

Case study

OutSystems secures application development with HP Fortify SCA



Advanced static code analysis helps global software company secure customer applications from development to deployment

Industry

Software development

Objective

Enhance the security of OutSystems Platform and the applications that customers create, deploy, and manage with it through static analysis to help prevent vulnerabilities

Approach

Deploy HP Fortify Static Code Analyzer (SCA) and integrate the solution tightly into the software development lifecycle for early detection and remediation

IT matters

- Automatically performs advanced vulnerability scanning on generated code during regression testing
- Integrates with existing tools and processes, minimizing engineering disruption
- Enhances developer awareness of secure coding practices
- Maximizes developer efficiency and helps eliminate release delays through early identification and remediation
- Broad language coverage supports assessment of C#, Java, JavaScript, HTML, .NET, and more

Business matters

- Safer code. Secures applications created, deployed, and managed by OutSystems Platform
- Lower cost. Quickly addresses customer and prospect concerns about application security, shortening the sales cycle and reducing associated costs
- Easier for the customer. Security enhancements in OutSystems Platform automatically extend to customer code when the applications are regenerated and redeployed



“HP Fortify SCA enhances the delivery of inherently secure mobile and web applications, integrates well with our development processes, and delivers an extra layer of confidence for our end customers.”

– Miguel Lopes, vice president of product management

OutSystems provides the only open, high-productivity application platform (PaaS) that makes it easy to create, deploy, and manage enterprise mobile and web applications, helping IT deliver innovative business solutions fast. OutSystems Platform enables rapid delivery of beautiful applications for all devices utilizing responsive or device-specific web design. The Platform empowers IT to tackle changing business requirements by automating core DevOps best practices such as continuous integration and delivery. It is available as a public cloud, private cloud, and on-premise solution. Hundreds of companies in 24 countries across 22 industries use OutSystems Platform to create and deliver custom, mission-critical applications.

HP Fortify Static Code Analyzer (SCA) provides the all-important application security component of the Platform. Using HP Fortify SCA, OutSystems is able to perform advanced vulnerability scanning on generated code during regression testing, defining key acceptance criteria to eliminate critical, high, and medium level vulnerabilities.

PaaS model

It's a slightly unusual use of Fortify SCA. OutSystems delivers a low-code application platform for creating, deploying, and managing mobile and web enterprise applications very rapidly, with the aim of accelerating the development, staging, testing, and deployment of applications from an enterprise to its employees, customers, or partners. As a platform as a service (PaaS) provider, the company must ensure the security of both its internal applications and OutSystems Platform.

"That's the interesting twist for OutSystems," says Miguel Lopes, vice president of product management. "We first applied it to our public catalog of applications built with OutSystems Platform for an extra layer of validation on the security of these apps, and then we applied it again against the Platform itself for an extra layer of validation on the code that we were generating. We are not the typical end-user of an application security solution."

OutSystems has been using Fortify SCA for nearly two years. "Security is an extremely important issue for us," says product manager Arlindo Lima. "We sell to enterprise customers and security is inevitably a 'first meeting' issue, so we have always been diligent about

performing vulnerability and quality assurance tests on our code. Prior to implementing Fortify, however, the testing was typically done via a non-automated process when we were ready to release a new version. What HP Fortify gave us was a way to automate the process and perform the scans much earlier."

Best choice

Fortify SCA is now an integral part of the software development lifecycle (SDLC) at OutSystems. "Fortify provides a broad spectrum of vulnerability tests that we can assess the Platform against," says Lima. "That gives us an additional level of confidence that we are delivering the best code to our customers."

Fortify SCA is now tightly integrated in the automated build process. During the day, the developers commit code and run unit tests as needed. Then, as part of the automated build process, all of the code is tested against Fortify SCA to ensure that it is secure.

Market requirements drove the decision to implement Fortify SCA; in fact, some OutSystems customers were already using HP Fortify to verify OutSystems Platform as part of their vendor assessment criteria. Says Lopes, "In the past, it was fairly laborious for us to explain our security-related initiatives to customers and prospects. Now, when we explain that our SDLC incorporates daily build validation with Fortify, the security concerns are quickly dispelled."

Another key factor in the purchase decision was Fortify SCA's breadth of language coverage. OutSystems Platform generates

code in C#, Java, JavaScript, HTML, .NET, and more; OutSystems needed a solution that could provide security assessment for all of these languages. The fact that HP is a well-known leader in application security tests—as OutSystems verified with Forrester and Gartner—provided further support. Says Lima, “Fortify was regularly on top in the industry analyst evaluations.”

The extensibility of Fortify SCA also gets high marks. “We are essentially power users,” says Lopes. “The ability to incorporate the Fortify results into our own tools and processes is huge for us; for example, we do not want to give our developers another dashboard to look at. It is easy to integrate HP Fortify into our existing environment.”

Top security standards

The Engineering Productivity Team at OutSystems took the lead in rolling Fortify SCA out to the development group, ensuring that Fortify was fully integrated with tools already in use. “Security is one of those non-functional requirements that can be easily overlooked yet often creates the worst problems for development teams,” says António Melo, manager of the Productivity Team. “By proactively using the HP Fortify solution, we are able to ensure that applications generated with OutSystems Platform benefit from top security standards. This enables our customers to rapidly create and maintain mobile and web applications that are inherently secure.”

The benefit of scanning OutSystems code with Fortify SCA extends far beyond the Platform itself. As soon as customers upgrade their Platform to use the most up-to-date version with all security enhancements, they just regenerate and redeploy their applications. All applications benefit from the new security fixes that OutSystems has rolled out, without the customer having to do anything. Says Lima, “We make security enhancements once and all of our customers benefit.”

Silver bullet

The positive results of the Fortify deployment include safer code and a smoother sales cycle. “Our R&D team became more aware of good security practices,” says Lima. “We were already very good at security, but Fortify enabled us to become even better. It also gave our organization a solid security conversation that we can have with our customers. Just saying that our code has been verified with HP Fortify nearly always removes the security objection immediately.”

OutSystems presales engineers call Fortify SCA a “silver bullet.” Continues Lima, “Once prospects learn that we use HP Fortify, their security objections usually disappear, helping move the sales cycle along faster. We typically hear something like, ‘Wow, that’s impressive!’ HP Fortify helps us streamline the sales process by minimizing concerns about security.”

Customer at a glance

Solution

- HP Fortify Static Code Analyzer (SCA)

Fortify SCA is a good match for the company's agile development lifecycle. "There is no doubt that our investment in the HP Fortify automation project was worth it," says Lopes. "Immediate daily detection of issues prevents the wasted time and money associated with discoveries during final test or post-release."

The solution is also a good match for emerging challenges. "The increased prevalence of Bring Your Own Device, or BYOD, is a growing concern," Lopes continues. "The days when enterprise security was completely separate from the consumer side are gone; now you can have end-user devices, such as smart phones, that are vulnerable to whatever new threat is coming up. Another challenge is the fact that cloud systems potentially have more exposure than traditional systems.

These are two important areas where we will be counting on HP Fortify for extended help to prevent attacks."

In the end, it comes down to the customer. "Our customers' concern for security is paramount for us," concludes Lopes. "It's not just about productivity and the applications they need to run their business. It's the fact that security risk puts their reputation on the line. HP Fortify SCA enhances the delivery of inherently secure mobile and web applications, integrates well with our development processes, and delivers an extra layer of confidence for our end customers."

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