Can we (really) trust developers to handle security?

Lawrence Crowther
Head of Solutions Engineering
Snyk, APJ

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Digital Transformation Changed the Way Developers Work

Yesterday

- Sporadic Deployment (Months) 
- Siloed Devs and Ops 
- Rigid Dev Model 
- Limited Supply Chain 

Today

- Continuous Deployment 
- DevOps 
- Agile Dev Model 
- Vast & Opaque Supply Chain 

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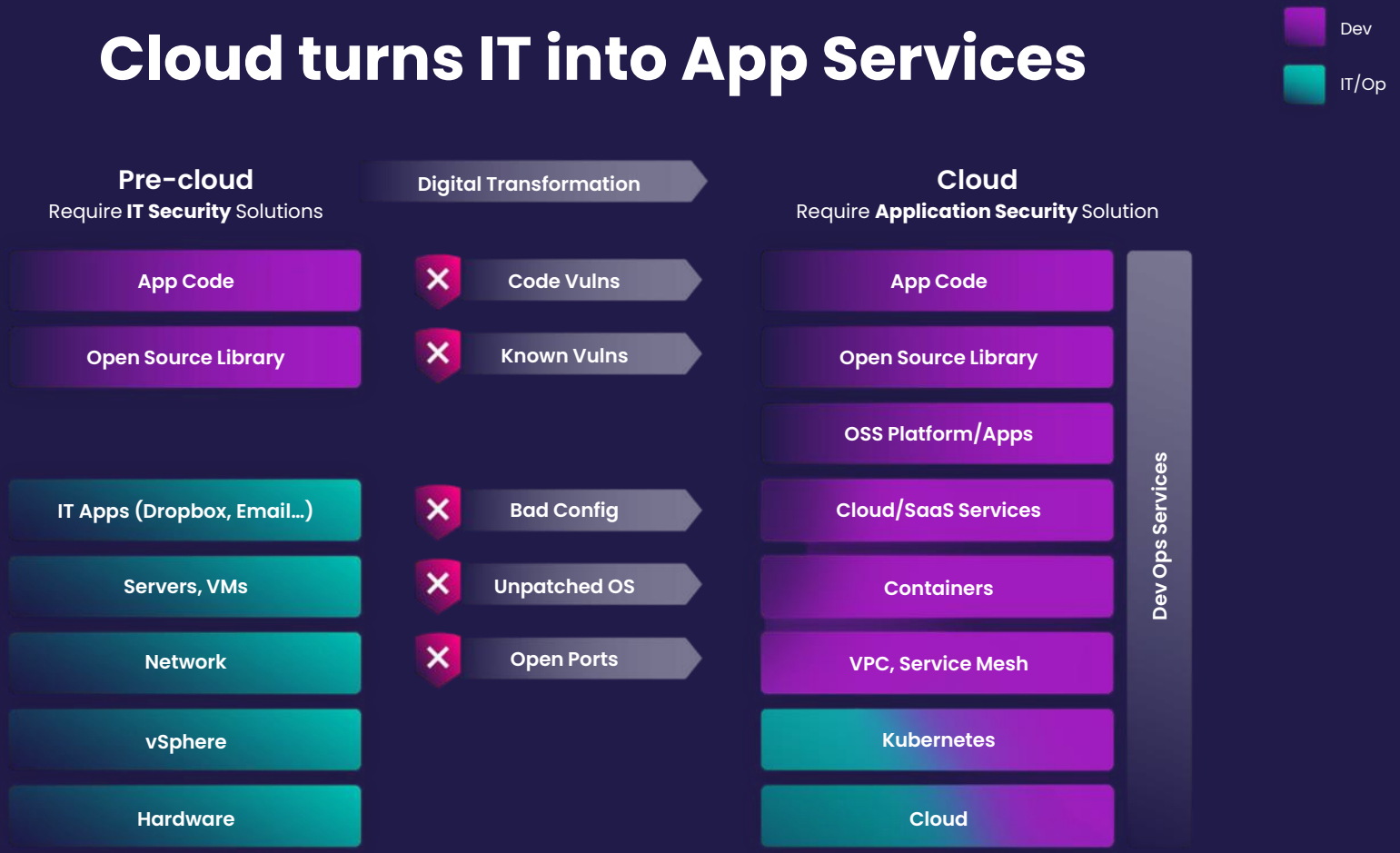
Cloud turns IT into App Services



