Securing the Digital Transformation with DevOps

Cloud & Container Security Automation

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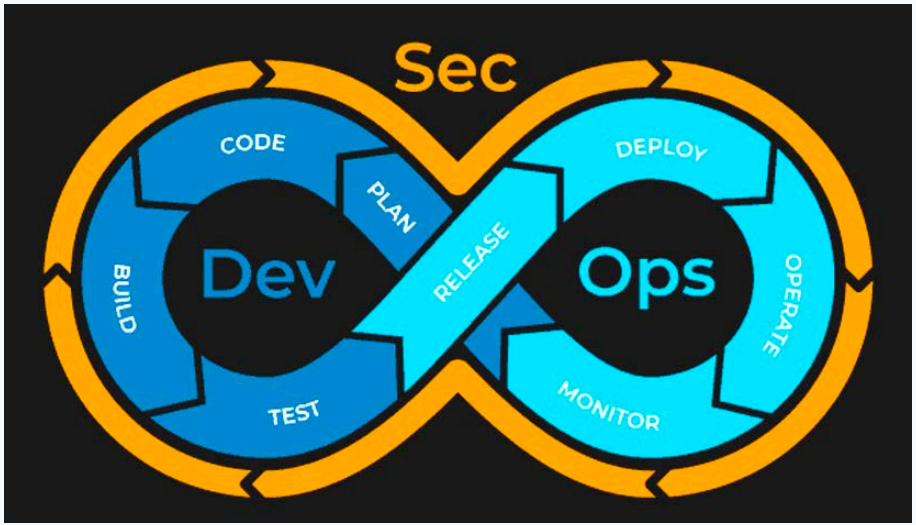
Digital
Transformation

The Changing Role of Security

Security selects, builds the security tooling



DevOps operationalize the security tooling

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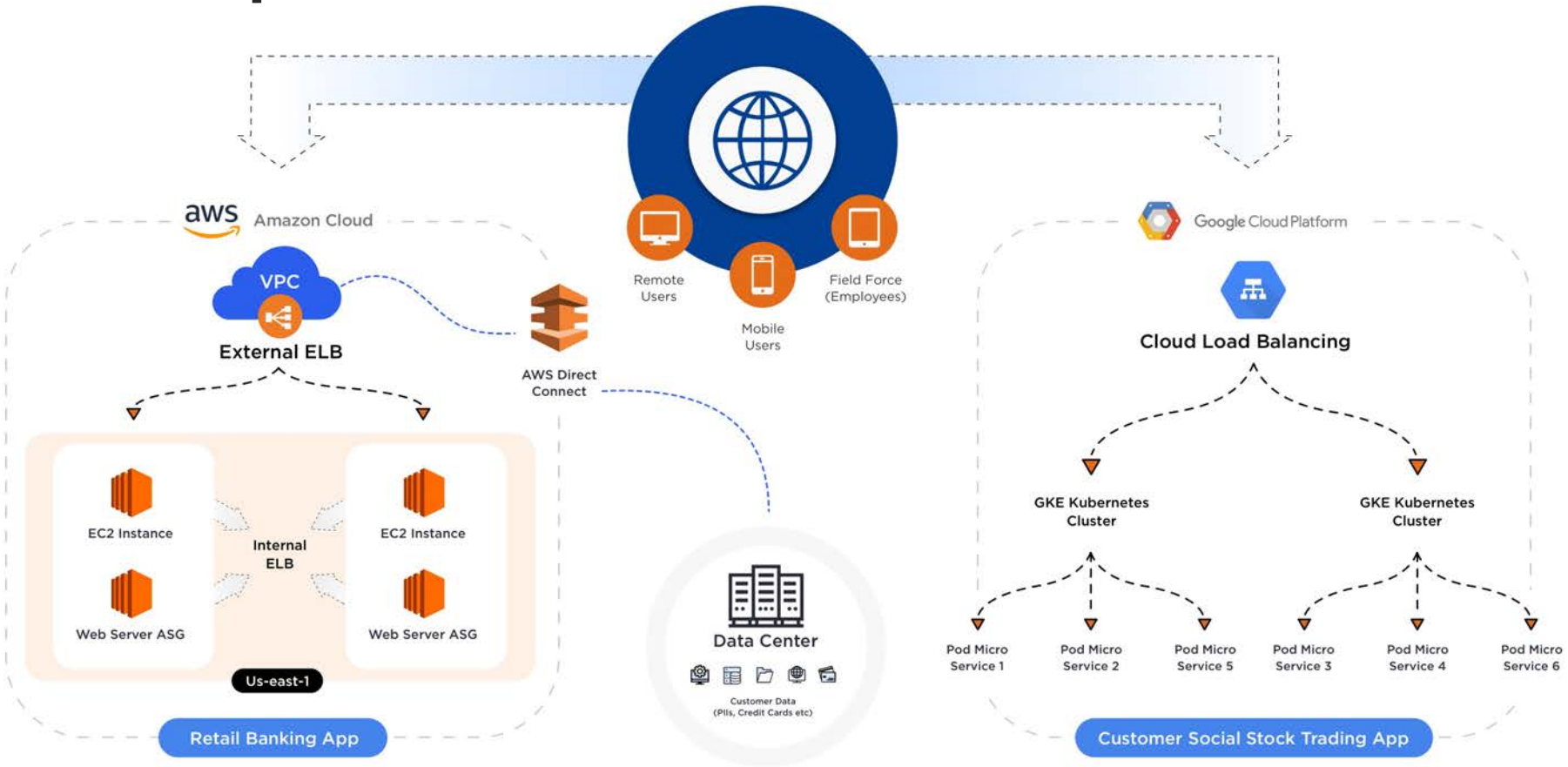
Example Customer Scenario



