

Samsung Electronics

Application Protection Guidelines For Samsung Apps

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Guide on developing and submitting the protected application through seller office

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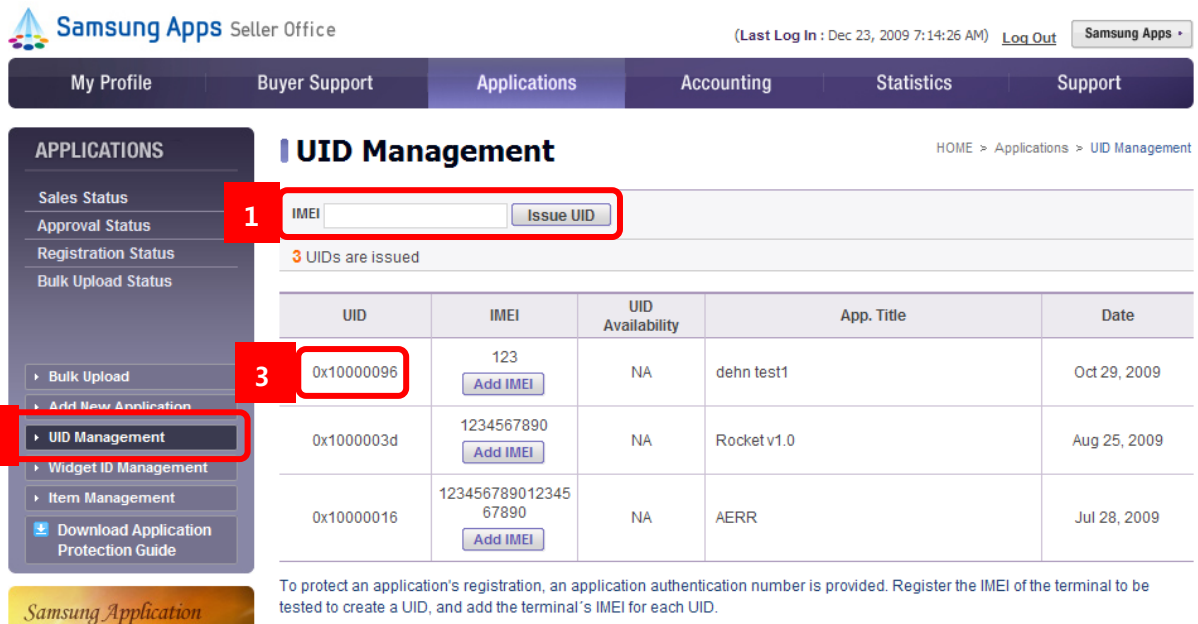
1. Background

This document introduces how developers apply Samsung Apps’s application protection to their application through the Seller Office and the Zirconia¹ library. Furthermore, this document introduces the procedures for developing and submitting an application. Applying Zirconia to your application is optional. Therefore, if you do not wish to apply Zirconia to your application, you may ignore the rest of this document.

2. Get application ID (UID) from Seller office

Samsung Apps welcomes you to the first step of applying Zirconia. As a developer, first you need to get an UID by submitting your IMEI, as described below.

1. Developer clicks “UID Management” menu to get UID (1)
2. Developer requests UID by submitting IMEI, which will be used for testing the application. Applications with registered UIDs are considered to be license-free for handsets whose IMEIs are registered.(2)
3. Developers use the UID for development of the application. (3)



HOME > Applications > UID Management

UID	IMEI	UID Availability	App. Title	Date
0x10000096	123	NA	dehn test1	Oct 29, 2009
0x1000003d	1234567890	NA	Rocket v1.0	Aug 25, 2009
0x10000016	12345678901234567890	NA	AERR	Jul 28, 2009

To protect an application's registration, an application authentication number is provided. Register the IMEI of the terminal to be tested to create a UID, and add the terminal's IMEI for each UID.

¹ Zirconia is the name of the application protection library released by Samsung Apps.

3. Develop application

Developers develop their applications using the application ID (UID) issued by the Seller Office. The Zirconia library needs to be applied to the application to protect it from piracy. Otherwise, the application will not be protected (unless protected by a different system).

