

bada Tutorial: SDK (Target)



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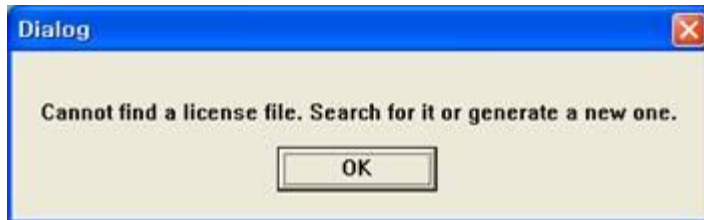
Installing a Device Driver for Test Phones

- Extract S8500-Driver-V5_02_0_0.zip in BADA_SDK_HOME/Tools and run Setup.exe.
- Connect your test phone to your PC with a USB cable.
- Select a folder for the driver location in the Hardware Update Wizard. The Hardware Update Wizard is shown twice for 2 modem ports.
 - Select **Install from a list or specific location (Advanced)**.
 - Check **Include this location in the search**.
 - Browse the folder with the device driver.
- Check if there are the 2 modem ports in Device Manager.
 - “Samsung Mobile Modem in V2” in **Modem**.
 - “Samsung Mobile Modem Diagnostic Serial Port V2 (WDM)” in **Port**.

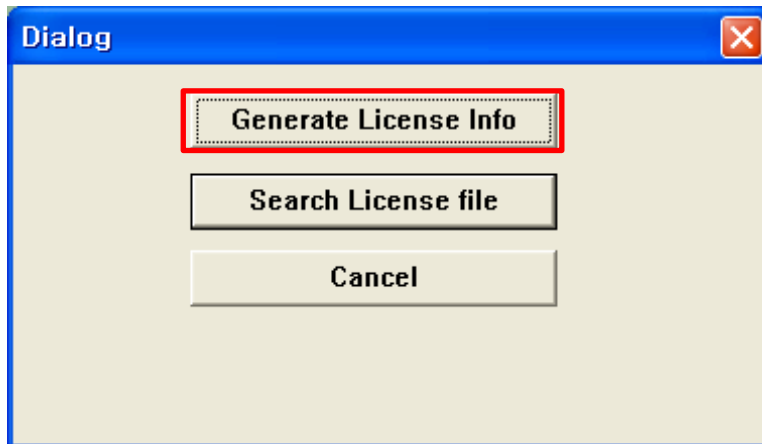


Downloading Platform Binaries (1/2)

- Run `PlatformDownloader.exe` in `BADA_SDK_HOME/Tools`.



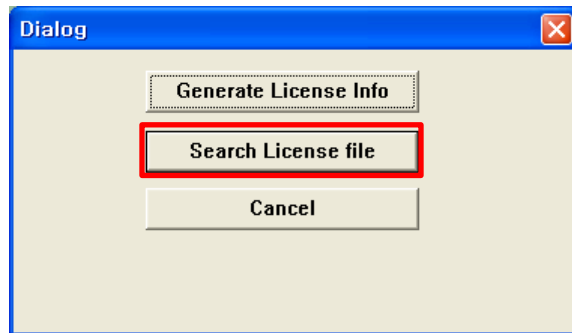
- Generate license information by clicking **Generate License Info**.



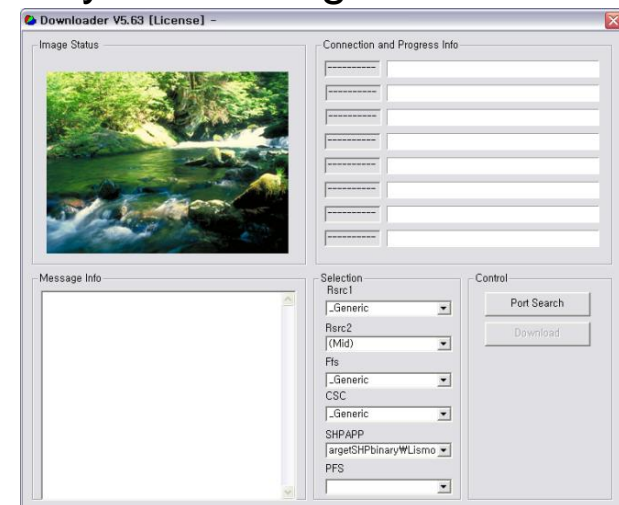
- Send your license information to your contact point at Samsung.

Downloading Platform Binaries (2/2)

- When you receive your license file, click **Search License file** and select your license file.



- Download the target binaries:
 - At the same time, click the **SEND** and **POWER** key on the target device. "Download Mode" appears on the display.
 - Connect your target to your PC.
 - On the PC, click **Port Search** and **Download**.



