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April 2020

Providing a Toggleable Flag in Release Builds of Mobile Applications for Rapid Testing

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Recommended Citation

Anonymous, "Providing a Toggleable Flag in Release Builds of Mobile Applications for Rapid Testing", Technical Disclosure Commons, (April 13, 2020)
https://www.tdcommons.org/dpubs_series/3133



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Providing a Toggleable Flag in Release Builds of Mobile Applications for Rapid Testing

ABSTRACT

This disclosure describes the use of a flag that can be toggled in the release build of an application. Toggling the flag enables the application or portions of the application to be switched to developer mode. A developer can deploy and test code updates quickly, without having to deal with code signing or registering devices. The described techniques can reduce test iterations to a few seconds and make it easy to reproduce and debug issues that only show up in production builds of applications.

KEYWORDS

- Mobile app
- App development
- App testing
- Release build
- Production build
- Toggleable flag
- Code testing

BACKGROUND

Developing a mobile application has a slow iteration cycle. When a developer makes changes to application code using a code editor, multiple steps need to be performed prior to testing the code. The developer has to save the source code file and compile the code. After compilation, the developer needs to install the application on a device (e.g., a test device) and navigate to the part of the mobile application that is being worked on to view the change. At its fastest, this iteration cycle takes several minutes. Furthermore, actually provisioning a device to

be able to see changes on it is difficult. The use of code signing requires that the developer register a certificate with a signing authority and register the device. Only after such registration can a device accept the newly compiled application.

DESCRIPTION

This disclosure describes the use of a flag that can be toggled in the release build of an application. Toggling the flag enables the application or portions of the application to be switched to developer mode. In the developer mode, a developer can load the source code for a screen at an individual screen level. For example, the code can be loaded from a developer's laptop or a cloud server. The code is written in an interpreted language such as JavaScript.

Since the code does not need to be compiled, it can be served quickly to the test device. The app itself does not need to be reinstalled in order to iterate through multiple versions of the code. The flag and code updates are granular to the individual screen level of the application. This eliminates the need for a developer to renavigate to the particular screen to see the changes.

The described techniques can shorten the iteration cycle down to the order of seconds. Further, the provision of a flag in the release build eliminates the requirement that the test device be provisioned in a special way, thus avoiding the need for code signing or registering devices. The techniques also make it easy to reproduce and debug issues that only show up in production builds. As the testing is performed on a device in a release build, it is also easy to test aspects such as accessibility or animations, which is difficult when testing using a debug build.

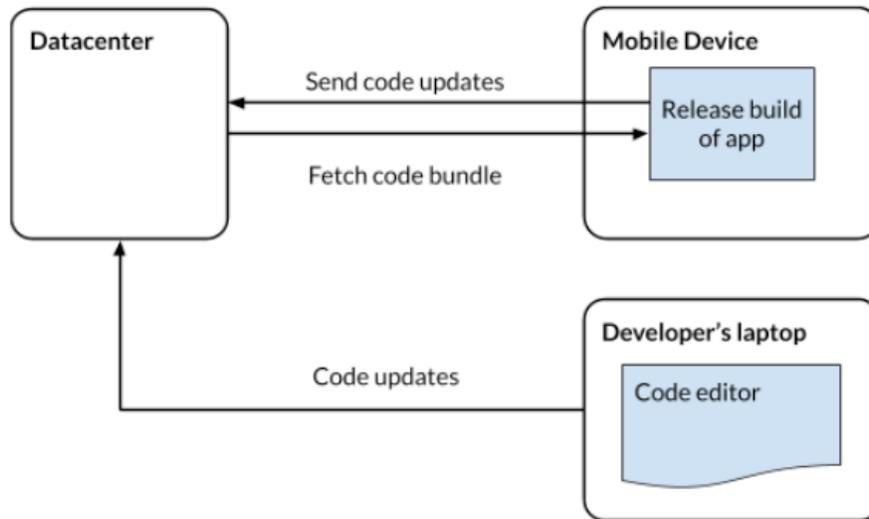


Fig. 1

Fig. 1 illustrates an example configuration. A developer using a laptop updates source code using a code editor. The code updates are sent to a datacenter. A mobile device is configured with the release build of the app, with a flag that can be toggled on a per-screen basis. When the flag is set to developer mode, the app sends a request to the datacenter for the code bundle for the particular screen and receives code updates. In this manner, a developer can test code updates easily.

CONCLUSION

This disclosure describes the use of a flag that can be toggled in the release build of an application. Toggling the flag enables the application or portions of the application to be switched to developer mode. A developer can deploy and test code updates quickly, without having to deal with code signing or registering devices. The described techniques can reduce test iterations to a few seconds and make it easy to reproduce and debug issues that only show up in production builds of applications.