During the process of developing the application, there are mandatory and optional implementation lists as outlined below.

3.1 Mandatory implementation lists

3.1.1 Display pop-up window notifying the user that the program will use network to connect to the license server in the following case.

- a. When Zirconia tries to use the network to get a license from its server (ex: Zirconia checks for the license on the local system. If there is no license, Zirconia will use an internet connection to get the license. In this case, the application should display pop-up window to ask the user whether to proceed, and if user selects OK, Zirconia will look online for the license.)

3.1.2 Display pop-up windows showing the error code and its corresponding message under the following circumstances.

- a. When the following error codes return from the Zirconia library (ex: the Zirconia library returns the error code EZIRCONIA_NOT_PURCHASED, and the application then displays a pop-up message with error code. If the user confirms the message, it terminates the application.)

Error codes from Zirconia library	Definition
EZIRCONIA_NOT_PURCHASED	After running the application, the server discovers the application has not been purchased, so the license is not sent to the application.
EZIRCONIA_INVALID_VALUE	After running the application, the server checks the parameters of the application. At least one of the parameters is null. (This can occur with the phone is off)
EZIRCONIA_CANNOT_CHECK	After running the application, the server is unable

	to check whether the application is purchased because of server failure, such as a DB access failure.
EZIRCONIA_RECEIVE_FAILED	After running the application, the license is not sent to the application because of a network failure. (The application could not receive a response from the server)
EZIRCONIA_SEND_FAILED	After running the application, the license is not sent to the application because of a network failure (The request from the application could not be sent to the server)
EZIRCONIA_KEY_CREATION_FAILED	After running the application, the license could not be saved to the local disk. The reasons for this can be: Disk I/O error, not enough space in the folder, no permission to save the license on the disk.
EZIRCONIA_CLIENT_MISMATCH	This occurs if the client requests a license from a server that is not from the Zirconia library.
EZIRCONIA_VERSION_MISMATCH	This occurs if the client requests a license from the server that is from an invalid version of the Zirconia library not supported by the license server.
EZIRCONIA_LICENSE_MISMATCH	The license from the server is not valid.
EZIRCONIA_SERVER_MISMATCH	The license was sent to the application from an invalid server.
EZIRCONIA_APPLICATION_MODIFIED	The user has modified the application.

3.1.3 Terminate the application when user confirms the error displayed on the pop-up windows.

When the error pop-up window is displayed, the user's confirmation of the pop-up window terminates the application.

3.2 Optional implementation lists

3.2.1 Display pop-up windows showing the code and its corresponding message under the following circumstances.

When the license is successfully retrieved from server and the application is successfully approved.