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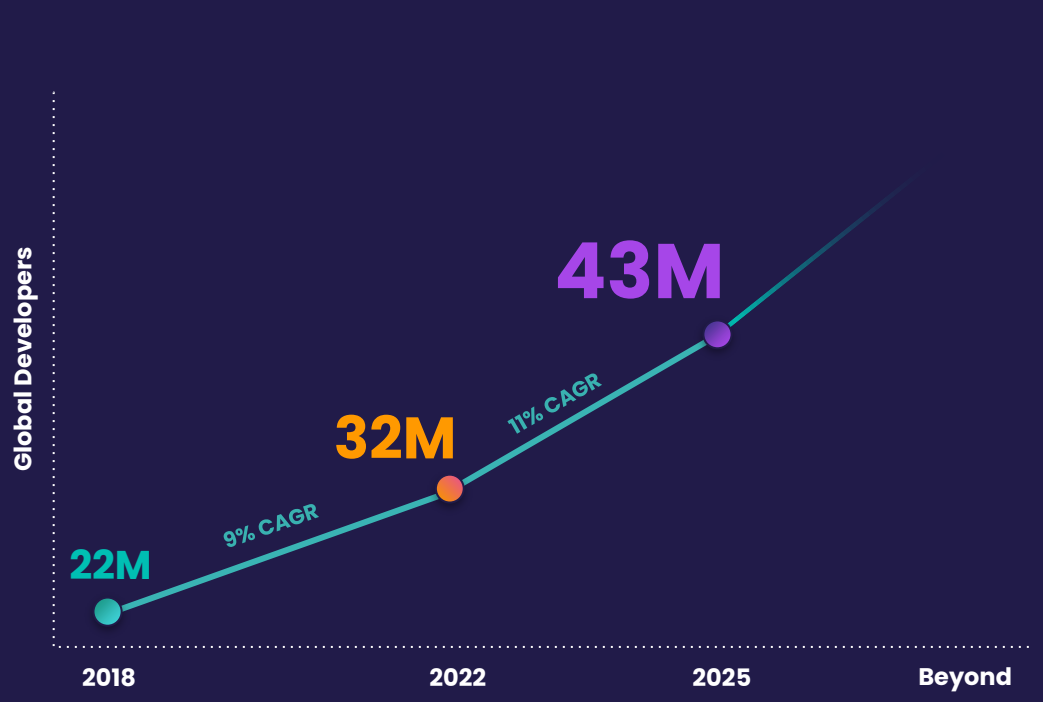
Developer Growth Is Outpacing Security

The World Is Increasingly Reliant on Developers



Security Talent Shortages Prevent Scaling

600K

Unfilled Cybersecurity Positions in the US

3.5M

Cybersecurity Job Openings Globally by 2025

164%

Next 5-Year Growth in Demand for App Development Security

Source: IDC, White House, US Department of Commerce, Cybersecurity Ventures, Truist Security Research. Note: 2021 developer figure extrapolated based on 2020-2025 CAGR of 10.5%. US unfilled cybersecurity positions in the past year as of September 2021.

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And the only way to scale security is to empower developers

*"The ratio of engineers in Development, Operations, and Infosec in a typical technology organization is **100:10:1**.*

When Infosec is that outnumbered, without automation and integrating information security into the daily work of Dev and Ops, Infosec can only do compliance checking, which is the opposite of security engineering—and besides, it also makes everyone hate us."

—Gene Kim
10 Tips for Integrating Security Into DevOps, DZone

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Dev-first Security

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4 Key Principles of a Dev First Security Program

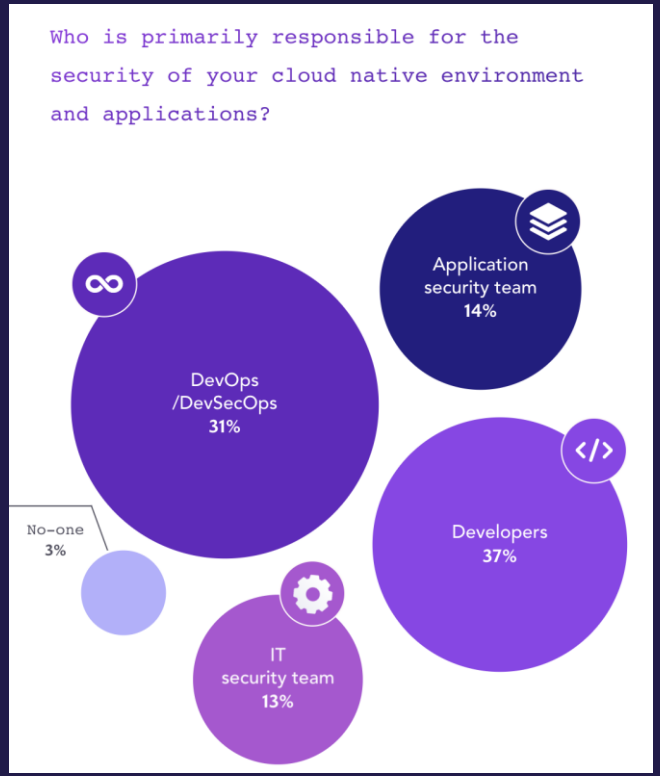
1. Change in ownership

Security isn't just for the security team

"Developers are **three times more likely** to view security as their responsibility versus their security peers"