Converting Application Projects

For existing projects that do not have a build configuration for a target environment:

1. Create a new bada Empty project of the correct application type using the Application Wizard.
 - Select the manifest file in the current project folder.
 - Verify that **Target-Debug** is checked under **Select Configurations** in the Application Wizard.
2. Copy the original source code files, include files, and resource files to the new project folder.
3. Change the source code in `ProjectNameEntry.cpp`:
 - Old:

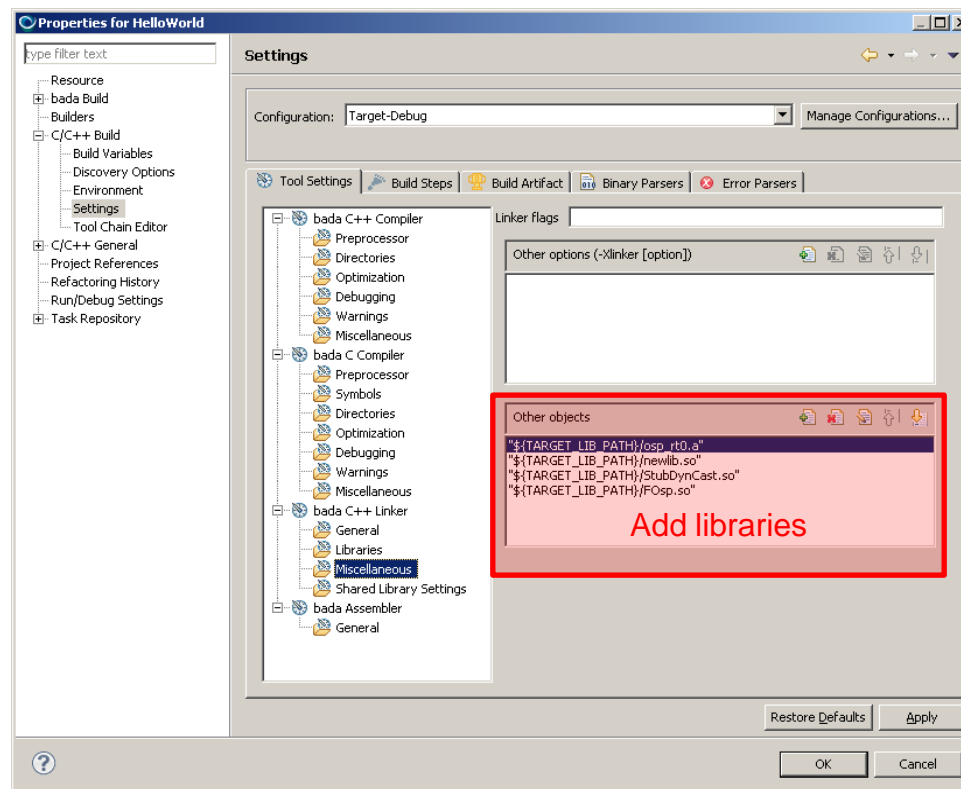
```
_declspec(dllexport) int OspMain(int argc, char *pArgv[]);
```
 - New:

```
_EXPORT_ int OspMain(int argc, char* pArgv[]);
```
4. Update the settings for libraries, library paths, and include paths.

Setting Applications (1/2)

You can add library search paths and libraries:

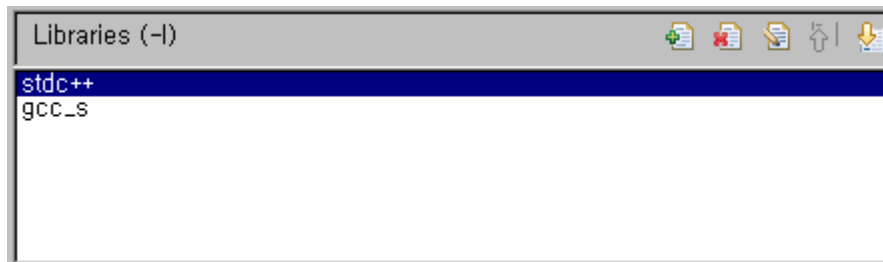
1. Right-click the project and select **Properties > C/C++ Build > Settings > bada C++ Linker > Miscellaneous**.
2. Select a configuration and add libraries.
 - For example, add `${TARGET_LIB_PATH}/YOUR_LIBRARY.a`



Setting Applications (2/2)

You must change legacy projects in the libraries:

1. You can change **Libraries** at **Properties > C/C++ Build > Settings > bada C++ Linker > Libraries**.

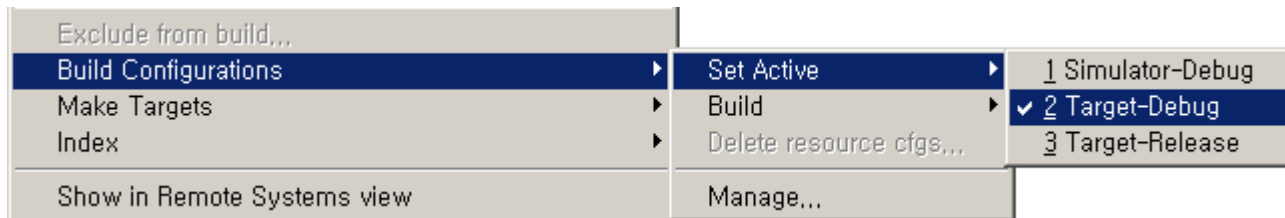


2. You can change **Other objects** at **Properties > C/C++ Build > Settings > bada C++ Linker > Miscellaneous**.

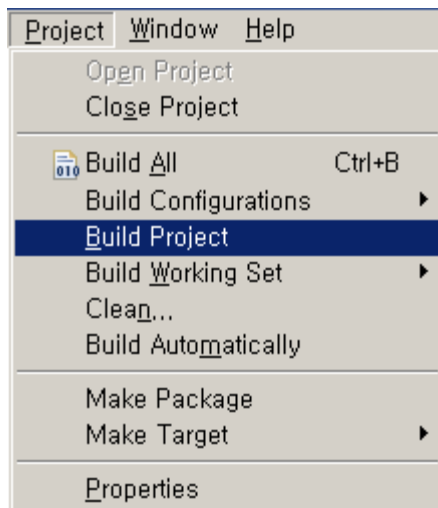


Building Applications

- You can change build configurations using the **Build Configurations** menu item.



