IMPS CERTIFICATIONS ZONE USER MANUAL FOR BANKS V 1.1
(NPCI/CERT/IMPS-008)

Document History

Version	Date (DD/MM/YY)	Author	Reviewed by	Approved by	Revision History
1.0	15/11/2019	Arpita/ Ayyappa	Appala Reddy	Giridhar	Draft
1.1	09/04/2021	Ayyappa	Appala Reddy	Giridhar	Updated

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1. Introduction

   This document describes the features and functionalities of the certifications zone tool for IMPS Product. IMPS certifications zone is a simulating tool that facilitates testers to self-execute the test transactions corresponding to the test cases that make part of the IMPS certification program. This certifications zone helps member banks to develop switch applications in accordance to IMPS latest specification 3.4.1.1.

The basic idea behind this certifications zone is to provide banks a direct web based access, a mechanism to simulate transactions both comfort and UAT round of testing without the involvement of NPCI team.

2. Architecture

2.1 Architecture

   For the bank pursuing remitter certification, the IMPS certifications zone will act both as NPCI network and beneficiary. Similarly the IMPS certifications zone will act both as NPCI network and remitter for the bank pursuing beneficiary certification for its EFT switch.
During configuration phase, these simulation modules are activated and linked to a certification slot which represents a particular certification.
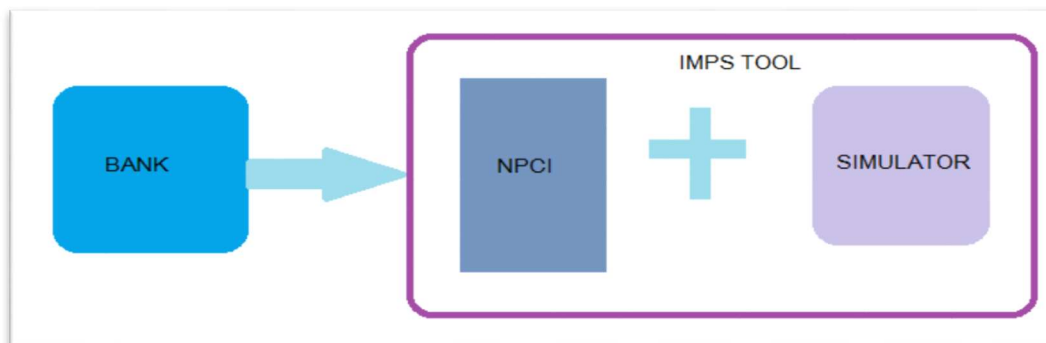
2.2 Salient Features

- ✓ Self-execution of test cases by member banks with minimum support from NPCI for comfort and UAT rounds of certification
- ✓ Banks can perform both Remitter and Beneficiary cases.
- ✓ Certifications zone is available round the clock for certification i.e., 24*7*365 days
- ✓ It ensures effective transaction validation and explicit messaging for each type of error.
- ✓ Dashboard to view the status of daily status
- ✓ Safe & Secure as it is using SSL validation via HTTPS protocol TLS 1.2 and it is hosted on NPCI Net
- ✓ Supports simultaneous certifications for different sub-products (P2P, P2A & FIR) and channels like Mobile, Internet, ATM, Branch, and SMS.
- ✓ Access to the system based on unique login credential.
- ✓ Option to view the transaction logs from the UI, enabling versatile searching options
- ✓ Explicit messaging and guidance during transaction validation.

✓ Option available to download Review report and UAT script.
✓ Downloadable option for raw files and NTSL file for reconciliation

2.3 Connection to IMPS certifications zone

The architecture of IMPS Certifications zone necessities the following two type of connections for the bank to establish.

2.3.1 Scopes and Channels available in Certifications Zone

➢ P2A – (MOB/ INET/ BRC/ ATM)
➢ P2P – (MOB/ INET/ BRC/ ATM)
➢ FIR– (P2P & P2A)

2.3.1.1 Bank's switch connection to IMPS certifications zone

In order to certify its host switch, a bank needs to establish a connection between its EFT switch and IMPS certifications zone.

During configuration phase and prior to the start of the certification, the NPCI team will share a port number and the natted IP of the IMPS certifications zone with banks.

Ex: Source IP (**192.168.xx.xx / 10.1.xx.xx**), Destination IP (**192.168.xx.xx**) and port **xxxx**

The banks in return need to share the natted IP of the EFT switch with NPCI team. The natted IP provided by the bank will be configured in NPCI network and in IMPS certifications zone.

The below figure shows that a bank's EFT switch is connected to the switch interface of the IMPS certifications zone for the exchange of the ISO messages.

Note: *The connection will be allowed only with the natted IP shared by the bank specifically for the IMPS certifications zone.*

Figure 1: Connectivity

2.3.2 Web connectivity for accessing IMPS certifications zone

The bank user needs to access IMPS Certifications zone over the web in order to perform testing. This type of connection is specific to the IMPS Certifications zone architecture, and is essential for accessing the IMPS Certifications zone as a simulating tool over the web.

The IMPS certification zone allows user to access over a completely secure medium by using HTTPS TLS 1.2 protocol. HTTPS URLs begin with "https://" and use **port xxx** by default with destination **IP 192.168.xx.xx**.

All the data, travel via an SSL encrypted medium with SSL certificate being issued by established and recognized Internet Certification Authority.

URL: **https://certificationszone.npci.org.in/IMPS/login**

3. Browser compatibility

IMPS Certifications zone is compatible with the following browsers:

> Microsoft edge:- Version 44 or above on Windows Platform

> Mozilla Firefox:- Version 70 or above on Windows Platform

> Google Chrome:- Version 70 or above on Windows Platform

Note:
- It is recommended to use Google chrome version 70 or above on windows platform and using internet explorer may not yield good results.

- All the above mentioned browsers have been tested on windows and Linux platforms.

4. Accessing IMPS certifications zone

4.1 Pre-requisites

Member bank can opt for Certification testing (Comfort round/UAT round) or support testing, accordingly testing slot will be provided by NPCI. The bank pursuing certification/support need to share the following details in UT (Universal Template) prior to commencement of the testing:

S.NO	Details to be Provided	New Bank	Existing bank
1	Name of Bank	✓	✓
2	Bank code	NPCI	✓
3	Acquirer ID	NPCI	✓
4	NBIN	NPCI	✓
5	Bank source IP	NPCI	✓
6	Port	NPCI	NPCI
7	Account number	✓	✓
8	IFSC Code	✓	✓
9	Mobile number(P2P)	✓	✓
10	Amount limit	✓	✓
11	Email ID	✓	✓
12	Scope of certification	✓	✓

✓ User credential and password will be provided by NPCI

4.2 URL

The intended users from NPCI's member banks need to access the below URL:

https://certificationszone.npci.org.in/IMPS/login

Note: if the bank is not able to access URL, bank has to add the domain name i.e., certificationszone.npci.org.in in default proxy settings of the browser.

