

The background features a vibrant, multi-colored abstract design. On the left, there are overlapping, wavy bands of color in shades of orange, red, and yellow. On the right, a bright white light source emits a series of colorful rays in shades of blue, green, and yellow, creating a sunburst effect. The overall composition is dynamic and energetic.

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The bridge to possible

ThousandEyes 101

Foundations and Use Cases to make your life better
by providing critical network and service visibility

Bernie Clairmont - Product Solution Architect @BernieClairmont

David Smith - VP Core Network Engineering Manager at U.S. Bank
BRKOPS-1301

Cisco Webex App

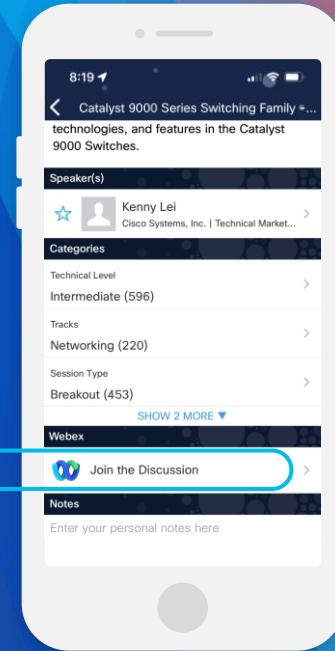
Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 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 June 9, 2023.



<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKOPS-1301>



I'm a Product Solutions Architect at ThousandEyes, a Cisco Company, helping to innovate and revolutionize network, cloud and digital service reliability. I've been evangelizing network and performance management for over 25 years, starting out as a system administrator, and then moving into network engineering and network, server and storage management for telecommunications and cable providers. I love helping customers innovate the way they manage their network infrastructure.

Bernie Clairmont
Product Solutions Architect
Email: bclairmo@cisco.com
LinkedIn: <https://www.linkedin.com/in/bernardclairmont/>



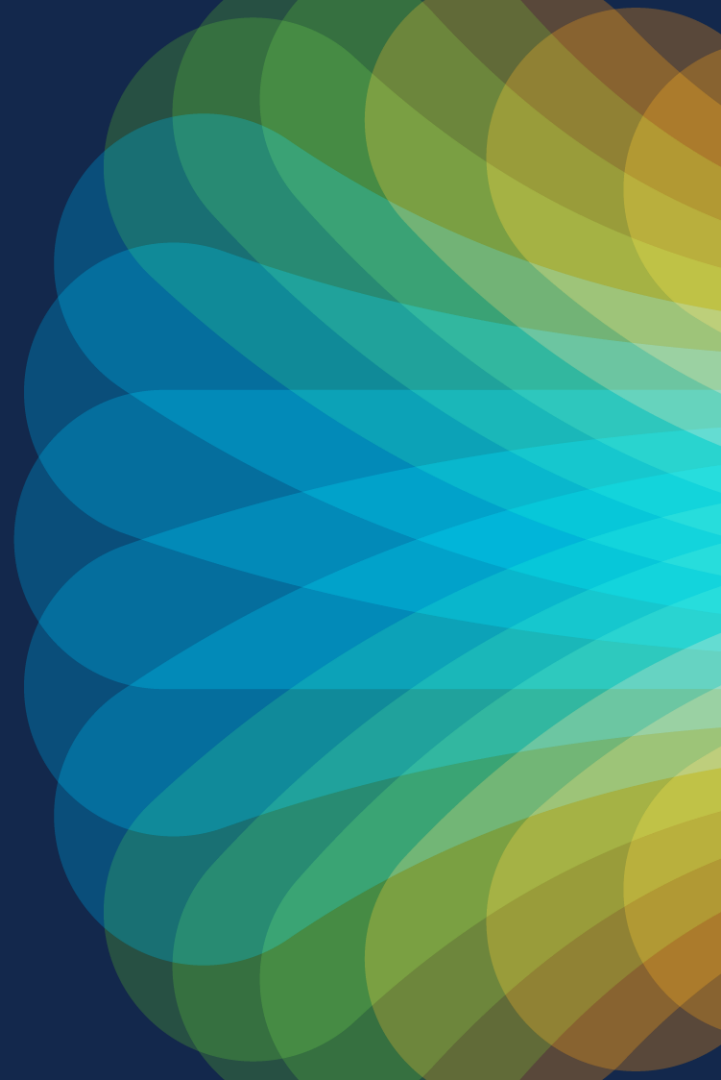
U.S. Bank's highly diverse network must be flexible enough to handle processing a \$5 debit card purchase to safeguarding a \$100 million wire transfer, while giving customers, and all end users a consistent, predictable experience. David Smith, VP of Core Network Engineering, oversees designing, implementing and maintaining the network for U.S. Bank – the United States' fifth-largest bank.

David Smith, U.S. Bank
VP Core Network Engineering Manager
Email: david.smith@usbank.com
LinkedIn: <https://www.linkedin.com/in/david-smith-mn/>

Agenda

- ThousandEyes Overview
- Use Cases/Demonstration
- ThousandEyes at US Bank
- Conclusion

