



Unified Attack Surface Management

with an Attacker's and Defender's View



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Vice President, Product Management
Attack Surface Management – CSAM & EASM
Web App & API Security - WAS



Enterprise TruRisk™ Platform

Measure, communicate, and eliminate cyber risk.

De-risk your business.

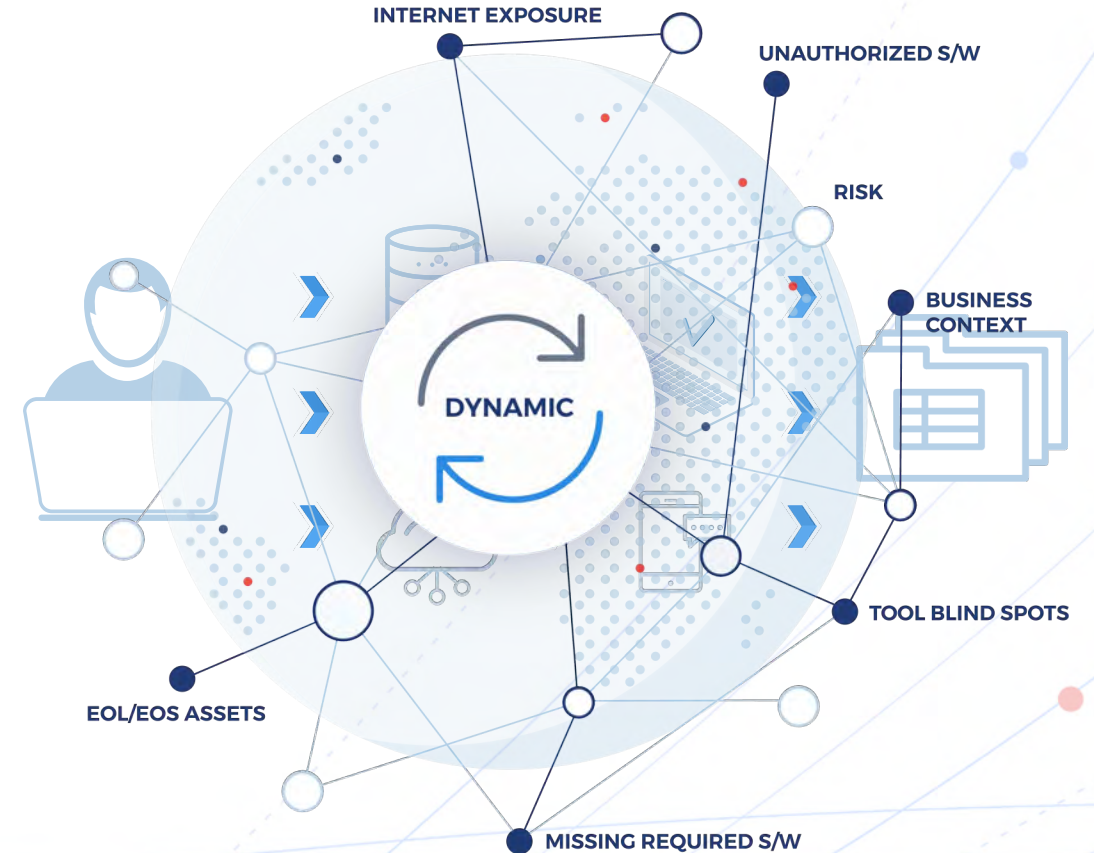
Measure Cyber Risk

First Step in measuring your Cyber Risk begins with Effective Attack Surface Management Program and discover all the Assets

Challenges with IT-Centric Asset Inventory

Outdated and Lacks Cyber Risk Context

- ✗ Laborious, time-consuming task to create & maintain spreadsheets
- ✗ Outdated CMDB lacks real-time context of IT Estate
- ✗ Lack of visibility into all environments (e.g., PCI, OT, Internet-facing) creates blind-spots
- ✗ Unauthorized software, ports, and services
- ✗ Risk of End-of-Support/End-of-Life Software
- ✗ Lacks Cyber Risk Context in the Asset Inventory



How do you perform Inventory Risk Assessment with Inaccurate Inventory ?



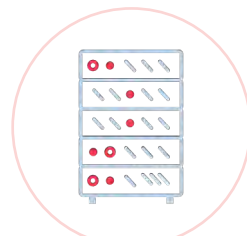
IT Assets



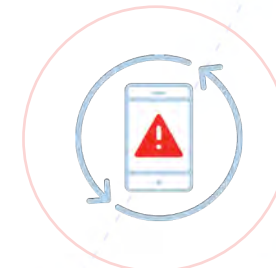
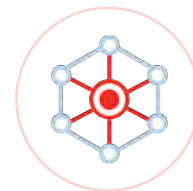
Digital
Certificates



SaaS Apps



Servers



Open Source
Software

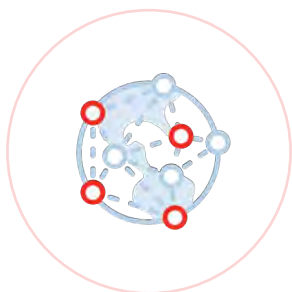


Databases

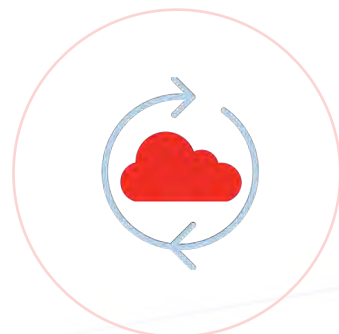
The Attack Surface is Constantly Evolving



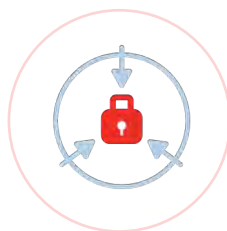
IP Cameras



Endpoints



Cloud Assets



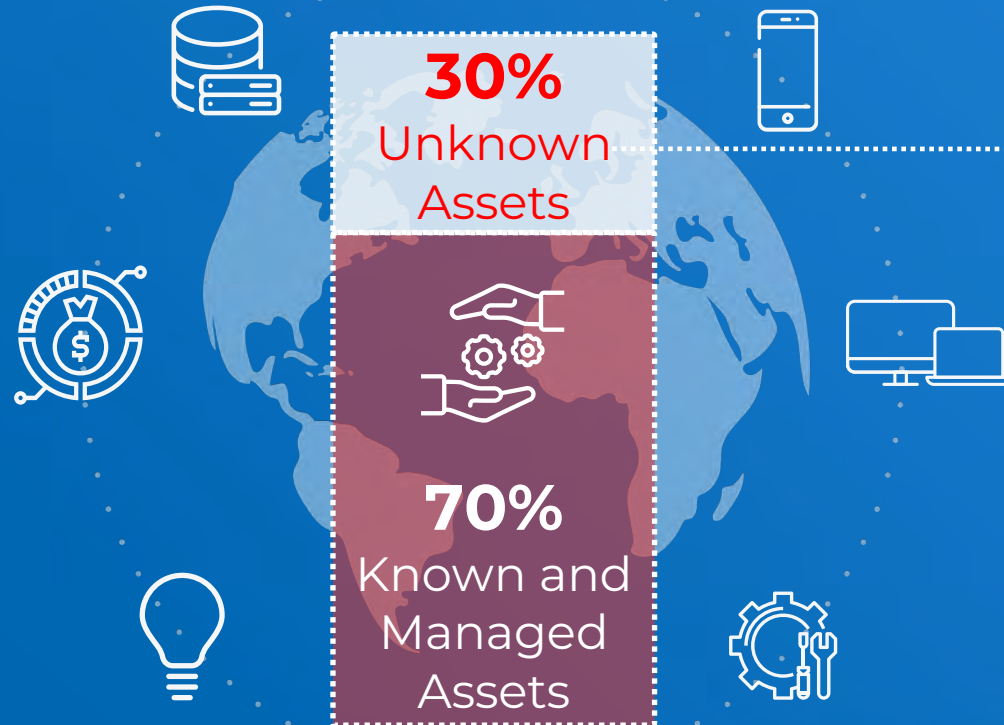
Cloud Apps



First-party Apps

Impact of Unknown Assets

Not Known to Your VM, But Known to Attackers



- **Only 9%** of orgs believe they actively **monitor 100% of their attack surface**
- **43%** of orgs spend more than **80 hours discovering assets**
- **69%** of orgs experience an attack **targeting 'unknown' assets**

Introducing Qualys' Approach to Manage Dynamic Attack Surface

CyberSecurity Asset Management (CSAM)

Internal + External View = Entire Attack Surface

1 Unified Inventory with Cyber Risk & Business Context

Simplify and improve Risk-based vulnerability management, AppSec, Patch management & SOC programs

2 External Attack Surface Management

Continuous discovery, risk assessment, prioritization, and remediation of the entire attack surface



CSAM - Attack Surface Discovery

Use Case Based Flexible and Incremental Discovery Methods

Internal assets

Agent, Scanner, Sensors



Assets from 3rd parties

API-Based Connectors



IOT/OT assets

Passive Network Sensor



External assets

Open-source Tech & Qualys Internet scanner

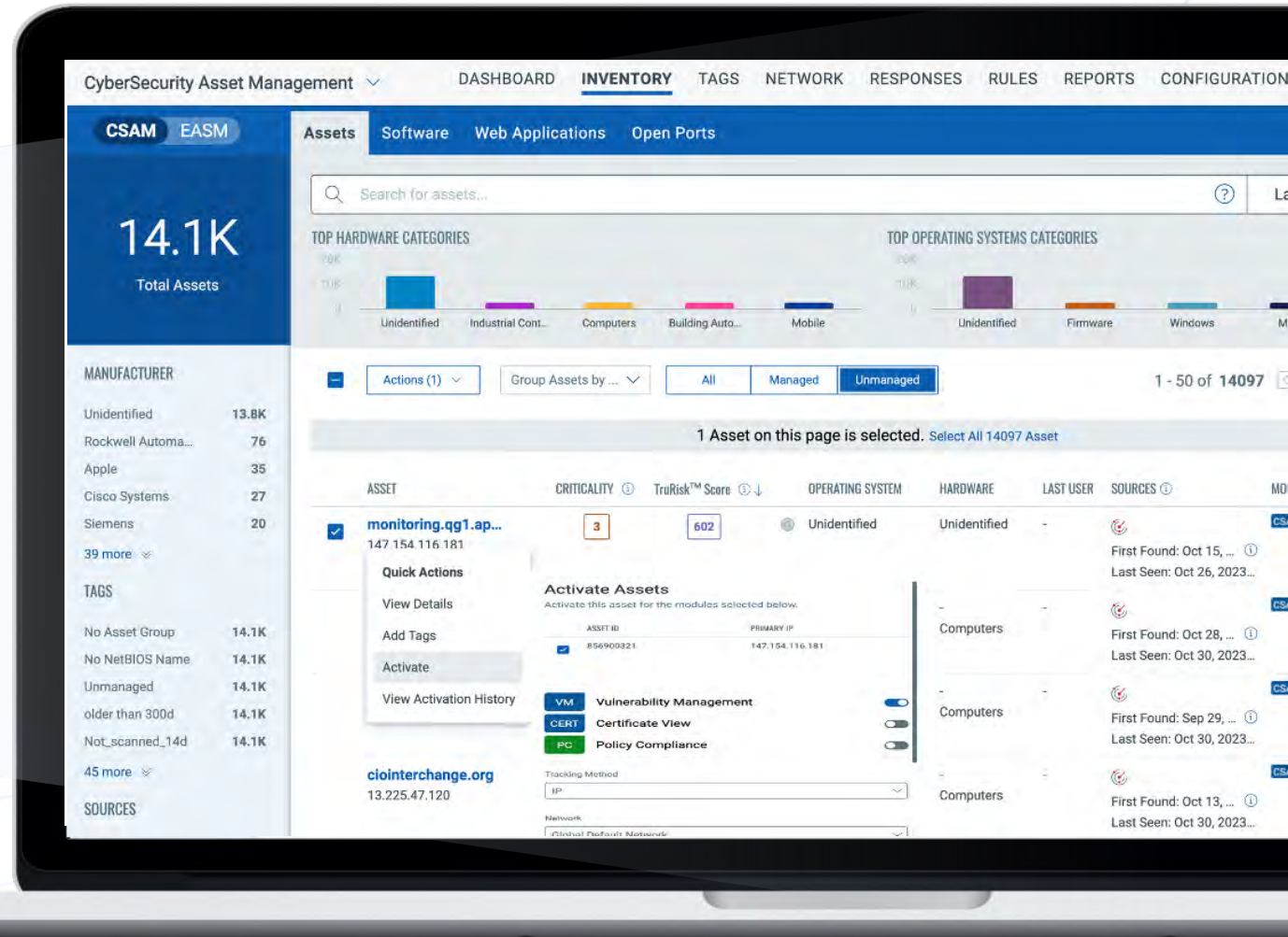


External Attack Surface Discovery & Monitoring

External Attack Surface Management (EASM)