4.3 Turnaround Time (TAT)

Bank has to complete all stages of certification within TAT, defined by NPCI and the TAT for test case execution is given in below table for both Comfort and UAT rounds. Given test slot for current scope of testing will be expired once the TAT has exceeded by the bank, then again bank has to request NPCI certification team for extension of test slot if required with proper justification for exceeding TAT.

Activity/Round of testing	Comfort-TAT (in Days)	UAT-TAT (in Days)
Execution of test cases	15	2

5. Login Page

- After successful onboarding of member bank, NPCI (Admin) will create a bank user and will share the login credentials (User Name and Password) with bank, prior to the start of testing.
- The user should correctly enter the 'User Name' Followed by correct 'Password' shared by NPCI earlier.
- Enter valid captcha displayed on screen and finally click on the login button. A successful Login will redirect the user to the HOME page.
- 'Password' is case sensitive
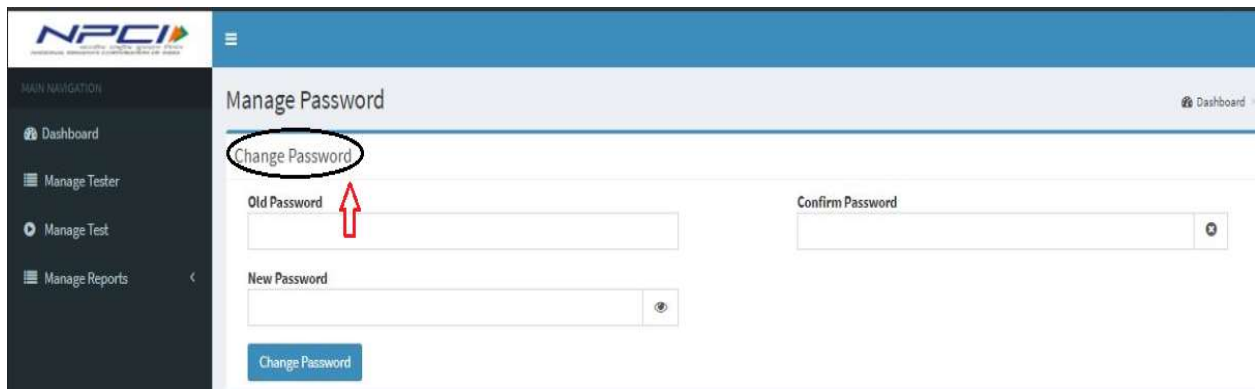
Elements of login page

The login page of IMPS certifications zone will have following highlights:
1. NPCI logo and Tab name as – '**login**'

2. HTTPS protocol and Padlock: The address uses 'https' which means that communication is encrypted and secured using SSL.

3. Text boxes for Login credentials and NPCI logo

4. Text Captcha

6. Home Page

After successful validation of the Login credentials, the system navigates the user to the 'Home' page. Immediately after first login bank will be forced to change the login password received from NPCI and the password should consists of at least one capital letter and one number and minimum 8 characters in length.

Note: Bank will not get any mail notification for password change and please be noted that mail ID in username extensively for login purpose, no alerts will be sent to that mail.

Home page displays the following tabs for the Bank User and the following options are available.

- Dashboard
- Manage Tester
- Manage Test
- Manage Reports
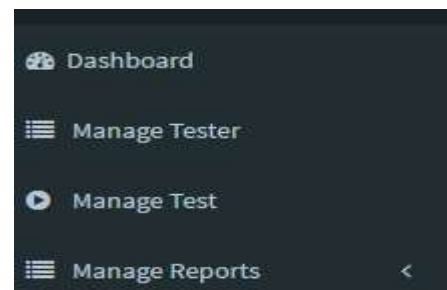
6.1 Dashboard

This Field consists of bank information like Name, Bank source IP, NBIN, Port etc and transaction count, with which bank tester is able to know the basic information about

bank, testing status, downloadable latest IMPS specification, reference test case sheets and Notifications sent by NPCI and Hamburger icon to toggle the main menu is available
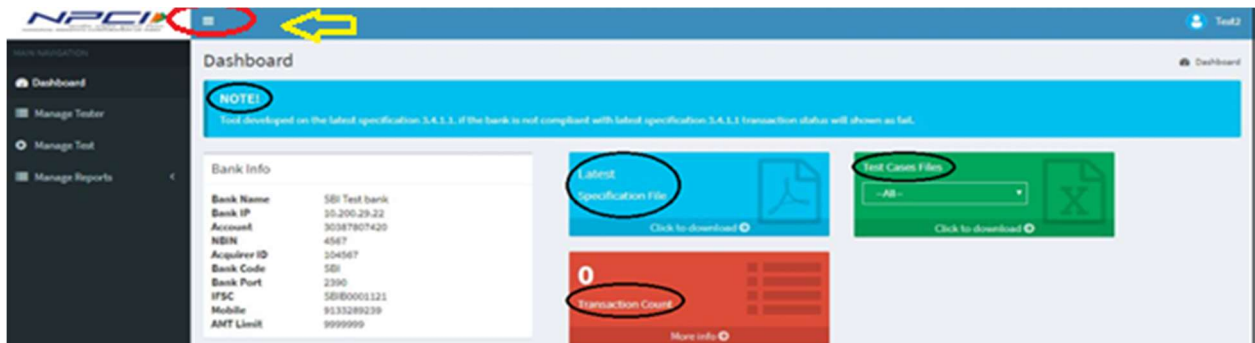
Note: *Bank has to check the Dashboard for all notifications by **NPCI** to pre-inform banks about scheduled maintenance down time. After scheduled activity bank has to start the node.*

6.2 Manage Tester

This field consists of bank testers list, as of now bank is provided with only one user login for one test slot
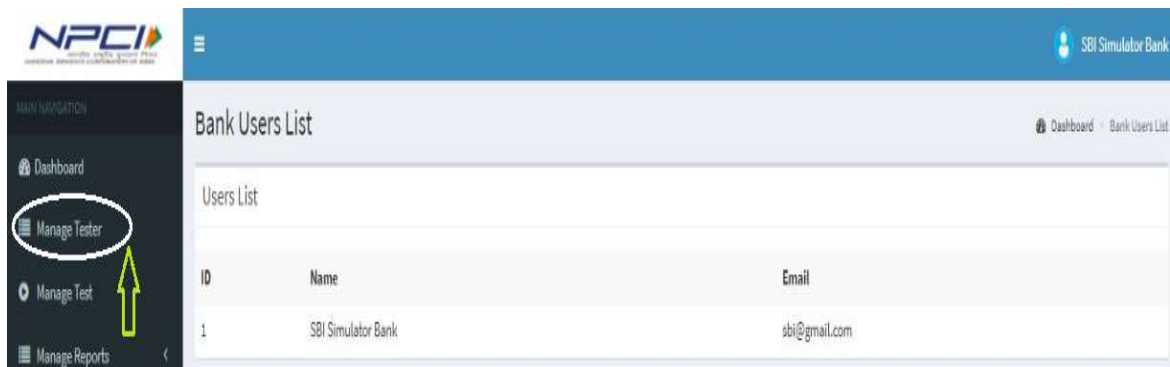
6.3 Manage Test

This field consists of bank test slot, as shown below bank can execute and see the transaction logs. If bank wants to request any waiver then select that particular case in the waiver shown in the below screen shot

Banks→CERT Slots → Group → Test, Log and waiver

6.4 Manage Reports

In manage reports tab bank will be allowed to download various reports. In comfort round of testing bank will be provided with review report only but in UAT Round, there are 3 different reports available for bank to download i.e., Review report, Settlement report, UAT script . Detailed explanation for reports was given in further sections.

