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Building culture of security & driving a high performance team with security metrics

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What will I cover?

1. How AWS thinks about security

2. Fostering security culture - 4 Key areas

3. How the role of security is changing

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How AWS thinks about security

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Technology alone does not make you secure. Culture is what makes organizations secure.

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“Security is Amazon’s top priority.”

Jeff Bezos

“Security is our top priority. ”

Andy Jassy

“Security is Amazon’s top priority. ”

Adam Selipsky

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Fostering security culture - 4 Key areas

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1 - Senior leadership owning security thread

- Senior leadership owns the security thread and they encourage each service and application owners to collaboration with Security Team

- They build mechanism to achieve desired outcomes, shape policies, invest in tooling and measuring right things

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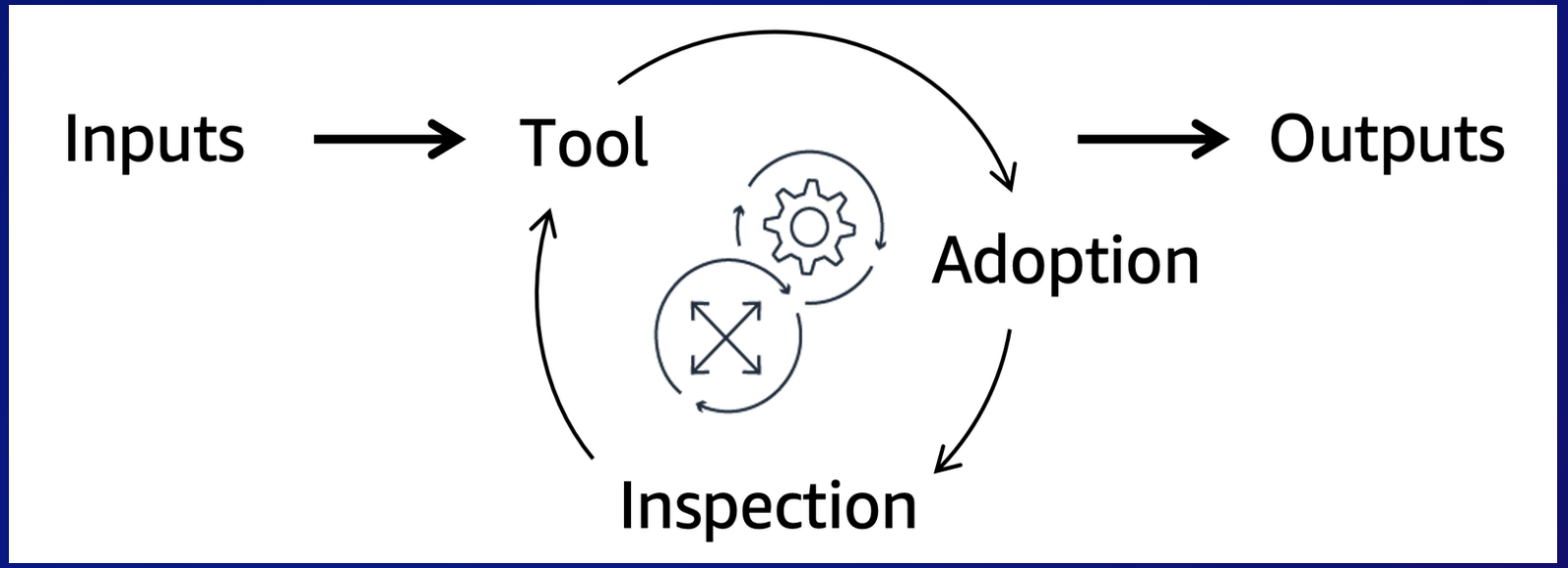
2 - Fostering security culture

"Good intentions never work, you need good mechanisms to make anything happen."

