



Eliminando o ponto-cego chamado Internet com ThousandEyes

Felipe Amorim, Systems Engineer, CCIE #52925
Marcos Alves, Technical Solution Specialist, CCIE #42199

Agenda

1 ThousandEyes Assurance Overview

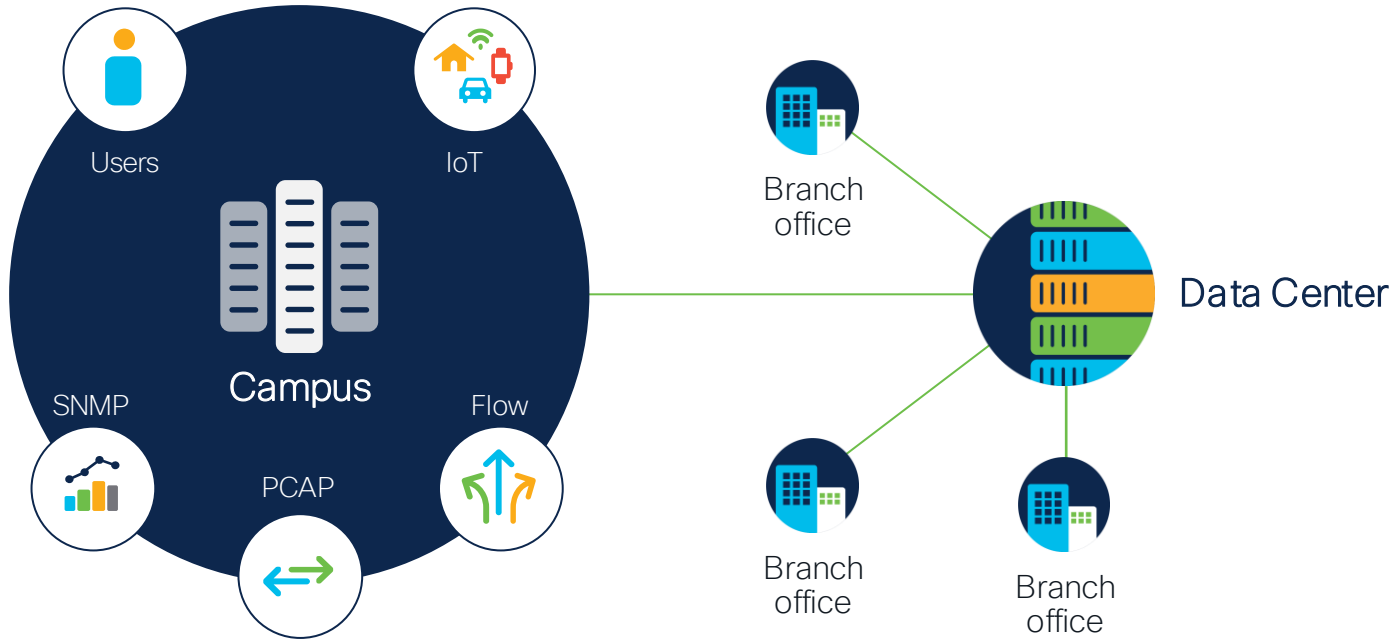
2 Use Cases

3 Demo

4 Integrating with the Catalyst 9k

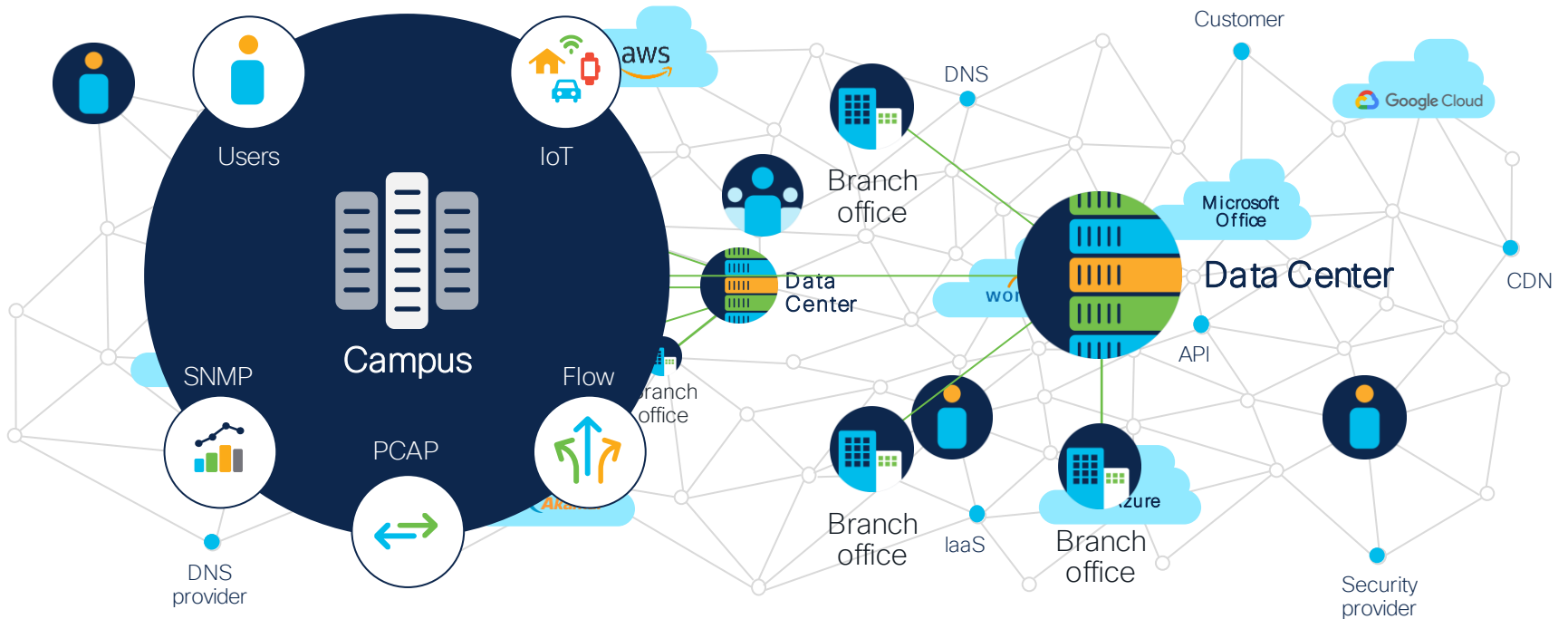
