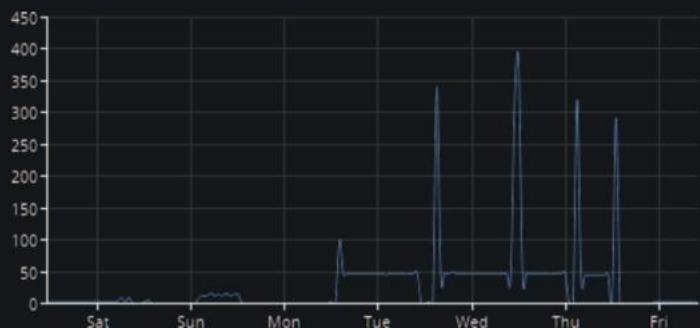
Provides a summary of activity on the appliance

Network Threats Intrusion Events Status Geolocation QoS Zero Trust +

Show the Last 1 week

Add Widgets

Unique Applications over Time



Last updated 1 hour 53 minutes ago

Traffic by Application Risk

Risk	Total Bytes (KB)
Medium	1,798,478,979.1
Very Low	1,256,659,970.74
Low	161,189,216.21
Very High	5,538,746.92
High	344,415.75

Last updated 1 hour 53 minutes ago

Traffic by Business Relevance

Top Web Applications Seen

Application	Total Bytes (KB)
Microsoft Update	117,636,758.2
Microsoft Teams	114,939,281.95
Office 365	94,043,347.24
Microsoft Azure	57,776,054.61
Exchange Online	33,183,744.18
Sharepoint Online	27,668,340.53
FTP Active	6,321,509
Azure cloud portal	3,511,493.68
generic audio/video	3,004,062.8
BitTorrent	2,808,941.32
Office Mobile	2,448,127.88
OneDrive	1,865,205.63
Windows Live	1,800,741.51
Azure Authentication Service	1,335,639.25
Youdao Dictionary	819,434.97

Last updated 1 hour 52 minutes ago

Top Server Applications Seen

Risky Applications with Low Business Relevance

Application	Total Connections
eDonkey	140,731

Top Client Applications Seen

Application	Total Bytes (KB)
Internet Explorer	497,874,567.91
SSL client	480,675,423.55
BITS	59,429,748.62
DCE/RPC	58,616,506.69
Firefox	45,106,731.28
Chrome	39,681,638.02
BitTorrent	2,808,941.32
eDonkey	2,703,496
OneDrive	1,865,205.63
Windows Live	1,800,741.51
Microsoft Excel	898,705.38
Youdao Dictionary	819,434.97
RTP	611,582.94
Facebook	204,235.16
Discord	27,037.05

