OWASP EKS GOAT

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OWASP EKS GOAT

Your Kubernetes on AWS Is Probably Misconfigured and Here's How to Fix It

OWASP EKS GOAT

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AGENDA

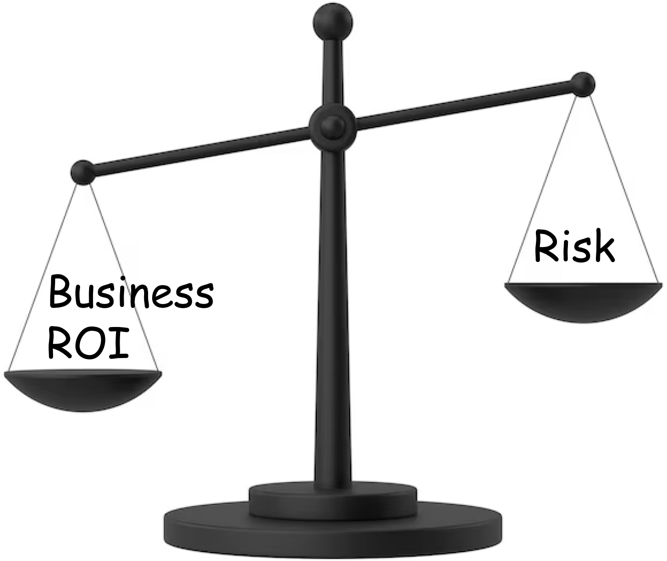
- Architecture of Kubernetes
- How Attackers Break into Kubernetes on AWS using OWASP EKS Goat (Demo)
- EKS Security Best Practices

Why Does It Matter ?