5 Licensing

You used to control everything



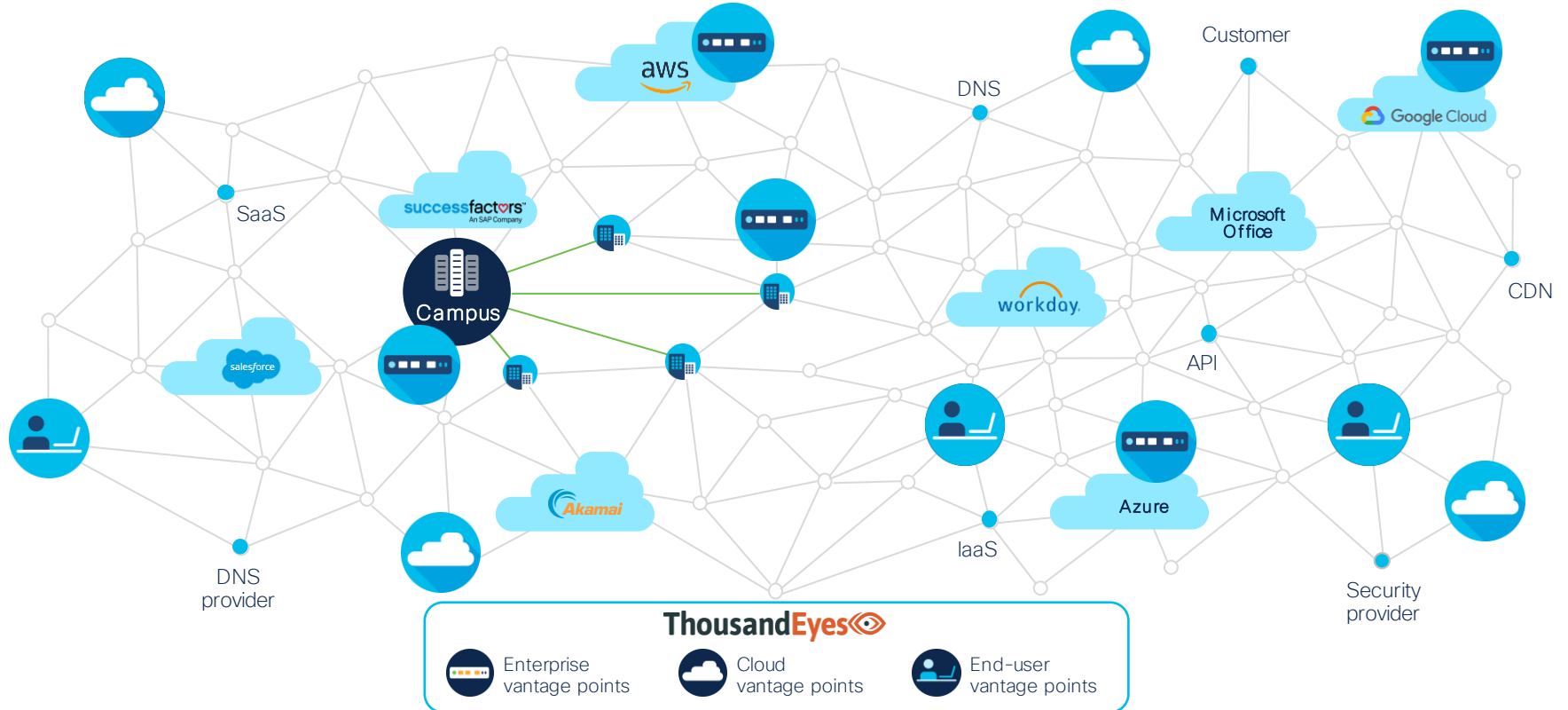
IT managed digital experience by controlling networks and applications