Last updated 1 hour 54 minutes ago

Top Operating Systems Seen



TOO MUCH DATA TO MAKE A **DECISION**

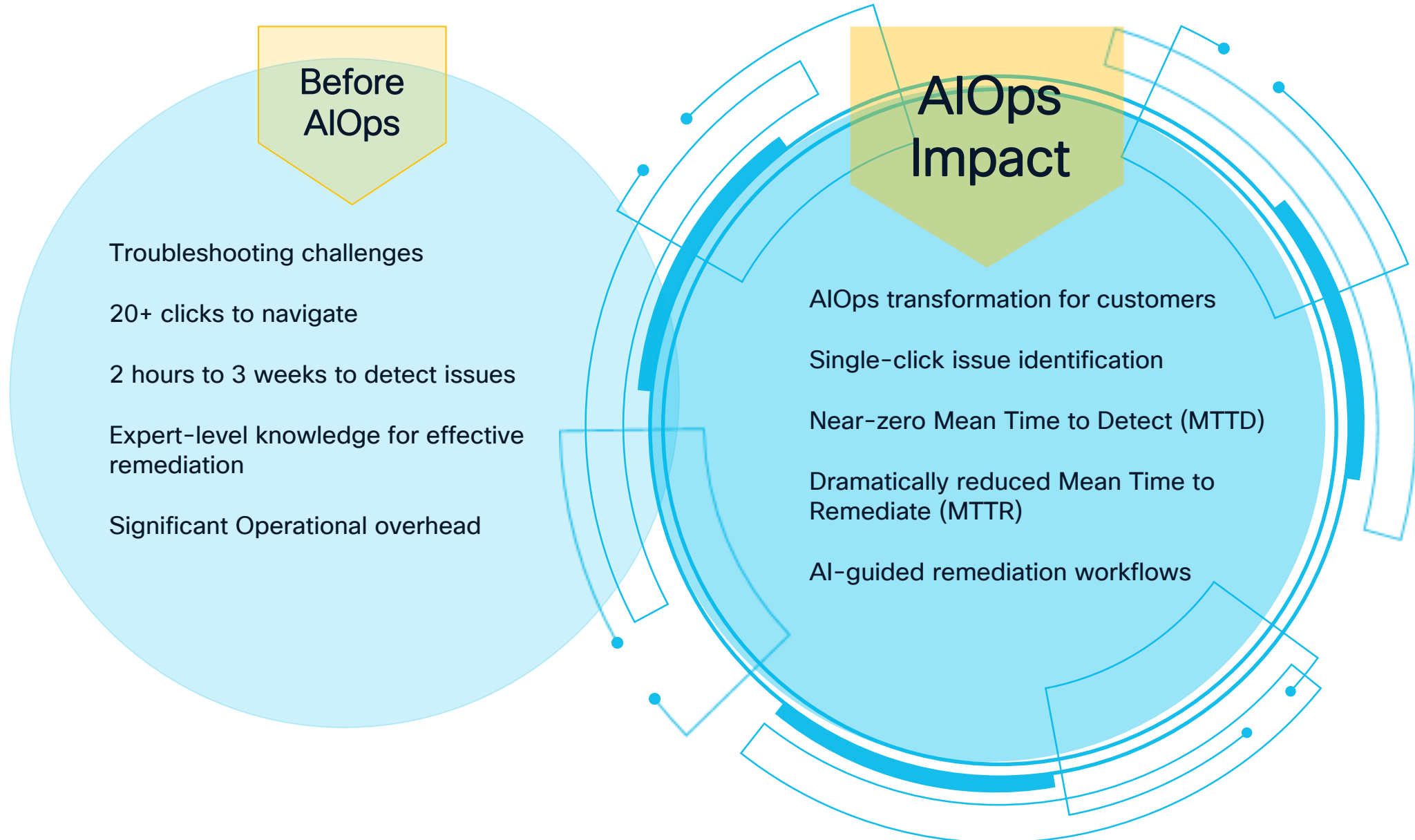


AI Ops

for Firewall

Simplifying Operations and Enhancing Security







AIOps

for Firewall

Simplifying Operations and Enhancing Security

Predictive Insights

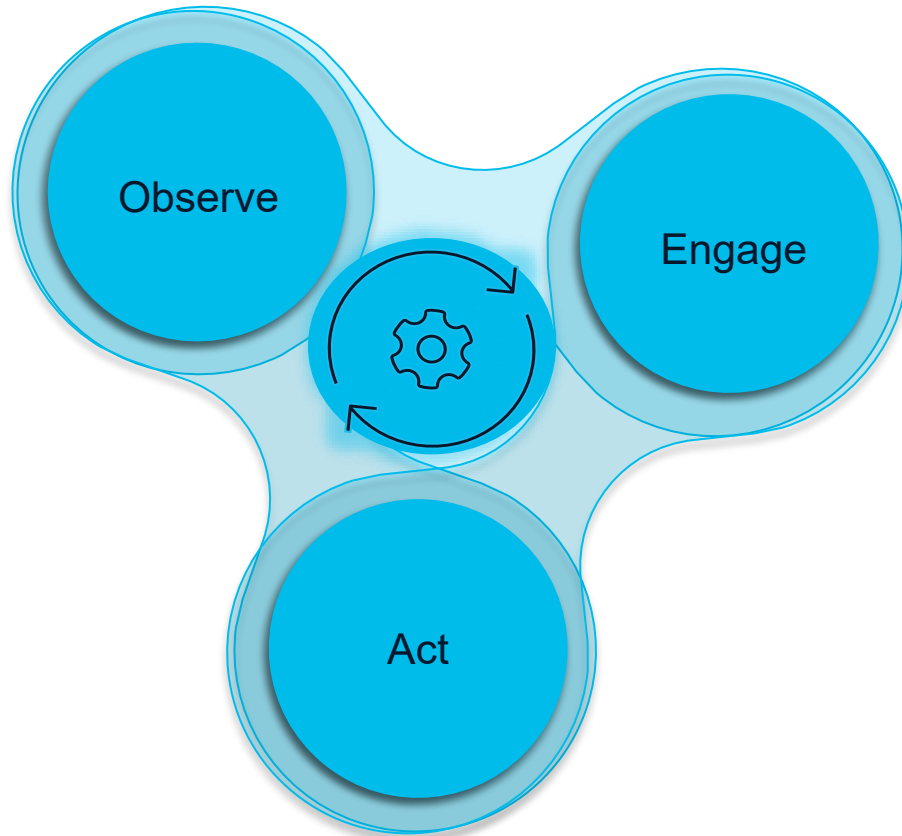
Improved Operational
Efficiency

AI-guided remediations for
Enhanced Decision Making

Simplifying Operations with AIOps: The How and Why

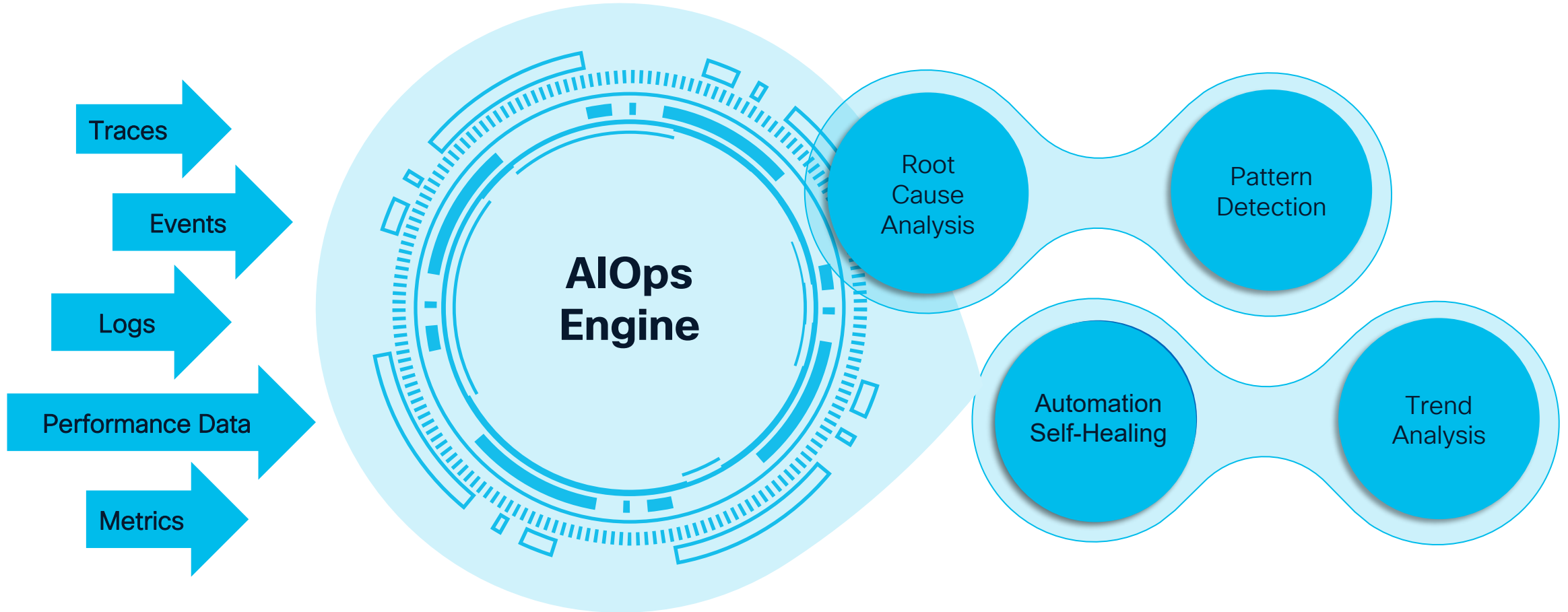
CISCO Live !

Our Approach

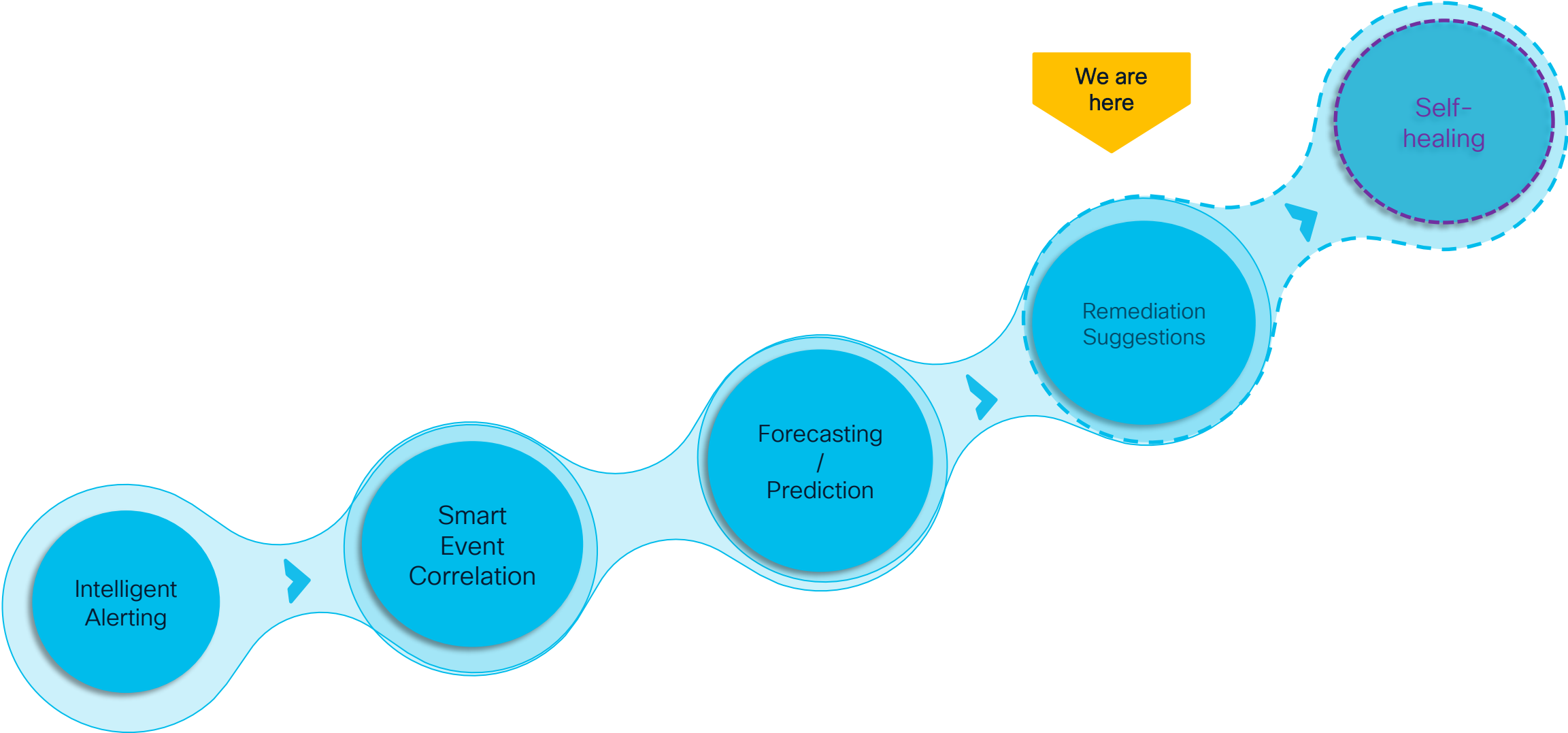


- 1 Data Selection**
Locating & Presenting the most pertinent information
- 2 Pattern Discovery**
Correlating and finding relationship between events across entities
- 3 Inference**
Identifying root cause and recurring issues across environments
- 4 Collaboration**
Notification and collaboration of appropriate operators and teams
- 5 Automation**
Automating remediation

