



***UPI CERTIFICATION ZONE -USER MANUAL FOR
BANKS
(VERSION 1.0)***

Document History

Version	Date (DD/MM/YY)	Author	Reviewed by	Approved by	Revision History
1.0	12/10/2020	Arpita Mishra	Appala Reddy		Draft
1.1	09/04/2021	Arpita Mishra	Chaitanya Rekapalli		CZ URL removed, tester will share these details with member banks over emails.

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1. Introduction

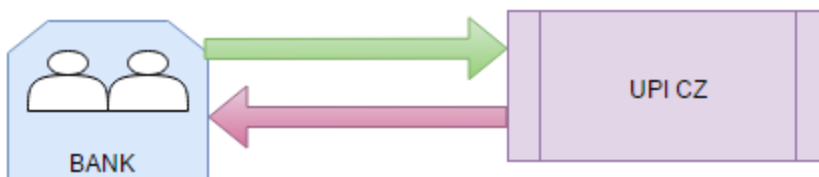
This document describes the features and functionalities of the certification zone tool for UPI product. UPI certification zone is a simulating tool that facilitates testers to self-execute the test transactions corresponding to the test cases that make part of the UPI certification program. This certification zone helps member banks to develop switch & applications in accordance to Unified Payments Interface 2.0 TSD v1.42.

The basic idea behind this certification 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 Acquirer certification, the UPI certifications zone will act both as UPI server and Issuer. Similarly the UPI certifications zone will act both as UPI server and acquirer for the bank pursuing issuer certification for its psp or switch respectively. During configuration phase, these simulation modules are activated and linked to a certification slot which represents a particular certification.



Here Bank can act as one of the entities (Payer/payee/remitter/beneficiary) and all other three entities will be performed by UPI CZ. Only Bank leg will be visible in logs for which testing is performed.

2.2 Salient Features

- ✓ Self-execution of test cases by member bank with minimum support from NPCI for comfort and UAT rounds of certification.
- ✓ Banks can perform both Acquirer and Issuer cases.
- ✓ Certification zone is available round the clock for certification
- ✓ It ensures effective transaction validation and explicit messaging for each type of error.
- ✓ Dashboard to view the status of daily testing status.
- ✓ Safe & secured as it is using SSL validation via HTTPS protocol TLS 1.2 and is hosted on NPCI net
- ✓ Supports simultaneous certifications for different sub-products (UPI 2.0, Mandate, PAN validation)
- ✓ Access to the system based on unique login credential.
- ✓ Option to view the transaction logs from the UI, enabling versatile searching options.
- ✓ Extensive messaging and guidance during transaction validation.
- ✓ Options available to download review report and UAT scripts
- ✓ Downloadable option for raw files and NTSL file for reconciliation.

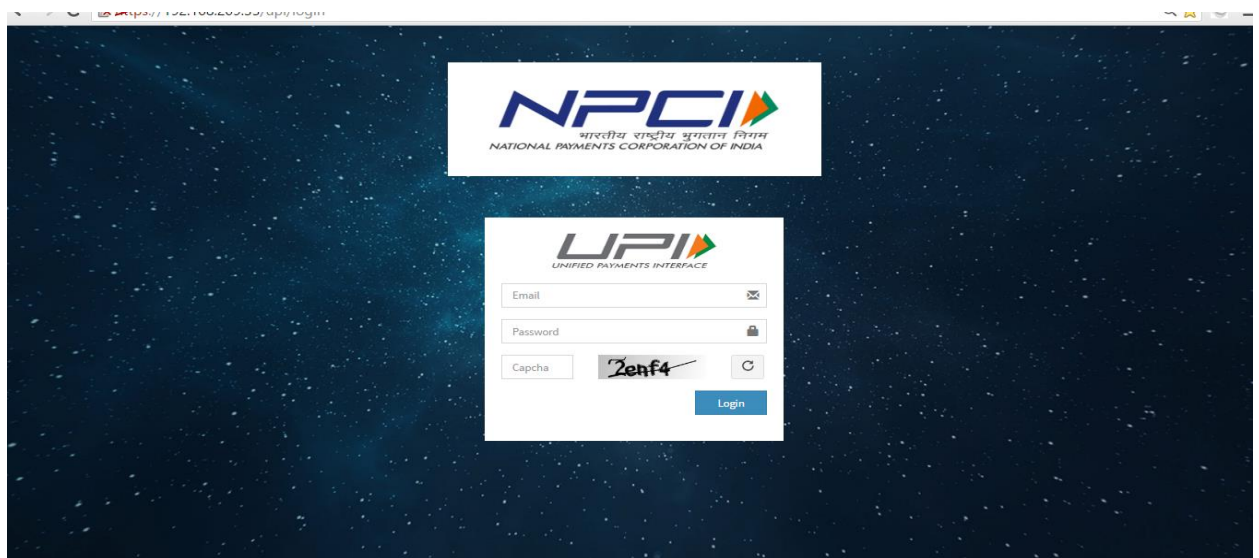
3. PRE-REQUISITE

Bank to provide below details in Universal template along with certificates (SSL, SIGNER, HSM) in .cer or crt format.

