Measure, Communicate & Eliminate Your Cyber Risk with Qualys Platform

Shailesh Athalye
Senior VP Product Management, Qualys

Indiana Jones

“It’s important… Trust me.”

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Approach of ‘Indiana Jones’ of Cyber Risk

~~A systematic approach to de-risking their digital ecosystems~~

Security Teams

- Measure Cyber Risk
- Communicate Cyber Risk
- Eliminate Cyber Risk

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Challenges

Challenge of Measuring Risk

Knowing Your Internal and External Attack Surface

CMDB != Inventory for Cyber Risk

- Lacks Comprehensiveness
- Lacks Cyber Risk context

35%

Unknown Assets but known your attackers!

20%

Assets Not Running AV/EDR

Lack of Business context, resulting in More work post VM, Risk assessment

45%

Of Critical Assets are Missing Business Criticality

80

Hours spent to make unknown asset, as managed, prioritizing risk for asset with low criticality

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Challenges of Measuring Risk

Context for the 'Top 10' Risk Factors

- **Inability to collect data – Comprehensively & Accurately**
- **Lack of Threat & Business context**
  1. **Ransomware:** CVEs related to vulnerabilities
  2. **Dark Web chatter:** CVEs related to your industry talked in dark web
  3. **Known Malware:** CVEs exploited by by known threat actors
- **Unable to view unified 'Toxic Insights'**

First-Party OSS

API

LIGHTWEIGHT AGENT

PLATFORM SERVICES

SENSORS

3rd Party Data

APPLICATIONS

OPERATING SYSTEMS

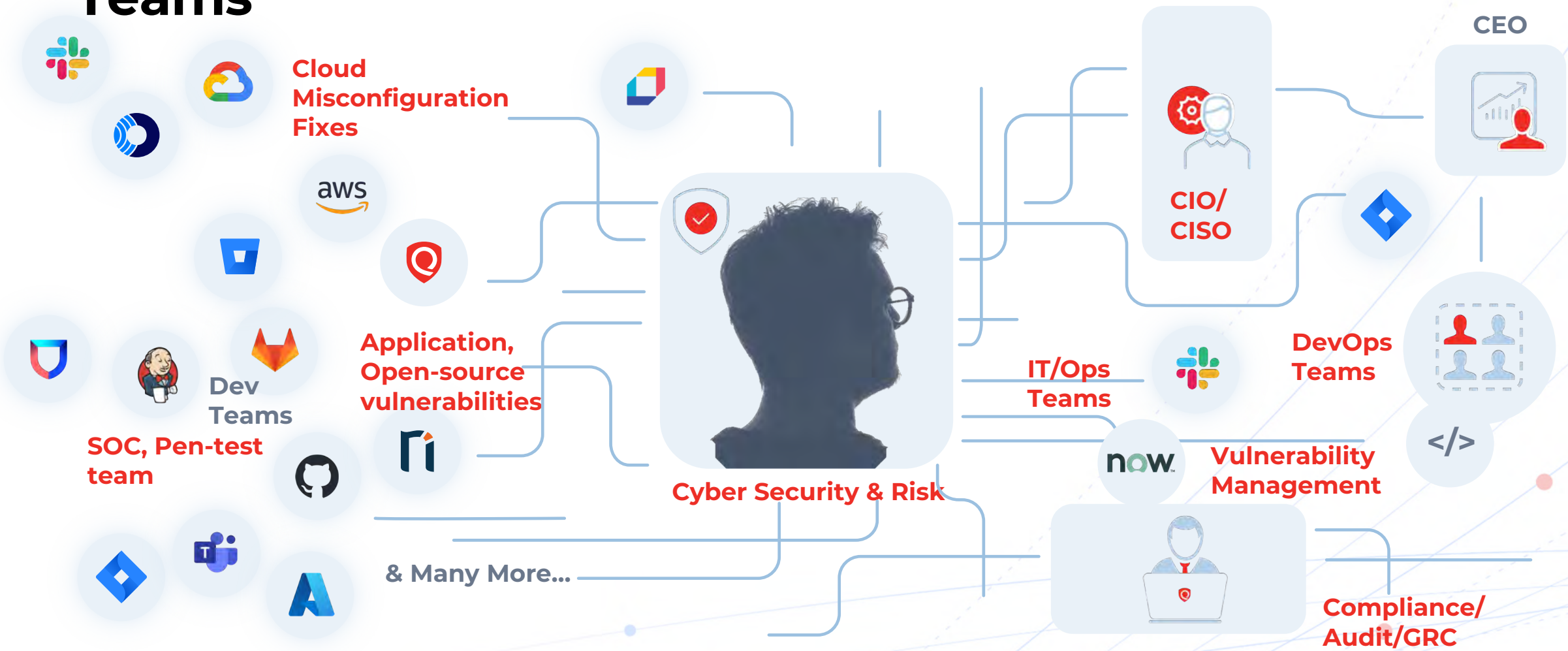
CLOUD / CONTAINERS / VMs

IT / WORKSTATIONS / SERVERS

IOT

EXTERNAL DEVICES

Challenge of Communicating Right Data to Right Teams



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Challenges of Eliminating Risk

IT not Risk, based Elimination

Vulnerability Closure != Patch

IT/Ops needs ‘Exact Remediations’

Not knowing ‘Low hanging Fruits’, which won’t terrify IT teams, w/o uttering the word ‘automate’

48K
Patches from Microsoft, 10K from third parties

440K
All Vulnerabilities

128K
3rd Party Software on workstations

Chrome:	Firefox:	Adobe:	iTunes:
2647	2131	1530	613
(2008-2023)	(2003-2023)	(2004-2023)	(2005-2023)

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Eliminating Risk – Problem of Whack-o-Mole Instead of Risk Prevention

Top Attacks of 2021, 2022 & 2023 have happened using Exploitable, Ransomware-Exploited or CISA catalogue provided vulnerabilities, not patched

Malware	Known CVEs	Known Misconfigurations
Conti	24	61
Darkside	04	54
Netwalker	08	03
Petya	10	06
REvil	24	27

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The Solution

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Qualys Enterprise TruRisk Platform

Qualys TruRisk™

Context of Threats | **Business Intelligence** | **Orchestration**

Internal & External Inventory Risk Management with Business Context

Detect, Prioritize vulnerabilities, Misconfigurations

Remediate vulns, misconfigs with Automation and intelligent workflows

Monitor, detect & respond & Prevent threats with Risk, business context

Drive compliance Monitoring, Reporting for Industry mandates, standards

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Step 0 of Measuring Risk

Knowing Your Internal and External Attack Surface

1 Manage Inventory Risk with Cyber Risk & Business Context

External attack surface, EOL/EOS, Open-source, Unauthorized software, Absence of Security tooling

2 Simplifies & Fast-tracks Vulnerability & Inventory Programs

Continuous discovery, inventory risk meta-data for baselining CMDB, with complete VMDR with business context

Internal assets

Agent, Scanner, Sensors

IOT/OT assets

Passive Network Sensor

Assets from 3rd parties

API-Based Connectors

Active Directory

servicenow

bmc helix

vmware

External assets

Open-source Tech & Qualys Internet canner

SHODAN

Scanner

DNS

Whois

Identity for everyone

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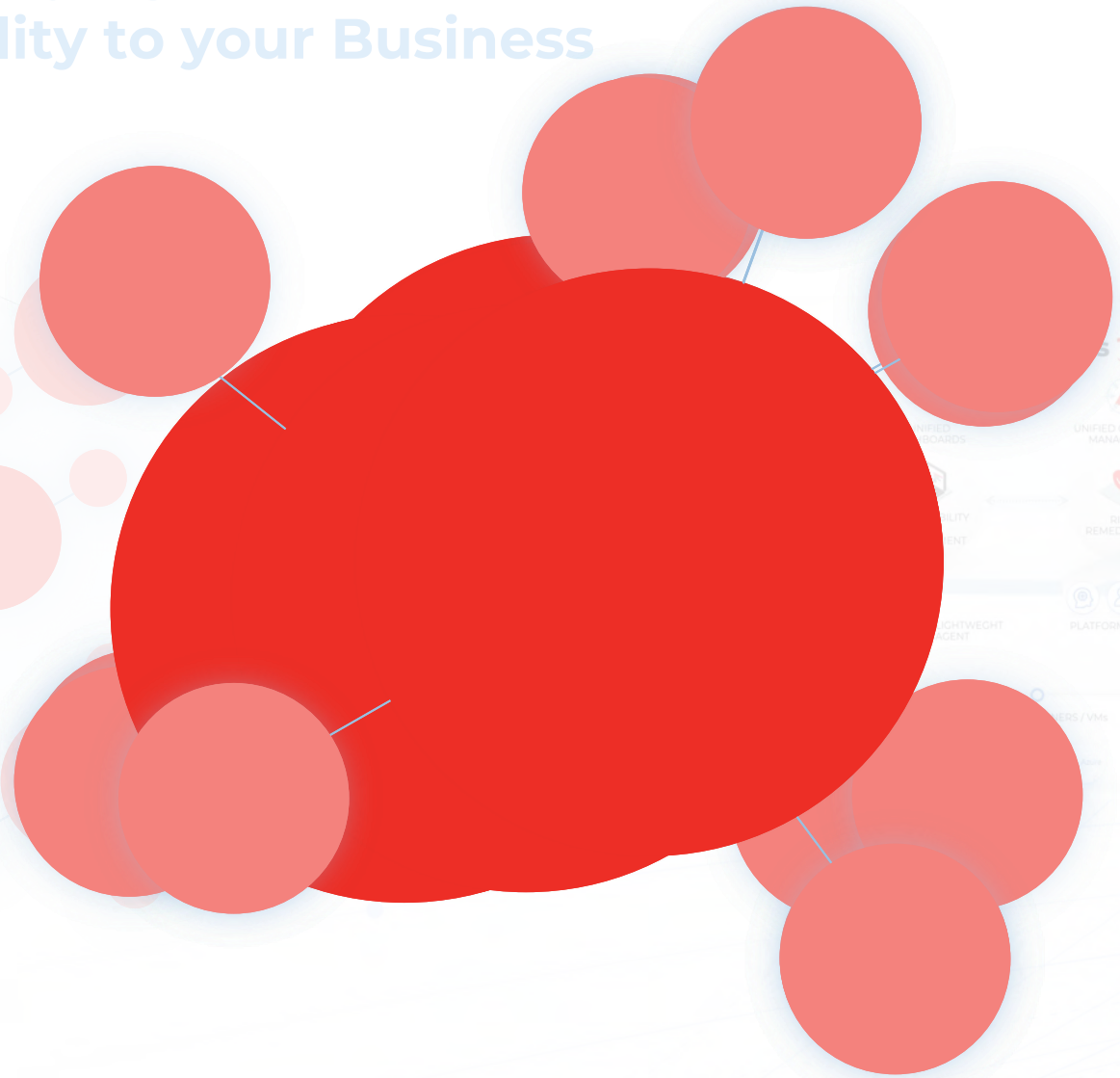
Measuring TruRisk

Collecting & Unifying Risk Factors, Correlated & Contextualized for Threats, Criticality to your Business



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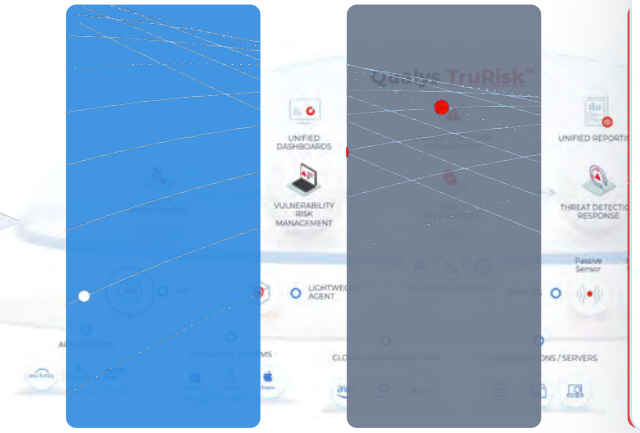
Measuring TruRisk