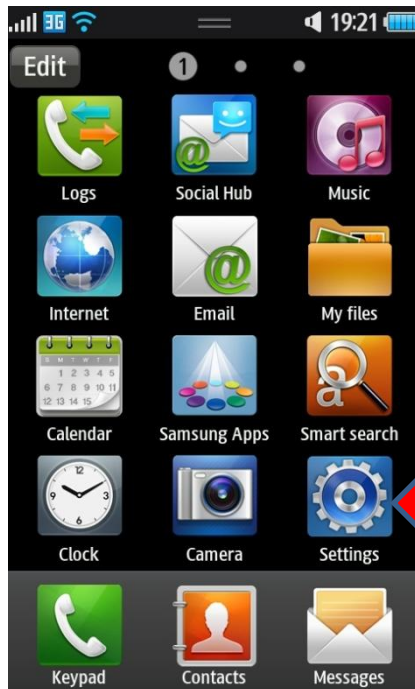
- You can build your project using the **Build Project** menu item.



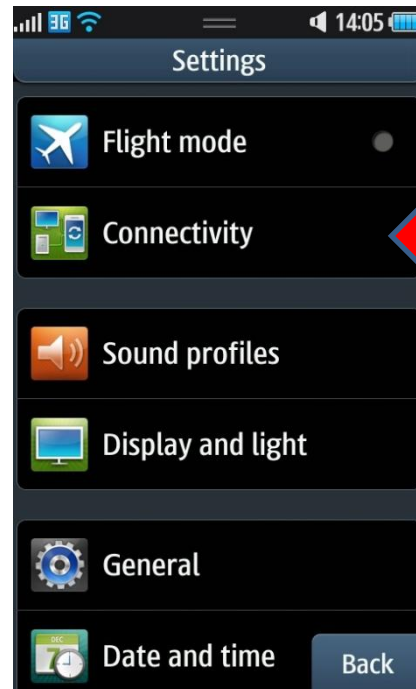
Install Test Root Certificate to Target

You have to install the test root certificate to target for target testing as follows.

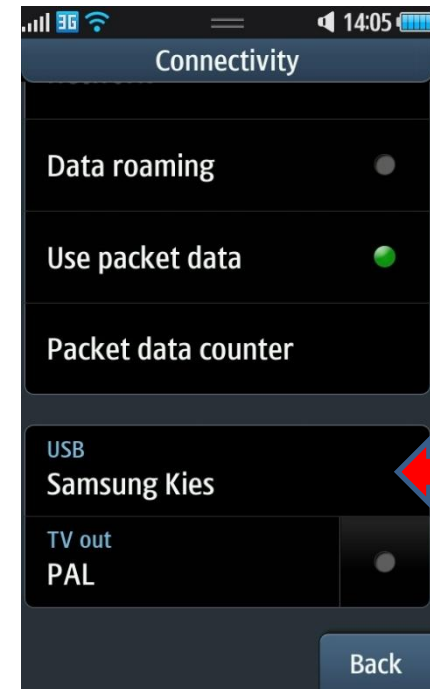
1. Tab “Settings” as (a)
2. Tab “Connectivity” as (b)
3. Tab “USB” as (c)



(a)



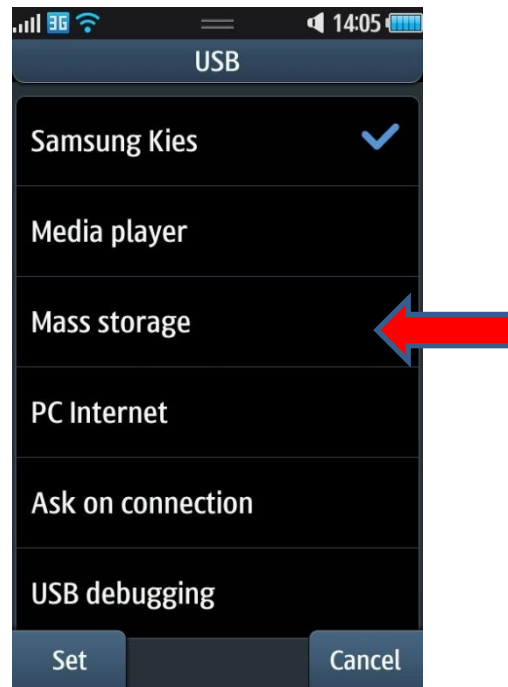
(b)



