

AI-Driven Unified Observability

*Building Resilient Operations
with Splunk & Cisco*

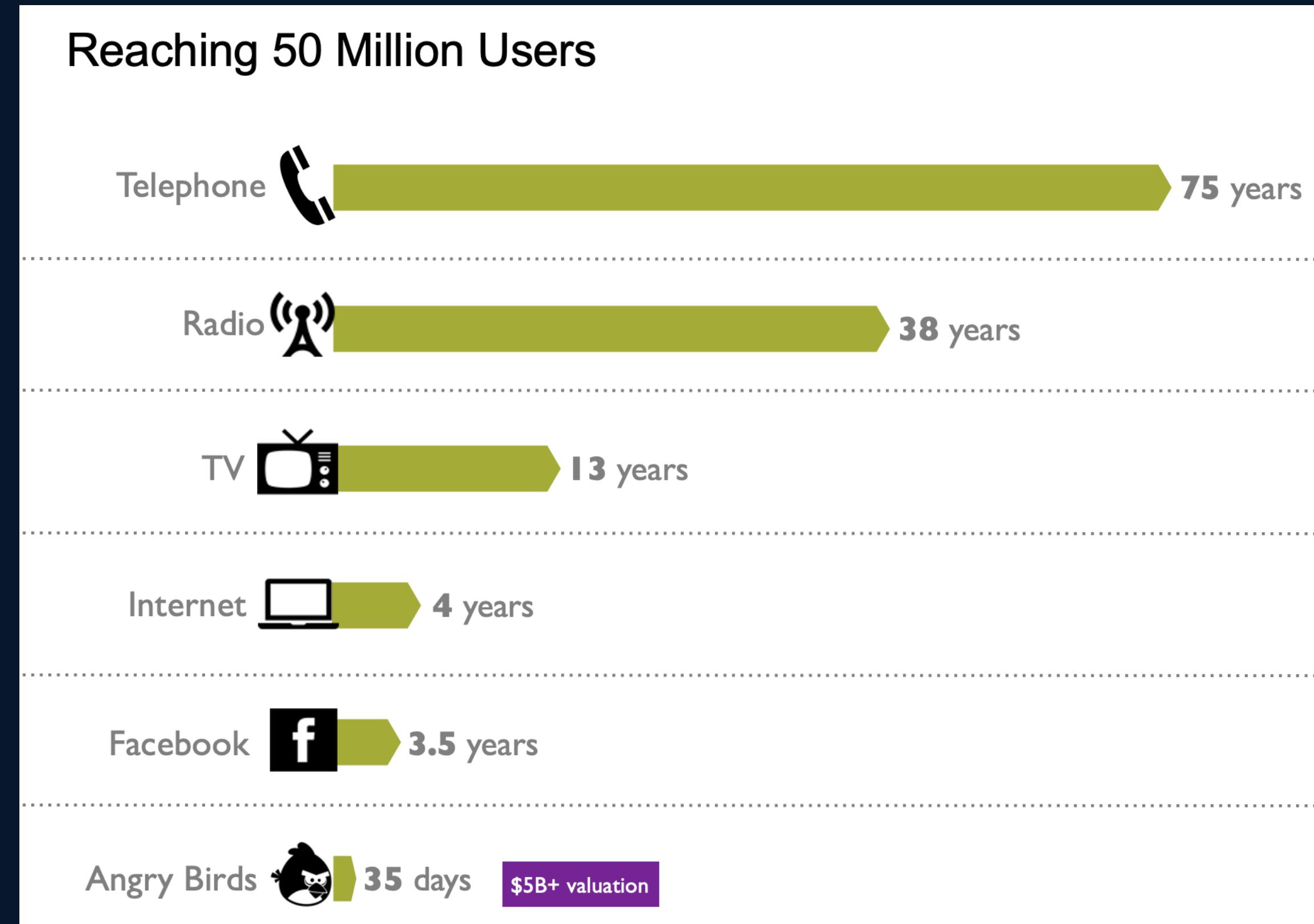
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Scottsdale, AZ



Reaching 50 Million Users



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Agenda

- 01 Today's Observability Challenges
Why traditional tools fall short ?
- 02 Unified Observability
Troubleshoot and pinpoint root cause end to end visibility
- 03 AI as Force Multiplier
AI in Observability & Observability for AI
- 04 Demo
Walkthrough of Splunk Observability
- 05 Key Takeaways
How these innovations impact your business

What is Observability?



*"Observability is the ability to understand the **internal state** of a complex system by examining its **outputs**"*



*"Ensures the **resilience** of digital systems and reduces the **human toil** of operating them by letting **software** do more of the **heavy lifting** to identify problems, find root causes and take corrective action."*

Minimize or prevent **business impacting** problems

Control Systems

Complex Digital Systems

Monitoring Vs Observability

Tells You

Failures

Data Fidelity

Alerting

Cross System view

RCA

Monitoring

IF something is broken

Identifies known failures

Aggregated / sampled logs and metrics

Reactive alerts based on static thresholds

Point tools for each domain

Manual correlation of data slows down RCA

Observability

When, why, and how something broke

Identifies and Investigates unknown / novel failures

Full-fidelity logs, metrics and traces

Proactive alerts to prevent issues

Unified correlated solution

Real-time automated correlation to speed RCA

Observability improves digital resilience

Leaders are able to find and fix problems faster, ensure reliability, and build better digital experiences

