

# DTS – Device Tracking System

## User Manual

### Contacts and validity

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## 1. Objective

The purpose of this document is to provide the general guideline to use the DTS which consists

- a) Split Devices
- b) Split Lot
  - a. Split Standard
  - b. Split Non-Standard
  - c. Split ORT
- c) DMC Validation
  - a. Validate Pass Device
  - b. Validate Fail Device
  - c. Validate Sampling Device
- d) Merge Lot
- e) Update Devices
- f) Audit Log

## 2. Background

DTS, Device Tracking System is an application that provide interfaces and features to the users to split, merge and update the devices information to Device Information System (DIS) and split and merge lot to Manufacturing Execution System (MES). Below are the features that provided in the system:-

- a) **Split Devices** is one of the features that enabled the users to validate the lot and select the devices to split in MES and DIS.
- b) **DMC Validation** is one of the features that enabled the users to scan the device ID and validate the device based on pass devices and fail devices.
- c) **Merge Lot** is one of the features that enabled the users to validate mother and child lots and merge the lot in ProTOS and devices in Device Tracking System.
- d) **Update Devices** is one of the features that enabled the engineer/technician to validate the lot and update the devices information in Device Tracking System.
- e) **Audit Log** is one of the features that enabled administrator to view the transaction log that done by user.
- f) **Add User** is one of the features that enabled administrator to add new user to use the system.
- g) **Manage User** is one of the features that enabled administrator to change the role of the user and delete the user credential.

## 3. Scope

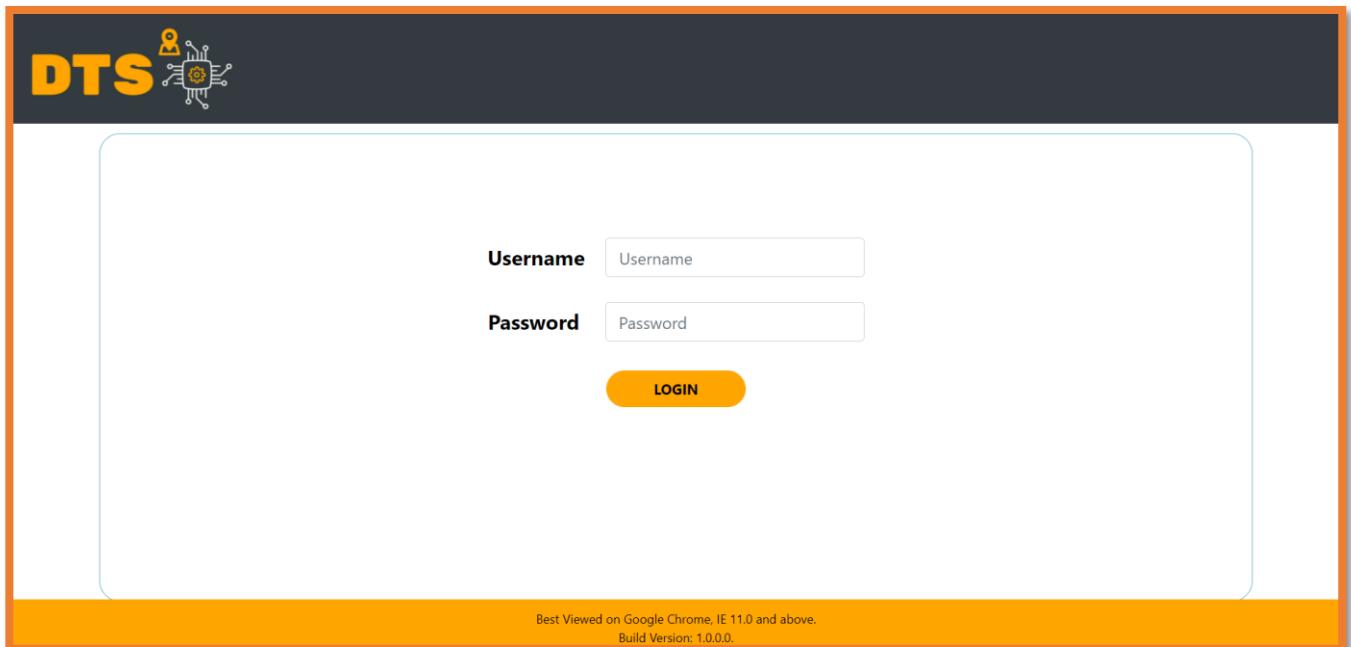
This guideline applies to the facilities that will using the Device Information System.

## **4. System Requirements**

- The system required .NET Framework 4.5.2 and above.
- The system required Window 7 and above.
- The system required to view in Google Chrome, Mozilla Firefox and Internet Explorer version 10 and above.
- Users should have scanner to scan the Device ID in DMC Validation.

## 5. Guideline

### 5.1 Login



The screenshot shows the DTS login interface. At the top left is the DTS logo, which consists of the letters 'DTS' in yellow with a small orange circuit board icon integrated into the letter 'S'. The main area has a light gray background with rounded corners. It contains two input fields: 'Username' and 'Password', both with placeholder text ('Username' and 'Password'). Below these is a yellow 'LOGIN' button with white text. At the bottom of the page, there is a yellow footer bar with the text 'Best Viewed on Google Chrome, IE 11.0 and above.' and 'Build Version: 1.0.0.0.'

Figure 1

1. First, navigate to the system using link stated in above table 1.
2. At login page, key in the window login username and password to log in as shown in Figure 1.

3. If the password not matched, system will prompt error as below Figure 2.

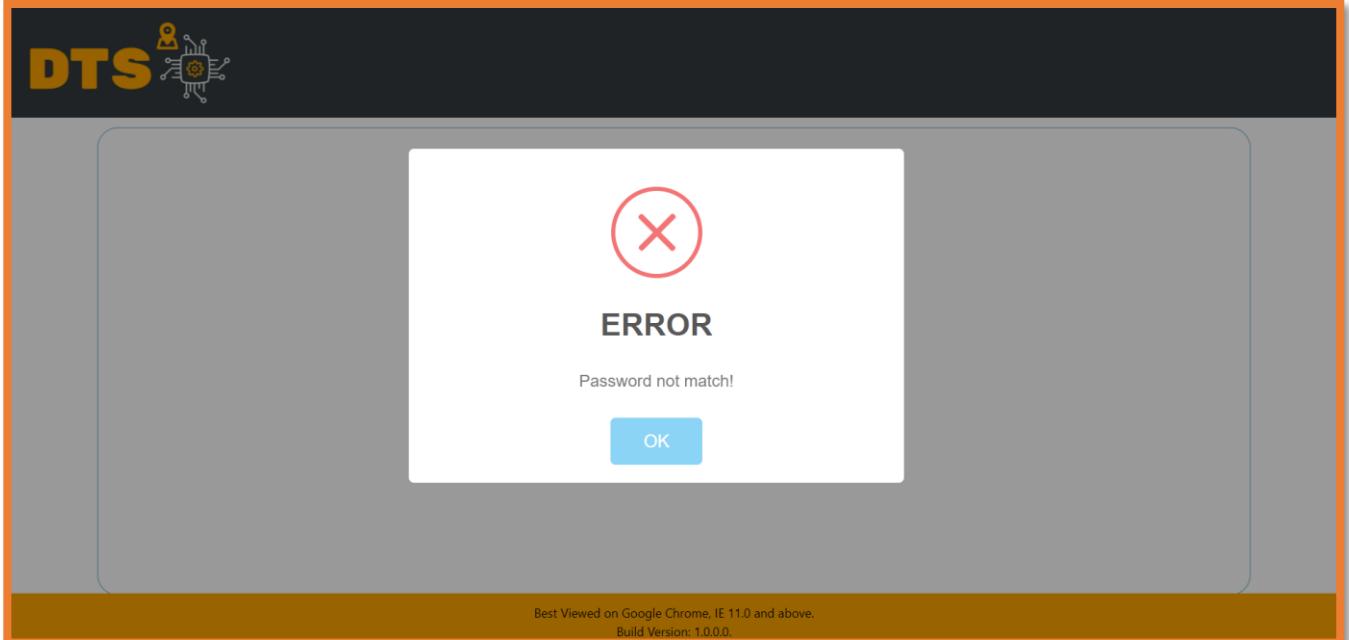


Figure 2

4. If the user doesn't have account in the system, the system will prompt error as below Figure 3.

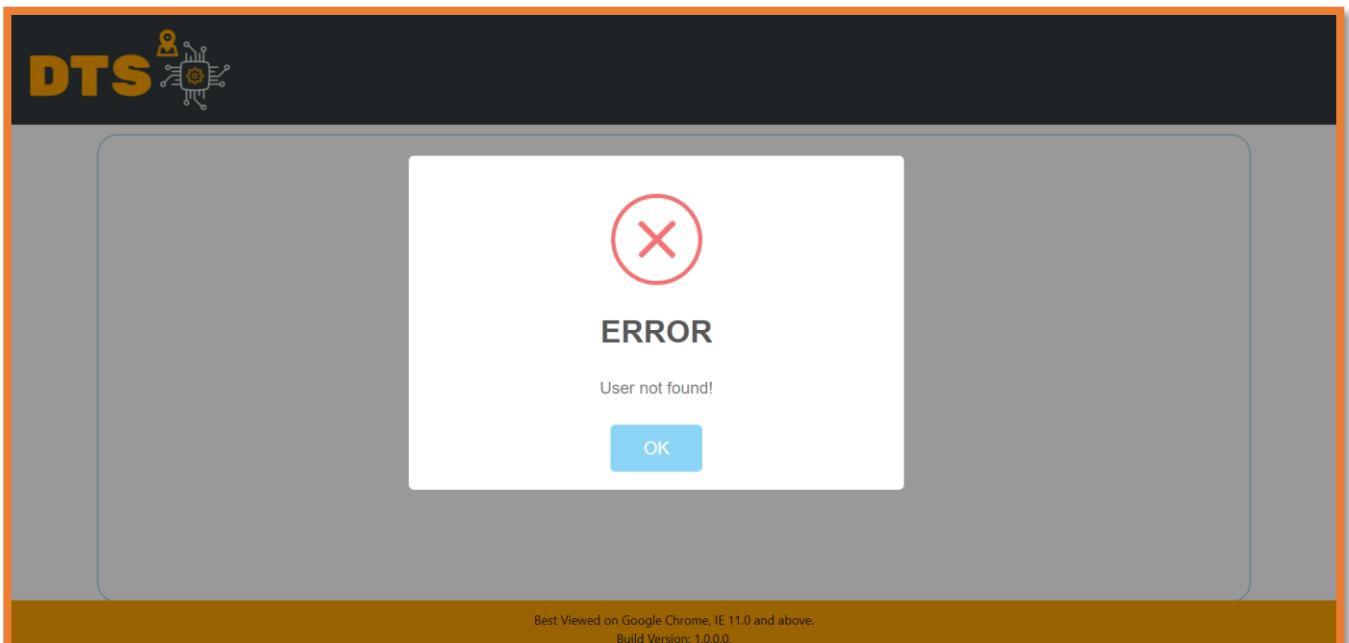


Figure 3

5. If successful login, user will be direct to Home page. Please refer section 5.2.

## 5.2 Home View

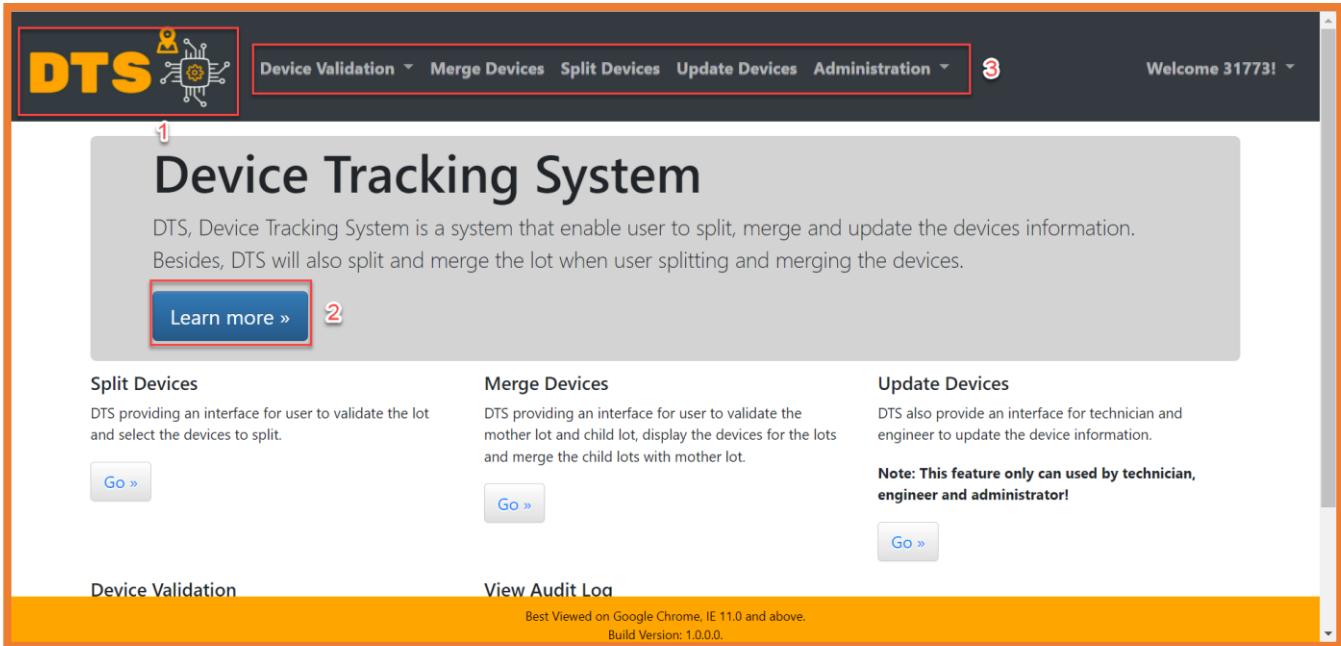


Figure 4.0

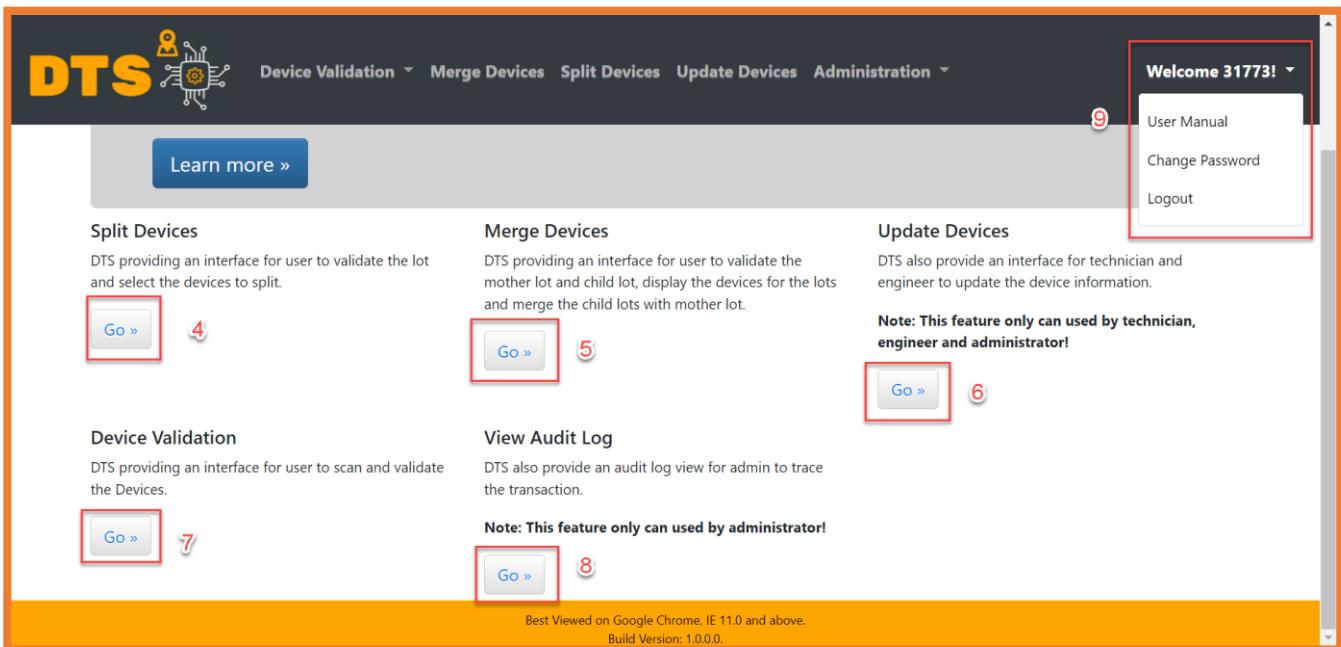


Figure 4.1

In Home Page, there are several buttons that user can click to direct to features as highlighted in Figure 4.0 and Figure 4.1: -

1. Home Page button – user can click this button to return to Home page.
2. Learn more button – user can click this button to download the user manual.
3. Navigation bar – user can click any showed link to navigate to the related features such as Split Devices, Merge Devices, Update Devices, Administrative tab which consists of Audit Log, Add user and Manage User.
4. Split Devices Go button – user can click this button to navigate to Split Devices feature. Please refer section 5.3 for more details.
5. Merge Devices Go button – user can click this button to navigate to Merge Devices feature. Please refer section 5.4 for more details.

6. Update Devices Go button – user can click this button to navigate to Update Devices feature, this button will show according to the user role. Existing only Technician, Engineer and Administrator can use this feature. Please refer section 5.5 for more details.
7. DMC Validation Go button – user can click this button to navigate to Validate Pass Device feature. Please refer section 5.8 for more details.
8. View Audit Log Go button – user can click this button to navigate to Audit Log feature. This feature is only available for administrator. Please refer section 5.6 for more details.
9. User Profile – a dropdown list will show upon user clicked. There was a menu with three choices which are user manual, Change Password and Logout. User can click user manual to download the user manual, Change Password to change new password and click Logout to logout the system and return to login page.

**Notes:**

- I. The links in navigation bar are based on the user role. For example, operator will only see three links such as, DMC Validation, Merge Devices and Split Devices.
- II. The system will redirect the user back to Login page if idle more than 10 minutes.

## 5.3 Split Devices

DTS, Device Tracking System is a system that enable user to split, merge and update the devices information. Besides, DTS will also split and merge the lot when user splitting and merging the devices.

[Learn more »](#)

**Split Devices**  
DTS providing an interface for user to validate the lot and select the devices to split.  
[Go >>](#)

**Merge Devices**  
DTS providing an interface for user to validate the mother lot and child lot, display the devices for the lots and merge the child lots with mother lot.  
[Go >>](#)

**Update Devices**  
DTS also provide an interface for technician and engineer to update the device information.  
**Note:** This feature only can used by technician, engineer and administrator!  
[Go >>](#)

**Device Validation**

**View Audit Log**  
Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 5

1. At Home page, user can click Split Devices link at the navigation bar or Go button under Split Devices to navigate to the Split Devices feature as circled in Figure 5.
2. Upon navigated to Split Devices page successful, a Lot Validate page will be shown as Figure 6.

**Split Devices**

Lot Number:

[Validate](#)

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 6

3. User required to scan or key in the lot number that needed to split in the text box and click Validate button to validate as circled in Figure 7.

The screenshot shows the DTS software interface with a dark header bar. The header contains the DTS logo, navigation links for 'Device Validation', 'Merge Devices', 'Split Devices', 'Update Devices', and 'Administration', and a welcome message 'Welcome 31773!'. Below the header is a section titled 'Split Devices'. It has a form with a 'Lot Number:' label and an input field. A red box surrounds the input field, and a red circle with the number '1' is positioned to its right. Below the input field is a 'Validate' button, which is also surrounded by a red box and has a red circle with the number '2' to its right. At the bottom of the screen, there is a yellow footer bar with the text 'Best Viewed on Google Chrome, IE 11.0 and above.' and 'Build Version: 1.0.0.0.'

Figure 7

4. If user clicked validate without key in any lot number, system will prompt error as Figure 8.

This screenshot shows the same DTS software interface as Figure 7, but with an error message. The 'Lot Number:' input field is empty and has a red border around it. To its right, a red box contains the error message 'Please enter Lot Number'. The 'Validate' button is located below the input field. The rest of the interface, including the header, section title, and footer, remains the same as in Figure 7.

Figure 8

5. If validate failed, system will prompt related error message and user required to validate the lot number as step 2. Figure 9 showed the example of the error prompt if the lot number not valid in ProTOS.

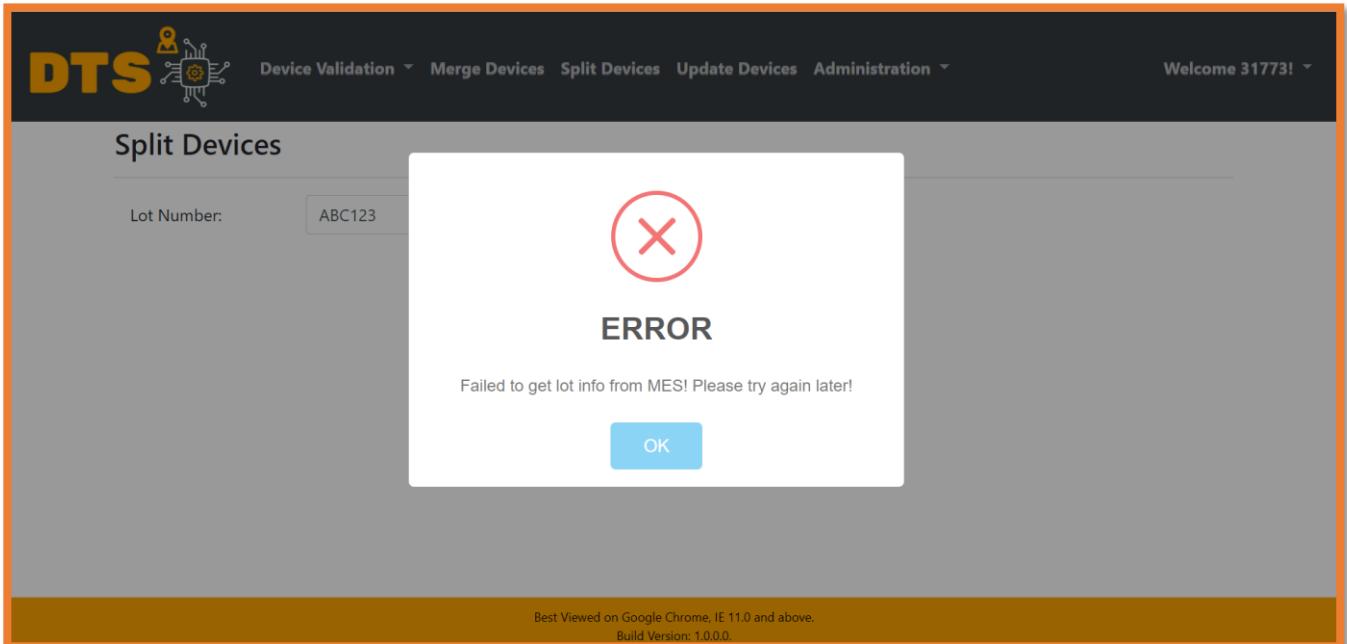


Figure 9

6. Upon validate successful, a list of devices will be shown in the grid view as Figure 10.

The screenshot shows the DTS software interface with a dark header bar. The header contains the DTS logo, navigation links for 'Device Validation', 'Merge Devices', 'Split Devices', 'Update Devices', 'Administration', and a welcome message 'Welcome 31773!'. Below the header, the main content area has a title 'Split Devices - A22010002 (2)'. A data grid table is displayed, showing the following data:

<input type="checkbox"/>	Device Id	Alias Id	Source Substr...	Target Substr...	Source Po...	Target Pos...	From X	From Y	To X	To Y	Bin Result	Bin Code	Bin Desc
<input type="checkbox"/>	DTSTEST01	DTSTEST01		FOIL02		1			1	1	PASS	2	GOOD
<input type="checkbox"/>	DTSTEST02	DTSTEST02		FOIL02		2			2	1	PASS	2	GOOD
<input type="checkbox"/>	DTSTEST03	DTSTEST03		FOIL02		3			3	1	PASS	1	TESTED OK
<input type="checkbox"/>	DTSTEST04	DTSTEST04		FOIL03		1			1	1	FAIL	3	FAILFLT
<input type="checkbox"/>	DTSTEST05	DTSTEST05		FOIL03		2			2	1	FAIL	3	FAILFLT

At the bottom of the grid, a message 'Count=5' is displayed. To the right of the grid are two buttons: 'Include Fail Devices on MES Split Qty' (unchecked), 'Split' (in a yellow box), and 'Cancel' (in a red box). The footer of the page includes the text 'Best Viewed on Google Chrome, IE 11.0 and above.' and 'Build Version: 1.0.0.0.'

