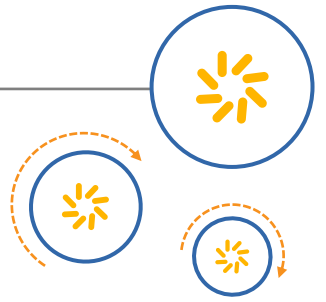




Qualcomm Technologies, Inc.



# Device Characterization Platform v1.0.0

## User Guide

DCP-Authority-User-Guide-v1.0.0

October 4, 2019

## Revision history

Revision	Date	Description
A	October 2019	Initial release

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# 1. Introduction

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Device Characterization Platform (DCP) is a platform for authorized users to characterize devices based on their IMEI by querying GSMA IMEI database. It fetches information associated with an IMEI from GSMA IMEI database and displays to user. It gives option to user to report counterfeit device if its TAC part of IMEI is not approved by GSMA or characteristics retrieved from GSMA IMEI database does not match with physical device.

## 1.1. Purpose

This document is intended to give assistance to the user to use the Device Characterization Platform (DCP).

## 1.2. Supported Desktop Browsers

*Table 1- Supported Desktop Browsers*

Name	Version
Internet Explorer	11.0
Firefox 52.5 ESR	57.0
Chrome	63.0
Safari	11.0
Edge	41.16299

## 1.3. Supported Mobile Browsers

*Table 2- Supported Mobile Browsers*

Name	Version
Chrome	63.0
UC Browser	11.5
Opera(Android)	44.1
Opera(iOS)	16.0.7
Safari	11.1
Samsung Internet	6.2
Android	4.1.x - 4.3

## 1.4. Definitions, Acronyms, and Abbreviations

Table 3- Definitions, Acronyms, and Abbreviations

Term	Definition
DCP	Device Characterization Platform
TAC	Type Allocation Code
IMEI	International Mobile Equipment Identity

## 2. System Description

Table 4-System Description

Feature/Sections	Description
Login Screen	<ul style="list-style-type: none"> <li>In order to gain access to information and functionality, user first needs to enter his/her credentials on login screen.</li> </ul>
Portal Sections	<p>The portal is divided into following sections.</p> <ul style="list-style-type: none"> <li><b>Header</b> Header section displays name of the system, language change option and name of the logged in user with logout functionality.</li> <li><b>Navigation Panel</b> Navigation Panel contains main navigation menu through which user can navigate the whole system.</li> <li><b>Main Content Area</b> Main Content Area contains all the content to be displayed and actions to be performed for respective feature.</li> <li><b>Footer</b> Footer contains the copyright statement.</li> </ul>
Dashboard	<ul style="list-style-type: none"> <li>The dashboard gives the visual display of stats (i.e. statistics, charts, table and heat maps) at a glance.</li> </ul>
IMEI Search	<ul style="list-style-type: none"> <li>Allows user to enter IMEI to fetch details from GSMA IMEI database</li> </ul>
Device Status	<ul style="list-style-type: none"> <li>Displays the following information (i.e. Device ID, Manufacturer, Equipment Type, Brand Name, Model Name, Marketing Name, Internal Model Name, TAC Approved Date, Device Certify Body, Radio Interface, Operating System, SIM Support, Bluetooth Support, and WLAN Support) of the device in a table.</li> </ul>
My Activity	<ul style="list-style-type: none"> <li>Allows user to view his/her own activity logs (i.e. User Device (web, mobile), Checking Method (auto, manual), IMEI Number, Result Status (found/not found), Results Matched(yes/no), User Name, Created At).</li> </ul>
All Users Activity	<ul style="list-style-type: none"> <li>Allows user to view all activity logs of all other users.</li> </ul>
Counterfeit Devices	<ul style="list-style-type: none"> <li>Allows user to search, delete, and view the devices that have been reported as counterfeit</li> </ul>
Members	<ul style="list-style-type: none"> <li>Allows admin user to create a new user and view/edit profile of users.</li> </ul>

Feature/Sections	Description
App Download	<ul style="list-style-type: none"><li>Allows user to download the mobile app by accepting the end user license agreement.</li></ul>
License Agreement	<ul style="list-style-type: none"><li>Allows user to view current license agreement and add new version of license agreement</li></ul>
System Feedbacks	<ul style="list-style-type: none"><li>Allows admin to view the feedback of users.</li></ul>
Language Change	<ul style="list-style-type: none"><li>Facilitates user to select any language (English, Vietnamese) for the system.</li></ul>