2.8X

faster detection of application problems

76%

Higher change rate success for production code

38%

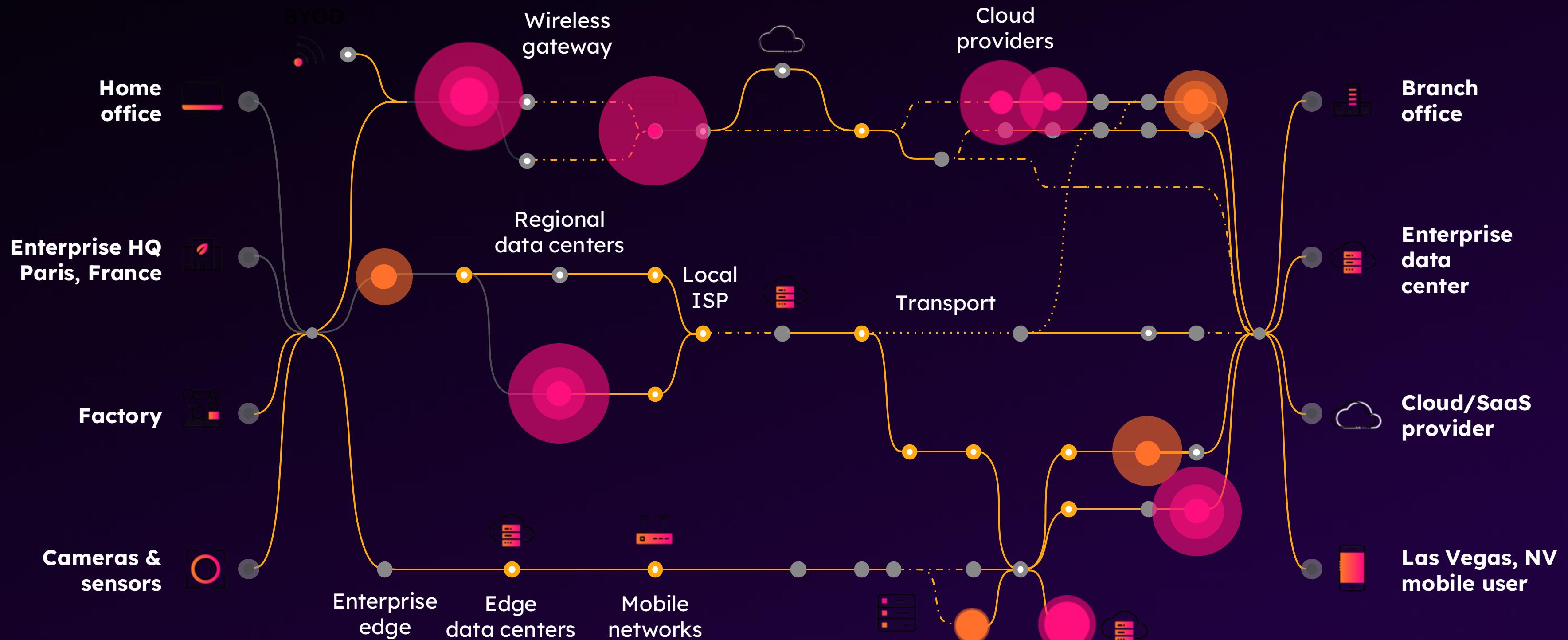
More time spent on innovation

2.6X

Higher annual return on observability solutions

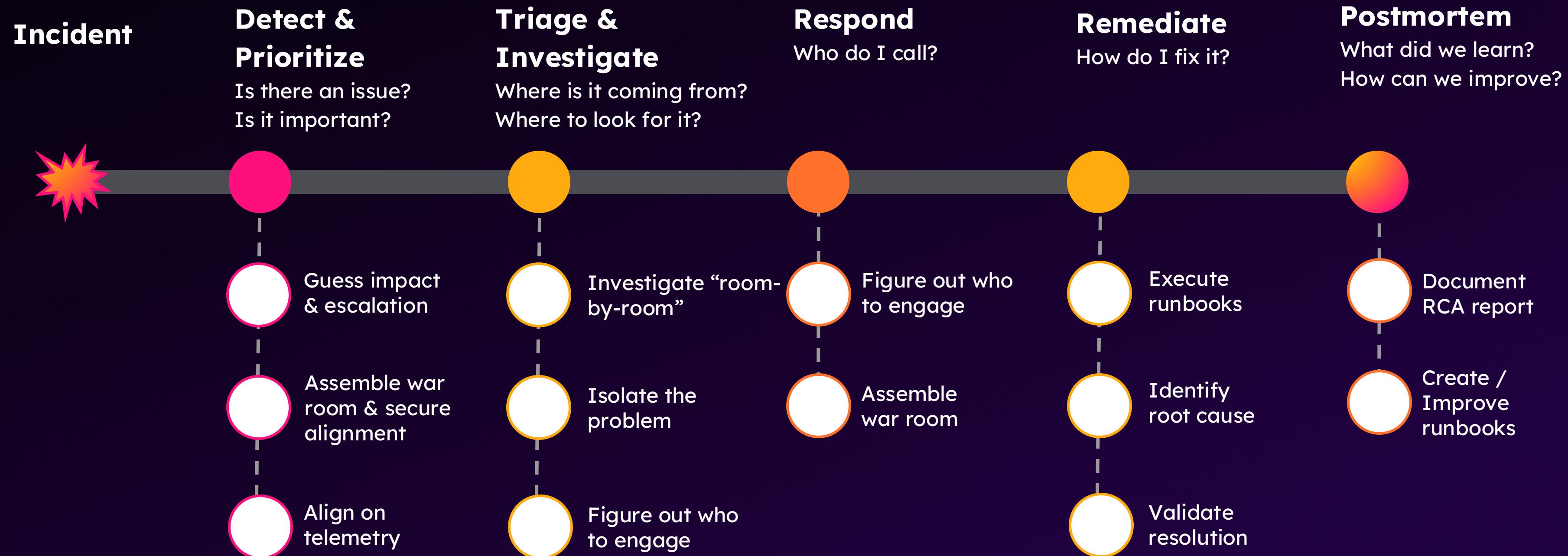


Digital footprints are complex



Incident Management Workflow

The Workflow that AI is about to Transform



Today's Observability Challenges



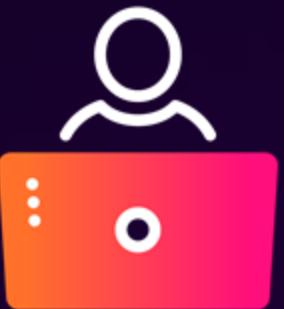
Visibility Gaps

More Stacks & Data
results in Less Clarity



Lack of Unified O11y

Too Many Tools,
Too Little Insight



Data Explosion & AI

Data Outpaces
Human Insight

The Evolution of Monitoring & Observability

From Reactive to Autonomous: Tracing the Journey to AI-Driven Observability

Reactive
(Basic)



Issue detection
after failure

Proactive
(Smarter)



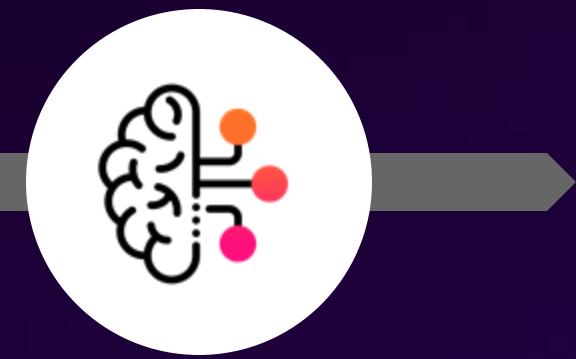
Addressing issues
before major impact

Predictive
(AI-Driven)



Anticipating
failures

Autonomous
(Self-Healing)



Automated detection
and remediation

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It has to be the “Network!”

Splunk Observability

Build a leading observability practice in the AI era

Unified Observability Experience

APM

Infrastructure Monitoring

Digital Experience Monitoring

Business Insights

Application Security

Observability for AI

Network Observability

Traditional Environments

Splunk Platform

Federation

Log Analytics

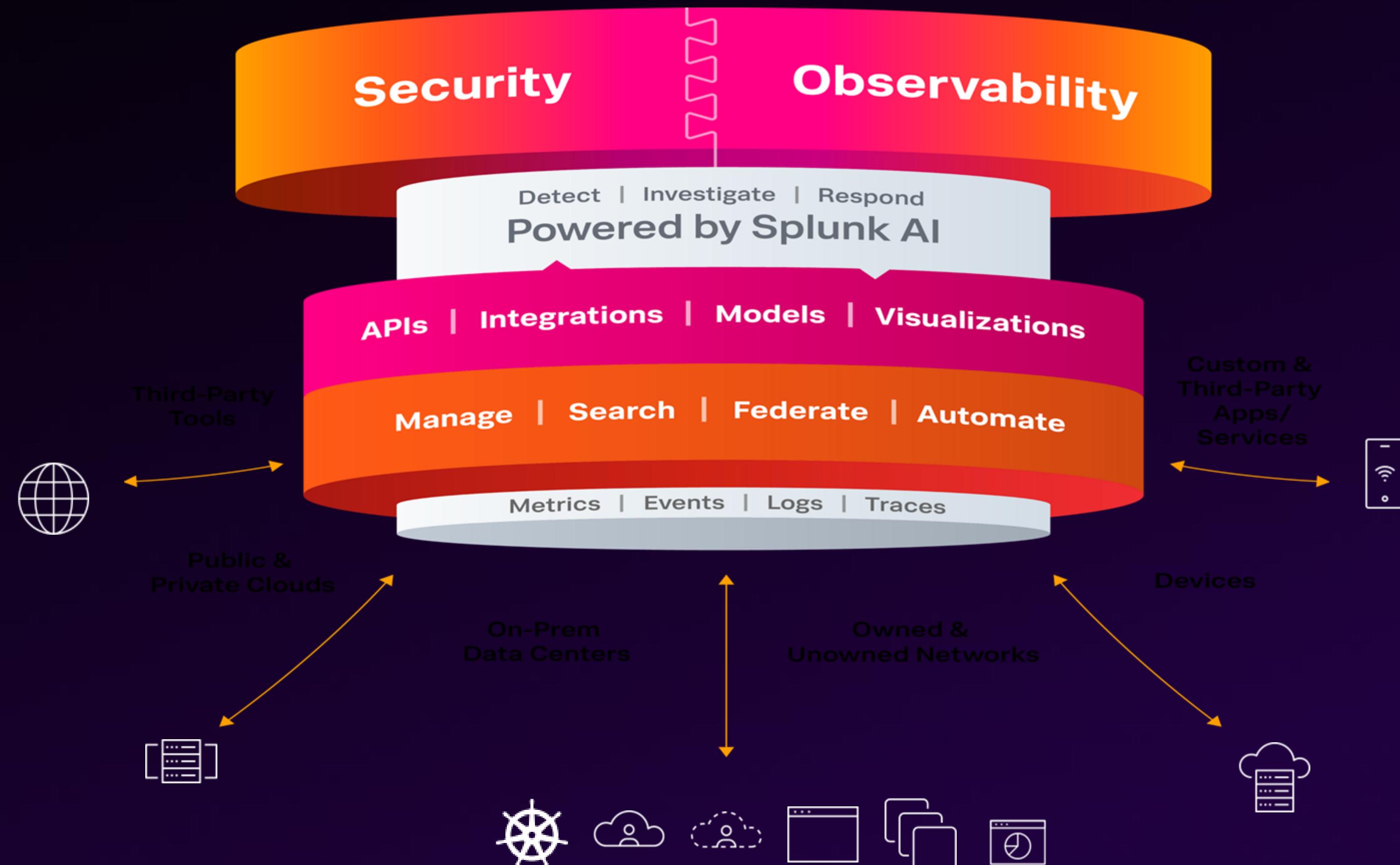
Event Intelligence

Cloud native environments

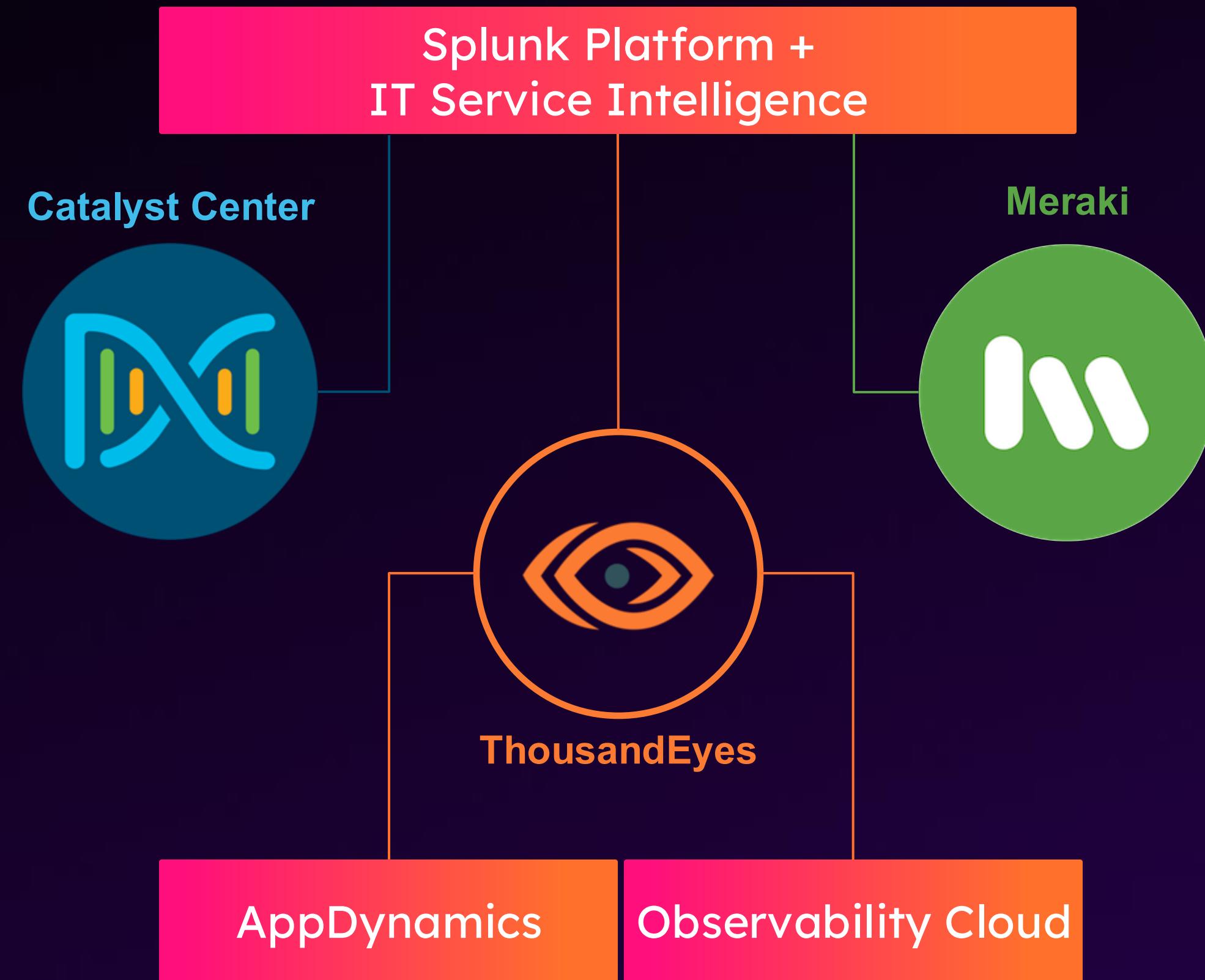


OTEL Compliant

Splunk Platform Advantage



Splunk Observability + Cisco Networking



Use cases for integrated network observability

Correlate Network Domains

Assure network service health by unifying visibility and reducing alert noise across network domains (ThousandEyes, Catalyst Center, Meraki).

