Unremoved Unused and Dead Code Increases Maintenance Burden

Dead code resides in an application’s codebase but is not used by the application. Removing dead code significantly reduces the burden of maintaining the codebase and makes it easier to understand. Developers want to remove dead code but are terrified of doing so because the process of identifying and removing dead code is manually intensive and can break the application. Traditional tools like IDEs do not provide a complete view of code used in production over time due to their static nature. Profilers are so overhead intensive they cannot practically be used in production settings.

Azul Code Inventory – Overview

A feature of Azul Vulnerability Detection, Code Inventory is the only solution that precisely catalogs the source code actually used in production by Java applications, making it easy to accurately identify dead code for removal. It slashes the burden of maintaining and testing code that is not being used, significantly improving developer productivity and ultimately saving time and money.

- Aggregates what code runs over time
- Strongest, most accurate signal
- Collects information inside the JVM
- Runs in Production, no performance penalty
- Provides a comprehensive view across an enterprise’s Java workloads
- Identifies code down to the class/package and method level

Proof

“Without a timely, complete and trustworthy code use and impact report, there’s a danger that the step of deprecating code can cause bigger problems. Reliably identifying dead code is the hard part and using automation to find what code is and is not running, or can’t ever be reached, gives developers a huge advantage.”

David Norfolk, Practice Leader, Bloor Research
Benefits

**Significant Reduction in Time Spent**  Automatically finds what code runs, dramatically slashing the time to identify dead code for removal by eliminating the time-intensive manual process of locating and validating dead code.

**Remove Unused and Dead Code with Confidence**  Provides a comprehensive view across an enterprise’s Java workloads of what code runs over time down to the class/package and method level, providing a more accurate signal to confidently remove dead code and reduce the risk of breaking the application.

**No Production Performance Penalty**  Collects and aggregates detailed code information from inside the JVM without the performance penalty of traditional profilers, and provides production context IDEs lack.

**Summarizes and Retains History**  Collects data across all of an enterprise’s Java workloads and consolidates it to provide a history of when code was first and last run, down to the method level.

How it Works

1. The application runs on top of the Azul JVM, enabled with Code Inventory
2. Data goes through the Forwarder to a point of collection
3. Each customer’s tenant collects and aggregates the data, marking the first-seen and last-seen date and time of each method to provide visibility across runs.
4. Application owners can call Code Inventory for the results via the REST API and compare against their code to plan removal

Learn more at [https://www.azul.com/components/code-inventory](https://www.azul.com/components/code-inventory)

About Azul

Headquartered in Sunnyvale, California, Azul provides the Java platform for the modern cloud enterprise. Azul is the only company 100 percent focused on Java. Millions of Java developers, hundreds of millions of devices, and the world’s most highly regarded business trust Azul to power their applications with exceptional capabilities, performance, security, value, and success. Azul customers include 35 percent of the Fortune 100, 50 percent of the Forbes Top-Ten World’s Most Valuable Brands, all ten of the world’s top-ten financial trading companies, and leading brands like Avaya, Bazaarvoice, BMW, Credit Suisse, Deutsche Telekom, LG, Mastercard, Mizuho, Priceline, Salesforce, Software AG, and Workday.

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