

CISCO *Live!*



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The bridge to possible

Finding Needles in a Haystack

Prab Singh

Group PM

Internet & WAN | Collective Intelligence

Cisco Live BRKAPP-1003 | June 2022

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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”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until June 17, 2022.

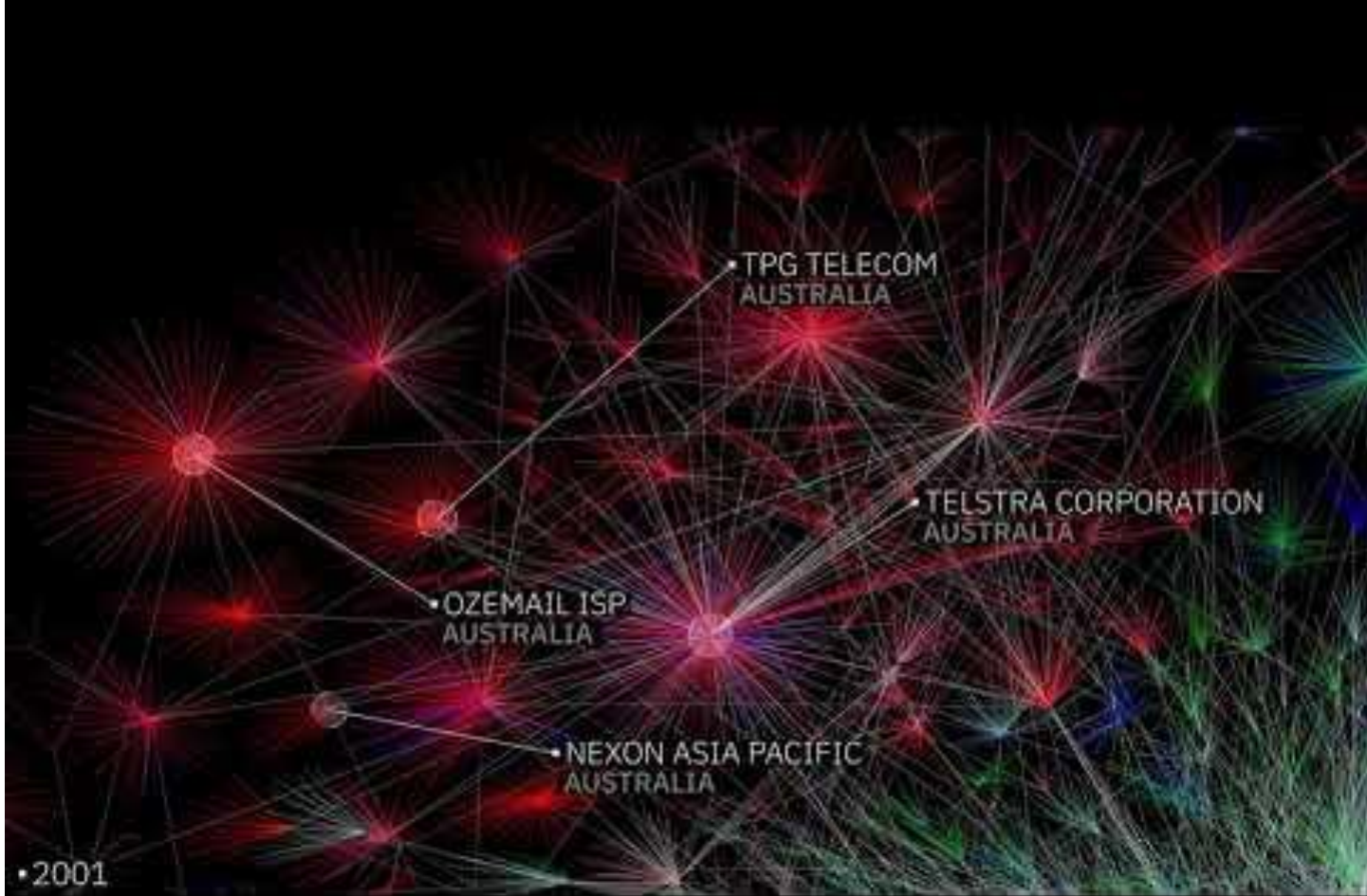


<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKAPP-1003>



Agenda

- Evolution of the Internet
- How Digital Experience is Changing the Network Landscape
- Anatomy of a HTTP Request
- Live Walkthrough of ThousandEyes Troubleshooting
- Getting to Root Cause Analysis





