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The bridge to possible

Enabling Hybrid Work with ThousandEyes

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BRKAPP-2564

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How

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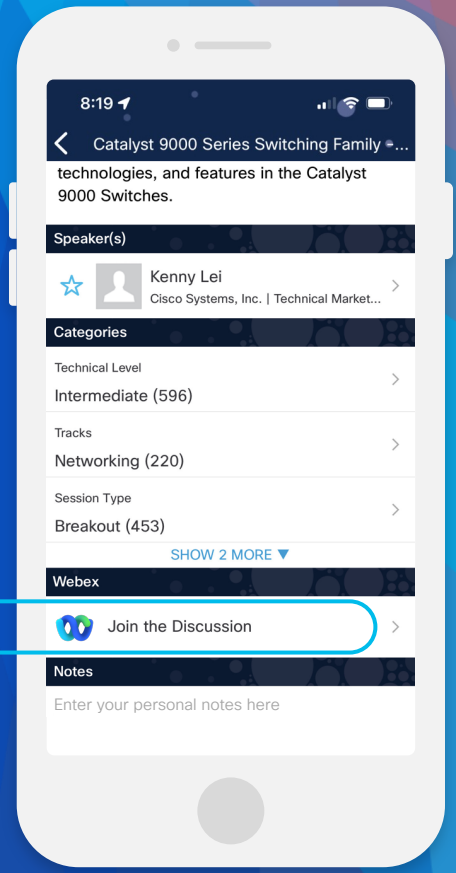

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Agenda

- Hybrid Work Today
- ThousandEyes refresher
- Solution Overview
- ThousandEyes in Action
- Call To Action

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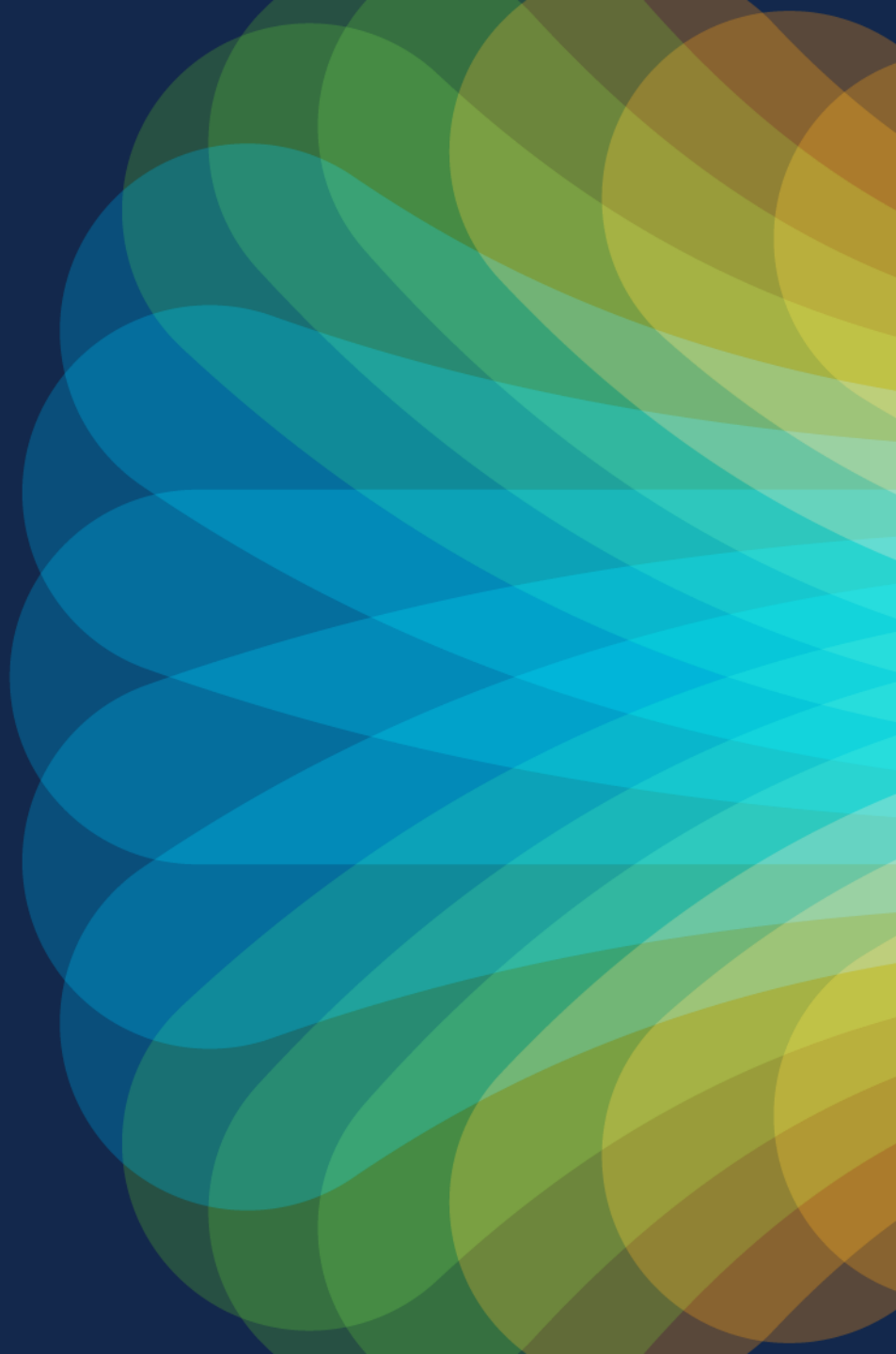
Hybrid Work Today



Management paradigm

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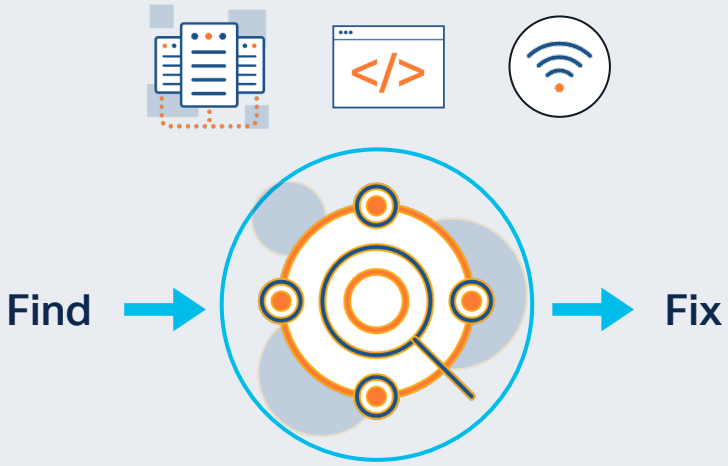
Management paradigm has shifted

IT Assets You Control



IT Assets You Don't Control

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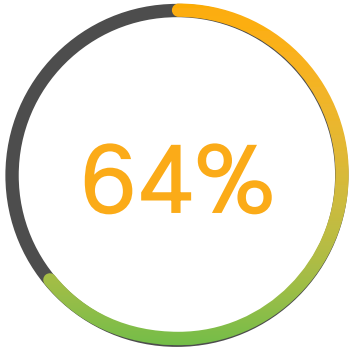
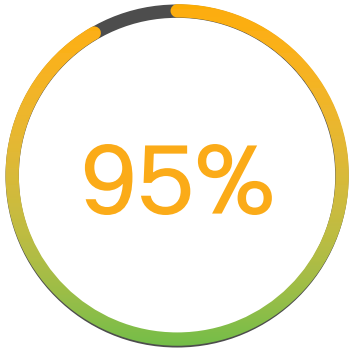
Gaps in Operational Visibility Impact Business



agree that the ability to work from anywhere instead of coming into the office directly affects whether they stay at or leave a job



of network outages occurred outside of cloud provider networks, within Internet and transit providers