Collecting & Unifying Risk Factors, with Threat & Business Context



Normalization Correlation

Context

1. **Ransomware:** CVEs related to vuln
2. **Dark Web chatter:** CVEs related to your
3. **Known Malware:** CVEs exploited by by known threat actors

1. **Perimeter:** Internet Facing Assets (IFAs)
   - WEB
   - Infra
   - APIs
2. **Zero Tolerance and SOX:** As is define in the IT Assets Policy
   - DMZ (Front, Back)
   - Authentication (AD, ADFS, LDAP)
   - Payment and Cards Systems
   - AML
   - GSNET
   - SOX Systems
3. **Workstations**
4. **Internals:** Any other Server/infra in the internal network

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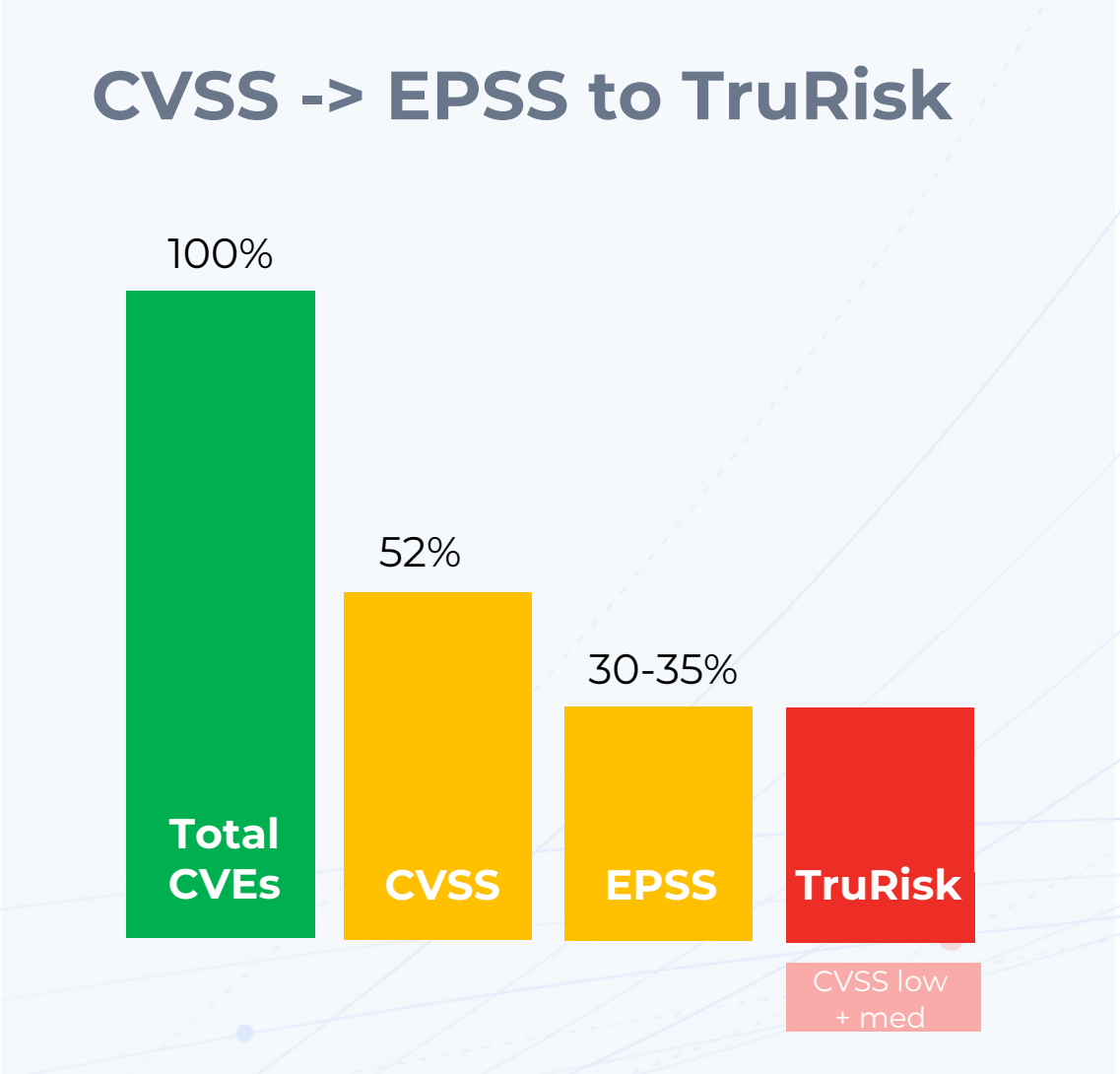
Outcome of Measuring TruRisk

Up to 85%

fewer vulnerabilities

~80%

less ‘Ransomware’ vulnerabilities



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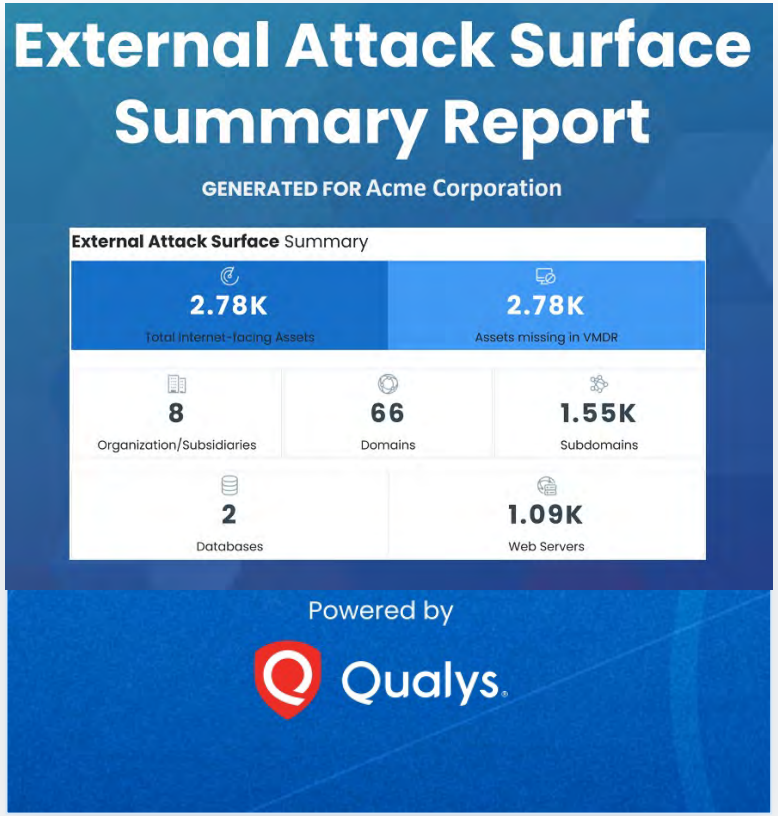
Communicating Risk

Contextual Communication Per Persona/Responsibilities



Communicating to Executives

Unified, Quantified, Prioritized Cybersecurity Risk score

Talks Business language & Factors Contributing to Risk to Business
(which business critical app has highest risk)

Provides actionable recommendations to eliminate, reduce risk

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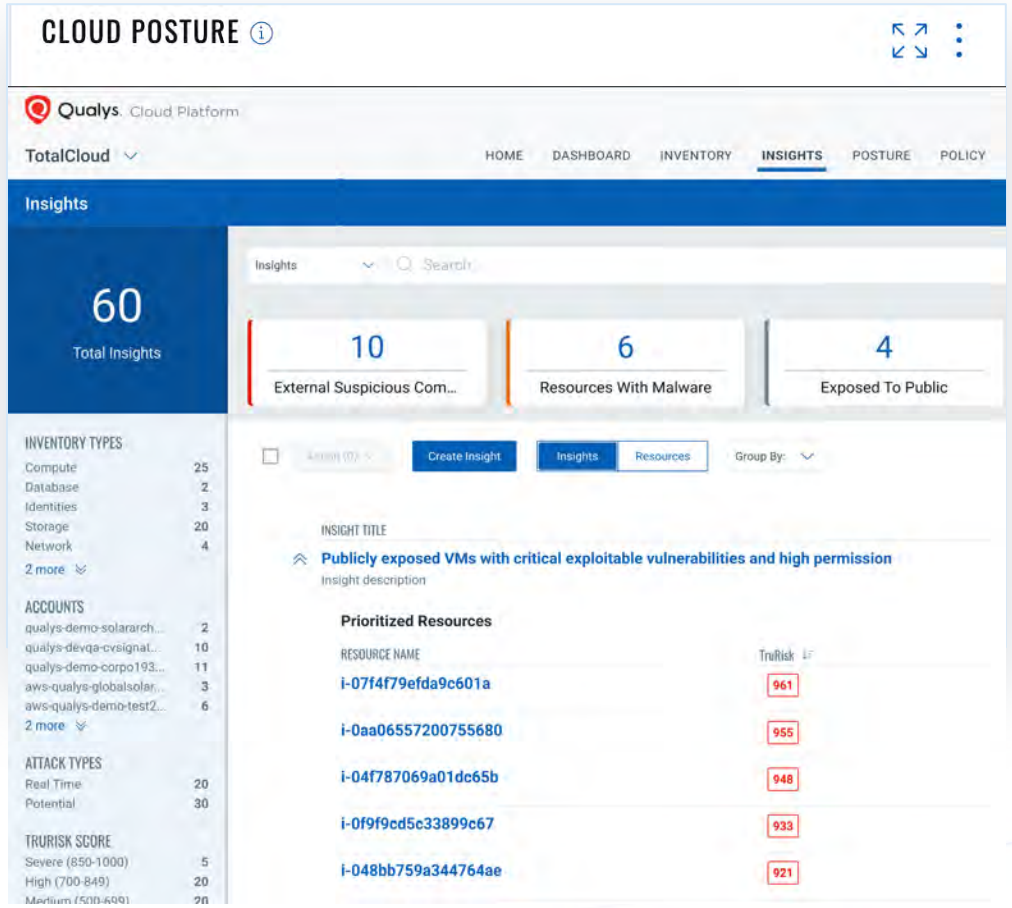
Communicating Risk

Contextual Communication Per Persona/Responsibilities



Communicating to Risk Category Management

Actionable Views of Prioritized Risk Factors impacting Business Risk

Know in Detail – the dependencies impacting risk you are responsible with context of threats, priorities and trends

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Communicating Risk

Contextual Communication Per Persona/Responsibilities

Communicating Risk to Threat & SOC Team

Proactively communicate TruRisk with risk indicators & business context to known Attack techniques reduce the risk of attacks

