



# Juniper MIST Routing Assurance (SaaS)

Vijendra Singh, Reseller at Juniper Networks



**Juniper Paragon**



**Juniper MIST Routing Assurance**

On-prem

SaaS Only

Multi-vendor

Juniper only

Day -0,1,2

Day 2 AIOPS

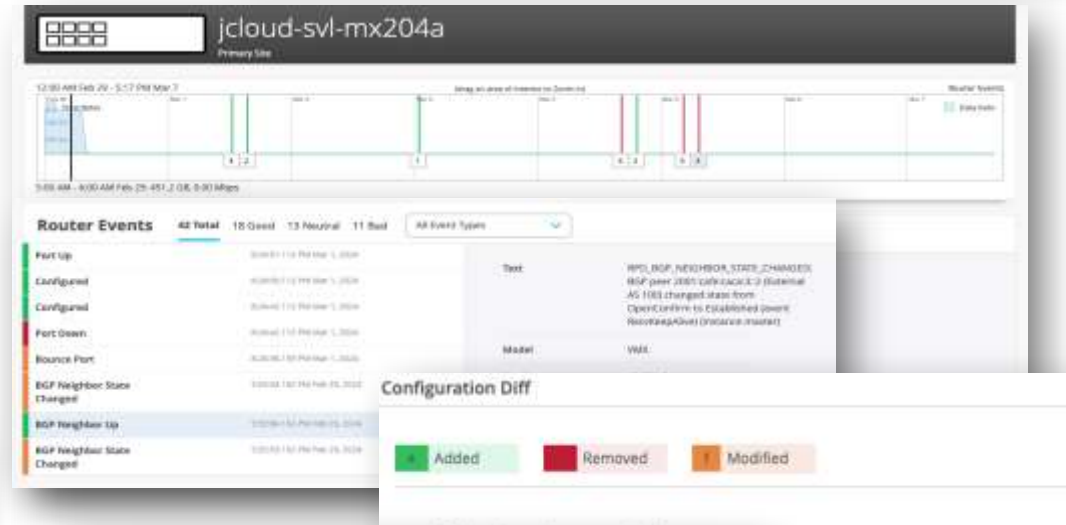
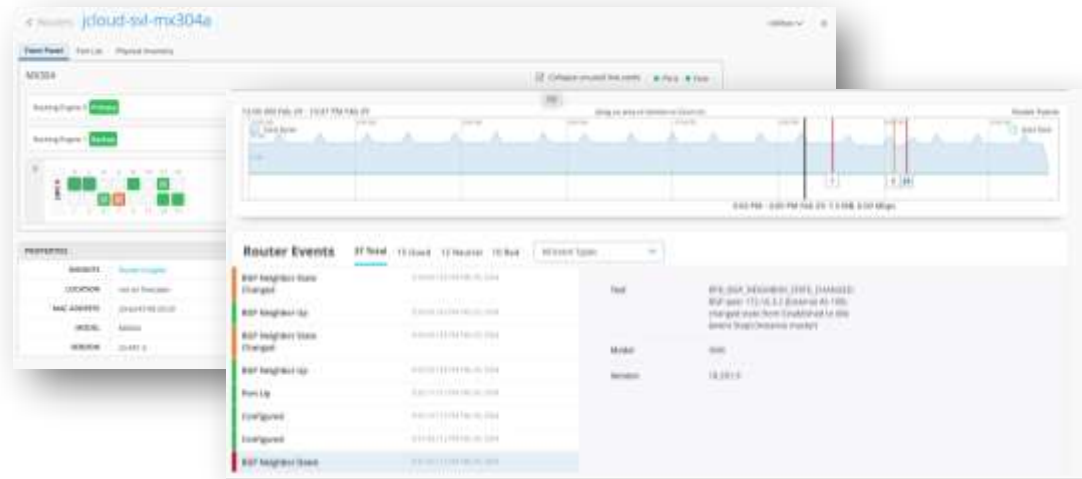
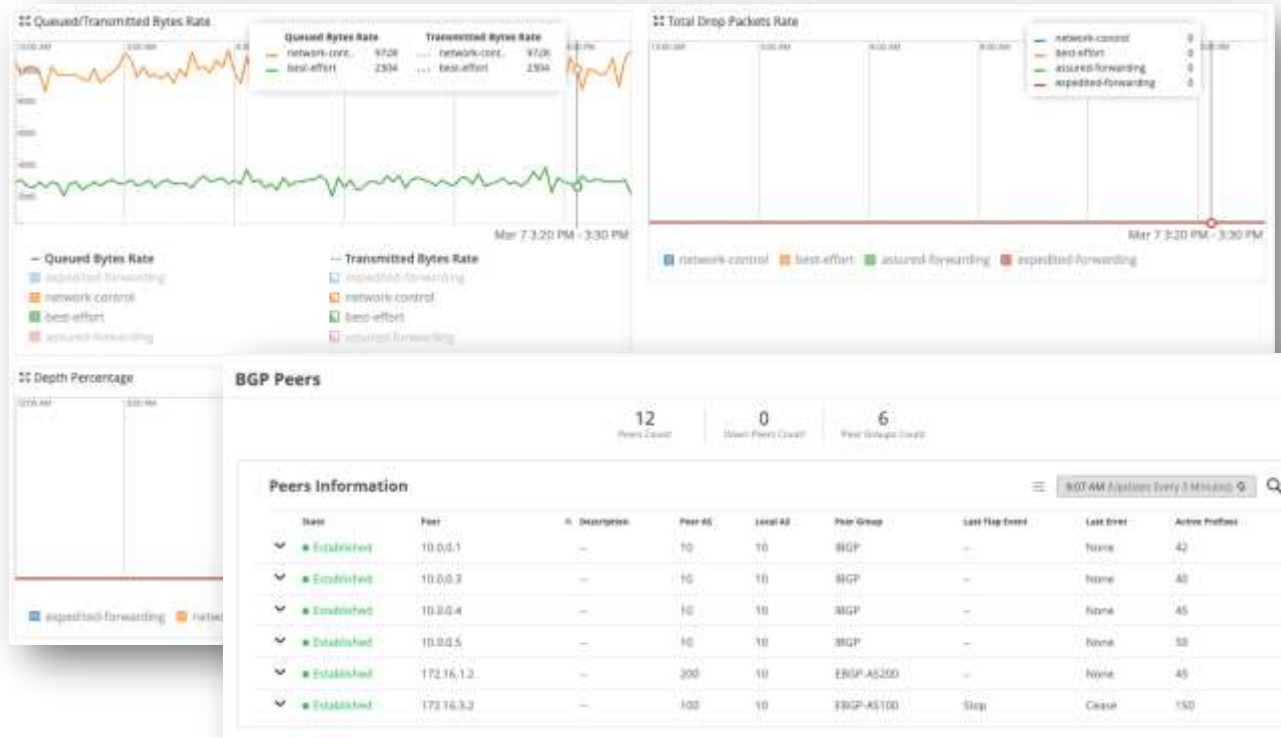
Customizable