6.5 Logout

The user can exit from current session using the '**Sign out**' button on the top right hand corner near '**User Profile**'.

Note: Multiple sessions were not allowed with the same user credentials, i.e., only one user is allowed to access the certifications zone with the credentials provided by NPCI

7. Using IMPS certifications zone for certification

7.1 Network Cases

Bank acting as Remitter /Beneficiary / Both has to perform the network cases.
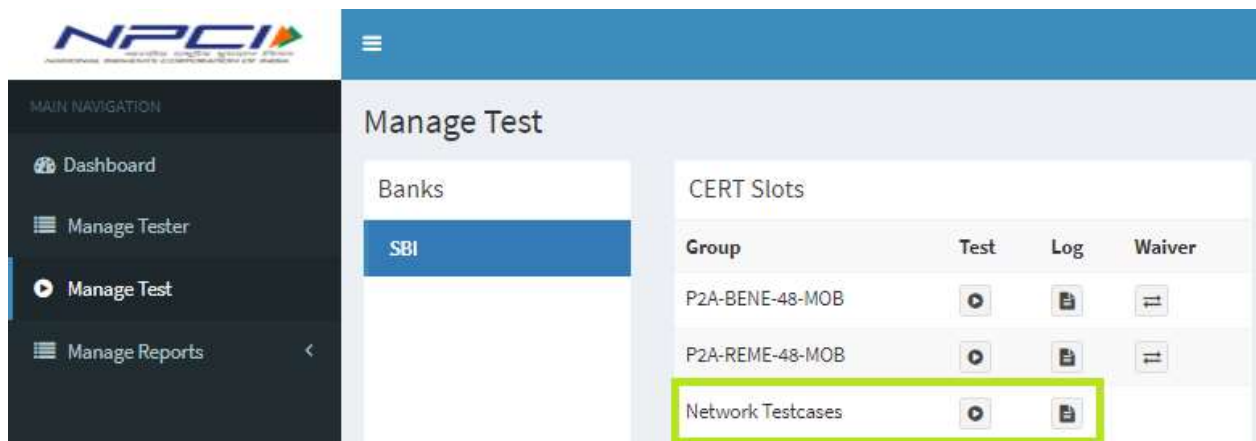
a. To execute network messages to Bank, please click on the **play icon**

b. To view logs, please select **text icon**.

IMPS Network TestCases

Network Test Cases

Name	RefName	Description	CertGroup	RC	Remark		
1.1	011	SIGN ON MESSAGE FROM BANK	REME	00	001	▶	📄
1.2	012	SIGN OFF MESSAGE FROM BANK	REME	00	002	▶	📄
1.3	013	ECHO MESSAGE FROM BANK	REME	00	301	▶	📄
1.4	014	SIGN ON MESSAGE TO BANK	BENE	00	001	▶	📄
1.5	015	SIGN OFF MESSAGE TO BANK	BENE	00	002	▶	📄
1.6	016	ECHO MESSAGE TO BANK	BENE	00	301	▶	📄
1.7	017	CUTOVER MESSAGE TO BANK	BENE	00	201	▶	📄
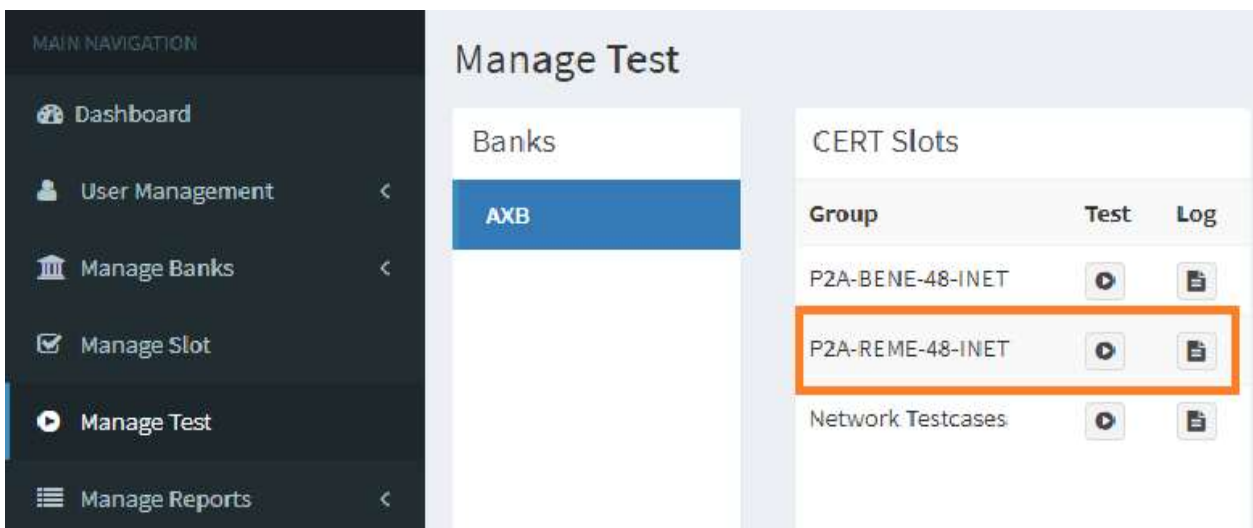
Sample logs as in screenshot→

Status

Id	REQ	RES	Description
0	0800	0810	
7	1115084913	1115084913	
11	809167	809167	
39		00	
70	001	001	

7.2 Remitter Cases

Select Remitter cases from the CERT Slots where Bank is acting as Remitter and Tool as NPCI Switch and Beneficiary.

Select to the 'play' icon to go to test cases.

