CISCO Connect

A New Approach to Network Resilience

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What is Digital Resilience?

What is Observability?

Observability is the ability to understand and assess the internal state, performance, and health of a technology system by analyzing the data it produces externally, such as logs, metrics, and traces.

Control Theory – Rudolf E Ka'lman, 1959–1960

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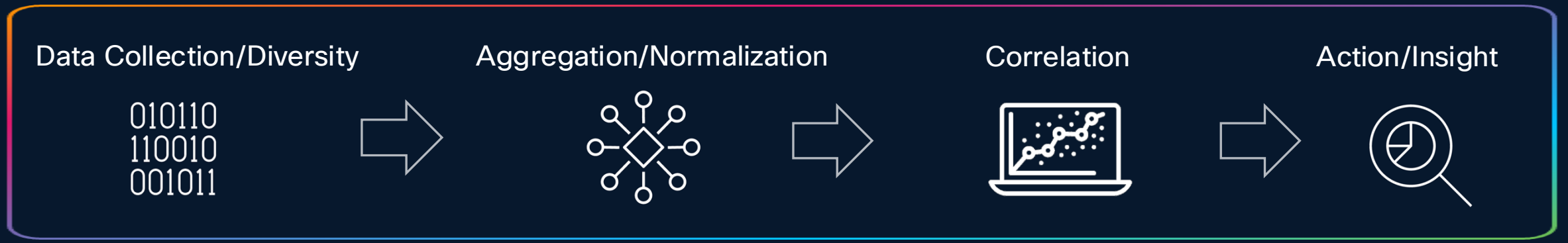
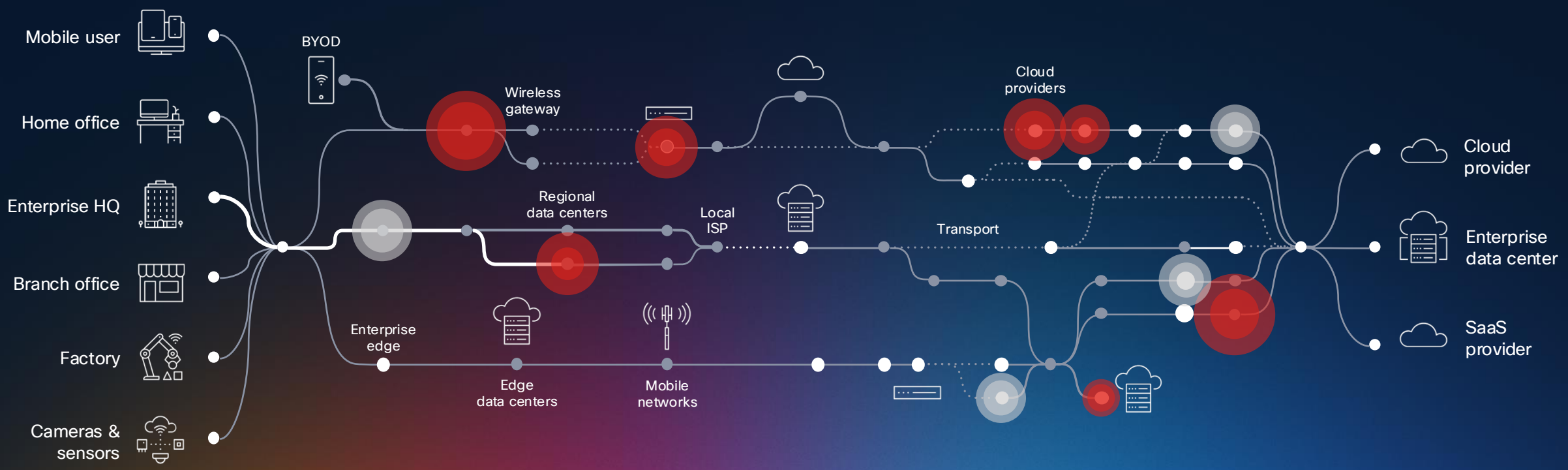
What is Observability's Role?

Feature	Monitoring	Observability
Focus	Known issues	Unknown and complex issues
Approach	Reactive	Proactive + Exploratory
Goal	Detect failures	Understand system behavior
Question it answers	"Is it working?"	"Why is it behaving this way?"

What Really Matters?



The technology system now spans owned and unowned environments



Silos of people, tools and data increase complexity | AI-powered workflows introduce new demands

Slowness & latency is the NEW DOWN!

Prevent issues before they affect customers, remediate rapidly, and adapt to new opportunities

Digital Resilience

Security

Gain comprehensive threat prevention, detection, investigation, and response for organizations of any size and security maturity

Observability

Prevent downtime and optimize experiences with visibility and insights across end-to-end services, including owned and unowned environments

Assurance

Enable seamless end-to-end connectivity across cloud, internet and enterprise networks to assure the delivery of applications and services

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The Unified Advantage

Observability

Unified visibility across network, infrastructure, and applications with business context

splunk> a CISCO company

CONTEXT

Assurance

End to-end visibility into all networks and services that affect app performance and delivery

CISCO ThousandEyes

APPLICATION | NETWORK | INFRASTRUCTURE | CLOUD

BUILT-IN DATA AND PRODUCT INTEGRATION ACROSS CISCO NETWORKING, SECURITY, AND COLLABORATION

CISCO

Splunk IT Service Intelligence

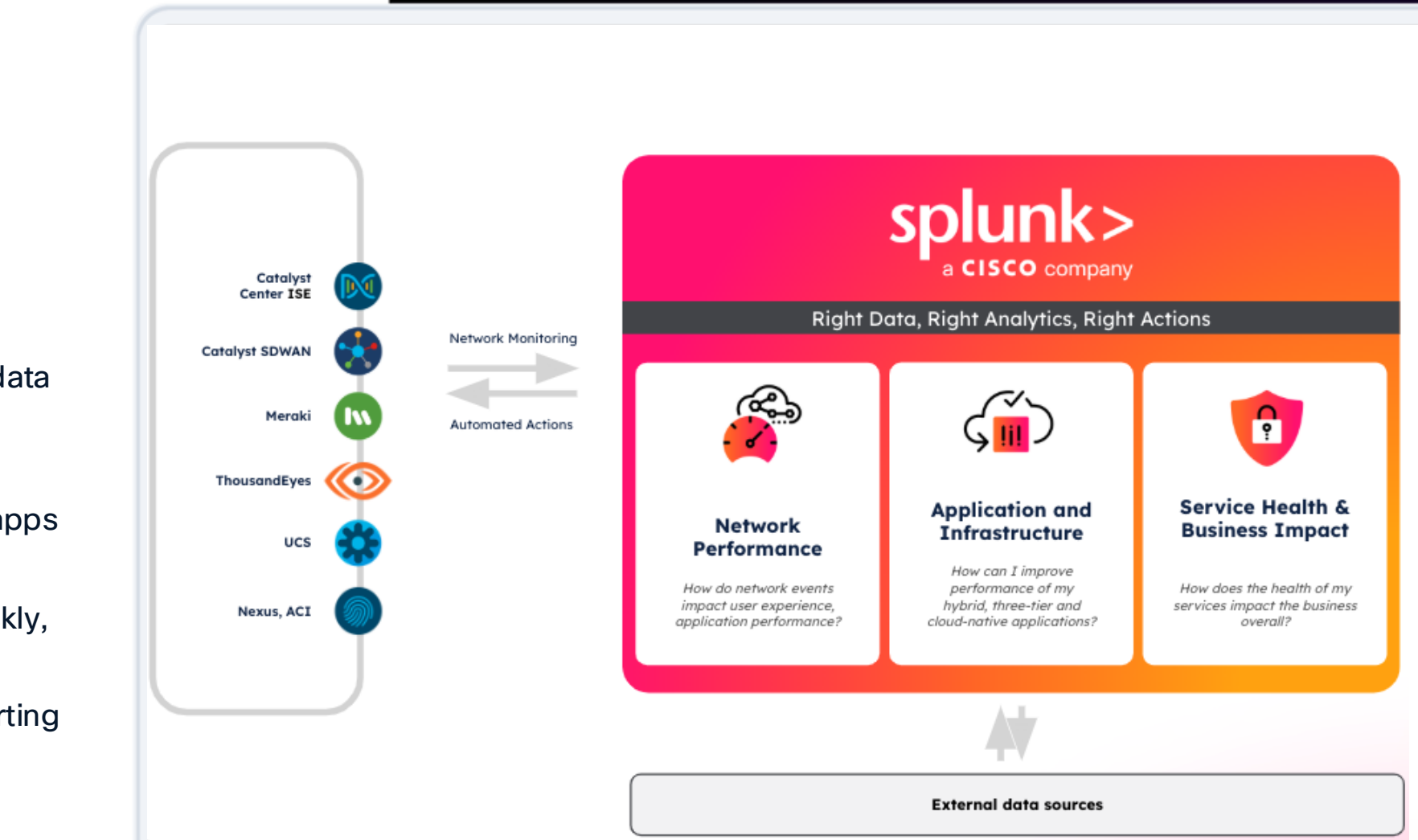
KPI-driven, predictive analytics solution for digital services

- Consolidate Visibility
- Find the Signal in the Noise
- Understand Business Impact

Consolidate Visibility

Break down silos by bringing all operational data into one place.

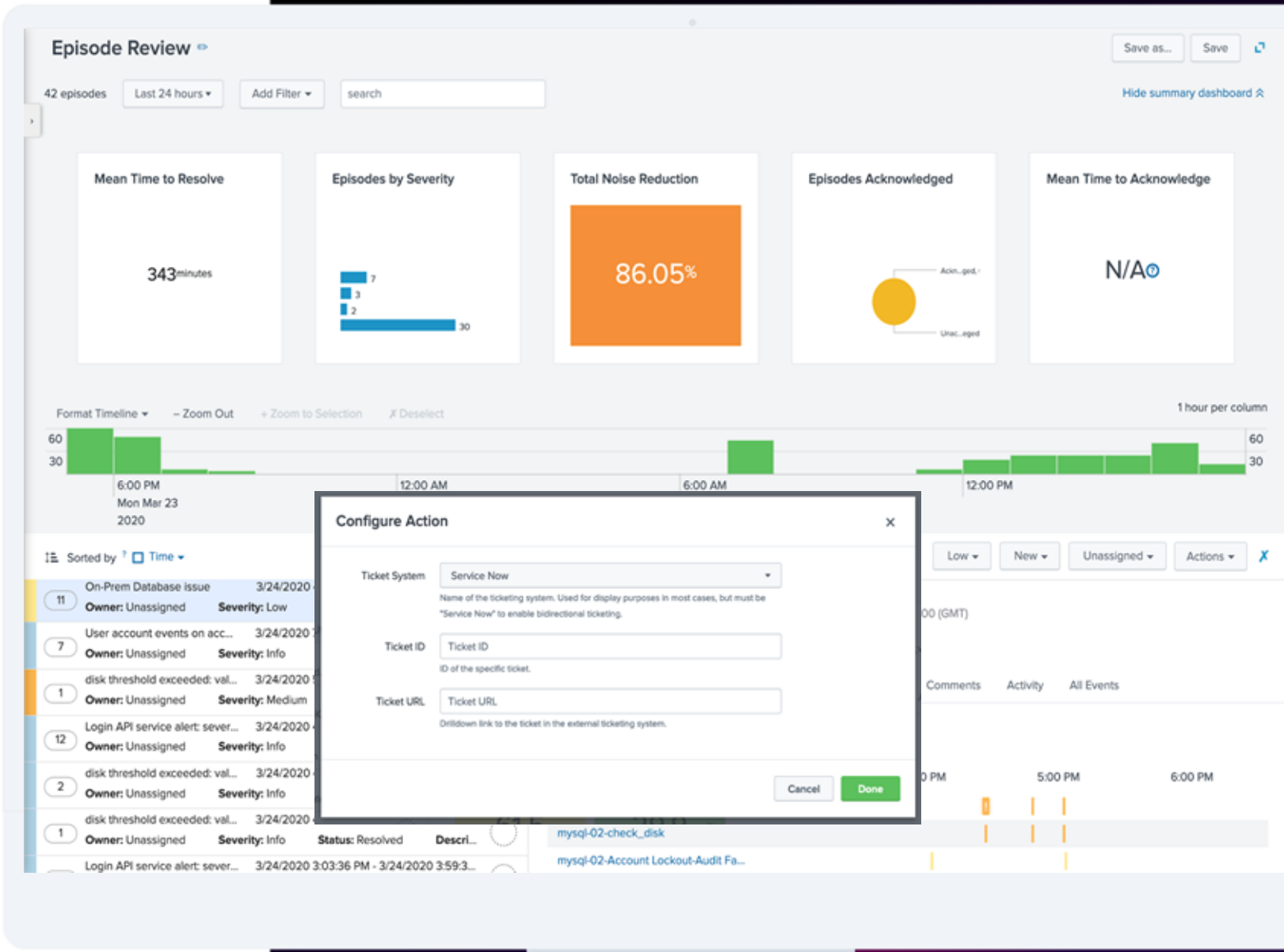
- Mitigate tool sprawl by correlating data in one place
- Breakdown silos with a single view across infra, owned and unowned apps and networks
- Understand and resolve issues quickly, regardless of domain
- Deliver executive visibility and reporting with real-time dashboards



Find the Signal in the Noise

AI-driven alert correlation and root cause identification.