Our Approach

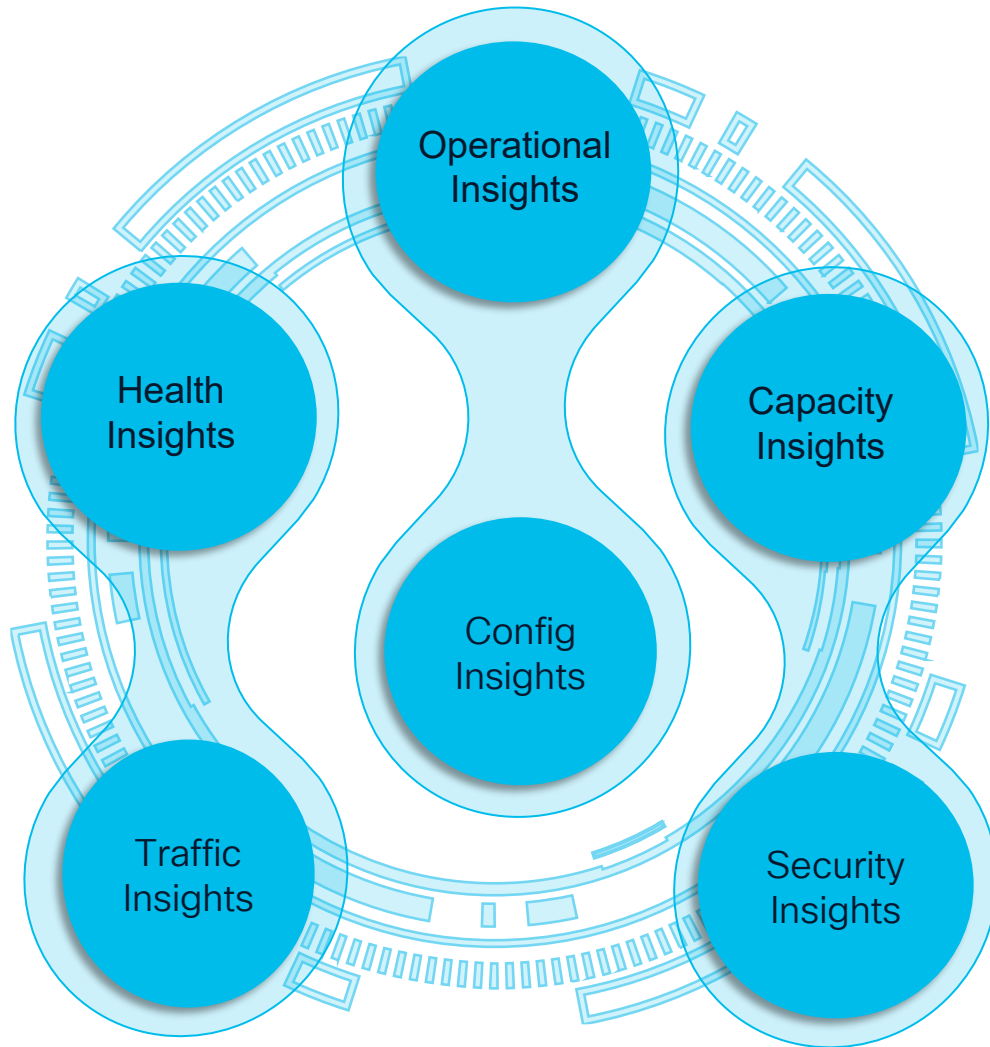


AIOps Use cases: A maturity curve



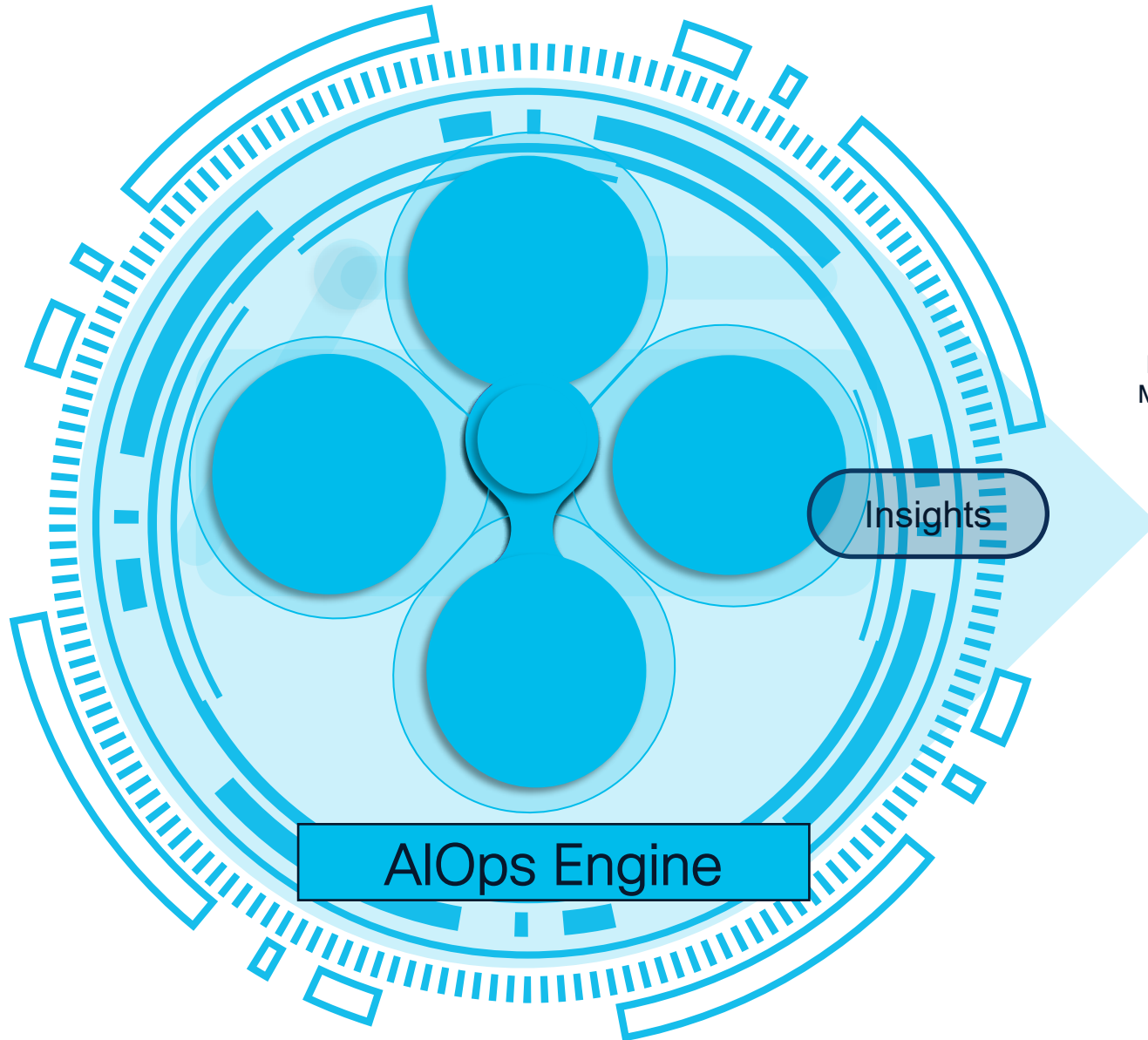
Charting the Future: Vision & Roadmap

AIOps Vision



Simplify Operations and Enhance Security Posture for Cisco Firewalls

- Prevent misconfigurations and enhance security posture with **best practice recommendations**
- Provide Root cause analysis and forecast/predict patterns using **predictive analytics** and **Dynamic Baseline**
- Receive **Policy Optimization** suggestions and remediations tailored to your environment for easy Policy Management & optimal firewall performance
- Provide visibility into user risks and automated rules to step up authentication or block them based on risks.
- Application Insights to provide Internet and Application related outage details.



25TB - Troubleshoot

1 Million - Firewalls

52 Billion - Health Metrics

200 Billion - Threat Events

AIOps Engine

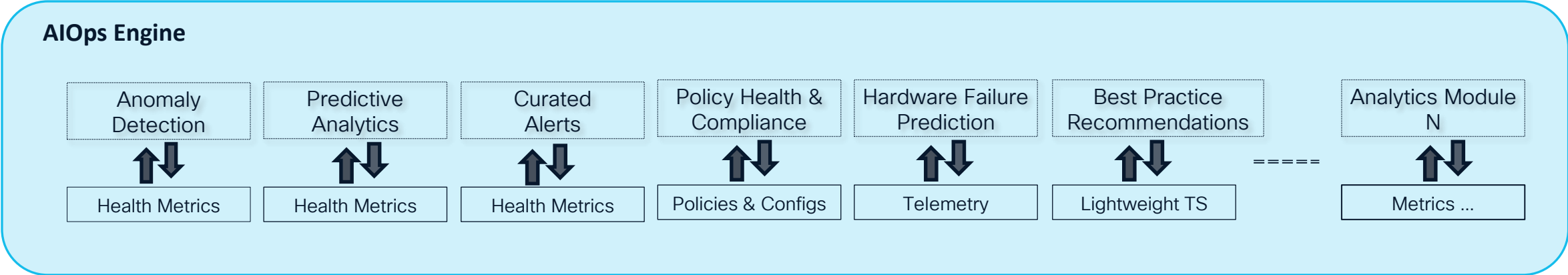
Insights

From investigating and correlating Millions of Metrics to few countable actionable Insights

Insights

Security Cloud Control

AIOps Insights



Secure Firewall (Appliance)

Secure Firewall (Virtual)

Real-World Use cases & outcomes



Policy & Configuration Insights

- Policy Analyzer & Optimizer
- Port to App-Id based conversion of rules
- Inline Optimizer
- Best Practice Recommendation
- Feature Adoption
- NAT Policy Analyzer

Operational Insights

- Software Upgrade Planner
- Renewal Upgrade Planner
- Internet Insights

Security Insights

- Visibility into user risks

Traffic & Capacity Insights

- Elephant Flow Detection
- VPN Monitoring & Capacity Planner
- Capacity & Trend Analyzer

Inline Policy Analyser & Optimiser



The Problem

Customers often don't fully use their security tools or use it ineffectively, leading to weak security practices and misconfigurations that raise the risk of a breach.



The Solution

Inline Policy analysis and optimization addresses issues like overlapping, hidden, or overly broad rules. For instance, if a customer has a rule that permits broad group of traffic above more specific rules that overlaps the same traffic, we will point out these malpractices and help reduce unnecessary rules.