Now your world has changed



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

Delivering visibility for the new enterprise reality



Actionable insights across any network and app

ThousandEyes

Network visibility

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



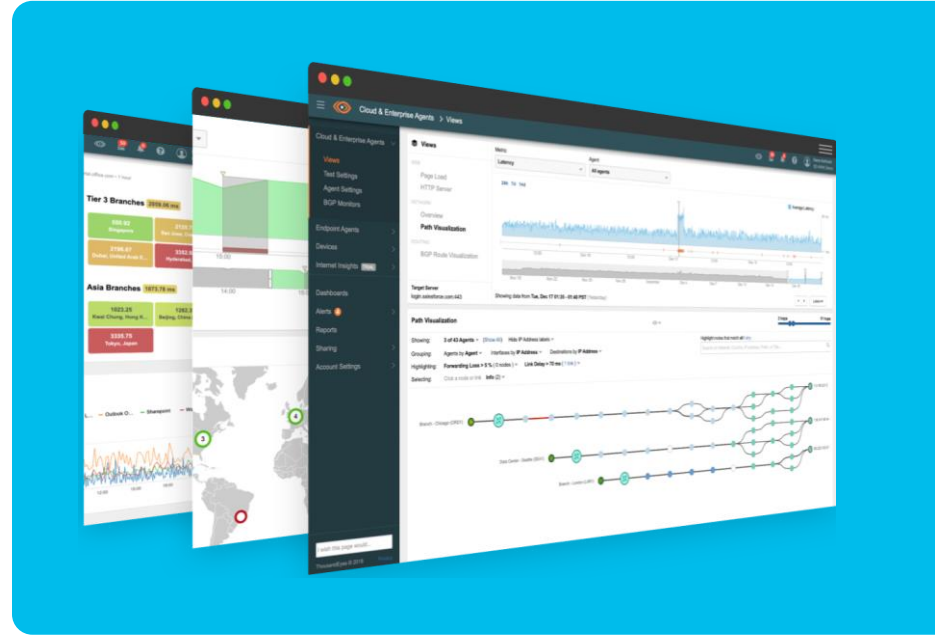
App experience

- 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



