

Native TCT Tester User Guide

Version 1.0, for Tizen 3.0

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1 Introduction

This document provides comprehensive information about Native TCT Manager, including an Overview, Test Environment setup, Installation Instructions, Operating Instructions, and Concluding Routines etc.

Native TCT Manager is a Graphic User Interface (GUI) and serves as a major component of Tizen Compliance Tests (TCT) tool set.

By providing a unified web UI, Native TCT Manager allows users to manage automated test case execution, including the following:

Save test case information as test plan, load and execute tests.

Run automated test cases.

Automatically generates a report after executing test cases, user can view, rerun, resume, remove or export the report.

2 Test Environment Setup

2.1 Symbols and abbreviations

TC - Test Case

TCT - Tizen Compliance Test

SDB - Smart Development Bridge

<name> - Mandatory argument

[name] - Optional argument

\$ (in shell command) - Indicates the beginning of a command

\ (in shell command) – In long commands, the backslash character ensures that newline character is ignored (if you join consecutive lines, please remove unnecessary backslashes)

2.2 Hardware Requirements

- a) PC or Laptop that will work as host on which TCT-Manager will be installed
- b) Tizen device that will work as target on which TCs will be executed
- c) USB Cable for connecting device to host

2.3 Software Requirements

1. Install 32 or 64 bit Ubuntu OS.
2. Install JDK 1.6 or newer version on Linux PC.
3. Install Tizen 3.0 SDK on Linux PC for SDB connection.
4. These packages should be installed before installing TCT-Manager

~\$ sudo apt-get install rpm2cpio

~\$ sudo apt-get install tree

~\$ sudo apt-get install python-pip

~\$ sudo apt-get install python-support

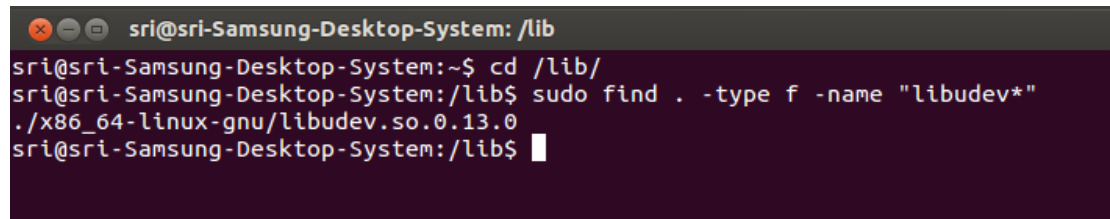
```
~$ sudo apt-get install python-requests
```

```
~$ sudo apt-get install python-setuptools
```

5. libudev1 or libudev-dev package should be installed for SDB.

First find the library 'libudev' installation location using command:~\$ cd /lib/

```
$ find . -type f -name "libudev*"
```

A terminal window with a dark background and light text. The title bar reads 'sri@sri-Samsung-Desktop-System: /lib'. The terminal shows the following commands and output:

```
sri@sri-Samsung-Desktop-System:~$ cd /lib/  
sri@sri-Samsung-Desktop-System:/lib$ sudo find . -type f -name "libudev*"  
./x86_64-linux-gnu/libudev.so.0.13.0  
sri@sri-Samsung-Desktop-System:/lib$
```

Figure 1. Getting location of libudev

If the package is not properly linked, use the following command:

- ~\$ sudo ln -s /lib/<installation-folder>/libudev.so.<version> /lib/<installation-folder>/libudev.so.0

e.g. ~\$ sudo ln -s /lib/i386-linux-gnu/libudev.so.0.13.0 /lib/i386-linux-gnu/libudev.so.0

2.4 Getting TCT-binary and TCT-manager

2.4.1 Download TCT binary

Download TCT binary from site:

http://download.tizen.org/tct/3.0/NATIVE_TCT/3.0_rXX/native-tct_3.0_rXX.zip

```
~$ unzip native-tct_3.0_rXX.zip
```

```
~$ cd native-tct_3.0_rXX/TCT/native-tct-3.0
```

Native TCT packages are already built and inside in native-tct-3.0/package/mobile and native-tct-3.0/package/wearable folder. You can find zip files in there.

2.4.2 Tools Permission

Execute the following command and give access permission to all contents inside tools.


```
~$ sudo chmod 777 -R native-tct-3.0
```

2.4.3 Folder structure

You will find the folder structure like below:

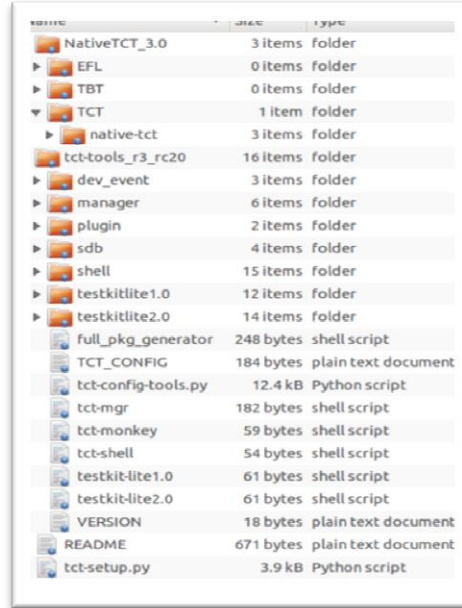


Figure 2. TCT-Manager folder structure

The following table describes the folders contents.

Folder	Description
package	All the packages to be tested in device
resource	Required resources for TCT manager
tools	Contains installation scripts for host and device

Table 1. TCT-Manager folders

2.4.4 For Host Configuration

a) Set environment on your host

```
~/NativeTCT_3.0/$ sudo python tct-setup.py
```

```

sri@sri:~/TCT-Execution/NativeTCT_3.0$ sudo python tct-setup.py
[sudo] password for sri:
current source base path =/home/sri/TCT-Execution/NativeTCT_3.0/tct-tools_r3_rc20/
current target base path =/opt/tools
target shell path is exists
target shell dir destroyed
copy shell dir finish
target manager path is exists
target manager dir destroyed
copy manager dir finish
target monkey path is exists
target monkey dir destroyed
copy monkey dir finish
target lite2.4 path is exists
target lite2.4 dir destroyed
copy lite2.4 dir finish
target lite3.0 path is exists
target lite3.0 dir destroyed
copy lite3.0 dir finish
target plugin path is exists
target plugin dir destroyed
copy plugin dir finish
current source base path =/home/sri/TCT-Execution/NativeTCT_3.0/NativeTCT_3.0/TCT/native-tct/tools/
current target base path =/opt/tct
source doc path is not a dir
target package path is exists
target package dir destroyed
copy package dir finish
target manager path is exists
target manager dir destroyed
copy manager dir finish
target resource path is exists
target resource dir destroyed
copy resource dir finish
sri@sri:~/TCT-Execution/NativeTCT_3.0$ █

```

Figure 3. Host Installation

2.4.5 For Device Configuration

- a) Connect the target device to host (PC) through USB.
- b) Remount system as read-write.
 - ~\$ sdb root on
 - ~\$ sdb shell
- c) Set environment on your target
 - ~/NativeTCT_3.0/native-tct-3.0/tools /\$ sudo python /opt/tct/tizen_native_3.0/scripts/tct-config-device.py

```

sri@sri:~/sss/3.0/api/tool/NativeTCT_3.0$ python /opt/tct/tizen_native_3.0/scripts/tct-config-device.py
set sdb root on. Please wait...
set sdb date to present time
Fri Aug 5 13:51:00 IST 2016
WARNING: Your data is to be sent over an unencrypted connection and could be read by others.
Pushed          TCT_CONFIG    100%    184 B    0KB/s
1 file(s) pushed. 0 file(s) skipped.
/opt/tools/TCT_CONFIG          1KB/s (184 bytes in 0.153s)
sdb shell "cat /etc/products.d/tizen.prod |grep \<arch"
get device cpu_arch type: <arch>armv7l</arch>
arm
check resource directory. Please wait...
The directory resource exists
-----
[ Clean old test resource on device. Please wait... ]
sdb shell ps aux | grep testkit-stub | grep -v grep | awk '{print $2}'
No process of testkit-stub activated
Uninstall testconfig. Please wait...
Archive: /opt/tct/tizen_native_3.0/resource/tct-testconfig-3.0.zip
--> "sdb devices"
List of devices attached
0000d83900006200    device    tml
--> "sdb -s 0000d83900006200    shell id -u owner"
6001
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/preconfigure.json"
rm: cannot remove '/home/owner/share/tct/preconfigure.json': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/portconfigure.json"
rm: cannot remove '/home/owner/share/tct/portconfigure.json': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/opt/tct-testconfig/preconfigure.json"
rm: cannot remove '/home/owner/share/tct/opt/tct-testconfig/preconfigure.json': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/opt/tct-testconfig/tests.xml"
rm: cannot remove '/home/owner/share/tct/opt/tct-testconfig/tests.xml': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/opt/tct-testconfig/tct-testconfig.ini"
rm: cannot remove '/home/owner/share/tct/opt/tct-testconfig/tct-testconfig.ini': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/opt/tct-testconfig/portconfigure.json"
rm: cannot remove '/home/owner/share/tct/opt/tct-testconfig/portconfigure.json': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/opt/tct-testconfig/TC_Config.txt"
rm: cannot remove '/home/owner/share/tct/opt/tct-testconfig/TC_Config.txt': No such file or directory
--> "sdb devices"
List of devices attached
0000d83900006200    device    tml
--> "sdb -s 0000d83900006200    shell id -u owner"
6001
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/preconfigure.json"
rm: cannot remove '/home/owner/share/tct/preconfigure.json': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/portconfigure.json"
rm: cannot remove '/home/owner/share/tct/portconfigure.json': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/opt/tct-testconfig/preconfigure.json"
rm: cannot remove '/home/owner/share/tct/opt/tct-testconfig/preconfigure.json': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/opt/tct-testconfig/tests.xml"
rm: cannot remove '/home/owner/share/tct/opt/tct-testconfig/tests.xml': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/opt/tct-testconfig/tct-testconfig.ini"
rm: cannot remove '/home/owner/share/tct/opt/tct-testconfig/tct-testconfig.ini': No such file or directory
--> "sdb -s 0000d83900006200    shell rm /home/owner/share/tct/opt/tct-testconfig/portconfigure.json"

```

Figure 4. Device Installation

Note: We recommend to use --purge option (like clean) for getting fresh execution environment. If you face any problems, you should do as root.

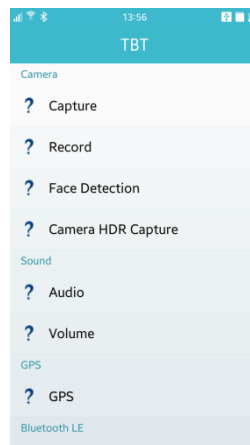
2.5 TBT

2.5.1 Installing the TBT Package

Install the TBT package by following steps:

1. Download binary from the below link :
http://download.tizen.org/tct/2.4/NATIVE_TCT/2.4_rXX/native-tct_2.4_rXX.zip
2. Firstly uninstall tbtcoreapp from the device if already installed.
3. Execute **install.sh**.

```
$ unzip native-tct_2.4_rXX.zip  
$ cd native-tct_2.4_rXX/TBT  
$ chmod +x install.sh  
$ ./install.sh
```
4. After running the script, TBT will be launched.
5. Test case list will appear in welcome screen.
6. If the required feature for the respective test case is not available in the device, then a message will be shown, while executing the test cases.



Mobile
Figure 5: TBT Application

2.5.2 Application Status Report

The status (Pass, Fail, Not-Tested or Feature-Not-Supported) of all the test cases are stored in an XML file. The name of the file is tbt-report.xml. It is generated in the Others folder of the storage directory of the system.

By default, if manufacturer doesn't change the path, it should be located in /opt/home/owner/content/Others/tbt-report.xml. You can get report with:

```
$ sdb pull /opt/home/owner/content/Others/tbt-report.xml
```

2.6 EFL

2.6.1 Get EFL Binary from Download site

http://download.tizen.org/tct/3.0/NATIVE_TCT/native-tct_3.0_xx.zip

```
$ unzip native-tct_3.0_r1.zip
```

```
$ cd native-tct_3.0_r1/EFL
```

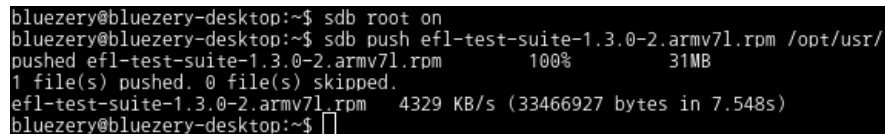
2.6.2 Push EFL UTC package into Tizen device

Enable sdb root mode:

```
$sdb root on
```

Push EFL UTC package into Tizen device:

```
$sdb push efl-test-suite-1.3.0-2.{Option}.rpm /opt/usr
```



```
bluezery@bluezery-desktop:~$ sdb root on
bluezery@bluezery-desktop:~$ sdb push efl-test-suite-1.3.0-2.armv7l.rpm /opt/usr/
pushed efl-test-suite-1.3.0-2.armv7l.rpm      100%      31MB
1 file(s) pushed, 0 file(s) skipped.
efl-test-suite-1.3.0-2.armv7l.rpm    4329 KB/s (33466927 bytes in 7.548s)
bluezery@bluezery-desktop:~$
```

Figure 6: EFL UTC Push

2.6.3 Login to Tizen device via SDB and install EFL UTC package

Login to Tizen device:

```
$sdb shell
```

Install EFL UTC using rpm command:

```
#mount -o remount,rw /
```

```
#cd opt/usr
```

```
#rpm -Uvh efl-test-suite-xxx.{Option}.rpm --force --nodeps
```

```

performer@sohyun-Samsung-DeskTop-System:~/Desktop$ sdb shell
sh-4.1# mount -o remount,rw /
sh-4.1# cd opt/usr
sh-4.1# rpm -Uvh --force --nodeps efl-test-suite-1.3.0-2.armv7l.rpm
reading device security policy from /etc/device-sec-policy
package ac-domain-system defined ac domain Isolated
package ac-domain-system defined ac domain ^
package ac-domain-system defined ac domain *
package ac-domain-system defined ac domain _
allowing ac_domain Isolated provided in root for root
allowing ac_domain ^ provided in root for root
allowing ac_domain * provided in root for root
allowing ac_domain _ provided in root for root
allowing ac_domain Isolated provided in root for _default_
allowing ac_domain ^ provided in root for _default_
allowing ac_domain * provided in root for _default_
allowing ac_domain _ provided in root for _default_
package org.tizen.helloworldnocert defined ac domain org.tizen.helloworldnocert
allowing ac_domain org.tizen.helloworldnocert provided in _default_ for root
allowing ac_domain org.tizen.helloworldnocert provided in _default_ for _default_
package sprd-wcnd defined ac domain wcnd
allowing ac_domain wcnd provided in _default_ for root
allowing ac_domain wcnd provided in _default_ for _default_
package vc-engine-default defined ac domain vc-engine-default
allowing ac_domain vc-engine-default provided in _default_ for root
allowing ac_domain vc-engine-default provided in _default_ for _default_
package privilege-checker defined ac domain privilege-checker
allowing ac_domain privilege-checker provided in _default_ for root
allowing ac_domain privilege-checker provided in _default_ for _default_
package shims defined ac domain shims

```

Figure 7: EFL UTC Install

3 How to Execute TCT

3.1 Execute TCT test suites:

3.1.1 Run TCT-Manager

Execute the following command:

`~$ tct-mgr`

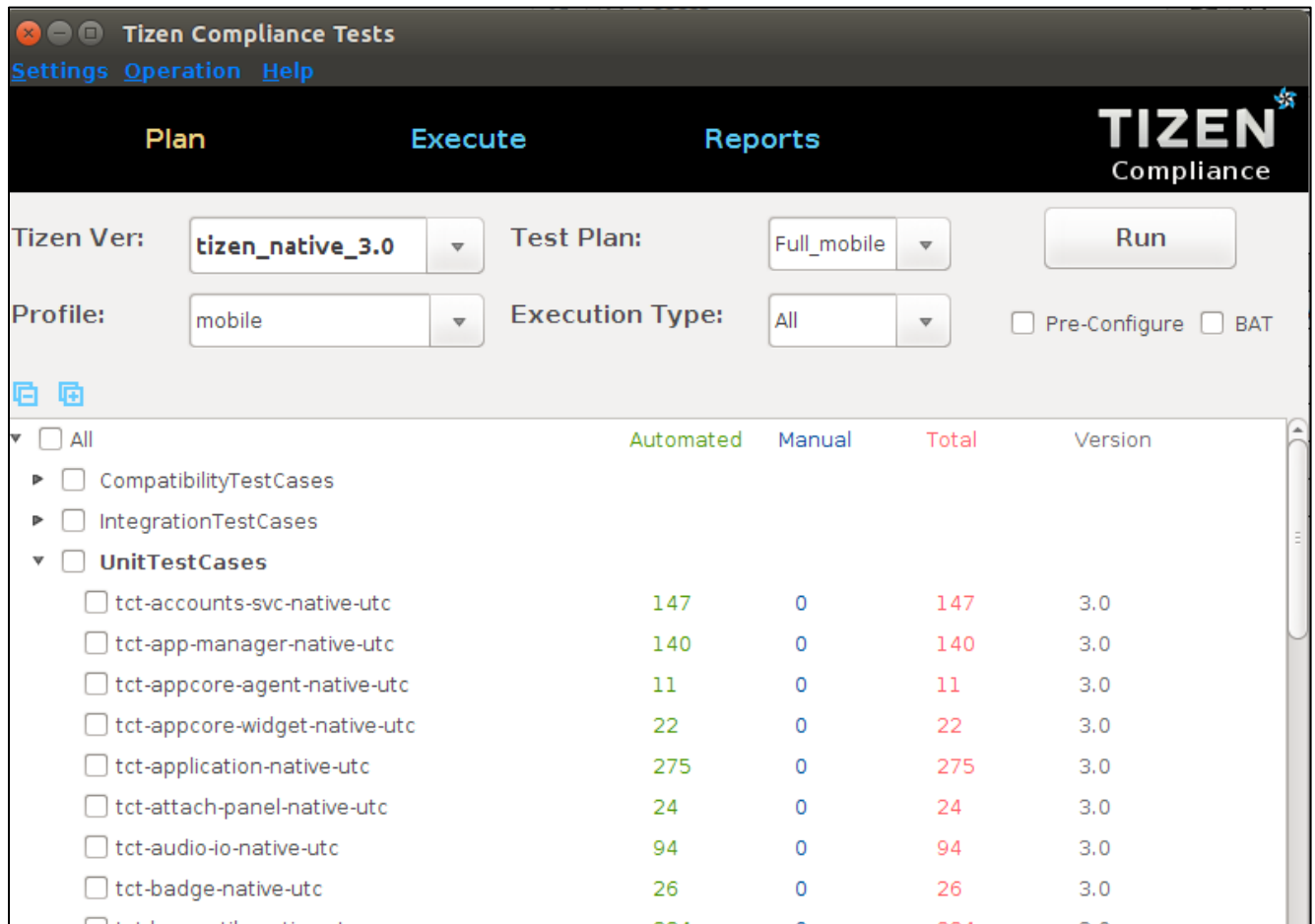


Figure 8. TCT-Manager UI

3.1.2 Choose Profile:

Choose your profile from profile combo box.

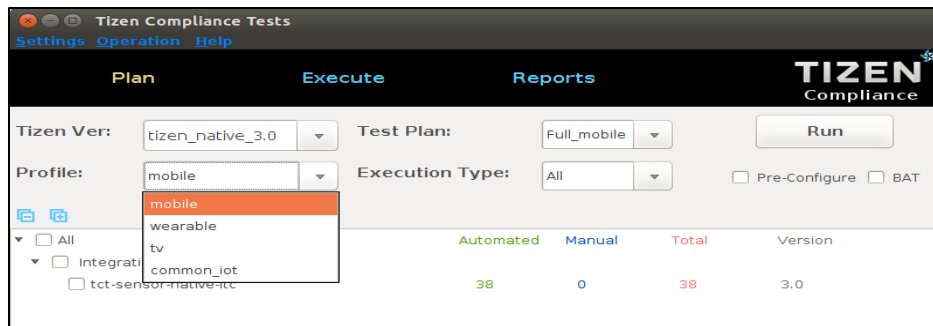


Figure 9. Select Profile

3.1.3 Choose Target:

Choose your target from **Settings > Choose Device:**

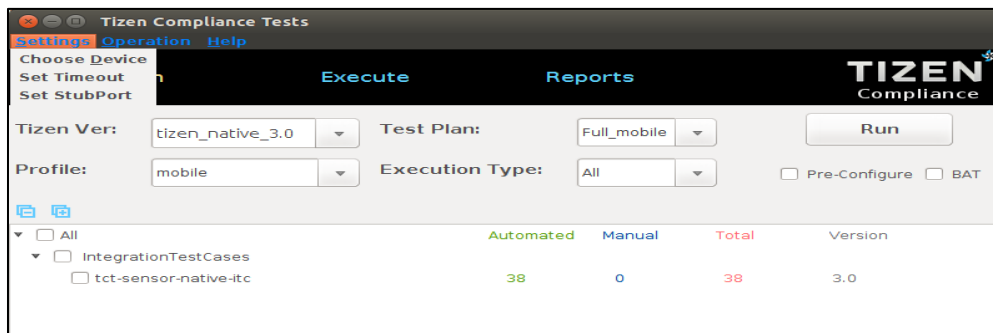


Figure 10. Choose device in TCT-Manager UI

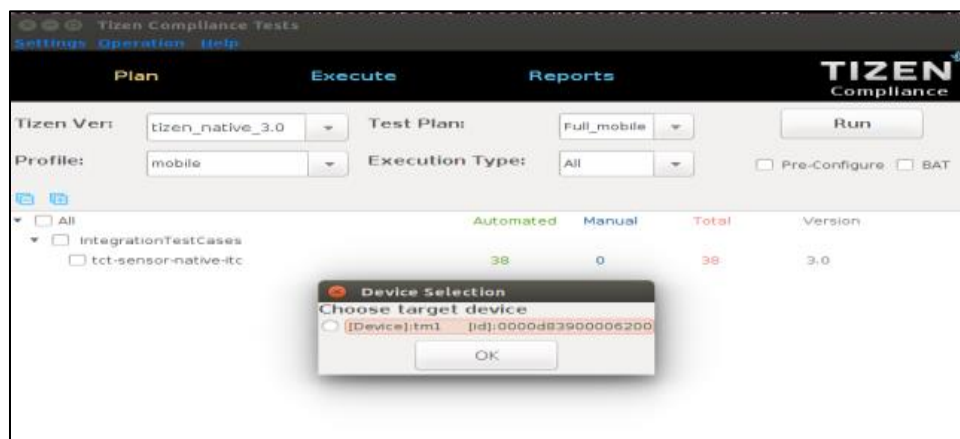


Figure 11. Device selection in TCT-Manager

3.1.4 Execution by Creating a New Plan:

1. Select suites by checking boxes from trees.
2. Choose profile.
3. Select Execution Type to 'All'.
4. Click button 'Run'. Leave Pre-Configure box unchecked at first time.
 - ※ If you check the box from second time, pre-configurations will be set as default.
5. Press 'Run' button.
6. Create a new test plan.
7. Input new plan name and then click 'OK'.

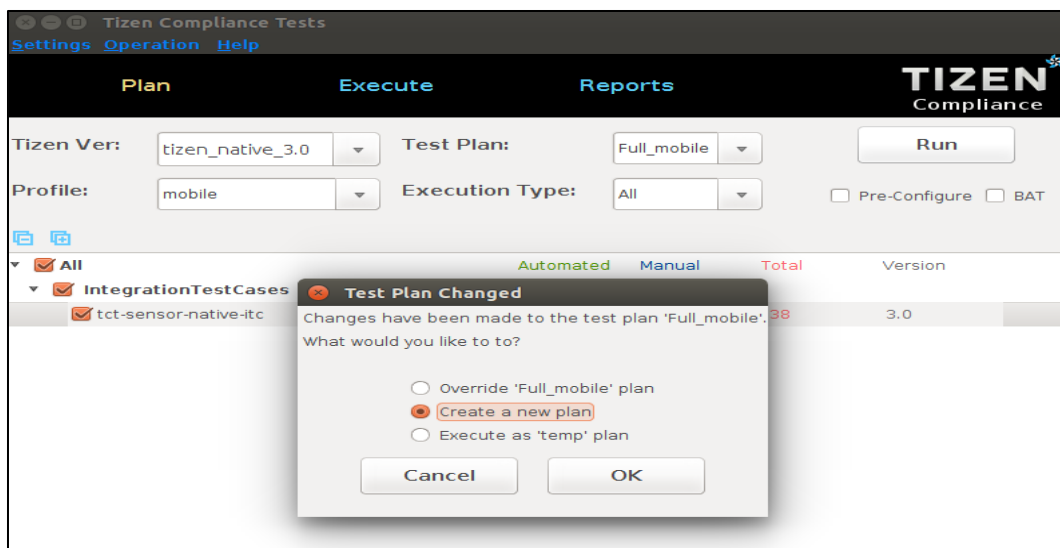


Figure 12. Creating a new plan in TCT-Manager

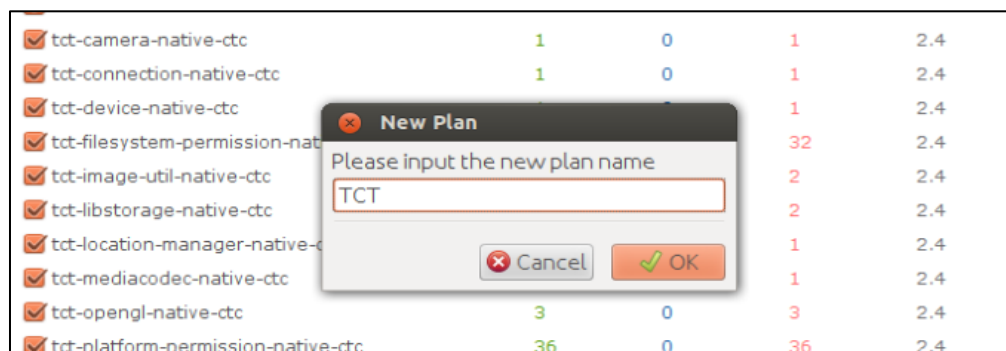


Figure 13. Input plan name in TCT-Manager

3.1.5 Perform Health check:

As shown in Figure 11, health check routines will be invoked to check the status of the target before executing the selected test suites. After all health check routines pass, TCT-Manager runs selected test suites.

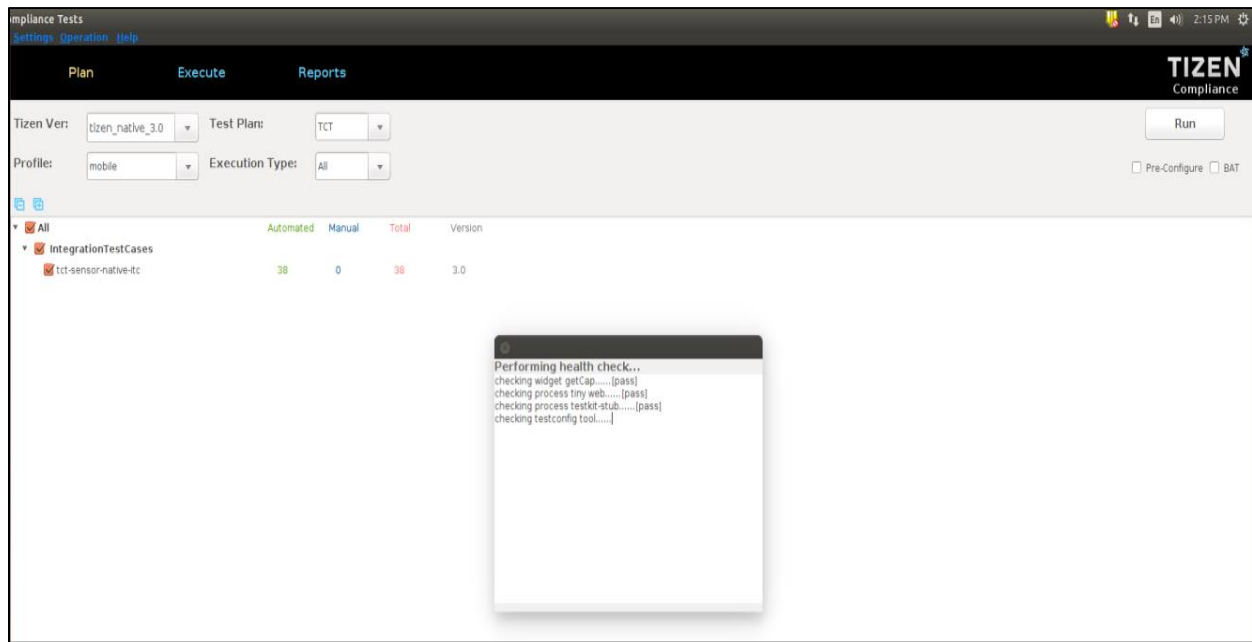


Figure 14. Health check monitoring after execution Run in TCT-Manager

3.1.6 Edit Pre-Configuration File:

If you execute any package which needs pre-condition, a dialog is displayed to show the configurable parameters for testing as shown in Figure 12. Change the values of parameters as per the test environment and press 'Continue'. For e.g. value of EMAIL_RECIPIENT should be set as the email address of recipient to which email

should be sent. Before running TCT, leave Pre-Configure box unchecked.

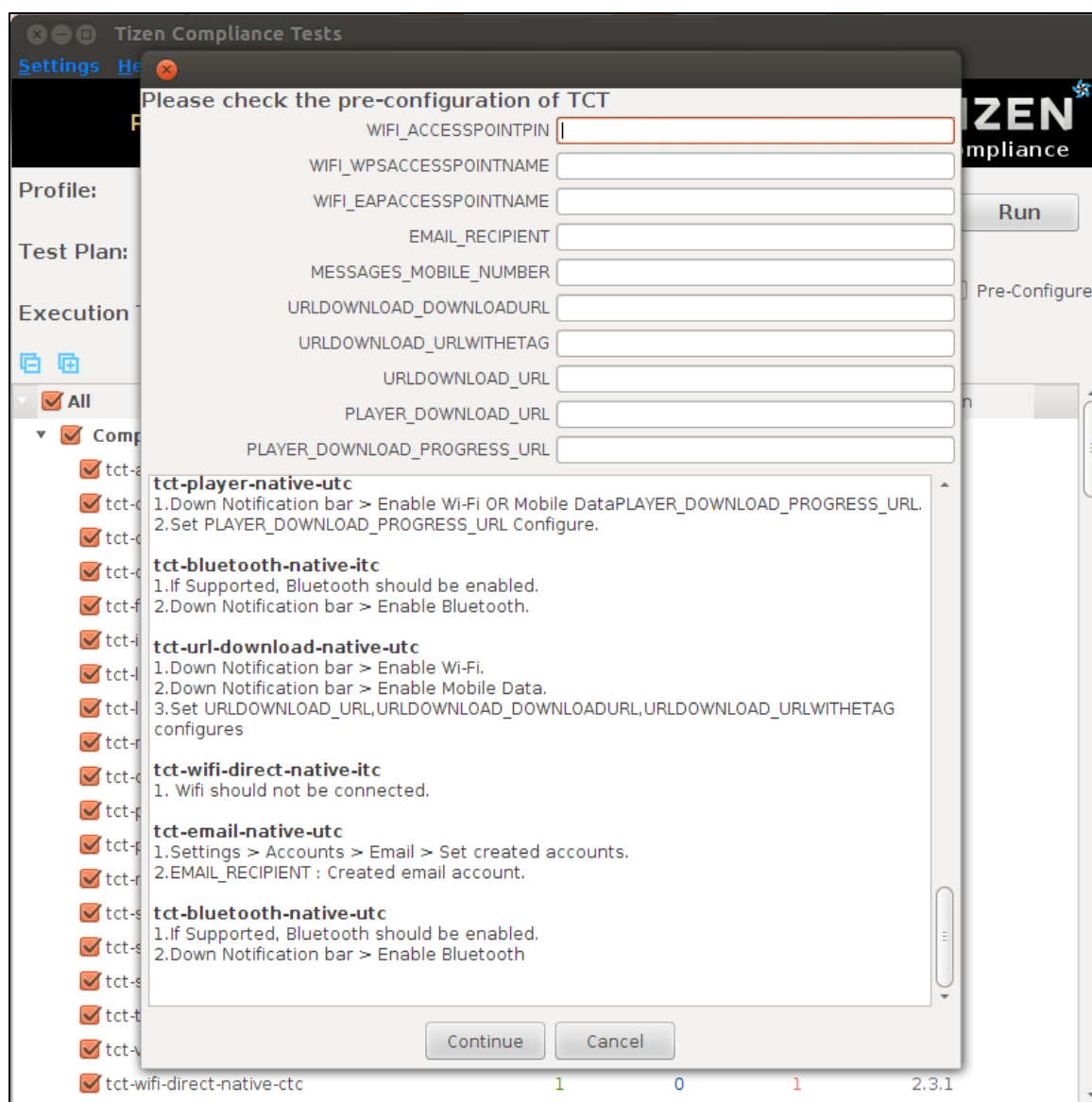


Figure 15. Edit Pre-Configuration file before execution.

