



Cybersecurity Skills Shortage Causes and Cures

Top 5 Takeaways from the *DevSecOps Global Skills Survey Report*

Over the past few years, DevOps has moved into the mainstream and changed the way organizations develop software. Yet the path to building a successful DevOps environment can be extraordinarily bumpy.

One of the biggest roadblocks organizations face is assembling the right mix of skill sets for this highly collaborative environment. Not only do organizations require technical expertise from their tech teams, but employees must understand security principles in deep and broad ways. The end goal is to transform a DevOps initiative into DevSecOps. However, in an environment where shortages of cybersecurity professionals have reached critical levels and demand for developers with security skills is high, the path to progress can be daunting.

How can your organization better navigate the task? DevOps.com surveyed 397 IT professionals in May and June 2017. Here are five key findings from the *DevSecOps Global Skills Survey report*:



1

Security skills haven't been sufficiently stressed.

Skill shortages are a common problem for DevOps. And DevSecOps fares even worse. Nearly 40 percent of the survey's respondents said they struggle to find all-purpose DevOps gurus with sufficient knowledge of security testing. And nearly seven in 10 developers said their organizations don't provide adequate training in security. Making matters worse, new employees generally lack adequate security skills. 76 percent of survey respondents who attended college reported that they weren't required to complete any security courses while in school. All of this translates into skills deficiencies that impact DevOps and make the journey to DevSecOps all the more difficult.



2

Organizations are struggling to find people with the right skills.

Skills shortages in DevOps have real-world consequences: Nearly one in three technology professionals said their company's IT workforce is unprepared to securely deliver software at DevOps speeds, and slightly more than half said they believe it's only somewhat prepared. Top concerns include finding developers with adequate security training, finding security people with enough understanding of the business, and finding technical staff who can communicate effectively and interact well with others.



3

The lack of fully trained staff keeps many organizations from achieving goals and objectives.

Continuous delivery is the objective of most organizations. But skills shortages take a toll. Only about one in 10 organizations are using DevOps practices — from development to production — across the entire organization. The norm, unfortunately, is deploying DevOps within a select number of teams or inconsistently deploying it across the business. The study also found that other organizations are only beginning their DevOps journey. All of this is contributing to the technical and personnel debt that exists today. The former can lead to coding approaches that place a premium on speed over quality. The latter can lead to stalled efforts or outright failures in the DevOps arena.



4

Traditional education and training aren't enough.

There are no shortcuts around DevSecOps skills shortages. Focusing on new hires to fill the gap probably won't help — most college graduates receive little to no instruction about secure coding, cryptography and other cybersecurity issues. In fact, only about one-quarter of all universities offer a dedicated security program or track. A disturbing paradox results: While the business world is merging software development and security, the academic world is separating the two fields and even creating greater stratification among college graduates. Further complicating things: Very few schools offer any instruction in DevSecOps. Just 3 percent of the survey respondents said they learned the most relevant skills for their profession at college.



5

Continuous education is the key to success.

Only about 4 percent of respondents said they obtained their most relevant skills through third-party training offered by their companies. But this doesn't mean that classroom training doesn't have value: About 37 percent indicated that classroom or eLearning training programs would be the most effective way to help them bolster their skills.

Seven in 10 developers stated their organizations don't do enough to keep up with AppSec training and knowledge requirements, and about 85 percent of security experts said their organization isn't keeping up with organizational AppSec requirements. The upshot? Organizations must focus on a more holistic model that taps employer training, third-party eLearning, classroom instruction, on-the-job training and self-guided education to create the skilled workforce they need.



Today, it's not enough to adopt a piecemeal approach to DevOps or DevSecOps. Education, learning and knowledge must be part of a continuous professional development journey. The end result is benefits for employees and dividends for the enterprise.

For more information about DevSecOps — and to view the entire report — visit: <https://info.veracode.com/analyst-report-devsecops-global-skill-survey.html>