- Splunk ITSI content packs for Cisco Enterprise Networking (Catalyst Center and Meraki)
- Splunk ITSI content pack for ThousandEyes

Pinpoint Network Impact on App Performance

Troubleshoot app performance problems with dependencies on owned and unowned networks.

- ThousandEyes integration with Splunk Observability Cloud APM
- ThousandEyes integration with Splunk Observability Cloud RUM
- ThousandEyes integration with Splunk AppDynamics

Splunk ITSI & Cisco Enterprise Networking

Enterprise Network Monitoring for branch & campus to quickly pinpoint site & device issues in Cisco networks

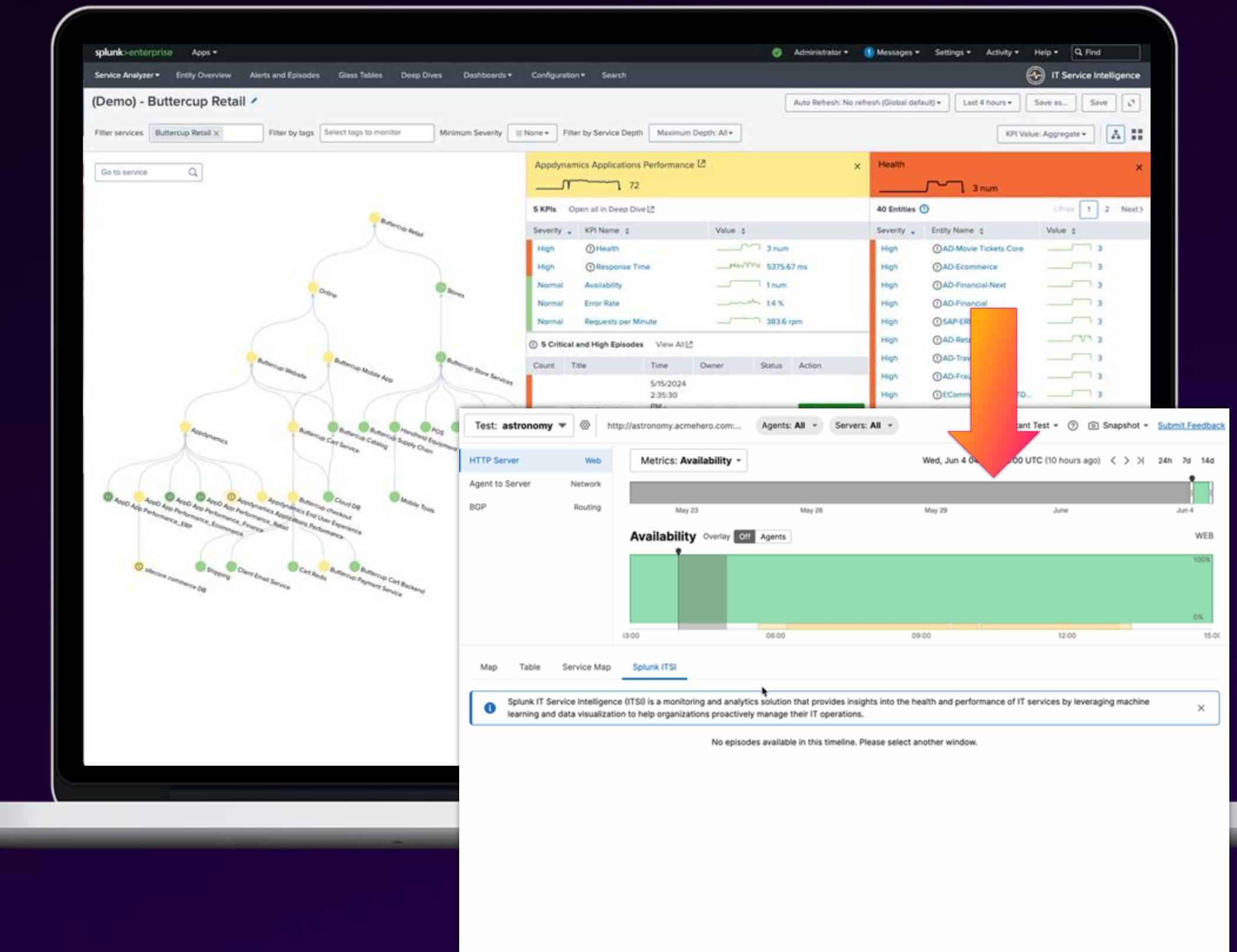
- ITSI content packs for **Catalyst Center** and **Meraki**
- Cross-domain correlation for reduced alert noise and domain isolation
- Out-of-the-box **topology** to measure the health of a location (e.g. retail store) and isolate problematic devices
- Device alert import, normalization, deduplication,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

The image illustrates the integration of Splunk ITSI and Cisco Enterprise Networking. At the top, two white routers are connected to a laptop displaying a Splunk dashboard with two line charts. A large orange arrow points from the laptop to a smartphone. The smartphone screen shows a network topology for a 'Buttercup Store' with various monitoring points like 'Appdynamics', 'Splunk Observability', 'Synthetic Tests', and 'Real User Monitoring'. A green circle highlights the 'Real User Monitoring' section. A yellow circle highlights the 'Clients' section, which includes 'Device health' and a table for 'Switches' and 'Wireless'. A red arrow points from the smartphone to a laptop displaying a Cisco Catalyst Center dashboard with tables for 'Clients', 'Device health', and 'Switches'. A third red arrow points from the Catalyst Center laptop to a Cisco Meraki dashboard showing 'Clients', 'Device health', and 'Switches'.

Splunk ITSI & ThousandEyes

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

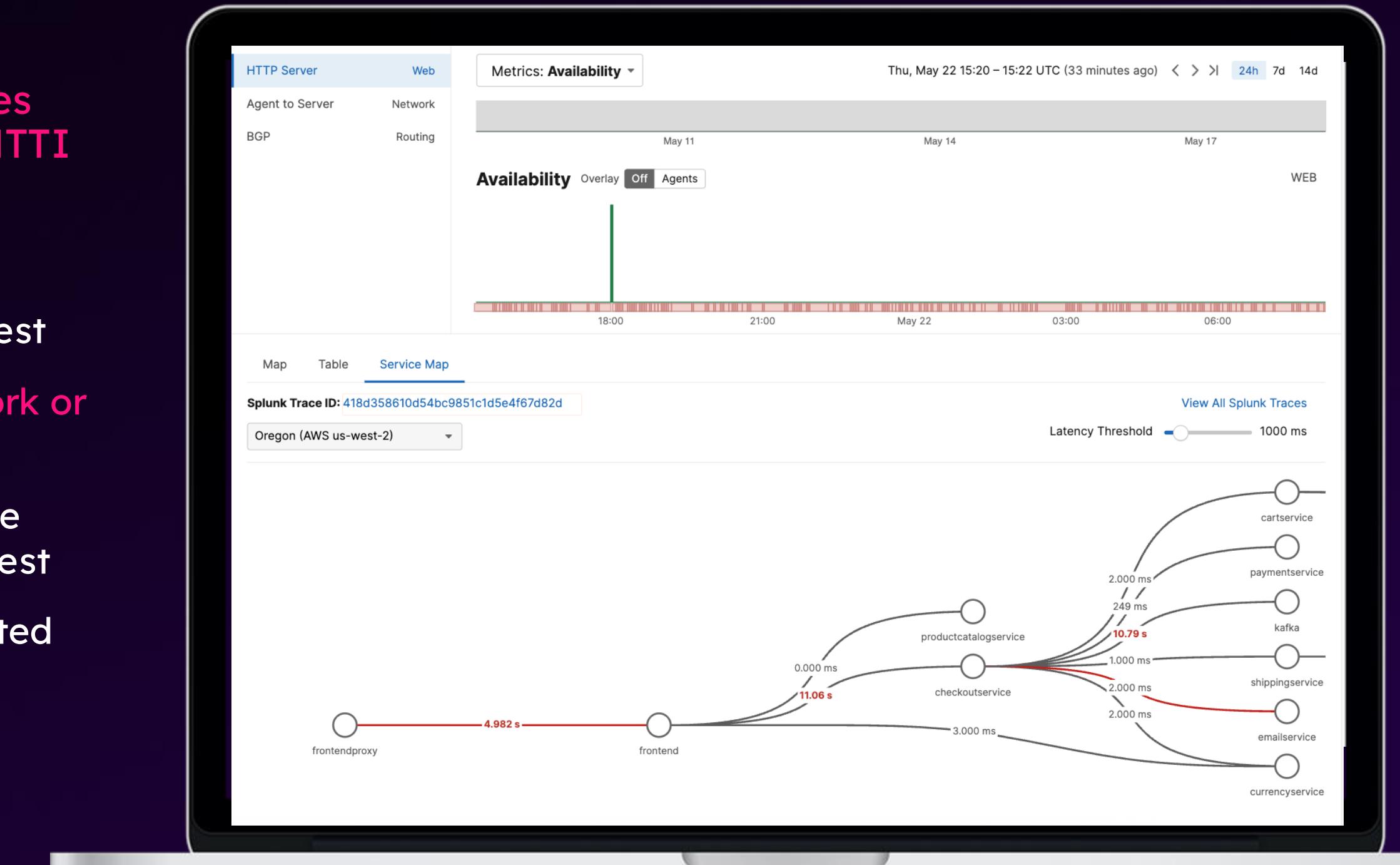
- Integrate **alerts from ThousandEyes** into ITSI to reduce alert noise and accelerate MTTR
- Bring **network performance & business metrics** from ThousandEyes into ITSI for faster troubleshooting based on impact
- Centralize **network telemetry** and incident response from ThousandEyes, and across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