Attackers' View – Outside-in perspective

- 1 Discover '**Previously Unknown**' internet-facing assets
- 2 **Monitor Cyber Risk** for M&A Entities, 3rd party vendors, subsidiaries
- 3 **Identify & remediate security gaps and misconfiguration** issues
- 4 **Continuous monitoring - Be alerted** when unknown assets, domains, subdomains are found
- 5 **Operationalize asset data** with One-click into VM, WAS, Patch, ITSM & SOC



EASM KPI Dashboard – Measuring Risk

<p>~2K # of Customers</p>	<p>~200K (3%) # of Assets w/ DB Open Ports(mssql, mysql, cassandra...)</p>	<p>2.9M+ # of Sub Domain Discovered</p>
<p>~7M # of EASM Discovered Asset</p>	<p>330K+ Avg # of External Assets of Top 10 customers</p>	<p>6000+ # of Subsidiaries</p>
<p>~500K (7%) # of Vulnerable EASM Asset</p>	<p>10+ Avg # of Related Entities Discovered</p>	<p>Avg % of External UNKNOWN Asset to Total Asset is ~30-36%</p>
<p>~1.5M (21%) # of Assets w/ Risky Open Ports(RDP, SSH, SFTP...)</p>	<p>105K+ # of Domain Discovered</p>	

Internal Attack Surface Discovery & Monitoring

Introducing Qualys Cloud Agent Passive Sensor

For detecting 100% of devices' communication in the network

Continuously Monitor and Reduce Internal Attack Surface

✓ **Single, Lightweight, extensible, self-updating & centrally managed Agent**

Customizable Qualys Agent for various systems, filters data from public or home networks

✓ **Get away from the limitation of network taps**

Non-intrusive network reporting with auto-elected Master Reporter per domain, showing managed/unmanaged assets in Qualys platform

✓ **Passive sensing**

Data will be sniffed passively in the subnet by listening to broadcasts and multicasts

- Collect rich asset metadata using ARP, DHCP, SSDP, NetBios, mDNS, CDP/LLDP, LLMNR, WSD and more.

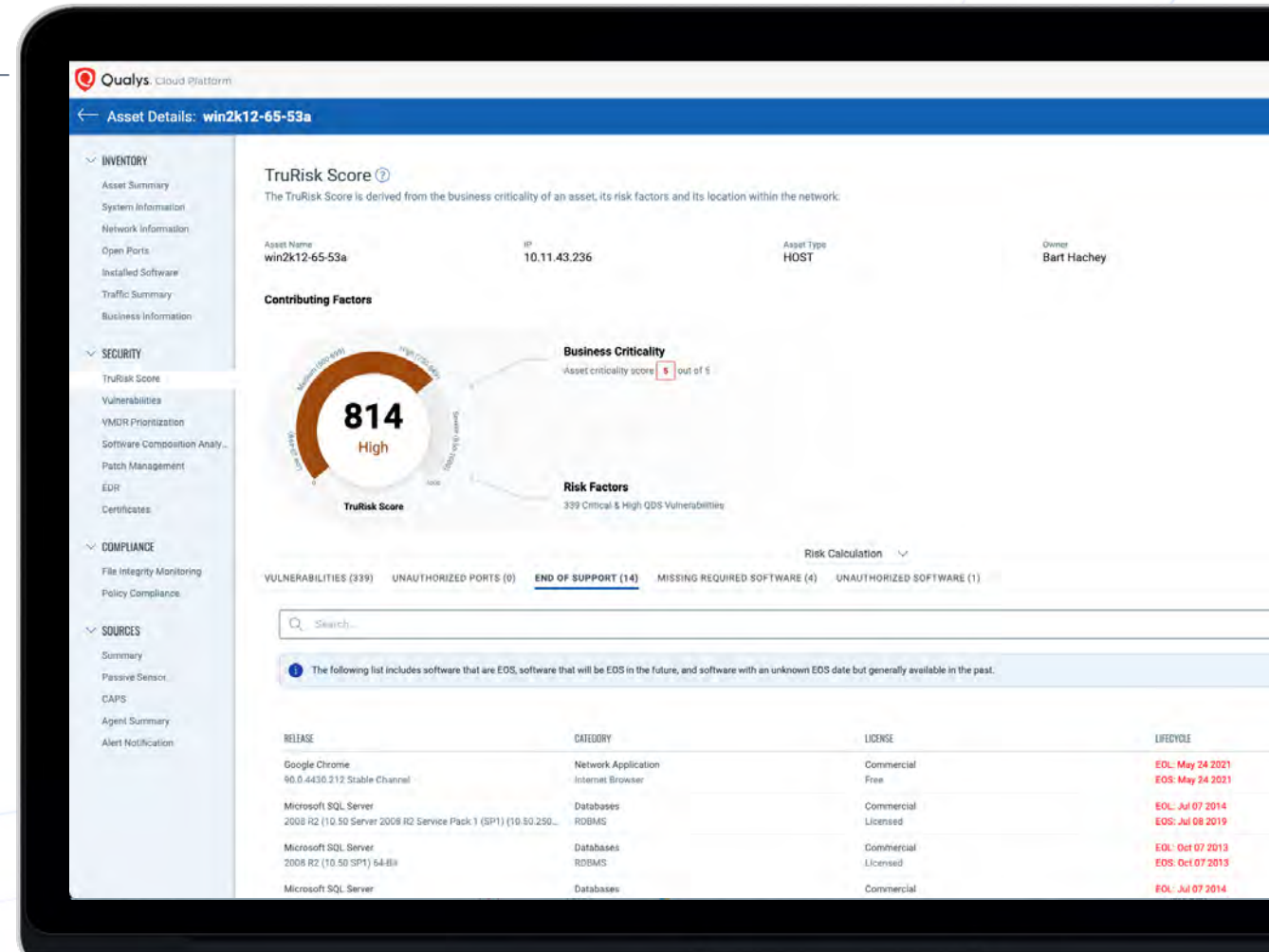


Identify Rogue Devices even in IOT environment without a massive investment in sensors and new systems

CyberSecurity Asset Management - CSAM

Defenders' View – Inside-out Perspective

- 1 Comprehensive **Asset discovery & Inventory** – Cloud, On-prem, IoT/OT, Internet-facing
- 2 **Third-party integrations** for asset aggregation and intelligence
- 3 **Bi-Dir CMDB Sync** for enriching inventory with **business context**
- 4 **Cyber Risk Assessment of Inventory**
 - Unauthorized Software, Ports
 - Find Security Agent Coverage
 - Manage EoL/EoS (Tech-Debt)
- 5 **Risk-based prioritization** and remediation workflows **with Qualys TruRisk**



Purpose-built Inventory for Cyber Security Team

Bringing Together External + Internal Attack Surface

Purpose-built for Cybersecurity and VM/Risk teams

1 External Attack Surface Management

Attacker outside-in perspective.



Discover and continuously **monitor outside-in digital footprint internet-facing assets**



Natively integrate with VMDR (or other) for vuln analysis and prioritization



Continuously improve and implement **attack surface management (ASM)** strategies



Internal Attack Surface Management 2

Defender inside-out perspective

Discover **Cloud, On-prem, Data center, IT, OT/IoT and Rogue Assets**



Security, **compliance**, and **Risk-based** prioritization



Orchestrate and Automate Workflow across IT and Security



Risk-Based Prioritization

... Must Include 3rd-Party (Non-Qualys) Environment

- 1** Bring in missing 3rd party assets to Qualys for unified inventory and attack surface risk assessment and monitoring
- 2** Risk-Based prioritization with 3rd party business context
- 3** **3rd Party Connectors** for CMDB, AD, Webhook, and **Security and IT tools**
 - ServiceNow CMDB, BMC Helix, Active Directory, VMware, CrowdStrike, Zscaler, Splunk, Jira, etc.

Qualys Cloud Platform

Business-context Risk Prioritization

Banking Service
Status: Operational | Environment: Production | Business Criticality: 5

TOTAL ASSETS: 133 | INTERNET EXPOSED: 15 | UNMANAGED ASSETS: 5 | ASSETS WITH SECURITY GAPS: 106 (89% of total)

Top Contributing Factors: Risk Calculation | **Assets** | All Issues

Filter: Asset Scope and Risk Scoring Parameters

Assets

8 Unauthorized Software | 3 Missing Required Software | 14 EOS Software | 15 EOL Software | 0 OBS Hardware | 0 EOS Hardware

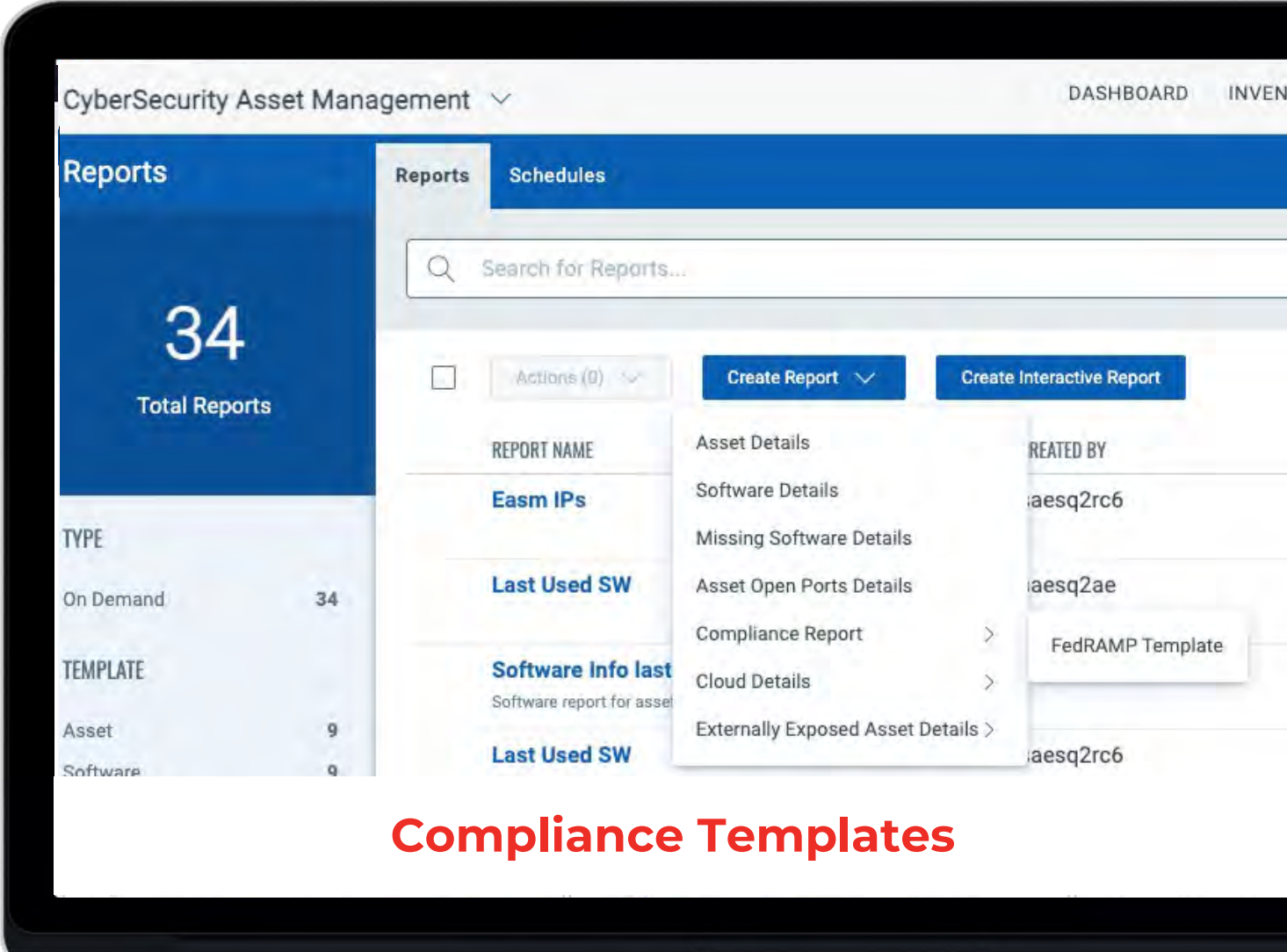
Search:

ASSET NAME	TYPE	ASSET CRITICALITY	TRUE RISK SCORE	CRITICAL ISSUES	MODULES
bnk_app_01	Web Application	4	802	4	CSAM, WAS
Db01.org	Database Instance	5	746	2	CSAM, PC
135302-T490	Microsoft Windows Server 2008 R2 Datacenter Virtual Machine	4	711	4	CSAM, VMDR
DBVM-123	Microsoft Windows Server 2008 Datacenter (1607) Virtual Ma...	4	704	5	CSAM, VMDR
Dock123	Container	3	569	1	CSAM, CS
SB345	S3 Bucket Amazon Web Services	4	564	2	CSAM, CV
DB0001987-aws	RDS Amazon Web Services	5	408	4	CSAM, CV
195302-AS1	Microsoft Windows Server Virtual Machine	4	405	2	CSAM

Communicate Cyber Risk

To Drive Business Outcomes

- Create a **single source of truth**
- **Communicate cyber risk** to all stakeholders in your organization
- Provide **complete context** for every stage of the workflow

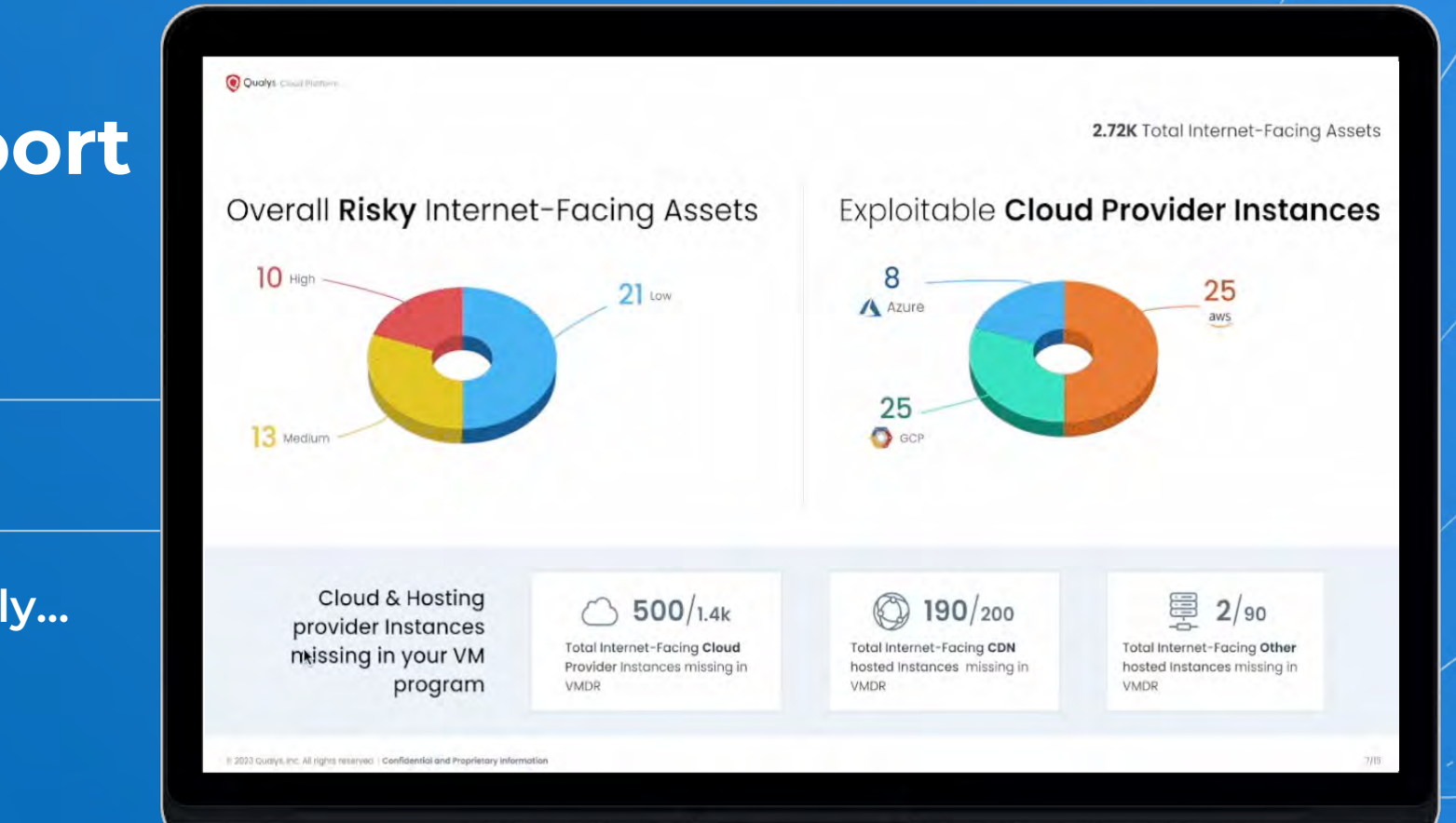


External Attack Surface Risk Report

Know your Risk on Internet-facing Assets

View Your Attack Surface

Prioritize Your Risk Accordingly...



Powered by:



Stop by the **Q&A Bar** to
receive your EASM report and
speak with a Qualys expert!



Powered
by:



Tech-Debt (EoL/EoS) Risk Report

View Your Tech-Debt (EoL/EoS)
across hybrid environment

Proactively plan of upgrade of
upcoming EoL/EoS

TruRisk Based Prioritization

Coming Soon



Powered
by:



Solving CISO Challenges

Simplified & Optimized Cybersecurity with Unified Platform



No More Siloed Tools

- External Attack Surface Management
- IT Asset Inventory for On-Prem
- IT Asset Inventory for Cloud
- IT Asset Inventory for OT/IOT
- Vulnerability Management
- CMDB/ITSM Ticketing



SecOps & IT Ops Optimization

- Removes manual stitching of data across VM, ITSM, CMDB, Patch Mgmt, SOC & GRC tools
- Discover entire attack surface and add business context with Bi-directional CMDB sync



Reduced TCO

- Reduced TCO with centralized platform
- Consolidate siloed point products into Unified One-platform-one-agent

Eliminate Cyber Risk

Eliminate Cyber Risk

With a Continuous, Actionable Inventory



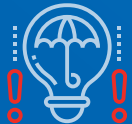
Discovery internal rogue and external unknown unmanaged assets and bring them to VM, WAS, PC Scan



Proactively find and plan upgrade the EoL/EoS Software and associated vulnerabilities



One-click Uninstall workflow for unauthorized, open source software



Accelerate the incident triage and response

ROI: Delivering Business Outcomes

Reduce the Attack Surface with a Unified Approach



Mean-Time-to-Discovery

30 Days

2 Days



Asset Coverage

~50-70%

~100%



Tech Debt Mitigation

Reactive

Planned up to 12 months



Mean-Time-to-Remediation

30+ Days

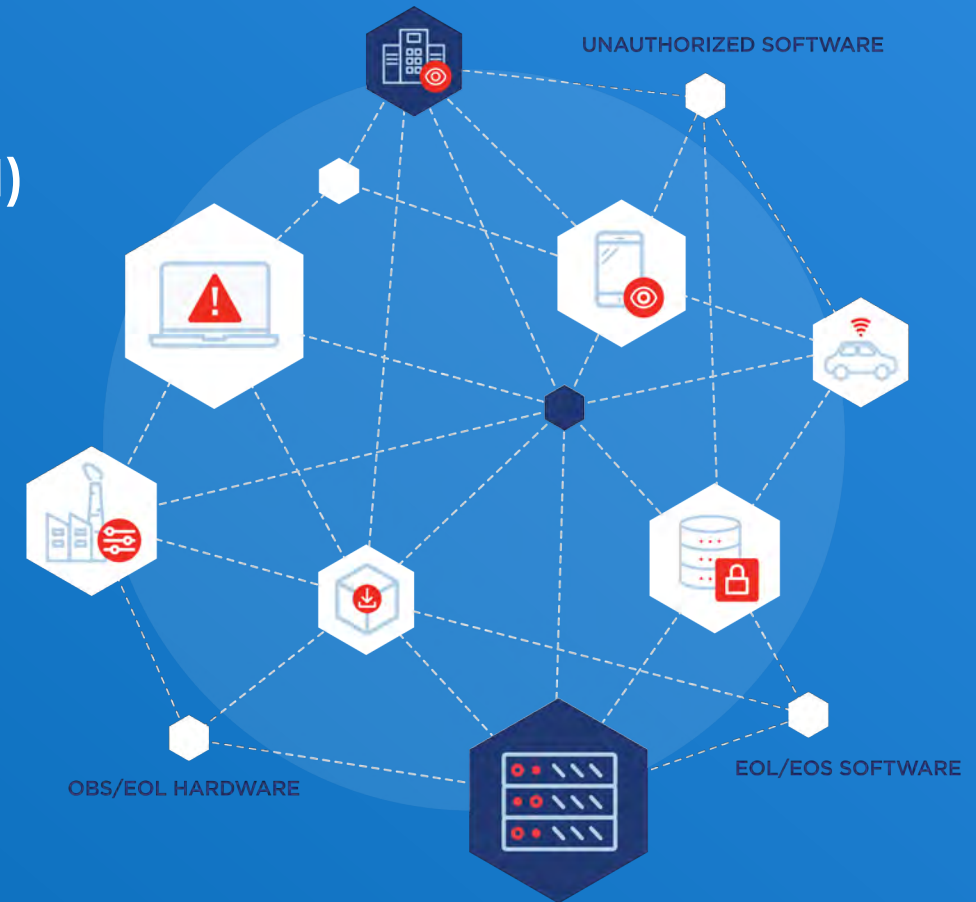
1-2 Days

CyberSecurity Asset Management

with External Attack Surface Management (EASM)

Turn on CSAM + EASM for your Environment:

- **30-day trial**
- **Joint review after 10 days**
- **Go to:** qualys.com/apps/cybersecurity-asset-management/



Beatrice Sirchis

Vice President, Application Security

Background includes:

- ✓ Network Engineer
- ✓ Security Engineer
- ✓ Security Architect and Project Manager
- ✓ CISO of Affiliate Subsidiaries at Discount Bank



IDB Bank

More than 70 years of personal service and sophisticated financial solutions.

IDB Bank offers personalized and comprehensive solutions for protecting and preserving your wealth.

- ✓ Company Founded: **1935**
- ✓ Headquarters: **New York, NY**
- ✓ **Company Scope: International**

United States, Latin America, Israel



Driving the Bank's Rapid Business Growth

Cyber Security as a Business Enabler and Competitive Advantage for Bank



IT assets and resources of all types exist in on-prem and multi-cloud environment



Integrate business and IT systems/resources

- Highly regulated environment
- Real-time threat detection and remediation with integrated platform



Growing number of hardware and software providers – extension of corporate network means stringent security standards be met



Measure and improve efficiency within the security program – KRIs



Zero Trust Security Architecture



Critical Requirements We Were Looking For



Dynamic visibility of previously unknown/rogue assets in real-time to stay prepared for audits and regulations



Identify **external, internet-facing** exposure and bring to VM, PC scan



Identify gaps: EoL/EoS (and scope of impact), unauthorized software, missing agents, etc.