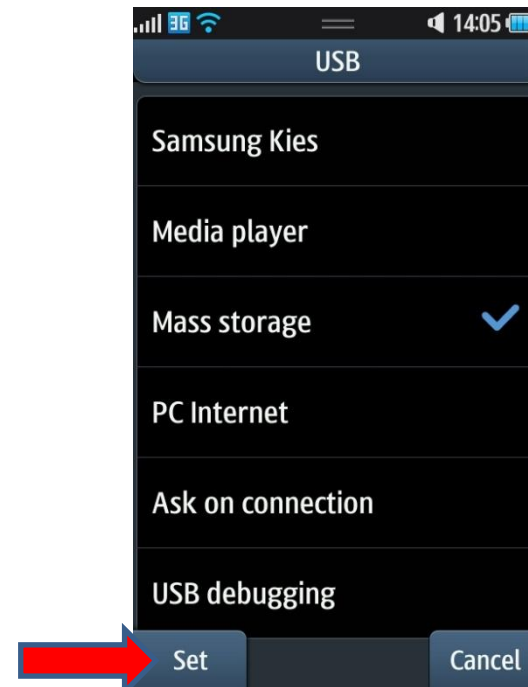
(c)

Install Test Root Certificate to Target

4. Tab “Mass storage” as (d)
5. Tab “Set” as (e)



(d)



(e)

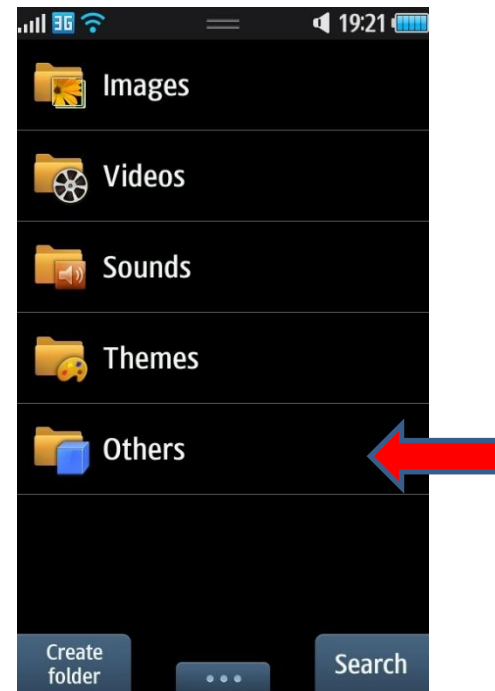
6. Connect your target to your PC.

Install Test Root Certificate to Target

6. Copy BADA_SDK_HOME\Tools\sbuild\rootCACert.cer file to *Removable Disk\Others*.
7. Tab “My files” as (f)
8. Tab “Others” as (g)



(f)



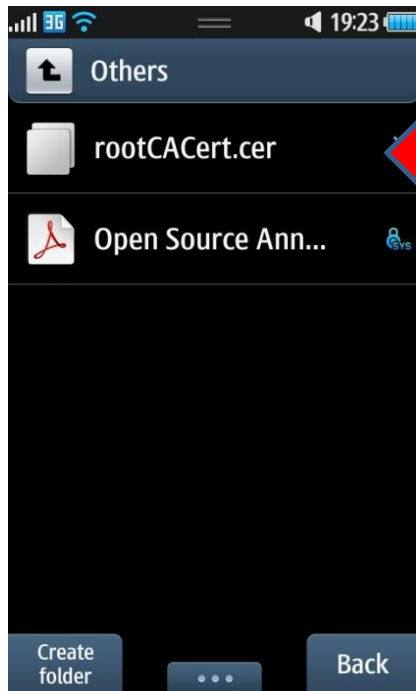
(g)

Install Test Root Certificate to Target

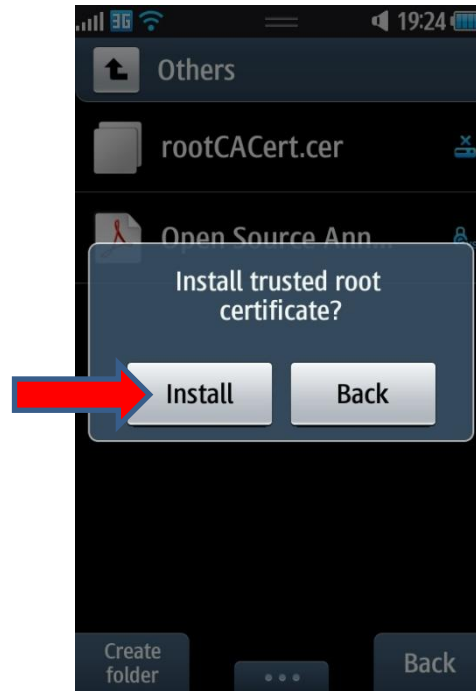
9. Tap “rootCACert.cer” as (h)