Security Challenges in the Cloud

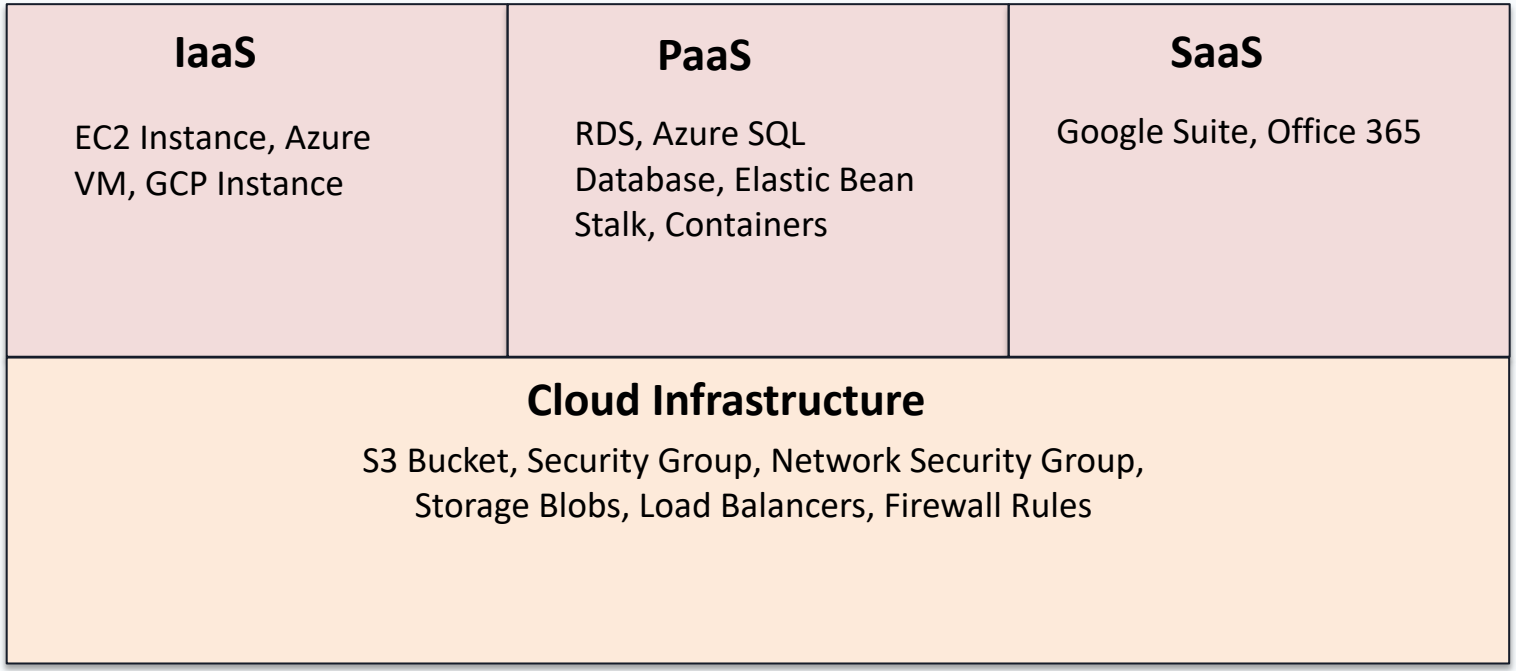
Lack of visibility or control on cloud resources

Misconfiguration of cloud services

Multi cloud environment magnifies security challenges

Lack of a unified security toolset/controls for on-prem & cloud workloads

Securing Your Cloud Deployments



Cloud Security

Securing Cloud Workloads

Hardening and Standardizing

Vulnerability Management

- Asset Inventory & Vulnerability Assessment (Internal & Perimeter)
- Prioritization using Threat Protection
- Indicators of Compromise
- Patch Management

Policy Compliance

- Policy Compliance
- File Integrity Monitoring

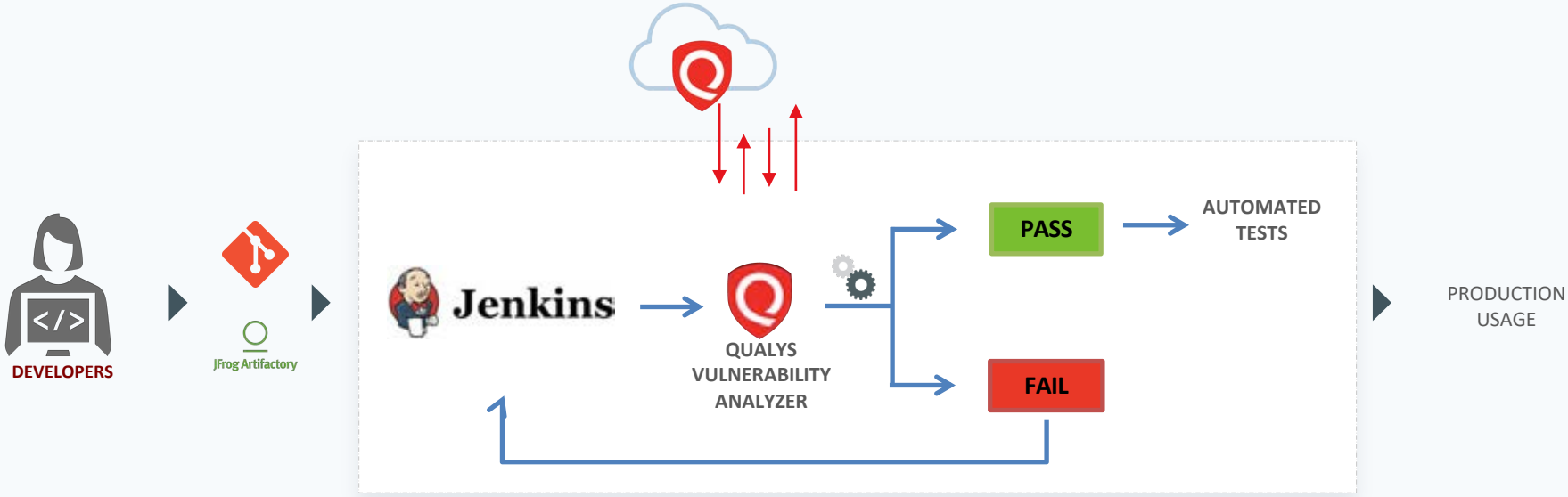
Application Security

- Web Application Scanning
- Web Application Firewall
- API Security*

* Roadmap

Vulnerability Analysis in CI/CD

Blocking vulnerable applications/images entering production



Supports evaluating – IPs/Hosts, Cloud Instances, and Web Applications

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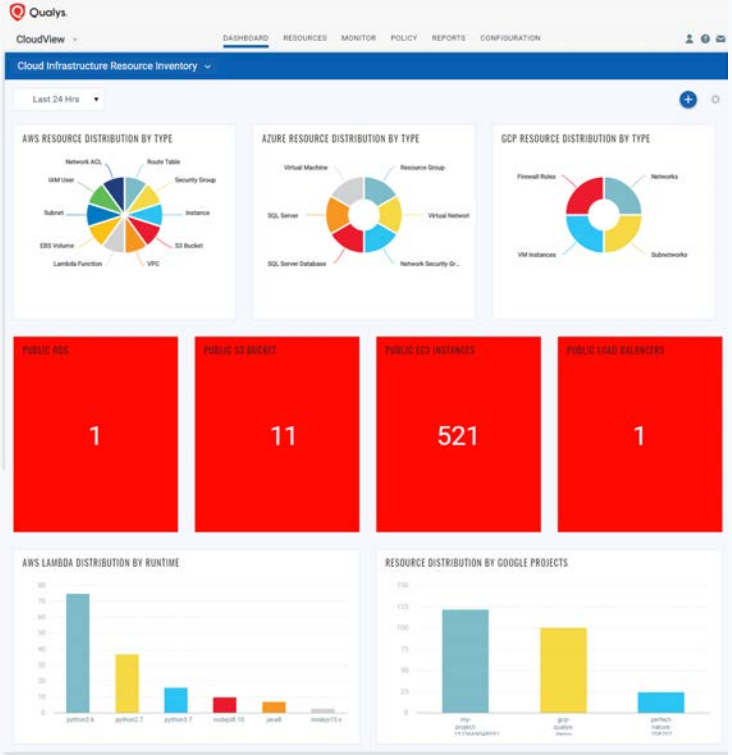
Rich Visibility with CloudView

Visibility into your cloud resources

Identify public facing/perimeter resources

Resource usage by regions/accounts.