## 3. System Navigation

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### 3.1. Login Screen

1. Enter username and password in respective fields
2. Click on “Log in” button

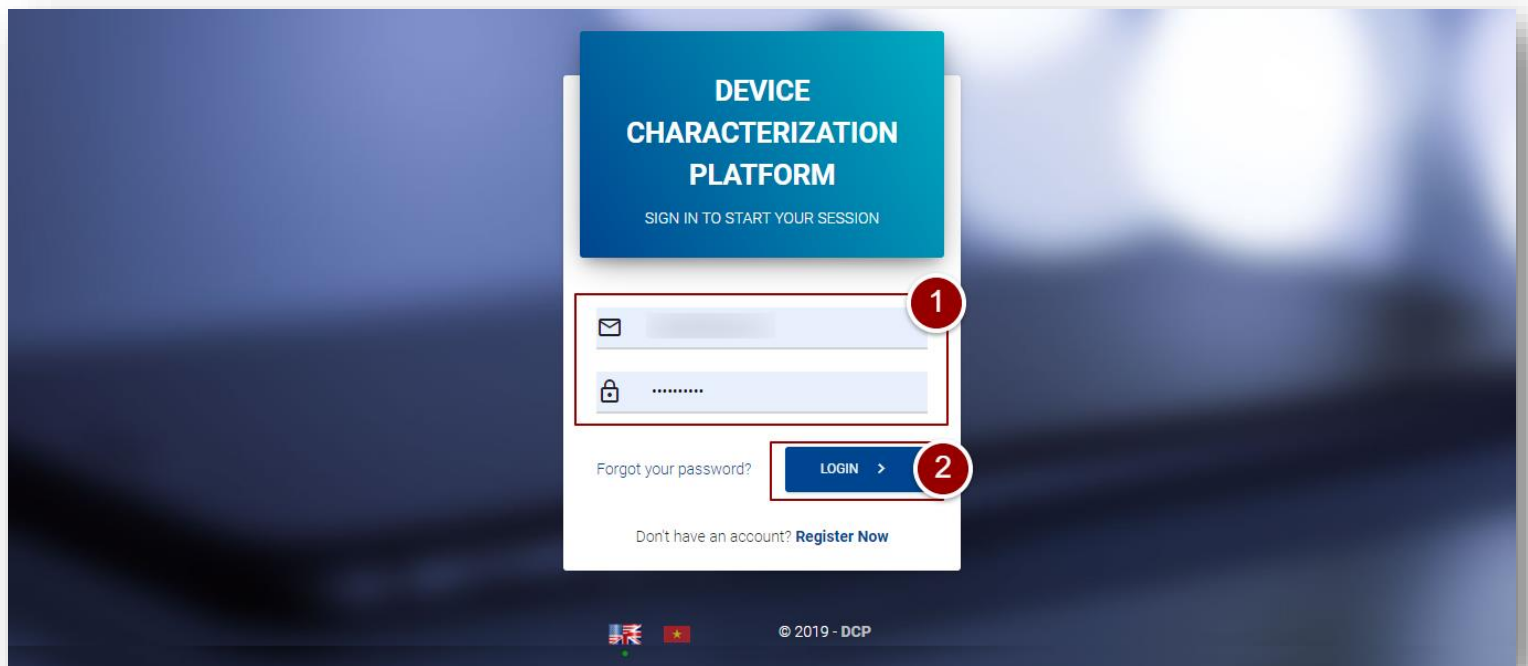


Figure 1-Login Screen

## 3.2. Portal Sections

The portal screen is divided into following sections:

1. **Header** section displays name of the system, name of the logged in user with logout functionality.
2. **Main Navigation Panel** helps user to navigate through system.
3. **Main Content Area** contains all relevant information related to the respective feature/option.
4. **Footer** contains the version and copyrights statement.

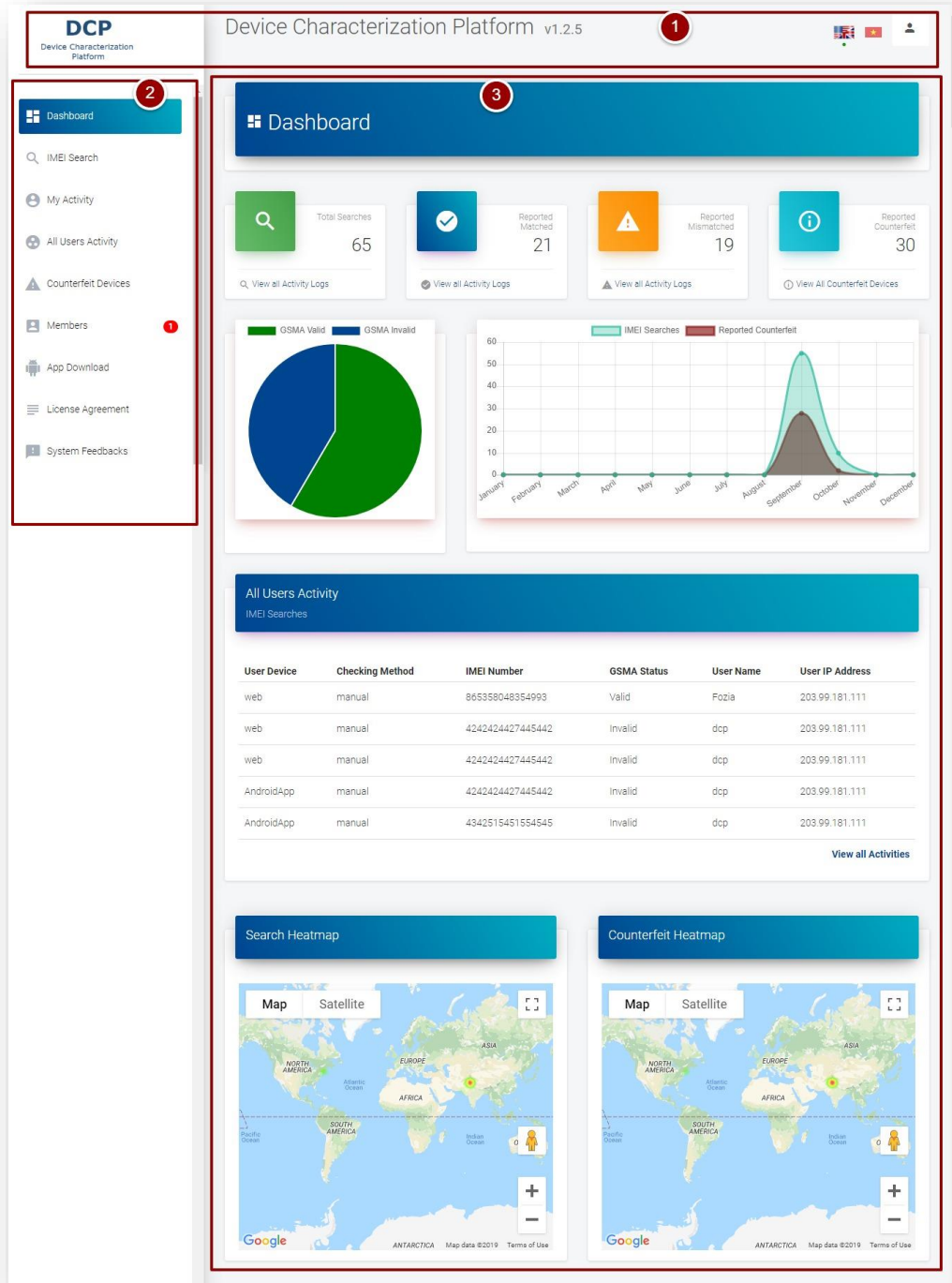


Figure 2-Portal Sections

### 3.3. Dashboard Screen

By clicking on “Login” button, it will redirect user to dashboard screen that displays all stats of the system.