Automated CMDB sync to streamline remediation through ticket assignment and SLA enforcement



Reporting with unified dashboard including KRIs, vulns with critical risk, and defined risk thresholds to prioritize most important work



Shared platform across IT, Security, Internal Audit, and Risk Management Teams.

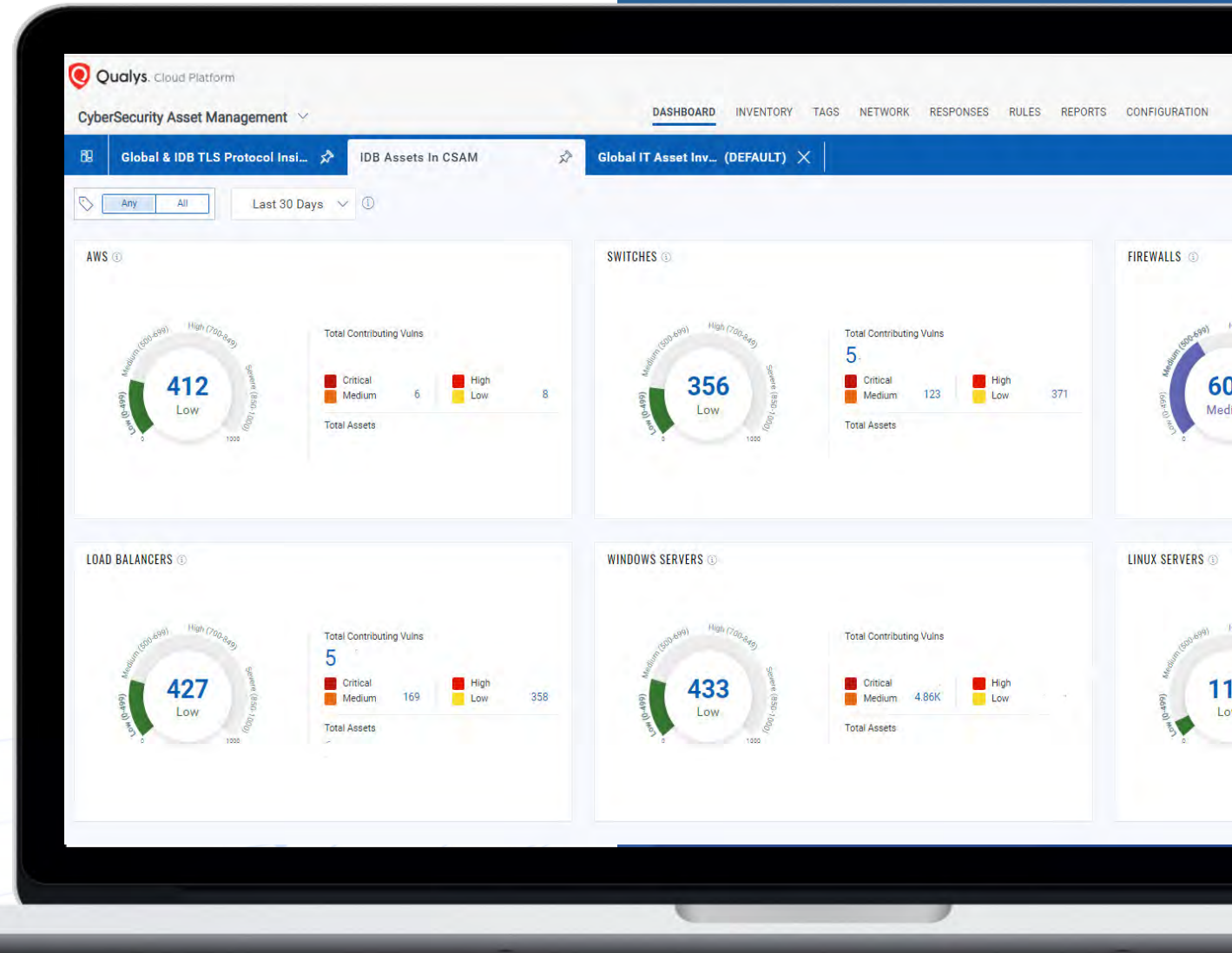
How We Use CSAM

Continuous Visibility Across the Hybrid Environment

Complete asset and software visibility across all our environments (categorization of assets)

- ✓ Including on-prem and multiple cloud assets
- ✓ Cloud agent deployment for complete software visibility
- ✓ Network passive sensor detects new assets connecting to our corporate network in real-time, to add them to VM & PC
- ✓ Using the Traffic Analyzer to understand asset communication, relationships, and key services (e.g., databases)

Effective purge rules to maintain inventory up-to-date

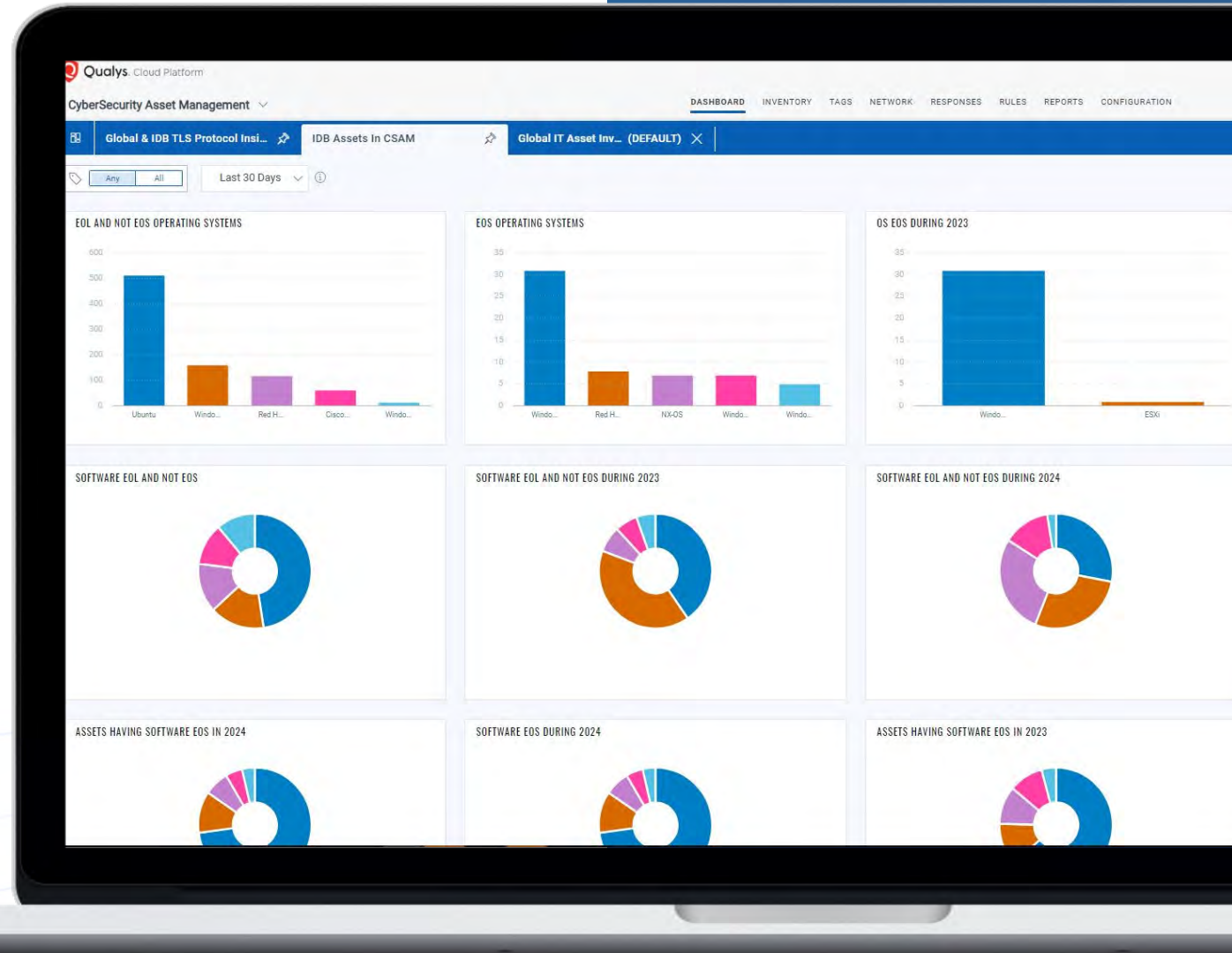


How We Use CSAM

Continuous Cyber Risk Assessment Across the Hybrid Environment

Proactively reduce tech debt with real-time EoL/EoS and unauthorized software

- ✓ Plan ahead based on defined widgets on EOL/EoS due dates – Java, .NET
- ✓ Automatically identify & notify software that is elevating cybersecurity risk – Unauthorized Software – File sharing (Samba), Packet Inspection (Sniffer), Paranoia
- ✓ Automatically identify new vulnerable applications – such as to Log4j/Spring4Shell
- ✓ Detect missing agents (CrowdStrike, Splunk Collector, etc.)

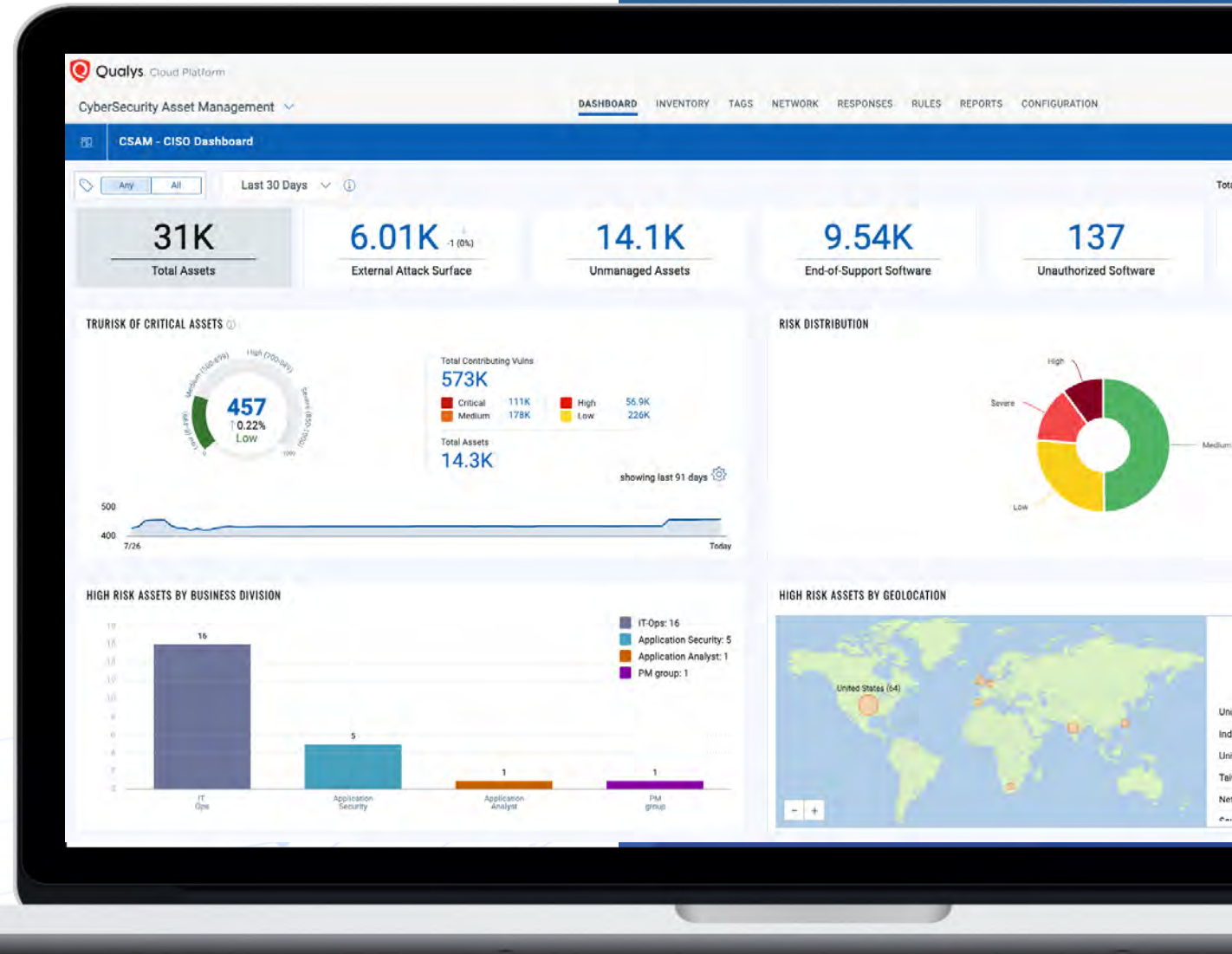


How We Use CSAM

Business Context with Tagging to drive effective prioritization

Business and IT oriented tagging

- ✓ Business, IT and Cybersec critical systems
- ✓ Environments (prod, test, dev, UAT) and locations
- ✓ Operating systems types, software types
- ✓ Functional and performance