Below is the pre-requisites list of individual modules suggesting the necessary changes in configuration values:-

UTC		
Packages	Pre-requisites	DEVICE [How to find Information]
bluetooth	If Supported, Bluetooth should be enabled.	*Down Notification bar > Enable Bluetooth
camera	If Supported, Camera should be working.	*If there is no H/W camera, please connect USB samsung camera. *For TV profile, please connect USB samsung TV camera.
capi-maps-service	Get credential app_id and app_code from HERE developer site(https://developer.here.com).	[Set the Pre-Configure dialog of TCT-Manager UI] *MAPS_PROVIDER_KEY : app_id/app_code ex) abcd/1234

contacts-service2	If Supported, SIM Card should be inserted.	*Insert SIM card. *SDN information should be written in SIM Card. (Only allow to write this information to tele-company) *Contacts > Select Sim > Save Contact Information.
connection	If Supported, Enable Wi-Fi If Supported, Enable Mobile Data Network	*Down Notification bar > Enable Wi-Fi. *Down Notification bar > Enable Mobile Data.
email	Must be set an email account.	*Settings > Accounts > Email > Set created accounts [Set the Pre-Configure dialog of TCT-Manager UI] *EMAIL_RECIPIENT : Created email account
http	If Supported, Enable Wi-Fi	*Down Notification bar > Enable Wi-Fi.
iotcon	If Supported, Enable Wi-Fi	*Down Notification bar > Enable Wi-Fi.
location-manager	If Supported, GPS should be enabled.	*Down Notification bar > Enable GPS
messages	If Supported, SIM Card (call, message, data network) should be inserted.	*Insert SIM Card [Set the Pre-Configure dialog of TCT-Manager UI] *MESSAGES_MOBILE_NUMBER ex) +821012345678
media-content	If Supported, SD card should be inserted.	*Insert SD card.
nfc	If Supported, NFC should be ON.	*Down Notification bar > Enable NFC
player	Must be connected to internet using Wi-Fi or data network.	*Down Notification bar > Enable Wi-Fi OR Down Notification bar > Enable Mobile Data [Set the Pre-Configure dialog of TCT-Manager UI] *PLAYER_DOWNLOAD_URL ex) http://www.archive.org/download/WaltzingMathilda-avi/WaltzingMathilda320X240_512kb.mp4 *PLAYER_DOWNLOAD_PROGRESS_URL ex) http://content.bitsontherun.com/videos/ntPYsD4L-1ahmry41.mp4
push	If Supported, Enable Wi-Fi or Data Network. Get push app id and app secret. - App ID is basic identification string value to register your application to Push server. Push server identify your application package identify your App ID. You can get Application ID with below guide document: Maybe, you have to request to Tizen.org via email. https://developer.tizen.org/development/tutorials/native-application/messaging/push - AppSecret is kind of pass code of your App ID. When any servers or other applications request to send push notification to your application, they must send request including your application's (target) App ID and App Secret. So, you can do push TCT with your own AppID and AppSecret. Adding notices: Please check push tutorial's "Managing Security" section with care.	*Down Notification bar > Enable Wi-Fi or Mobile Data. [Set the Pre-Configure dialog of TCT-Manager UI] *PUSH_APPID *PUSH_APPSECRET

url-download	Must be connected to Internet using Wi-Fi or data network.	*Down Notification bar > Enable Wi-Fi OR Down Notification bar > Enable Mobile Data.
telephony	If Supported, SIM Card (call, message, data network) should be inserted.	*Insert SIM card.
webkit2	Must be connected to internet using Wi-Fi or data network.	*Down Notification bar > Enable Wi-Fi or Mobile Data
wifi-direct	Wifi should not be connected.	*Down Notification bar > Disable Wi-Fi
wifi	If Supported, Wi-Fi should be enabled.	*Down Notification bar > Enable Wi-Fi [Set the Pre-Configure dialog of TCT-Manager UI] *Wi-Fi_WPSACCESSPOINTNAME (Wi-Fi router's name) *Wi-Fi_ACCESSPOINTPIN (Wi-Fi router's password)

ITC		
Packages	Pre-requisites	DEVICE [How to find Information]
bluetooth	If Supported, Bluetooth should be enabled.	*Down Notification bar > Enable Bluetooth
camera	If Supported, Camera should be available.	*If there is no H/W camera, please connect USB samsung camera. *For TV profile, please connect USB samsung TV camera.
capi-maps-service	If Supported, Enable Wi-Fi or Data Network. Get credential app_id and app_code from HERE developer site(https://developer.here.com).	*Down Notification bar > Enable Wi-Fi or Mobile Data. [Set the Pre-Configure dialog of TCT-Manager UI] *MAPS_PROVIDER_KEY : app_id/app_code ex) abcd/1234
connection	If Supported, Enable Wi-Fi If Supported, Enable Mobile Data Network	*Down Notification bar > Enable Wi-Fi. *Down Notification bar > Enable Mobile Data.
contacts-service2	1. If Supported, SIM Card should be inserted. 2. Create a contact in SIM	*Insert SIM card. *SDN information should be written in SIM Card. (Only allow to write this information to tele-company) * Contacts > Select Sim > Save Contact Information
email	Must be set an email account.	*Settings > Accounts > Email > Set created accounts [Set the Pre-Configure dialog of TCT-Manager UI] *EMAIL_RECIPIENT : Created email account
http	If Supported, Enable Wi-Fi	*Down Notification bar > Enable Wi-Fi.
iotcon	If Supported, Enable Wi-Fi	*Down Notification bar > Enable Wi-Fi.
key-manager	Must be set the time as correct	*Once connect mobile data or wi-fi, it comes correct when 'auto update' set. Or Settings > Data and Time : Set by manual.
nfc	If Supported, NFC should be ON.	*Down Notification bar > Enable NFC
location-manager	If Supported, GPS should be enabled.	*Down Notification bar > Enable GPS
media-content	If Supported, SD card should be inserted.	*Insert SD card.
messages	If Supported, SIM Card (call, message, data network) should be inserted.	*Insert SIM Card [Set the Pre-Configure dialog of TCT-Manager UI] *MESSAGES_MOBILE_NUMBER ex) +821012345678

push	<p>If Supported, Enable Wi-Fi or Data Network. Get push app id and app secret. - App ID is basic identification string value to register your application to Push server. Push server identify your application package identify your App ID. You can get Application ID with below guide document: Maybe, you have to request to Tizen.org via email. https://developer.tizen.org/development/tutorials/native-application/messaging/push</p> <p>- AppSecret is kind of pass code of your App ID. When any servers or other applications request to send push notification to your application, they must send request including your application's (target) App ID and App Secret. So, you can do push TCT with your own AppID and AppSecret.</p> <p>Adding notices: Please check push tutorial's "Managing Security" section with care.</p>	<p>*Down Notification bar > Enable Wi-Fi or Mobile Data. [Set the Pre-Configure dialog of TCT-Manager UI] *PUSH_APPID *PUSH_APPSECRET</p>
player	<p>Must be connected to internet using Wi-Fi or data network.</p>	<p>*Down Notification bar > Enable Wi-Fi OR Down Notification bar > Enable Mobile Data [Set the Pre-Configure dialog of TCT-Manager UI] *PLAYER_DOWNLOAD_URL ex) http://www.archive.org/download/WaltzingMathilda-avi/WaltzingMathilda320X240_512kb.mp4 *PLAYER_DOWNLOAD_PROGRESS_URL ex) http://content.bitsontherun.com/videos/ntPYsD4L-1ahmry41.mp4</p>
telephony	<p>If Supported, SIM Card (call, message, data network) should be inserted.</p>	<p>*Insert SIM card. ※ SPN information should be written in SIM Card. (Only allow to write this information to tele-company)</p>
url-download	<p>Must be connected to Internet using Wi-Fi or data network.</p>	<p>*Down Notification bar > Enable Wi-Fi OR Down Notification bar > Enable Mobile Data [Set the Pre-Configure dialog of TCT-Manager UI] *URLDOWNLOAD_URL ex) https://download.tizen.org/misc/Tizen-Brand/01-Primary-Assets/Logo/On-Light/01-RGB/Tizen-Logo-On-Light-RGB.png *URLDOWNLOAD_DOWNLOADURL ex) http://mirrors.ustc.edu.cn/videolan-ftp/vlc/2.1.5/win32/vlc-2.1.5-win32.zip *URLDOWNLOAD_URLWITHETAG ex) http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html</p>
webkit2	<p>Must be connected to internet using Wi-Fi or data network.</p>	<p>*Down Notification bar > Enable Wi-Fi OR Down Notification bar > Enable Mobile Data</p>
wifi-direct	<p>Wifi should not be connected.</p>	<p>*Down Notification bar > Disable Wi-Fi</p>

wifi	If Supported, Wi-Fi should be enabled.	*Down Notification bar > Enable Wi-Fi [Set the Pre-Configure dialog of TCT-Manager UI] *Wi-Fi_WPSACCESSPOINTNAME (Wi-Fi router's name) *Wi-Fi_ACCESSPOINTPIN (Wi-Fi router's password) *Wi-Fi_EAPACCESSPOINTNAME (Should be enterprise access point mode and public. This Wi-Fi router should be different from above WPS enabled public Wi-Fi router.)>
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CTC		
Packages	Pre-requisites	DEVICE [How to find Information]
platform-permission	If Supported, Bluetooth should be enabled. If Supported, SIM card should be inserted. If Supported, SD card should be inserted. If Supported, Enable Wi-Fi.	*Down Notification bar > Enable Bluetooth *Insert SIM card. *Insert SD card. *Down Notification bar > Enable Wi-Fi.
telephony	If Supported, SIM Card (call, message, data network) should be inserted.	*Insert SIM card.

3.1.7 Execution Progress:

When executing the test, this screen will be shown as in Figure 13.

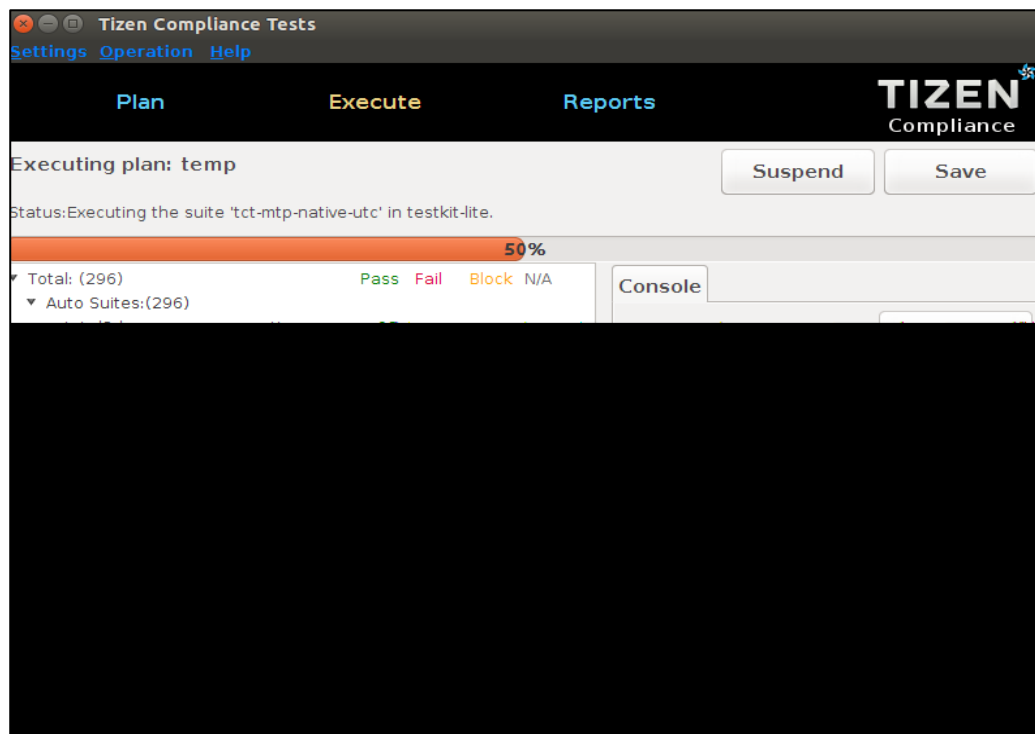


Figure 16. Execution progress while Running Test Suite in TCT-Manager

3.1.8 Execution Report:

After executing all the test suites, Reports tab will show a results list as in Figure 14.

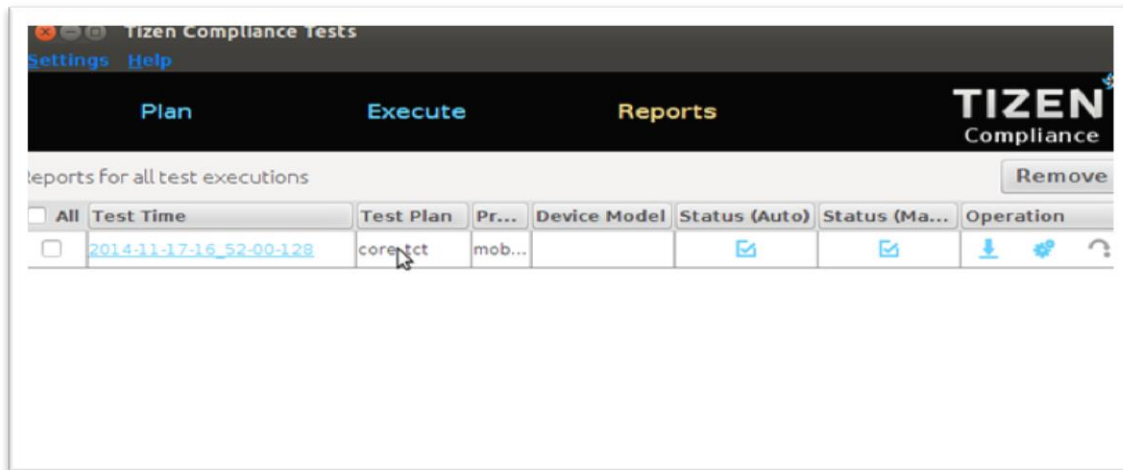


Figure 17. Execution report after completing execution in TCT-Manager

3.1.9 Download Result:

You can download the result file by clicking red marked button showed in Figure 15.

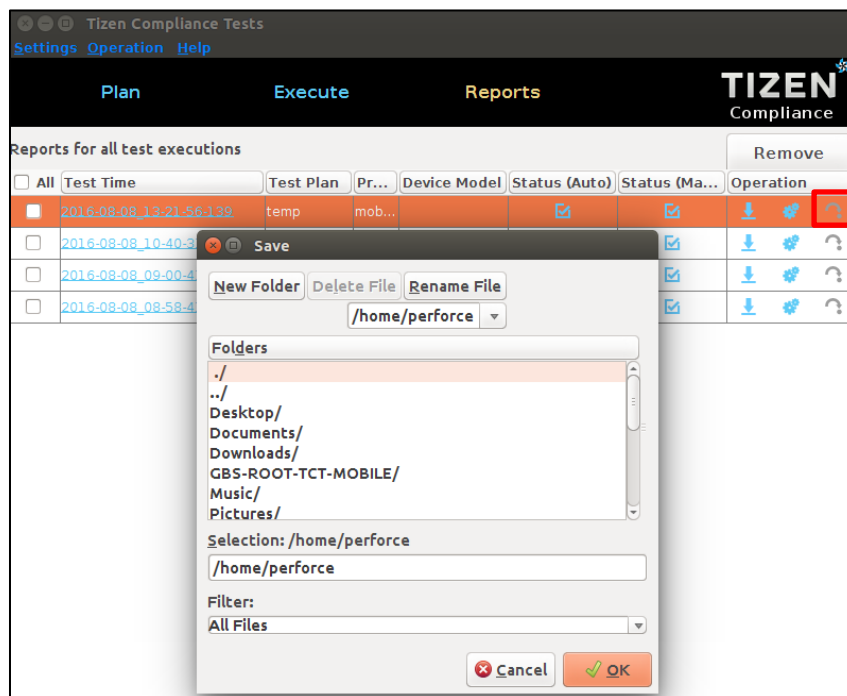


Figure 18. Download the Execution report in TCT-Manager

3.1.10 View the Execution report in browser

Click the red marked link to view result summary in browser as shown in Figure 16.

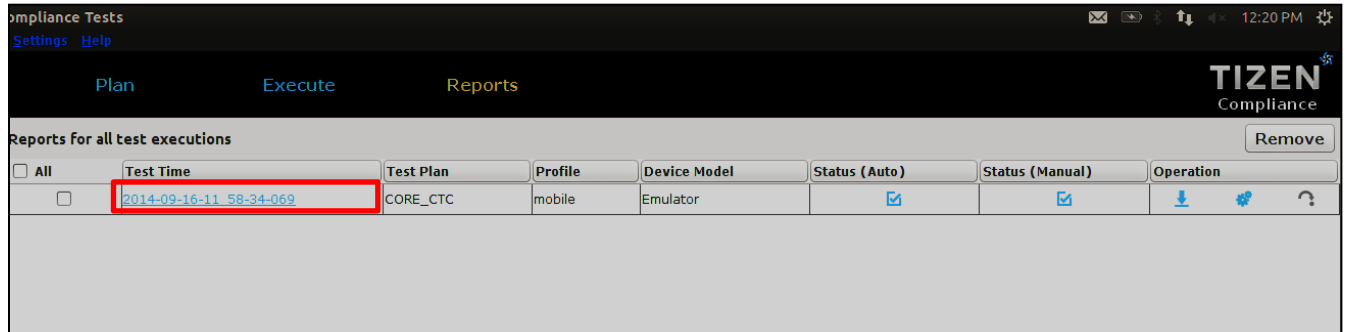


Figure 19. View the Execution report in TCT-Manager

TCT-manager provides detailed information about test results. TCT Report (Figure 17) shows how many test suites were executed, how many test cases were checked, how many test cases passed or failed, etc.

TCT Report

Test Summary	
TCT Version	tizen_native_3.0
Test Plan Name	temp
Test Profile	mobile
Build ID	N/A
Test Total	1556
Test Passed	1544
Test Failed	12
Test Blocked	0
Test Not Executed	0
Time	2016-08-08_10_40_37 ~ 2016-08-08_11_27_10

Device Information	
Host Device	Linux-3.13.0-92-generic-x86_64-with-Ubuntu-14.04-trusty
Manufacturer	N/A
Device Model	N/A
Device ID	0000bfc100006200
Screen Size	N/A
Resolution	N/A

Device Capability

The information of device capability is not available.

Test Summary by Suite

Suite	Total	Passed	Failed	Blocked	Not Executed	Ratio
tct-application-native-ipc	56	56	0	0	0	100.00%
tct-application-native-utc	275	275	0	0	0	100.00%
tct-app-manager-native-ipc	45	45	0	0	0	100.00%
tct-app-manager-native-utc	140	140	0	0	0	100.00%
tct-badge-native-ipc	6	6	0	0	0	100.00%

Figure 20. View the Execution report summary in TCT-Manager

3.1.11 View Result Details:

By clicking the name of each test suite, you can check the name, purpose, result and error log of each test

case (Figure 18). Also you can see sdb dlog by clicking dlog link.

Suite Test Results			
Test Suite: tct-nfc-native-ctc (All) Show all Show only failed Show only blocked Show only not executed Summary			
Case_ID	Purpose	Result	Stdout
Test Set: Nfc			dlog
CTc_NfcManager_IsSupportedNfc_p	Device screen height and width get test	PASS	Successfully Launched [CAPI_NETWORK_NFC_CTC] Executing Testcase: CTc_NfcManager_IsSupportedNfc_p [CAPI_NETWORK_NFC_CTC] NFC is Not supported returncode=0

Figure 21. View the Execution Report Details in TCT-Manager

3.1.12 Execution Log Export:

Export execution log by clicking export button marked red in Figure 19.

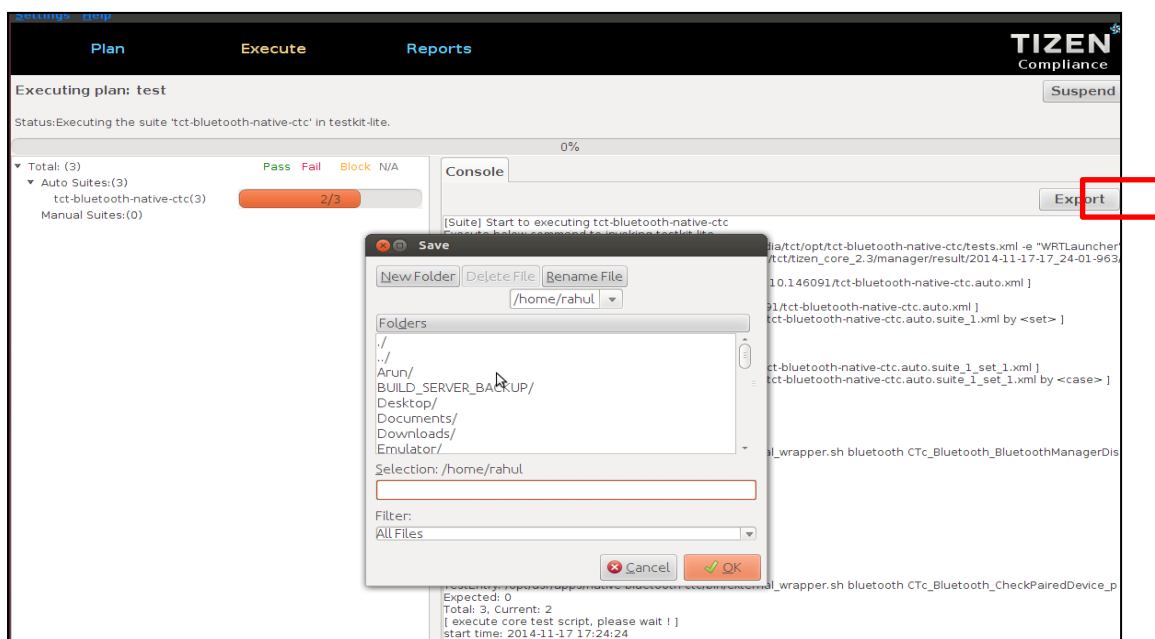


Figure 22. Exporting Log of Execution Report from TCT-Manager

3.1.13 Stop Execution:

While executing test suites if executions need to be stopped, click the window close button which will prompt like below (Figure 20).

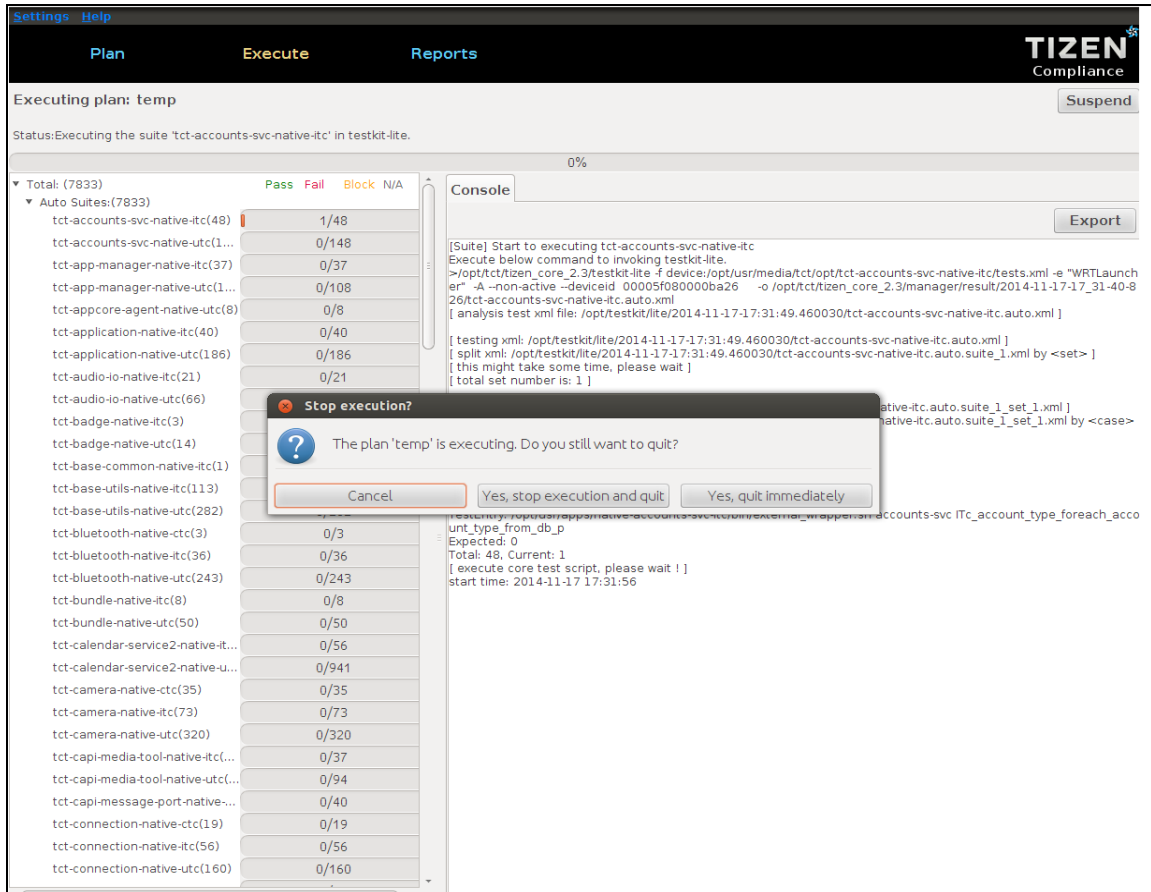


Figure 23. Stop the test-suite execution while execution is running in TCT-Manager

3.1.14 Rerun Failed Test Cases:

If you want to re-run for non-pass test cases, click rerun button (Figure 21).

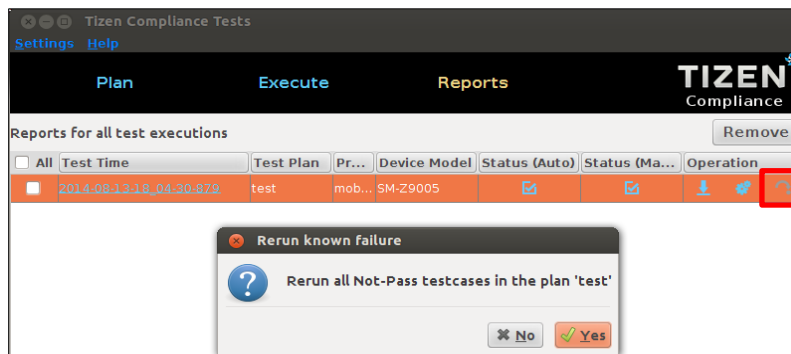


Figure 24. Rerun Failed TCs

3.2 Execute/Test TBT:

3.2.1 Testing the Mobile Device

This chapter describes the various tests that can be performed to check the device functionality.

3.2.1.1. Camera

This section describes the camera testing options. If the functionality works as expected then press **Pass**. Otherwise, press **Fail**.

Camera Capture

To test the camera capture functionality:

1. Select the **Capture** from the test case list
2. Press **Capture** to capture a picture.
3. Check the captured picture which is shown automatically.

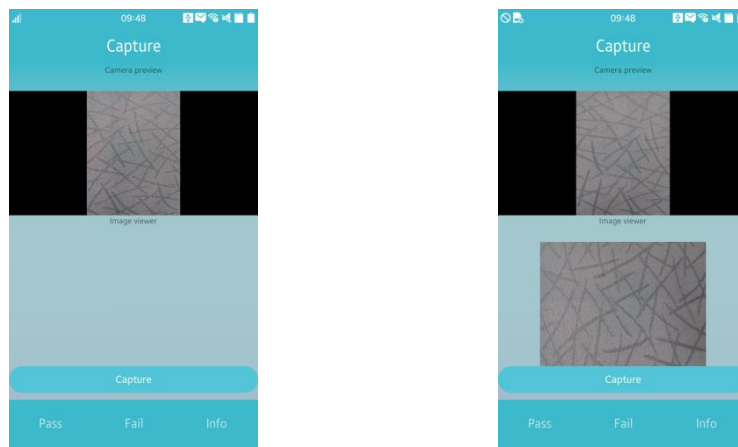


Figure 25: Camera Preview

Camera Record:

To test the camera recording functionality:

1. Select the **Record** Test from the test case list.
2. Press **Record** button to record the video.
3. Press **Stop** to stop the recording

Check the recorded video clip which is shown automatically.

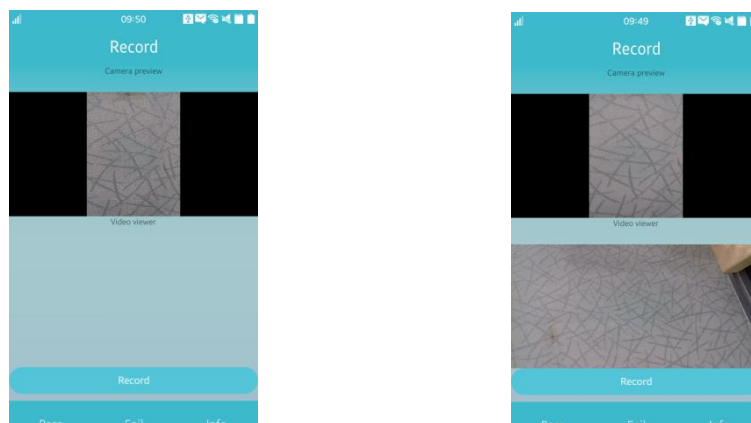


Figure 26: Camera Record

Camera Face Detection:

To perform the test,

1. Select **Face Detection** Test from the **test case list** and the camera preview starts automatically.
2. If the camera can detect face and “zoom in” and “zoom out” is performed automatically then **Pass**, otherwise **Fail**.

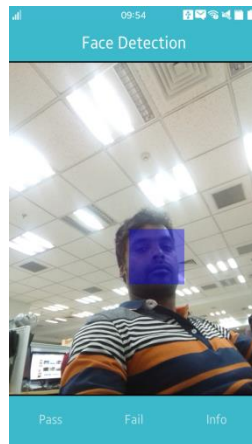


Figure 27: Face detection

Camera HDR Capture:

To perform the test,

1. Select **Camera HDR Capture** from the test case list.
2. Press button **Capture** and the captured picture is shown.
3. If the picture can be captured and shown, then **Pass**, otherwise **Fail**.

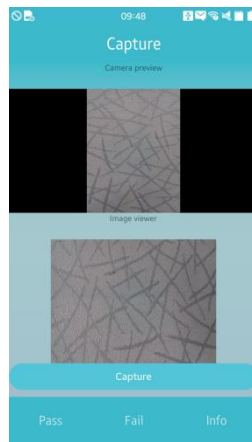


Figure 28: Camera HDR Capture

3.2.1.2. Sound

This section describes the sound testing options. If the functionality works as expected, then press **Pass**. Otherwise, press **Fail**.

Sound Audio

To test the sound of the speaker:

1. Select **Audio** Test from the test case list.
2. Press **Play**.
3. Check the sound output to the speaker.
4. Press **Stop** to stop the music.
5. Press **Pause** to pause the music



Figure 29: Sound Test

Sound Volume

To test the sound volume:

1. Select the **Volume** Test from the **test case list** and the sound is played automatically.
2. Slide the Volume **Slider** to change the volume level.
3. Check the sound output to the speaker by hearing and watching the value of volume label.



Figure 30: Sound Volume Test

3.2.1.3. GPS

To test the **GPS** functionality,

1. Select the **GPS** Test from the **test case list**
2. Enable Location and view the GPS information.
3. If the information is correct then **PASS**, otherwise **FAIL**.

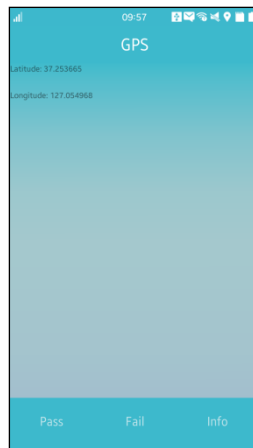


Figure 31: GPS

Note: If the GPS information is unavailable for 6 minutes, the process fails.

3.2.1.4. Bluetooth LE

This section describes the Bluetooth LE testing options. If the functionality works as expected, press PASS, otherwise, press FAIL.

Gatt Client Test

This section act as a gatt client and shows the services, characteristics, descriptions of gatt server with corresponding uuid.

To perform the test

1. Select **Gatt Client** from the test case list.
2. Set **BLE device** in discover mode.
3. If Bluetooth is off, turn on manually.
4. Press button **Discover** and a list of available BLE devices will be appeared.
5. Select the desired device and gatt services will be shown with corresponding uuid in list.
6. Select the desired **gatt** service and corresponding characteristics will be shown with uuid in list.
7. Select the desired characteristic and press write button, written successfully message will be shown.
8. Press **read** button, read successfully message will be shown.

9. Press **expand** button, if descriptors is available for selected characteristics then descriptors will be shown with corresponding uuid in list.
10. Select the desired descriptor and press **write int** button, written successfully message will be shown.
11. Press **read int** button, Descriptor value 25 will be shown in list.
12. Press **write float** button, written successfully message will be shown.
13. Press **read float** button, Descriptor float value 15200.00000 will be shown in list.

If all the steps are performed correctly then Pass, otherwise Fail.

NB: From steps 8-12 depends on availability of descriptors.



Figure 32: GATT

3.2.1.5. Bluetooth

This section describes the Bluetooth testing options. If the functionality works as expected, then press **PASS**, otherwise, press **FAIL**.

Bluetooth Client Paired:

To test Bluetooth client pairing:

1. Select **Client Paired** from the test case list in one phone.
2. Select Server Paired from the test case list in one
3. If Bluetooth is off, turn on manually.

Press button **Discover** and a list of available devices will be appeared

Select the desired device and wait for the connection popup message. If you want to cancel connection during paring, select the **Cancel** button..

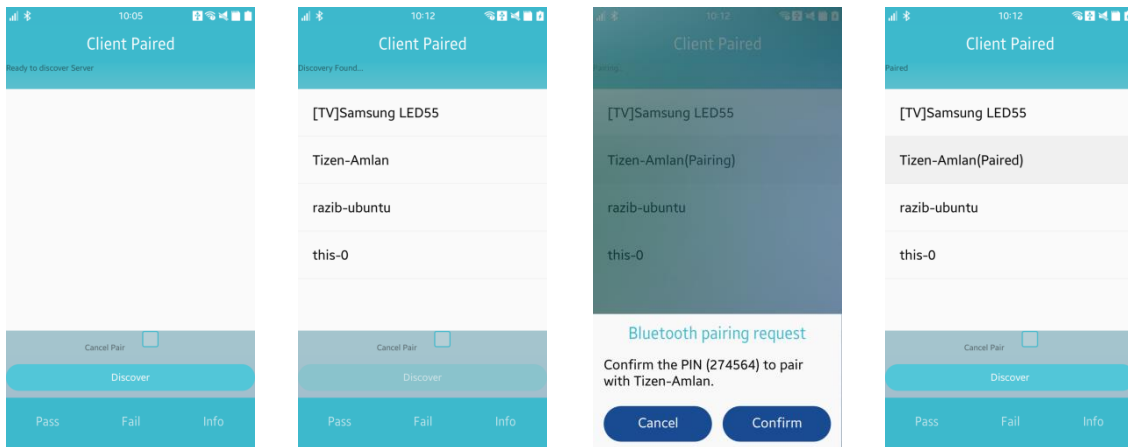
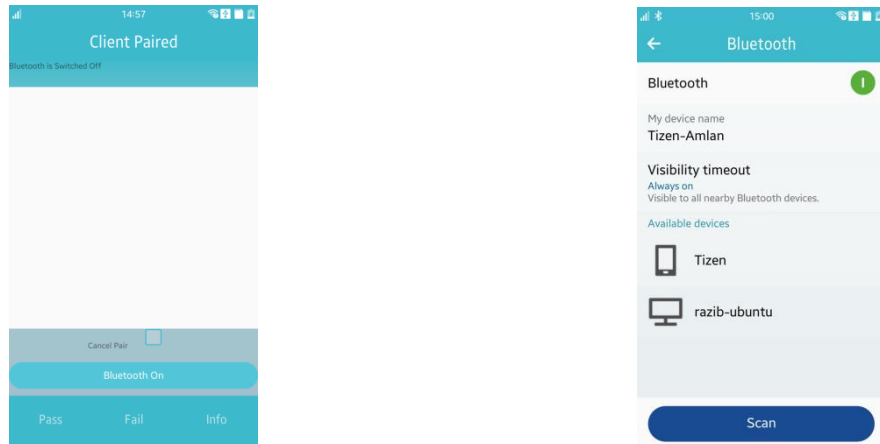


Figure 33: Client Paring

Bluetooth Server Paired:

To test Bluetooth server pairing:

1. Select **Server Paired** from the test case list of one phone.
2. Select Client Paired from the test case list of other phone.
3. If Bluetooth is off, turn on manually.
4. Press **Set Visible** and wait for the connection pop-up message.
If the message is shown properly then **PASS**, otherwise **FAIL**.