Optimize Policy Hygiene

Detects Potential Security Gaps

Reduction in Change Management Time

Policy Analyzer & Optimizer

Surface anomalies in rules to guide users to attend to stale rules and other policy hygiene issues that might be oversights

Security Cloud Control Policy Analyzer and Optimizer

Data Source: firepower_10.10.18.139

Overall summary
Review the cumulative summary of the total policies and address the areas that need attention to ensure compliance and optimal performance.

45,828 Total Rules

- 17,836 (38.9%) Healthy rules
- 25,071 (54.7%) Unhealthy rules
- 2,921 (6.4%) Disabled rules

Total 49,345 anomalies in 25,071 unhealthy rules

- Shadowed rules: 10,734 (21.8%)
- Expired rules: 494 (1.0%)
- Total overlap objects: 15,516 (31.4%)
- Redundant rules: 9,488 (19.2%)
- Mergeable rules: 12,909 (26.2%)
- Partial overlap objects: 204 (0.4%)

Search by Access Control Policy Name, Analysis Status, or Remediation Status. Displaying 9 of 9 results.

Access Control Poli	Devices	Total Rules	Observations	Analysis Status	Last Modified	Last Analyzed	Remediation Status	Remediation Time
<input type="checkbox"/> Internal_ACP	0	12673	8558 48% Op	Completed	10/11/2024, 09:1	10/16/2024, 23: Analysis up-to-dat		
<input type="checkbox"/> raj-vic-741	0	999	29 <1% Optim	Completed	10/11/2024, 09:1	10/16/2024, 23: Analysis up-to-dat		
<input type="checkbox"/> access1	0	7	2 14% Optimiz	Completed	10/11/2024, 09:1	10/16/2024, 23: Analysis up-to-dat		
<input type="checkbox"/> shadowed_anor	0	206	157 36% Optir	Completed	09/12/2024, 19:	09/20/2024, 14: Analysis up-to-dat		
<input type="checkbox"/> UFTWF-FW-UR	0	95	94 80% Optir	Completed	09/12/2024, 19:	09/20/2024, 14: Analysis up-to-dat		
<input checked="" type="checkbox"/> NIC-HQ-NS-FW	0	30488	40099 58% O	Completed	09/12/2024, 19:	09/20/2024, 14: Analysis up-to-dat		

NIC-HQ-NS-FW

- Devices: 0
- Total Rules: 30488
- Observations: 40099 58% Optimizable
- Analysis Status: Completed
- Last Modified: 09/12/2024, 19:17:54
- Last Analyzed: 09/20/2024, 14:29:11
- Remediation Status: Not Running
- Hit Count Aggregation Status: No data to process

Analysis Actions

- View analysis details & optimize
- Download analysis report

Remediation Actions

- Remediation history (0 version available)

Policy Observation

We found a total of 40099 anomalies.

Duplicate Rules (13601)

- Fully Shadowed Rules: 6362
- Fully Redundant Rules: 7239

Overlapping Objects (14779)

- Fully Overlapped Objects: 14629
- Partially Overlapped Objects: 150

Policy Analyzer & Optimizer

81%

Config anomalies detected in a real customer deployment





Security Cloud Control Integration

Integrate the management center with the Security Cloud Control to use a suite of cloud services. Use your Security Cloud Control Sign On account to authorize management center to register with Security Cloud Control. If you don't have a Security Cloud Control Sign On account, [create an account](#) and integrate management center with Security Cloud Control. If you were using Security Cloud Control services prior to version 7.6, you can continue to send events to Security Cloud Control. However, to use the new Security Cloud Control features, you must enable Security Cloud Control. [Learn more](#)

Monitor

Insights & Reports >

Events & Logs >

Manage

Policies >

Objects >

Firewall Devices >

Secure Connections >

Integrations >

Troubleshooting >

Administration >

Integration

Security Cloud Control

Disabled

Current Cloud Region ⓘ

staging-sse.cisco.com (stagi... ▾)

[Learn more](#)

Tenant

None

Cloud Onboarding Status

Not Available

[Enable Security Cloud Control](#)

Settings

To send **Events** to the Cisco cloud or to use the **Security Cloud Control Support** features, either register the management center with Smart License (System > Smart Licenses) or enable Security Cloud Control.

Event Configuration

Send events to the cloud

[View your Events in Security Cloud Control](#)

Intrusion events

File and malware events

Connection events

Security

All ⓘ

Cisco AI Assistant for Security

Powered by generative AI and natural language processing, Cisco AI Assistant for Security enables you to create access control rules, query documentation and reference materials when required, and

Security Cloud Control Support

Cisco cloud support services provide an enhanced support experience and maximize the value of the Cisco products. The management center establishes and maintains a secure connection to Cisco cloud to participate in additional service offerings from Cisco.

Enable Cisco Success Network

Enable Cisco Support Diagnostics

Cisco XDR Automation

Enable Cisco XDR Automation to allow a Cisco XDR user to build automated workflows that interact with various resources in the Secure Firewall Management Center. [Learn more](#)

Save



Search

Return Home Deploy



gayathna@cisco.com



Object Management | Intrusion | Network Analysis Policy | DNS | Import/Export

Monitor

- Insights & Reports >
- Events & Logs >

Manage

- Policies >**
- Objects
- Devices >
- Secure Connections >
- Integrations >
- Troubleshooting >
- Administration >

Find in Menu

Type to search

Total 11 policies

Analyze Policies Delete Policies Create Policy

<input type="checkbox"/>	Access Control Policy	Anomaly	Last Analyzed	Last Modified	Status	
<input type="checkbox"/>	AcPolicyWithRCD-Clome--1	44 62% Optimizable	2025-10-31 06:09:26 <i>Analysis changes updated</i>	2025-10-31 04:50:16 Modified by "jbaig@cisco.com"	Assigned to 0 devices, 1 template	
<input type="checkbox"/>	AcPolicyWithRCD-Clone-5	45 62% Optimizable	2025-11-03 05:08:27 <i>Analysis changes updated</i>	2025-11-03 01:35:15 Modified by "aridey@cisco.com"	Assigned to 0 devices	
<input type="checkbox"/>	AcPolicyWithRCD-Demo	46 64% Optimizable	2025-10-21 07:08:42 <i>Analysis changes updated</i>	2025-10-17 03:24:58 Modified by "Firepower System"	Assigned to 0 devices	
<input type="checkbox"/>	AcPolicyWithRCD-R	45 64% Optimizable	2025-10-31 12:38:06 <i>Analysis changes updated</i>	2025-10-31 07:15:48 Modified by "aridey@cisco.com"	Assigned to 1 device <i>Changes pending in all assigned devices</i>	
<input type="checkbox"/>	AcPolicyWithRCD_Mod	46 64% Optimizable	2025-10-21 07:11:12 <i>Analysis changes updated</i>	2025-10-16 11:17:02 Modified by "parachou@cisco.com"	Assigned to 0 devices	
<input type="checkbox"/>	anomalies_policy_DO_NOT_CHANGE	147 34% Optimizable	2025-10-30 03:19:31 <i>Analysis changes updated</i>	2025-10-30 03:12:09 Modified by "jbaig@cisco.com"	Assigned to 1 device <i>Changes pending in all assigned devices</i>	
<input type="checkbox"/>	Default Access Control Policy <i>Default Access Control Policy with default action block</i>	No anomaly detected	2025-10-31 06:08:42 <i>Analysis changes updated</i>	2025-10-30 23:07:47 Modified by "Firepower System"	Assigned to 2 devices <i>Changes pending in all assigned devices</i>	
<input type="checkbox"/>	Initial ACP	Not analyzed	Not analyzed	2025-11-03 11:34:14	Assigned to 0 devices	

Adaptive Policy Insights

Port based Rules to App-ID based Rules



The Problem

As customers transition from legacy firewalls to next-gen firewalls (NGFW), many legacy port-based rules are carried over without review. In addition, several port-based rules are often retained for convenience but they can significantly weaken your security posture.



The Solution

Leverage **application-based policy analysis and optimization tools** to identify and replace outdated port-based rules.

- Detect legacy and unused rules
- Suggest application-aware replacements
- Prioritize high-risk rules for cleanup

Reduced attack surface

Application aware policies

Improved security posture

- Organization: ztp_sanity_tenant
- Platform menu
 - Firewall
 - Dashboard
 - Monitor
 - Insights & Reports
 - Events & Logs
 - Manage
 - Policies
 - Objects
 - Security Devices
 - Secure Connections
 - Administration
 - Platform services
 - Favorites
 - Security Devices
 - Shared Objects
 - Platform Management

AIOps / Policy Analyzer and Optimizer

Policy Analyzer and Optimizer

remediation - testing - policy

Policy last analyzed: Nov 05, 2025 07:29:44 UTC - 08:00 | Policy last modified: Nov 05, 2025 07:22:12 UTC - 08:00

Download analysis report | 1 rules marked for remediation. [Discard] [Apply Remediation]

Summary Duplicate rules 15 Expired rules 5 Mergeable rules 11 Overlapping objects 11 Policy insights

Overall summary

Review the cumulative summary to address issues, if any, and achieve optimal performance.