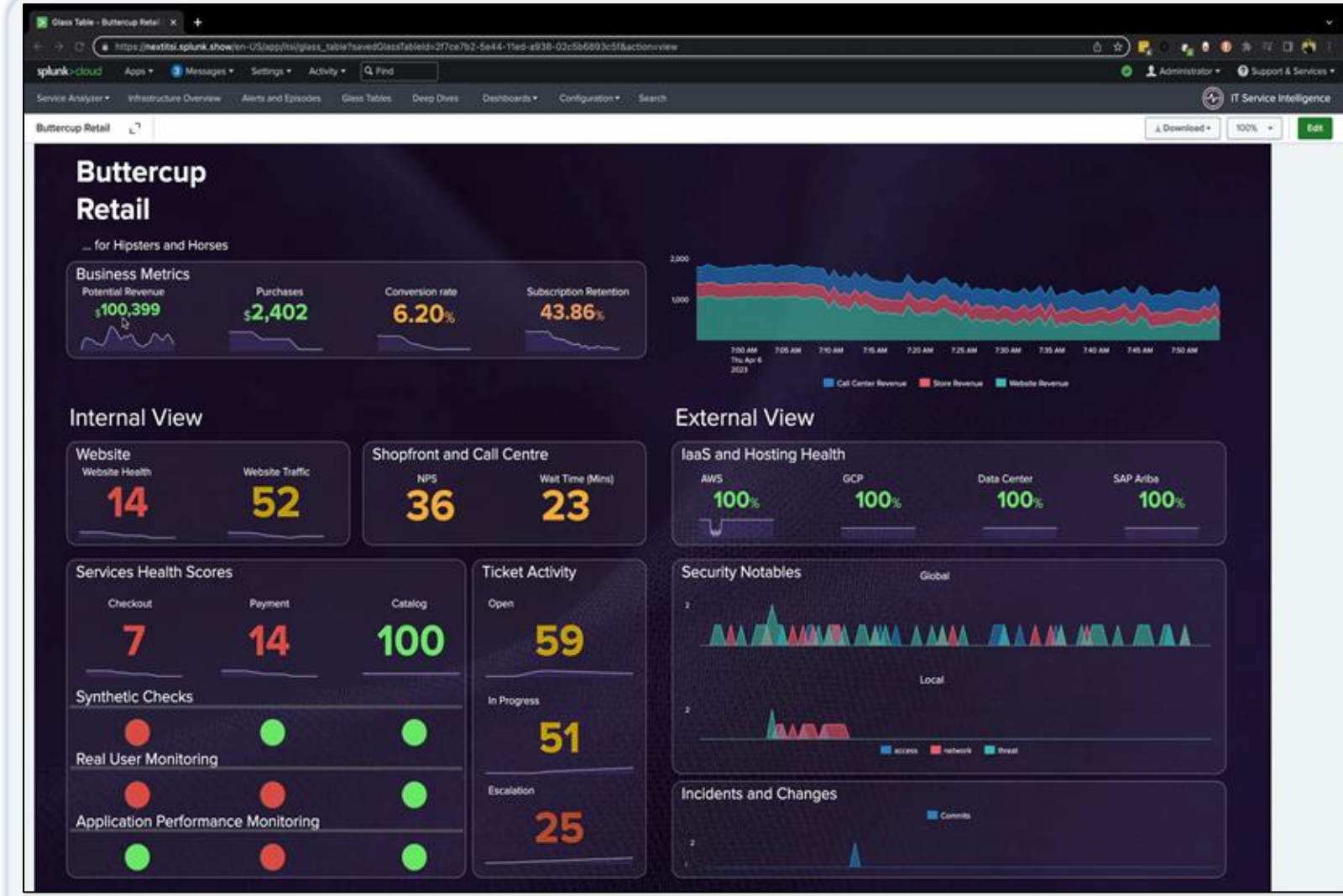
- Group related alerts automatically with AI
- Get ahead of alert storms and reduce alert fatigue
- Gain context to reduce guess work
- Understand the root cause of issues
- Reduce MTTD and MTTR to keep systems up and running



Understand Business Impact

Quickly prioritize and report on what matters most.

- Understand how IT performance affects business KPIs
- Prioritize and triage issues based on business impact
- Quickly isolate domain to reduce impact and mean time to resolution
- Visualize and report on IT performance connected to business outcomes with real-time dashboards



Benefits for the Business

Cost Optimization

Reduce redundant point tools

Operational Efficiency

Increase flexibility and adaptability to ephemeral environments

Business Impact

Connect IT to business-critical services and apps

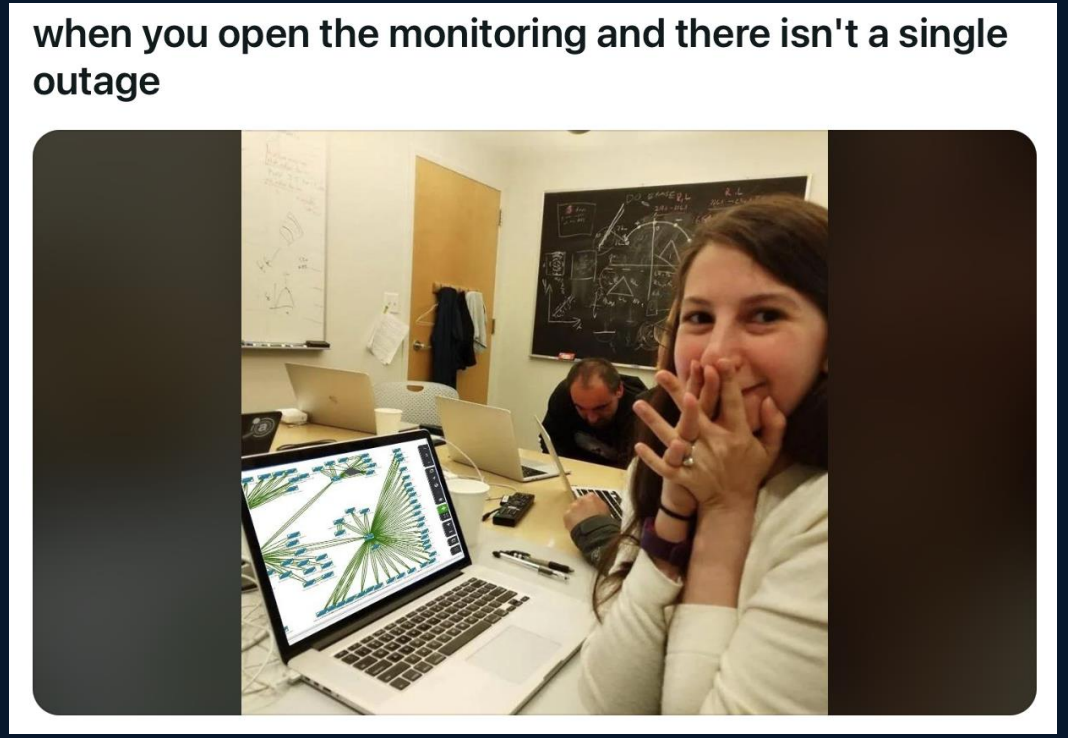
Innovation

From cost center to strategic partner

How is Assurance different from Monitoring?

Monitoring watches for symptoms; Assurance ensures the entire digital experience works as expected by **detecting risks before users feel the impact**

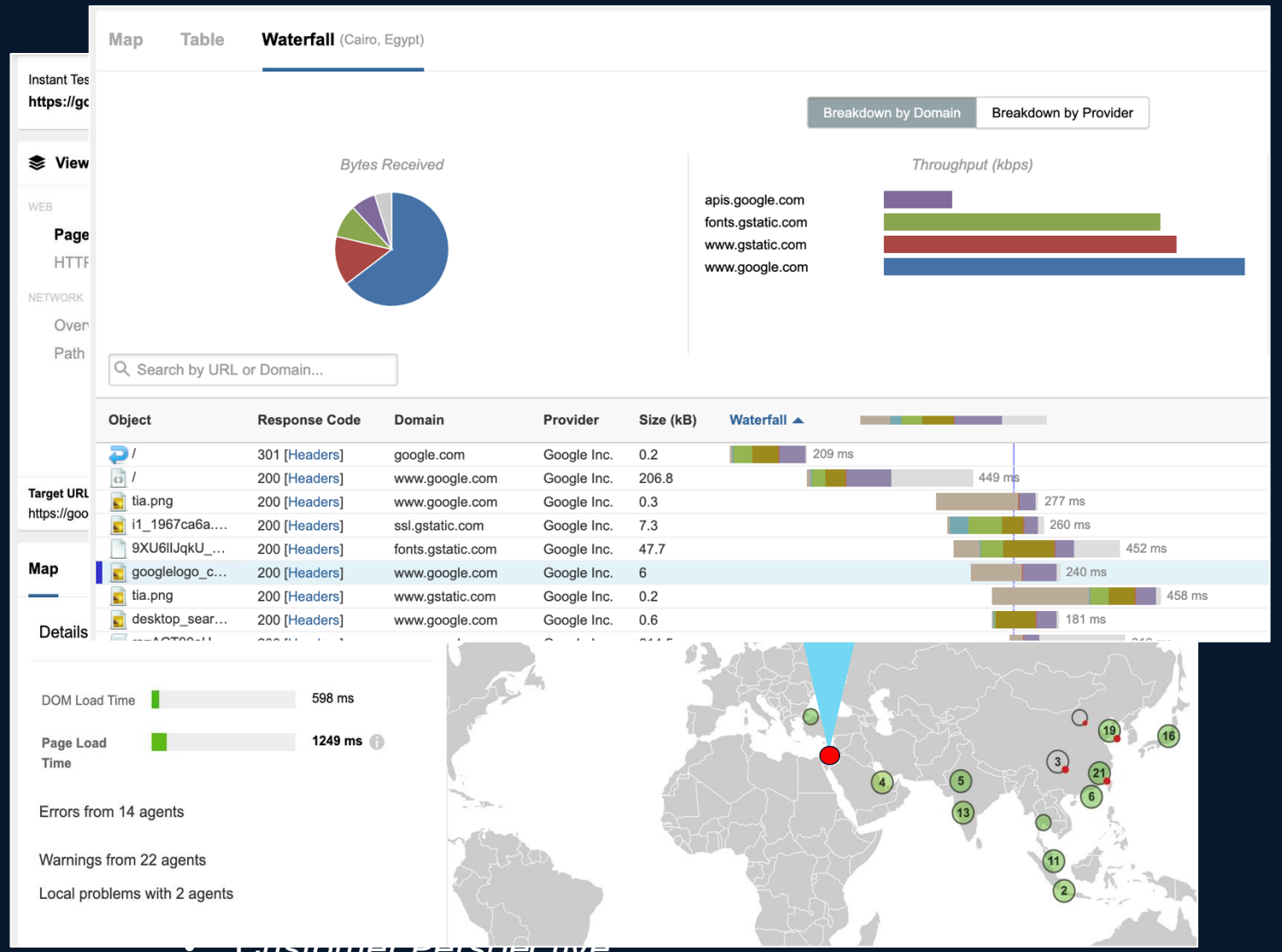
Monitoring	Assurance
Tells you *something* is broken	Analyzes performance to prevent breakage
Gives you alerts, but you need to figure it out	Actionable intelligence and recommendations
Usually limited to single domains (infra, app)	Context on *how* services interact



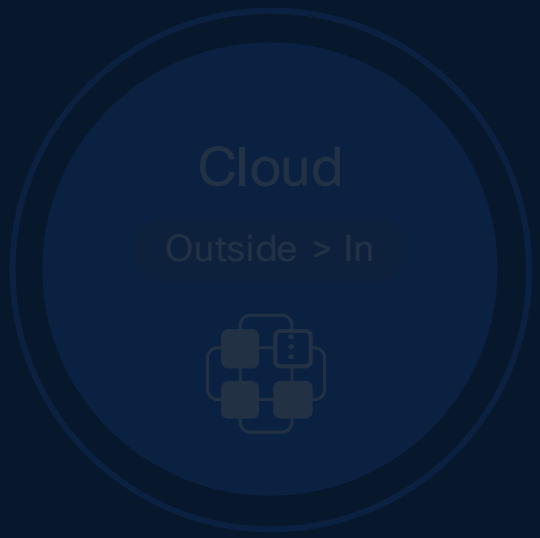
Cloud

Outside > In

Over 1000 vantage points all over the world

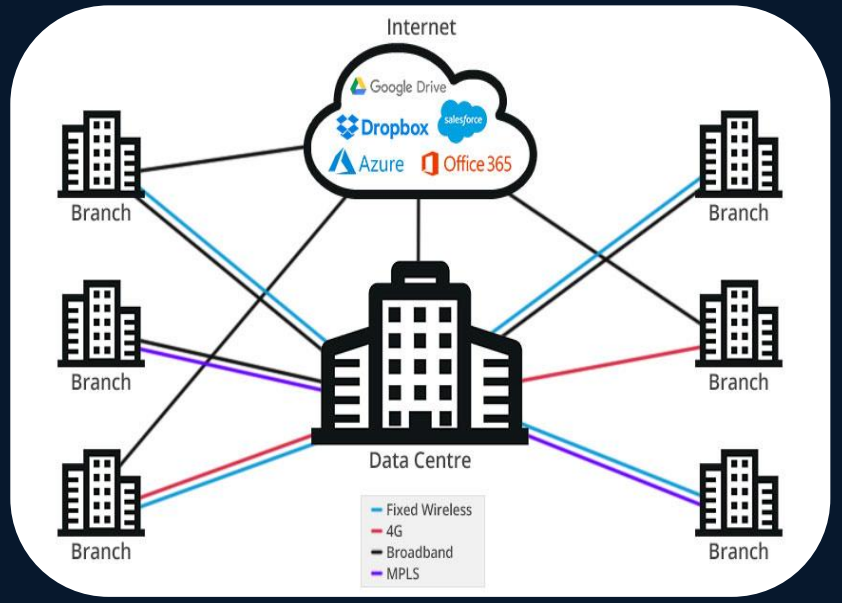


• *Customer Perspective*



Over 1000 vantage points all over the world

Vantage points from inside your network to any critical dependency.