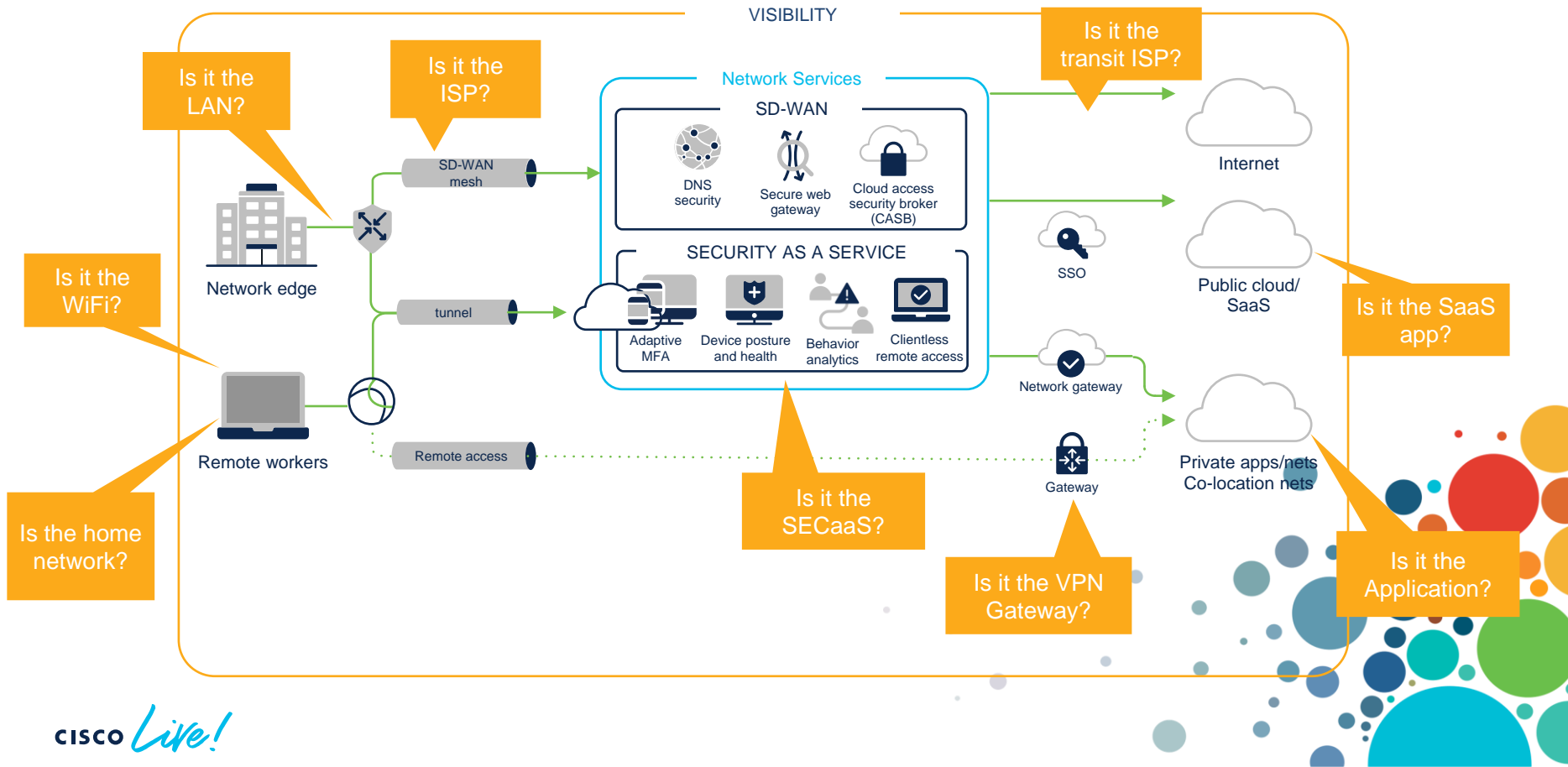
Mohit Lad
CEO, ThousandEyes

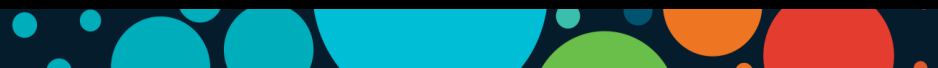


Rafal Waligora
Manager, Network Engineering, Twitter

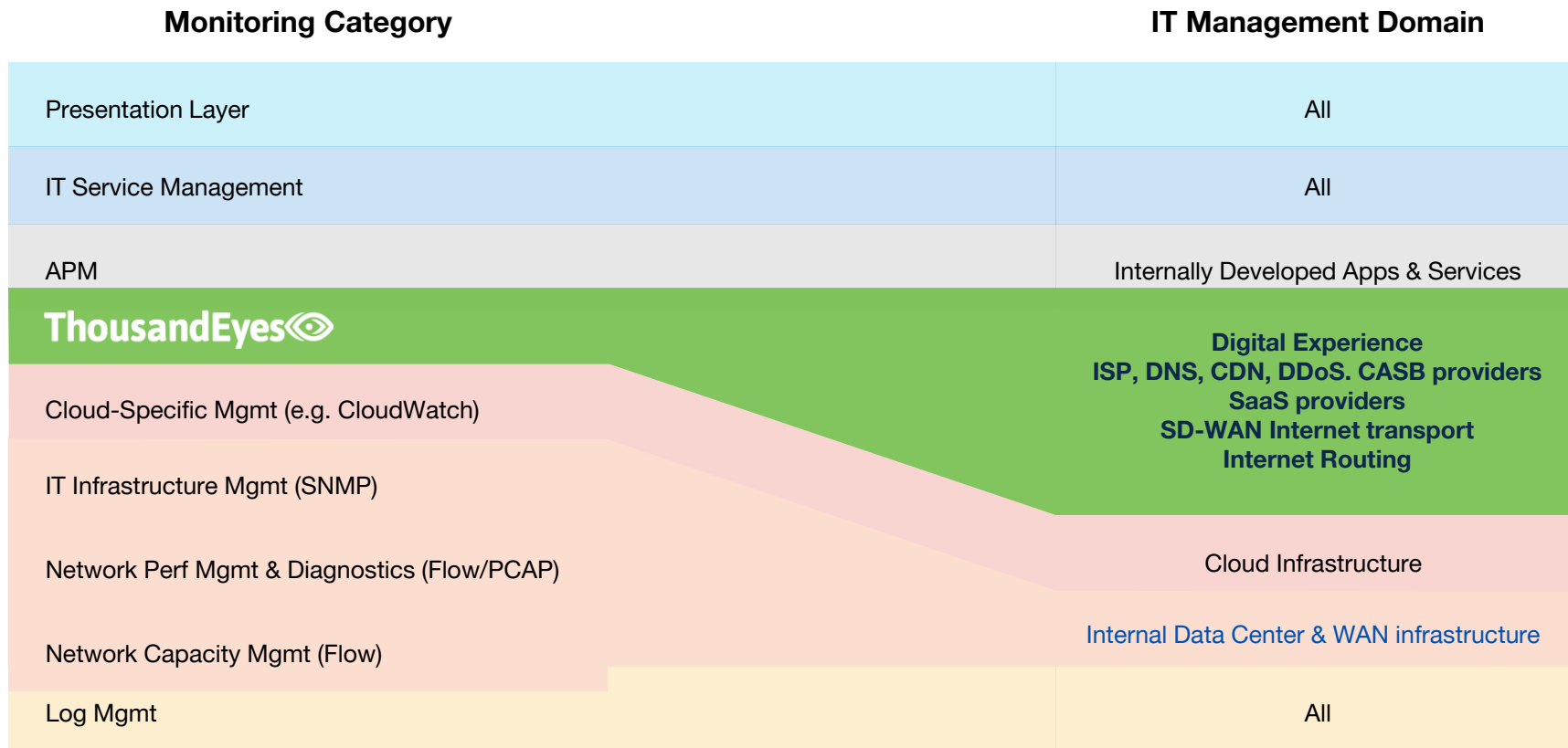
STRUCTURE

Visibility into E2E digital experience is complex





Modern IT Ops Visibility Architecture



The Anatomy of an HTTP Request

There are five distinct phases that we track when fetching a URL: performing a DNS resolution (DNS time), establishing a TCP connection (connect time), performing an SSL handshake (SSL time), sending the request and waiting for the first bytes of the response (wait time), and receiving the full response (receive time). When one of our agents makes a request directly to a webserver, measuring these values is fairly straightforward.

Figure 1 shows a timing diagram of a sample request for www.cnn.com.