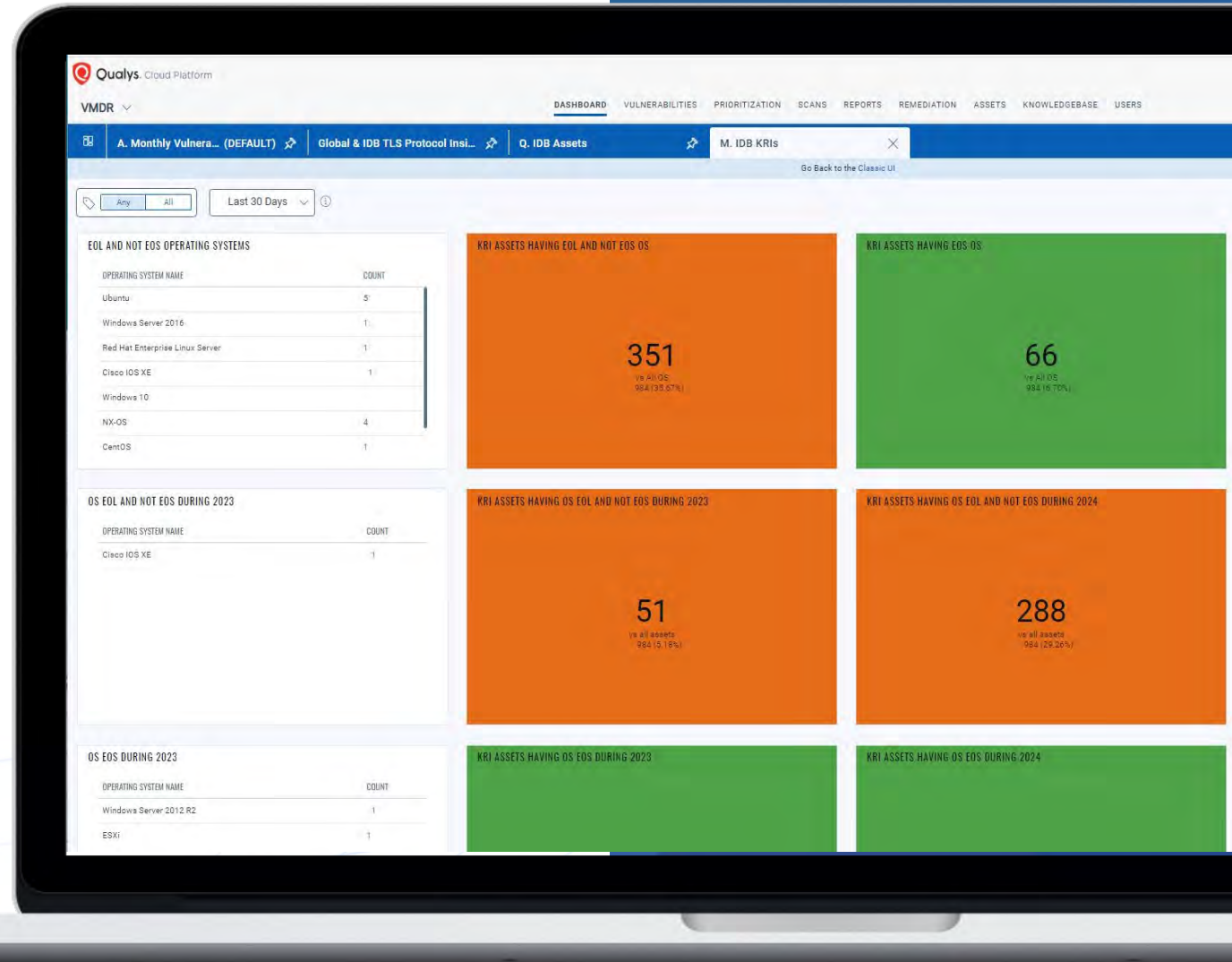
How We Use CSAM

Measure, Communicate and Eliminate the Risk

Monitoring cybersecurity KRIs

- ✓ Number of Assets having EoL/EoS Operating Systems & Software
- ✓ Plan budget for fixing upcoming EoL/EoS for next year
- ✓ Threshold based reporting (Orange, Green) for mitigation planning

Prioritize and remediate risk based on asset criticality and TruRisk ratings



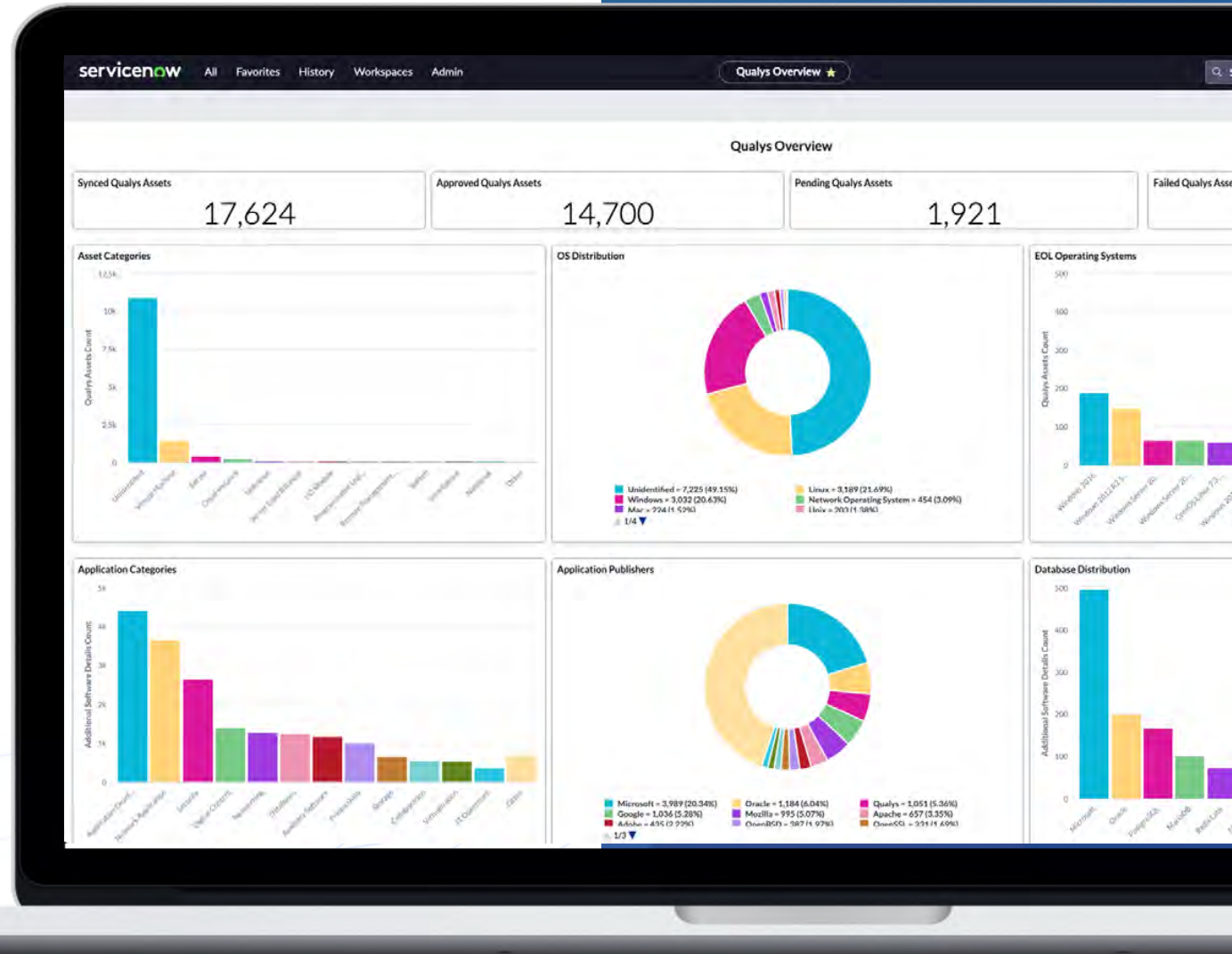
How We Use CSAM

Turbocharge CMDB with Assets and Cyber Risk Context and Reduce MTTR

Leveraging CMDB sync for ServiceNow to operationalize role-based ticket assignment (owner, department), monitor patching, SLA and more

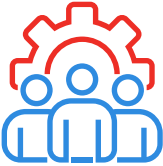
- ✓ Daily, automatic **asset and vulnerabilities** export to ServiceNow
- ✓ **Automatic assignment** rules in ServiceNow based on Qualys tags
- ✓ **SLA defined** and follow up procedures according to Qualys tags

Accelerate the remediation and patching for IT team with enriched CMDB with cyber risk context



Qualys CSAM Outcomes for IDBANY

Measure, Communicate and Eliminate the Risk



MTTD: more than 200% faster

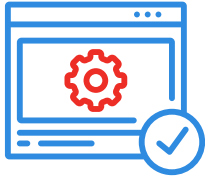
Security team resource time savings with automated asset discovery and management.



Instantly comply to meet SLA expectations and compliance requirements for inventory, EoL/EoS, unauthorized software, and more.



Proactively plan for end-of-support operating systems and software **3-12 months in advance**, reducing exposure significantly.



Close tickets faster with automated ticket assignment with **up to 95% accuracy**.

What's Next?

Expand Attack Surface Management Journey with Qualys

Augment the vulnerability management program with insights from an **external attacker's point of view**

Internal Attack Surface with Cloud Agent Passive Sensor - Identify rogue devices (even in IoT environment) without a massive investment in sensors and new systems

Bring in missing Assets from non-Qualys environment with **Active Directory Connector**



Monitor and Reduce Attack Surface Risk



Demo

Challenges IT-Centric Inventory with Disjoint View

IT Team

Laborious, time-consuming task to create & maintain spreadsheets/CMDB

Asset inventory is typically **updated manually** or through infrequent uploads

Lack of visibility into the ephemeral external internet-facing assets

Lack of visibility into all environments (e.g., PCI, OT) **creates blind-spots**

Cyber Security Team

Manual effort in mapping vulnerabilities to asset records, creating, assigning tickets, and tracking progress.