BANK to provide	NPCI to provide
NAME	IP
SPONSOR (if any)	URL
IP	PORT
NBIN, IIN	USER CREDENTIALS
SERVICE PROVIDER	BANK CODE
FORMAT	ORG ID
HANDLE	
IFSC	
DEBIT CAP LIMIT	
MPIN LENGTH	

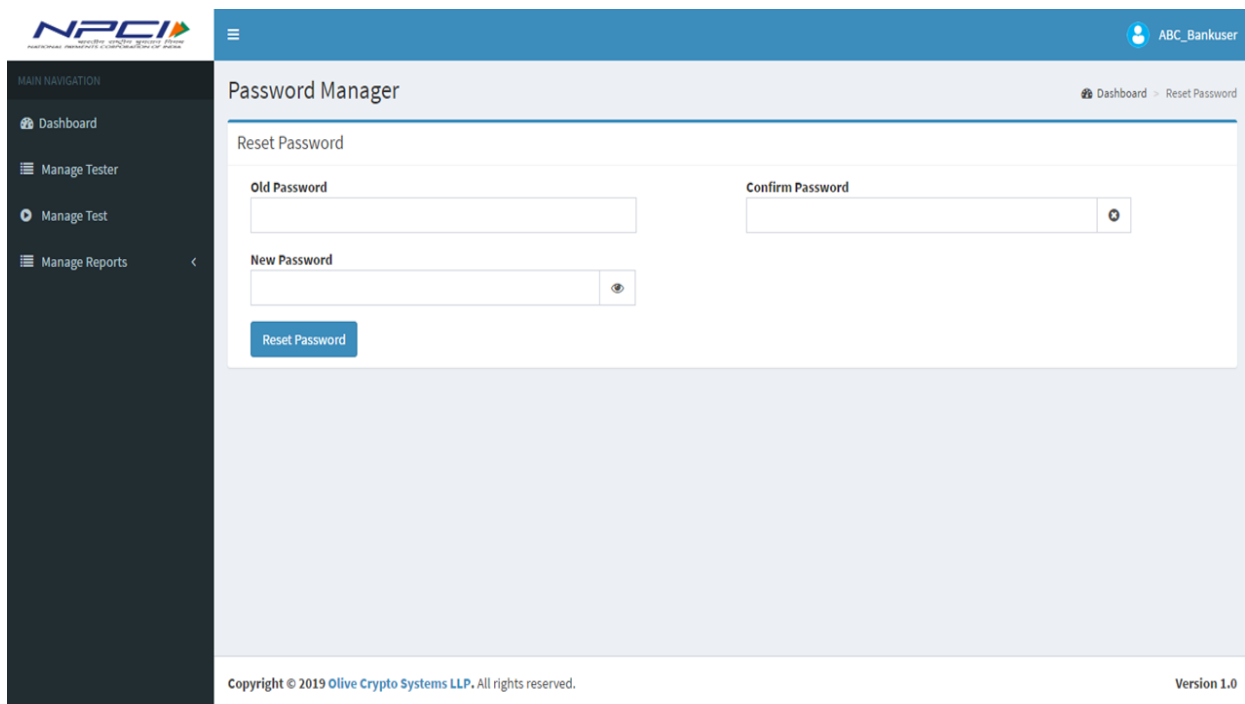
4. LOGIN PAGE

The User has to provide credentials to login in to UPI Certification zone Virtual Accounts Portal along with the captcha.



4.1 First login

Tool will prompt tester to change password when login for first time using the credential shared by NPCI. Bank to change the password after successful login.



Password Manager

Reset Password

Old Password

Confirm Password

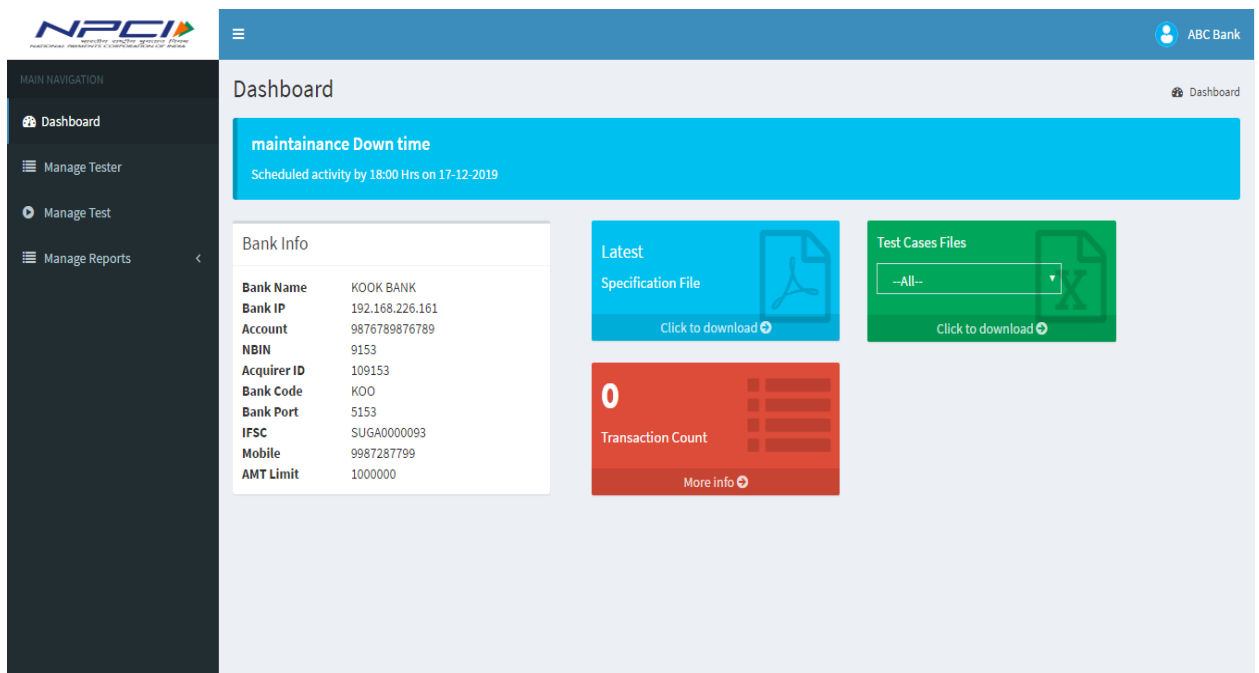
New Password

[Reset Password](#)

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5. Home Page-Dashboard

The User can see the below home page once login to the Portal.