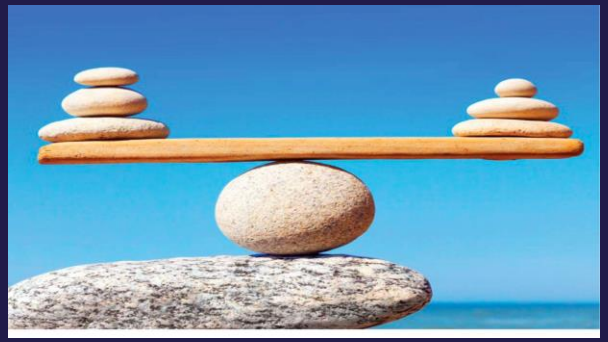
Source: State of Cloud Native Application Security

https://snyk.io/state-of-cloud-native-application-security/



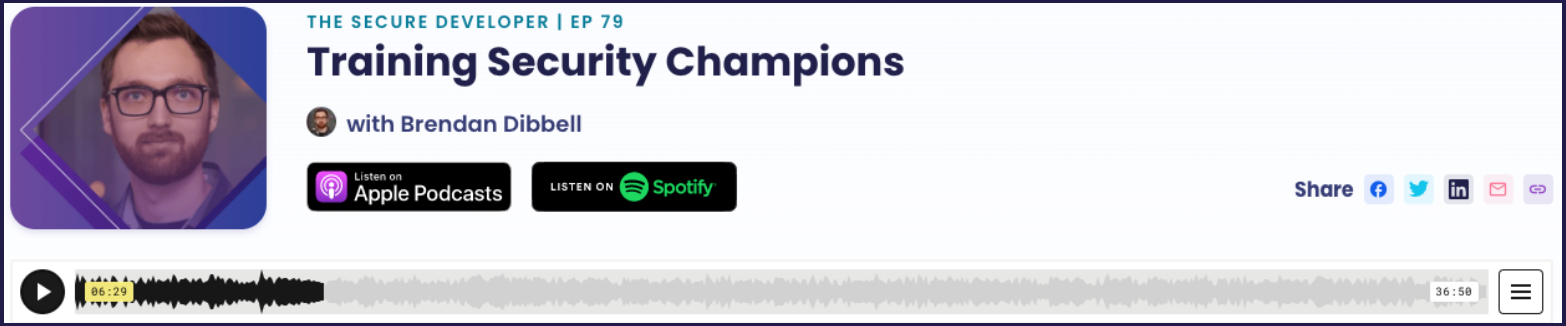
shared ownership model

"When everybody owns something, nobody owns it, and nobody has a direct interest in maintaining or improving its condition." **Milton Friedman**



balanced ownership

Security Ownership



"Instead of focusing on doing all of the things, we really want to focus on how do we give our engineers the tools that they need to take ownership of security."

Brendan Dibbell
Application Security Engineer Team Lead
Toast

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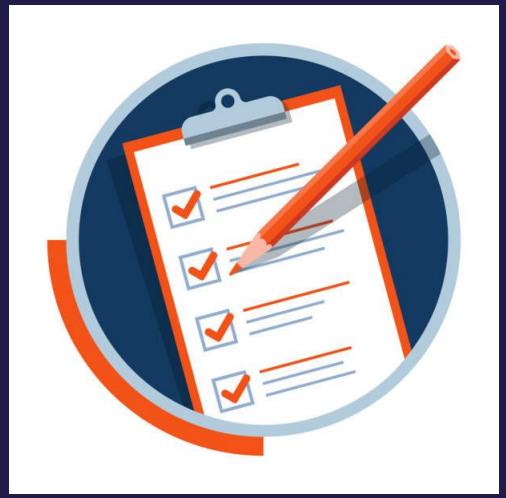
4 Key Principles of a Dev First Security Program

