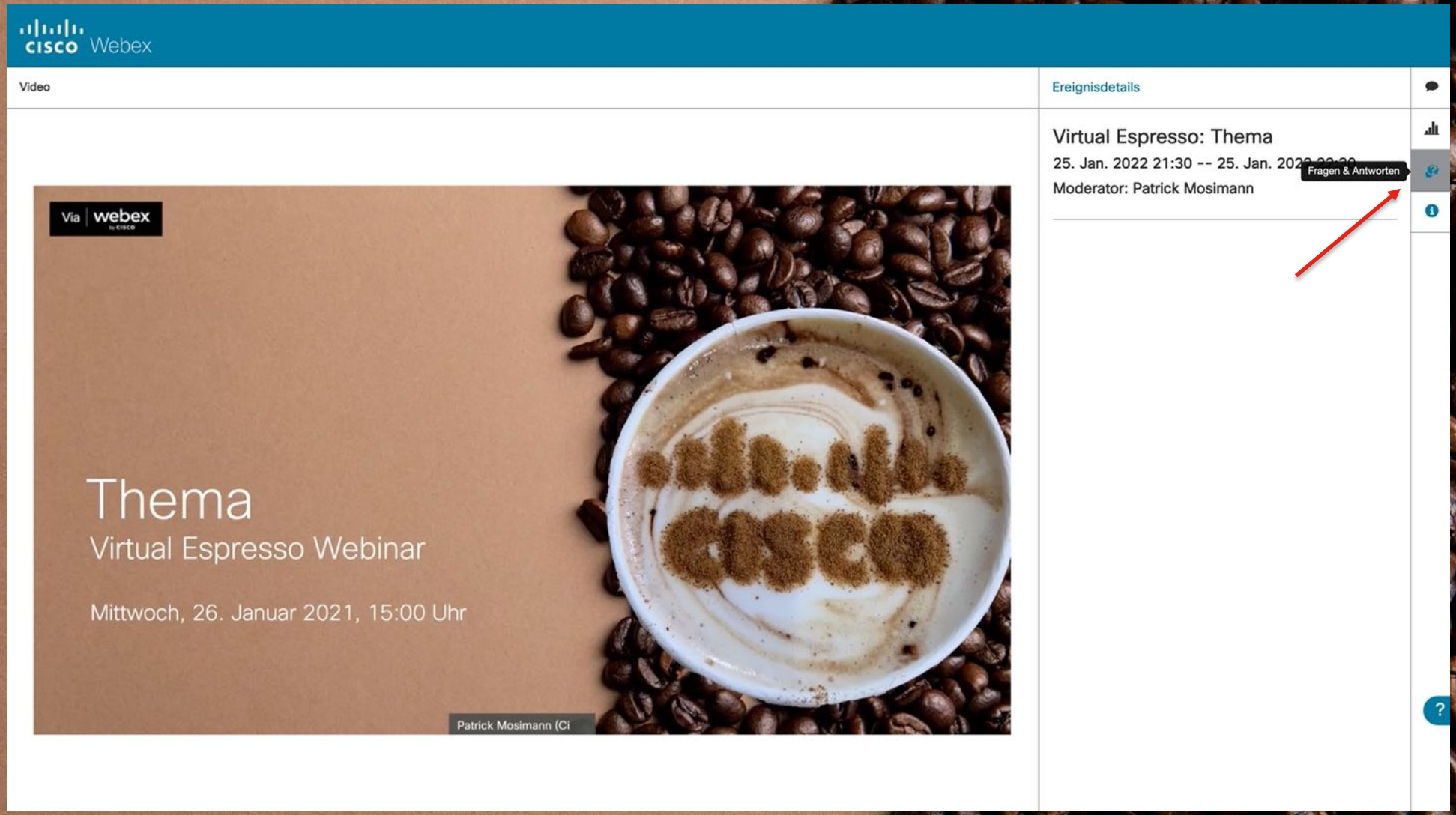
von 0 auf ~~100~~ ThousandEyes

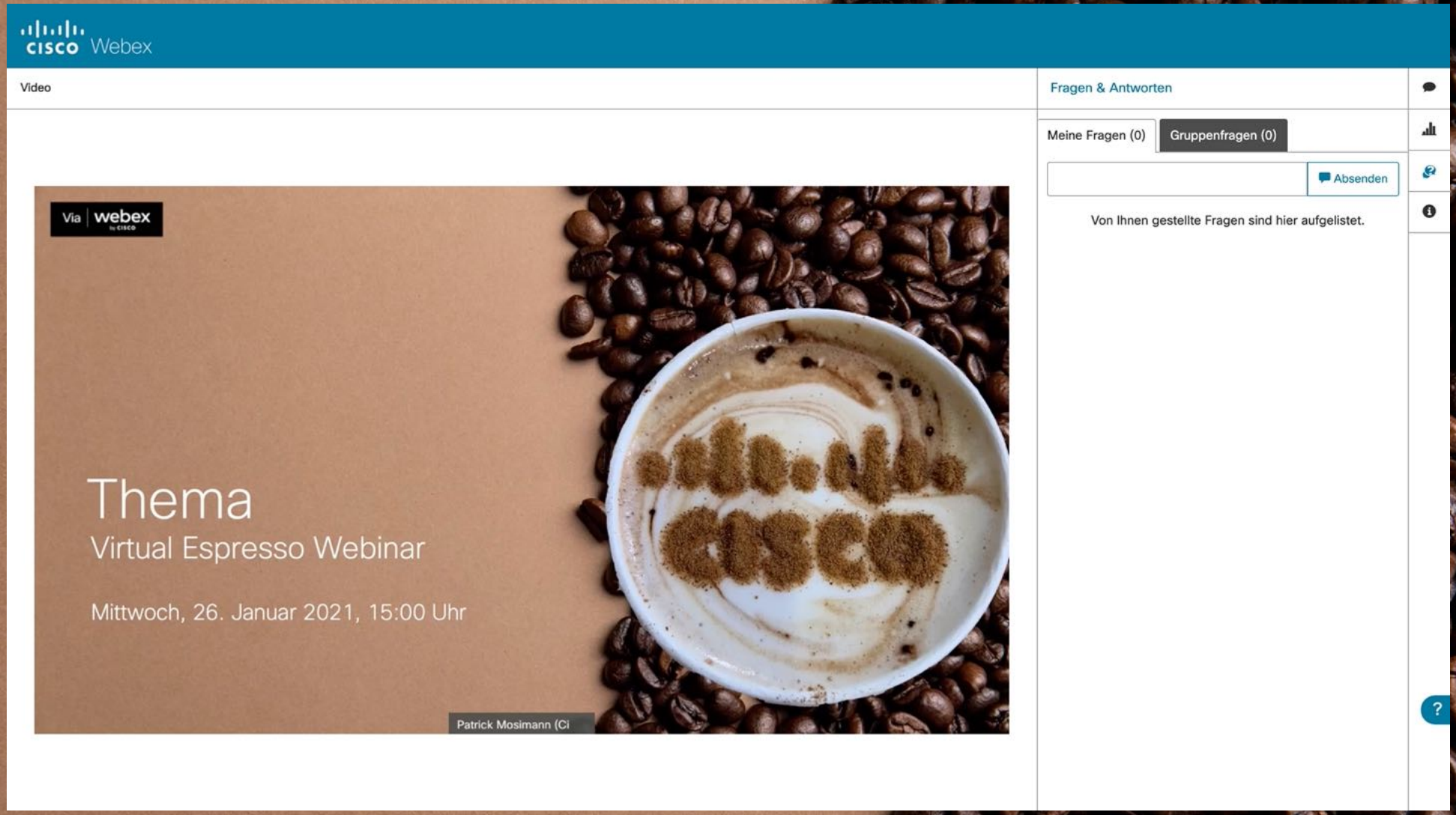
Virtual Espresso Webinar

Sven Kutzer
Technical Solutions Architect
Mittwoch, 9. Februar 2022, 15:00 Uhr

👉 please utilise the Q&A function to get your question answered



👉 please utilise the Q&A function to get your question answered



von 0 auf ~~100~~

ThousandEyes

Virtual Espresso Webinar

Sven Kutzer
Technical Solutions Architect
Mittwoch, 9. Februar 2022, 15:00 Uhr

Agenda

1. Introduction
2. What is Cisco® ThousandEyes?
3. Use cases in the enterprise campus