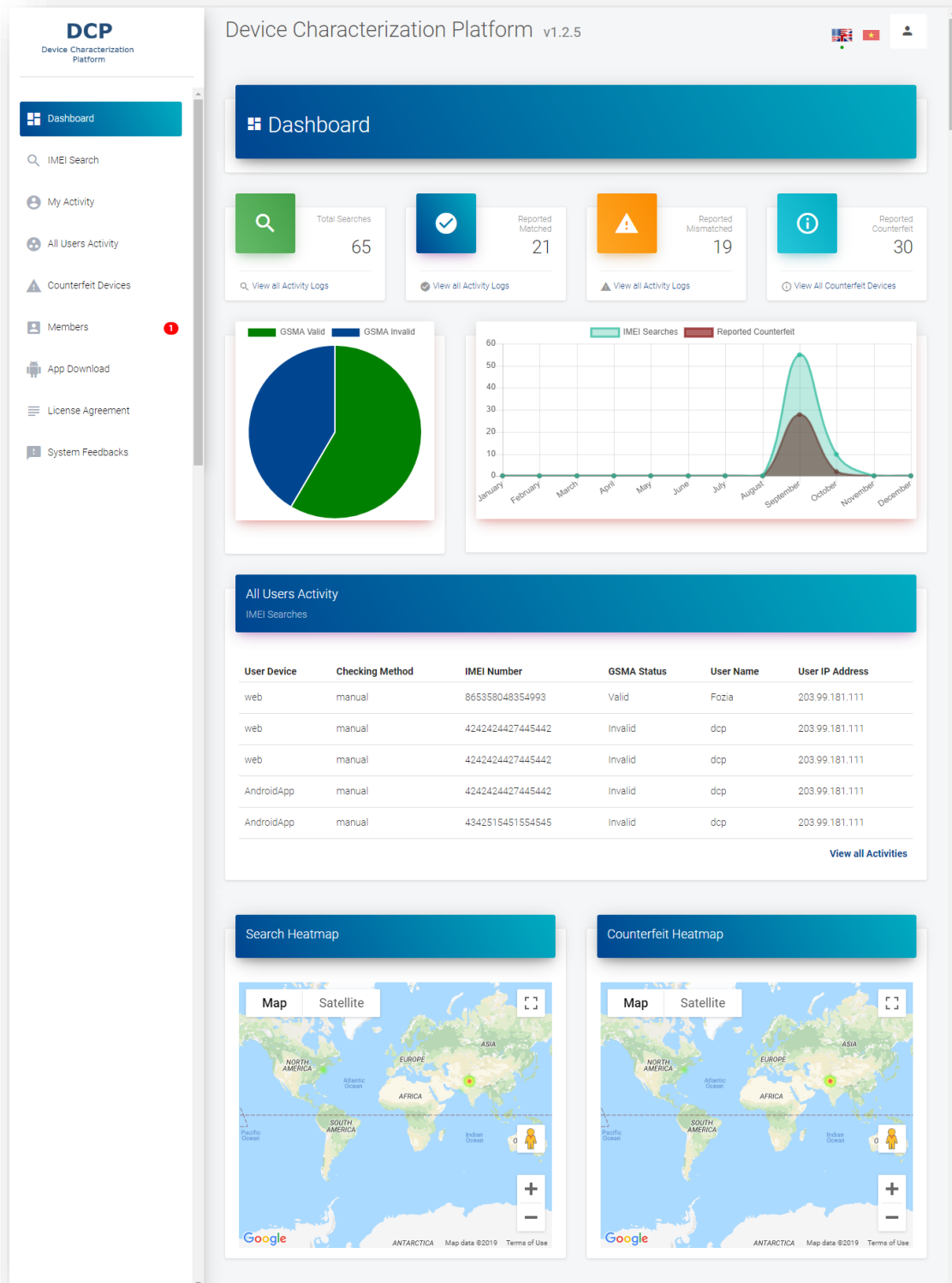


Figure 3-Dashboard Screen

## 3.4. IMEI Search

1. To search a particular IMEI, click on “IMEI Search” link
2. Enter IMEI in the respective field  
**Note:** The length of the IMEI should be between 14-16 characters.
3. Click on “Search” button

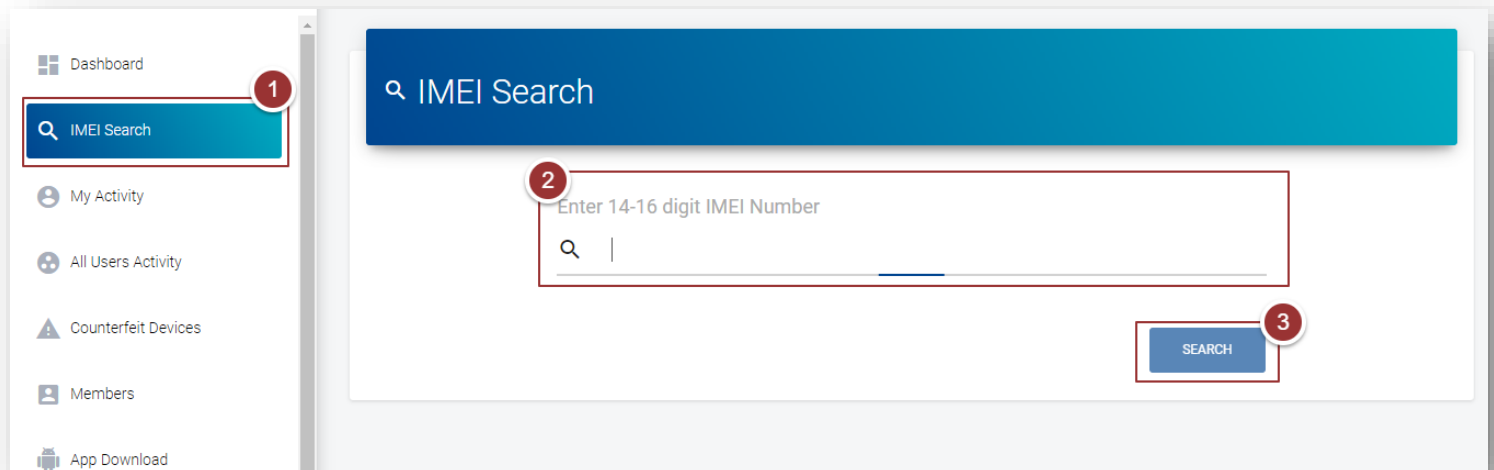


Figure 4-IMEI Search

By clicking on “Search” button a popup will appear that contain entered IMEI to be verified.

4. Verify the IMEI and click on “OK” button

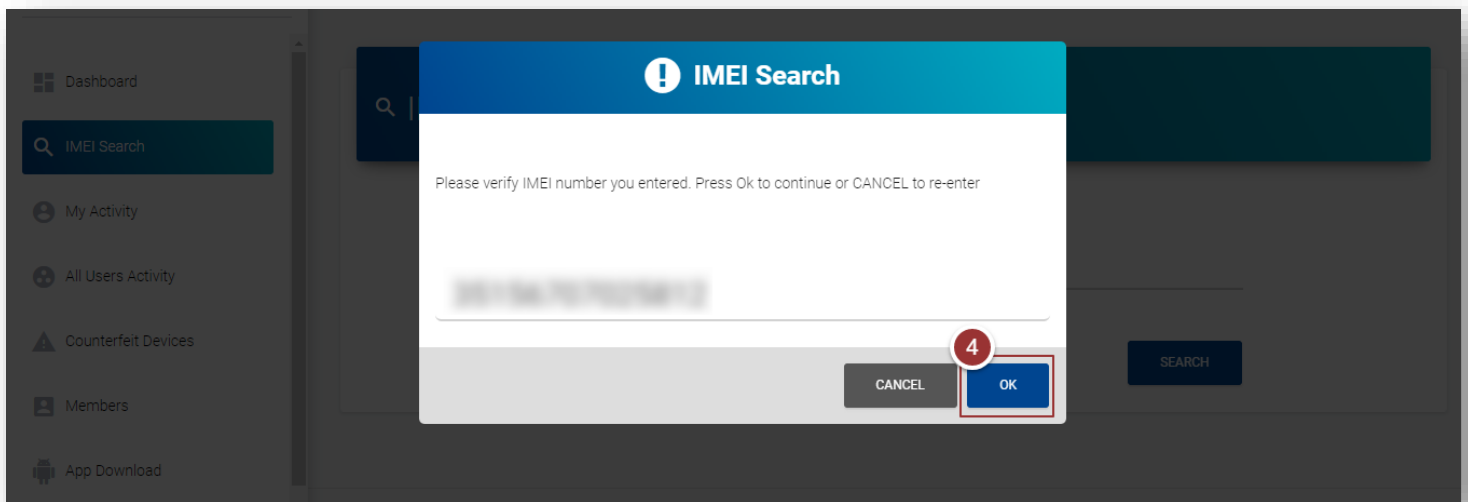




Figure 5-IMEI Search

The details of the searched IMEI (i.e. Device ID, Manufacturer, Equipment Type etc.) will display in a table.