Splunk Observability Cloud APM & ThousandEyes

End-to-end visibility across ThousandEyes tests and Splunk APM traces for faster MTTI & MTTR

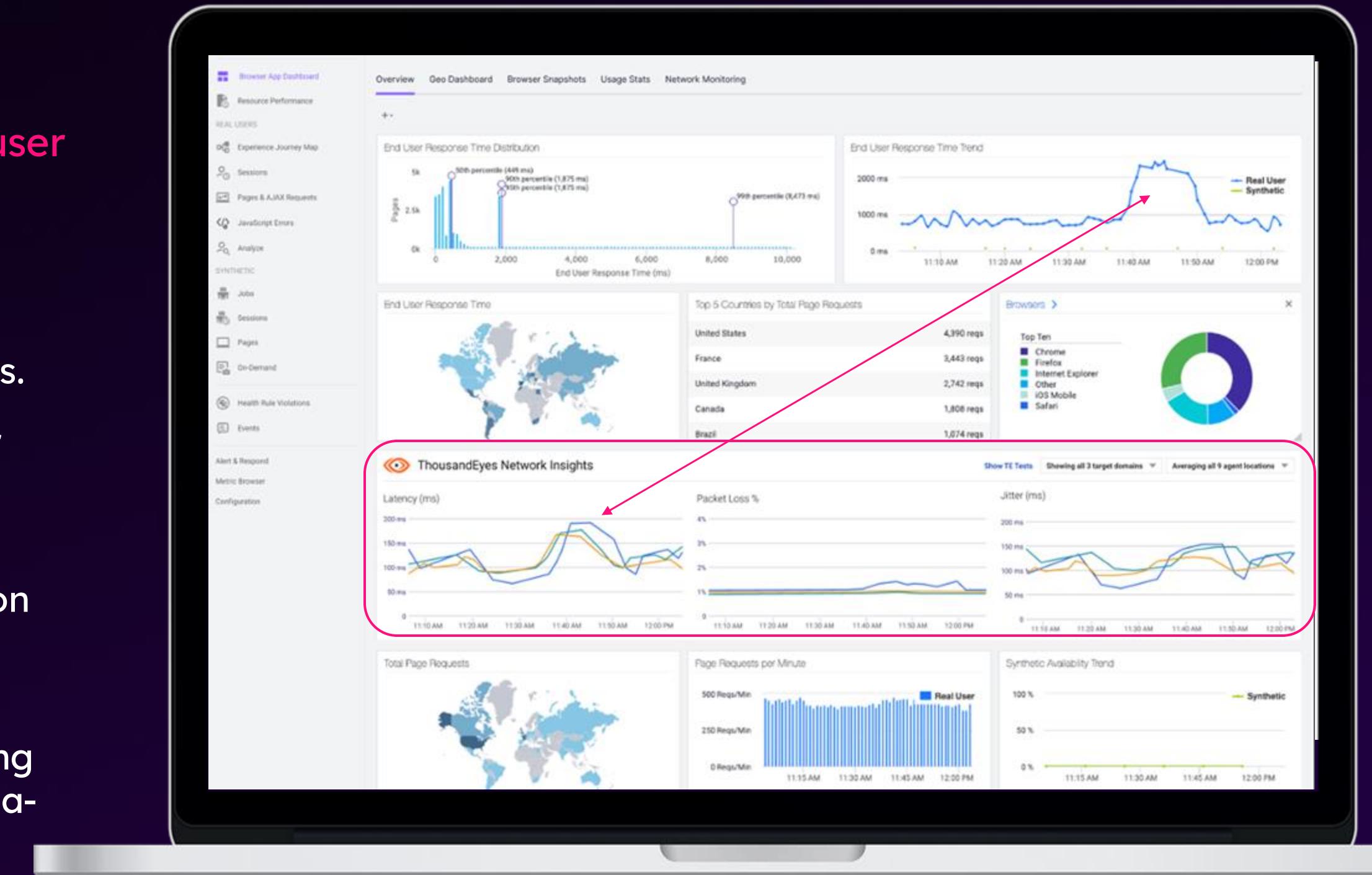
- Quickly diagnose failing ThousandEyes test
- Understand if slowness is from the network or application layer
- View trace topology and key intra-service metrics in context of the ThousandEyes test
- Easily set up tests for services instrumented in Splunk Observability Cloud from the ThousandEyes UI



Splunk AppDynamics & ThousandEyes

Gain detailed insights into how owned networks and the public internet impact user experience

- Gain **unified digital journey visibility** by integrating ThousandEyes & AppDynamics.
- Accelerate issue resolution by linking user experience insights with deep network intelligence.
- Sync network test creation with application mapping for comprehensive performance monitoring.
- Proactively **enhance user experiences** using integrated RUM and network data for data-driven optimizations.



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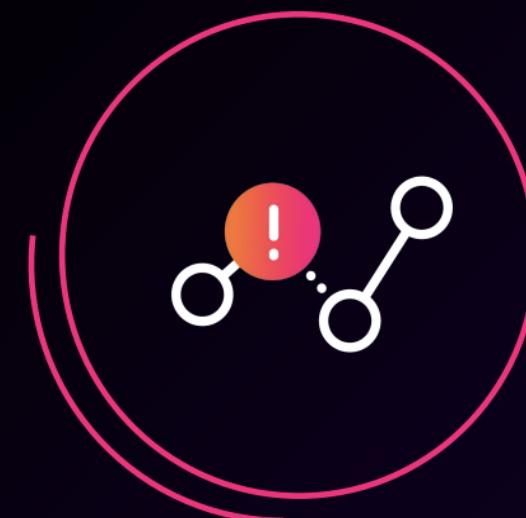
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Our approach toward ML and AI

Detec and predict

Real-time,
streaming analysis
to detect anomalies
and forecast trends



Machine and Deep Learning



Generative AI



Correlate and diagnose

Aggregate and analyze
all data to investigate
and identify root cause

Make everyone an expert

Reduce need for environment
and tool expertise by
simplifying analysis and
investigations

AI is rewriting the rules

...for what it takes to build a leading observability practice



Apps can now be written with little human involvement



AI agents will perform troubleshooting & fixes



AI apps require new forms of telemetry

Three key innovation areas in Splunk Observability

1. Unified Observability

Instrument and monitor three-tier and microservices environments in one solution, with deeper **business context**.

2. Agentic AI to assist setup, and detect, identify root causes and fix problems before they turn into business-impacting incidents.

3. Monitor the health, performance, quality, and cost of the entire **AI application stack**, including agents, LLMs, and AI infrastructure.