Figure 10

Device Id	Alias Id	Source Substr...	Target Substr...	Source Po...	Target Pos...	From X	From Y	To X	To Y	Bin Result	Bin Code	Bin Desc
DTSTEST11	DTSTEST11	FOIL03		3			3	1	PASS	2	GOOD	
DTSTEST12	DTSTEST12	FOIL03		4			4	1	PASS	2	GOOD	
DTSTEST13	DTSTEST13	FOIL03		5			5	1	PASS	2	GOOD	
DTSTEST21	DTSTEST21	FOIL03		13			13	1	PASS	2	GOOD	
DTSTEST14	DTSTEST14	FOIL03		6			6	1	PASS	2	GOOD	
DTSTEST15	DTSTEST15	FOIL03		7			7	1	PASS	2	GOOD	
DTSTEST17	DTSTEST17	FOIL03		9			9	1	PASS	2	GOOD	
DTSTEST18	DTSTEST18	FOIL03		10			10	1	PASS	2	GOOD	
DTSTEST19	DTSTEST19	FOIL03		11			11	1	PASS	2	GOOD	
DTSTEST20	DTSTEST20	FOIL03		12			12	1	PASS	2	GOOD	

Figure 11

7. In the grid view page, there are multiple features that user can use as circled with number:-

  1. Selection all – user can select this little box to select all the devices.
  2. Single select – user can select or de-select individual device by selecting this box.
  3. Page view – user can select which page to view by using this feature.
  4. Checkbox – user can tick the checkbox to enable the Include Fail Devices on MES Split Qty feature.
  5. Split button – user can click this button to split the lot in ProTOS and devices in DTS after selecting devices.
  6. Cancel button – user can click this button to return to Lot Validate page.
  7. Count – this showed the total devices quantity.
  8. Filter row – user can filter the devices list by enter value in this row.
  9. Title – this showed the page title, the lot number and operation that validated.

8. User required to click the Clear button if wanted to show the full devices list as shown in Figure 12.

The screenshot shows the DTS software interface with the title "Split Devices - A22010002 (2)". At the top, there is a navigation bar with links for Device Validation, Merge Devices, Split Devices, Update Devices, Administration, and a welcome message "Welcome 31773!". Below the navigation bar is a table titled "Split Devices - A22010002 (2)". The table has columns for Device Id, Alias Id, Source Substr..., Target Substr..., Source Po..., Target Pos..., From X, From Y, To X, To Y, Bin Result, Bin Code, and Bin Desc. There are 13 rows in the table. A red box highlights the "Clear" button in the first row. At the bottom of the table, there is a "Count=13" label and a set of buttons: "Include Fail Devices on MES Split Qty", "Split", and "Cancel". Below the table, a yellow banner displays the text "Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0."

Figure 12

9. If user didn't select any devices and clicked the Split button, system will prompt error as shown in Figure 13.

The screenshot shows the DTS software interface with the title "Split Devices - A22010002 (2)". At the top, there is a navigation bar with links for Device Validation, Merge Devices, Split Devices, Update Devices, Administration, and a welcome message "Welcome 31773!". Below the navigation bar is a table titled "Split Devices - A22010002 (2)". The table has columns for Device Id, Alias Id, Source Substr..., Target Substr..., Source Po..., Target Pos..., From X, From Y, To X, To Y, Bin Result, Bin Code, and Bin Desc. There are 16 rows in the table. A red box highlights the "OK" button in a modal dialog box. The dialog box contains a large red X icon and the word "ERROR" below it. Below the dialog box, the message "Please select devices to split!" is displayed, followed by an "OK" button. At the bottom of the table, there is a "Count=16" label and a set of buttons: "Include Fail Devices on MES Split Qty", "Split", and "Cancel". Below the table, a yellow banner displays the text "Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0."

Figure 13

10. After selected devices, user can click Split button and a confirmation box will prompt as shown in Figure 14. User can cancel the transaction if wanted to select more devices or confirm the transaction to continue the transaction.

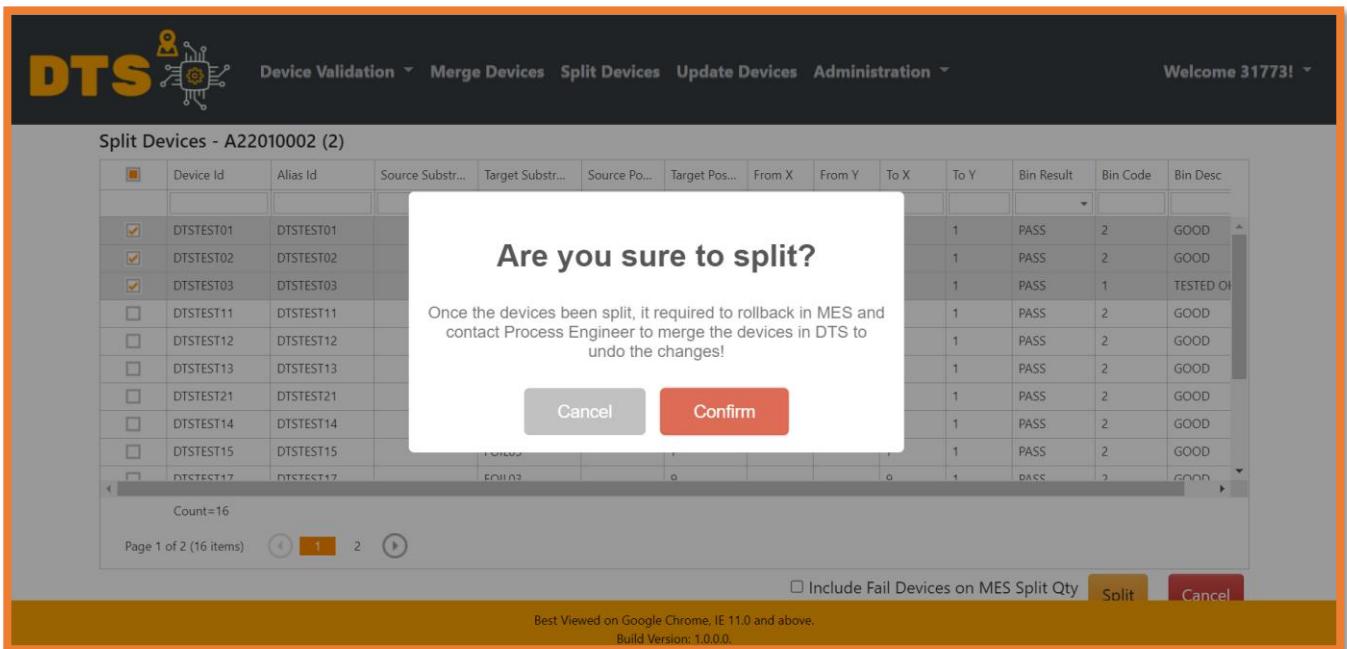


Figure 14

11. If the transaction failed in MES or DIS, an error will prompt to alert the user.
12. Upon transaction success, system will show a success message with mother lot and child lot number and return to Lot Validate page as shown in Figure 15.
13. Additional notes:-
- If transaction failed at MES side, user can try again by re-validate the lot number.
  - If transaction failed at DIS side, user required to call CIM Tech to perform rollback the Split transaction in MES or user can roll back the transaction if has access to rollback before re-validate the lot number.

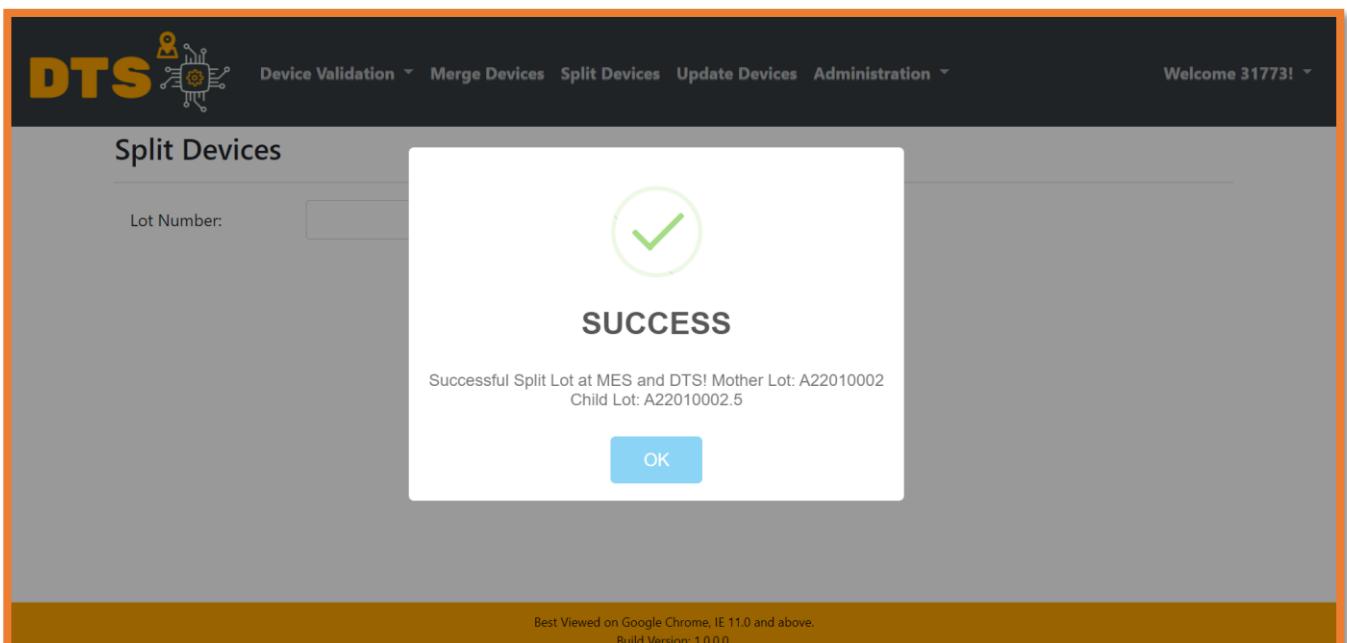


Figure 15

## 5.4 Merge Devices

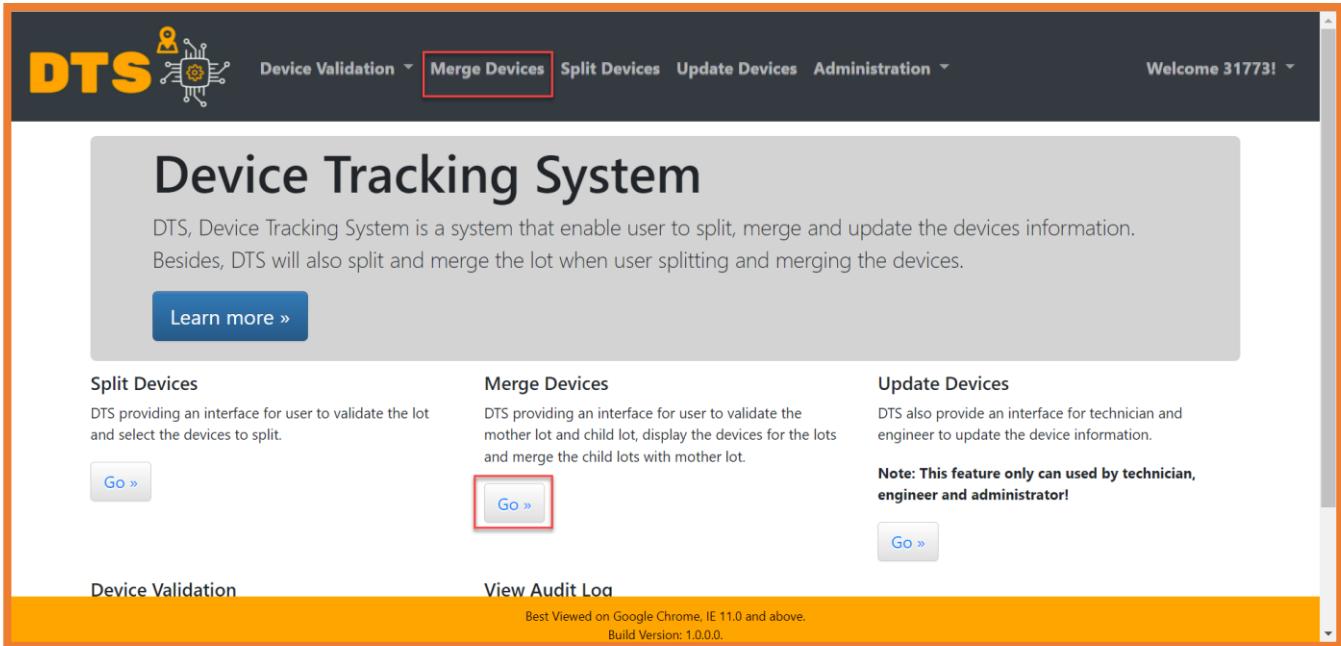


Figure 16

1. At Home Page, user can click the Merge Devices link at navigation bar or Go button under the Merge Devices feature as shown in Figure 16.
2. Upon navigate successful to Merge Devices, a Mother Lot and Child Lot Validate page will be prompt as Figure 17.

The screenshot shows the 'Merge Devices' validation page. The header is identical to the homepage. The main content area is titled 'Merge Devices'. It contains five input fields labeled 'Mother Lot Number:', 'Child Lot Number:', 'Child Lot Number2:', 'Child Lot Number3:', and 'Child Lot Number4:'. Below these fields is an orange 'Validate' button. At the bottom of the page, there is a note about browser compatibility and build version.

Figure 17

3. In Lot Validate page, user required to scan or key in the mother lot and child lot number then clicked the Validate button to validate both lot number as shown in Figure 18.

The screenshot shows the 'Merge Devices' page. At the top, there is a navigation bar with the DTS logo, 'Device Validation', 'Merge Devices', 'Split Devices', 'Update Devices', 'Administration', and a welcome message 'Welcome 31773!'. Below the navigation bar, the page title 'Merge Devices' is displayed. There are five input fields labeled 'Mother Lot Number' (1) and 'Child Lot Number' (2). Each of these fields has a red border around it. Below these are three more fields labeled 'Child Lot Number2' (3), 'Child Lot Number3' (4), and 'Child Lot Number4' (5), each with a red border. At the bottom right is a yellow 'Validate' button with the number 6 next to it. A note at the bottom of the page states 'Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0.'

Figure 18

4. If user didn't key in either mother lot or child lot number and clicked Validate button, system will show error as Figure 19.

This screenshot shows the same 'Merge Devices' page as Figure 18, but with validation errors. The 'Mother Lot Number' field contains the value 'A22010002'. The 'Child Lot Number' field is empty and has a red border, with the error message 'Please enter Child Lot Number' displayed in a red box next to it. The other fields ('Child Lot Number2', 'Child Lot Number3', 'Child Lot Number4') are empty and have red borders. The 'Validate' button is at the bottom. The footer notes 'Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0.'

Figure 19

5. If validate failed, system will prompt error which same as Lot Validate for Split Devices.

6. Upon Validate successful, both mother and child lot devices will be show in grid view as shown in Figure 20.

#	Device Id	Alias Id	Source Substr...	Target Substr...	Source Po...	Target Pos...	From X	From Y	To X	To Y	Bin Result	Bin Code	Bin Desc
DTTEST11	DTTEST11			FOIL03		3			3	1	PASS	2	GOOD
DTTEST12	DTTEST12			FOIL03		4			4	1	PASS	2	GOOD
DTTEST13	DTTEST13			FOIL03		5			5	1	PASS	2	GOOD
DTTEST14	DTTEST14			FOIL03		6			6	1	PASS	2	GOOD
DTTEST15	DTTEST15			FOIL03		7			7	1	PASS	2	GOOD
DTTEST17	DTTEST17			FOIL03		9			9	1	PASS	2	GOOD
DTTEST24	DTTEST24			FOIL03		16			16	1	PASS	2	GOOD
DTTEST18	DTTEST18			FOIL03		10			10	1	PASS	2	GOOD
DTTEST19	DTTEST19			FOIL03		11			11	1	PASS	2	GOOD
DTTEST20	DTTEST20			FOIL03		12			12	1	PASS	2	GOOD

Count=16

Page 1 of 2 (16 items) 1 2

Confirm Cancel

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 20

#	Device Id	Alias Id	Source Substr...	Target Substr...	Source Po...	Target Pos...	From X	From Y	To X	To Y	Bin Result	Bin Code	Bin Desc
DTTEST11	DTTEST11			FOIL03		3			3	1	PASS	2	GOOD
DTTEST12	DTTEST12			FOIL03		4			4	1	PASS	2	GOOD
DTTEST13	DTTEST13			FOIL03		5			5	1	PASS	2	GOOD
DTTEST14	DTTEST14			FOIL03		6			6	1	PASS	2	GOOD
DTTEST15	DTTEST15			FOIL03		7			7	1	PASS	2	GOOD
DTTEST17	DTTEST17			FOIL03		9			9	1	PASS	2	GOOD
DTTEST24	DTTEST24			FOIL03		16			16	1	PASS	2	GOOD
DTTEST18	DTTEST18			FOIL03		10			10	1	PASS	2	GOOD
DTTEST19	DTTEST19			FOIL03		11			11	1	PASS	2	GOOD
DTTEST20	DTTEST20			FOIL03		12			12	1	PASS	2	GOOD

Count=16

Page 1 of 2 (16 items) 1 2

Confirm Cancel

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 21

7. In the grid view page, there are few features that user can use as circled with number in Figure 21.
1. Page control – user can switch between mother lot device information and child lot device information by clicking the Lot Number tabs.
  2. Filter row – user can filter device information by key in value in this row.
  3. Page view – user can select different page to view the device information.
  4. Confirm button – after verifying the device information, user can click this button to perform Merge Devices transaction to MES and Merge Devices to DIS.
  5. Cancel button – user can click this button to cancel and return to Lot Validate page.
  6. Count – this showed the count of devices in each page.

8. Same as Split Devices grid view, user required to click the Clear button after filtering the device information as shown in Figure 22.

Figure 22

9. Upon clicked the Confirm button, a confirmation box will be prompt as shown in Figure 23.  
User can choose to continue the transaction by clicking Confirm button or click Close to return to grid view page.

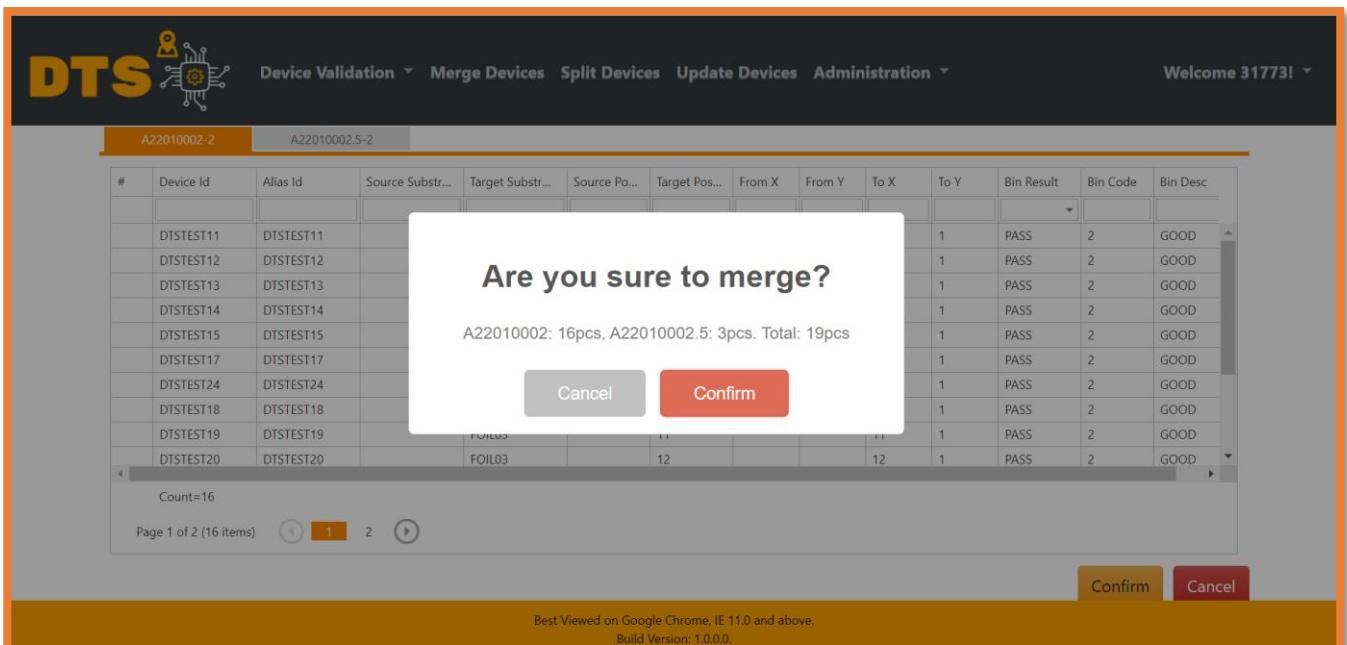


Figure 23

10. If the transaction failed in MES or DIS, an error will prompt to alert the user same as Split Devices.

11. Upon transaction success, system will show a success message and return to Lot Validate page as shown in Figure 24.

12. Additional notes:-

- I. If transaction failed at MES side, user can try again by re-validate the lot number.
- II. If transaction failed at DIS side, user required to call CIM Tech to perform rollback the Split transaction in MES or user can roll back the transaction if has access to rollback before re-validate the lot number.