- Jeff Bezos



The complete process of a mechanism

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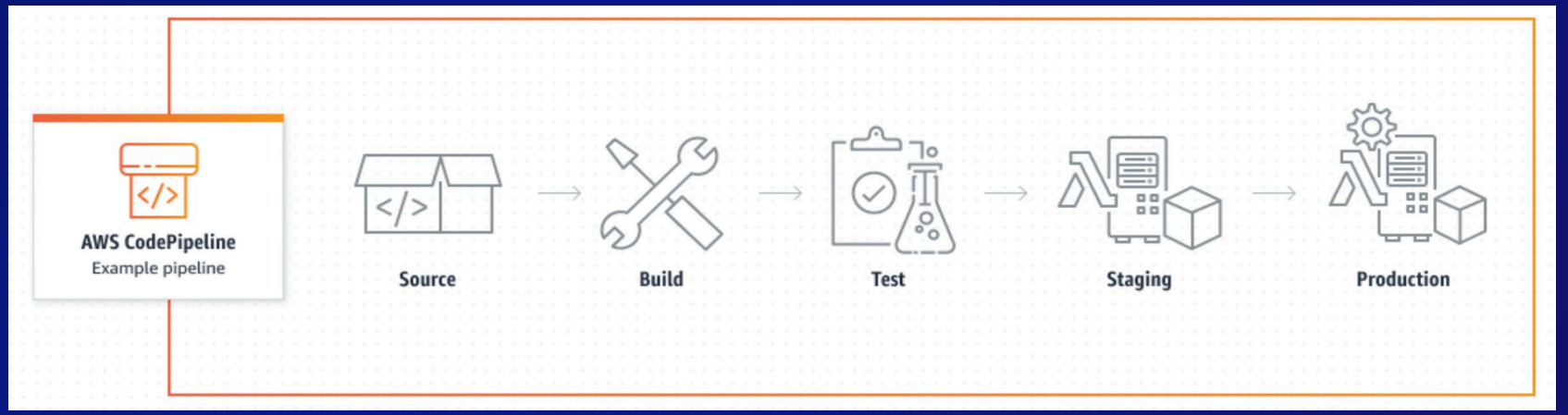
3 - Tools and metrics

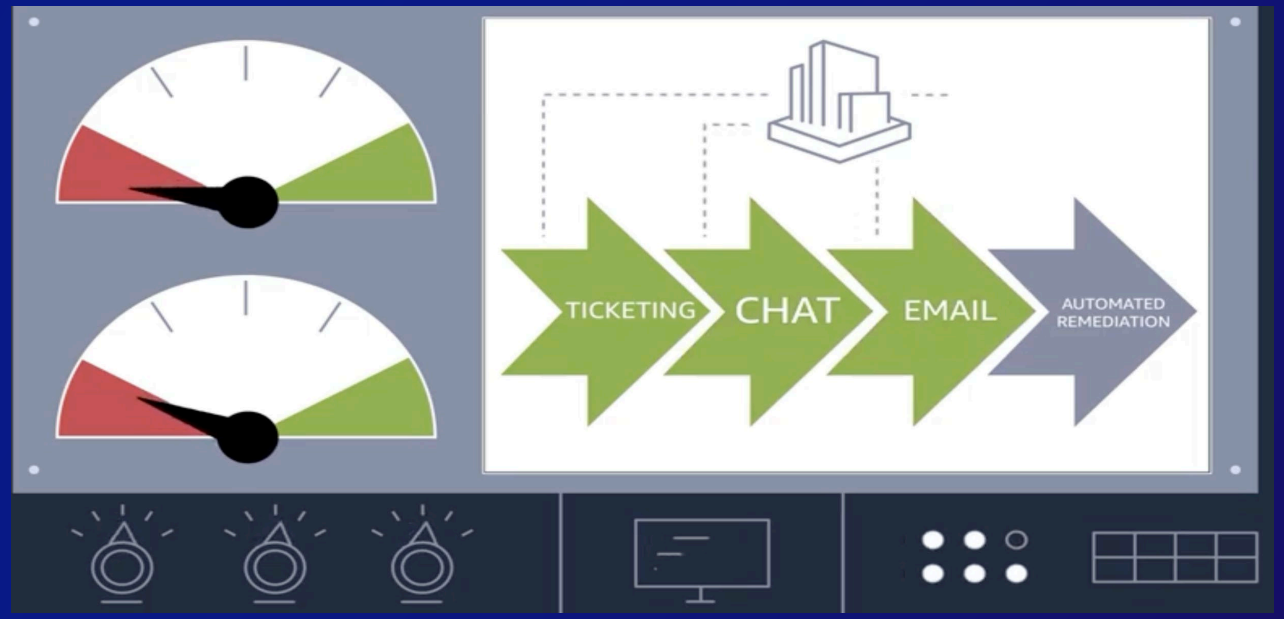
AWS Service Catalog

Create, organize, and control your curated catalog of AWS products



AWS Security Hub

Quickly assess your high-priority security alerts and security posture across all of your accounts and regions