AI Embedded across Incident Response

Minimize & prevent incidents

Readiness Incident Detection Prioritization RCA & Response Remediation Analysis



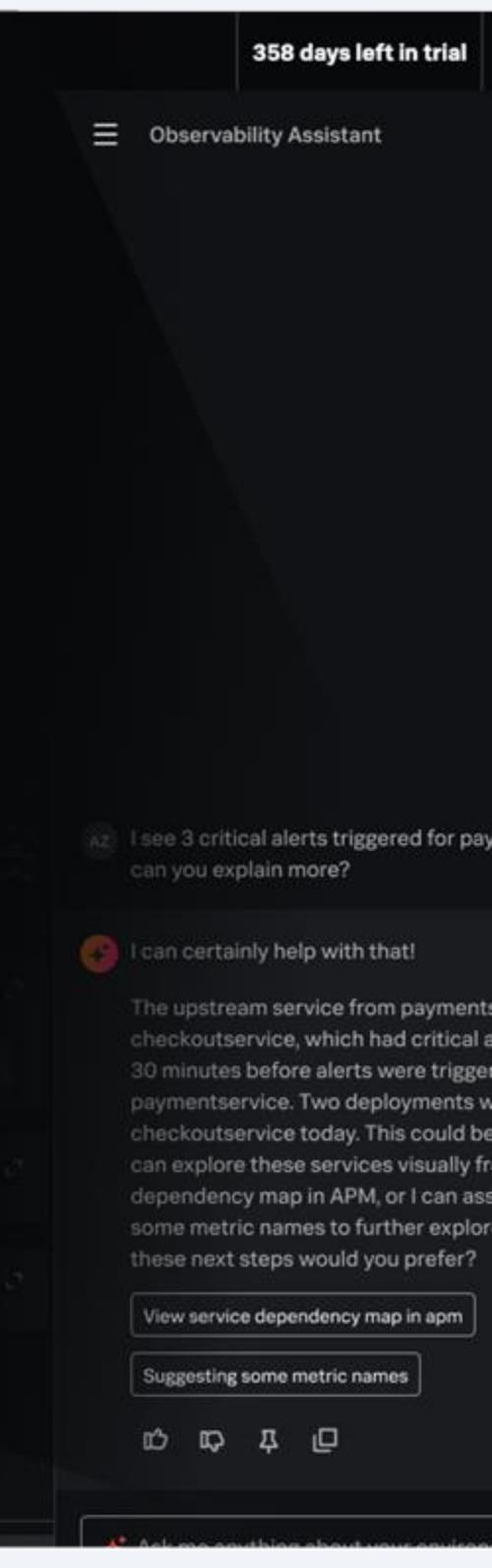
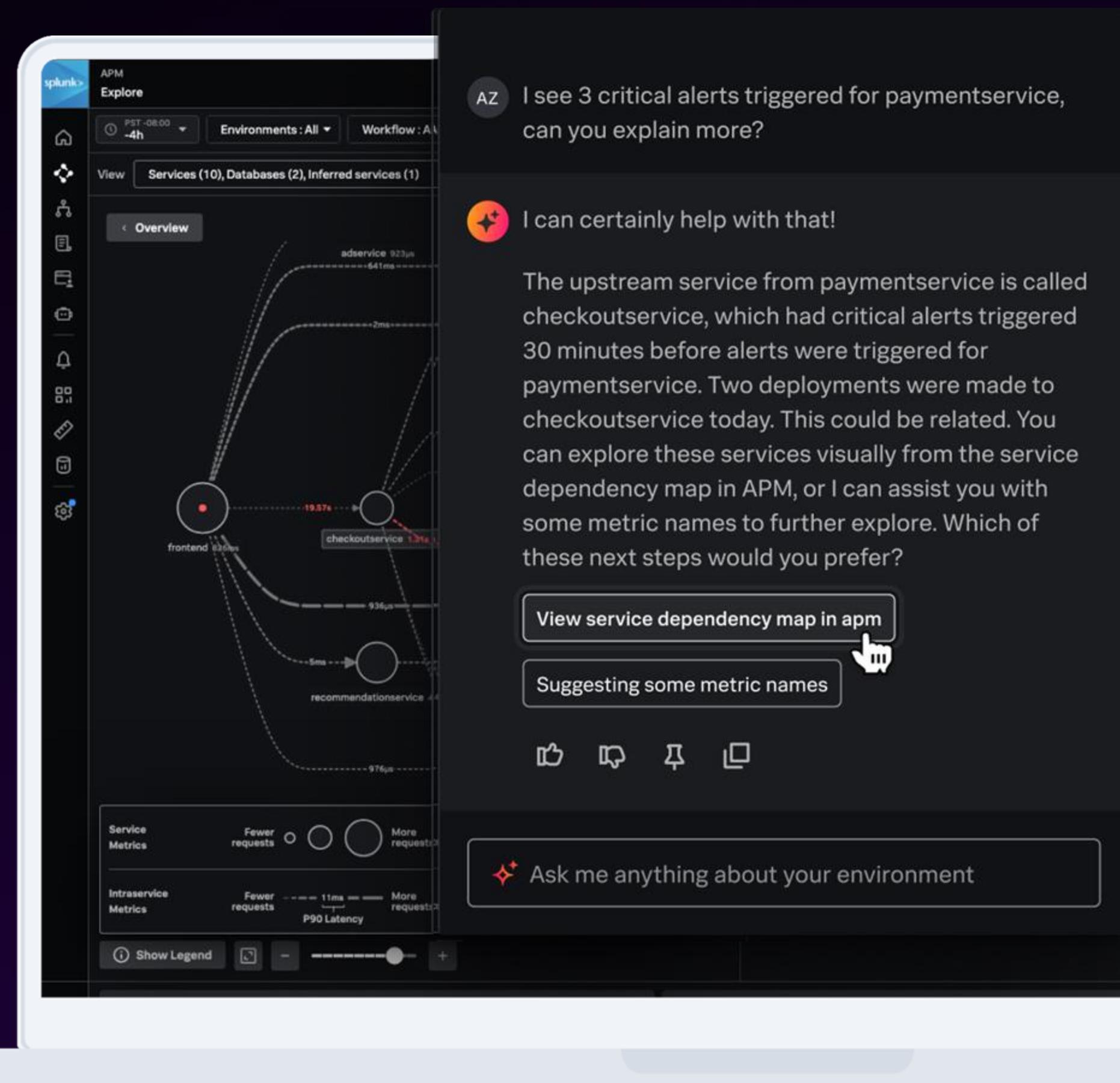
AI-Native User Experience

- **Chat-based AI Assistant** for easy, interactive insights [Available Now]
- **Dynamic, collaborative** user interface with **AI Canvas**, and embedded in-product AI experiences
- **Observability MCP servers** and Slack / Teams AI agents to unlock observability in the developer / SRE workflows

AI-Powered Observability

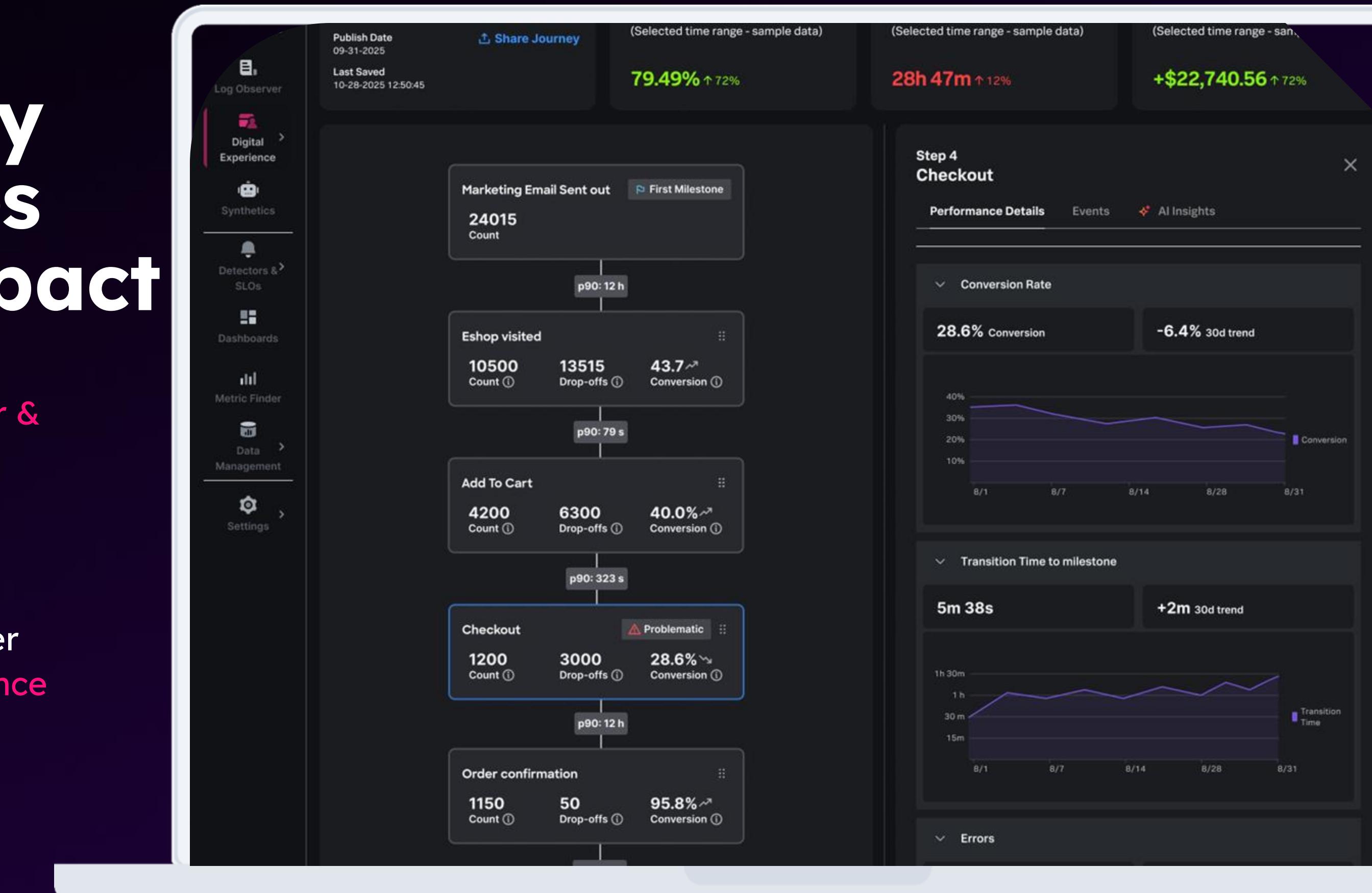
AI helping across your entire incident lifecycle

- **AI Assistant & Agents help across the incident lifecycle**
- **Faster, more accurate detection:**
More accurate alerting, predictive analytics, and anomaly detection driven by AI
- **Intelligent investigation:** AI-directed troubleshooting and root cause analysis help speed remediation



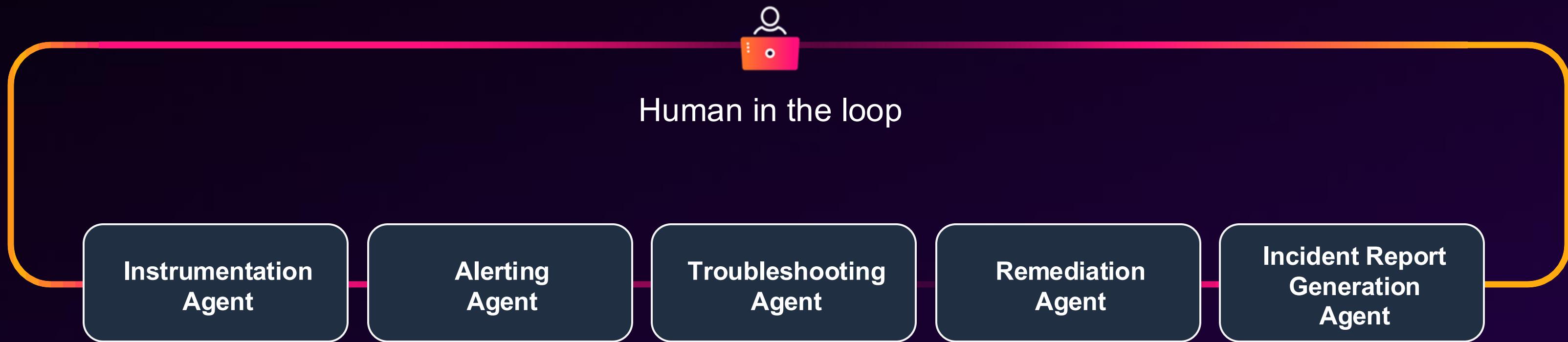
Unified observability that surfaces business impact

- Monitor and secure **three-tier & microservices** apps in one solution
- Deeper **business context** to prioritize what matters
- Understand and optimize user journeys with **digital experience** analytics



