As a greater number of organizations transform themselves for the digital economy, application development is becoming more important as a business driver. Security, once treated as an afterthought in the software development life cycle (if included at all), is now “shifting left” to occur earlier to help mitigate issues before software is released or deployed. DevOps is a major driver in that shift.

Application security, therefore, is increasing in importance to help ensure errors in code and other factors don’t negatively impact the security of an organization’s network. Compliance, speed to market and coverage for multiple platform types are some of the elements addressed by application security. Yet some organizations aren’t deriving true value from their current application security solution.

A survey of 538 technology influencers and decision-makers by BizTechInsights on behalf of Micro Focus reveals the most common factors that impact organizations’ implementation and use of application security solutions, what they consider to be the most pressing issues regarding their application security solution, and more.
SURVEY RESULTS

Threats on the Increase

Echoing the industry as a whole, most survey respondents—almost three-quarters—say they’ve noticed an increase in security threats over the last 12 months. Interestingly, 12 percent of respondents report seeing significantly or slightly lower security threats, perhaps reflecting the success of their current security solution to mitigate threats.

Fig. 1: Has your organization seen a difference in the number of security threats in the past 12 months?
Security Maturity Perceived as Average

While no respondents considered their security maturity at the highest level, the majority believe their security rates a 5 or higher. The largest single group (28 percent) rate themselves at a 5, reflecting a belief that there is still much to learn when it comes to keeping their organization’s data and networks safe.

Fig. 2: How would you describe your security maturity level on a 1-to-10 scale, with 10 being Best/Military Grade Level Security?
Breaches Spur Security Action

When asked which events increase the urgency in and process for purchasing security solutions, breach took top honors at 30 percent, followed by IT audits at 22 percent and missing compliance standards at 17 percent. Interestingly, those three events are among the major issues that application security technology addresses.

**Fig. 3: What events “speed up” the need, and buying process, for security solutions?**
Vulnerabilities, Compliance Top Challenges in Application Security

Mitigating application vulnerabilities and meeting compliance are the two biggest challenges in application security, underscoring the importance of delivering applications that meet the mark in quality and security. “Ensuring business-critical applications are delivered without vulnerabilities” was listed as the top challenge by 30 percent of respondents, while “ensuring applications meet compliance requirements” was listed by 26 percent of respondents. Rounding out the top three challenges was “ensuring all applications are covered within the application security program,” at 21 percent.

Fig. 4: What do you consider to be your organization’s biggest challenge in application security?
Security Confidence High

Despite the constant flow of news regarding security breaches in organizations large and small, an overwhelming majority of respondents report having some level of confidence in their current security efforts. Almost half (43 percent) are extremely confident, and another 21 percent are considerably confident. In fact, only 10 percent of respondents are not at all confident with their current security efforts.

**Fig. 5: How confident are you in your organization’s current security efforts?**
Feeling the Need for Speed

Organizations want to be more compliant and faster when it comes to their security testing, according to the survey results. One-third of respondents say improving compliance is their goal, while an almost equal number (30 percent) say they want to improve the speed of their security testing.

Fig. 6: What are your goals related to your application security efforts? (Check all that apply)
DevOps is a Journey, Not a Destination

Organizations that have adopted DevOps understand it is a never-ending process, as witnessed by the survey responses. When asked how far along they are in their DevOps journey, the largest number (35 percent) say they have a lot of work to do still. Another 29 percent consider themselves to be DevOps-enabled. Almost one-third (31 percent) are not currently part of the DevOps population.

![Fig. 7: How far along is your organization in its DevOps journey?](image-url)
Outsourcing Testing Most Popular

The largest number of survey respondents (29 percent) currently use a third-party service for their testing needs. In fact, about half of all respondents use a third party during some part of their testing process, which speaks to a level of comfort with both in-house and third-party testing solutions.

Fig. 8: How does your organization currently manage application security testing?
Application Security a Growing Concern

More companies are concerned with the security of their applications than they were a year ago, survey results show. More than one-quarter (28 percent) say their level of concern has increased dramatically, while 20 percent say it has increased slightly. In contrast, a combined 37 percent say their level of concern has decreased over the last 12 months.