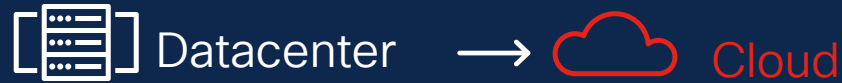
ThousandEyes Overview



The Challenge

Visibility and
control is
shrinking

External
dependencies
are
exponentially
growing



The Challenge

Massive
blind spots
erode ability
to manage

So many layers, domains,
and providers

Traditional tools don't
work for what you don't
own

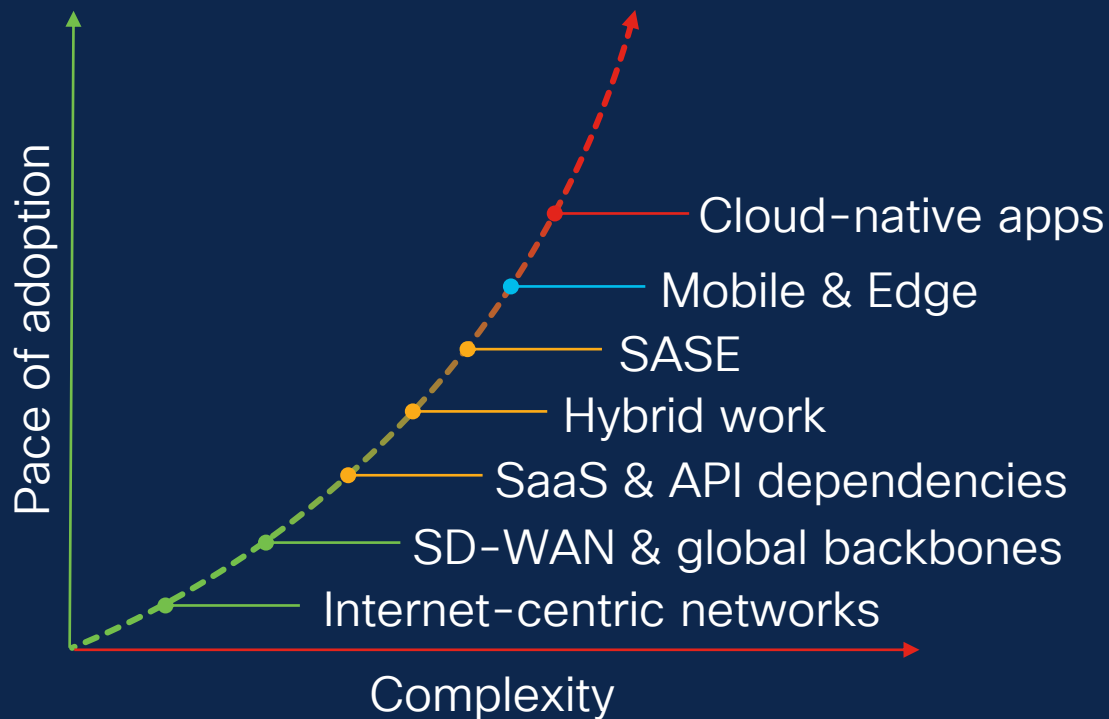


The Challenge

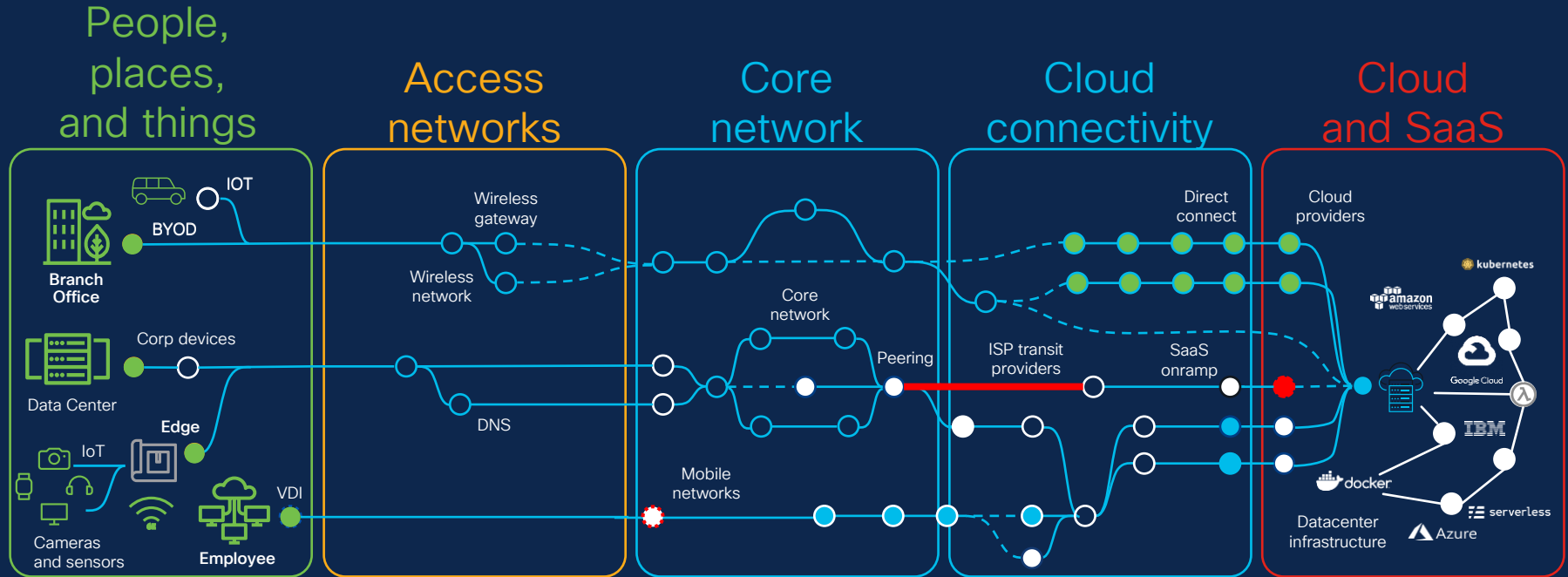
Soaring
complexity curve
is widening
visibility gap