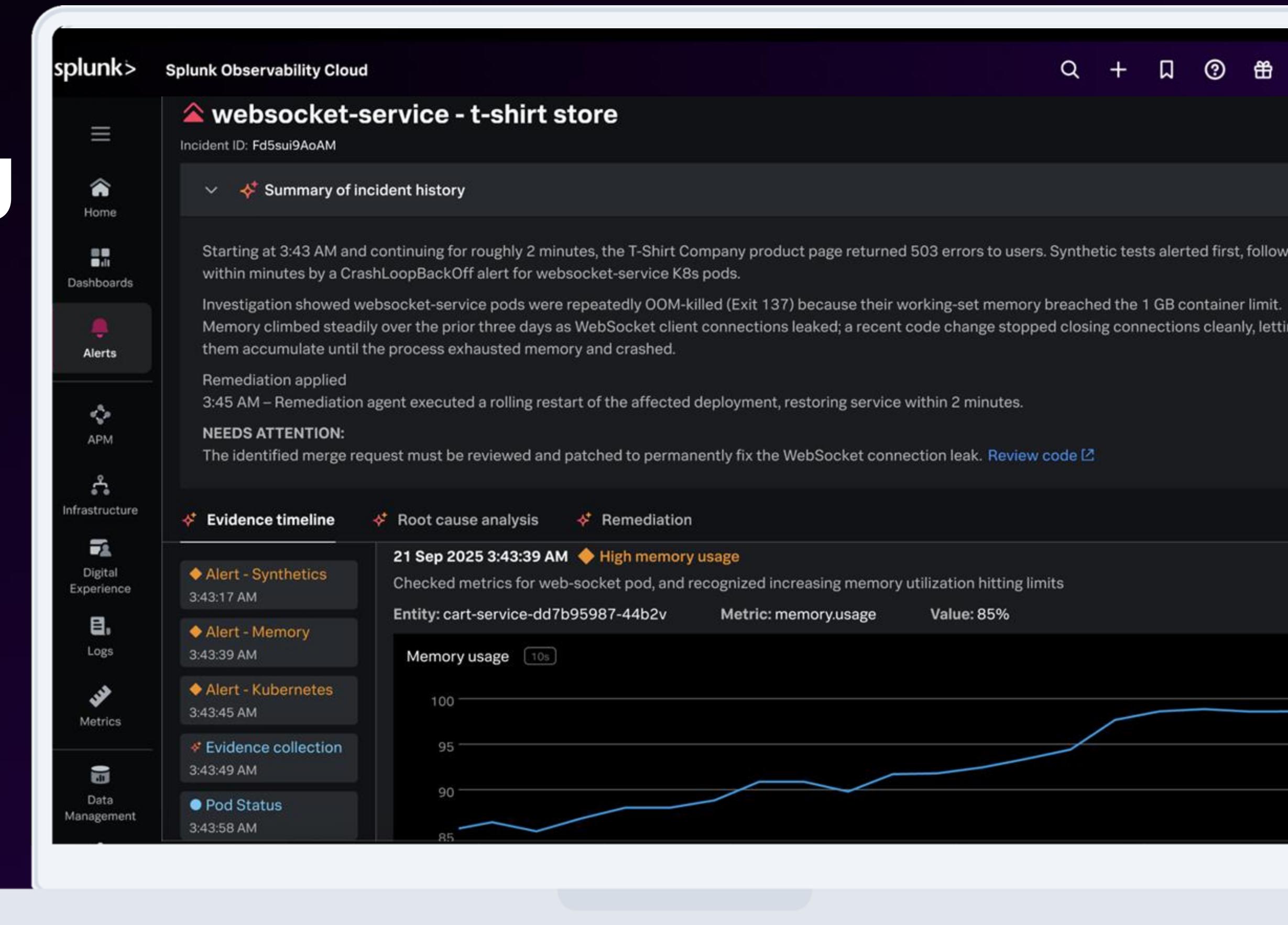
Pictured: Business Insights

Fix and prevent with AI agents (Coming soon)



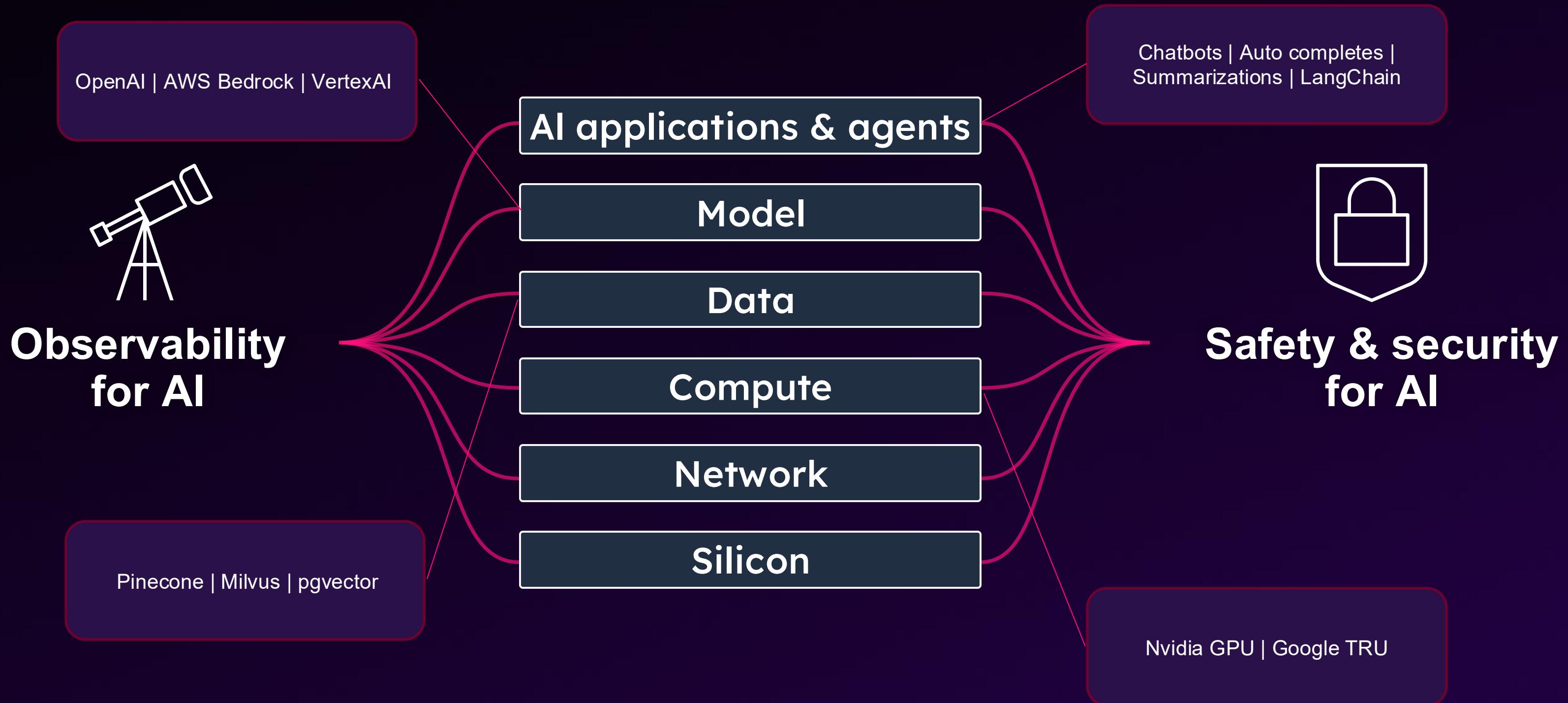
Fix & prevent problems using AI agents

- AI-generated RCA in-context, to reduce MTTI
- AI-directed alert correlation and summarization to reduce alert noise
- AI agents to prevent problems by optimizing data collection and alert configuration
- AI agents to automate every stage of the incident response lifecycle



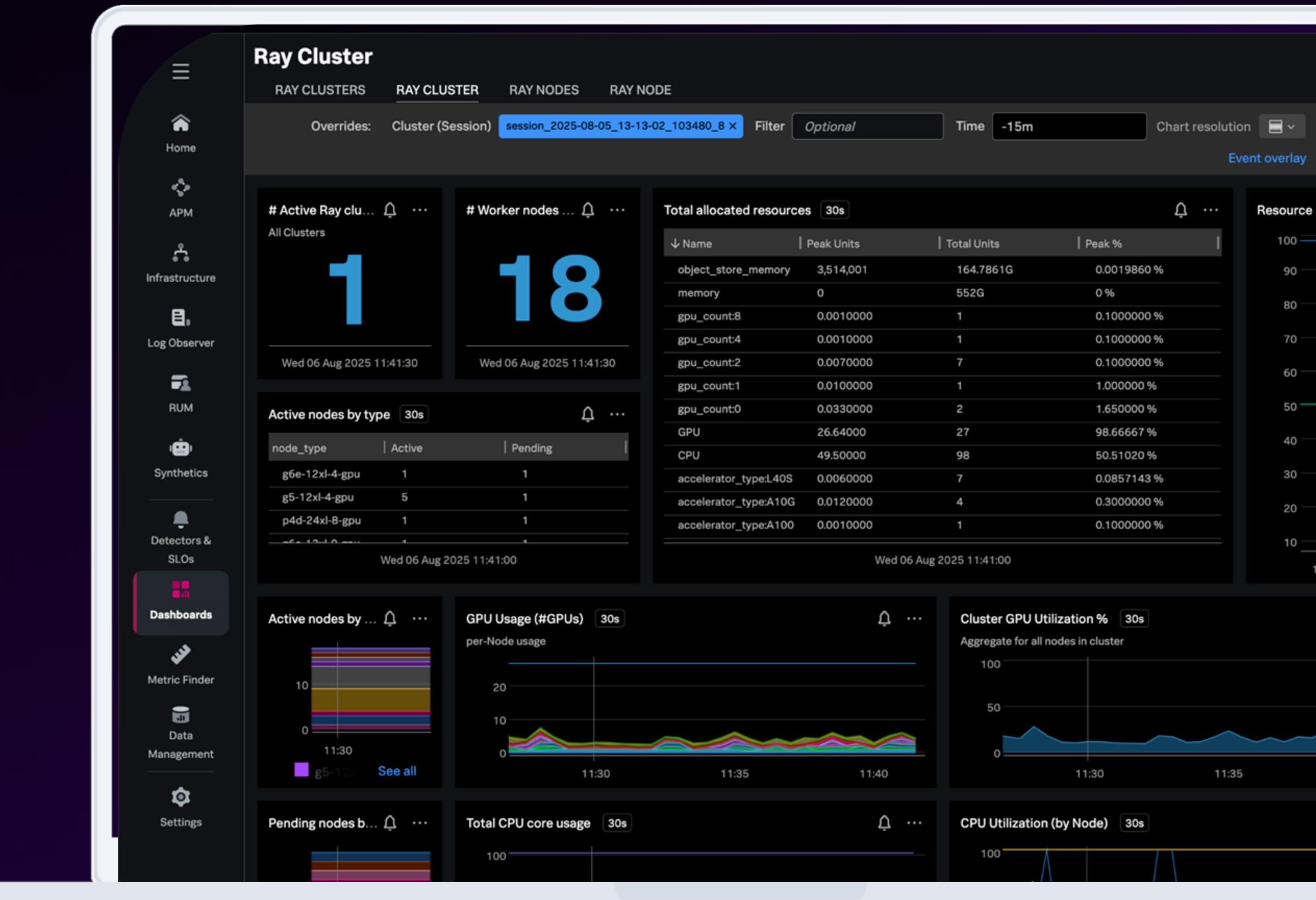
Pictured: AI directed troubleshooting in Observability Cloud

