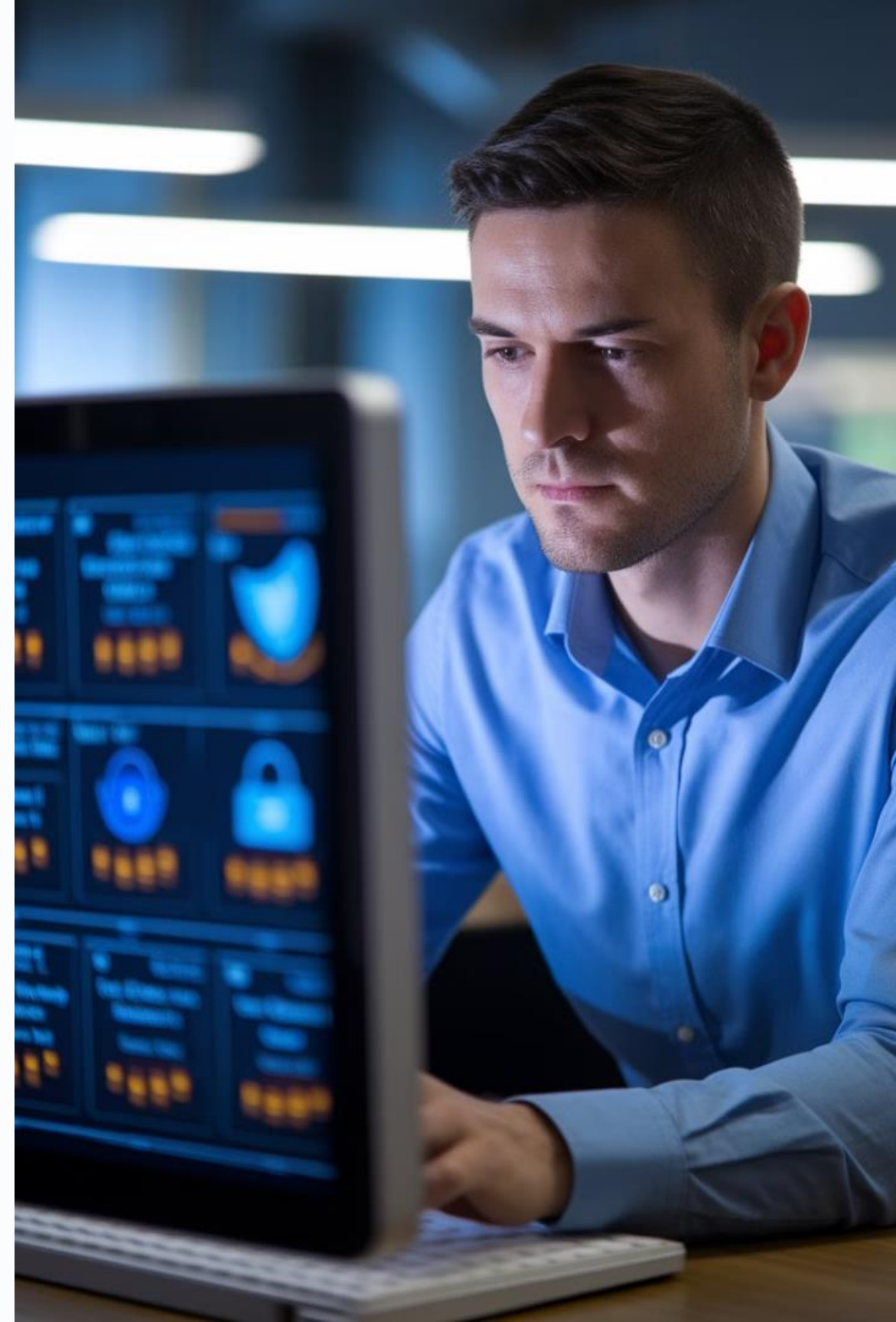


Security and Compliance in AWS Projects: A PM's Responsibility

In today's digital landscape, **security and compliance** are no longer just IT concerns—they are **business-critical priorities**. As organizations migrate to AWS, project managers must embed security best practices from day one.