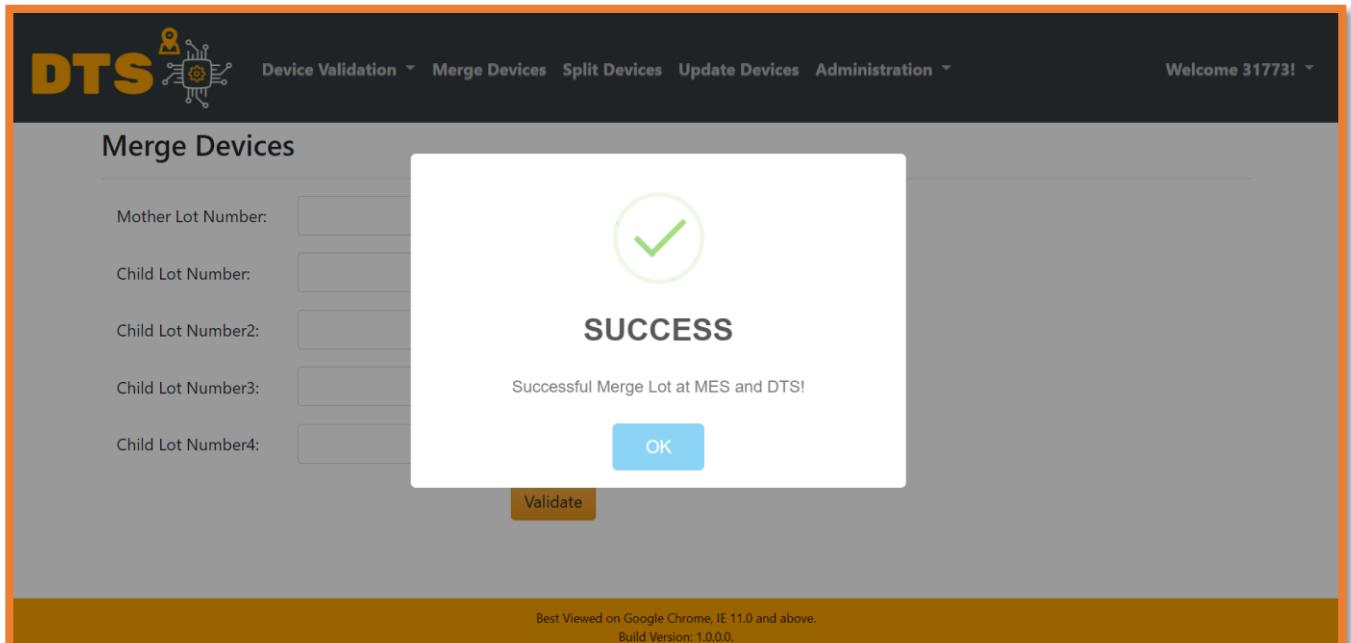


Figure 24

## 5.5 Update Devices

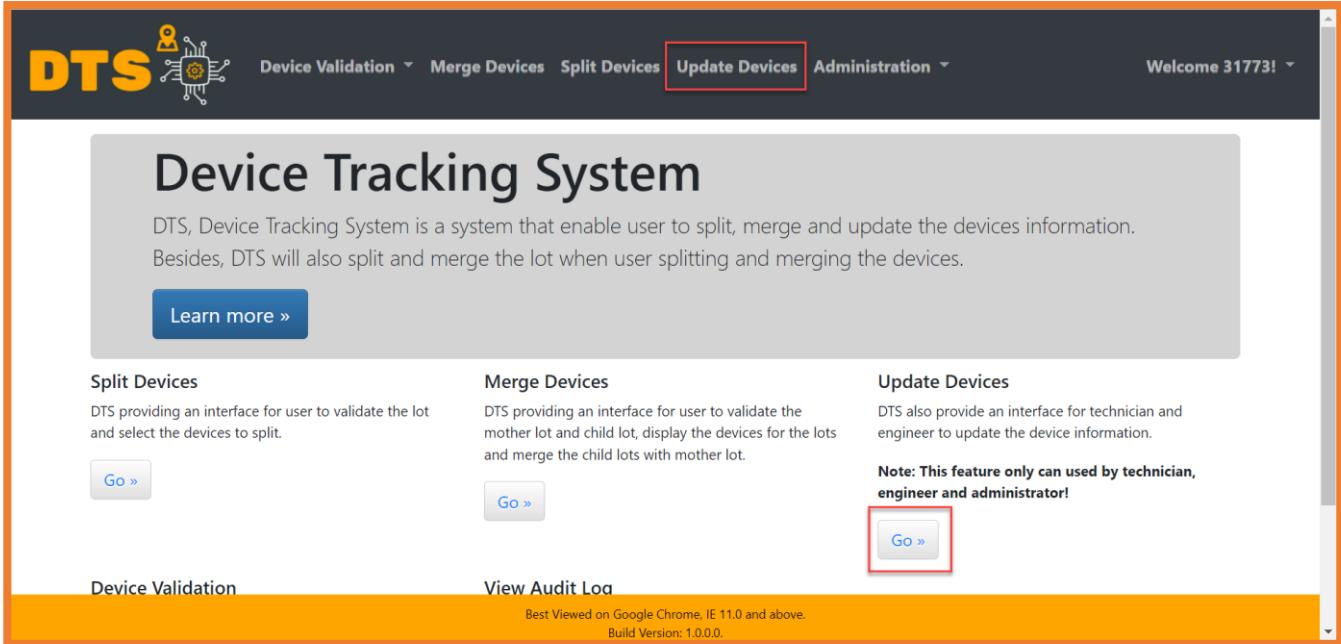


Figure 25

1. At Home page, user can click the Update Devices link at navigation bar or Go button under Update Devices feature as shown in Figure 25.
- Note:** The link and the Go button can only see by Technician/Engineer.
2. Upon navigate to the Update Devices successful, a Lot Validate will be prompt for user to validate the lot number.

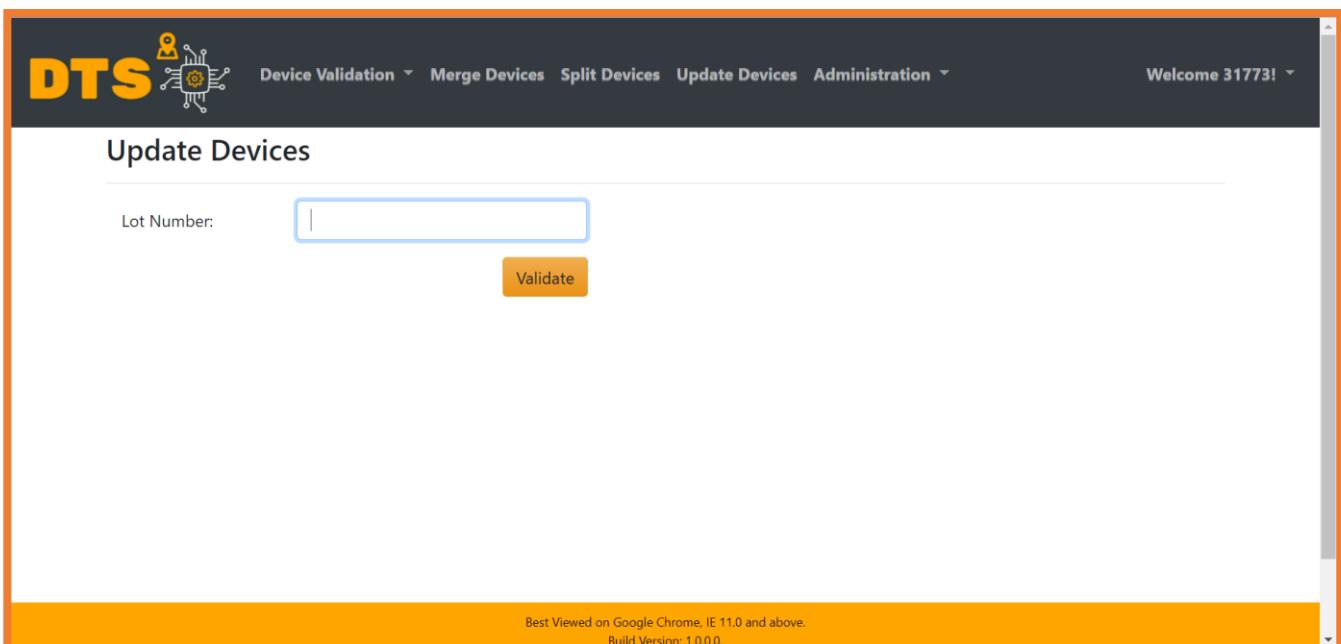


Figure 26

3. In Lot Validate page, user required to key in or scan the lot number that wanted to update the device information as shown in Figure 27.

The screenshot shows the DTS software interface with a dark header bar. The header contains the DTS logo, navigation links for 'Device Validation', 'Merge Devices', 'Split Devices', 'Update Devices', and 'Administration', and a welcome message 'Welcome 31773!'. Below the header is a section titled 'Update Devices'. It features a 'Lot Number:' input field with a placeholder '(1)' and a 'Validate' button below it with a placeholder '(2)'. The entire 'Update Devices' section is enclosed in a light gray border. At the bottom of the screen, there is a yellow footer bar with the text 'Best Viewed on Google Chrome, IE 11.0 and above.' and 'Build Version: 1.0.0.0.'

Figure 27

4. Same as Split Devices and Merge Devices, system will prompt error if user clicked the Validate button without key in any lot number as shown in Figure 28.

This screenshot is similar to Figure 27, showing the 'Update Devices' page. However, the 'Lot Number:' input field is empty, and a red box highlights the 'Validate' button. An error message 'Please enter Lot Number' is displayed in the input field. The rest of the interface, including the header, section title, and footer, is identical to Figure 27.

Figure 28

5. If Validate failed, the system will prompt error to notice the user and user required to re-validate the lot number again as shown in Figure 29.

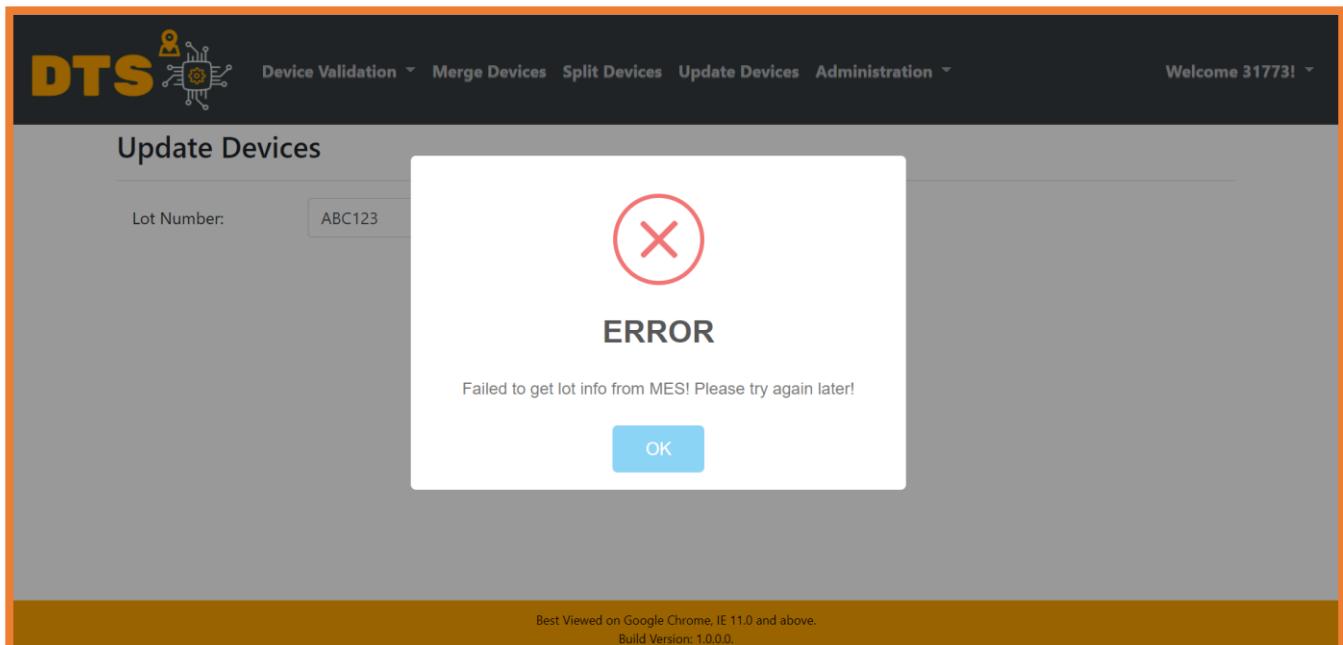


Figure 29

6. Upon Validate successful, system will show the lot device information in grid view as shown in Figure 30.

The screenshot shows the DTS software interface with a dark header bar. The header contains the DTS logo, navigation links for 'Device Validation', 'Merge Devices', 'Split Devices', 'Update Devices', and 'Administration', and a welcome message 'Welcome 31773!'. Below the header, a sub-header reads 'Update Devices - A22010002 (2)'. The main area displays a data grid with 19 items. The columns are labeled: Device Id, Alias Id, Source Substr..., Target Substr..., Source Po..., Target Pos..., From X, From Y, To X, To Y, Bin Result, Bin Code, and Bin Desc. The data grid shows various entries, such as DTTEST01 through DTTEST22, with their respective parameters and results. At the bottom of the grid, there is a message 'Count=19', a page navigation section 'Page 1 of 2 (19 items)' with buttons for previous, next, and last pages, and buttons for 'Save changes' and 'Cancel changes'. At the very bottom of the screen, there is a yellow footer bar with the text 'Best Viewed on Google Chrome, IE 11.0 and above.' and 'Build Version: 1.0.0.0.'

Figure 30

Device Id	Alias Id	Source Substr...	Target Substr...	Source Po...	Target Pos...	From X	From Y	To X	To Y	Bin Result	Bin Code	Bin Desc
DTSTEST01	DTSTEST01	FOIL02			1			1	1	PASS	2	GOOD
DTSTEST02	DTSTEST02	FOIL02			2			2	1	PASS	2	GOOD
DTSTEST03	DTSTEST03	FOIL02			3			3	1	PASS	1	TESTED ON
DTSTEST11	DTSTEST11	FOIL03			3			3	1	PASS	2	GOOD
DTSTEST12	DTSTEST12	FOIL03			4			4	1	PASS	2	GOOD
DTSTEST13	DTSTEST13	FOIL03			5			5	1	PASS	2	GOOD
DTSTEST21	DTSTEST21	FOIL03			13			13	1	PASS	2	GOOD
DTSTEST22	DTSTEST22	FOIL03			14			14	1	PASS	2	GOOD

Figure 31

7. In the grid view, there are several features that user can use as circled with number in Figure 31: -
  1. Multi-selection box – user can click this box to select all the devices.
  2. Single-selection box – user can click this box to select or de-select the individual device.
  3. Page view – user can switch to different page view by clicking the arrow or the page number.
  4. Filter row – user can key in value in this row to filter the devices information.
  5. Editor – user can double click the related information to edit the new information.
  6. Save Changes and Cancel Changes – user can click Save Changes to submit the edited information that been edited in Editor or click Cancel Changes to undo all the edited information.
  7. BatchUpdate button – user can select multiple devices and click this button to batch update the information such as Source Substrate ID, Target Substrate ID, Bin Code, Bin Result and Bin Description.
  8. Cancel button – user can click this button to cancel the transaction and return to Lot Validate page.
  9. Count – this showed the total devices quantity.
  10. Title – this showed the page title, lot number and operation that validated.
8. In the Update Devices, there are two features available which are Batch update device information and single device information update. Please refer section 5.5.1 and 5.5.2 for more details.
9. At the grid view, user can click Cancel button to return to Lot Validate page.

## 5.5.1 Batch Update Device Information

- At the grid view, select at least 2 devices before clicking the Batch Update button as shown in Figure 32.

**Note:**

- I. User should not edit any value in the grid view table editor if wanted to batch update the information else the value that edited will not be update.
- II. The grid view table will not show certain device information such as Source Substrate ID, FromX and FromY, but still can key in and update in the editor.

	Device Id	Alias Id	Source Substr...	Target Substr...	Source Po...	Target Pos...	From X	From Y	To X	To Y	Bin Result	Bin Code	Bin Desc
<input type="checkbox"/>	DTTEST01	DTTEST01		FOIL02		1			1	1	PASS	2	GOOD
<input checked="" type="checkbox"/>	DTTEST02	DTTEST02		FOIL02		2			2	1	PASS	2	GOOD
<input type="checkbox"/>	DTTEST03	DTTEST03		FOIL02		3			3	1	PASS	1	TESTED OI
<input type="checkbox"/>	DTTEST11	DTTEST11		FOIL03		3			3	1	PASS	2	GOOD
<input type="checkbox"/>	DTTEST12	DTTEST12		FOIL03		4			4	1	PASS	2	GOOD
<input type="checkbox"/>	DTTEST13	DTTEST13		FOIL03		5			5	1	PASS	2	GOOD
<input type="checkbox"/>	DTTEST21	DTTEST21		FOIL03		13			13	1	PASS	2	GOOD
<input type="checkbox"/>	DTTEST22	DTTEST22		FOIL03		14			14	1	PASS	2	GOOD
<input type="checkbox"/>	DTTEST00	DTTEST00		FOIL02		15			15	1	PASS	2	GOOD

Count=19  
Page 1 of 2 (19 items) Save changes Cancel changes

**BatchUpdate** **Cancel**

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 32

- If user clicked the Batch Update button without selecting any devices or less than two devices, system will prompt error as shown in Figure 33.

	Device Id	Alias Id	Source	From X	To Y	Bin Result	Bin Code	Bin Desc
<input type="checkbox"/>	DTTEST01	DTTEST01		1	PASS	2	GOOD	
<input type="checkbox"/>	DTTEST02	DTTEST02		1	PASS	2	GOOD	
<input type="checkbox"/>	DTTEST03	DTTEST03		1	PASS	1	TESTED OI	
<input type="checkbox"/>	DTTEST11	DTTEST11		1	PASS	2	GOOD	
<input type="checkbox"/>	DTTEST12	DTTEST12		1	PASS	2	GOOD	
<input type="checkbox"/>	DTTEST13	DTTEST13		1	PASS	2	GOOD	
<input type="checkbox"/>	DTTEST21	DTTEST21		1	PASS	2	GOOD	
<input type="checkbox"/>	DTTEST22	DTTEST22		1	PASS	2	GOOD	
<input type="checkbox"/>	DTTEST00	DTTEST00		1	PASS	2	GOOD	

Count=19  
Page 1 of 2 (19 items) Save changes Cancel changes

**OK**

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 33

3. After selected two or more devices and clicked the Batch Update button, system will prompt a modal box for user to key in the related fields that allowed to batch update such as Source Substrate ID, Target Substrate ID, Bin Code, Bin Result and Bin Desc as shown in Figure 34.



Device Validation

Welcome 31773! ▾

### Update Devices - A22010002 (2)

	Device Id	Alias Id	Source
<input checked="" type="checkbox"/>	DTSTEST01	DTSTEST01	
<input checked="" type="checkbox"/>	DTSTEST02	DTSTEST02	
<input type="checkbox"/>	DTSTEST03	DTSTEST03	
<input type="checkbox"/>	DTSTEST11	DTSTEST11	
<input type="checkbox"/>	DTSTEST12	DTSTEST12	
<input type="checkbox"/>	DTSTEST13	DTSTEST13	
<input type="checkbox"/>	DTSTEST21	DTSTEST21	
<input type="checkbox"/>	DTSTEST22	DTSTEST22	

Count=19

Page 1 of 2 (19 items) 1 2 >

### Batch Update

SourceSubstrateId	<input type="text"/>
TargetSubstrateId	<input type="text"/>
BinResult	<input type="text"/>
BinCode	<input type="text"/>
BinDesc	<input type="text"/>

Confirm
Close

Save changes
Cancel changes

BatchUpdate
Cancel

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 34

4. In the modal box, user can choose to key in the value in any of the related information text box except Bin Result that required user to choose the option on the dropdown list as shown in Figure 35.

The screenshot shows a web application interface for device validation. At the top left is the DTS logo with a stylized circuit board icon. To its right is the text "Device Validation". On the far right, it says "Welcome 31773!" with a dropdown arrow. The main area has a title "Update Devices - A22010002 (2)". Below this is a table with columns: Device Id, Alias Id, and Source. Several rows are listed, each with a checkbox and device names like DTSTEST01 through DTSTEST22. A modal dialog box is centered over the table, titled "Batch Update". It contains four input fields: "SourceSubstrateId" (empty), "TargetSubstrateId" (empty), "BinResult" (dropdown menu open, showing "PASS" and "FAIL"), and "BinCode" (dropdown menu open, showing "PASS" and "FAIL"). At the bottom of the modal are two buttons: "Confirm" (orange) and "Close" (red). In the background, to the right of the modal, there is a table with columns: To Y, Bin Result, Bin Code, and Bin Desc. The table lists 19 rows of data, mostly showing "PASS" results and "GOOD" codes. At the bottom right of the page are buttons for "Save changes" and "Cancel changes", and a large red button labeled "BatchUpdate".

Figure 35

5. User can leave the irrelevant information as empty without key in any value in the text box. For example, Figure 36 showed the case that only update Source Substrate ID to Reel3 and the Bin Result to PASS.

The screenshot shows the DTS Device Validation application. On the left, there's a table titled "Update Devices - A22010002 (2)" with columns for Device Id, Alias Id, and Source. Several rows are listed, with checkboxes next to DTTEST01 and DTTEST02. Below the table, it says "Count=19" and "Page 1 of 2 (19 items)". In the center, a modal dialog titled "Batch Update" contains fields for "SourceSubstrateld" (set to "Reel3"), "TargetSubstrateld" (empty), "BinResult" (set to "PASS"), "BinCode" (empty), and "BinDesc" (empty). At the bottom of the dialog are "Confirm" and "Close" buttons. The background shows a table with columns To Y, Bin Result, Bin Code, and Bin Desc, containing 19 rows of data. The top right corner of the screen displays "Welcome 31773!".

Figure 36

6. After key in all the related information, click Confirm button to update the new device information or click Close button to return to the grid view.
  7. If user clicked the Confirm button without key in any value in the text box, the system will prompt error to request user to key in at least one information field to update as shown in Figure 37.

The screenshot shows a web application interface for 'Device Validation'. At the top left is a logo with 'DTS' and a stylized device icon. To its right is the text 'Device Validation'. On the far right, it says 'Welcome 31773!' with a dropdown arrow. The main content area has a title 'Batch Update' at the top. Below it is a large red circle with a white 'X' inside. The word 'ERROR' is centered below the circle. A message 'Please enter at least one field for batch update!' is displayed. At the bottom of the modal is a blue 'OK' button. In the background, there are two tables. The left table is titled 'Update Devices - A22010002 (2)' and lists 19 items. The right table shows a list of bin results with columns: To Y, Bin Result, Bin Code, and Bin Desc. At the bottom right of the page are buttons for 'Save changes', 'Cancel changes', 'BatchUpdate', and 'Cancel'.

Figure 37

8. If system detected white space in the any of the information field, system will prompt error under the related information field as shown in Figure 38.

Figure 38

- If the devices information key in correctly, a confirmation box will prompt upon clicking the Confirm button as Figure 39.

The screenshot shows a software interface for device validation. At the top left is the DTS logo with a stylized circuit board icon. The top center has a 'Device Validation' button. The top right displays a welcome message 'Welcome 31773!'. Below the header, a main title 'Update Devices - A22010002 (2)' is shown above a table listing 19 items. The table columns are 'Device Id', 'Alias Id', and 'Source'. Several rows have checkboxes; the first two are checked, while others are empty. To the right of the table is a 'Batch Update' modal window. Inside the modal, the 'SourceSubstrateId' field is set to 'Reel3'. Below it is a 'TargetSubstrateId' field which is empty. A large central question is 'Are you sure to batch update?'. Below the question, a note states 'Once updated, the data will be change and upload to DTS!'. At the bottom of the modal are 'Cancel' and 'Confirm' buttons. Outside the modal, at the bottom right, are 'Confirm' and 'Close' buttons. At the very bottom of the screen, there are buttons for 'Save changes', 'Cancel changes', 'BatchUpdate', and 'Cancel'.

Figure 39

10. User can choose to cancel the transaction by clicking the Cancel button or continue the transaction by clicking Confirm button.
  11. If the transaction failed, system will prompt the related error message and user required to try again later.

12. Upon transaction success, system will prompt a success message and return to Lot Validate page as shown in Figure 40.

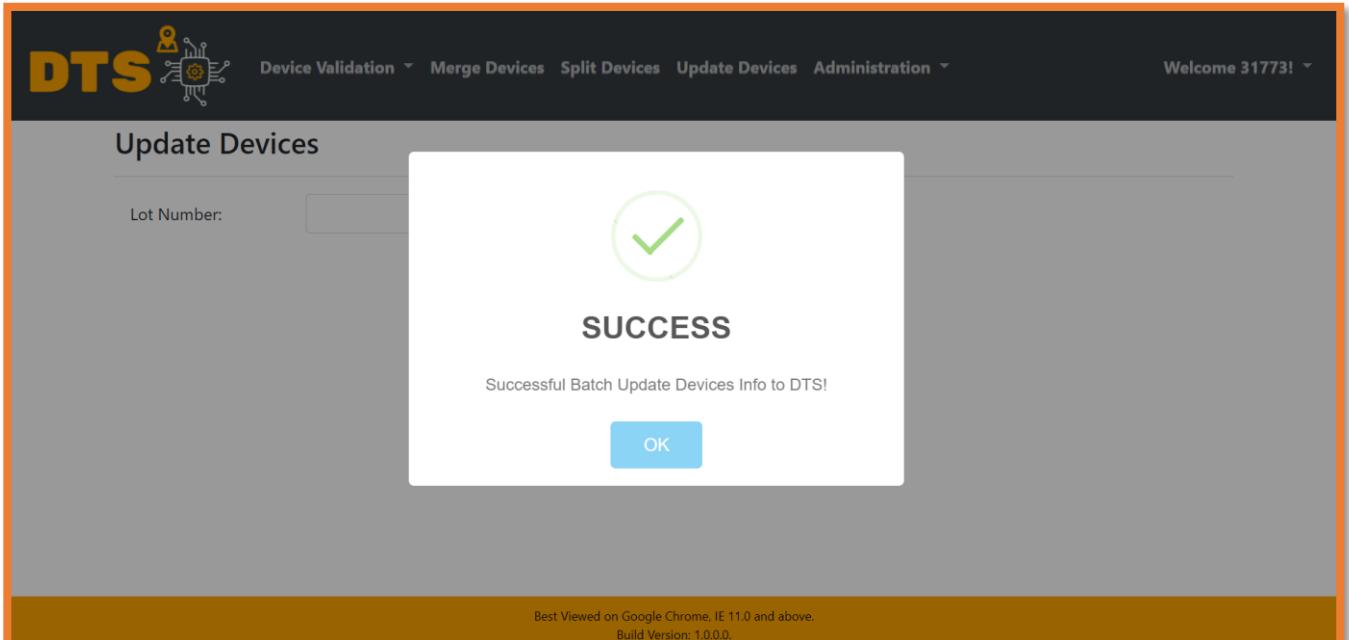


Figure 40

## 5.5.2 Single Device Information Update

- At grid view, User can edit any related field in the grid view table editor by clicking on the information except Device ID column as shown in Figure 41.