Prioritize security monitoring based on TruRisk

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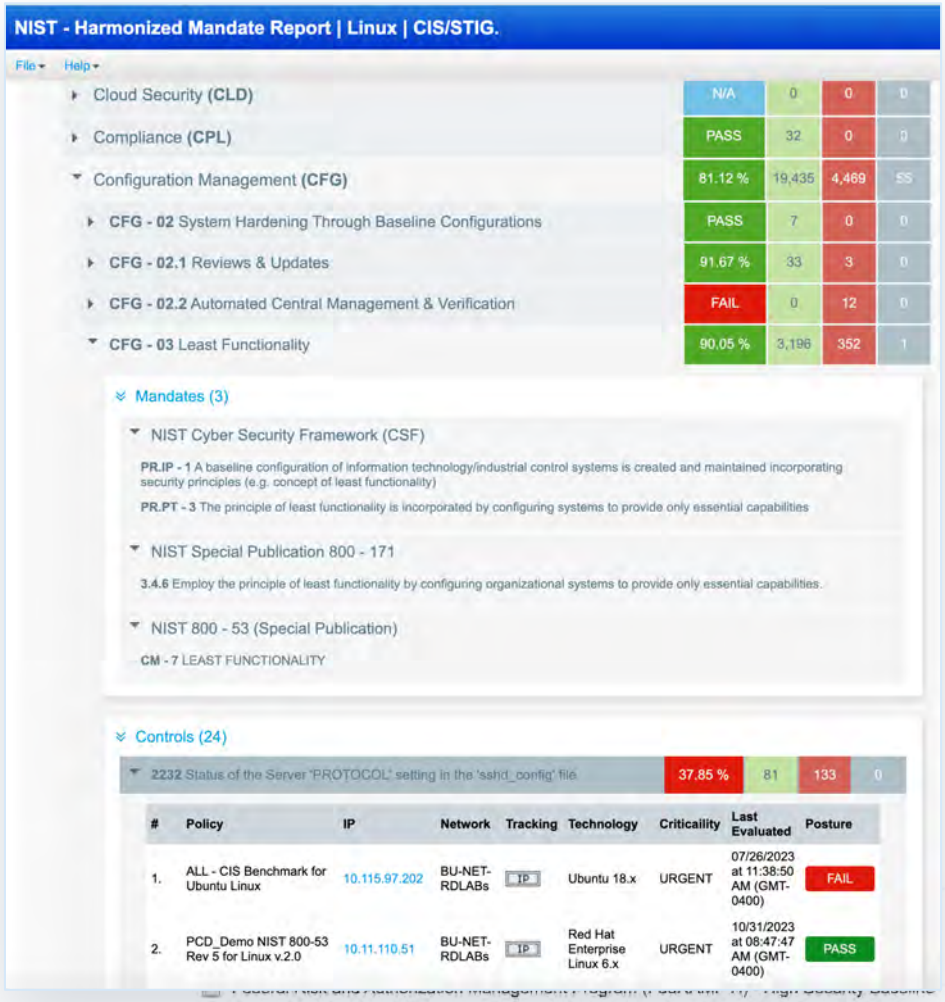
Communicate Compliance

Be-Audit Ready



Communicating to Audit/Compliance

Mapping of 50+ mandates, requirements to Qualys provided risk factors

Talks the language of 'which compliance requirement' failing, why, which assets

Provide RBAC supported access or send tickets with context to compliance teams

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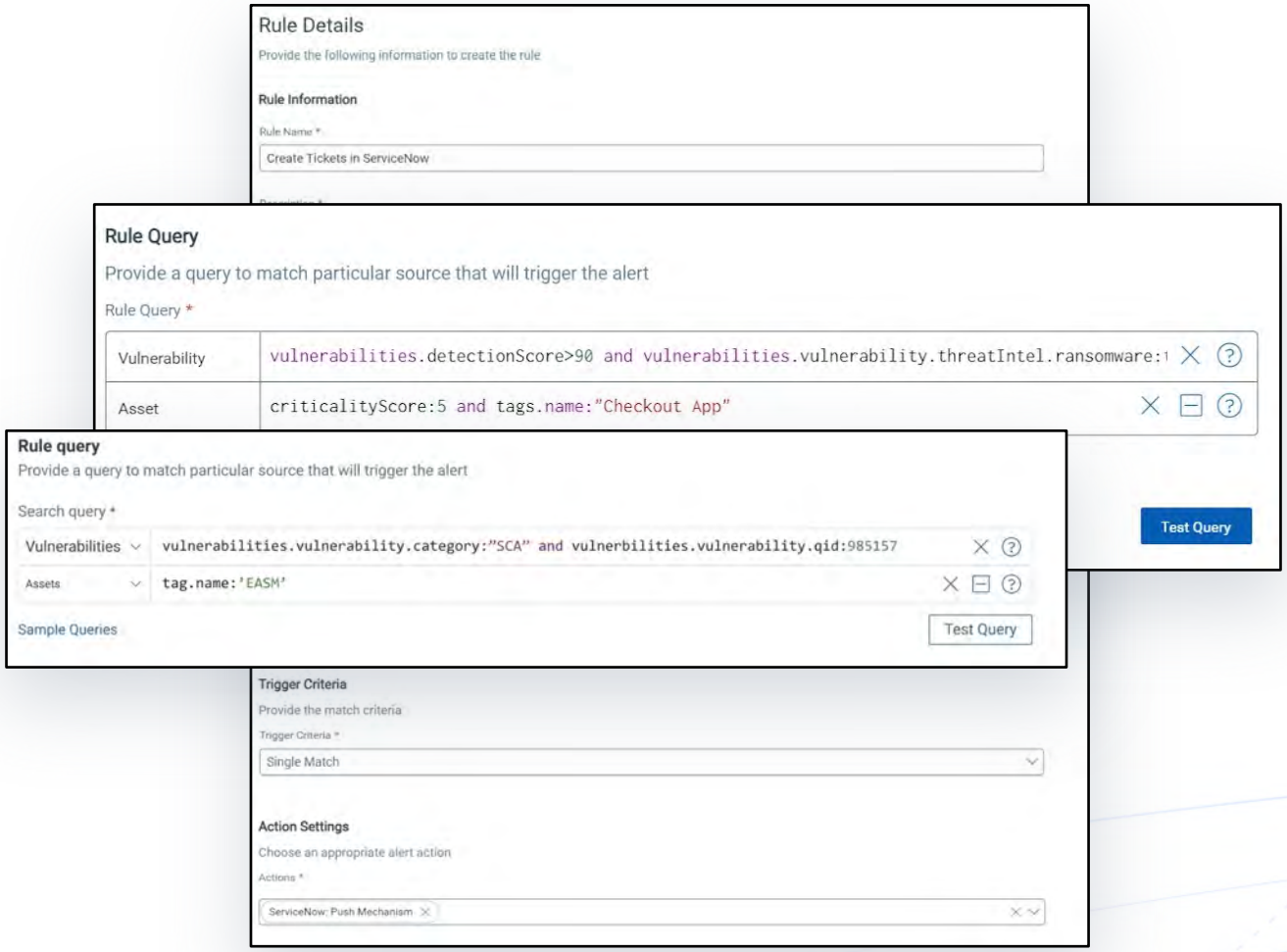

Communicating to Teams to remediate

Auto ticketing to move beyond spreadsheets

Rule-based ticketing, ownership assignment, and auto closure

Manage change approvals and deploy remediations directly from ITSM

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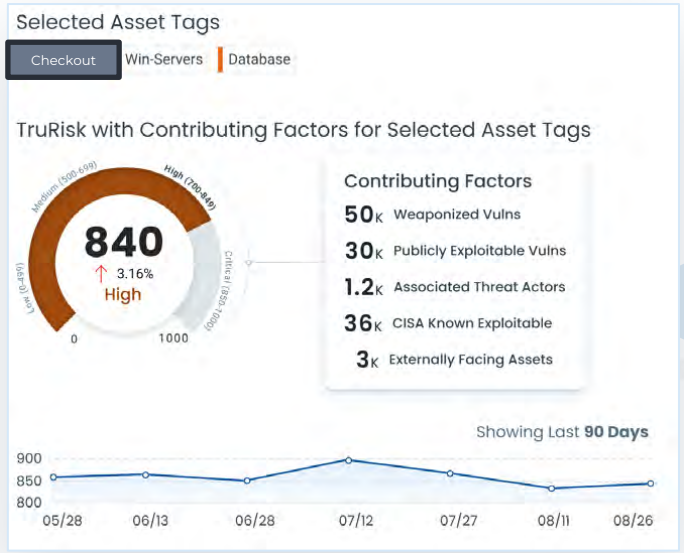
Communicating TruRisk

Right Data, with Right Context to Right team



Infra vulns

IT/Ops Teams

Patch KB + reg change
MS Windows OS
CVE: Printnightmare

open-source vulns

DevOps Teams

Software version update
Linux w/python
Python- open source

cloud misconfigurations

Cloud Team

Cloud Misconfig
S3 Bucket Public access
Account : AWS : ID
Fix script
IaC Template

application vulns

App Teams

Vuln for Apache Tomcat
Workload
Fix script
Update version, patch

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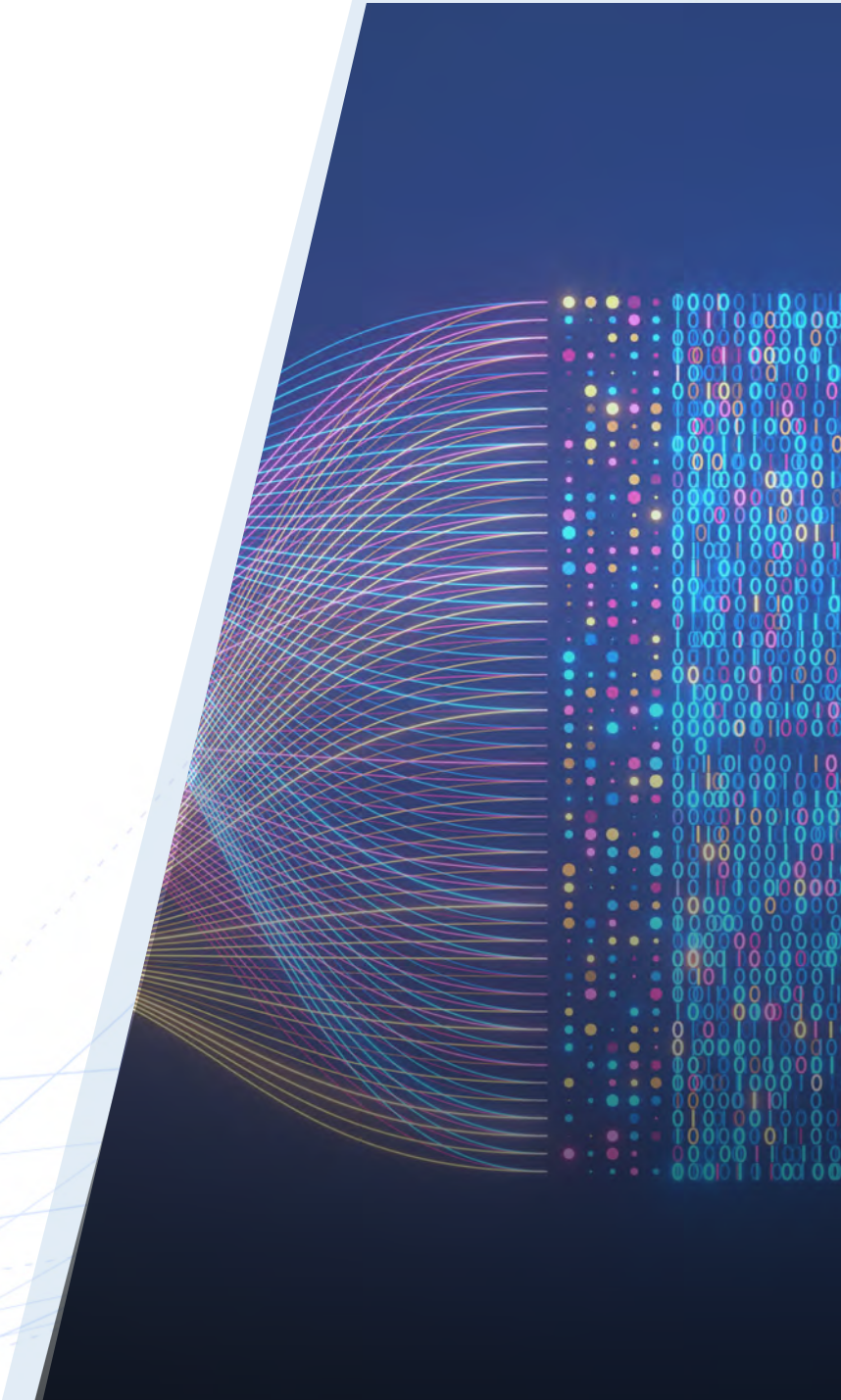
Eliminating Risk