Dashboard

maintenance Down time
Scheduled activity by 18:00 Hrs on 17-12-2019

Bank Info	
Bank Name	KOOK BANK
Bank IP	192.168.226.161
Account	9876789876789
NBIN	9153
Acquirer ID	109153
Bank Code	KOO
Bank Port	5153
IFSC	SUGA0000093
Mobile	9987287799
AMT Limit	1000000

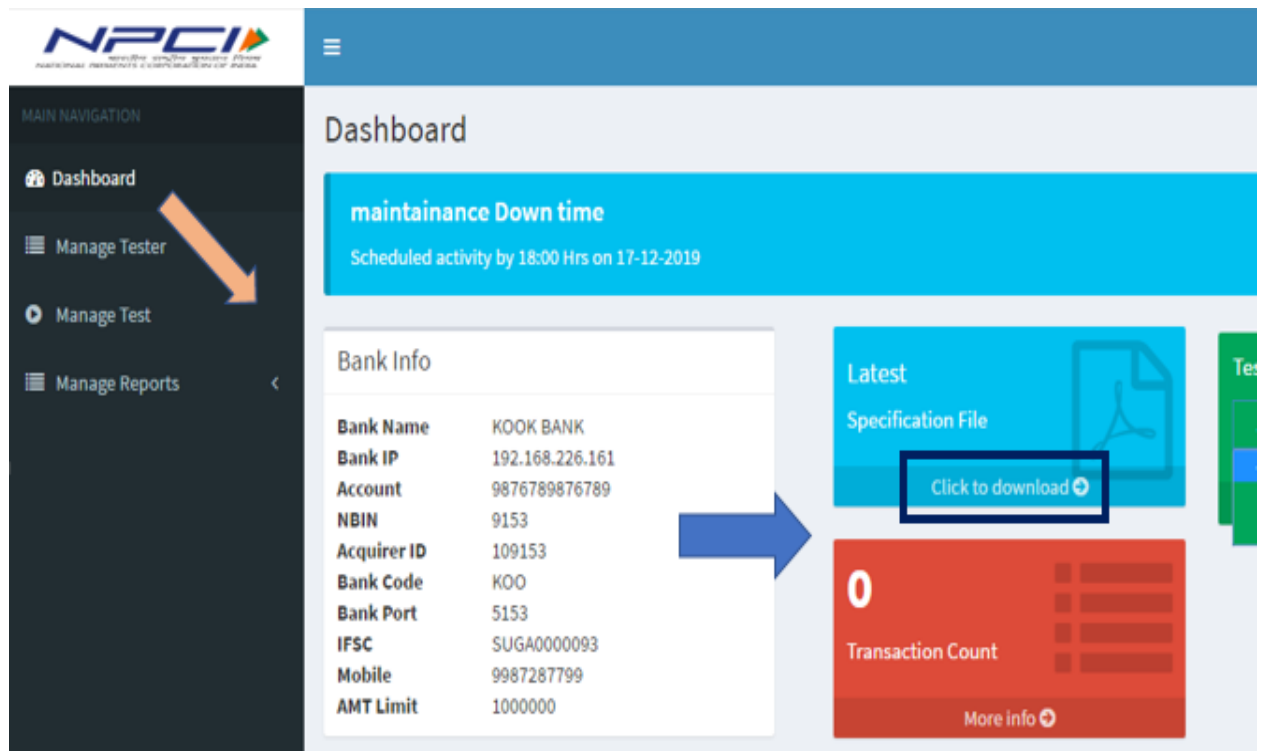
Latest Specification File
[Click to download](#)

Test Cases Files
--All--
[Click to download](#)

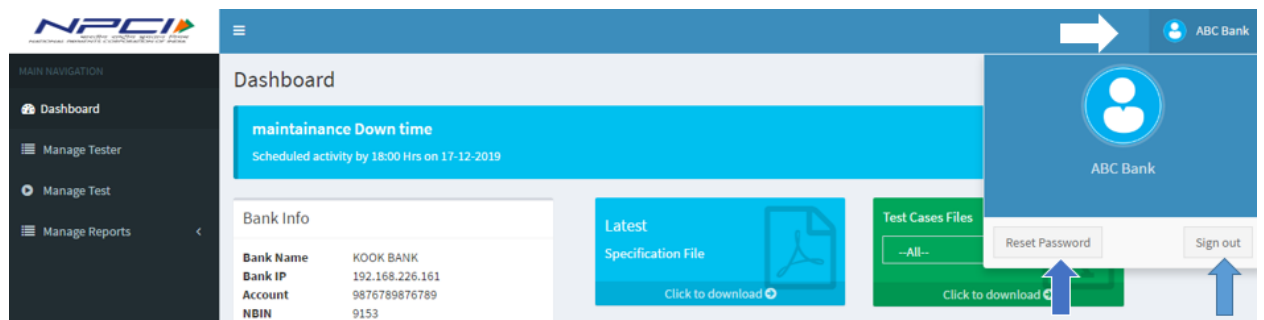
0 Transaction Count
[More info](#)

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Bank details will be visible in Dashboard along with Documents related to UPI certification. Maintenance message will be visible to all tester which will inform if any downtime is planned. Testers can access the tool and plan testing accordingly.



