

AudioCodes Ensures VoIP Software Quality and Security with Coverity

“We trust Coverity’s static analysis capabilities to such an extent that we treat Coverity bugs like field bugs. Unresolved Coverity defects can mean delaying a product release and affecting our ability to ensure customer satisfaction.”

—Yair Elharrar, AudioCodes Systems Engineering



Coverity customer since: 2005

Industry: Telecom Networking

Business Problem:

The proliferation of VoIP technology has generated significant opportunity for AudioCodes and companies that rely on AudioCodes to produce components and software for their telecommunications products. With market share for VoIP products influenced by each successive product release, AudioCodes needs reliable and secure software to support its rapid growth. Based on consumer and partner demand, AudioCodes needed to accelerate the delivery of its industry-leading telecommunications software without sacrificing the quality and security the company is known for.

Results:

AudioCodes utilizes Coverity to automatically find possible performance and security defects in the company’s software code prior to deployment in the field. Coverity saves AudioCodes’ software developers significant time by automatically searching source code each week for hard-to-find bugs. This enables AudioCodes to eliminate critical defects prior to releasing software for shipment, and accelerates the overall software delivery process.

The AudioCodes Challenge

AudioCodes provides innovative, reliable, and cost-effective Voice over Packet technology and Voice Network products, including media gateway and media server platforms for packet networks in the wireline, wireless, broadband access, and media server markets.

AudioCodes partners with OEMs, Network Equipment Providers, System Integrators, and Enterprises to build cutting-edge solutions based on the company’s VoIP technology. As AudioCodes’ products are integral parts of systems sold by leading telecommunications and networking manufacturers, the performance and security of AudioCodes software is a business-critical concern for the company. With a considerably large code base, the company required a solution that could help the development team ensure code quality and security ahead of deployment.

The Solution

Software quality has always been a primary goal for AudioCodes’ team of over 200 developers. However, despite the presence of a QA process and simulation tests, the amount of developer time required to identify must-fix bugs slowed down the software development cycle. To preserve valuable developer time, the company selected Prevent SQS from Coverity to deliver automated static code analysis and accelerate the software development process. By scanning for dangerous code bugs with Coverity earlier on in the application life cycle, AudioCodes’ engineers are helping the company avoid costly potential software failures in the field.

Since 2005, AudioCodes has trusted static code analysis from Coverity to help ensure software quality and security. Coverity engineers continually develop innovative checkers to provide companies like AudioCodes with deep insight into the quality of their code. AudioCodes has also worked directly with Coverity to develop additional checkers designed to help the company identify its most hard-to-find bugs.

“Two years ago, AudioCodes selected Coverity’s advanced source code analysis solution. We are pleased that the continuous improvement of Prevent’s checkers has confirmed our decision to choose Coverity,” stated Yair Elharrar, AudioCodes Systems Engineering.

The Details

Coverity Prevent provides comprehensive static code analysis for AudioCodes' most important software applications. As Coverity has one of the lowest false positive rates in the industry, data regarding bugs from Prevent is extremely valuable to AudioCodes, who notes Coverity false positive rates under 9%.

For AudioCodes, an additional important benefit of Coverity Prevent is its ability to quickly and easily integrate with the company's development environment. Elharrar says of his experience, "Coverity Prevent required no modifications for the code to work. It works quickly and does not require any additional software for a workstation. It also takes you directly to the line of code and shows the direct context of where the bug is — allowing our engineers to actively find and fix bugs."

The Net Result

"Scanning our full code base for quality and security issues every week would be very hard without Coverity."

—Yair Elharrar, AudioCodes Systems Engineering

Conclusion

AudioCodes currently analyzes its entire code base once a week by using Coverity Prevent and reports false positive rates under 9%. By automating this time-consuming task, Coverity helps AudioCodes accelerate the development of critical VoIP applications for inclusion in products sold by leading telecommunications and networking manufacturers around the globe. By ensuring the quality and security of code with Coverity, developers at AudioCodes can focus more time on creating new, innovative VoIP solutions to support the growth of their company.

About AudioCodes

AudioCodes Ltd. provides innovative, reliable and cost-effective Voice over IP (VoIP) technology, Voice Network Products, and Value Added Applications to Service Providers, Enterprises, OEMs, Network Equipment Providers and System Integrators worldwide. The company is a market leader in VoIP equipment, focused on VoIP Media Gateway, Media Server, Session Border Controllers (SBC), Security Gateways and Value Added Application network products. The Company is a VoIP technology leader focused on quality and interoperability, with a proven track record in product and network interoperability with industry leaders in the Service Provider and Enterprise spaces. AudioCodes' headquarters are located in Israel with R&D in the U.S. Other AudioCodes offices are located in Europe, India, the Far East, and Latin America. For more information on AudioCodes, visit www.audiocodes.com.

About Coverity

Coverity (www.coverity.com), the leader in improving software quality and security, is headquartered in San Francisco, California. Coverity's groundbreaking technology removes barriers to delivering complex software by automating the identification and resolution of critical defects and security vulnerabilities in C/C++ and Java source code. More than 350 leading companies have chosen Coverity Prevent SQS because it scales to tens of millions of lines of code, has the lowest false positive rate in the industry, and provides total path coverage. Companies like Ericsson, ESRI, Samsung, EMC, and Mentor Graphics work with Coverity to eliminate security and quality defects from their mission-critical systems.

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