4. Integration with DNA Center (Patrick)
5. Demo
6. Conclusion / Q&A

C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

von 0 auf
~~100~~ ThousandEyes
Virtual Espresso Webinar

Join at

slido.com

#173 422

ThousandEyes

Thrive in a connected world™

ThousandEyes is now part of Cisco.

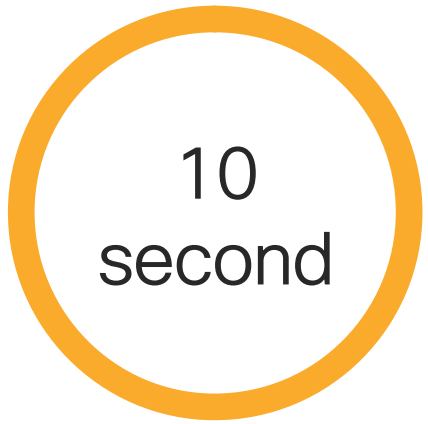
The 3 Important Response Limits

which are determined by human perceptual abilities to measure web and application performance

User's...

...system is reacting instantaneously

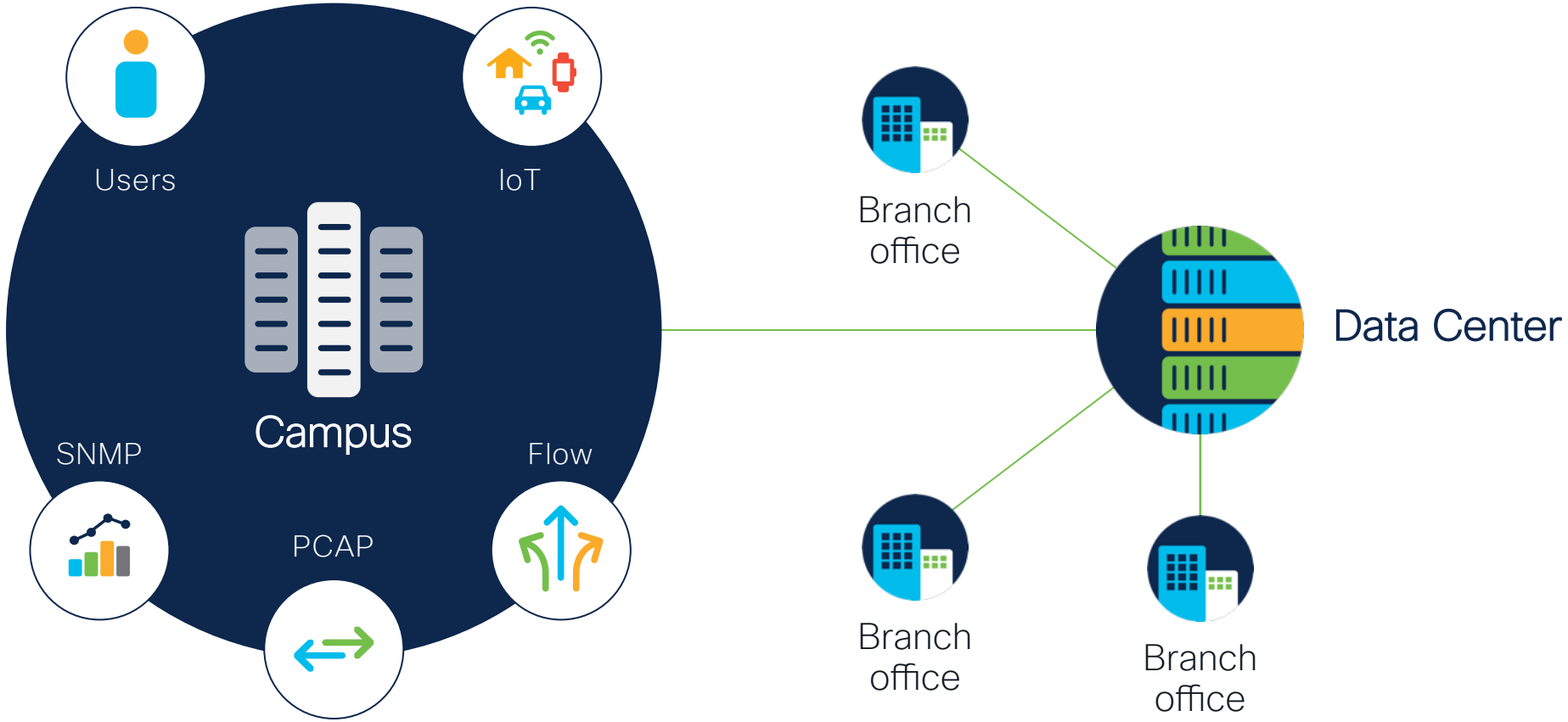
...flow of thought to stay uninterrupted