**Note:** User can edit multiple information at the same time.

	Device Id	Alias Id	Source Substr...	Target Substr...	Source Po...	Target Pos...	From X	From Y	To X	To Y	Bin Result	Bin Code	Bin Desc
	DTTEST01	DTTEST01		FOIL02	I	1			1	1	PASS	2	GOOD
	DTTEST02	DTTEST02		FOIL02		2			2	1	PASS	2	GOOD
	DTTEST03	DTTEST03		FOIL02		3			3	1	PASS	1	TESTED OK
	DTTEST11	DTTEST11		FOIL03		3			3	1	PASS	2	GOOD
	DTTEST12	DTTEST12		FOIL03		4			4	1	PASS	2	GOOD
	DTTEST13	DTTEST13		FOIL03		5			5	1	PASS	2	GOOD
	DTTEST21	DTTEST21		FOIL03		13			13	1	PASS	2	GOOD
	DTTEST22	DTTEST22		FOIL03		14			14	1	PASS	2	GOOD

Figure 41

- All the edited value will be highlighted in yellow color and the Save Changes and Cancel Changes button will be enabled as shown in Figure 42.

	Device Id	Alias Id	Source Substr...	Target Substr...	Source Po...	Target Pos...	From X	From Y	To X	To Y	Bin Result	Bin Code	Bin Desc
	DTTEST01	DTTEST01		FOIL03		1			1	1	FAIL		FAILTEST
	DTTEST02	DTTEST02		FOIL02		2			2	1	PASS	2	GOOD
	DTTEST03	DTTEST03		FOIL02		3			3	1	PASS	1	TESTED OK
	DTTEST11	DTTEST11		FOIL03		3			3	1	PASS	2	GOOD
	DTTEST12	DTTEST12		FOIL03		4			4	1	PASS	2	GOOD
	DTTEST13	DTTEST13		FOIL03		5			5	1	PASS	2	GOOD
	DTTEST21	DTTEST21		FOIL03		13			13	1	PASS	2	GOOD
	DTTEST22	DTTEST22		FOIL03		14			14	1	PASS	2	GOOD

Figure 42

- User can click the Save Changes button to update the edited device information or click Cancel Changes button to undo all the edited device information.

4. If the device information been edited as empty, the system will update empty value on the related device information.

**Note:** Please use the Cancel Changes button to undo the edited value if wrongly key in. **Do not leave the device information as empty if not required to update.**

Figure 45 showed the example of leaving the ToX value for Testing001 device as empty.

	Device Id	Alias Id	Source Substr...	Target Substr...	Source Po...	Target Pos...	From X	From Y	To X	To Y	Bin Result	Bin Code	Bin Desc
	DTTEST01	DTTEST01		FOIL02		1			1	1	PASS	2	GOOD
	DTTEST02	DTTEST02		FOIL02		2			2	1	PASS	2	GOOD
	DTTEST03	DTTEST03		FOIL02		3			3	1	PASS	1	TESTED OK
	DTTEST11	DTTEST11		FOIL03		3			3	1	PASS	2	GOOD
	DTTEST12	DTTEST12		FOIL03		4			4	1	PASS	2	GOOD
	DTTEST13	DTTEST13		FOIL03		5			5	1	PASS	2	GOOD
	DTTEST21	DTTEST21		FOIL03		13			13	1	PASS	2	GOOD
	DTTEST22	DTTEST22		FOIL03		14			14	1	PASS	2	GOOD
	DTTEST001	DTTEST001		FOIL02		15			15	1	PASS	2	GOOD

Count=19  
Page 1 of 2 (19 items) 1 2 3

[Save changes](#) [Cancel changes](#) [BatchUpdate](#) [Cancel](#)

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 43

5. After user clicked the Save Changes, system will update the edited device information to DTS and prompt a success message and return to Lot Validate page if transaction been executed successful as shown in Figure 46 else user will required to re-enter all the related device information again.

Lot Number:

**SUCCESS**

Successful Update Devices Info to DTS!

**OK**

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 44

6. If the system detected invalid data been key in at the related device information, system will prompt error message after user clicked the Save Changes button and user required to re-enter all the related device information as shown in Figure 45.

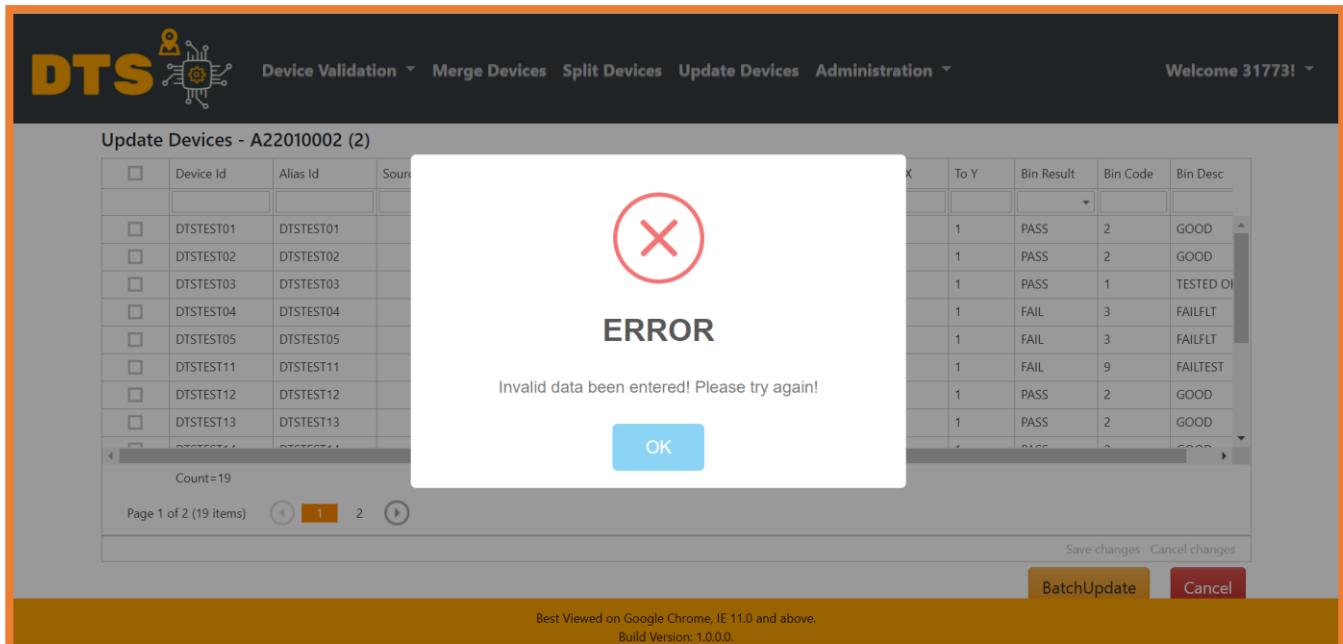


Figure 45

## 5.6 Audit Log

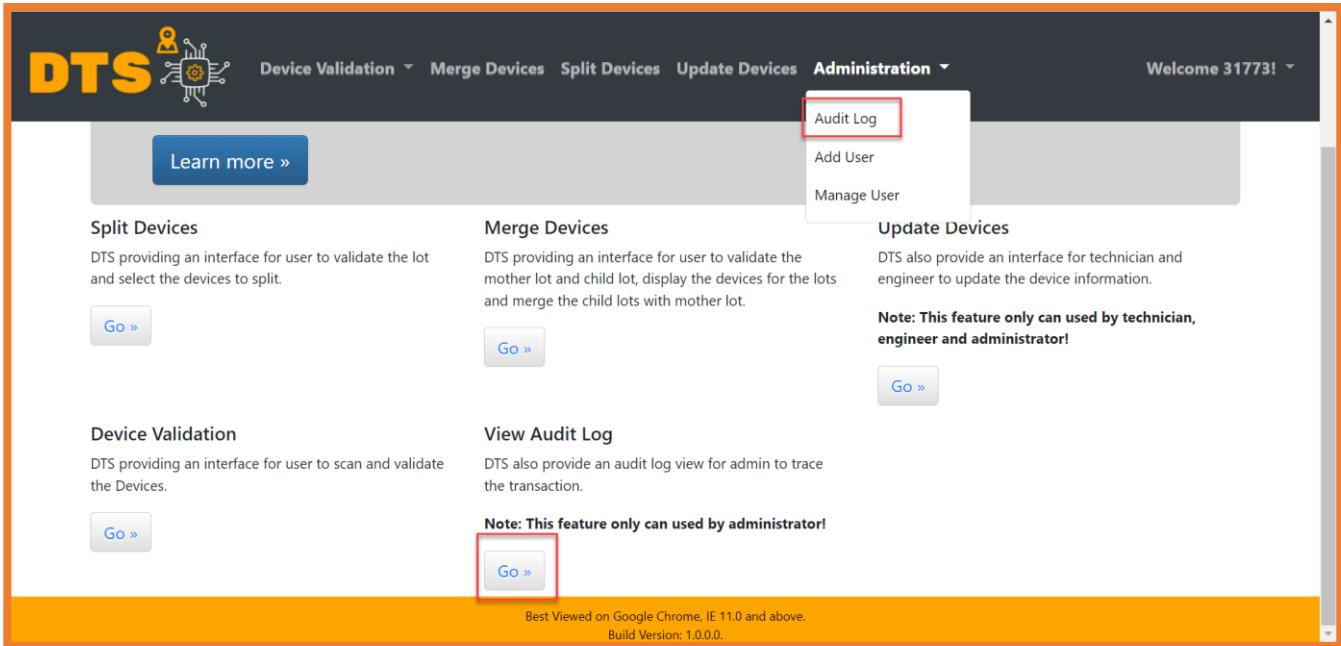


Figure 46

1. At Home page, user can click the Audit Log link at the navigation bar or Go button under View Audit Log to navigate to the Audit Log feature.

**Note:** This feature can only be used by Administrator.

2. Upon navigate to Audit Log successful, a page that consists of Start Date, End Date, a Submit button and a grid view table will be displayed as shown in Figure 47.

The screenshot shows the 'AuditLog' page. At the top, it has the same navigation bar as Figure 46. Below the navigation bar, there is a search form with 'Start Date:' and 'End Date:' input fields and a 'Submit' button. Below the search form is a grid table with columns: User Id, Event, Event Time, Mother Lot Number, Child Lot Number, and Operation. The table currently displays the message: 'No data to display'. At the bottom of the page, there is a yellow footer bar with the text: 'Best Viewed on Google Chrome, IE 11.0 and above.' and 'Build Version: 1.0.0.0.'

Figure 47

3. User can select the Start Date and End Date by clicking the empty text box.  
A calendar will prompt upon clicking the empty text box as shown in Figure 48.

**Note:** User should select the Start Date first before selecting End Date.

The screenshot shows the DTS AuditLog interface. At the top, there is a navigation bar with the DTS logo, menu items like Device Validation, Merge Devices, Split Devices, Update Devices, Administration, and a welcome message "Welcome 31773!". Below the navigation bar, the title "AuditLog" is displayed. There are two input fields: "Start Date:" and "End Date:", both currently empty. To the right of these fields is a "Submit" button. Below the input fields is a date picker calendar for March 2022. The calendar shows days from 1 to 31, with the 14th highlighted in yellow. A tooltip "March 2022" is visible above the calendar. To the right of the calendar is a table header with columns: Event Time, Mother Lot Number, Child Lot Number, and Operation. Below the table header, a message "No data to display" is shown. At the bottom of the page, a yellow footer bar contains the text "Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0."

Figure 48

4. User can click Submit button after selected the Start Date and End Date as shown in Figure 49.

The screenshot shows the DTS AuditLog interface. The layout is identical to Figure 48, with the DTS logo, navigation bar, and "AuditLog" title. The "Start Date:" field now contains "03/13/2022" and the "End Date:" field contains "03/15/2022". The "Submit" button is highlighted with a red box. The table below is empty, displaying the message "No data to display". The yellow footer bar at the bottom remains the same.

Figure 49

5. If the selected date range didn't have data stored, the system will prompt error message as shown in Figure 50.

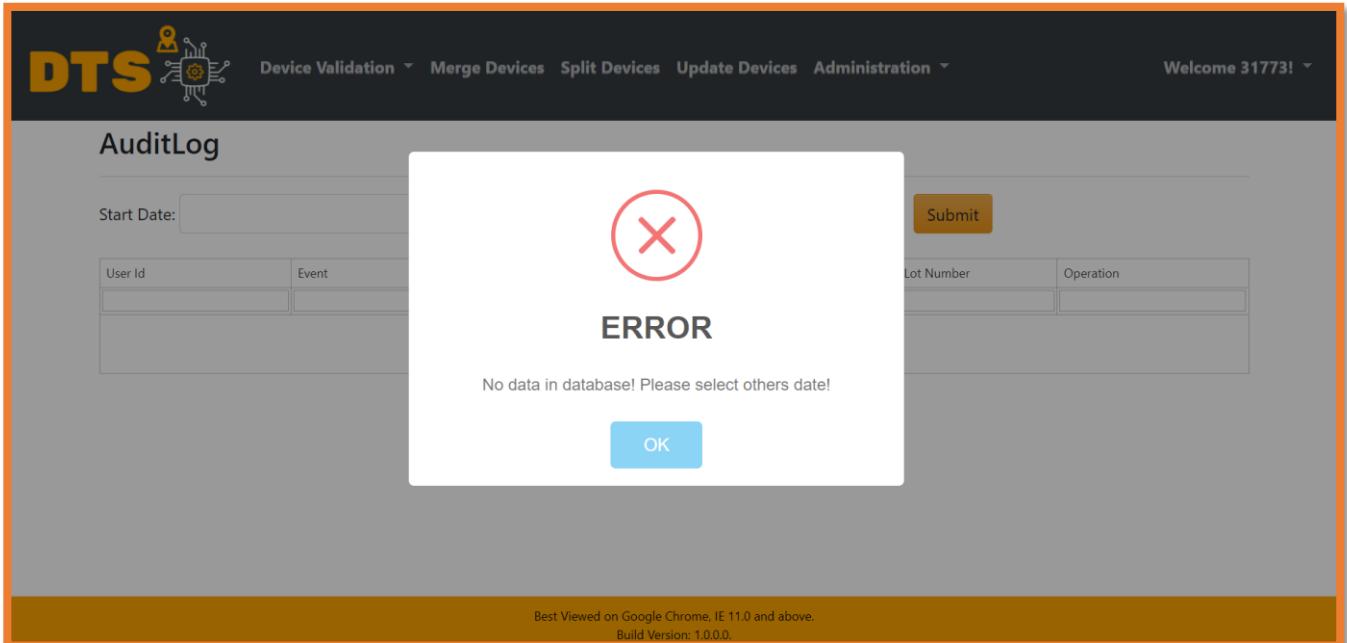


Figure 50

6. If the selected date range have data stored, the system will display the User ID, Event, Event Time, Mother Lot Number, Child Lot Number and Operation in the grid view table as shown in Figure 51.

**Notes:**

- I. Update and Batch Update event will display the lot number in Mother Lot Number only.
- II. Merge and Split Event will display the mother and child lot number to the Mother Lot Number and Child Lot Number.
- III. Validate Event such as ValidateFailDevice will display the lot number in Mother Lot Number only.

AuditLog					
Start Date:	End Date:	Submit			
User Id	Event	Event Time	Mother Lot Number	Child Lot Number	Operation
31773	Logout	03/11/2022 15:23:10.790			
31773	Login	03/11/2022 15:30:57.473			
31773	Logout	03/11/2022 15:35:15.407			
31773	Login	03/11/2022 15:37:34.423			
31773	Split	03/11/2022 15:38:23.817	A22010002	A22010002.3	2
31773	Merge	03/11/2022 15:39:42.110	A22010002	A22010002.3	2
31773	Split	03/11/2022 15:39:52.707	A22010002	A22010002.4	2
31773	Merge	03/11/2022 15:40:42.037	A22010002	A22010002.4	2
31773	Logout	03/11/2022 15:41:02.023			
31773	Update	03/11/2022 15:05:11.150	A22010002		2

Figure 51

## 5.7 DMC Validation

### 5.7.1 Validate Pass Device

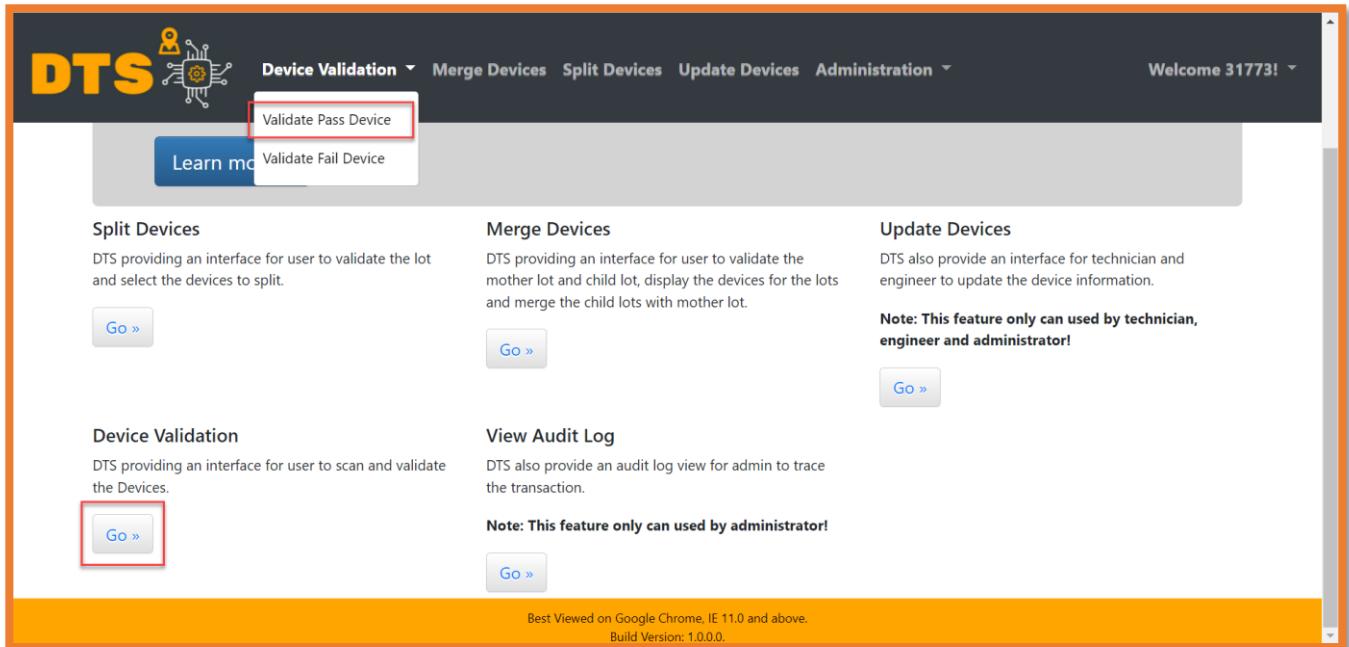


Figure 52

1. At Home page, user can click the DMC Validation tab at the navigation bar to show the features in the DMC Validation such as Validate Pass Device and Validate Fail Device and click Validate Pass Device or click the GO button under DMC Validation to direct navigate to Validate Pass Device feature.
2. Upon navigate to Validate Pass Device successful, a Lot Validate will be prompt for user to validate the lot number.

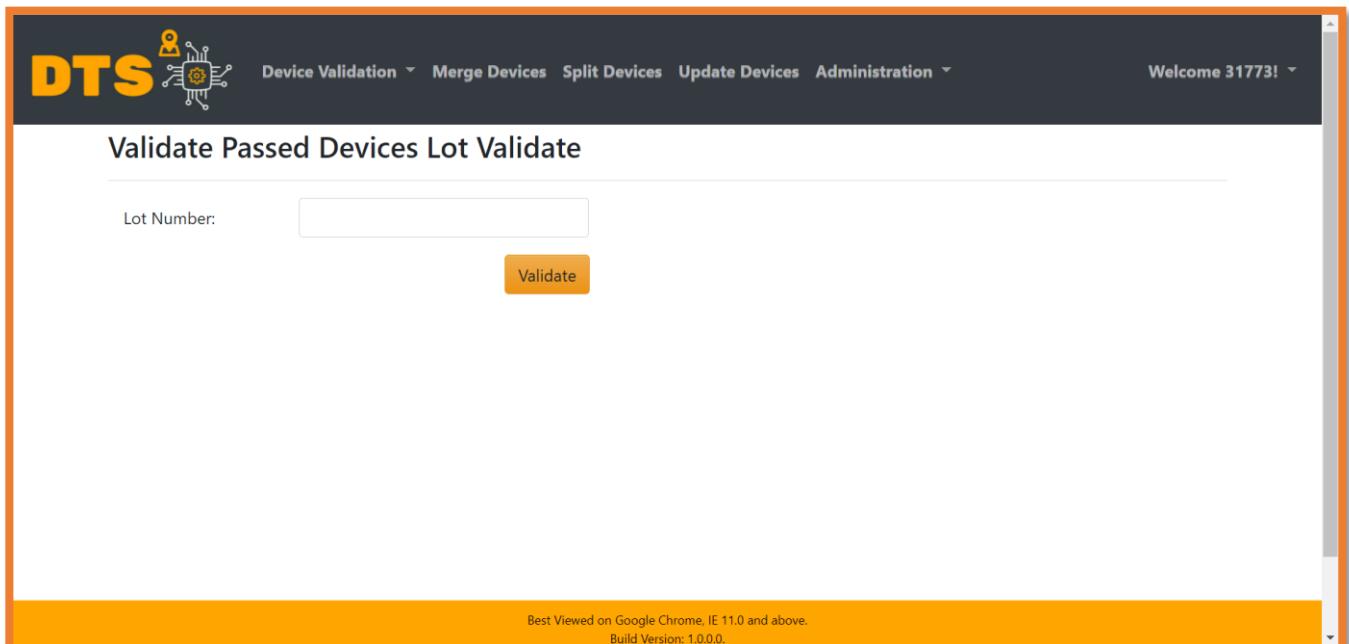


Figure 53

3. In Lot Validate page, user required to key in or scan the lot number and click the Validate button as shown in Figure 54.

The screenshot shows the DTS software interface with a dark header bar. The header contains the DTS logo, navigation links for 'Device Validation', 'Merge Devices', 'Split Devices', 'Update Devices', and 'Administration', and a welcome message 'Welcome 31773!'. Below the header, the main content area has a title 'Validate Passed Devices Lot Validate'. It features a 'Lot Number:' input field with a red border and a 'Validate' button below it, also with a red border. A red box surrounds the input field, and a red arrow labeled '1' points to it. Another red box surrounds the 'Validate' button, and a red arrow labeled '2' points to it. At the bottom of the screen, there is a yellow footer bar with the text 'Best Viewed on Google Chrome, IE 11.0 and above.' and 'Build Version: 1.0.0.0.'

Figure 54

4. Same as others features, system will prompt error if user clicked the Validate button without key in any lot number as shown in Figure 55.

This screenshot shows the same 'Validate Passed Devices Lot Validate' page as Figure 54. However, the 'Lot Number:' input field is empty. A red box highlights the 'Validate' button, and a red arrow labeled '1' points to it. To the right of the input field, a red box highlights the error message 'Please enter Lot Number', which is displayed in red text. The rest of the interface is identical to Figure 54, including the header, footer, and overall layout.

Figure 55

5. If Validate failed, the system will prompt error to notice the user and user required to re-validate the lot number again as shown in Figure 56.