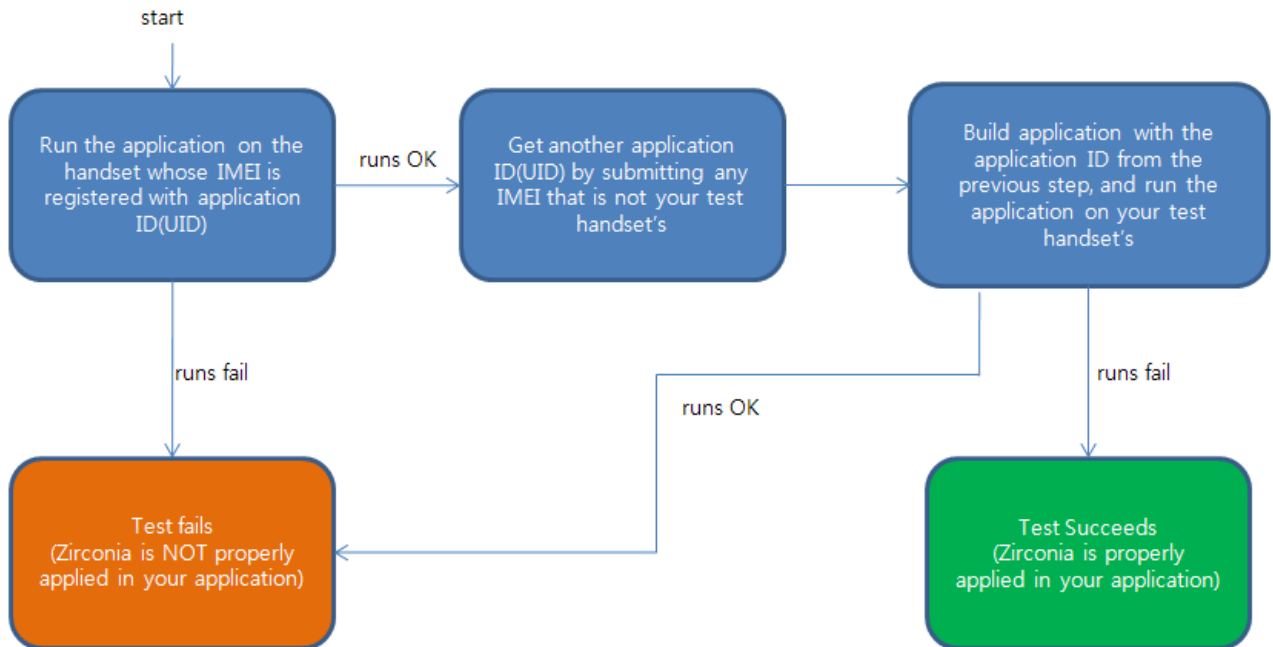
Code from Zirconia library	Definition
EZIRCONIA_SUCCESS	After running the application, a valid license is successfully received. The application runs successfully.

3.2.2 Display the pop-up window notifying the user that Zirconia is attempting to connect to the server. (ex: Display a pop-up window with the message, "Connecting to the license server ...")

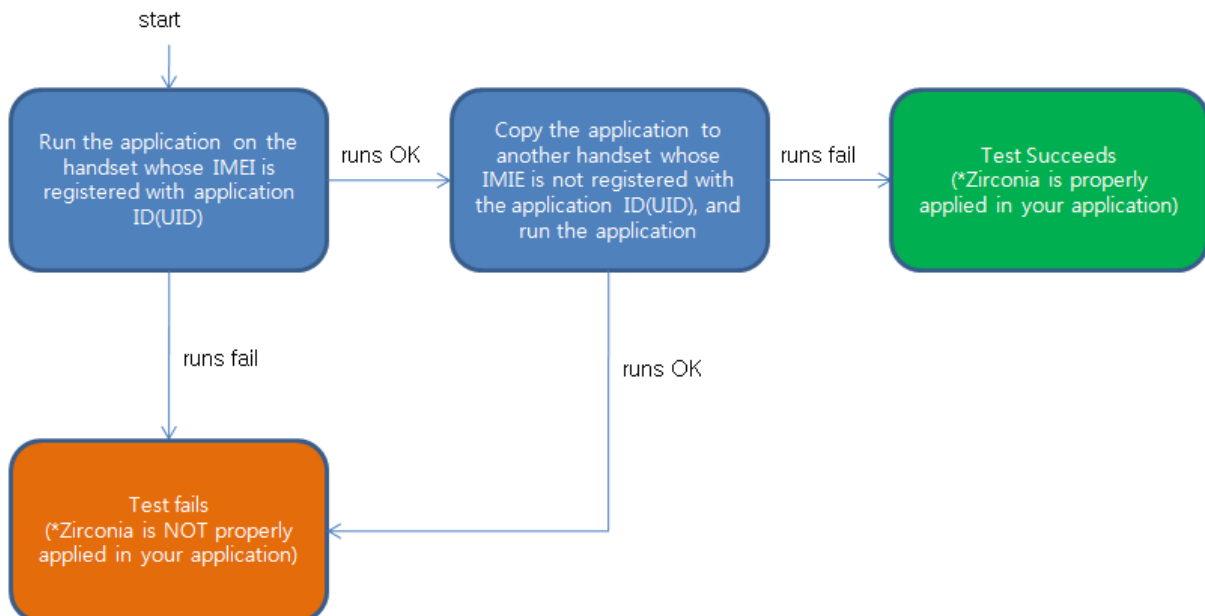
4. Test application

After developing the application, the developers can test whether Zirconia library is being properly applied to the application using a handset whose IMEI is registered in Seller Office or emulator (For testing, internet connectivity is required). There are three kinds of testing available depending on the available number of handsets.