Competitive pressures
driving technology
adoption

Adoption outpacing
capabilities to manage
new environments



Connections are Complex



See,
understand, and
improve digital
experiences
everywhere

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ThousandEyes 
part of Cisco

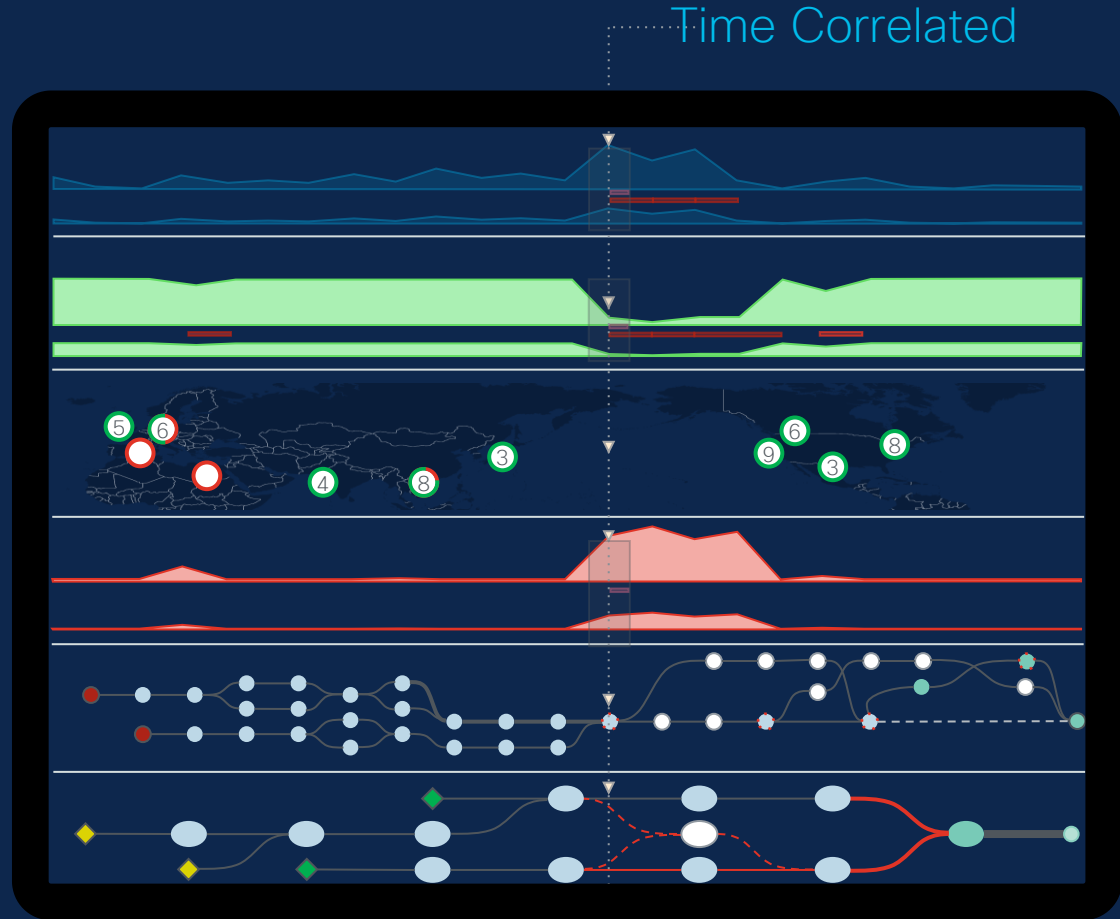
Our Solution

Collectively
powered
Internet
weather map



Our Solution

Correlate
performance
across
every layer



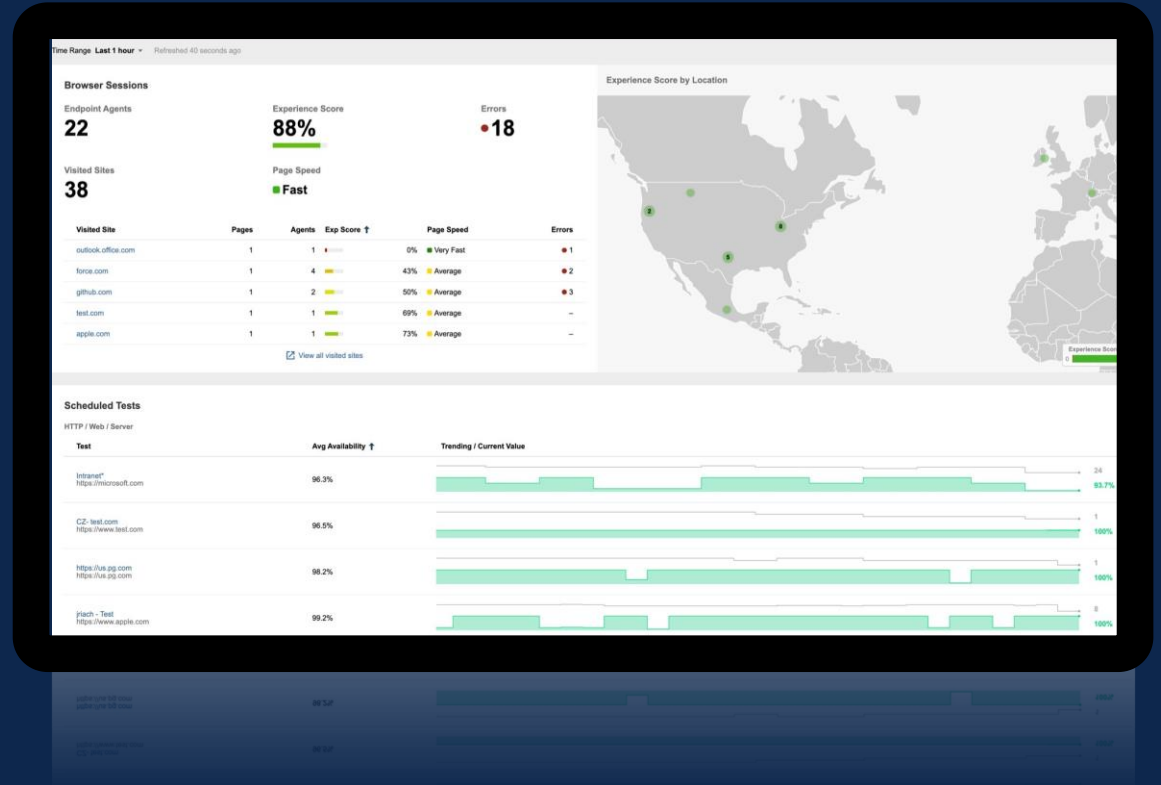
Our Solution

Visualize
services end-
to-end across
every domain



Our Solution

Understand
global
workforce
experience

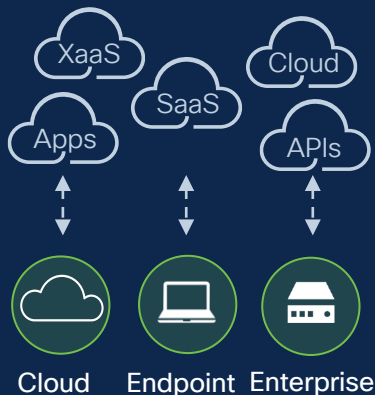


Our Solution

ThousandEyes Internet and Cloud Intelligence

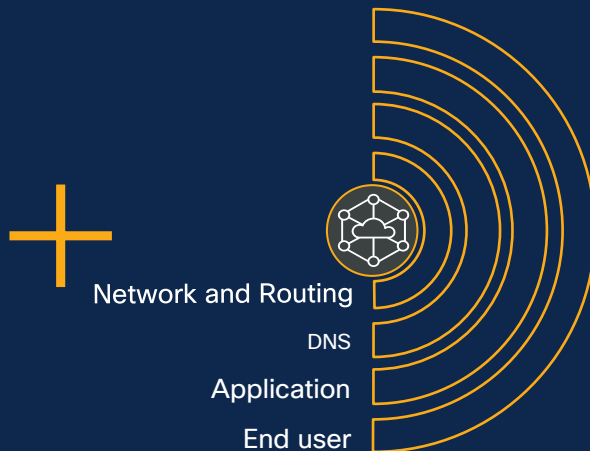
VISIBILITY

1000s Global Vantage



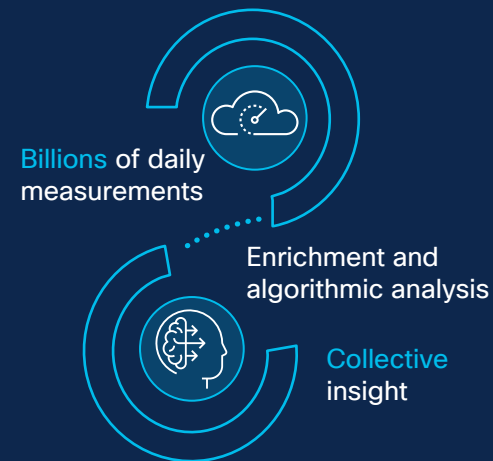
INTELLIGENCE

Unique X-layer Telemetry



WORKFLOWS

Global Collective Insight



Our Solution

ThousandEyes Internet and Cloud Intelligence

VISIBILITY

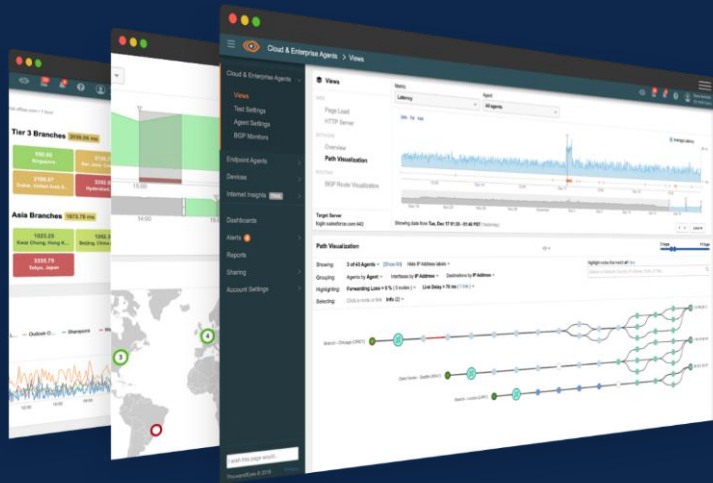


Surface fault domain,
root cause, and
attribution to
responsible party



See digital experience
in context with deep
correlations across
layers