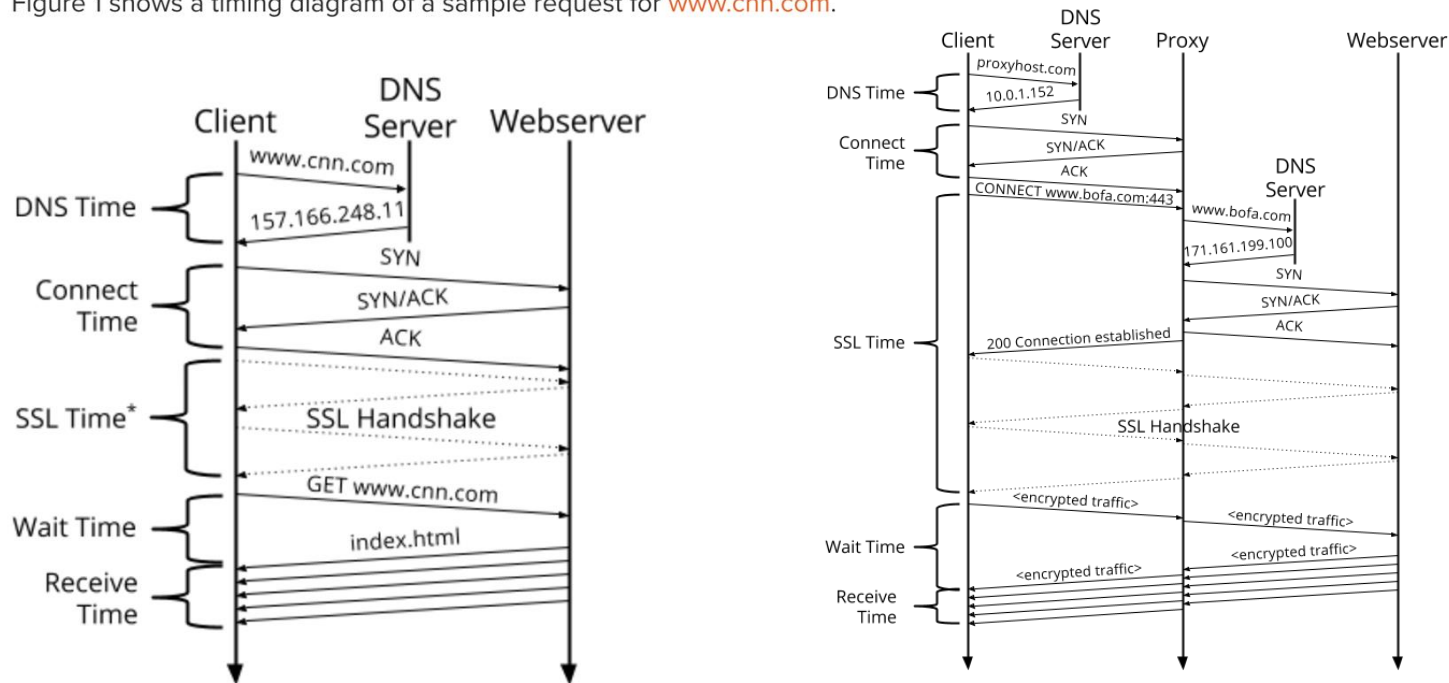
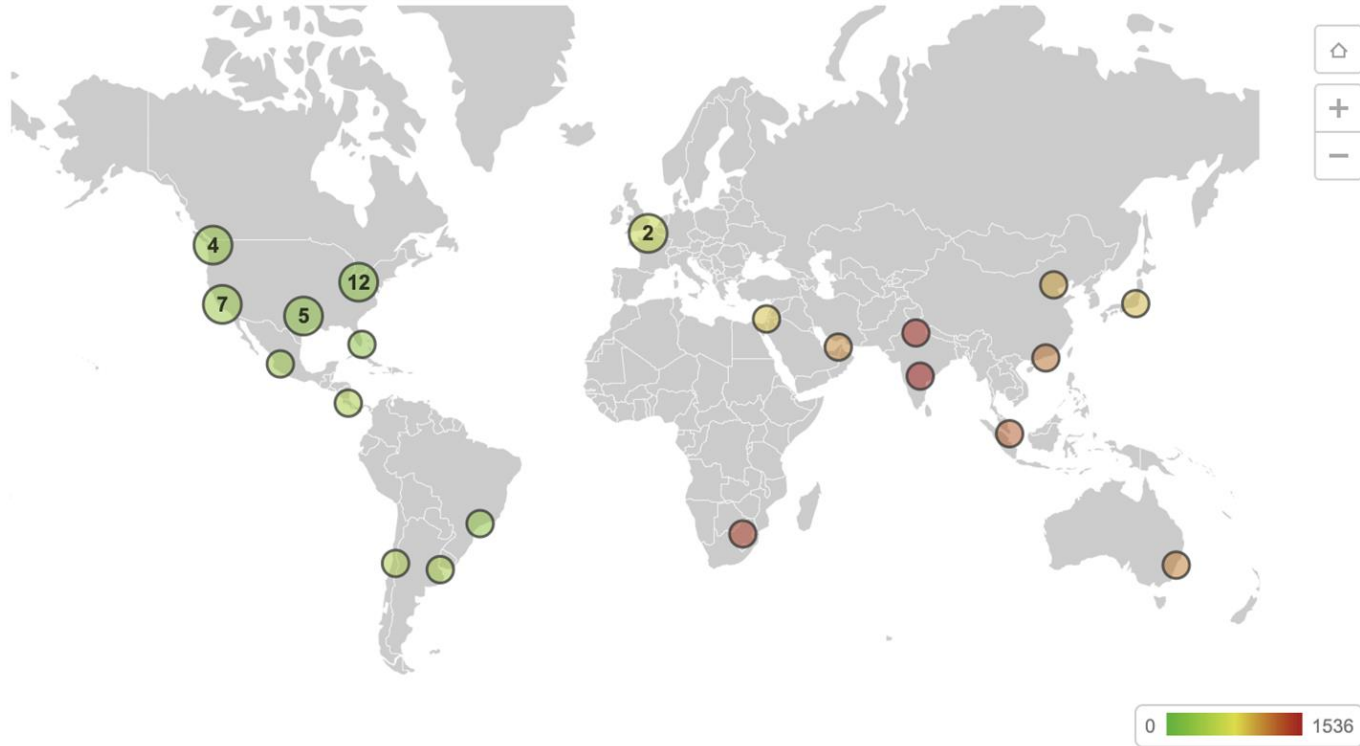


Figure 1: Basic HTTP(S) Request Breakdown

Response Times - Sharepoint Online

Web - HTTP Server — Response Time • Sharepoint - Page Load • 1 hour





FEATURED POST

Twitter Outage Analysis: March 28, 2022

On March 28, 2022, Twitter was rendered unreachable for some users around the globe due to a BGP hijack.

By: [Chris Villemez](#) | April 15, 2022 | 14 min read

READ POST 



How do we make root cause analysis faster and more accurate?



