



Beginner's Guide to ThousandEyes

Primož Kolman - Global Solutions Architect
BRKENT-1656



Introduction

Primož Kolman

Global Solutions Architect

Cisco ThousandEyes

- Software development and computer networks background
- Joined ThousandEyes in 2015
 - Various customer-facing roles



Webex App

Questions?

Use the Webex app to chat with the speaker after the session

How

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- 2 Click “Join the Discussion”
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- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until February 28, 2025.





Agenda

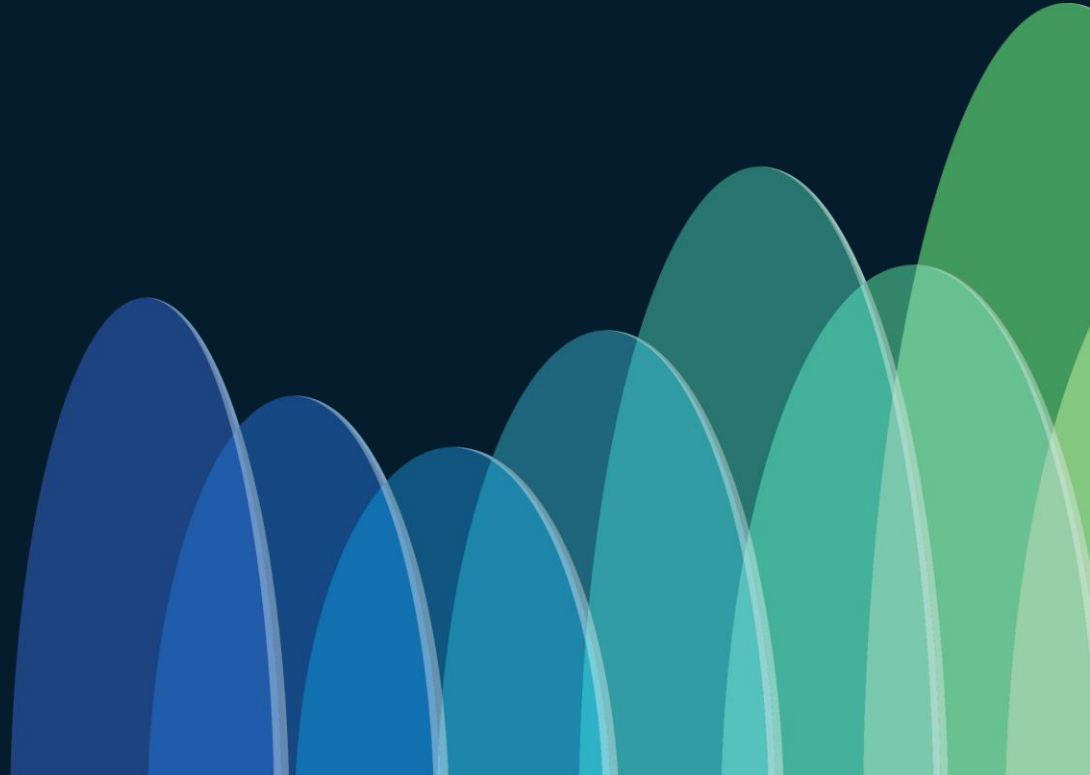
- Introduction
- Customer Digital Experience
- Workforce Digital Experience
- Enterprise Digital Experience
- Cloud Insights
- I Want More
- Licensing
- Start Today



What is your responsibility

① Start presenting to display the poll results on this slide.

Introduction



What were you
doing when ... ?

Demo

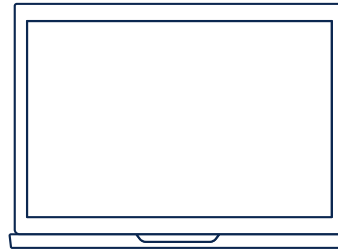


Why do you need ThousandEyes?

IF
YOU
CAN
READ THIS,
YOU PROBABLY
DON'T NEED

Why do you need ThousandEyes?