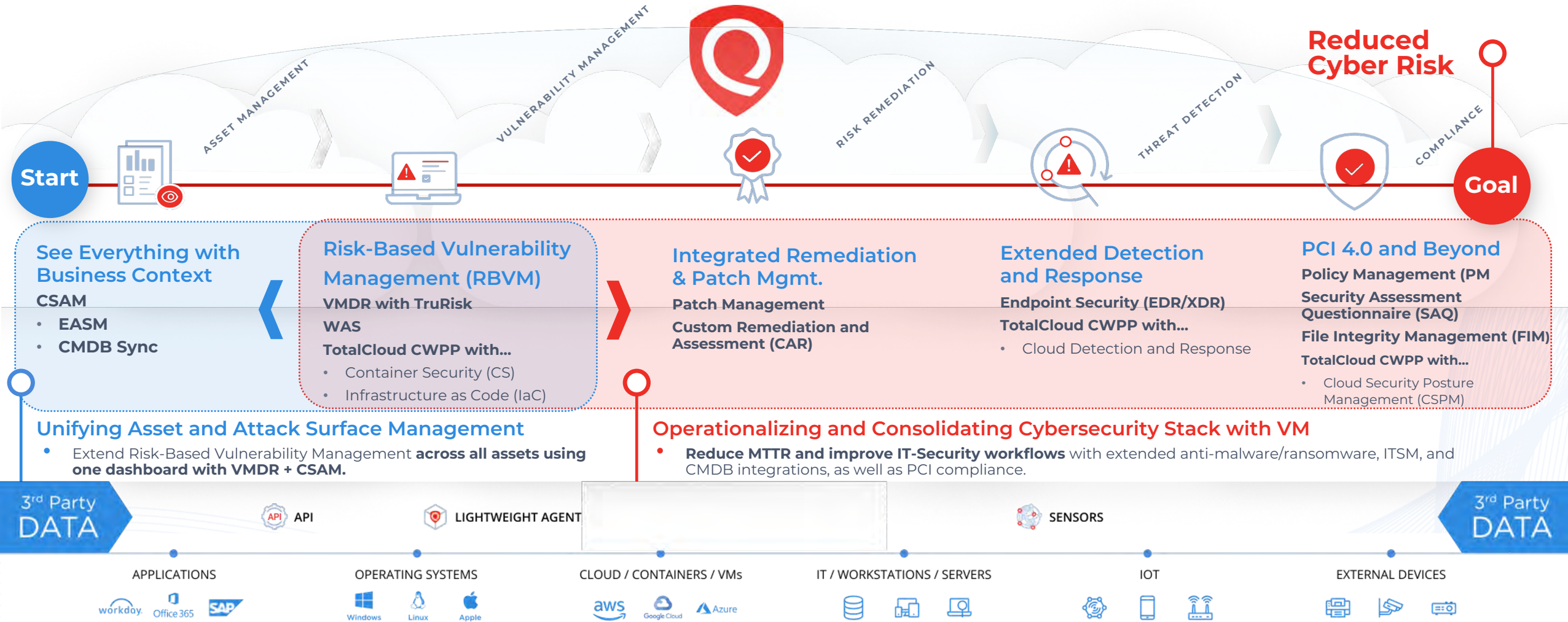
Time-consuming task to find & correlate asset context with Incident investigation & triage

Lack of correlated asset, vulnerabilities, **applications and business context**, creates gaps in risk-based prioritization program.

Inaccurate CMDB and ITSM with severely impacted MTTR

Landing & Expanding with Qualys

Manage Risk to your organization, no matter where it is.



The Qualys Enterprise **TruRisk** Platform

Reducing Cybersecurity Risk Effectively Across the Enterprise

Qualys **TruRisk**TM



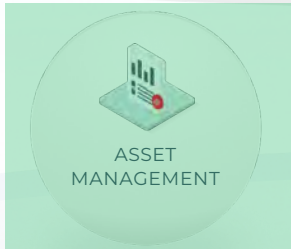
UNIFIED DASHBOARDS



UNIFIED CYBER RISK MANAGEMENT



UNIFIED REPORTING



ASSET
MANAGEMENT



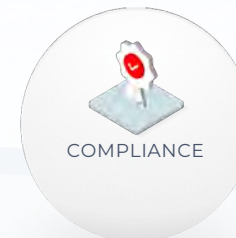
VULNERABILITY &
CONFIGURATION
MANAGEMENT



RISK
REMEDiation



THREAT
DETECTION
RESPONSE



COMPLIANCE



PLATFORM SERVICES



API



LIGHTWEIGHT AGENT



SENSORS

APPLICATIONS



OPERATING SYSTEMS



CLOUD / CONTAINERS / VMs



IT / WORKSTATIONS / SERVERS



IOT



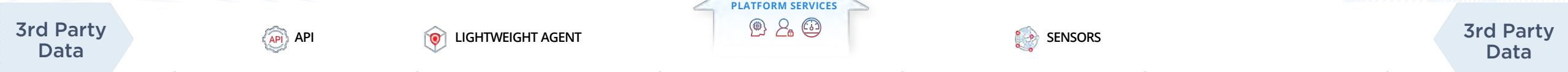
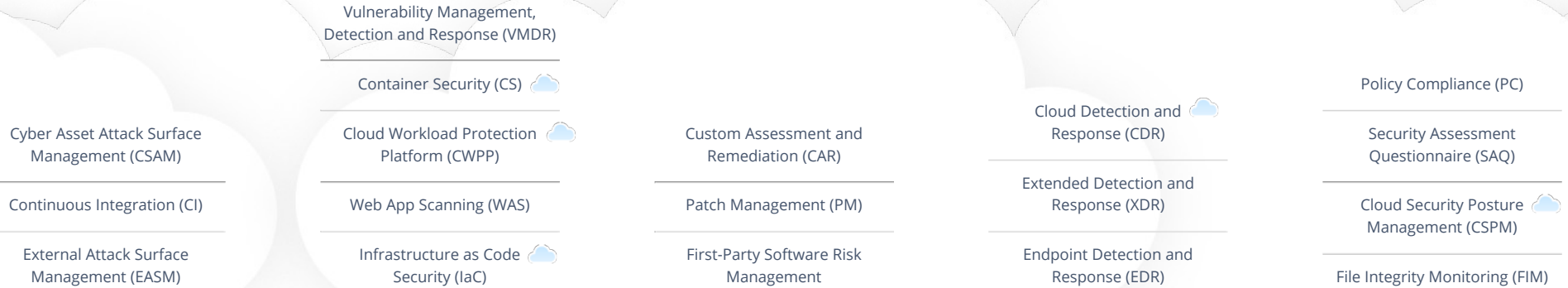
EXTERNAL DEVICES



Get More Security

The Qualys Platform

Qualys Products and the Problems They Solve

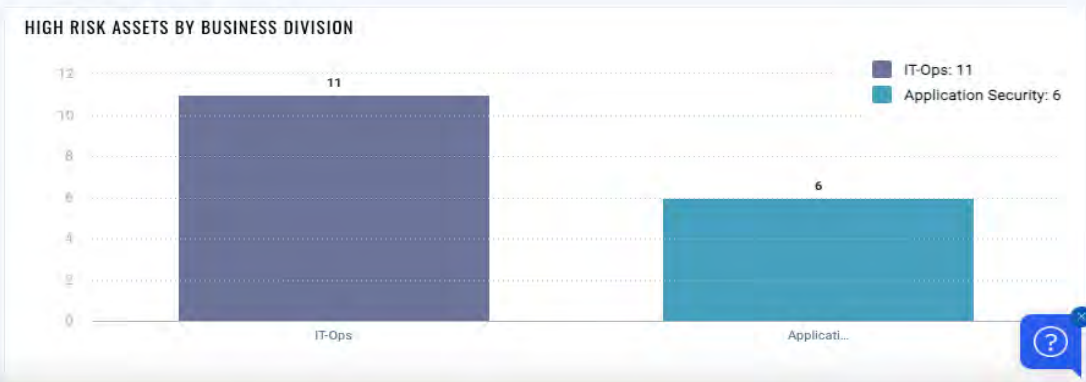
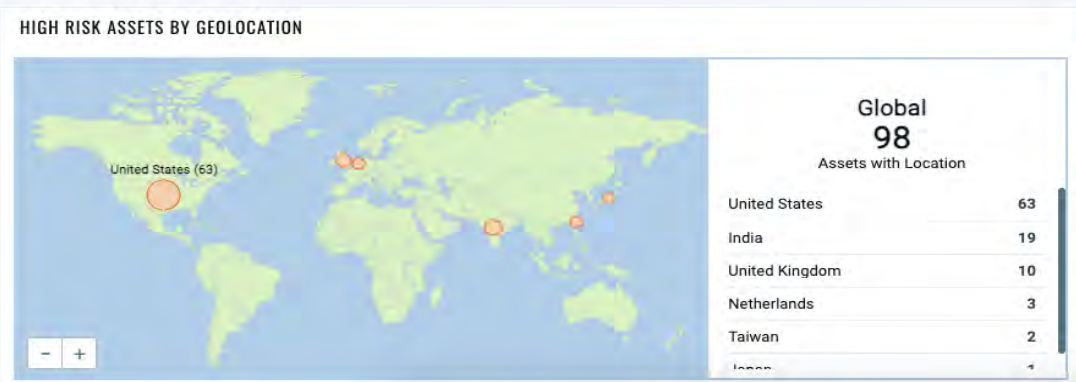
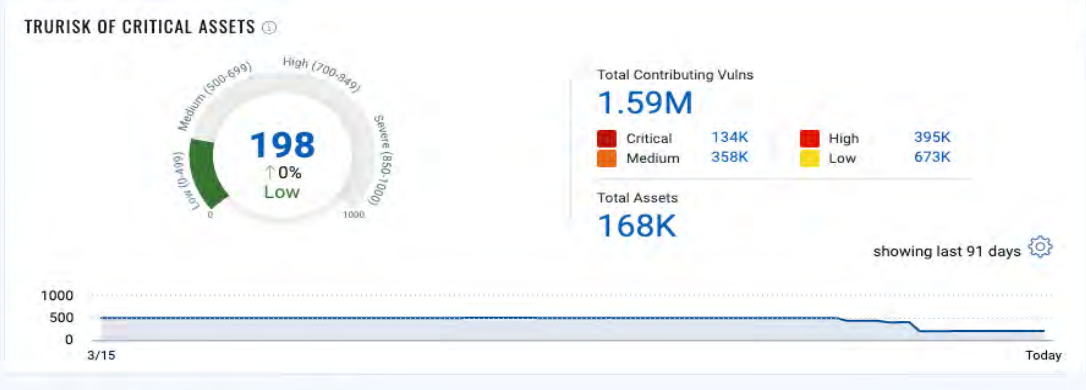
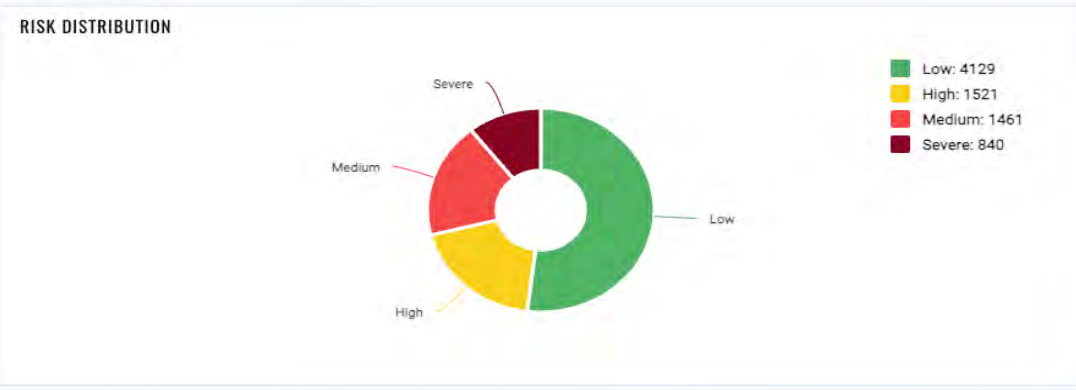