Device Characterization Platform



IMEI Search

Enter 14-16 digit IMEI Number

Q

3511461012345678

SEARCH

Results found

Device ID	351146101
Manufacturer	Samsung Mobile
Equipment Type	Smartphone
Brand Name	Samsung
Model Name	SM-N960U (U.S.)
Marketing Name	Samsung SM-N960U (U.S.)
Internal Model Name	Samsung SM-N960U (U.S.)
TAC Approved Date	2019-05-17
Device Certify Body	Not Applicable
Radio Interface	LTE-M
Operating System	Android
Sim Support	2-SIM
NFC Support	Yes
Bluetooth Support	Yes
WLAN Support	Yes

Are the results match your device?

YES?

NO? REPORT DEVICE

Figure 6-Searched Details Table

### 3.4.1. Matched Devices

**Note:** Repeat steps 1-4 as per section 3.4

If the searched details of the device are matched with user's device then user can mark the device as matched device.

5. To mark IMEI as matched, click on “Yes” button

The screenshot shows the 'Device Characterization Platform' interface. At the top, there is a header with the platform name, a US flag, and a user icon. Below the header is a search bar with the text 'IMEI Search'. Underneath the search bar is a prompt 'Enter 14-16 digit IMEI Number' followed by a search input field containing '357647890123456' and a 'SEARCH' button. Below the search bar, the section 'Results found' displays a table with 17 rows and 2 columns. The first column lists various device attributes, and the second column shows the corresponding values for the searched IMEI. At the bottom of the interface, there is a question 'Are the results match your device?' with two buttons: 'YES?' (highlighted with a red circle and the number 5) and 'NO? REPORT DEVICE'.

Device ID	357647890123456
Manufacturer	Samsung
Equipment Type	Smartphone
Brand Name	Samsung
Model Name	SM-N960U
Marketing Name	Samsung SM-N960U
Internal Model Name	Samsung SM-N960U
TAC Approved Date	2018-01-01
Device Certify Body	VeriSign
Radio Interface	LTE
Operating System	Android
Sim Support	Yes
NFC Support	Yes
Bluetooth Support	Yes
WLAN Support	Yes

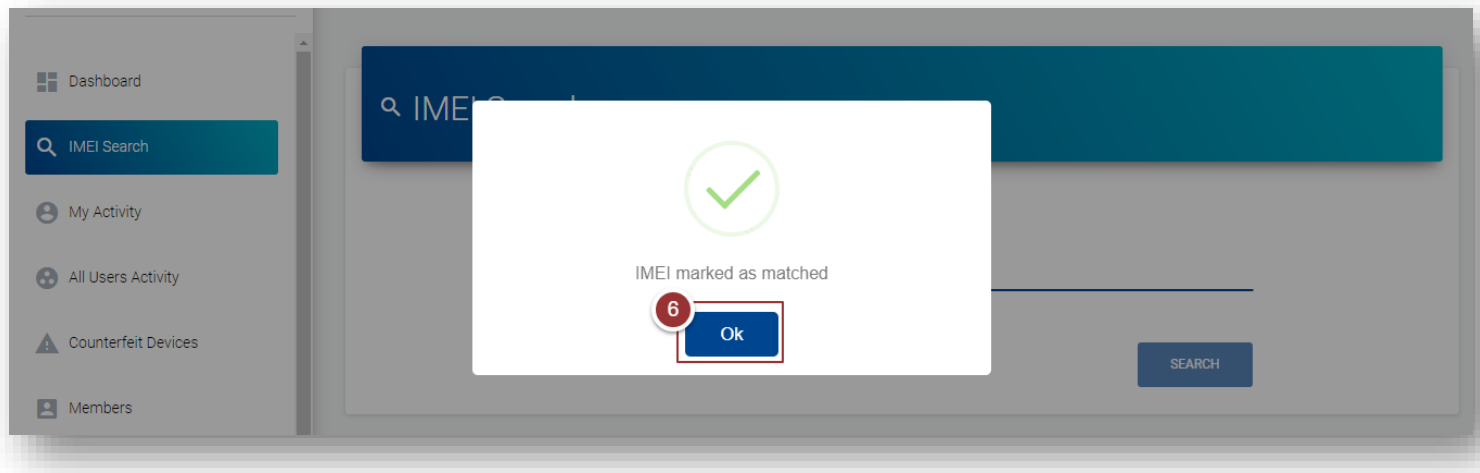
Are the results match your device?

**5** YES? NO? REPORT DEVICE

**Figure 7-Matched Devices**

By clicking on “Yes” button, a popup window will appear that displays the confirmation message.

6. Click on “OK” button to proceed further



**Figure 8-Confirmation Message**



### 3.4.2. Counterfeit Devices

**Note:** repeat steps 1-4 as per section 3.4

If the searched details of device are not found/not matched with user's device then user can report the device as counterfeit device.

5. To report device as counterfeit, click on "Report Device" button

The screenshot shows the 'Device Characterization Platform' interface. At the top, there is a header with the platform name, a US flag, and a user profile icon. Below the header is a blue search bar labeled 'IMEI Search'. Underneath the search bar, there is a text input field with the placeholder 'Enter 14-16 digit IMEI Number' and a magnifying glass icon. To the right of the input field is a blue 'SEARCH' button. Below the search bar, the section 'Results found' displays a table with device details. At the bottom of the interface, there is a question 'Are the results match your device?' with two buttons: 'YES?' (blue) and 'NO? REPORT DEVICE' (red). A red circle with the number '5' is placed over the 'NO? REPORT DEVICE' button.

Results found	
Device ID	357485011000000
Manufacturer	Samsung Mobile
Equipment Type	Smartphone
Brand Name	Samsung
Model Name	SM-N960U
Marketing Name	Samsung SM-N960U
Internal Model Name	Samsung SM-N960U
TAC Approved Date	2019-01-01
Device Certify Body	VeriSign
Radio Interface	4G LTE
Operating System	Android
Sim Support	Yes
NFC Support	Yes
Bluetooth Support	Yes
WLAN Support	Yes

Are the results match your device? YES? NO? REPORT DEVICE

Figure 9-Report Device

By clicking on “Report Device” button, a form will appear to get actual details of the device.