Houston, we
have a problem



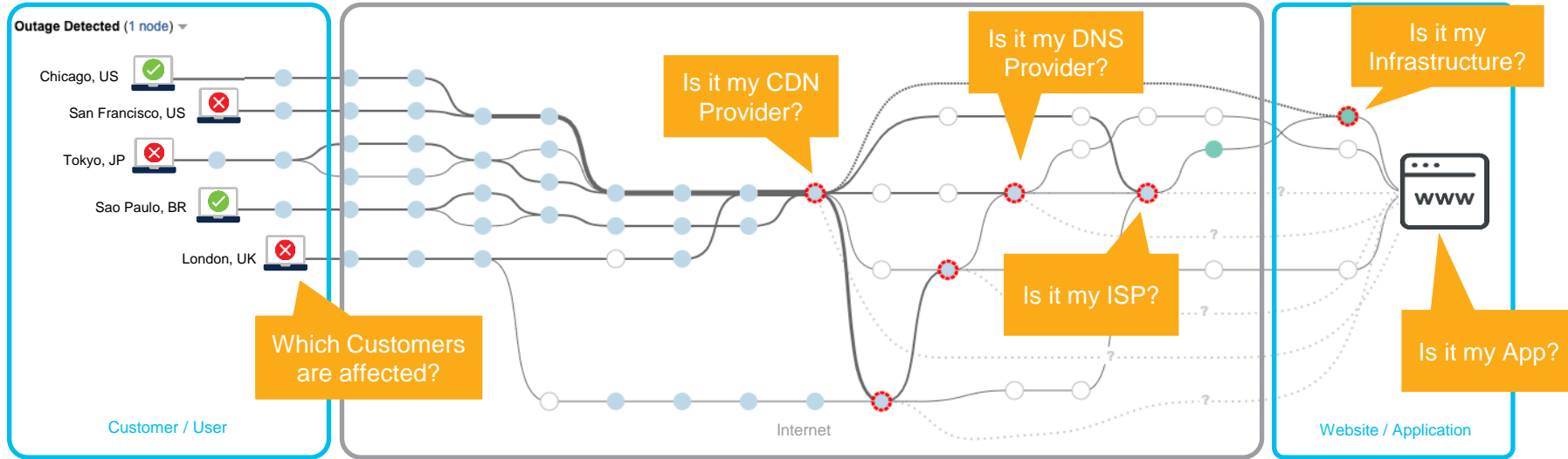
Employee



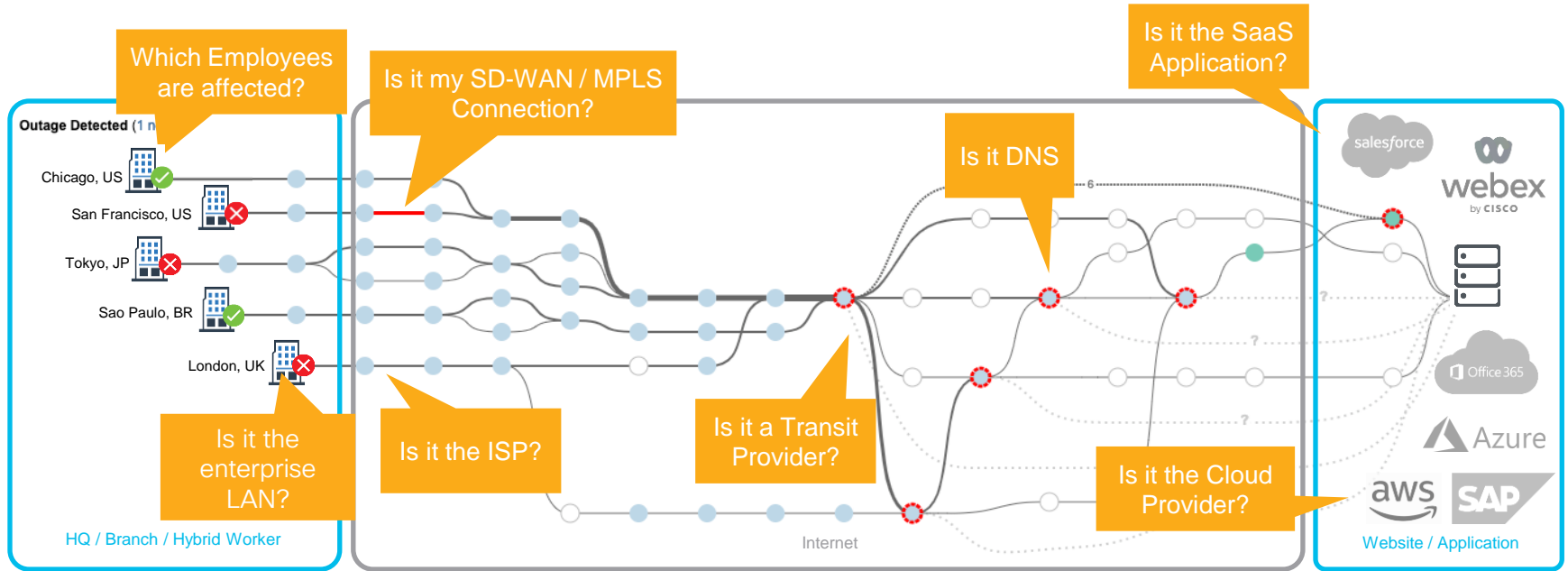
It's not your fault, but it is your problem