 **by Kimberly Wiethoff**



Why Security Matters

1 Data Breach Costs

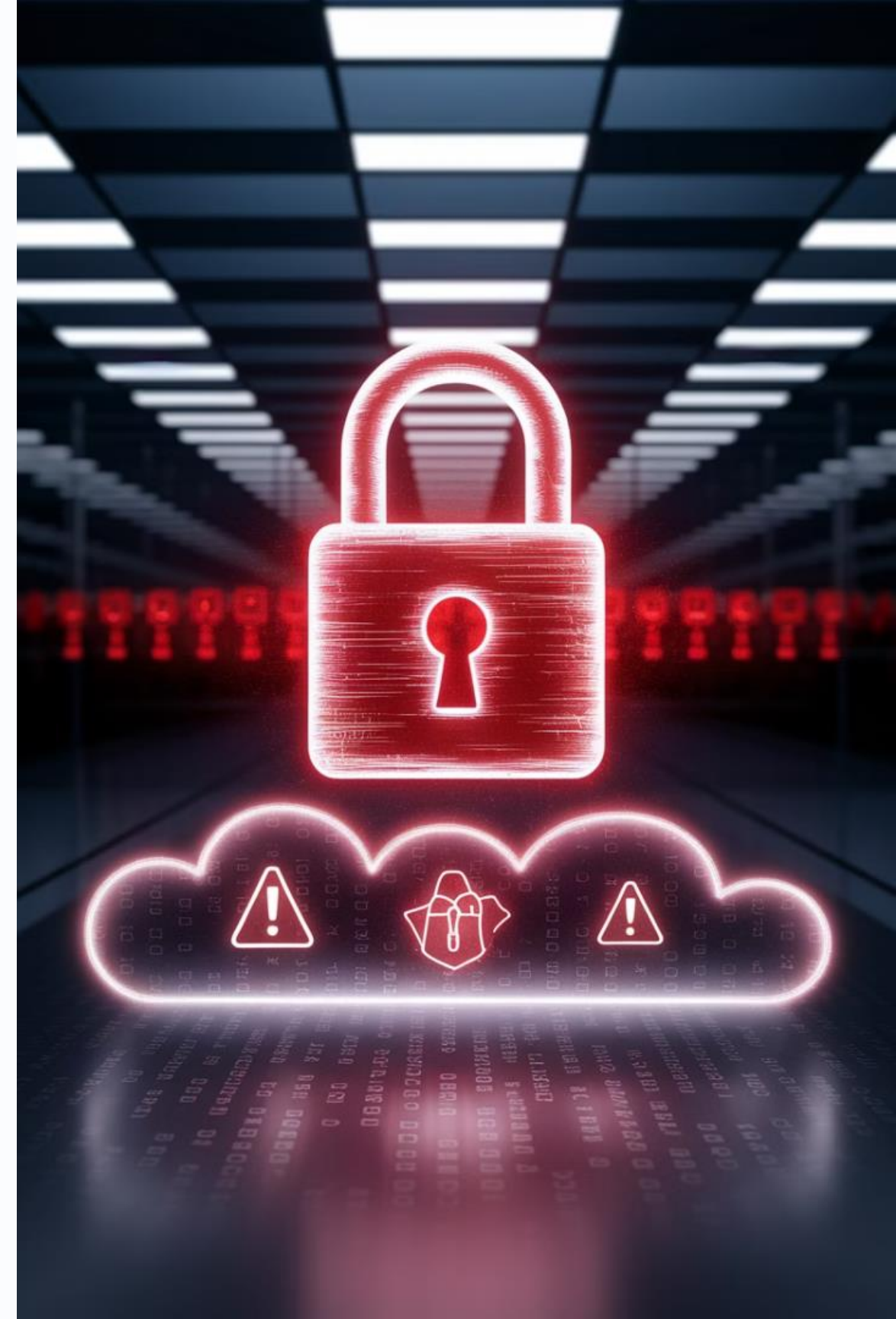
Breaches can cost millions in fines and damage your reputation.

