

Change Healthcare

Securing applications using Micro Focus® Fortify on Demand

Overview

Change Healthcare runs the largest financial and administrative healthcare network in the United States. Whether for pharmacies, dentists, hospitals, laboratories, or other healthcare organizations, the applications developed by Change Healthcare are used to process millions of healthcare transactions across the country.

Prior to August 2015, the company faced a data security challenge familiar to technology companies. Customers were increasingly asking for proof that Change Healthcare's systems were secure and that their patients' data was safe. Change Healthcare's reputation and the

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Application Director
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personal information of millions of Americans depended on the security of the company's applications. However, with the processes in place at the time, vulnerability testing was time-consuming and expensive. Today, Change Healthcare tests applications at a fraction of the cost and time it took previously. Fortify on Demand and Micro Focus® Fortify WebInspect provide an affordable and effective means of finding and fixing exploitable vulnerabilities much faster than before and without hindering the development process.

Challenge

In recent years, Change Healthcare has acquired several businesses to grow its range of solutions and diversify its developer expertise. The strategy has opened the door to many new customers, including hospitals, pharmacies, and other healthcare providers who use software applications to process prescriptions, create reports, and perform other critical tasks. However, it has also complicated the development process of these applications, multiplying the number of coding languages, environments, and standards. Over time, testing the growing number of applications became a recurring issue for the company's developers. They not only lacked security expertise and application testing processes, but they also used tools that were not always accurate, making it



At a Glance

- **Industry**
Healthcare
- **Location**
United States
- **Challenge**
Safeguard customer data and business reputation while reducing the costs and time involved in securing applications.
- **Products and Services**
Fortify on Demand
- **Results**
 - + Cuts application security testing time from 7 days to under 48 hours
 - + Multiplies the number of tested applications by 10
 - + Reduces the number of false positives, allowing faster fixes to vulnerabilities
 - + Reduces the company's cost of application security testing by 800%
 - + Decreases the risk of cyber breaches and protects customer data
 - + Limits the chances of non-compliance, further safeguarding business reputation

hard to find issues or fix potential vulnerabilities. "For a long time, we used an application security tool called Checkmarx," says Damien Suggs, Application Director at Change Healthcare. "But it produced so many false positives that the development teams lost faith in it. They essentially didn't want to deal with it, and they progressively stopped using it as part of their development process."

Another challenge was the amount of time it took to test code for vulnerabilities. Applications were systematically sent to a third-party, cloud-based testing service, to ensure that they met Payment Card Industry (PCI) security requirements. But results could take up to a week to come back, making the entire process highly inefficient and leading to ever-increasing testing bills. "The time it took to test code was slowing down developer productivity," says Damien.

Only some of Change Healthcare's developers were affected, as the company was restricting this testing to applications requiring PCI compliance. To expand the testing to include other types of applications would mean involving more than 250 developers scattered across different countries. Change Healthcare needed a centralized, coordinated method of testing across teams and locations.

Together, these challenges jeopardized Change Healthcare's ability to comply with government regulations on the secure use of personal information. Customers, meanwhile, also required proof that application security assessments were regularly conducted, a time-consuming process due to the absence of a centralized repository to store and access these reports.

Solution

Speeding Up Testing

Change Healthcare decided to implement a comprehensive software security assurance program that spanned the entire software

development lifecycle. The key to this shift was the decision to move to a single cloud-based testing service that was simple and fast enough for developers to voluntarily make it part of their daily schedule. For Damien, the key to success was making security testing part of their routine: "Micro Focus Fortify on Demand really addresses the needs of the developers. It makes sense to them," he says.

Increasing the pace of testing was crucial if developers were to test more code. In August 2015, Change Healthcare began using Fortify on Demand, an application security testing and risk management platform delivered as a service. Developers are now able to submit an application for testing and receive a report listing potential security issues by criticality, where they appear in the code, and specific remediation recommendations.

Fortify on Demand has a target turnaround of 48 hours for static scans, but most come back in just over 6. The speed of the solution has allowed Change Healthcare's developers to test and remediate quickly, improving their productivity and reducing the chance of cyber breaches. Another key benefit of using Fortify on Demand is that the number of false positive alerts has been significantly cut, freeing up valuable time and resources. "If there's a false positive, it's easy to challenge and get it suppressed in future assessments," says Damien.

Most importantly, Fortify on Demand seamlessly integrated with the development environments the company was already using. Code can now be sent for testing from within Microsoft Visual Studio or from a Jenkins automation server.

Results

Increasing Knowledge

Change Healthcare is also using Fortify WebInspect to scan web applications for weaknesses. This automated penetration testing

technology simulates real world attacks and detects security vulnerabilities, adding an additional layer of security.

"Micro Focus Fortify WebInspect gets into the application and does a great job of detecting security issues," says Damien. "It finds deeply rooted vulnerabilities, many of which can't be found by other products."

As an added bonus, the Fortify Taxonomy website has become a great resource. It provides developers with invaluable information on known vulnerabilities that may be relevant to their current projects. The site has helped them better understand the types of weaknesses that are likely to affect their applications.

Reducing Costs

The new approach has dramatically reduced the company's security testing expenses. Despite an increasing number of applications to be analyzed, the cost of testing has fallen by 800%.

Previously, the company paid by the hour for external software security testing. The bill rose exponentially as more and more applications were tested and went through multiple rounds of revisions. Change Healthcare now pays a subscription fee per application, avoiding any additional charges.

Looking Ahead

Fortify not only reduces the risk of exposing personal information, it also allows the company to reassure its management that each and every one of the applications that goes through its hands has been thoroughly tested. Internal auditors can now access security reports much more easily than before, making it simple to show hospitals, insurers, the government, and other stakeholders that a comprehensive testing regime is in place.

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Application Director
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The number of applications tested by Change Healthcare’s developers has increased almost tenfold. At the moment, about 150 of the company’s developers use Fortify on Demand, and there are plans to extend the usage as more developers are brought on board.

This is especially important as the company has a significant merger planned for 2017; thousands of new employees could potentially put their processes to the test, pushing the solution’s capabilities even further.

“Micro Focus Fortify on Demand has given us the confidence that developers have a handle on all security-related matters,” says Damien. “They know what they need to fix, exactly which part of the code should be changed, and why it needs fixing.”

“In short, the solution has completely changed our approach to application security. It has redefined it,” he adds.

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