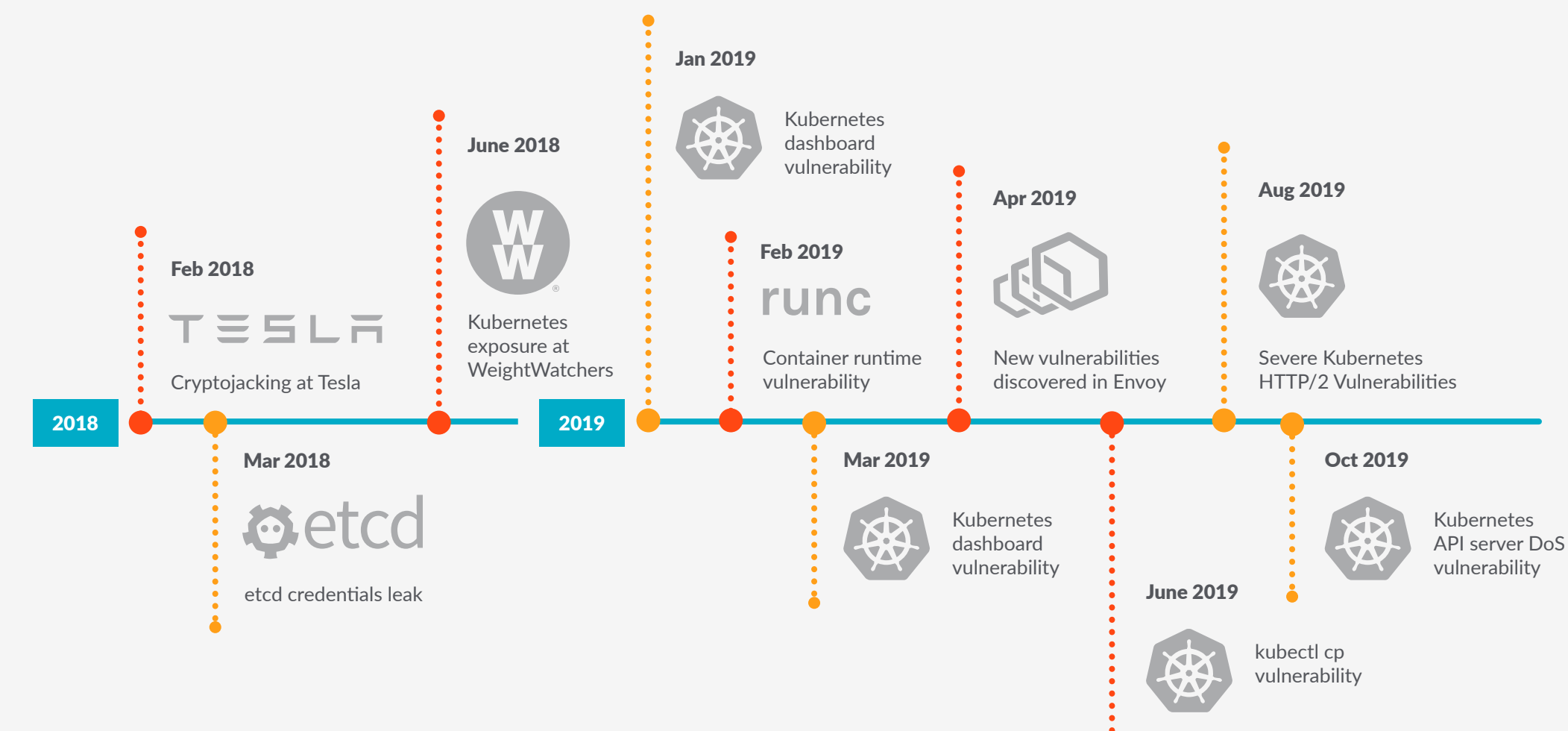


# Securing Kubernetes in Production

Are you ready?

As Kubernetes scales up, security is the #1 challenge facing DevOps\*



\* IDC TechBrief: Containers

**Vulnerabilities or misconfigurations were not addressed before deployment**

52% container images fail scans with high severity\* that leaves applications exposed to attacks\*

**Best practices for runtime prevention and detection were not in place**

On average, 21 containers per node are running as root, opening the door for container breakouts\*