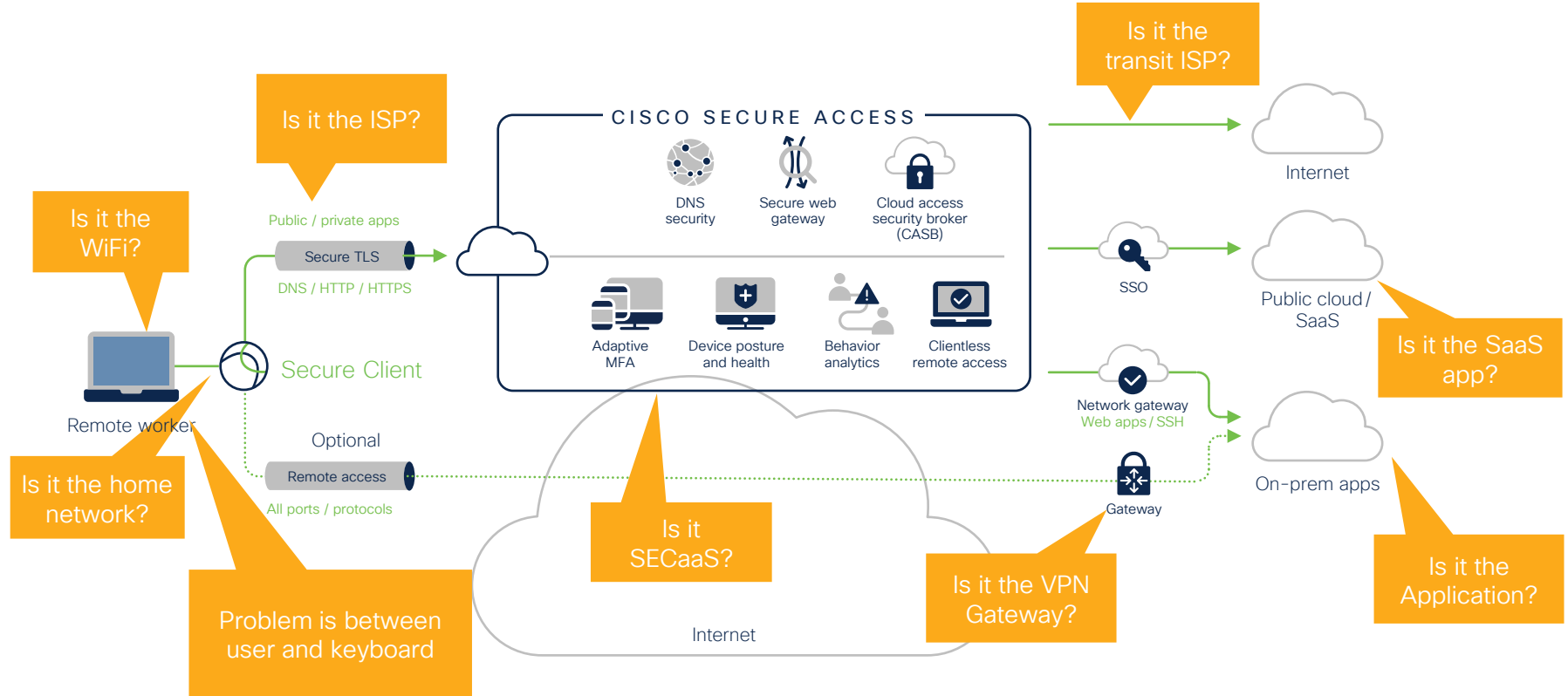
Problem Landscape: Application Provider



Problem Landscape: Branch Office

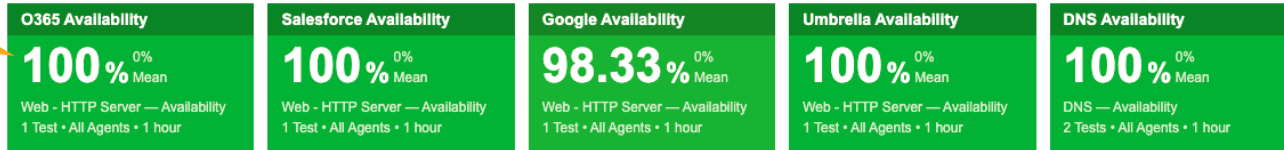


Problem Landscape: Remote Worker



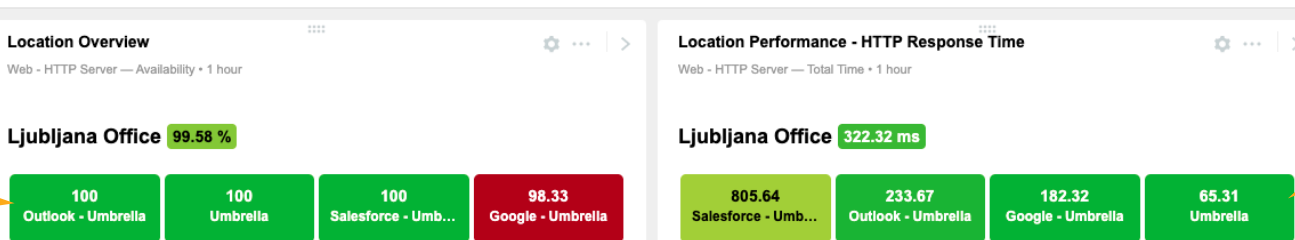
ThousandEyes Dashboard

Application
availability



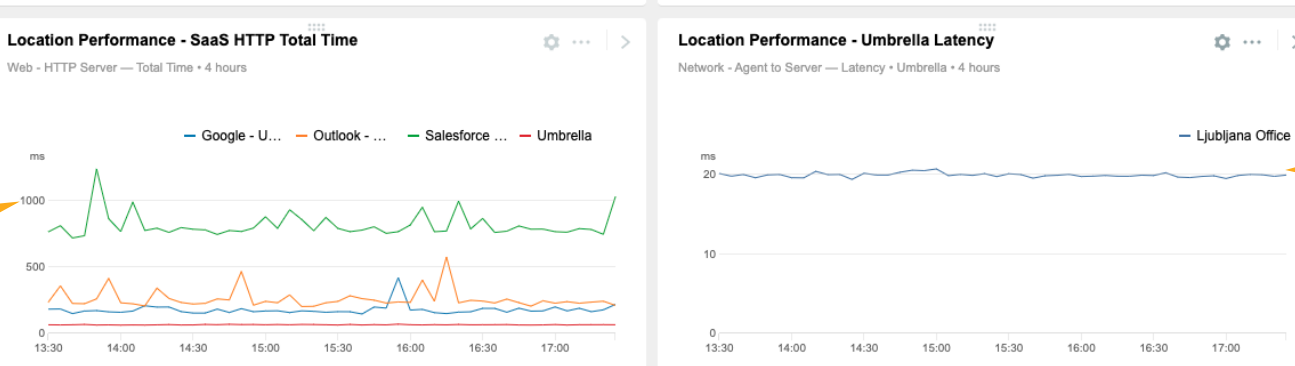
Service
availability

Per-office
availability



Per-office
performance

Application
performance



Umbrella
performance



ThousandEyes



decreases your
mean-time-to-resolution &
mean-time-to-innocence

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ThousandEyes Use-cases



Deliver stellar
digital experiences
to customers



Keep workers connected and
enjoying seamless app
performance



Optimize and sustain
the flow of your digital
supply chain

ThousandEyes Use-cases



You are an online service provider (retail, bank, SaaS, ...)

Your customers are everywhere.

You monitor your applications and APIs.



Your workers rely on business-critical applications while working from anywhere.

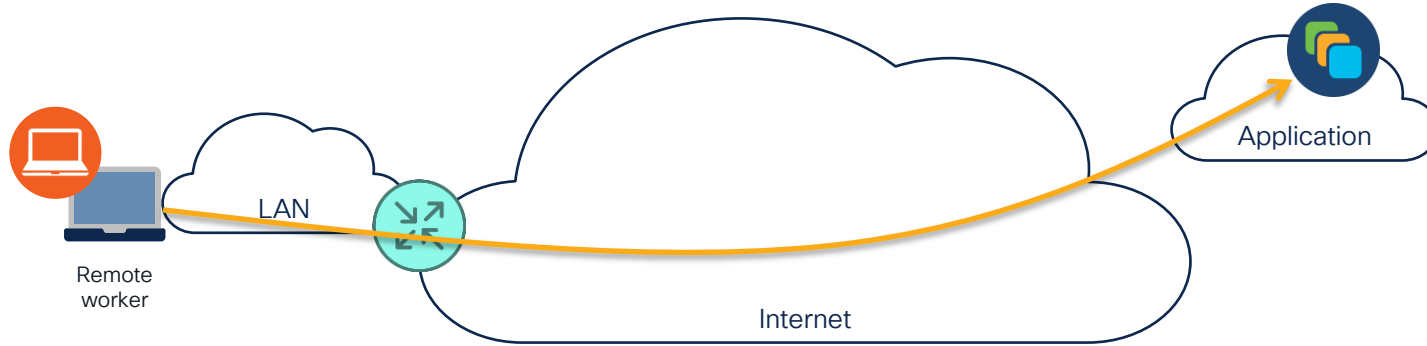
You monitor the applications your employees use, on-prem or in the cloud.



You own your network infrastructure, but also rely on Cloud, SD-WAN and SSE.

You monitor the network between your campus, branch offices, DCs and multi-cloud.

How Do We Do It?



- We generate our own synthetic traffic (Cloud, Enterprise and Endpoint Agent)
- We passively gather data from the client (Endpoint Agent)
- We passively gather data from network devices (Device Layer)
- No packet captures
- No flow monitoring ... yet

ThousandEyes Agents



Cloud Agents

- Installed in 268 cities and 66 countries around the world
- Broadband ISPs
- Cloud providers (AWS, Azure, GCP, Alibaba)
- Webex DCs



Enterprise Agents

- Install them in your offices
 - On Cisco devices, as VMs, Docker containers, Intel NUC appliances
- Perform active application and network performance monitoring



Endpoint Agents

- Install them on your employees' computers (Windows & macOS)
- Perform active application and network tests
- Passively collect performance data (WiFi metrics, CPU, ...)