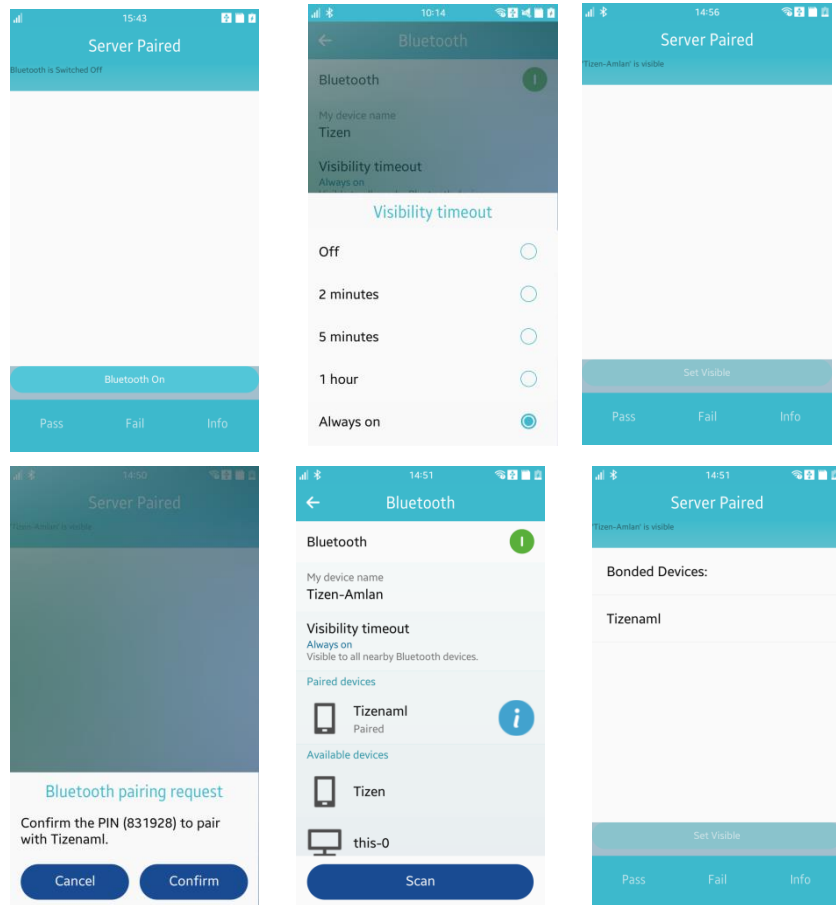


Figure 34: Server Pairing

Bluetooth OPP Server:

To perform the test at first, **Turn On** the Bluetooth of the device where the object will be pushed. Then,

1. Select **OPP Server** from the test case list of one phone.
2. Select **OPP Client** from the test case list of other phone.
3. Press **Switch Bluetooth On** to activate Bluetooth on the device and the Bluetooth application of the device will be opened. Turn on Bluetooth from there. Select the desired device and the devices will be paired.
4. Press **Set Visible** and wait for the connection pop-up message.
5. Press **“Confirm”** button to accept connection from client.
6. When client is trying to send a file, press **“Accept/Reject”** button to accept/reject file sending request.
7. Select **“Pass/Fail”** if proper message is shown in the server side.

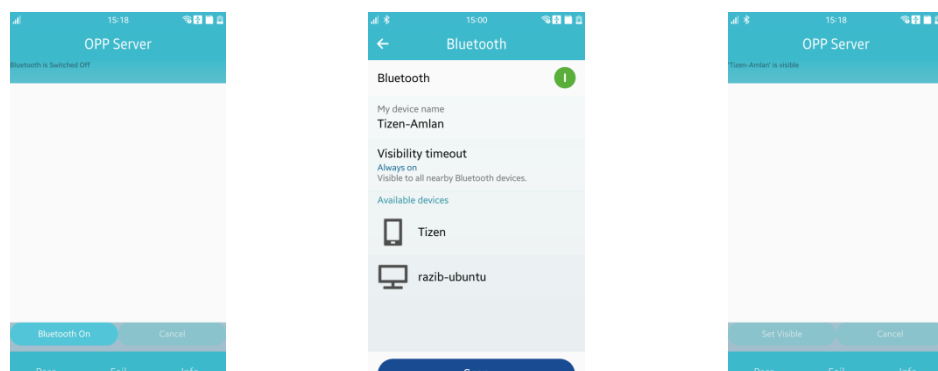


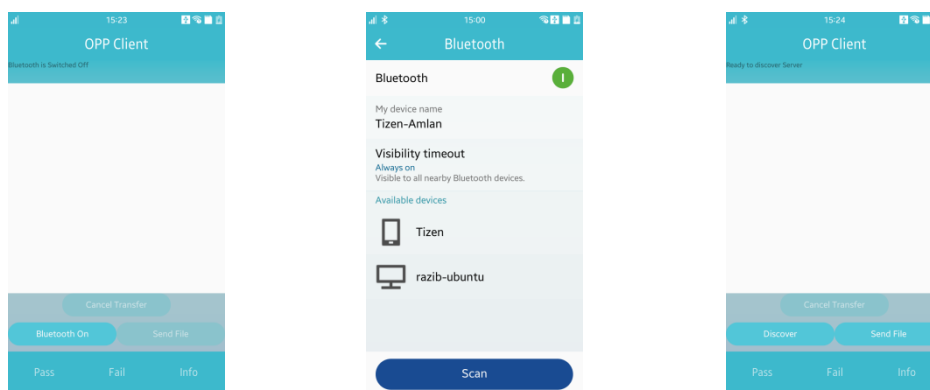


Figure 35: OPP Server

Bluetooth OPP Client

To perform the test at first, **Turn On** the Bluetooth of the device where the object will be pushed. Then,

1. Select Bluetooth **OPP Client** from the test case list in one phone.
2. Select **OPP Server** from the test case list of other phone.
3. Press **Bluetooth On** button to activate Bluetooth on the device and the Bluetooth application of the device will be opened. Turn on Bluetooth from there, Select the desired device and the devices will be paired.
4. Press button **Discover** to see the list of Bluetooth devices.
5. Select the desired device from the list.
6. Press button **Send File**.
7. If you want to cancel file sending after pressing “Send File” just press “Cancel Transfer” button, check the message to verify pass/fail.
8. Check if any image file is pushed in the other device.
9. If any image file is pushed then **Pass** otherwise **Fail**.
10. Also turn on the Visibility of Bluetooth.



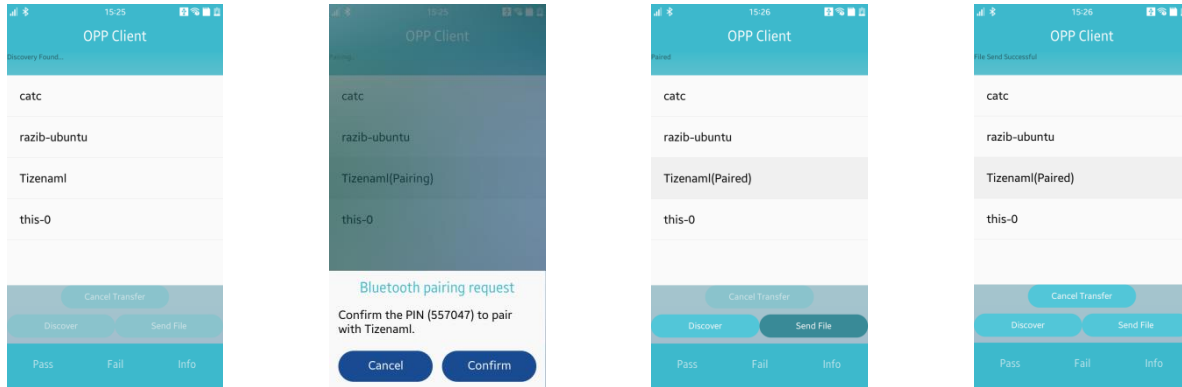


Figure 36: OPP Client

Bluetooth Hands free:

To perform the test

1. Select **Handsfree** from the test case list
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of Bluetooth Audio devices.
4. Select the desired device from the list.
5. Press button **Connect Audio**.
6. Now make a call and test if sound is heard in the audio device.
7. If all the steps are performed correctly then **Pass**, otherwise **Fail**.

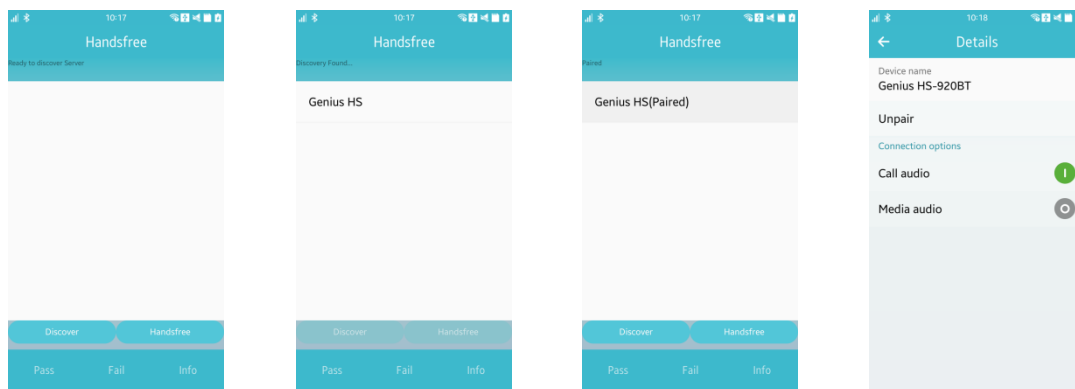


Figure 37: Handsfree

Bluetooth Audio Connect:

To perform the test

1. Select **Audio Connect** from the test case list
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of Bluetooth Audio devices.
4. Select the desired device from the list.
5. Press button **Connect Audio**.
6. Now you can hear the key pressing sound in Headset.
7. If all the steps are performed correctly then **Pass**, otherwise **Fail**.

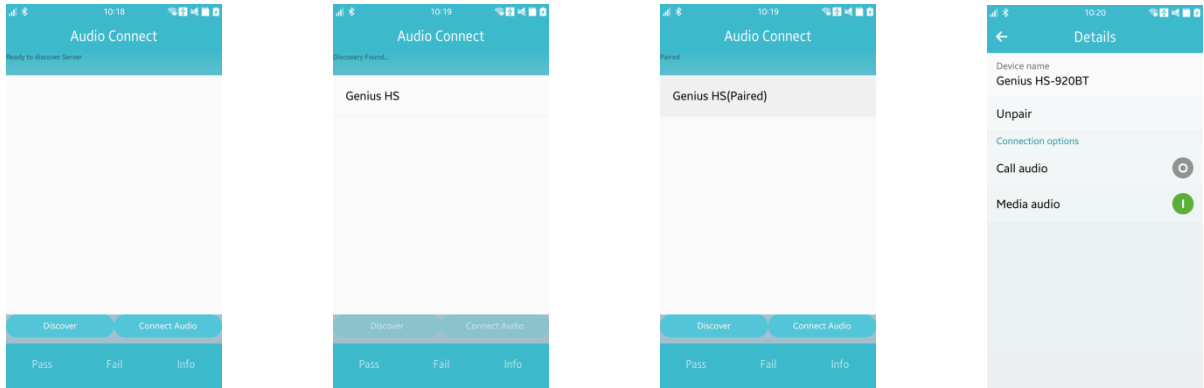


Figure 38: Audio Connect

Bluetooth Authorization:

To perform the test

1. Select **Authorization** from the test case list.
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of Bluetooth devices.
4. Select the desired device from the list.
5. Press button **Authorize** and the desired device is Authorized.
6. If all the steps are performed correctly then **Pass**, otherwise **Fail**.

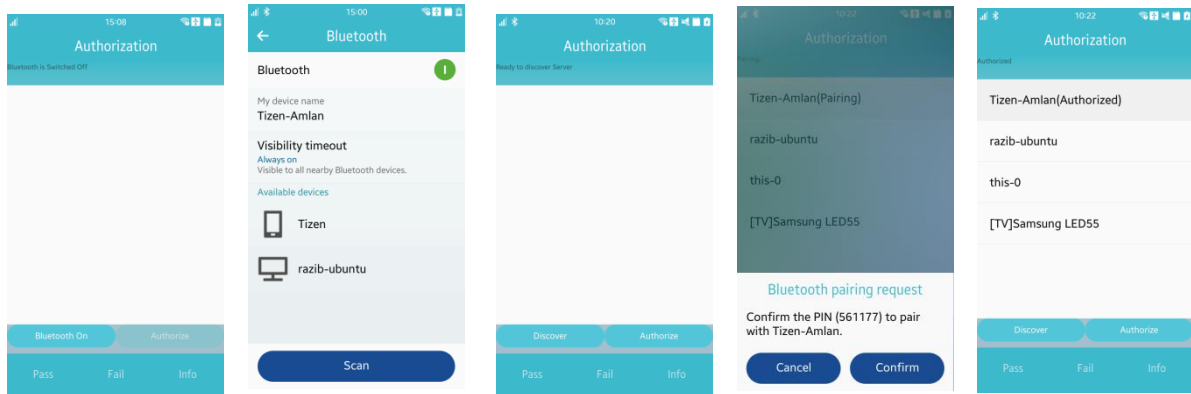


Figure 39: Authorization Test

Bluetooth Profiles:

To perform the test

- 1. Select **Bluetooth Profile** form the test case list.
- 2. If Bluetooth is off, turn on manually.
- 3. Press button **Discover** to see the list of Bluetooth Audio devices.
- 4. Select an audio profile enabled device like, Bluetooth Headset from the list for pairing.
- 5. After successful pairing, connected profiles will be shown.

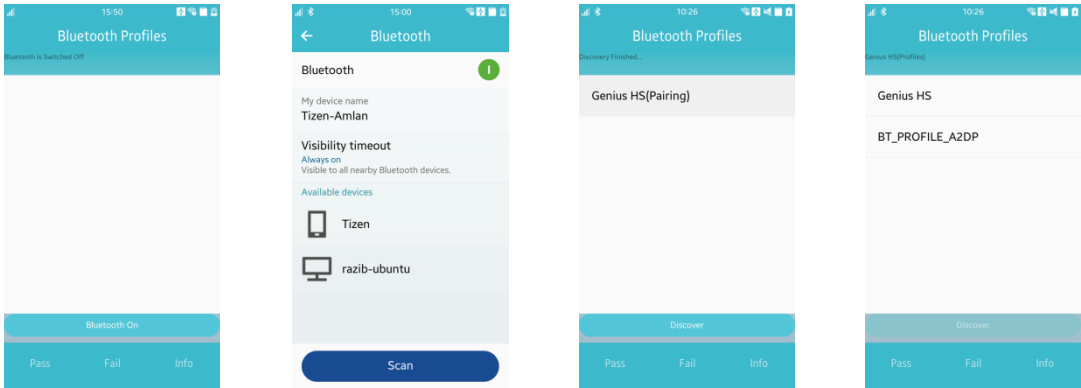


Figure 40: Profiles Test

Bluetooth SDP:

To perform this test:

- 1. Select **Bluetooth SDP** from the test case list.
- 2. If Bluetooth is off, turn on manually.
- 3. Press button **Discover** to see the list of Bluetooth devices.
- 4. Clicked on the desire device to make pair with that device.
- 5. After paring is completed press Connected Services, Bluetooth services will be shown in a list.
- 6. If Bluetooth profiles are shown then press PASS otherwise FAIL.

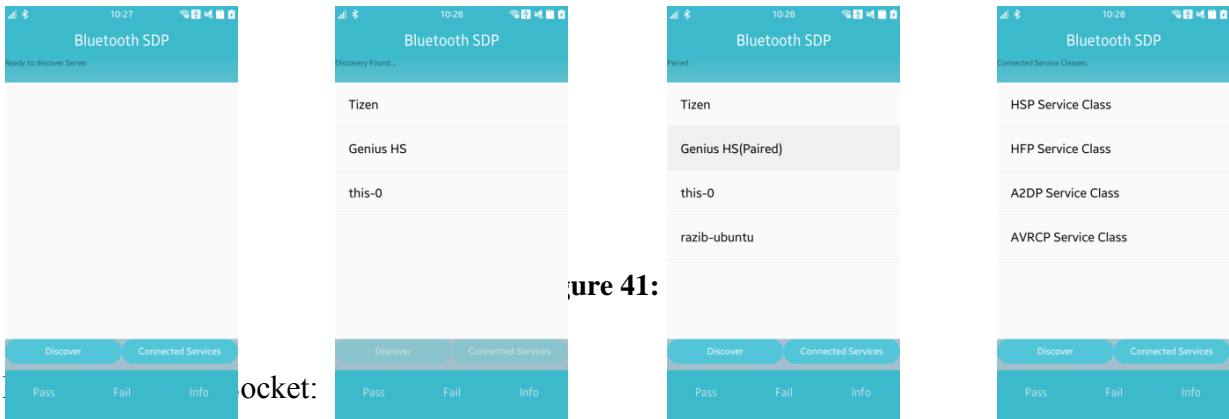


Figure 41:

To perform the test

1. Select **Client Socket** from the test case list in one phone.
2. Select Server Socket from the test case list in other phone.
3. If Bluetooth is off, turn on manually.
4. Press button **Discover** to see the list of Bluetooth devices.
5. Select the desired device from the list.
6. Press button **Send Data**.
7. Check if any file is pushed in the other device.
8. If any file is pushed then **Pass** otherwise **Fail**.

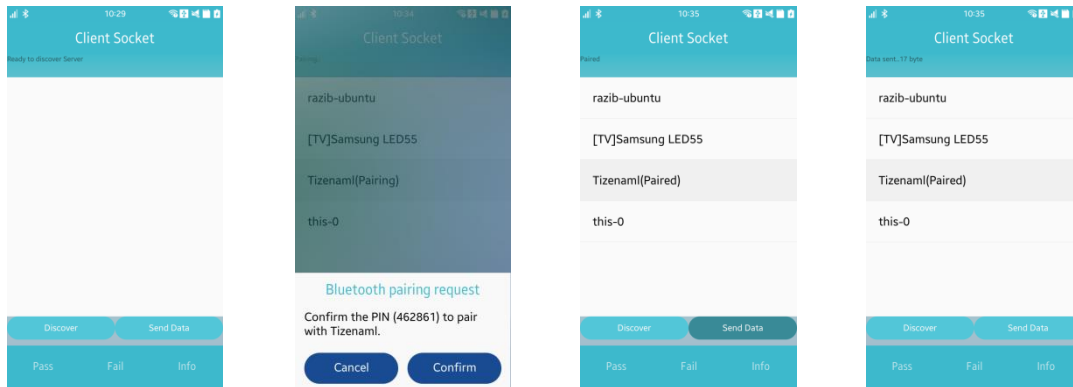


Figure 42: Client Socket

Bluetooth Server Socket:

To perform the test

1. Select **Server Socket** from the test case list in one phone.
2. Select Client Socket from the test case list of other phone.
3. If Bluetooth is off, turn on manually.
4. Press **Set Visible** and wait for the connection pop-up message.
5. If the message is shown properly then **Pass** otherwise **Fail**.

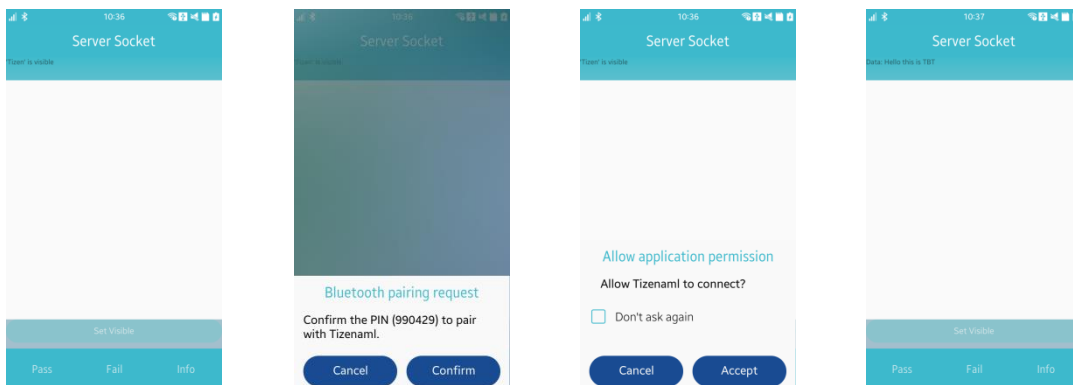


Figure 43: Server Socket

Bluetooth HID

To perform this test:

1. Select **HID Connect** from the test case list
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of Bluetooth HID devices.
4. Select the desired device from the list.
5. If you are trying to connect a keyboard, a pop-up will appear, press the same code on the keyboard and press enter.
6. **"HID connected"** will be written on the label, just above the device list.
7. Then go to the default messaging application, try to write message from the HID keyboard.
8. If input can be inserted using remote input device correctly then PASS otherwise FAIL.

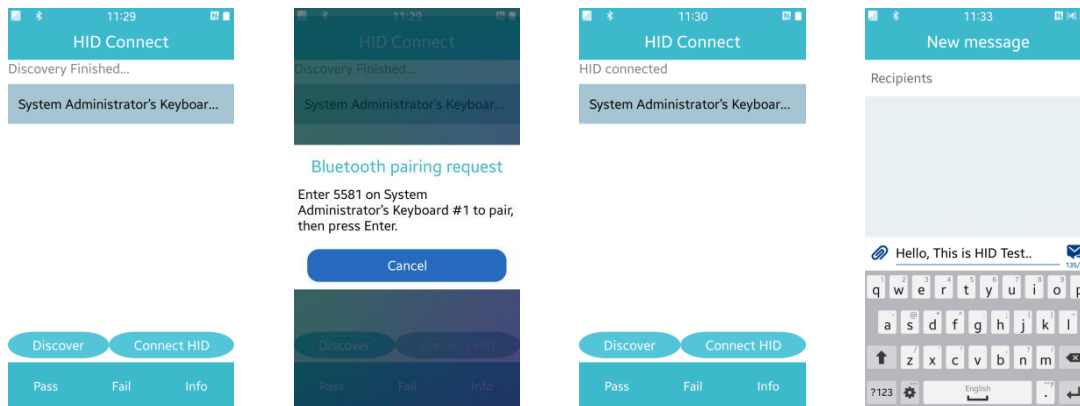


Figure 44: HID

Bluetooth Health

To perform the test

1. Select **Health** from the test case list
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of devices.
4. Select the desired device from the list.
5. Press button **Connect HDP** if not already connected.
6. Press button **Get Data** and data received will be shown on label then PASS otherwise FAIL.

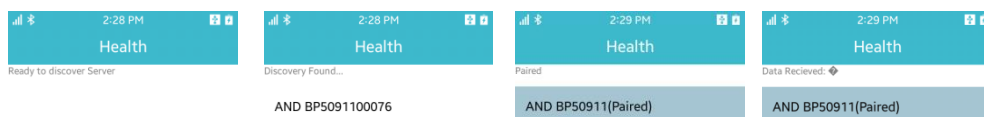


Figure 45: Health

3.2.1.6. Bluetooth Error Callbacks

This section is for testing the errors generated while invoking the callbacks and preconditions in Bluetooth.

Create Bond CB

To test create bond in bluetooth:

1. Select bluetooth off from settings.
2. Press Create Bond CB.
3. Error message "result = BT_ERROR_NOT_ENABLED" is displayed.
4. Select Bluetooth on from settings.
5. Press create bond CB.
6. Message of invoked callback with result is displayed in few seconds.

If all the steps are performed correctly then Pass, otherwise Fail.

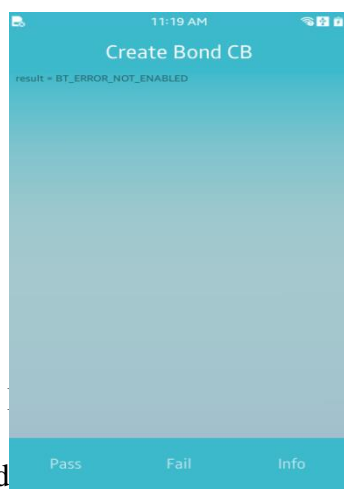


Figure 46: CreateBondCB



Destroy

To test d

1. Select bluetooth off from settings.
2. Press Destroy Bond CB.
3. Error message "result = BT_ERROR_NOT_ENABLED" is displayed.

4. Select Bluetooth on from settings.
5. Press Destroy Bond CB.
6. Message of invoked callback with result is displayed.
7. Set BT off now.
8. Message of invoked callback with result BT_ERROR_TIMED_OUT.

If all the steps are performed correctly then Pass, otherwise Fail.



Figure 47: DestroyBondCB

Discover Devices CB

To test discover devices in bluetooth:

1. Select bluetooth off from settings.
2. Press Discover Devices CB.
3. Error message "result = BT_ERROR_NOT_ENABLED" is displayed.
4. Select Bluetooth on from settings.
5. Press Discover Devices CB.
6. Message of invoked callback is displayed.

If all the steps are performed correctly then Pass, otherwise Fail.

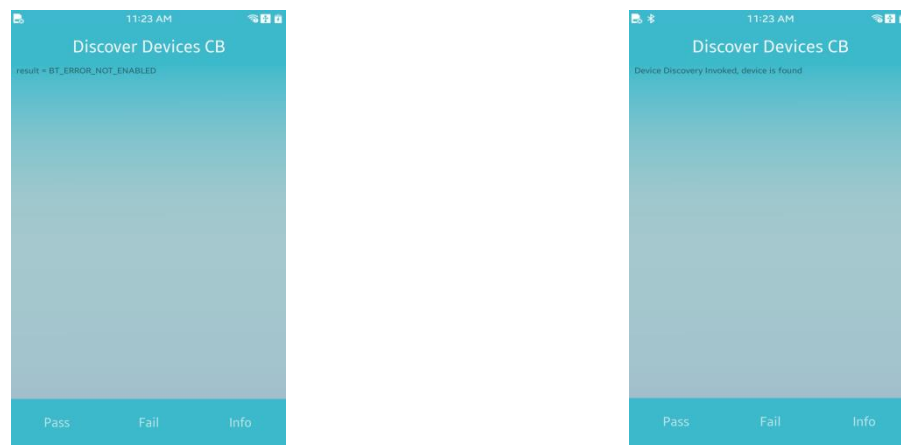


Figure 48: DiscoverDevicesCB

Get Device CB

To test get device in bluetooth:

1. Select bluetooth off from settings.
2. Press Get Device CB.
3. Error message "result = BT_ERROR_NOT_ENABLED" is displayed.
4. Select Bluetooth on from settings.
5. Press Get Device CB.
6. Message of invoked callback is displayed.

If all the steps are performed correctly then Pass, otherwise Fail.

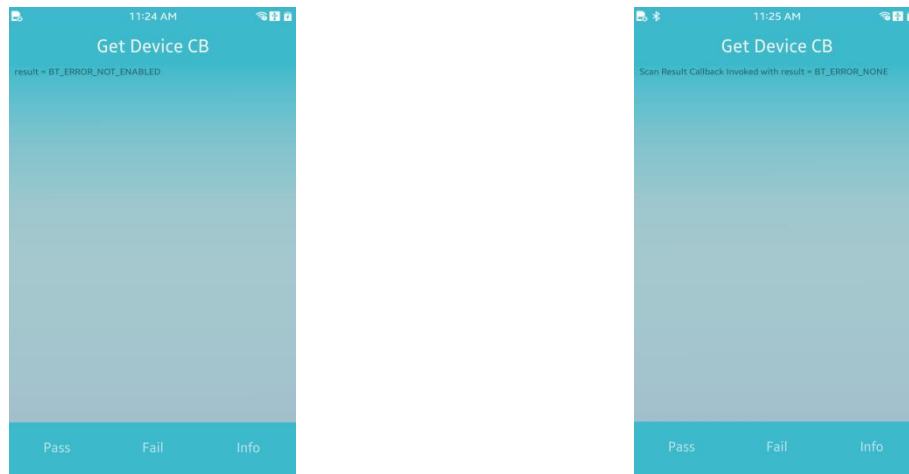


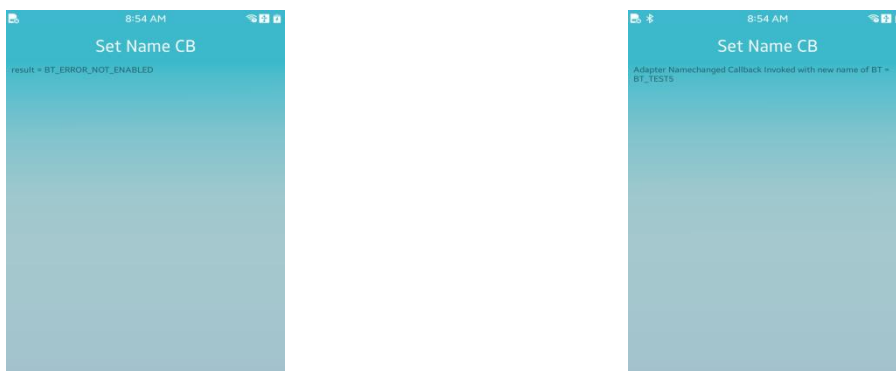
Figure 49: GetDeviceCB

Set Name CB

To test set name in bluetooth:

1. Select bluetooth off from settings.
2. Press Set Name CB.
3. Error message "result = BT_ERROR_NOT_ENABLED" is displayed.
4. Select Bluetooth on from settings.
5. Press Set Name CB.
6. Message of invoked callback is displayed with Name BT_TEST5

If all the steps are performed correctly then Pass, otherwise Fail.



Add Advertising Service UUID

1. Press Add Advertising Service UUID.
2. Error message of invalid parameter with passed value is displayed.

Add Advertising Service UUID

(result for UUID =
1111FFFFFFFFFFFFFFFFF11100805F9B34FB) is =
BT_ERROR_INVALID_PARAMETER

Pass Fail Info

3.2.1.7. Wi-Fi Activation

1. Select **Wifi** Test from the test case list.
2. To enable Wi-Fi, press button **Wifi On**.
To disable Wi-Fi, press button **Wifi Off**.

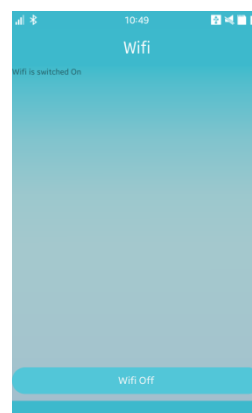


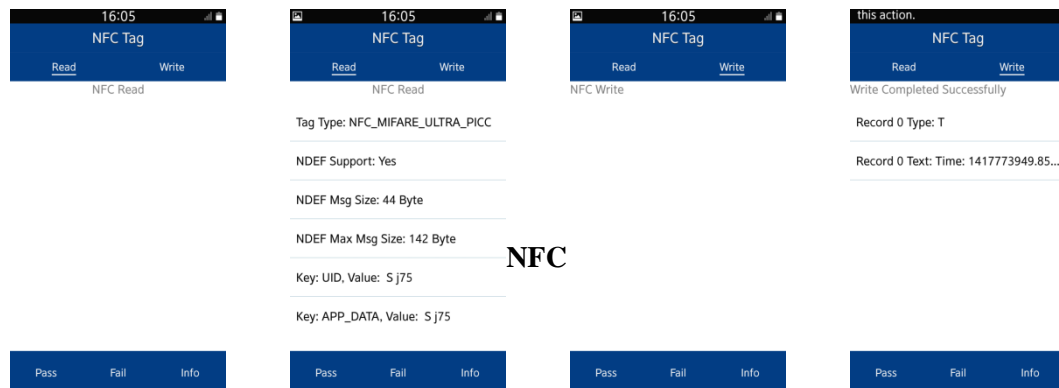
Figure 52: WIFI

3.2.1.8. NFC

NFC Tag

To perform the test, switch on NFC and

1. Select NFC Tag from the test case list and it is by default in read mode
2. Take the device to a NFC tag
3. A list will appear showing information about tag type, NDEF support, NDEF message size, maximum size of NDEF message, key, value, record type, record etc.
4. Then select the tab Write and take the device to a NFC tag
5. Then a string of Text type will be written in the NFC tag and a success message will be shown with written message.
6. If you remove device from tag it shows “Device Detached”
7. If all the steps are performed correctly then Pass, otherwise Fail



NFC P2P

To perform the test,

1. Take two NFC supported devices and switch on NFC in both
2. Select NFC P2P from the test case in two devices and click Server in one device and Client in other device
3. Touch the back of two devices, Server TC will output Data Received Successfully along with received data and Client TC will output Data Sent successfully.
4. If you detach devices it shows “Device Detached”
5. If all the steps are performed correctly then Pass, otherwise Fail.

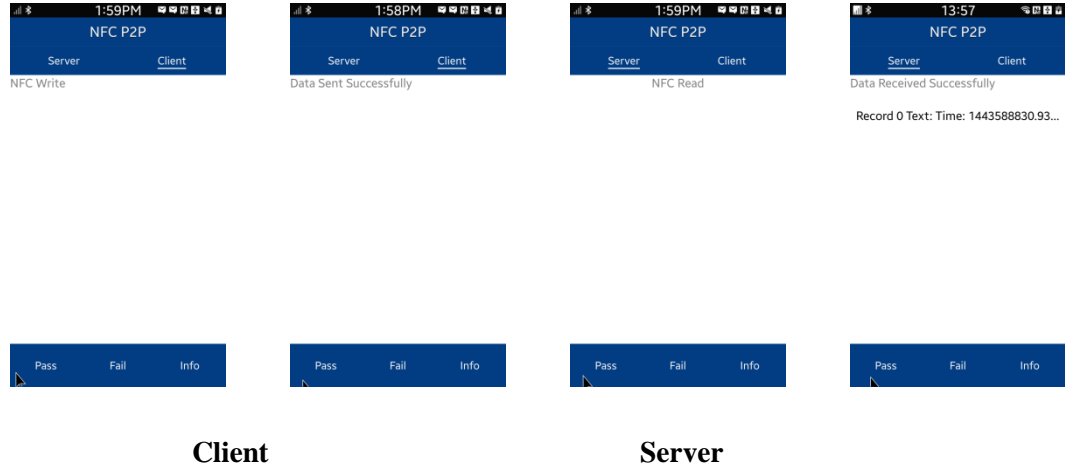


Figure 54: NFC P2P

NFC HCE Preferred

To perform the test

1. Turn NFC On.
2. Install tbt_hctestappA and tbt_hctestappB both.
3. Set tbt_hctestappA to default payment app by going Connection > NFC > Payment option from settings.
4. Connect Device to NFC Reader/Writer.
5. Send APDU command as “00 A4 04 00 07 A0 00 00 00 04 10 10” from NFC Reader/Writer.
6. tbt_hctestappA will be launched and “11 12 90 00” data will be received in NFC Reader as response.
7. Close the tbt_hctestappA app and run “NFC HCE Preferred” module from TBT.
8. Launch the preferred nfc hce app.
9. Repeat the step 4 to 6. This time data will be received in preferred app not in default app.
10. Give pass if everything work as above otherwise fail.

3.2.1.9. Display Test

The following requirements are mandatory for the **display** test:
Minimum screen size: 240 x 320 (QVGA)

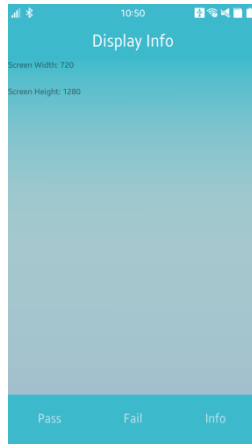


Figure 55: Display Test

To test the display, check whether the screen size is larger than the minimum size of 240x320.

3.2.1.10. Graphics

To test the **Graphics** ensure that a cube is rotating properly.