Deep visibility into every layer



Time Correlated

App Experience

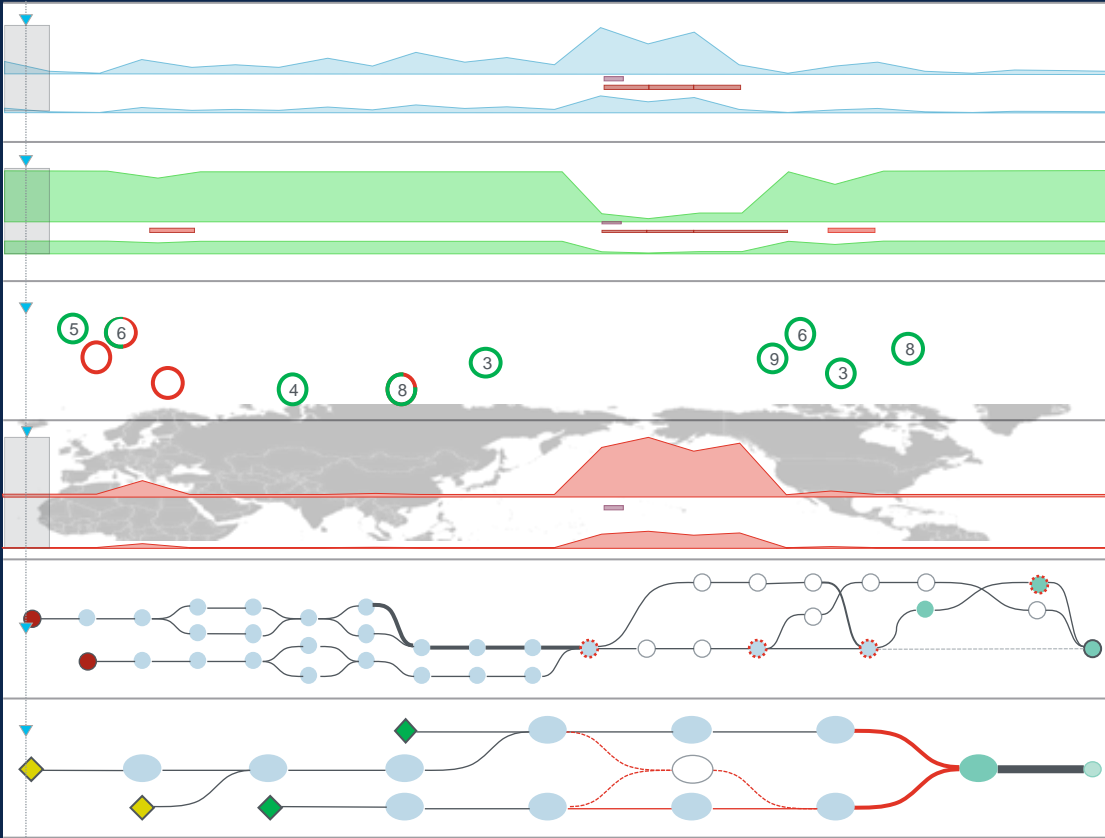
HTTP/DNS/RTP Server

Scope and Domain

Network Metrics

Network Path

BGP Monitoring



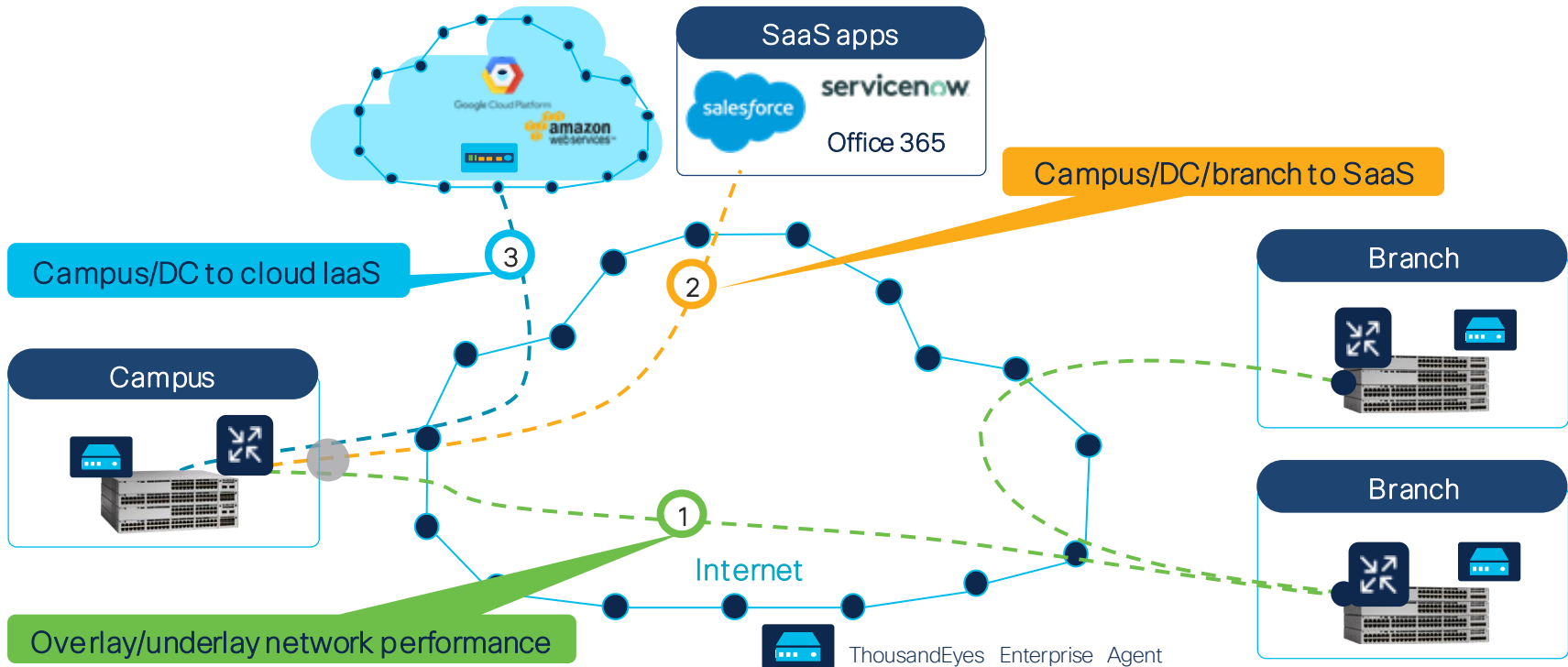
Polling Question 1

- Quais protocolos a sua empresa utiliza para monitorar problemas na WAN ?
- A. SNMP
 - B. Netflow
 - C. Ping
 - D. Traceroute
 - E. Todos