#1

Collaboration apps have become the most monitored application type for workers globally

2X

faster growth of teleworker vs. office routers – IT perimeter and business class connectivity is expanding to home

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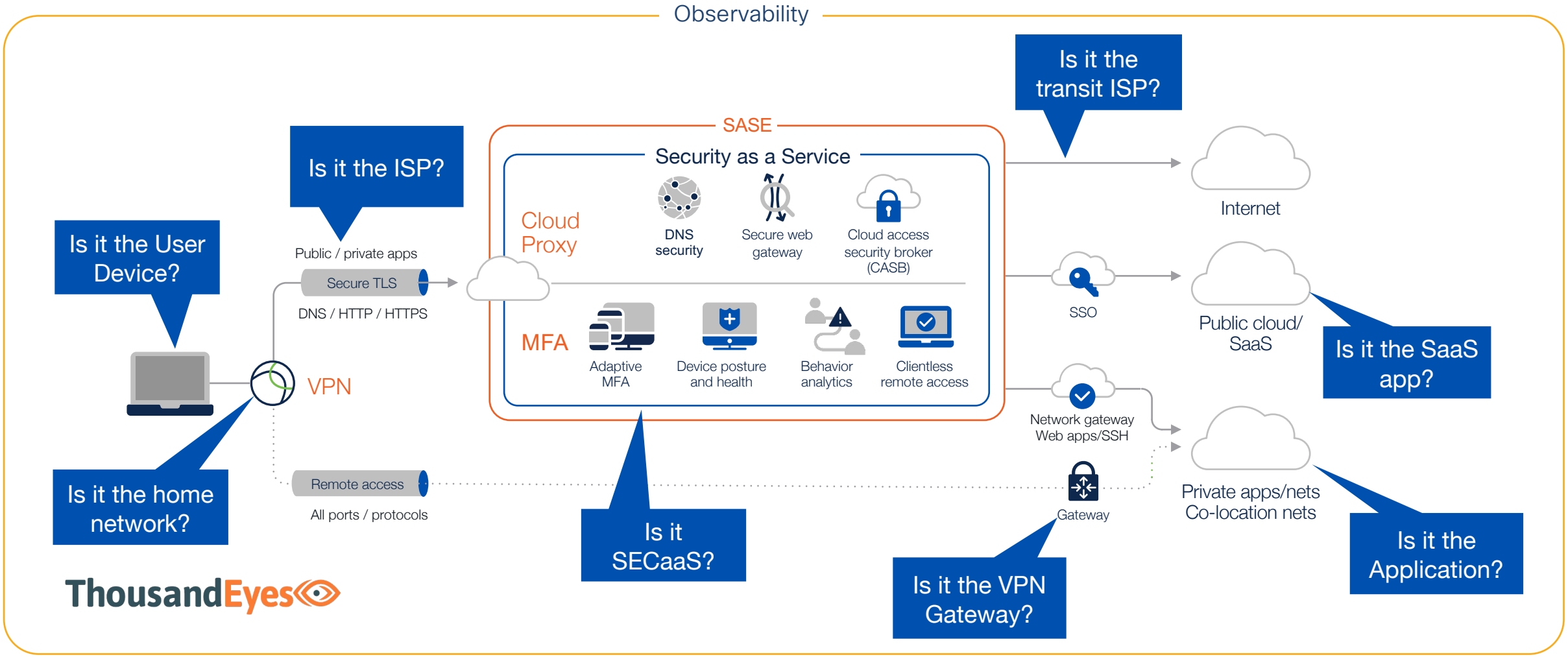
How can I support remote workers?



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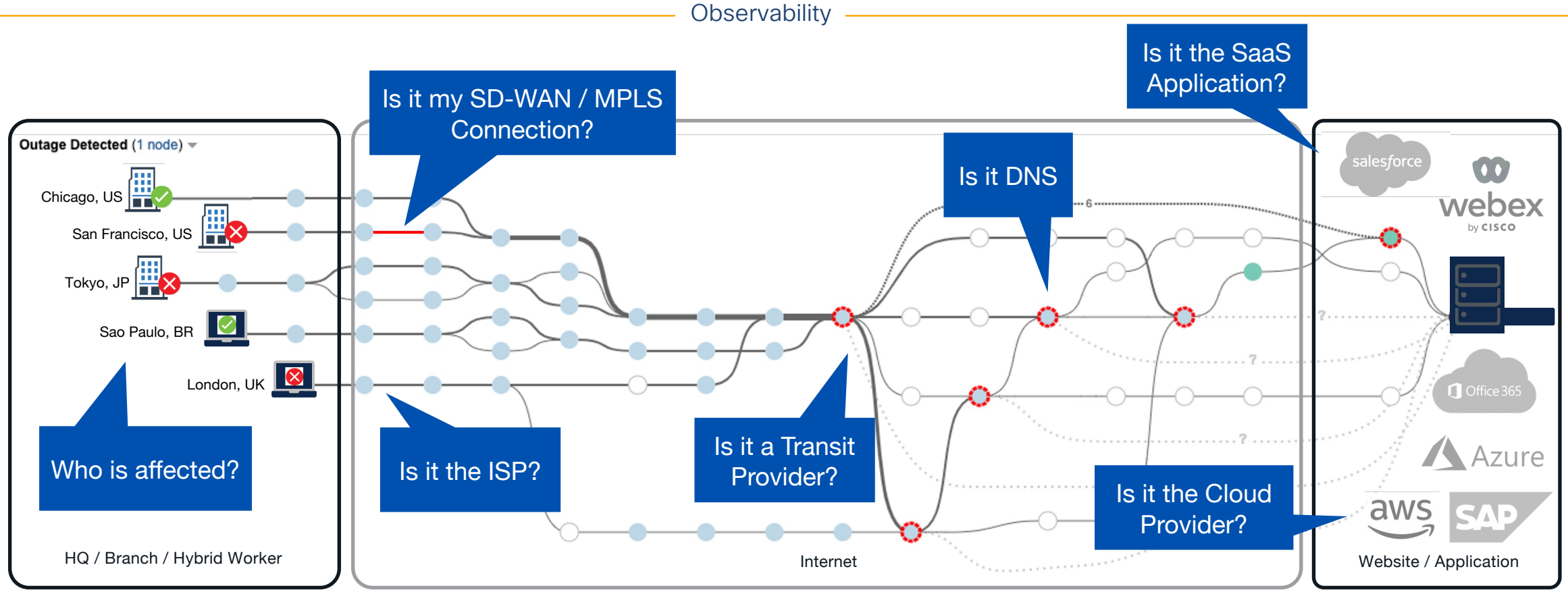
Can employees access their productivity apps?