Global CISO Dashboard – Inventory Breakdown

CSAM - CISO Dashboard

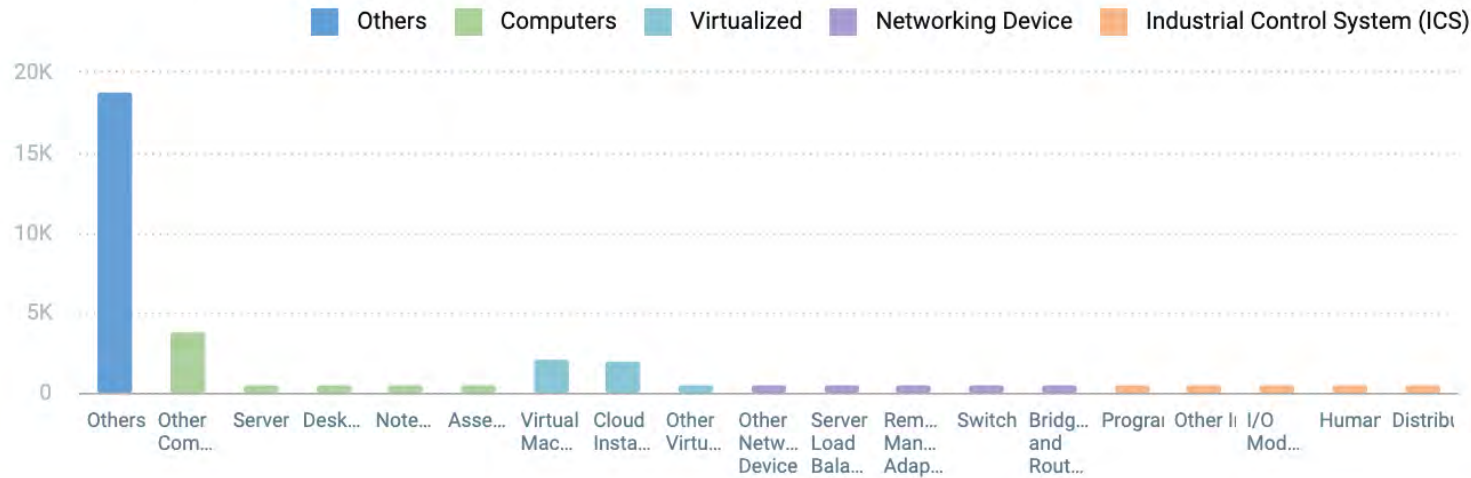
Any All Last 30 Days Total Widgets Count: 18 / 80

28K Total Assets	2.28K <small>+1.05K (-46%)</small> External Attack Surface	13.2K Unmanaged Assets	6.79K End-of-Support Software	138 Unauthorized Software
833 <small>-71 (-9%)</small> Missing Required Software				

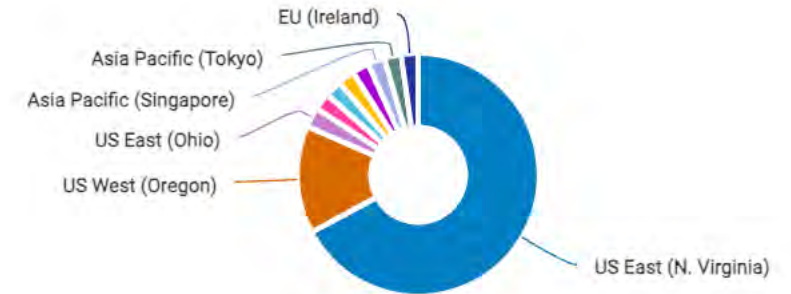


Global CISO Dashboard – Inventory Breakdown

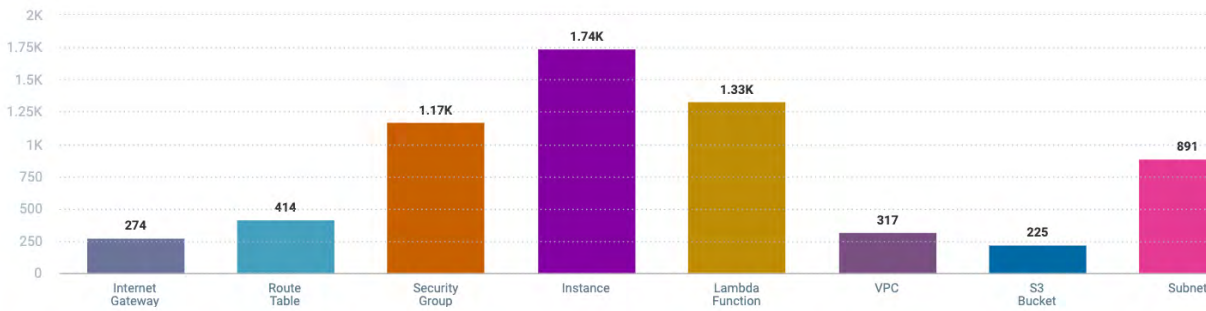
CATEGORY BREAKDOWN



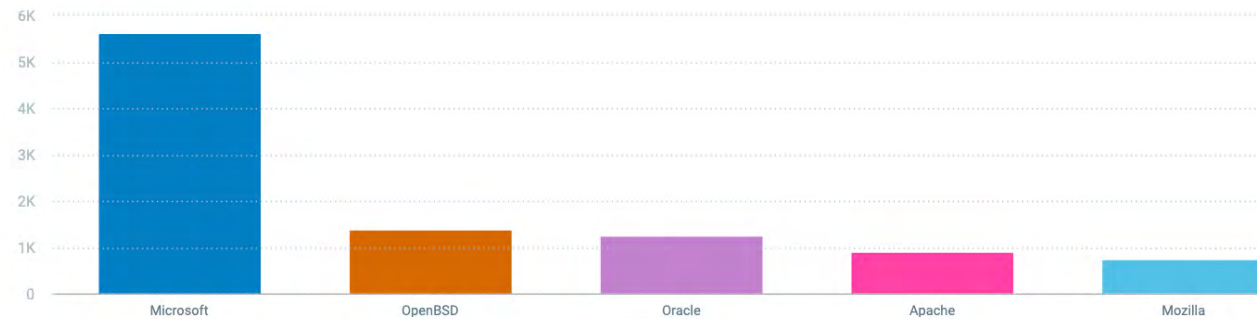
CLOUD - AWS INSTANCES BY REGION



TOP AWS RESOURCES

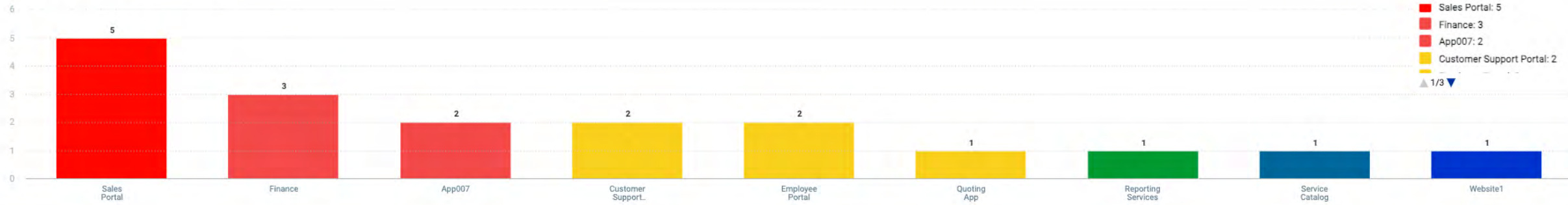


TOP SOFTWARE PUBLISHERS



Risk-Based Prioritization View of Attack Surface

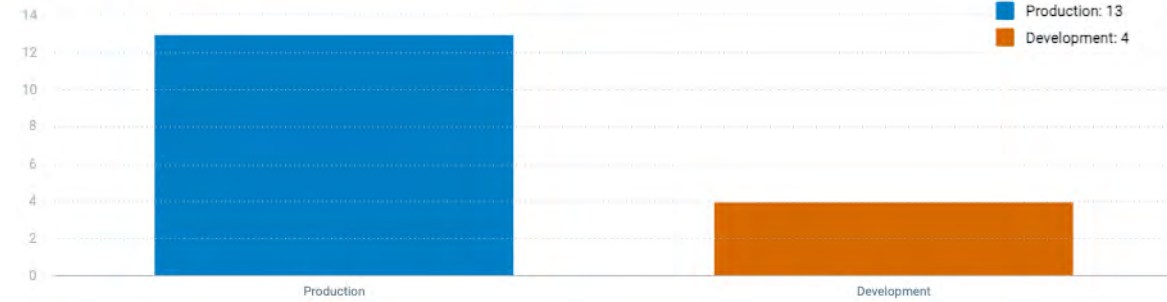
HIGH RISK ASSETS BY BUSINESS APPLICATIONS



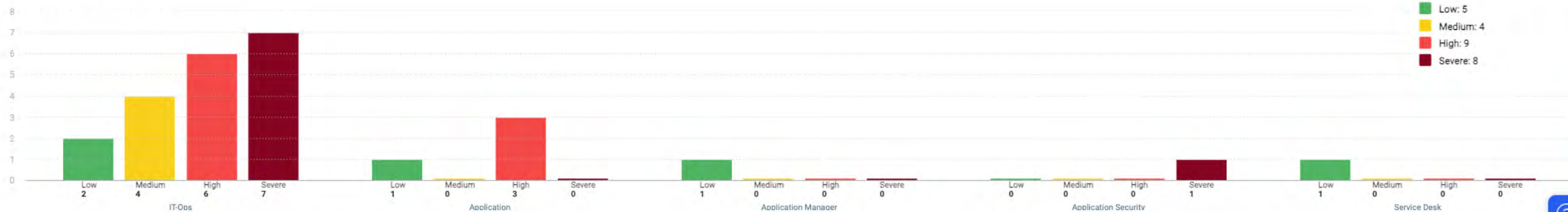
HIGH RISK ASSETS BY BUSINESS APPS

BUSINESS APP NAME	BUSINESS APP CRITICALITY	COUNT ↓
Sales Portal	2 - somewhat critical	5
Finance	1 - most critical	3
App007	1 - most critical	2
Customer Support Portal	1 - most critical	2
Employee Portal	2 - somewhat critical	2
Employee Portal	1 - most critical	1
Quoting App	1 - most critical	1