Agents:

- *Hypervisors, Linux, NUCs, Pi's*
- *Cisco Devices*
  - *Catalyst 8k/9k*
  - *ISR/ASR*
  - *Nexus Switches*
  - *Meraki MX67 and above*

From the end user's perspective
(Work from Home, traveling, etc.)

- ***Windows / Mac***
- ***Part of Secure Client***
- ***RoomOS (Webex)***
- ***CPU, Memory, Wireless, VPN***

ThousandEyes
part of Cisco

Cloud

Outside > In

Over 1000 vantage points all over the world

Customer Digital Experience

Enterprise

Inside > Out

Vantage points from inside your network to any critical dependency.

Enterprise Digital Experience

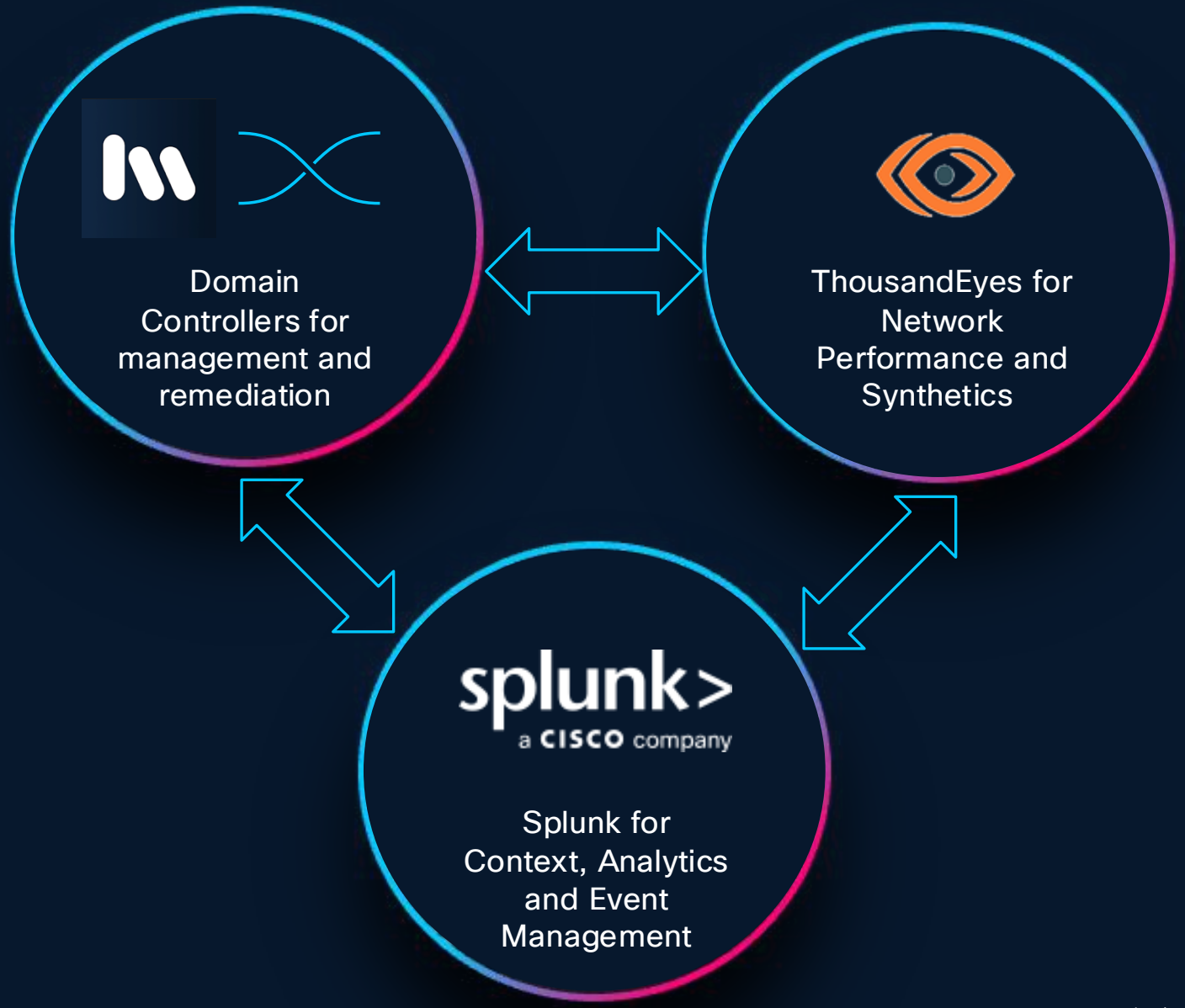
Endpoint

Your People

From the end user's perspective (Work from Home, traveling, etc.)

Hybrid Workplace (Work from Home)

Complimentary Network-specific solutions from one vendor



What is Correlated Network Observability in ITSI?

What it Delivers

- Cross-domain insights across network, app, infra, and users
- Dynamic correlation via KPIs and alerts
- Business-driven monitoring

Customer Value

- Unified visibility and business alignment across owned & external networks
- Proactive cross-domain problem detection
- Impact analysis

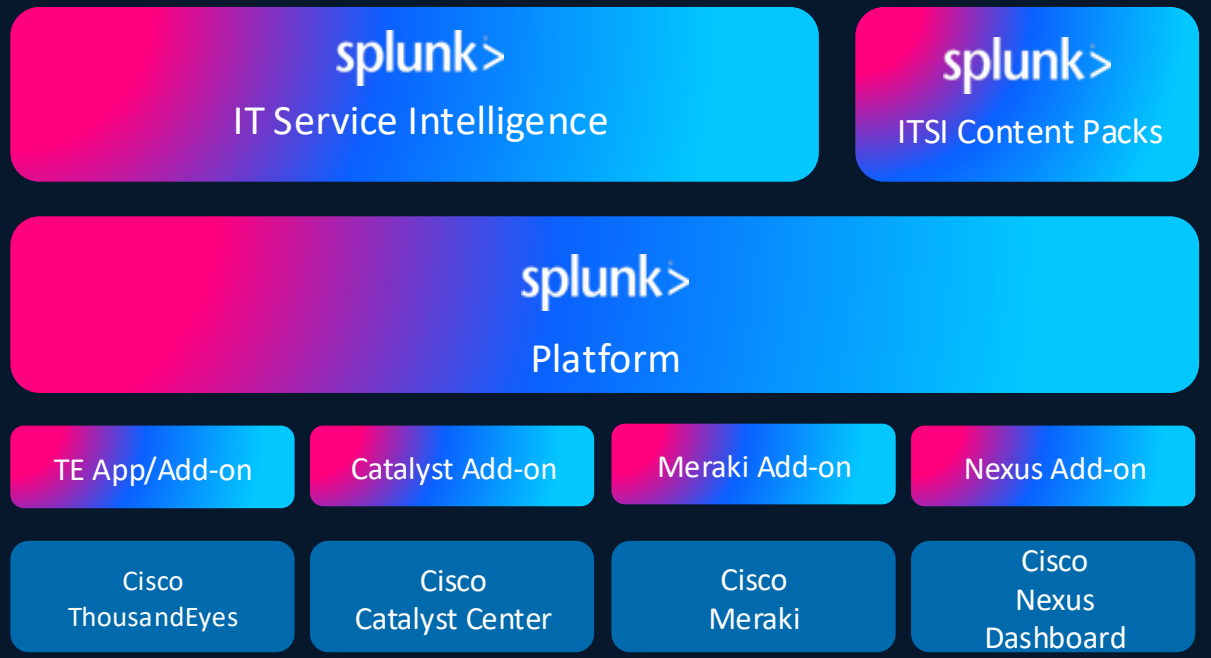
Who It's For

- L1/L2 Network Operations Teams
- NOC Management
- IT Operations teams and SREs
- Service Owners and Business Stakeholders

"Is a critical customer app slow because of a network issue (e.g., DNS) or app code?"

Out-of-the-box value with ITSI

- Alerts, metrics, events onboarding with data normalization
- Correlation rules for alert noise reduction
- Service, KPI, entity models for network service health monitoring
- Directed Troubleshooting via deep links into domain controllers
- Glass Tables for overall visibility



Unlock the power of Cisco

Splunk ITSI + ThousandEyes & Enterprise Networking

Visibility across infra, apps, owned & unowned networks

- **Single view:** One place where everything, including owned and unowned networks, is visible.
- **Break down silos:** Team can quickly determine service health, isolate the domain, diagnose, remediate or escalate issues.
- **Understand business impact:** Connect network & service health to what the business cares about to understand business impact

Cross-domain correlation

- **Reduce alert noise**: Group related alerts, regardless of origin
- **Prioritize what matters:** Focus on issues with the greatest business impact
- **Resolve issues faster**: Isolate the affected domain and with directed troubleshooting faster remediation

Joint Use Cases

Splunk + ThousandEyes & Enterprise Networking helps teams cut through the noise to prioritize what matters, solve issues faster.

Correlate network, apps + infrastructure

Gain holistic visibility to prioritize incidents based on business impact and eliminate blind spots.

Accelerate detailed root cause analysis

Quickly identify network-related application issues to reduce troubleshooting and escalations.

Service issues in external networks

Manage service dependencies and optimize routing using Splunk and ThousandEyes performance data.

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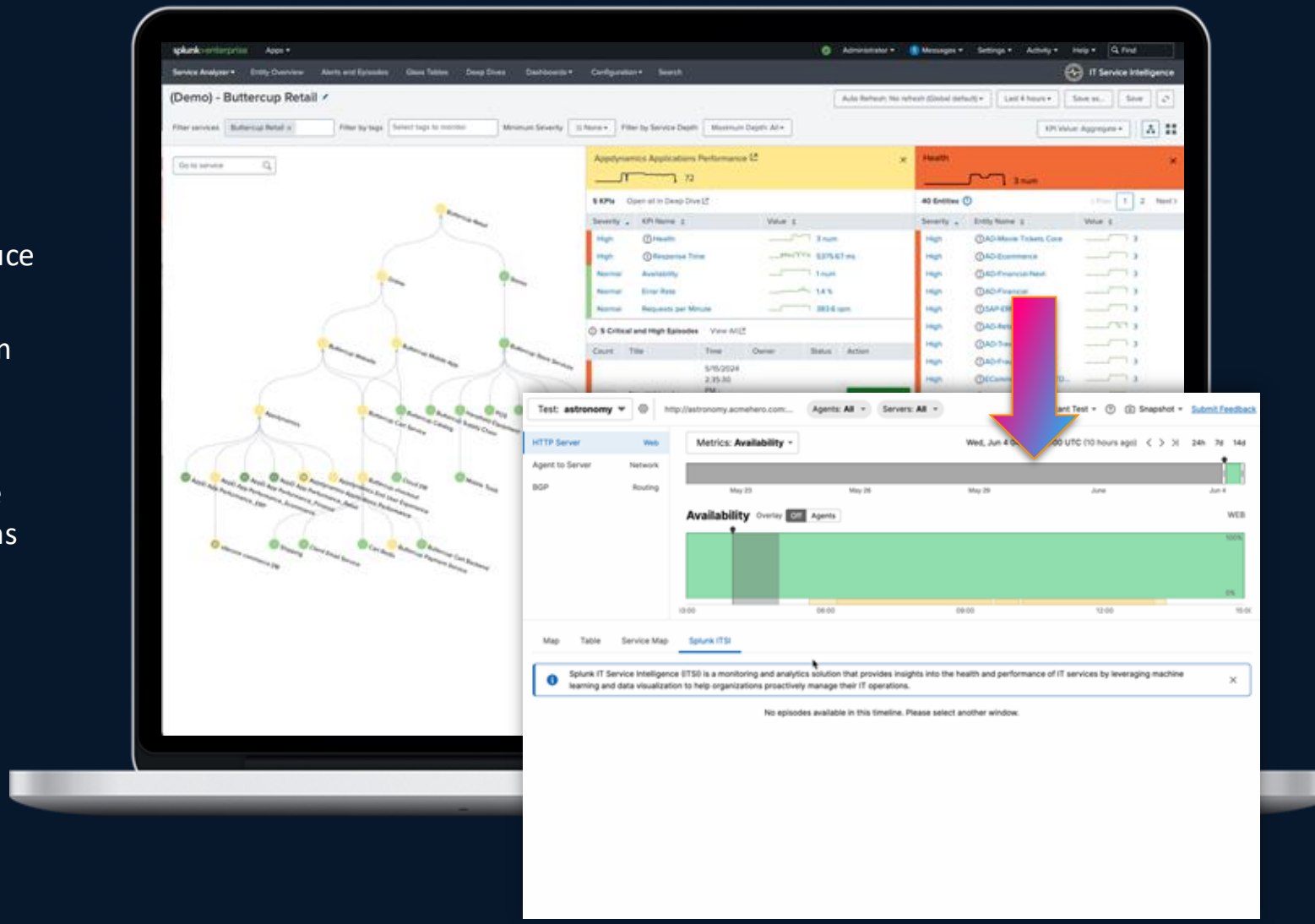
Resilient change management