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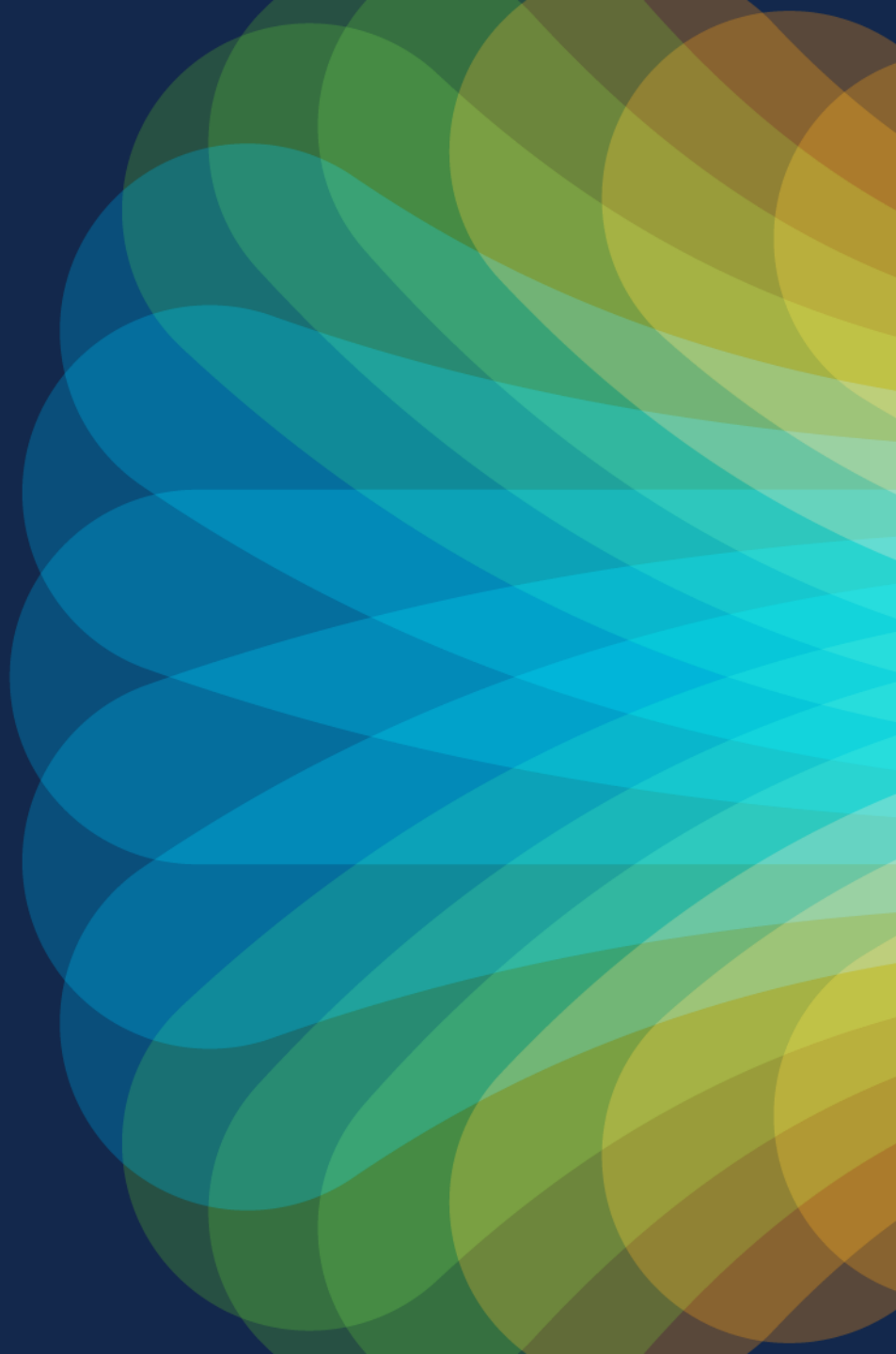
ThousandEyes Refresher



cisco Live!

Empowering **every** digital experience

Deliver stellar digital experiences to users

Keep workers connected and enjoying seamless app performance

Optimize and sustain the flow of your digital supply chain

ThousandEyes

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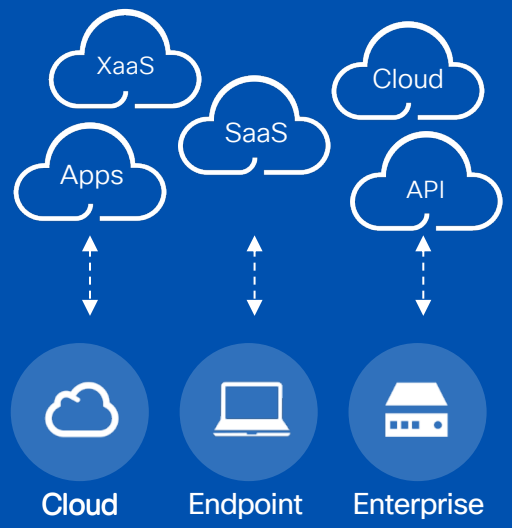
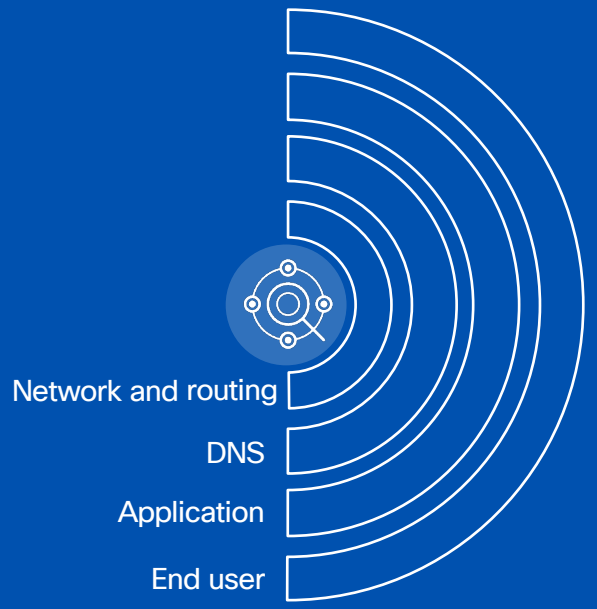
ThousandEyes Internet and Cloud Intelligence