2 Configuration Risks

Poorly configured AWS environments can expose sensitive information.

3 Compliance Penalties

Non-compliance can result in legal penalties and loss of customer trust.



The PM's Security Role

Not a Security Expert

You don't need to be a cybersecurity expert.

Strategic Integration

You must ensure security is part of planning and execution.

Risk Management

Security must be included in your risk management strategy.



AWS's Shared Responsibility Model

AWS Responsibilities

AWS secures physical infrastructure including data centers, servers, and networks.

They ensure compliance with global security standards like ISO 27001 and SOC 2.

Your Organization's Responsibilities

You must secure applications, data, and access controls.

Your team implements encryption, IAM policies, and monitoring.

You ensure regulatory compliance based on industry needs (HIPAA, GDPR).

Identity and Access Management



Least Privilege Access

Only give users the permissions they absolutely need.



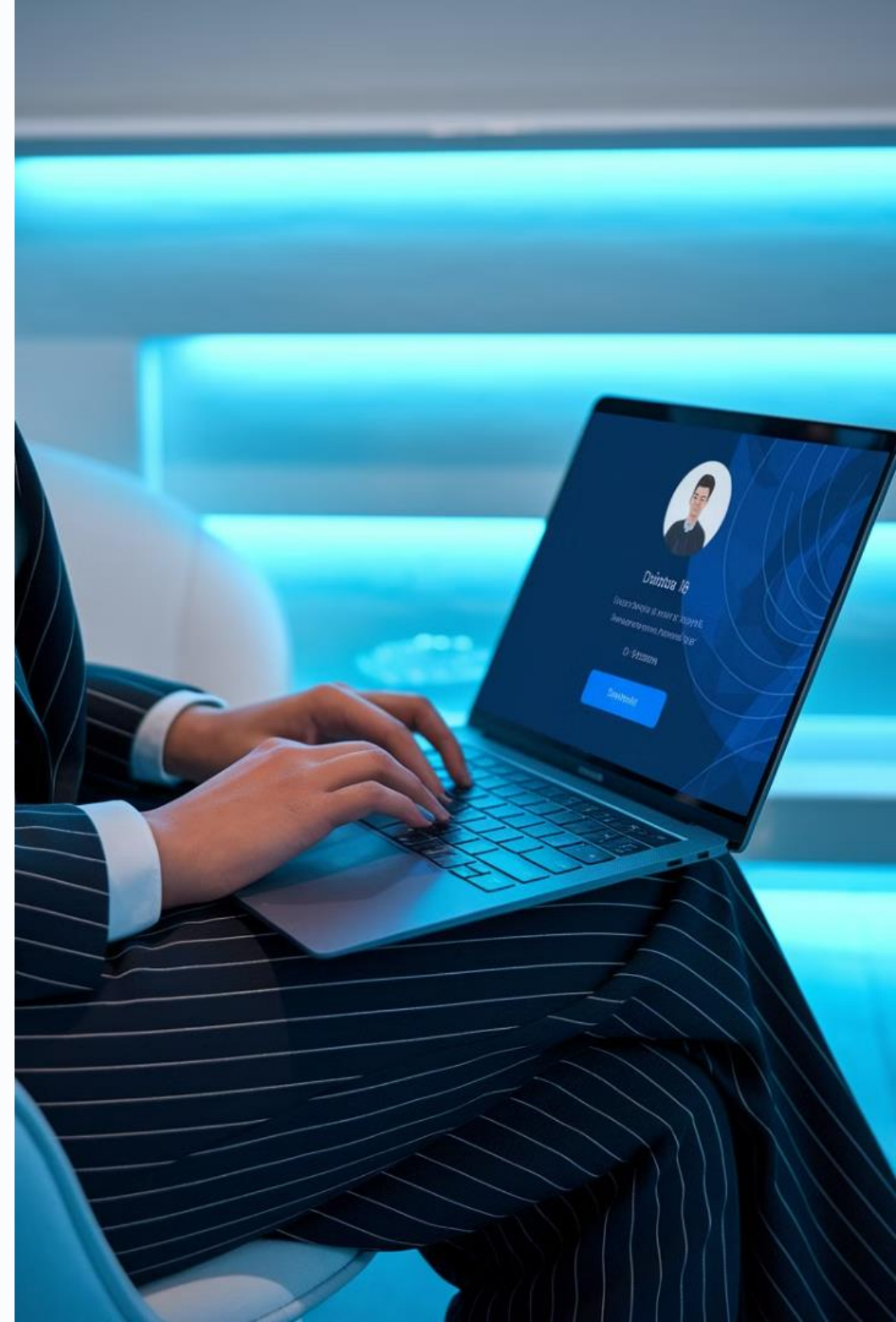
Multi-Factor Authentication

Enable MFA for all AWS accounts.



IAM Roles

Use IAM roles instead of long-term access keys.



Data Protection & Encryption



**SECURE
CLOUD STORAGE**

1

Data at Rest

Encrypt stored data using AWS KMS and S3 encryption.

2

Data in Transit

Secure data movement with TLS/SSL protocols.

3

Data Backup

Regularly back up critical data using AWS Backup.

4

Sensitive Data Detection

Set up Amazon Macie to detect PII and financial records.

Network Security

1

Isolation

Use AWS VPC to isolate environments.

