1. Reflection-aware static analysis of Android apps

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Abstract: We demonstrate the benefits of DroidRA, a tool for taming reflection in Android apps. DroidRA first statically extracts reflection-related object values from a given Android app. Then, it leverages the extracted values to boost the app in a way that reflective calls are no longer a challenge for existing static analyzers. This is achieved through a bytecode instrumentation approach, where reflective calls are supplemented with explicit traditional Java method calls which can be followed by state-of-the-art analyzers which do not handle reflection. Instrumented apps can thus be completely analyzed by existing static analyzers, which are no longer required to be modified to support reflection-aware analysis. The video demo of DroidRA can be found at https://youtu.be/-HW0V68aAWc. (0 refs)

Inspec controlled terms: Android (operating system) - Java - program diagnostics - reflection

Uncontrolled terms: reflection-aware static analysis - Android apps - DroidRA benefits - taming reflection tool - reflection-related object values extraction - reflective calls - bytecode instrumentation approach - Java method calls - reflection-aware analysis

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