INTELLIGENCE



WORKFLOWS



Gain global insight into
Internet and SaaS App
Outages



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

Our Solution

ThousandEyes Internet and Cloud Intelligence

VISIBILITY



- REST API
- OTEL and 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

INTELLIGENCE



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

Use Cases and Demonstration

Our Use Cases

Empowering every digital experience

Customer

Your Apps



Deliver stellar digital experiences to users

Workforce

Your People



Keep workers connected and enjoying seamless app performance

Enterprise

Your Infrastructure



Optimize and sustain the flow of your digital supply chain

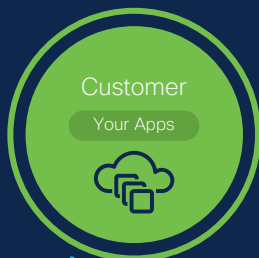
ThousandEyes 
part of Cisco

Our Use Cases Seamless with Cisco

Full Stack Observability (FSO)

ThousandEyes OTel
integration into AppDynamics

Test Recommendations and
Application Service Health



Hybrid Work

ThousandEyes Webex Vantage Points
and some RoomOS devices

Automatic monitoring Webex sessions

ThousandEyes insights in Webex
Control Hub

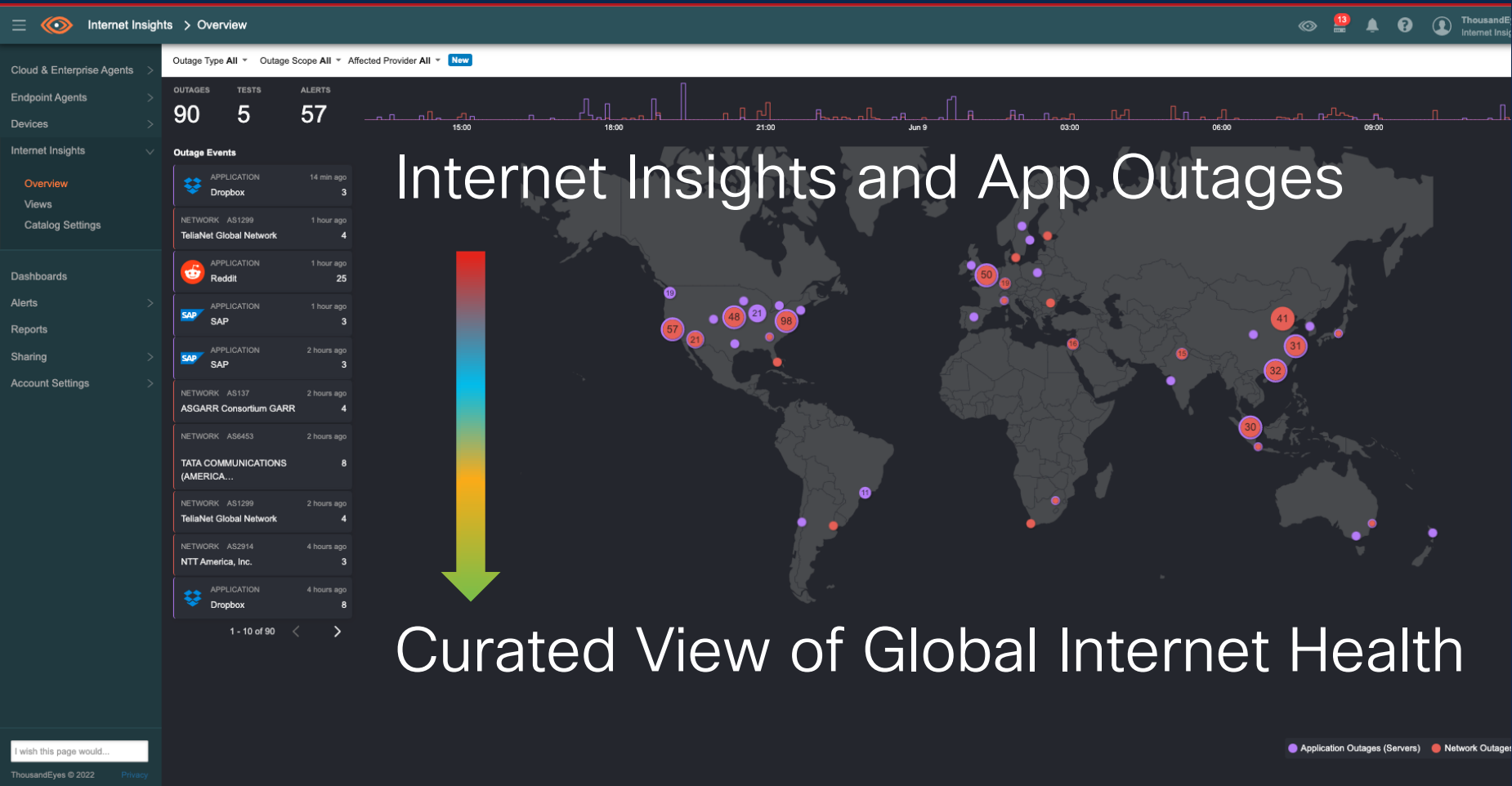


Secure Access Service Edge (SASE)