Current Test

Settings

Server

Agent

9 selected tests

All servers

All agents

Run Now

Save

Share

Views

WEB

HTTP Server

NETWORK

Overview

Path Visualization

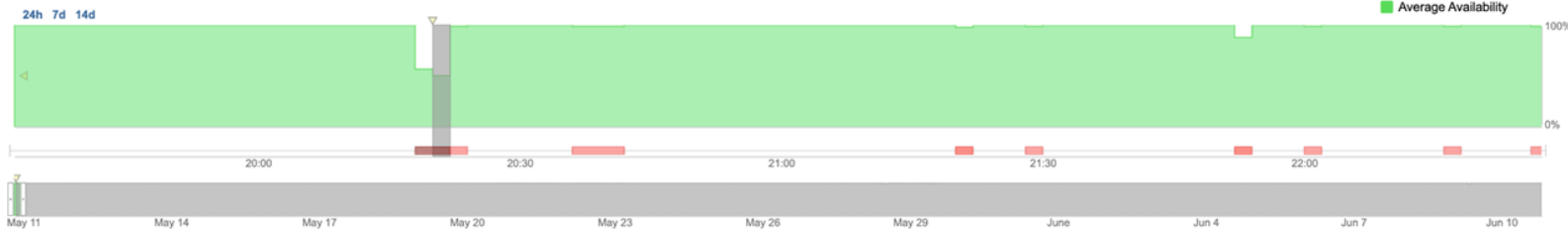
ROUTING

BGP Route Visualization

9 Target URLs

Metric

Availability



Showing data from Tue, May 10 20:20 - 20:22 UTC (30 days ago)

