

# End2End Content Services connects with agile code development

Automating security checks slashes application development cycles



“With WebInspect, we're able to stay ahead of potential security issues, and provide our customers the most thoroughly tested services and applications possible.”

—Jes Beirholm, Director of Information Security, End2End VAS ApS

**HP customer case study:** End2End VAS ApS leverages testing automation to speed up applications development without compromising applications and services security.  
**Industry:** Mobile Communications

## Objective:

To keep pace with the fast-moving mobile communications market, End2End must deliver its applications and services quickly without compromising quality or security.

## Approach:

Leveraging automation tools for security testing reduces development cycles and enables engineers to apply their resources more productively.

## IT improvements:

- Security testing reduced from a week to one hour
- Reduction of “false positives” during security checks
- Faster resolution of identified security issues
- Developers and testers can reallocate time to proactive security efforts

## Business benefits:

- Improved ability to deliver on value proposition to customers
- Improved productivity among development staff
- Ability to validate security claims during customer briefings



End2End VAS ApS., a European-based mobile content and information managed services provider, has to be agile to keep up with the fast-paced tempo of today's telecommunications market.

The company serves business-to-business clients in over 50 countries worldwide, focusing on mobile operators, portals, and other content providers. End2End's service delivery infrastructure enables its clients to quickly reach ROI on their mobile data initiatives by decreasing their development expenditures. It's a compelling value proposition, but to deliver, End2End must create applications that meet some daunting standards: they must be ready when needed, highly available, and secure.

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—Jes Beirholm, Director of Information Security, End2End VAS ApS



### Wasting enormous stretches of time

The foundation of End2End’s portfolio is its application and services platform Content Retail Solution (CRS). This platform, which runs on BEA WebLogic, comprises a download engine, a unique content management system, and a customer care and administration module.

To maintain its CRS platform, increasingly End2End is adopting the Agile principle of code development. This approach attempts to mitigate risk through the development of software in short time spans called iterations, during which mini-increments of large applications are produced within a few days, and then tested to verify functionality. According to Jes Beirholm, Director of Information Security at End2End, each iteration, which can be considered a mini software project in itself, undergoes stringent quality assurance and security testing.

Until last year, the company’s development team relied heavily on manually testing its iterations with a handful of both commercial and open source security and quality assurance testing tools. But the process wasn’t proving as effective as Beirholm needed.

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For instance, the reporting capabilities of the tools varied greatly, and they provided inconsistent results in how they described identical flaws and the potential development problems they uncovered. This, explains Beirholm, forced team members to waste enormous

stretches of time as they combed through the various reports to normalize test results for reporting. In addition, the number of false-positives these tools reported created even more work as the team labored to determine if they were just looking at “ghosts” within the results, or if their tools uncovered real software issues that needed to be remedied.

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“These tools would simply collect banner information and ‘shout’ vulnerabilities at us, simply because we were running Apache, or whatever application, as part of the project. Too many times, the vulnerabilities they ‘found’ just didn’t exist,” Beirholm says.

### Verifying actual vulnerabilities, in an intelligent way

Of course, that’s too much waste for a company that’s both growing and constantly on the move. Furthermore, at any given time, the company’s development team can have fifty or more software iterations underway. There simply isn’t any room for development cycle glitches. “Our team has to be able to move very quickly, very dynamically,” Beirholm says, “and to follow a continuous life-cycle of application development.”

It’s little surprise that the company wanted a more effective way to find and fix security flaws during application development. While Beirholm and the company’s team of developers were able to develop secure and available applications and services, “we were missing the ability to provide and monitor our

security controls effectively,” he says. “It’s a question of having tools that probe for the right things, and verify actual vulnerabilities in an intelligent way.”

So Beirholm turned to HP WebInspect software. “WebInspect encompassed the features we need to conduct our risk-based testing,” he says. One of those features is the software’s associated HP’s SecureBase: a database of application-layer vulnerabilities that, with some 4400 unique Web application vulnerabilities, threats, and security checks, ranks as the world’s largest and most comprehensive. WebInspect software, Beirholm adds, also provides the testing “richness” End2End needs to ensure its applications and services are as secure as possible. “That’s one of our goals,” Beirholm says, “and we know that we get to this level of quality with WebInspect.”

Beirholm is also pleased by the sheer number of tests WebInspect is capable of conducting, and the fact that it’s continuously updated to be able to spot both known and unknown vulnerabilities within the Web application layer.

“That is very, very vital for us,” he says. “WebInspect has given us the ability to go the extra mile with our security efforts. In the past we would have found potential security issues, but without the help of WebInspect we weren’t able to resolve such issues efficiently.”

#### **Twenty minutes of testing, instead of a week**

The automated testing, accuracy, and depth of WebInspect has slashed the amount of time that it used to take the company to find and verify security flaws. Prior to deploying WebInspect, testing took about a week to ferret through potential vulnerabilities,

classify their severity, and verify whether they were “ghosts” or actual weaknesses that needed to be remedied.