Recommended settings

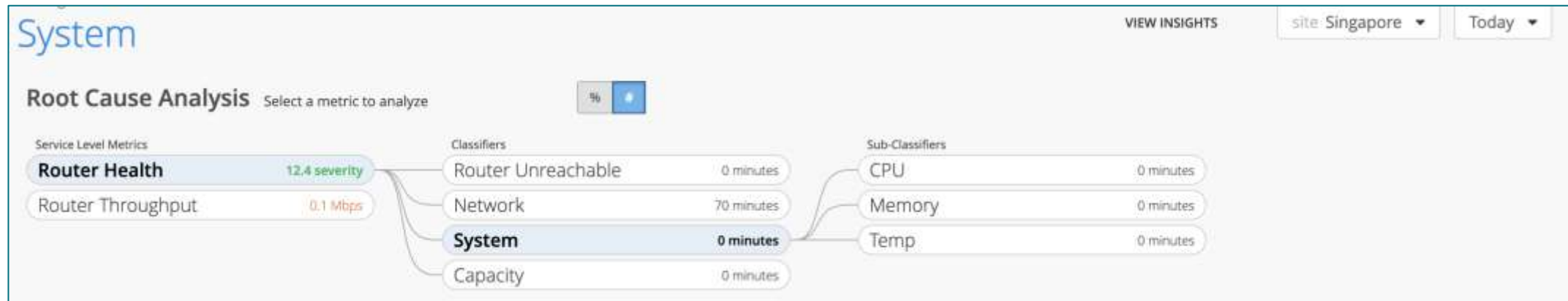
# New Routing Insights

Ease of operation now available for routing

- ✓ Fast Device registration and onboarding
- ✓ Routing Insights (IGP, BGP, CoS, queues, Device health metrics ...)
- ✓ Events / alarms (with Site Aggregation)
- ✓ Service Level Experience metrics



# Root Cause Analysis



# Router Onboarding



Status	Name	MAC Address	Model	Site	Serial Number
<input type="checkbox"/> Connect it	access-pe4	2c:6b:f5:02:20:00	VMX	Primary Site	VMX-4059C9D1

- Inventory → Adopt Router

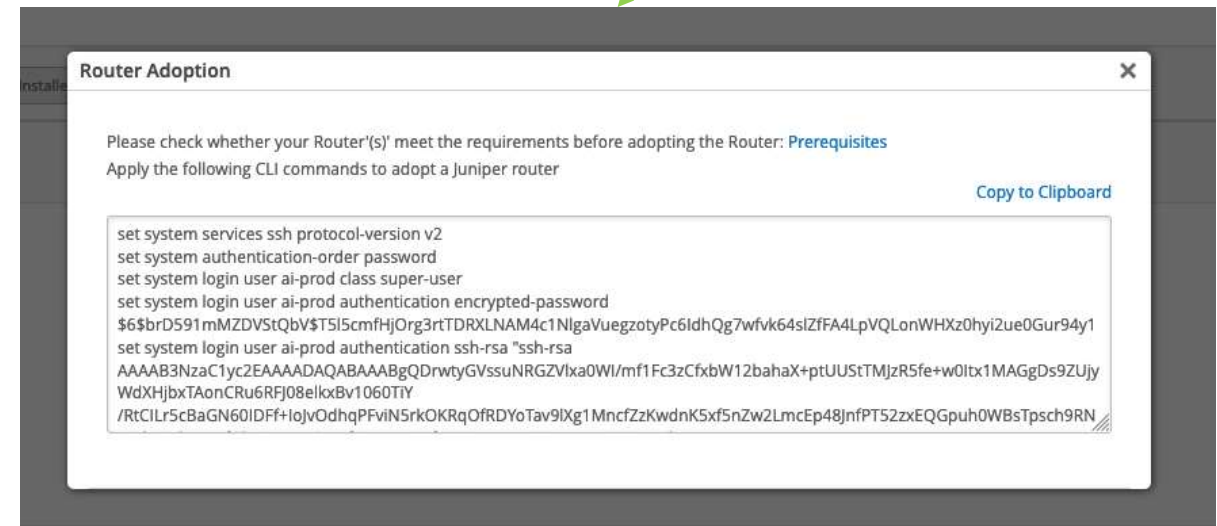
- Copy onboarding commands and apply to the router.