![Fig. 9: How has the level of concern regarding application security increased over the last 12 months?](chart_image)
Application Security a Concern, but Not Overwhelming

Less than one-quarter of respondents (14 percent) report being very concerned about the security of the applications put out by their organization, highlighting at least a minimal level of confidence. However, most report being concerned (45 percent) or somewhat concerned (26 percent), which shows that while they are confident, their level of confidence is still low.

Fig. 10: How concerned are you about the security of the applications your organization releases?
Compliance Confidence Level High

Security of applications may be low, but organizations are much more confident in the compliance of their applications, according to the survey. Almost half (47 percent) are somewhat confident and another 17 percent are very confident in their compliance posture. In contrast, 16 percent are not at all confident regarding the compliance of their applications—an issue addressed by application security.

Fig. 11: How confident are you about the compliance of the applications your organization releases?
Testing Shifting Further Left

As more organizations adopt DevOps, their testing process has shifted left to earlier in the development cycle. Application security testing is no different, the survey found. Most respondents—30 percent—test for vulnerabilities and bugs every time code is changed, while an almost equal number—28 percent—test at every stage of the development cycle. That’s good news for ensuring the security and stability of an application.

Fig. 12: At what point in the application development cycle does your organization test for vulnerabilities?
Truth in Advertising

Most survey respondents want to be sure their customers are getting what they pay for: When asked what they consider to be most important in application security, the majority (31 percent) say they want to ensure the application works as advertised. A close 28 percent want to meet compliance, while one-quarter of respondents want to ensure their customer data is safe. Interestingly, only 16 percent look to their application security solution to mitigate code vulnerabilities.

Fig. 13: What do you consider to be most important regarding application security?
**Most Apps Covered**

Regardless of platform used, almost all of an organization’s applications are covered by its current application security program, according to the survey results. While only 13 percent of respondents say all of their apps are covered, an impressive 38 percent say three-quarters or more of their apps are covered. However, one-quarter of respondents report their application security program covers only 1 percent to 25 percent of their apps, proving there is work to be done still.

*Fig. 14: What percentage of your apps are covered with your current application security program?*
Testing Done More Often

As DevOps pushes testing to the left, more organizations are stepping up their application security testing frequency. Most (40 percent) report performing application security testing, either static or dynamic, several times a week. Another 28 percent are testing their application security several times a day. The remaining 32 percent report testing several times a month, which—though not reaching true DevOps cadence—is better than the once- or twice-yearly updates of traditional waterfall development environments.

Fig. 15: How often do you perform an application security test (static or dynamic)?
Conclusion

Application security is an important element of the DevOps and security stack, as organizations look to ensure the applications they create for both in-house and external customers are free from vulnerabilities, meet compliance regulations and work as advertised. And, as security threats loom ever larger in both business and consumer environments, it behooves organizations to pay even more attention to the security of their applications.

While survey respondents overall seem satisfied with their current application security solution, an increase in the number of security threats is giving them cause for concern. In fact, 28 percent of respondents report a dramatic increase in the level of concern with application security over the last 12 months, and 45 percent are concerned about the security of the applications their organization releases.

As more companies adopt DevOps and testing shifts further left in the software development life cycle, application testing will only increase in importance and value. The need to reduce vulnerabilities, increase speed to market and ensure compliance will continue to drive adoption of application security solutions.
About Micro Focus

Micro Focus and HPE Software have joined to become one of the largest pure-play software companies in the world. Bringing together two leaders in the software industry, Micro Focus is uniquely positioned to help customers maximize existing software investments and embrace innovation in a world of hybrid IT—from mainframe to mobile to cloud.

We are a pure-play software company focused from the ground up on building, selling, and supporting software. This focus allows us to deliver on our mission to put customers at the center of innovation and deliver high-quality, enterprise-grade scalable software that our teams can be proud of. We help customers bridge the old and the new by maximizing the ROI on existing software investments and enabling innovation in the new hybrid model for enterprise IT.

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