10. Tap “Install” as (i)

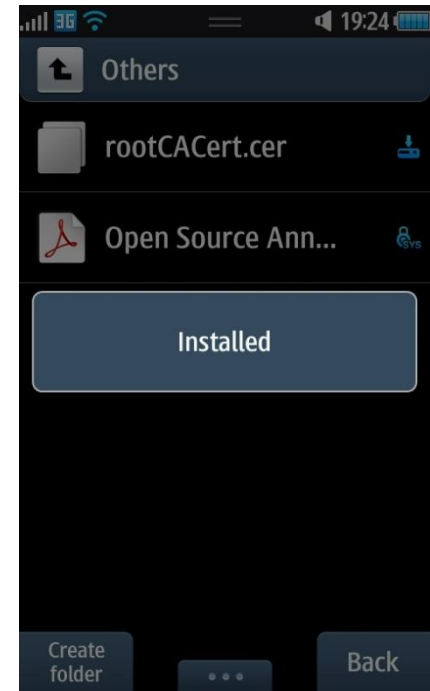
11. You can see the “Installed” message as (j)



(h)



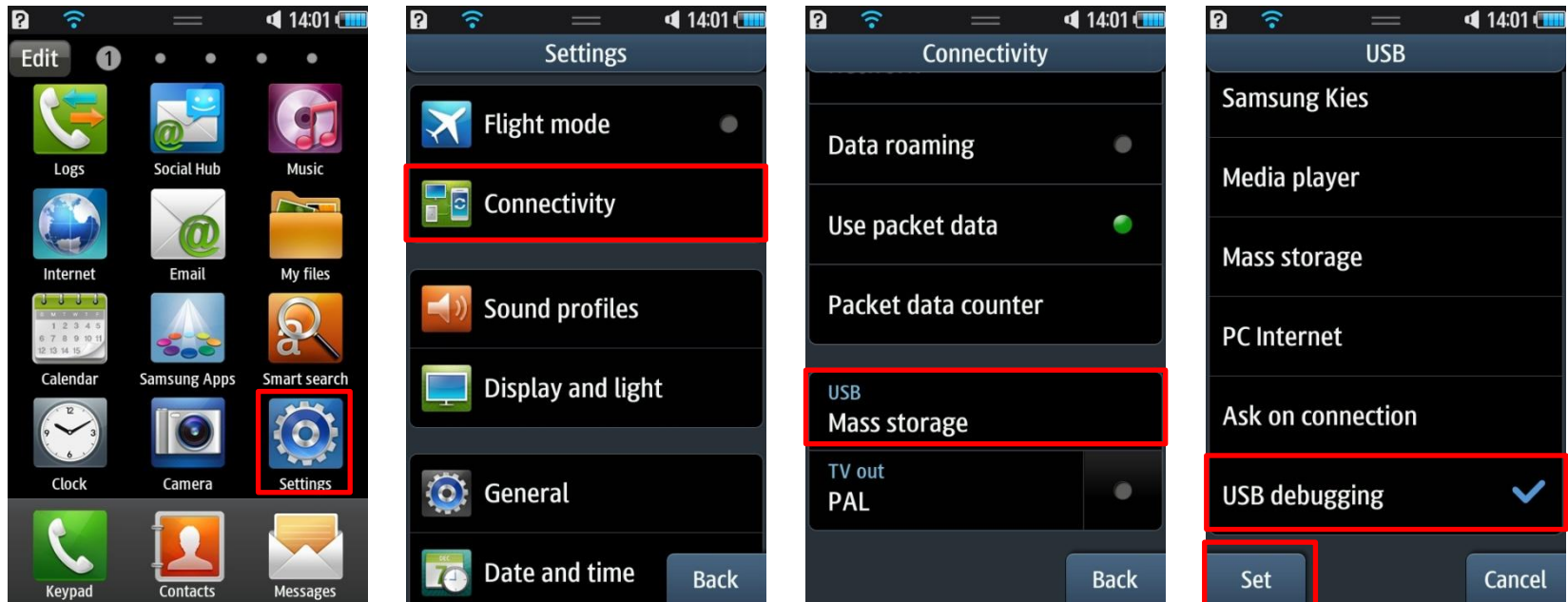
(i)



(j)

Preparing to Run/Debug Applications

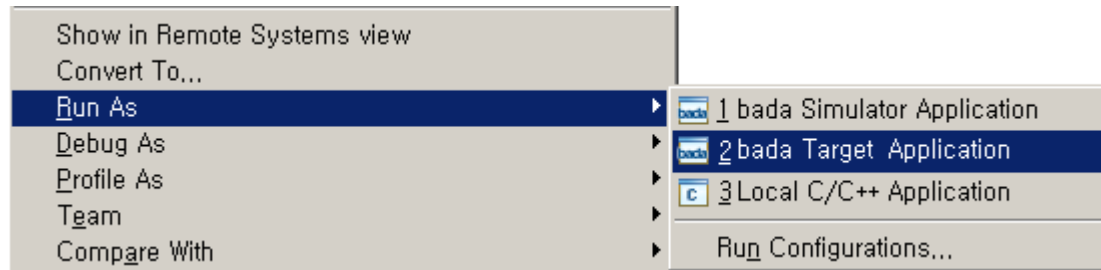
- You should change your target to the debug mode by the following step.



Running Applications (1/2)

You can run an application using the **Run As** menu item.

- The executable binary, resource files, and data files are downloaded before starting the run.
- The application is installed automatically while it runs.