2

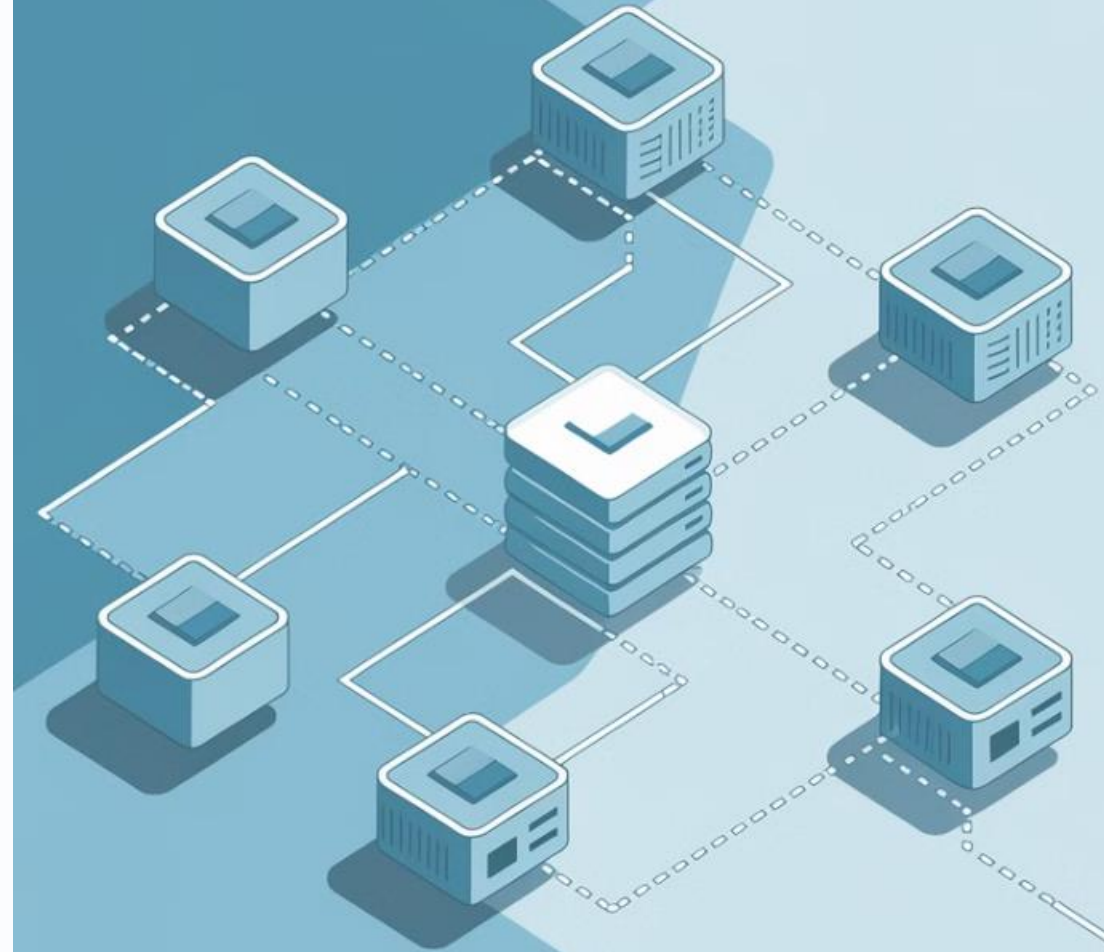
DDoS Protection

Enable AWS Shield for attack protection.

3