User can logout from the page using Sign out icon.

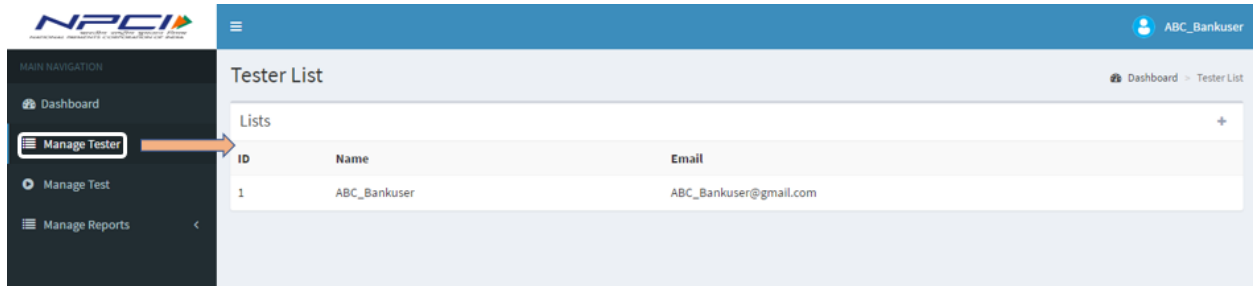


6. MANAGE TESTER

6.1 BANK USER:

NPCI to share one user credential to Bank as Bank admin. NPCI will have one user per bank now to avoid load testing.

6.2 Manage Tester: Here Bank admin can view its user details as email provided by NPCI.



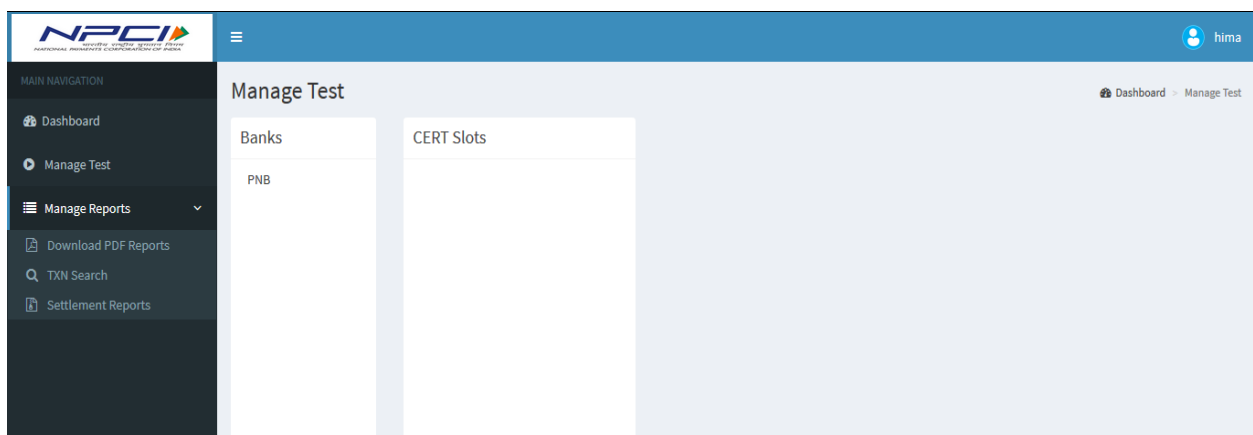
7. Manage Test

This module is accessed by Bank Tester only for testing. The scope and test cases will be present in this page. Tester need to select the scope and test case for execution. Cases executed successfully here will be updated in reports.

7.1 Bank Tester

For the Bank Tester, the user can see the banks which are pending for certification.

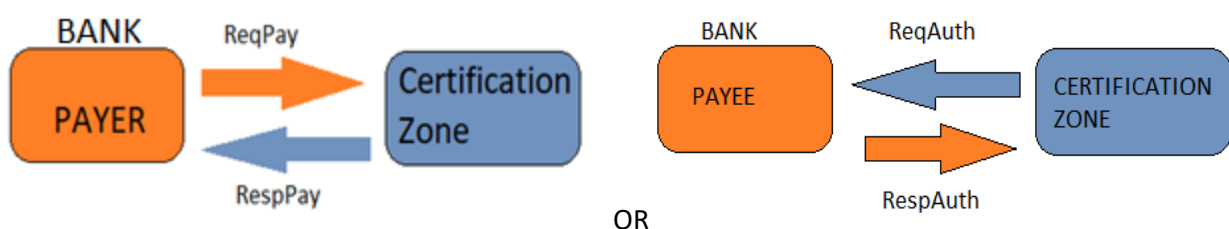
Note: For Bank tester the user can only see his/her banks which are pending for certification.



When clicked on the bank, the user can see pending certification slots for that bank.

Scopes such as UPI- 2.0 (meta , acquirer, issuer), Mandate (meta, financial), PAN validation, Recurring mandate, etc. are covered for certification. Test cases are as per latest test case sheet. The Validation are present according to latest UPI specification and Banks need to follow the same.

Execution of test cases are done for a particular module with CZ. If bank is acting as Payer then the legs visible to tester will that of payer only. Tester can view only payer legs and execute same, other legs are internal to UPI. Bank cannot act as two modules during certification in this tool.