Running Applications (2/2)

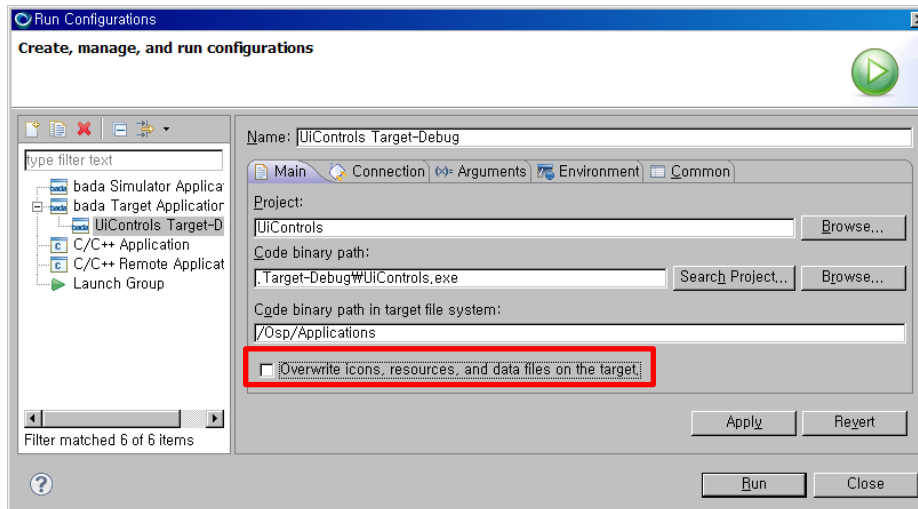
If the source code has been changed, you can download only the executable binary to your target without updating the other files:

- The option is only available for the Target-Debug and Target-Release build configurations.

1. Select **Run Configurations....**

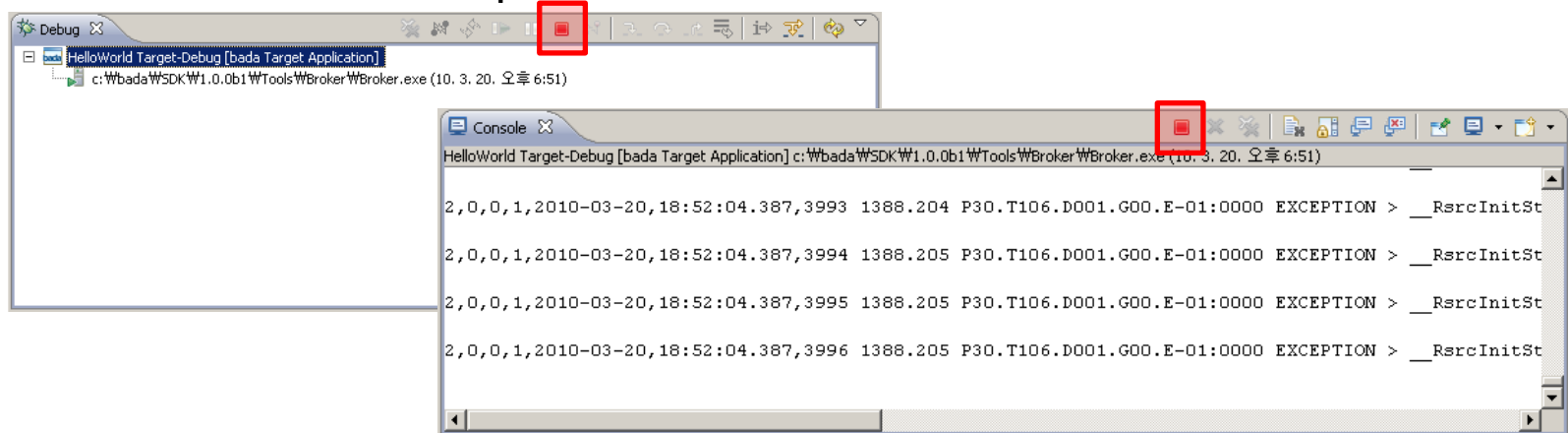


2. Clear **Overwrite icons, resources, and data files on the target.**



Exiting Applications

- Terminating with bada IDE
 - Click the **Terminate** button in the Console or Debug window to terminate the run operation of the bada IDE.



- An application is exited only after clicking the **Terminate** button followed by some other action in the application. For example, after clicking the **Terminate** button and some other button in the application.
- Terminating in your target device
 - Press the **End** key on your target device to terminate your application easily.

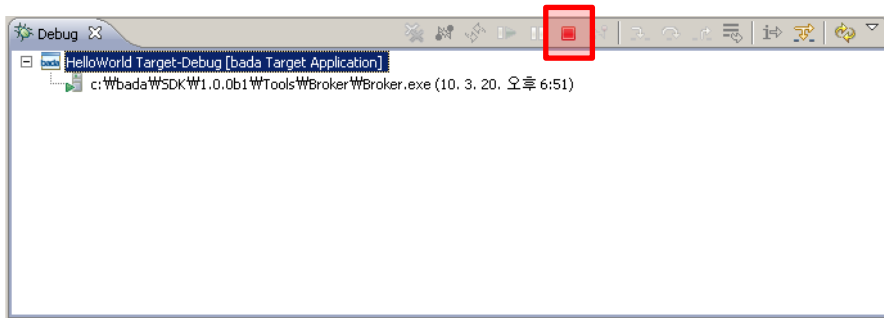
Debugging Applications

- For general information on debugging content, see Debugging Applications in the Development Environment tutorial.
- To debug the application on your target, right-click the project in Project Explorer and select **Debug as > bada Target Application**.
- The limitations for debugging in the target are:
 - Only four breakpoints can be inserted due to hardware limitation.
 - An application is suspended only after clicking the **Suspend** button followed by some other action in the application. For example, after clicking the **Suspend** button and some other button in the application.