When clicked on particular slot, the user can see the below screen. Here the user can see slot information in Bank Info button as shown in below screen.
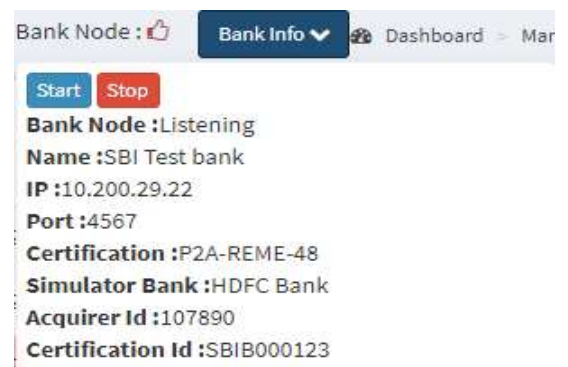
To start the test case, the user has to make the bank node up. By default the bank node will be down as shown in above screen with down thumb impression. To set the node up go to the Bank info button and click start button as shown in above screen.
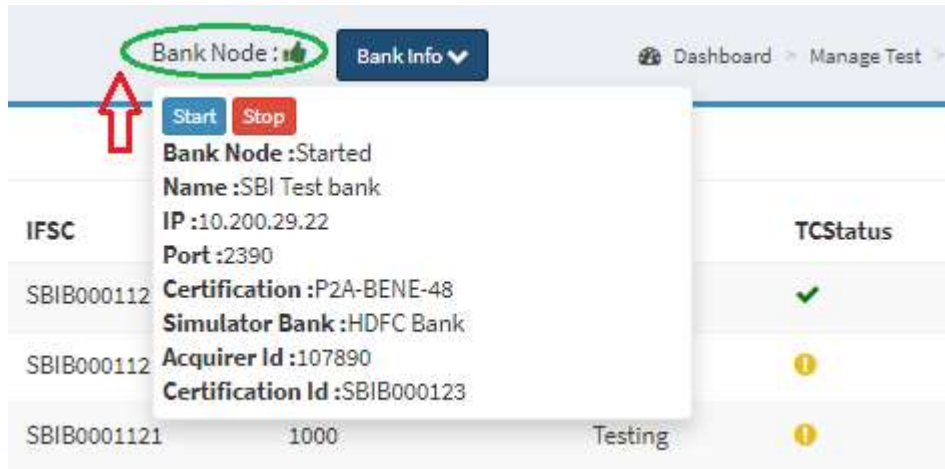
The screen shows the bank node is Listening →

Once the node made listen, then bank has to do telnet from their source server and has to send sign on then node will be up and bank can commence testing

The user can start testing test cases by selecting test button against each test case. Before commencement of testing, the user need to configure the given MMID (P2P), Account no. , IFSC (P2A) in Request Message for Beneficiary.

As Bank is remitter it should send request to the Tool whereas tool will provide response for the same.
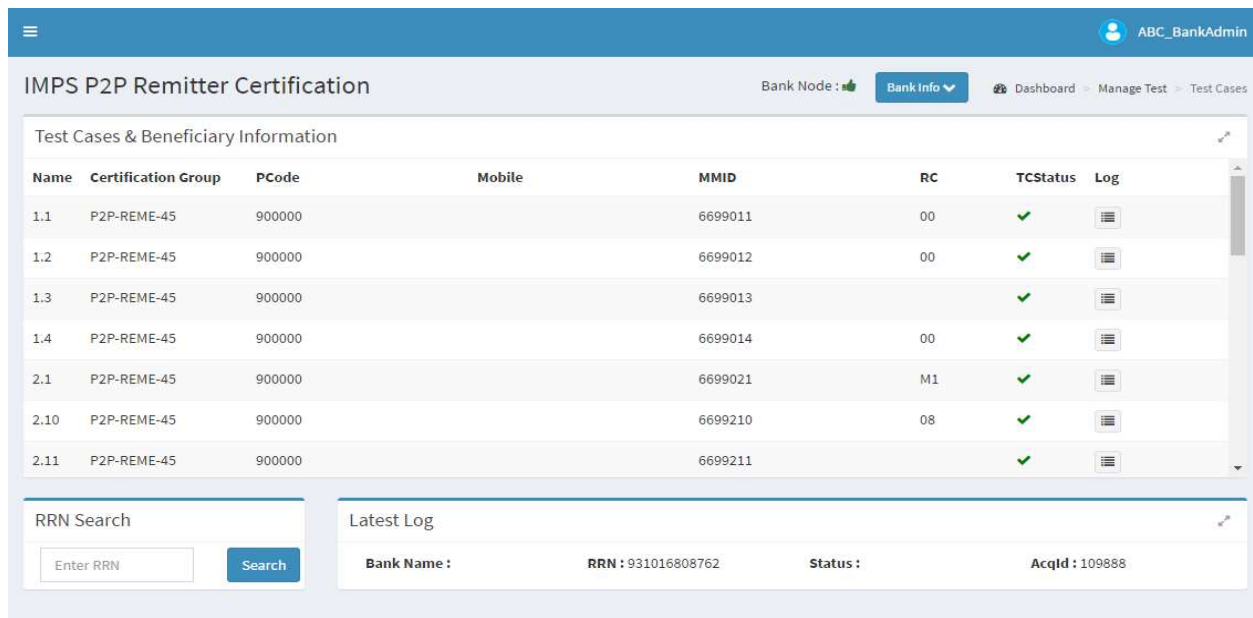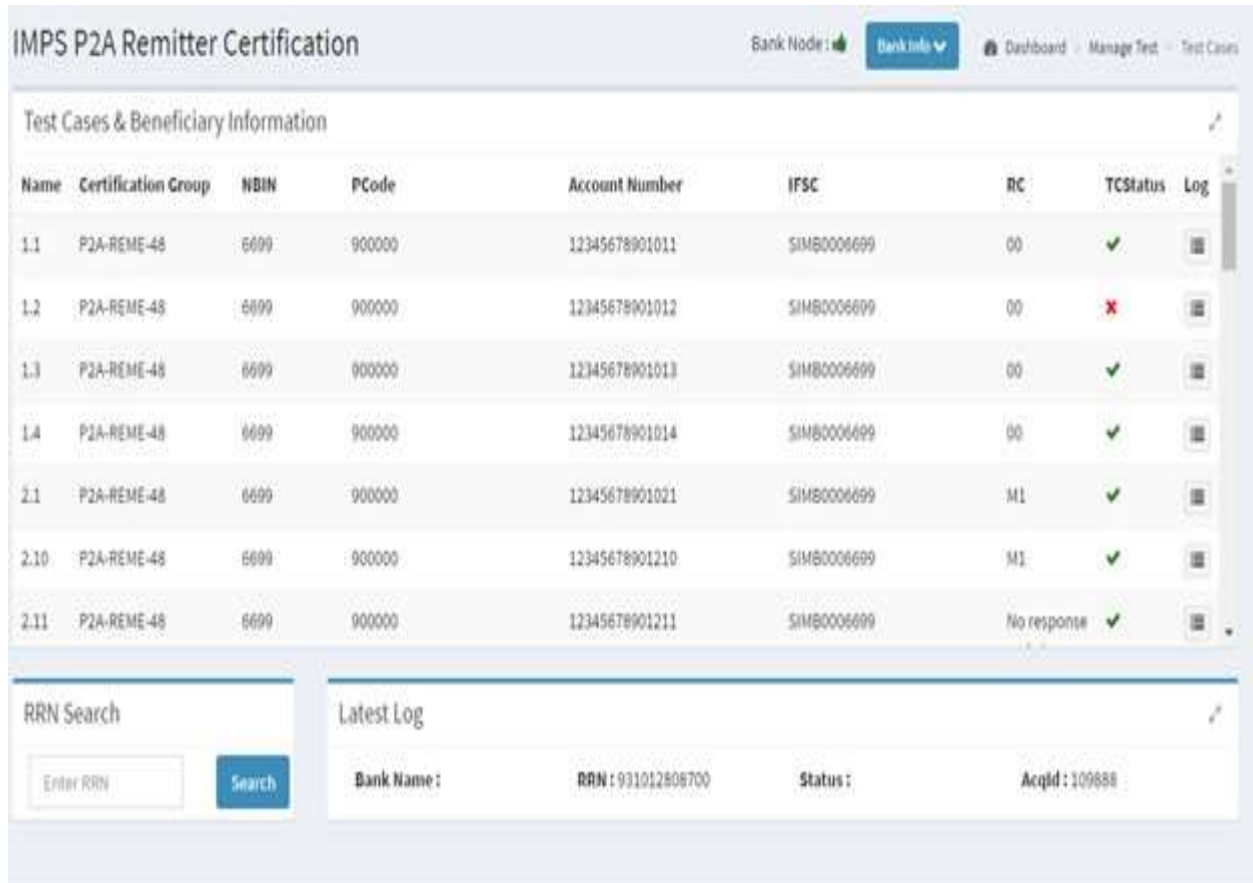
Note:

a. For P2P request, configure DE-120 tag 049 as the last 3 digits of the given MMID.

b. Beneficiary NBIN: as 1st 4 digit of MMID

Example: for

TC 1.1 → DE-120 tag 049 should be 011 & DE-2: NBIN should be 6699 (MMID: 6699011)

TC 1.2→ DE-120 tag 049 should be 012(MMID: 6699012)

Note: For P2A request use the NBIN, Account No. and IFSC given in tool for DE-120 tag 62 and 59 respectively. Also same account no. should be in the DE-2 last 10 digits.

Once the test case is completed, the status will be changed.

The user can also see the log for that test case after testing is completed by using log button ≡

After clicking the log button, bank can see the status of the transaction whether pass or fail. If fail, the reason for fail will be shown elaborately, so that bank can do development changes if necessary to modify that error and to fire the same test case again.

Sample view as below.

The user can also search transaction using RRN. The user can see the last transaction log under latest log.

The status icons i.e., tick, cross, and exclamation across the test case implies that the transaction is executed successfully (as expected), error (not as expected) and yet to execute.

Below screen shows the failure request, response and status.
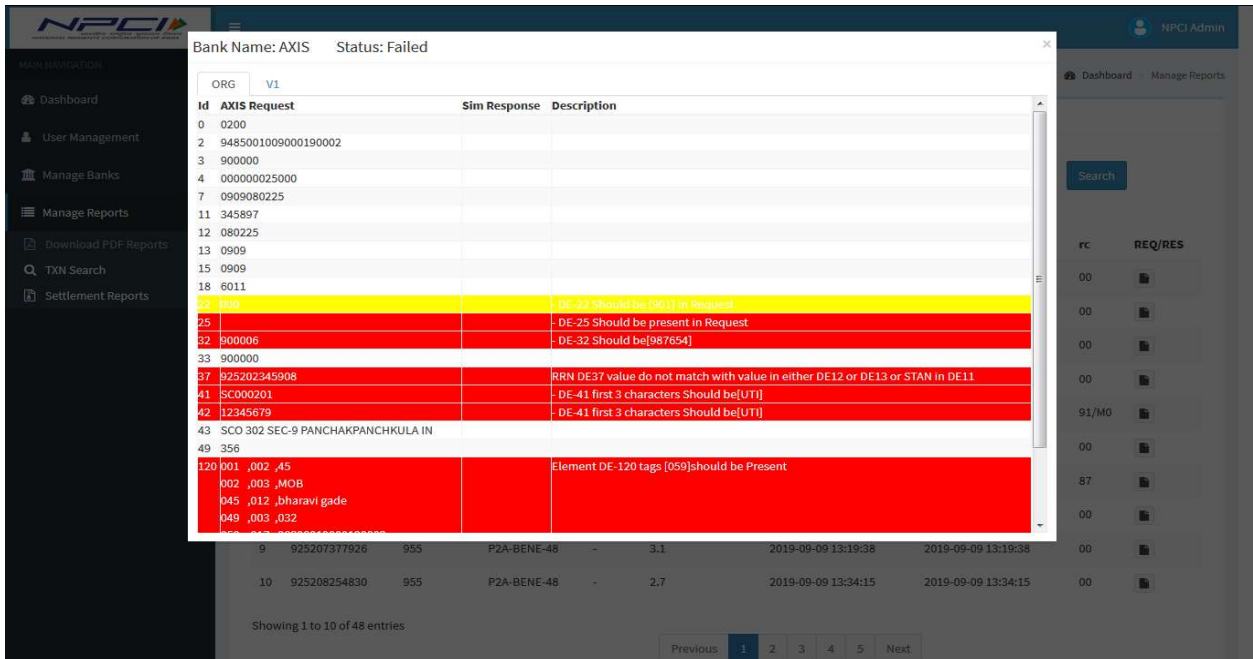
7.3 Beneficiary Cases

Select Beneficiary cases from the CERT Slots where Bank is acting as Beneficiary and Tool as NPCI Switch and Remitter.

User need to execute the request message from tool and give response for the same according to the test cases.
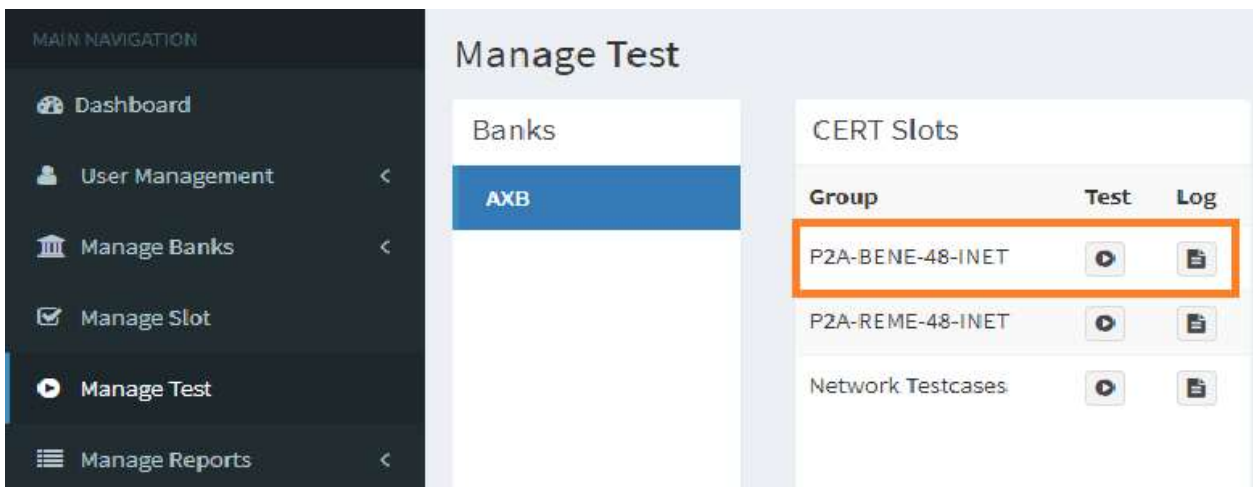
Select play icon to go to the test cases