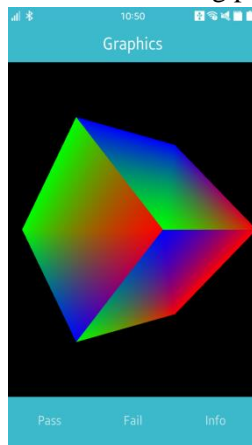


Figure 56: Graphics

3.2.1.11. Testing the Input Device

Edit field:

To test the edit field, three kinds of keypad will appear. If the keys can be pressed and inputs are shown, then the test is **Pass**, otherwise **Fail**.

1. Select **Number Keypad** from **test case list** for Number Keypad Test.
2. Select **PhoneNumber Keypad** from **test case list** for Phone Number Keypad Test.
3. Select **IP Keypad** from **test case list** for IPV4 Keypad Test.

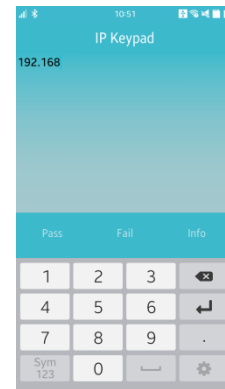
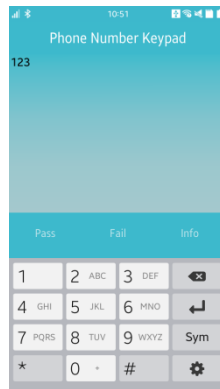
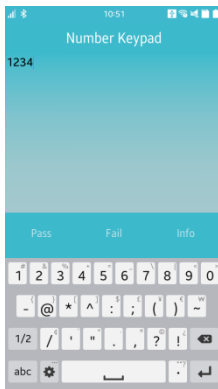


Figure 57: Input Device

3.2.1.12. Multimedia Features

This chapter describes the various tests that can be performed to check the multimedia features. If the functionality works as expected, press **Pass**, otherwise, press **Fail**.

Video

The local video test enables you to confirm that file formats, such as Mpeg4, H263, and H264 are playing normally. To test the video formats from the test case list select,

1. **H263Video** for testing video format of H263.
2. **MPEG4 Video** for testing video format of Mpeg4
3. **H264 Video** for testing video format of H264.
4. After selecting each test, press **Play** to play the video.
5. Press **Pause** to pause the video.
6. Press **Stop** to stop the video.

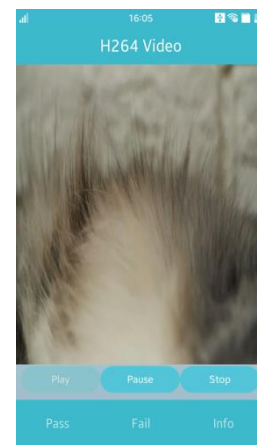


Figure 58: Local Video

3.2.1.13. Image View

The image view test enables you to confirm that file formats, such as .jpeg, .bmp, .gif, and .png can be viewed normally.

To perform the image view test,

1. Select **ImageView PNG** from **test case list** and an .png image will be shown automatically
2. Select **ImageView GIF** from **test case list** and an .gif image will be shown automatically
3. Select **ImageView BMP** from **test case list** and an .bmp image will be shown automatically
4. Select **ImageView JPG** from **test case list** and an .jpg image will be shown automatically

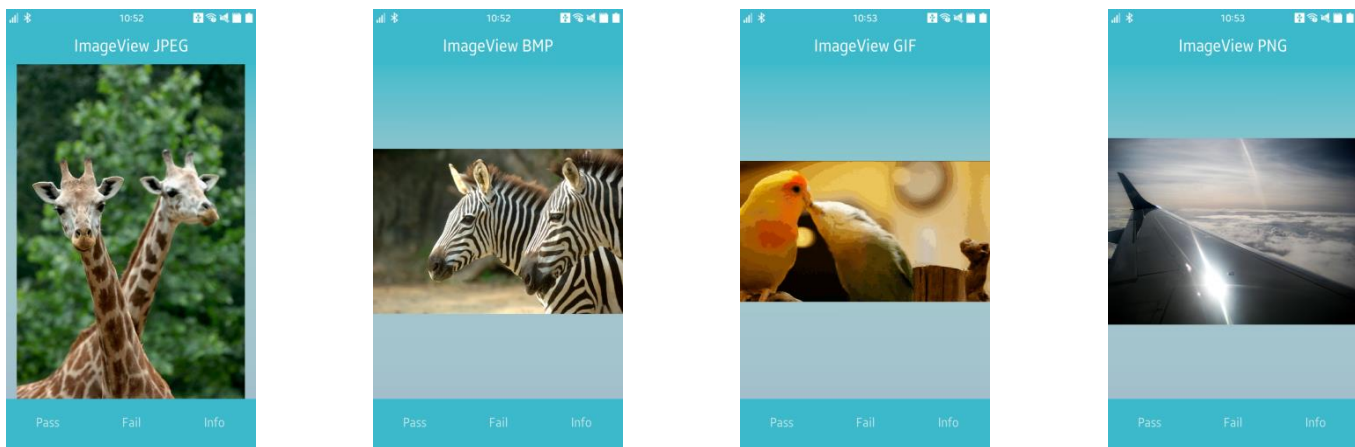


Figure 59: Image View

3.2.1.14. Data Control

TBT Data Control module requests different operations on the data provided by DataUIControl application. If the request is processed successfully then **Pass** otherwise **Fail**

Insert Operation

To perform the operation

1. Select **Sql Insert** from the test case list
2. Press button **Start**.
3. If the request is sent successfully and information is shown normally then **Pass**.
4. If any error is shown, then **Fail**.

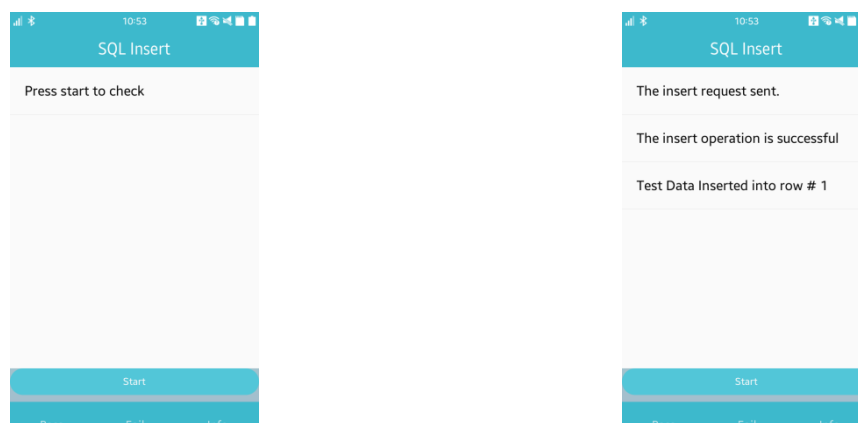


Figure 60: SQL Insert

Delete Operation

To perform the operation

1. Select **Sql Delete** from the test case list
2. Press button **Start Test**.
3. If the request is sent successfully and information is shown normally then **Pass**.
4. If any error is shown, then **Fail**.

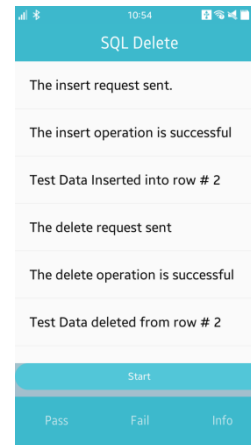
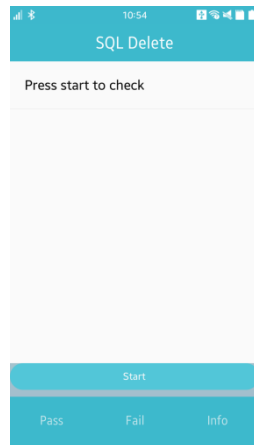


Figure 61: SQL Delete

Update Operation

To perform the operation

1. Select **Sql Update** from the test case list
2. Press button **Start**.
3. If the request is sent successfully and information is shown normally then **Pass**.
4. If any error is shown, then **Fail**.

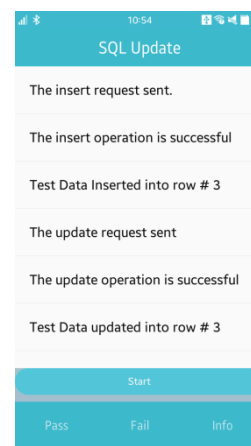
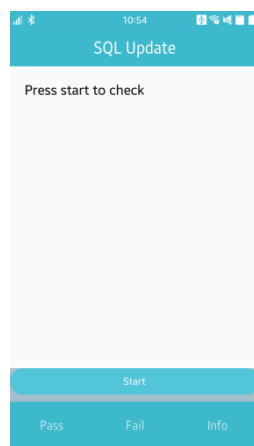


Figure 62: SQL Update

Select Operation

To perform the operation

1. Select **Sql Select** from the test case list
2. Press button **Start**
3. If the request is sent successfully and information is shown normally then **Pass**.
4. If any error is shown, then **Fail**.

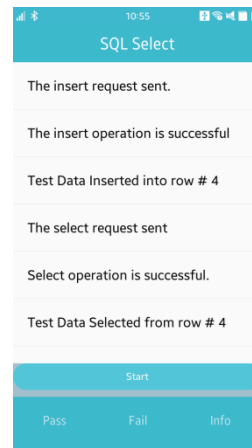
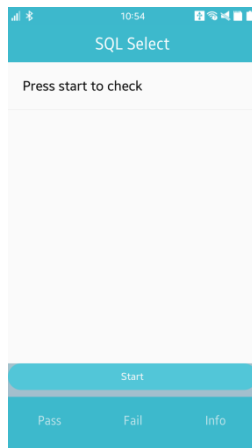
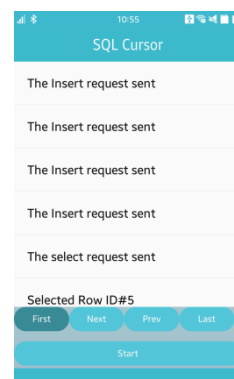
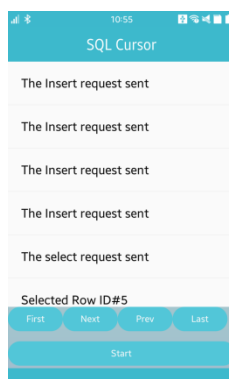
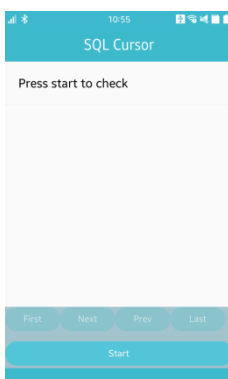


Figure 63: SQL Select

Cursor Operation

To perform the operation

1. Select **Sql Cursor** from the test case list
2. Press button **Start**.
3. It will show the list of row id of the selected items.
4. Press **First** to get the row id of the first selected item.
5. Press **Last** to get data t the row id of the last selected item.
6. Press **Next** and **Prev** to navigate between the selected items.
7. If all the operations are successful then **Pass** otherwise **Fail**.



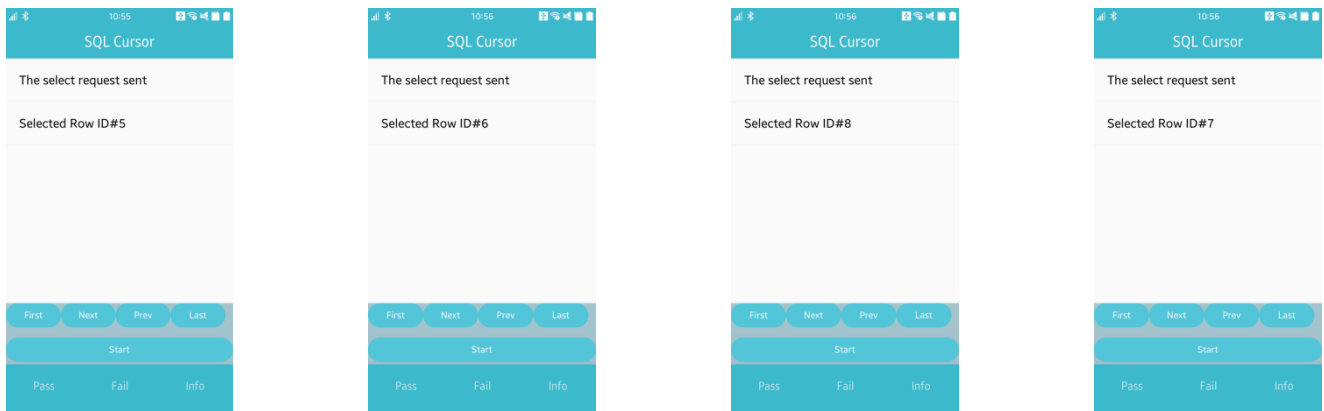


Figure 64: SQL Cursor

Data Control Map

To perform the test,

1. Select **SQL Map** from the test case list.
2. Press button **Start Test**. If three values are shown then **Pass**.
3. If all the values are not shown, then **Fail**.

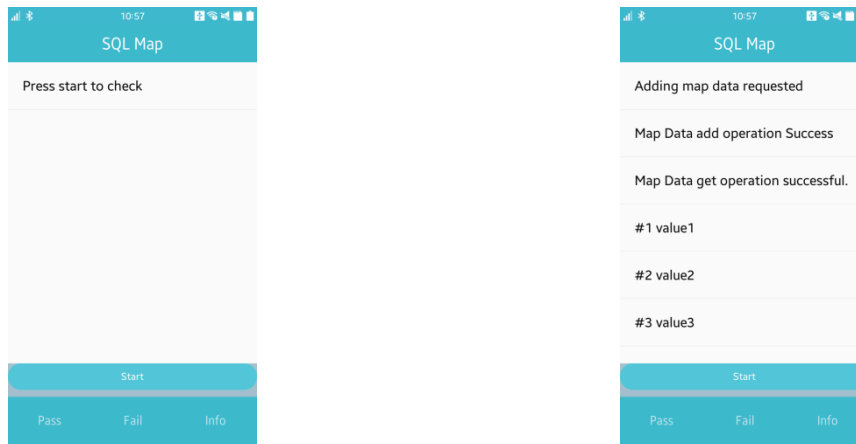


Figure 65: SQL Map

3.2.1.15. Application Controls

This chapter describes the various tests that can be performed to check that the application control operations work normally.

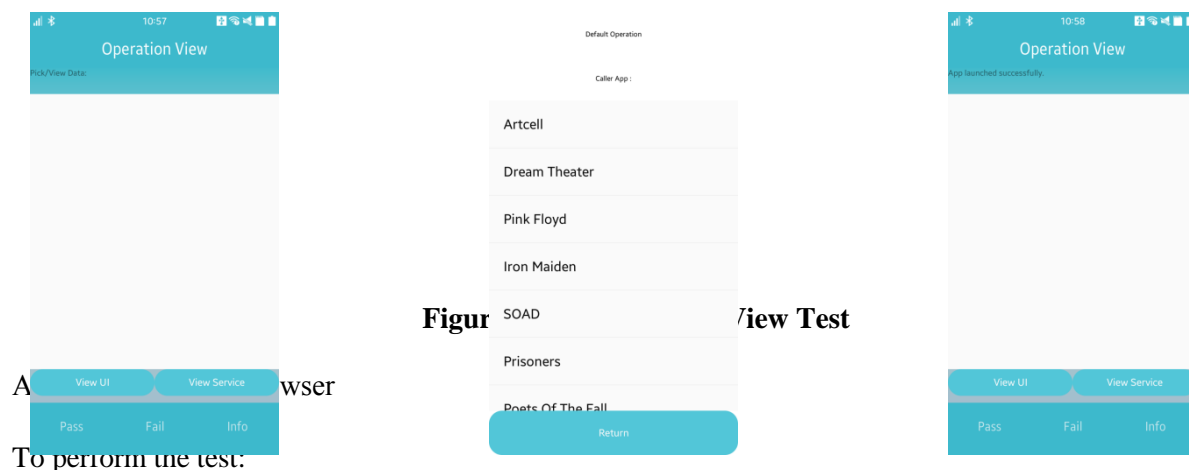
The view operation

If the functionality works as expected, press **Pass**. Otherwise, press **Fail**.

App Control View Test

To perform the test:

1. Select Operation View from the test case list
2. Press button **View UI**.
3. If UI is shown, Click item and press **Return** button.
4. Then press button **View Service**.
5. If App launched successfully, then **Pass** otherwise **Fail**.



To perform the test:

1. Confirm Internet is connected and Select Operation View Browser from the test case list confirm
2. Select list items one after another **View UI**.
3. Confirm browser is launched each time.

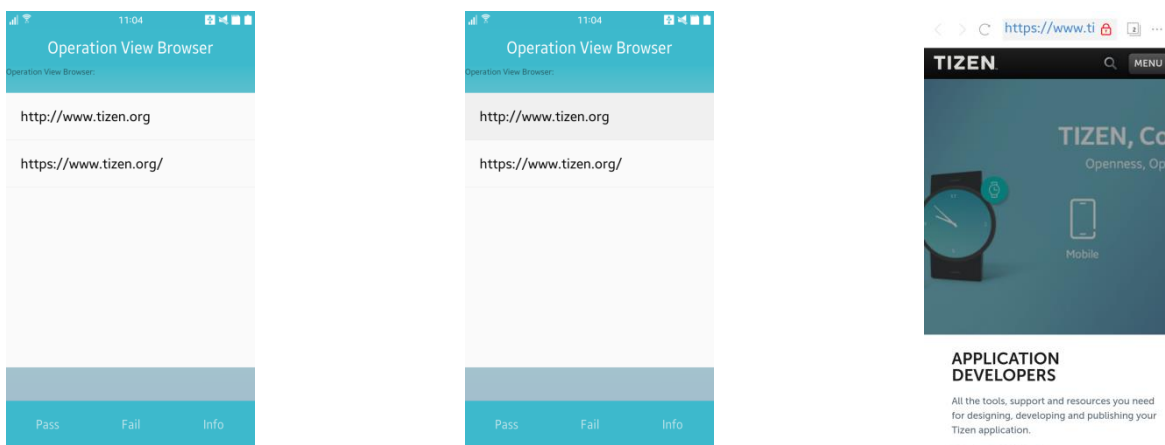


Figure 67: App Control View Browser Test

App Control View Image

To perform the test:

1. Select Operation View Image from the test case list confirm
2. Select list items one after another **View UI**.
3. Select operationpickviewapp and press Always or Just Once
4. Corresponding Image will be shown.

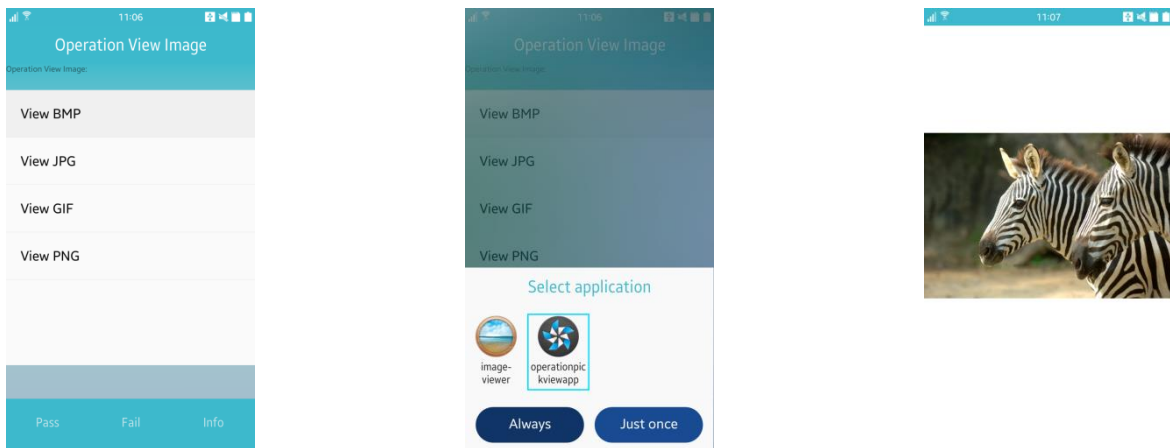


Figure 68: App Control View Image Test

App Control View Sound

To perform the test:

1. Select Operation View Sound from the test case list confirm
2. Select list items one after another **View UI**.
3. Select operationpickviewapp and press Always or Just Once
4. Corresponding Sound can be heard.

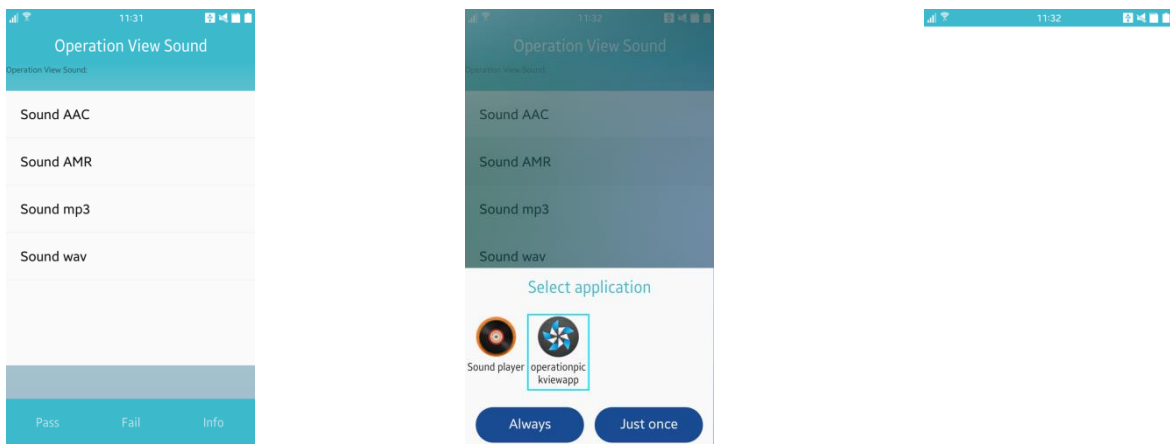


Figure 69: App Control View Sound Test

App Control View Video

To perform the test:

1. Select Operation View Video from the test case list confirm
2. Select list items one after another **View UI**.
3. Select operationpickviewapp and press Always or Just Once
4. Corresponding Video can be heard.

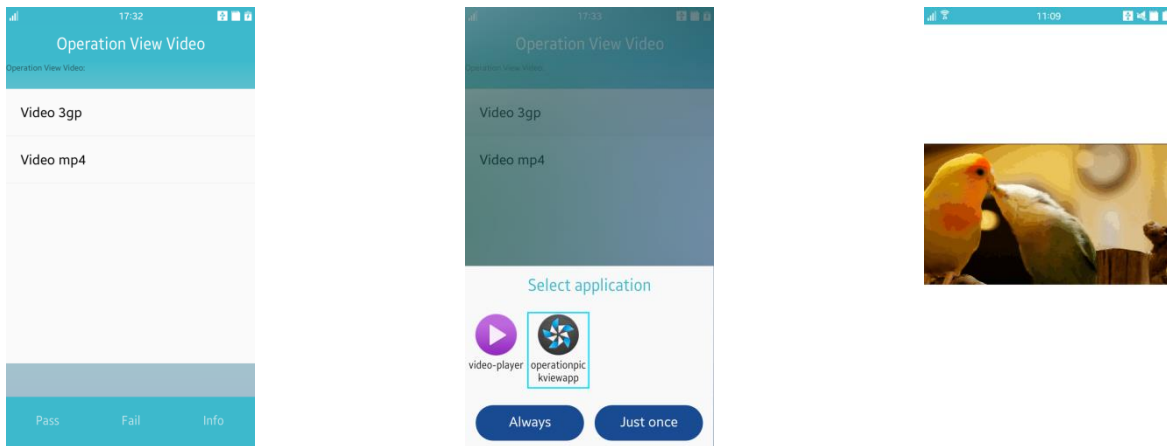


Figure 70: App Control View Video Test

3.2.1.16. The Pick Operation

If the functionality works as expected, press **Pass**, otherwise, press **Fail**.

App Control Pick Test

To perform the test:

1. Select Operation Pick from the test case list
2. Press **Multiple** and select multiple items and press Select Multiple.
3. If multiple data is returned, then **Pass** otherwise **Fail**
4. Press **Single** and select single item and press Select Single.
5. If single data is returned, then **Pass**, otherwise **Fail**.

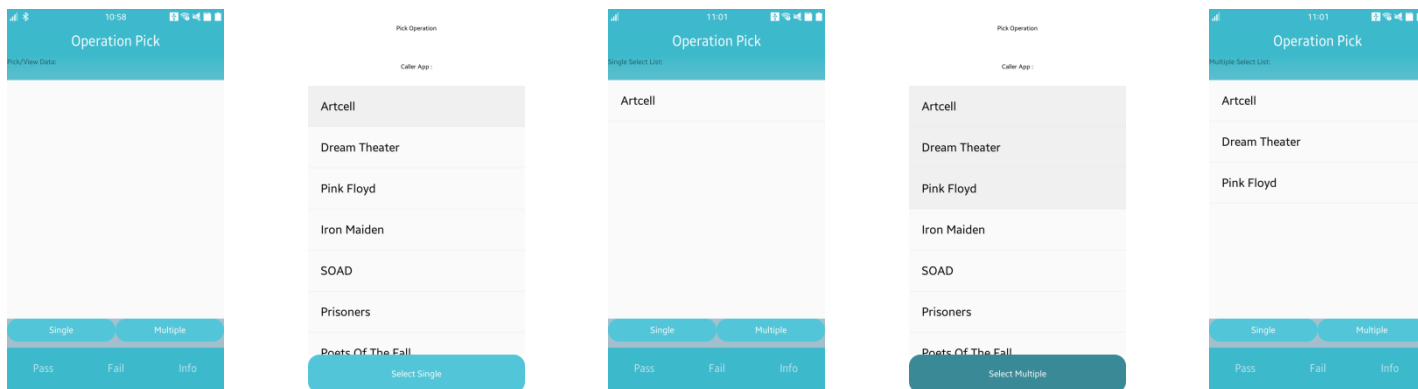


Figure 71: App Control Pick Test

App Control Pick All

To perform the test:

1. Select Operation Pick All from the test case list.
2. Select all from the list.
3. Select operationpickviewapp and press Always or Just Once
4. Operationpickviewapp showing all types of file, select any one.
5. Selected file information will be shown in TBT.

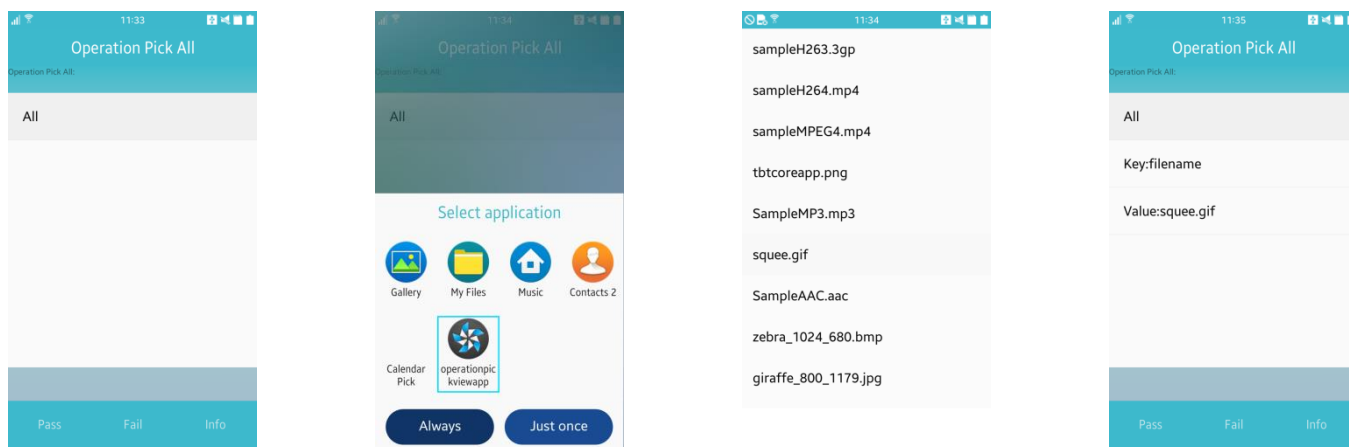


Figure 72: App Control Pick All Test

App Control Pick Image

To perform the test:

1. Select Operation Pick image from the test case list
2. Select Image from the list.
3. Select operationpickviewapp and press Always or Just Once

4. Operationpickviewapp showing all types of image file, select any one.
5. Selected file information will be shown in TBT.

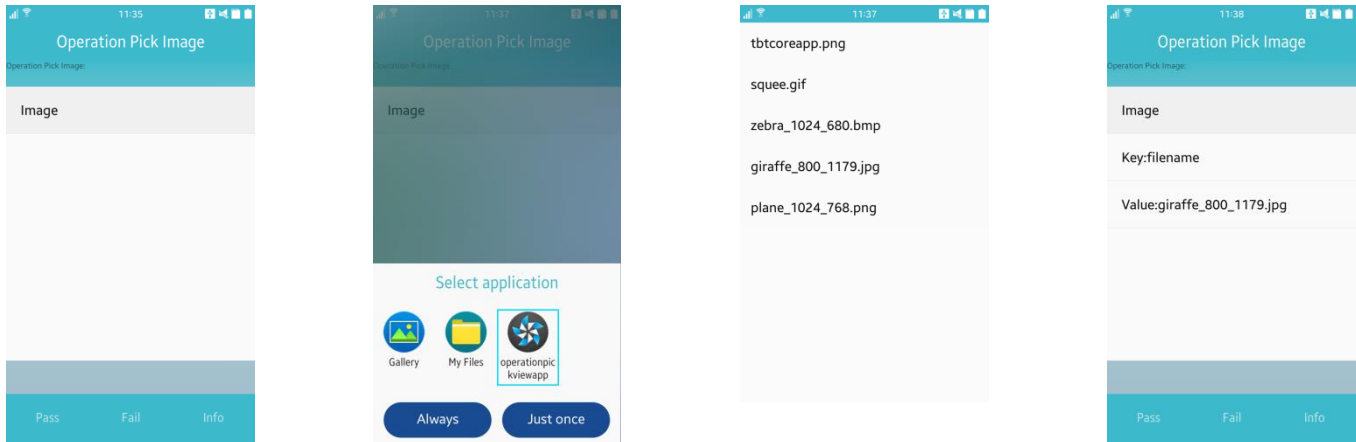


Figure 73: App Control Pick Image Test

App Control Pick Video

To perform the test:

1. Select Operation Pick video from the test case list
2. Select Video from the list.
3. Select operationpickviewapp and press Always or Just Once
4. Operationpickviewapp showing all types of video file, select any one.
5. Selected file information will be shown in TBT.

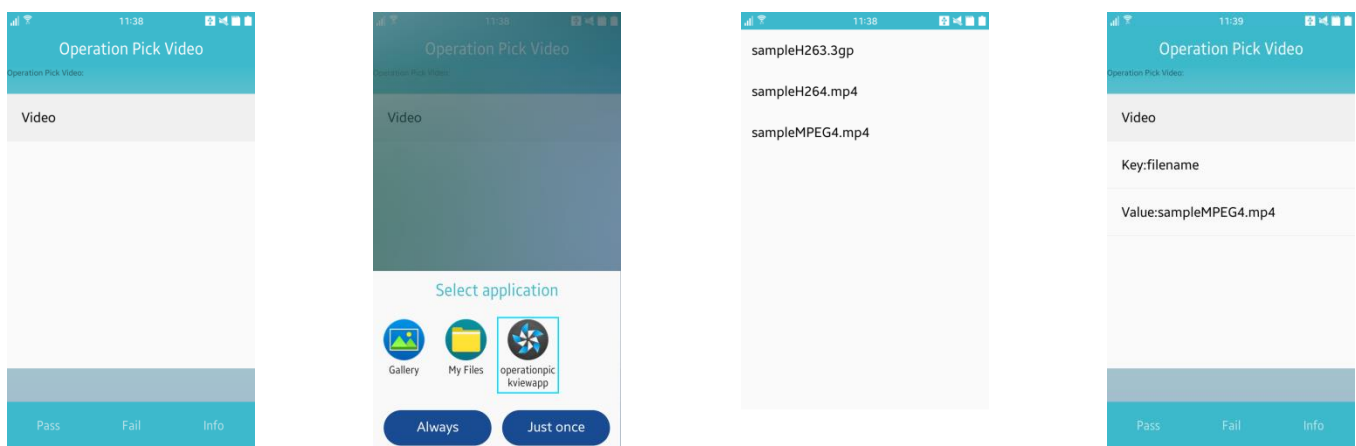


Figure 74: App Control Pick Video Test

App Control Pick Audio

To perform the test:

1. Select Operation Pick audio from the test case list
2. Select Audio from the list.
3. Select operationpickviewapp and press Always or Just Once
4. Operationpickviewapp showing all types of audio file, select any one.
5. Selected file information will be shown in TBT.

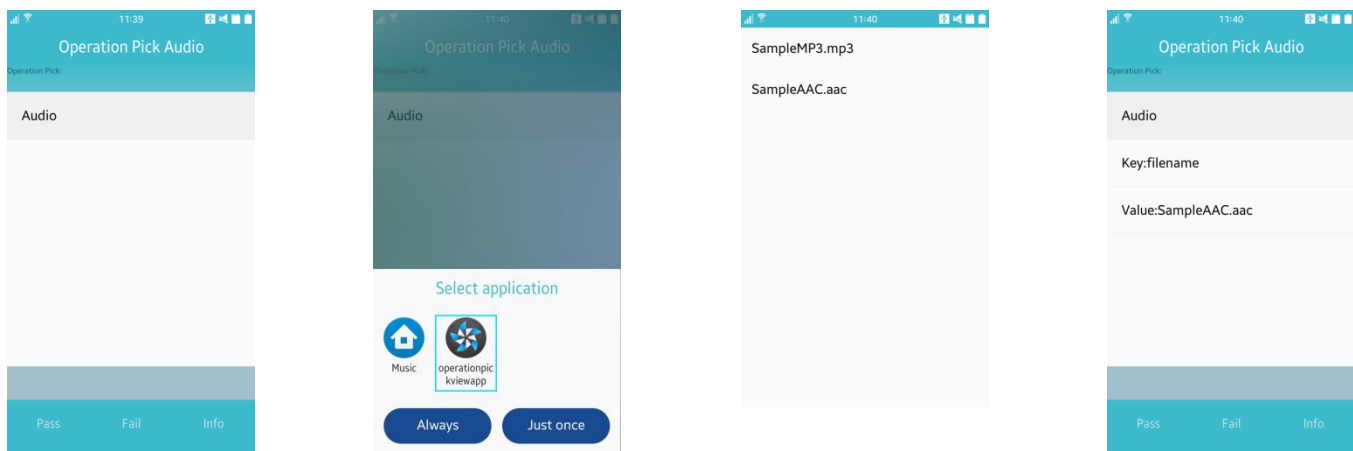


Figure 75: App Control Pick Video Test

3.2.1.17. Sensors

This chapter describes the various tests that can be performed to check that the device sensors work normally. If the functionality works as expected, press **Pass**. Otherwise, press **Fail**.

Accelerometer

This test verifies that the acceleration sensor is working normally.