Total 42 anomalies, in 34 unhealthy rules



Rules usage history



Hit rules & dead rules



Maximize ROI with Feature Adoption



The Problem

Users often find themselves buried in day-to-day operation tasks. They have limited time to learn new features that can help to improve security and productivity. Licenses bought were also often time not fully utilized. Currently, this information is not surfaced. Users may not be aware of the untapped values.



The Solution

Aside from offering best practice recommendations, helping our users to identify and understand underutilized features allow us to bring awareness on how our customers can get the most values out of their security spending.

← AIOps Insights

Feature Adoption

Data sources: Cloud-Delivered Firewall Management Center

Last updated: 2 days ago Refresh page

Summary

37%
Adoption rate

Feature overview
8 Total features
5 Not adopted
0 Partially adopted
3 Adopted

Each feature is represented as a percentage, indicating the total number of products that have or have not adopted that feature.

Feature recommendations



Encrypted Visibility Engine
Encrypted Visibility Engine for Firewall Threat Defense devices

Learn more



Cisco Secure Dynamic Attributes Connector
Dynamic Attributes Connector for Firewall Management Center

Learn more

Licenses and associated features

Each of the following features is associated with a license. Enable or disable a feature to improve your adoption score without impacting feature functionality.

Essentials

66%

- Application Segmentation via ZTNA
- AI Assistant
- Policy Analyzer and Optimizer

Change management



Enables formal processes for configuration changes in Management Center, including audit tracking and official approval before changes are deployed.

0%

Adoption rate

Feature adoption rate at each enforcement point

Adoption:0%

Cloud-Delivered Firewall Management Center

1 Total | 1 Not adopted | 0 Adopted

Devices

Adoption status

Cloud-delivered FMC

Not adopted

Rows per page 10 < 1 >

Steps to improve your feature adoption rate efficiency:

- Dashboard
- Multicloud Defense
- Monitor
 - Insights & Reports
 - Events & Logs
- Manage
 - Policies
 - Objects
 - Security Devices
 - Secure Connections
 - Administration

Best practice recommendations



The Problem

Organizations struggle with misconfigurations, evolving threat landscape, and resource constraints. Customers follow best practices to improve their security postures. However, today, this knowledge is not integrated into the product. Customers have to manually reference and keep track of their policy hygiene and making sure that their configurations are in aligning with best practices to defend against threats.



The Solution

We utilize machine learning algorithms to identify and rectify errors based on industry-defined and Cisco best practices. For instance, should a user inadvertently permit access to high-risk URL categories such as Phishing and Hacking, our system will detect and bring attention to this oversight, proposing corrective actions. These insights are also conveniently displayed on the integrated dashboard for easy access.

- Dashboard
- Monitor
 - Insights & Reports**
 - Events & Logs
- Manage
 - Policies
 - Objects
 - Security Devices
 - Secure Connections
 - Administration

← AI Ops Insights

Best Practices and Recommendations

Assessment summary | Total: 2 device reports

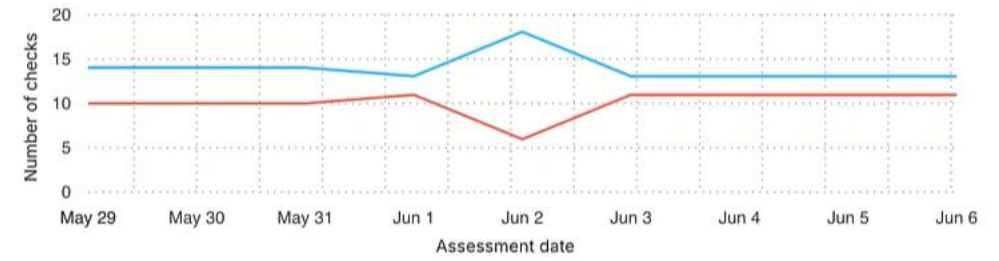
Checks summary

11/24

Checks requiring review

We recommend that you assess the checks that require review and set right any deviations from Firewall best practices. This is necessary for optimal performance of your device.

Best practices assessment trend



Device reports

2 device reports

Device name	Device status	Checks requiring review	Review categories	Assessment status
FTD-7.6	Warning	11 50% improvement potential	Improve access control, Manage access and control pane +1	Updated 4 days ago
FMC	Passed	0	-	Updated 18 hours ago

Elephant Flow detection and Remediation



The Problem

Large long lived flows called Elephant flows can overload the firewall device leading to traffic drops, compromised security posture, and sub-optimal firewall performance



The Solution

When a Firewall is managing a large network flow, we can forecast how large long-lived flows may impact CPU and memory. With AIOps insight, we can suggest to bypass low risky applications and throttle high risky apps and optimize the flows.

Faster Troubleshooting

Reduced Mean Time to Resolution

Risk-based prioritization

Elephant Flow detection and remediation

Correlate and show performance overload due to specific applications that can lead to traffic drop and compromised security



Recommendation to inspect high risk applications and bypass low risky apps



The dashboard displays a critical alert titled "High Traffic Spike Due to Elephant Flows" on Jan 7, 2024, at 07:08:00 PM. The description states that AIOps has detected high traffic losses caused by 4 applications, potentially leading to performance duress in smart cores. Elephant flows, although not numerous, occupy a disproportionate share of the total bandwidth over time, resulting in problems such as high CPU utilization, packet drops, and slower network speeds. Impacted devices listed are SJ-01-FP4100 and SJ-02-FP5100. The probable cause is identified as large elephant flows, resulting in a disproportionate share of the available bandwidth, leading to performance issues such as high CPU utilization, packet drops, and slower overall network speeds. The confidence level is High.

The dashboard includes two charts: "Application Throughput" and "Packet Drops".

Application Throughput

Time	Application 1	Application 2	Application 3	Application 4
1 Jan	10 Gbps	5 Gbps	10 Gbps	5 Gbps
04:00	10 Gbps	12 Gbps	8 Gbps	6 Gbps
08:00	10 Gbps	10 Gbps	8 Gbps	7 Gbps
12:00	10 Gbps	5 Gbps	10 Gbps	7 Gbps
16:00	15 Gbps	12 Gbps	5 Gbps	10 Gbps
20:00	12 Gbps	10 Gbps	10 Gbps	8 Gbps
2 Jan	14 Gbps	10 Gbps	5 Gbps	10 Gbps
04:00	12 Gbps	5 Gbps	10 Gbps	8 Gbps

Packet Drops

Time	Packet Drops (Gbps)
1 Jan	5 Gbps
04:00	4 Gbps
08:00	4 Gbps
12:00	7 Gbps
16:00	14 Gbps
20:00	13 Gbps
2 Jan	14 Gbps
04:00	14 Gbps

Elephant Flow Analysis - Applications Causing High CPU and Bandwidth

Applications	Security Risk	Source IP	Destination IP	CPU (%)	Throughput
MySQL (3)	Very Low	-	-	98% (Avg)	7.10 Gbps (Total)
		10.1.109.21	10.1.109.45	98%	1.10 Gbps
		10.1.108.25	10.1.109.45	98%	2.50 Gbps

Elephant Flow detection and remediation

AI suggested remediations to bypass or throttle traffic



List of applications where elephant flows are observed contributing to traffic spike & CPU spike



Automated remediation suggestion workflow



Elephant Flow Analysis - Applications Causing High CPU and Bandwidth

Applications	Security Risk	AI Suggested Remediation
> MySQL (3)	Very Low	Bypass Application
> Webex	Low	Bypass Application
> Amazon Alexa	Medium	-
> Cloudload (2)	Very High	Throttle Application

Remediation

The best remediation method for an elephant flow depends on a specific situation.. If the flow is legitimate and does not pose a security risk, bypassing may be the best option. However, if the flow is suspicious or malicious, throttling it may be necessary.

Bypass / Throttle Traffic Inspection for Applications

Bypass traffic inspection for trusted or low-risk applications. Alternatively, throttle traffic for nonbusiness critical and high-risk applications.

[Start Remediation](#) [Show Remediation Details](#)

Upgrade FTD to Support Increased Performance

VPN Monitoring and Capacity Planning



The Problem

Imbalance in VPN headend loads such as multiple users connect to a single VPN headend, while others remain underutilized or sessions that stay open for extended periods without actual usage can cause dropped connections and compromised performance.



The Solution

Using predictive analytics, we can identify these disparities and offer actionable solutions.