6. Enter the required information (i.e. Mobile Phone Brand, Model Name, Store Name, Address(user’s address), Description and images) in the respective fields

**Note:** User can upload maximum 5 images in (.png, .jpg, .gif .jpeg) format.

7. Click on “Submit” button

**Report Mobile phone**

6

Mobile Phone Brand Model Name

Store Name Address

Description

No file selected Choose File

\* Supported formats are .png, .jpg, .jpeg, .gif (max limit 5 images).

\* Max Image size is 2 MBs

7 SUBMIT

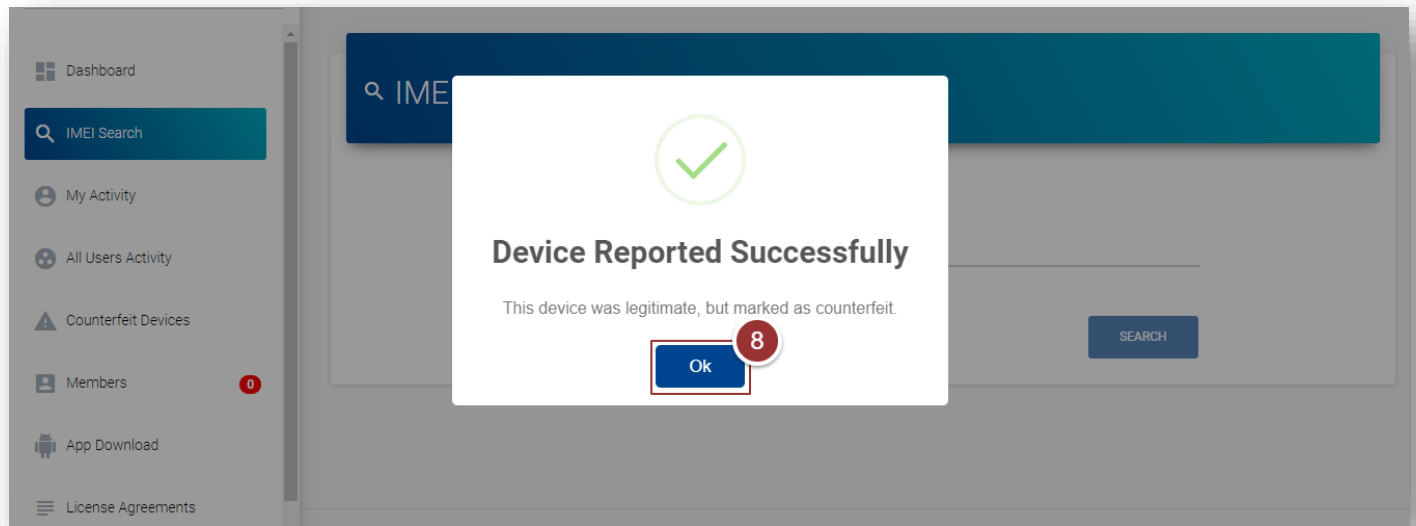
SEARCH

© 2018 DCP

Figure 10-Counterfeit Device Details

By clicking on “Submit” button, a popup window will appear that displays the confirmation message.

8. Click on “OK” button to proceed further



**Figure 11-Confirmation Message**

### 3.5. My Activity

1. To view activity logs(i.e. total number of IMEIs searched by the user), click on the “My Activity” link

A page will appear in the right content area that displays all activity details (i.e. User Device (web, mobile), Checking Method (auto, manual), IMEI Number, Result Status (found/not found), Results Matched(yes/no), User Name, Created At).

**DCP**  
Device Characterization Platform

Dashboard

IMEI Search

**My Activity**

All Users Activity

Counterfeit Devices

Members

App Download

### My Activities

Search IMEI Number

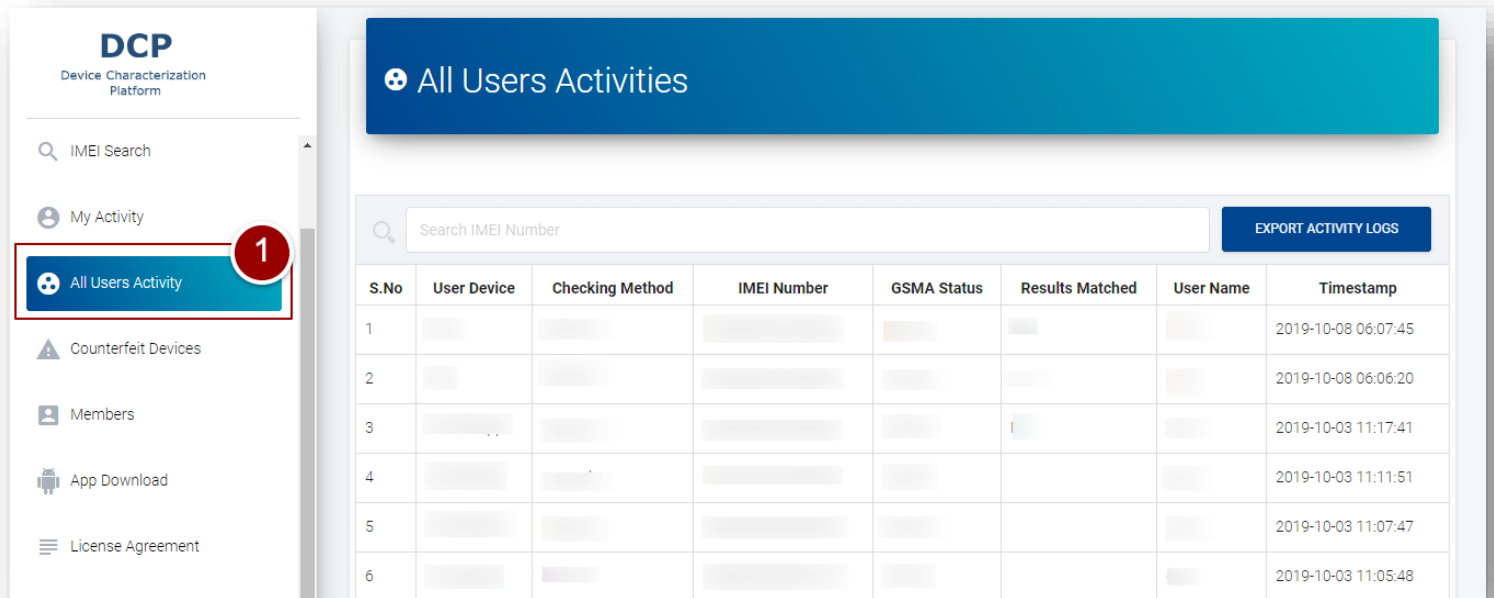
S.No	User Device	Checking Method	IMEI Number	GSMA Status	Results Matched	User Name	Timestamp
1							2019-10-08 06:07:45
2							2019-10-08 06:06:20
3							2019-10-03 11:17:41
4							2019-10-03 11:11:51
5							2019-10-03 11:07:47
6							2019-10-03 11:05:48