Stop Debugging

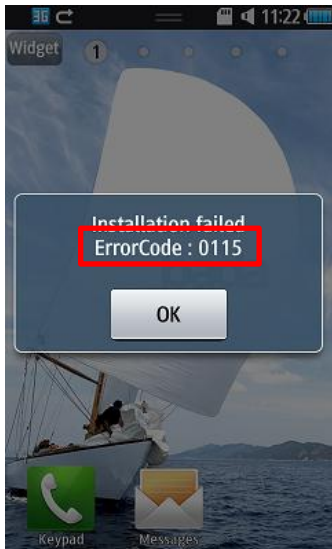
- Stopping with bada IDE
 - Click the **Terminate** button in the Console or Debug window to terminate the run operation of the bada IDE.



- An application is exited only after clicking the **Terminate** button followed by some other action in the application. For example, after clicking the **Terminate** button and some other button in the application.
- Reconnect the USB cable.

Error Codes (1/3)

- You can check the detailed description about error codes in the following table.



Error Code	Description
0101	Installation aborted: Another installation is in progress. Multiple applications cannot be installed at the same time.
0102	Installation error: Invalid package. Application cannot be installed properly because some of the package contents are invalid or missing.
0103	Installation error: Maximum number of applications reached. The count of applications that can be installed has reached the maximum limit. Uninstall some application first and try again.
0104	Installation error: Insufficient storage. Free some memory and try again. There is not enough storage available to install this application. Free some memory by removing unwanted media files, or uninstalling some existing applications.
0105	Installation error: Certificate Parsing Error. A certificate parsing error occurred. This error indicates that the certificate is invalid in Signature.xml. For the application integrity check, the chain of the certificate should be verified before actual installation.
0106	Installation error: Certificate has expired. The certificate used to sign the application has expired.
0107	Installation error: Certificate is revoked.", wxT("The certificate used to sign the application has been revoked according to the result of OCSP protocol.
0108	Installation error: Failed to find root certificate.", wxT("The root certificate, which is required to make certificate chain for the application integrity check, is not found in the device.
0109	Installation error: Signature verification failed.", wxT("Failed to verify application signature.
0110	Installation error: Application metadata registration failed.", wxT("Application metadata required to verify application integrity is missing or invalid.

Error Codes (2/3)

Error Code	Description
0111	Installation error: Application signature missing or invalid. Application signature required for verifying application integrity is missing or invalid.
0112	Installation error: Application manifest missing or invalid. The application manifest specifying metadata of the application is missing or invalid.
0113	Installation error: Invalid application executable file. Executable binary of the application was not found or invalid.
0114	Installation error: Invalid application information. Application information file specifying application name, icon path, etc., was not found or invalid.
0115	Installation error: Privilege registration failed. Failed to register privilege information to system database during installation.
0116	Installation error: Unknown Error Installation failed due to unknown reason.
0117	Installation error: Main menu icon missing. The application's Main menu icon is missing.
0118	Installation error: Setting menu icon missing. The application's Setting menu icon is missing.
0119	Installation error: Ticker icon missing. The application's Ticker icon is missing.
0120	Installation error: Quick panel icon missing. The application's Quick panel icon is invalid.
0121	Installation error: Launch image missing. The application's Launch image is invalid.
0122	Installation error: Main menu icon name invalid. The file name of the Main menu icon cannot be properly extracted from the application package.

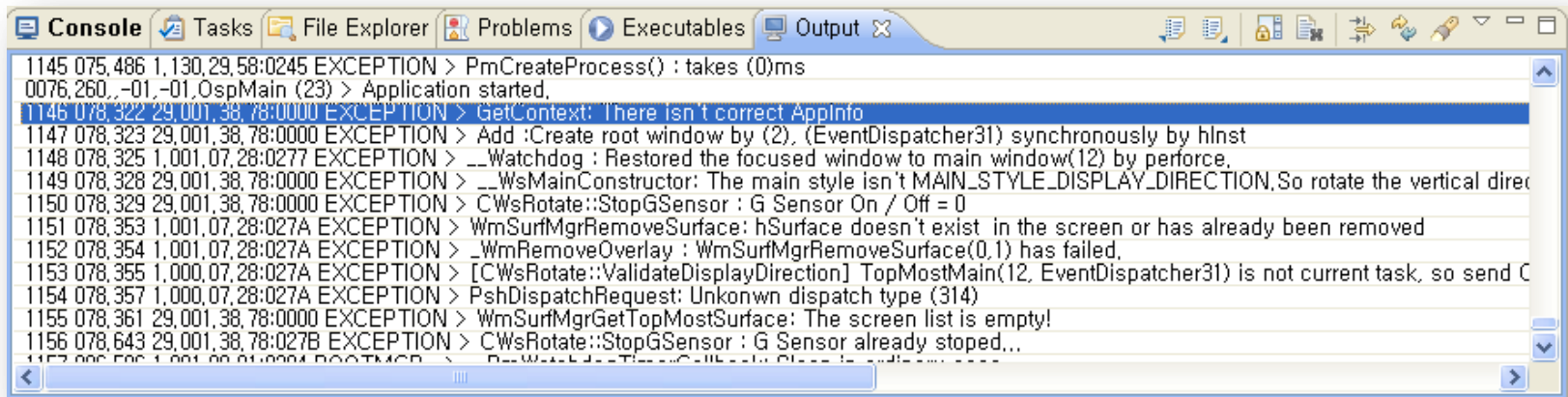
Error Codes (3/3)