- Not onboarded?

- Check connectivity from device → cloud. Telnet `pe-term.ai.juniper.net` port **2200**
- Already in an Org? Devices can only be onboarded into one Org per deployment.

- Assign to Site

- Connectivity and Stats are not available until the device is assigned to a Site.



**Router Adoption**

Please check whether your Router(s) meet the requirements before adopting the Router: [Prerequisites](#)

Apply the following CLI commands to adopt a Juniper router [Copy to Clipboard](#)

```
set system services ssh protocol-version v2
set system authentication-order password
set system login user ai-prod class super-user
set system login user ai-prod authentication encrypted-password
$6$brD591mMZDVstQbV$T5I5cmfHjO3rtTDRXLNAM4c1NlgaVuegzotyPc6ldhQg7wfvk64sIZfFA4LpVQLonWHXz0hyi2ue0Gur94y1
set system login user ai-prod authentication ssh-rsa "ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAQGDwtyGVssuNRGZVlxa0WI/mf1Fc3zCfxbW12bahaX+ptUUScTMjzR5fe+w0ltx1MAGgDs9ZUjy
WdXHjbxTAonCRu6RFJ08elkxv1060TY
/RtCilr5cBaGN60IDff+lojvOdhqPFviN5rkOKRqOfRDYoTav9lXg1MnccZzKwdnk5xf5nZw2LmcEp48JnfPTS2zxEQGpuh0WBsTpsch9RN
```

