Abstract

Security and privacy of Smartphone data are critical requirements in case of both personal as well as corporate environment. Hence, there is a need to come up with an effective solution in order to address data leakage issues in smartphones. Generally, taint analysis techniques are used for information flow tracking and data leakage detection purpose. Static Taint analysis techniques can detect the leakages that may not be exposed in runtime. Static analysis derives the information about program’s behaviour by inspecting the program’s code and discovering multiple paths of a program execution. In this work a static taint analysis tool Comnoid is proposed along with companion app ApkGrabber. Comnoid is based on open source tool FlowDroid and is capable of analyzing the inter app communication. Existing version of FlowDroid tool can provide precise static taint analysis but it lacks capability to analyze inter app communication between Android applications. Thus the aim of proposed scheme is to develop a tool to perform Static Taint analysis with inter app analysis which will take Android application APK files as an input and produce a data leakage report.
Comnoid: Information Leakage Detection using Data Flow Analysis on Android Devices

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Index Terms

Computer Science

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Keywords

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