Across Risk Factors

- Vulnerabilities
- Misconfigurations
- Unauthorized software
- Missing required software
- Open-source Vulnerabilities
- Infra Misconfigurations
- Sensitive data risks
- Technology debt risks
- Web application risks
- Emerging threats
- Endpoint Malicious activities
- Access control risks



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Eliminating Risk

Risk-based Elimination, across Attack Surfaces, Risk Categories

Web App OWASP vulnerabilities

Malicious, suspicious Activities

Inventory Cyber Hygiene Risks

Cloud Misconfigurations

Infra/DB/Web Servers/ Middleware Misconfigurations

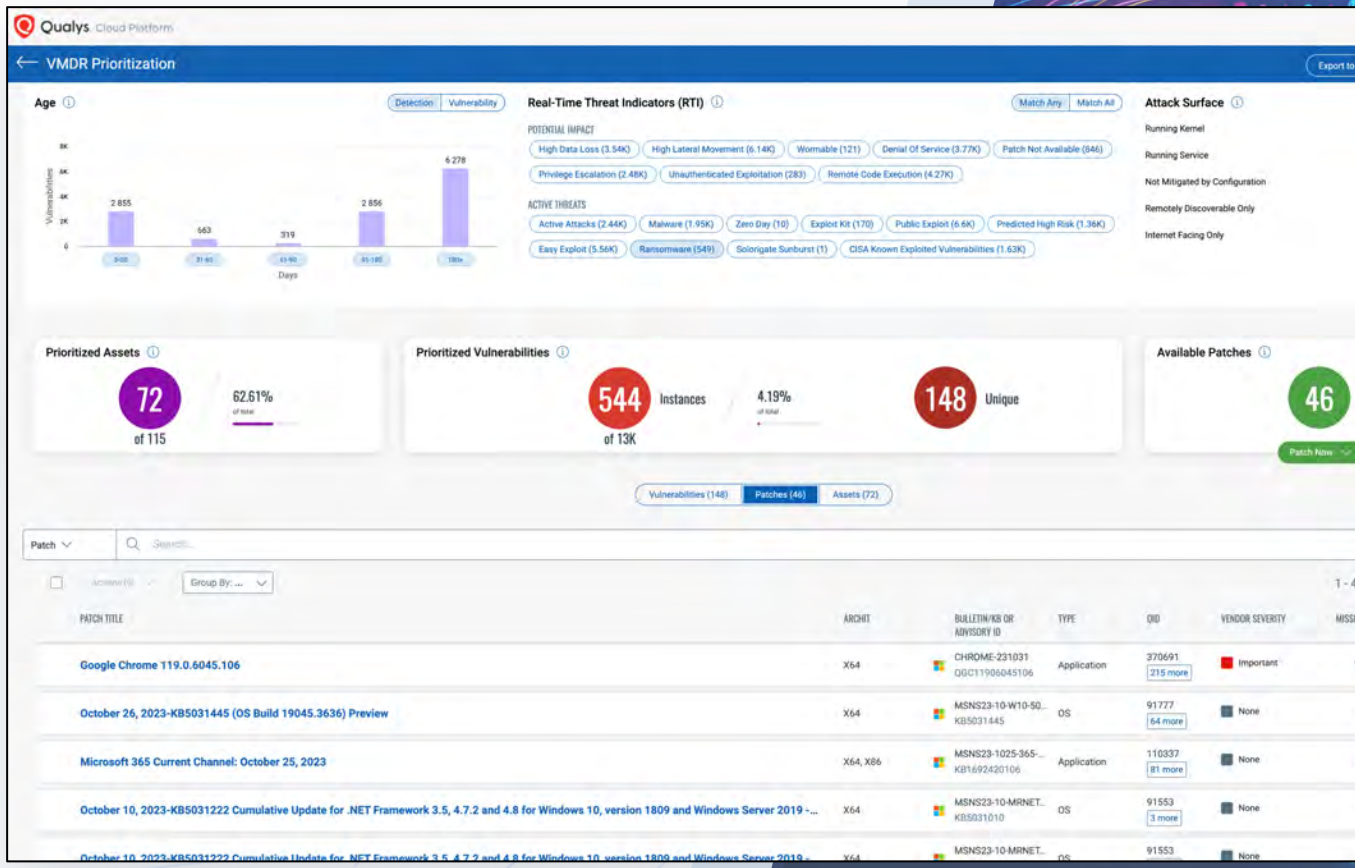
Open-source vulnerabilities

Access Controls

Technology Debt – EOL/EOS

Sensitive data risks

Infra Vulnerabilities



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Eliminating Risk

Risk-based Elimination, for prioritized vulnerabilities

Web App OWASP vulnerabilities

Malicious, suspicious Activities

Inventory Cyber Hygiene Risks

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Infra/DB/Web Servers/ Middleware Misconfigurations