Latest

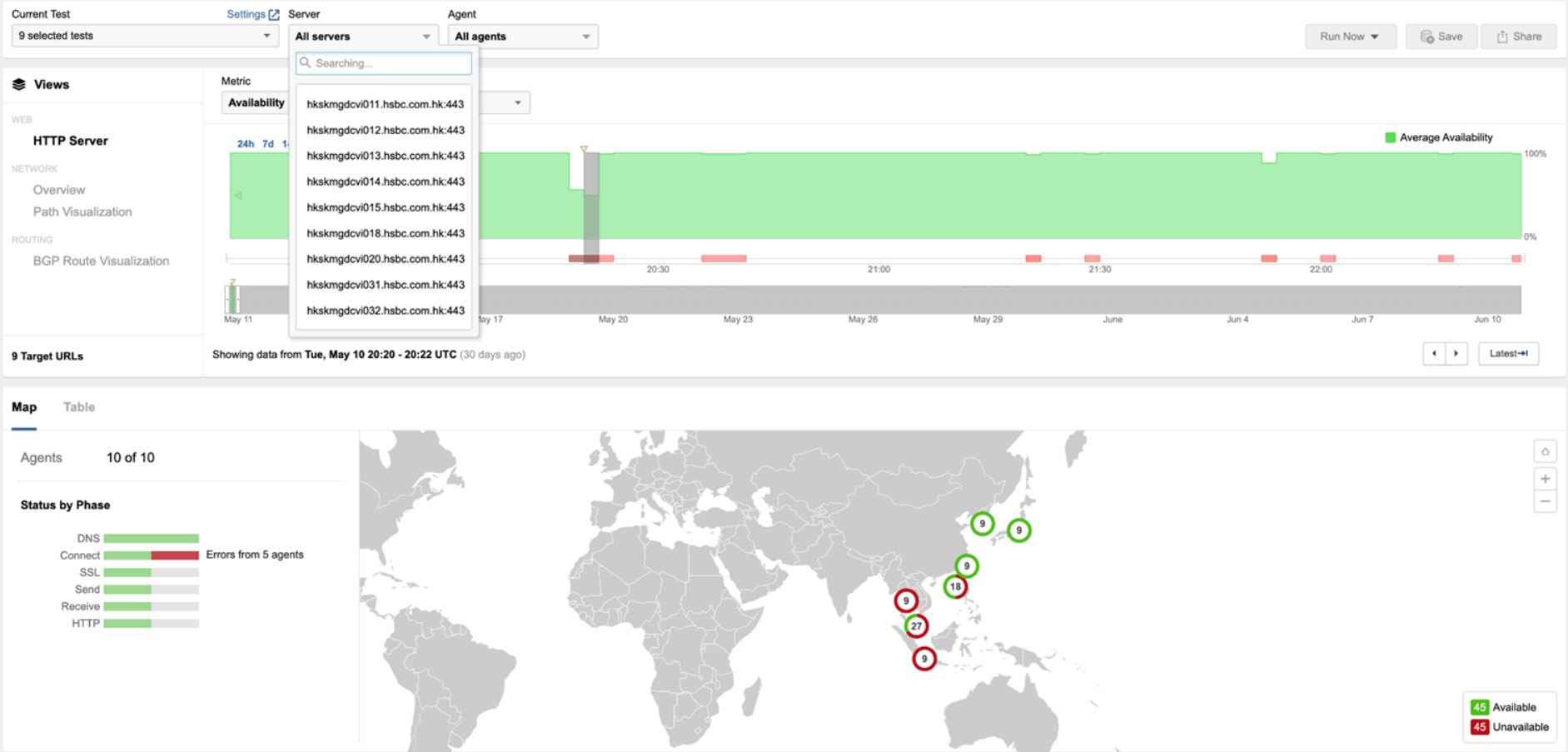
Map

Table

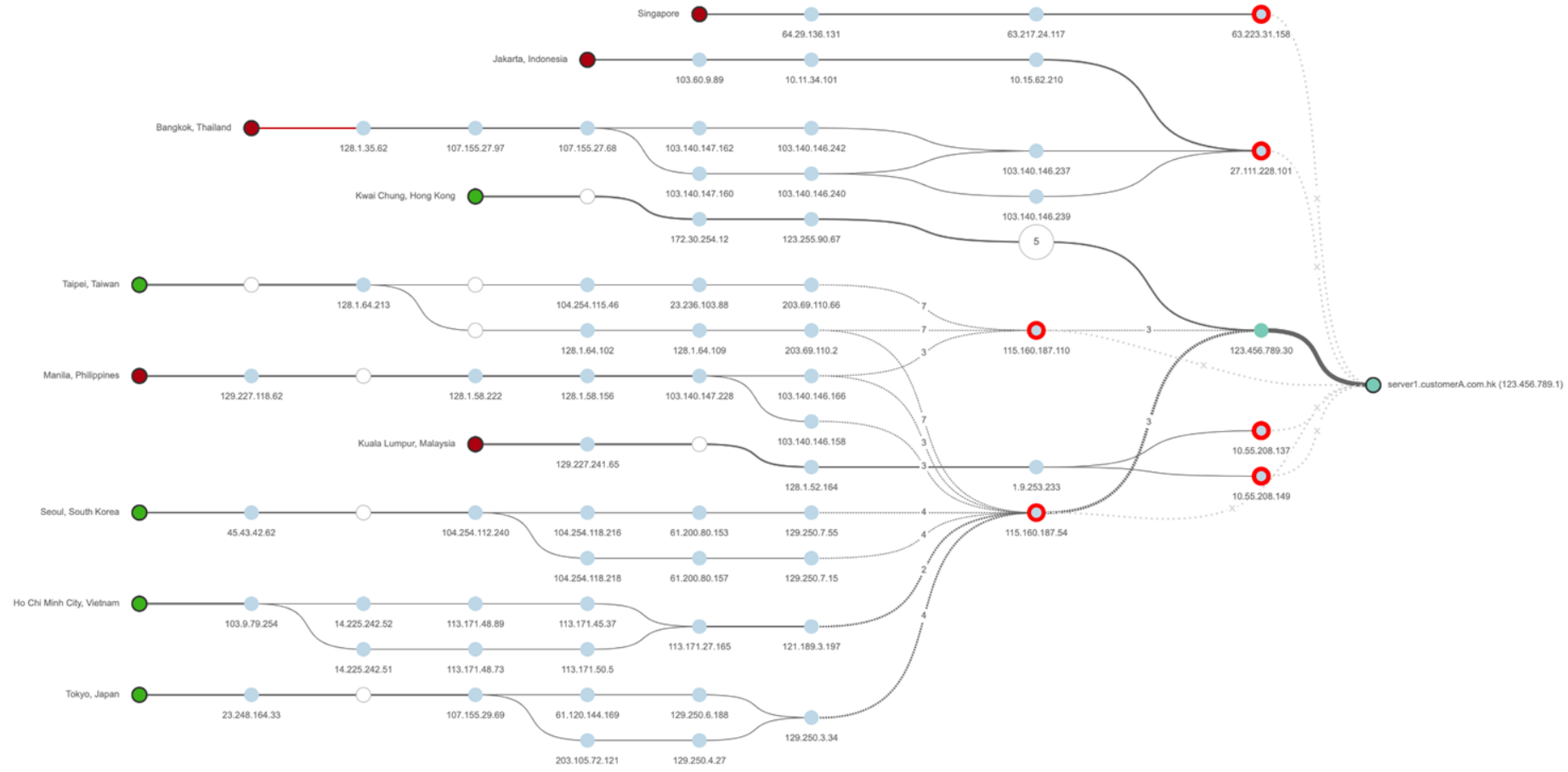
Agents 10 of 10

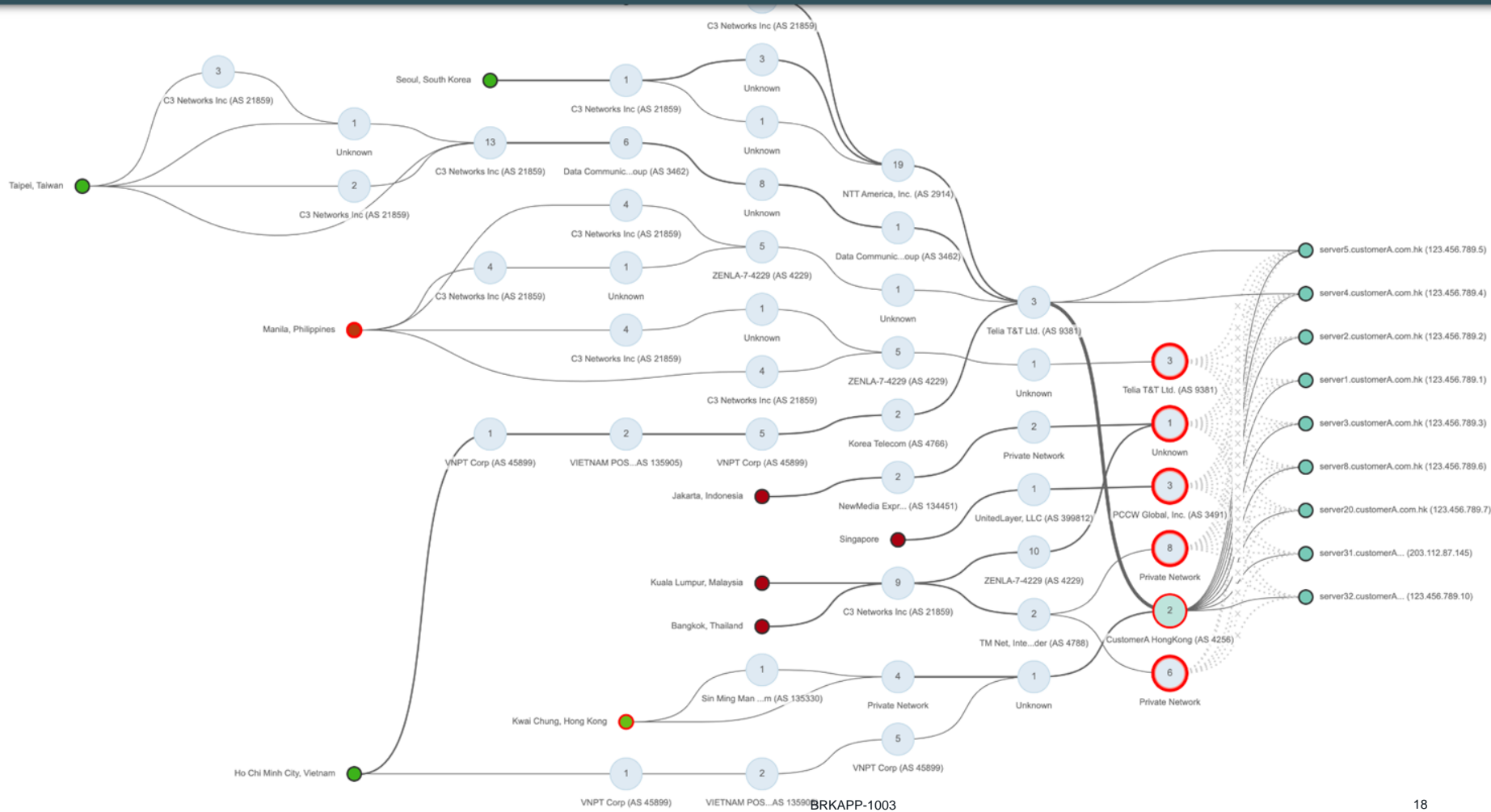
Status by Phase



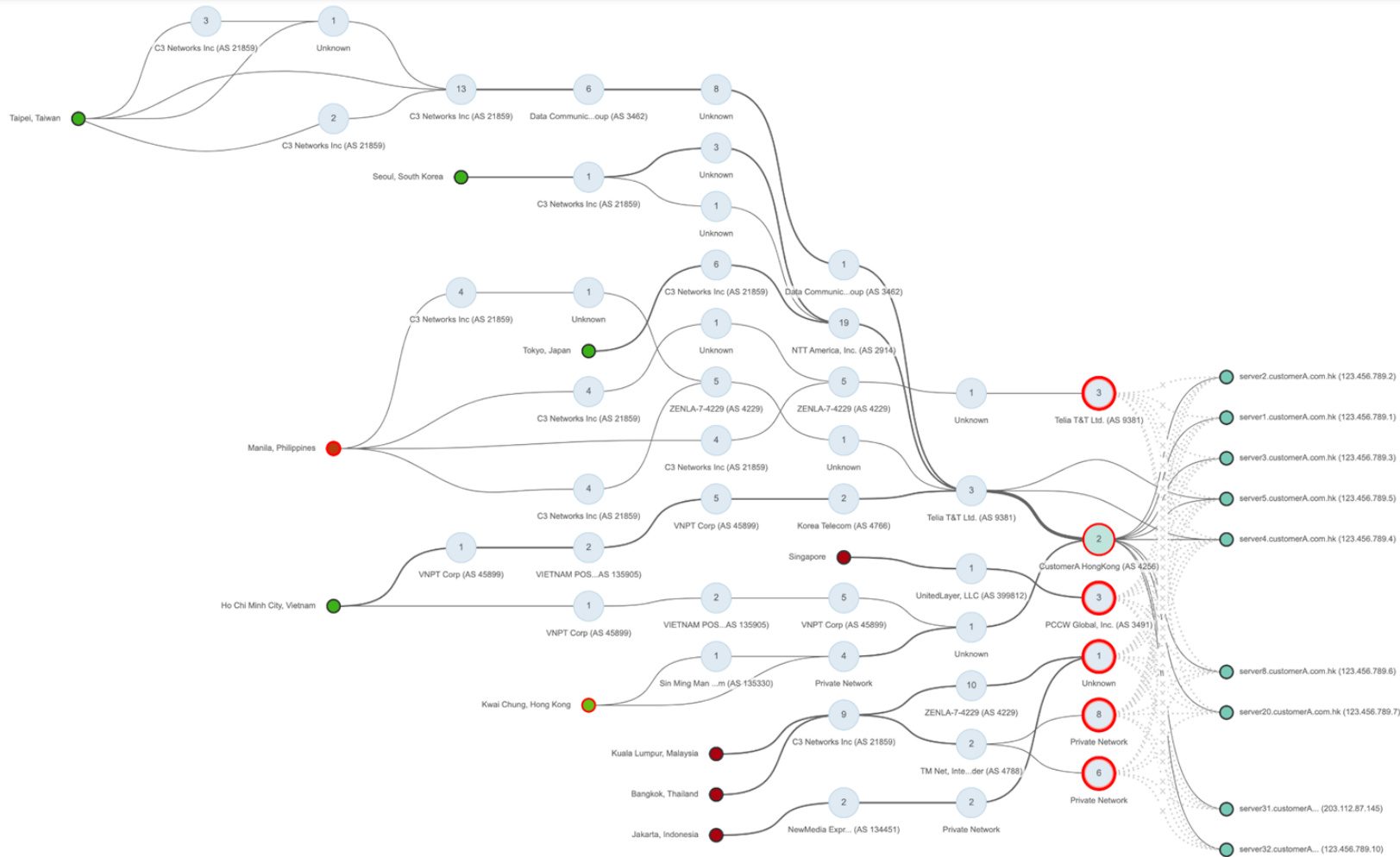


< Undo









Events

Events

Cloud & Enterprise Agents

Endpoint Agents

Devices

Internet Insights

WAN Insights

Dashboards

Alerts 11

Reports

Sharing

Account Settings

Events > Event Details

Critical Share 0

Network (PoP)