To perform the test,

1. Select **Accelerometer** from the test case list
2. As you move the device, the triangle displayed on the screen must point down.
3. If it points in another direction, the accelerometer is not properly configured.

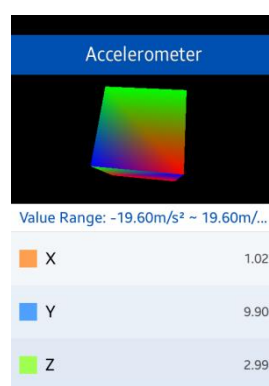
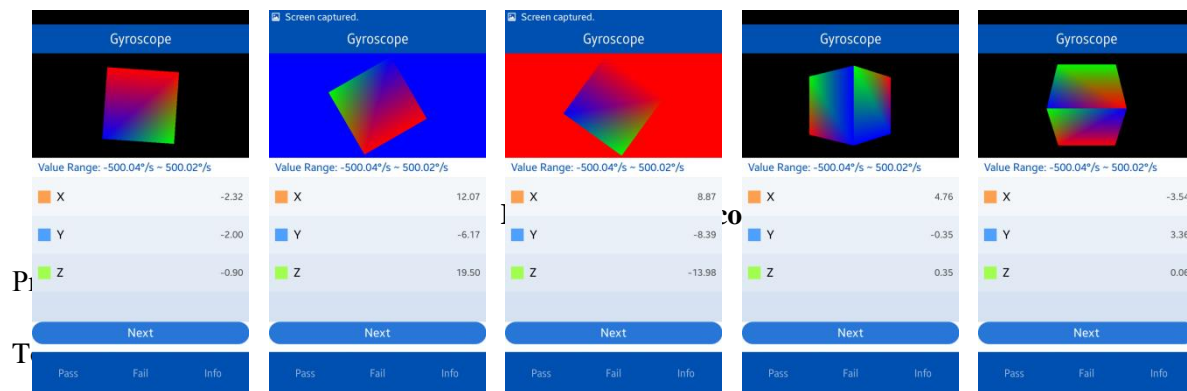


Figure 76: Accelerometer

Gyroscope

To perform the test

1. Select **Gyroscope** from the test case list
2. If the device is stable, then the background of the cube is black.
3. **Move** the device to the direction of the cube movement and background color will be **blue**.
4. **Move** the device to the opposite direction of the cube movement and background color will be **red**.
5. Press button **Next** to change direction of cube movement and do the previous steps accordingly.



1. Select **Proximity** from the test case list and an image showing a bulb will appear
2. Cover the upper portion of the device with hand and an image showing a glowing bulb will appear.
3. If the hand is moved away, the previous image will appear again.



Figure 78: Proximity

Light

To perform the test

1. Select **Light** from the test case list.
2. **Move** the device to the light source.
3. The color of the object slowly turns into red according to the intensity of light.



Figure 79: Light

Magnetometer

To perform the test

1. Select **Magnetometer** from the test case list
2. Move device and the value of X, Y and Z component of earth magnetic field will be change accordingly.



Figure 80: Magnetometer

Pressure

To perform the test

1. Select **Pressure** from the test case list
2. Current air pressure is displayed automatically if device supports pressure sensor.



Figure 81: Pressure

Ultra Violet

To perform the test

1. Select **Ultraviolet** from the test case list.
2. **Move** the device to the ultraviolet light source.
3. The color of the object slowly turns into violet according to the intensity of ultraviolet light.

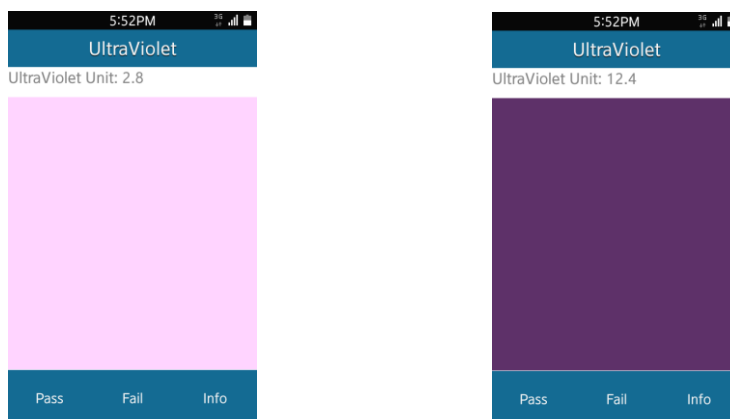


Figure 82: Ultra Violet

3.2.1.18. Platform Resources

This chapter describes the various tests that can be performed to check the platform resources. If the functionality works as expected, press **Pass**. Otherwise, press **Fail**.

UI Animations

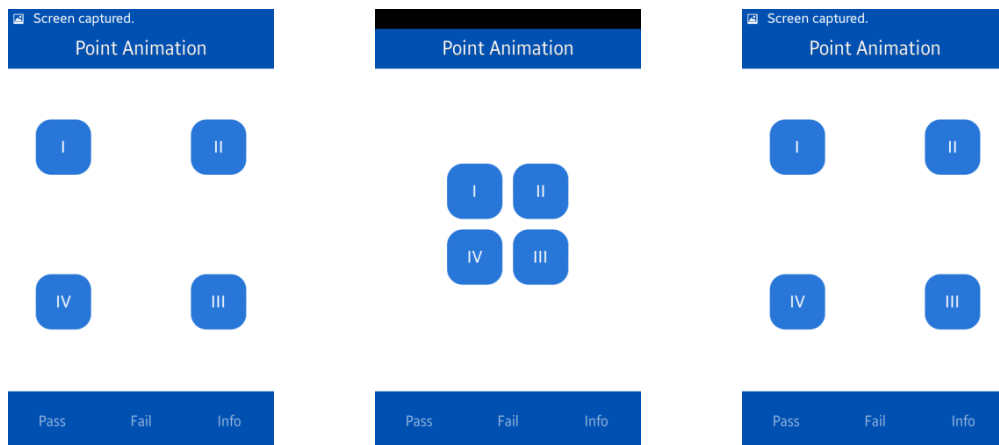
To perform the UI test:

1. Select Fade Animation, Dimension Animation, Rectangle Animation, Point Animation and Rotation Animation respectively for the respected animations.
2. After selecting each test, the animation will be shown automatically.
3. Press **Pass** if all tests are successful.

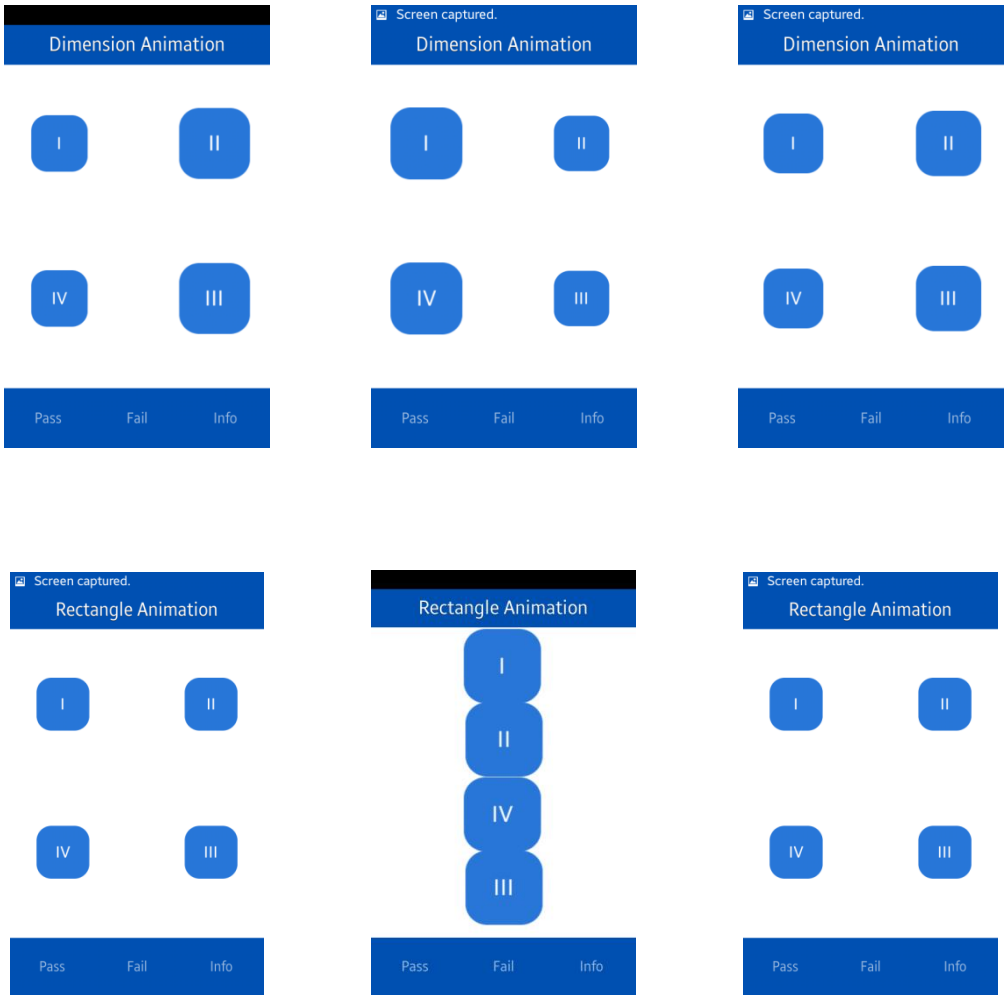
Fade animation:



Point animation:



Dimension animation:



Rotate animation:

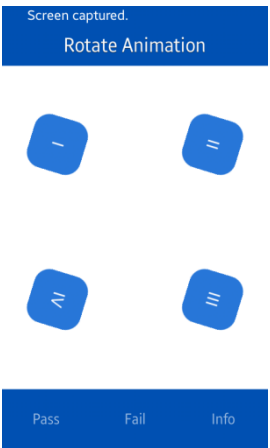


Figure 83: UI Animations

UI Components

This section describes the tests you can perform on UI components.

Image Resizing

This test enables you to resize the image as bigger and smaller.

To perform the **Resize Drawable** test:

1. Select **Resize Drawable** from the test case list.
2. Check that the images are resized automatically and normally.

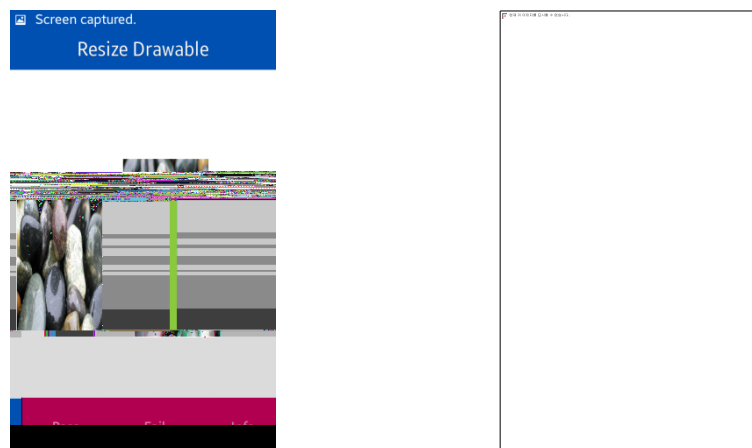


Figure 84: Image Resize

Shapes

This test shows different shapes in the screen.

To perform the **Shape** test:

1. Select the **Shape** from the test case list
2. If different shapes appear automatically and correctly, then **Pass** otherwise **Fail**.

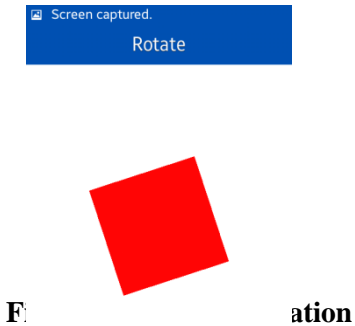


Figure 85: Testing Shapes

Rotation

To perform the rotation test:

- 1. Select **Rotate** from the **test case list** and check if the objects are rotating properly.
- 2. If yes then **Pass** otherwise **Fail**.



Alpha Drawing



To perform test

- 1. Select **Alpha Draw able** from **test case list** and objects of different brightness is shown automa tically.
- 2. If it is shown, then the test is successful.

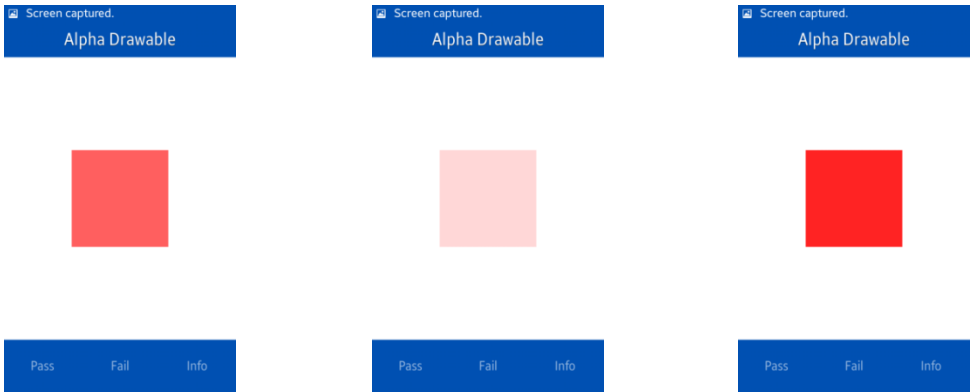


Figure 87: Testing Alpha drawing

Fonts

To perform the test,

- 1. Select **Font** from the **test case list** and text of different font sizes and colors are shown.
- 2. If it is shown, then **Pass** otherwise **Fail**.

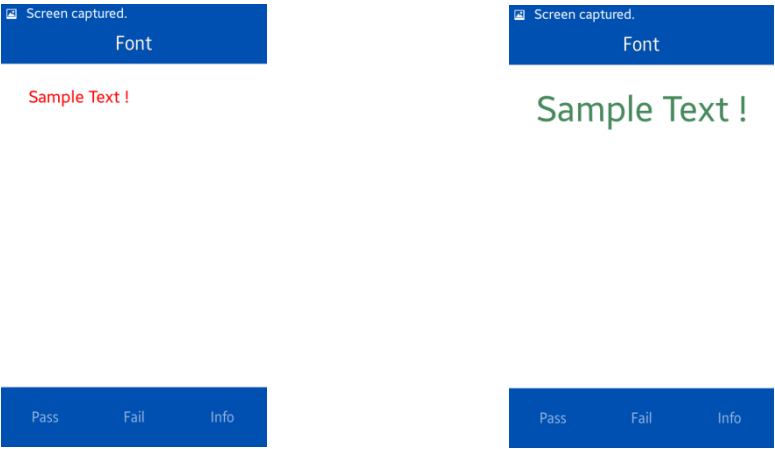


Figure 88: Testing Fonts

Line Drawings

To perform the test,

- 1. Select **UI (Line Drawable)** from the **test case list** and lines of different colors, size are drawn in different directions automatically.
- 2. If yes then **Pass** otherwise **Fail**.

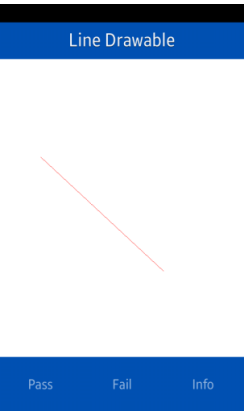


Figure 89: Testing Line Drawable

3.2.1.19. EFL / Event

This chapter describes the various tests that can be performed to check some EFL library functions. If the functionality works as expected, press **Pass**. Otherwise, press **Fail**.

Touch

To perform the touch test:

1. Select Touch from the test case list.
2. Touch and drag to draw random curves on the screen.
3. Check that the first press is green.
4. Check that the touch-drag is blue.
5. Check that the release location is red.
6. If the functionality works as expected, press Pass. Otherwise, press Fail.

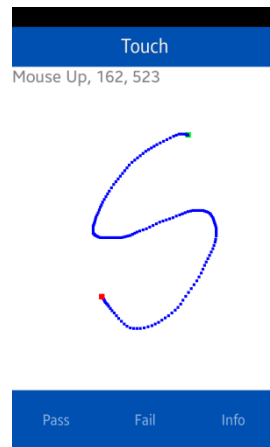


Figure 90: Touch

Event View

To perform the test

1. Select Event View from the test case list.
2. Select Settings from the Notification bar.
3. From Settings, select Language and input and change the language.
4. Go back to TBT and the information about language change and region change will be shown.
5. Move the device and change the device orientation.
6. Information about change in orientation will be shown.
7. If all the steps are performed correctly then Pass, otherwise Fail.

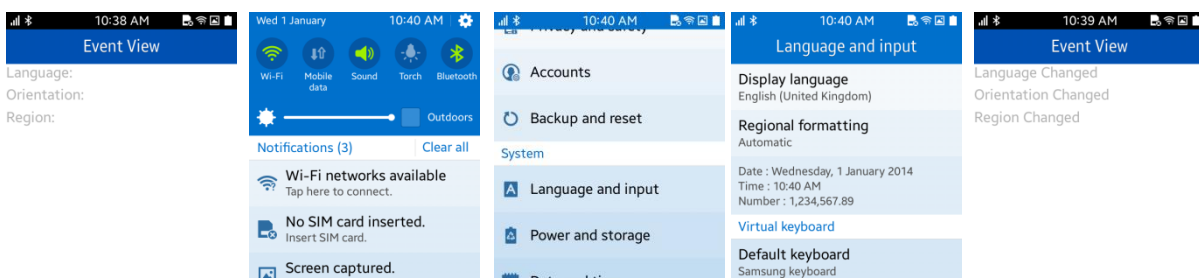


Figure 91: Event View

EFL Callback

To perform the test

- 1. Select EFL Callback from the test case list.
- 2. Press the Hardware Back Button and check whether the back button callback is detected.
- 3. Press button Delete Callback and the callback will be deleted.
- 4. Press the Hardware Back Button and check, there is no back button callback is detected.
- 5. Then press button Add Callback to add a new callback
- 6. Then again press the Hardware Back Button and check whether the back button callback is detected.
- 7. You must press Pass or Fail button to exit from the test.
- 8. If all the steps are performed correctly then Pass, otherwise Fail.

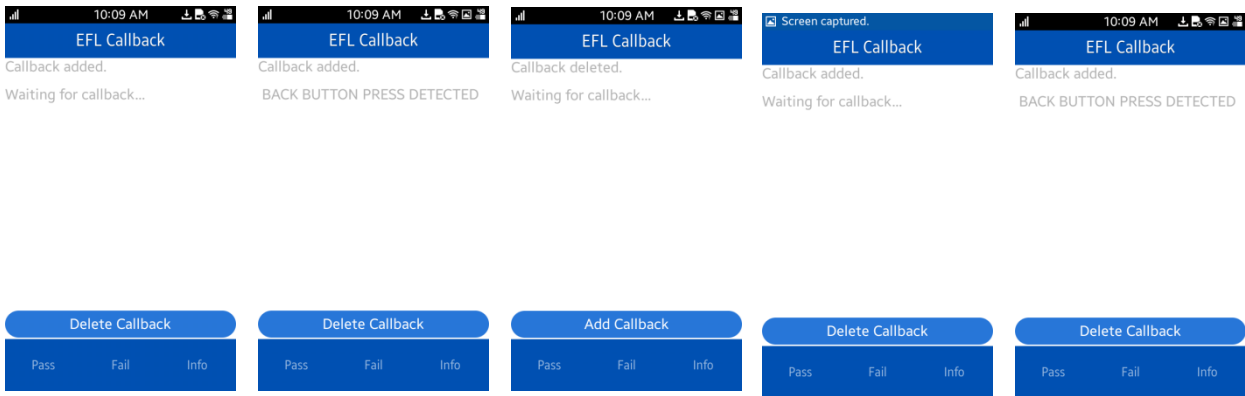


Figure 92: EFL Callback

3.2.1.20. IME

IME Alphabetic

This module shows a custom Alphabetic keyboard layout and its actions.

To Test this Module –

1. Set Default keyboard to TBT keyboard:
Go to Settings>Language and input > keyboard and enable TBT keyboard, then Select Default keyboard as TBT Keyboard.
2. Open IME Alphabetic module from TBT module list
3. An Alphabetic keyboard will be shown and "ELM_INPUT_PANEL_LANG_AUTOMATIC" will be shown at the bottom key.
4. Press Alphabetic keys then corresponding alphabets will be written in entry field.
5. Press BACK key to remove one character at a time from entry field.
6. Press Prid On key, then "abcd" will be written in entry field.
7. Press Prid Off to remove "abcd" from entry field.
8. Press Spc key to make a space character in entry field.
9. If everything works properly as steps mentioned above then Pass otherwise Fail.

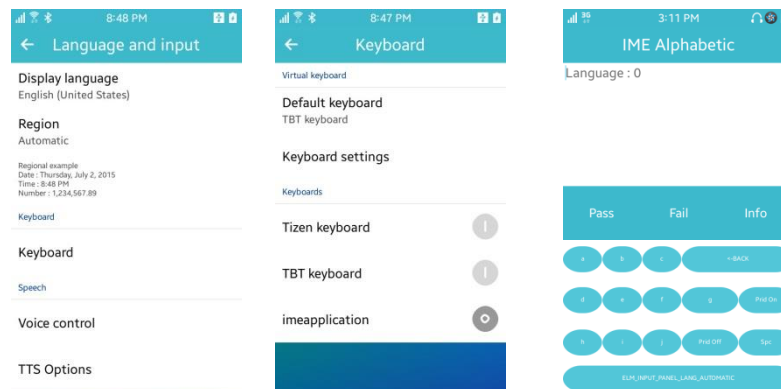


Figure 93: IME Alphabetic

IME Numeric

This module shows a custom Numeric keyboard layout and its actions.

To Test this Module –

1. Set Default keyboard to TBT keyboard:
Go to Settings>Language and input > keyboard and enable TBT keyboard, then Select Default keyboard as TBT Keyboard.
2. Open IME Numeric module from TBT module list
3. An Numeric keyboard will be shown and "ELM_INPUT_PANEL_LANG_AUTOMATIC" will be shown at the bottom key.
4. Press Numeric keys then corresponding numerics will be written in entry field.
5. Press BACK key to remove one character at a time from entry field.

6. Press DS key to delete character under cursor from entry field.
7. Press Spc key to make a space character in entry field.
8. If everything works properly as steps mentioned above then Pass otherwise Fail.

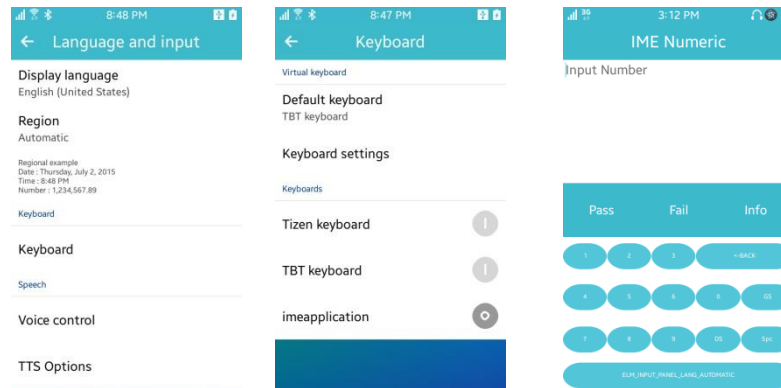


Figure 94: IME Alphabetic

IME Events

This module Tests the effect of Language change Event to custom input method.

To Test this Module –

1. Set Default keyboard to TBT keyboard:
Go to Settings > Language and input > keyboard and enable TBT keyboard, then Select Default keyboard as TBT Keyboard.
2. Open IME Events from TBT module list
3. Change Language from Settings > Language and input > Display language
4. Return back to IME Events module.
5. The text of the key will be changed as the language changed.
6. If everything works properly as steps mentioned above then Pass otherwise Fail.

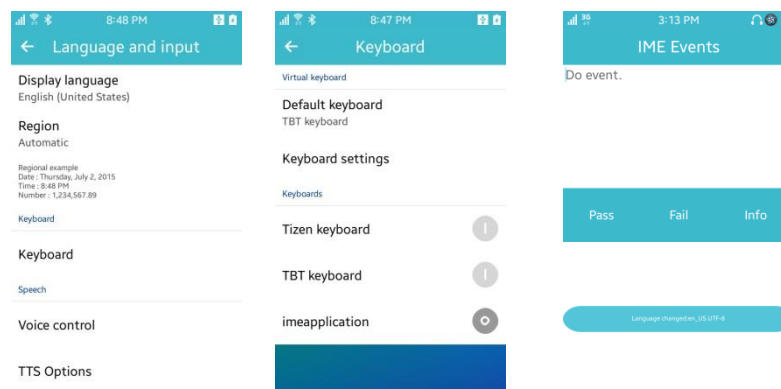


Figure 95: IME Events

IME Context Info

This module Tests the Context Info of a custom input panel.

To Test this Module –

1. Set Default keyboard to TBT keyboard:
Go to Settings>Language and input > keyboard and enable TBT keyboard, then
Select Default keyboard as TBT Keyboard.
2. Open IME Context Info from TBT module list
3. A keyboard with Pass text to all Keys will be shown
4. If everything works properly as steps mentioned above then Pass otherwise Fail.

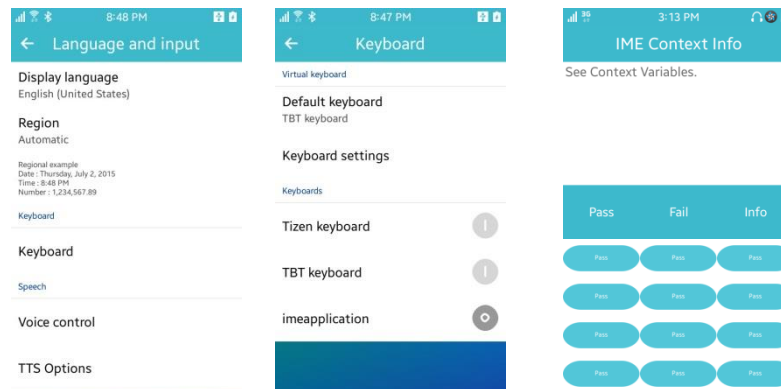


Figure 96: IME Context Info

3.2.1.21. The Widget

To perform the test:

1. Select WIDGET from the test case list
2. Press button **View Widget UI**.
3. If Widget UI is shown, then **Pass** otherwise **Fail**.

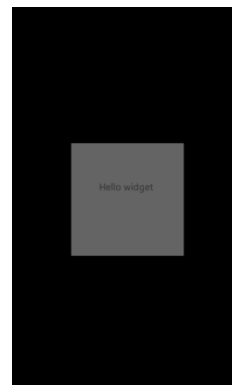


Figure 97: Widget

3.2.1.22. Shortcut

To perform this test:

1. Select Shortcut from the test case list.
2. If you want to create duplicate shortcut, check the “Allow duplicate” labeled checkbox, otherwise do not check it.
3. Press the “Add shortcut” button, then you will see the message “Shortcut Created”.
4. After that go to the home screen and check; if shortcut is created the PASS, otherwise FAIL.

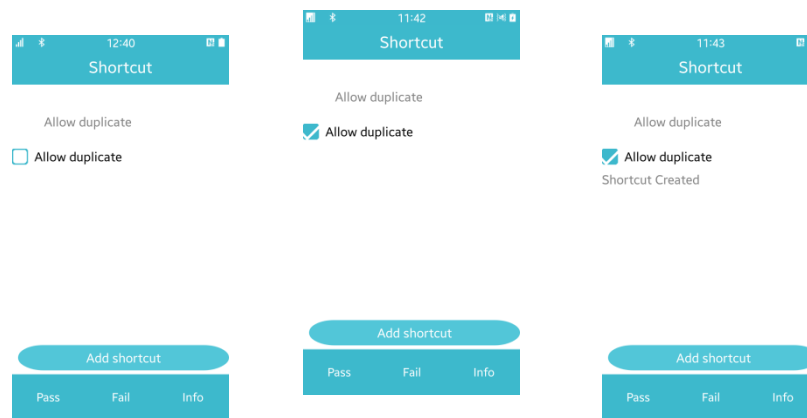


Figure 98: Shortcut

3.2.1.23. OAuth 2.0

This section describes the OAuth 2.0 testing options. If the functionality works as expected, press PASS, otherwise, press FAIL.

This section test OAuth 2.0 by logging into **gmail** account and shows it's users information
To perform the test

1. At first, be sure that internet connection is available.
2. After Entering on OAuth 2.0 module, press Clear Cache button to remove previously saved data.
3. Select GOOGLE_AUTH2_CODE, This will redirected to Google Authentication page.
4. Give Gmail username and password and press login. It will prompt a tbcoreapp access page.
5. Press Accept then the account profile picture and name will be shown as per Gmail account.
6. Press “Clear Cache” button.
7. Select “GOOGLE_OAUTH2_CHECK_STATE” and do step as setp 4
8. Press Accept then “test_state” will be seen.

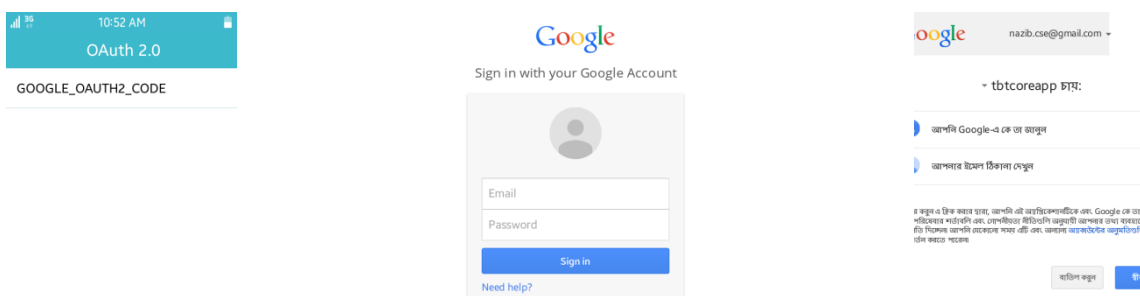


Figure 99: OAuth 2.0

3.2.1.24. Push Service

To perform the test, select **Push Service** from the **test case list**. There are two tests. Firstly,

1. Press **Start** button to start the push service and a successful response will be displayed.
2. Then long press the Home button and clear the application instance
3. After a few moments, there will a notification.
4. Click on the notification and the message will be shown.
5. Secondly, Press button Start to start the push service.
6. Press button Message.
7. After a few moments a message will be shown.
8. Press button Disconnect to disconnect Push Service

If all steps are completed perfectly, then the test can be considered as success.

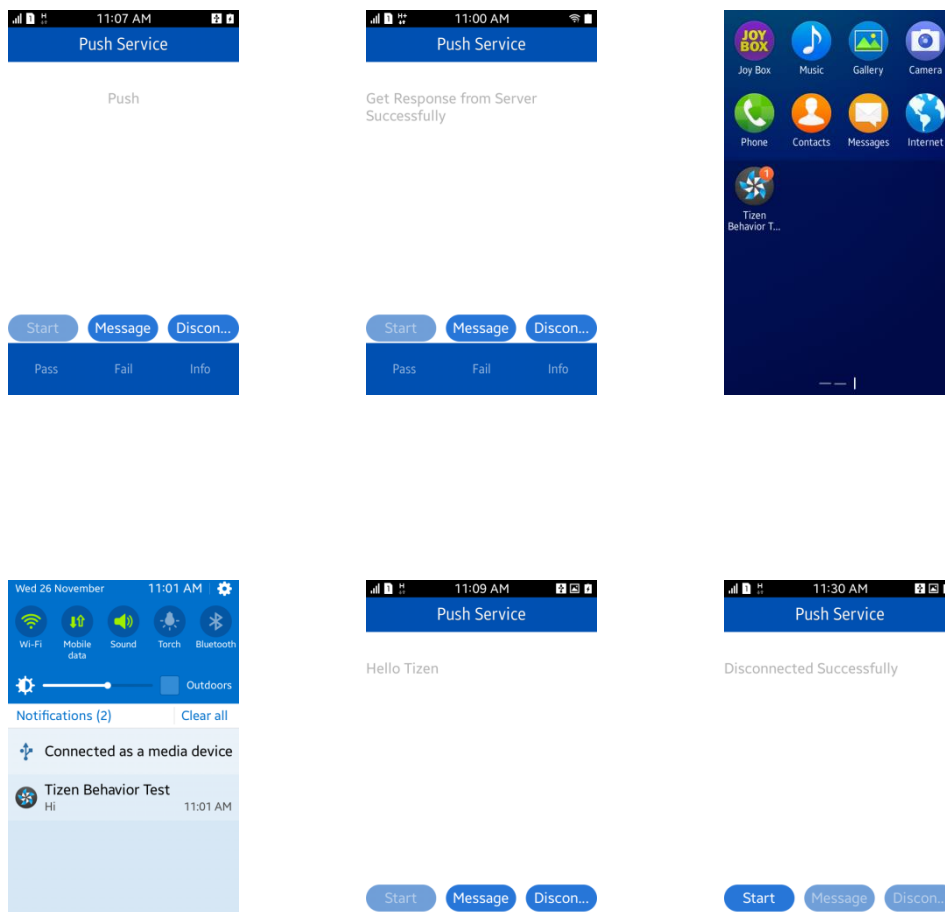


Figure 100: Push Service

3.2.1.25. Runtime Info

To perform the test, select **Runtime Info** from the **test case list**. There are 9 scenarios in runtime-info.

1. **Audio Jack:** There are two test steps.

Firstly,

1. Initial page will show Audio Jack Not Connected, connect headphone in audio jack.
 2. Then message will show “Audio Jack Connected with 3 wire ear jack” or “Audio Jack Connected with 4 wire ear jack” according to the type of air jack connected. If Audio jack is not supported, “Audio Jack is not supported” will be shown
2. **Vibrate Mode:** There are two test steps.

Firstly,

1. Initial page will show “Vibrate Mode is Not Enabled” or “Vibrate Mode is enabled”, depending on the vibrate mode status.
 2. You can change status of Vibrate Mode and see whether it is enabled or disabled.
3. **Battery Charging:** There are two test steps.

Firstly,

1. Initial page will show “Battery Charging Started” or “Battery not charging”, depending on the charger connected or not.
 2. You can plugin charger or plug it out and see whether it is charging or not.
4. **GPS Connection:** There are two test steps.

Firstly,

1. Initial page will show GPS state, depending on the “Location” enabled or not.
2. You can enable or disable Location and see whether GPS is enabled or not.

5. **USB Connection:** There are two test steps.

Firstly,

1. Initial page will show “USB is connected” or “USB not connected”, depending on the USB

charger connected or not.

2. You can plugin USB charger or plug it out and see whether it is connected or not.

6. **Bluetooth:** There are two test steps.

Firstly,

1. Initial page will show “Bluetooth not enabled” or “Bluetooth is enabled”, depending on the Bluetooth is enabled or not.
2. You can enable and disable Bluetooth and see whether it is enabled or not.

7. **Auto Rotate:** There are two test steps.

Firstly,

1. Initial page will show “Auto Rotate is Enabled” or “Auto Rotate not Enabled”, depending on the Auto Rotate is enabled or not.
2. You can enable and disable Auto Rotate and see whether it is enabled or not.

8. **Location:** There are two test steps.