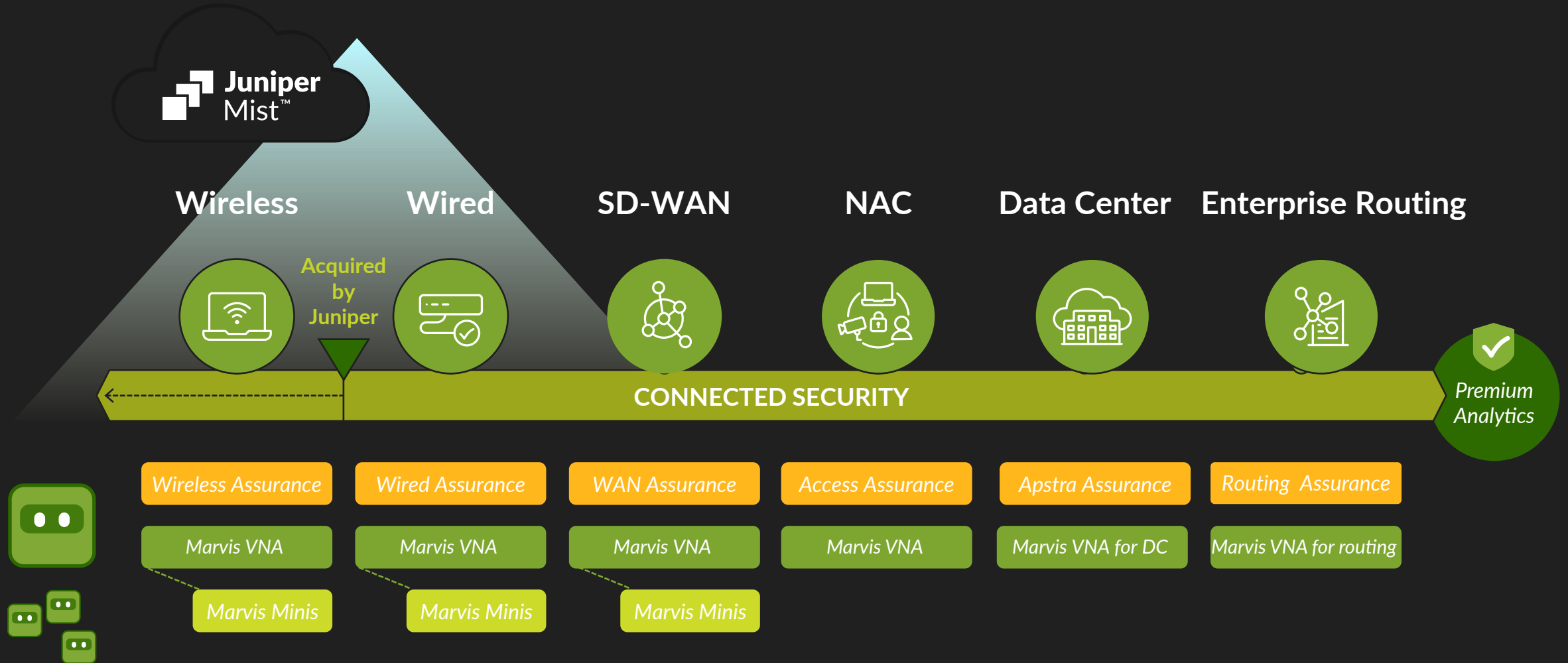


# Juniper MIST Full Stack Portfolio

Vijendra Singh, Reseller at Juniper Networks

# Enterprise Blueprint:

*Extending common cloud and VNA across the Juniper portfolio*



# Why are we better?

## USER EXPERIENCE OUTCOMES

Deploy Networks  
10x Faster

Get extreme  
visibility Client to  
Cloud

Reduce Trouble  
Tickets by > 80%

Keep Networks  
Always up to date

Do more with less  
with Industry  
leading AIOps

## PORTFOLIO DIFFERENTIATION

### CLOUD /AIOps

Scalability & Resiliency  
Deliver a consistent  
experience whether it is a  
10 AP - 300K AP

### WIRELESS

Dynamic PCAP  
Marvis Minis  
AI-Driven RRM

### WIRED

Day 0 Automation:  
Templates & DPC  
Dynamic PCAP, Marvis  
Minis & Actions

### SD-WAN

Tunnel-free  
Zero-Trust  
Day 2 simplicity with SLE,  
Dynamic PCAP,  
Application visibility

### CLOUD NAC

Eliminate Day 0  
Massive improvement in  
Day 2 activities over ISE  
& Clearpass





# Juniper MIST AI-Native Wired Assurance

Vijendra Singh, Reseller at Juniper Networks

# Campus and Distributed Branch Architectures



Small/Medium  
Campus

## Virtual Chassis/ EVPN Multihoming (EZ-LAG)

- Ideal for SMB use cases.
- Ideal for topologies transitioning from legacy/proprietary technologies to EVPN based fabric i.e. STP, MC-LAG.



Campus/HQ

## Campus Fabric Core- Distribution

- Ideal for medium to large scale topologies.
- Recommended for use cases where Access layer is L2 with standard LACP.



Campus/HQ

## Campus Fabric IP Clos

- Micro segmentation (GBP) use cases.
- Greenfield and L3/VXLAN at the Access Layer.