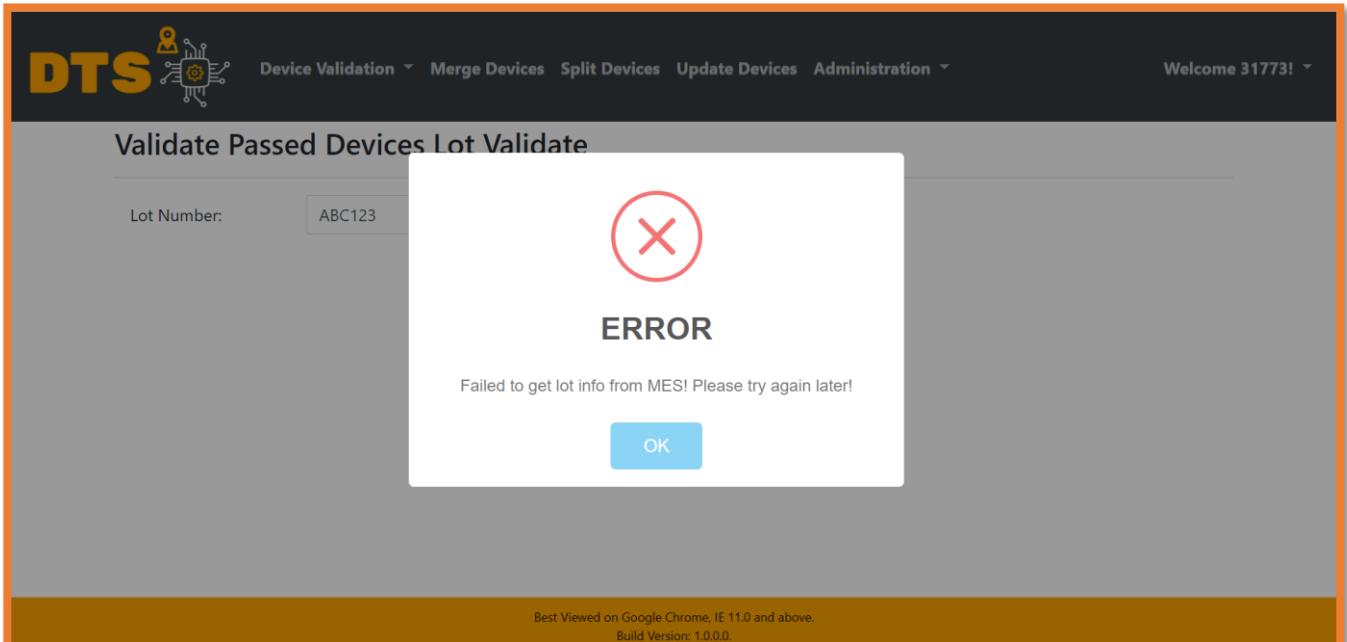


Figure 56

6. If the lot didn't consist of any pass devices information, system will prompt error to notice the user and user required to verify with the Process Tech/Engineer as shown in Figure 57.

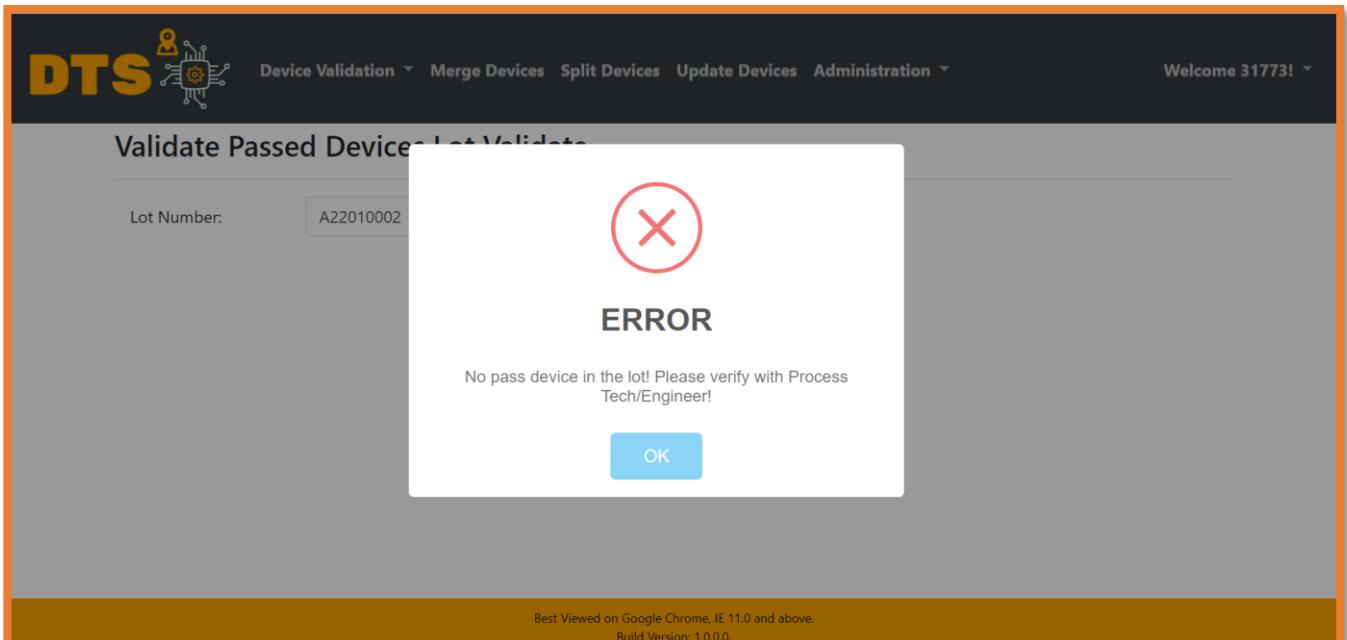


Figure 57

7. Upon Validate successful, system will show the scan device interface same as the Split Lot features as shown in Figure 58.

Figure 58

Figure 59

8. In the scan device interface, there are several features that user can use and refer as circled with number in Figure 59:-
1. Validated Lot Number – user can refer this as the validated lot number.
  2. Validated Lot Operation – user can refer this as the operation of the validated lot number.
  3. Device ID text box – user required to scan the device ID in this field.
  4. Submit button – user required to click this button to submit and validate the device information.
  5. Grid View – system will display the validated device information in this grid view.
  6. Quantity – system will show the scanned device quantity and the pass devices quantity for the validated lot.
  7. Validate button – user can click this button to perform validation and the system will set the validation result to MES.

8. Cancel button – user can click this button to cancel the transaction and return to Lot Validate page.
9. If the user clicked the Submit without scan any device ID, system will prompt error beside the device ID text box same as Split Lot features.

Device ID:  Please scan Device ID! Submit

DeviceID	Bin Result	Bin Code	Bin Desc

No data to display

Count=0

Quantity: 0 / 3

Validate Cancel

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 60

10. If the user clicked the Validate button without scanning any device ID, system will prompt error.

Device ID:

DeviceID	Bin Result	Bin Code

No data

Count=0

Quantity: 0 / 3

Validate Cancel

Please scan more devices to validate!

OK

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 61

11. After user scanned the device ID and clicked the Submit button, system will display the scanned device information in the grid view upon validate the device ID successful as shown in Figure 62.

**Note:**

- I. System will validate the scanned device ID based on below conditions:-
  - a) The scanned device ID must be Pass device.
  - b) The scanned device ID must be same bin.
  - c) The scanned device ID cannot be duplicated.
  - d) The scanned device ID is belonging to the validated lot.
  - e) The scanned device quantity cannot over the pass devices quantity for the validated lot.
- II. System will highlight the device that failed the validation in red.

The screenshot shows the DTS software interface with the following details:

- Header:** DTS logo, Device Validation, Merge Devices, Split Devices, Update Devices, Administration, Welcome 31773!
- Title:** Validate Pass Device - A22010002 (2)
- Form Fields:** Device ID input field and a Submit button.
- Data Grid:** A table with columns DeviceID, Bin Result, Bin Code, and Bin Desc. One row is highlighted with a red border: DTSTEST01, PASS, 1, GOOD.
- Text:** Count=1, Quantity: 1 / 3.
- Buttons:** Validate and Cancel.
- Footer:** Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0.

Figure 62

12. If the scanned device ID is Fail or Previous Fail device, system will display the device information in grid view and prompt error as shown in Figure 63.

The screenshot shows the DTS software interface with the following details:

- Header:** DTS logo, Device Validation, Merge Devices, Split Devices, Update Devices, Administration, Welcome 31773!
- Title:** Validate Pass Device - A22010002 (2)
- Form Fields:** Device ID input field.
- Data Grid:** A table with columns DeviceID, Bin Result, Bin Code. Two rows are highlighted with a red border: DTSTEST01, PASS, 1 and DTSTEST11, FAIL, 0.
- Message Box:** A modal window titled "WARNING" with an exclamation mark icon. The text inside says "The scanned device is FAIL device!" and has an "OK" button.
- Text:** Count=2, Quantity: 2 / 3.
- Buttons:** Validate and Cancel.
- Footer:** Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0.

Figure 63

- If the scanned device ID is different bin, system will display the device information in grid view and prompt error as shown in Figure 64.

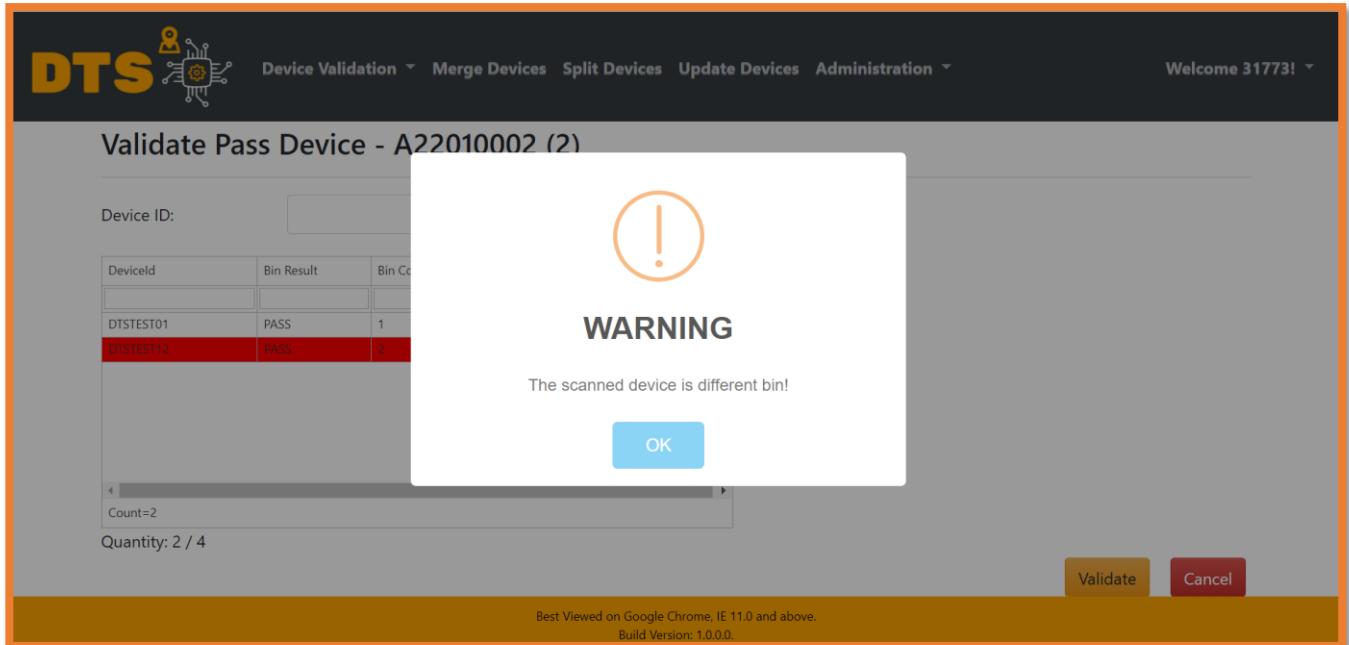


Figure 64

- If the scanned device ID been scanned previously, system will display the device ID in the grid view and prompt error as shown in Figure 65.

**Note:** System will not increase the scanned device quantity since the device ID been scanned before.

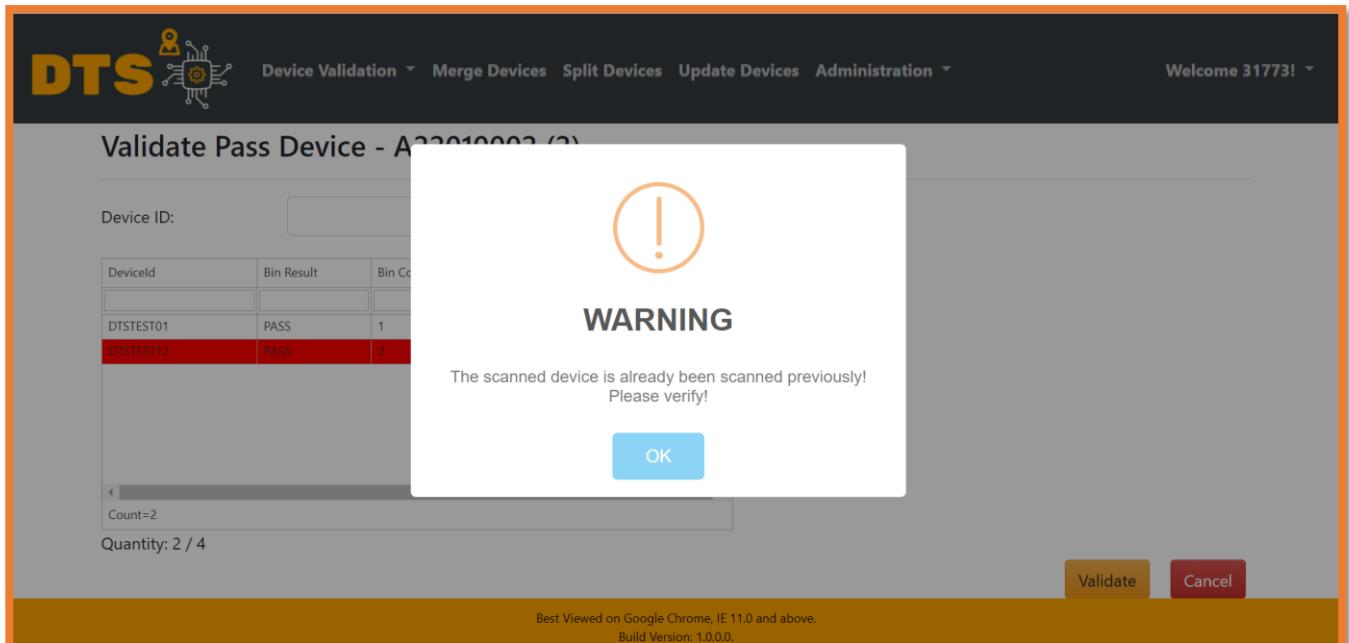


Figure 65

4. If the scanned device ID is not belonging to the validated lot, system will display the device information in grid view and prompt error as shown in Figure 66.

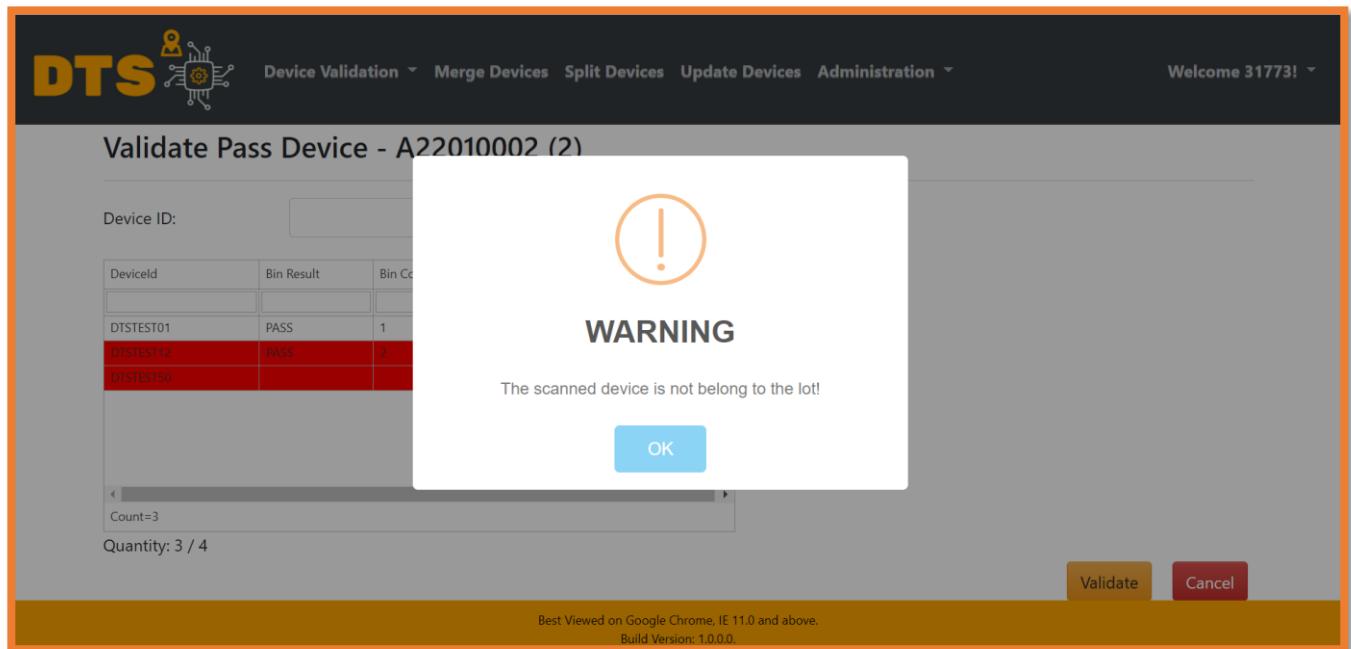


Figure 66

5. If the scanned device quantity is **more than** the pass devices quantity, system will continue prompt error when user continue to scan and submit the device ID as shown in Figure 67.

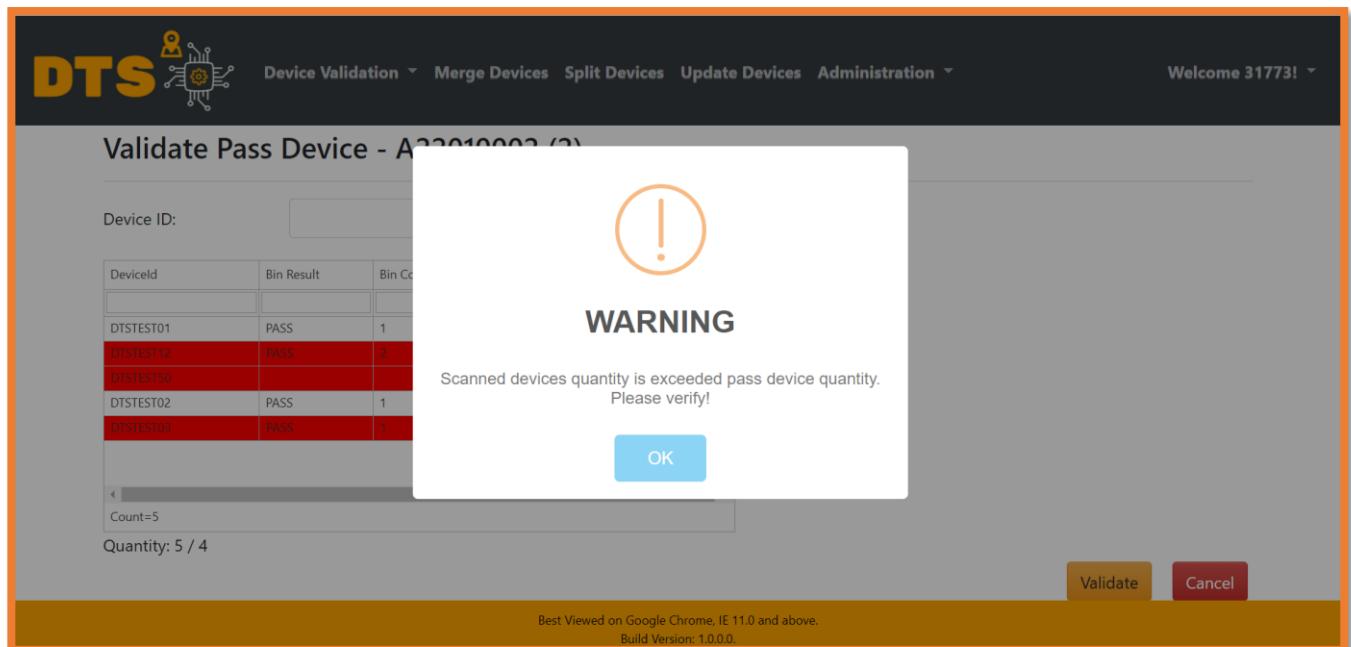


Figure 67

6. User can click the Validate button to perform validation and set the validation result to MES as shown in Figure 68.

The screenshot shows the DTS Device Validation interface. At the top, there's a navigation bar with links for Device Validation, Merge Devices, Split Devices, Update Devices, Administration, and a welcome message for user 31773. Below the navigation is a title "Validate Pass Device - A22010002 (2)". A form field "Device ID:" contains a placeholder and a "Submit" button. Below this is a table with columns: Deviceld, Bin Result, Bin Code, and Bin Desc. The table rows show four entries: DTSTEST01 (PASS, 1, GOOD), DTSTEST02 (PASS, 1, GOOD), DTSTEST03 (PASS, 1, GOOD), and DTSTEST12 (PASS, 1, GOOD). A progress bar at the bottom indicates "Count=4". A red box highlights the text "Quantity: 4 / 4". On the right side, there are "Validate" and "Cancel" buttons. A note at the bottom states "Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0."

Figure 68

7. Upon user clicked the Validate button, system will prompt a confirmation message. User can click the Confirm button to continue the transaction or Cancel button to return to the scan device interface as shown in Figure 69.

This screenshot is similar to Figure 68 but includes a modal dialog box in the center. The dialog asks "Are you sure to validate the lot?". It also displays the message "Scanned device: 4! Please click confirm to validate the lot!". At the bottom of the dialog are "Cancel" and "Confirm" buttons. The background of the main interface is dimmed. The bottom status bar remains the same as in Figure 68.

Figure 69

- After user clicked the Validate button, system will validate the scanned devices list based on the validation conditions stated at Step 11 and set the validation result to MES. If the transaction been executed successful, system will prompt a success message and request user to perform MVOU for the validated lot from MES as shown in Figure 70.

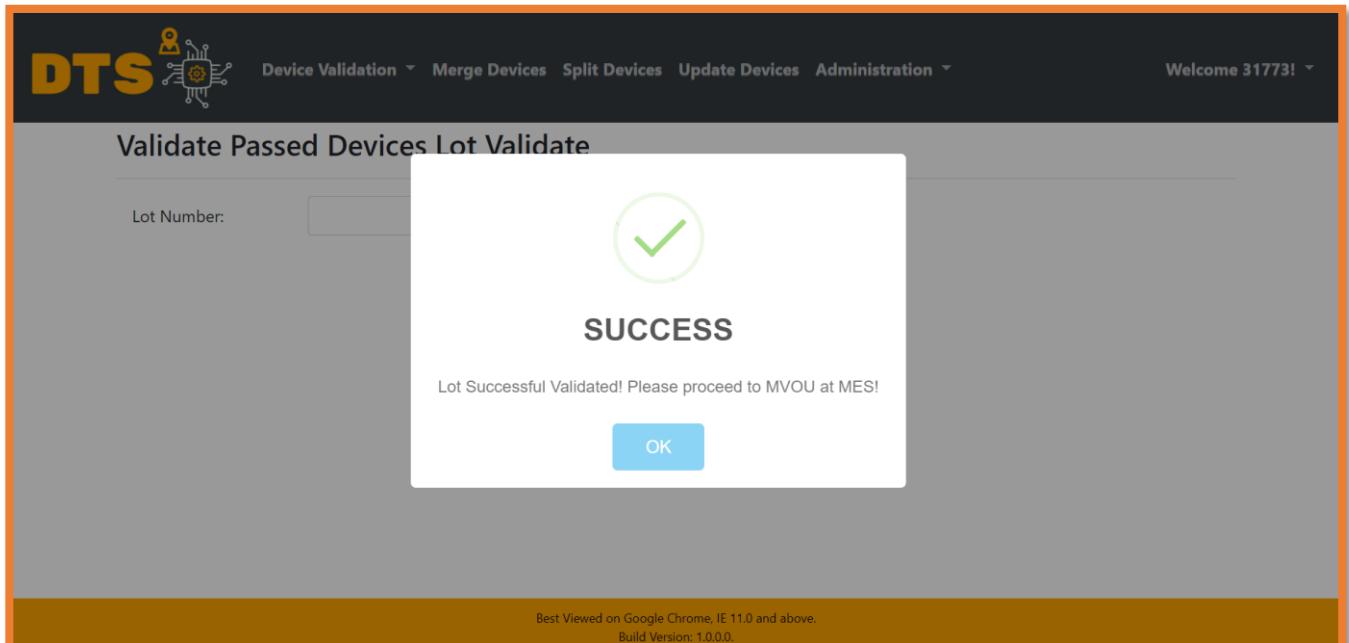


Figure 70

- If the validation failed, the system will prompt the validation failed reason as shown in Figure 71.