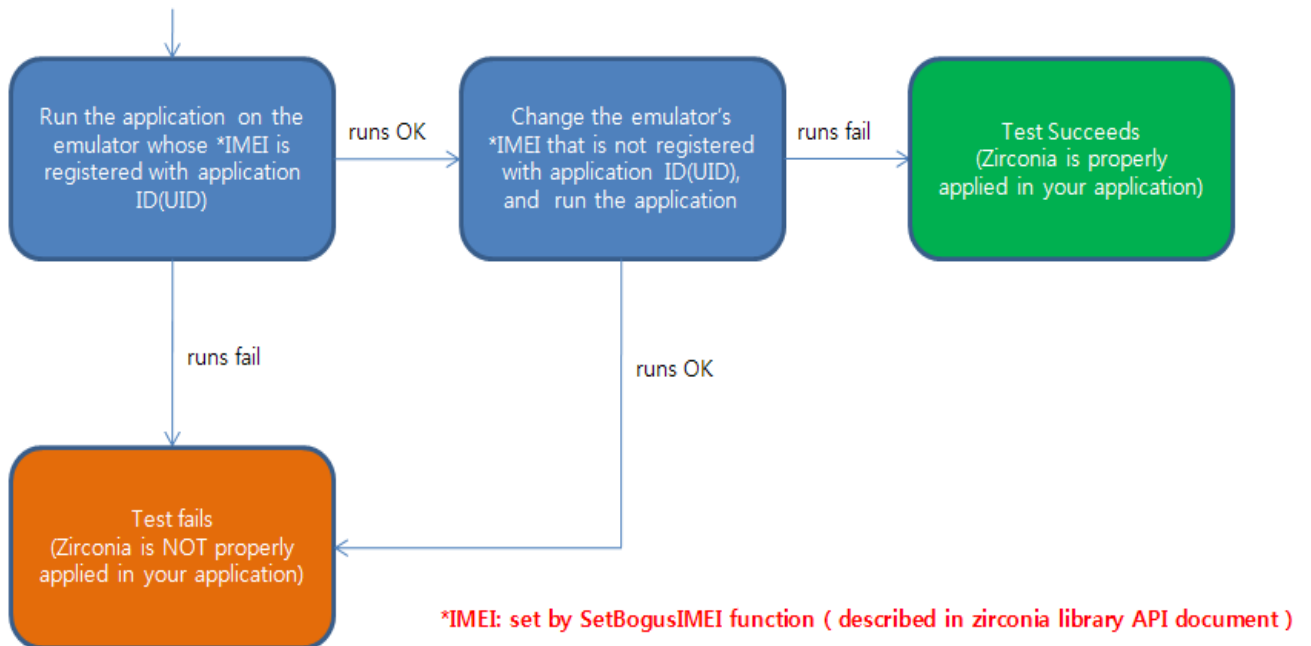
4-1. Only one handset is available for testing



4-2. More than two handsets are available for testing



4-3. No handset is available for testing (emulator)



5. Submit application

After developing and testing the application, it is submitted with the application ID (UID) that was used for development, as seen on the screen shot below. While going through "step 1 Overview", there are two selections that you guys need to be more careful if Zirconia is applied to your application.

1. Click "Select UID" button to select the UID that was used for development.
2. Answer the question to declare whether you applied Zirconia to your application.
(* Depending on the selection whether your application contain Zirconia, your application would be handled differently by Samsung Apps.)

▶ You must provide rating certificate of GRB to sell the application to Korea.

● UID Information

1

▶ UID

Select UID

Please register for UID to apply "Application Protection" or "In App Buy".

2

▶ Does your application contain Zirconia? *

Yes No

● Comments to Approval Team

▶ Comments for application certification *

Please include reference information for the evaluators or describe your revisions.

E.g) - Failure issues 1 and 2 corrected. Failure issue 3 could not be corrected because...