**Most container breaches are often undetected until it is too late**

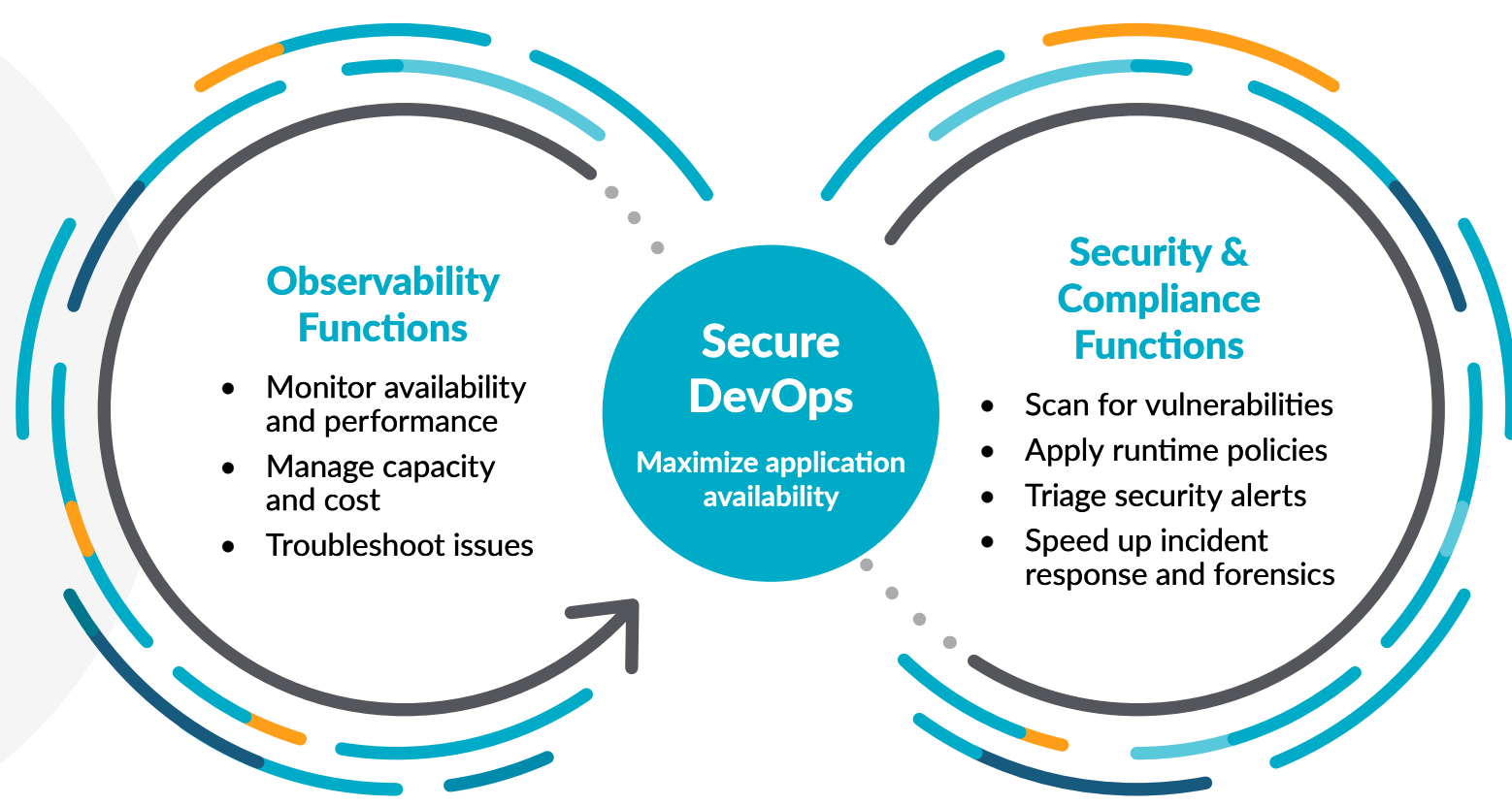
5 min container lifespan requires purpose-built tools for audit and incident response\*

**Security is often addressed after deployment**

\* Sysdig 2019 container usage report

[Read the Report](#)

DevOps adds security and compliance into their workflow



Adopt a 5 step checklist for a secure DevOps workflow

**1**

Scan for vulnerabilities early and ensure configuration meets CIS best practices

CIS Benchmarks

Vulnerability Feeds

**Examples**

- "Containers must not run as root"
- "Block images with high severity vulnerabilities"

**2**

Apply precise runtime policies for prevention and detection

**Examples**

- "MITRE ATT&CK framework for container runtime security"
- "Did someone launch a privileged container?"

**3**

Use the same data for security, performance and capacity monitoring

**Examples**

- "Who are my top talkers?"
- "Is this CPU spike related to a DoS attack?"