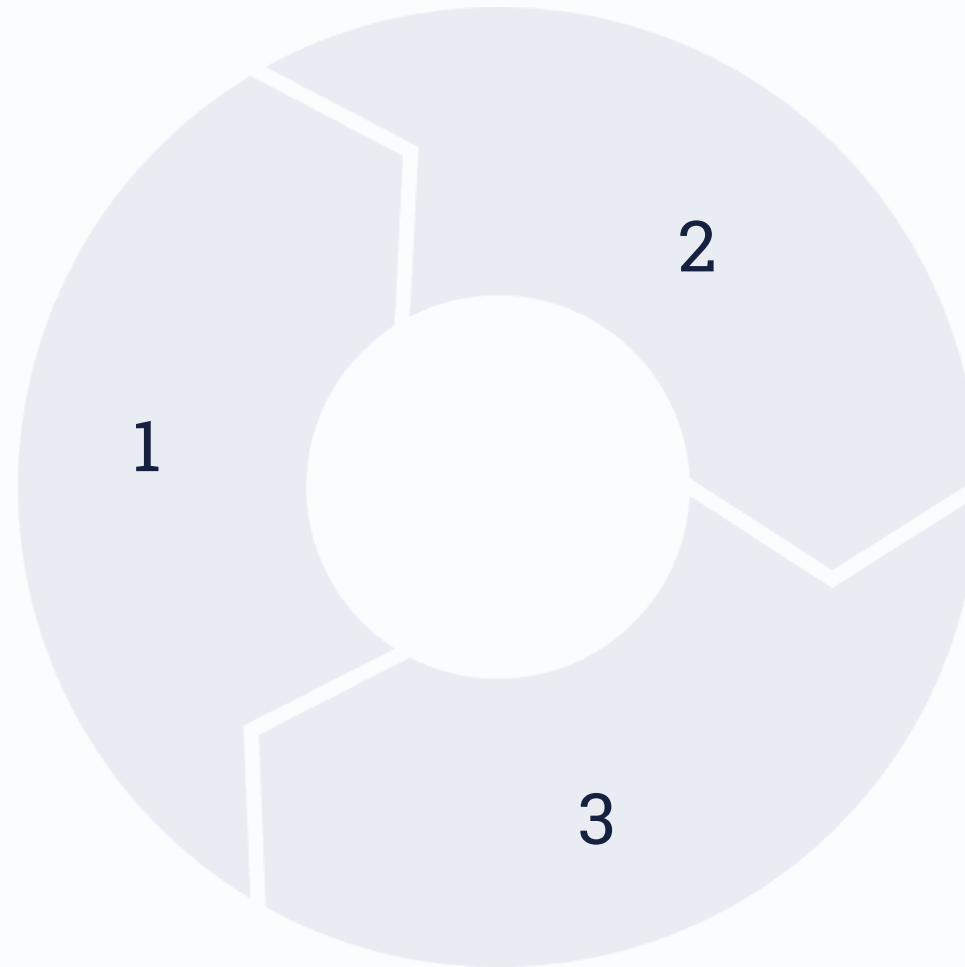
Traffic Control

Implement security groups and network ACLs.