Ensure stable application performance by **monitoring changes and testing impacts on user experience.**

Splunk ITSI & ThousandEyes

End-to-end visibility of apps, infrastructure, and network health correlated with business KPIs

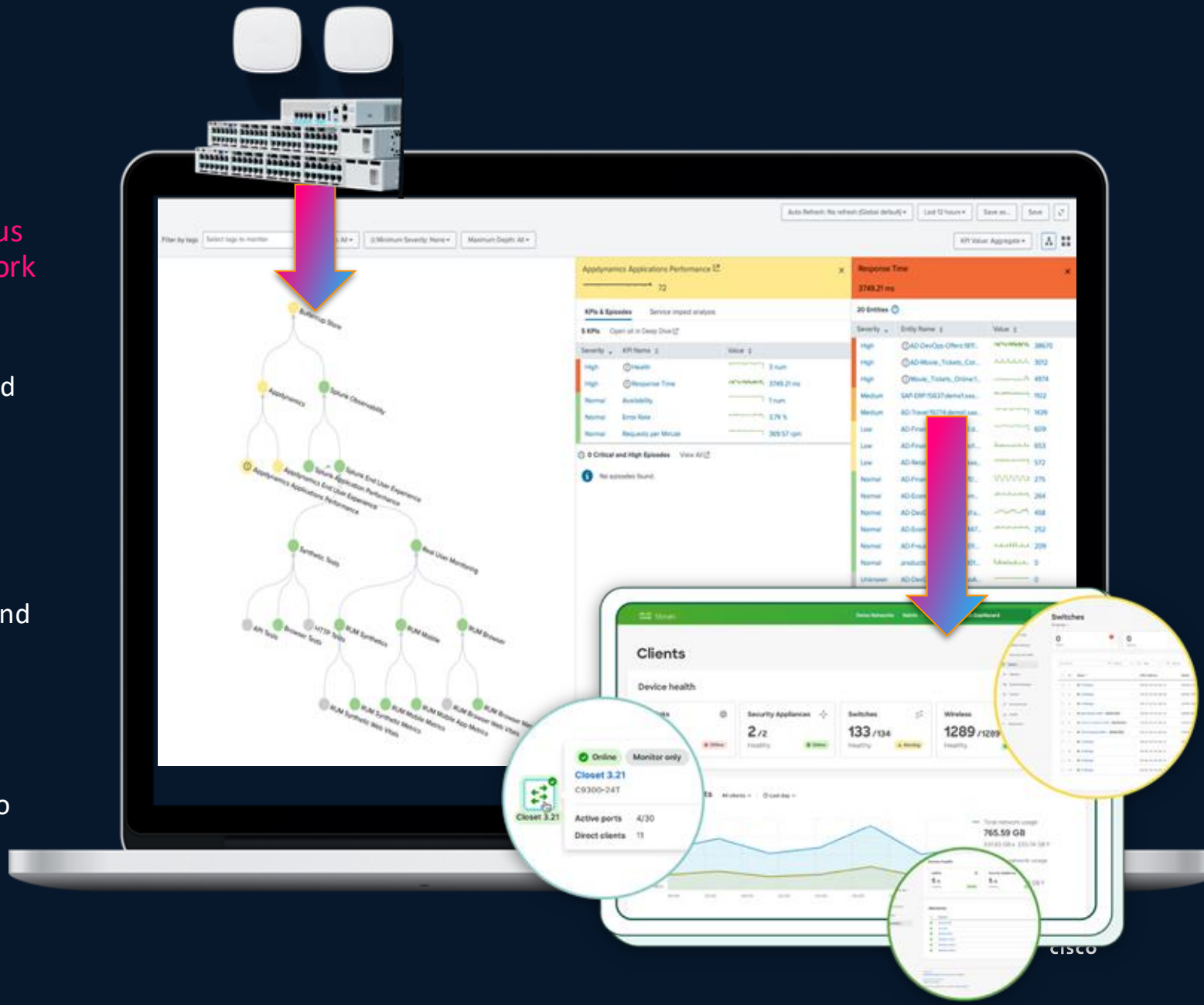
- Integrate alerts from ThousandEyes into ITSI to reduce alert noise and accelerate MTTR
- Bring network performance & business metrics from ThousandEyes into ITSI for faster troubleshooting based on impact
- Centralize network telemetry and incident response from ThousandEyes, and across other Cisco solutions
- In-context directed troubleshooting into ThousandEyes



Splunk ITSI & Cisco Enterprise Networking

Enterprise Network Monitoring for branch & campus to quickly pinpoint site & device issues in the network

- Integrations with Catalyst Center and Meraki
- Cross-domain correlation for reduced alert noise and domain isolation
- Out-of-the-box topology to measure the health of a location (e.g. retail store) and isolate problematic devices
- Device alert import, normalization, deduplication, and correlation logic
- Insights for problem troubleshooting (e.g. recent configuration changes)
- In-context guidance into Catalyst Center & Meraki to take action on devices



Splunk ITSI and Cisco Nexus Dashboards Integration

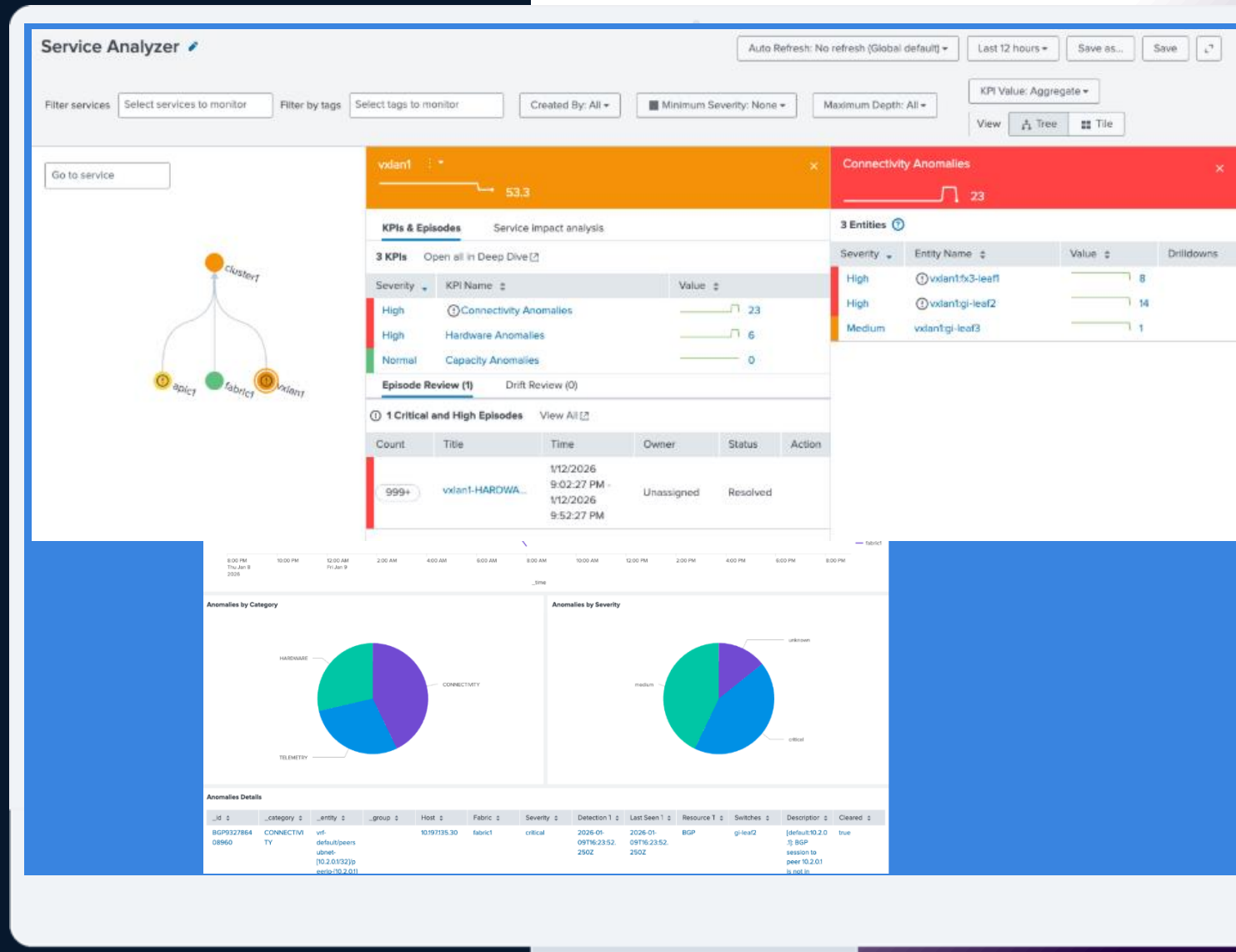
Quickly pinpoint data center issues with…

Dynamic service topology by fabrics

KPIs and entity models to measure health of data center connectivity, capacity, and hardware anomalies

”One click” alert onboarding, normalization, deduplication, and correlation

Insights into Nexus data center to identify cause of anomalies – represented as actionable alerts



cisco ThousandEyes + splunk> APM Service Map

WEB
Transactions
HTTP Server
NETWORK
Overview
Path Visualization
ROUTING
BGP Route Visualization

24h 7d 14d

06:00 09:00 12:00 15:00 18:00 21:00 Nov 25 03:00

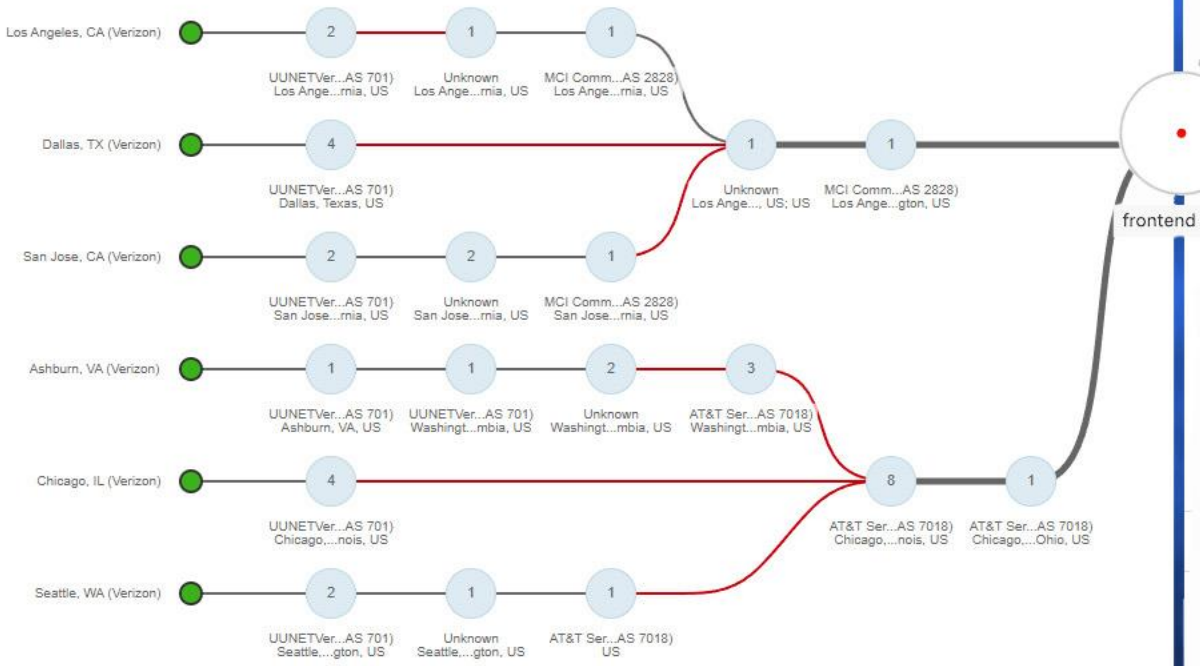
Target Server
hilton.com:443

Showing data from **Thu, Nov 25 05:50 - 06:00 KST** (16 minutes ago)