After clicking on play button, the below screen will appear with test cases to be executed as per scope of testing
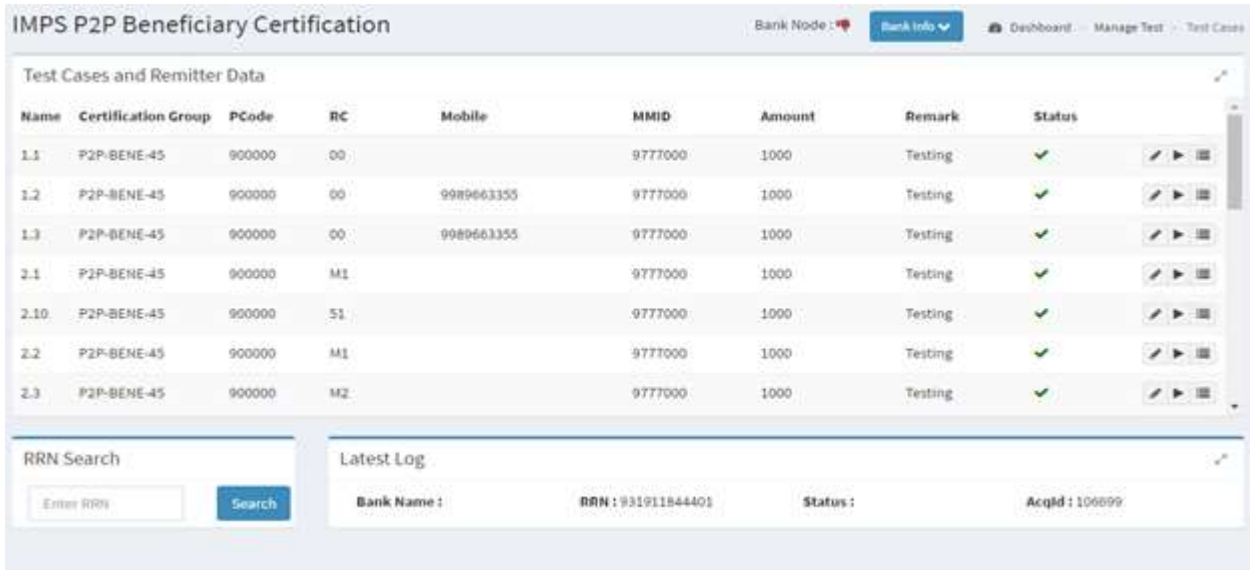
Note: For P2P:

Before executing the test case, user need to populate Mobile no., MMID, Amount and Remarks for testing. To do the same, select edit icon and populate Beneficiary details in the respective editable columns.
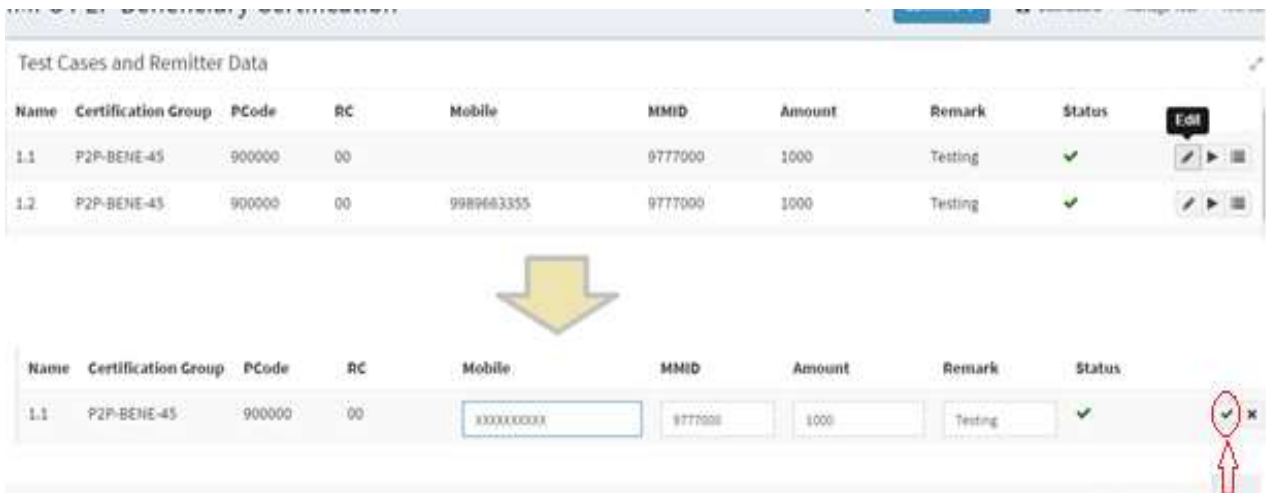
Select on submit button (tick) to reflect the details given.

Similarly for P2A testing, before executing the case user need to populate Account number, IFSC code, Amount and Remarks for testing. To do the same select edit icon and populate beneficiary details in the respective editable column.
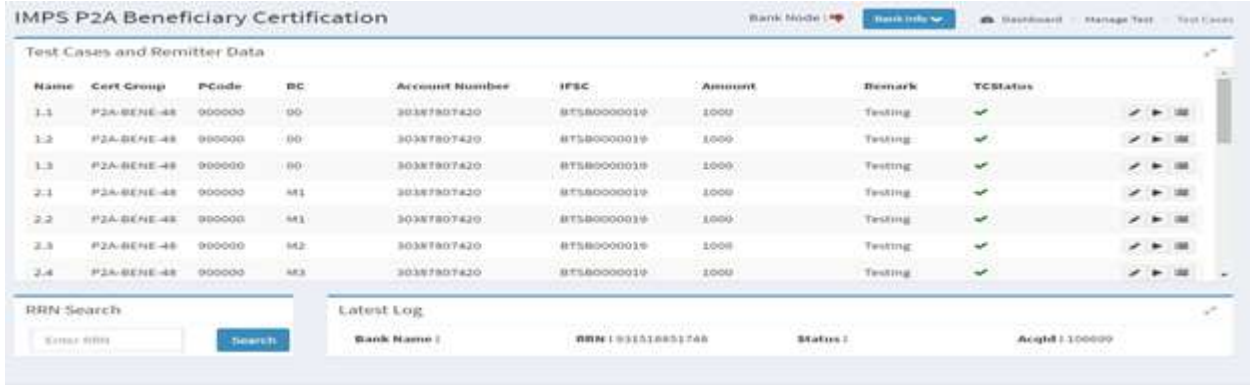
Before executing the case user need to populate Account no. , IFSC, Amount, Remarks for testing. To do the same select edit icon and populate beneficiary details in the respective editable column.
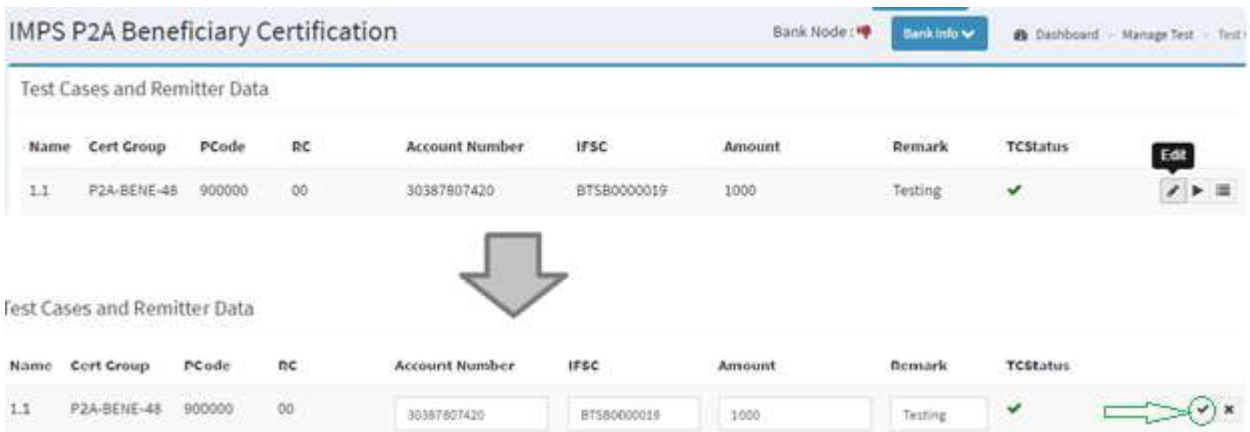
Select on submit button (tick) to reflect the details given.