VISIBILITY | INTELLIGENCE | WORKFLOWS

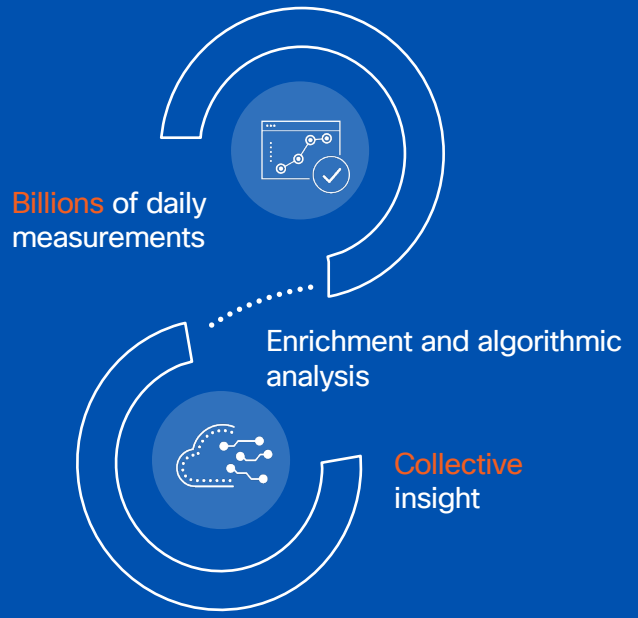
1000s of Global Vantage Points



Unique X-layer Telemetry



Global Collective Insight



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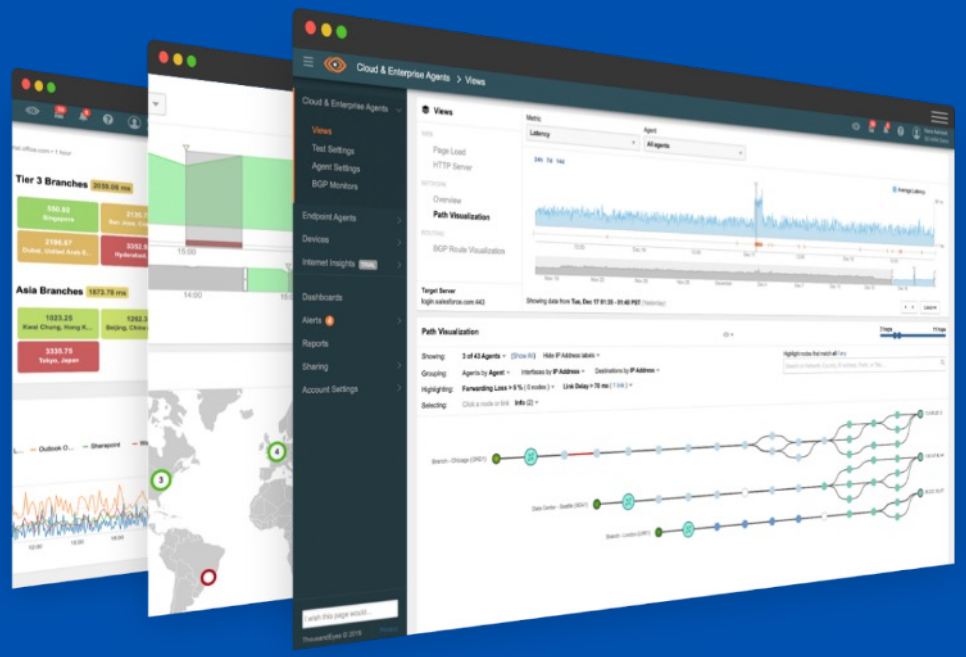
ThousandEyes Internet and Cloud Intelligence

VISIBILITY | INTELLIGENCE | WORKFLOWS

Surface fault domain, root cause, and attribution to responsible party

See digital experience in context with deep correlations across layers



Gain global insight into Internet and SaaS App Outages

Drill down to quality of experience of individual users and groups in your workforce

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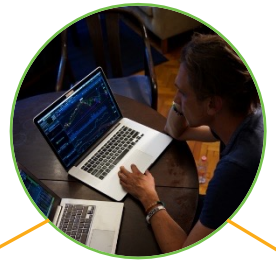
ThousandEyes Internet and Cloud Intelligence

VISIBILITY	INTELLIGENCE	WORKFLOWS

- REST API
- Native Integrations
- Custom webhooks
- Cloud templates
- Infra as Code tools
- Sharelinks for easy sharing across teams

SREs / App owners

Troubleshoot and optimize App, APIs and delivery services



NetOps (Service delivery)

Tune BGP and peering and monitor for anomalies, hijacks and sub-optimal routing

Customer Support

Build trust with timely, data-driven communication

IT Helpdesk

Rapidly prioritize, resolve and direct issues to the right team to ensure workforce productivity

Enterprise WAN Ops

Proactively manage and improve SD-WAN and cloud connectivity to assure app performance for users across sites

External Teams

Receive detailed, actionable information to quickly resolve issues

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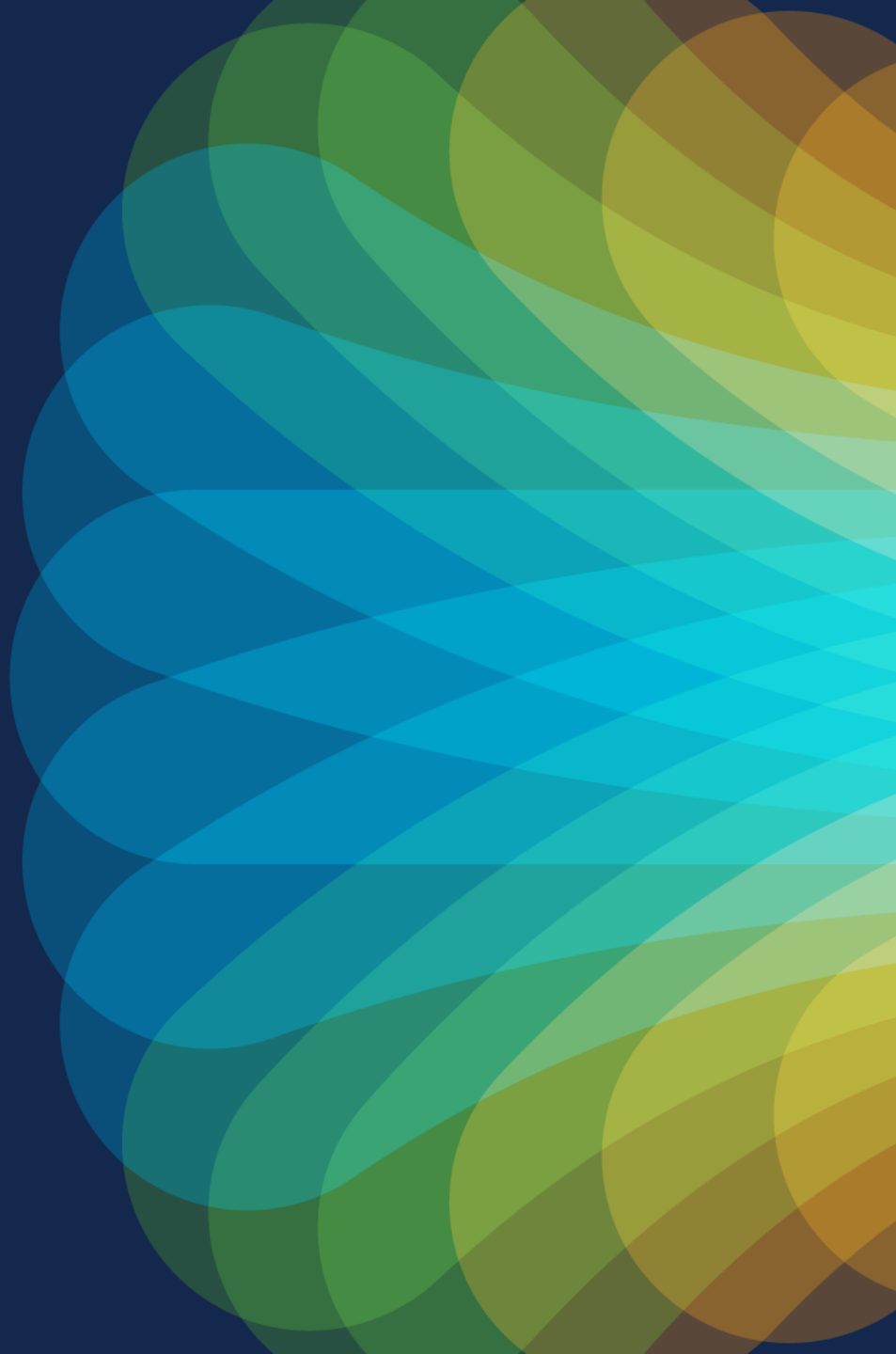
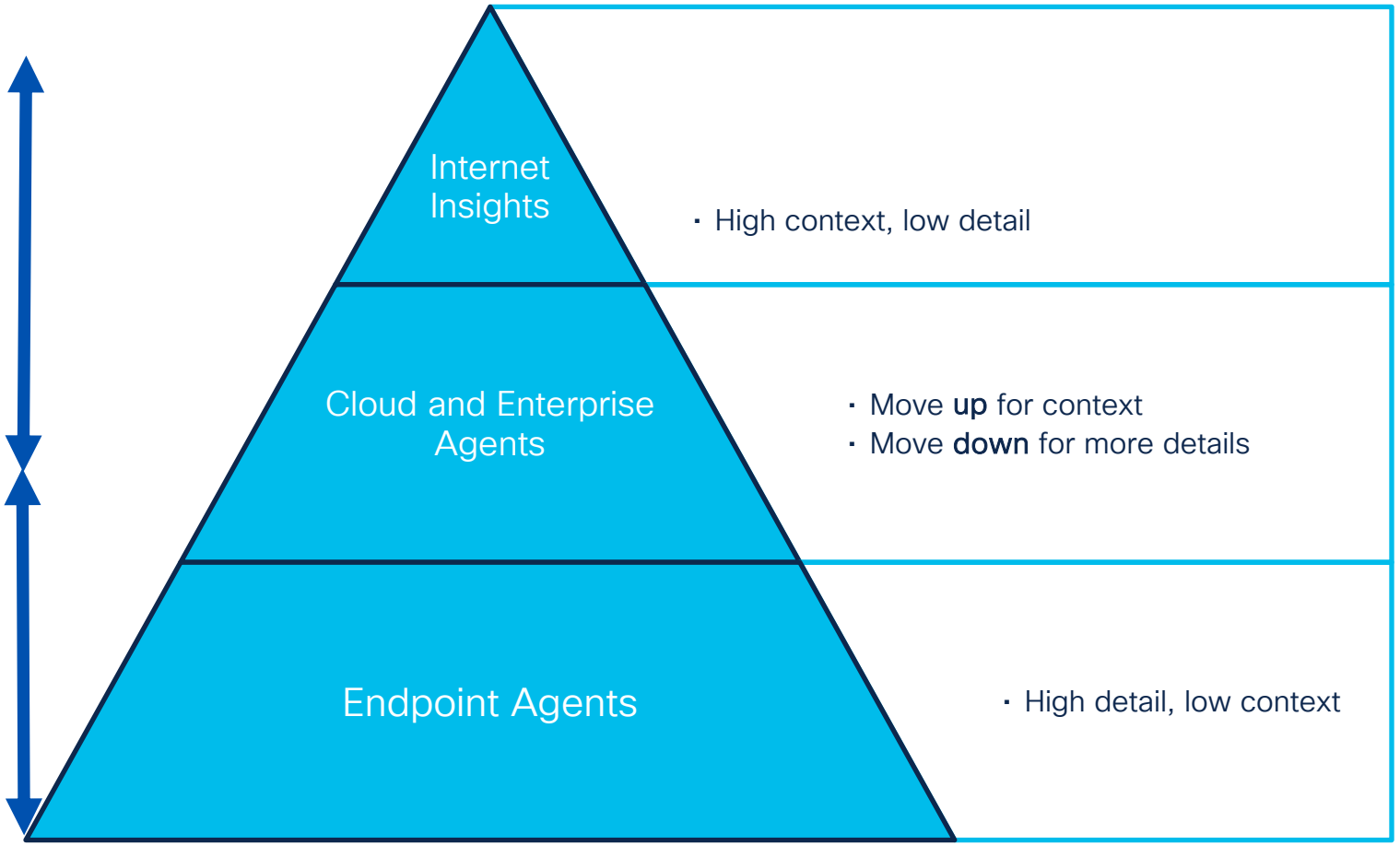
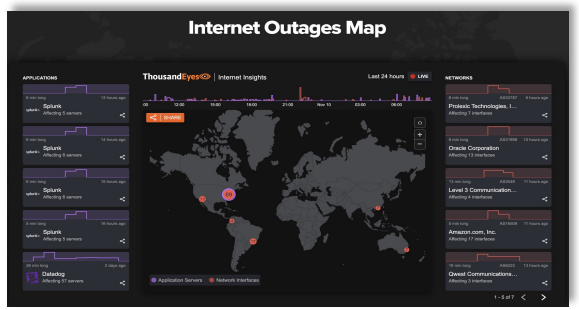
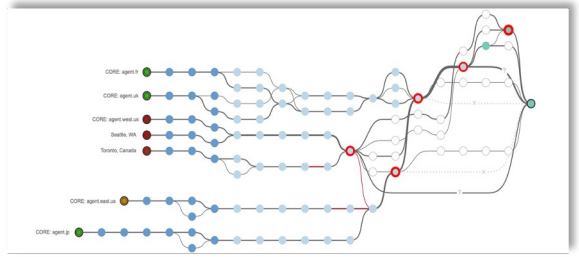
Solution Overview