...keeping the attention focused on the dialogue

C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

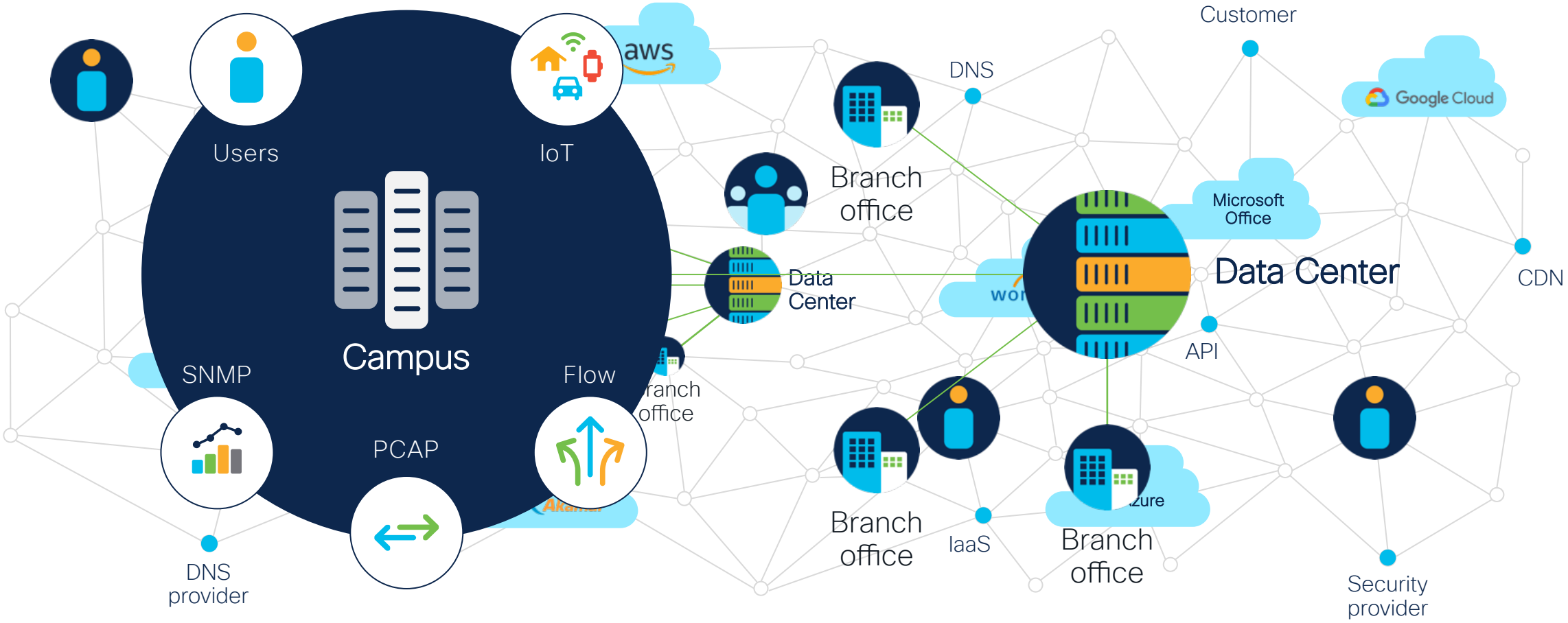
You used to control everything



IT managed digital experience by controlling networks and applications

C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

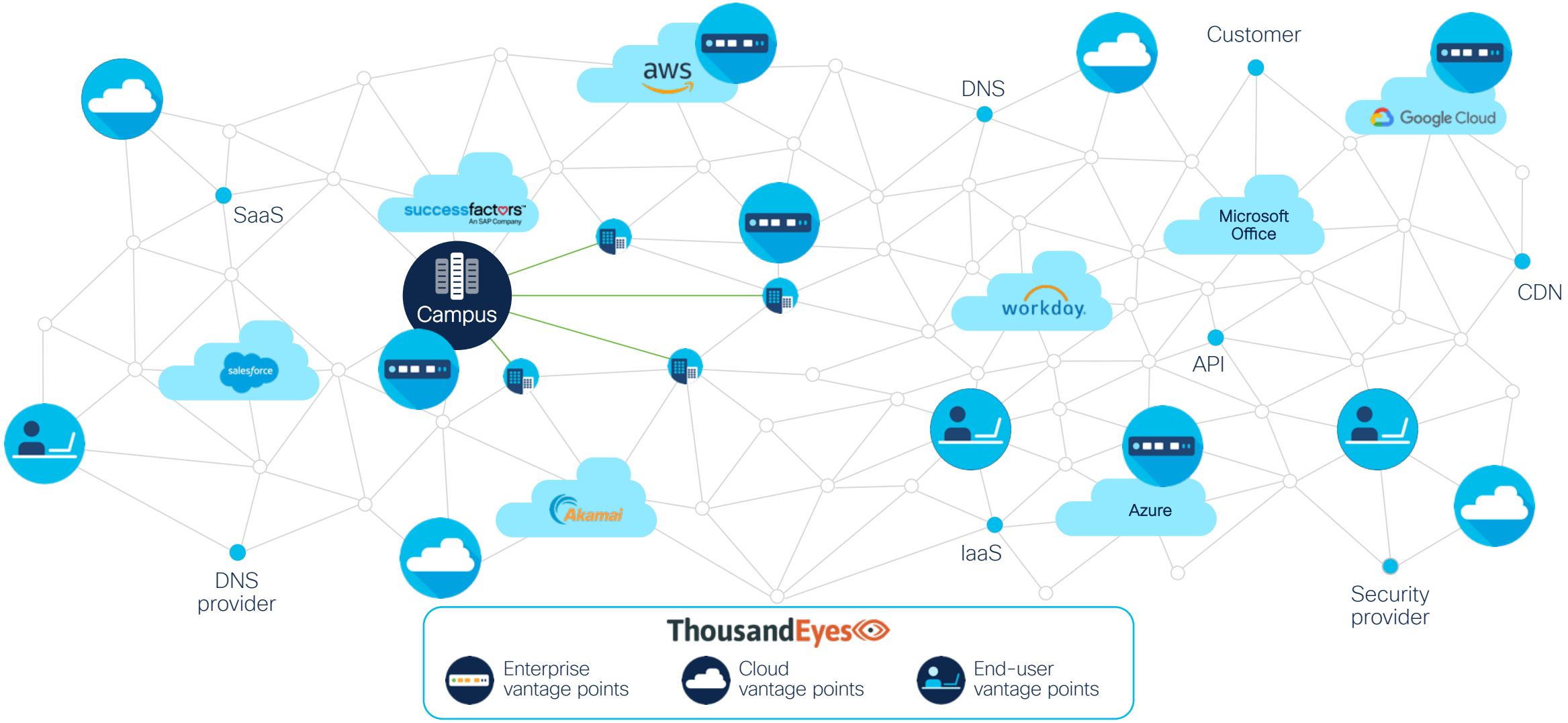
Now your world has changed



Digital experience relies on service providers and networks outside of IT's control