ThousandEyes embedded in Cisco SD-
WAN platforms + Catalyst 9000, Nexus
9000, Meraki MX67+

Simple, scalable agent admin through
device management platforms

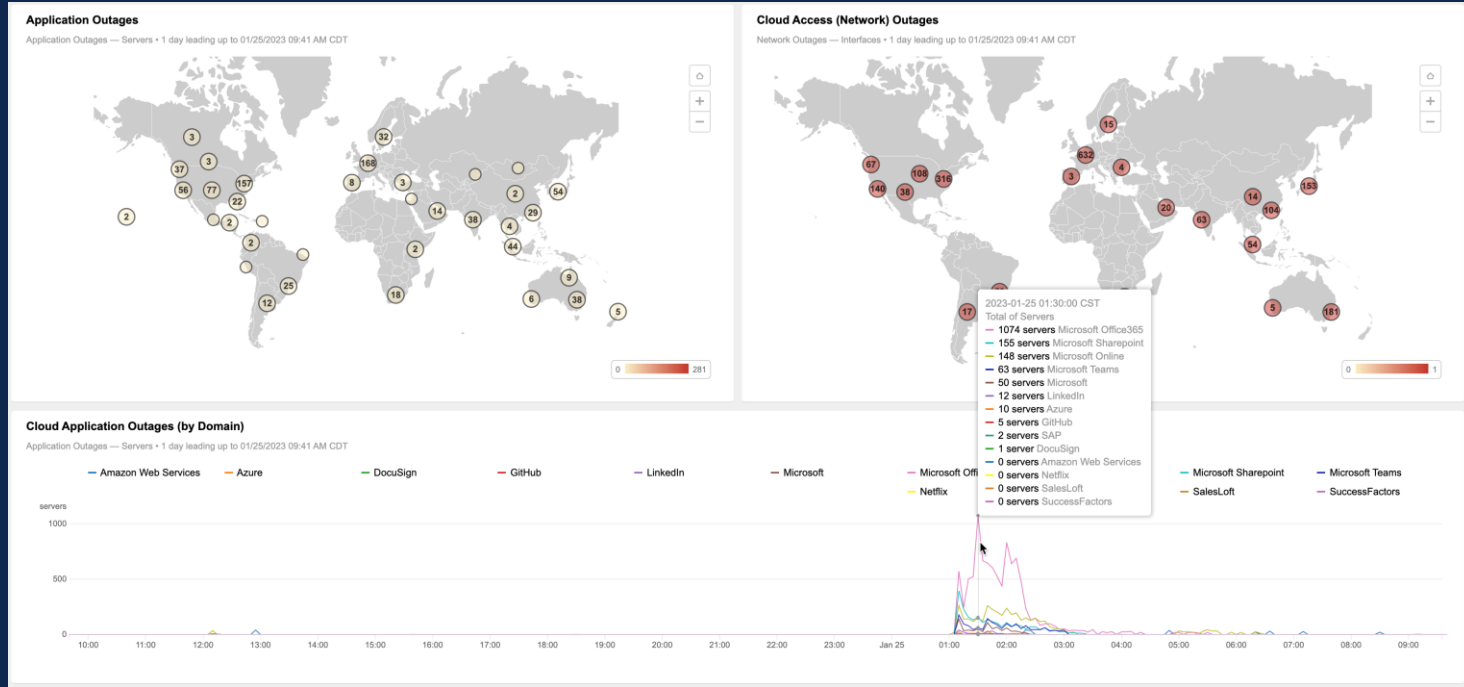




General SaaS and Provider Network/App Health

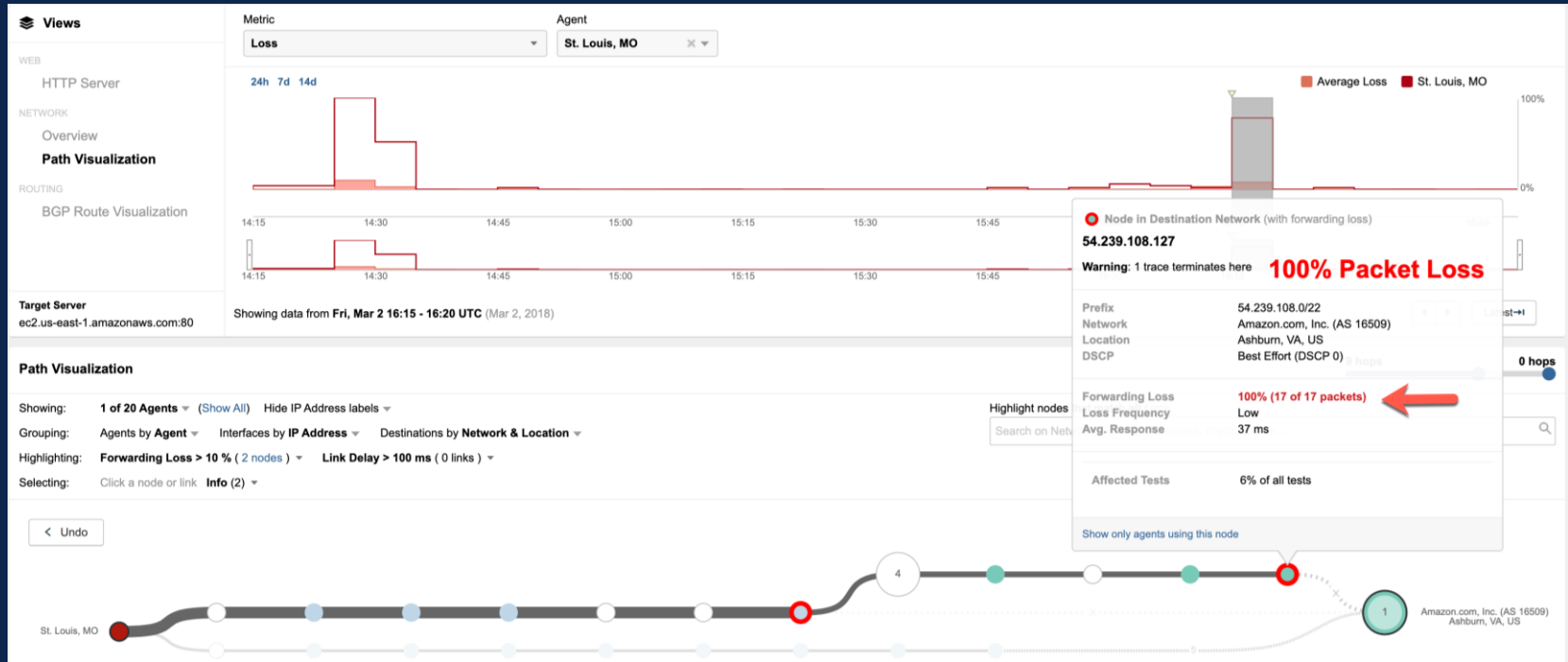
Quickly See Outages

- ASN
- App
- Country
- Domain
- Error Type



Network Outage Use Case (AWS East-1)