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4 - Practicing escalations – the right way

- Practice escalations – the right way, by identifying problem early and making right people know about the problem
- Ticketing brings right visibility and traceability

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Cloud SRC strategy – How the role of security is changing

- Security reviews
- Committee approval
- Compliance checks
- Long lived workloads
- Manual code reviews
- Architecture reviews
- Manual change management
- Manual remediation

- Security in and of the pipeline
- Self service, Continuous governance
- Continuous compliance
- Immutable ephemeral workloads
- DevSecOps
- Secure blueprint repository
- Secure fast changing immutable workloads
- Automation with no humans touchpoints

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Security is not just value preservation, it's the value creator & the key differentiator

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Welcome Himanshu Das, CISO at CRED

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- Members only app for creditworthy and trusted users (750+ credit score)
- Single app to track & manage all credit cards
- Members earn CRED coins for paying bills
- We engage & reward our members for good financial behaviour
- Cross-sell financial services & lifestyle products

billpay **mint** **max**

cash **scan & pay** **pay**

store **travel** **rewards**

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The most resilient cybersecurity bridge is the one that unites us in a shared culture within AWS Cloud, where responsibility, awareness, and proactive action form the pillars that support the secure and robust infrastructure our customers and partners depend on.

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How do we build a culture of security?

- Start with leadership commitment towards security
- Foster a security-conscious mindset
- Conduct regular security trainings and workshops
- Make security fun and engaging - CTF’s
- Establish a security evangelisation program
- Foster a blame-free culture
- Share success stories

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How do we build a high performance resilient cybersecurity team?

- Encourage open and transparent communication
- Foster a culture of innovation
- Emphasize continuous learning and collaboration
- Empower team members
- Encourage risk-taking
- Promote integrity and ethics

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How do we measure high performance team?

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Foundational pillars of resilient Cybersecurity

5 pillars to measure your organization’s security maturity:

- IAM
- Detection
- Infrastructure Protection
- Data Protection
- IR & Automation

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Foundational pillars of resilient Cybersecurity : IAM

IAM

- Percentage of root accounts with virtual or hardware multi-factor authentication
- Number of unused IAM roles and EC2 key pairs detected and removed.
- Frequency of access key rotation

Groundbreaking - Achieve Principle of Least Privileges (PoLP)

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Foundational pillars of resilient Cybersecurity: Detection

Detection

- Percentage of detection coverage
- Mean Time to Detect (MTTD) and Mean time to respond(MTTR)
- Number of security incidents/events detected
- False positive rate

Groundbreaking

- Preventative controls – These controls are designed to prevent an event from occurring
- Detective controls – These controls are designed to detect, log, and alert after an event has occurred
- Responsive controls – These controls are designed to drive remediation of adverse events or deviations from your security baseline

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Foundational pillars of resilient Cybersecurity: Infrastructure protection

Infrastructure protection

- Percentage of applications covered by WAF and Shield
- Vulnerability scanning coverage and frequency
- Percentage of security groups with appropriate rules for authorized ports/IPs

Groundbreaking - First Layer Of Defense?

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Foundational pillars of resilient Cybersecurity: Data protection

Data protection

- Data classification coverage and data lifecycle
- Percentage of data assets with encryption enabled
- Percentage of sensitive data masked or obfuscated to protect against unauthorized access
- Percentage of data access events logged and monitored for anomalies or suspicious activities

Groundbreaking - AWS Shared Responsibility Model (E.g. RBI Data resilience)

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Security metrics - core metrics vs check metrics?

- Number of cyber security attacks prevented - WAF metrics
- Ransomware & Malware attacks prevented - EDR metrics
- Number of phishing attacks prevented
- MTTD and MTTR
- Number of security incidents
- Zero Critical/High findings in regulatory audits
- Critical open risks impacting compliance/Business continuity
- Critical security bugs/Vulnerabilities in production

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Key takeaways: Summary

- Cybersecurity Culture: Cultivate a strong cybersecurity culture among employees to increase awareness and understanding of their roles in maintaining security

- Proactive and Reactive Approach: Adopt a proactive and adaptive approach to continuously monitor threats, invest in advanced security technologies, and respond to incidents

- Resiliency: Strengthen resiliency by promoting internal collaboration across teams and departments to develop and implement comprehensive security strategies, ensuring a unified approach to tackling cybersecurity challenges

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