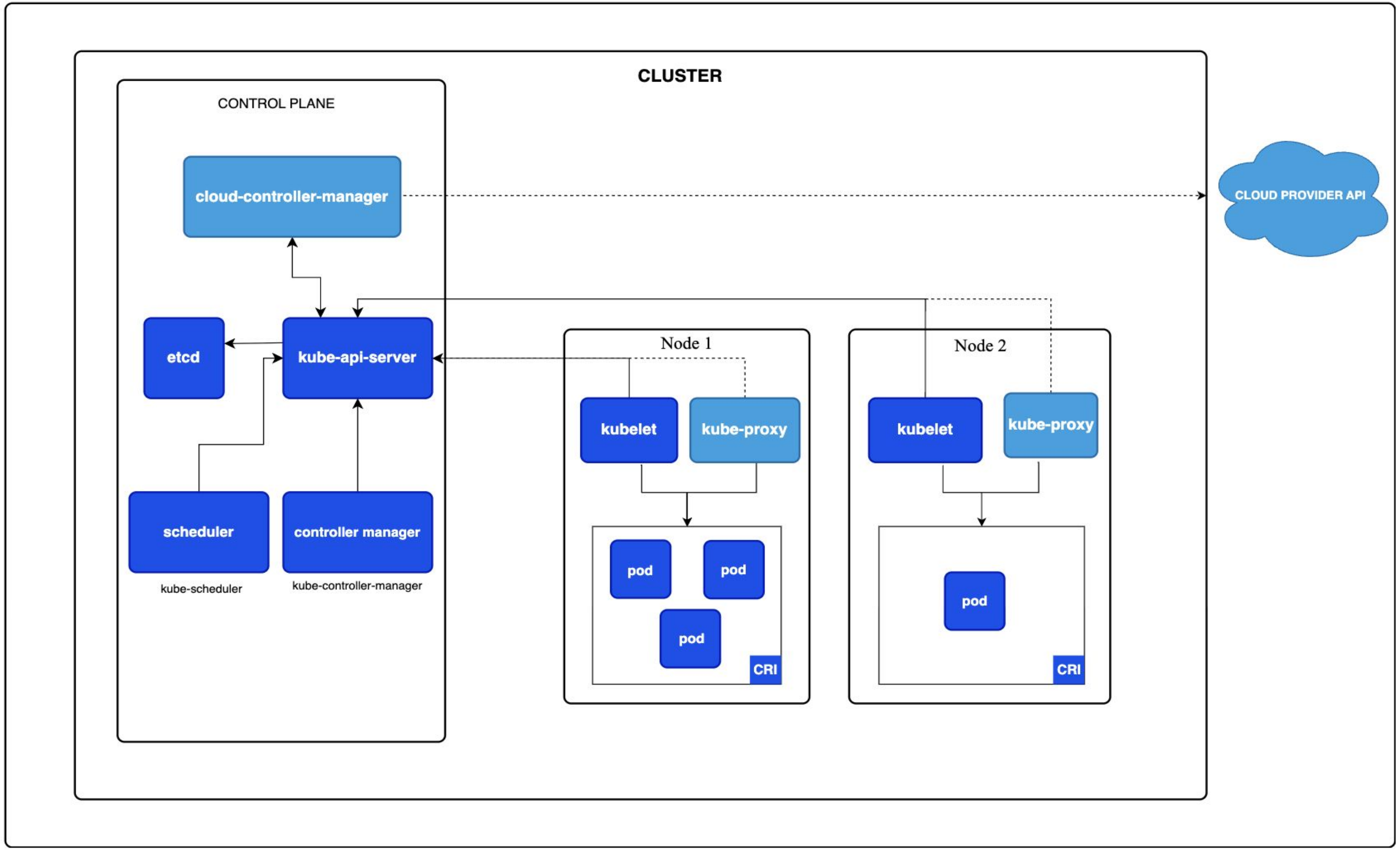
Amazon EKS

Attack Surface (K8s)

Attack Surface (K8s + Cloud)



Architecture of Kubernetes



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Ref:
https://kubernetes.io/docs/concepts/architecture/

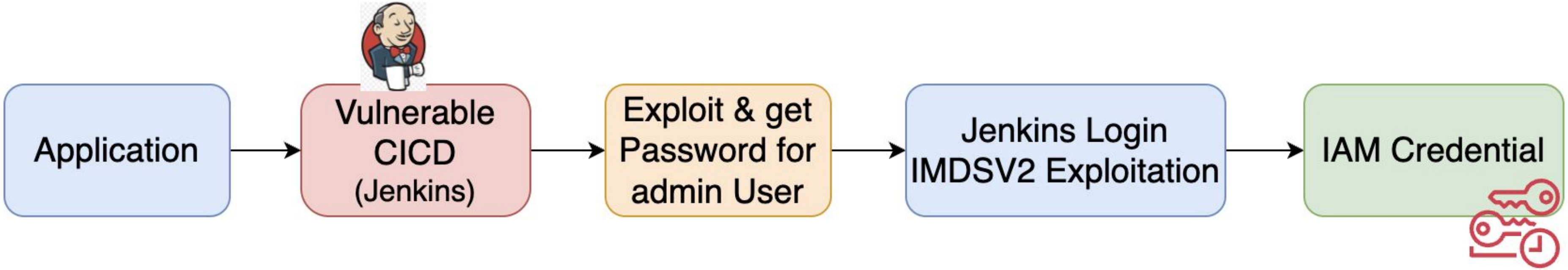
How Attackers Break Kubernetes on AWS (Demo using OWASP EKS Goat)

Documentation:

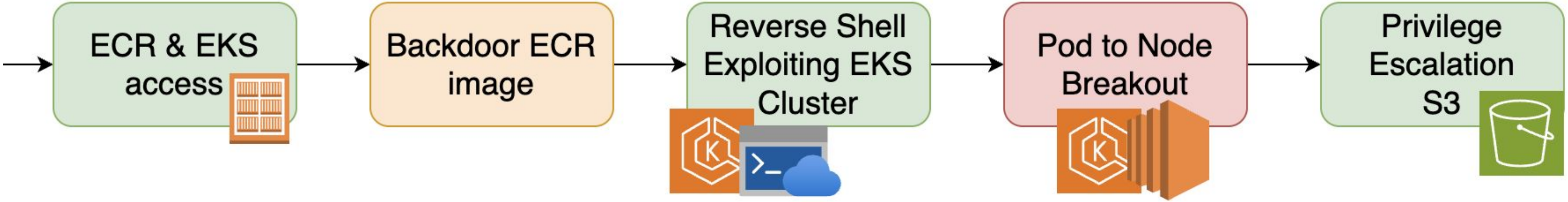
https://eksgoat.kubernetesvillage.com/

Vulnerable Lab IP:

Inside the Attack: OWASP EKS GOAT


Application
Vulnerable CICD (Jenkins)
Exploit & get Password for admin User
Jenkins Login IMDSV2 Exploitation
IAM Credential