Observe AI Stack (agents to Infrastructure)



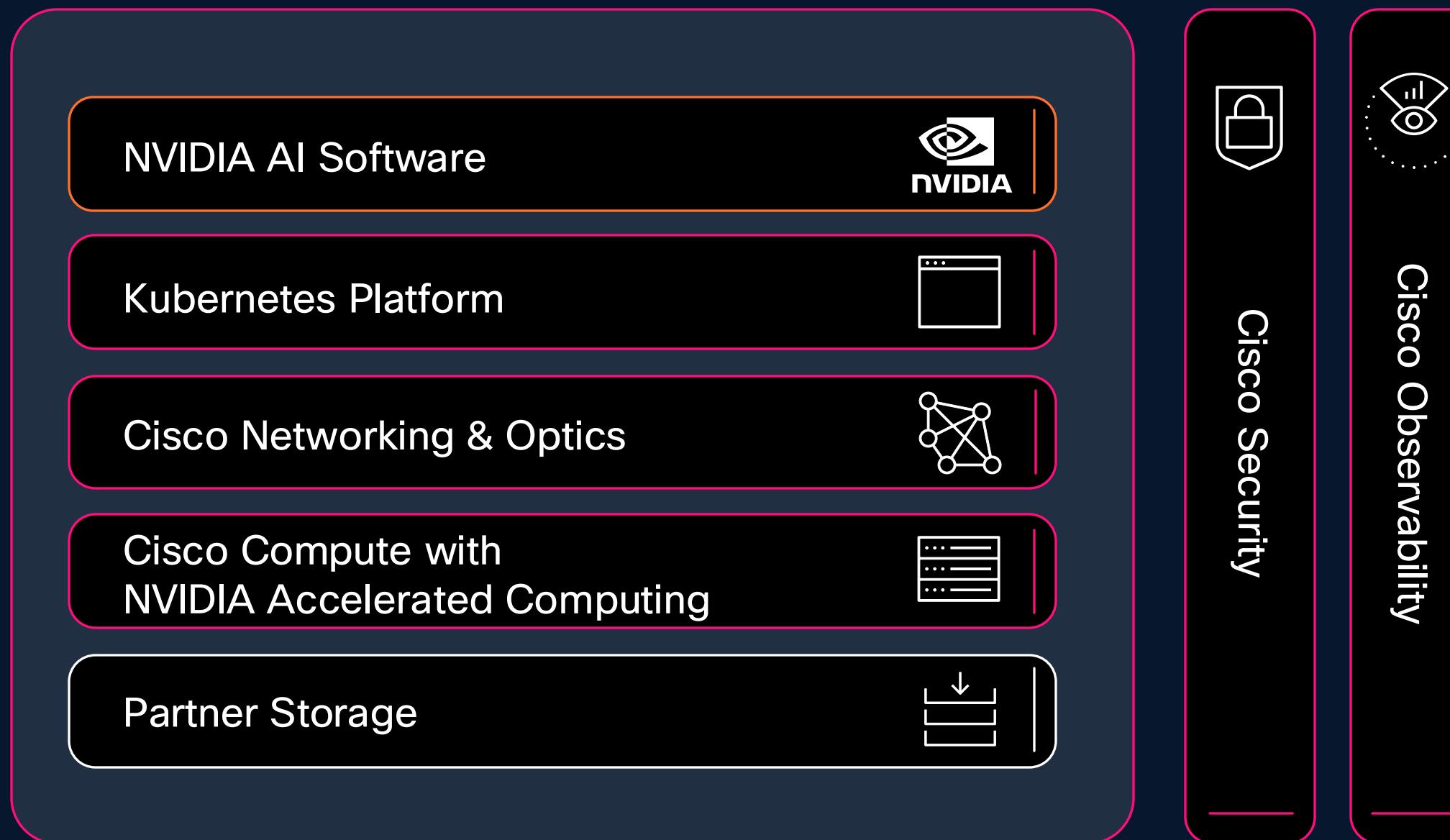
Observe AI agents & infrastructure

- Monitor the health and consumption of **GPUs**, **vector databases**, orchestration frameworks & agent platforms to **control costs** & ensure reliability
- Ensure the quality, accuracy, and security of **LLMs** and **agentic apps** to minimize **bias**, **inaccuracies**, **hallucinations**, and costs and performance risks



Pictured: AI Infrastructure Monitoring

Cisco AI Pods

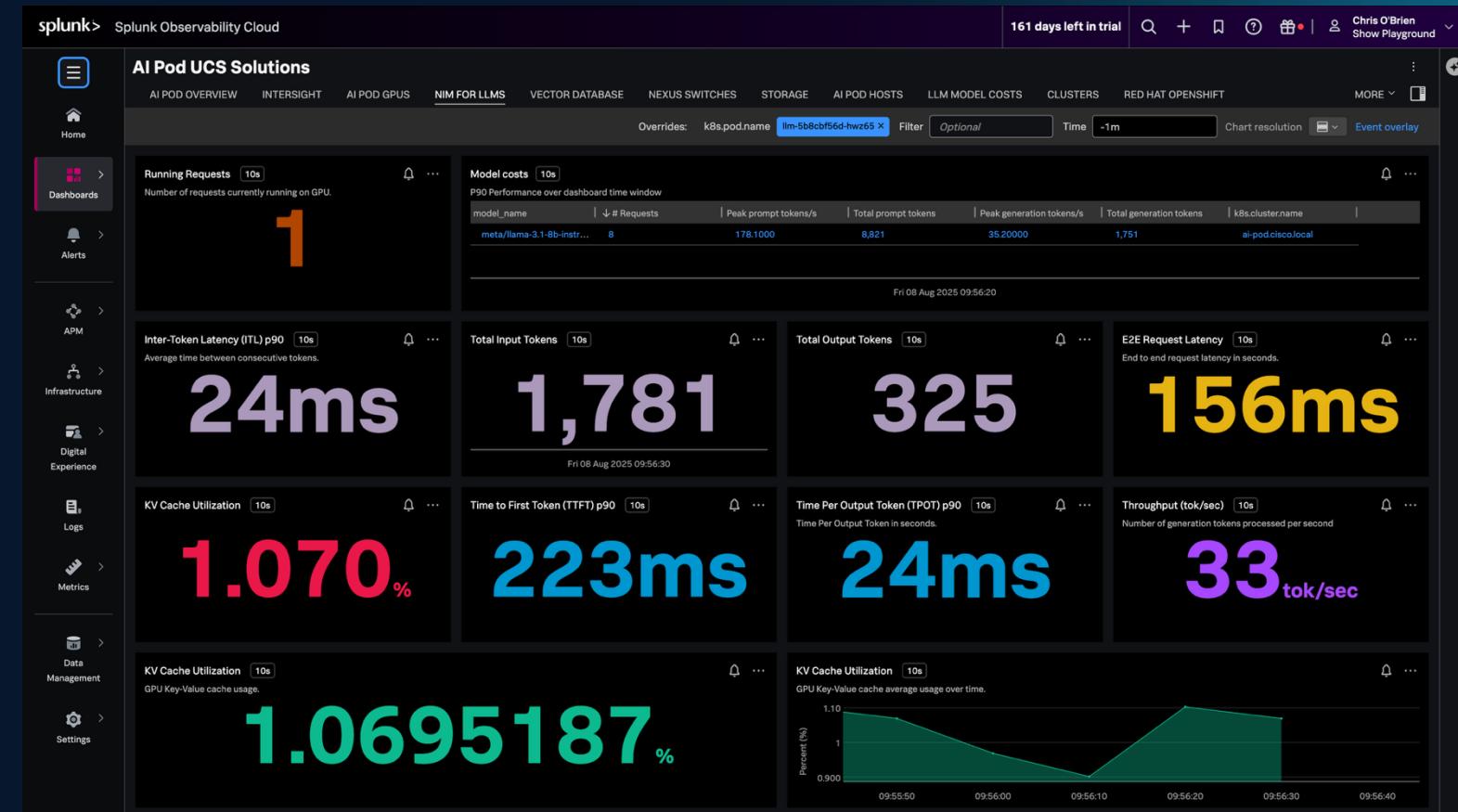


Reference architecture

Validated solutions and turnkey offerings

Differentiated with Security and Observability

Splunk Observability for AI Pods



OpenTelemetry-native Own and control your data, avoid vendor lock-in

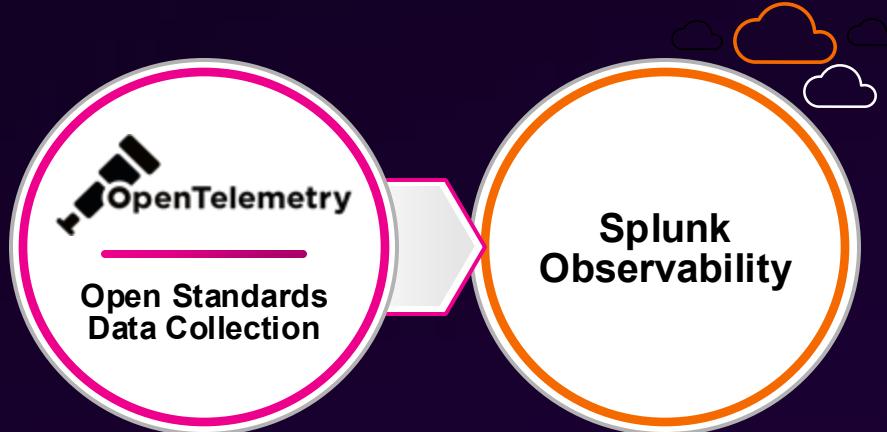
AI powered analytics and guidance AI/ML driven features like Service Maps and Trace Analytics provide help resolve issues faster.