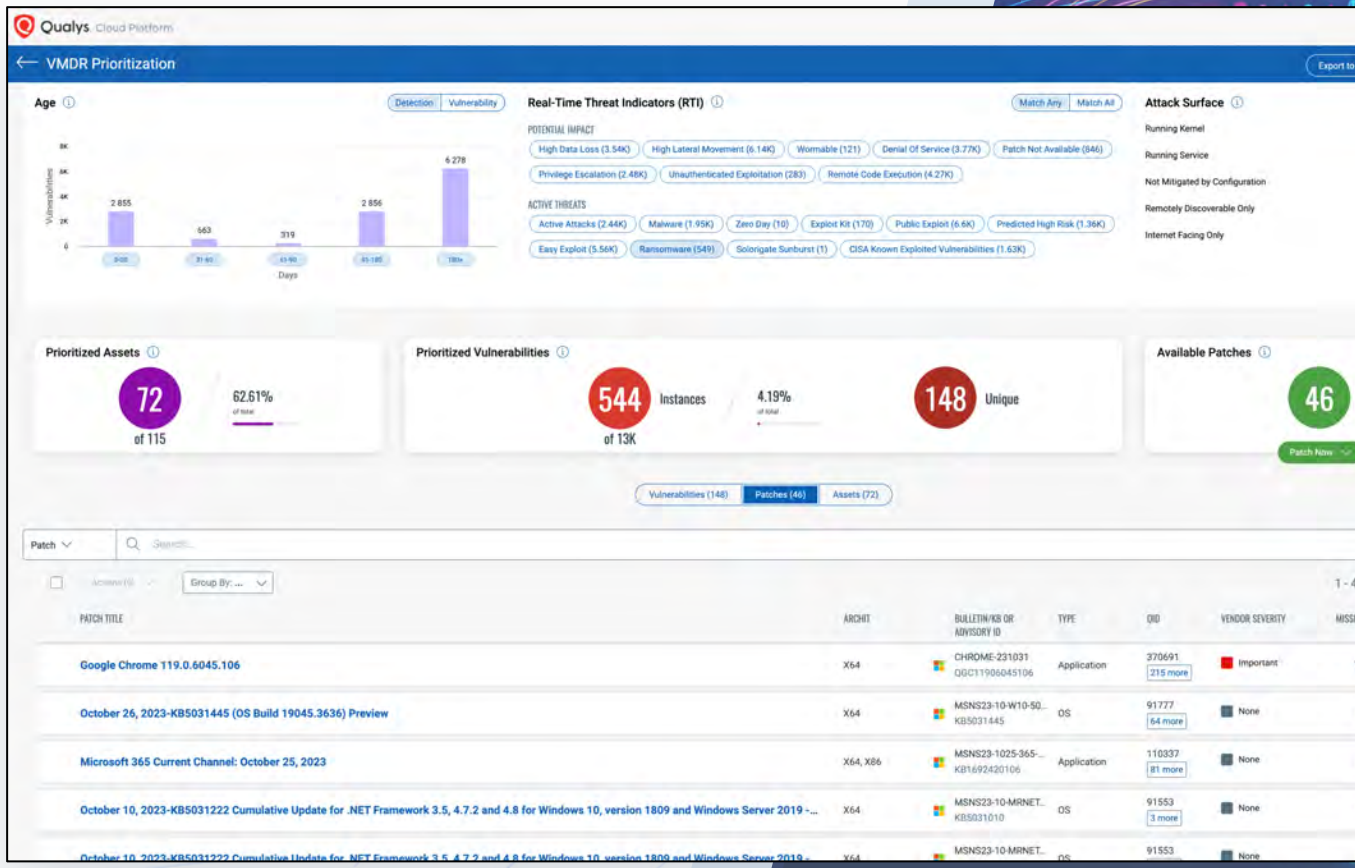
Open-source vulnerabilities

Access Controls

Technology Debt – EOL/EOS

Sensitive data risks

Infra Vulnerabilities



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Eliminating Risk

Risk-based Elimination, for Cloud

Web App OWASP vulnerabilities

Malicious, suspicious Activities

Inventory Cyber Hygiene Risks

Cloud Misconfigurations

Infra/DB/Web Servers/ Middleware Misconfigurations

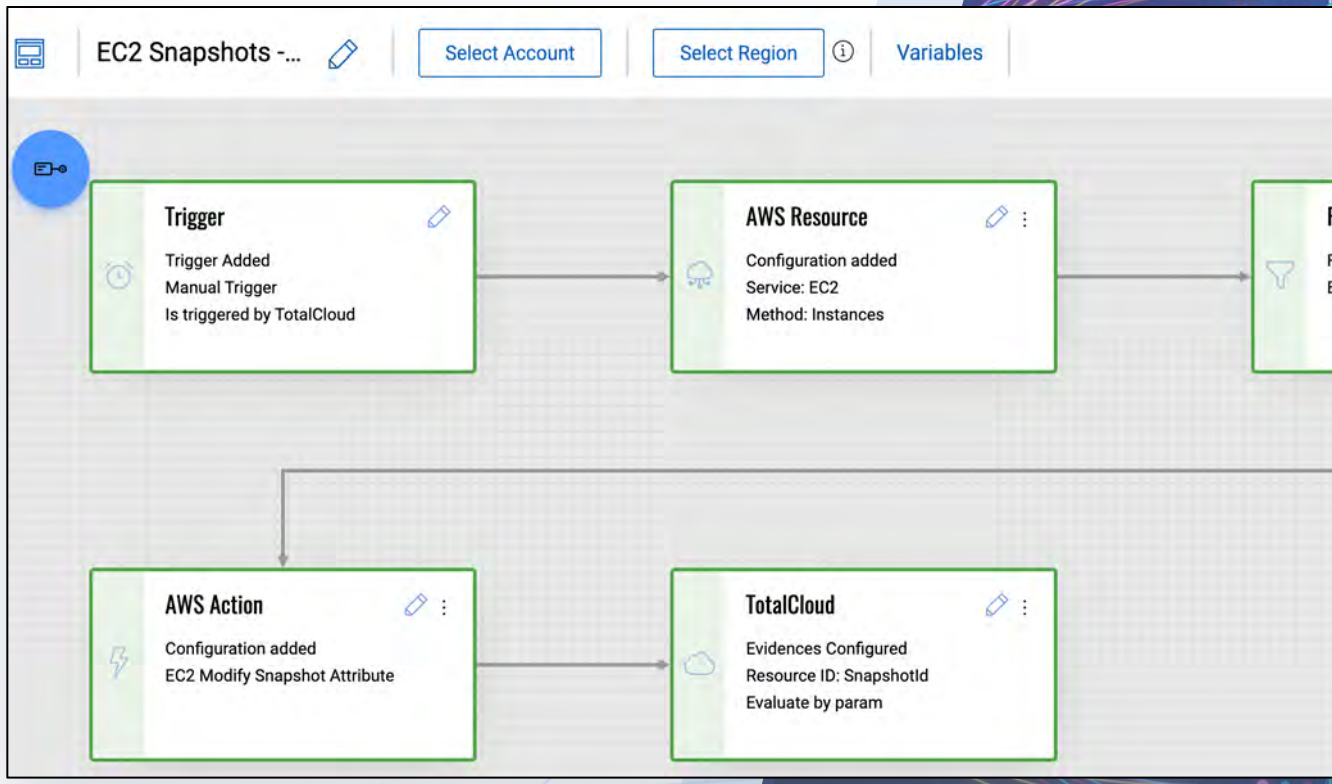
Open-source vulnerabilities

Access Controls

Technology Debt – EOL/EOS

Sensitive data risks

Infra Vulnerabilities



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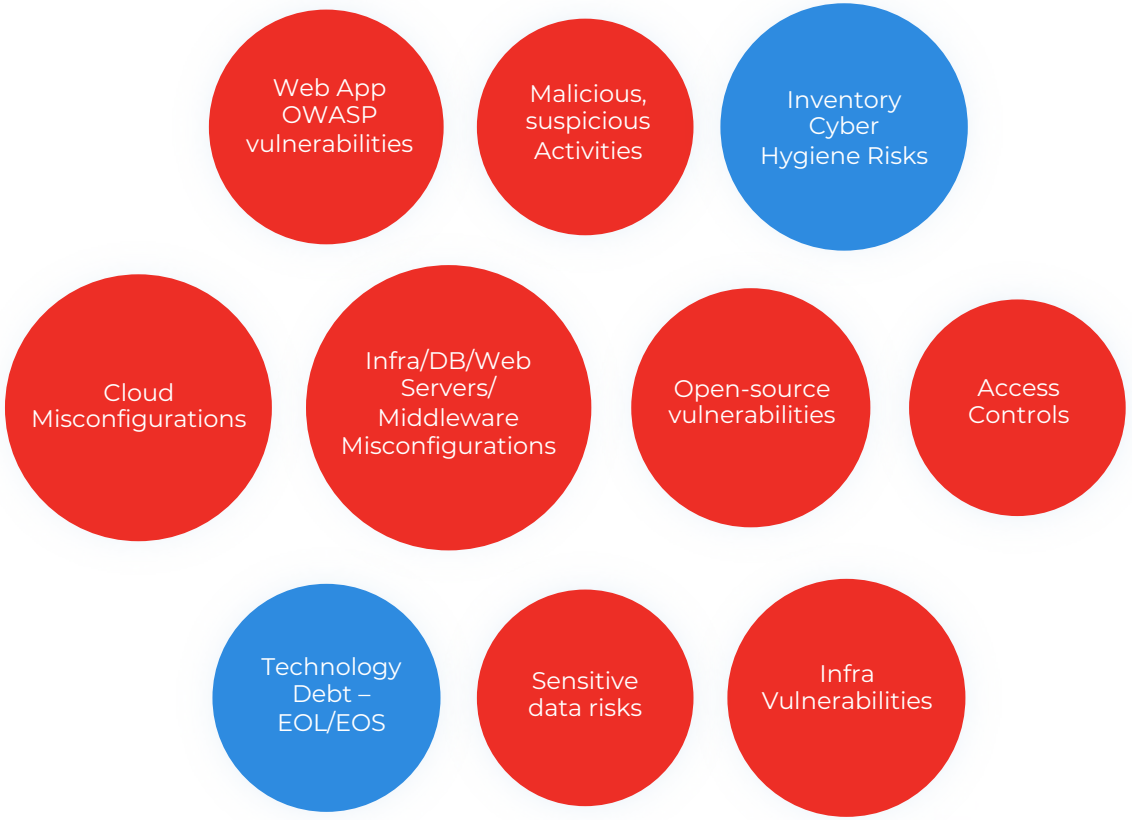
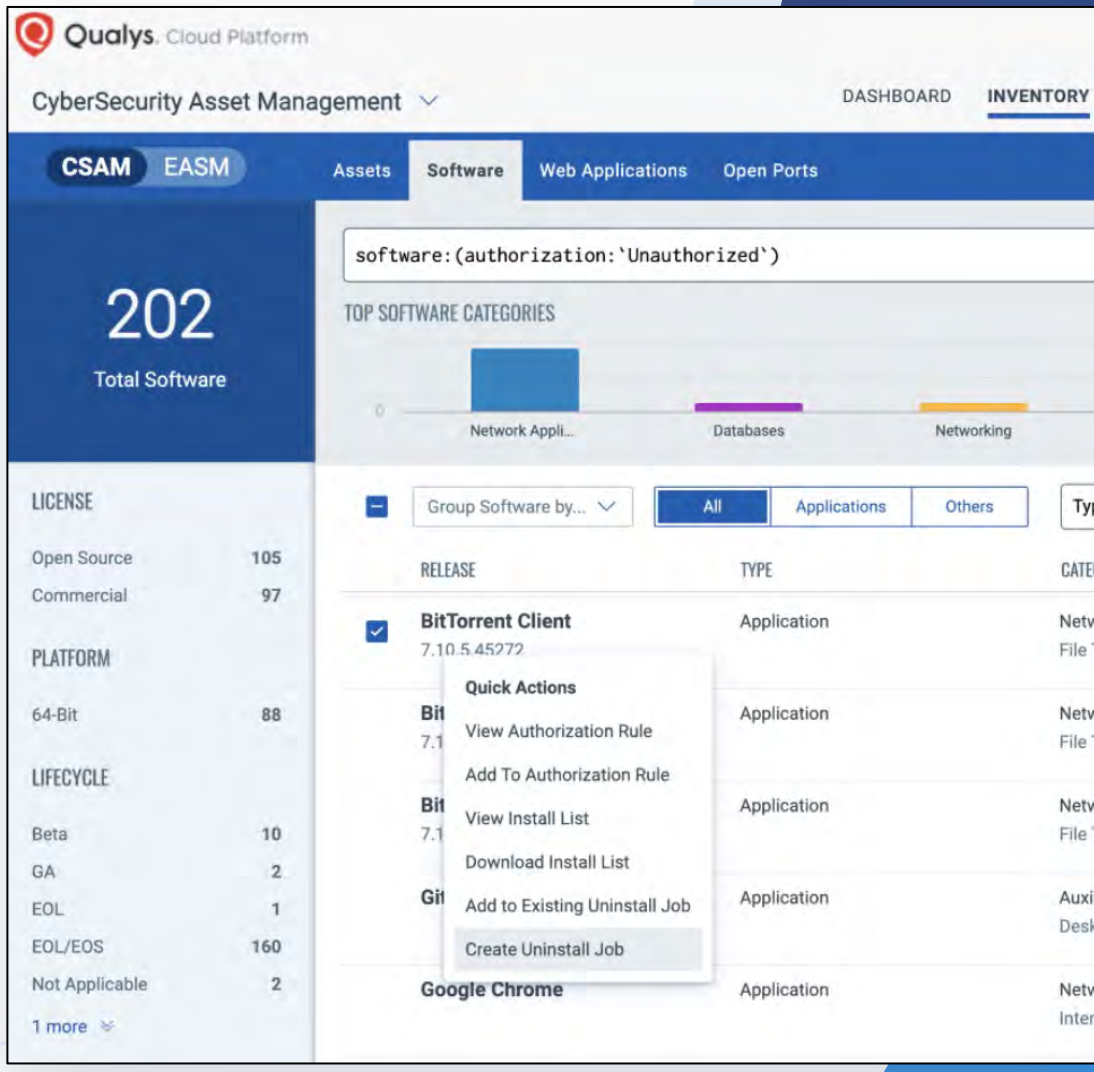
Eliminating Risk

Risk-based Elimination, for Inventory





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Not Just Eliminating, but Preventing Risk

Web App OWASP vulnerabilities

Malicious, suspicious Activities

Inventory Cyber Hygiene Risks

Cloud Misconfigurations

Infra/DB/Web Servers/ Middleware Misconfigurations

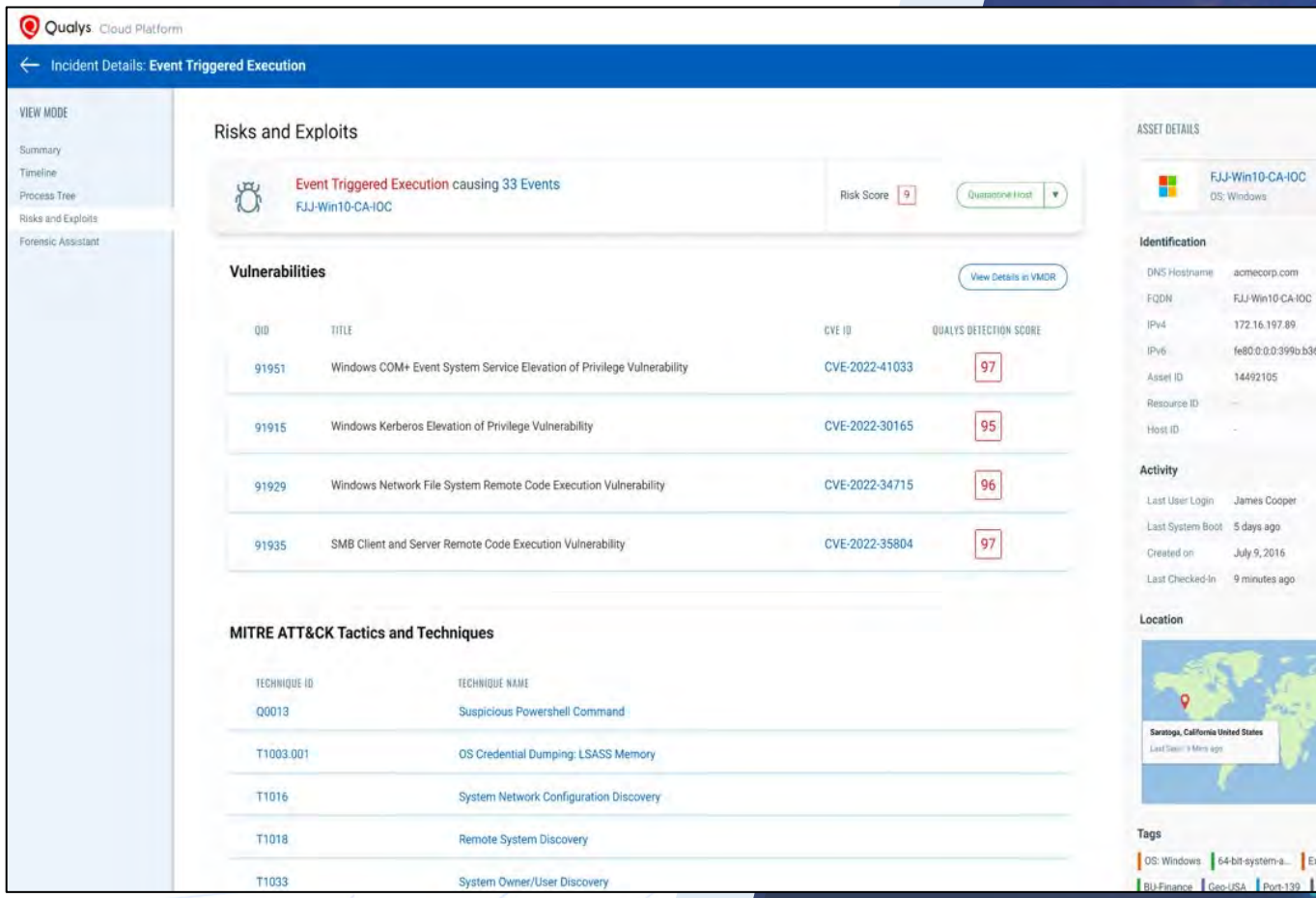
Open-source vulnerabilities

Access Controls

Technology Debt – EOL/EOS

Sensitive data risks

Infra Vulnerabilities



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Qualys®

Enterprise TruRisk™ Platform

Measure, communicate, and eliminate cyber risk.