Path Visualization

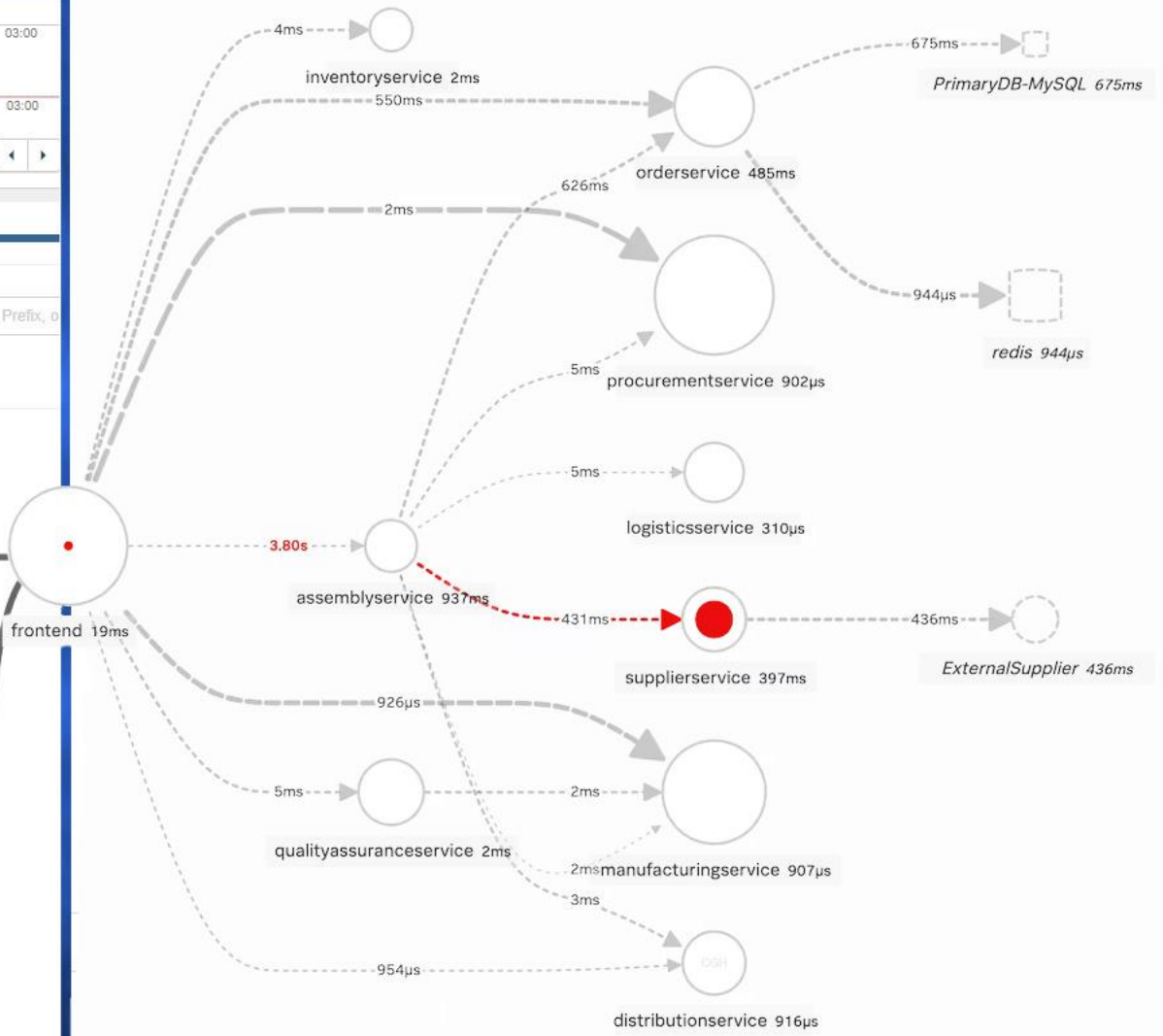
5 hops

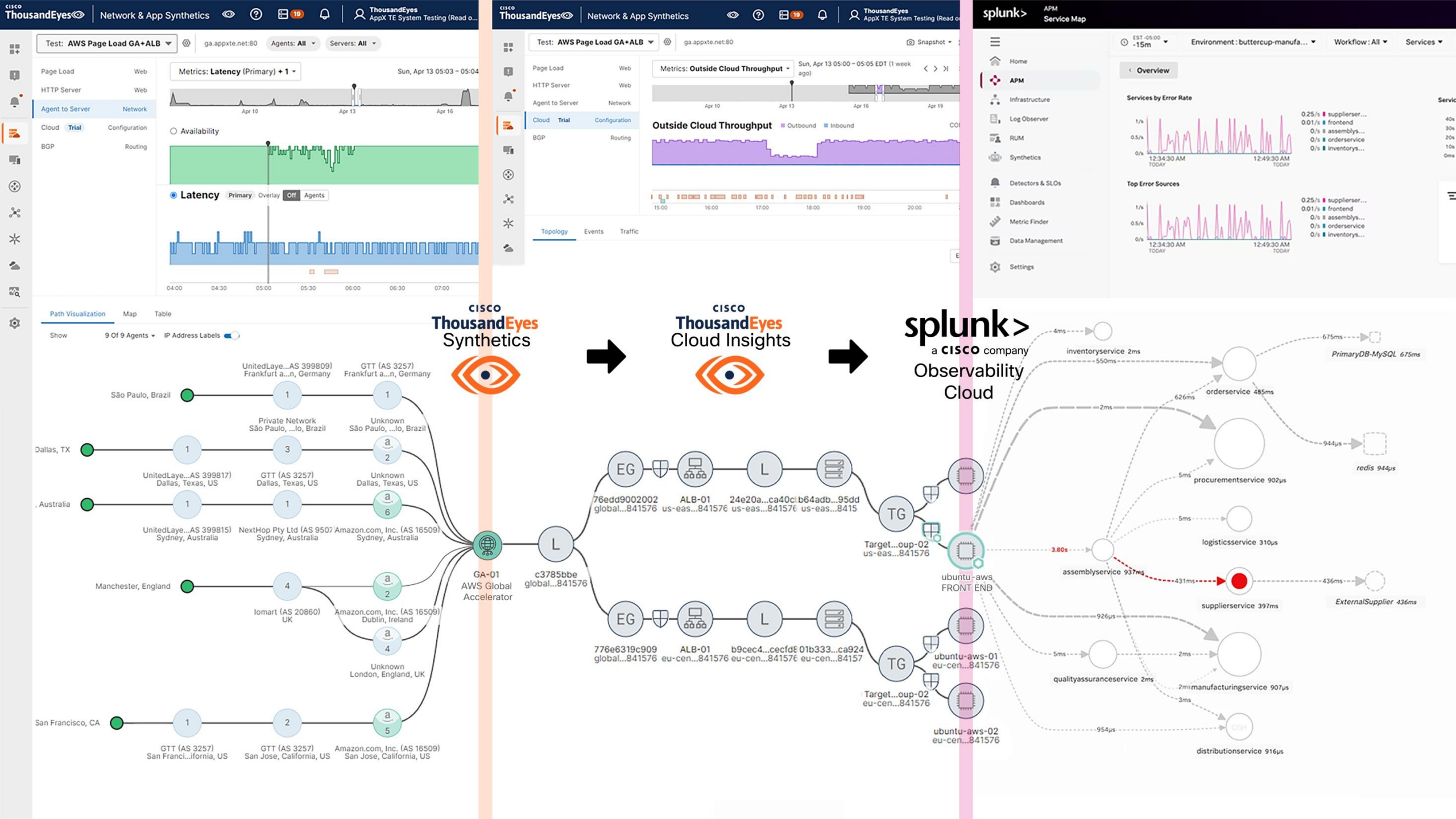
Showing: **1 of 1 Test** **6 of 6 Agents** **1 of 1 Server** Hide IP Address labels
Grouping: Agents by **Agent** Interfaces by **Network & Location** Destinations by **IP Address**
Highlighting: **Forwarding Loss > 5 %** (0 nodes) **Link Delay > 10 ms** (7 links)
Selecting: Click a node or link **Info** (1)
Highlight nodes that match **all** / any
Search on Network, Country, IP address, Prefix, o



Workflow : All Services Add filters

Showing all 13 services by request coun



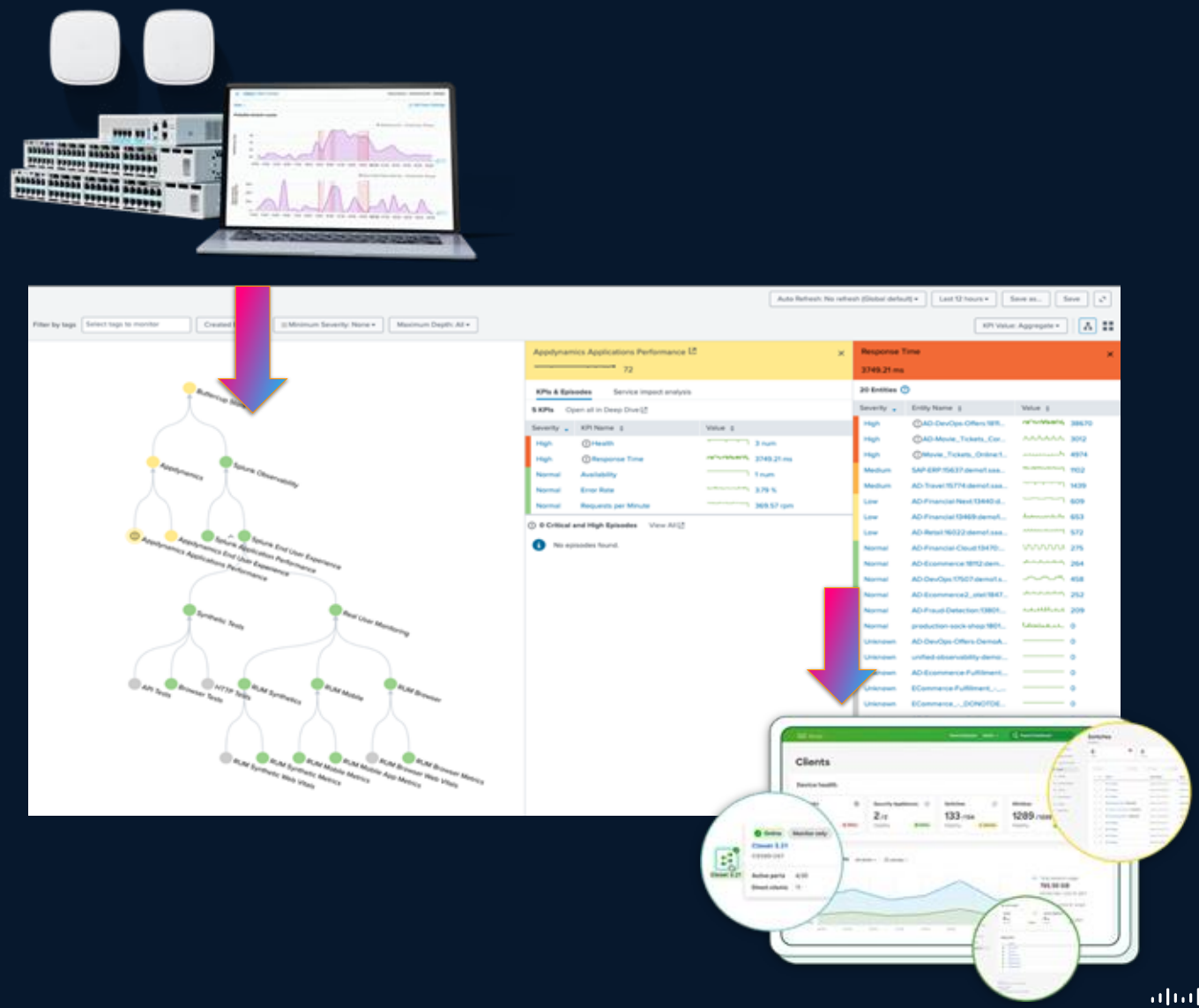

Network & App Synthetics
Test: AWS Page Load GA+ALB
Page Load
HTTP Server
Agent to Server
Cloud Trial
BGP
Metrics: Latency (Primary) + 1
Availability
Latency
Path Visualization
Map
Table
São Paulo, Brazil
Dallas, TX
Australia
Manchester, England
San Francisco, CA
GA-01
AWS Global Accelerator
CISCO ThousandEyes Synthetics
CISCO ThousandEyes Cloud Insights
splunk> a cisco company Observability Cloud
Metrics: Outside Cloud Throughput
Outside Cloud Throughput
Topology
Events
Traffic
APM
Service Map
Overview
Services by Error Rate
Top Error Sources
inventoryservice
orderservice
procurementservice
logisticsservice
assemblyservice
supplierservice
qualityassuranceservice
manufacturingservice
distributionservice
PrimaryDB-MySQL
redis
ExternalSupplier
ubuntu-aws FRONT END
ubuntu-aws-01
ubuntu-aws-02