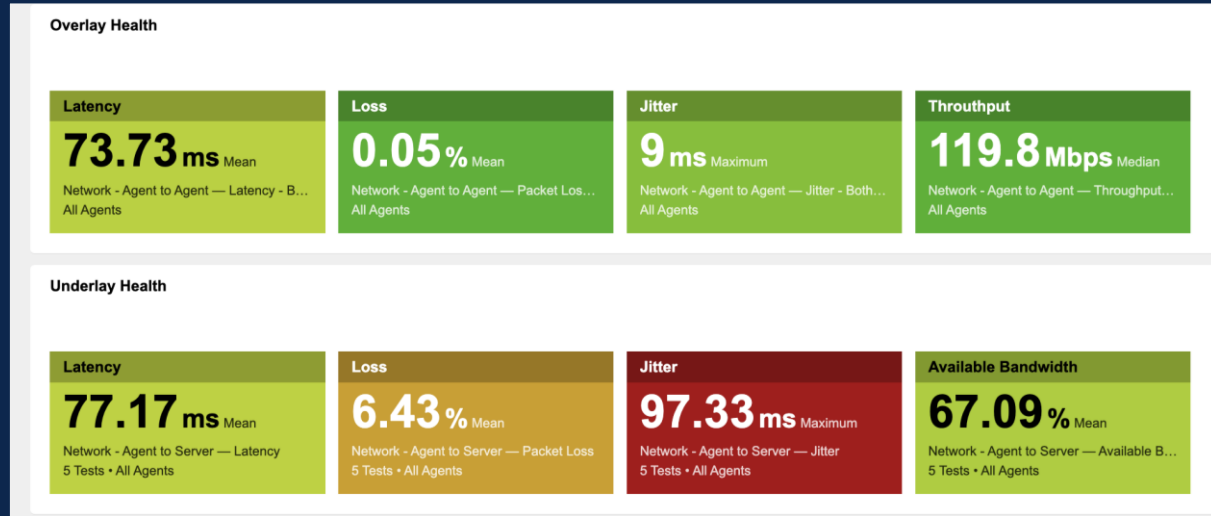
Cloud Provider Network Visibility



General SD-WAN Monitoring

Health Dashboard Example

- Overlay health
 - Loss
 - Latency
- Underlay transport
 - Loss
 - Latency
- Available bandwidth (overlay and underlay)



SD-WAN Overlay/Underlay Visualizations

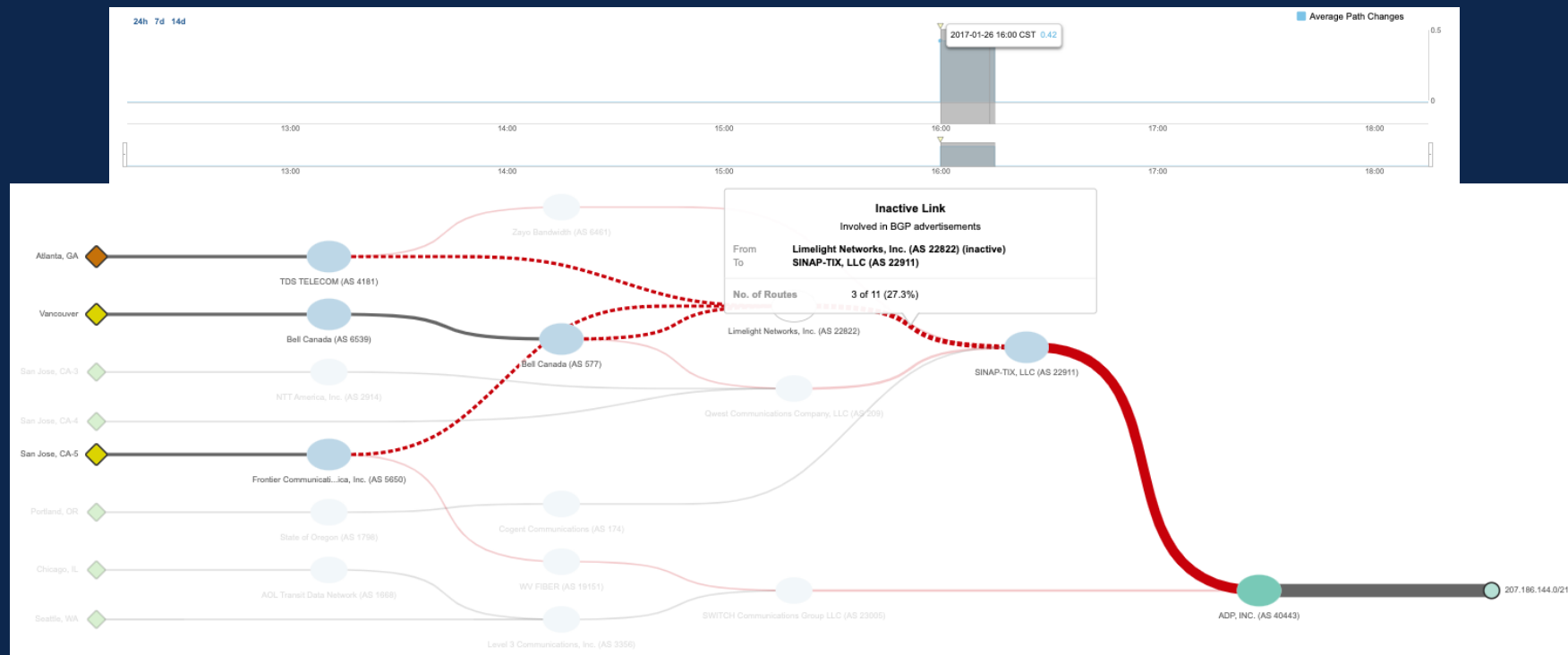
Full mesh underlay and overlay network visibility
Local datacenters to national datacenters