De-risk your business.

What’s Next...

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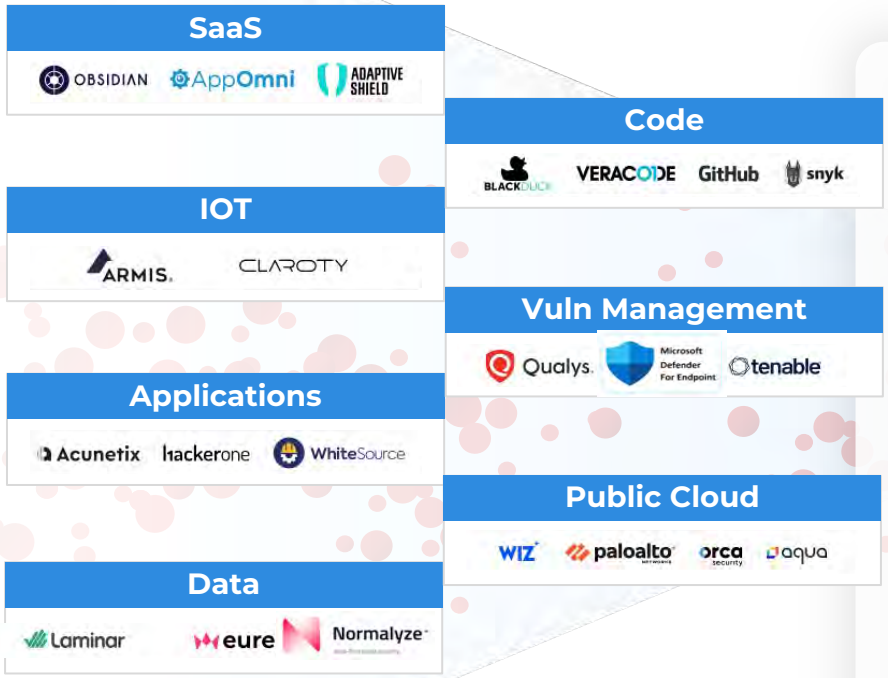
Further Challenges of Measuring Risk

Every tool measures risk differently, with/without Threat, Business context



Qualitative

- Severe / Critical
- Urgent / Low
- Medium / High
- Pass / Fail
- Category 1,2,3 etc..

Quantitative

- 10, 50, 100
- 1-5

CVSS

- 1-10

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Communicate Risk

For Intrinsic Business Value & Loss

1. No Tie up for Cyber Risk to the Business Value & Loss.
   What's the impact on business

2. Inability to communicate risk to right teams on their impact on organization's TruRisk

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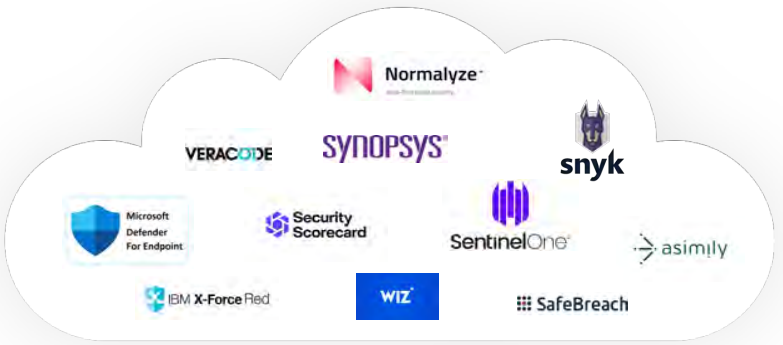
Communicate Risk

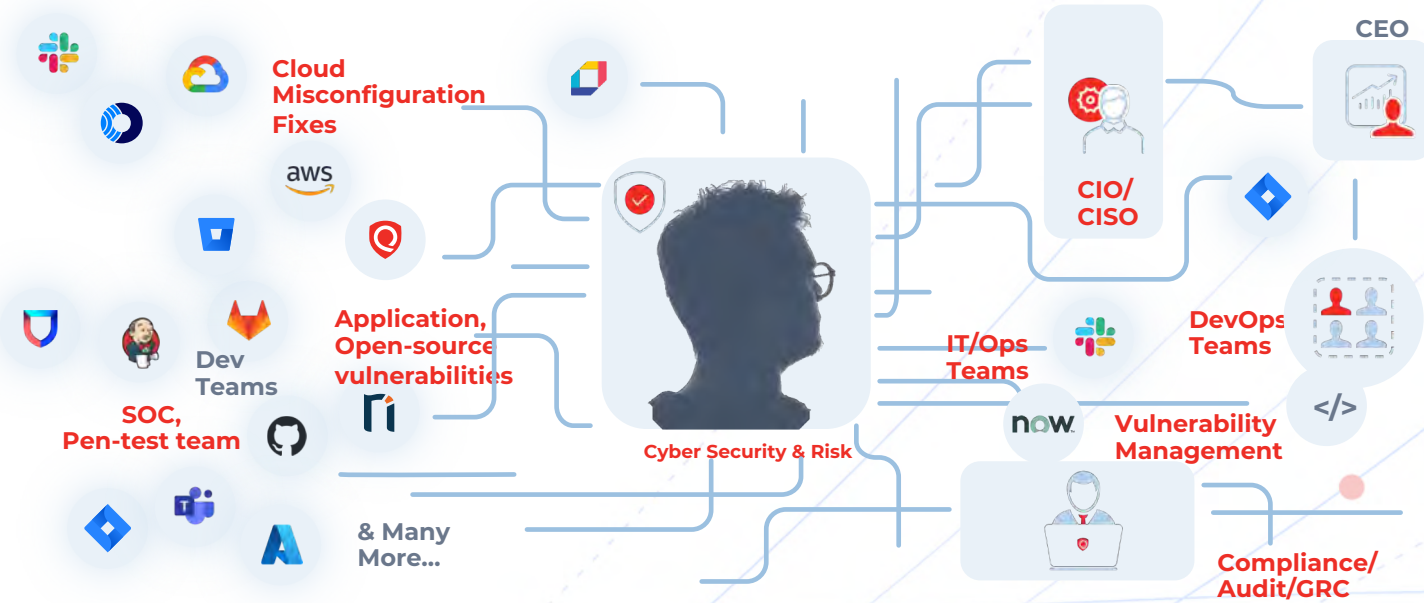
Challenge of Communicating Right Data to Right Team

Amplified by *10



The Qualys Solution set

- Cyber Asset Attack Surface Management (CSAM)
- Application & API security
- External Attack Surface Management (EASM)
- Vulnerability Management Detection and Response (VMDR)
- TotalCloud
- Patch Management (PM)
- Policy Compliance (PC)
- **...and more**



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Need to Reduce Risk, w/o Patch Dependency

Patching Hygiene Doesn't Improve, Then what?

Attackers continue to **exploit old vulnerabilities & remain unpatched**

What are Options beyond Patching

Top 10 Riskiest Vulns, not 0 days, Exploited by Threat Actors

30+ Days to remediate weaponized vulnerabilities

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Extending the Power of the Qualys **TruRisk** Platform for **Eco-System** Risk Management

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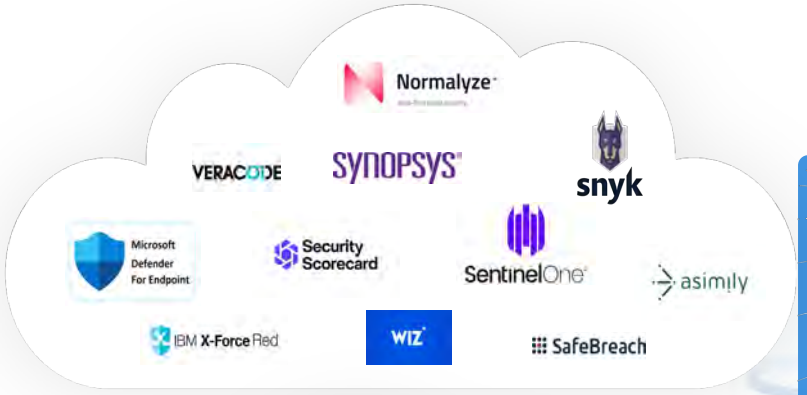
Measuring TruRisk Across Eco-System



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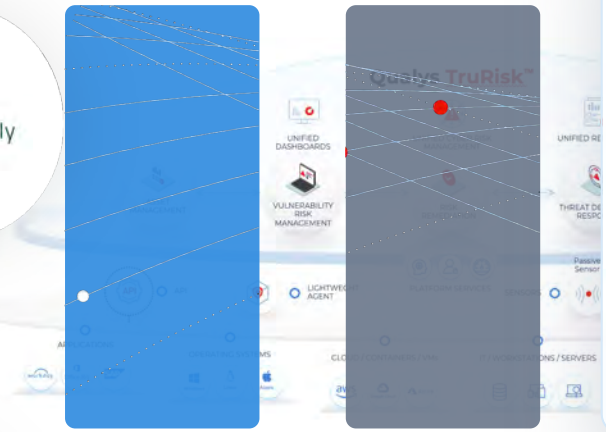
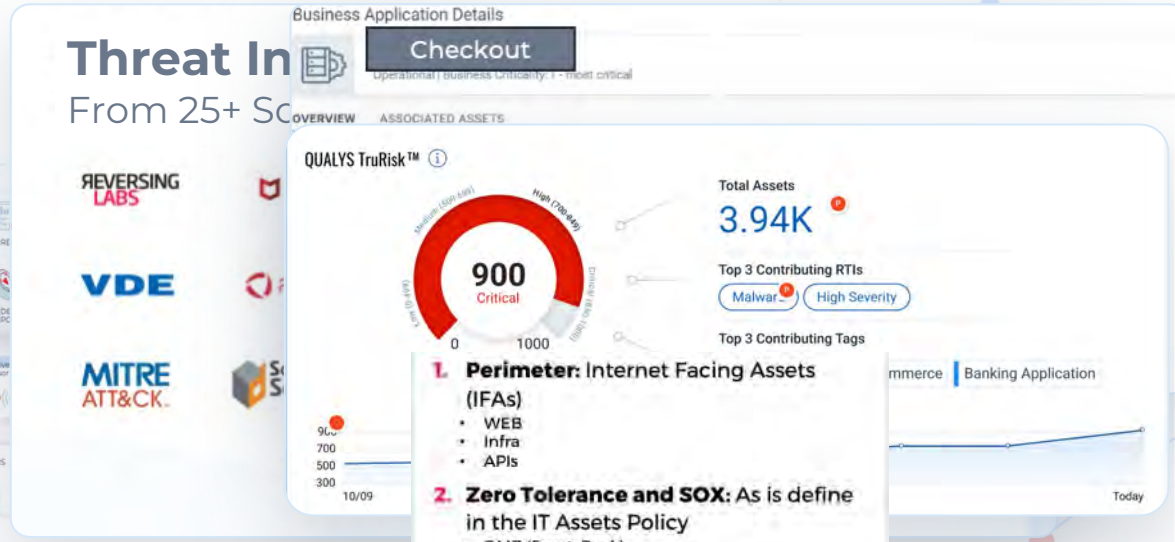


