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| **Revisionhistory** | | | |
| **Version** | **Author** | **Date** | **Revision** |
| 1.0 | Daniel Sebok | Jan 25,2021 | Initial Draft |
| 1.1 | Sunil K Namdev | Jan 28, 2021 | Reviewed |

Design document for IDOS-32

**Functionality impact:**

After pressing the button Submit for Accounting, we first call the government API.

If it succeeds, then we can go with the current accounting procedure.

If it fails show an error message for the user. The transaction will still be added to the transaction list with a status of pending. Pending transactions will have a new dropdown with options “Generate IRN”, “Generate e-Way Bill” which will retry calling the gov API. Only creator or master users can access this button.

On the transaction purpose “Cancellation/Voiding Invoice“ the cancel IRN api should be called. The rest of the flow is the same, status should be pending if failed, and dropdown should be enabled for the retry.

If API calls fails then display a dropdown in transaction list only for “MASTER ADMIN” or “CREATOR” roles

Sell transactions – transaction status will be “IRN Pending”

* Generate IRN

Cancel Invoice - transaction status will be “Cancel IRN Pending”

* Cancel IRN

Above transactions should be created but do not have accounting impact which means no data will go in trial balance tables and inventor tables

If API successful then display dropdown for all ROLES with below options

Sell transactions

* Generate e-Way Bill by IRN
* Cancel E-way Bill

Cancel Invoice

* Not needed

**Middle layer changes:**

1. Create adapters ‘IrnXYAdapter’.
2. A new status should be created for “PENDING” transactions.
3. Each adapter should implement the calling HTTP request, response parsing, exception handling, timeout handling. (see api.doc)
4. A table should be created in database, to store the gstin, client id, client secret, auth token and its expiry for different branches.
5. HTTP API urls will be stored in the idos\_config\_param table as new key-value pairs (e.g. generate-irn-url ).
6. For the HTTP call, we’ll use HttpClient which is a simple java implementation of calling an HTTP endpoint.
7. All response should be stored in the table Idos-Irn-Data so we can easily debug responses later on.
8. Each adapter should call the cache (or DB directly) first, to check if the AuthToken (provided by the government api) is stored already and if it’s expired or not.
9. If it’s not expired, call should be made.
10. If it’s expired, an authentication request should be sent and update the table Idos-Irn-Token and call the proper endpoint as in point 5.

**Database changes :**

Create the table ‘Idos-Irn-Data`.

**DROP TABLE IF EXISTS `idos\_irn\_data`;**

**CREATE TABLE ` idos\_irn\_data` (**

**`ID` bigint(20) NOT NULL AUTO\_INCREMENT,**

**`CREATED\_AT` DATETIME DEFAULT NULL,**

**`** **CREATED** \_ **BY` int(11) DEFAULT NULL,**

**`MODIFIED\_AT` DATETIME DEFAULT NULL,**

**`MODIFIED\_BY` int(11) DEFAULT NULL,**

**` BRANCH\_ID` bigint(20) DEFAULT NULL,**

**` TRANSACTION\_ID` bigint(20) DEFAULT NULL,**

**` RESPONSE\_DATA` TEXT DEFAULT NULL**

**PRIMARY KEY (`ID`)**

**)**

Create the table ‘Idos-Irn-Token`.

**1)CREATE TABLE STATEMENT**

**DROP TABLE IF EXISTS `idos\_irn\_token `;**

**CREATE TABLE ` idos\_irn\_token ` (**

**`ID` bigint(20) NOT NULL AUTO\_INCREMENT,**

**`CREATED\_AT` DATETIME DEFAULT NULL,**

**`** **CREATED** \_ **BY` int(11) DEFAULT NULL,**

**`MODIFIED\_AT` DATETIME DEFAULT NULL,**

**`MODIFIED\_BY` int(11) DEFAULT NULL,**

**` BRANCH\_ID` bigint(20) DEFAULT NULL,**

**` GSTIN` VARCHAR(15) DEFAULT NULL,**

**` CLIENT\_ID` VARCHAR(255) DEFAULT NULL,**

**`CLIENT\_SECRET` VARCHAR(255) DEFAULT NULL,**

**` AUTH\_TOKEN` VARCHAR(255) DEFAULT NULL,**

**`TOKEN\_EXPIRY` DATETIME DEFAULT NULL,**

**PRIMARY KEY (`ID`)**

**)**

**2) Organisation table change**

**A new field ( e\_invoice\_needed or similar) should be introduced in order to track if the organisation needs e-invoice or not.**

**UI/UX changes:**

- A new checkbox should be implemented, so users can decide if they need this additional E-Invoice system, or not.

-------------------------------------END------------------------------------------------