Customer Digital Experience



Demo



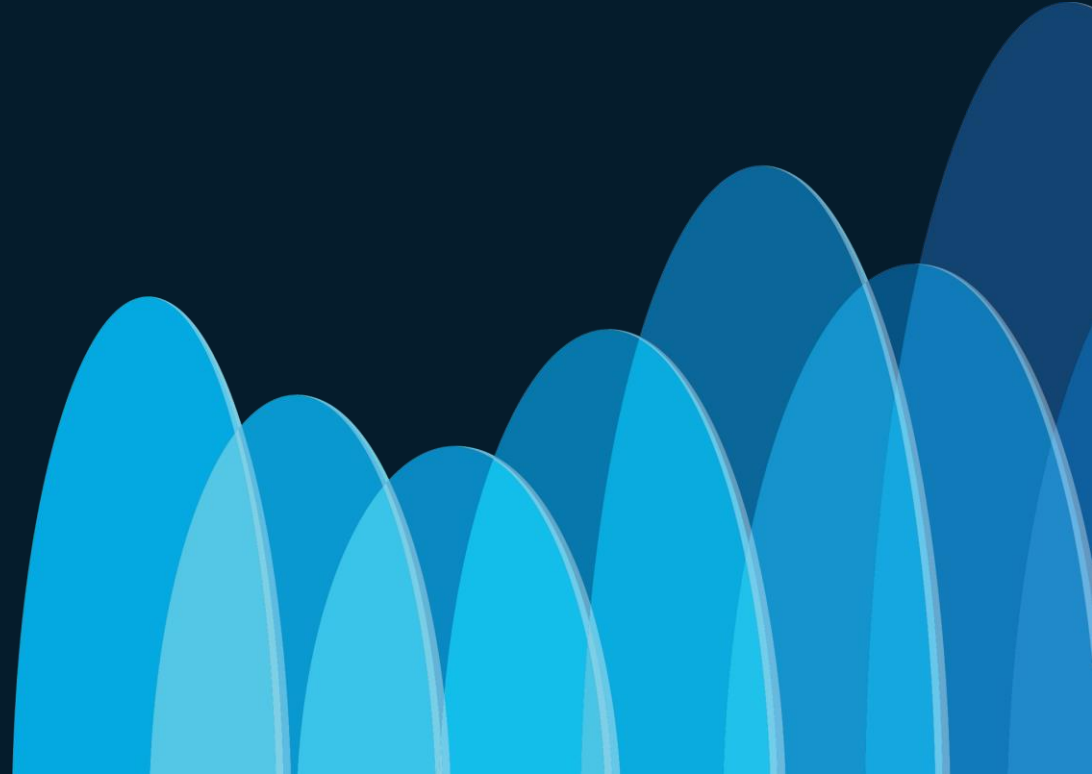
Cloud Agents

- They are as close to your real users experience as possible
- Installed in 277 cities and 70 countries around the world
 - Broadband ISPs
 - Cloud providers (AWS, Azure, GCP, Alibaba)
 - Webex data centers
 - Mobile edge compute (AWS Wavelength)



Workforce Digital Experience

CISCO *Live!*



Demo



Endpoint Agent

- Install it on your employees' computers (Windows & macOS)
 - Manual, Group policy or Managed Software Center
 - Standalone or as Cisco Secure Client module
- Performs active application and network performance tests
- Passively collects performance data (WiFi metrics, CPU, ...)
- Detects and monitors VPNs, proxies
- Follows the employee wherever he works from
 - Work from home, office, anywhere



Endpoint Agent & Cisco Secure Access

- Endpoint agent is an important component of Cisco Secure Access Experience Insights
- Comes for free with Cisco Secure Access, albeit not with full functionality (Experience Insights license)



Enterprise Digital Experience



Demo



Enterprise Agent

- Install it in your office in user VLAN
 - Cisco Catalyst and Meraki MX Series
 - VM, Docker, Intel NUC, Raspberry Pi
 - Install on whatever available, Cisco devices give you no visibility advantage
- Performs active application and network performance tests
 - Performs complex Web application testing (incl. SSO)
 - Can test VPN and SD-WAN underlay
- Provides constant baseline even without active users

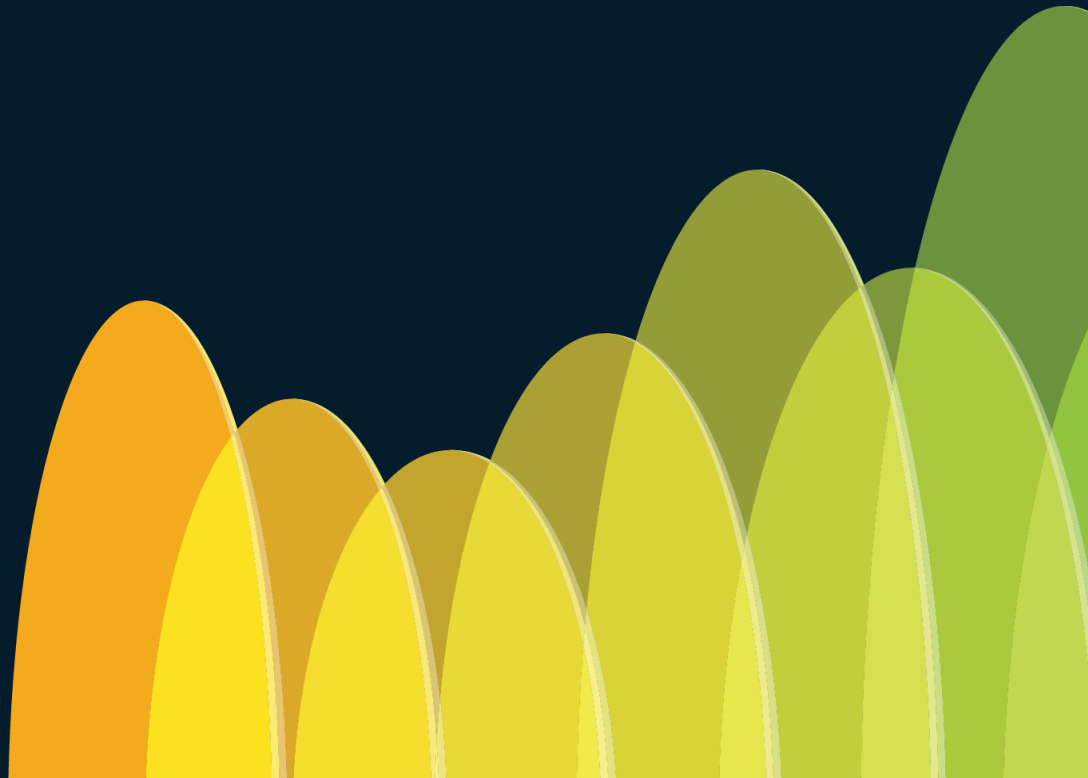


Enterprise Agent Deployment Matrix

Platform	Web Browser Tests	Multi-interface
Virtual Appliance	Yes	Yes
Docker	Yes	Yes
Linux package (Ubuntu, RHEL)	Yes	Yes
Cat 9300, Cat 9400	Yes, with SSD	Yes
Cat 8200, Cat 8300, ISR 4000, ASR 1000, ISR 1000 X	No	No
Meraki MX	No	No
Nexus 9000	No	No
Physical Appliance on Intel NUC	Yes	Yes
Physical Appliance on Raspberry Pi	No	Yes