In Figure 71, the validation failed due to the scanned devices quantity is not match with the pass device quantity.

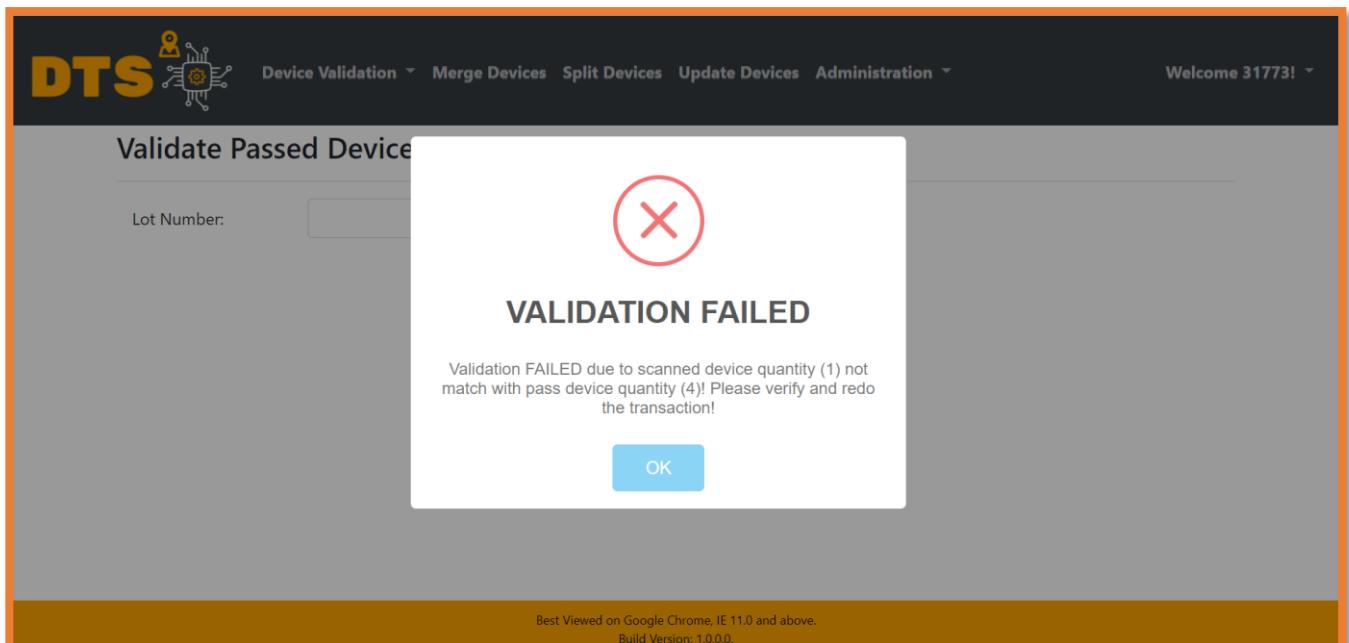


Figure 71

## 5.7.2 Validate Fail Device

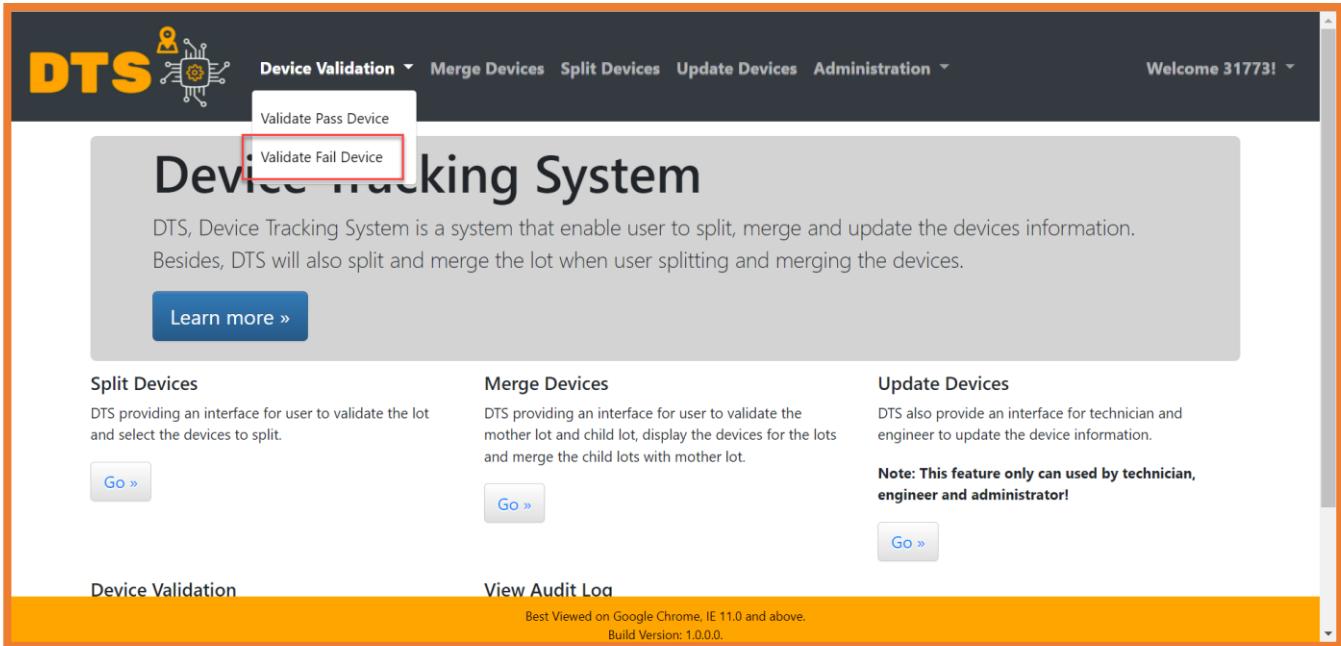


Figure 72

1. At Home page, user can click the DMC Validation tab at the navigation bar to show the features in the DMC Validation such as Validate Pass Device, Validate Fail Device and Validate Sampling Device, and click Validate Fail Device to navigate to the Validate Fail Device feature.
2. Upon navigate to Validate Fail Device successful, a Lot Validate will be prompt for user to validate the lot number.

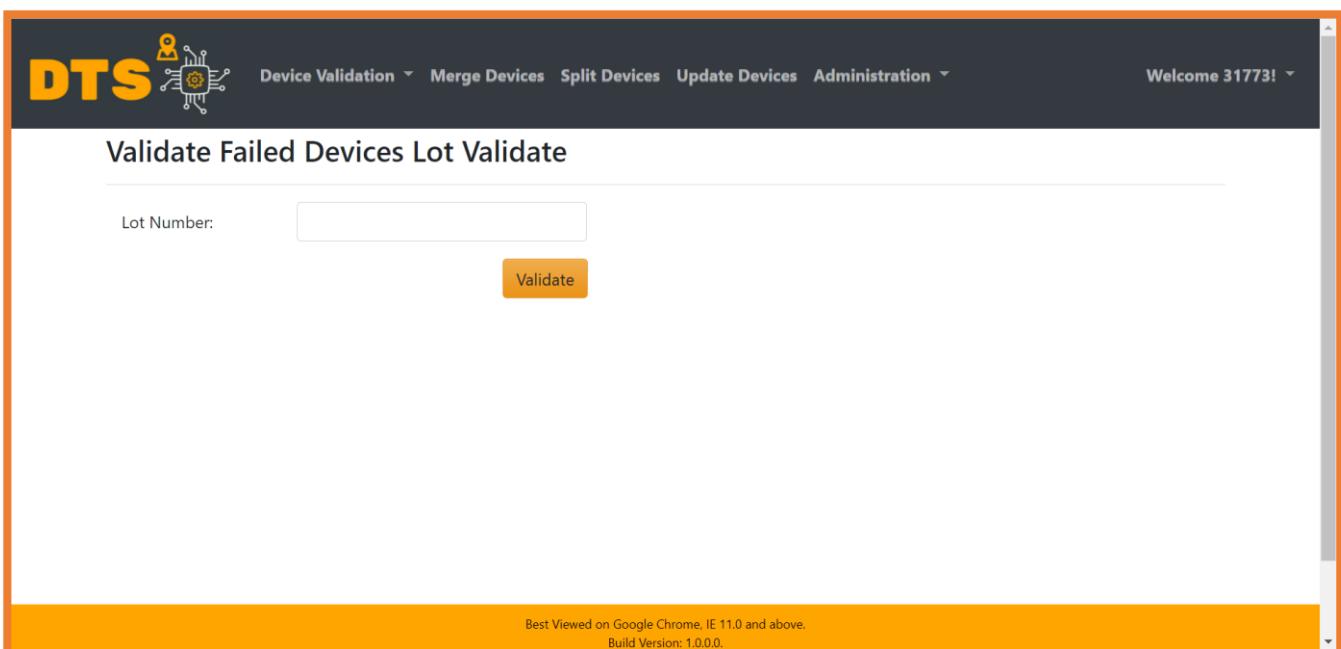


Figure 73

3. In Lot Validate page, user required to key in or scan the lot number and click the Validate button as shown in Figure 74.

The screenshot shows the DTS software interface with a dark header bar. The header contains the DTS logo, navigation links for 'Device Validation', 'Merge Devices', 'Split Devices', 'Update Devices', and 'Administration', and a welcome message 'Welcome 31773!'. Below the header is a section titled 'Validate Failed Devices Lot Validate'. It features a text input field labeled 'Lot Number:' (marked with a red box and number 1) and a yellow 'Validate' button (marked with a red box and number 2). At the bottom of the page, there is a note: 'Best Viewed on Google Chrome, IE 11.0 and above.' and 'Build Version: 1.0.0.0.'

Figure 74

4. Same as others features, system will prompt error if user clicked the Validate button without key in any lot number as shown in Figure 75.

The screenshot shows the same DTS software interface as Figure 74, but with an error message. The 'Lot Number:' input field is empty and has a red border, with the error message 'Please enter Lot Number' displayed inside it. The yellow 'Validate' button is visible below the input field. The bottom of the page includes the note: 'Best Viewed on Google Chrome, IE 11.0 and above.' and 'Build Version: 1.0.0.0.'

Figure 75

5. If Validate failed, the system will prompt error to notice the user and user required to re-validate the lot number again as shown in Figure 76.

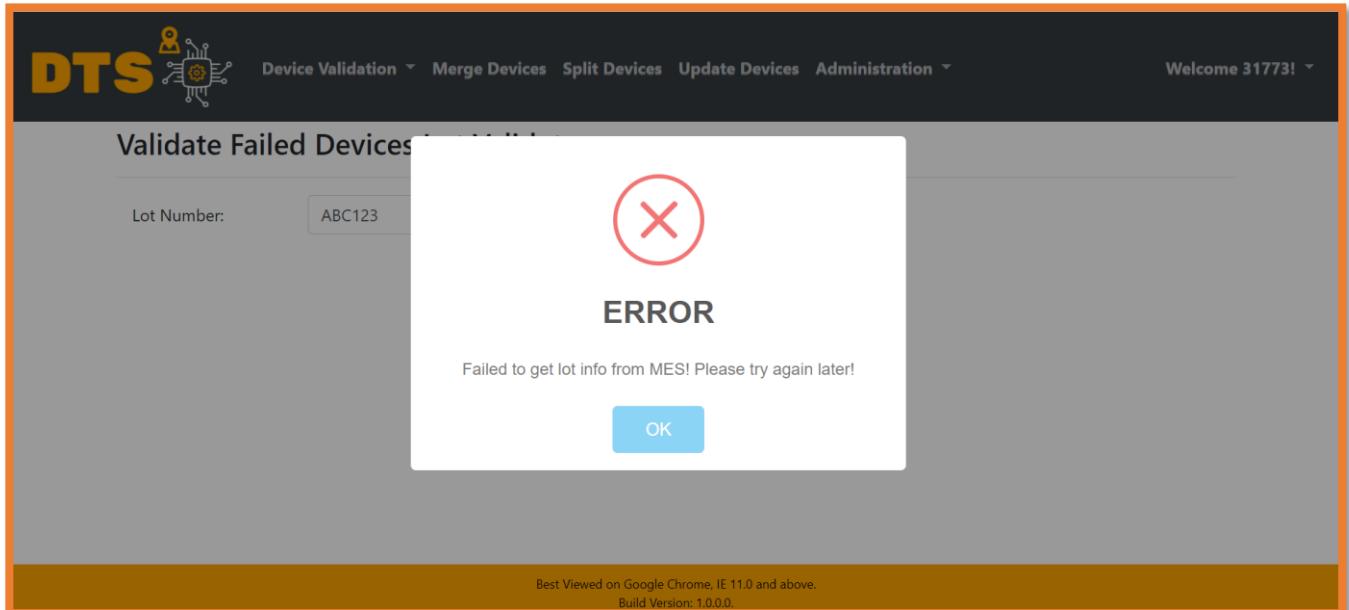


Figure 76

6. If the lot didn't consist of any fail devices information, system will prompt error to notice the user and user required to verify with Process Tech/Engineer as shown in Figure 77.

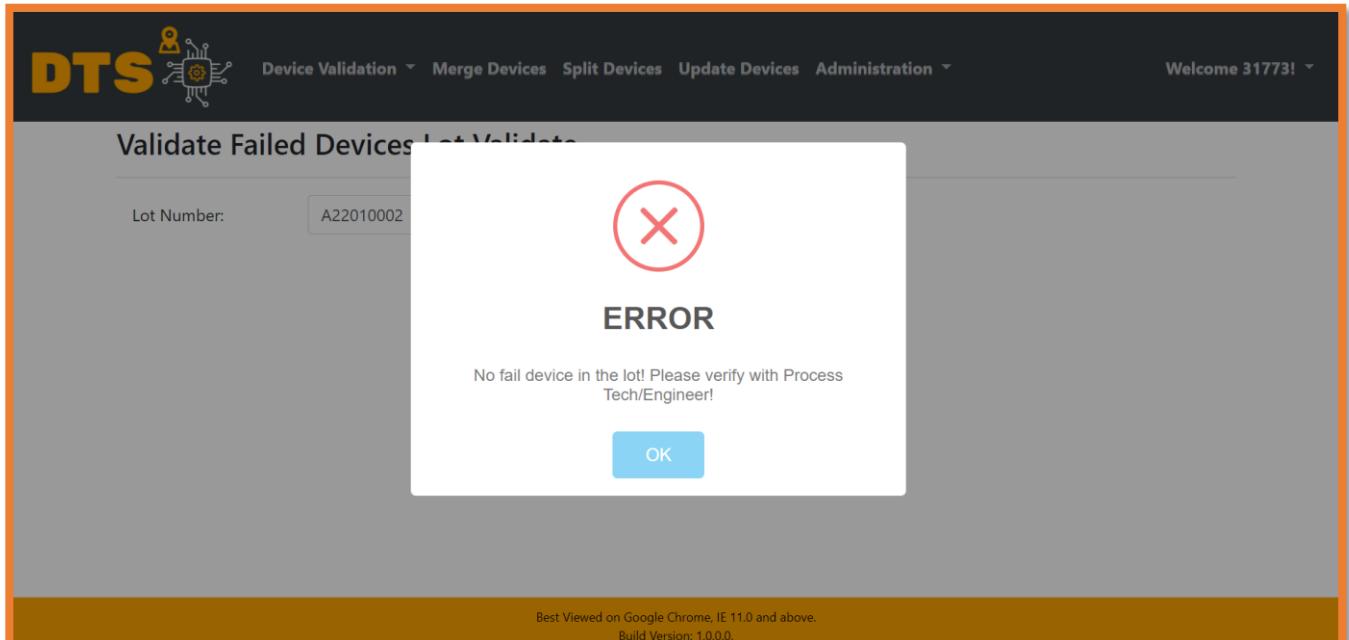


Figure 77

7. Upon Validate successful, system will show the lot device information in grid view as shown in Figure 78.

The screenshot shows the DTS software interface with the following details:

- Header:** DTS logo, Device Validation, Merge Devices, Split Devices, Update Devices, Administration, Welcome 31773!
- Title:** Validate Fail Device - A22010002 (2)
- Device ID Input:** A text input field containing "A22010002" with a red border, circled by number 1.
- Submit Button:** An orange "Submit" button with a red border, circled by number 2.
- Grid View:** A table with columns: DeviceID, Bin Result, Bin Code, Bin Desc. It displays the message "No data to display". Below the table is a scroll bar and the text "Count=0".
- Quantity:** A text field showing "Quantity: 0 / 3" with a red border, circled by number 3.
- Validation Buttons:** "Validate" (orange) and "Cancel" (red) buttons at the bottom right.
- Footer:** Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0.

Figure 78

The screenshot shows the DTS software interface with the following details, with red numbers 1 through 8 overlaid:

- Device ID Input:** A text input field containing "A22010002" with a red border, circled by number 1.
- Submit Button:** An orange "Submit" button with a red border, circled by number 2.
- Grid View:** A table with columns: DeviceID, Bin Result, Bin Code, Bin Desc. It displays the message "No data to display". Below the table is a scroll bar and the text "Count=0".
- Quantity:** A text field showing "Quantity: 0 / 3" with a red border, circled by number 3.
- Validation Buttons:** "Validate" (orange) and "Cancel" (red) buttons at the bottom right.
- Footnote:** Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0.

Figure 79

8. In the scan device interface, there are several features that user can use and refer as circled with number in Figure 79:-

1. Validated Lot Number – user can refer this as the validated lot number.
2. Validated Lot Operation – user can refer this as the operation of the validated lot number.
3. Device ID text box – user required to scan the device ID in this field.
4. Submit button – user required to click this button to submit and validate the device information.
5. Grid View – system will display the validated device information in this grid view.
6. Quantity – system will show the scanned device quantity and the fail devices quantity for the validated lot.
7. Validate button – user can click this button to perform validation and the system will set the validation result to MES.
8. Cancel button – user can click this button to cancel the transaction and return to Lot Validate page.

9. If the user clicked the Submit without scan any device ID, system will prompt error beside the device ID text box.

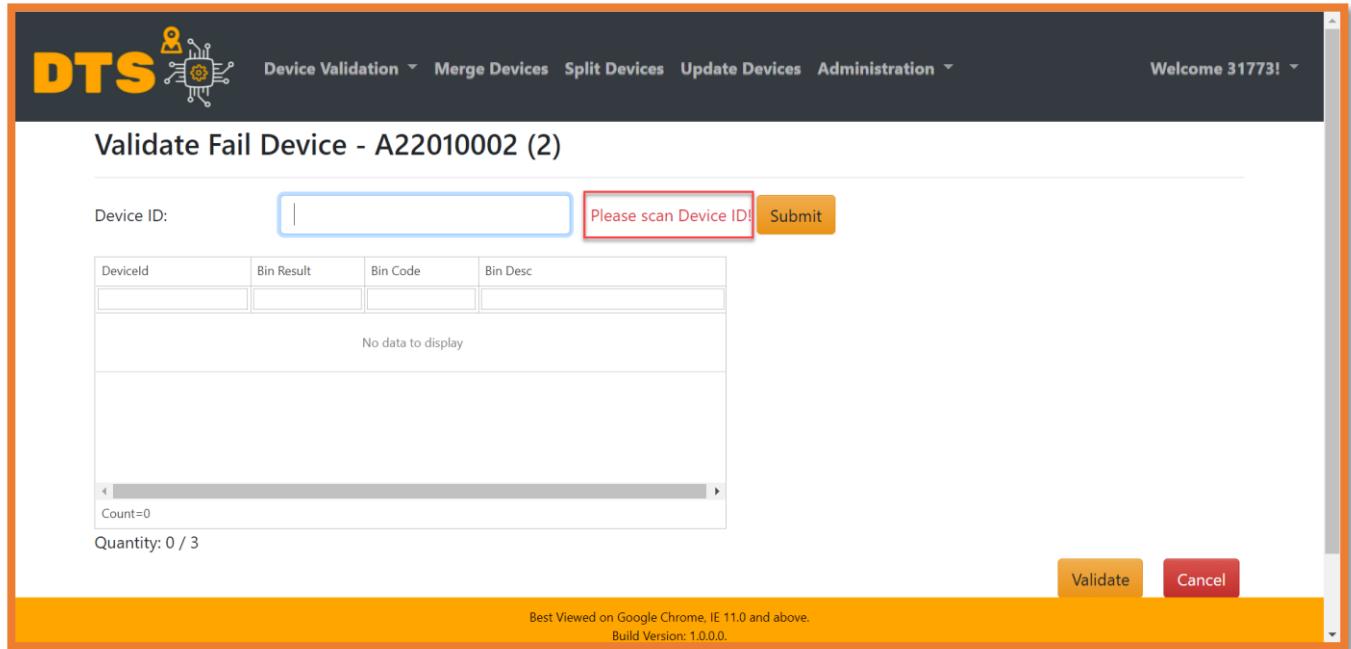


Figure 80

10. If the user clicked the Validate button without scanning any device ID, system will prompt error.

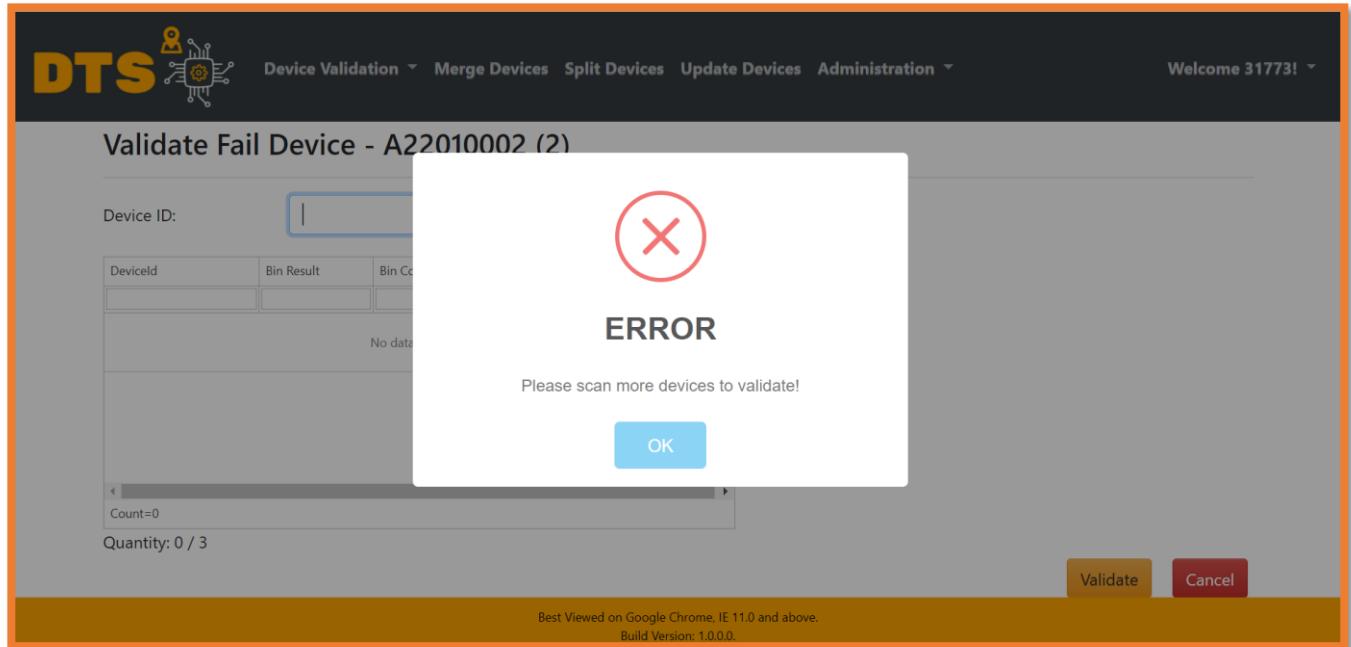


Figure 81

11. After user scanned the device ID and clicked the Submit button, system will display the scanned device information in the grid view upon validate the device ID successful as shown in Figure 82.

**Note:**

- I. System will validate the scanned device ID based on below conditions:-
  - a) The scanned device ID must be Pass device.
  - b) The scanned device ID cannot be duplicated.
  - c) The scanned device ID is belonging to the validated lot.
  - d) The scanned device quantity cannot over the fail devices quantity for the validated lot.
- II. System will highlight the device that failed the validation in red.