**Figure 12-My Activity**

## 3.6. All Users Activity

1. To view activity logs of all other users, click on “All Users Activity” link

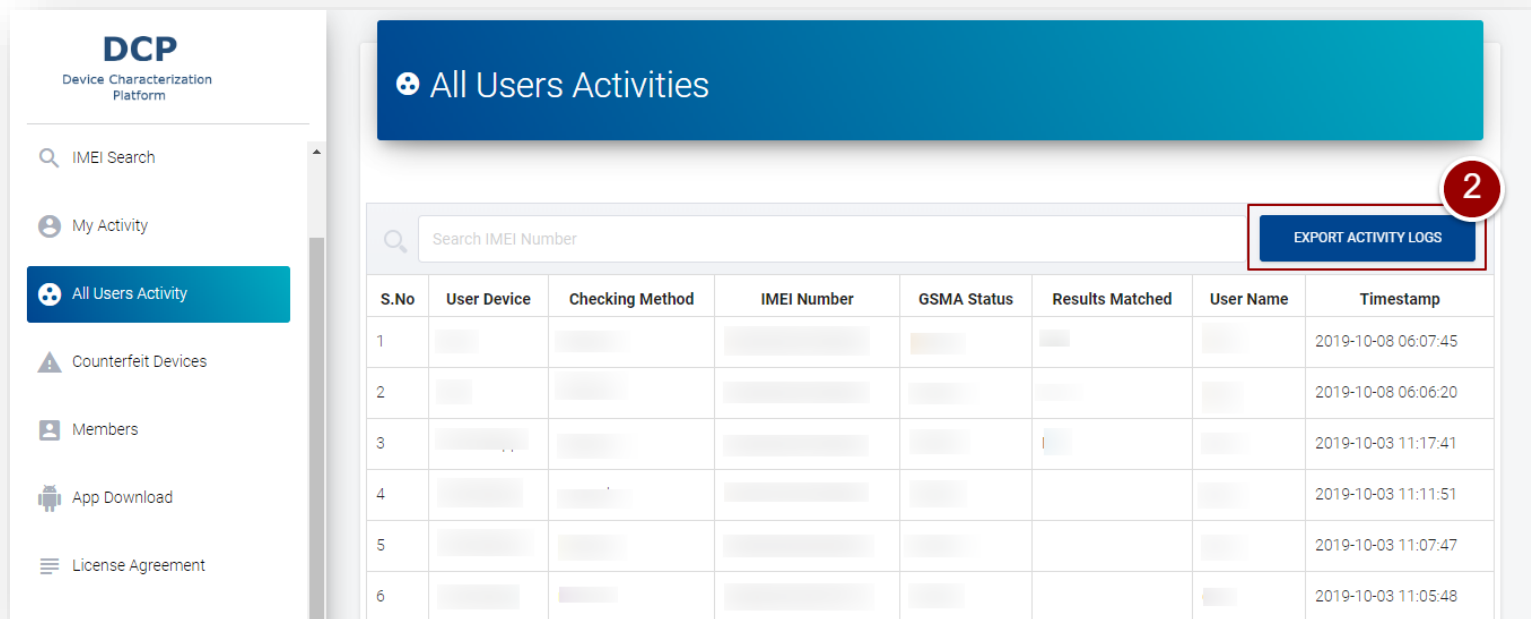
A page will appear in the right content area that displays all activity details.



S.No	User Device	Checking Method	IMEI Number	GSMA Status	Results Matched	User Name	Timestamp
1							2019-10-08 06:07:45
2							2019-10-08 06:06:20
3							2019-10-03 11:17:41
4							2019-10-03 11:11:51
5							2019-10-03 11:07:47
6							2019-10-03 11:05:48

Figure 13-All Users Activity

2. To download activity details of all users, click on the “Export Activity Logs” button



**DCP**  
Device Characterization Platform

IMEI Search

My Activity

**All Users Activity**

Counterfeit Devices

Members

App Download

License Agreement

## All Users Activities

Search IMEI Number

**EXPORT ACTIVITY LOGS**

S.No	User Device	Checking Method	IMEI Number	GSMA Status	Results Matched	User Name	Timestamp
1							2019-10-08 06:07:45
2							2019-10-08 06:06:20
3							2019-10-03 11:17:41
4							2019-10-03 11:11:51
5							2019-10-03 11:07:47
6							2019-10-03 11:05:48

**Figure 14-Export Activity Logs**

### 3.7. Counterfeit Devices

1. To view all counterfeit devices (i.e. Not matched or Not found), click on “Counterfeit Devices” link

A page will appear in right content area that displays information (i.e. IMEI Number, User Name, Brand Name, Model Name, Status, time and date) of counterfeit devices.

S.No	IMEI Number	User Name	Brand Name	Model Name	GSMA Status	Timestamp	Actions
1						2019-10-03 11:26:00	
2						2019-10-03 11:09:40	
3						2019-09-25 09:19:41	
4						2019-09-25 09:11:00	
5						2019-09-25 07:59:23	
6	1724885469485781	Usama	Huawei	Y7	Not Found	2019-09-25 07:52:56	

Figure 15-Counterfeit Devices

2. To delete/view the log of counterfeit device, click on the required action button
3. To download all details of counterfeit devices, click on the “Export Counterfeit Logs” button
4. To download all details of comparison Logs, click on the “Comparison Logs”

**DCP**  
Device Characterization Platform

Dashboard  
IMEI Search  
My Activity  
All Users Activity  
**Counterfeit Devices**  
Members  
App Download

### Reported Counterfeit

Search IMEI Number

**EXPORT COUNTERFEIT LOGS** **COMPARISON LOGS**

S.No	IMEI Number	User Name	Brand Name	Model Name	GSMA Status	Timestamp	Actions
1						2019-10-03 11:26:00	
2						2019-10-03 11:09:40	
3						2019-09-25 09:19:41	
4						2019-09-25 09:11:00	
5						2019-09-25 07:59:23	
6	1724885469485781	Usama	Huawei	Y7	Not Found	2019-09-25 07:52:56	

Figure 16-Export Counterfeit Logs



## 3.8. Add Members

1. To create a new user, click on “Members” link

A page will appear in right content area that displays the information (i.e. First Name, Last Name, Email Address, and Date/Time Added) of created users.

2. Click on “Add New User” button

The screenshot shows the DCP (Device Characterization Platform) interface. On the left is a sidebar with navigation links: Dashboard, IMEI Search, My Activity, All Users Activity, Counterfeit Devices, **Members** (highlighted with a red box and a red circle with the number 1), and App Download. The main content area is titled 'Users Administration' and features a search bar labeled 'Search all Users'. In the top right corner of this area is a blue button labeled 'ADD NEW USER' (highlighted with a red box and a red circle with the number 2). Below the search bar is a table with the following columns: S.No, First Name, Last Name, Email Address, Date/Time Added, Actions, and Licenses Information. The table contains four rows of user data. The 'Actions' column for each row contains icons for lock, edit, and delete. The 'Licenses Information' column contains a link to 'View User Licenses' for each user.