View associations to identify the blast radius



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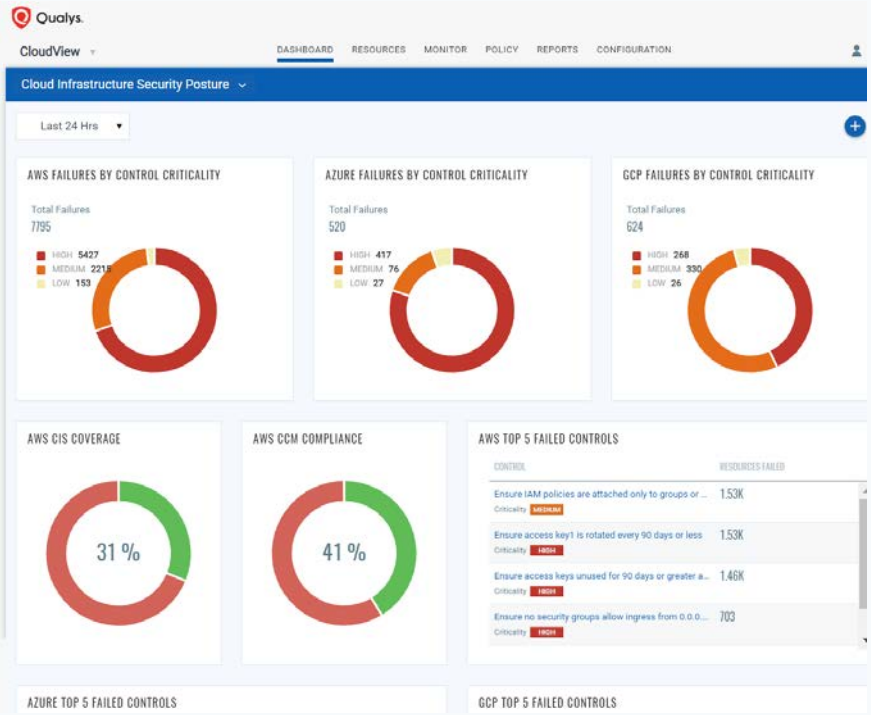
Compliance Assessment

Identify misconfigured resources

Detect resources that are non-compliant against standards such as CIS Benchmark

Identify top failed controls/account for prioritizing the remediation efforts



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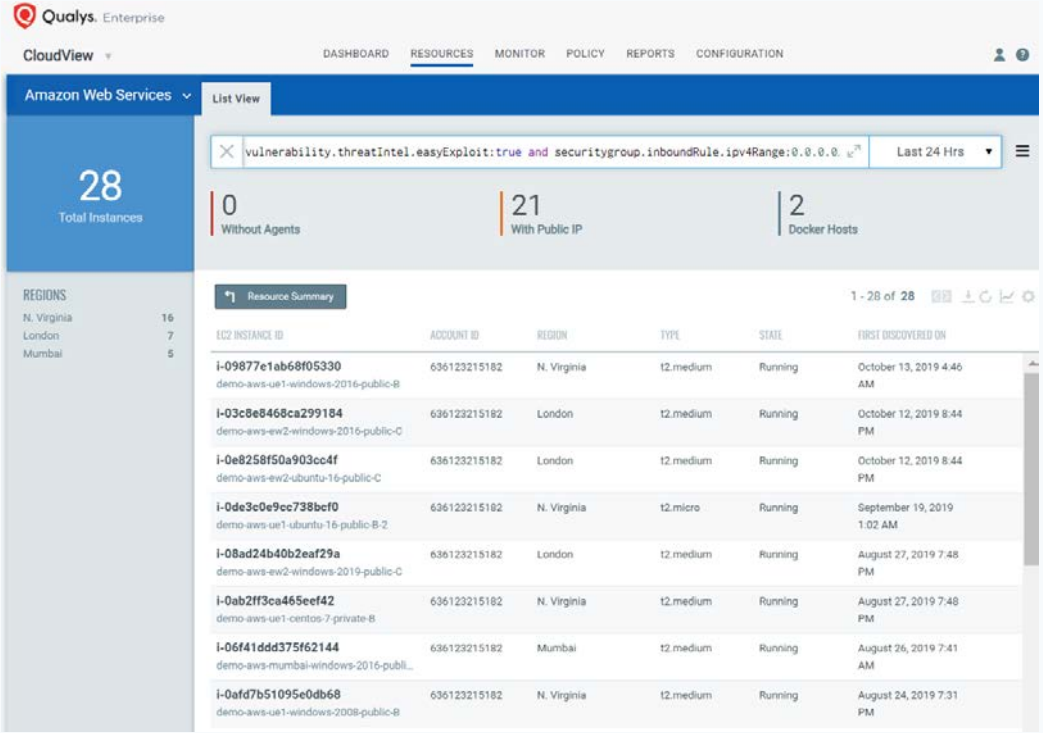
Correlate with Vulnerability Data

Identify vulnerable instances with public IP and associated with the misconfigured security groups

Use vulnerability information for cloud instances to prioritize threats better



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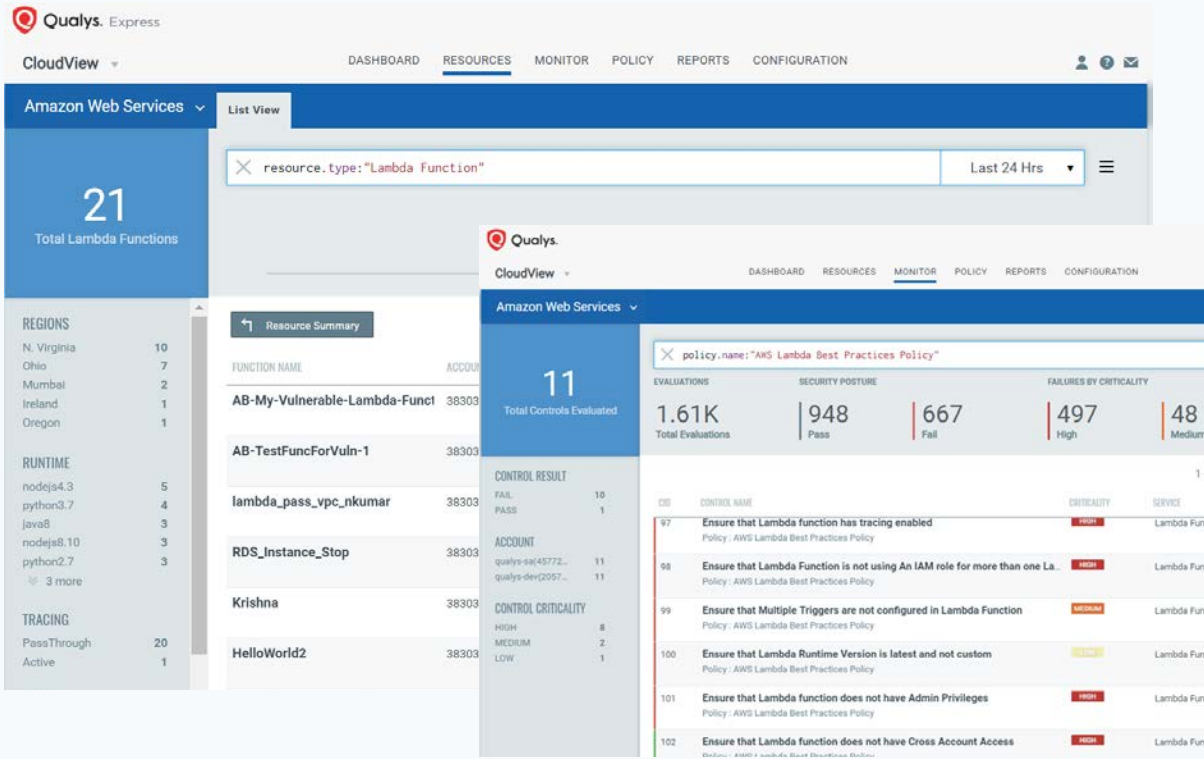
Serverless Visibility