DeviceID	Bin Result	Bin Code	Bin Desc
DTSTEST16	FAIL	5002	FAILTEST

Quantity: 1 / 3

Validate Cancel

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 82

12. If the scanned device ID is Pass device, system will display the device information in grid view and prompt error as shown in Figure 83.

DeviceID	Bin Result	Bin Code
DTSTEST16	FAIL	5002
DTSTEST01	PASS	1

The scanned device is PASS device!

OK

Validate Cancel

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 83

13. If the scanned device ID been scanned previously, system will display the device ID in the grid view and prompt error as shown in Figure 84.

**Note:** System will not increase the scanned device quantity since the device ID been scanned before.

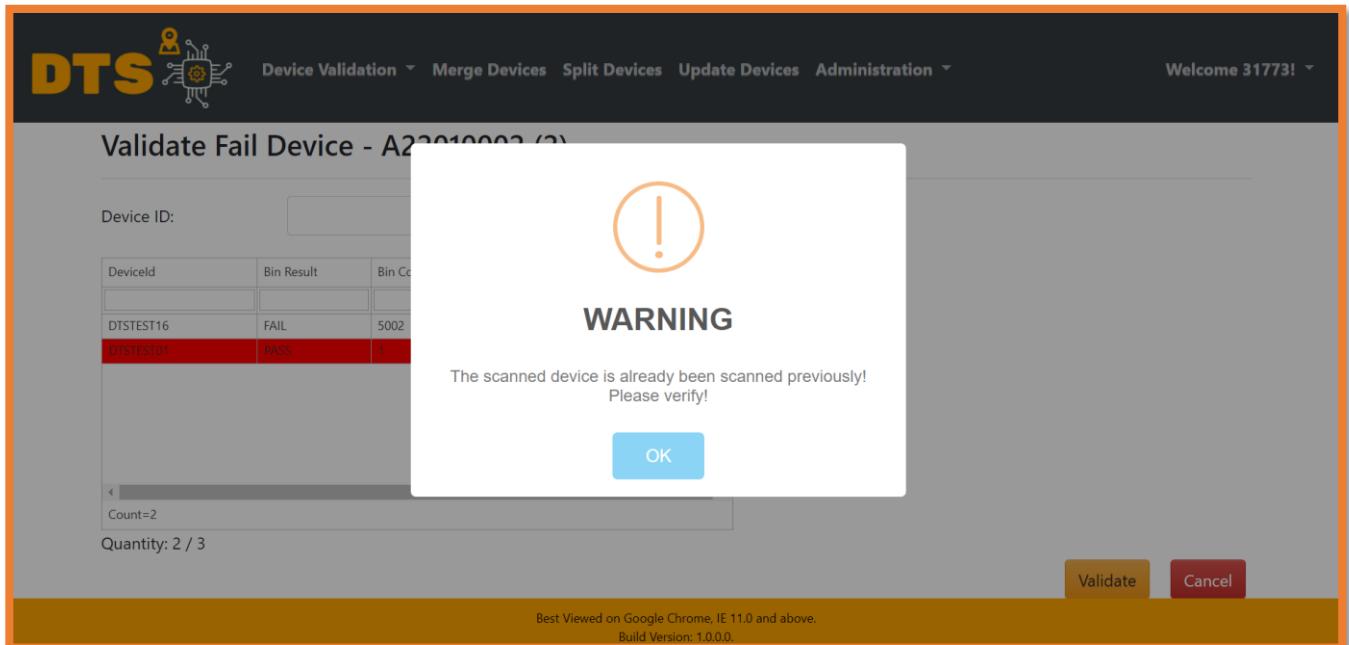


Figure 84

14. If the scanned device ID is not belonging to the validated lot, system will display the device information in grid view and prompt error as shown in Figure 85.

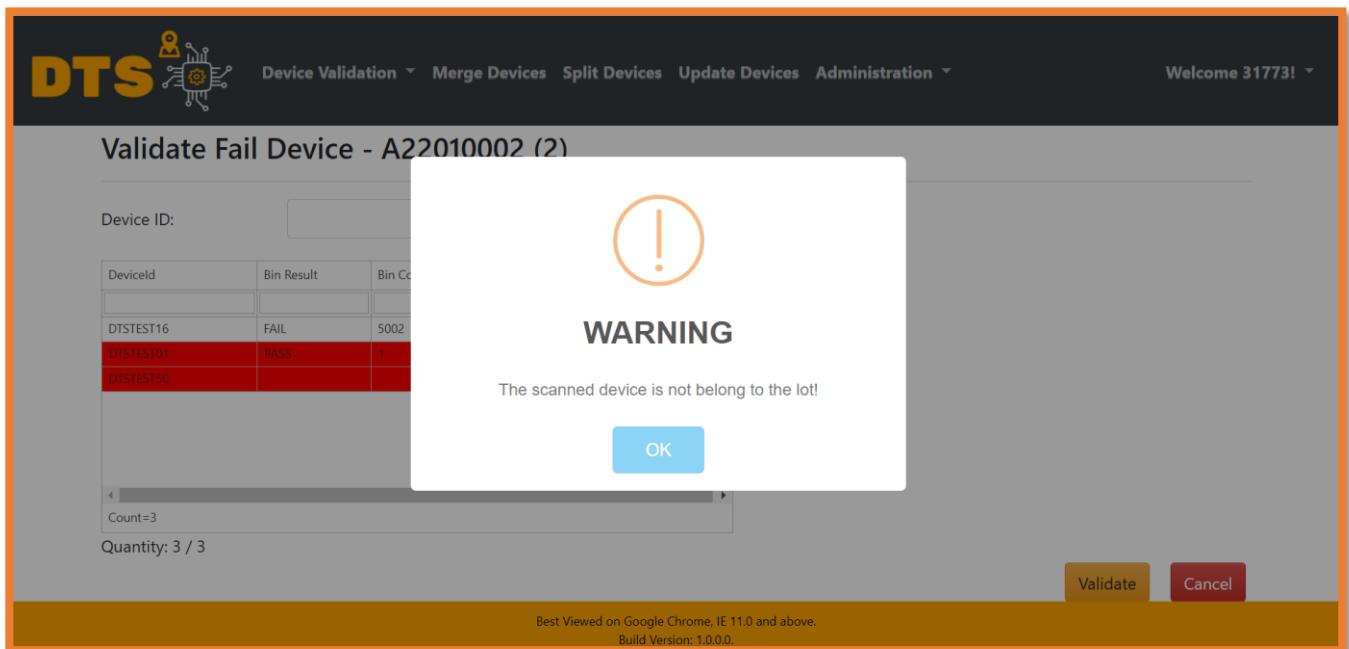


Figure 85

15. If the scanned device quantity is **more than** the fail devices quantity, system will continue prompt error when user continue to scan and submit the device ID as shown in Figure 86.

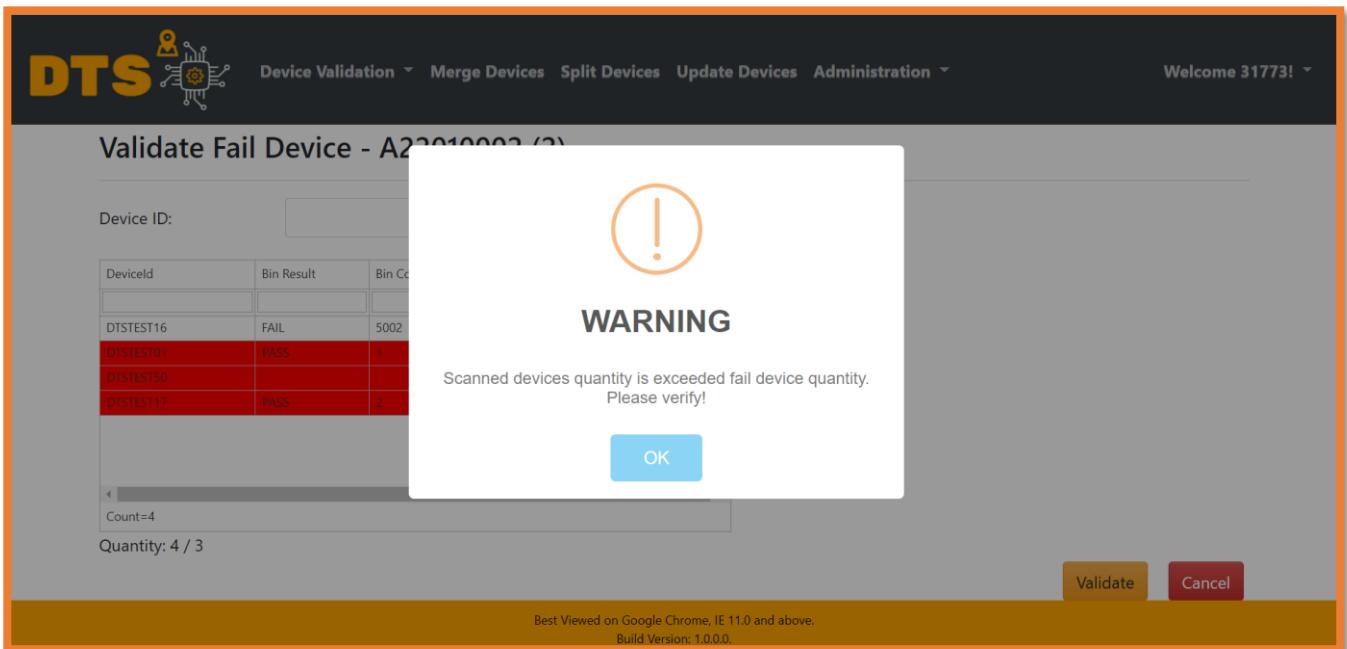


Figure 86

16. User can click the Validate button to perform validation and set the validation result to MES as shown in Figure 87.

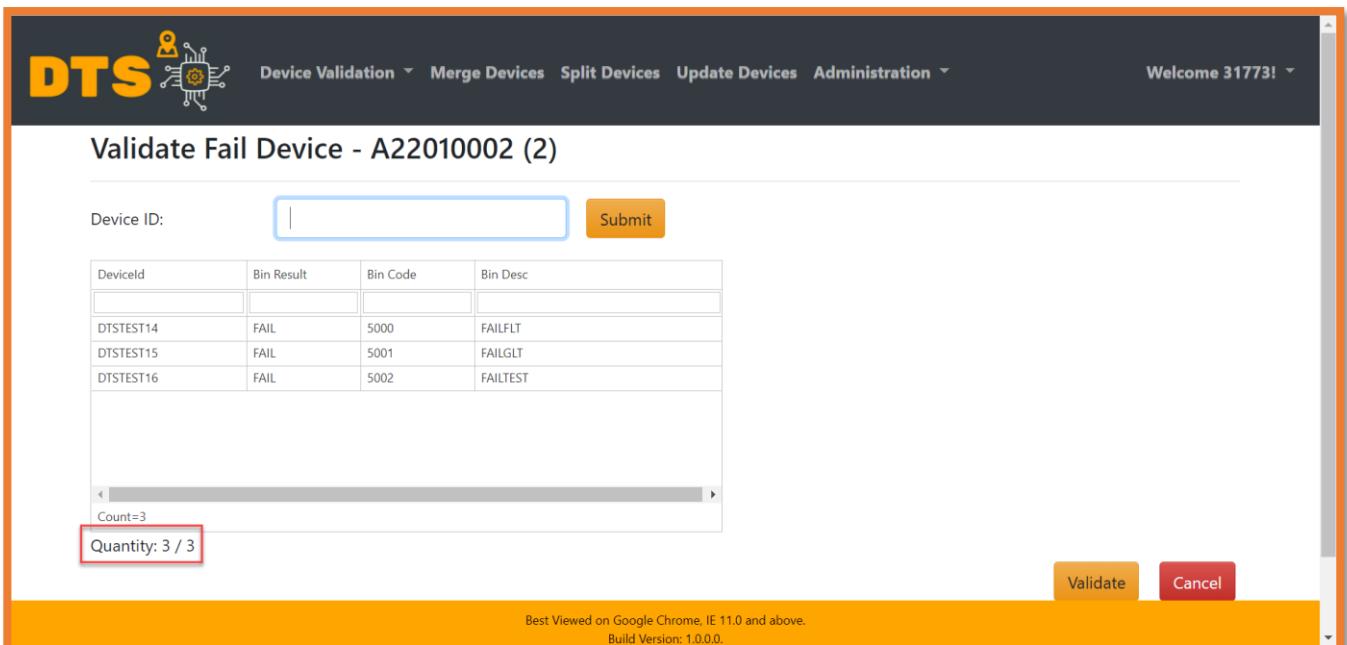


Figure 87

17. Upon user clicked the Validate button, system will prompt a confirmation message. User can click the Confirm button to continue the transaction or Cancel button to return to the scan device interface as shown in Figure 88.

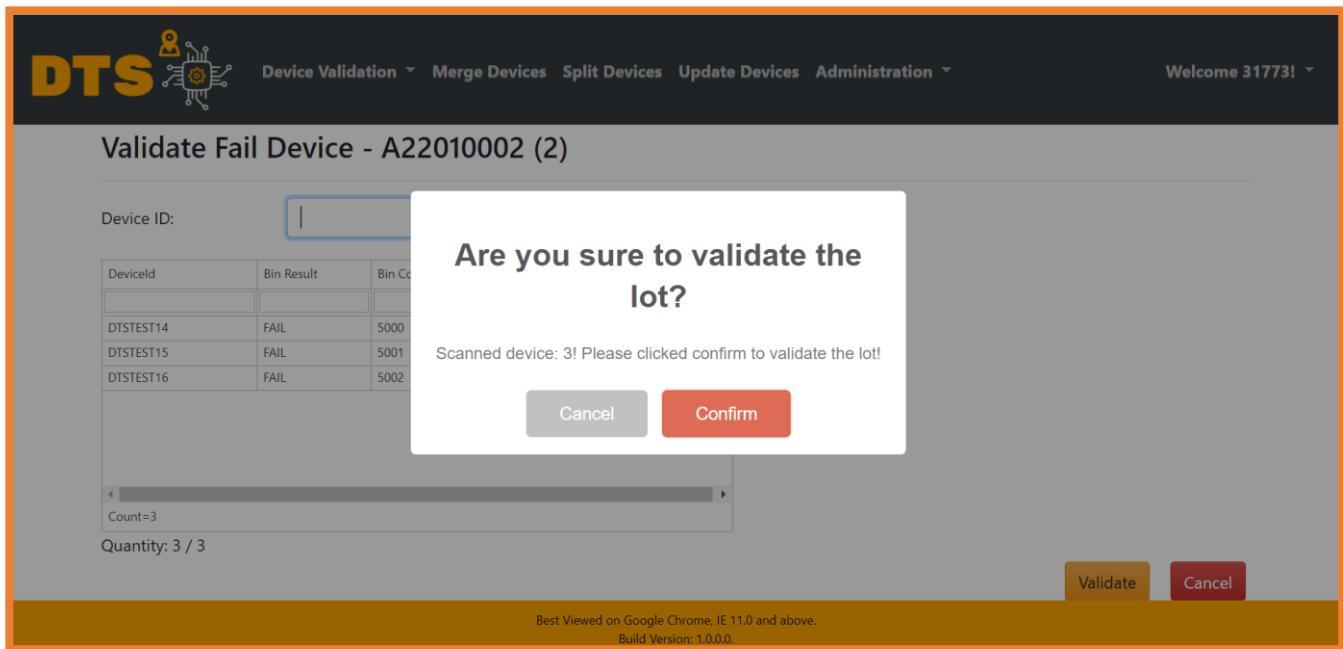


Figure 88

18. After user clicked the Validate button, system will validate the scanned devices list based on the validation conditions stated at Step 11 and set the validation result to MES. If the transaction been executed successful, system will prompt a success message and request user to perform MVOU for the validated lot from MES as shown in Figure 89.

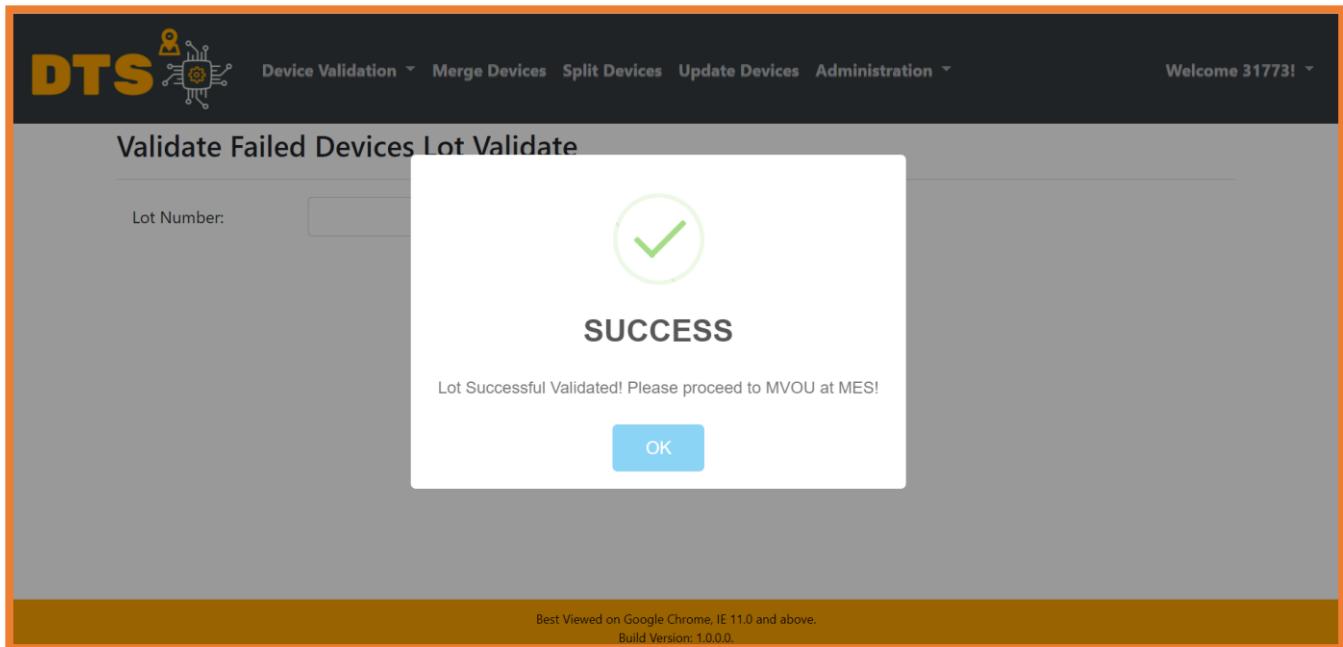


Figure 89

19. If the validation failed, the system will prompt the validation failed reason as shown in Figure 90.

In Figure 90, the validation failed due to the scanned device ID consists of alien device or passed device.

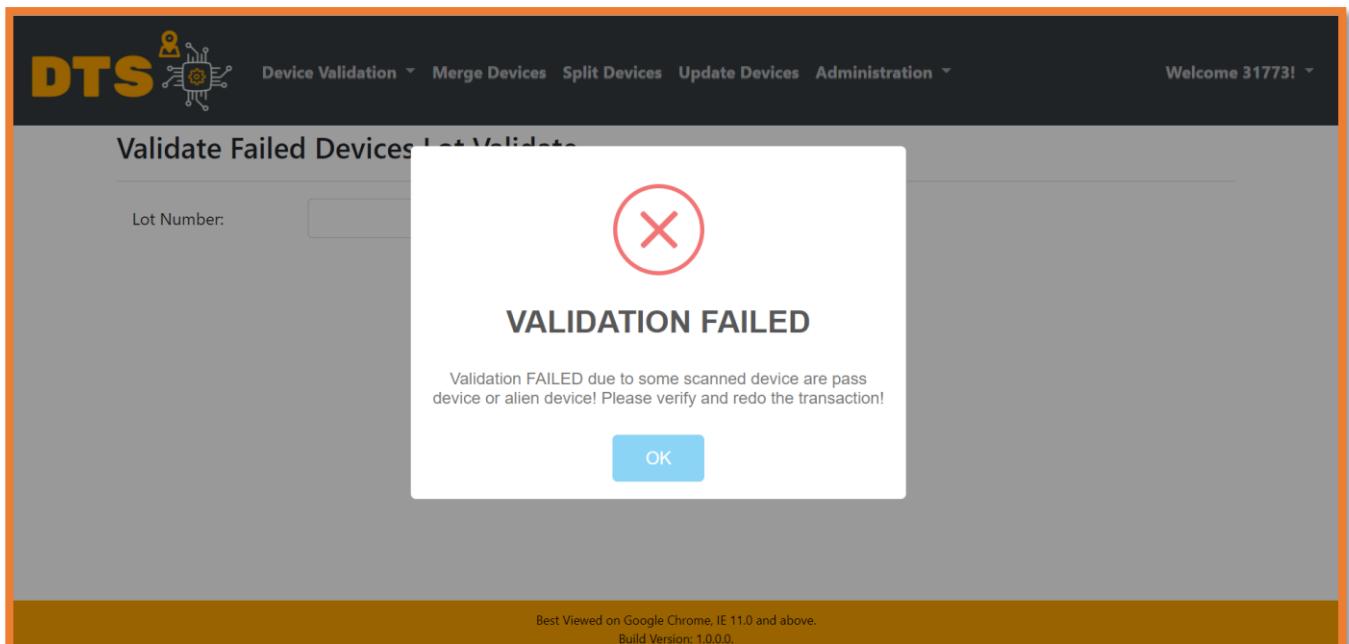


Figure 90

## 5.8 Add User

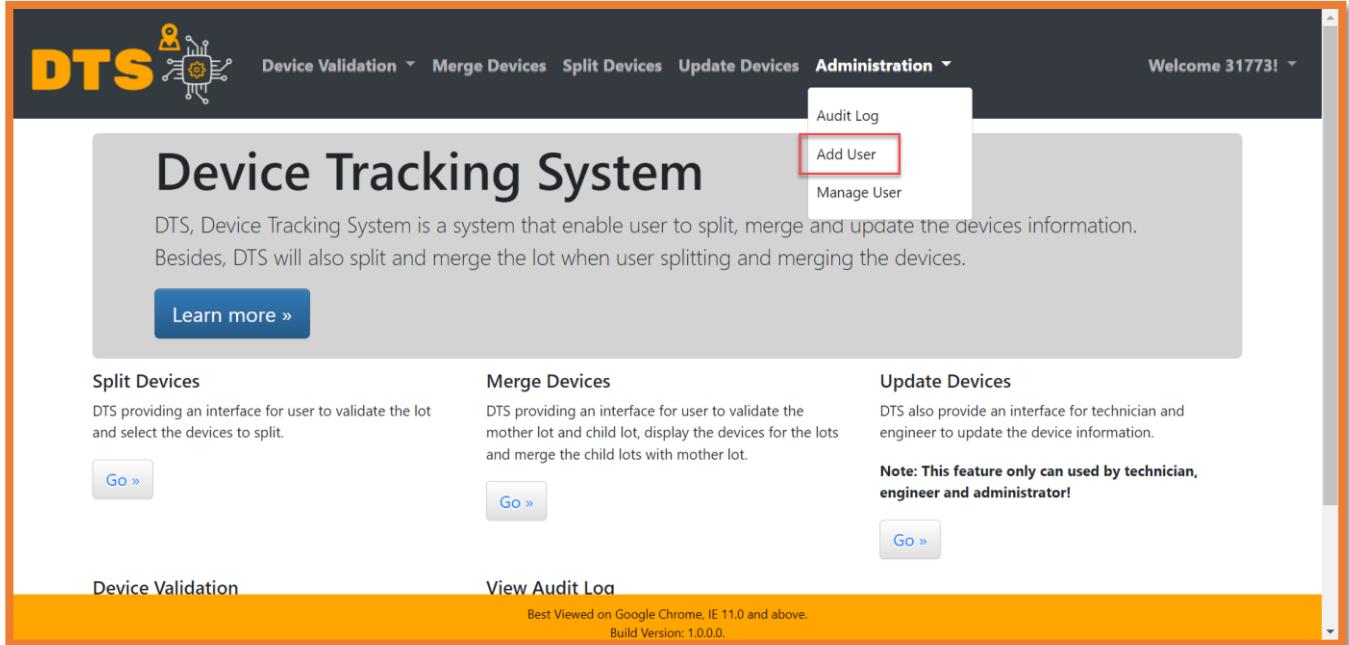


Figure 91

- Administrator can click Add User link under Administration tab to navigate to the Add User feature to add new user.