S.No	First Name	Last Name	Email Address	Date/Time Added	Actions	Licenses Information
1				2019-10-08 06:09:35		
2				2019-09-24 13:34:58		<a href="#">View User Licenses</a>
3				2019-09-24 13:34:58		<a href="#">View User Licenses</a>
4				2019-09-24 13:34:58		<a href="#">View User Licenses</a>

Figure 17-Add Members

3. A form will appear to get details of the user (i.e. First Name, Last Name, Email, and password)
4. Click on “Add” button

The screenshot shows the 'Add User Details' form in the DCP (Device Characterization Platform) interface. The left sidebar contains navigation links: Dashboard, IMEI Search, My Activity, All Users Activity, Counterfeit Devices, Members, and App Download. The main form area has a red border and contains the following fields:

- First Name (with a red circle '3' in the top right corner)
- Last Name
- Email (with a blue background)
- Password (with a blue background and a lock icon)
- Retype New Password
- Select Role: Admin

At the bottom left of the form is a 'Back' button with a left arrow. At the bottom right is an 'ADD' button with a red circle '4' in the top right corner.

Figure 18-Add User Details

5. To approve the request of user account, click on lock icon

Device Characterization Platform v1.2.5

Users Administration

Search all Users

ADD NEW USER












S.No	First Name	Last Name	Email Address	Date/Time Added	Actions	Licenses Information
1				2019-10-08 06:52:59	  	
2				2019-10-08 06:09:35	  	<a href="#">View User Licenses</a>
3				2019-09-24 13:34:58	  	<a href="#">View User Licenses</a>
4				2019-09-24 13:34:58	 	<a href="#">View User Licenses</a>

Figure 19-Activate User Account

6. To edit information or delete the created user, click on required action button

The screenshot displays the 'Users Administration' page. On the left is a sidebar with navigation links: Dashboard, IMEI Search, My Activity, All Users Activity, Counterfeit Devices, Members (highlighted with a red badge '1'), and App Download. The main content area has a blue header 'Users Administration'. Below it is a search bar 'Search all Users' and an 'ADD NEW USER' button. A table lists four users with columns: S.No, First Name, Last Name, Email Address, Date/Time Added, Actions, and Licenses Information. The 'Actions' column for the first user is highlighted with a red box and a red circle containing the number '6', indicating the required action. The 'Licenses Information' column for users 2, 3, and 4 contains a link 'View User Licenses'.









S.No	First Name	Last Name	Email Address	Date/Time Added	Actions	Licenses Information
1				2019-10-08 06:52:59	 	
2				2019-10-08 06:09:35	 	<a href="#">View User Licenses</a>
3				2019-09-24 13:34:58	 	<a href="#">View User Licenses</a>
4				2019-09-24 13:34:58	 	<a href="#">View User Licenses</a>

Figure 20-Action Buttons

### 3.9. App Download

1. To download mobile app, click on “App download” link

A license agreement will appear in right content area. After accepting the license agreement user will be able to download the mobile app.

2. To accept the license agreement, click on checkbox

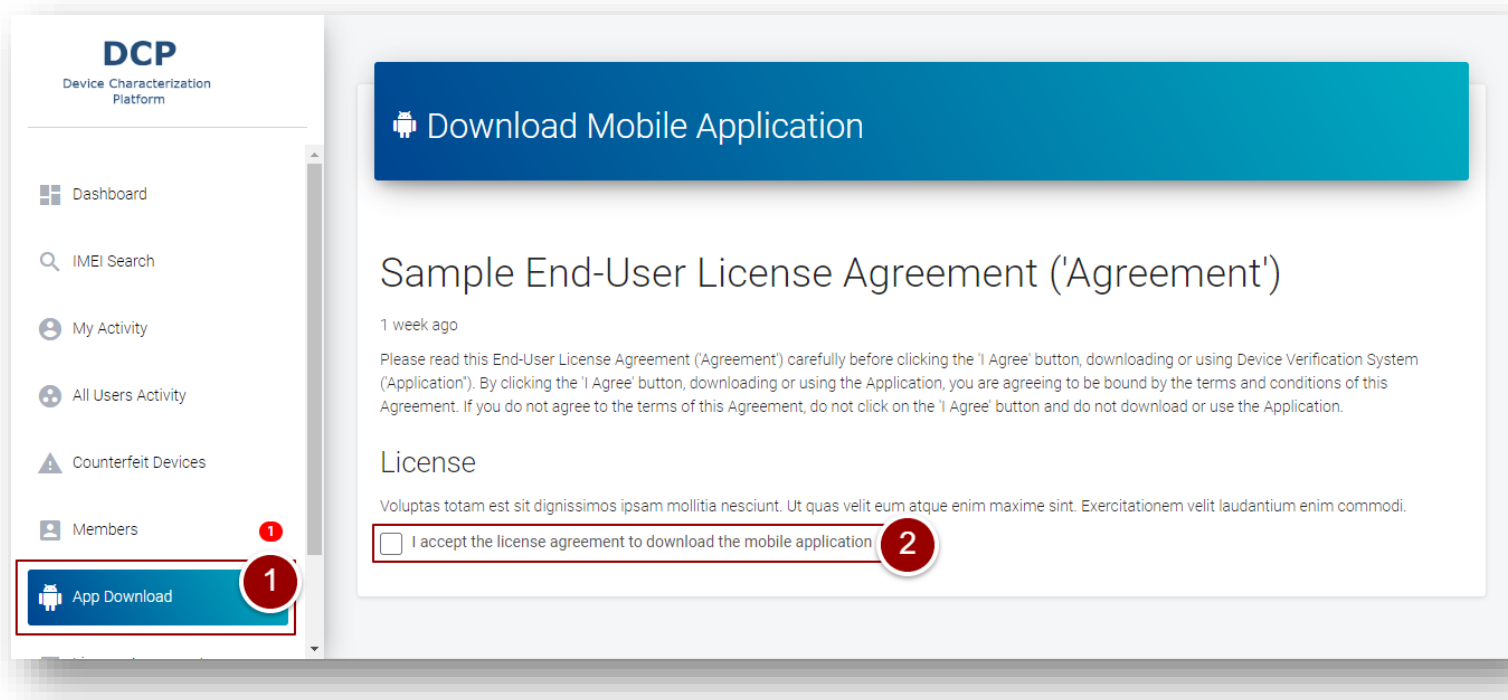


Figure 21- Download Mobile App

By clicking on checkbox, a button will appear on the page.