Manage Test								
Banks		Certification Slots						
AAA		Group	Total TCs	Success	Failed	Waiveoff	Pending	Progress
		META_API_ACQ	78	68	19	0	10	<div><div></div></div>
		META_API_ISS	57	26	35	0	31	<div><div></div></div>
		MANDATEMETA	90	36	42	0	54	<div><div></div></div>
		PAYER_PSP	91	44	43	0	47	<div><div></div></div>
		PAYEE_PSP	43	29	13	0	14	<div><div></div></div>
		REMITTER	61	13	40	0	48	<div><div></div></div>
		BENEFICIARY	37	13	24	0	24	<div><div></div></div>
		ValCust	50	35	10	0	15	<div><div></div></div>
		SI_MANDATE	32	13	9	0	19	<div><div></div></div>

Now the user can start testing.

- For NPCI initiated cases Bank to click on play button and give details and click on test for initiating request from CZ.

API :SetCre TC : MT_14 Group : META_API_ISS

META_API_ISS Test Cases

Test Cases

#	TC ID	Type	Ver	RC	Status
1	MT_1	Hbt	1.0	00	✗
2	MT_14	SetCre	1.0	00	✗
3	MT_28	SetCre	1.0	AM	✓
4	MT_53A	ListAccount	2.0	00	✓
5	MT_29A	ListAccount	1.0	B3	⚠
6	MT_33	SetCre	1.0	00	✗
7	MT_56	SetCre	1.0	00	✗
8	MT_38A	SetCre	1.0	00	✗
9	MT_7B	ReqRegMob	1.0	00	✗
10	MT_13A	ListAccount	1.0	00	✗

Form Fields:

- *Account Number
- *Account Type
- *Old Pin
- *IFSC
- *Mobile
- *New Pin

Test

ETA_API_ISS Test Cases

Test Cases

#	TC ID	Type	Ver	RC	Status
1	MT_1	Hbt	1.0	00	✗
2	MT_14	SetCre	1.0	00	✗
3	MT_28	SetCre	1.0	AM	✓
4	MT_53A	ListAccount	2.0	00	✓
5	MT_29A	ListAccount	1.0	B3	⚠
6	MT_33	SetCre	1.0	00	✗

Status

Process Started

Request Sent

Waiting for Response

Status In Process

- b. For Bank initiated cases there will be no play button. Bank to initiate request to CZ for which CZ will provide response to Bank. Same can be viewed in logs. The test data is visible on the page for Bank initiated cases such as vpa, note, IFSC. Tester while initiating need to populate the given test data into the API send to CZ for CZ to identify the case and give response accordingly.

The user can see the status after getting response as shown below.

META_API_ACQ Test Cases

Dashboard Manage Test Manage Certifications Test Case

Test Cases


Enter TXN ID

#	TC ID	API Type	API Name	Test Data	Version	RC	Status	Log
1	MT_1	Hbt	Heart beat message		1.0	00	✓	
2	MT_14	SetCre	Set credential Request-PINcredentials	SCAA0001114	1.0	00	✓	
3	MT_28	SetCre	Set credential Request-PINcredentials	SCAA0001128	1.0	AM	✓	
4	MT_68	Any	All		1.0	00	⚠	
5	MT_19	ManageVae	Request ManageVae		1.0	00	✓	
6	MT_40	ManageVae	Request ManageVae		2.0	00	✗	
7	MT_4	Listkeys	Request ListKeys		1.0	00	✓	
8	MT_53A	ListAccount	Response for Account List	ABSF0001135	2.0	00	✓	
9	MT_29A	ListAccount	Request for Account List	ABFE0001135	1.0	B3	✓	
10	MT_56	SetCre	Set credential Request-PINcredentials	SCAA0001156	2.0	00	✓	

Showing 1 to 10 of 78 entries

Previous 1 2 3 4 5 ... 8 Next

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  .

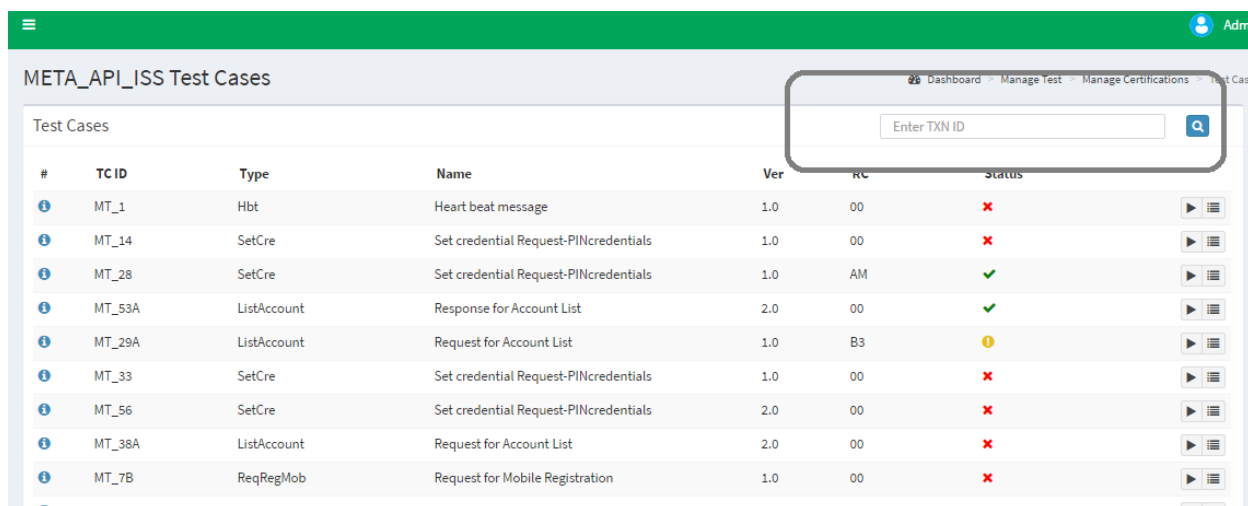
Bank Name: AAA Status: Success Group: META_API_ACQ Test Case Id: MT_1