Firstly,

1. Initial page will show “Location is Enabled” or “Location not enabled”, depending on the Location is enabled or not.
2. You can enable and disable Location and see whether it is enabled or not.

9. **Wifi HotSpot:** There are two test steps.

Firstly,

1. Initial page will show “Wifi Hotspot Not Enabled” or “Wifi Hotspot is enabled”, depending on the Wifi Hotspot is enabled or not.
2. You can enable and disable Wifi Hotspot [Settings->Thethering->Wi-Fi Thethering] and see whether it is enabled or not.[You should insert sim to enable wifi hotspot]

If all the above scenarios steps are competed perfectly, then the test can be considered as success.

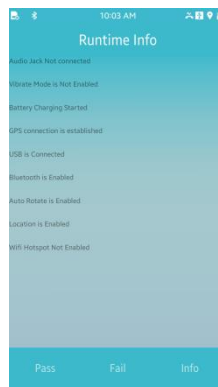


Figure 101: Runtime Info

3.2.1.26. Attach Panel

To perform this test, take some pictures with camera so that images are available in device images folder. Select **Attach Panel** from the **test case list**. Firstly,

1. Press “+” button in top left corner in the initial page.
2. Gallery Images will be shown using attach panel, click on a image.
3. Clicked Image will be selected and shown in the upper area.

If all steps are completed perfectly, then the test can be considered as success.

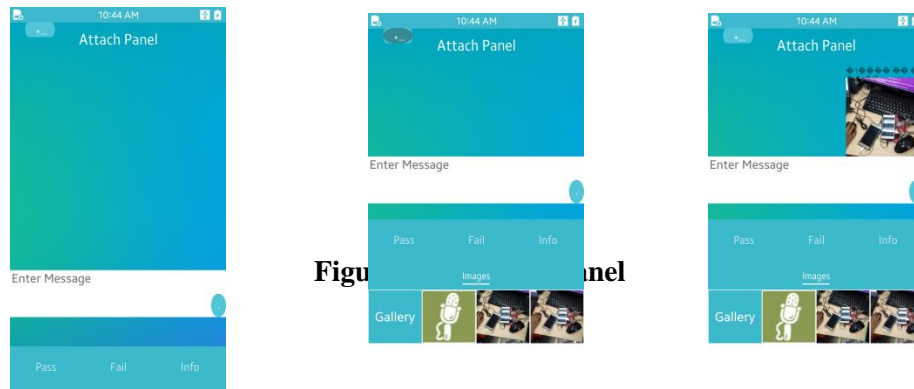


Figure 102: Attach Panel

3.2.1.27. Hardware/Software Feature Summary

To view the hardware/software feature summary of the device:

1. Select HW / SW Feature Test from the test case list
2. Different Hardware/Software features are shown automatically.
3. If it works as expected, press **Pass**. Otherwise, press **Fail**.

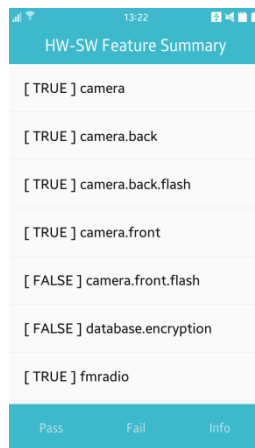


Figure 103: Hardware/Software Feature Summary

3.2.1.28. Testing MTP

Transfer Photos

To perform the test:

1. Connect OTG Cable’s OTG gender (micro USB end) to Test Tizen device.
2. Connect other end to another device which supports MTP ex: Android device and select connection option to Transfer Photos (PTP) in this device.
3. Open **Transfer Photos** module under **MTP** section in TBT.
4. Device information will be seen in bottom list and in top list JPG files list will be seen.
5. Select *.jpg image name from top list. Then corresponding files information will be seen in bottom list.
6. If it works as expected, press **Pass**. Otherwise, press **Fail**.

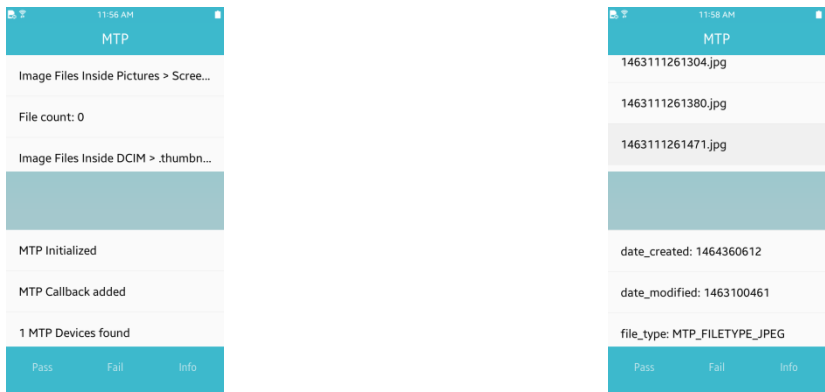


Figure 104: Picture Transfer

3.2.1.29. NSD

DNS-SD Remote

To perform the test:

1. Open **DNS-SD Remote** module under **NSD** group.
2. “**dnssd initialized**” will be shown in bottom list.
3. Press **Add Record** button. Then, “**local service registered**” will be seen in bottom list and in top list added text with key value pair will be seen.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.



Figure 105: DNS-SD Remote

DNS-SD Local

To perform the test:

1. Connect test device to a **Wi-Fi network**.
2. Open DNS-SD Local module under NSD group.
3. **“dnssd initialized”** will be shown in bottom list.
4. Open **DNS-SD Remote** module in another device and connect that device to **same Wi-Fi network**.
5. Press **Add Record** in **DNS-SD Remote** module.
6. Press **Browse Service** button. Then, corresponding service and text value in **DNS-SD Remote** will be seen in top list.
7. If it works as expected, press **Pass**. Otherwise, press **Fail**.

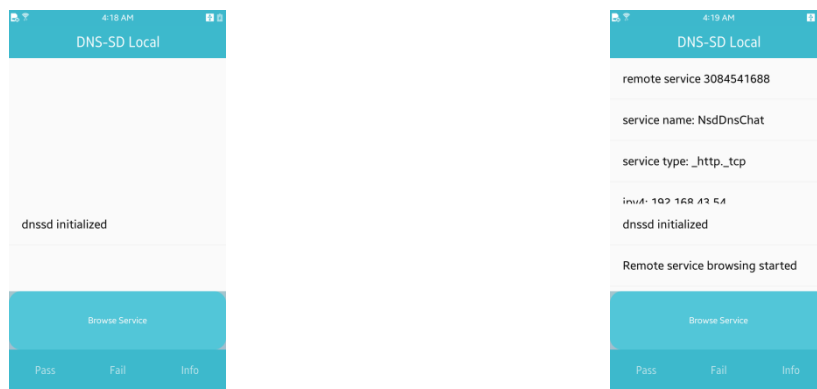


Figure 106: DNS-SD Local

SSDP Remote

To perform the test:

1. Open **SSDP Remote** module under **NSD** group.
2. **“ssdp initialized”** will be shown in bottom list.
3. Press **Add Service** button. Then, **“service created”** will be seen in bottom list and in top list added url, usn will be seen.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.

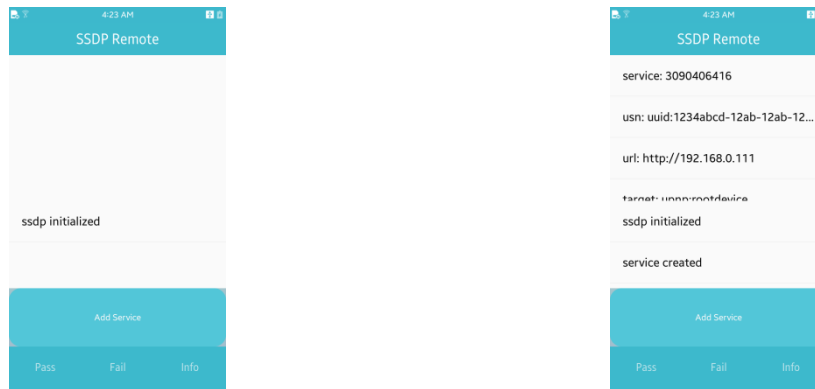


Figure 107: SSDP Remote

SSDP Local

To perform the test:

1. Connect test device to a **Wi-Fi network**.
2. Open **SSDP Local** module under **NSD** group.
3. “**ssdp initialized**” will be shown in bottom list.
4. Open **SSDP Remote** module in another device and connect that device to **same Wi-Fi network**.
5. Press **Add Service** in **SSDP Remote** module.
6. Press **Browse Service** button. Then, corresponding url, usn in **SSDP Remote** will be seen in top list.
7. If it works as expected, press **Pass**. Otherwise, press **Fail**.

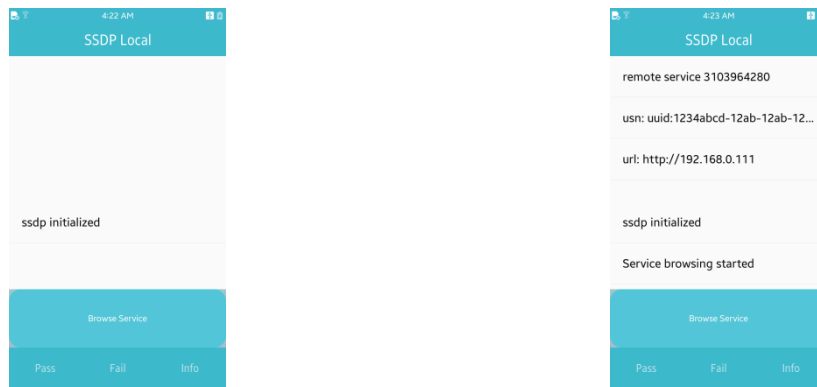


Figure 108: SSDP Local

3.2.1.30. SD-Card Status

To view the SD-Card status of the device:

1. Select SD-Card from the test case list.
2. You have to change SD card state [Remove/Insert SD Card] to see the changes.
3. Accordingly it will show “STORAGE_STATE_MOUNTED” or “STORAGE_STATE_REMOVE”.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.



Figure 109: SD Card

3.2.1.31. Radio

To view the Radio status on the device:

1. Select Radio from the test case list.
2. Connect headphone in audio jack.
3. Now, remove headphone and it will show “Interrupted by unplugging headphones”.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.

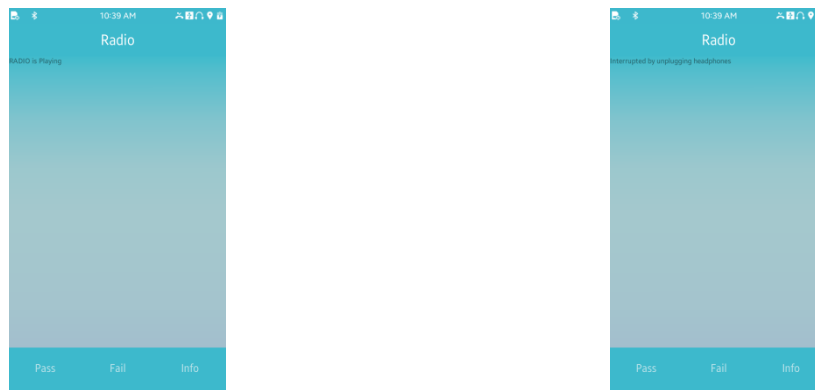


Figure 110: Radio

3.2.1.32. Sound Manager

Connection Status

To perform the test,

1. Select Connection Status from the test case list .
2. Insert headphone in Audio Jack , Connection Status now show “Audio Jack connected” .Now, remove headphone and it will display” Audio Jack not connected”.
3. If it works as expected, press **Pass**. Otherwise, press **Fail**.

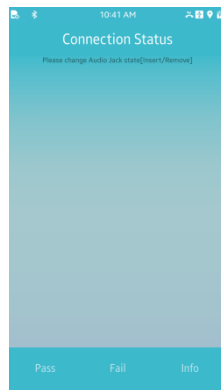


Figure 111: Connection Status



Device Status

To perform the test,

1. Select Device Status from the test case list .
2. Insert headphone in Audio Jack , Change sound profile to “Sound”.
- It shows “state of device was changed”.
3. If it works as expected, press **Pass**. Otherwise, press **Fail**.

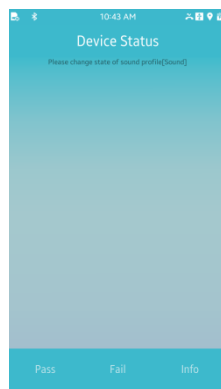
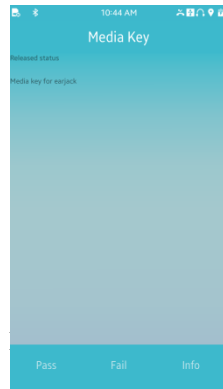


Figure 112: Device Status

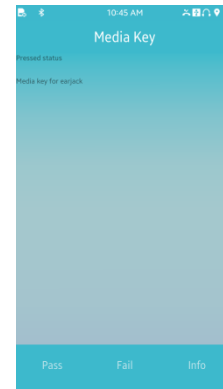
3.2.1.33. Media Key

To view the Media Key status on the device:

1. Select Media Key from the test case list.
2. Connect headphone that have play button [media key] on it with device.
3. Now, Press button on headphone, It will show “Pressed/Released Status” and Media Key for earjack.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.



Key



3.2.1.34. Package Manager

To view the Package Manager status on the device:

1. Select Package Manager from the test case list.
2. Uninstall package: Go to Settings->Applications->Application manager, now uninstall some package. You can see that package status changes to “uninstall event type” and State changes to “completed event state”.
3. Install/Update package: Go to the path mentioned in instruction guide that appears when you open package manager from the list and install package. You can see that package status changes to “install/update event type” and State changes to “complete/progress event state”.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.

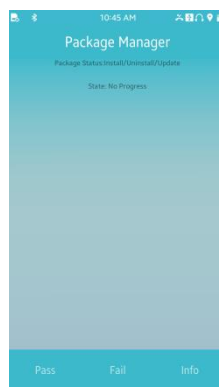


Figure 114: Package Manager

3.2.1.35. Notification

Notification Text

To perform the test,

1. Select Notification text from the test case list.
2. You will see text notification “Hello World!!!”.

If it works as expected, press **Pass**. Otherwise, press **Fail**.

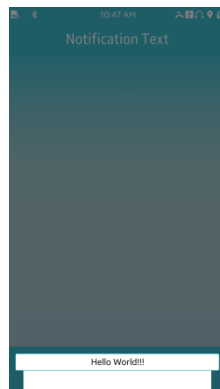


Figure 115: Notification Text

Notification Time

To perform the test,

1. Select Notification Time from the test case list.
2. You will see time notification “<Time>some numbers</Time>”.

If it works as expected, press **Pass**. Otherwise, press **Fail**.

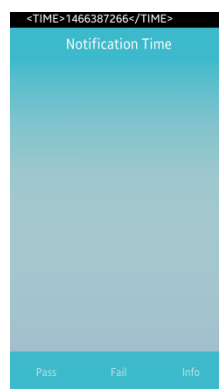


Figure 116: Notification Time

Notification Title

To perform the test

1. Select Notification Title from the test case list.
2. You will see title notification “I’m Title”.

If it works as expected, press **Pass**. Otherwise, press **Fail**.



Figure 117: N

Notification Image

To perform the test,

1. Select Notification Image from the test case list.
2. You will see blank notification with some image icon.

If it works as expected, press **Pass**. Otherwise, press **Fail**.

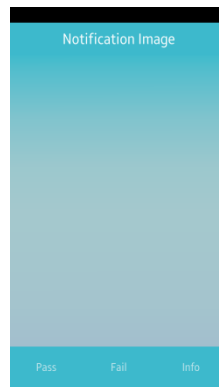


Figure 118: Notification Image

3.2.1.36. Connection

To view the Connection status on the device:

1. Select Connection from the test case list.
2. Initially if SIM is not inserted it shows “Profile is not cellular type”.
3. Insert SIM: Press back button and again open connection from test list. Now Status shows “Out of Service/Connected” depending on network.
4. Change to flight mode: Go to Settings->Airplane mode, now enable it.
Press back button and again open connection from test list. Now, Status shows “Flight mode”.
5. If it works as expected, press **Pass**. Otherwise, press **Fail**.



Figure 119: Connection

3.2.1.37. System Settings

To perform the test:

1. In System Settings make changes in Display->Font->Size. This should be reflected in the tbtc coreapp - System Settings.
2. In System Settings make changes in Date and Time->24 clock. This should be reflected in the tbtc coreapp - System Settings.
3. When System Time changes System Time in tbtc coreapp changes status.
4. If lock sound in system settings in sound menu is present, change its setting. This should be reflected in the tbtc coreapp - System Settings.
5. In System Settings make changes in Sound->Notification as Silent. This should be reflected in the tbtc coreapp - System Settings as Silent Mode enabled.
6. If screen touch sound in system settings is present, change its setting. This should be reflected in the tbtc coreapp - System Settings.
7. In System Settings make changes in Display->Auto Rotate Screen. This should be reflected in the tbtc coreapp - System Settings as Rotation Control is enabled.
8. If Motion is present in system settings menu, change its setting. This should be reflected in the tbtc coreapp - System Settings.
9. Enable/ Disable Flight Mode in System Settings. Same should be reflected in tbtc coreapp - System Settings.

10. Lock/Unlock the device. Same should be reflected in tbtcoreapp - System Settings as Device is unlocked/locked. Locked status is for a fraction of second.
11. If all the steps are performed correctly then Pass, otherwise Fail.

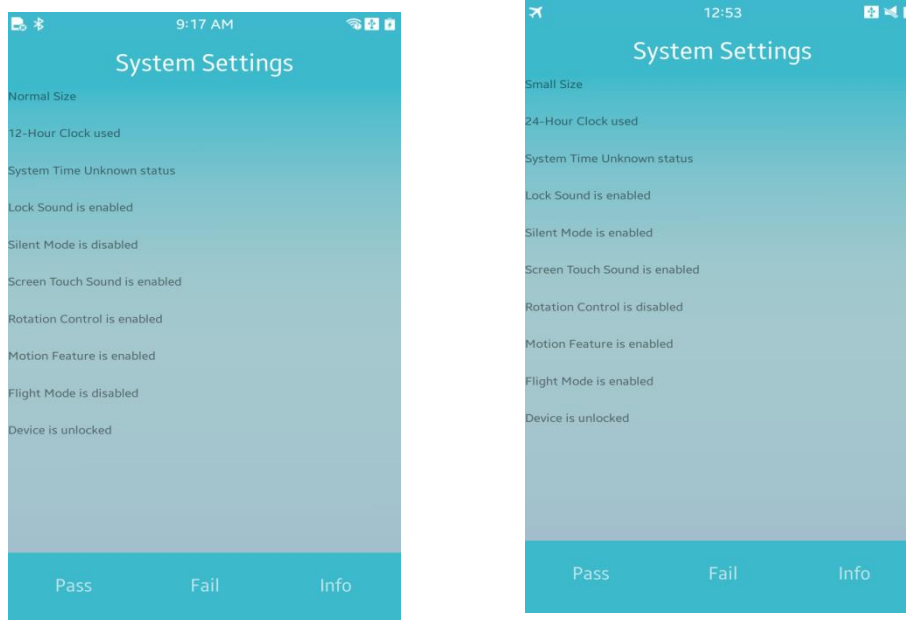


Figure 120: System Settings

3.2.1.38. Contacts

To perform the test:

1. In contacts menu, create a contact(if already exists, delete and re-create it) with Name as "Test" and phone number as "12345678"
2. Make a number of calls to Test
3. Press Contacts in tbtcoreapp.
4. The count displayed is equal to the number of the calls made to "Test".
5. Delete the contact "Test".
6. If all the steps are performed correctly then Pass, otherwise Fail.



Figure 121: Contacts

3.2.1.39. D2D

D2D Client

To perform the test:

1. Connect D2D Server to Same WiFi Network.
2. Run D2D server.
3. Run D2D Client Module from TBT
4. /tizen/remote-app-control will be shown
5. Select /tizen/remote-app-control first. Then cortbt_uiapp will be launch in D2D Server
6. If everything is working as above then pass otherwise fail

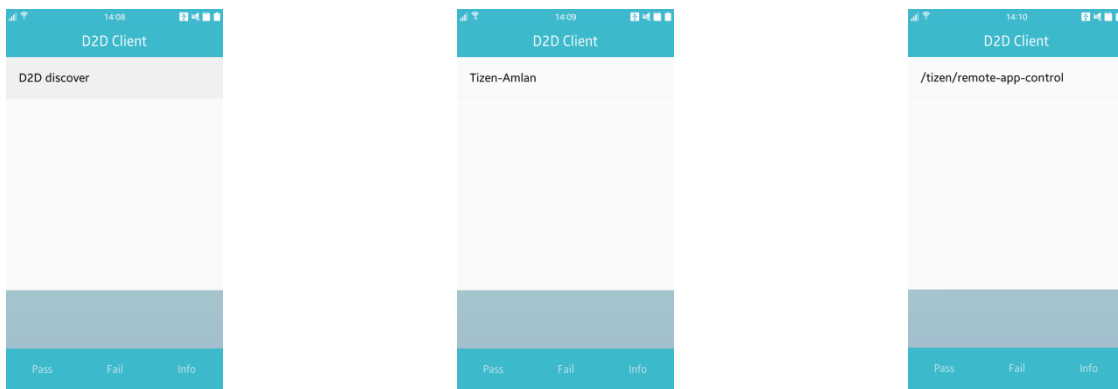


Figure 122: D2D Client

D2D Server

To perform the test:

1. Connect D2D Client to Same WiFi Network.

2. Run D2D Server Module from TBT
3. Server Ready Message will be shown
4. If everything works as above then pass otherwise fail.

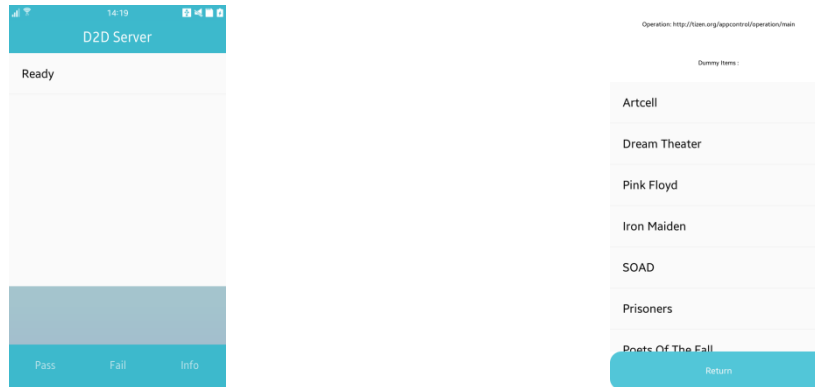


Figure 123: D2D Server

3.2.1.40. TTS/STT

TTS

To perform the test:

1. Run TTS.
2. Press Text to Speech Button
3. Text: The quick brown fox jumps over the lazy dog can be heard

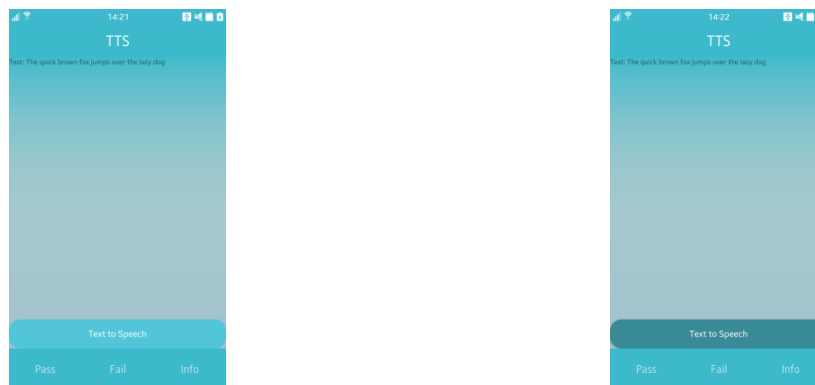


Figure 124: TTS

STT

To perform the test:

1. Confirm internet is connected and Run STT.
2. Press Speak button and say something loud
3. After Recording and Processing steps, recognized text will be shown.

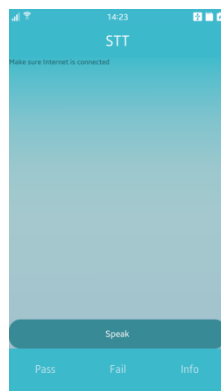


Figure 125: STT



STT Error

To perform the test:

1. Confirm internet is not connected and Run STT Error.
2. Press Speak button and say something loud
3. STT_ERROR_OUT_OF_NETWORK will be shown.

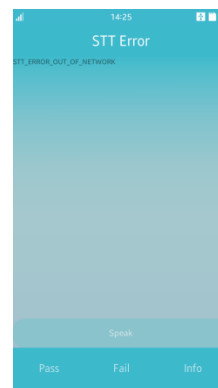
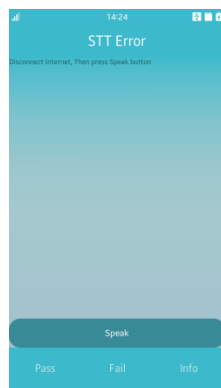


Figure 126: STT Error

3.2.2 Testing the Wearable Device

This chapter describes the various tests that can be performed to check the wearable device functionality.

3.2.2.1. Camera

This section describes the camera testing options. If the functionality works as expected then press **Pass**. Otherwise, press **Fail**.

Camera Capture

To test the camera capture functionality:

1. Select the **Capture** from the test case list
2. Press **Capture** to capture a picture.
3. Check the captured picture which is shown automatically.

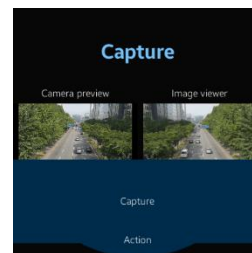
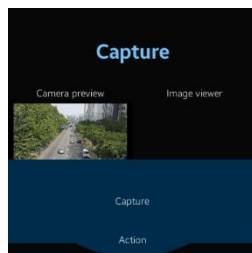


Figure 127: Camera Preview

Camera Recorder:

To test the camera recording functionality:

1. Select the **Record** Test from the test case list.
2. Press **Record** button to record the video.
3. Press **Stop** to stop the recording
4. Check the recorded video clip which is shown automatically.

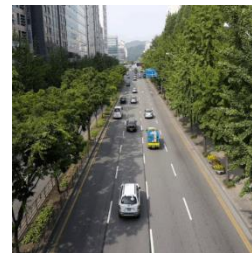
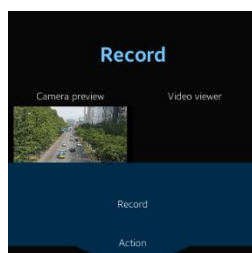


Figure 128: Camera Record

Camera Face Detection

To perform the test,

1. Select **Face Detection** Test from the **test case list** and the camera preview starts automatically.
2. If the camera can detect face and “zoom in” and “zoom out” is performed automatically then **Pass**, otherwise **Fail**.

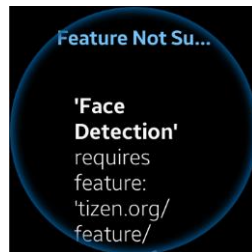


Figure 129: Face detection

Camera HDR Capture

To perform the test,

1. Select **Camera HDR Capture** from the test case list.
2. Press button **Capture** and the captured picture is shown.
3. If the picture can be captured and shown, then **Pass**, otherwise **Fail**.



Figure 130: Camera HDR Capture

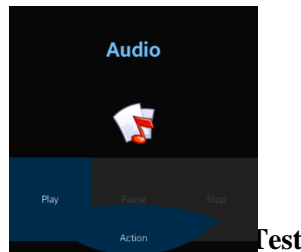
3.2.2.2. Sound

This section describes the sound testing options. If the functionality works as expected, then press **Pass**. Otherwise, press **Fail**.

Sound Audio

To test the sound of the speaker:

1. Select **Audio** Test from the test case list.
2. Press **Play**.
3. Check the sound output to the speaker.
4. Press **Stop** to stop the music.
5. Press **Pause** to pause the music



Sound Volume

To test the sound volume:

1. Select the **Volume** Test from the **test case list** and the sound is played automatically.
2. Slide the Volume **Slider** to change the volume level.
3. Check the sound output to the speaker by hearing and watching the value of volume label.

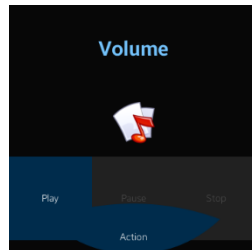


Figure 132: Sound Volume Test

3.2.2.3. GPS

To test the **GPS** functionality,

1. Select the **GPS** Test from the **test case list**
2. Enable Location and view the GPS information.

3. If the information is correct then **PASS**, otherwise **FAIL**.



Figure 133: GPS

Note: If the GPS information is unavailable for 6 minutes, the process fails.

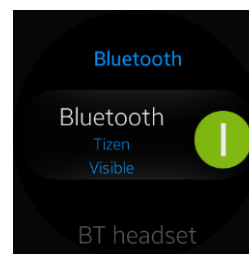
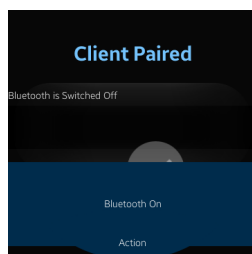
3.2.2.4. Bluetooth

This section describes the Bluetooth testing options. If the functionality works as expected, then press **PASS**, otherwise, press **FAIL**.

Bluetooth Client Paired:

To test Bluetooth client pairing:

1. Select **Client Paired** from the test case list in one phone.
2. Select Server Paired from the test case list in one
3. If Bluetooth is off, turn on manually.
4. Press button **Discover** and a list of available devices will be appeared.
5. Select the desired device and wait for the connection popup message. If you want to cancel connection during paring, select the **Cancel** button.



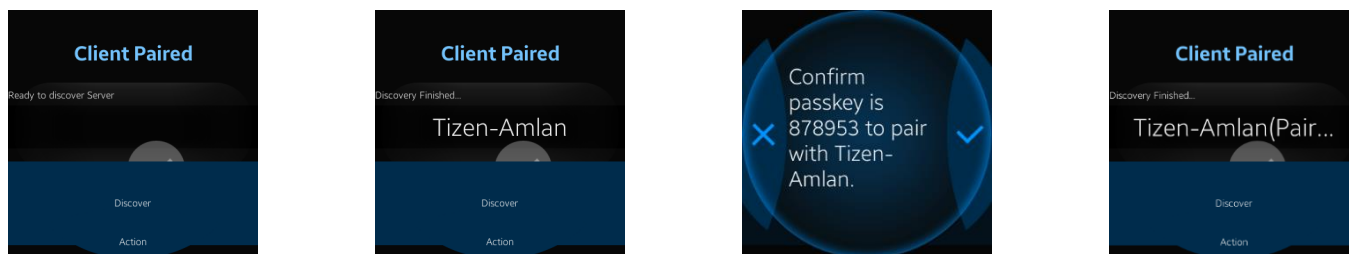


Figure 134: Client Paring

Bluetooth Server Paired:

To test Bluetooth server pairing:

1. Select **Server Paired** from the test case list of one phone.
2. Select Client Paired from the test case list of other phone.
3. If Bluetooth is off, turn on manually.
4. Press **Set Visible** and wait for the connection pop-up message.
5. If the message is shown properly then **PASS**, otherwise **FAIL**.

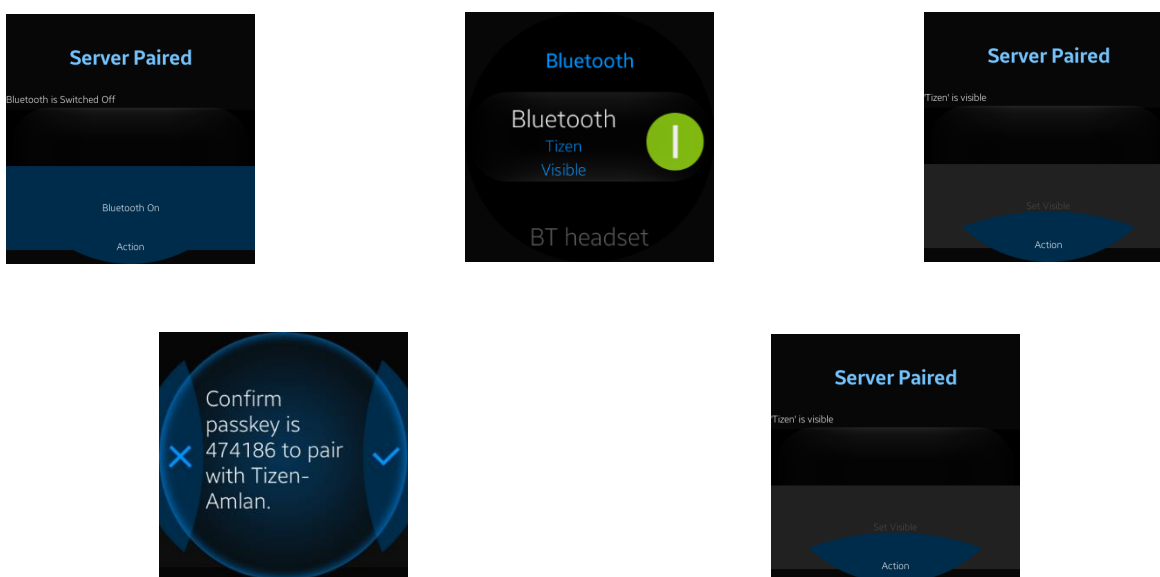


Figure 135: Server Pairing

Bluetooth OPP Server

To perform the test at first, **Turn On** the Bluetooth of the device where the object will be pushed. Then,

1. Select **OPP Server** from the test case list of one phone.

2. Select **OPP Client** from the test case list of other phone.
3. Press **Switch Bluetooth On** to activate Bluetooth on the device and the Bluetooth application of the device will be opened. Turn on Bluetooth from there Select the desired device and the devices will be paired.
4. Press **Set Visible** and wait for the connection pop-up message.
5. Press “**Confirm**” button to accept connection from client.
6. When client is trying to send a file press “Accept/Reject” button to accept/reject file sending request.
7. Select “Pass/Fail” if proper message shown in the server side.



Figure 136: OPP Server

Bluetooth OPP Client

To perform the test at first, **Turn On** the Bluetooth of the device where the object will be pushed. Then,

1. Select Bluetooth **OPP Client** from the test case list in one phone.
2. Select **OPP Server** from the test case list of other phone.
3. Press **Bluetooth On** button to activate Bluetooth on the device and the Bluetooth application of the device will be opened. Turn on Bluetooth from there, Select the desired device and the devices will be paired.
4. Press button **Discover** to see the list of Bluetooth devices.
5. Select the desired device from the list.
6. Press button **Send File**.
7. If you want to cancel file sending after pressing “Send File” just press “Cancel Transfer” button, check the message to verify pass/fail.
8. Check if any image file is pushed in the other device.
9. If any image file is pushed then **Pass** otherwise **Fail**.
10. Also turn on the Visibility of Bluetooth.

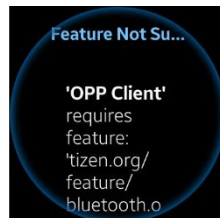


Figure 137: OPP Client

Bluetooth Handsfree

To perform the test

1. Select **Handsfree** from the test case list
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of Bluetooth Audio devices.
4. Select the desired device from the list.
5. Press button **Connect Audio**.
6. Now make a call and test if sound is heard in the audio device.
7. If all the steps are performed correctly then **Pass**, otherwise **Fail**.