C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Delivering visibility for the new enterprise reality



C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Deep visibility into every layer

Time Correlated

App experience

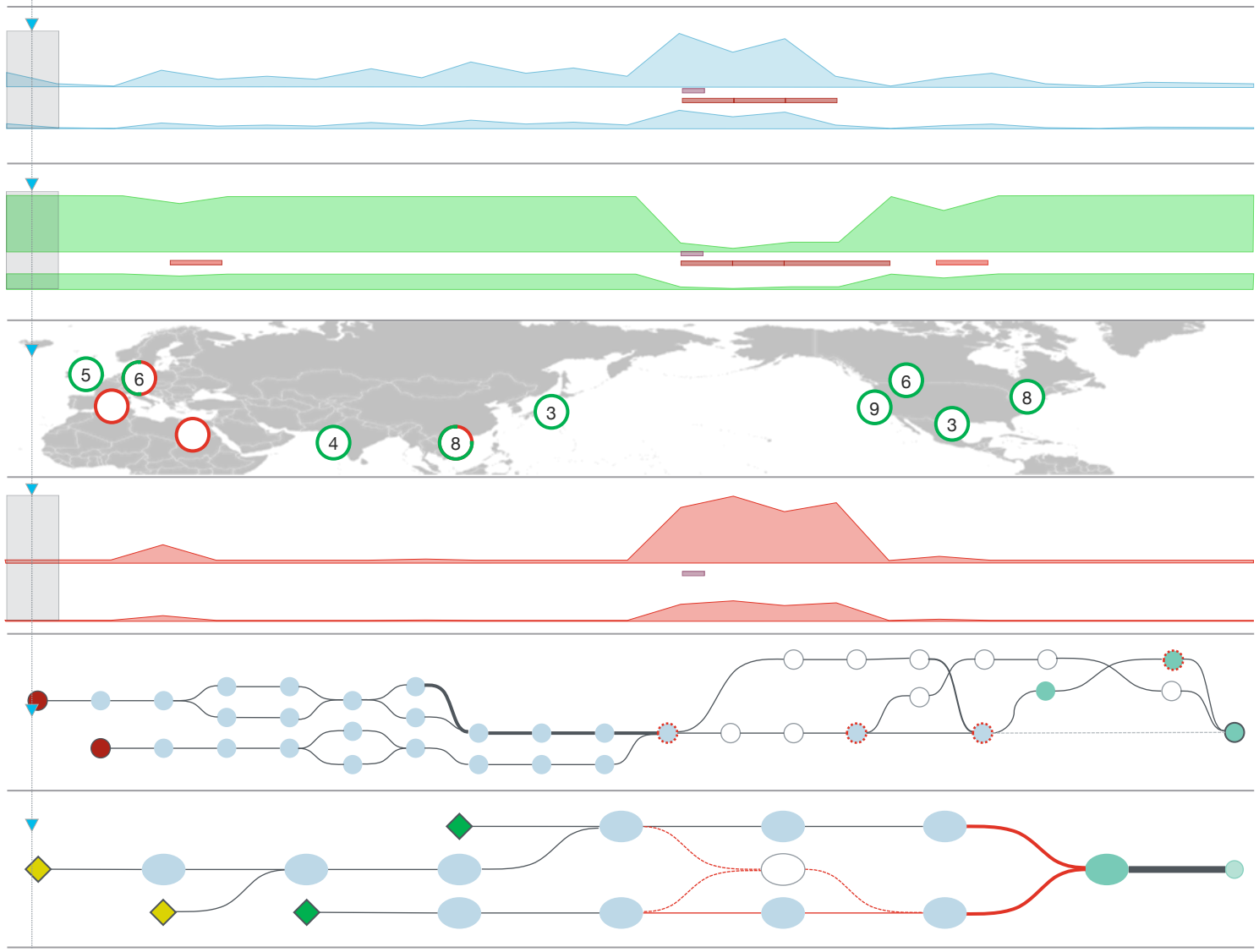
HTTP/DNS/RTP server

Scope and domain

Network metrics

Network path

BGP monitoring



Actionable insights across any network and app

Network visibility

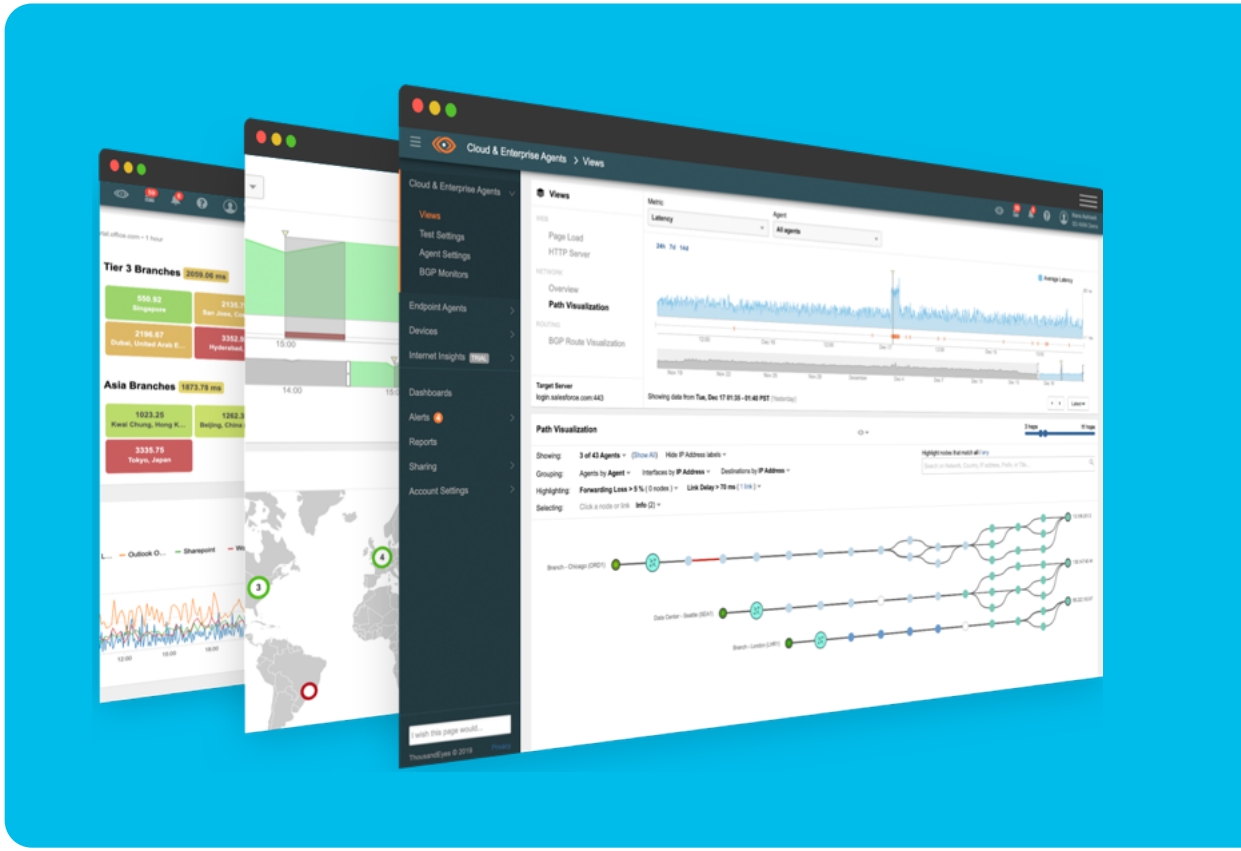
- End-to-end network path and metrics across any network
- Identify issues down to the service provider, location, and interfaces