Visualizing a Third-Party ISP Outage

Network topology and performance

BGP, cloud, SaaS, ISP, DDoS, DNS, CDN



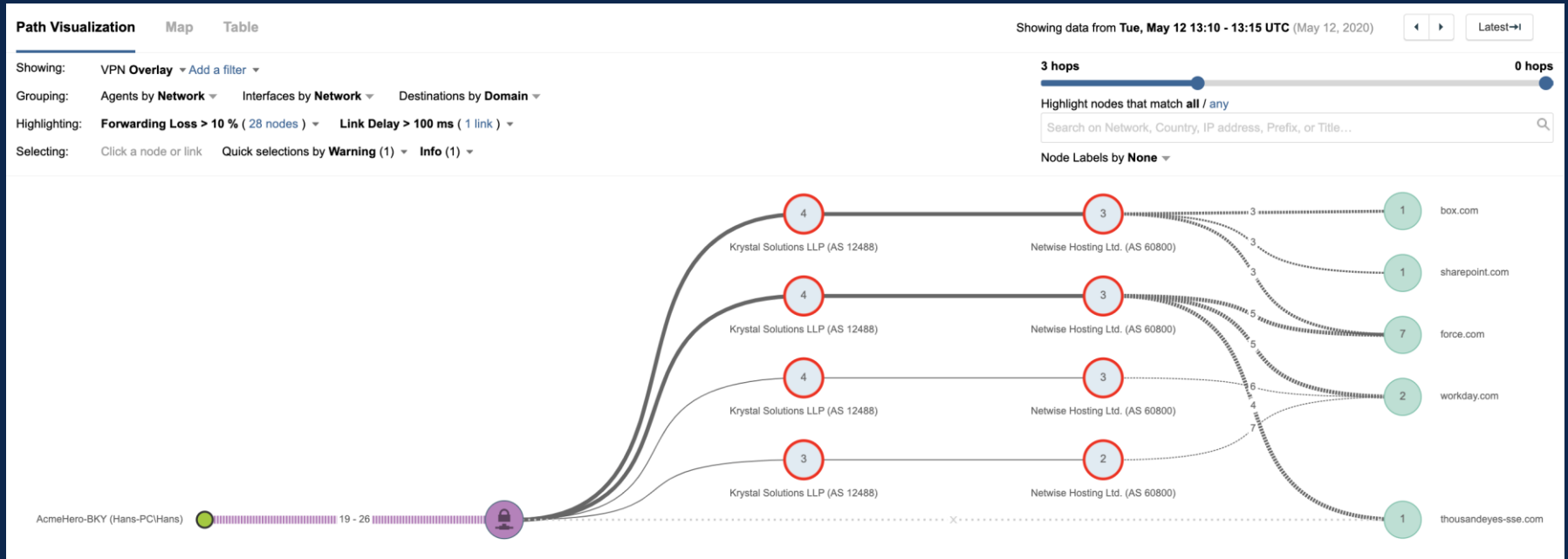
Visualizing from an End Users Perspective

End User Network and Automated Session Testing



Visualizing from an End Users Perspective

User Connecting to the Wrong VPN



ThousandEyes at US Bank



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U.S. Bank – Who are we?



- U.S. Bank is the fifth largest banking institution in the United States



- Our retail branch network spans the United States
- Worldwide digital footprint



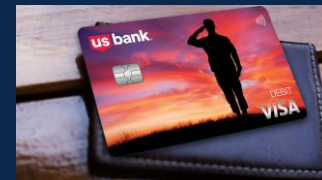
- Elavon is a subsidiary of U.S. Bank and is the fourth-largest merchant acquirer in Europe, processing payments for many of the best-known businesses on the continent.

U.S. Bank – By the Numbers



- Nearly 77,000 employees in 13 countries
- More than 2,000 branches in 26 states
- More than 80% of transactions and 65% of loan sales now online
- No. 150 on the Fortune 500
- More than \$24 billion in annual revenue and \$587 billion in assets as of 2022
- Founded under national bank charter No. 24 in 1863

U.S. Bank – IT Infrastructure Fun Facts



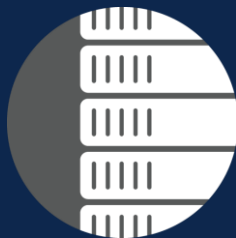
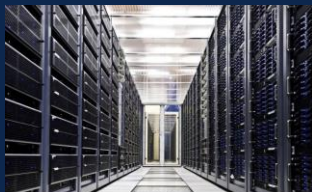
Compute

Servers

7,016

Virtual Servers

27,423



Mainframe

MIPs

88,606

DASD

90 TB



Storage

NAS Storage

37 PB

NAS Backup

40 PB

SAN Storage

22 PB



Network

Routers

3068

Switches

7392

Firewalls

2774

Access Points

8778

ThousandEyes at U.S. Bank



Use Cases:



ThousandEyes @ U.S. Bank

- Internet Insights
- On-line Banking
 - ❑ Synthetic Transactions
- Elavon Payment Services
- WAN Monitoring
- Employee Experience
 - ❑ O365
 - ❑ Mortgage Lenders
 - ❑ Virtual Desktops (VDI)

- Total Tests = 4,849
- Tests w/alerts = 4,311
- Enterprise Agents = 79
- Endpoint Agents = 533
- Monthly Logins: Peak = 3,752
- Units consumed = 130,985,822/mo. avg.

Conclusion

Why ThousandEyes?

See, understand and improve digital experience everywhere

Broad Data Collection

Deliver ubiquitous visibility

E2E visibility, synthetic, and cloud network visibility across every vantage point that matters

Proactive Intelligence

Identify and isolate issues quickly

Event detection, correlation, and causal analysis for intelligent troubleshooting

Operational Workflows

Integrate with a connected ecosystem

Unlock intelligence and data across ecosystems via open standards

Cisco ThousandEyes assuring every element of modern digital experience



Mobile / Home



Wireless / Access / Routing



Datacenter / Service Provider



Internet



Cloud / App

Fill out your session surveys!



Attendees who fill out a minimum of four session surveys and the overall event survey will get **Cisco Live-branded socks** (while supplies last)!



Attendees will also earn 100 points in the **Cisco Live Challenge** for every survey completed.



These points help you get on the leaderboard and increase your chances of winning daily and grand prizes

ThousandEyes Cisco Live Sessions

Product and Strategy Overview: Keep up with ThousandEyes Innovations

Shimei Cridlig
Technical Consulting Engineer, Cisco Systems, Inc.