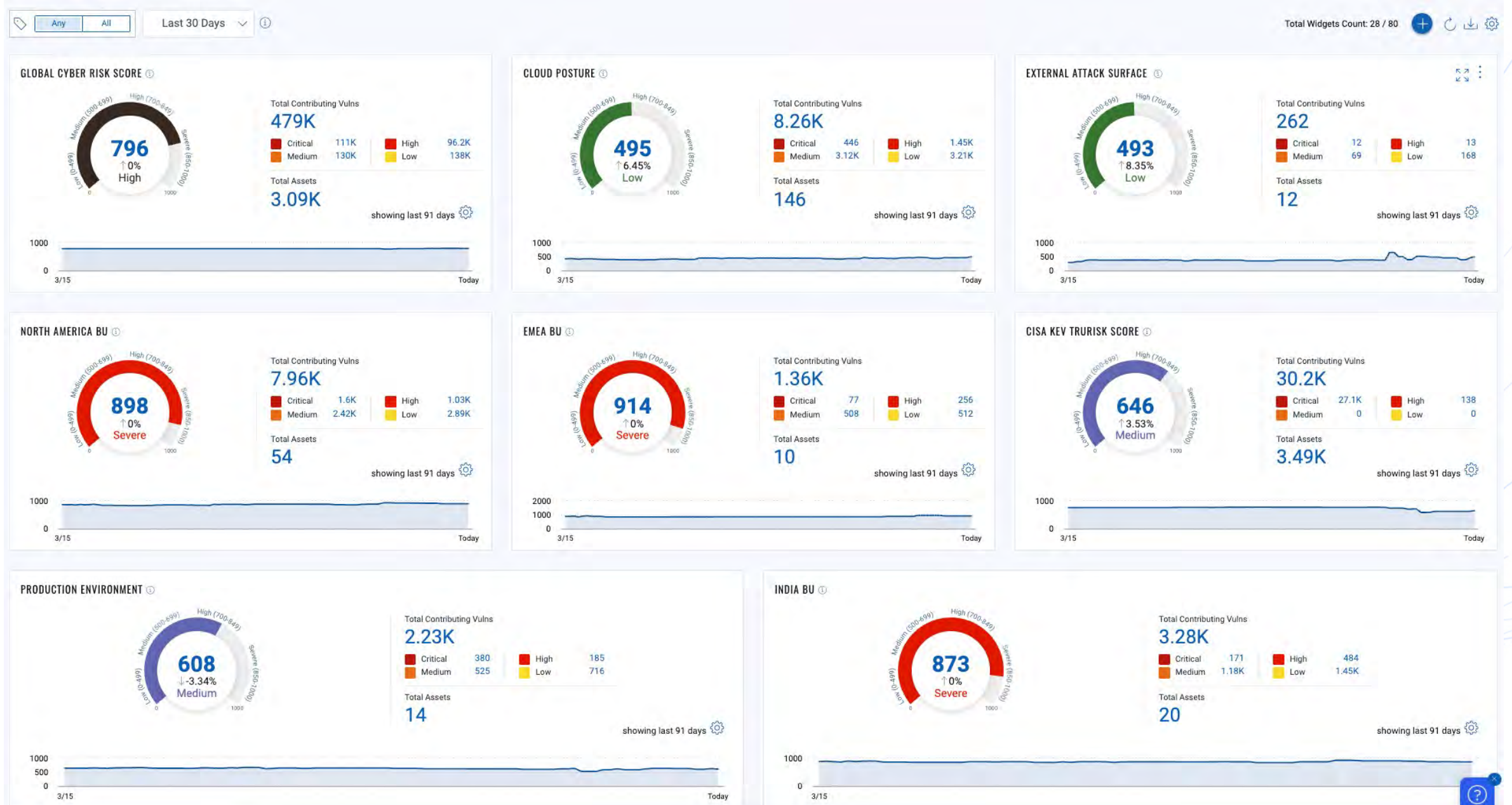
HIGH RISK ASSETS BY ENVIRONMENT



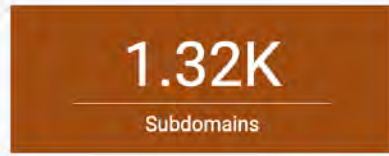
RISK DISTRIBUTION BY SUPPORT GROUP



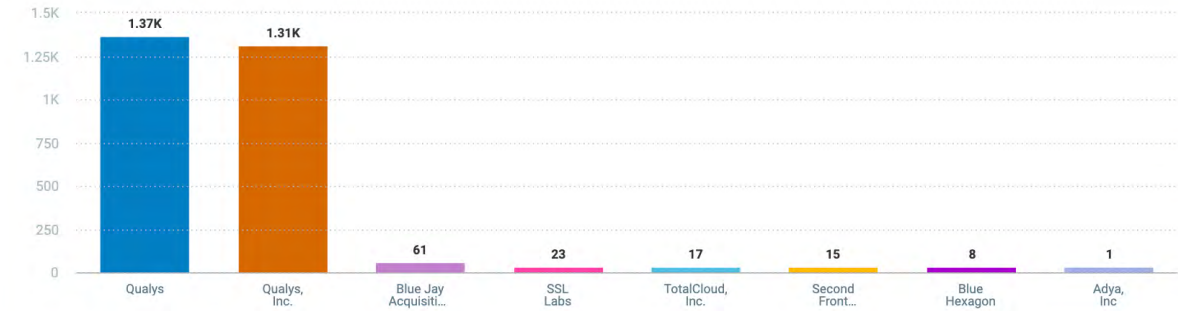
Risk-Based Prioritization View of Attack Surface



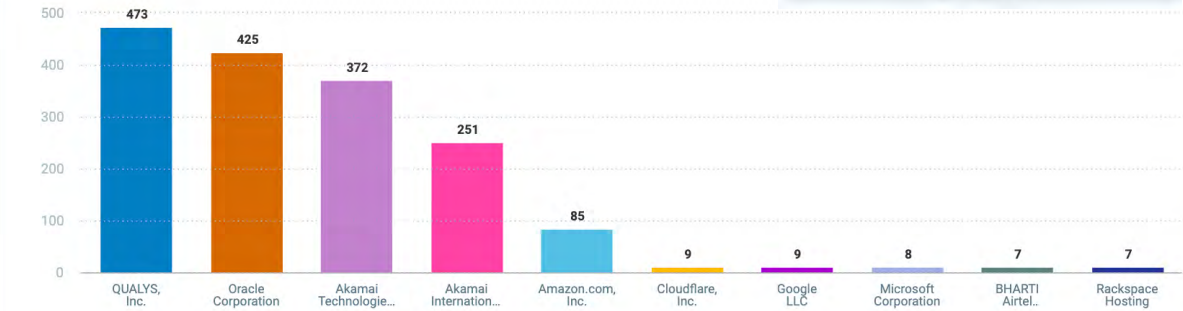
Insights from the EASM



ASSETS BY ORG/SUBSIDIARY



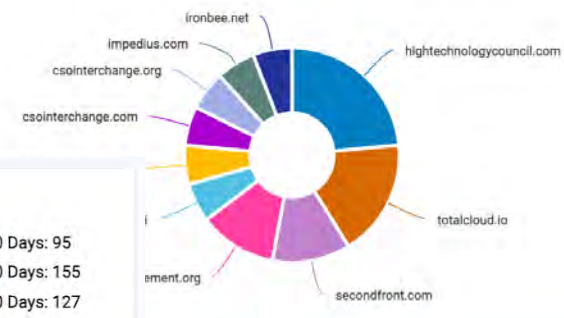
ASSETS BY DATACENTER



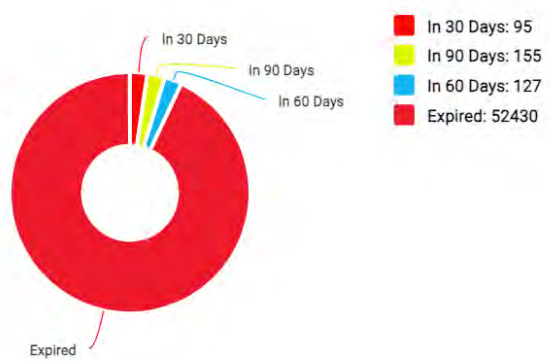
TOP VULNERABLE SUBDOMAINS

ASSET SUBDOMAIN	ASSET ORGANIZATION NAME	COUNT ↓
jira.blujaysolutions.com	Qualys	2
jira.blujaysolutions.com	Blue Jay Acquisition Sub, Inc.	2
testbb.blujaysolutions.com	Blue Jay Acquisition Sub, Inc.	2
testjira.blujaysolutions.com	Blue Jay Acquisition Sub, Inc.	
demo03.s02.sjc01.qualys.com	Qualys	
demo04.s02.sjc01.qualys.com	Qualys	
demo05.s02.sjc01.qualys.com	Qualys	

DOMAIN DISTRIBUTION

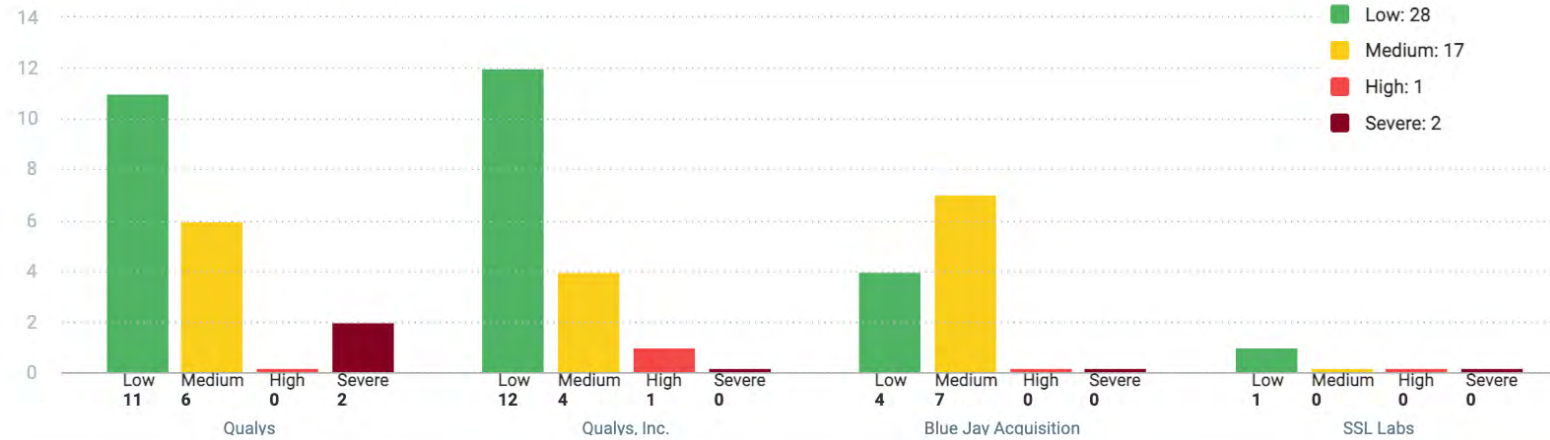


SSL CERTS BY EXPIRATION



Insights from the EASM - Risk Distribution

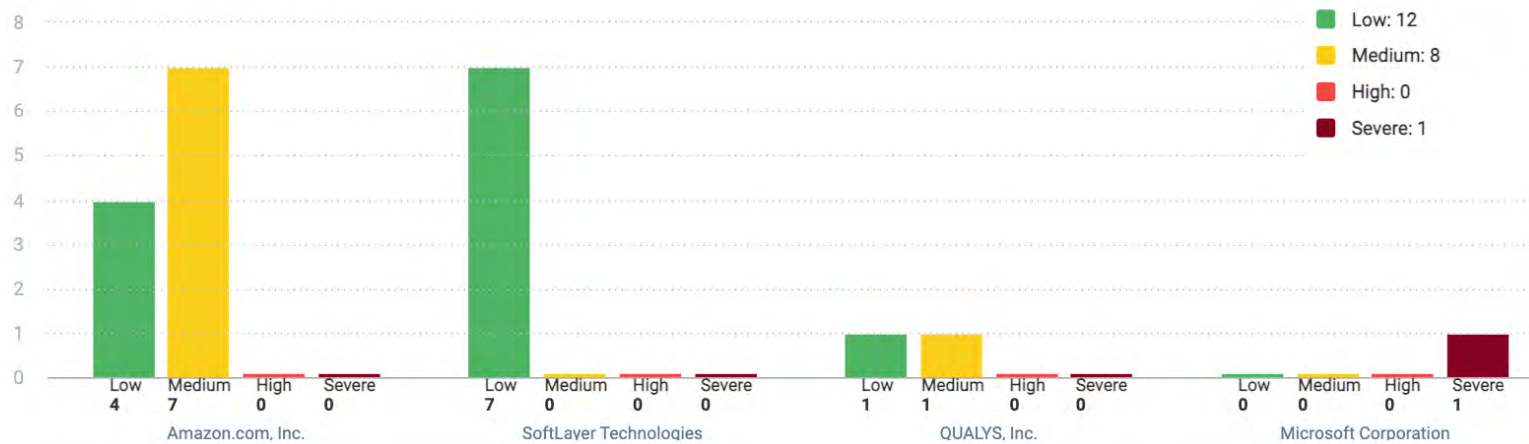
RISK DISTRIBUTION BY ORG/SUBSIDIARY



TOP ORGANIZATIONS WITH RISKY OPEN PORTS (ASSET COUNT)

ASSET ORGANIZATION NAME	COUNT
Qualys, Inc	75
Qualys	51
Blue Jay Acquisition Sub, Inc.	14
Second Front Systems	11
Qualys, Inc.	5
TotalCloud, Inc.	4
Adya, Inc	1

RISK DISTRIBUTION BY DATACENTER



TOP DOMAINS WITH RISKY OPEN PORTS (ASSET COUNT)

ASSET DOMAIN	COUNT
secondfront.com	2
bluehexagon.ai	1
blujaysolutions.ca	1
cloudvulnerabilityscanner.com	1
impedius.org	1
leanlogistics.us	1
securityvibes.com	1