Use cases in the enterprise campus

Service assurance is beyond the enterprise domain

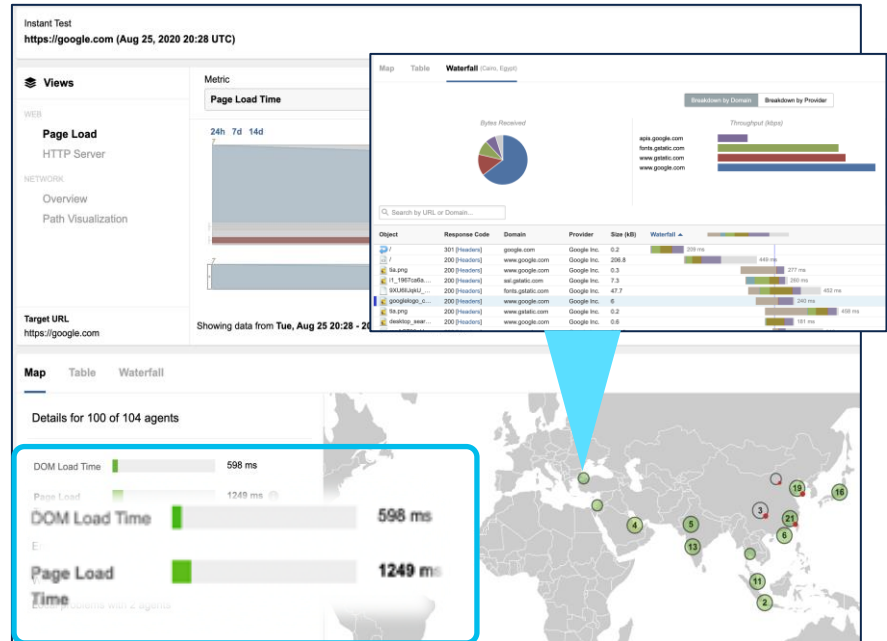
Use cases for ThousandEyes Enterprise Agent



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



DNS performance monitoring

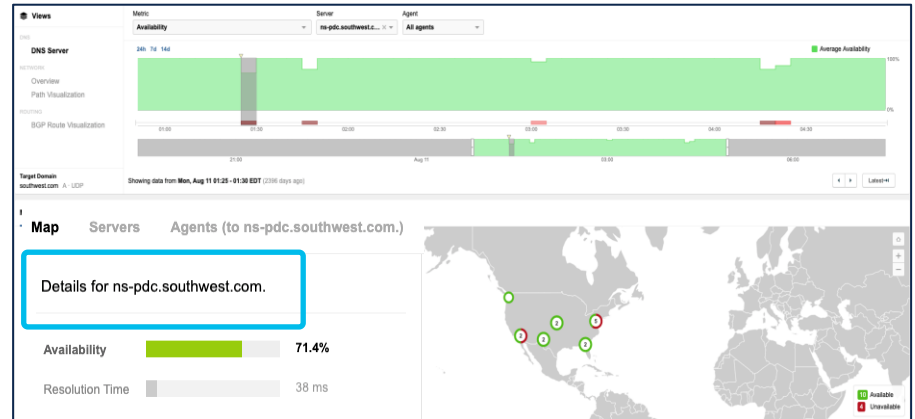
DNS: Critical component of app delivery and security