Serverless Visibility – Inventory support for AWS Lambda functions

Best practices policy for identifying misconfigurations



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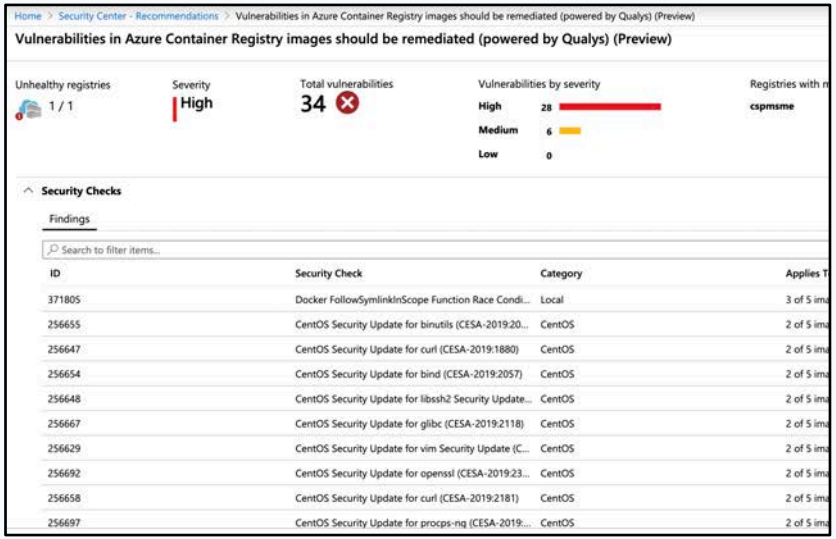
Built-in Security with Cloud Providers

Send findings into Azure, AWS, GCP Security Hubs

Access & investigate findings from within the Cloud Provider Security console

Native integration of vulnerability assessment of hosts, containers

(MSFT Azure - Powered by Qualys)



Native Azure Host, Container Scanning (Powered by Qualys)

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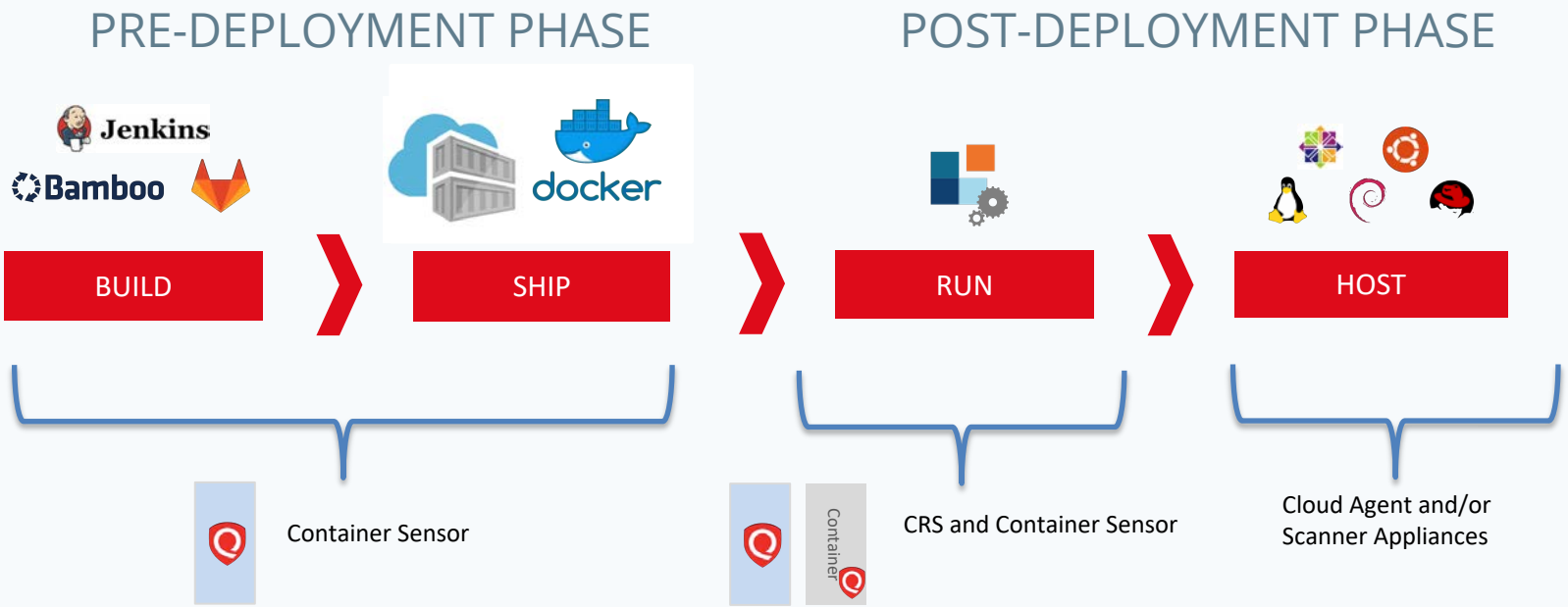
Container Security