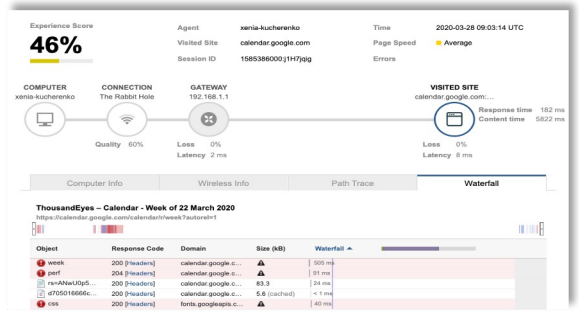


ThousandEyes product offering









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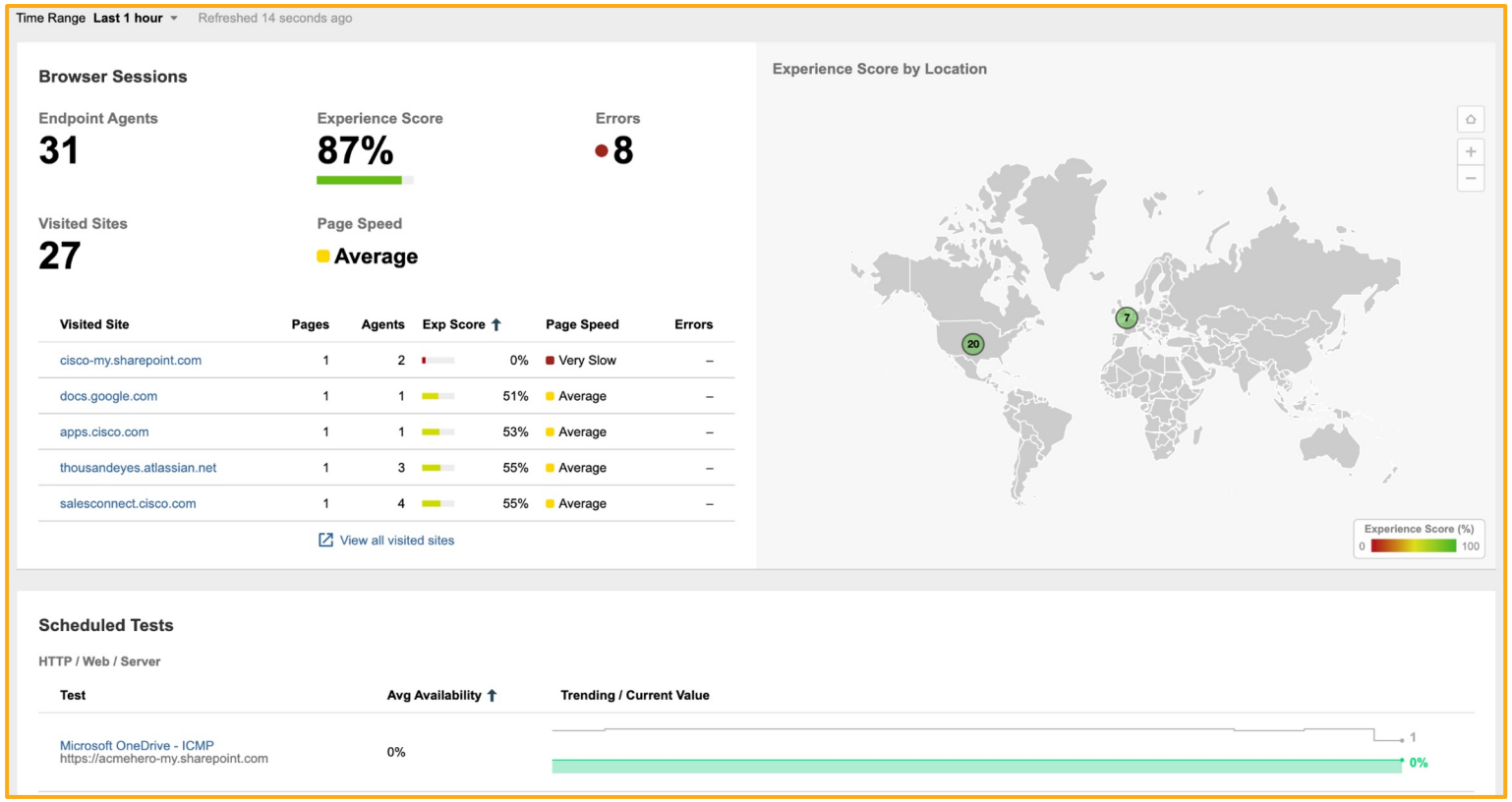
What is the Endpoint?