3. Click on “Download” button

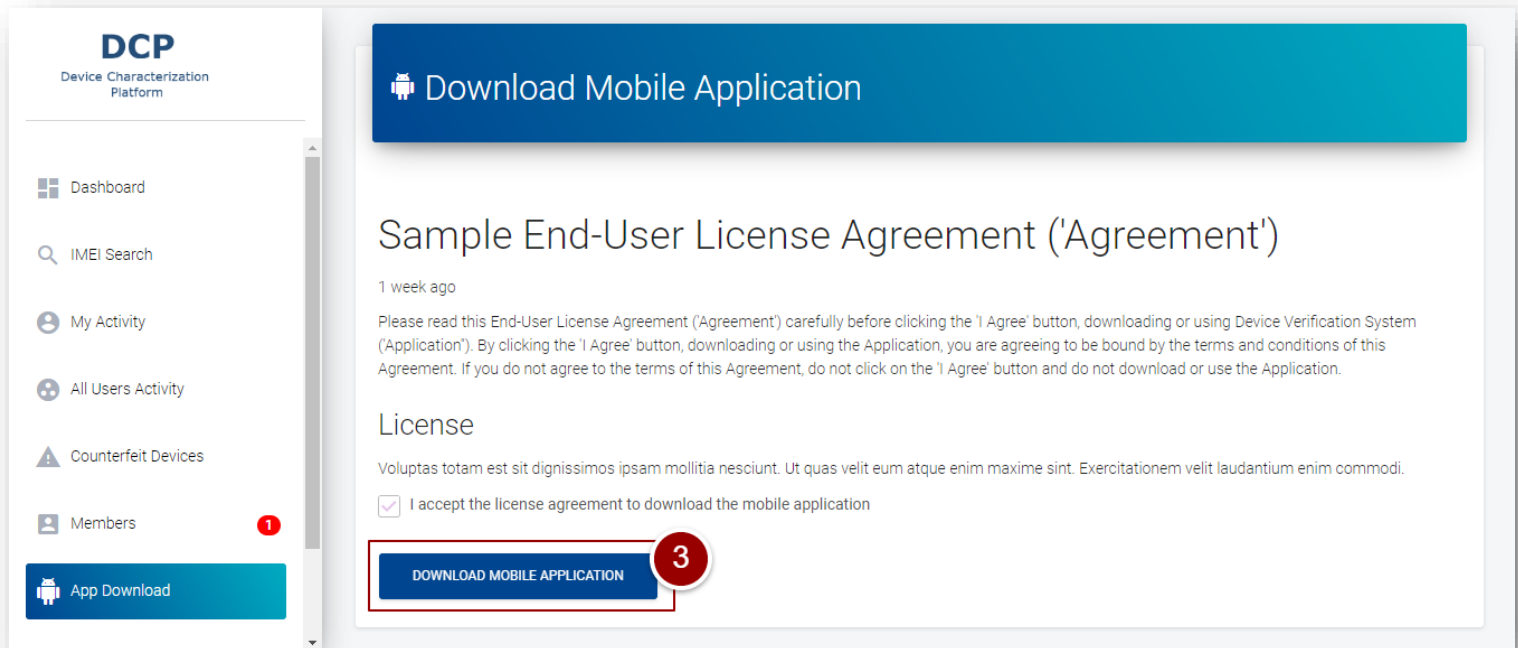


Figure 22-Download Mobile App

## 3.10. License Agreement

1. To add new license, click on “License Agreement” link

A page will appear in right content area that displays created licenses.

2. Click on “Add New License” button

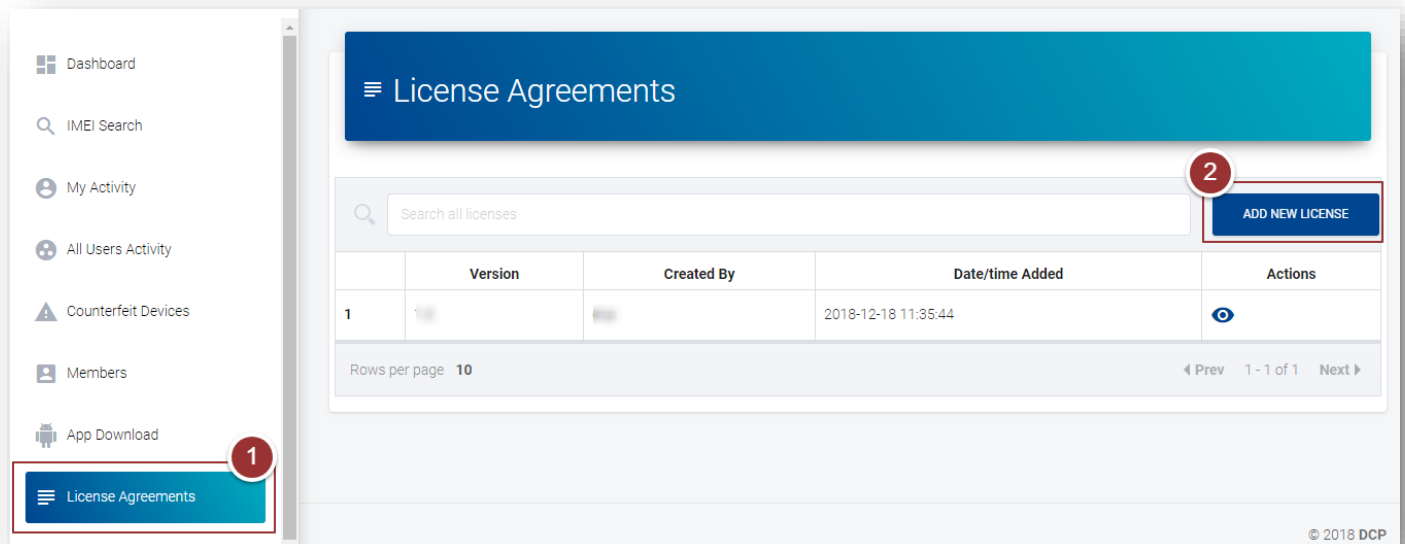


Figure 23-License Agreement

3. Enter the details of license (i.e. License Version, License Content) in the respective fields
4. Click on “Agree License Agreement” button

License Version

Enter License version for the agreement

License Content

**B** *I* U [Link](#) 14 ▼ A ▼ 

- ☰
- ☷
- ☷ ▼

**Table** ▼

**4** ADD LICENSE AGREEMENT

Figure 24-License Agreement



## 3.11. System Feedbacks

1. To view feedback of users, click on “System Feedbacks” link

A page will appear in right content area that displays all user’s feedback.

S.No	User Name	Feedback	Date/Time Added	GSMA Status
1		Please add xyz option in the app	2019-09-25 07:59:52	
2		Kindly add xyz functionality	2019-09-25 07:52:11	
3		Please add xyz functionality	2019-09-25 06:05:06	

Figure 25-System Feedback