Security across the Container Lifecycle



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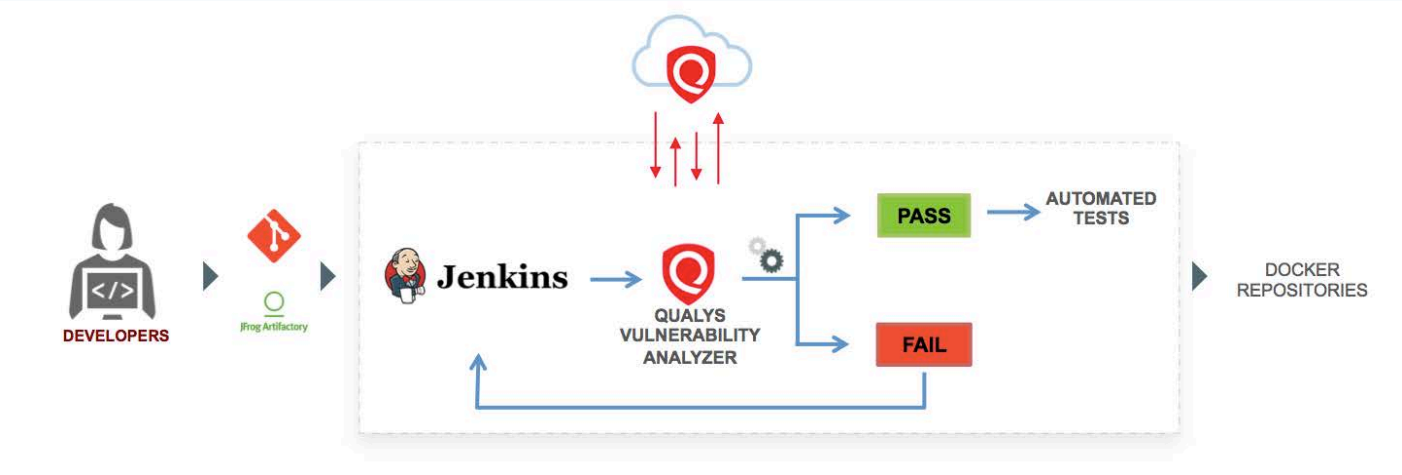
CRS – Container Runtime Security

Scanning Containers in CI/CD

DevOps friendly container scanning using a plug-in
Actionable, detailed, high-accuracy vulnerability info for DevOps



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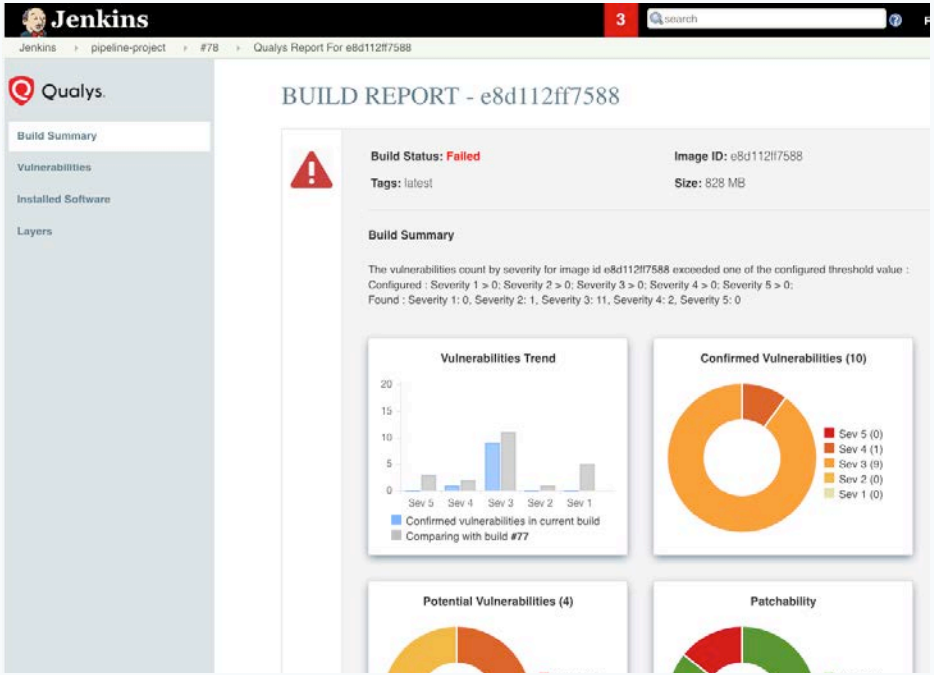
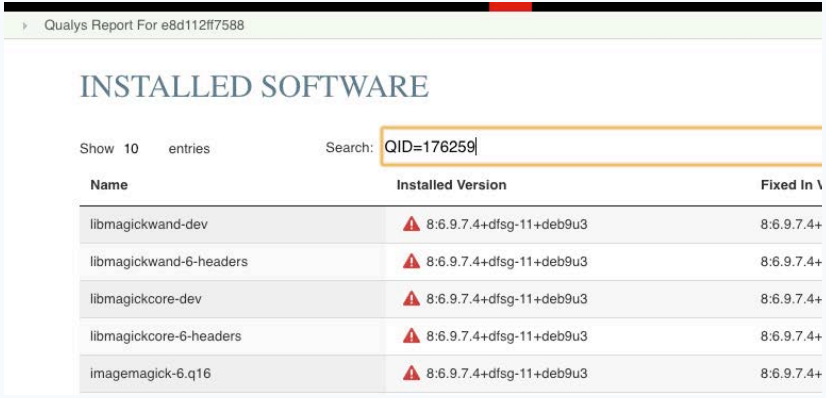
Actionable findings for Dev, DevOps





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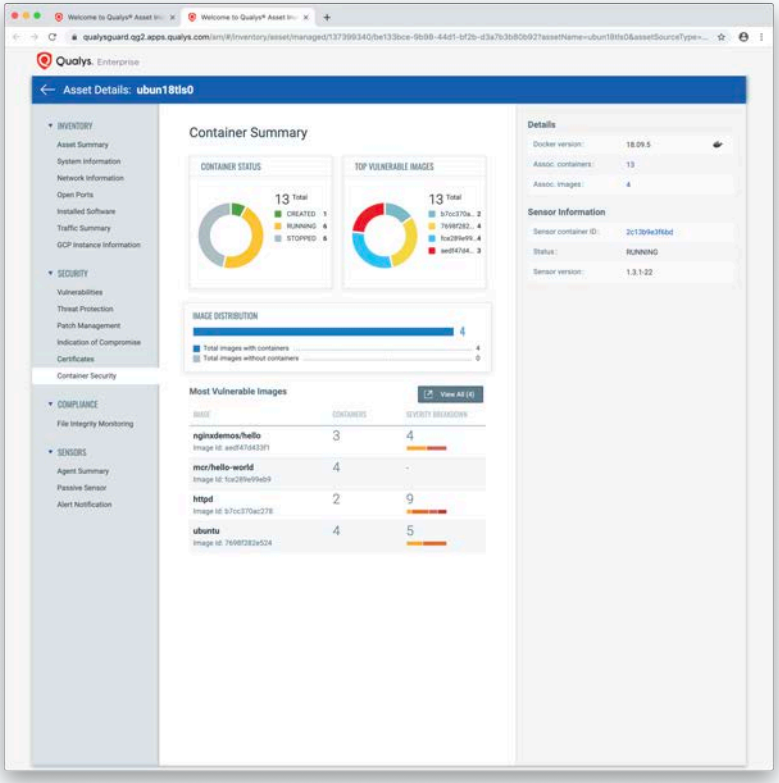
Visibility into Container Infrastructure