“Today that’s done in about one hour of scanning and application exploration with WebInspect,” Beirholm says. “That’s a very, very big gain on ROI.

“When talking about security and automated security tools, one of the biggest enemies is the false positives. The amount of knowledge that you need to be able to go into depth of analyzing the false positives to verify requires a high level of expertise, but it is also extremely time consuming,” Beirholm continues. “The drop in false positives has meant a great deal to us.”

#### **Staying ahead of potential security issues**

Because End2End tests its applications as often as twice a month, after they’ve been deployed into production, the newfound efficiency has made it easier for the company to remain proactive when it comes to the development of its Web applications.

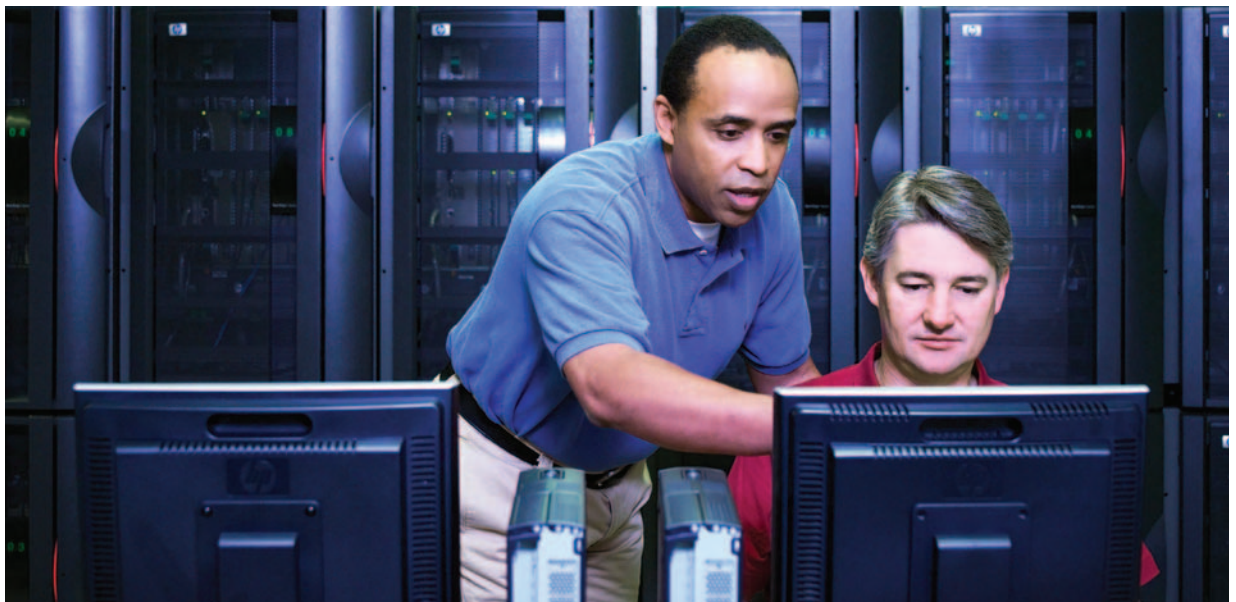
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It’s also helped End2End communicate its commitment to security to its customers. That’s critical, because each year End2End’s clients conduct customer-based audits that detail End2End’s development and security process and procedures. “When we discuss application development with our customers, security questions always come up,” Beirholm explains. His team addresses those questions, in part, by leveraging WebInspect as a critical component of its risk



## Customer solution at a glance

### Primary applications

Security testing during application development

### HP Services

- HP WebInspect software
- HP TestDirector for Quality Center software
- HP QuickTest Professional software



management process. "That's what they want to see verified when they do audits," he says.

WebInspect isn't the only HP software End2End uses to support its development cycles: it also relies on HP TestDirector for Quality Center software and HP QuickTest Professional software for application development management and testing. Soon, Beirholm says he will integrate WebInspect with the other HP applications. This will give End2End a common platform to conduct its security and application quality testing, and will drive even more productivity by centralizing the company's Web application and security testing.

While the need to build speed, accuracy, efficiency, and security into the development process exists for any company, it's especially critical for a nimble and fast-growing company such as End2End. "Efficiency is the name of the game here," says Beirholm. "We couldn't be a market leader without the aid of automated testing tools like WebInspect."

## Customer

End2End is a mobile data specialist with extensive expertise and a solid track record of delivering partially and fully outsourced solutions that include a combination of technology and business processes. The company's solutions are currently powering the delivery of mobile data services and content across more than 50 mobile operators in 20 countries on five continents. Customers include market leaders such as Microsoft, Motorola, Orange, O2, and Vodafone.

End2End is an independently operating company within the MACH Group. MACH is the leading global clearing and settlement partner for mobile-based transactions.

To learn more, visit [www.hp.com](http://www.hp.com)

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4AA1-8946ENW, April 2008