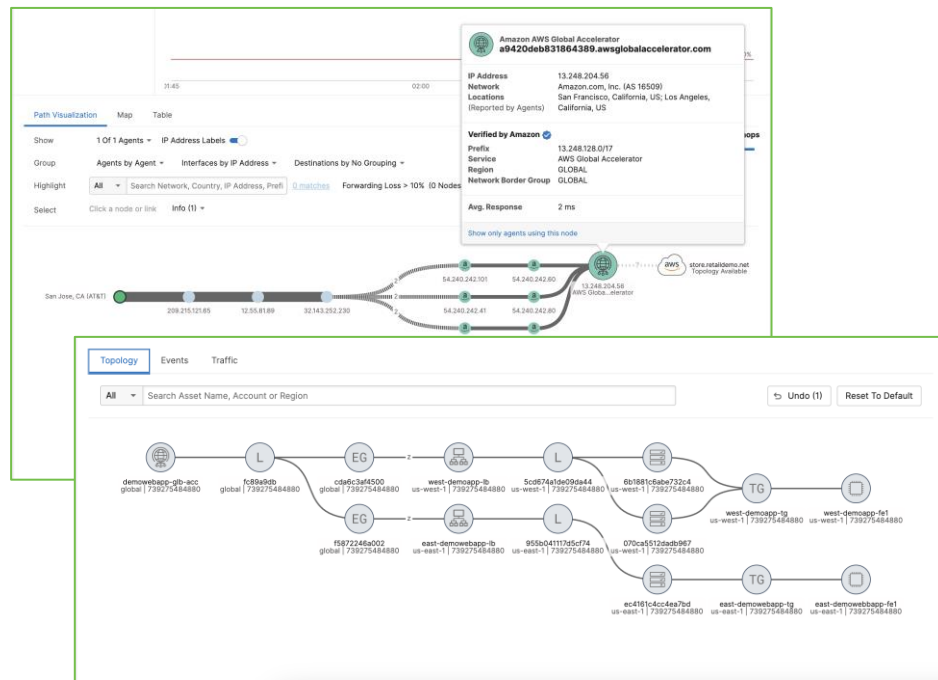
Cloud Insights

(AWS, Azure and GCP soon)



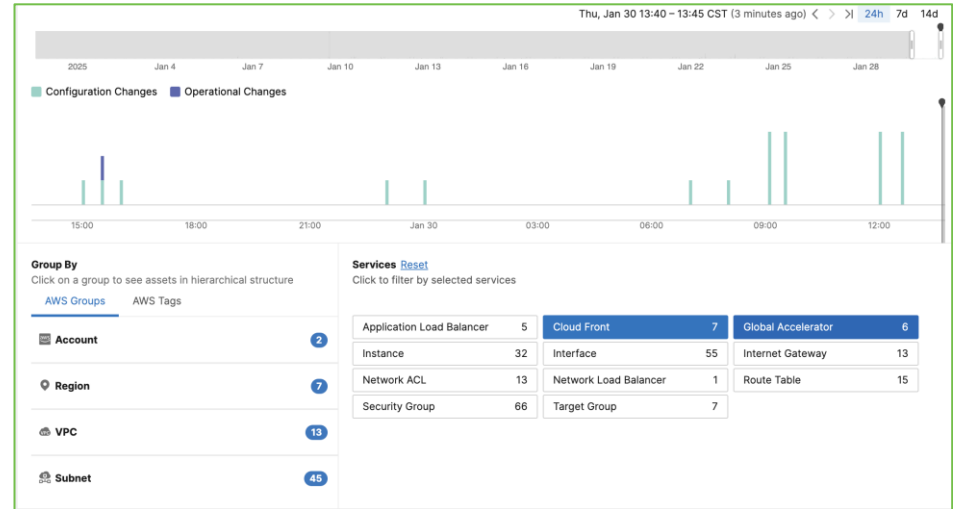
Cloud Path Enrichment and Topology Visualization

- Deep visibility into public cloud infrastructure and service dependencies.
- Provide additional details when traffic traverses cloud service provider networks.
- Auto discover cloud provider resources to understand every service dependency.



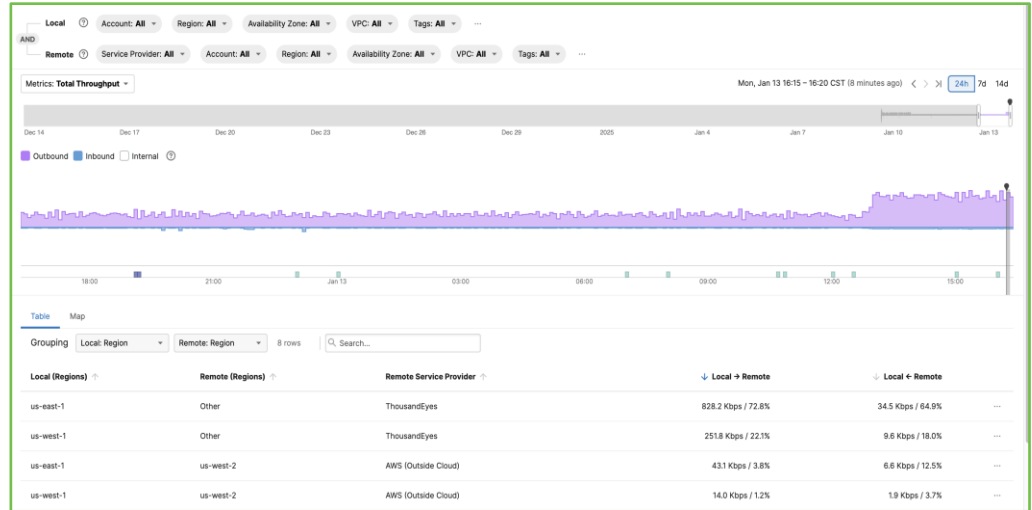
Cloud Inventory

- Enables Ops teams to quickly identify and report on configuration and operational changes that impact user experience.
- Automatically creates an inventory of all elements and services across the entire cloud infrastructure.
- Consolidated inventory reporting across all AWS accounts, regions, VPCs, etc.

