Threat Based Rapid Vulnerability Eradication

Using Threat Intelligence to Drive Vulnerability Management

Introduction to Blackstone

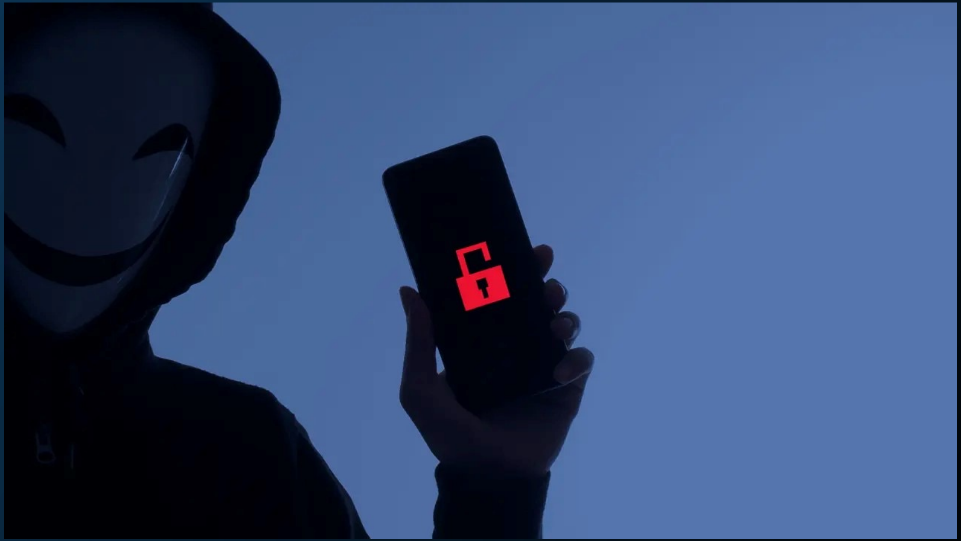
- The world's largest alternative asset manager
- $1 trillion in assets under management
- More than 12,600 real estate assets and 230 portfolio companies

About Me

- Lead the application security program at Blackstone
- Have worked in application security for 10 years
- Held a variety of positions at different companies (BlackRock, Bishop Fox, Zoom)
- Before working in application security, designed digital ICs and software for military applications

State of Things Today

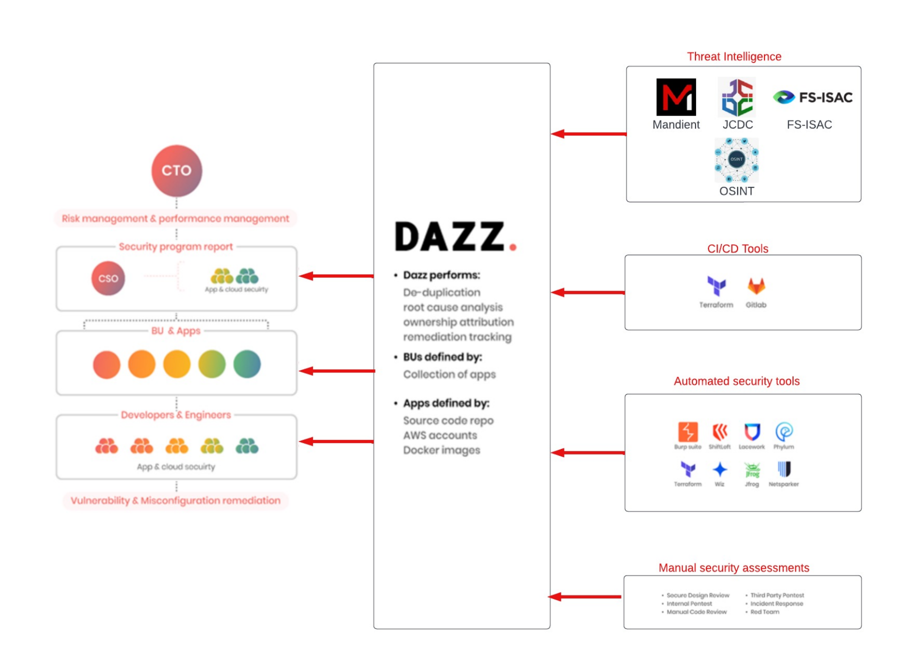
- 25,082 CVEs (Common Vulnerabilities and Exposures) were reported in 2022 ~ 24% increase from 2021
- 19,766 CVEs so far reported in 2023….well on our way to beating 2022
- People are not perfect, but we can get around these imperfections



General Vulnerability Management

- Security products are treated “as is”, enhancements are done at the vendor’s discretion
- Triaging and root cause analysis is a manual and time-consuming process
- Prioritization of issues generally lacks overall threat context

Blackstone’s Approach



CTO

Risk management & performance management

Security program report

CSO

App & cloud security

BU & Apps

Developers & Engineers

App & cloud secuirty

Vulnerability & Misconfiguration remediation

DAZZ.

- Dazz performs:
  De-duplication
  root cause analysis
  ownership attribution
  remediation tracking
- BUs defined by:
  Collection of apps
- Apps defined by:
  Source code repo
  AWS accounts
  Docker images

Threat Intelligence

Mandient
JCDC
FS-ISAC
OSINT

CI/CD Tools

Terraform
Gitlab

Automated security tools

Burp suite
ShiftLeft
Lacework
Phylum
Terraform
Wiz
Jfrog
Netsparker

Manual security assessments

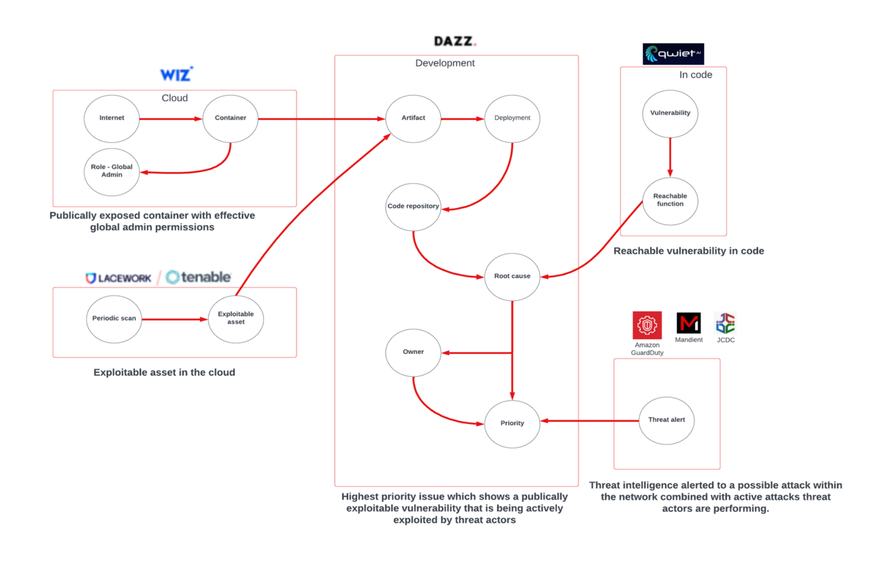
- Secure Design Review
- Internal Pentest
- Manual Code Review
- Third Party Pentest
- Incident Response
- Red Team

- Combine multiple vulnerability sources into one single pane of glass
- Utilize design partnerships with vendors to improve the triage process
- Incorporate threat intelligence to provide context-based prioritization

Benefits to Blackstone's Approach

- Centrally attribute, correlate, and de-duplicate security issues from multiple scanning tools
- Hastened the product/customer feedback loops between all critical security products by formally establishing partnerships
- Contextual threat intelligence can provide a layer of prioritization to truly laser in on the "what matters"

A Practical Example



Publically exposed container with effective global admin permissions

Exploitable asset in the cloud

Reachable vulnerability in code

Highest priority issue which shows a publically exploitable vulnerability that is being actively exploited by threat actors

Threat intelligence alerted to a possible attack within the network combined with active attacks threat actors are performing.

- SOC receives an alert and verifies using threat intel
- SOC notifies AppSec which utilizes Dazz to map the threat to an open finding
- AppSec utilizes Dazz to trace the vulnerability to a container which is open to the public internet
- AppSec creates a Proof of Concept to verify the issue
- AppSec and SOC notify the application owner to remediate the issue

Key Takeaways

- Ingest results from scanning tools into one central place
- Utilize design partnerships to get the most value from your vulnerability management solution
- Incorporate threat intelligence to prioritize and focus your vulnerability management

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