Normalization **Correlation**



Context

1. **Ransomware:**
   CVEs related to vulnera
2. **Dark Web chatter:**
   CVEs related to your in
3. **Known Malware:**
   CVEs exploited by by known threat actors

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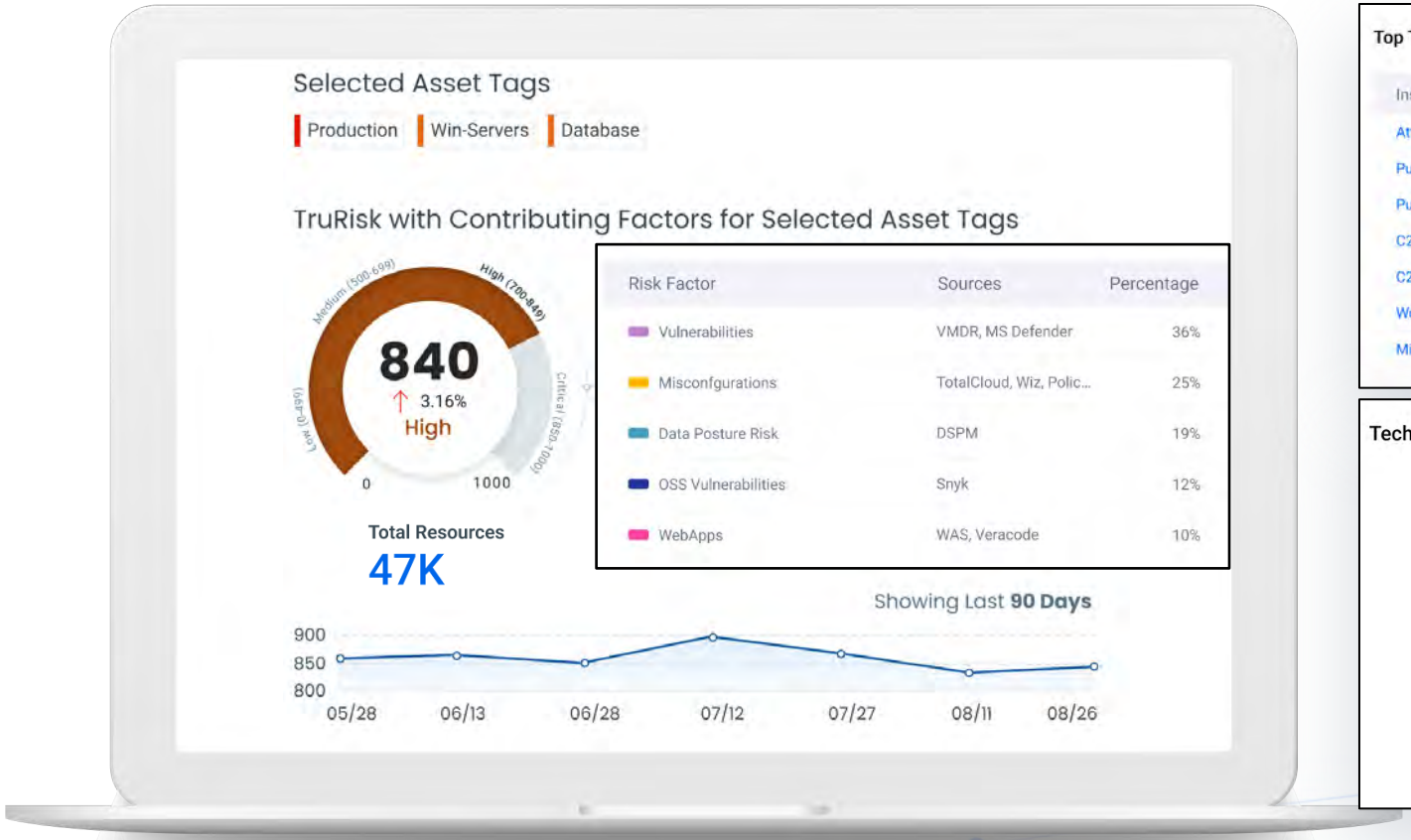
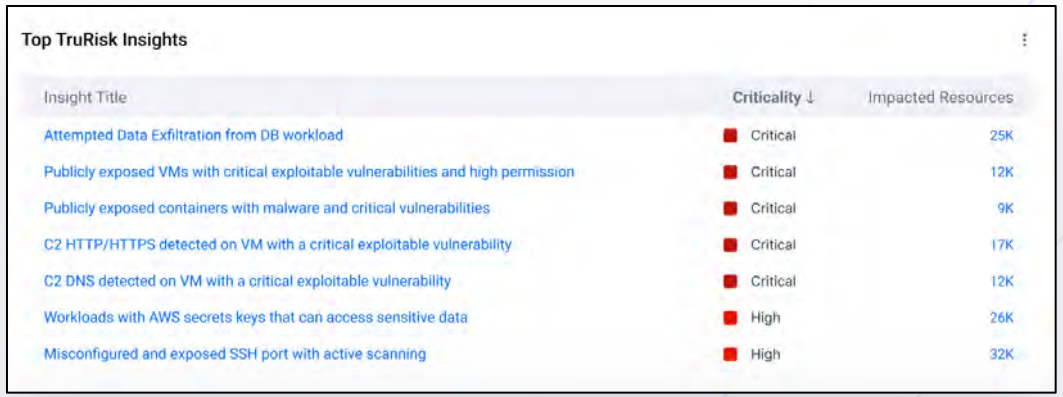
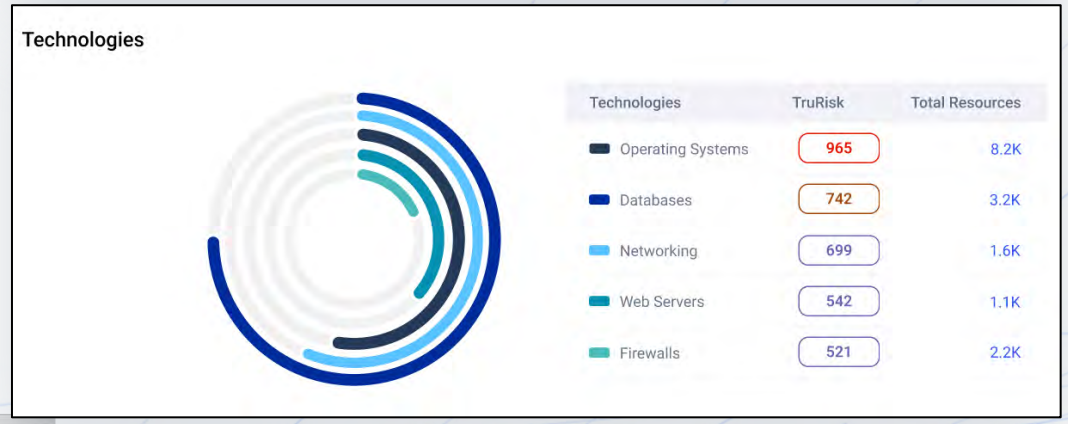
Measuring TruRisk Across the Eco-System







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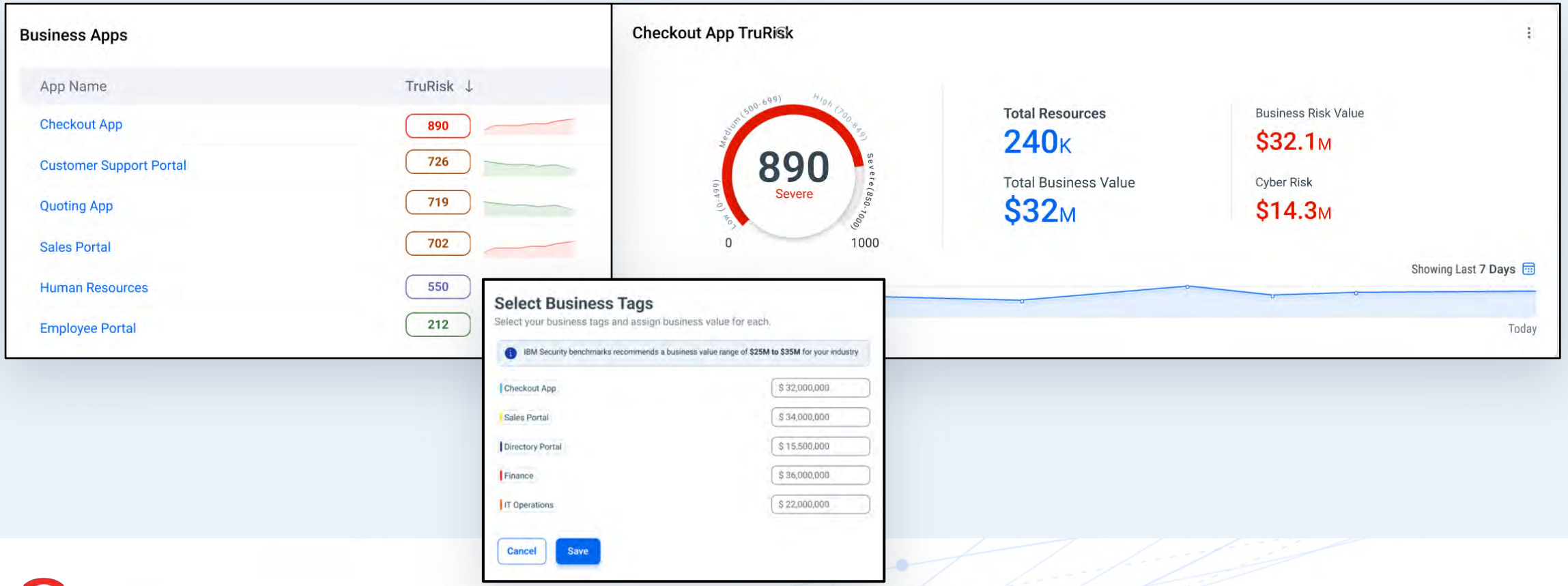
Communicating TruRisk to Executives in Language of Business Value & Loss



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Communicating TruRisk

Right Data, with Right Context to Right team

Normalyze
VERACODE
SYNOPSYS
snyk
Microsoft Defender For Endpoint
Security Scorecard
SentinelOne
asimily
IBM X-Force Red
WIZ
SafeBreach

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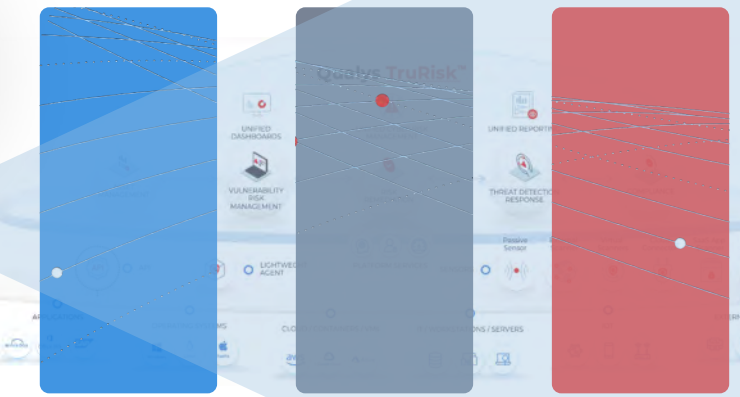