E.g.: Big box retail store/Small Campus

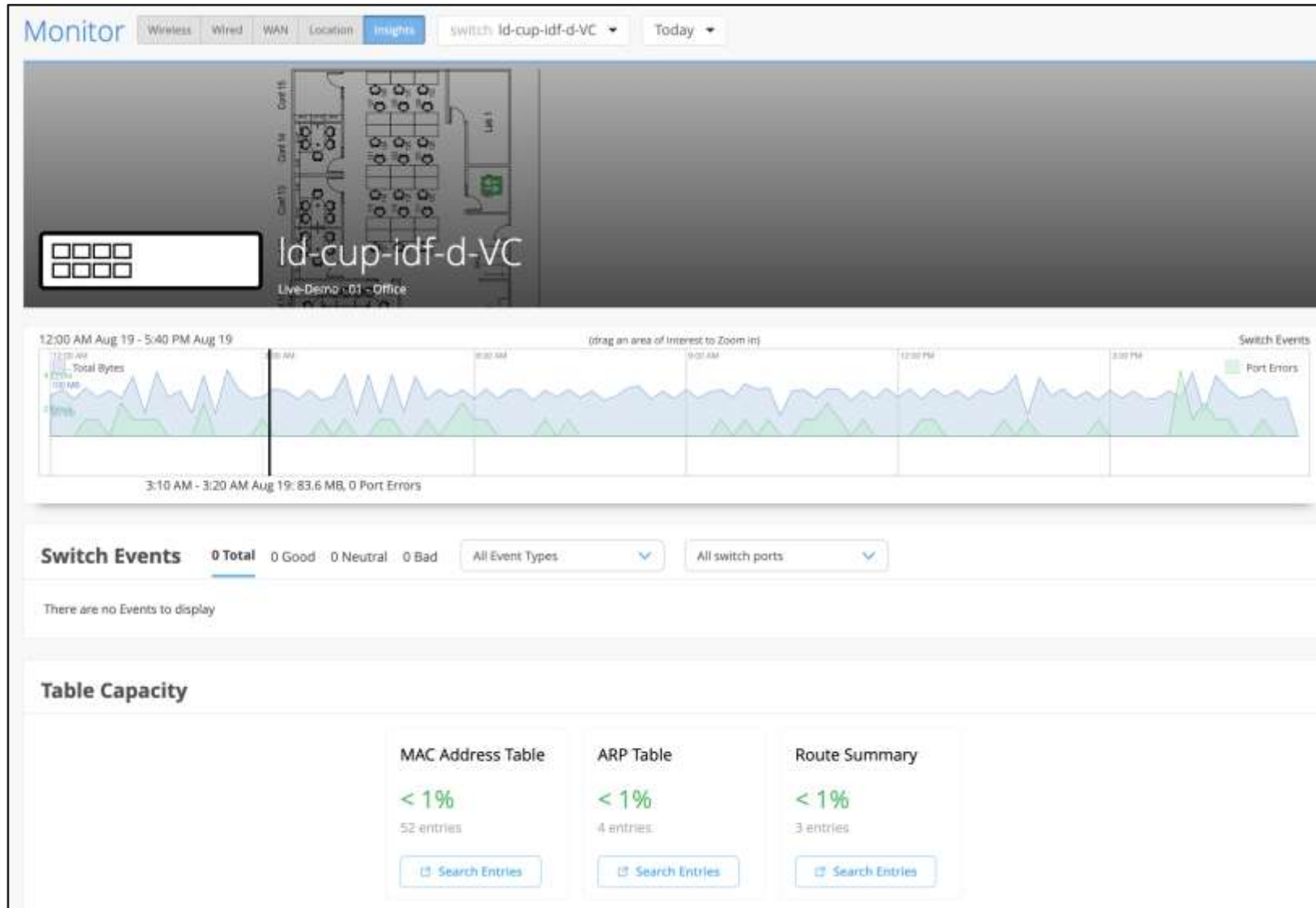


E.g.: University/Large Campus



E.g.: Hospital/Large Enterprise

# Switch Capacity



# Switch Capacity

Search Entries

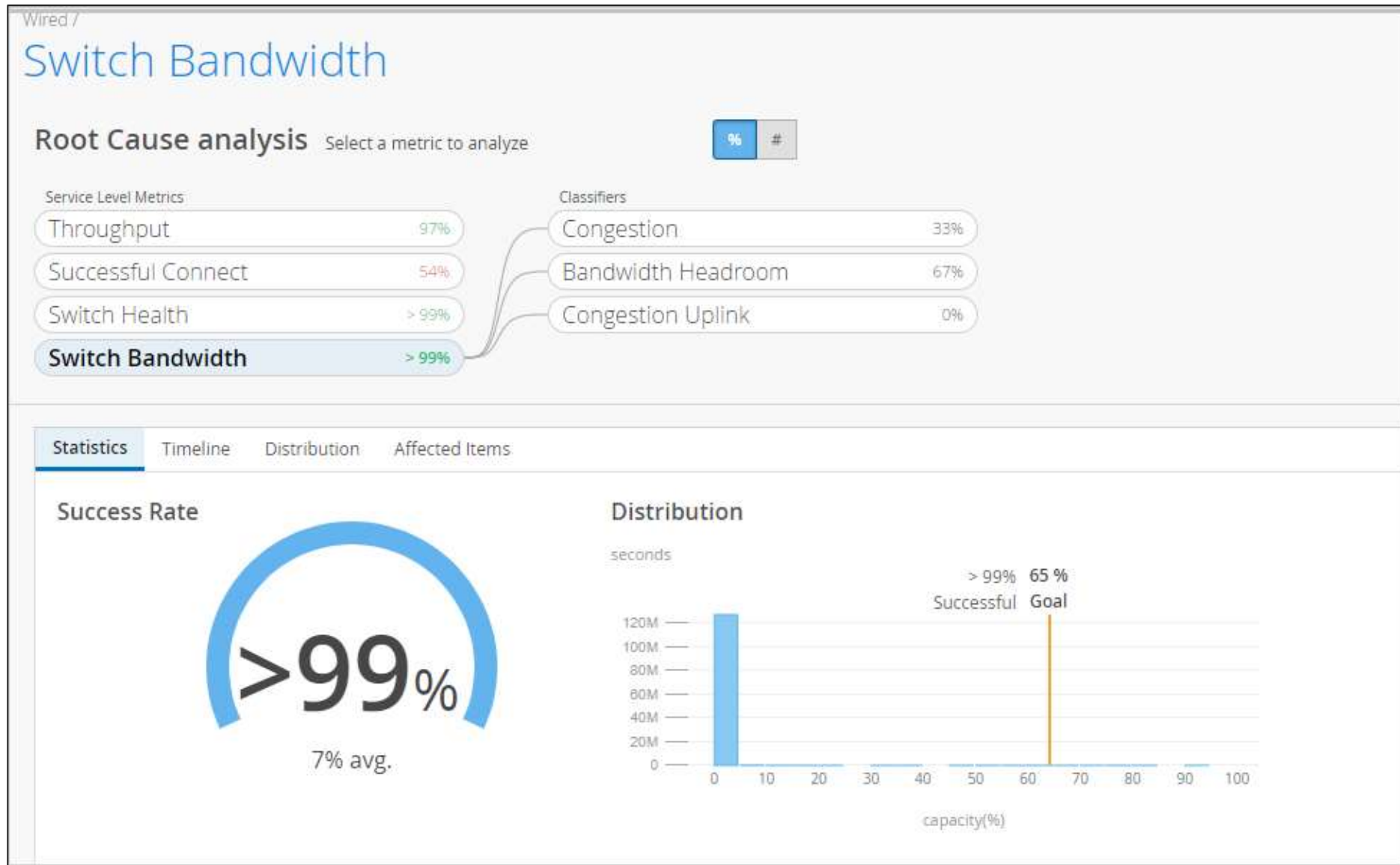
MAC Table **ARP Table** Route Table

IP Address:  All VRFs:  All Port IDs:

```
-----New Search-----
MAC Address      Address      Interface    Flags
ac:7             :37 10.102.70.252 vme.0       none
fc::             :53 10.102.70.253 vme.0       none
00:c             :0b 10.102.70.254 vme.0       none
Total entries: 3
```