Error Code	Description
0123	Installation error: Setting menu icon name invalid. The file name of the Setting menu icon cannot be properly extracted from the application package.
0124	Installation error: Ticker icon name invalid. The file name of the Ticker icon cannot be properly extracted from the application package.
0125	Installation error: Quick panel icon name invalid. The file name of the Quick panel icon cannot be properly extracted from the application package.
0126	Installation error: Launch image name invalid. The file name of the launch image cannot be properly extracted from the application package.
0127	Installation error: License acquisition failed. Failed to acquire the license during DRM file installation.
0128	Installation error: Failed to decrypt DRM package. Failed to decrypt the DRM package with the license file due to some reason like key not found.
0201	Launch error: No License. The application does not have the rights to be launched or PNUM does not match.
0202	Launch error: Signature verification failed. Verification of signature has failed because the application binary or hash table file has been modified after installation.
0203	Launch error: File(s) missing for signature verification. Files required for hash checking are missing.



Checking Debug Messages

- Start the Output pane by selecting **Window > Show View > Other... > bada – Output.**
- The usage for the Output pane is the same as for the simulator environment.



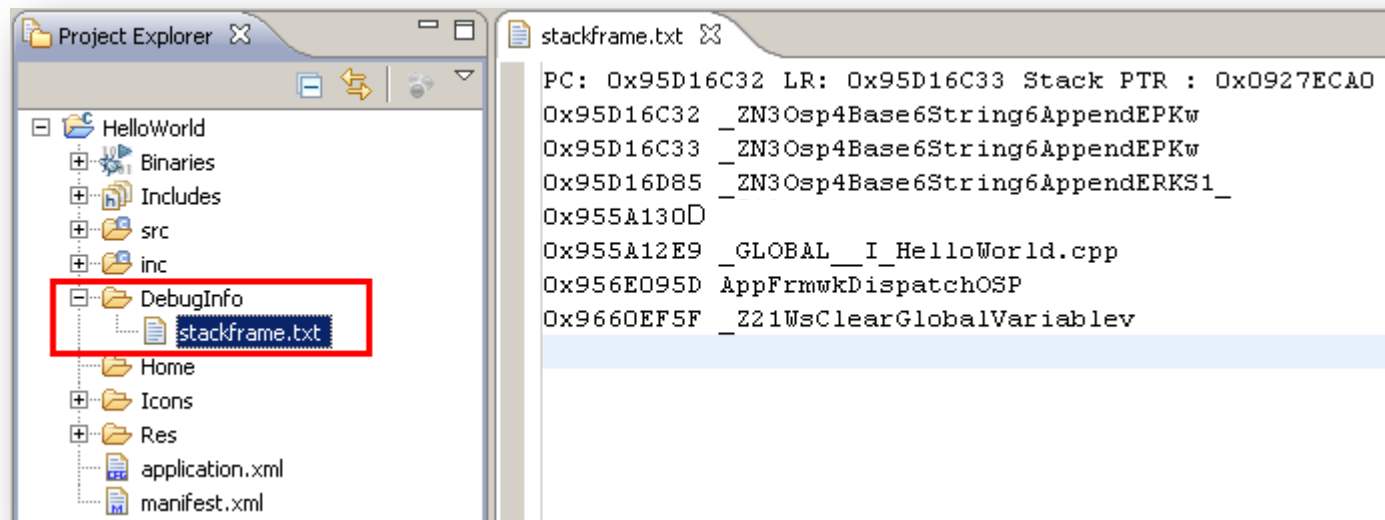
The screenshot shows the 'Output' pane of an IDE. The pane title is 'Output' with a close button. The content displays a series of log entries, each starting with a timestamp and the word 'EXCEPTION'. The messages include details about process creation, application start, and various system errors such as 'GetContext: There isn't correct AppInfo', 'Add :Create root window by (2), (EventDispatcher31) synchronously by hInst', and 'WmSurfMgrRemoveSurface: hSurface doesn't exist in the screen or has already been removed'. The text is wrapped and scrollable.

- You can also show debug messages in the Console pane.

Getting Debug Information

You can get debug information after the target terminates abnormally during debugging:

- Debug information includes stack frame.
- Select **Project > Get Debug Information**.





bada

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