Normalization Correlation Concept

Infra vulns

open-source vulns

cloud misconfigurations

application vulns

IT/Ops Teams

Patch KB + reg change
MS Windows OS
CVE: Printnightmare

DevOps Teams

Software version update
Linux w/python
Python- open source

Cloud Team

Cloud Misconfig
S3 Bucket Public access
Account : AWS : ID
Fix script
IaC Template

App Teams

Vuln for Apache Tomcat
Workload
Fix script
Update version, patch

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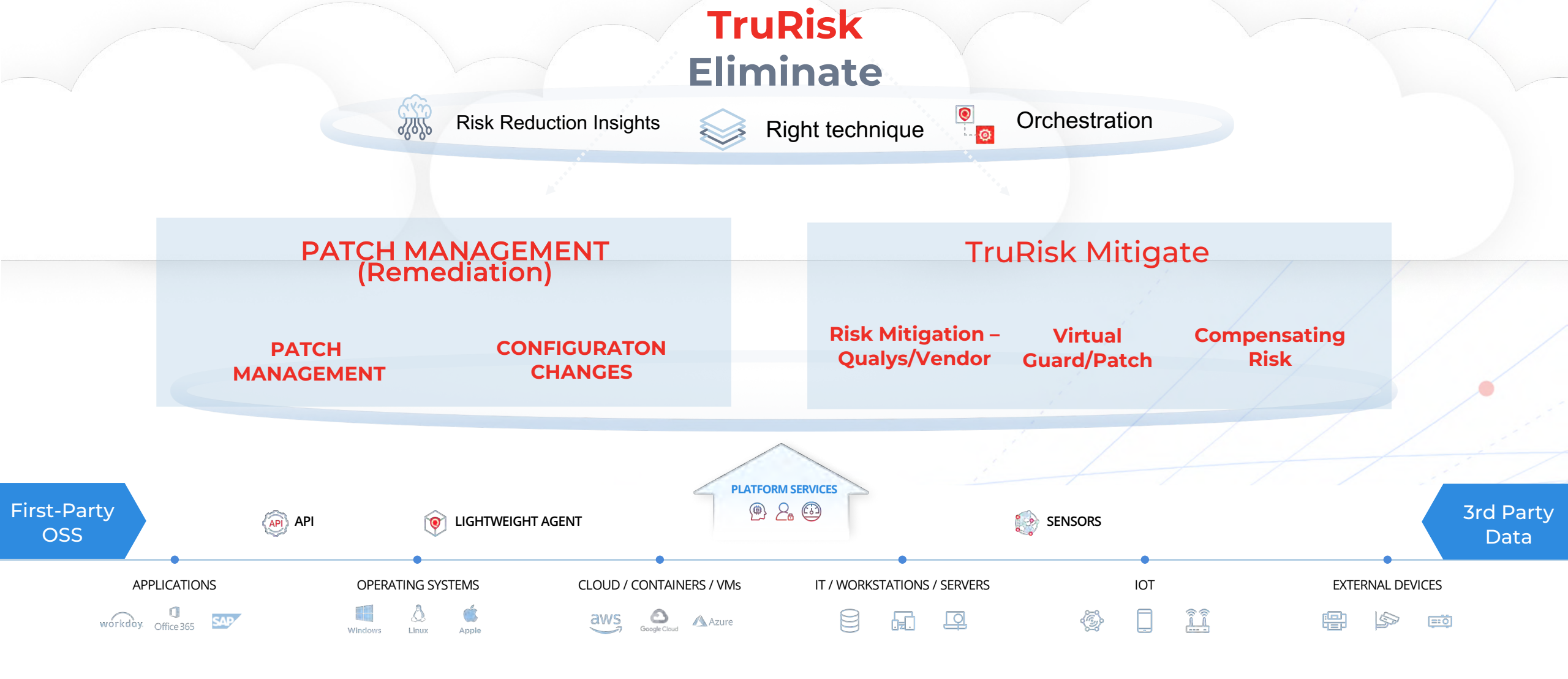
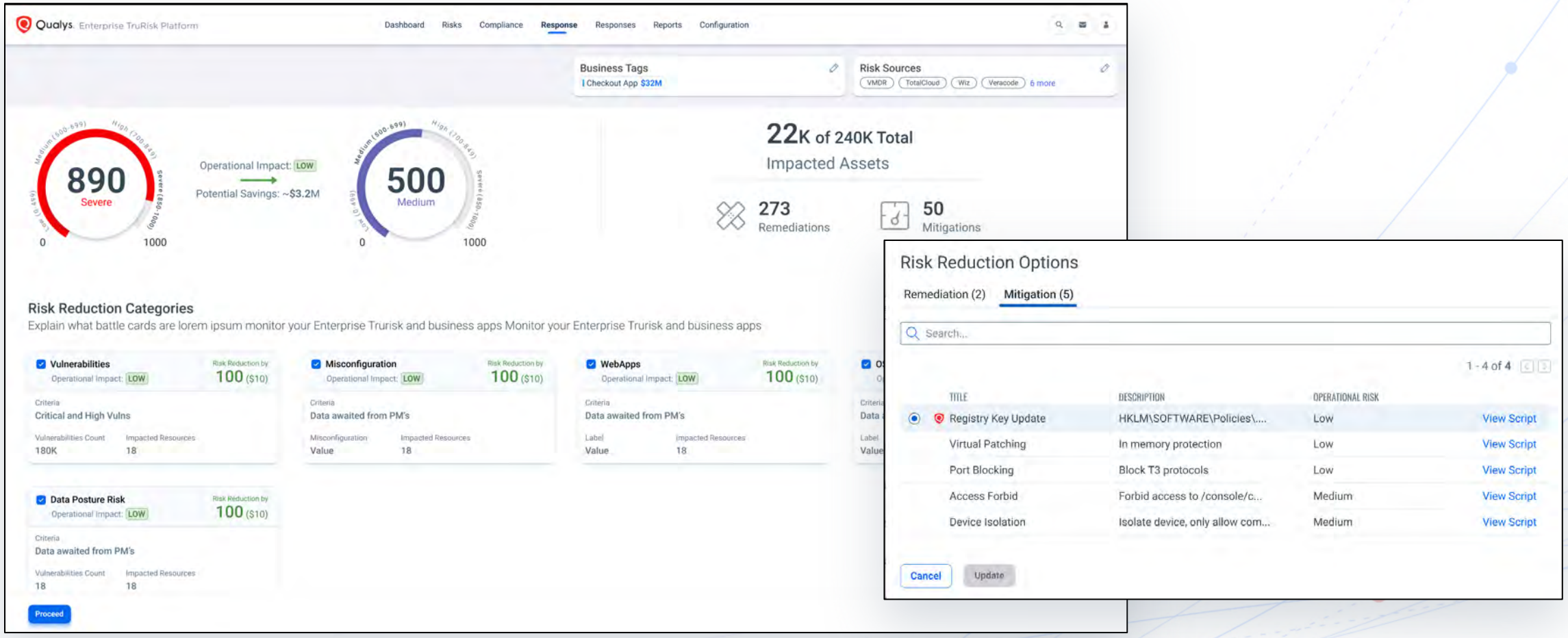
TruRisk Eliminate

Remediate, Mitigate, Compensate, Virtually Guard



Eliminating Risk … with Techniques Beyond Patching, balancing Operational Impact



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Risk Mitigation

Going Beyond Patching

Risk Mitigation: Vendor provided

Registry Keys, config Settings, User Permissions,

Virtual Patching

Temporary Shield To Protect Memory & Kernel Space

Risk Mitigation: Qualys

Uninstall Of Software, Port Blocking

Compensate Risk: Orchestration

Microsoft Defender, Palo Alto firewall changes with Qualys Qflow trigger

Accept Risk

Sap,zlinux, Mainframes , Databases with approvals

Modifying Access

Machine & User Identities

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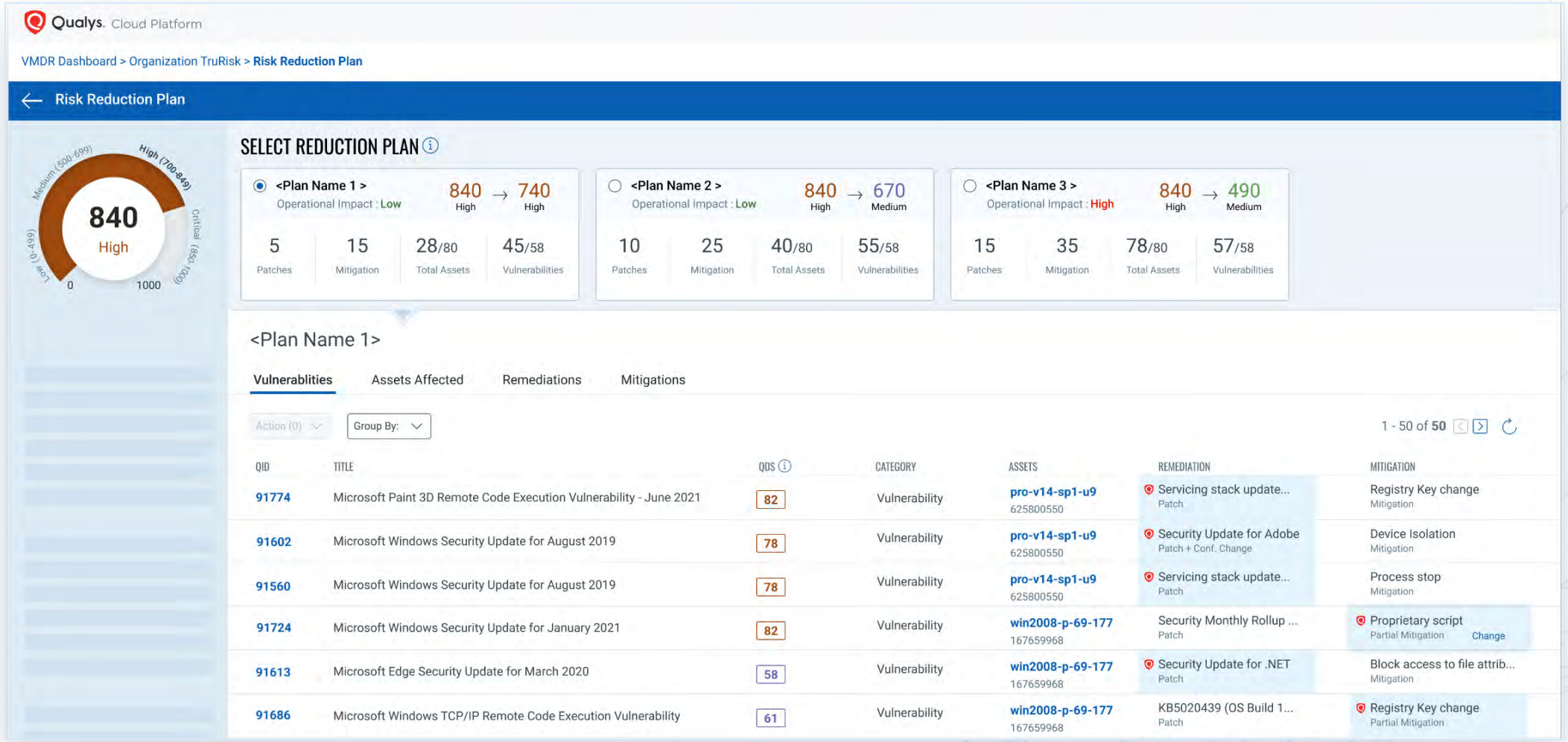
Eliminating Risk Effectively

Personalized Risk Reduction Recommendations



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De-risk your business.

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