- Lightweight service Installed on an end user's laptop or desktop
- Monitors the entire digital supply chain,
- Browser plug-in ,data collection at the system level.
- Troubleshoot performance issues related to Wi-Fi, bandwidth capacity, ISP routing, VPN gateways, and SaaS availability.



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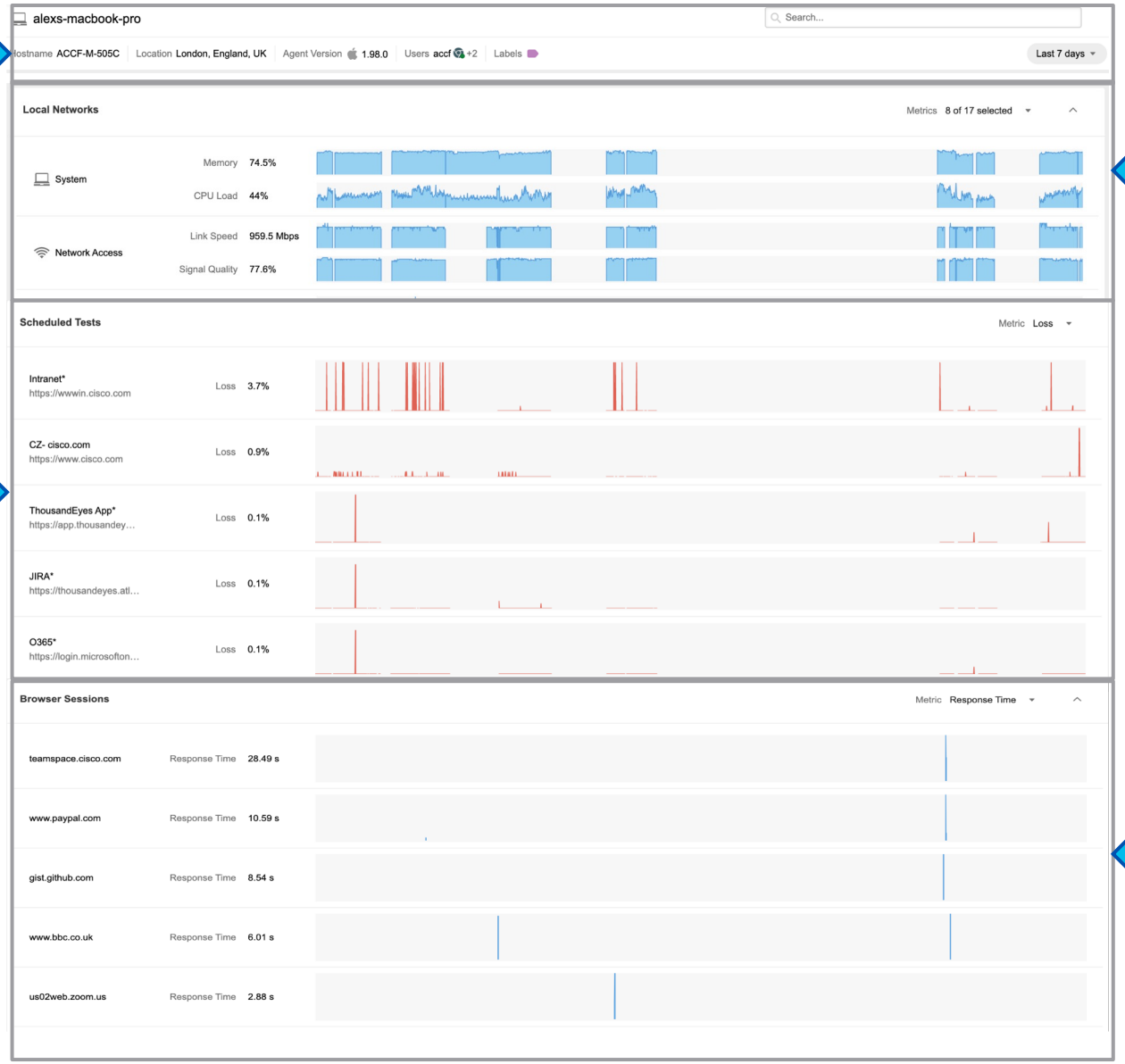
Breaking down the Single Agent View

This section highlights the selected agent you have chosen to investigate and information related to their machine and geolocation

This section displays the Scheduled tests (max of 10 concurrent) you have configured to run on this particular agent. The timelines for each test display the metric you have selected from the dropdown.



This section shows the performance of the end machine utilized by the endpoint agent you have selected, their local network and access methods, VPN stats, and proxy performance. The level of detail shown is determined by what checkboxes you have selected in the Metrics dropdown.

This section shows the performance of specific browser sessions monitored by the agent's profile. The timelines for each test display the metric you have selected from the dropdown.

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Resource Impact on Workstation

A single test user on Mac, running without a VPN, executing 10 scheduled tests (9 at two minute intervals and 1 at five minutes) utilised the following resources over the space of 1h50.

te-user-agent	183 KB	29 KB	232	84	793	accf
te-agent	1.7 MB	11.1 MB	14,137	16,758	151	root

Endpoint Agent sent+received in total 12.8MB of data, ultimately averaging less than 50Kb/sec of bandwidth across that time window.

With regards to CPU and Memory, we carried out a number of benchmarking tests for ~30 minutes on Windows and Mac devices. The general consensus was that:

- RAM usage ranged from 10-50MB
- CPU usage rarely peaked above 1-2% for Scheduled and Local Network tests
- CPU did spike with the Browser Sessions extension which is expected due to the post-processing we carryout.
    - Spikes were seen up to 30% on very rare occasions

All testing was carried out over a 30 minute period on Macs using psrecord. On Windows, we utilised perfmon.exe, built into Windows.