Inside the Attack: OWASP EKS GOAT



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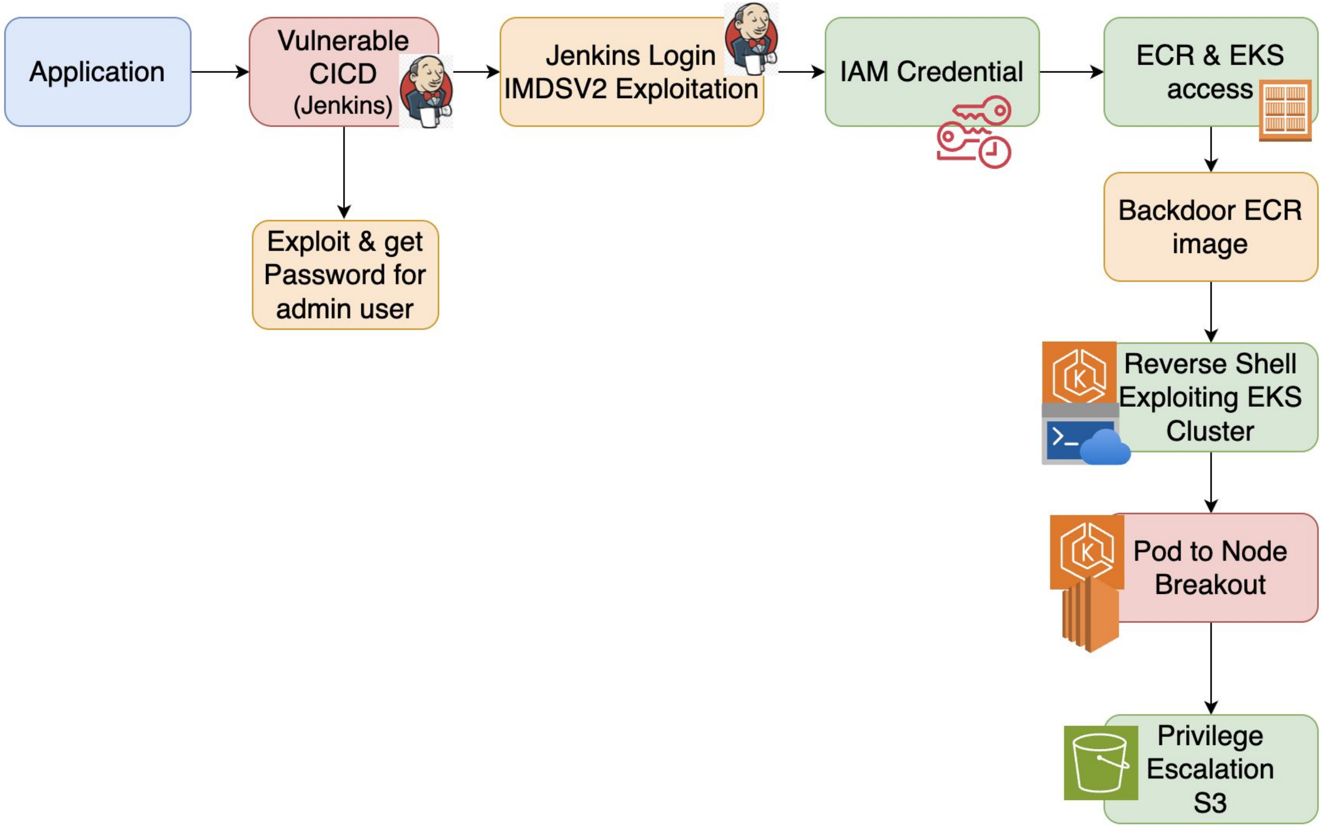

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ECR & EKS access

Backdoor ECR image

Reverse Shell Exploiting EKS Cluster

Pod to Node Breakout

Privilege Escalation S3

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EKS Security Best Practices

01 Insecure EKS API Server Access

02 Securing Images from Repositories

03 Encrypting Data at Rest

04 Minimise Pod’s IAM Permissions

05 Securing Node Group IAM Roles

EKS Security Best Practices

06 Unsecured Load Balancers

07 Enforce Network Segmentation

08 Realtime Monitoring with GuardDuty

09 Poor Secrets Management

10 Enforce Security with Admission Controller

QUIZ TIME!

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A. The smallest deployable unit
B. A single container
C. A virtual machine
D. A network policy

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