Free inventory for all your container infrastructure

Visibility into containers via Scanner, Cloud Agent, Container Sensor

Tracking DockerHub official images

Upgrade for security across DevOps pipeline



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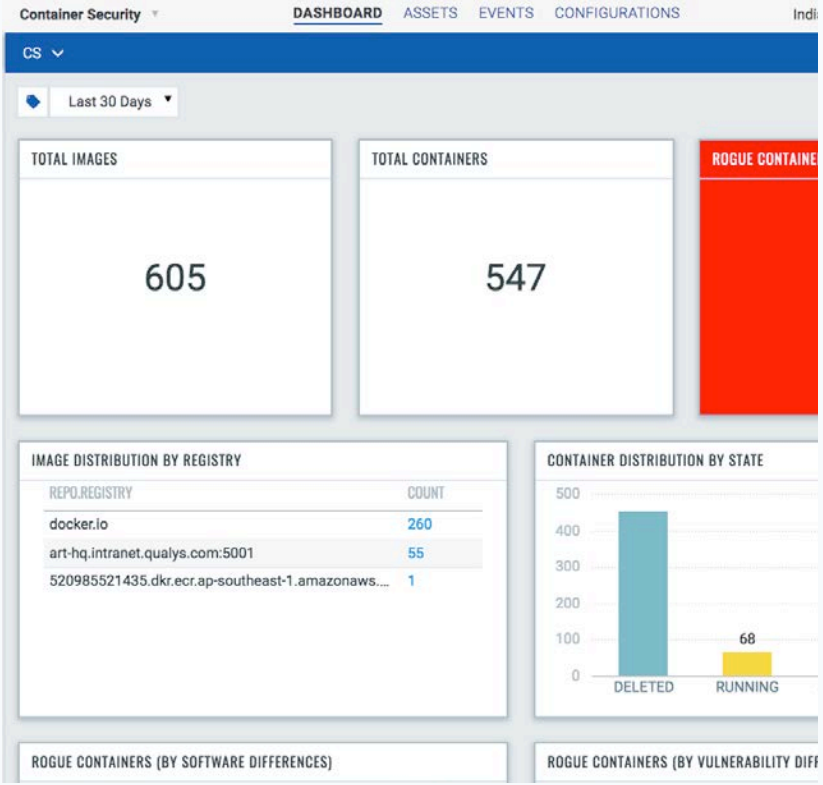
Deeper Visibility Into Containers

Inventory & security posture widgets

- Count of images, containers
- Containers by state
- Vulnerable images

Personalize and add custom widgets



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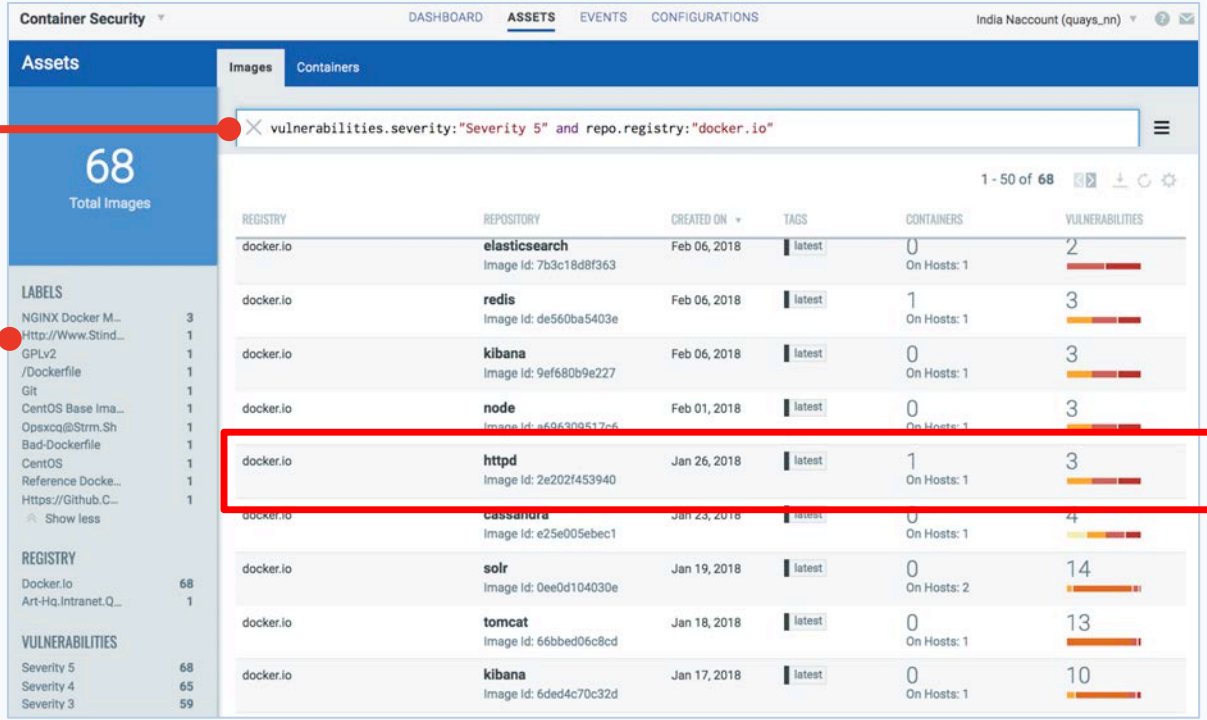
Correlating with Vulnerability Data

Search based on all attributes

Preset quick search filters

- Identify images by application labels



- Image info
- Registry info
- Containers for this image
- Vulnerability posture?
- Easy drill down for complete inventory

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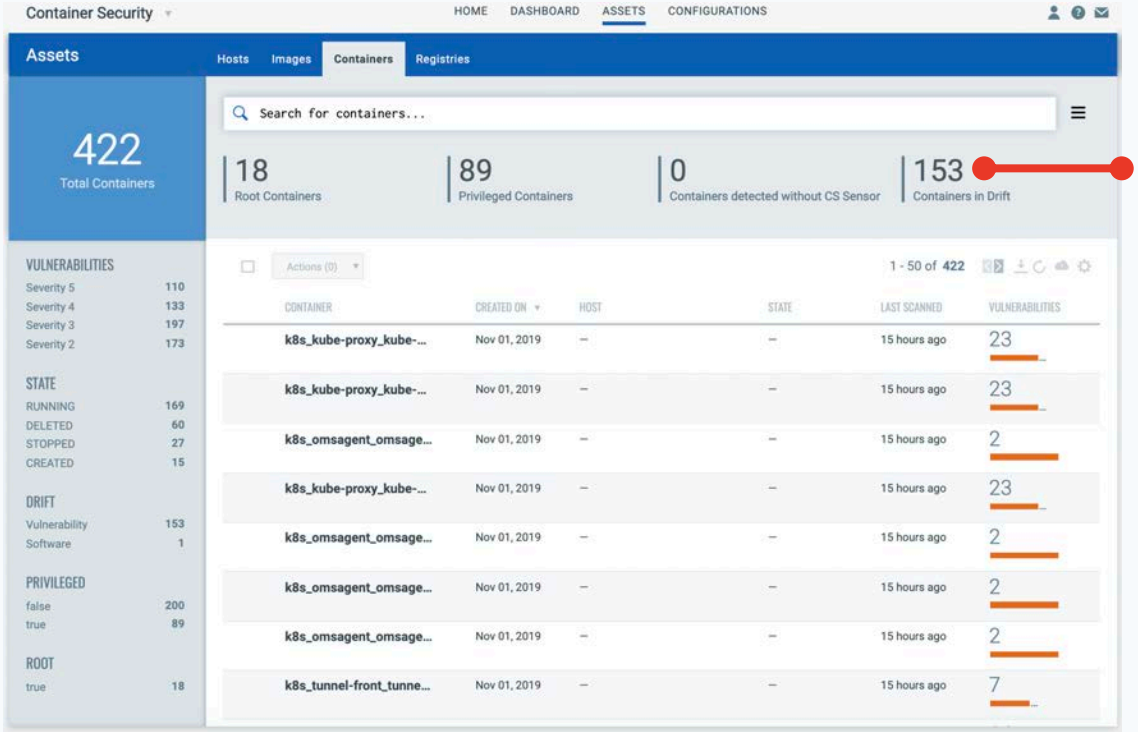
Detecting Runtime Drift



Identify potential breaches in containers

"Drift" Containers, differ from their parent Images by vulnerability, software package composition, behavior, etc

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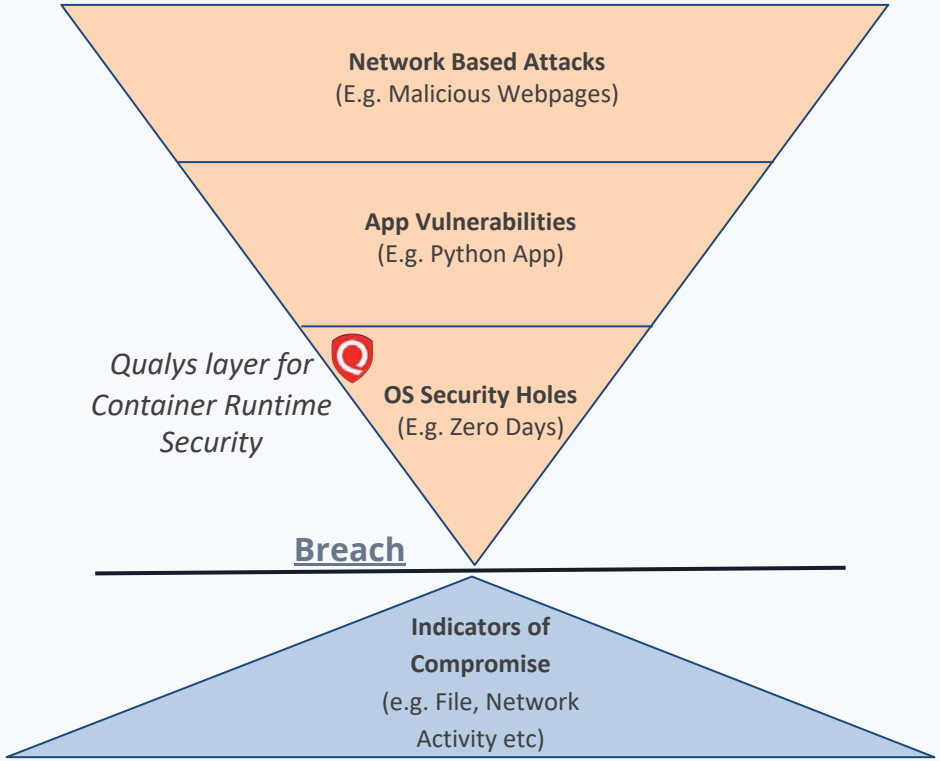
Hardening, Response for Containers



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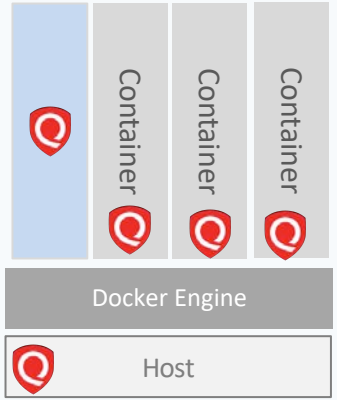
Container Runtime Security

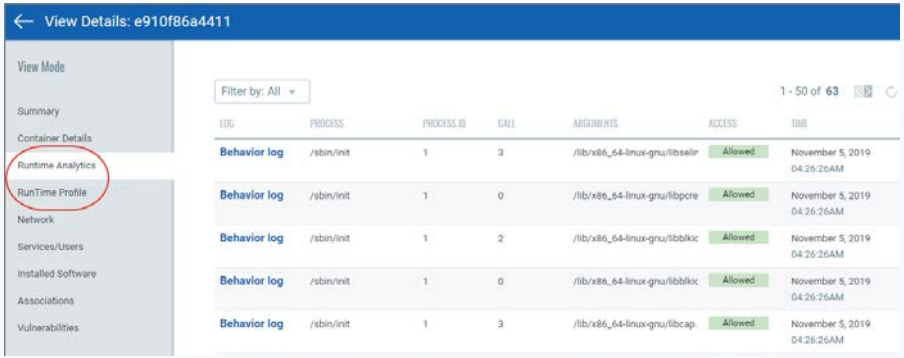
Integrated into Qualys Platform

Function level firewall for containers

Granular security policies to control file, network, process behavior

Built-in policies from Qualys Threat Research





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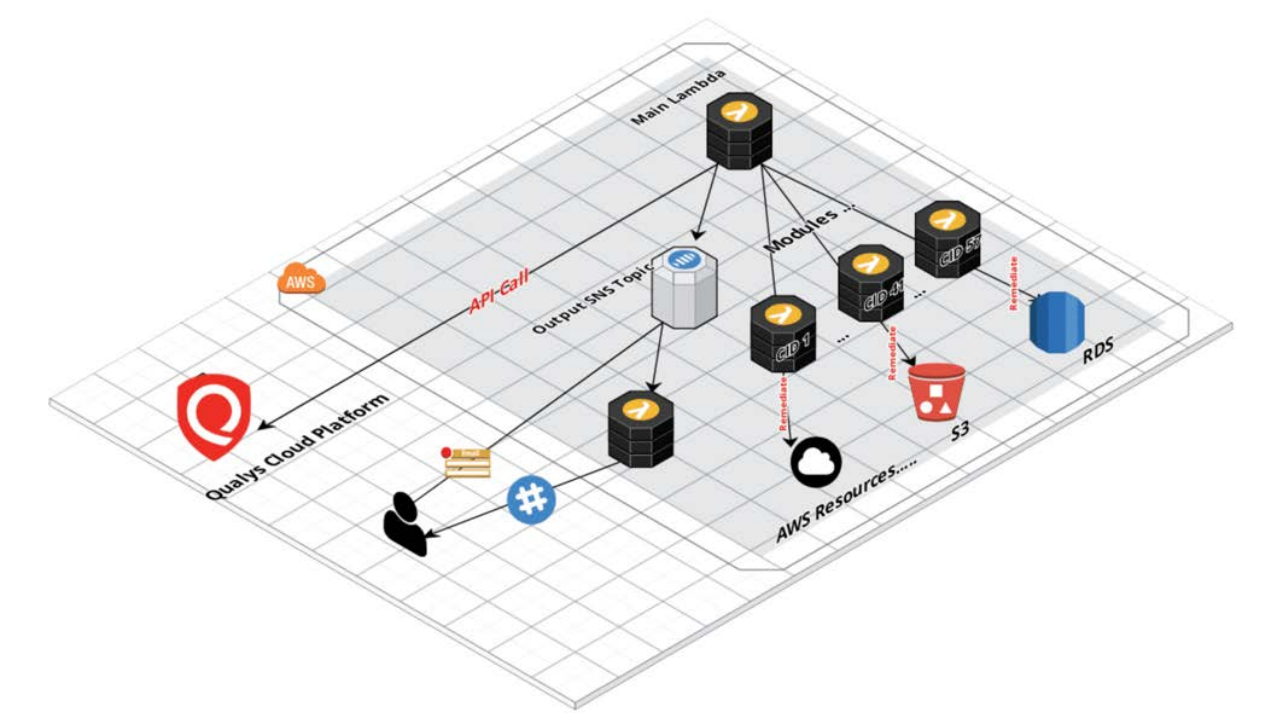
DEMO


The Road Ahead

Towards Automated Remediation



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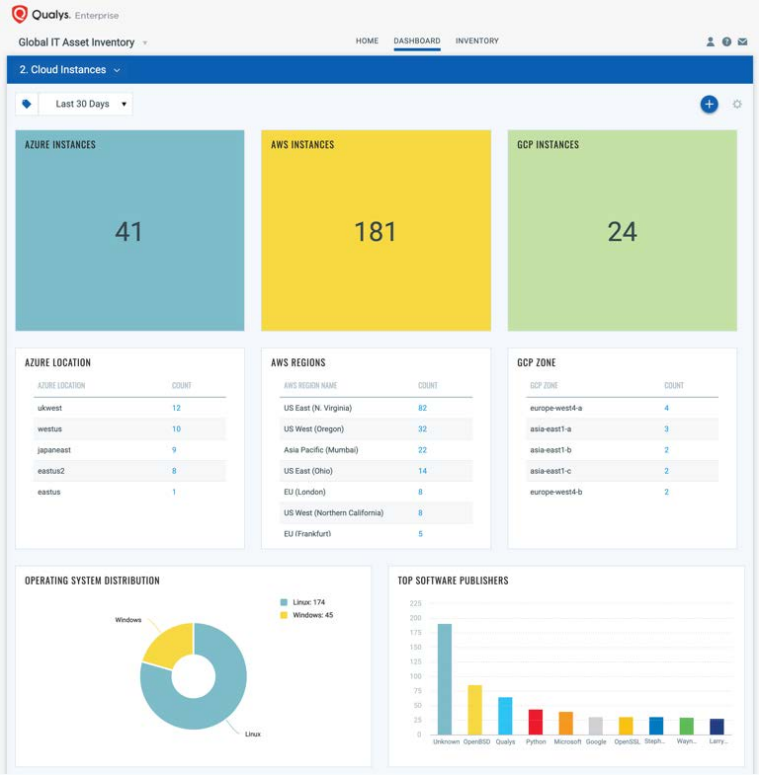
Towards Seamless Visibility

Across application stack (Hosts, Kubernetes Pods, Containers, Serverless)

Correlate cloud inventory data with containers



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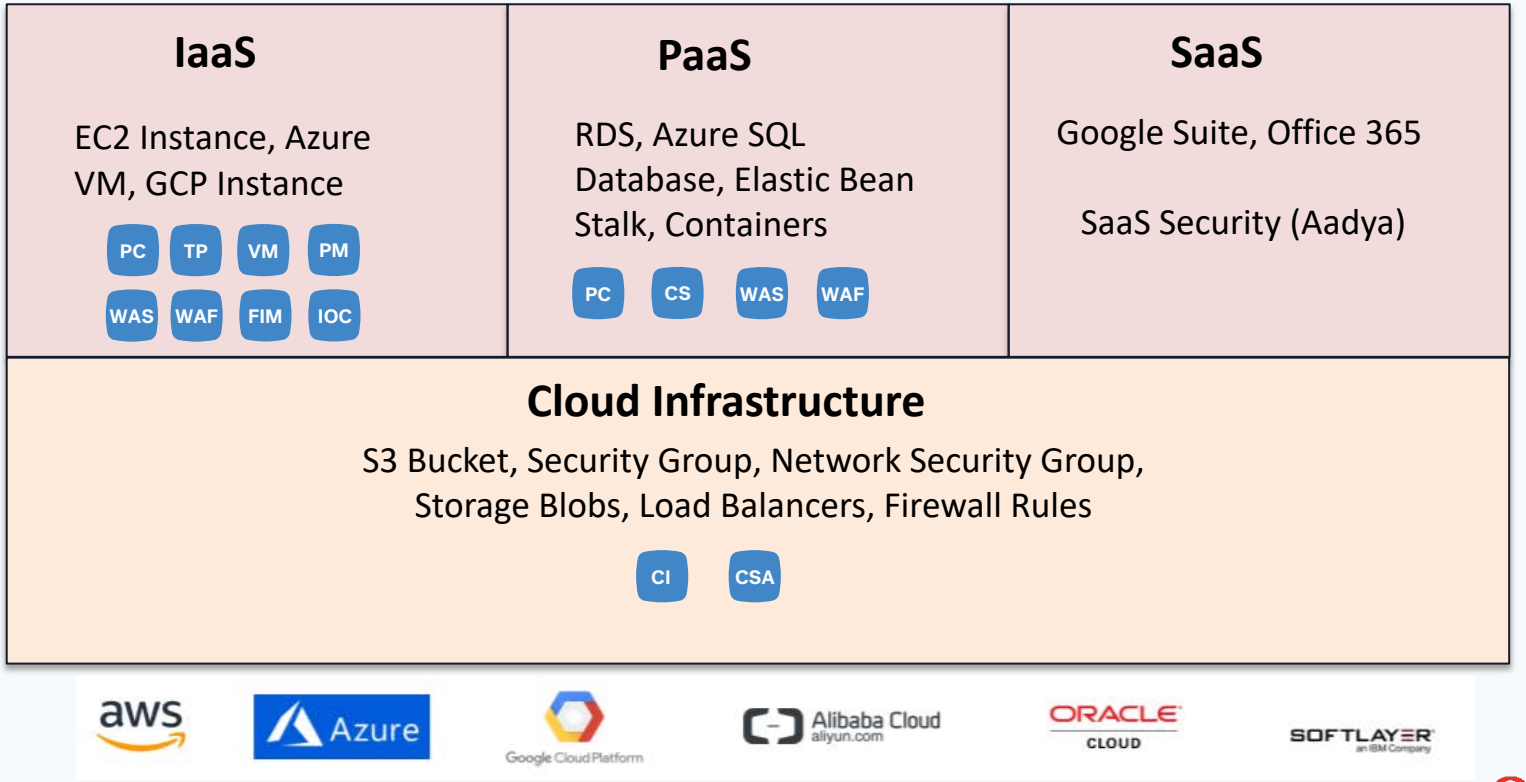
Securing Your Cloud Deployments



Qualys GitHub for DevOps

Automation scripts for sensors

Best practice process automation

Open source community around Qualys ecosystem

https://github.com/qualys

Thank You

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