# Bandwidth SLE





# Juniper Mist WAN Assurance (SD-WAN)

Vijendra Singh, Reseller at Juniper Networks

# WAN Edge SSR Speed Test

WAN Edges : Sunnyvale-Spoke

SSR

ADVANCED SECURITY

1 Port Selected ge-0/0/0

STATISTICS	
SPEED	1G
POE	Disabled
FULL DUPLEX	Yes
BPS (TX/RX)	0 / 0
PACKETS (TX/RX)	21 M / 22 M
BYTES (TX/RX)	3.5 GB / 6 GB
STP	--
MAC ADDRESS	52:54:00:7b:0f:bb

NETWORKS							
Name	Interface	VLAN	IP Address	Address Mode	Bytes (TX/RX)	Packets (TX/RX)	Speed Test
broadband	ge-0/0/0	0	128.128.128.14/29	Dynamic	3.3 GB / 5.8 GB	21.1 M / 21.2 M	Run Test

## On-demand Speed test

1. Select WAN interface from front panel
2. View historical tests
3. Select Run Test to begin an on-demand speed test

## Scheduled Speed test

1. From Site settings select day/time to run speed test

# WAN Speed Test Demo

The screenshot displays the Juniper Mist management interface for a WAN Edge device named 'Sunnyvale-Spoke'. The interface is divided into several sections:

- Header:** Shows 'Juniper Mist', 'ACME', 'Change language (en)', and 'MON 2:53 PM'.
- Left Navigation:** Includes Monitor, Marvis™, Clients, Access Points, Switches, WAN Edges (selected), Mist Edges, Private 5G, Location, Analytics, Site, and Organization.
- Device Overview:** Shows 'SSR' with status indicators for CPU and Memory, and three green status icons for interfaces ge-0/0/0, ge-0/0/1, and ge-0/0/2.
- Advanced Security:** Includes URL Filtering and IDP.
- PROPERTIES:**

INSIGHTS	WAN Edge Insights
LOCATION	not on floorplan
MAC ADDRESS	02:00:01:54:b4:1b
MODEL	SSR
VERSION	6.3.0-59.r1
HARDWARE MODEL	QEMU - Standard PC (Q35 + ICH9 2009)
TEMPLATE	Small-Spoke
HUB PROFILE	None
- STATISTICS:**

STATUS	Connected
UPTIME	12d 22h 46m
LAST SEEN	May 20, 2024 2:49:20 PM
LAST CONFIG	Configured - May 20, 2024 1:55:16 PM
- DHCP STATISTICS:**

Usage: Leased IPs 1.3%, Available IPs 98.7%

Pool Name	Leased IPs	Total IPs
Corp-User	1	101
Guest	0	29
IoT	1	23
- SPEED TESTS:**