100% network loss detected in TATA COMMUNICATIONS (AMERICA) INC in Bangalore affecting 3 tests.

Event Summary

Date

April 26, 2022

Start/End Time

08:18 – 08:20 UTC

Duration

2 minutes

Affected Tests

3

Affected Agents

2

Agent Errors

0

Root cause

100% network loss reported from 3 agents running the same tests during the same time period. This problem was isolated in TATA COMMUNICATIONS (AMERICA) INC network.

Help us improve Events. Share feedback.

Event Log

Alerts	Test	Start	End	Affected Agents	Reason
2	SDW-UL Brussels brs1-vw01 TATA 10684... 195.219.227.98 ICMP	2022-04-26 08:18	2022-04-26 08:19	IT-BNG-TE01 (Bangalore, Karnataka, India)	100% network loss reported at lorem ipsum dolor.
0	SDW-UL Bucharest, Romania 130.248.60.3 ICMP	2022-04-26 08:18	2022-04-26 08:20	IT-BNG-TE01 (Bangalore, Karnataka, India) IT-BNG2-TE01 (Bangalore, Karnataka, India)	<div>View Event Snapshot</div>
1	SDW-UL London, UK 130.248.71.3 ICMP	2022-04-26 08:19	2022-04-26 08:20	IT-BNG-TE01 (Bangalore, Karnataka, India) IT-BNG2-TE01 (Bangalore, Karnataka, India)	100% network loss reported at lorem ipsum dolor.

Affected Agents

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Cisco Learning Network

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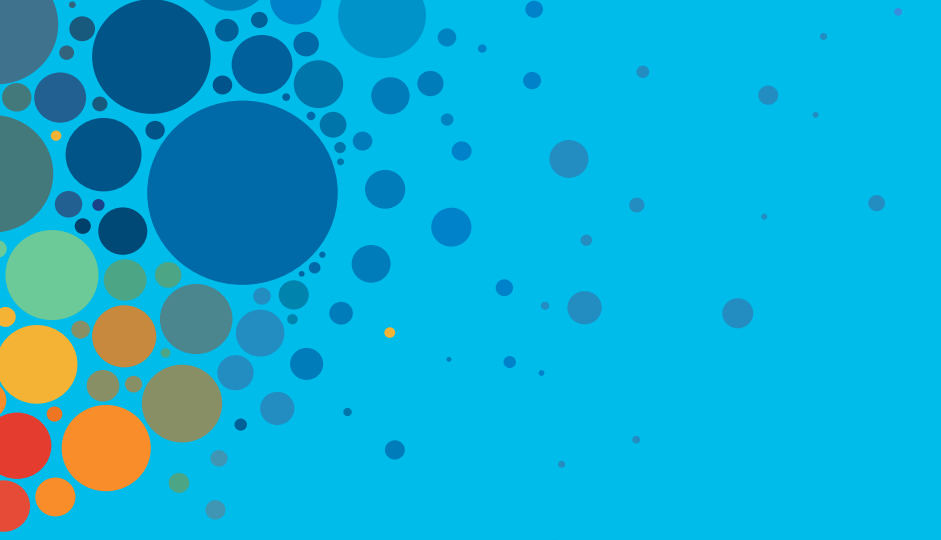
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Thank you

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