App experience

- Quickly isolate issues to application, network, or other service
- Understand performance of user interactions with applications

Correlated insights

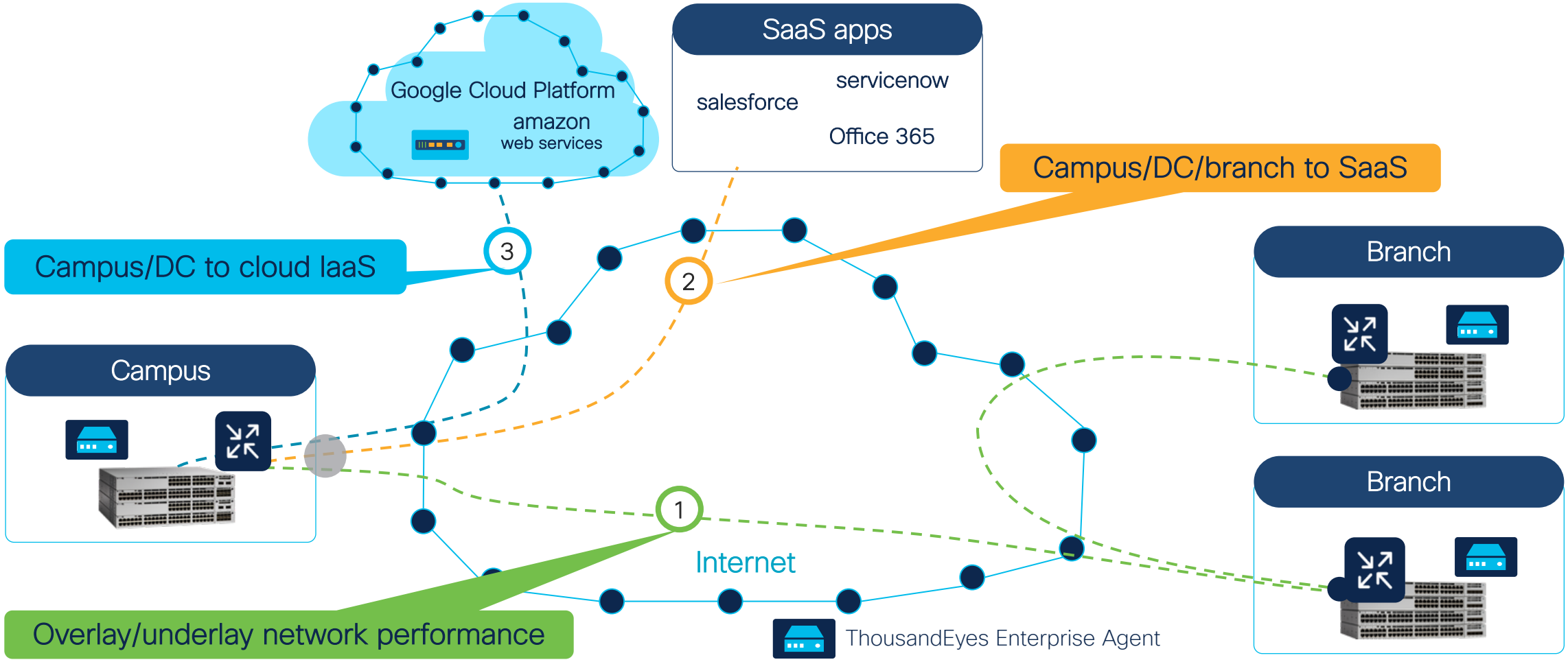
- Correlate network and app issues with internet routing, internal network devices, and global outage events



C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Service assurance is beyond the enterprise domain

Use cases for ThousandEyes Enterprise Agent



C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Service assurance on Catalyst 9000 with ThousandEyes