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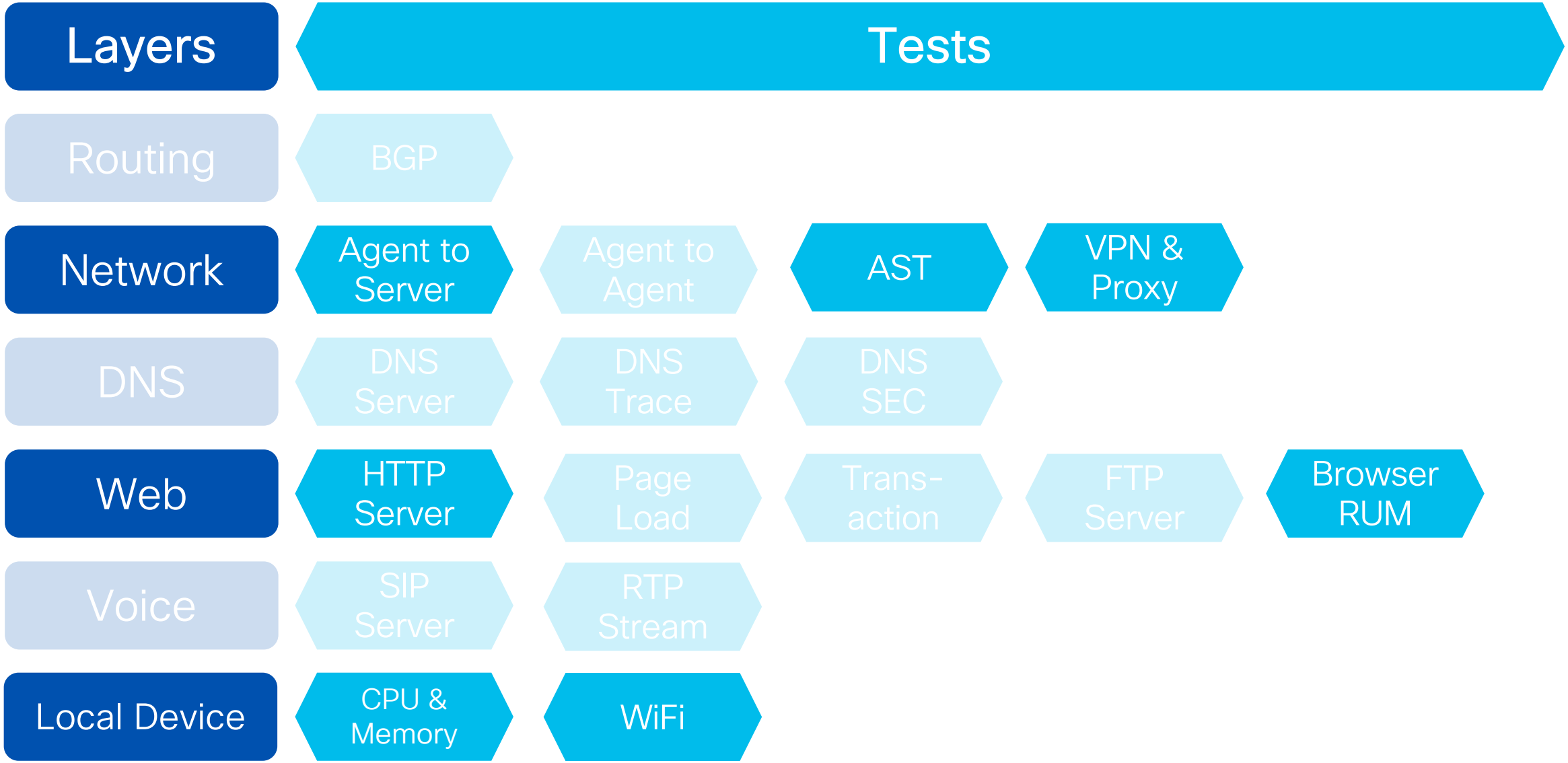
Endpoint Agent Test Components



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Cloud and Enterprise Test Components

Layers	Tests				
Routing	BGP				
Network	Agent to Server	Agent to Agent	AST	VPN & Proxy	
DNS	DNS Server	DNS Trace	DNS SEC		
Web	HTTP Server	Page Load	Trans-action	FTP Server	Browser RUM
Voice	SIP Server	RTP Stream			
Local Device	CPU & Memory	WiFi			

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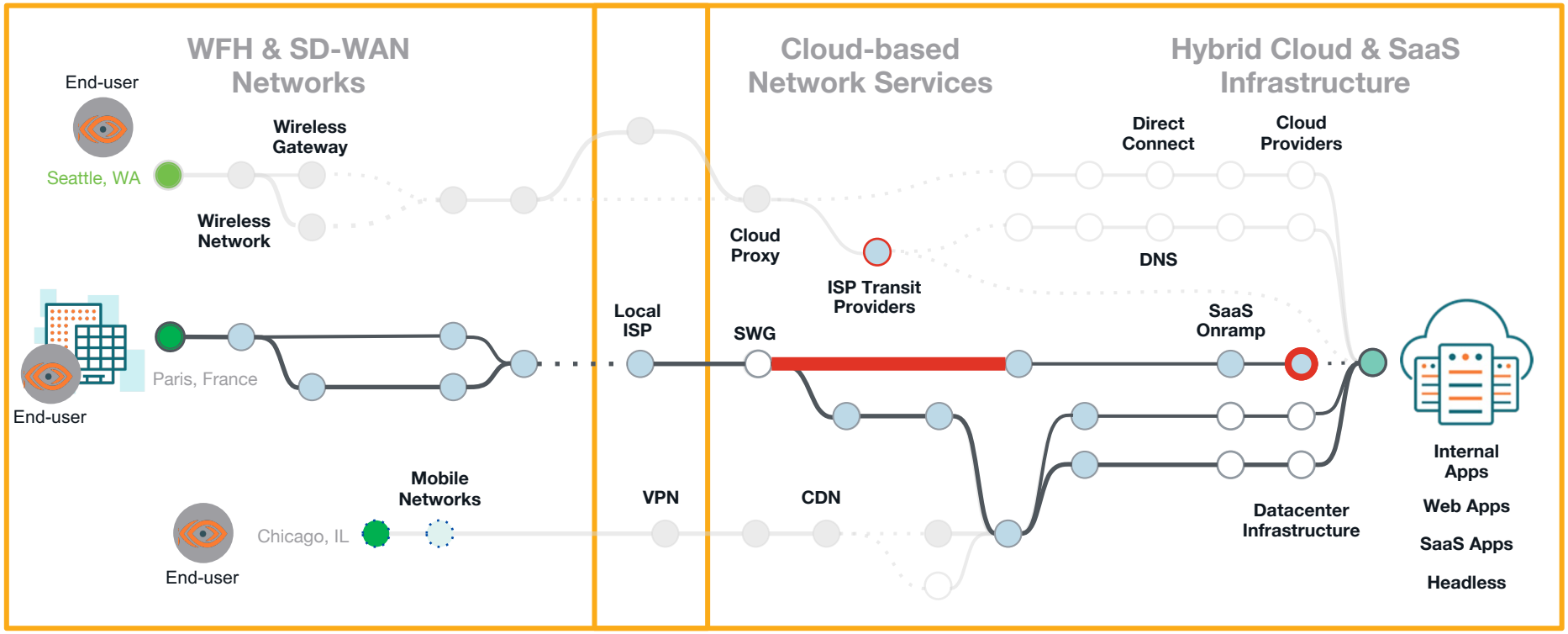
Completing the end-to-end picture



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ThousandEyes Agents for Room OS