- 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

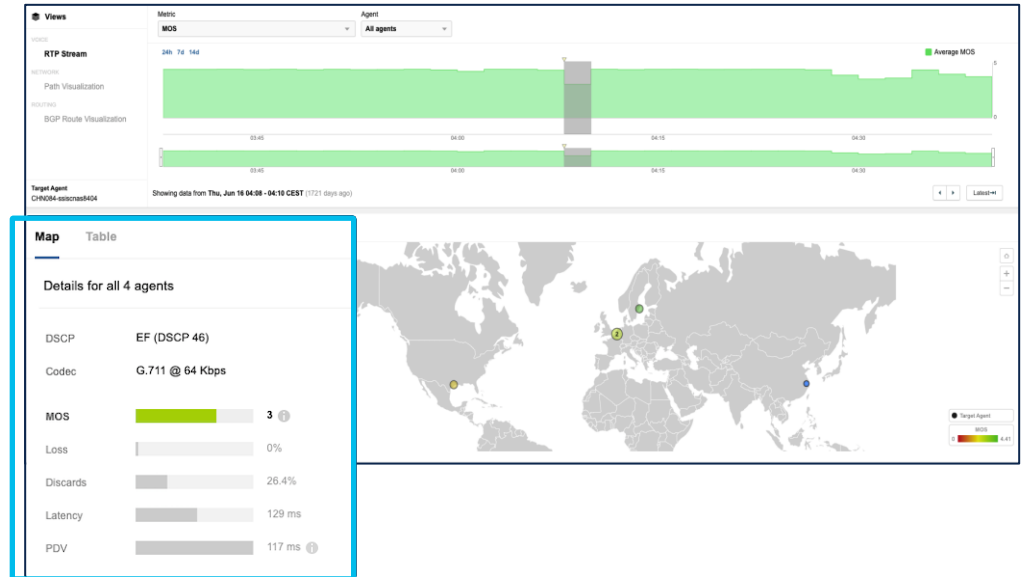
DNS server test view



| 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 | — |

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



Polling Question 2

- Qual parte da rede da sua empresa é mais difícil para ter visibilidade em casos de troubleshooting?
 - A. LAN
 - B. WLAN
 - C. MPLS
 - D. Data Center
 - E. Internet

Demo

Polling Question 3

- Qual porcentagem das aplicações da sua empresa estão hospedadas na nuvem pública (IaaS e SaaS) ?
 - A. 0%
 - B. Menor 25%
 - C. De 25% a 50%
 - D. De 50% a 75%
 - E. Maior 75%

Integrating with the Catalyst 9K

Visibility from Switch to SaaS

Cisco Catalyst 9300 and 9400 switches Brings ThousandEyes to Your Network

NEW

Thousand Eyes now included with Cisco Catalyst 9300 and 9400 Switches

Upsell
9200 To
9300/L



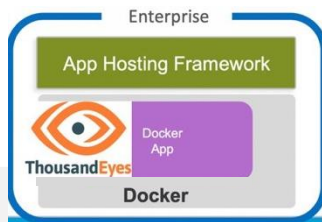
Catalyst 9000 Switching
+
ThousandEyes 

DNA A/P
License
Attachment

ThousandEyes now included with Cisco DNA licenses

New and existing Catalyst 9000 switches now include ThousandEyes service assurance

App hosting: no extra hardware




- Run ThousandEyes agent natively on flash of 9300/9400 switches
- Out of the box access to ThousandEyes for new switches

DNA subscription benefits



DNA Essentials

DNA Advantage 

DNA Premier 

- Includes ThousandEyes Units for one test* at 5-minutes frequency for a month
- Pool entitled test capacity to deploy anywhere within your network

Data Visualization



- License to ThousandEyes SaaS-based management platform
- Access to Dashboards, alerts and reporting tools