Faster troubleshooting

Reduced Mean Time to Resolution

Risk-based prioritization

Traffic Insights: VPN Monitoring and Capacity Planning

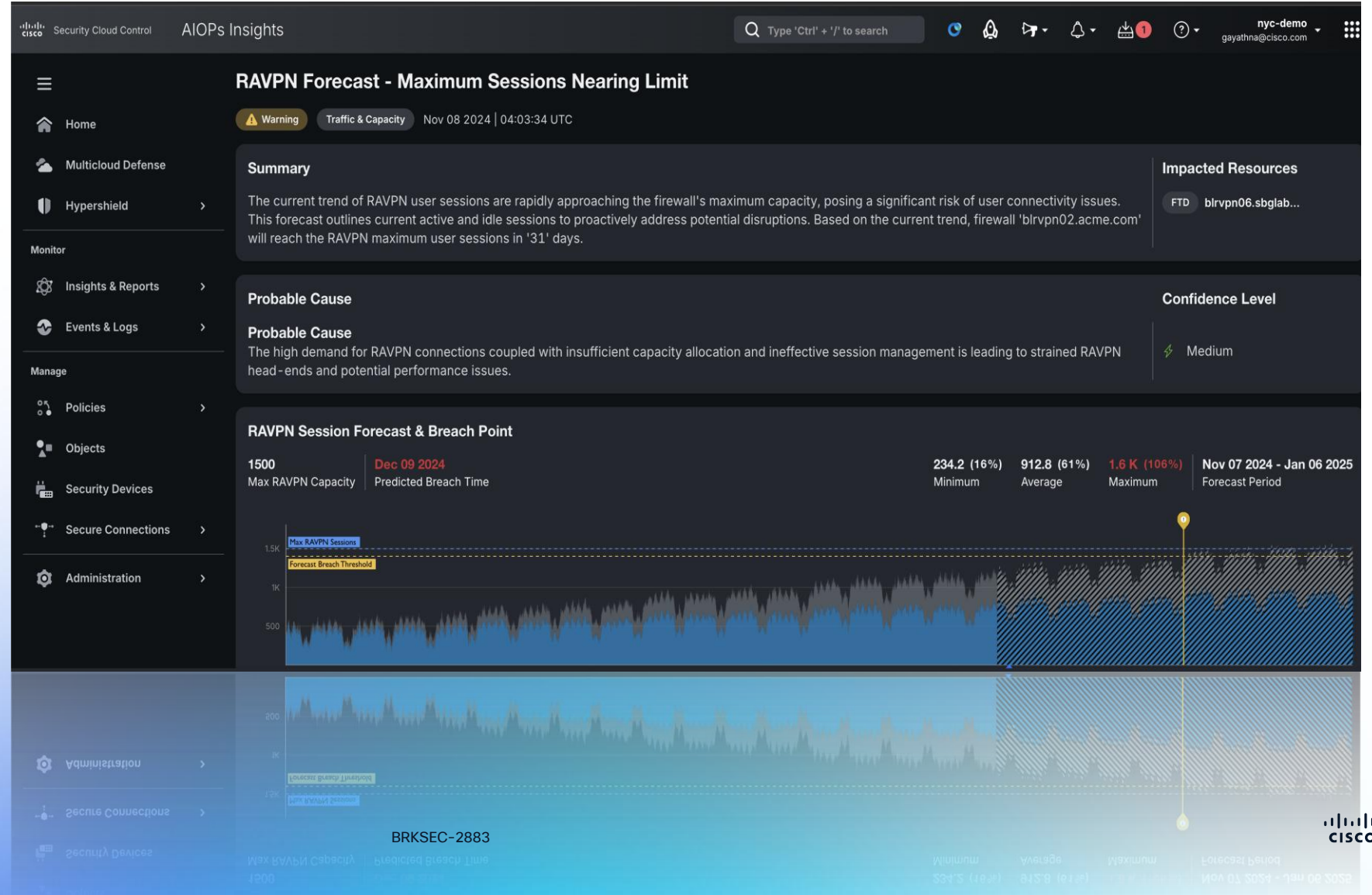
Description of the anomaly and impacted devices



Probable cause & confidence level



Root cause analysis of the problem



- Organization: aiops-smathura
- Platform menu
 - Firewall
 - Dashboard
- Monitor
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 - Events & Logs
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 - Shared Objects
 - Platform Management

AIOps summary Last 24 hours



Insights 9

Insights by device



Insights by priority

1	High Snort CPU usage	Active : 1
1	High Snort memory usage	Active : 1
1	High traffic caused by elephant flow	Active : 1
1	Connections rate (CPS) anomaly	Active : 1
1	RAVPN forecast: Nearing maximum sessions limit	Active : 1
5	Best Practices & Recommendations	Active : 5
4	Software Upgrade Recommendation	Active : 4

Capacity and Trend Analyzer

Forecast problems before they occur

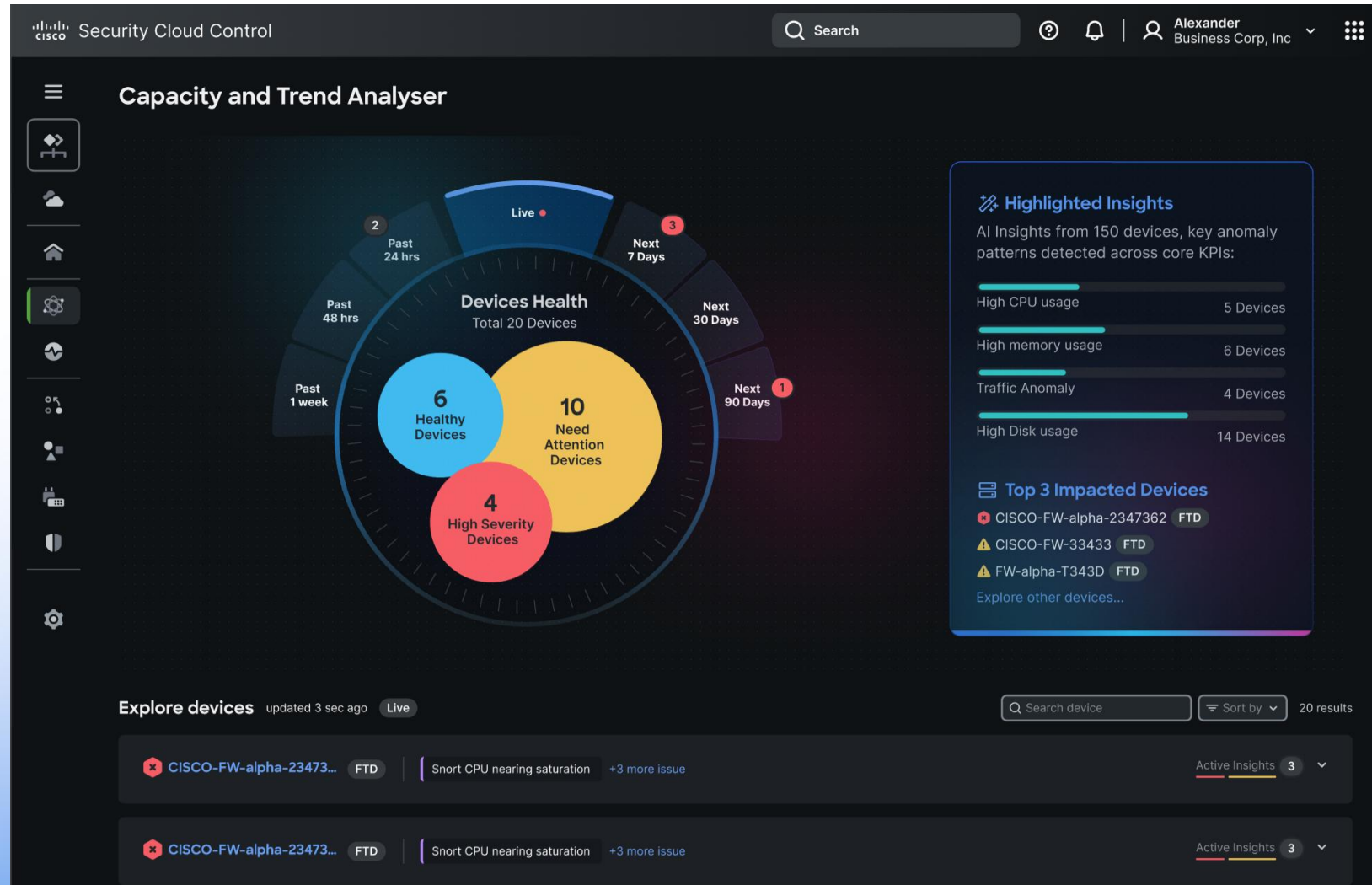
Helps with anomaly detection and proactive forecasting of problems along with root cause analysis

Ability to look into past, present & future

Ability to look through insights in real-time along with investigation capabilities to look through past and forecast options for future

Add your custom KPI to track

Provided with flexibility to choose KPI's and monitor those which matter to you.



Security Insights: Risky user visibility



The Problem

Credential theft and identity-based attacks dominate cybersecurity incidents by exploiting the fundamental trust in digital identities. Traditional firewalls lack the architecture to detect or block malicious activities involving compromised credentials, leaving organizations exposed to persistent, stealthy attacks that leverage legitimate access to escalate privileges, move laterally, and deploy ransomware



The Solution

AIOps surfaces real-time insights into risky users and anomalous behavior and highlights risks such as privilege escalation, MFA fatigue, impossible travel, or sudden privilege spikes. These risks are surfaced through an intuitive dashboard, categorized by severity, and accompanied by root cause analysis and guided remediation steps.