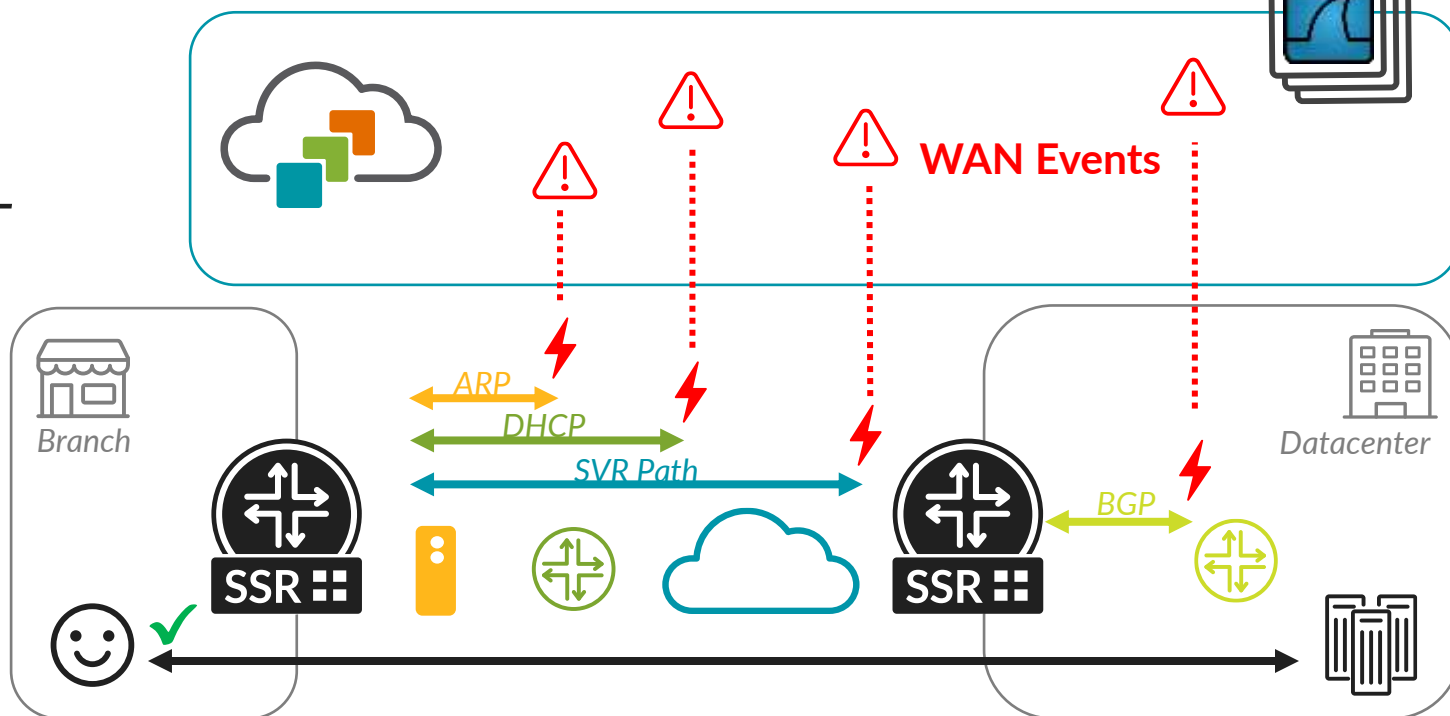
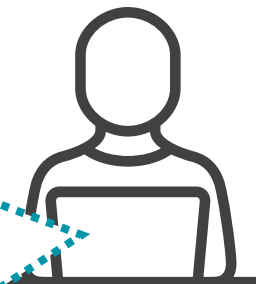
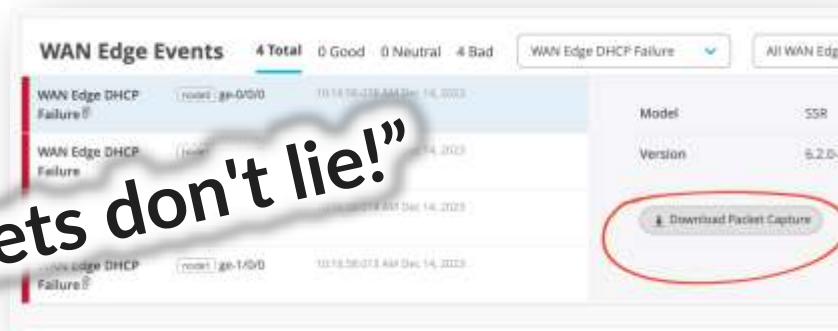
Run Start Time	Type	Progress	Download	Upload	Latency	Interface	VLAN
12:01:27 PM, May 20	Scheduled	Succeeded	57.13 Mbps	18.35 Mbps	18 ms	ge-0/0/0	0
- TOPOLOGY DETAILS:** Includes a search filter box.



# WAN Dynamic PCAP

- *SSR gathers packet captures around key triggers*
- *Relevant packets sent to Mist along with event telemetry*
- *PCAP downloads associated with events at your fingertips*
- *Simplify debugging with on-the-wire proof*

**“Packets don't lie!”**



# WAN Dynamic PCAP Demo

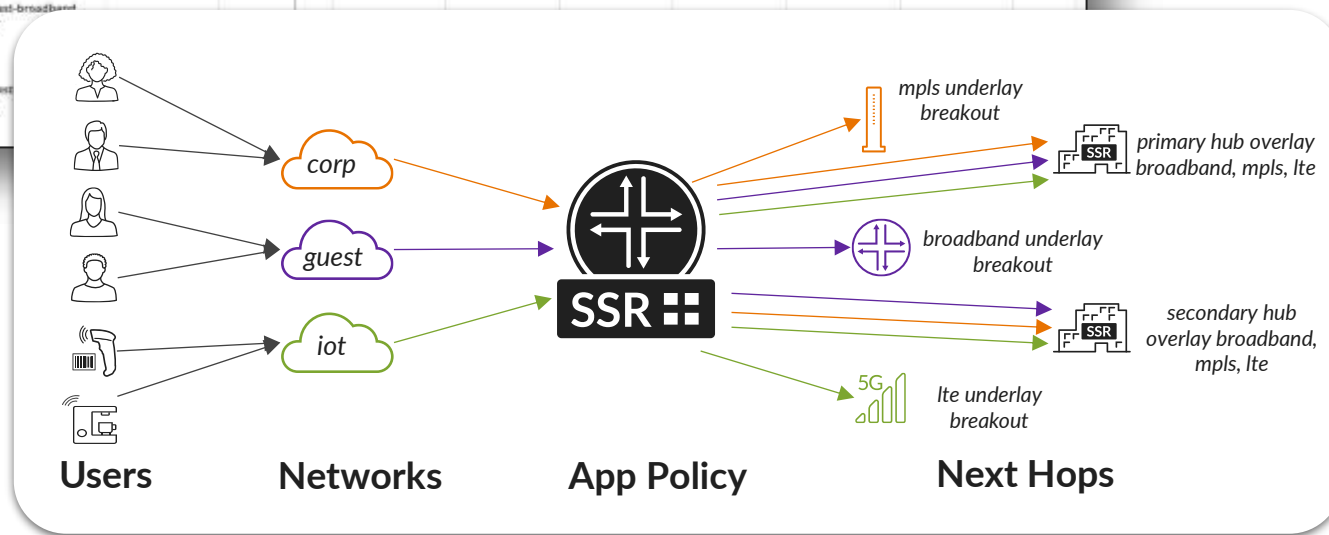
The screenshot displays the Juniper Mist ACME Monitor interface. The left sidebar contains navigation options: Monitor, Marvis™, Clients, Access Points, Switches, WAN Edges, Mist Edges, Private 5G, Location, Analytics, Site, and Organization. The main content area is titled 'Monitor' and includes tabs for Wireless, Wired, WAN, Location, and Insights. The current view is 'WAN' and shows 'Overall Service' health. A table lists 9 sites with their respective metrics for WAN Edge Health, WAN Link Health, and Application Health.