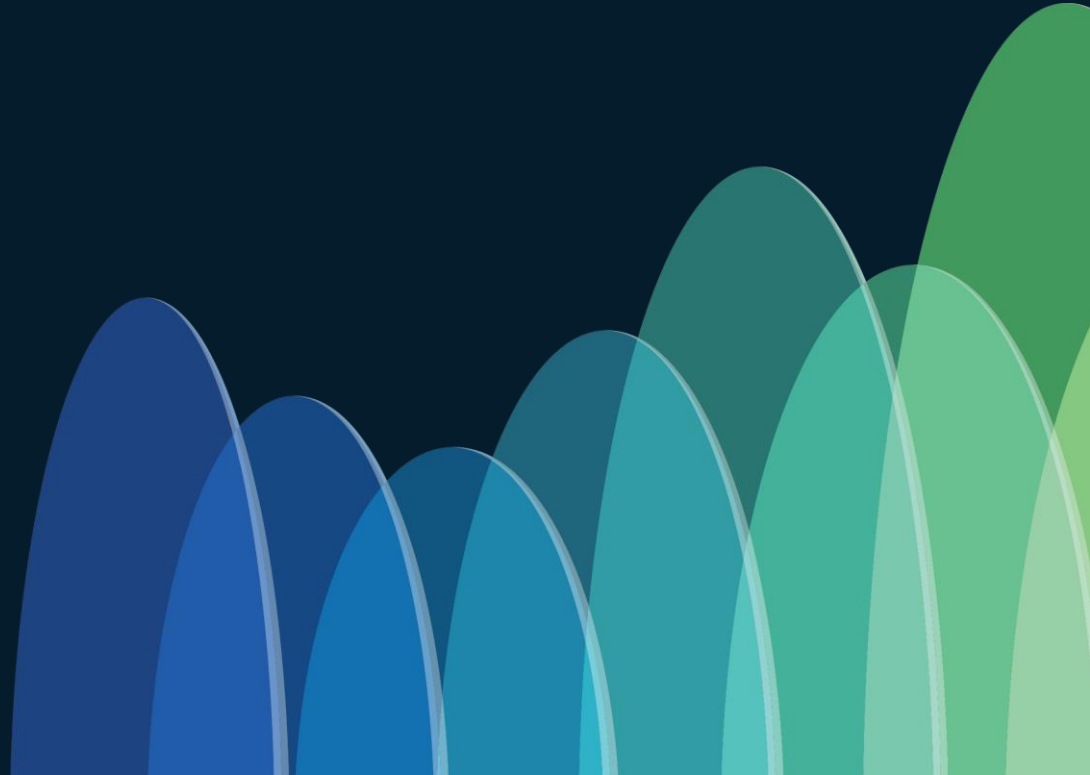


Cloud Traffic Views

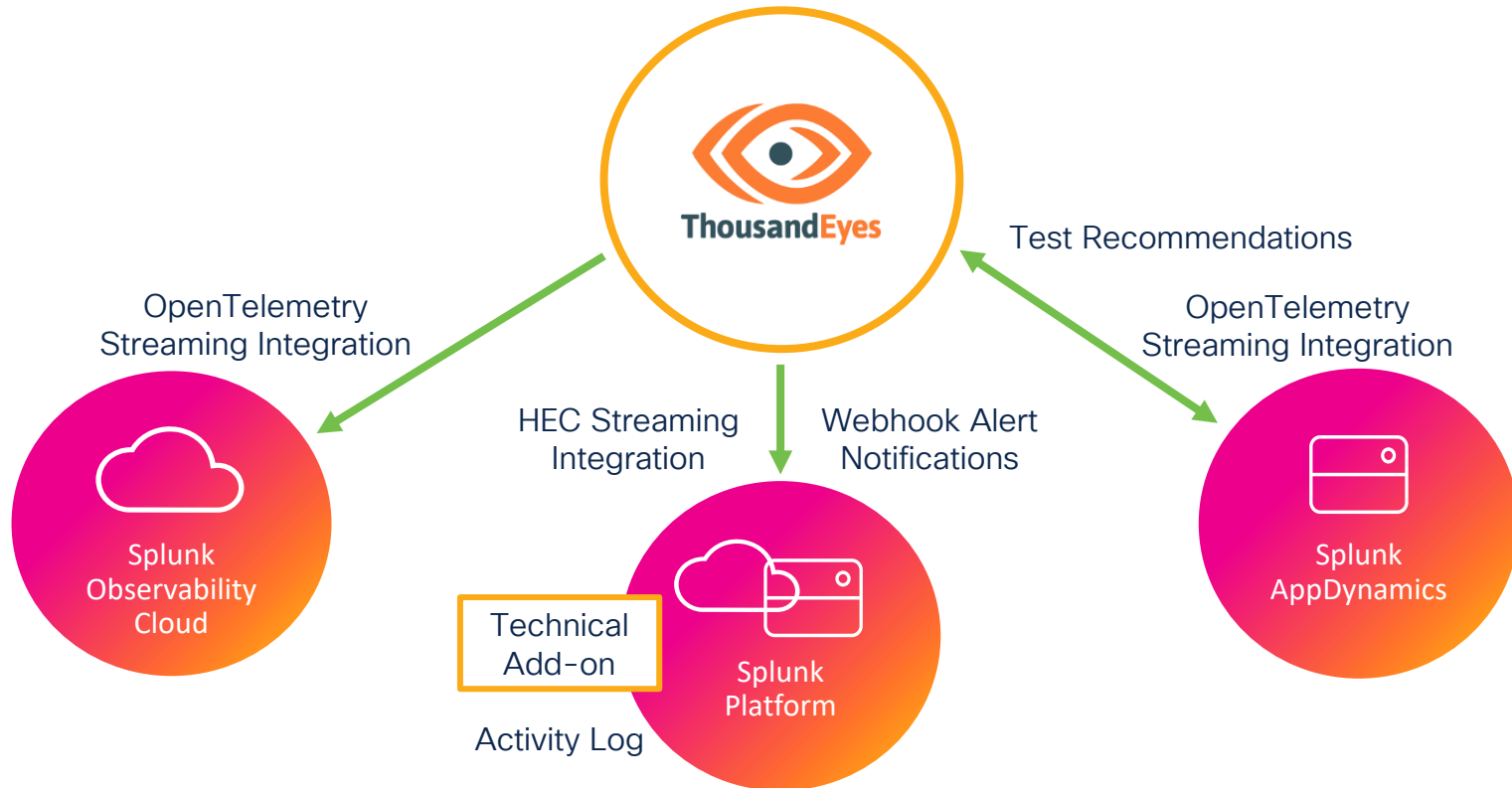
- Ingests VPC flow logs from AWS and displays traffic information in pre-built dashboards and views.
- Traffic views can be filtered by several dimensions.
 - Cloud account, region, availability zone, VPC, application
- Events takes recent configuration changes and other events.