Campus connectivity



Modern WAN

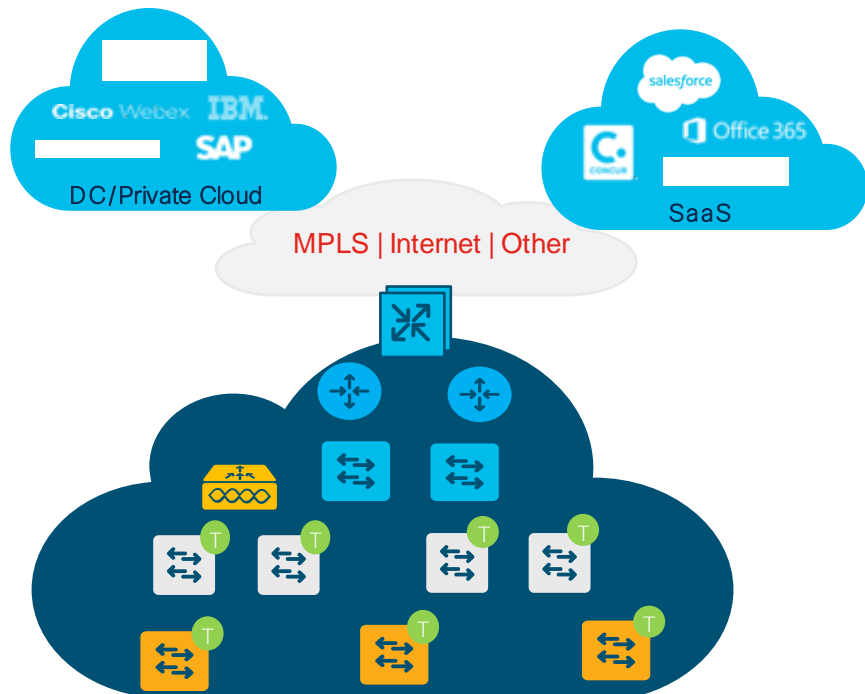


Application experience

*Choose from a menu of several networking, web and voice tests
Browser-based tests need the use of SSD and consume more ThousandEyes units

IBN Switching-Thousand Eyes deployments

Easy to deploy solution for customers to gain end-to-end visibility into their campus and branch networks



Network Visibility

- Single dashboard view with **visualization for L2 and L3 network paths** from network edge
- Set SLAs for key SaaS and DC apps by measuring loss, latency, jitter and response time by running **Application performance tests** (HTTP/FTP/Voice/DNS)
- **Network Device Monitoring** – device layer for proactive troubleshooting

Application Experience Monitoring

- **Advanced Application performance**– page load time, latency with individual application steps / transactions
- Leverage collective insights from millions of measurements all over the world by using **Internet Insights**

Licensing

Catalyst 9000 DNA Licensing Tiers

Cisco DNA Premier

SD-Access ready, with advanced security features bundled for midsize to large customers

Single SKU 3/5/7 Year Subscriptions

Stealthwatch

ISE Base + ISE Plus

Cisco DNA Advantage – now with ThousandEyes

Cisco DNA Essentials



+
Network Advantage
(Full Layer 3 Routing)

Cisco DNA Advantage

SD-Access capable, with policy-based automation and assurance for small to midsize customers

Single SKU 3/5/7 Year Subscriptions

Flexible Network Segmentation

Service Assurance with ThousandEyes

Cisco Prime Infrastructure*

Cisco DNA Essentials



+
Network Advantage
(Full Layer 3 Routing)

Cisco DNA Essentials

Simplified management and base automation and monitoring for entry-level customers

Single SKU 3/5/7 Year Subscriptions

Centralized Management

Base Automation and Monitoring



+
Network Essentials
(Layer 2 Routed Access)

ThousandEyes access is included with Cisco DNA Advantage and Cisco DNA Premier
sold with Cisco Catalyst 9300 and 9400 switches

ThousandEyes access for new Catalyst 9300/9400 Series switches



1
New 9300/9400 purchased with DNA-A or DNA-P on CCW



2
ThousandEyes agent Preloaded in flash by manufacturing



3
Account login received via email



4
Day 1 access to ThousandEyes account

ThousandEyes access for existing Catalyst 9300/9400 Series switches

1



Accept
ThousandEyes
entitlement in
CSSM

2



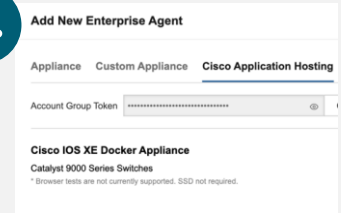
Account login
received
via email

3



Upgrade
IOSXE on the
switch
17.3.3 – 9300
17.5.1 – 9400

4



Download and
install
enterprise
agent from the
TE portal

Recap and Resources

Start your ThousandEyes *on a Catalyst 9K switch today!*

Catalyst 9300/L
with DNA A/P



Catalyst 9400
with DNA A/P



ThousandEyes 

[ThousandEyes Signup](#)
[ThousandEyes Activation Guide](#)
[Cisco Smart Software Manager](#)
[Ordering Guide to Request ThousandEyes Credits for Existing Cat9k](#)

[Installing ThousandEyes Agent on Cat9k](#)
[Docker Agent Installation for Cat9k](#)
[Firewall Configuration for ThousandEyes Agent](#)