Figure 138: Handsfree

Bluetooth Audio Connect

To perform the test

1. Select **Audio Connect** from the test case list
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of Bluetooth Audio devices.
4. Select the desired device from the list.
5. Press button **Connect Audio**.
6. Now you can hear the key pressing sound in Headset.
7. If all the steps are performed correctly then **Pass**, otherwise **Fail**.

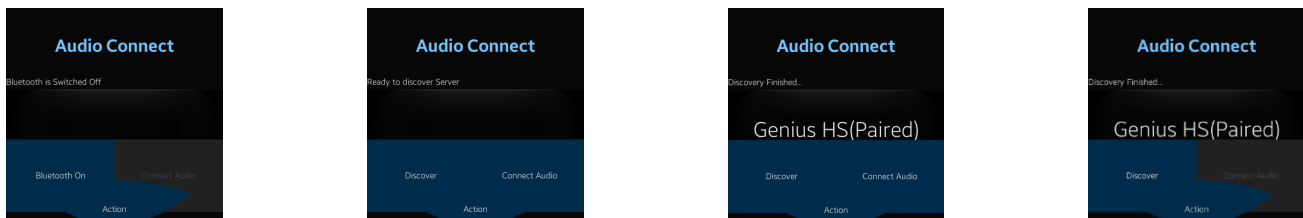


Figure 139: Audio Connect

Bluetooth Authorization Test

To perform the test

1. Select **Authorization** from the test case list.
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of Bluetooth devices.
4. Select the desired device from the list.
5. Press button **Authorize** and the desired device is Authorized.
6. If all the steps are performed correctly then **Pass**, otherwise **Fail**.

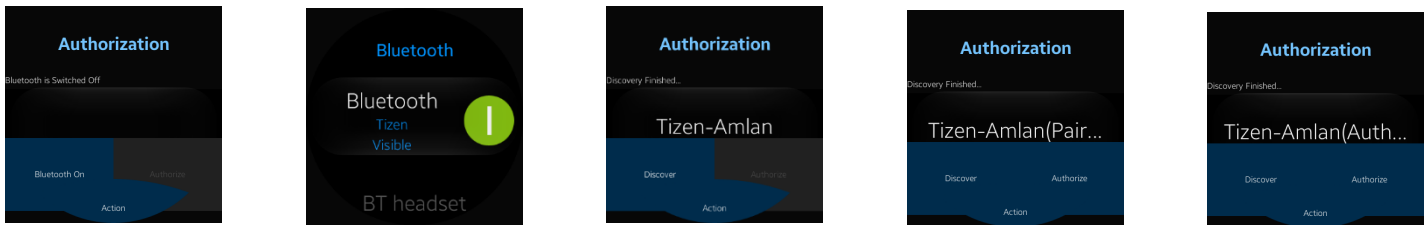


Figure 140: Authorization Test

Bluetooth Profiles Test

To perform the test

1. Select **Bluetooth Profile** from the test case list.
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of Bluetooth Audio devices.
4. Select an audio profile enabled device like, Bluetooth Headset from the list for pairing.
5. After successful pairing, connected profiles will be shown.

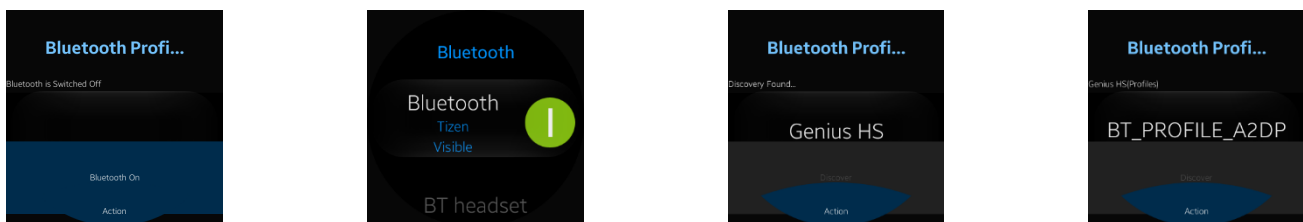


Figure 141: Profiles Test

Bluetooth SDP

To perform this test:

1. Select **Bluetooth SDP** from the test case list.
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of Bluetooth devices.
4. Clicked on the desire device to make pair with that device.

5. After pairing is completed press Connected Services, Bluetooth services will be shown in a list.
6. If Bluetooth profiles are shown then press PASS otherwise FAIL.

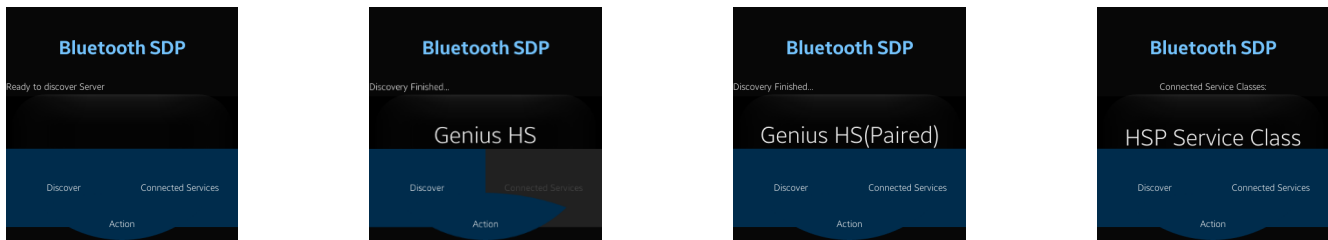


Figure 142: SDP

Bluetooth Client Socket

To perform the test

1. Select **Client Socket** from the test case list in one phone.
2. Select Server Socket from the test case list in other phone.
3. If Bluetooth is off, turn on manually.
4. Press button **Discover** to see the list of Bluetooth devices.
5. Select the desired device from the list.
6. Press button **Send Data**.
7. Check if any file is pushed in the other device.
8. If any file is pushed then **Pass** otherwise **Fail**.

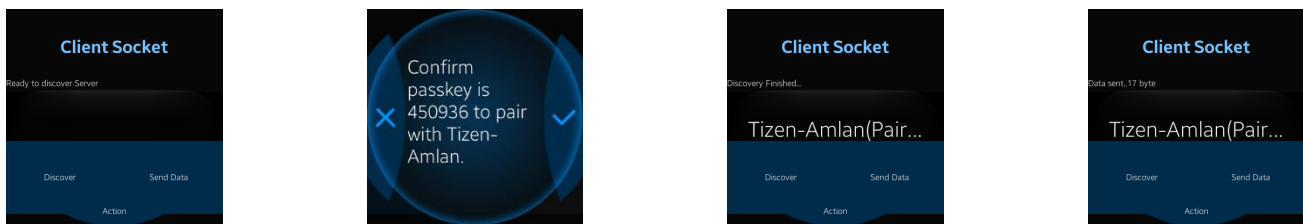


Figure 143: Client Socket

Bluetooth Server Socket

To perform the test

1. Select **Server Socket** from the test case list in one phone.
2. Select Client Socket from the test case list of other phone.
3. If Bluetooth is off, turn on manually.
4. Press **Set Visible** and wait for the connection pop-up message.
 - i. If the message is shown properly then **Pass** otherwise **Fail**.



Figure 144: Server Socket

Bluetooth HID

To perform this test:

1. Select **HID Connect** from the test case list
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of Bluetooth HID devices.
4. Select the desired device from the list.
5. If you are trying to connect a keyboard, a pop-up will appear, press the same code on the keyboard and press enter.
6. **"HID connected"** will be written on the label, just above the device list.
7. Then go to the default messaging application, try to write message from the HID keyboard.
8. If input can be inserted using remote input device correctly then PASS otherwise FAIL.

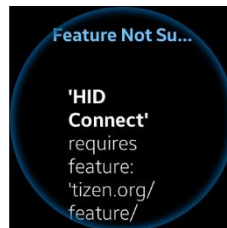


Figure 145: HID

Bluetooth Health

To perform the test

1. Select **Health** from the test case list
2. If Bluetooth is off, turn on manually.
3. Press button **Discover** to see the list of devices.
4. Select the desired device from the list.
5. Press button **Connect HDP** if not already connected.
6. Press button **Get Data** and data received will be shown on label then PASS otherwise FAIL.

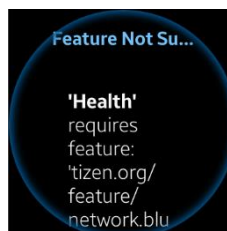


Figure 146: Health

3.2.2.5. Bluetooth Error Callbacks

This section is for testing the errors generated while invoking the callbacks and preconditions in bluetooth.
Create Bond CB

To test create bond in bluetooth:

1. Select bluetooth off from settings.
2. Press Create Bond CB.
3. Error message "result = BT_ERROR_NOT_ENABLED" is displayed.
4. Select Bluetooth on from settings.
5. Press create bond CB.
6. Message of invoked callback with result is displayed in few seconds.

If all the steps are performed correctly then Pass, otherwise Fail.

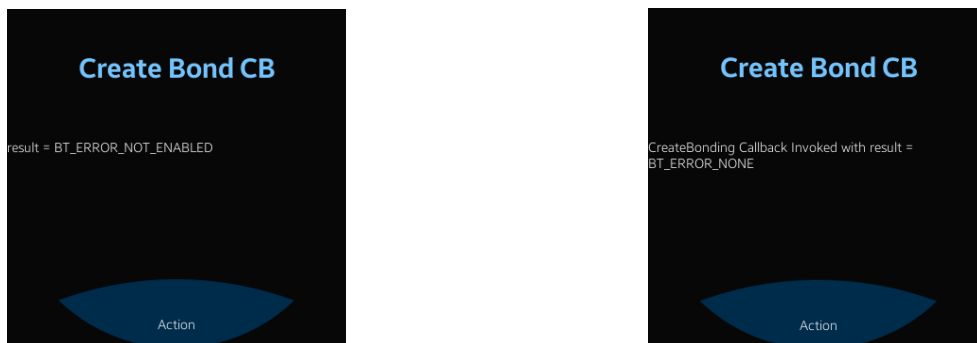


Figure 147: CreateBondCB

Destroy Bond CB

To test destroy bond in bluetooth:

1. Select bluetooth off from settings.
2. Press Destroy Bond CB.
3. Error message "result = BT_ERROR_NOT_ENABLED" is displayed.
4. Select Bluetooth on from settings.
5. Press Destroy Bond CB.
6. Message of invoked callback with result is displayed.
7. Set BT off now.
8. Message of invoked callback with result BT_ERROR_TIMED_OUT.

If all the steps are performed correctly then Pass, otherwise Fail.

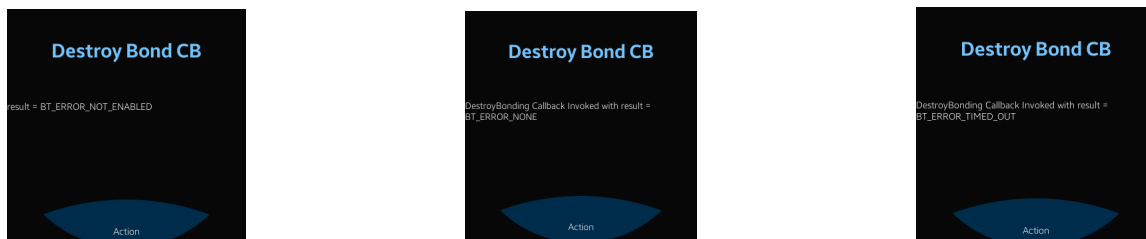


Figure 148: DestroyBondCB

Discover Devices CB

To test discover devices in bluetooth:

1. Select bluetooth off from settings.
2. Press Discover Devices CB.
3. Error message "result = BT_ERROR_NOT_ENABLED" is displayed.
4. Select Bluetooth on from settings.
5. Press Discover Devices CB.
6. Message of invoked callback is displayed.

If all the steps are performed correctly then Pass, otherwise Fail.

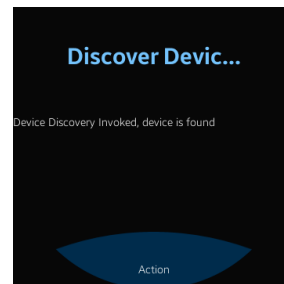
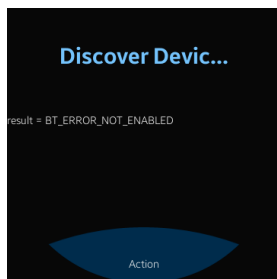


Figure 149: DiscoverDevicesCB

Get Device CB

To test get device in bluetooth:

1. Select bluetooth off from settings.
2. Press Get Device CB.
3. Error message "result = BT_ERROR_NOT_ENABLED" is displayed.
4. Select Bluetooth on from settings.
5. Press Get Device CB.
6. Message of invoked callback is displayed.

If all the steps are performed correctly then Pass, otherwise Fail.



Figure 150: GetDeviceCB

Set Name CB

To test set name in bluetooth:

1. Select bluetooth off from settings.
2. Press Set Name CB.
3. Error message "result = BT_ERROR_NOT_ENABLED" is displayed.
4. Select Bluetooth on from settings.
5. Press Set Name CB.
6. Message of invoked callback is displayed with Name BT_TEST5.

If all the steps are performed correctly then Pass, otherwise Fail.

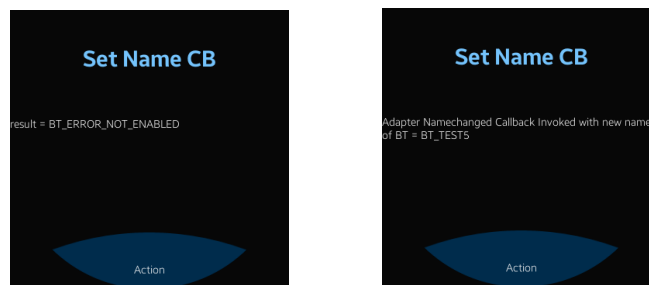


Figure 151: SetNameCB

Add Advertising Service UUID

This test is to pass: out of range parameter as service UUID and check the error.

1. Press Add Advertising Service UUID.
2. Error message of invalid parameter with passed value is displayed.

If all the steps are performed correctly then Pass, otherwise Fail.

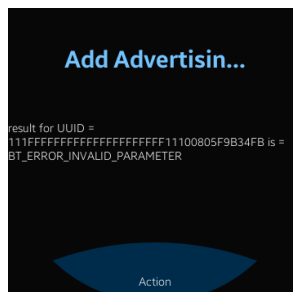


Figure 152: AddAdvertisingServiceUUID

3.2.2.6. Wi-Fi Activation

To test the Wi-Fi activation:

1. Select **Wifi** Test from the test case list.
2. To enable Wi-Fi, press button **Wifi On**.
3. To disable Wi-Fi, press button **Wifi Off**.



Figure 153: WIFI

3.2.2.7. NFC

NFC Tag

To perform the test, switch on NFC and

1. Select NFC Tag from the test case list and it is by default in read mode
2. Take the device to a NFC tag
3. A list will appear showing information about tag type, NDEF support, NDEF message size, maximum size of NDEF message, key, value, record type, record etc.
4. Then select the tab Write and take the device to a NFC tag
5. Then a string of Text type will be written in the NFC tag and a success message will be shown with written message.
6. If you remove device from tag it shows “Device Detached”
7. If all the steps are performed correctly then Pass, otherwise Fail

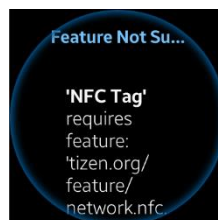


Figure 154: NFC Tag

NFC P2P

To perform the test,

1. Take two NFC supported devices and switch on NFC in both
2. Select NFC P2P from the test case in two devices and click Server in one device and Client in other device
3. Touch the back of two devices, Server TC will output Data Received Successfully along with received data and Client TC will output Data Sent successfully.
4. If you detach devices it shows “Device Detached”
5. If all the steps are performed correctly then Pass, otherwise Fail.



Figure 155: NFC P2P

NFC HCE Preferred

To perform the test

1. Turn NFC On.
2. Install tbt_hcetestappA and tbt_hcetestappB both.
3. Set tbt_hcetestappA to default payment app by going Connection > NFC > Payment option from settings.
4. Connect Device to NFC Reader/Writer.
5. Send APDU command as “00 A4 04 00 07 A0 00 00 00 04 10 10” from NFC Reader/Writer.
6. tbt_hcetestappA will be launched and “11 12 90 00” data will be received in NFC Reader as response.
7. Close the tbt_hcetestappA app and run “NFC HCE Preferred” module from TBT.
8. Launch the preferred nfc hce app.
9. Repeat the step 4 to 6. This time data will be received in preferred app not in default app.
10. Give pass if everything work as above otherwise fail.

3.2.2.8. Display

The following requirements are mandatory for the **display** test:
Minimum screen size: 240 x 320 (QVGA)

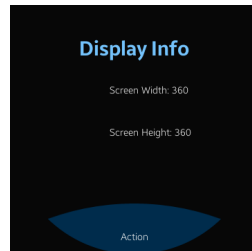


Figure 156: Display Test

To test the display, check whether the screen size is larger than the minimum size of 240x320.

3.2.2.9. Graphics

To test the **Graphics** ensure that a cube is rotating properly.

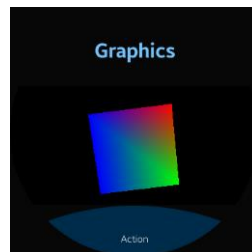


Figure 157: Graphics

3.2.2.10. Input Device

Edit field:

To test the edit field, three kinds of keypad will appear. If the keys can be pressed and inputs are shown, then the test is **Pass**, otherwise **Fail**.

1. Select **Number Keypad** from **test case list** for Number Keypad Test.

2. Select **PhoneNumber Keypad** from **test case list** for Phone Number Keypad Test.
3. Select **IP Keypad** from **test case list** for IPV4 Keypad Test.

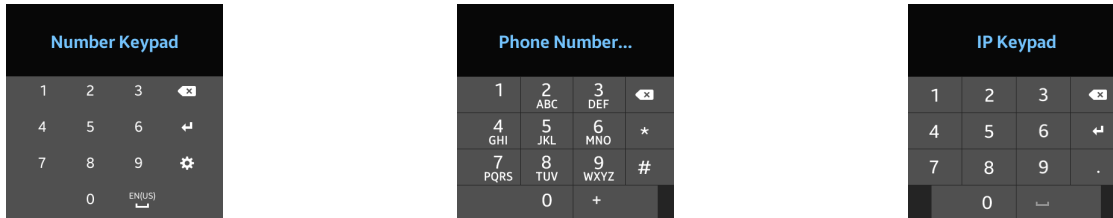


Figure 158: Input Device

3.2.2.11. Multimedia

This chapter describes the various tests that can be performed to check the multimedia features. If the functionality works as expected, press **Pass**, otherwise, press **Fail**.

Video

The local video test enables you to confirm that file formats, such as Mpeg4, H263, and H264 are playing normally. To test the video formats from the test case list select,

1. **H263Video** for testing video format of H263.
2. **MPEG4 Video** for testing video format of Mpeg4
3. **H264 Video** for testing video format of H264.
4. After selecting each test, press **Play** to play the video.
5. Press **Pause** to pause the video.
6. Press **Stop** to stop the video.

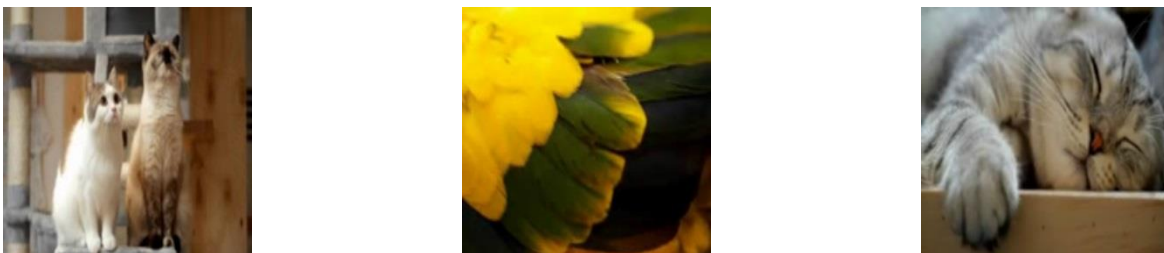


Figure 159: Local Video

3.2.2.12. Image View

The image view test enables you to confirm that file formats, such as .jpeg, .bmp, .gif, and .png can be viewed normally.

To perform the image view test,

1. Select **ImageView PNG** from **test case list** and an .png image will be shown automatically
2. Select **ImageView GIF** from **test case list** and an .gif image will be shown automatically
3. Select **ImageView BMP** from **test case list** and an .bmp image will be shown automatically
4. Select **ImageView JPG** from **test case list** and an .jpg image will be shown automatically

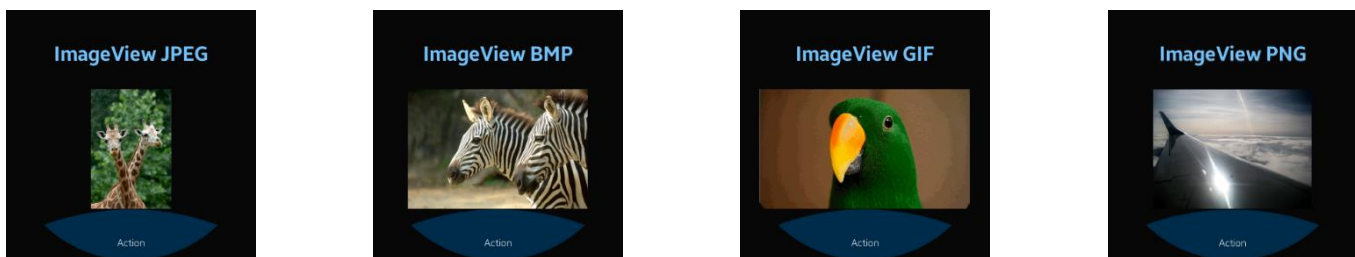


Figure 160: Image View

3.2.2.13. Data Control

TBT Data Control module requests different operations on the data provided by DataUIControl application. If the request is processed successfully then **Pass** otherwise **Fail**

Insert Operation

To perform the operation

1. Select **Sql Insert** from the test case list
2. Press button **Start**.
3. If the request is sent successfully and information is shown normally then **Pass**.
4. If any error is shown, then **Fail**.

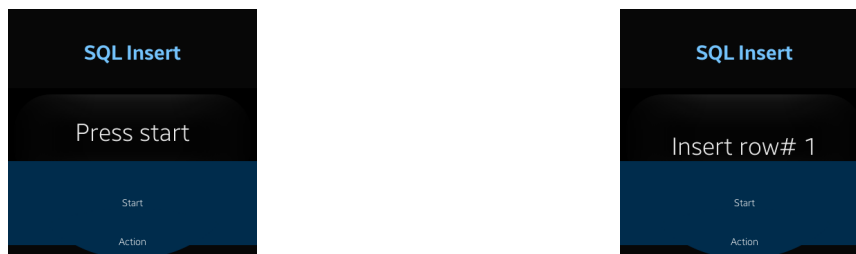


Figure 161: SQL Insert

Delete Operation

To perform the operation

1. Select **Sql Delete** from the test case list
2. Press button **Start Test**.
3. If the request is sent successfully and information is shown normally then **Pass**.
4. If any error is shown, then **Fail**.



Figure 162: SQL Delete

Update Operation

To perform the operation

1. Select **Sql Update** from the test case list
2. Press button **Start**.
3. If the request is sent successfully and information is shown normally then **Pass**.
4. If any error is shown, then **Fail**.



Figure 163: SQL Update

Select Operation

To perform the operation

1. Select **Sql Select** from the test case list
2. Press button **Start**
3. If the request is sent successfully and information is shown normally then **Pass**.
4. If any error is shown, then **Fail**.

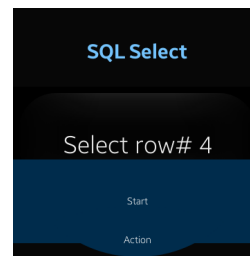
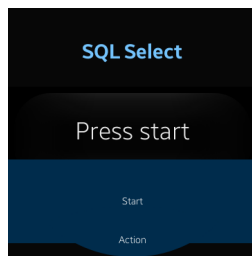


Figure 164: SQL Select

Cursor Operation

To perform the operation

1. Select **Sql Cursor** from the test case list
2. Press button **Start**.
3. It will show the list of row id of the selected items.
4. Press **First** to get the row id of the first selected item.
5. Press **Last** to get data t the row id of the last selected item.
6. Press **Next** and **Prev** to navigate between the selected items.
7. If all the operations are successful then **Pass** otherwise **Fail**.

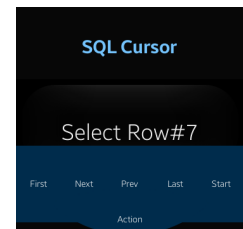
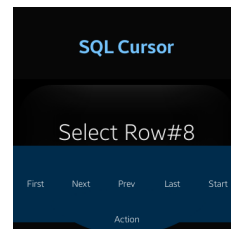
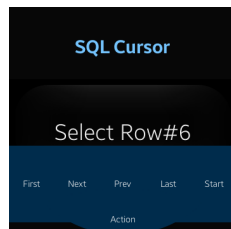
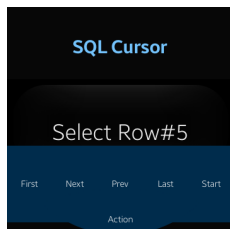
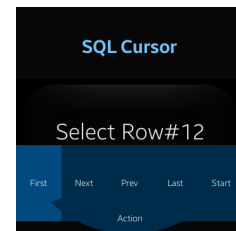
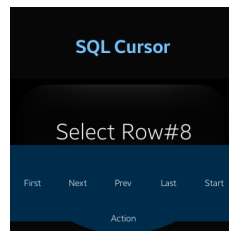
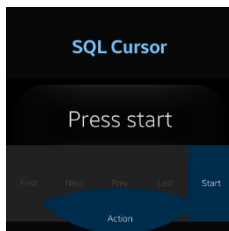


Figure 165: SQL Cursor

Data Control Map

To perform the test,

1. Select **SQL Map** from the test case list.
2. Press button **Start Test**. If three values are shown then **Pass**.
3. If all the values are not shown, then **Fail**.

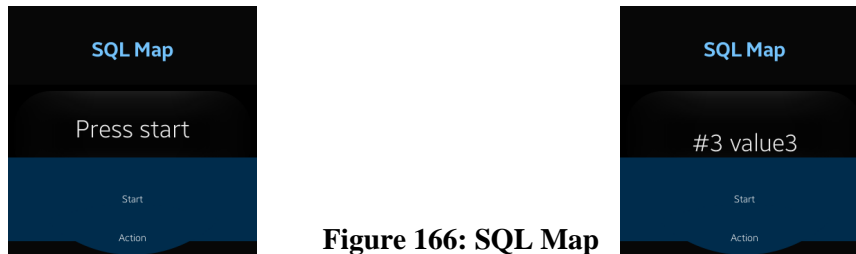


Figure 166: SQL Map

3.2.2.14. Application Controls Operation view

This chapter describes the various tests that can be performed to check that the application control operations work normally.

If the functionality works as expected, press **Pass**. Otherwise, press **Fail**.

App Control View Test

To perform the test:

1. Select Operation View from the test case list
2. Press button **View UI**.
3. If UI is shown, Click item and press **Return** button.
4. Then press button **View Service**.
5. If App launched successfully, then **Pass** otherwise **Fail**.

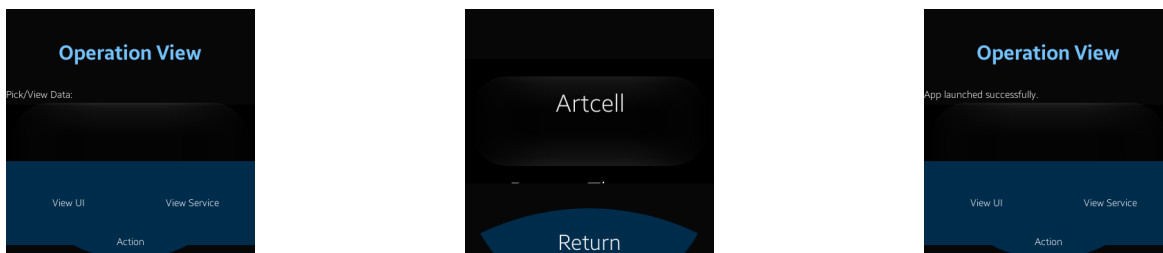
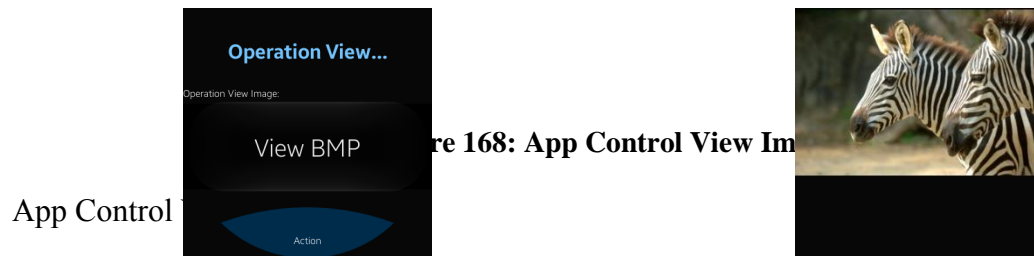


Figure 167: App Control View Test

App Control View Image

To perform the test:

1. Select Operation View Image from the test case list confirm
2. Select list items one after another **View UI**.
3. Select operationpickviewapp and press Always or Just Once
4. Corresponding Image will be shown.



To perform the test:

1. Select Operation View Sound from the test case list confirm
2. Select list items one after another **View UI**.
3. Select operationpickviewapp and press Always or Just Once
4. Corresponding Sound can be heard.



Figure 169: App Control View Sound Test

App Control View Video

To perform the test:

1. Select Operation View Video from the test case list confirm
2. Select list items one after another **View UI**.
3. Select operationpickviewapp and press Always or Just Once
4. Corresponding Video can be heard.



Figure 170: App Control View Video Test

App Control Pick Test

To perform the test:

1. Select Operation Pick from the test case list
2. Press **Multiple** and select multiple items and press Select Multiple.
3. If multiple data is returned, then **Pass** otherwise **Fail**
4. Press **Single** and select single item and press Select Single.
5. If single data is returned, then **Pass**, otherwise **Fail**.

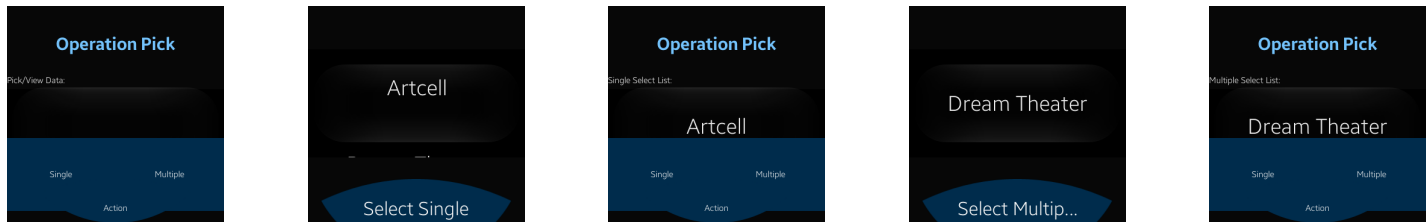


Figure 171: App Control Pick Test

App Control Pick All

To perform the test:

1. Select Operation Pick All from the test case list.
2. Select all from the list.
3. Select operationpickviewapp and press Always or Just Once
4. Operationpickviewapp showing all types of file, select any one.
5. Selected file information will be shown in TBT.

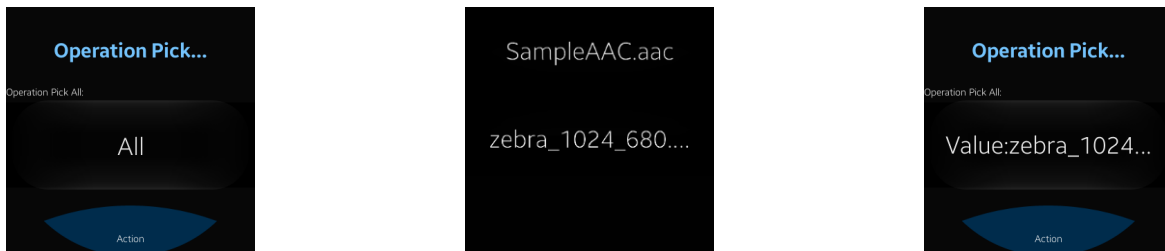


Figure 172: App Control Pick All Test

App Control Pick Image

To perform the test:

1. Select Operation Pick image from the test case list
2. Select Image from the list.
3. Select operationpickviewapp and press Always or Just Once
4. Operationpickviewapp showing all types of image file, select any one.
5. Selected file information will be shown in TBT.

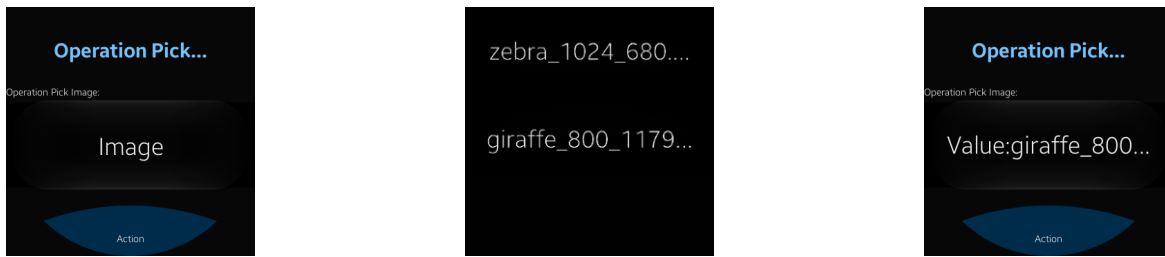


Figure 173: App Control Pick Image Test

App Control Pick Video

To perform the test:

1. Select Operation Pick video from the test case list
2. Select Video from the list.
3. Select operationpickviewapp and press Always or Just Once
4. Operationpickviewapp showing all types of video file, select any one.
5. Selected file information will be shown in TBT.

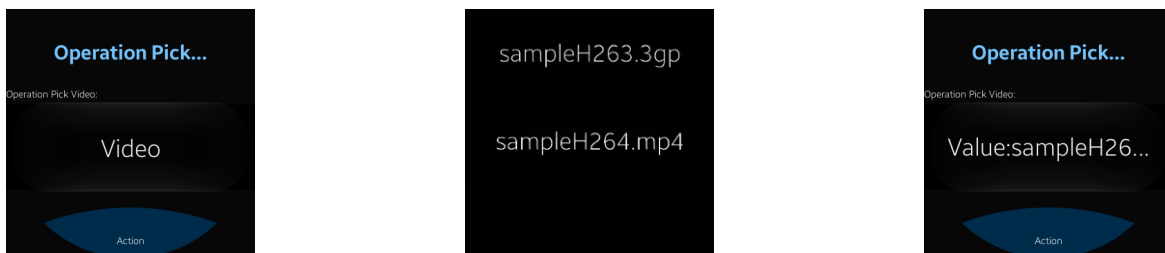


Figure 174: App Control Pick Video Test

App Control Pick Audio

To perform the test:

1. Select Operation Pick audio from the test case list
2. Select Audio from the list.
3. Select operationpickviewapp and press Always or Just Once
4. Operationpickviewapp showing all types of audio file, select any one.
5. Selected file information will be shown in TBT.