1. Change in ownership
2. Design for the developers

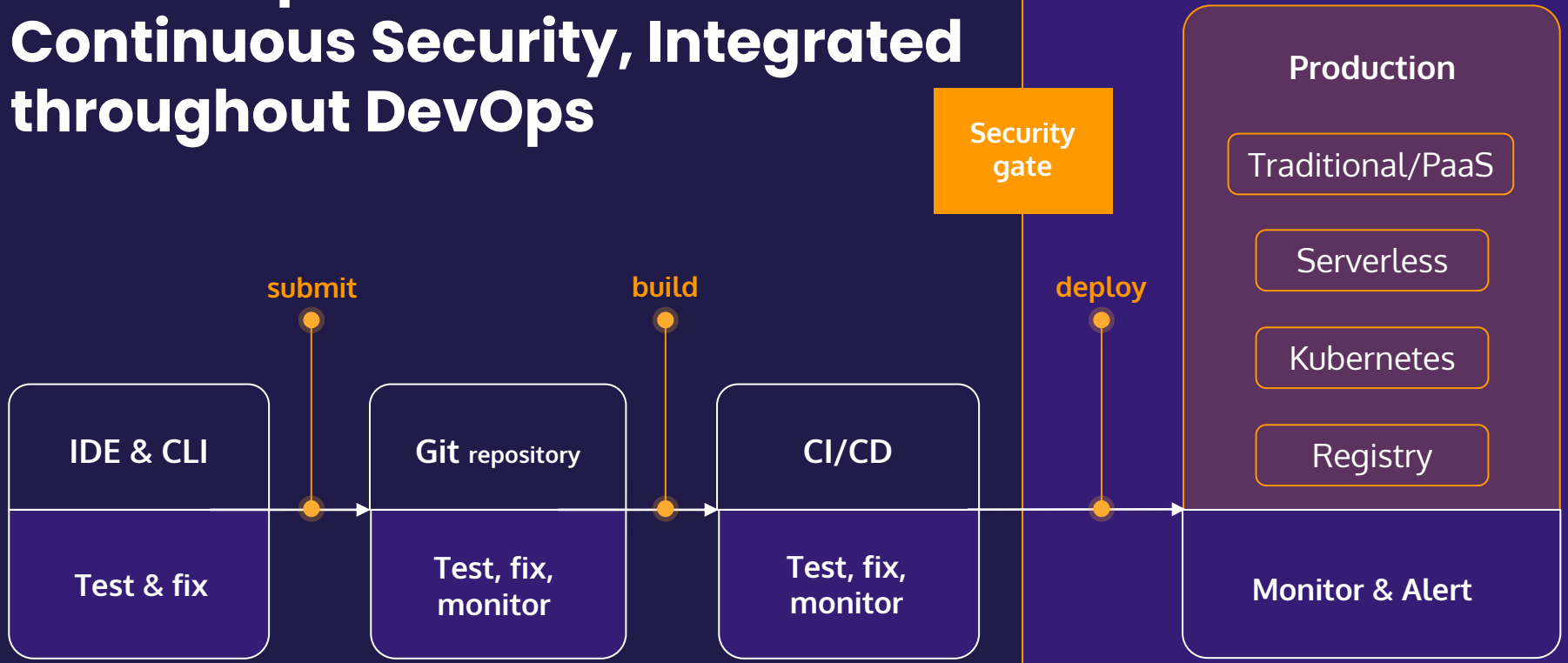
What’s the goal?

Security Audits



Developers Fix

DevSecOps: Continuous Security, Integrated throughout DevOps



Meet the Developers Where They Are

"It's meeting people where they are and trying to integrate with existing workflows of how people do their job, making things easy and safe by default."

Andy Steingruebl
Chief Security Officer
Pinterest

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4 Key Principles of a Dev First Security Program

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2. Design for the developers
3. Bring the cloud into appsec

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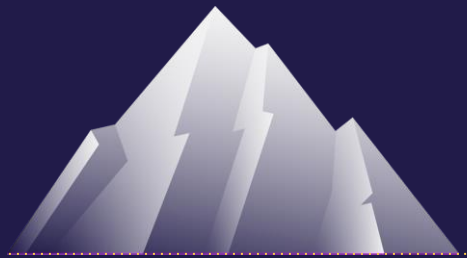
The modern application

A new risk profile for developers



Code

- **Software deployed daily** - ‘waterfall’ approach doesn’t scale. Scans can’t take hours.
- **10-20% of code is custom** - and digital transformation increases pressure to deliver more and faster.