The user can start test case using test button provided against each test case.
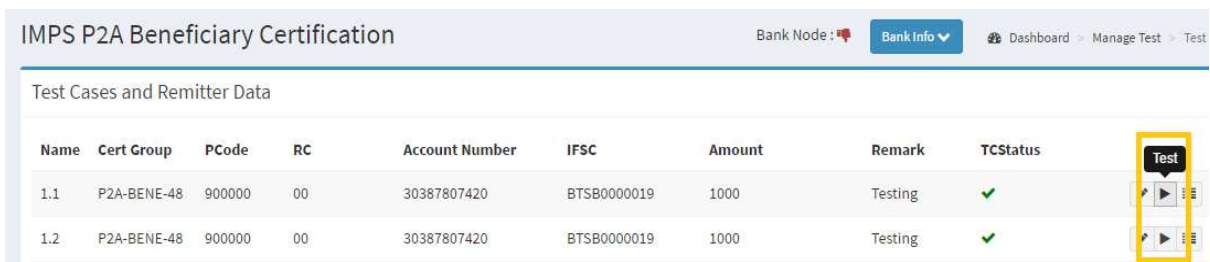
Below screen shows when user clicks the test button.
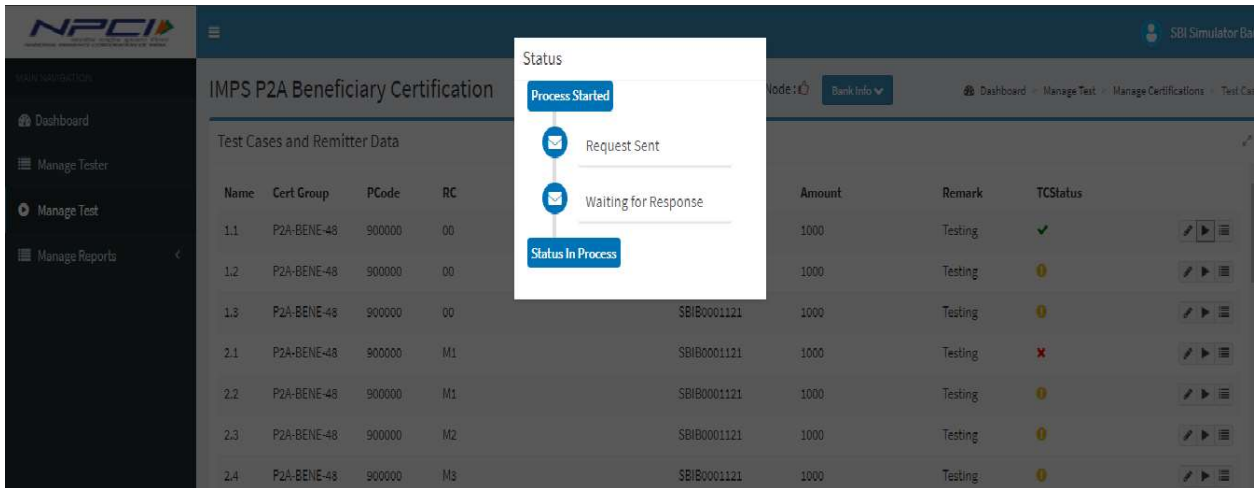
The user can see the status after getting response as shown below.
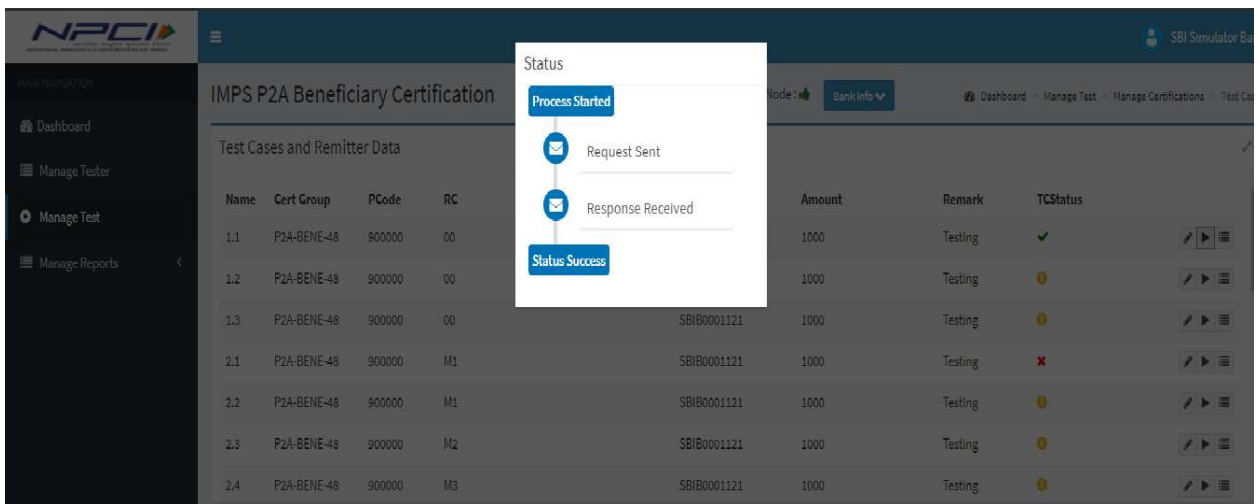
Once the test case is completed, the status will be changed.
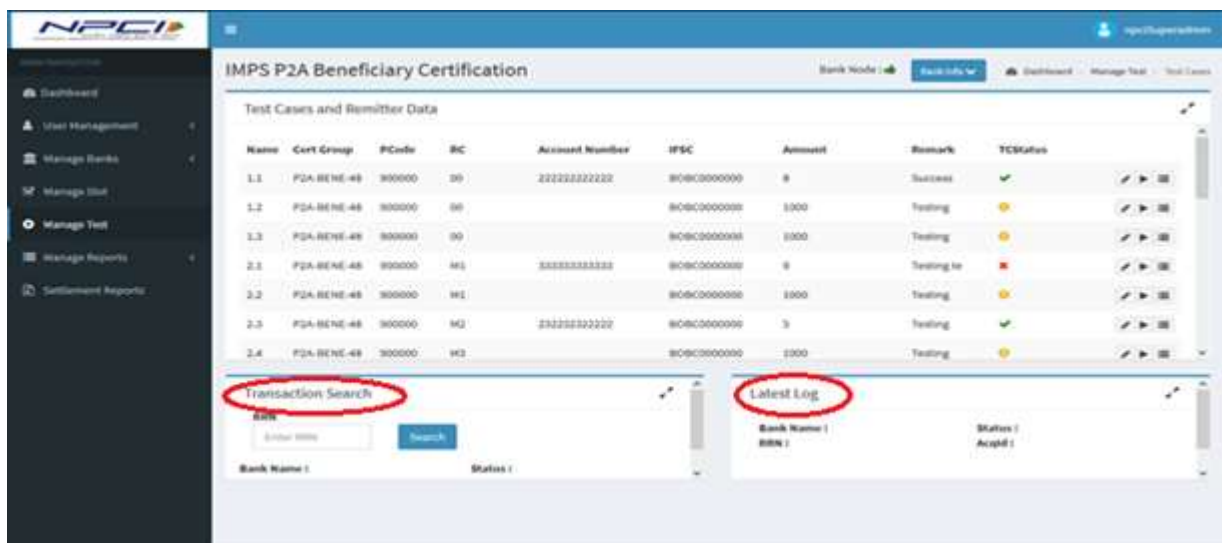
The user can also see the log for that test case after testing is completed by using log button ☰