**Note:** This feature can only be used by Administrator.

- Upon navigate to Add User page successful, a page consists of textbox, Role dropdown list and a Add button will be displayed as shown in Figure 92.

The screenshot shows the 'Add User' page. At the top, there is a navigation bar with links for 'Device Validation', 'Merge Devices', 'Split Devices', 'Update Devices', 'Administration', and a welcome message 'Welcome 31773!'. Below the navigation bar, the main content area has a title 'Add User'. It contains two input fields: 'UserId' (with an empty text input box) and 'Role' (with a dropdown menu set to 'Supervisor'). Below these fields is a blue 'Add' button. At the bottom of the page, there is a note: 'Best Viewed on Google Chrome, IE 11.0 and above. Build Version: 1.0.0.0.'

Figure 92

- Administrator can enter the related user Id in the textbox and select the related role for the user to add to the system user directory.

- Once entered the User Id and selected the related Role for the user, Administrator can click the Add button to add in to the system as shown in Figure 93.

The screenshot shows the DTS software interface with a dark header bar. The header contains the DTS logo, navigation links for 'Device Validation', 'Merge Devices', 'Split Devices', 'Update Devices', and 'Administration', and a welcome message 'Welcome 31773!'. Below the header is a form titled 'Add User'. It has two input fields: 'UserId' with the value '1000' and 'Role' set to 'Supervisor'. A large orange 'Add' button is positioned below the inputs. At the bottom of the page, there is a note: 'Best Viewed on Google Chrome, IE 11.0 and above.' and 'Build Version: 1.0.0.0.'

Figure 93

- Upon the system added the user successful, a success message will be display as shown in Figure 94.

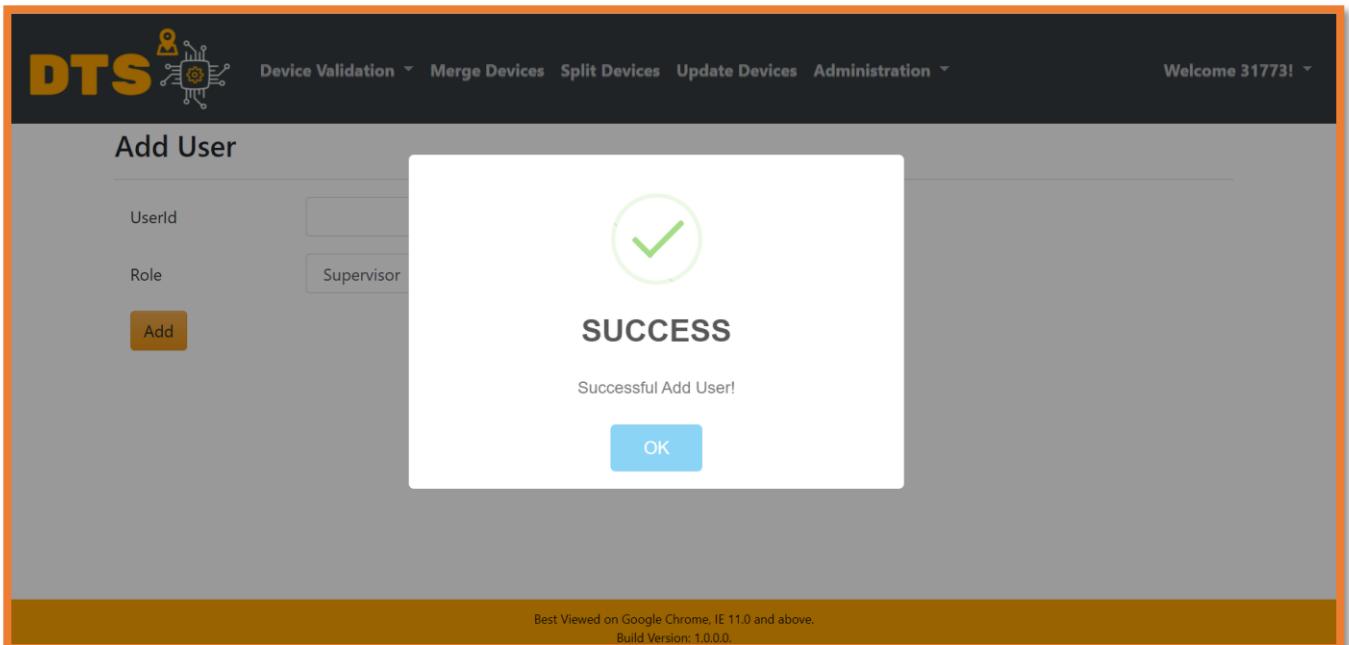


Figure 94

- The system will show error message if occur any error as shown in Figure 95.  
In Figure 95, the system failed to add user due to the user already existed in the directory.

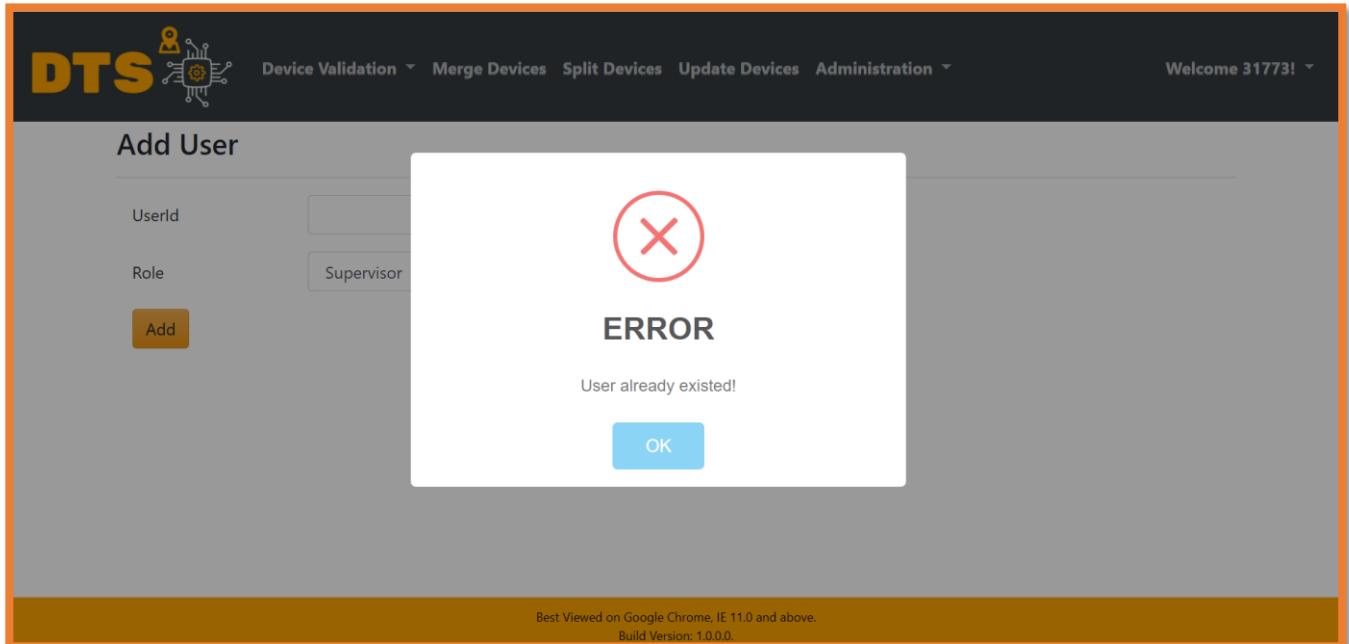


Figure 95

## 5.9 Manage User

The screenshot shows the DTS web application. At the top, there's a navigation bar with the DTS logo, 'Device Validation', 'Merge Devices', 'Split Devices', 'Update Devices', 'Administration' (with a dropdown arrow), and a welcome message 'Welcome 31773!'. The 'Administration' dropdown is open, showing options: 'Audit Log', 'Add User', and 'Manage User', with 'Manage User' highlighted by a red box. Below the navigation is a main content area with a heading 'Device Tracking System' and a brief description: 'DTS, Device Tracking System is a system that enable user to split, merge and update the devices information. Besides, DTS will also split and merge the lot when user splitting and merging the devices.' There are three main sections: 'Split Devices' (with a 'Go >' button), 'Merge Devices' (with a 'Go >' button), and 'Update Devices' (with a 'Go >' button). At the bottom, there's a 'Device Validation' section and a 'View Audit Log' section, both with notes about browser compatibility and build version. A note at the bottom right states: 'Note: This feature only can used by technician, engineer and administrator!'

Figure 96

- Administrator can click the Manage User link under Administration tab to navigate to Manage User feature.

**Note:** This feature can only be used by Administrator.

2. Upon navigate to the manage user successful, a page that consists of a page title, a grid view table and a Delete button will be display as shown in Figure 97.

**Note:** All the active user will be display in the grid view table upon navigate successful to the manage user page.

<input type="checkbox"/>	User ID	Role
<input type="checkbox"/>		
<input type="checkbox"/>	31773	Admin
<input type="checkbox"/>	49444	Engineer
<input type="checkbox"/>	33773	Technician
<input type="checkbox"/>	32773	Operator
<input type="checkbox"/>	1000	Engineer

Count=5

Save changes Cancel changes

Delete User

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 97

3. Administrator can modify the user role by selecting the related role in the dropdown, the system will show the modified cell as yellow. Administrator can click Save changes link at the bottom of the grid view table to update the record or click Cancel changes to cancel the role that been modified as shown in Figure 98.

<input type="checkbox"/>	User ID	Role
<input type="checkbox"/>		
<input type="checkbox"/>	31773	Admin
<input type="checkbox"/>	49444	Supervisor
<input type="checkbox"/>	33773	Technician
<input type="checkbox"/>	32773	Operator
<input type="checkbox"/>	1000	Engineer

Count=5

Save changes Cancel changes

Delete User

Best Viewed on Google Chrome, IE 11.0 and above.  
Build Version: 1.0.0.0.

Figure 98

4. Upon update successful, system will display a success message and display the new records as shown in Figure 99.

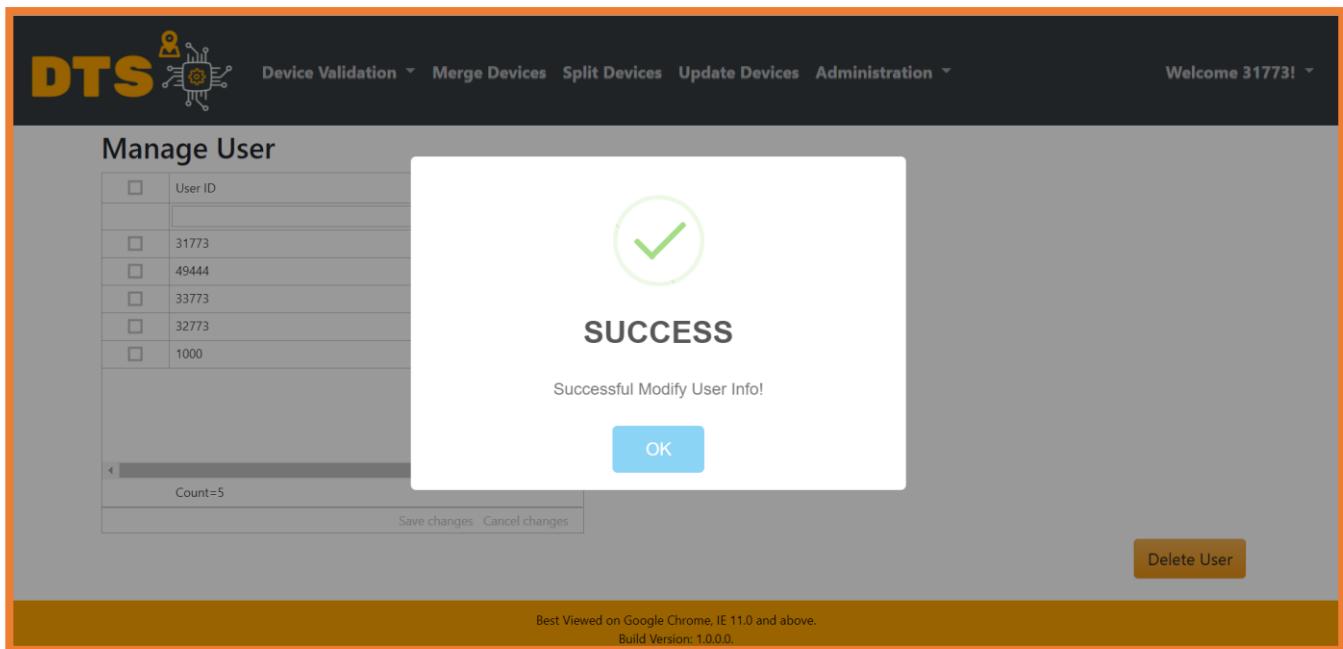


Figure 99

5. Administrator can select the user by ticking the checkbox on the left of the grid view table and click Delete User button to delete the user from the system directory as shown in Figure 100.

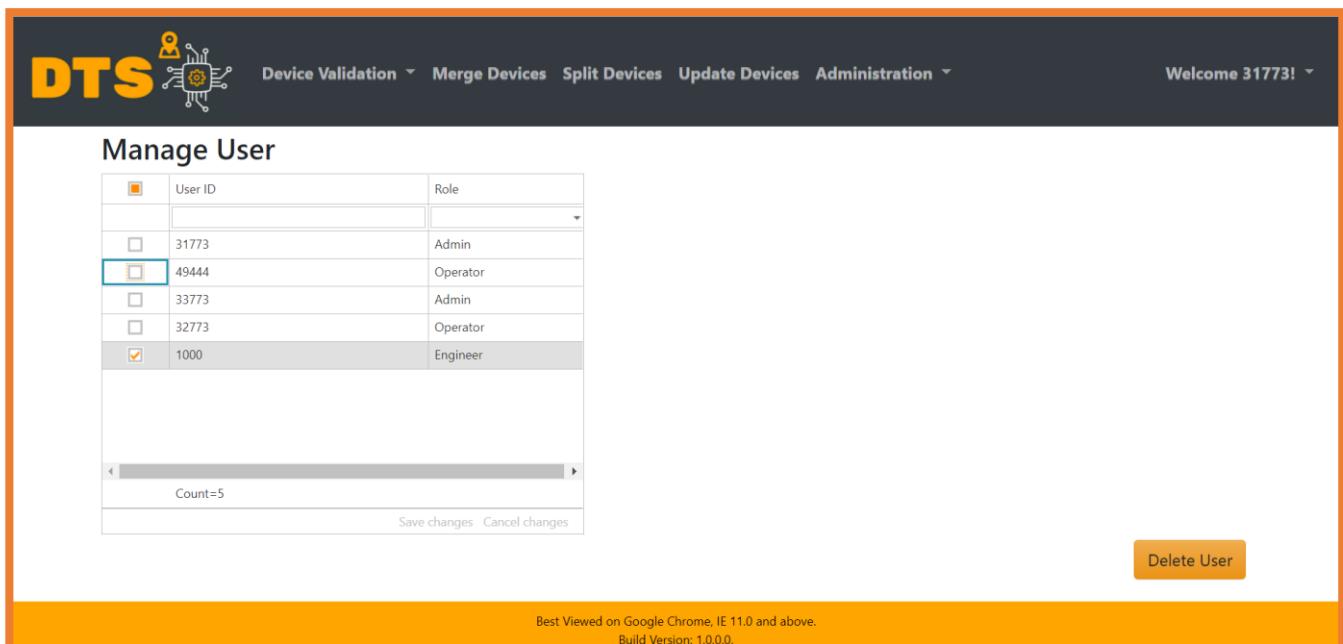


Figure 100

6. The system will display a confirmation message box after clicked the Delete User button as shown in Figure 101.

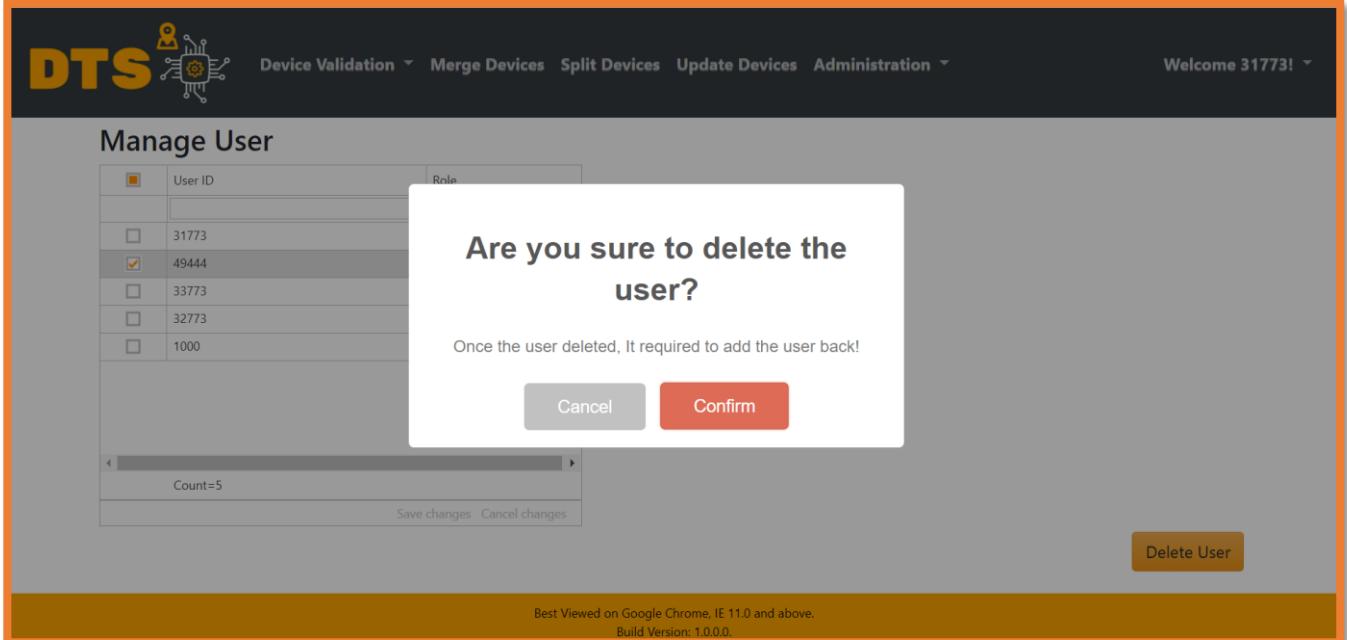


Figure 101

7. Upon delete successful, system will display a success message as shown in Figure 102.

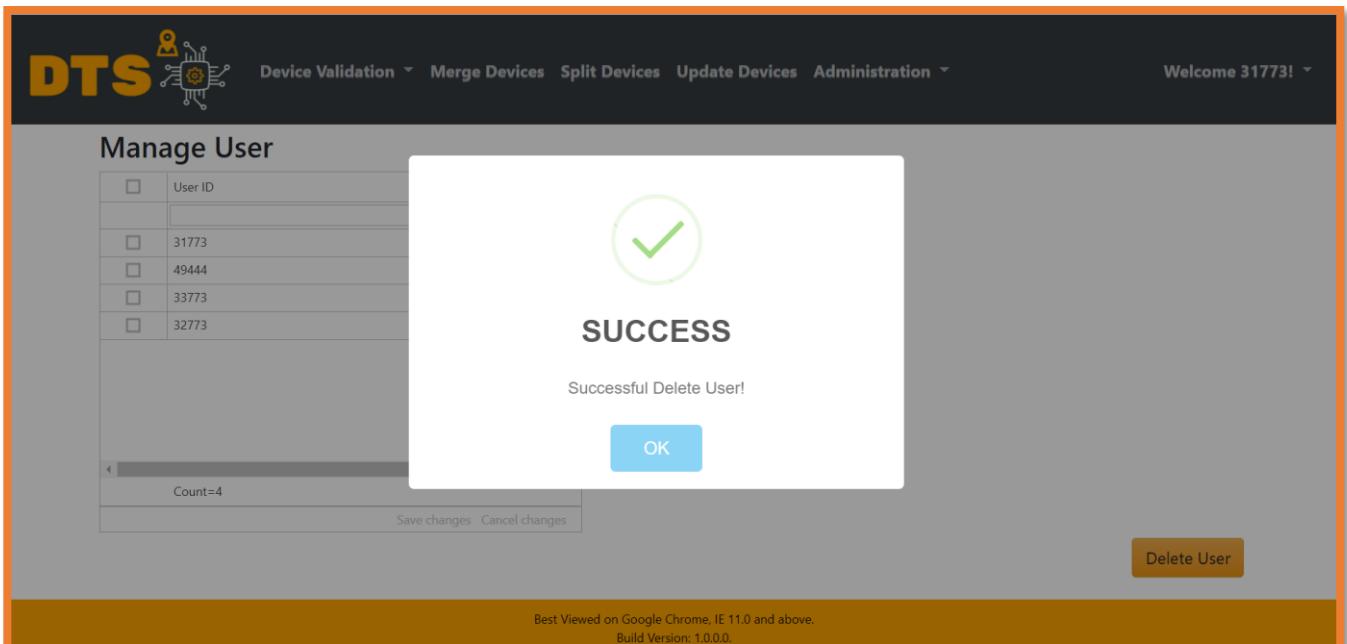


Figure 102

8. The system will prompt error message if the administrator clicked the Delete User button without select any user to delete as shown as Figure 103.

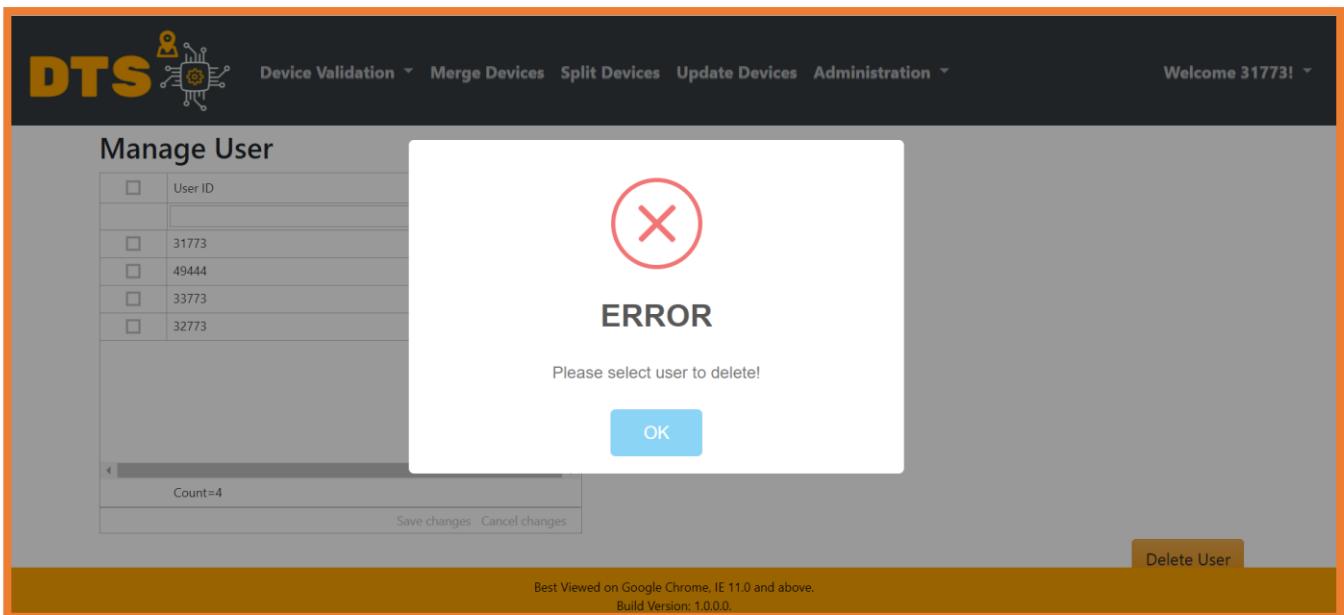


Figure 103

## Document History

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Version	Date	Short description of change	Process Owner/Expert
1.00	2022-01-09	New	Chang, Aik Hoe (Jackson)
1.10	2022-03-08	Add in new features Add User and Manage User guidance's	Chang, Aik Hoe (Jackson)

## References

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Appendices to the document (A), references to other documents (R)

No. (A/R)	Document Title	Source / Storage location

## Trusted Reviewers

---

### Name

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Dagdasas, Roselle Anicia Erestain