Request RequestACK Response ResponseACK

AAA Request

```
<?xml version="1.0" encoding="UTF-8"?><ns2:ReqHbt xmlns:ns2="http://npci.org/upi/schema/"><Head msgId="KTx6f7623b97a284e00ae416644bf035204"
orgId="400005" ts="2020-06-15T16:22:47+05:30" ver="1.0"></Head><Txn id="CYL0123456789abcde01234abcde000100" note="Heart beat"
refId="KTx0f4653f6eaf4aca9eae9f9beSade90e" refUrl="http://KTxcbank.in" ts="2020-06-15T16:22:47+05:30" type="Hbt"></Txn><HbtMsg type="ALIVE" value="NA">
</HbtMsg><Signature xmlns="http://www.w3.org/2000/09/xmldsig#"><SignedInfo><CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-
20010315"></CanonicalizationMethod><SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldsig#rsa-sha1"></SignatureMethod><Reference URI="">
<Transforms><Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"></Transform></Transforms><DigestMethod
Algorithm="http://www.w3.org/2001/04/xmenc#sha256"></DigestMethod><DigestValue>V8bnguk4vVugjln9aq80AA/ax1v0MOLIMBH8eksCF9k=</DigestValue>
</Reference></SignedInfo><SignatureValue>0OfqfAD3FMOUQLnR5+3SwRjn8KYq7UJZuM7UT8o1hEX5RSYBJP/NfczLUJB9+YD1cgf97kZq67I
FRQsKYP13PqcPjvLcRH5I9JdcVkgmesSV5J3BPQqVifacGLpzsAnMEEJNBhCwV6MyAuFa7bg440G
QQRM1bUrhJN+KGrq+OE1URv4v5XBMQe9Y70aCnVQyr9V8MAIU8a5GnHsMZHQ3Gr01/orTOQ0MCq
JGqTNafzBcBTG81ajH0Fv3AaZ2Dmf715IP7/BsKYKWqZTYKZogVEvryhQqnnkMptI6aa1q/kKbv
c67Z5c6Vjh5VQuHv7xuwfietFdBpJAIQPxg==</SignatureValue></KeyInfo><KeyInfo><RSAKeyValue>
<Modulus>26h/SRF+Vlt+qdl+oGGGLZcTpwJazJPWnZNC4tnhjpQWhbaAn7Ebcj/LPBpf3MNeFNuAbb5exLi
KJtwAmYnCsJi0IPUpUnEN79AZdipFslWl8FX3haRl88so12cv+Oh3eLirgP9LP3UoLvBPIW2s
Panf1MTMQFn2dBac+qWJhJU+xcxWg3axvkeEC8PTeps6bOWqiev1sIAYMfzP6kCld8EpuXwv7nh
L9b0tJTRAH2bz2R/Im/Y0InACbHn7fq125mMCw/VP9I/C7naST5ExyQ6euQzC1ay2K07/MtR9
x4/xzFbQF2uX6eiWmpfz71RyGu9e/peZAirWEJQ==</Modulus><Exponent>AQAB</Exponent></RSAKeyValue></KeyInfo></Signature></ns2:ReqHbt>
```

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



#	TC ID	Type	Name	Ver	RC	Status
1	MT_1	Hbt	Heart beat message	1.0	00	✗
2	MT_14	SetCre	Set credential Request-PINcredentials	1.0	00	✗
3	MT_28	SetCre	Set credential Request-PINcredentials	1.0	AM	✓
4	MT_53A	ListAccount	Response for Account List	2.0	00	✓
5	MT_29A	ListAccount	Request for Account List	1.0	B3	!
6	MT_33	SetCre	Set credential Request-PINcredentials	1.0	00	✗
7	MT_56	SetCre	Set credential Request-PINcredentials	2.0	00	✗
8	MT_38A	ListAccount	Request for Account List	2.0	00	✗
9	MT_7B	ReqRegMob	Request for Mobile Registration	1.0	00	✗
10	MT_12A	ListAccount	Request for Account List	1.0	00	✗

7.2 Pre-requisite for testing- scope-wise scenario:

- a. For Financial mandate the UMN should be available in CZ server and should be a valid one. Expired UMN details will not be processed.
- b. For an API financial/notify mandate refer to respective API in create mandate. Example: If Bank acting as Payer for notify mandate i.e. RespAuthValCust, then UMN to be used for testing should be the one which was created by Bank as payer only with API as RespAuthMandate.
- c. For ONETIME mandate financial/update/revoke tester need to create separate UMN.
- d. For UDIR cases tester require original transaction details to be populated in txn block. Before UDIR cases tester need to execute a financial cases, the dependency cases are available in the UDIR slot. Original txn can be used only once.
 - i. Bank tester need to perform and a financial transaction successfully –deemed.
 - ii. Tester to use same transaction details to initiate UDIR APIs (Reqchktxn, ReqComplaint, etc.).
 - iii. Test case to be performed will be mentioned as message.
 - iv. In NPCI initiated cases, tester need to provide the original transaction ID for tool to fetch other details from DB.
 - v. In Bank initiated, tester need to provide original transaction details as performed in request to tool.