Risky user detection

Automated remediation

Identity aware firewall



Dashboard

Users

Applications

Devices

Non-Human Identities

Checks

Reports

Integrations

System Logs

Tenant Access

Tenant Settings >

⚠ There is 1 integration with data collection disabled. Re-enable the collection, or consider deleting.
There are 3 notification targets disabled. Re-enable the notification targets, or consider deleting.

Integration Status

4 of 6 Providers Synced

- 1 connection error
- 1 collection error
- 1 disabled

[Last data collection](#) ⓘ

Providers

Duo Intrepid Corp (autogenerated)
Connectivity: **Connected**
Collection Status: **Success**
Average Traffic: 2 records

Steve J Jamf
Connectivity: **Connected**
Collection Status: **Success**
Average Traffic: 3 records

Steve J Okta
Connectivity: **Connected**
Collection Status: **Success**
Average Traffic: 6 records

cisco-demo
Connectivity: **N/A**
Collection Status: **Disabled**
Average Traffic: 0 records

cisco-fpidentity-abp
Connectivity: **Partially Connected**
Collection Status: **Error**
Average Traffic: 0 records

cisco-fpidentity-muster
Connectivity: **Connected**
Collection Status: **Success**
Average Traffic: 9 records

Notification Targets

My Email Target
Connectivity: **N/A**
Configured for 0 checks

auto-generated-test-webhook-postman-6c4aec7b
Connectivity: **N/A**
Disabled

new_test_webhook
Connectivity: **N/A**
Disabled

testWebhook
Connectivity: **N/A**
Disabled

API clients

CII connector

DocsTest2

SteveJAPITest

aparajith-demo1

aparajith_latest

api-client

cii2

demo

remove_audience

Software Upgrade Planner



The Problem

Today, planning for an upgrade involves extensive bug scrub & psirt identification triage process to understand what's the best version customers can upgrade to.



The Solution

Analysis & report of PSIRTs and bugs based on current customer versions.

Identify and mitigate relevant risks before upgrading.

Suggests best major and minor versions which aligns with your stability and innovation preferences.

Eliminates manual research with environment-specific guidance

Simplifies planning process

Reduced mean time to resolution

Major or minor upgrade versions

- Organization: alops-smathura
- Home
- Products
 - Firewall
 - Duo
- Platform services
 - Favorites
 - Security Devices
 - Shared Objects
 - Platform Management

[Set default homepage](#)

Home

Top Insights & Alerts 17 Active Insights

[All Insights](#)

High Snort Memory Usage

Data source: smathura_ftd_ver76_ip77

Snort Memory utilization has reached 87%, surpassing the defined threshold.

67d ago [Details](#)

High Snort CPU Usage

Data source: smathura_ftd_ver76_ip77

Snort CPU utilization has reached 86%, surpassing the defined threshold.

69d ago [Details](#)

High Traffic Caused by Elephant Flow

Data source: smathura_ftd_ver76_ip77

AIOPS has detected high traffic on the firewall caused by 1 flow, potentially leading to performance duress in Snort cores.

69d ago [Details](#)

Overall Inventory

13 Total Devices

Issues	1
Pending Action	1
Other	7
Online	4
Device End-of-Life	3

[View All Devices](#)

RA VPN Sessions

No results found

Configuration States

0 Not Synced	0 Conflict Detected	3 Synced
--------------	---------------------	----------

Renewal Upgrade Planner



The Problem

Today, planning for renewal of new firewall model is a very manual process. It involves understanding of firewall models newly released by Cisco and migration paths



The Solution

Provides automated report of devices reaching End of Life along with various other dates. This also provides insights into new models released by Cisco along with links to data sheet.

Simplifies planning process

Reduced mean time to resolution

Renew to latest & greatest

- Organization: alops-smathura
- Platform menu
 - Firewall
 - Dashboard
 - Monitor
 - Insights & Reports
 - Events & Logs
 - Manage
 - Policies
 - Objects
 - Security Devices
 - Secure Connections
 - Administration
 - Platform services
 - Favorites
 - Security Devices
 - Shared Objects
 - Platform Management

Dashboard

Customize

All Insights

Top Insights & Alerts 19 Active Insights

High Snort Memory Usage

Data source: smathura_ftd_ver76_ip77

Snort Memory utilization has reached 87%, surpassing the defined threshold.

4d ago [Details](#)

High Snort CPU Usage

Data source: smathura_ftd_ver76_ip77

Snort CPU utilization has reached 86%, surpassing the defined threshold.

5d ago [Details](#)

High Traffic Caused by Elephant Flow

Data source: smathura_ftd_ver76_ip77

AIQps has detected high traffic on the firewall caused by 1 flow, potentially leading to performance duress in Snort cores.

5d ago [Details](#)

Overall Inventory

13 Total Devices

Issues	0
Pending Action	1
Other	2
Online	10
Device End-of-Life	3

[View All Devices](#)

RA VPN Sessions

No results found

Configuration States

5 Not Synced	0 Conflict Detected	5 Synced
--------------	---------------------	----------

Internet & Network Outages visibility with Thousand Eyes Integration



The Problem

When apps or internet services go down (e.g. Microsoft 365, Salesforce), IT teams often struggle to know:

Is it the network, the application provider, or our firewall?

How widespread is the issue (global vs local)?

Which users or sites are impacted?

This lack of visibility slows root cause analysis and leads to wasted time troubleshooting problems outside your control.



The Solution

ThousandEyes Internet Insights integration into AIOps for firewall provides real-time visibility into **internet and application outages**.

What is broken?

Where is the impact and the duration of impact?

Shows outages which are relevant or applicable to the customer based on their configuration & event data.

Reduce Mean Time to Detect

Visibility into application outages

Thousand Eyes Integration

Monitor

Analysis >

Manage

Policies >

Devices >

Objects >

Integration >

Object Management | Intrusion | Network Analysis Policy | DNS | Import/Export

Type to search

Loading Policies

Analyze Policies

Delete Policies

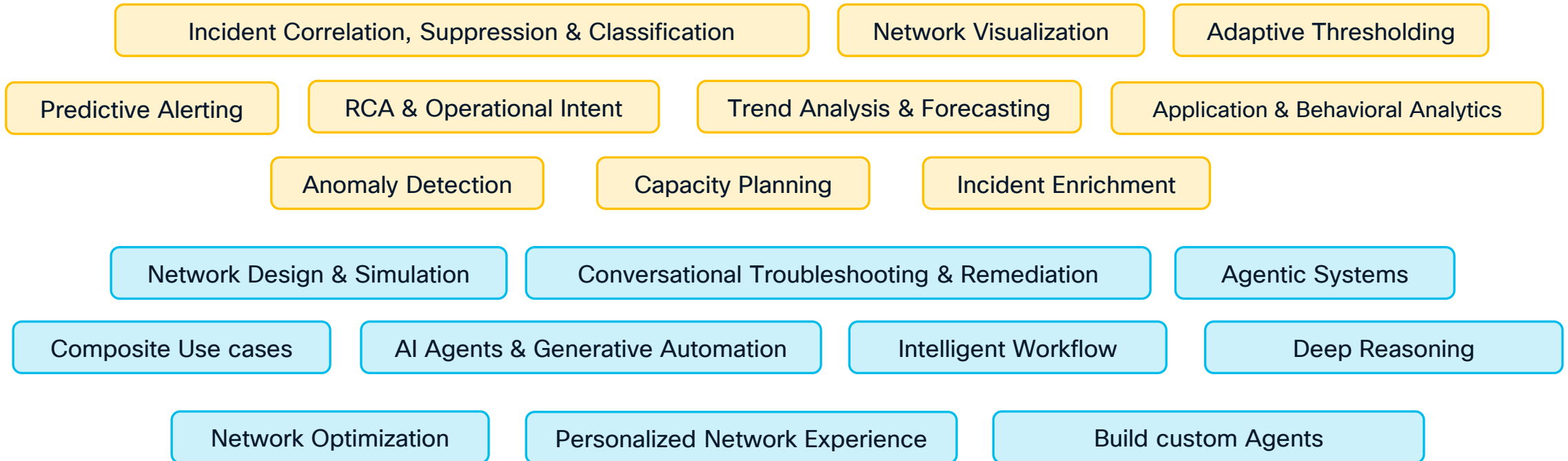
New Policy

<input type="checkbox"/>	Access Control Policy	Anomaly	Last Analyzed	Last Modified	Status	