Path visualization

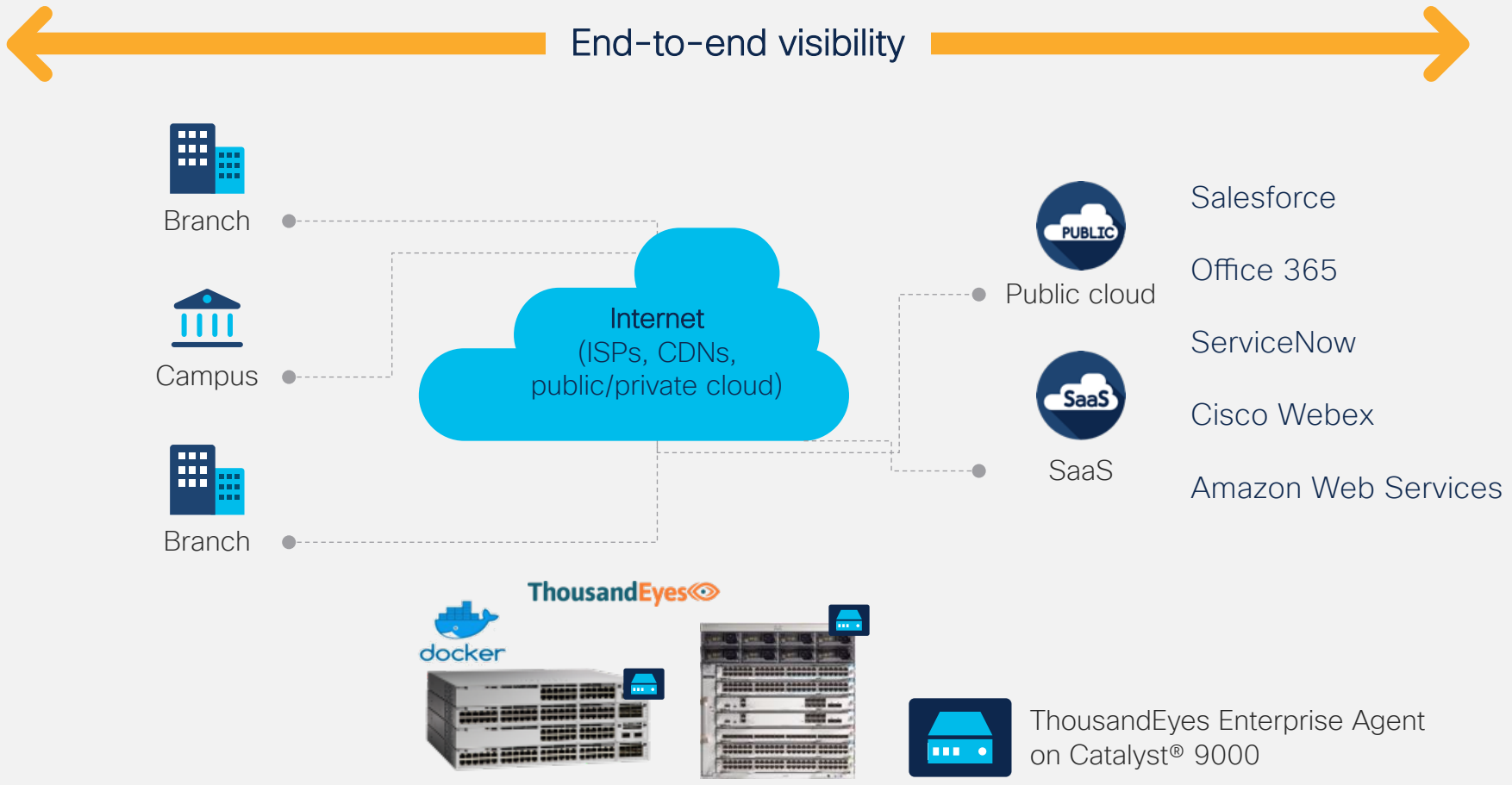
- End-to-end path from branch/campus to data center/cloud
- Detailed hop-by-hop metrics

Application experience

- Analysis of user experience
- Visualization of traffic flow patterns

Anomaly detection

- Benchmark routine performance of network and applications
- Proactive resolution, and outage detection

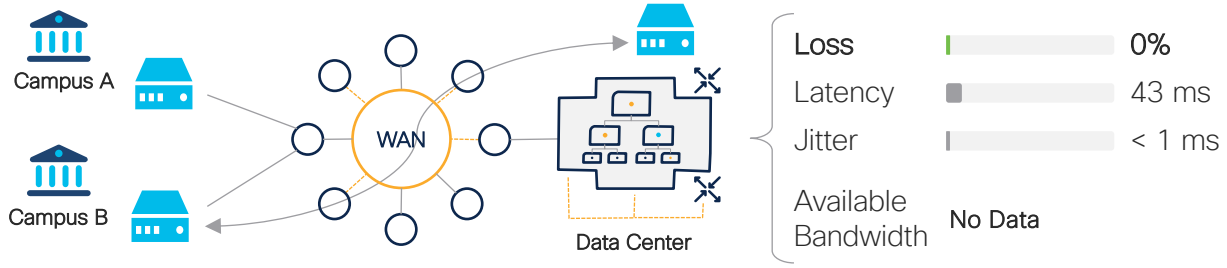


C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

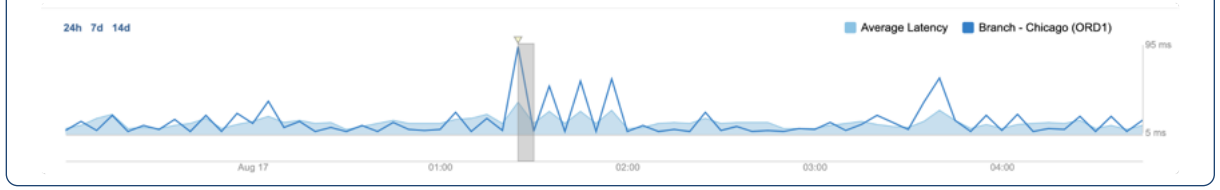
Troubleshooting SaaS and monitoring campus performance

Agent to agent/server

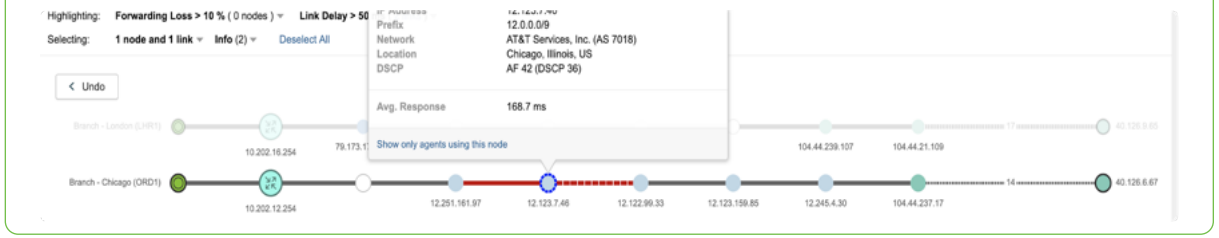
- Identifying **poor user experience**
  - Did traffic hand off to SaaS app optimally?
  - Was there an outage within the enterprise, WAN, or SaaS backbone?
- Having **full path visibility** to identify and resolve issues
- Active monitoring for **latency, loss, bandwidth, jitter**