ThousandEyes Agents

Will be released with the RoomOS software channel

Tests Supported

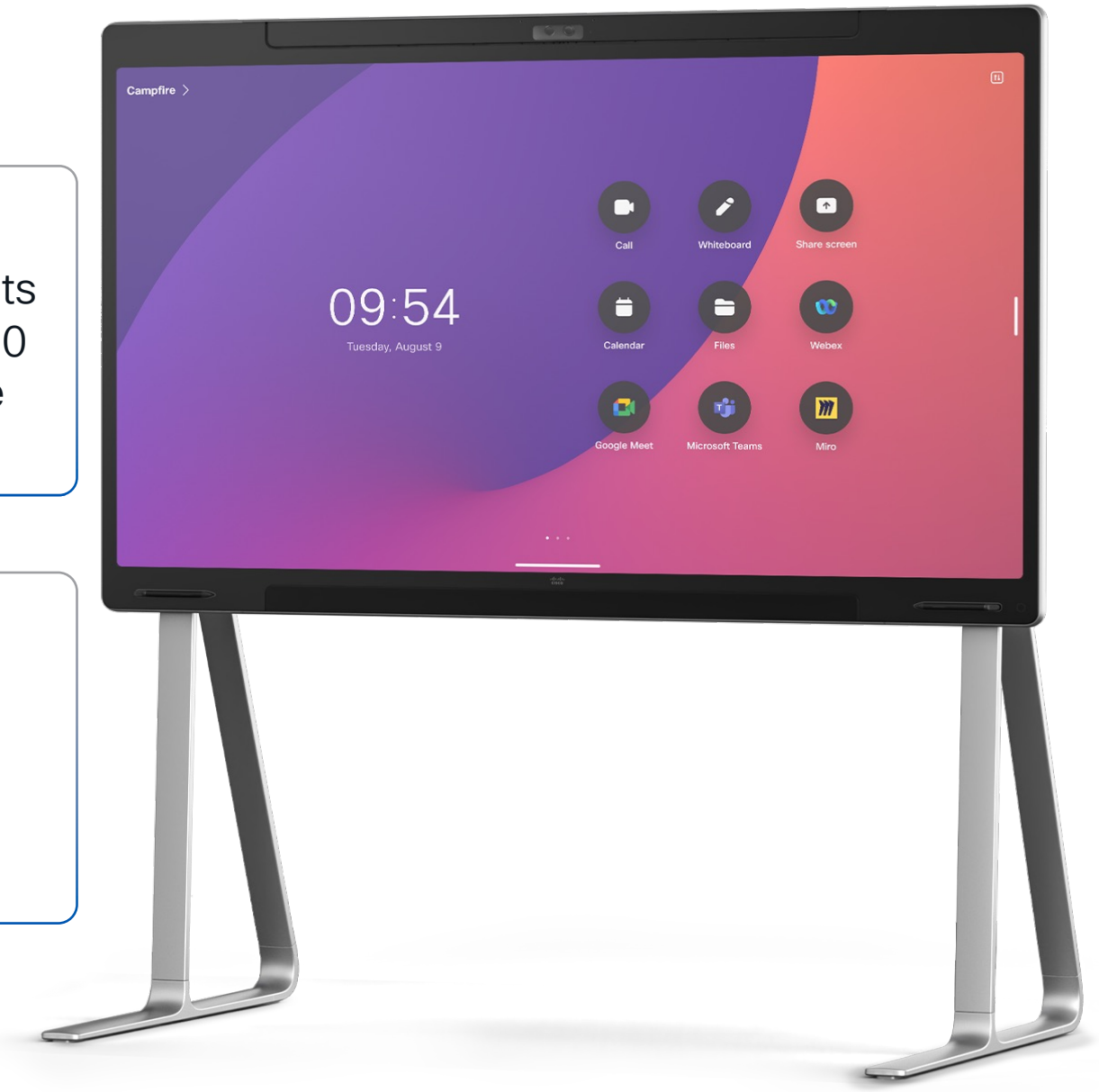
Automated Session tests (AST's) will run every 60 sec when meetings are in progress

Problem Solving

Aims to mitigate the complexities of troubleshooting and root cause identification on RoomOS devices

Simplification

Simplifies the problem-solving process and enhances overall device performance



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Supported Devices (Webex Cloud)

Cisco Room Series
*Except for Navigator

Cisco Desk Series
* Except for Desk Camera

Cisco Board Pro Series

Cisco Codec (Pro /EQ)

Devices running CE 9.x or earlier (DX/SX/MX products) do not run this OS and are out of scope at this time

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Workflow

ThousandEyes Endpoint Agent will be embedded as part of the RoomOS firmware

ThousandEyes Automated Session Tests (ASTs) will run when Webex meetings are in progress

The agent will be enabled in Control Hub & integration will work on Day 1

Network path visibility in Control Hub and Thousand Eyes portal.

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ThousandEyes In Action

Call To Action

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to meet, greet, whiteboard & gain
insights about your unique questions
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Thursday	**9:30am – 4:00pm**
Friday	**10:30am – 1:30pm**

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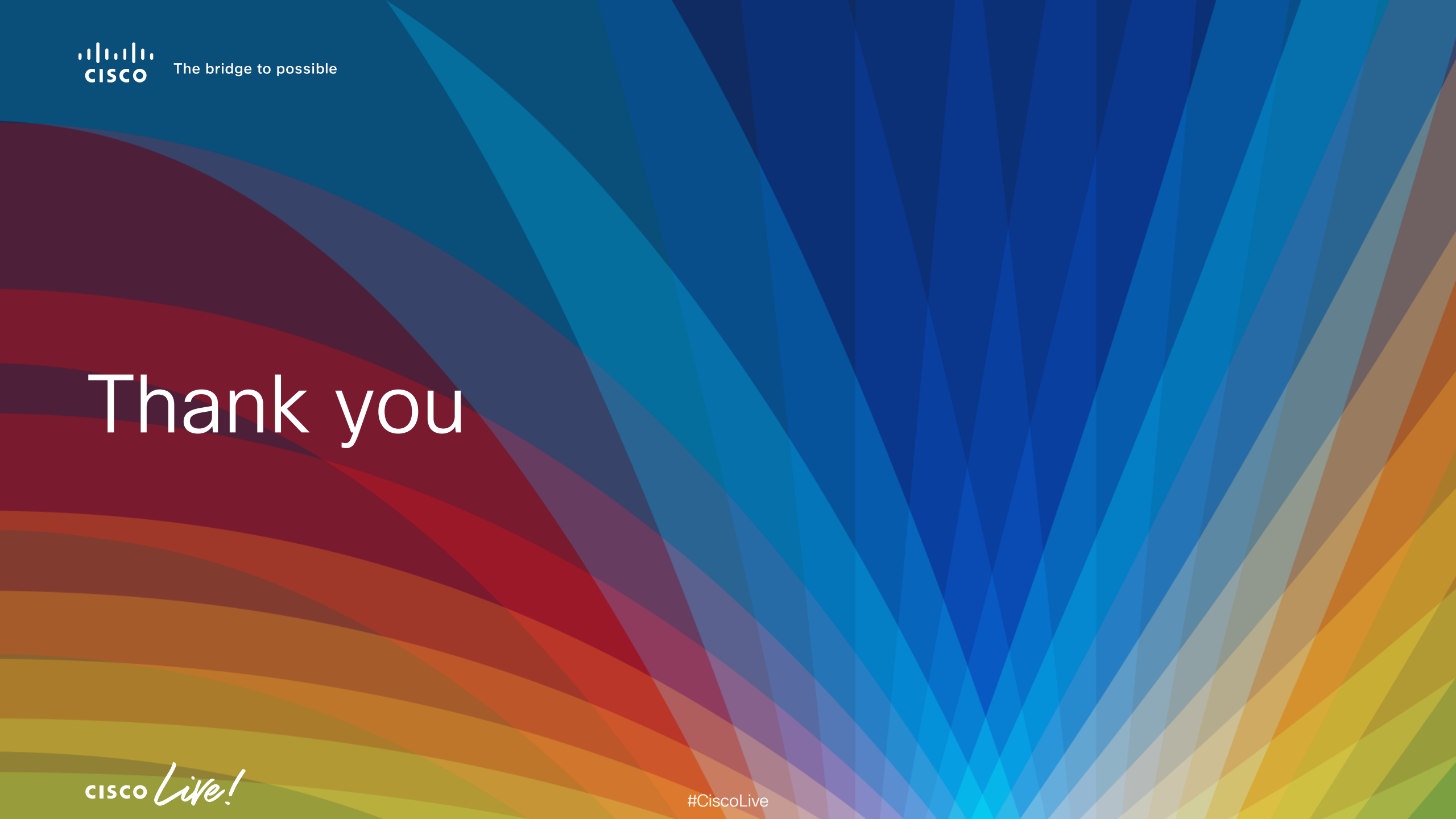
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