Monday, June 5 | 1:30pm - 2:00pm
World of Solutions - Cisco Theater 3

Redefining Network Assurance for Modern, Digital Experiences

Mohit Lad, SVP/GM Network Assurance, Cisco |
Co-founder ThousandEyes, Cisco
Colby Rozell, Product Owner, Enterprise Monitoring & Alerting, Chevron
Joe Vaccaro, VP, Product, Cisco ThousandEyes
Matt Landry, VP, Product Management, Networking & Security, Cisco

Wednesday, June 7 | 11:45am - 12:30pm
Innovation Theater - Level 2, Mandalay Bay IJ

Optimizing IT Operations with ThousandEyes and OpenTelemetry

Mike Hicks
Principal Solution Analyst, Cisco Systems, Inc.

Wednesday, June 7 | 10:30am - 11:30am PT
Lower Level, Tradewinds DEF

Customer Success Story: How WWE Uses Cisco ThousandEyes To Remove Network Unknowns Before and During Live Broadcasts

Ralph Riley - Director, Broadcast IT Systems, WWE
Joe Vaccaro - VP, Product, Cisco ThousandEyes

Thursday, June 8 | 11:00am - 12:00pm
Level 2, Reef AB

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Internet outages and research. Available 24x7

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ThousandEyes Internet
Intelligence



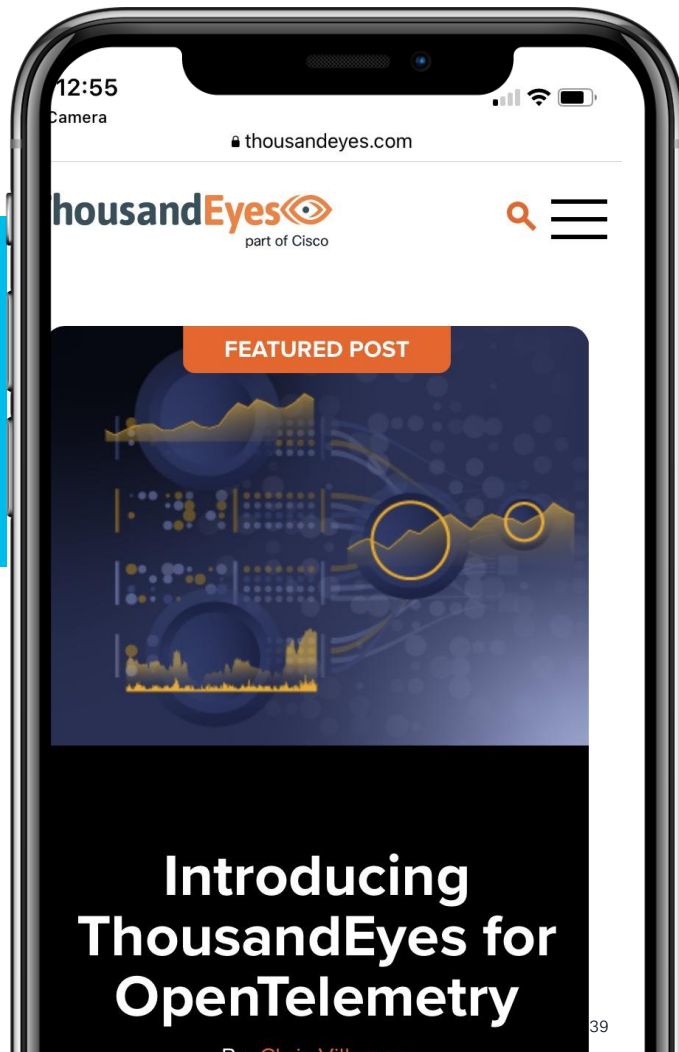
ThousandEyes
Research



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- 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 www.CiscoLive.com/on-demand

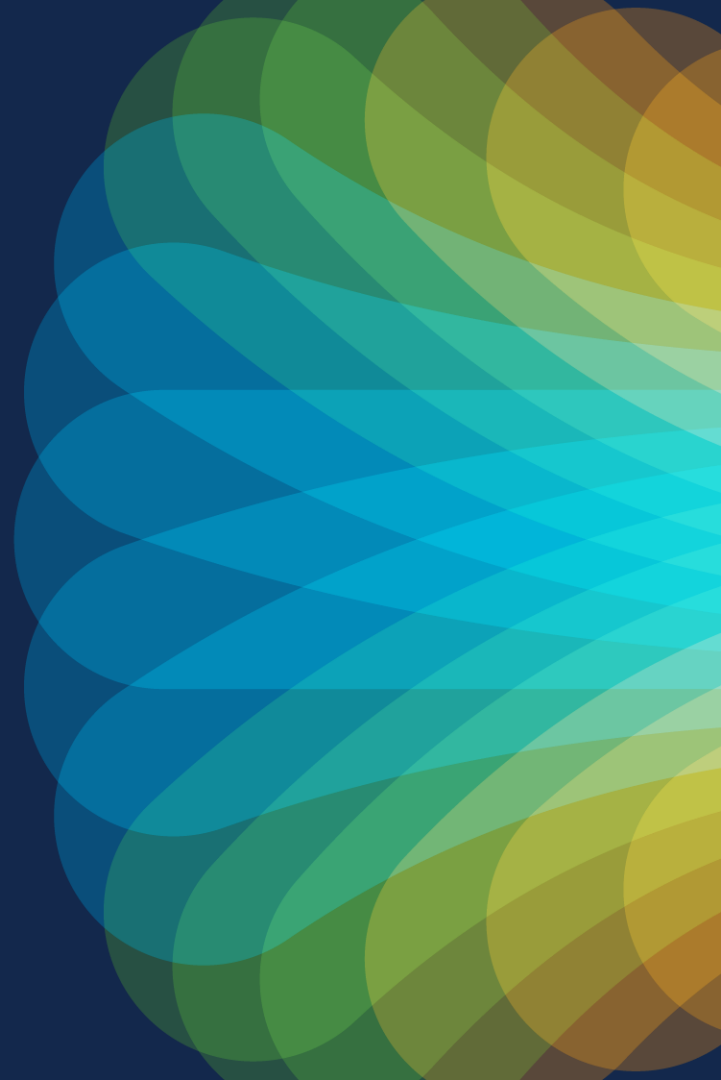


The bridge to possible

Thank you

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The background is a vibrant, abstract graphic. It features a central bright white light source from which numerous colorful rays emanate, creating a sunburst or starburst effect. The rays transition through a spectrum of colors including yellow, orange, red, and various shades of blue and green. Overlaid on this are several large, semi-transparent, wavy shapes in similar color tones, giving the overall image a sense of motion and energy.

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Cisco Live Challenge

Gamify your Cisco Live experience!
Get points for attending this session!

How:

- 1 Open the Cisco Events App.
- 2 Click on 'Cisco Live Challenge' in the side menu.
- 3 Click on View Your Badges at the top.
- 4 Click the + at the bottom of the screen and scan the QR code:

