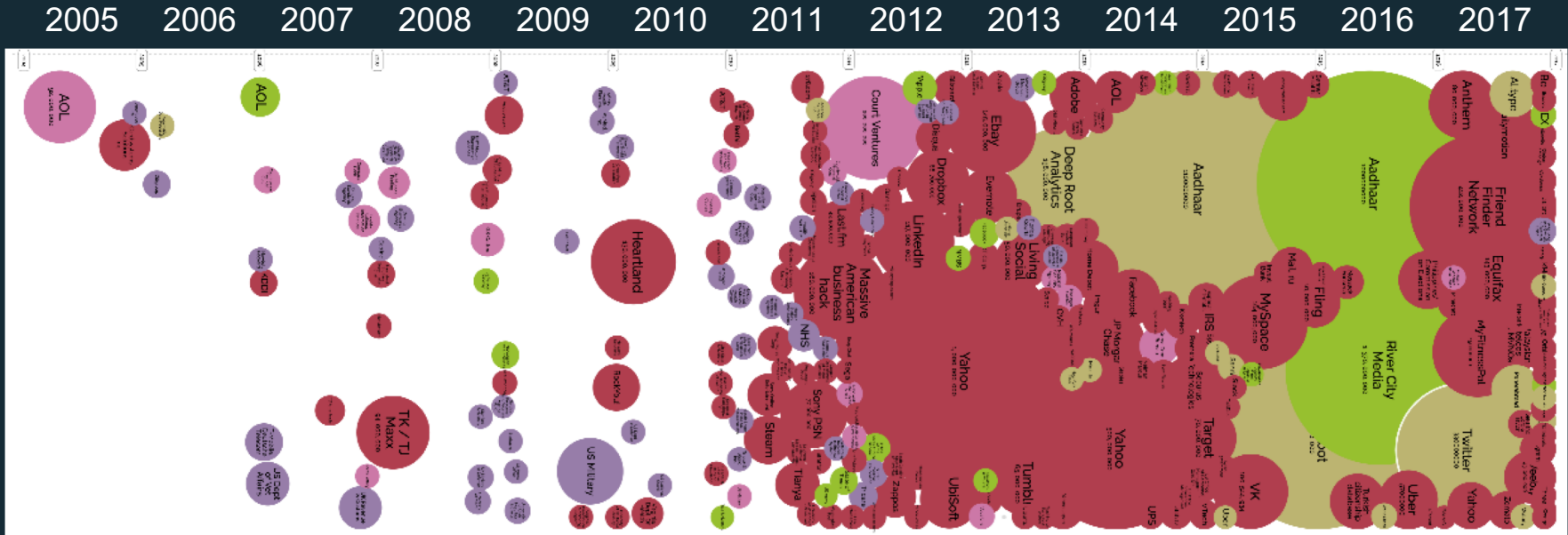


Build Smarter Defenses

---

# Simulate the Adversary

# The Odds are Against Us



# And Defenders Keep Investing

PROXY / URL FILTER / ANTIMALWARE

FIREWALL

NGFW

IDS

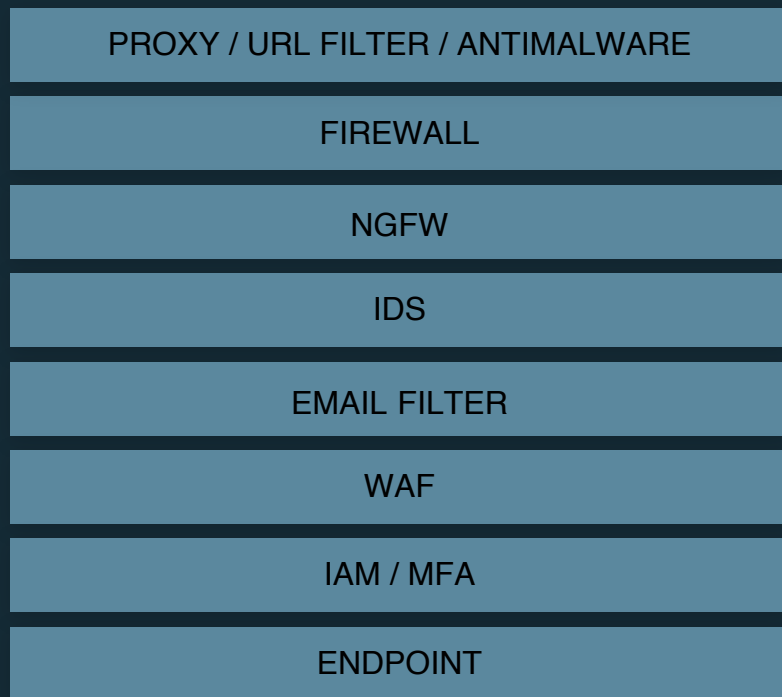
EMAIL FILTER

WAF

IAM / MFA

ENDPOINT

# But Still Cannot Answer Critical Questions



## SECURITY TEAMS

Are these controls working?  
What's the IMPACT of attack?

## BOARD/EXECS/BUSINESS

Can I show security ROI?  
Can I justify more investment?

# What Got us Here, Won't Take us There

1. Build defenses
2. Scan and patch quarterly
3. Run pen tests annually
4. Buy more tools
5. Get breached
6. Get publicized
7. \*Hire investigator to \*identify where attacks were successful\*



# It's Time to Turn Security Upside Down

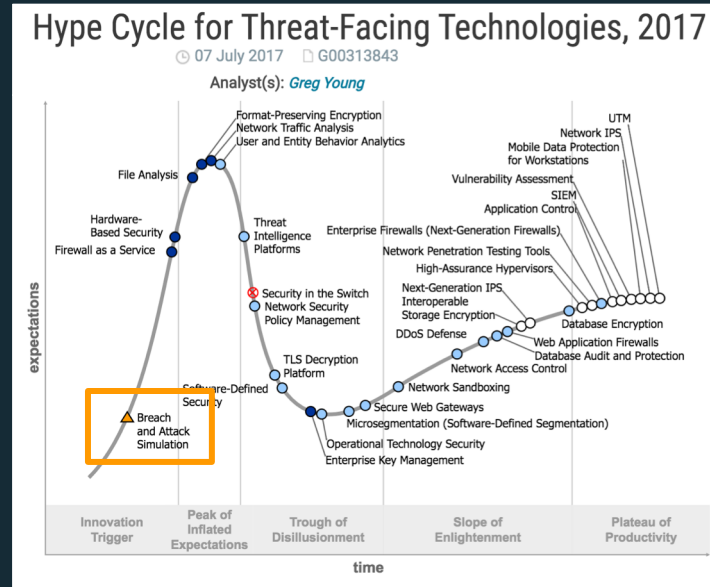
1. Unleash thousands of attacks, safely
2. **\*Identify where attacks are successful\***
3. Prioritize blue team efforts based on risk
4. Remediate critical issues
5. Continuously ensure no new gaps
6. Stay ahead of emerging campaigns
7. Fix what *will* happen, before it's too late



# A New Category: Breach and Attack Simulation

*“...Shifting to a more proactive risk prevention model can offer valuable data that security and risk managers can use to reduce their risk profiles.”*

- Gartner



# Simulation: Automated, Comprehensive, Continuous

## Remediate Issues

Get more from security investment

- Send to automation and orchestration
- Ensure fixes have no negative security effect
- Maximize outage windows and ops time

## Simulate Attacks

Eliminate bias with full automation

- Industry's largest set of attacks
- Uncover security blind spots
- Proven, emerging, never-before seen

## Prioritize Results

Drive results with no false positives

- Visualized kill chain
- Simple filters based on critical asset risk
- SIEM and Business Intelligence integration



# 100% Real Techniques – All Safe for Production

Relentless attacks, across the entire kill chain, without risk



Infiltration

Simulated phishing  
Malware download  
Drop to disk



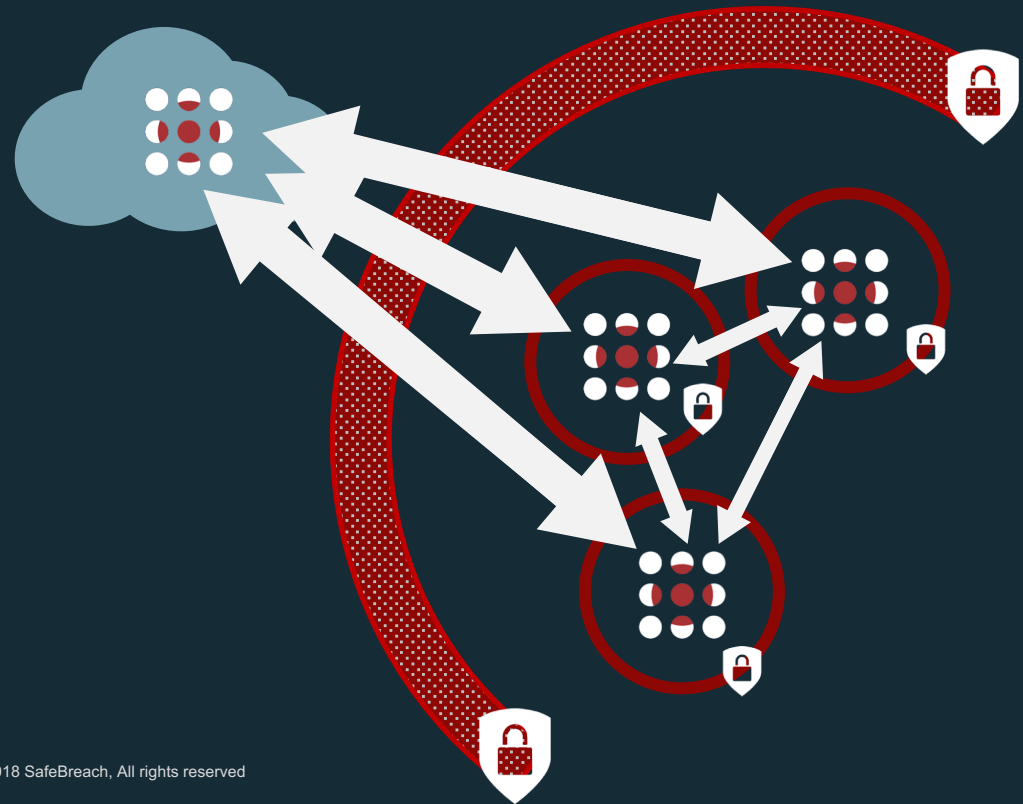
Lateral Moves

Brute force credentials  
Remote code execution  
Transfer over SMB

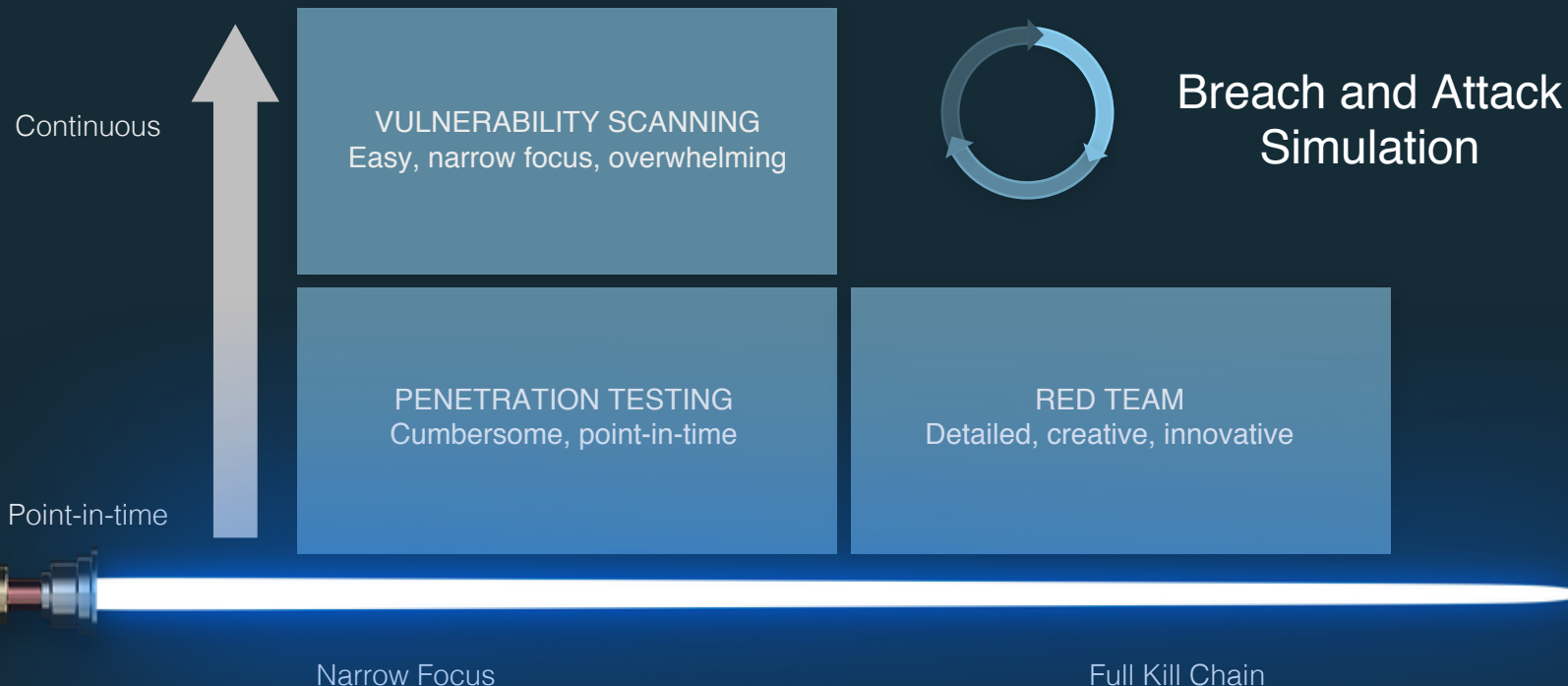


Exfiltration

Header stuffing  
DNS tunneling  
Malicious ICMP



# How is BAS Different from... Everything else?



# The Benefits of Playing the Hacker



Minimize security exposure



Get more from existing security



Prepare for audits



Test alerting and action plans



Rationalize security investment



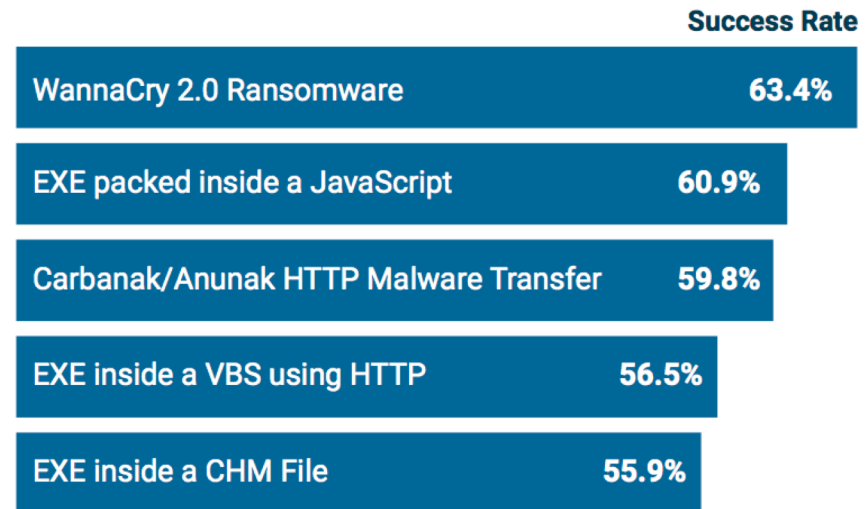
Mergers and acquisitions

Validate your defenses before the attackers do

# Simulating the Adversary: Results

- Malware manages to evade perimeter defenses
- Encrypted files not scanned
- Leaving it up to the endpoint

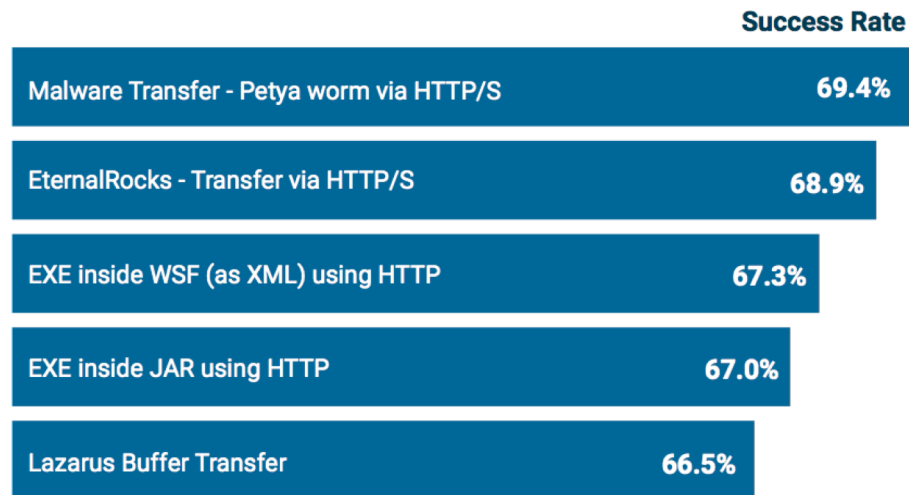
## Top Infiltration Methods



# Simulating the Adversary: Results

- Lateral moves looked like infiltration
- LAN trust is too high
- Is internal traffic safer than Internet traffic?

## Top Lateral Movement Methods



# Simulating the Adversary: Remediation

- Dramatically increased security in three weeks
- No new investment
- Conflicting rules, misconfiguration, underutilization

## Infiltration



## Segmentation



## Exfiltration





SIMULATE ATTACKS  
VALIDATE CONTROLS  
HARNESS THE HACKER

 SafeBreach