

# DevOps: Greater than the sum of its parts

The discipline's links to cloud and automation make it central to any adaptive cybersecurity strategy



**Rick Howard**

Chief Security Officer,  
Palo Alto Networks

**A** S AGENCIES SEEK to develop more flexible, robust strategies for responding to today's complex threat landscape, they shouldn't overlook the key role DevOps can play.

The agile, collaborative nature of DevOps perfectly complements the multidisciplinary nature of adaptive cybersecurity, and its connection to cloud technology and automation has profound implications for agencies' abilities to build

and execute modern strategies to protect their systems.

I talk to a lot of network defenders in the public and private sectors who say they have DevOps teams. But if I probe deeper, I find that many of them think simply moving their apps to the cloud is DevOps. That's not it at all.

## A digital production line

The traditional separation of development

and operations into two distinct teams has created conflict over vocabulary, risk assumptions, technical problem-solving and product requirements. The result is often a lack of mutual trust and respect.

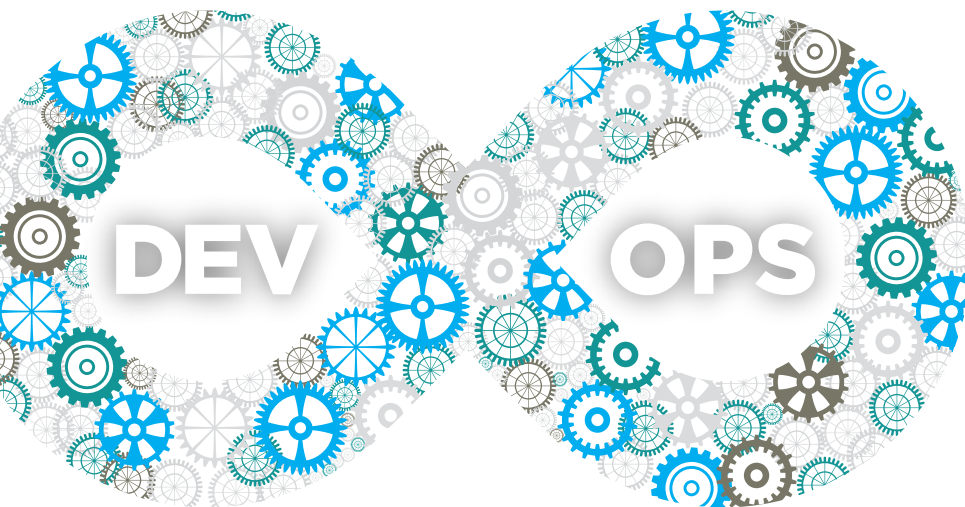
By contrast, DevOps involves recognizing that application development is a system of systems. Under the old waterfall methodology, somebody would build a proof of concept, which would be sent to the quality control experts. Once they were done with it, they would throw it to the IT operations group — and never think about it again.

With DevOps, organizations can rapidly develop applications across all areas of expertise. The discipline is based on the premise that the process of developing, conducting quality assurance, deploying, maintaining and incorporating security into IT systems is similar to a manufacturing production line. In this case — where the raw material is source code and the finished product is a cloud-based application — the process of continuous integration and automated testing mirrors the best production lines in the manufacturing world.

Furthermore, DevOps practitioners seek to avoid shortcuts that can lead to security vulnerabilities and other weaknesses. It is a more thoughtful, holistic approach to development because everyone is working together to develop, automate and use a continuous delivery pipeline.

## Agile and automated

Automating tasks is a force multiplier and can be used to ensure consistency across an organization. DevOps presents



By capitalizing on the automation that DevOps and cloud technology allow, some organizations are **deploying apps 10 times per day** instead of once every two years.

The **process of continuous integration** and automated testing mirrors the best production lines in the manufacturing world.

the opportunity to automate progressive software rollouts, detect problems early and safely roll back a system or app, if necessary. By capitalizing on the automation that DevOps and cloud technology allow, some organizations are deploying apps 10 times per day instead of once every two years. If they discover a security or performance flaw, they can

pull it back, fix it and release the updated version all on the same day.

Having a team of IT administrators who must manually update or fix systems is inherently inefficient and does not scale. By automating much of that work, IT teams can dedicate more of their time and energy to improving performance and enhancing security.

To be successful, DevOps must percolate through the entire agency. By becoming immersed in that philosophy, agencies can ensure that they have the ability to continually adapt to new cybersecurity challenges. ■

**Rick Howard** is chief security officer at Palo Alto Networks.

# THE POWER OF THE NEXT-GENERATION SECURITY PLATFORM

Clearly, cyberattacks aren't going away anytime soon.

Here's the good news: You can prevent them!

Palo Alto Networks® Next-Generation Security Platform brings network, cloud and endpoint security into one natively integrated architecture to help you gain visibility, get critical threat intel and automatically protect your government agency or organization.

Find out more at [paloaltonetworks.com](http://paloaltonetworks.com).