Monitoring & Threat Detection

Activity Logging
Enable AWS CloudTrail for API activity.



Security Dashboard

Use AWS Security Hub for centralized monitoring.

Threat Detection

Set up Amazon GuardDuty for anomaly monitoring.

Include security tasks in your project schedule to avoid last-minute risks.

Compliance Standards & AWS Solutions

Standard	Industry	AWS Solutions
HIPAA	Healthcare	AWS HealthLake, AWS Config
SOC 2, ISO 27001	Security Frameworks	AWS Audit Manager
GDPR	EU Data Privacy	AWS KMS, AWS Access Analyzer
PCI DSS	Payment Processing	AWS Key Management Service





Security & Compliance Risk Management

Identify Requirements Early

Align security policies before deployment.

Conduct Regular Audits

Use AWS Audit Manager to track security risks.

Automate Monitoring

Set up alerts using AWS Config & Security Hub.

Train Teams

Prevent misconfigured resources that can lead to data leaks.

Security & Compliance Metrics

0

Security Incidents

Target zero GuardDuty alerts.

100%

Encrypted Resources

All S3 buckets and databases must be encrypted.

90+

Compliance Score

Maintain high compliance score in AWS Security Hub.

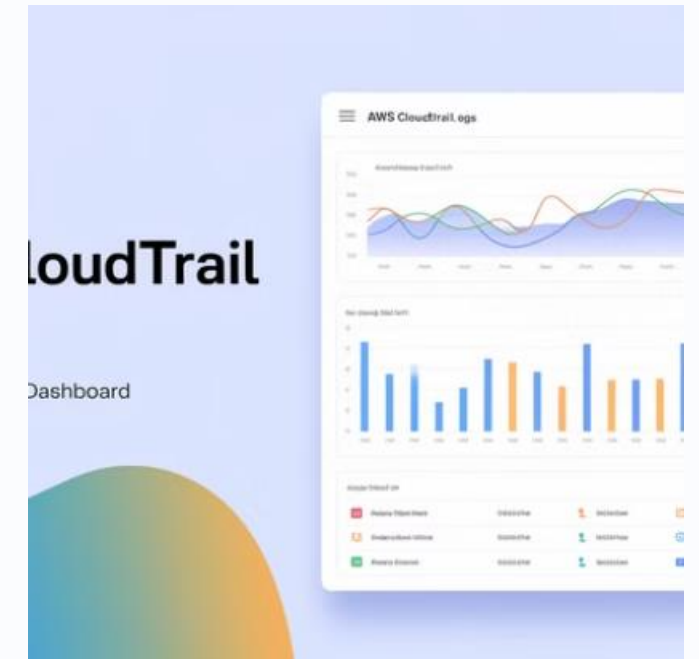
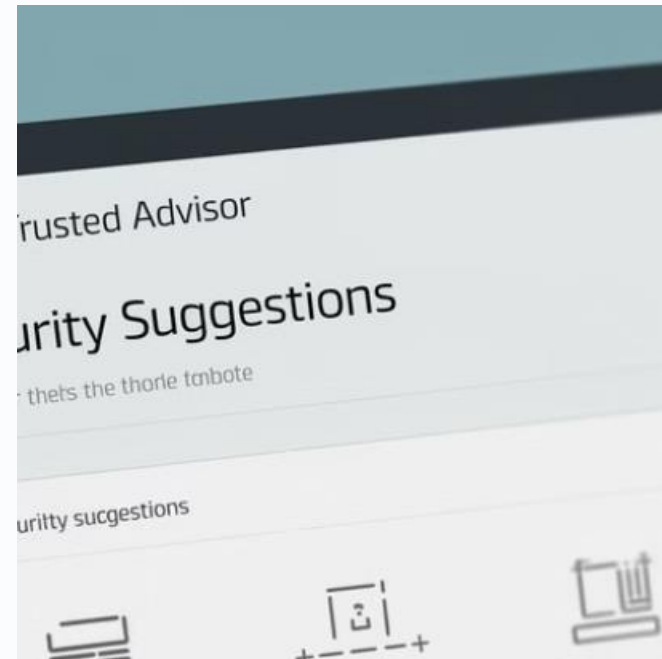
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IAM Violations

Eliminate overly permissive roles.