I Want More

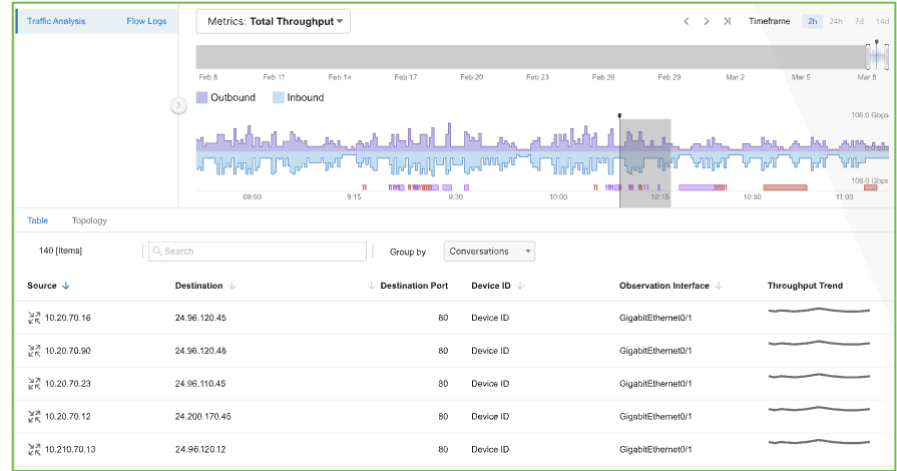


ThousandEyes + Splunk



Traffic Insights

- Correlate NetFlow data with synthetic tests for added context that accelerates troubleshooting efforts
- Vendor-agnostic - analyze data from all your network infrastructure to get a holistic view of usage across your environment



Internet Insights

- Internet insights provide network and SaaS app outage detection at Internet scale
 - Visibility into network outages that disrupt your global SD-WAN mesh
 - Visibility into SaaS application outages, and its scale and geographic scope
- **Eliminates unnecessary troubleshooting cycles**
- Used by organizations with global customer or employee presence



Device Layer

- Device layer provides visibility into performance of your internal network devices by gathering network device topology
- Good old SNMP
 - But still very useful to get that insight into Layer 2
- Free of charge



WAN Insights

- Applies statistical models to Catalyst Analytics path metrics
- Provides network forecasts and SD-WAN policy recommendations
- Optimizes user experience across enterprise sites
- If you have Catalyst Analytics, you're already eligible to use it!



Licensing

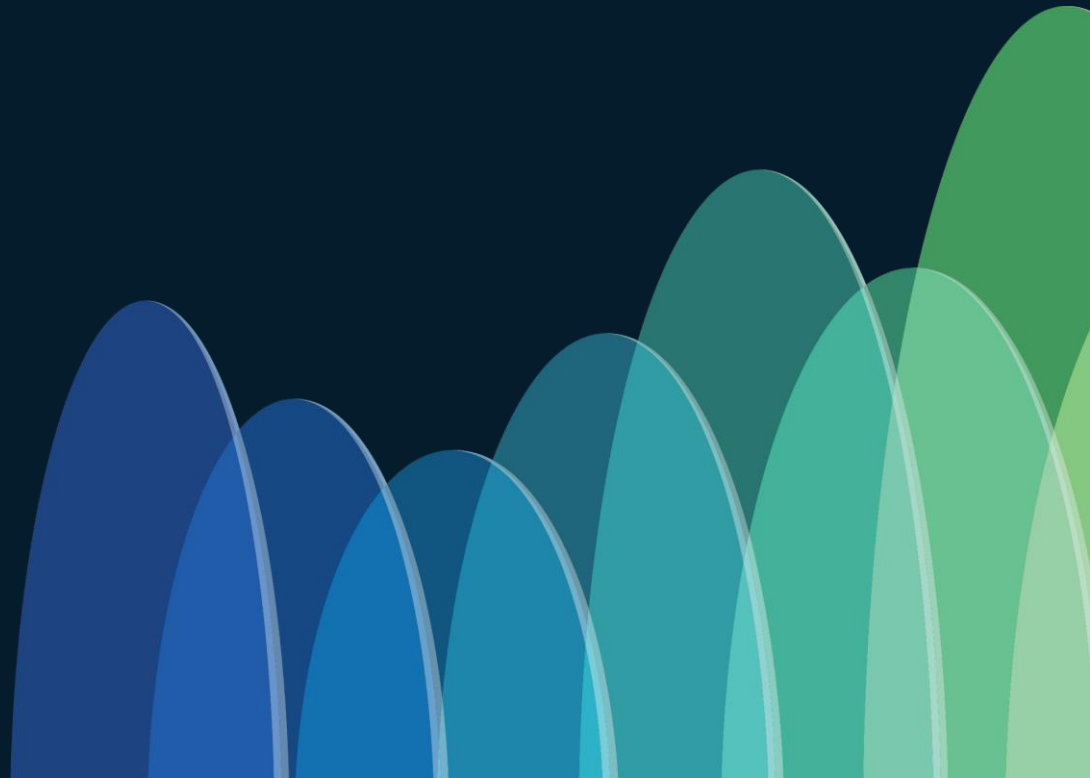
Licensing

Product	Licensing	Example
Cloud Agents Enterprise Agents	Using <i>Units</i> , test usage based, linear	<ul style="list-style-type: none">• 1 HTTP test 5-min interval on EA: 23 units / month• 1 HTTP test 5-min interval on CA: 45 units / month• 1 HTTP test 10-min interval on CA: 23 units / month
Endpoint Agent	Agent based	<ul style="list-style-type: none">• 500 active EPAs -> 500 EPA licences• 3 license tiers
Cloud Insights	Cloud Insights Essentials or Advantage Flow based, using <i>Units</i>	<ul style="list-style-type: none">• Adv for 1+ cloud provider and 50+ accounts• 1000 flows / second -> 300 units / month
Traffic Insights	Flow based, using <i>Units</i>	<ul style="list-style-type: none">• 1000 flows / second -> 300 units / month
Internet Insights	Per Region / Provider	<ul style="list-style-type: none">• All ISPs in North America• All CDNs in EMEA• All in
Device Layer	Free	
WAN Insights	Free with Catalyst SD-WAN Analytics	