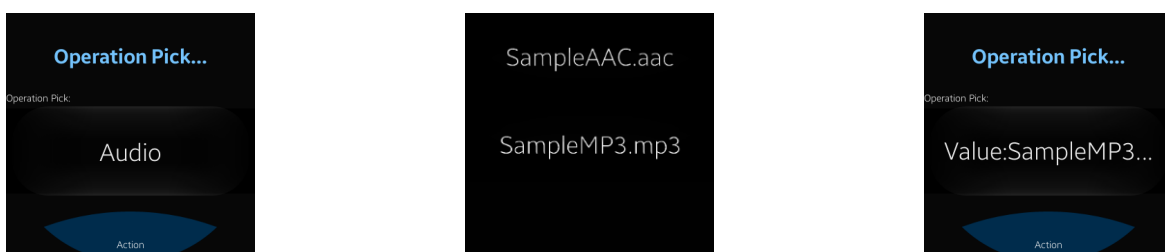


Figure 175: App Control Pick Video Test

3.2.2.15. Sensors

This chapter describes the various tests that can be performed to check that the device sensors work normally. If the functionality works as expected, press **Pass**. Otherwise, press **Fail**.

Accelerometer

This test verifies that the acceleration sensor is working normally.

To perform the test,

1. Select **Accelerometer** from the test case list
2. As you move the device, the triangle displayed on the screen must point down.
3. If it points in another direction, the accelerometer is not properly configured.

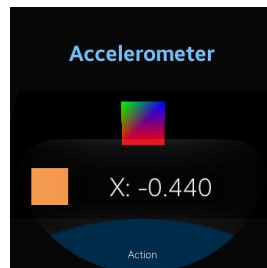


Figure 176: Accelerometer

Gyroscope

To perform the test

1. Select **Gyroscope** from the test case list
2. If the device is stable, then the background of the cube is black.
3. **Move** the device to the direction of the cube movement and background color will be **blue**.
4. **Move** the device to the opposite direction of the cube movement and background color will be **red**.
5. Press button **Next** to change direction of cube movement and do the previous steps accordingly.

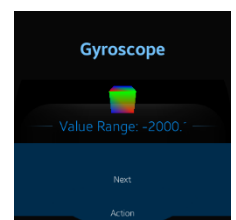
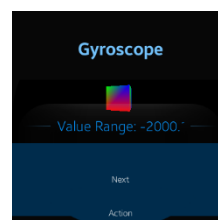
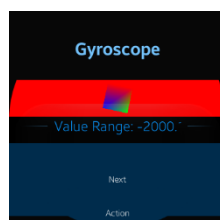
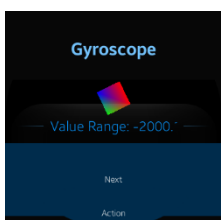


Figure 177: Gyroscope

Proximity

To perform the test

1. Select **Proximity** from the test case list and an image showing a bulb will appear
2. Cover the upper portion of the device with hand and an image showing a glowing bulb will appear.
3. If the hand is moved away, the previous image will appear again.



Figure 178: Proximity

Light

To perform the test

1. Select **Light** from the test case list.
2. **Move** the device to the light source.
3. The color of the object slowly turns into red according to the intensity of light.

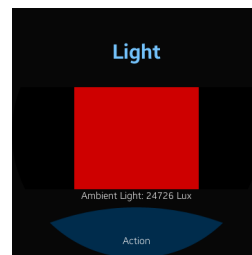
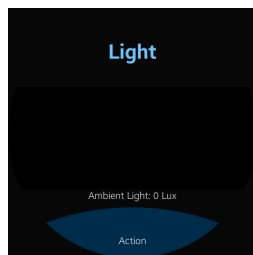


Figure 179: Light

Magnetometer

To perform the test

1. Select **Magnetometer** from the test case list
2. Move device and the value of X, Y and Z component of earth magnetic field will be change accordingly.

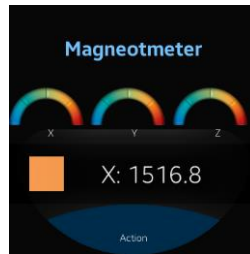


Figure 180: Magnetometer

Pressure

To perform the test

1. Select **Pressure** from the test case list
2. Current air pressure is displayed automatically if device supports pressure sensor.

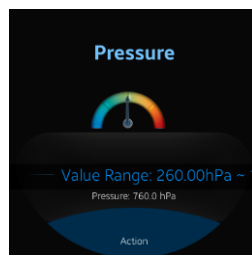


Figure 181: Pressure

Ultra Violet

To perform the test

1. Select **Ultraviolet** from the test case list.
2. **Move** the device to the ultraviolet light source.
3. The color of the object slowly turns into violet according to the intensity of ultraviolet light.

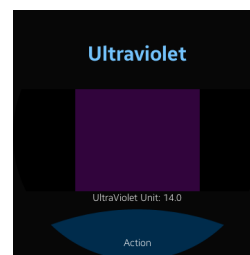


Figure 182: Ultra Violet

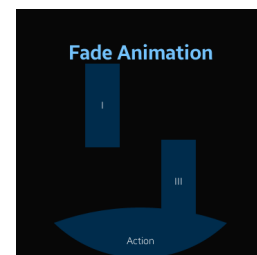
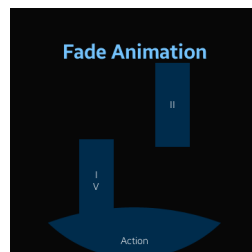
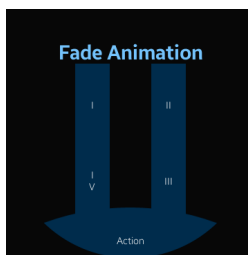
3.2.2.16. UI animations

This chapter describes the various tests that can be performed to check the platform resources. If the functionality works as expected, press **Pass**. Otherwise, press **Fail**.

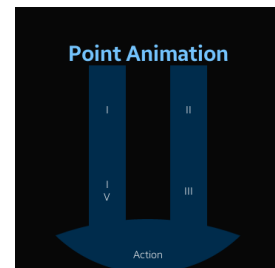
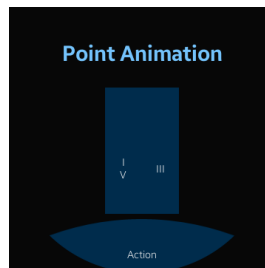
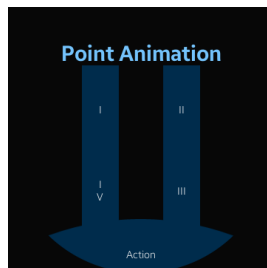
To perform the UI test:

1. Select Fade Animation, Dimension Animation, Rectangle Animation, Point Animation and Rotation Animation respectively for the respected animations.
2. After selecting each test, the animation will be shown automatically.
3. Press **Pass** if all tests are successful.

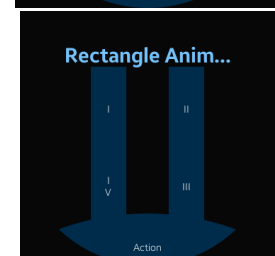
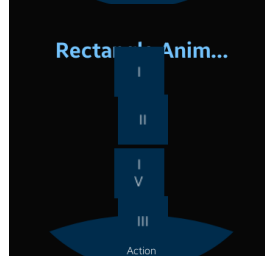
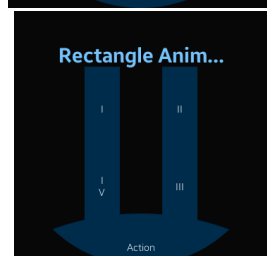
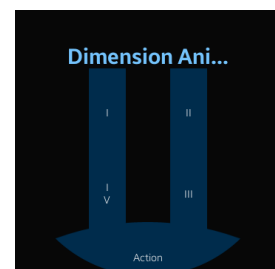
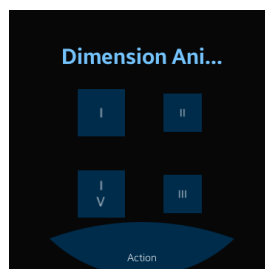
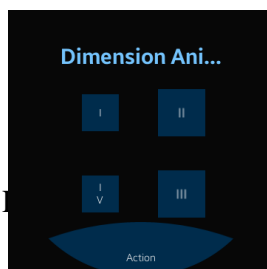
Fade animation:



Point animation:



Dimension animation:



Rotate animation:

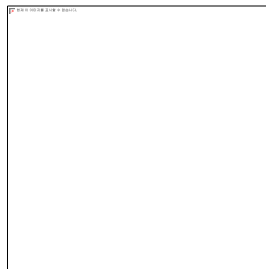


Figure 183: UI Animations

3.2.2.17. Testing UI Components

This section describes the tests you can perform on UI components.

Image Resizing

This test enables you to resize the image as bigger and smaller.

To perform the **Resize Drawable** test:

1. Select **Resize Drawable** from the test case list.
2. Check that the images are resized automatically and normally.

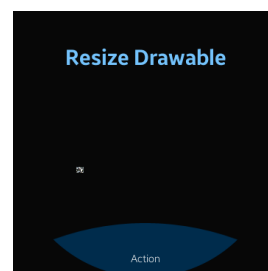


Figure 184: Image Resize

Shapes

This test shows different shapes in the screen.

To perform the **Shape** test:

1. Select the **Shape** from the test case list
2. If different shapes appear automatically and correctly, then **Pass** otherwise **Fail**.



Figure 185: Shapes

Rotation

To perform the rotation test:

1. Select **Rotate** from the **test case list** and check if the objects are rotating properly.
2. If yes then **Pass** otherwise **Fail**.

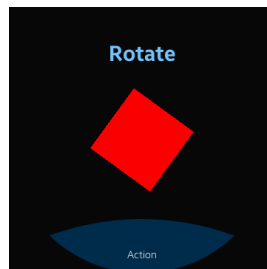


Figure 186: Rotation

Alpha Drawing

To perform the test

1. Select **Alpha Drawable** from the **test case list** and objects of different brightness is shown automatically.
2. If it is shown, then the test is successful.

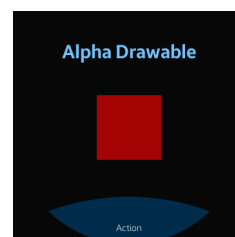
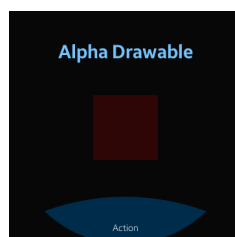
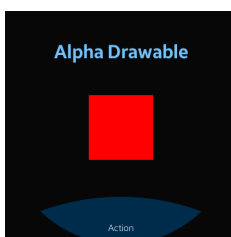


Figure 187: Alpha drawing

Fonts

To perform the test,

1. Select Font from the test case list and text of different font sizes and colors are shown.
2. If it is shown, then Pass otherwise Fail.



Figure 188: Fonts

Line Drawings

To perform the test,

1. Select UI (Line Drawable) from the test case list and lines of different colors, size are drawn in different directions automatically.
2. If yes then Pass otherwise Fail.

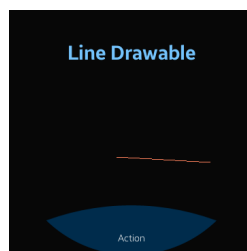


Figure 189: Line Drawable

3.2.2.18. EFL / Event

This chapter describes the various tests that can be performed to check some EFL library functions. If the functionality works as expected, press **Pass**. Otherwise, press **Fail**.

Touch

To perform the touch test:

1. Select Touch from the test case list.
2. Touch and drag to draw random curves on the screen.
3. Check that the first press is green.
4. Check that the touch-drag is blue.
5. Check that the release location is red.
6. If the functionality works as expected, press Pass. Otherwise, press Fail.

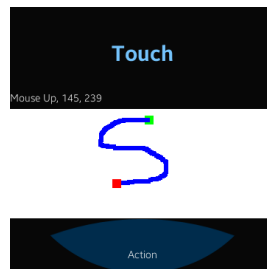


Figure 190: Touch

Event View

To perform the test

1. Select Event View from the test case list.
2. Select Settings from the Notification bar.
3. From Settings, select Language and input and change the language.
4. Go back to TBT and the information about language change and region change will be shown.
5. Move the device and change the device orientation.
6. Information about change in orientation will be shown.
7. If all the steps are performed correctly then Pass, otherwise Fail.

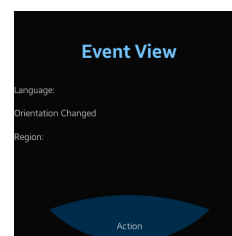
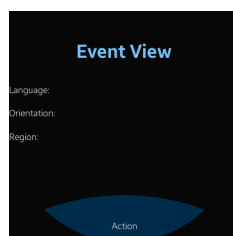


Figure 191: Event View

EFL Callback

To perform the test

1. Select EFL Callback from the test case list.
2. Press the Hardware Back Button and check whether the back button callback is detected.
3. Press button Delete Callback and the callback will be deleted.
4. Press the Hardware Back Button and check, there is no back button callback is detected.
5. Then press button Add Callback to add a new callback
6. Then again press the Hardware Back Button and check whether the back button callback is detected.
7. You must press Pass or Fail button to exit from the test.
8. If all the steps are performed correctly then Pass, otherwise Fail.

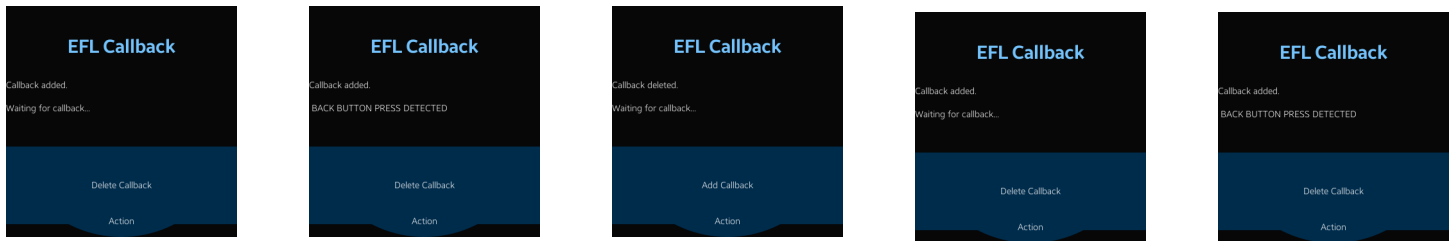


Figure 192: EFL Callback

3.2.2.19. Widget

To perform the test:

1. Select WIDGET from the test case list
2. Press button **View Widget UI**.
3. If Widget UI is shown, then **Pass** otherwise **Fail**.

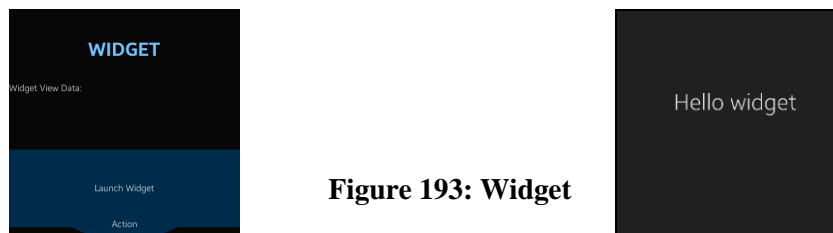


Figure 193: Widget

3.2.2.20. Push Service

To perform the test, select **Push Service** from the **test case list**. There are two tests. Firstly,

1. Press **Start** button to start the push service and a successful response will be displayed.
2. Then long press the Home button and clear the application instance
3. After a few moments, there will a notification.
4. Click on the notification and the message will be shown.

5. Secondly, Press button Start to start the push service.
6. Press button Message.
7. After a few moments a message will be shown.
8. Press button Disconnect to disconnect Push Service

If all steps are completed perfectly, then the test can be considered as success.

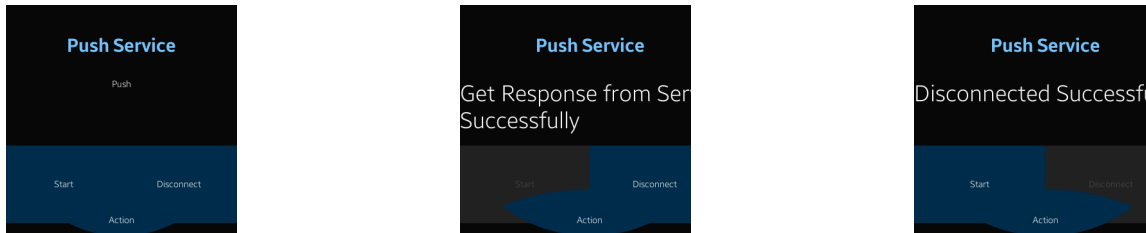


Figure 194: Push Service

3.2.2.21. Runtime Info

To perform the test, select **Runtime Info** from the **test case list**. There are 9 scenarios in runtime-info.

1. **Audio Jack:** There are two test steps.

Firstly,

- a. Initial page will show Audio Jack Not Connected, connect headphone in audio jack.
- b. Then message will show “Audio Jack Connected with 3 wire ear jack” or “Audio Jack Connected with 4 wire ear jack” according to the type of air jack connected. If Audio jack is not supported, “Audio Jack is not supported” will be shown

2. **Vibrate Mode:** There are two test steps.

Firstly,

- a. Initial page will show “Vibrate Mode is Not Enabled” or “Vibrate Mode is enabled”, depending on the vibrate mode status.
- b. You can change status of Vibrate Mode and see whether it is enabled or disabled.

3. **Battery Charging:** There are two test steps.

Firstly,

- a. Initial page will show “Battery Charging Started” or “Battery not charging”, depending on the charger connected or not.

- b. You can plugin charger or plug it out and see whether it is charging or not.

4. **GPS Connection:** There are two test steps.

Firstly,

- a. Initial page will show GPS state, depending on the “Location” enabled or not.
- b. You can enable or disable Location and see whether GPS is enabled or not.

5. **USB Connection:** There are two test steps.

Firstly,

- a. Initial page will show “USB is connected” or “USB not connected”, depending on the USB charger connected or not.
- b. You can plugin USB charger or plug it out and see whether it is connected or not.

6. **Bluetooth:** There are two test steps.

Firstly,

- a. Initial page will show “Bluetooth not enabled” or “Bluetooth is enabled”, depending on the Bluetooth is enabled or not.
- b. You can enable and disable Bluetooth and see whether it is enabled or not.

7. **Auto Rotate:** There are two test steps.

Firstly,

- a. Initial page will show “Auto Rotate is Enabled” or “Auto Rotate not Enabled”, depending on the Auto Rotate is enabled or not.
- b. You can enable and disable Auto Rotate and see whether it is enabled or not.

8. **Location:** There are two test steps.

Firstly,

- a. Initial page will show “Location is Enabled” or “Location not enabled”, depending on the Location is enabled or not.
- b. You can enable and disable Location and see whether it is enabled or not.

9. **Wifi HotSpot:** There are two test steps.

Firstly,

- a. Initial page will show “Wifi Hotspot Not Enabled” or “Wifi Hotspot is enabled”, depending on the Wifi Hotspot is enabled or not.
- b. You can enable and disable Wifi Hotspot [Settings->Thethering->Wi-Fi Thethering] and see whether it is enabled or not.[You should insert sim to enable wifi hotspot]

If all the above scenarios steps are competed perfectly, then the test can be considered as success.

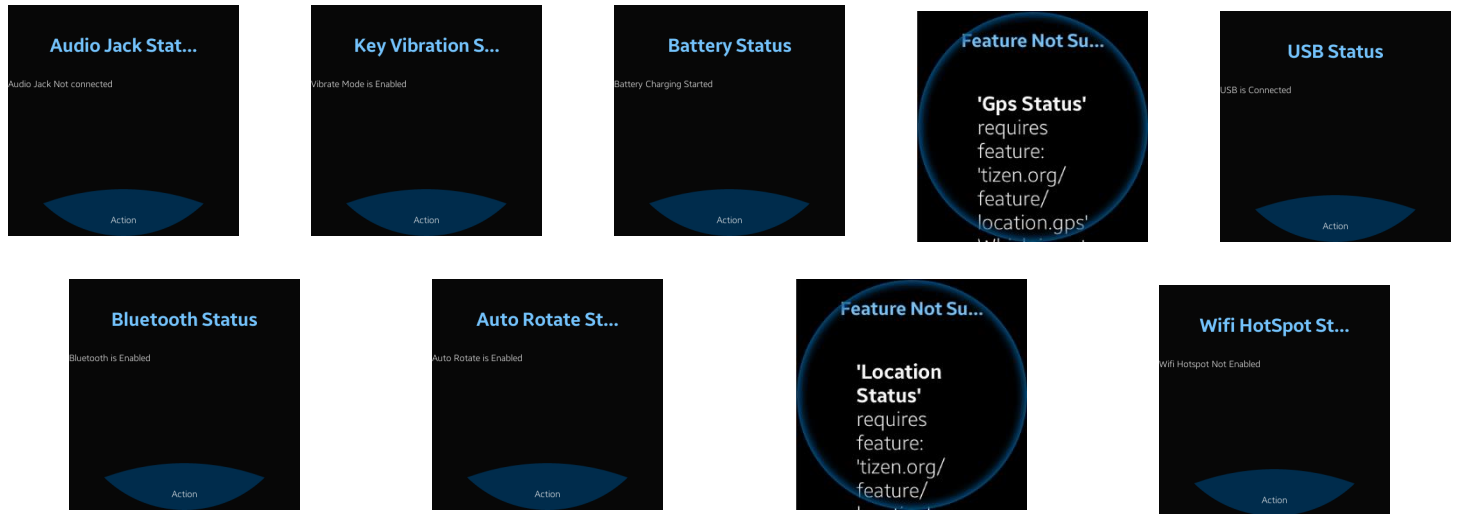


Figure 195: Runtime Info

3.2.2.22. Hardware/Software Feature

To view the hardware/software feature summary of the device:

1. Select HW / SW Feature Test from the test case list
2. Different Hardware/Software features are shown automatically.
3. If it works as expected, press **Pass**. Otherwise, press **Fail**.

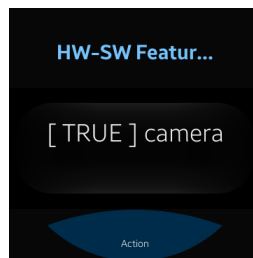


Figure 196: Hardware/Software Feature Summary

3.2.2.23. NSD

DNS-SD Remote

To perform the test:

1. Open **DNS-SD Remote** module under **NSD** group.
2. **“dnssd initialized”** will be shown in bottom list.
3. Press **Add Record** button. Then, **“local service registered”** will be seen in bottom list and in top list added text with key value pair will be seen.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.



Figure 197: DNS-SD Remote

DNS-SD Local

To perform the test:

1. Connect test device to a **Wi-Fi network**.
2. Open DNS-SD Local module under NSD group.
3. **“dnssd initialized”** will be shown in bottom list.
4. Open [DNS-SD Remote](#) module in another device and connect that device to **same Wi-Fi network**.
5. Press **Add Record** in [DNS-SD Remote](#) module.
6. Press **Browse Service** button. Then, corresponding service and text value in [DNS-SD Remote](#) will be seen in top list.
7. If it works as expected, press **Pass**. Otherwise, press **Fail**.



Figure 198: DNS-SD Local

SSDP Remote

To perform the test:

1. Open **SSDP Remote** module under **NSD** group.
2. **“ssdp initialized”** will be shown in bottom list.

3. Press Add Service button. Then, “**service created**” will be seen in bottom list and in top list added url, usn will be seen.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.



Figure 199: SSDP Remote

SSDP Local

To perform the test:

1. Connect test device to a **Wi-Fi network**.
2. Open **SSDP Local** module under **NSD** group.
3. “**ssdp initialized**” will be shown in bottom list.
4. Open SSDP Remote module in another device and connect that device to **same Wi-Fi network**.
5. Press **Add Service** in **SSDP Remote** module.
6. Press **Browse Service** button. Then, corresponding url, usn in **SSDP Remote** will be seen in top list.
7. If it works as expected, press **Pass**. Otherwise, press **Fail**.

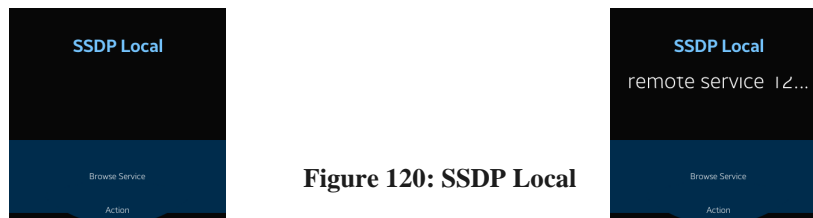


Figure 120: SSDP Local

3.2.2.24. SD-Card Status

To view the SD-Card status of the device:

1. Select SD-Card from the test case list.
2. You have to change SD card state [Remove/Insert SD Card] to see the changes.
3. Accordingly it will show “**STORAGE_STATE_MOUNTED**” or “**STORAGE_STATE_REMOVE**”.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.

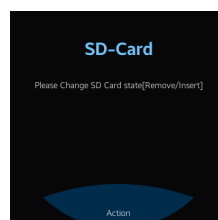


Figure 121: SD Card

3.2.2.25. Radio

To view the Radio status on the device:

1. Select Radio from the test case list.
2. Connect headphone in audio jack.
3. Now, remove headphone and it will show “Interrupted by unplugging headphones”.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.



Figure 122: Radio

3.2.2.26. Sound Manager

Connection Status

To perform the test,

1. Select Connection Status from the test case list .
2. Insert headphone in Audio Jack , Connection Status now show “Audio Jack connected” .Now, remove headphone and it will display” Audio Jack not connected”.
3. If it works as expected, press **Pass**. Otherwise, press **Fail**.

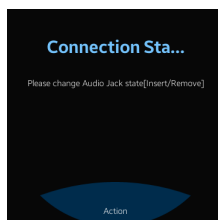


Figure 123: Connection Status

Device Status

To perform the test,

1. Select Device Status from the test case list .
2. Insert headphone in Audio Jack , Change sound profile to “Sound”.
3. It shows “state of device was changed”.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.

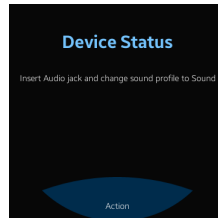


Figure 124: Device Status

3.2.2.27. Media Key

To view the Media Key status on the device:

1. Select Media Key from the test case list.
2. Connect headphone that have play button [media key] on it with device.
3. Now, Press button on headphone, It will show “Pressed/Released Status” and Media Key for earj
ack.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.

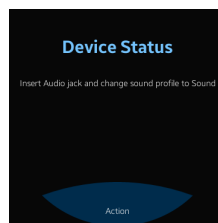


Figure 125: Media Key

3.2.2.28. Package Manager

To view the Package Manager status on the device:

1. Select Package Manager from the test case list.

2. Uninstall package: Go to Settings->Applications->Application manager, now uninstall some package. You can see that package status changes to “uninstall event type” and State changes to “completed event state”.
3. Install/Update package: Go to the path mentioned in instruction guide that appears when you open package manager from the list and install package. You can see that package status changes to “install/update event type” and State changes to “complete/progress event state”.
4. If it works as expected, press **Pass**. Otherwise, press **Fail**.



Figure 126: Package Manager

3.2.2.29. Connection

To view the Connection status on the device:

1. Select Connection from the test case list.
2. Initially if SIM is not inserted it shows “Profile is not cellular type”.
3. Insert SIM: Press back button and again open connection from test list. Now Status shows “Out of Service/Connected” depending on network.
4. Change to flight mode: Go to Settings->Airplane mode, now enable it.
5. Press back button and again open connection from test list. Now, Status shows “Flight mode”.
6. If it works as expected, press **Pass**. Otherwise, press **Fail**.



Figure 127: Connection

3.2.2.30. System Settings

To perform the test:

1. In System Settings make changes in Display->Font->Size. This should be reflected in the tbtcapp - System Settings.

2. In System Settings make changes in Date and Time->24 clock. This should be reflected in the tbtcapp - System Settings.
3. When System Time changes System Time in tbtcapp changes status.
4. If lock sound in system settings in sound menu is present, change its setting. This should be reflected in the tbtcapp - System Settings.
5. In System Settings make changes in Sound->Notification as Silent. This should be reflected in the tbtcapp - System Settings as Silent Mode enabled.
6. If screen touch sound in system settings is present, change its setting. This should be reflected in the tbtcapp - System Settings.
7. In System Settings make changes in Display->Auto Rotate Screen. This should be reflected in the tbtcapp - System Settings as Rotation Control is enabled.
8. If Motion is present in system settings menu, change its setting. This should be reflected in the tbtcapp - System Settings.
9. Enable/ Disable Flight Mode in System Settings. Same should be reflected in tbtcapp - System Settings.
10. Lock/Unlock the device. Same should be reflected in tbtcapp - System Settings as Device is unlocked/locked. Locked status is for a fraction of second.

If all the steps are performed correctly then Pass, otherwise Fail.

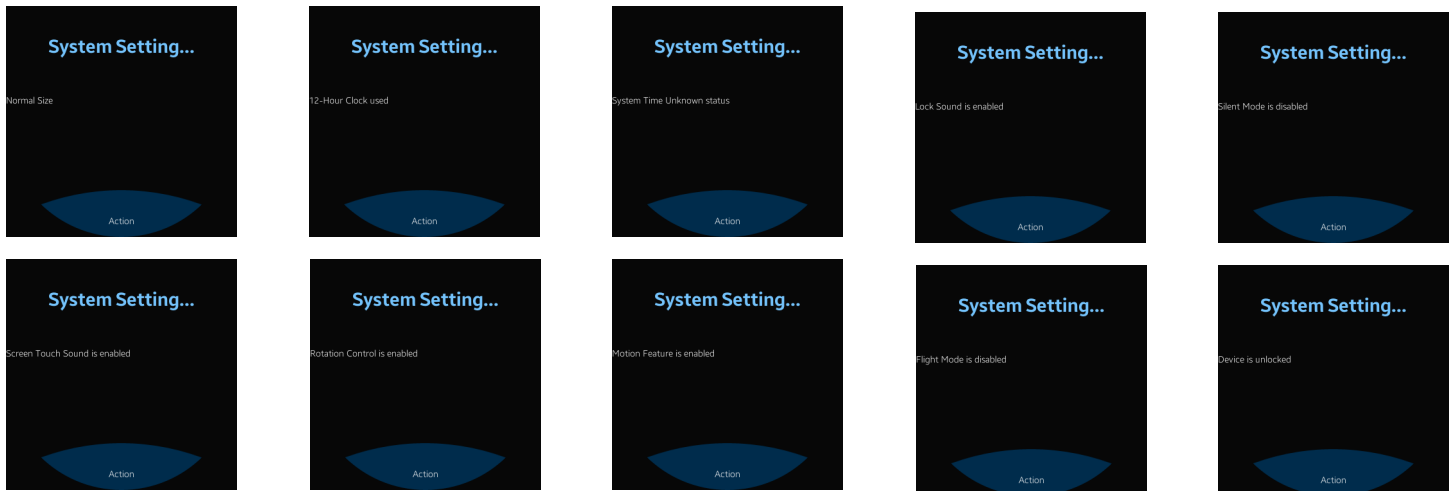


Figure 128: System Settings

3.2.2.31. Contacts

To perform the test:

1. In contacts menu, create a contact(if already exists, delete and re-create it) with Name as "Test" and phone number as "12345678"
2. Make a number of calls to Test
3. Press Contacts in tbtcapp.
4. The count displayed is equal to the number of the calls made to "Test".
5. Delete the contact "Test".
6. If all the steps are performed correctly then Pass, otherwise Fail.



Figure 129: Contacts

3.2.2.32. D2D

D2D Client

To perform the test:

1. Connect D2D Server to Same WiFi Network.
2. Run D2D server.
3. Run D2D Client Module from TBT
4. /tizen/remote-app-control will be shown
5. Select /tizen/remote-app-control first. Then cortbt_uiapp will be launch in D2D Server
6. If everything is working as above then pass otherwise fail

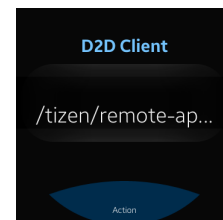
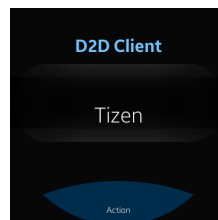
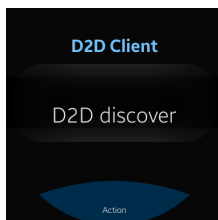


Figure 130: D2D Client

D2D Server

To perform the test:

1. Connect D2D Client to Same WiFi Network.
2. Run D2D Server Module from TBT
3. Server Ready Message will be shown
4. If everything works as above then pass otherwise fail.



Figure 131: D2D Server

3.3 Execute/Test EFL:

3.3.1 Run EFL UTC

Before execute this, swipe off lock screen and check if LCD is on now.
Run EFL UTC on Tizen device:

```
# su - (pwd : tizen)
# cd /opt/usr/efl-test-suite/TC
# ./execute.sh mobile
```

```
sh-3.2# cd opt/usr/efl-test-suite/TC
sh-3.2# ./execute.sh mobile
Starts the test for Mobile Profile scenarios
Start checking current machine....
arm7l is running....
[vconf] ***** set key db/setting/lcd_backlight_normal - value : 0
tcc: journal file is /opt/usr/efl-test-suite/TC/results/exec-tar-result-1445390649.journal
10:24:10 Execute /ecore/ecore_thread/utc_UIFW_ecore_thread_run
10:24:12 Execute /ecore/ecore_thread/utc_UIFW_ecore_thread_feedback_run
10:24:14 Execute /ecore/ecore_thread/utc_UIFW_ecore_thread_cancel
10:24:16 Execute /ecore/ecore_thread/utc_UIFW_ecore_thread_check
10:24:18 Execute /ecore/ecore_thread/utc_UIFW_ecore_thread_global_data_add
10:24:19 Execute /ecore/ecore_thread/utc_UIFW_ecore_thread_global_data_del
10:24:20 Execute /ecore/ecore_thread/utc_UIFW_ecore_thread_global_data_find
10:24:21 Execute /ecore/ecore_thread/utc_UIFW_ecore_thread_max_set
10:24:22 Execute /ecore/ecore_thread/utc_UIFW_ecore_thread_max_get
10:24:23 Execute /ecore/ecore_thread/utc_UIFW_ecore_thread_active_get
```

Figure 132: EFL UTC Run

3.3.2 View Result Summary

Get results from Tizen device to your computer:

```
$sdb pull /opt/usr/efl-test-suite/TC/results/
```

View results via browser:

```
$google-chrome exec-tar-result-xxxx.html
```

4 Appendix

- Certain ports should be opened if company firewall is applied to Wi-Fi being used. These ports are needed to create email account, download files and push module for sending and receiving push notifications.

5223, 110, 143, 465, 587, 993, 995, 8000, 8081, 8088, 8080, 80, 443