Historical performance view



Path visualization



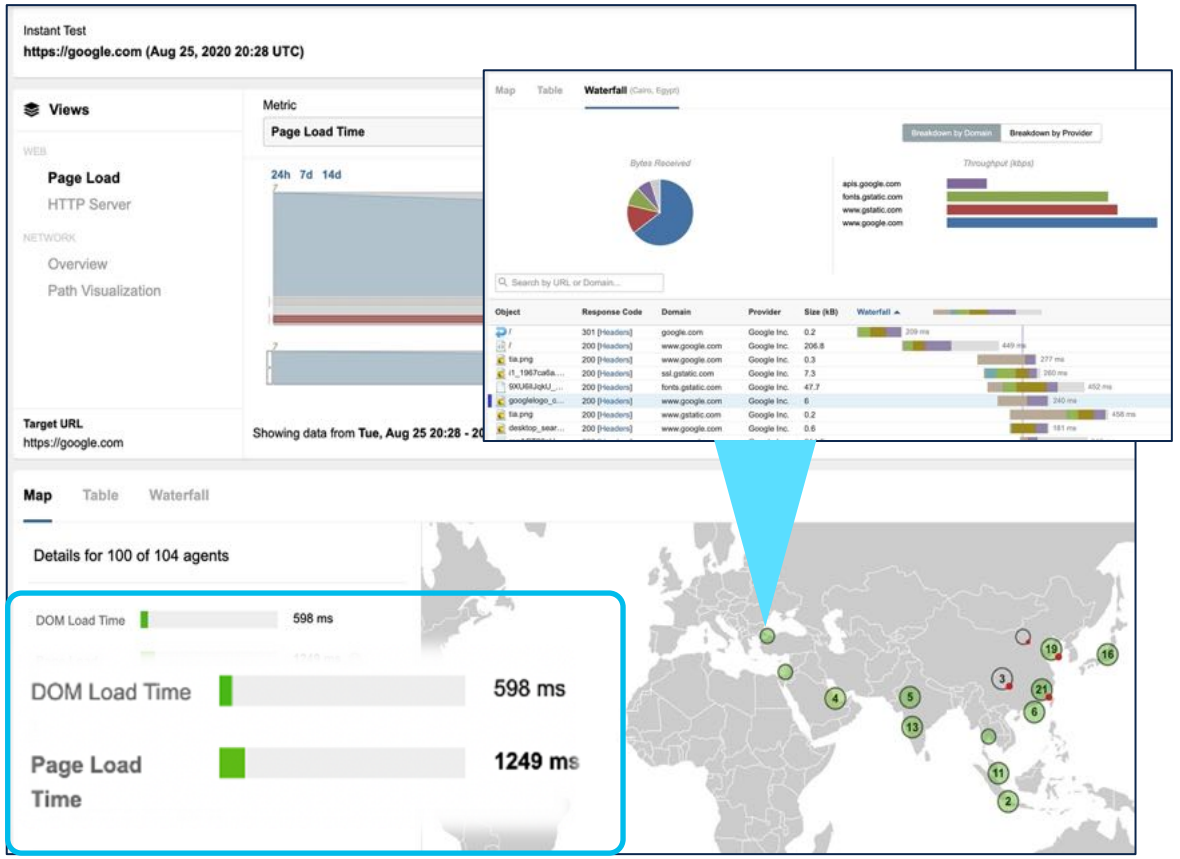
Hop-by-hop view of network paths and performance with proactive, customizable alerts

C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Web performance monitoring

- **Web tests:** HTTP, page load, transaction
- Monitor and validate web applications' usability and performance, including SaaS and internally-hosted apps
- HTTP Server Test
  - Measure availability, response time and throughput of an HTTP service
- Page Load Tests
  - Measure page load times of individual web components using **waterfall analysis**
- Transaction Tests
  - Monitor application usability by emulating user journey through an app with multi-step transactions scripts
  - Validate third-party API performance and application logic of complex workflows

Page load test view



C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

DNS performance monitoring

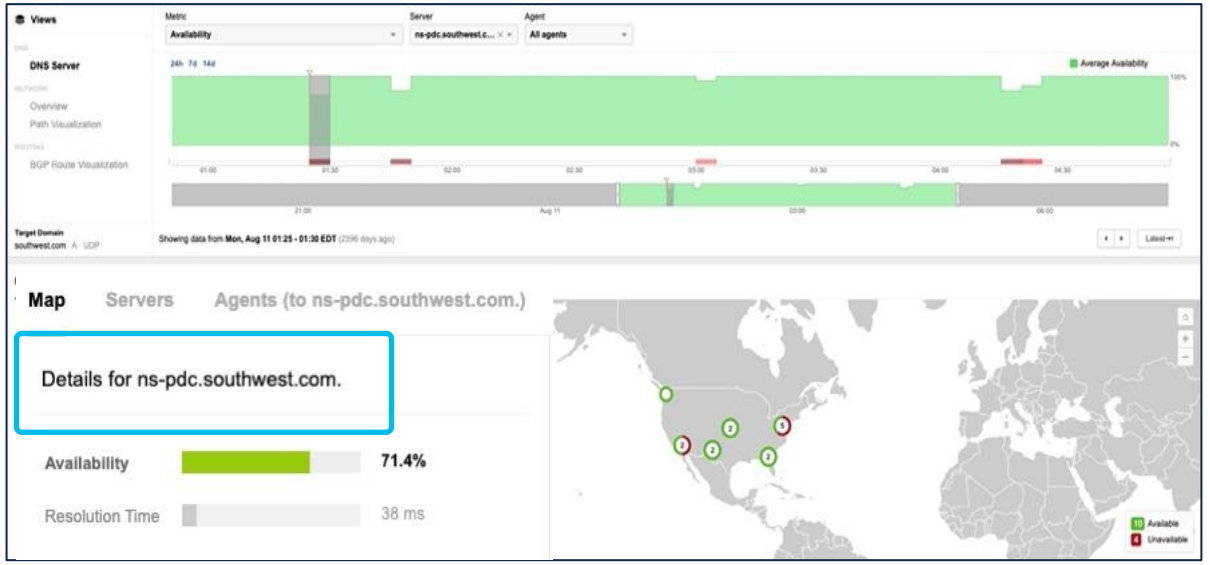
DNS: Critical component of app delivery and security

- No DNS, No Digital Experience
- Unreachable DNS server, tampered DNS records renders an application unavailable

Proactively monitor DNS Performance with

- DNS Server Test: Availability, performance and network connectivity to authoritative DNS servers
- DNS Trace: Ensure availability, query times and accuracy of DNS records and mappings
- DNSSEC: Validate the security trust tree, typically used to protect the integrity of DNS records