**4**

Continuously validate compliance (PCI, NIST) across the Kubernetes lifecycle

**Examples**

- "Is it a malicious attack or configuration error?"
- "PCI Req. 11.4 - Use IDS/IPS to Detect and Prevent Network Intrusion"

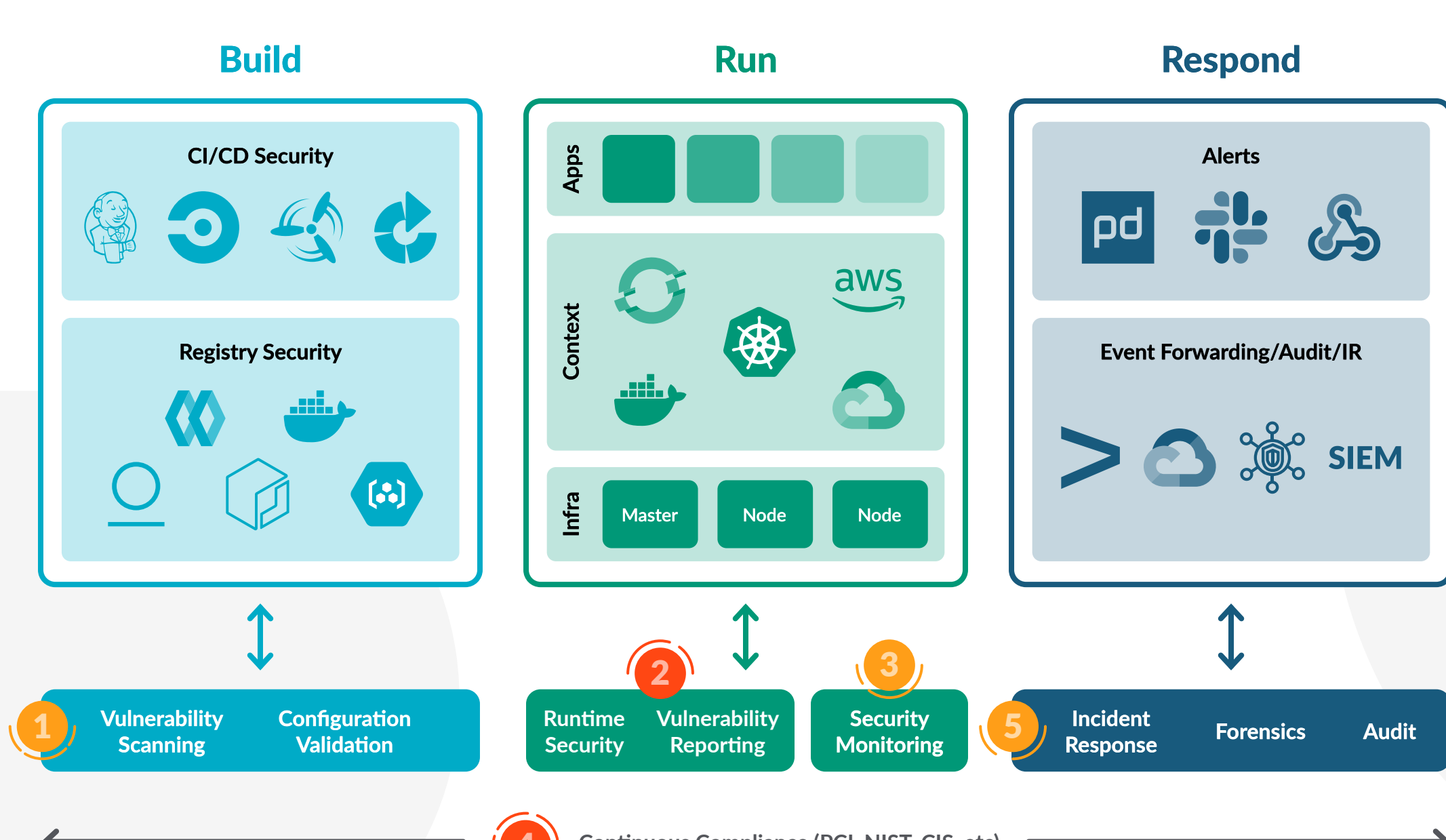
**5**

Implement a response framework for troubleshooting and forensics

**Examples**

- "Kubernetes user activity"
- "commands run"
- "connections made"
- "processes spawned"

Embed your secure DevOps workflow into your existing cloud-native ecosystem



Tools must support a secure DevOps workflow to run Kubernetes and containers in production.



To learn more about how security is converging with DevOps, read the 5 Keys to a Secure DevOps Workflow.

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