No data sampling Eliminate blind spots by collecting and analyzing 100% of your data with Splunk's NoSample™ tracing.

OpenTelemetry Collector

Full control over your data, no vendor lock-in

- Single **open standards-based** agent for metrics, traces, logs and more
- **Standardized** naming conventions powers correlation of logs, metrics and traces
- Complements other GDI, e.g. Splunk forwarders, cloud API integrations



The screenshot shows the Splunk Data Setup interface. The top navigation bar includes the Splunk logo and the "Data Setup" tab. On the left, a sidebar lists "Deployed" (4 items), "Drafts" (2 items), and "Recommendations" (3 items). Below this is a "CATEGORIES" section with links to "All" (26 items), "Agent Monitored Services", "AWS Services", "Azure Services", "Container Platforms", "Cloud Providers", "GCP Services", "Host Agents", "Instrumentation Libraries", "Other Collectors", and "Serverless". The main content area is titled "Connect Your Data" with the sub-instruction "Connect to your systems and data sources." It features a "FEATURED" section with icons for "aws" (Amazon Web Services), "GCP" (Google Cloud Platform), "Microsoft Azure", "Kubernetes", and "OpenTelemetry Collector". Below this are sections for "AGENT MONITORED SERVICES", "AWS SERVICES", and "AZURE SERVICES", each showing multiple instances of the respective service icons.

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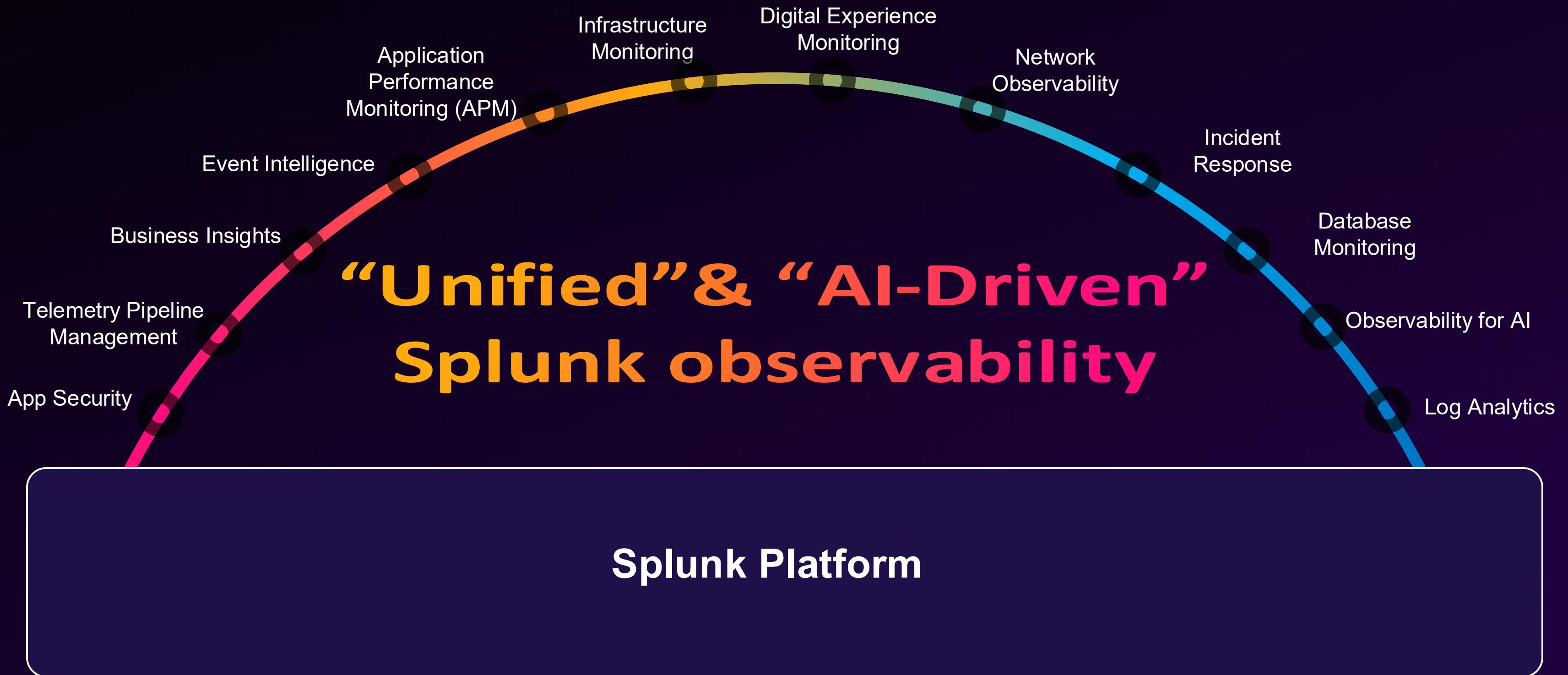
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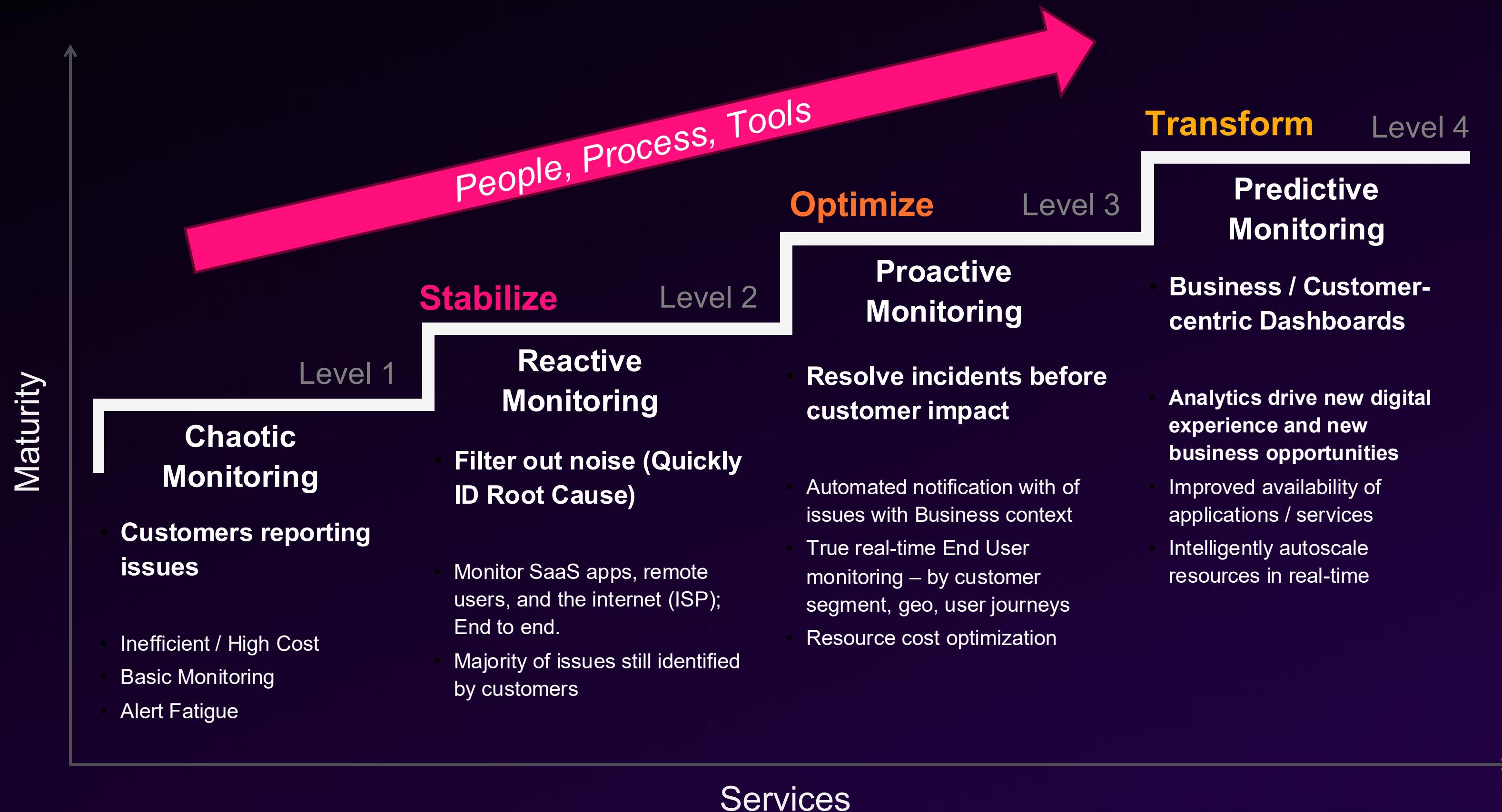
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Key Takeaway

Build and future-proof resilient operations with...



Observability - Operational Maturity Model



Next Steps together

Use Case Deep Dive

- Review app architectures
- Prioritize use cases
- Initial Splunk solutioning

SRE, Software Engineering, ITOps

Solution Demonstration

- Platform Overview
- Live Demo
- Use case walk-through

SRE, Software Engineering, ITOps, Platform Engineering, Architecture, Tool Mgmt.

Day-in-the-Life Accelerated Workshop

- RCA Process Overview
- Reverse Demo
- Best Practice & Guidance

SRE, Software Engineering, ITOps, Tool Mgmt.