Cloud security: Terraform for Azure Cloud + AWS Python DB injection

With 9.3, IaC support expands to include Terraform files for Azure Cloud in order to help even more developers secure not just their code, but also their deployments. The domains for Azure Cloud Terraform analysis include security at rest and at transit, Azure Active Directory, Azure Resource Manager and public network access.

And in commercial editions, taint analysis of AWS Python Lambdas expands to recognize AWS-specific database sinks. That means AthenaDB, RDS-Data, DynamoDB, SimpleDB, and RedShift interactions are now correctly recognized by the taint analysis engine as database interactions for both Python and JavaScript Lambdas.

Bidirectional character detection sees what you can't

The presence of bidirectional (Bidi) characters in your files can change what you thought was an innocuous comment into potentially malicious code. Since these Bidi characters aren't visible to the eye, it's especially important that analysis detect them for you. So we've added a cross-language rule to detect these characters in all analyzed files.

Taint analysis comes to Android

Helping Android developers write cleaner, safer code is a top goal for the 9-series. Already, we've introduced Android-specific rules for security-sensitive configurations,
MASVS requirements, and coroutines. Now, in commercial editions, we’ve added Android taint analysis for catching XSS, remote code execution, command injection, SQL injection, and path injection in Java code.

**SalesForce analysis starts with Lightning Components**

SalesForce Lightning Components are now fully analyzed by default. JavaScript analysis has been updated to understand the Aura Controller’s special syntax, and .cmp files are now automatically recognized as HTML files. While analysis of Salesforce’s object-oriented Apex language starts in Enterprise Edition, Lightning Component analysis is available for free starting in Community Edition.

**New rules help you master C++20**

**coroutines**

One of C++20’s most exciting new features is coroutines, which are especially useful for low-latency programming. To help developers use them well and avoid common pitfalls, we’ve added ten new coroutine-specific rules, and updated 13 existing rules to avoid false positives and provide the best experience.

**Keeping up with new language versions**

A lot of programming language updates have been released in the last few months, and SonarQube 9.3 catches up on parsing them. Analysis now understands these language versions:

- Java 17 parsing wraps up with switch pattern matching
- Go 1.17
- Ruby 3.0.3
- Scala 3
- PHP 8.1
- Kotlin 1.6
- Swift 5.5
- Apex 1.53

**Clean as You Code comes to Portfolios**

The Clean as You Code methodology has come to Portfolios. Now the Portfolio homepage reflects the same values developers see in Project homepages: measures on New Code. This means managers and developers will share a united understanding of their projects’ health and enjoy richer collaboration.

**Portfolios continue branching out**

In 9.2 Portfolio editing was expanded to allow selection of project branches. With 9.3 branch support is complete with the addition of support for Application branches for
your portfolio. Portfolio editing was also updated to make selection of Applications more intuitive. Additionally, Application administration has been moved out of the Portfolio administration UI for greater clarity.

**GA: Data Center Edition supports Kubernetes**

Running Data Center Edition on Kubernetes is now officially supported. A few months ago we announced this support in beta. Now it’s GA with the addition of support for Prometheus monitoring for all editions.

**Language Updates**

- Java: 1 new rule for Java 17’s sealed classes
  - 9 rules updated for consistent support of Nullability annotations
- C++: Update of 26 rules to support C# 9 Top-level statements
- RPG: Copy-paste detection considers free-form tokens
- TS: Analysis was expanded to include project files not referenced in tsconfig
- Python: Use precomputed Typeshed symbols

The information was edited by ALM-Toolbox.
We officially represent SonarQube and provide support, training and licenses of SonarQube and SonarCloud.

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