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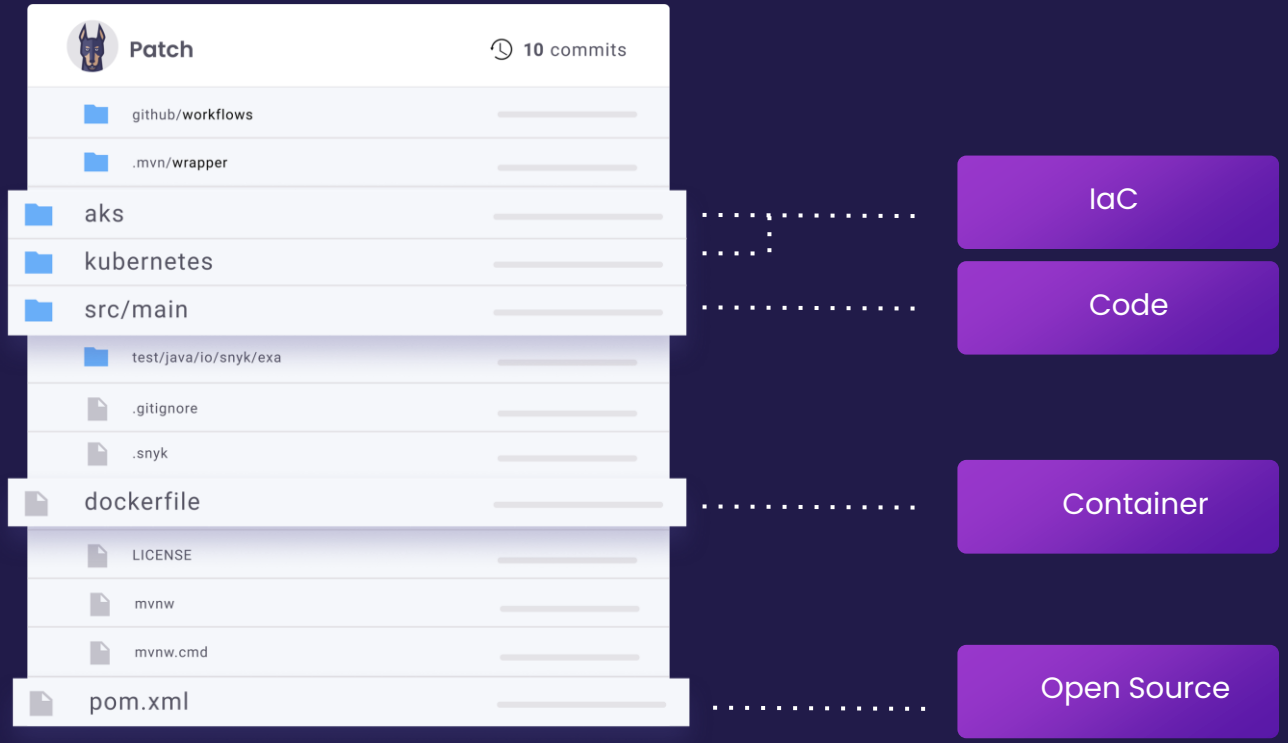
The modern application

The Developer's View



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Gartner AST Critical Capabilities

2020			2021			2022		
15.4	•	SAST	12	•	SAST	10	•	SAST
13	•	DAST	11	•	DAST	6	•	DAST
6	•	IAST	8.4	•	IAST	9	•	IAST
13.4	•	SCA	12.4	•	SCA	12	•	SCA
11.4	•	Mobile AST	6	•	Mobile AST	8	•	Mobile AST
1.6	•	Business Critical Apps	2	•	Business Critical Apps	2	•	Business Critical Apps
13	•	API Testing & Discovery	11.6	•	API Testing & Discovery	14	•	API Testing & Discovery
14	•	SDLC Integration	11	•	Lifecycle Integration	9	•	Lifecycle Integration
12.2	•	Automation & Speed	7	•	Infrastructure as Code	8	•	Infrastructure as Code
			4	•	Container Security Scanning	9	•	Container Security Scanning
			2	•	Fuzzing	3	•	Fuzzing
			12.6	•	Developer Enablement	10	•	Developer Enablement

4 Key Principles of a Dev First Security Program

1. Change in ownership
2. Design for the developers
3. Bring the cloud into appsec
4. Develop your champions

Security Champions

- Embedded
- Experienced
- Empathetic

Security Champions

"When I think about security champions and successful models, it's either where out of engineering or development teams, you actually identify several folks that are responsible for security."

Rinki Sethi
Vice President and Chief Information Security Officer
Twitter

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One small weakness destroyed the imperial star destroyer!

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Develop fast.

Stay secure.