Real world examples

Network Engineering & Architecture

- Catalyst Center provides deterministic core and WAN behavior
- **Meraki Accelerates Branch Deployment**
- **ThousandEyes validates paths pre and post change**
- Splunk ITSI tracks performance and configuration impact

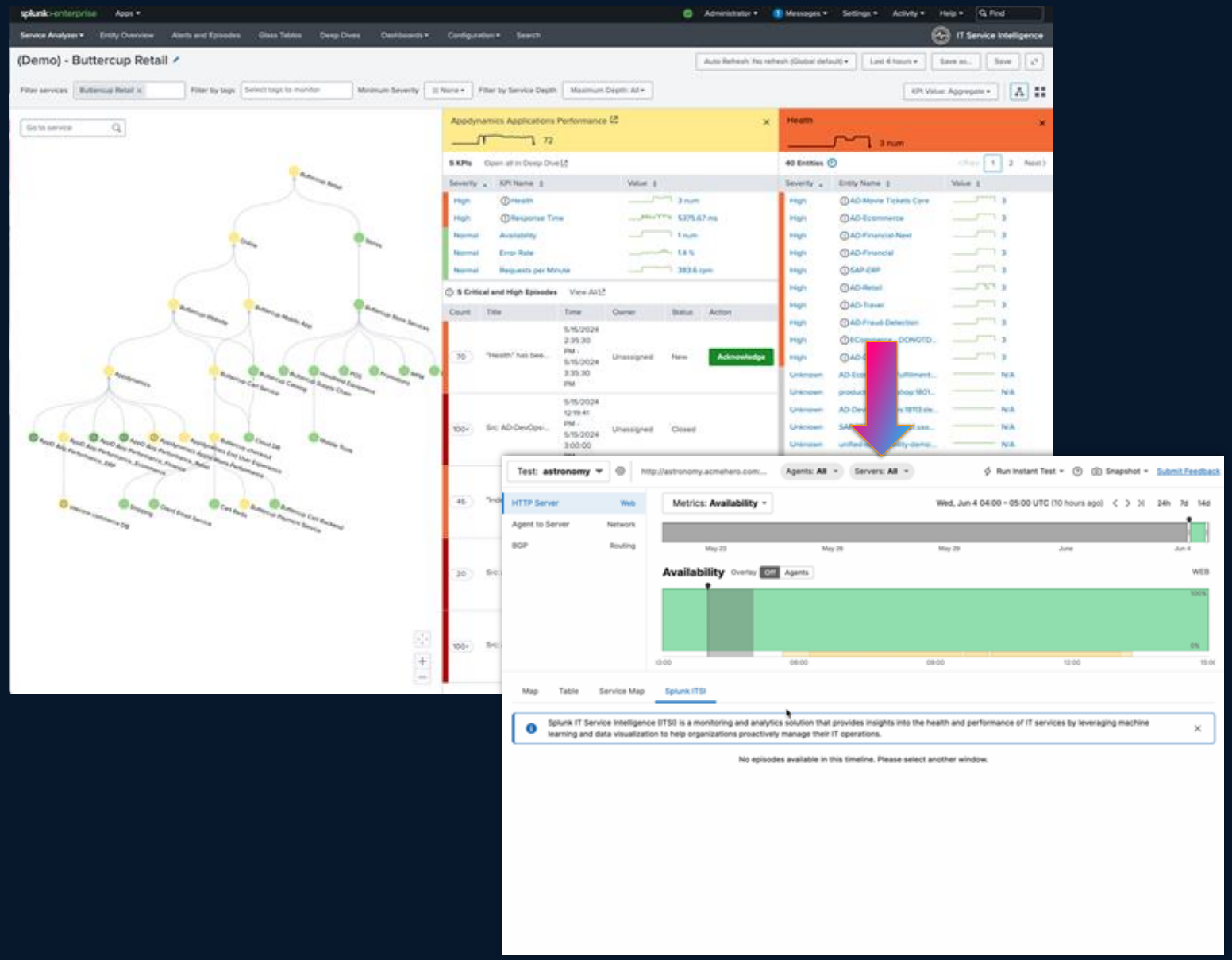
Outcome:
Predictable deployments and measurable outcomes



NOC & Operations Leadership

- Device Telemetry Consolidated in Splunk
- Splunk ITSI App correlates events into Service Impacting Issues
- ThousandEyes identifies ISP-Level Latency
- Streaming Telemetry (Structured device-level data)

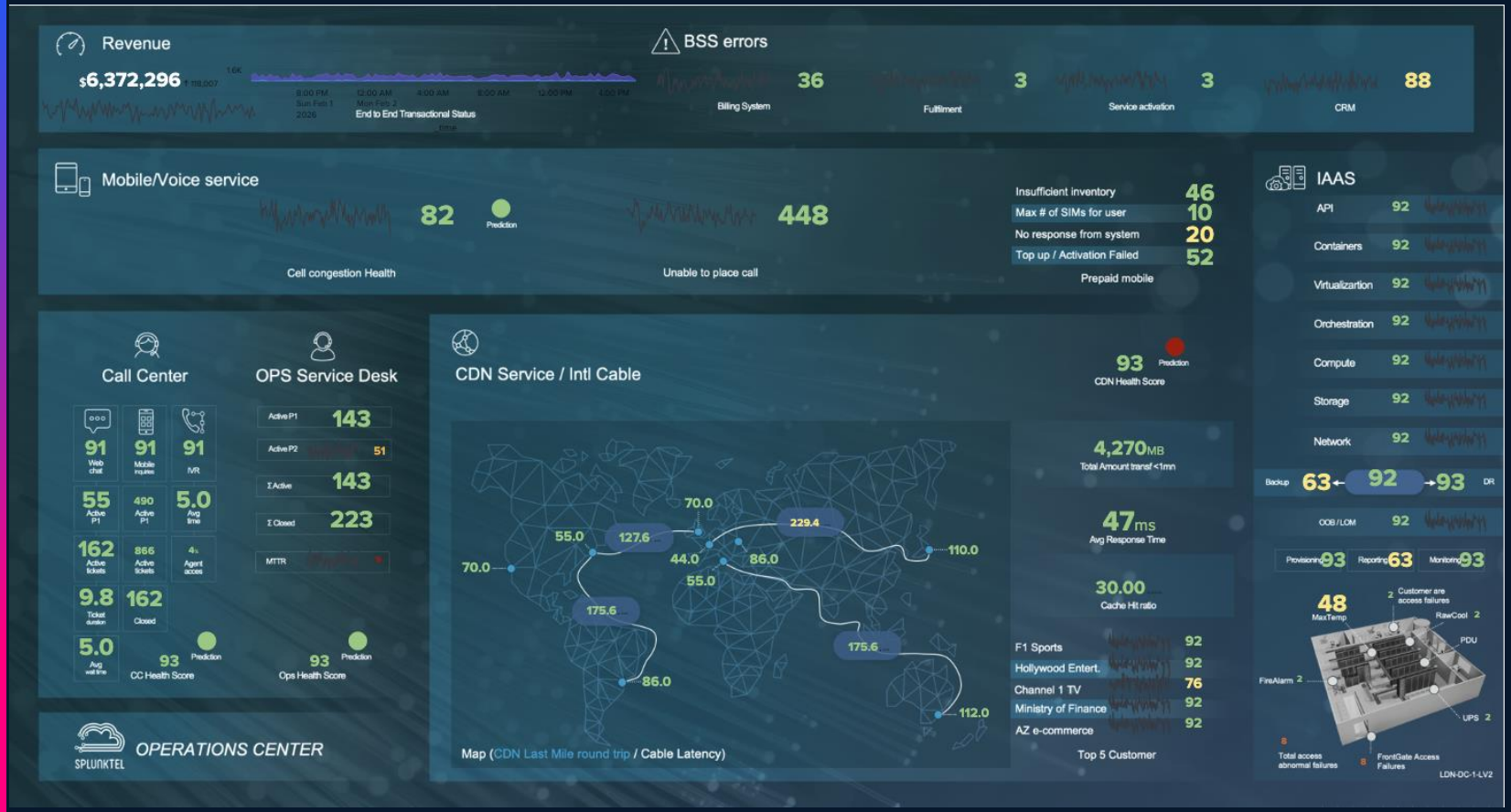
Outcome:
Faster MTTR with minimal escalation



Service Reliability & Executive Escalations

- ThousandEyes exposes cloud routing instability
- Splunk correlates user experience and error logs
- Splunk ITSI quantifies business impact
- Network teams validate internal health

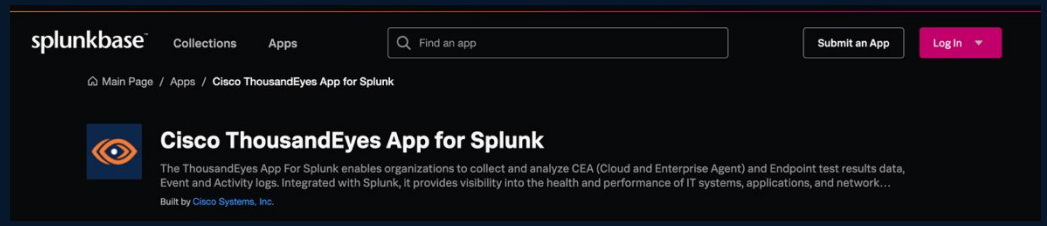
Outcome:
Clear accountability and informed escalation