DNS server test view



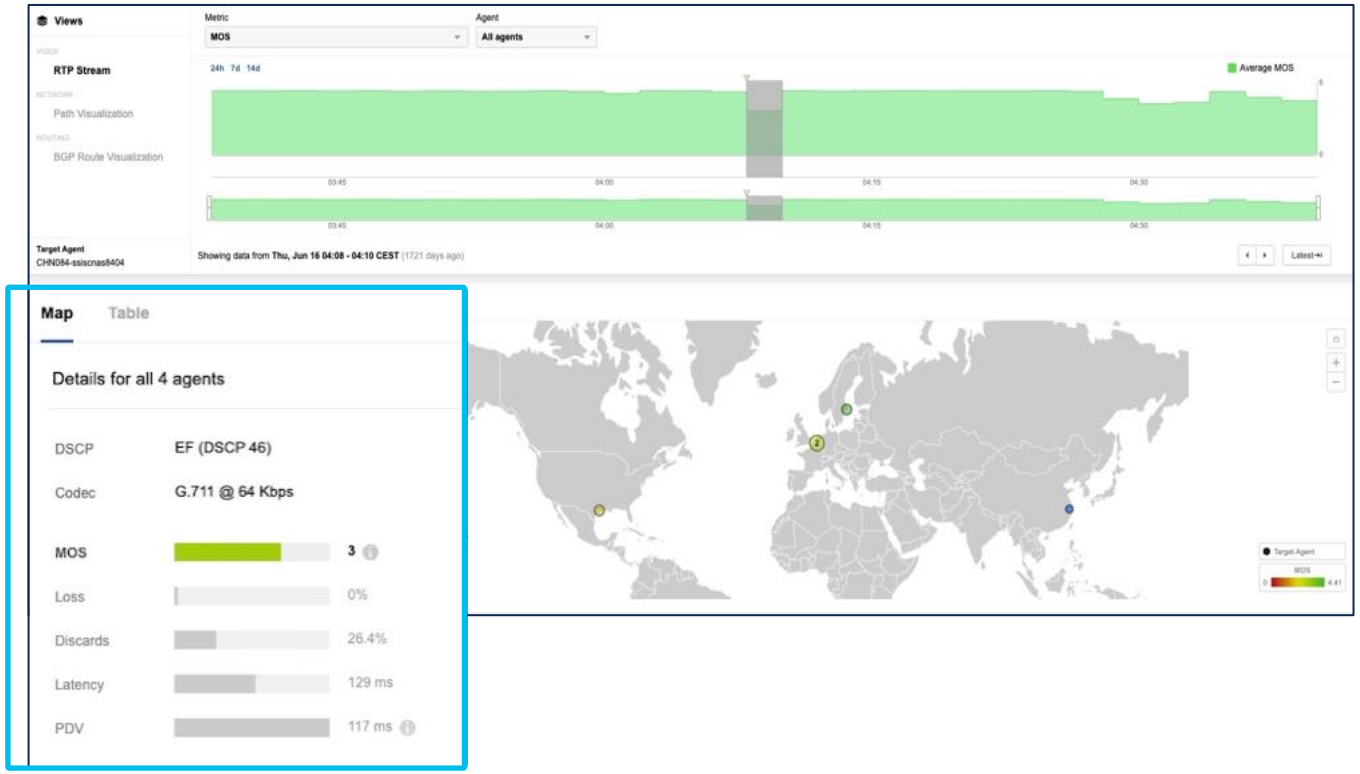
Map Servers **Agents (to ns-pdc.southwest.com.)**

Agent	Date (EDT)	Mappings	Error Details	Resolution Time (ms)
Las Vegas, NV	2014-08-11 01:25:23	–	Could not reach name server	–
Charlotte, NC	2014-08-11 01:25:14	–	Could not reach name server	–
Philadelphia, PA	2014-08-11 01:25:27	–	Could not reach name server	–
Boston, MA	2014-08-11 01:26:05	–	Could not reach name server	–

C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Troubleshooting VoIP

- VoIP packets are **extremely susceptible** to underlying network conditions that traditional VoIP monitors can't detect
- **Simulate VoIP calls** between Enterprise Agents in branch office
- Measure Session Initiation Protocol (SIP) and Real-Time Transport Protocol (RTP) **server availability,** monitor MoS scores and detect when and where QoS changes impact voice quality



C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

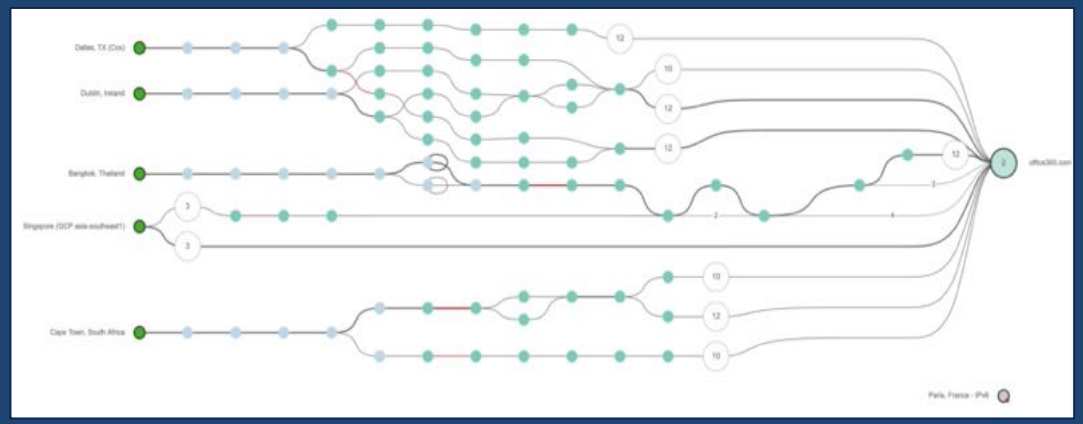
Integration with DNA Center

Demo

Conclusion

Conclusion

End-to-end visibility with ThousandEyes



Key benefits

- **Service assurance:** Help ensure performance of critical business apps with groundbreaking observability across LAN, WAN, service providers, and cloud/SaaS networks
- **Rapid remediation:** Quickly locate issues across LAN, service providers, and cloud/SaaS networks
- **Simple deployment:** ThousandEyes Enterprise Agent is natively hosted on your Cisco Catalyst 9300 and 9400 Series Switches with Cisco DNA Center

C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

Questions?

C97-2361259-00 © 2021 Cisco and/or its affiliates. All rights reserved. Cisco Confidential

OUTLOOK Upcoming Virtual Espresso

- Blog: http://cs.co/vEspresso
- Topics:
  - 23.02.2022: Netzwerk Trends in der hybriden Arbeitswelt
  - 09.03.2022: Switching Innovations
  - 23.03.2022: WiFi Innovations
  - 06.04.2022: Routing Innovations

dankä villmal
grazie mille
merci beaucoup
grazia fitg
thank you