UDIR Test Cases

Bank Name: - AAA Certification Round: COMFORT Connection : Online

Enter TXN ID

#	TC ID	API Type	API Name	Test Data	Version	RC- UpiRC	Status	Test/Log
1	UDIR_RE_1	ReqPay	REMITTER	udirre1@mypsp	2.0	-	✗	▶
2	UDIR_RE_2	ReqPay	REMITTER	udirre2@mypsp	2.0	-	✓	▶
3	UDIR_RE_3	ReqChkTxn	REMITTER	udirre3@mypsp	2.0	-	✓	▶
4	UDIR_RE_4	ReqChkTxn	REMITTER	udirre4@mypsp	2.0	-	✓	▶
5	UDIR_RE_5	ReqTxnConfirmation	REMITTER	udirre5@mypsp	2.0	-	✗	▶
6	UDIR_BE_25	ReqChkTxn	REMITTER	udirbe25@mypsp	2.0	-	✗	▶
7	UDIR_PR_8	PAYER_PSP	PAYER_PSP	udirpr8@mypsp	2.0	-	✓	▶
8	UDIR_PR_9	PAYER_PSP	PAYER_PSP	udirpr9@mypsp	2.0	-	✓	▶
9	UDIR_PR_10	PAYER_PSP	PAYER_PSP	udirpr10@mypsp	2.0	-	!	▶
10	UDIR_PR_12	PAYER_PSP	PAYER_PSP	udirpr12@mypsp	2.0	-	!	▶

Showing 1 to 10 of 41 entries

Previous 1 2 3 4 5 Next

API : ReqPay TC : UDIR_RE_1 Group : UDIR

*OrgTxnid

Bank to provide original transaction details to be filled in Request to Bank in txn block - orgtxn, orgts.

Tag Num	Message Item	<XML Tag>	Occurrence	Datatype	Length	Mandatory
3.1.12	Original transaction ID when reversal/Refund has to be done	orgTxnid	1..1	Alphanumeric	Length=35	Y
3.1.13	Original RRN	orgRrn	0..1	Numeric	Length=12	N
3.1.14	Original Date of the txn	orgTxnDate	0..1	ISODate Time	Min Length: 1 Max Length:255	N
3.1.15	Original Transaction Amount	orgTxnAmt	1..1	Numeric	Min Length: 1 Max Length:15	Y

Click on Test button for CZ to initiate request to Bank

Test ▶

EXECUTION RESULT:

After initiating case from CZ the status will be shown as pending until response is received to the API from Bank end. On the basis of the response received the status will change to SUCCESS or FAILURE.

Bank Name: AAA Status: Pending Group : UDIR Test Case Id : UDIR_RE_1

Request RequestACK Response ResponseACK

Sim Request

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:ReqPay xmlns:ns2="http://npci.org/upi/schema/">
  <Head ver="2.0" ts="2020-12-10T17:56:07.102+05:30" orgId="NPCI" msgId="NPC6ad7b2445718449b908974fa70035587"></Head>
  <Meta>
    <Tag name="PAYREQSTART" value="2020-11-26T21:10:06.304+05:30"></Tag>
    <Tag name="PAYREQEND" value="2020-11-26T21:10:06.304+05:30"></Tag>
  </Meta>
  <Txn id="NPCb730d8be803641d0bd510c6c5911c61f" note="AUTOUPDATE[RET]115" ts="2020-12-10T17:56:07.103+05:30" type="REVERSAL"
  orgTxnId="AAA22ce429f78a34ef8bb41dfc9cba4a984" orgRespCode="RB" custRef="033121968197" initiationMode="00" subType="DEBIT" purpose="00"></Txn>
  <Payer addr="tester@mypsp" name="remitter" seqNum="1" type="PERSON" code="0000">
  <Info>
    <Identity type="ACCOUNT" verifiedName="remitter" id="12345678901234567890"></Identity>
  </Info>
</ns2:ReqPay>
```

Bank Name: AAA Status: Success Group : UDIR T

Request RequestACK Response ResponseACK

Sim Request

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:ReqPay xmlns:ns2="http://npci.org/upi/schema/">
  <Head ver="2.0" ts="2020-11-26T21:28:56.242+05:30" orgId="NPCI" msgId="NPC57df6e4">
  <Meta>
    <Tag name="PAYREQSTART" value="2020-11-26T21:10:06.304+05:30"></Tag>
  </Meta>
</ns2:ReqPay>
```

In case of FAILURE, reason or error code can be viewed in Ack tab. Bank to fix the issue and execute the case again. Bank to follow the specification shared by NPCI for populating tags in xml.