The user can also search transaction using RRN. The user can see the last transaction log under latest log as shown in above screenshot.

8. Manage Reports

This module is accessed by Bank Tester where the user can download the following reports.

1. Review Reports
2. Settlement Reports.
3. UAT Scripts

8.1 Review Reports

The above screen shows the banks list and their certification slots where the user can select the bank and can download the Review report for both comfort and UAT rounds. Bank has to download the review report and send it to NPCI for screening and to get access with further process.

8.2 Settlement Reports

This feature is extensively given to banks in UAT round of testing. Below screen shows the settlement reports where the user can directly download the raw and NTSL reports used for banks **day 1** reconciliation purpose.
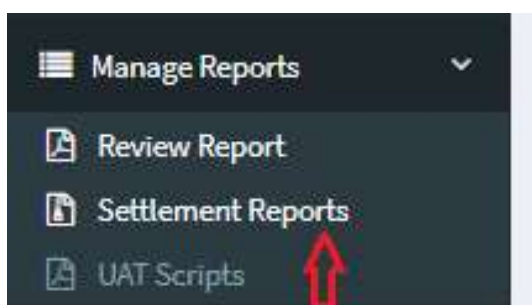
8.3 UAT scripts

Once after the testing is completed and if the review of test cases executed as per test case sheet and scope of certification if found pass then bank has to download this UAT script and send it back to NPCI with proper bank seal and authorized signature

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9. Feedback

NPCI has made every effort to include all relevant information in this document. However, it is possible that some specific information you are looking for is not available herewith. If you would like such information to be included in a subsequent version of this book, write to <sirteam@npci.org.in> with the subject line as "IMPS certifications zone User Manual-Feedback".

10. Points worth noting and pre checks to be done

➢ Bank needs to ensure whitelisting of both GUI and switch connectivity at bank end before commencement of testing

➢ Advised to use Google chrome browser with version above 70 to access certifications zone tool

➢ If the given URL is not being accessed, bank has to crosscheck the URL accessing with URL given by NPCI and try doing telnet to the NPCI destination IP with designated port and has to provide a screenshot to NPCI for further assistance

➢ Email ID given in user name (during login) is exclusively for login purpose, no alerts will be sent (to member banks) to those email ID's

➢ Multiple channels for one particular scope at one time will not be allowed

➢ Banks to Cross check the scope of testing and slot given in Certifications zone

➢ With the given login credentials, only one user from bank testing team can login to certifications zone, multiple login with single user credentials is restricted

➢ Bank has to strictly follow latest IMPS specification , downloadable from dashboard, if the bank is not following the latest spec, then deviation in DE's that were there in transaction will be highlighted in red color for not comply with new specification

➢ Notifications of scheduled activities will be communicated to member banks on an ongoing basis in the dashboard , Banks has

➢ While initiating the Remitting transactions, bank has to use specific beneficiary account numbers/mobile numbers with IFSC code/MMID that were anchored on certifications zone tool testing in the given slot

➢ Bank coming for support or certification is refrained from initiating bulk transactions

➢ Transactions with wrong details in DE#2, DE#3, DE#32 and DE#120 will not be parsed and logged in certifications zone tool

➢ Banks need any further technical assistance or for giving feedback regarding certifications zone tool, can write to sirteam@npci.org.in

S.No	Possible issue	check to be done at bank end
1	Not able to access URL	1. IP & PORT whitelisting confirmation from bank network team whether whitelisted at bank end or not 2. Telnet to NPCI destination IP with respective Port and take a screenshot (192.168.xx.xx and port is xxx) 3. still getting issue Contact NPCI team with screenshot taken and whitelisting Confirmation from bank end
2	Not able to connect Switch after accessing URL	1. IP & PORT whitelisting confirmation from bank network team whether whitelisted at bank end or not 2. Telnet to NPCI destination IP with respective Port and take a screenshot (192.168.xx.xx and port provided by NPCI) 3. still getting issue Contact NPCI team with screenshot taken and whitelisting Confirmation from bank end
3	Transaction is not getting logged in Tool	Check for Primary data elements getting populated as per latest specification or not DE#2 DE#3 DE#32 DE#120 all tags DE#41, DE#42, DE#43 DE#18, DE#22, DE#25 W.R.T DE#120 Tag 56
4	If transaction is getting logged and tool is throwing error	check the error description and do changes accordingly, make sure to follow latest specification
5	when remitter transaction is not getting logged in tool	when bank is remitter, bank has to use beneficiary details displayed in tool testing slot to get the desired response code
6	when Beneficiary transaction is not reaching bank	bank to cross check whether the account details were properly configured at bank end