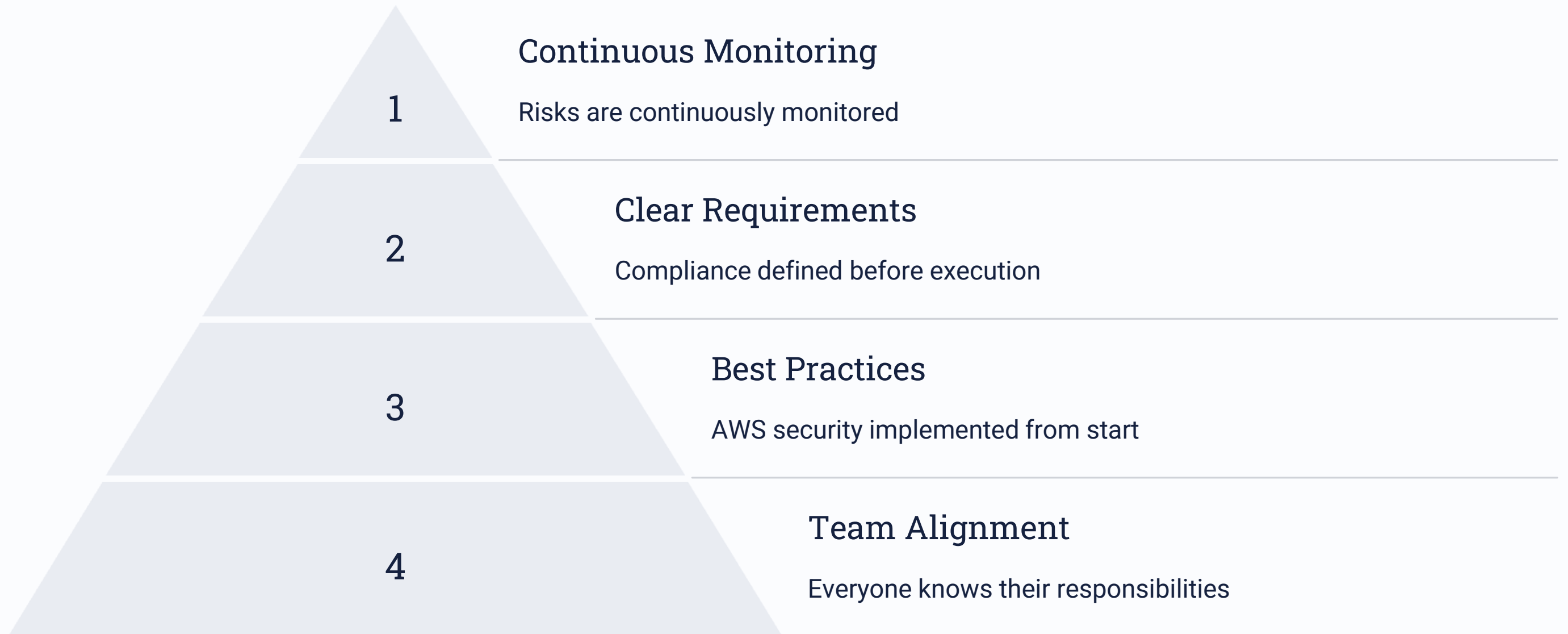


AWS Tools for Security Reporting



Use **Security Hub** for consolidated security scores and compliance status, **Trusted Advisor** for cost/performance/security optimization, **AWS Config** for compliance auditing and resource tracking, and **CloudTrail** for detailed API activity monitoring. Schedule monthly security reviews with cross-functional teams (IT, compliance, dev) using these reports to identify gaps, track incident trends, and document compliance for stakeholders.

The PM's Security & Compliance Checklist



Security and compliance should never be an afterthought in AWS projects. Integrate them from day one for project success.