Bank Name: AAA Status: Failed Group : UDIR Test Case Id : UDIR_BE_2

Request RequestACK Response ResponseACK

Sim Request

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:ReqChkTxn xmlns:ns2="http://npci.org/upi/schema/">
  <Head ver="2.0" ts="2020-12-14T15:38:55.636+05:30" orgId="NPCI" msgId="NPCccd12d6fe9d1450ab581e6e25dec7ba0" prodType="UPI"></Head>
  <Txn id="AAAb1df54c85c914bf6eb6e9fc13070ce93" note="AUTOUPDATE" refId="034915000001" refUrl="http://bank.com" ts="2020-12-14T15:38:55.636+05:30"
  type="AUTOUPDATE" orgTxnId="AAA603a65b6c0ee40bb9c4023e5495f8d11" custRef="034915000001" orgTxnDate="2020-12-10T13:37:08.687+05:30"
  orgRrn="034513452477" initiationMode="00" subType="CREDIT" purpose="00" orgTxnAmt="100.00"></Txn>
</ns2:ReqChkTxn>
```

Bank Name: AAA Status: Failed Group : UDIR Test Case Id : UDIR_BE_2

Request RequestACK Response ResponseACK

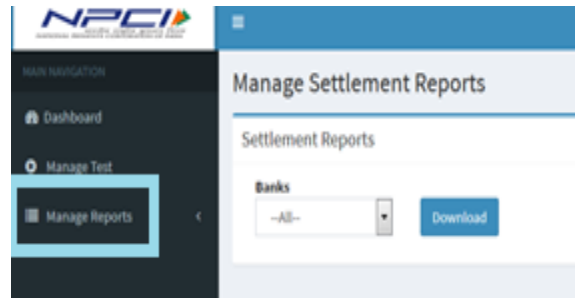
Sim Request

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:Ack api="RespChkTxn" reqMsgId="NPC5719f704fec74e8491504c1e26d0fdcc" ts="2020-12-14T15:39:23+05:30" xmlns:ns2="http://npci.org/upi/schema/">
  <errorMessages>
    <errorCd>E04</errorCd>
    <errorDtl>RESP.ERRORCODE MUST BE PRESENT</errorDtl>
  </errorMessages>
</ns2:Ack>
```

8. MANGE REPORTS




























This module is accessed by NPCI Tester and Bank Tester where the user can perform the following functions.

1. Review reports
2. Settlement Reports.
3. UAT scripts



8.1 Review report & UAT script:

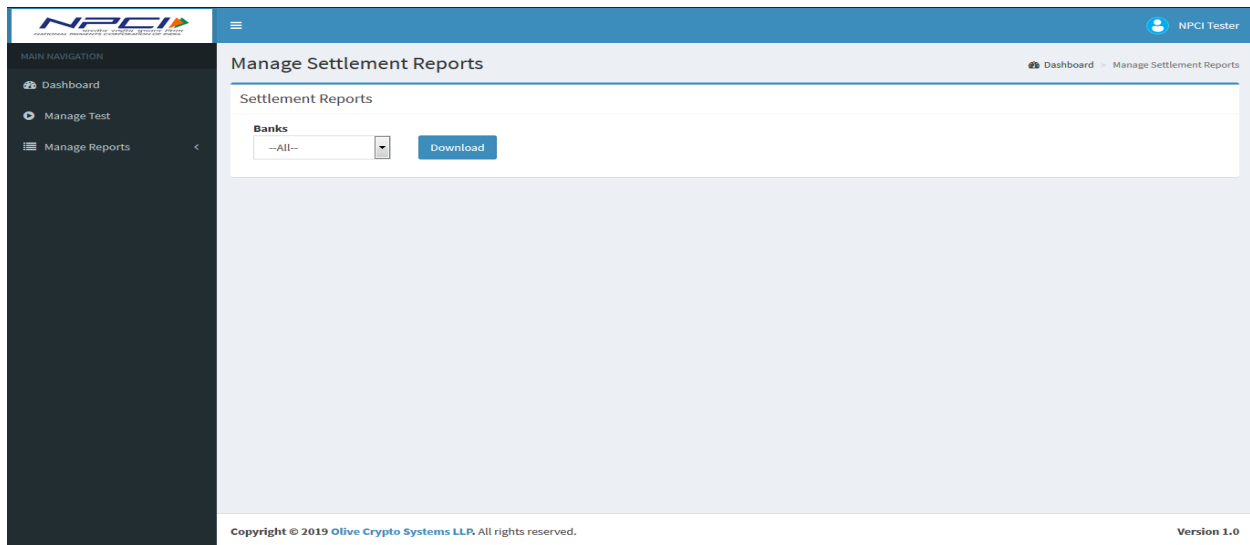
In this module, the user can get the review reports, for comfort and UAT for given scopes.

Manage Reports																					
<div>Banks</div> <div>AAA</div>	<div>CERT Slots</div> <table> <tr> <th>Group</th><th>ReviewReport</th></tr> <tr> <td>META_API_ACQ</td><td></td></tr> <tr> <td>META_API_ISS</td><td></td></tr> <tr> <td>MANDATEMETA</td><td></td></tr> <tr> <td>PAYER_PSP</td><td></td></tr> <tr> <td>PAYEE_PSP</td><td></td></tr> <tr> <td>REMITTER</td><td></td></tr> <tr> <td>BENEFICIARY</td><td></td></tr> <tr> <td>ValCust</td><td></td></tr> <tr> <td>SI_MANDATE</td><td></td></tr> </table>	Group	ReviewReport	META_API_ACQ		META_API_ISS		MANDATEMETA		PAYER_PSP		PAYEE_PSP		REMITTER		BENEFICIARY		ValCust		SI_MANDATE	
Group	ReviewReport																				
META_API_ACQ																					
META_API_ISS																					
MANDATEMETA																					
PAYER_PSP																					
PAYEE_PSP																					
REMITTER																					
BENEFICIARY																					
ValCust																					
SI_MANDATE																					

Only success transactions will be updated in reports.

8.2 Manage Settlement Reports

Below screen shows the settlement reports where the user can download the settlement report based on bank name.



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 “UPI Certification zone User Manual-Feedback”.