ThousandEyes Endpoint Agent Licences

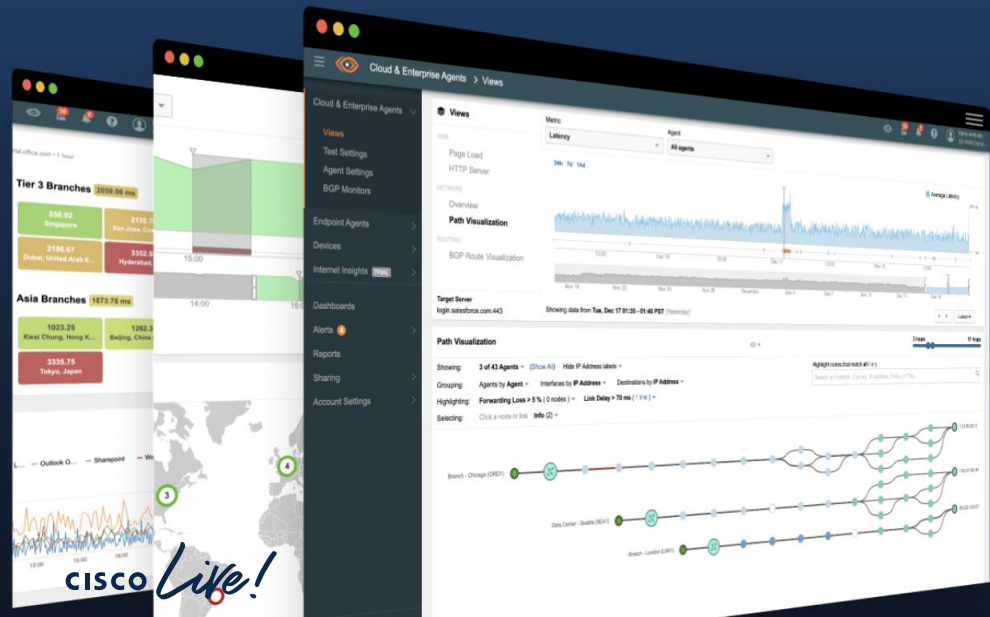
	Advantage	Essentials	Experience Insights
Buying Motion	Separate purchase	Separate purchase	Included in Secure Access
Data Retention	30 days	14 days	4 days
Browser session monitoring	Yes	Yes	No
Synthetic tests	10 dynamic and scheduled tests (mix and match)	4 dynamic and scheduled tests (mix and match)	1 dynamic test, 1 scheduled test to SSE Cloud infrastructure
Local network tests	Included	Included	Included
Machine metrics	“Top 5”	“Top 5”	“Basic”

Start Today



Sign Up for a 15-Day Free Trial

Get actionable insights into your critical customer and employee-facing applications and services.



ALL FIELDS REQUIRED

I agree to the processing of my personal data by ThousandEyes as described in the [Privacy Policy](#).



ThousandEyes



decreases your
mean-time-to-resolution &
mean-time-to-innocence

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New!

Cisco Enterprise Network Assurance Certificate



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v1.0 Code: 300-445 ENNA

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The New Assurance for Enterprise Networks
Certification: Strategies for Success
BRKCRT-2020

CCNP Hands-On Implementing Enterprise
Network Assurance - LTRCART-1101

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Assurance certification with
ThousandEyes technology.
Gain the expertise to help
ensure smooth, secure,
and compliant digital
experiences.

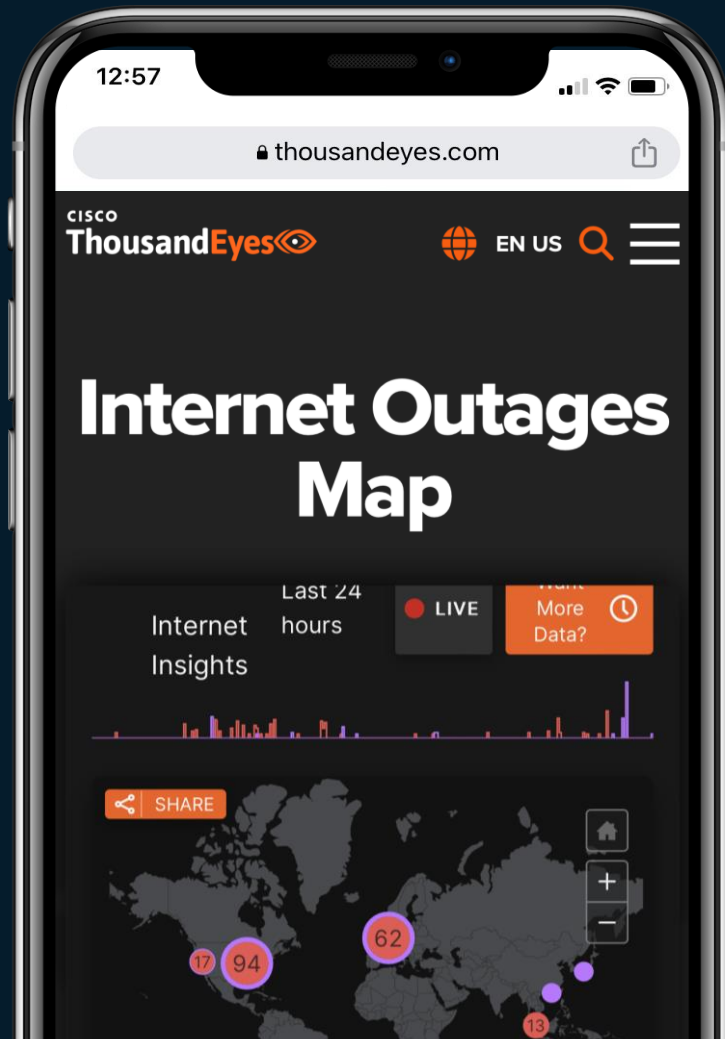
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sessions



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The Internet Report Podcast
Outage Analysis • Expert Insight • Practical Tips



Webex App

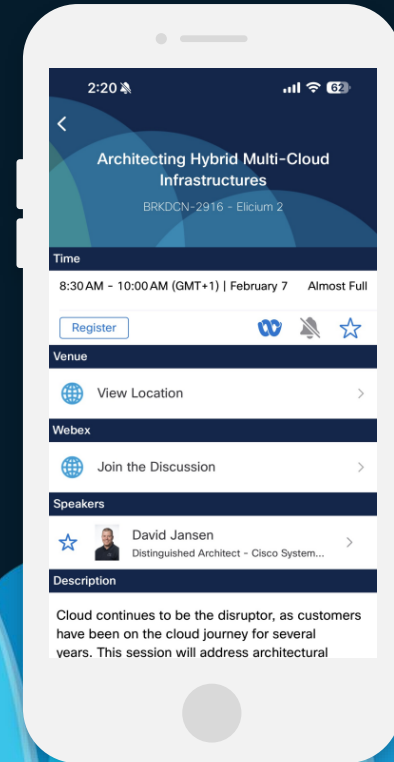
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Fill Out Your Session Surveys



Participants who fill out a minimum of 4 session surveys and the overall event survey will get a unique Cisco Live t-shirt.

(from 11:30 on Thursday, while supplies last)



All surveys can be taken in the Cisco Events mobile app or by logging in to the Session Catalog and clicking the 'Participant Dashboard'



Content Catalog

Continue your education

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- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at ciscolive.com/on-demand. Sessions from this event will be available from March 3.

Contact me at: primoz@cisco.com



Thank you

CISCO *Live!*

GO BEYOND

The background of the slide features a series of overlapping, teardrop-shaped elements in various shades of blue, ranging from light sky blue to deep navy blue. These shapes are arranged in a way that creates a sense of depth and movement, resembling a stylized mountain range or a series of waves. The overall aesthetic is clean and modern.