

Runtime Monitoring Using Policy-Based Approach to Control Information Flow for Mobile Apps

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Abstract : Mobile applications are verified to check the correctness or evaluated to check the performance with respect to specific security properties such as availability, integrity, and confidentiality. Where they are made available to the end users of the mobile application is achievable only to a limited degree using software engineering static verification techniques. The more sensitive the information, such as credit card data, personal medical information or personal emails being processed by mobile application, the more important it is to ensure the confidentiality of this information. Monitoring non-trusted mobile application during execution in an environment where sensitive information is present is difficult and unnerving. The paper addresses the issue of monitoring and controlling the flow of confidential information during non-trusted mobile application execution. The approach concentrates on providing a dynamic and usable information security solution by interacting with the mobile users during the run-time of mobile application in response to information flow events.

Keywords : mobile application, run-time verification, usable security, direct information flow

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