AI Capabilities Journey

From Augmenting to a journey toward autonomy

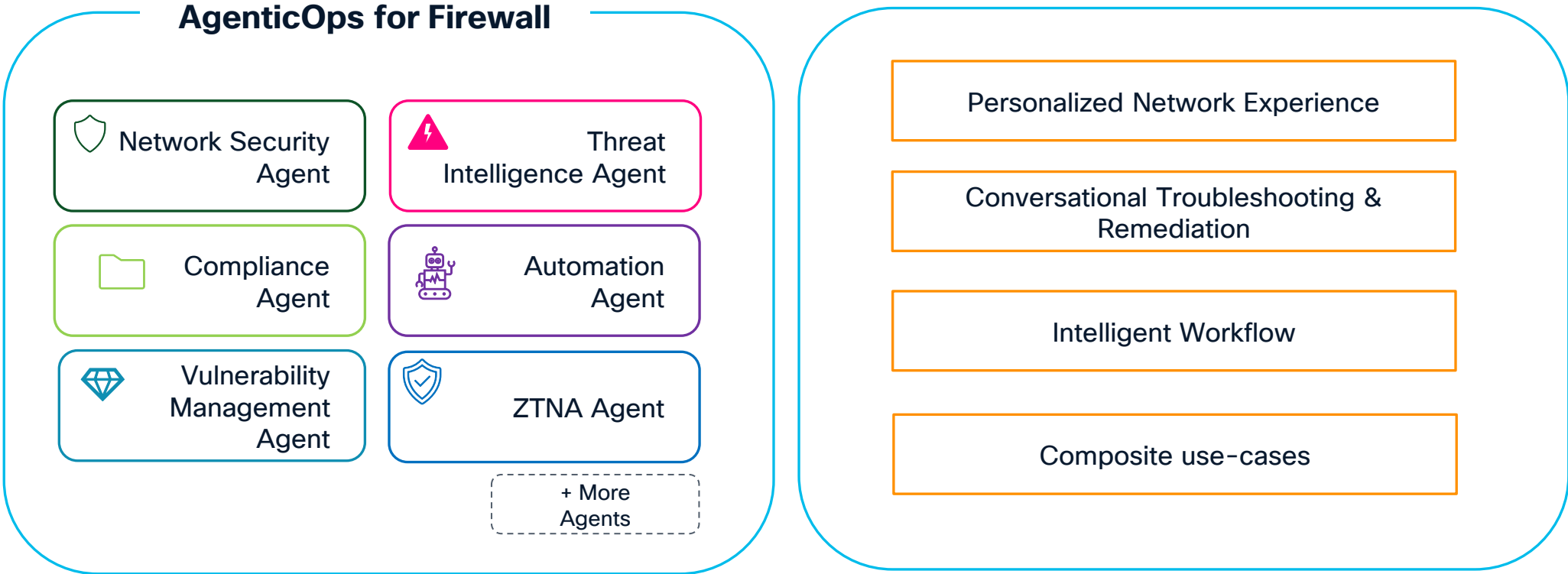
Adoption | Acceleration



AgenticOps: The next evolution of AIOps

Beyond Insights: Transitioning from AIOps to AgenticOps

Vision



Human-in-the loop approvals & Guardrails

AgenticOps for Firewall

Jan 2026
Beta

Security Cloud Control

Network Security Agent

Simplify complex product interactions and day-to-day network operations

- Configuration Management
- Troubleshooting
- Proactive Monitoring

Compliance agent

Simplify the overall compliance & audit process such as PCI DSS

- PCI DSS
- Audit Automation
- Autonomous Remediation

Operations agent

Accelerate troubleshooting, resolve support tickets

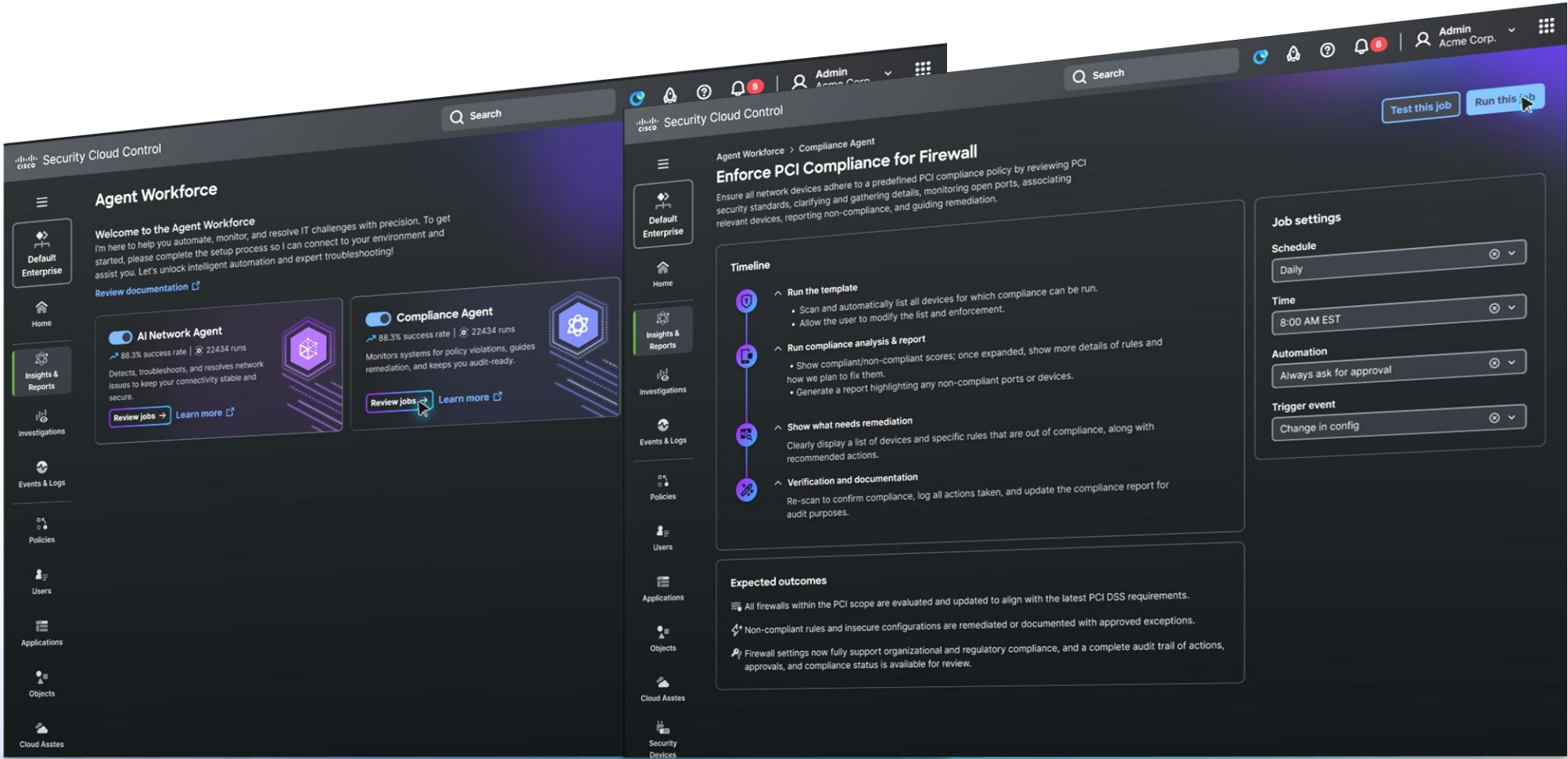
- Ticket Resolution
- Auto-Remediation
- Root Cause Analysis

Beta Sign up



AgenticOps for Firewall

The vision: networks that self-monitor, self-heal, and act, enabling proactive operations while keeping engineers in control (human in-the-loop).



AgenticOps for Cisco Firewall from Security Cloud Control



Minimize misconfigurations and downtime



Simplified Operations and Improved Security posture



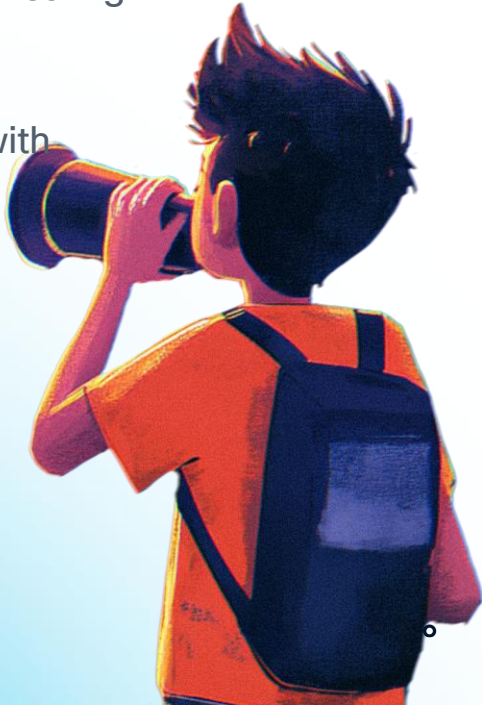
Autonomous troubleshooting and self-healing



Enhance collaboration and approvals with Human-in-loop mechanism



Productivity gains



Complete your session evaluations



Complete a minimum of 4 session surveys and the Overall Event Survey to claim a Cisco Live T-Shirt.



Earn up to 800 points by completing all surveys and climb the Cisco Live Challenge leaderboard.



Level up and earn exclusive prizes!



Complete your surveys in the Cisco Live Events app.

Continue your education



Visit the Cisco Stand for related demos



Book your one-on-one Meet the Expert meeting



Attend the interactive education with Capture the Flag, and Walk-in Labs



Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand

Thank you

CISCO Live !