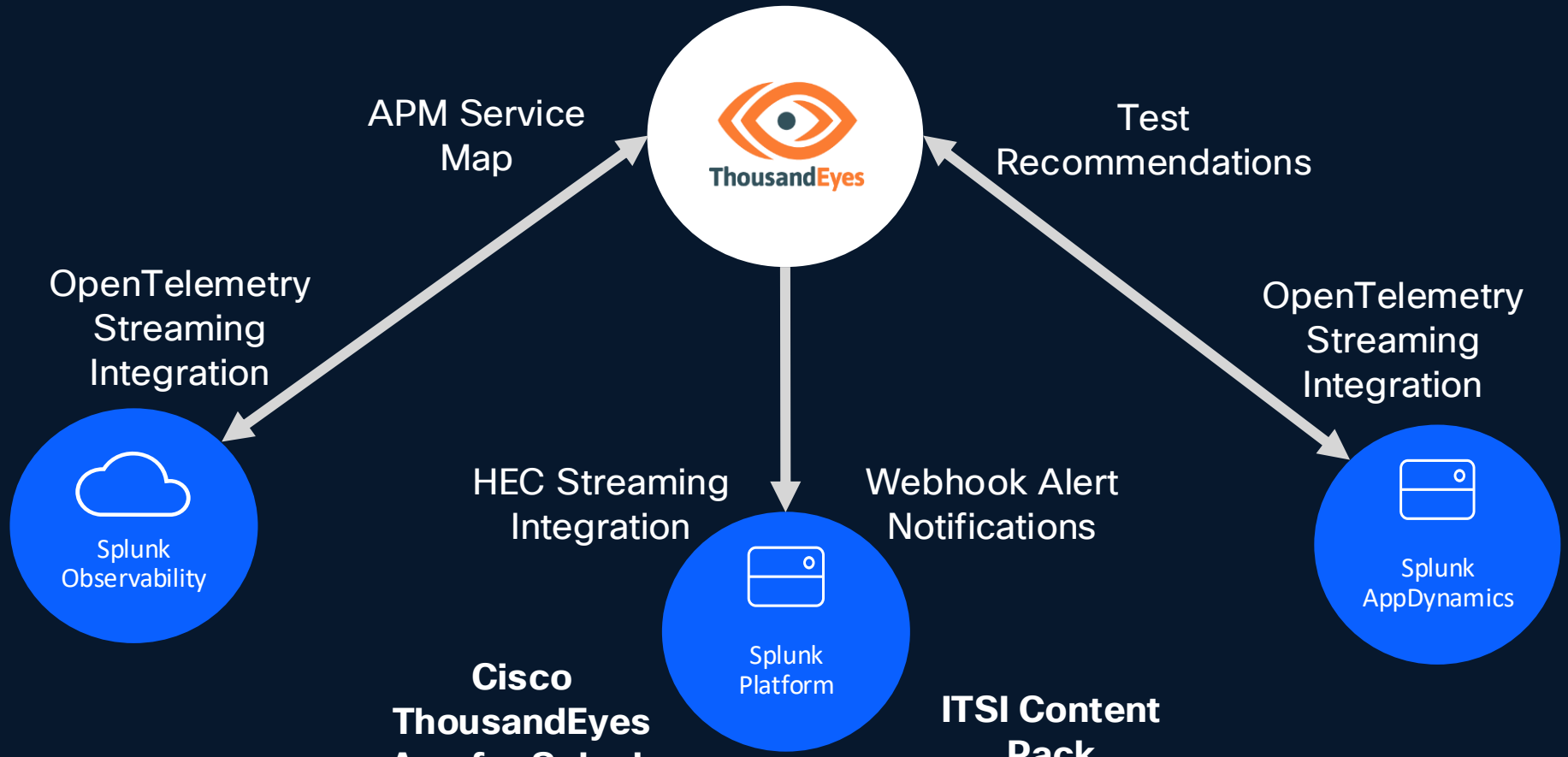



CISCO

Splunk + ThousandEyes

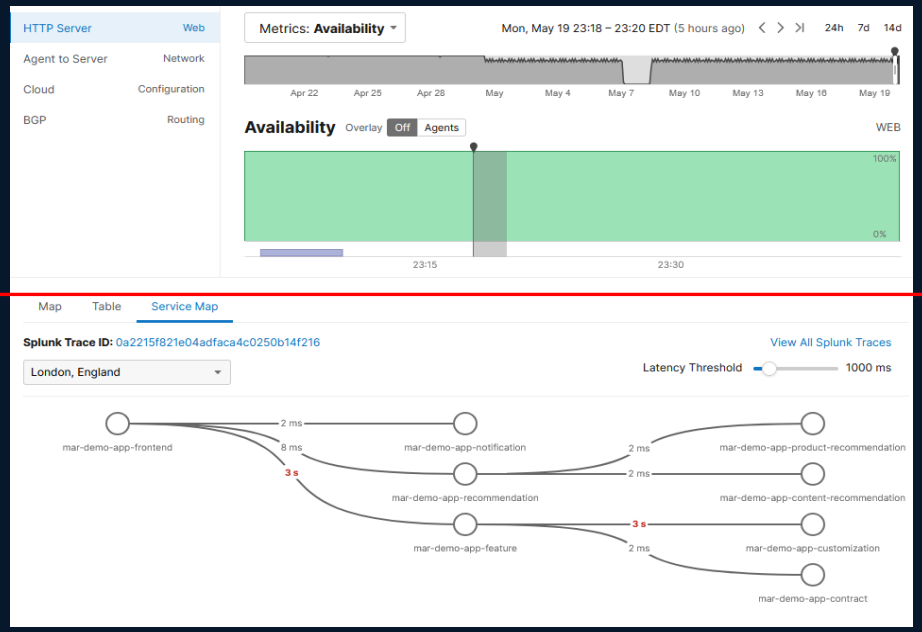
Contextual Data Sharing and Enrichment



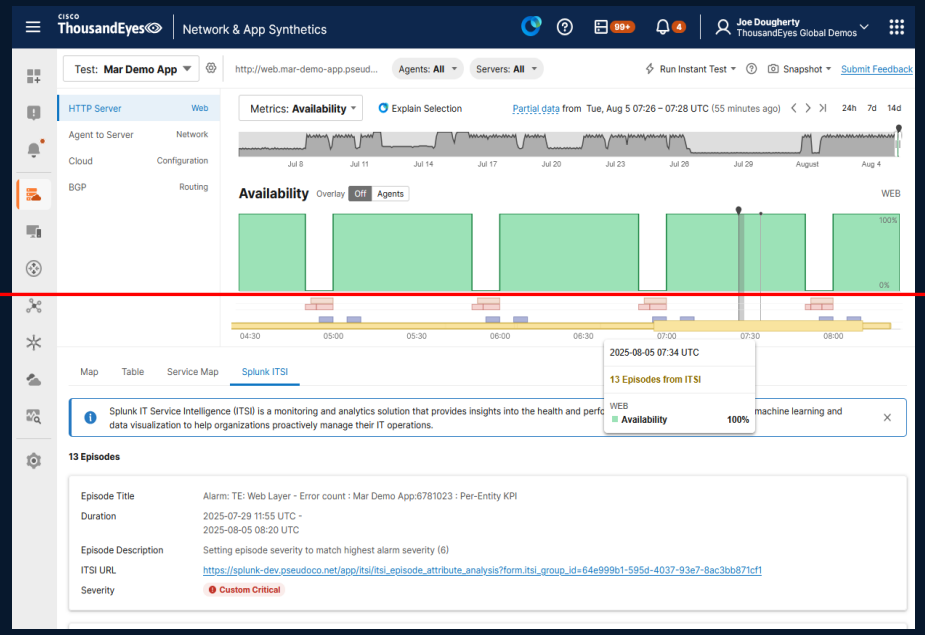


Splunk + ThousandEyes

Contextual Data Sharing and Enrichment

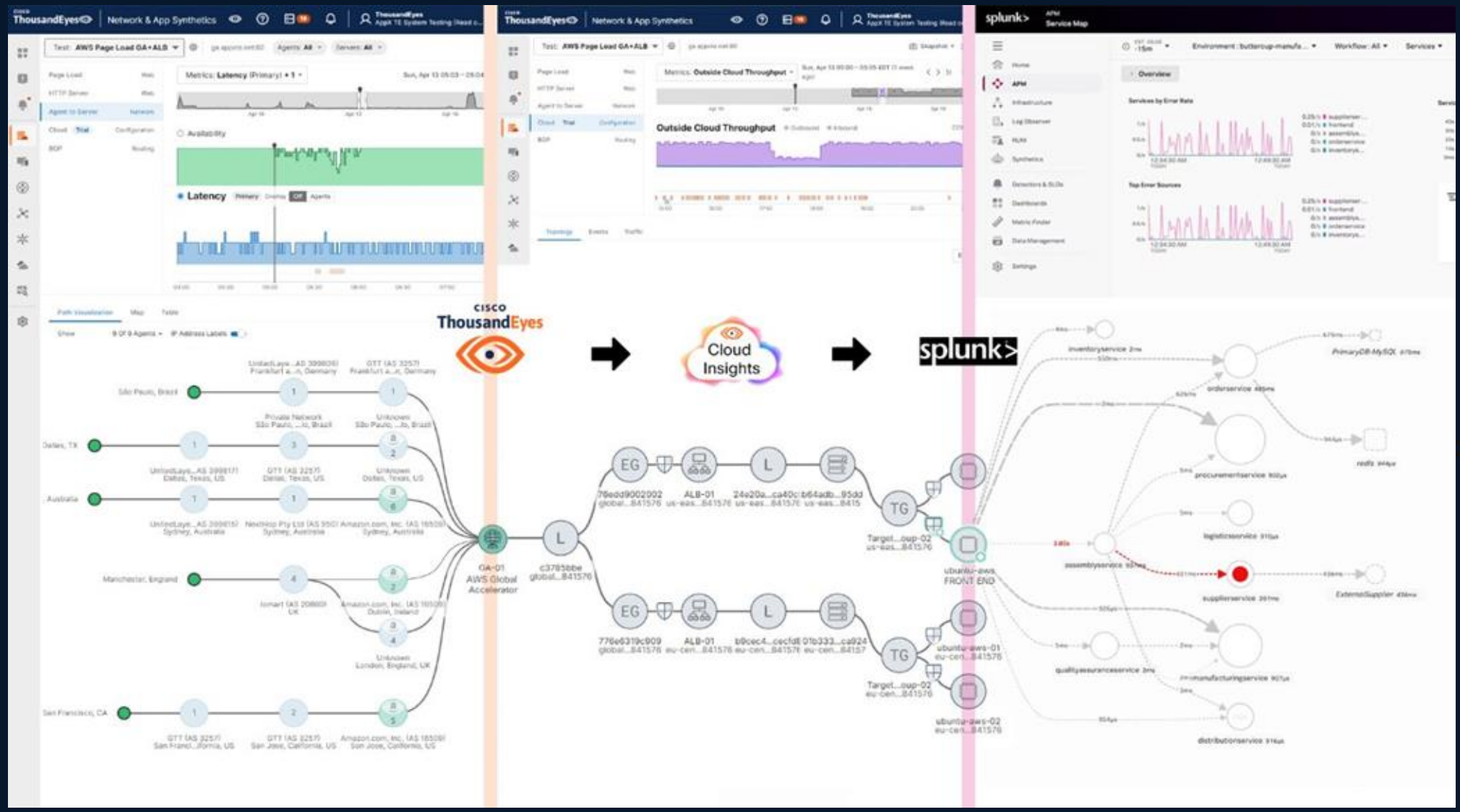


Splunk Service Dependency Map in ThousandEyes



Splunk ITSI Event Context data in ThousandEyes

End to End Visibility (really)



From reactive to proactive starts with intelligence

Baseline and detect

Monitor end-to-end digital experience from critical vantage points

See across environments

Troubleshoot mission-critical apps and infrastructure

Localize and diagnose

Visualize, localize, and diagnose across every network segment

Guided insights

Prioritize issues based on business impact

Mitigate and remediate

Closed-loop actions across digital domains and teams

Proactive response

Prevent outages & accelerate MTTR with guided root cause analysis

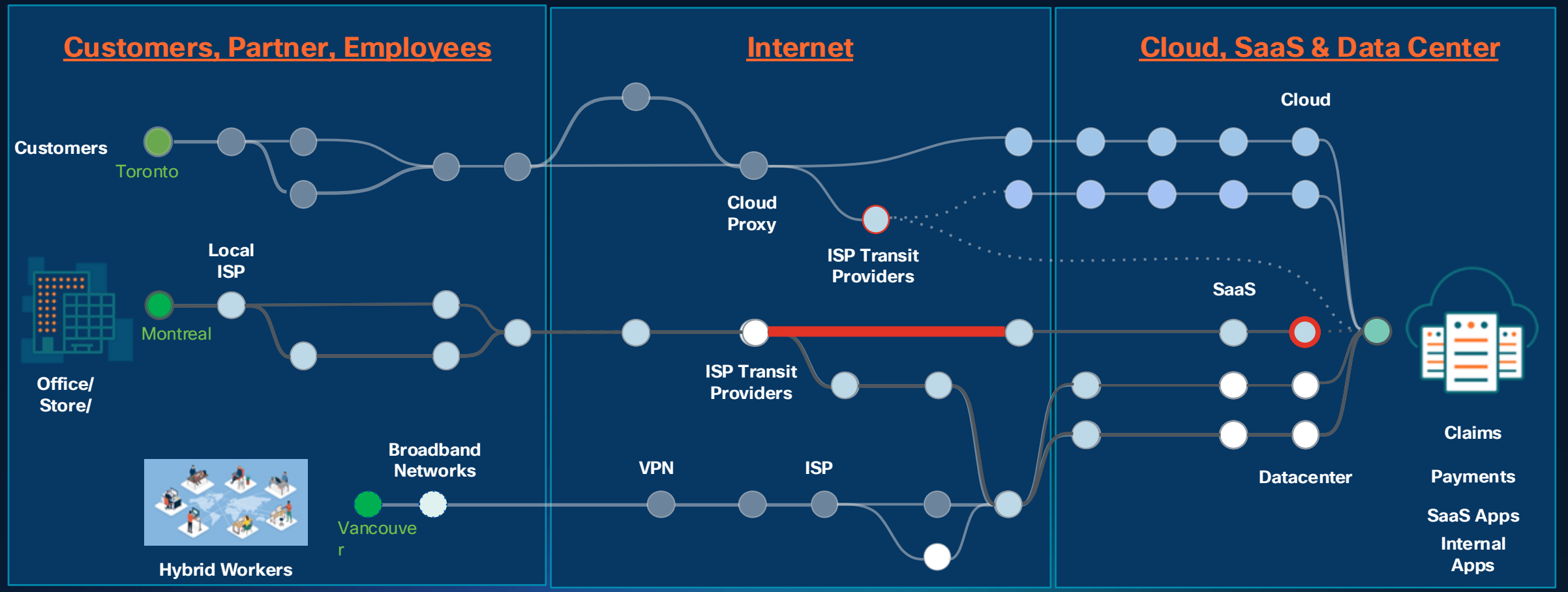
Predict and optimize

Forecast disruptions, optimize path, and plan connectivity and migrations

Unified workflows

Standardize observability practices across teams

Challenges Digital Resilience Strategies Solve



1000+ Points of Presence around the world
Leverage investments in Cisco solutions

Visibility into owned and unowned networks
Understand the impact of macro outages