Site	Avg WAN Edge Count	Avg Client Count	Overall Service	WAN Edge Health	WAN Link Health	Application Health
DC East	2	0	52%	66%	38%	--
DC West	1	0	79%	58%	99%	--
North Bend			--	--	--	--
Cloud Azure West			--	--	--	--
Cloud Azure East			--	--	--	--
Cloud AWS West			--	--	--	--
Cloud AWS East			--	--	--	--
Las Vegas	2	4	78%	67%	68%	100%
Sunnyvale	1	6	92%	99%	76%	100%

# App Routing Insights



- ✓ See Session Smart Routing in action!
- ✓ Visibility into user experience being saved over time
- ✓ Key insights into:
  - **How much** traffic is arriving for apps
  - **Who** is it coming from
  - **Where** is the traffic being sent
  - **What** is affecting path selection
    - ARP unresolved
    - No address from DHCP
    - Dynamic routing protocol change
    - SLA not met
    - Path down
    - Probe down
    - Port down
    - Config change

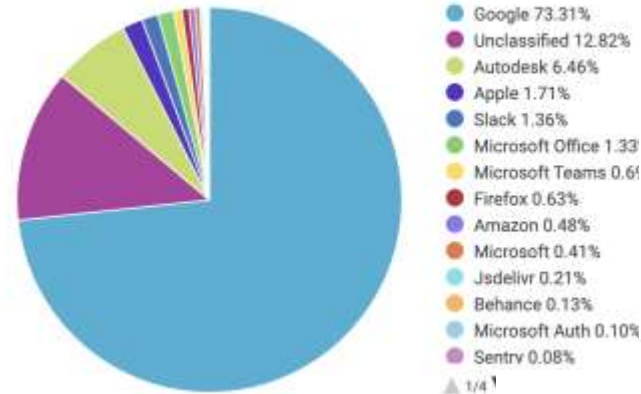


# Security Assurance Insights in Premium Analytics

- ✓ *Global Security Insights*
- ✓ *Attack trends and summary*
- ✓ *Detailed IP source/dest info*
- ✓ *Scheduled delivery of PDF/CSV via email*

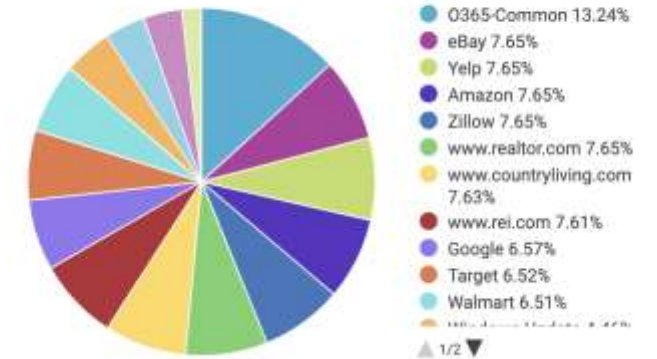
*Key differentiator: Living dashboards that may be customized based upon desired filters*

Top Business Apps

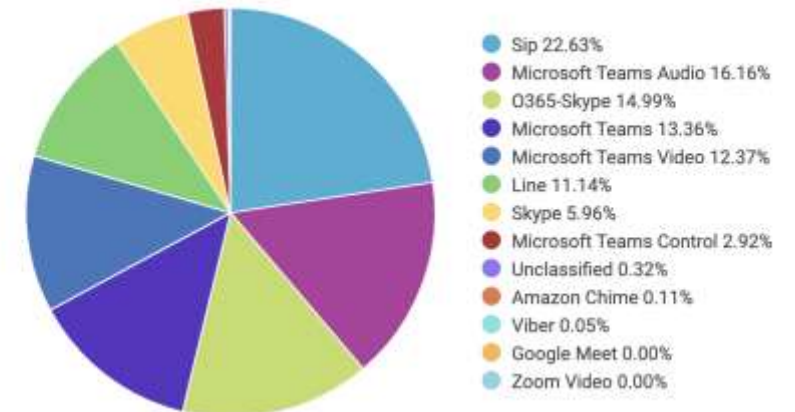


Top URL Blocked Events by Application

Please click on the chart to view additional details



Top Conferencing/Collaboration Apps





# Thank you

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