Extends visibility into the Cloud and SaaS provider networks

How It Works

CLOUD AGENT

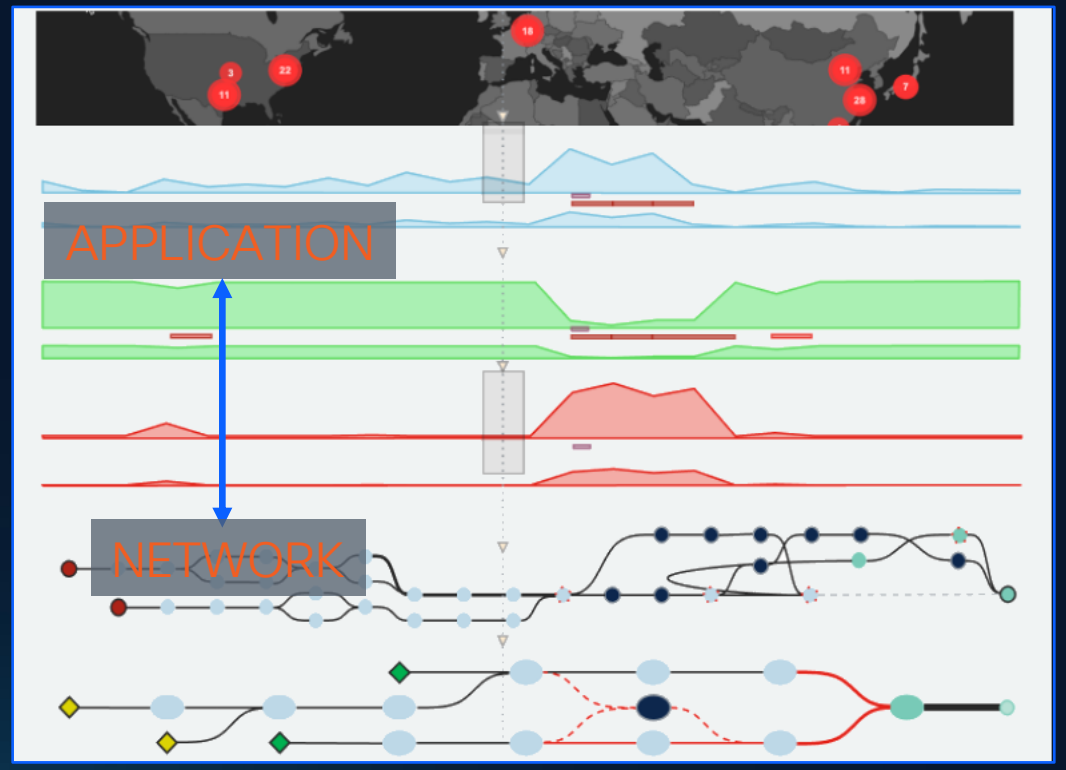
- 400+ ThousandEyes maintained POPs
- Global scale
- T1/2 DCs, Cloud and Broadband providers
- Outside-in visibility
- Public facing sites and APIs
- Customer experience

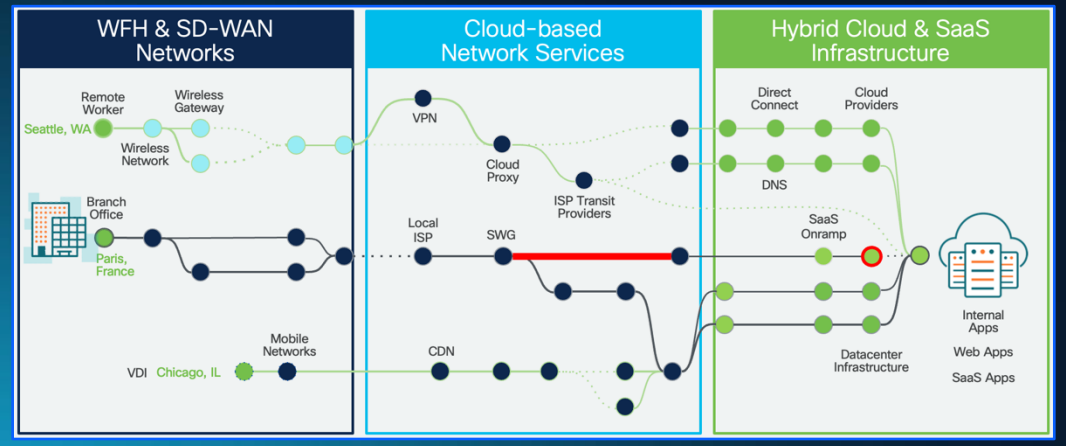
ENTERPRISE AGENT

- Deployed in YOUR environment
- DCs, sites, offices, branches, stores…
- VMs, Servers, Containers, Cisco HW
- Inside-out, inside-inside
- Internal apps, SaaS, network
- Employee / network experience

ENDPOINT AGENT

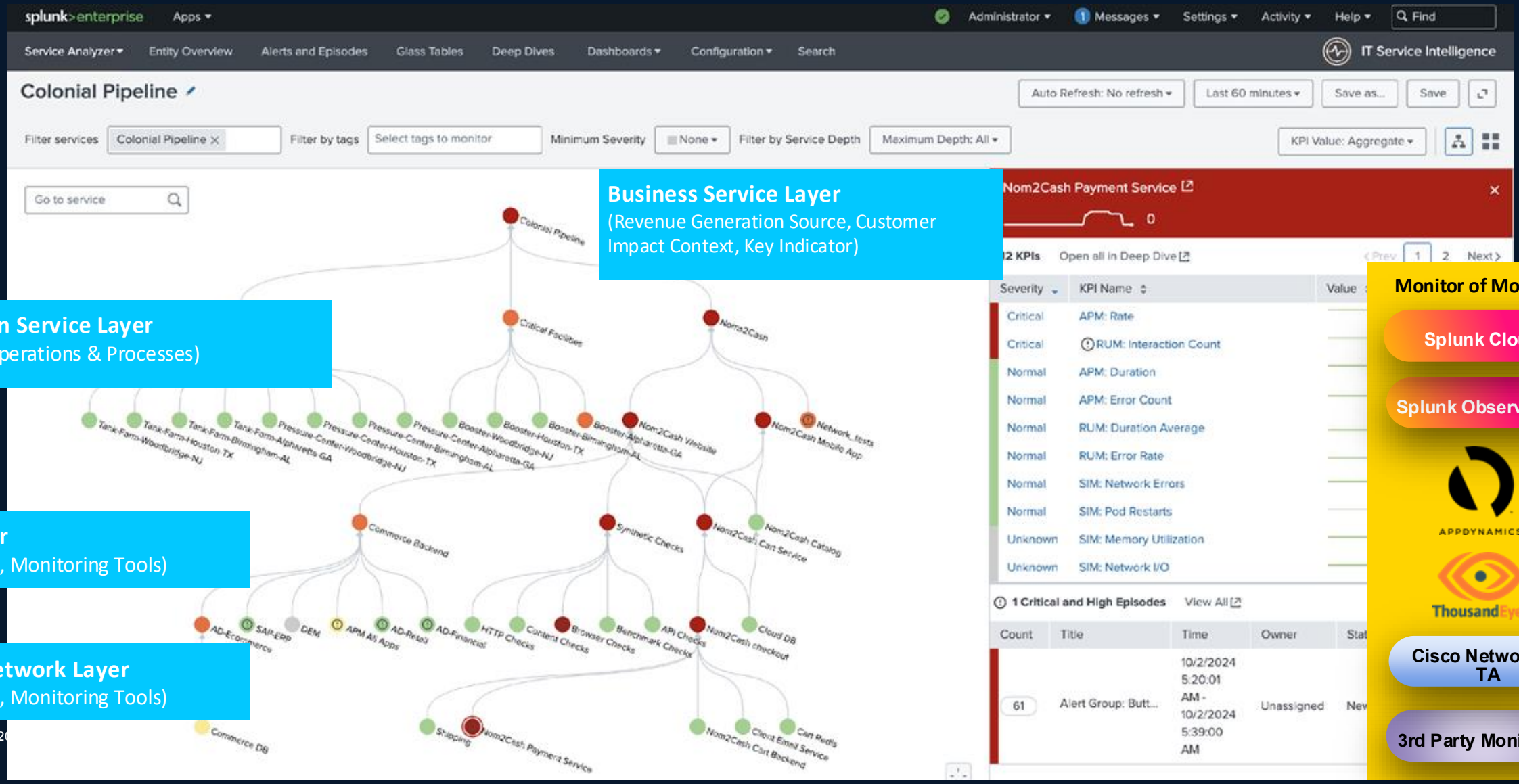
- Deployed on your employees' devices
- Home, office, anywhere…
- Laptops, RoomOS, Secure Access, Mobile
- Last mile visibility
- Internal/external apps, SaaS, network
- Wi-fi, VPN, ISP, any app





IT Service Intelligence: Top-down Business Visibility

Correlate business performance with underlying services & telemetry, across Splunk & 3rd Party monitoring

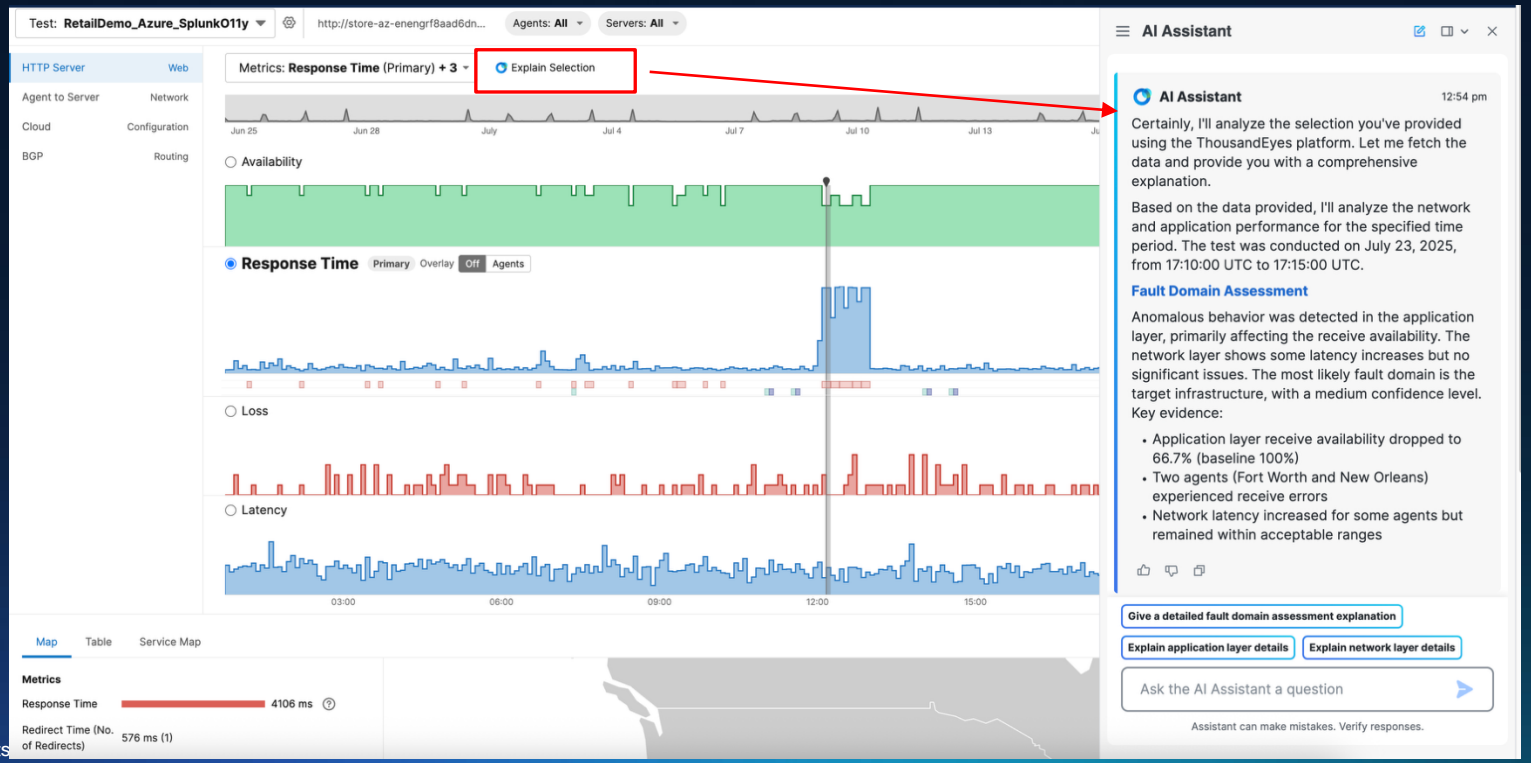


AI Assistant Value

Unlock Assurance for all with everyday language empowering any user to operate like an expert

Instant explanations and guided troubleshooting, accelerate root cause analysis and resolution

Predict and minimize the impact of operational issues before they affect user experiences



Built-In Assurance
Built-On Resilience

LAN/WAN

Cisco Networking
Embedded Agents

Increase end-to-end visibility leveraging investments in Cisco networking hardware

SSE/SASE

Cisco Secure Access
Experience Insights

Gain insights to quickly resolve user impacting issues

Collaboration

webex by CISCO

Leverage Cisco Devices & Phones to optimize user experiences anywhere they choose to work

Observability

splunk> a CISCO company

Extend visibility into owned and unowned networks to assure resilient experiences

cisco

CISCO Connect

Thank you


CISCO