Plan: **2 tools for Eric’s request**

This document is about the plan, requirements, designs and details about 2 tools that Eric requested for team Tier 3 Support to do.

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# **Overview the plan for both 2 tools**

**Tools:**

* 1st tool: Displaying member and authorization records, querying the warehouse accounts in production.
* 2nd tool: Displaying staged data from the HHAX data feed, able to review inbound member and authorization database.

**Total time for 2 tools:** 224 hours – 5 weeks 3 days (included self-testing)

* Login & connections, permissions: 64 hours – 1 week 3 days.
* Time for 1st tool: 96 hours – 2 weeks 2 days.
* Time for 2nd tool: 64 hours – 1 week 3 days.

**Total screens:** 10 screens and 3 popups.

* Login, choose the tool and choose the database: 4 screens.
* Manage connections to databases (Warehouse and HHAX Integration): 1 screen and 2 popups.
* Mange accounts: 1 screen and 1 popup.
* The 1st tool for querying the warehouse: 2 screens.
* The 2nd tool for querying the HHAX Integration: 2 screens.

**Spent time at least each week:** 20 hours (code tools and do tickets)

**Time start coding tools:** (After accepting this plan)

**Date to release 1st tool:** (After accepting this plan)

**Date to release 2nd tool:** (After accepting this plan)

**Technology Stacks:**

* 2 tools in 1 website – built from
  + Front end: ReactJS v16.
  + Back end: .NET (Restful APIs) with language C#.
  + Database: MS SQL– is stored in local files and also included in the site.
* Developer: 1 – Nhan Thien Nguyen.
* Server’s environment:
  + System: Windows Server.
  + Needed packages: NodeJS x64 for Windows, .NET Framework.

For more detail about the security and requirements, screens, … of each tool, please read my information below.

1. **Connections to databases, security and permissions**

**Total time:** 64 hours – 1 week 3 days.

**Connections to database:**

* The connections to database can only be set by Admin account.
* Admin account can easily add/edit/remove connections to database with the information: server name, login, password.

**Security:**

* The accounts ’s passwords must be encrypted so that they can’t be seen easily in the database.
* The tool supports concurrent logins with a session timeout of 15 minutes of no-activity to keep connections down.

**Permissions and access rights:**

* There are 2 types of account:
* ***Admin:*** This is the ***full-control******and access*** account, is ***provided from KMS*** and there’s only one.
* ***Normal user:*** Can ***only be used to login and access*** the tools. Normal users can be created by Admin, and are ***limited which tools to access***. The normal user can only access to the 1st tool or the 2nd tool, or maybe both 2 tools by Admin set.

|  |  |  |
| --- | --- | --- |
| ***Permission & Access right*** | ***Admin*** | ***Normal user*** |
| Add/Edit/Remove connections to databases. | **YES** | **NO** |
| Choosing the database to connect. | **YES** | **YES** |
| Add/Edit/Remove normal accounts. | **YES** | **NO** |
| Set permission of normal accounts: which tools they can access. | **YES** | **NO** |
| Access and use the tools. | **YES** – both 2 tools | **YES** – but limited which tools can be accessed by Admin. |

*Table 1.1 Permissions and access rights*

**Databases and schemas:** There are 2 tables.

* Table Accounts:

|  |  |  |
| --- | --- | --- |
| **Column** | **Type** | **Explain** |
| ID | Int | The primary key. |
| Username | Nvarchar(50) | ***Unique*** - The user name is used to log in. |
| Password | Nvarchar(150) | The password is used to log in – encrypted. |
| Is\_Admin | Boolean | Is Admin or not. |
| Can\_access\_DW | Boolean | Can access 1st tool or not. |
| Can\_access\_HHAX | Boolean | Can access 2nd tool or not. |

Table 1.2 Database table Accounts

Constraints:

Primary Key: ID

* Table Connections:

|  |  |  |
| --- | --- | --- |
| **Column** | **Type** | **Explain** |
| ID | Int | The primary key. |
| Type\_Connection\_Name | Nvarchar(150) | “HHAX” or “DW” |
| Connection\_name | Nvarchar(150) | ***Unique*** - Connection name (alias). |
| Server\_name | Nvarchar(150) | Server name of the database. |
| Database\_name | Nvarchar(150) | Database name of the database. |
| Username\_database | Nvarchar(150) | Username is used to log in the database. |
| Password\_database | Nvarchar(150) | Password is used to log in the database – encrypted. |

Table 1.3 Database table Connections

Constraints:

Primary key: ID

**Screens:** Total 6 screens and 3 popups.

* Screen 2.1: Login page.

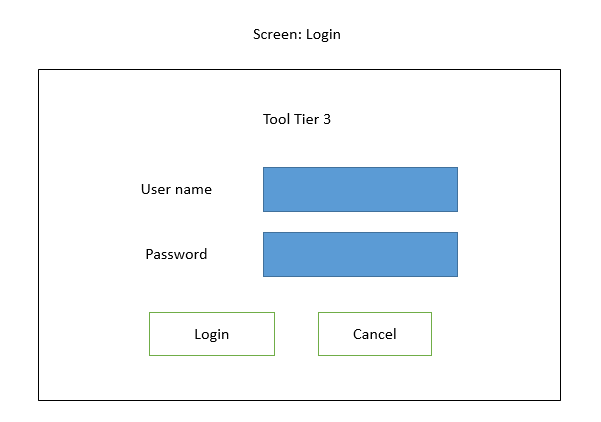


Figure 1.1 Screen login

* Screen 2.2: Choose the tool to use.

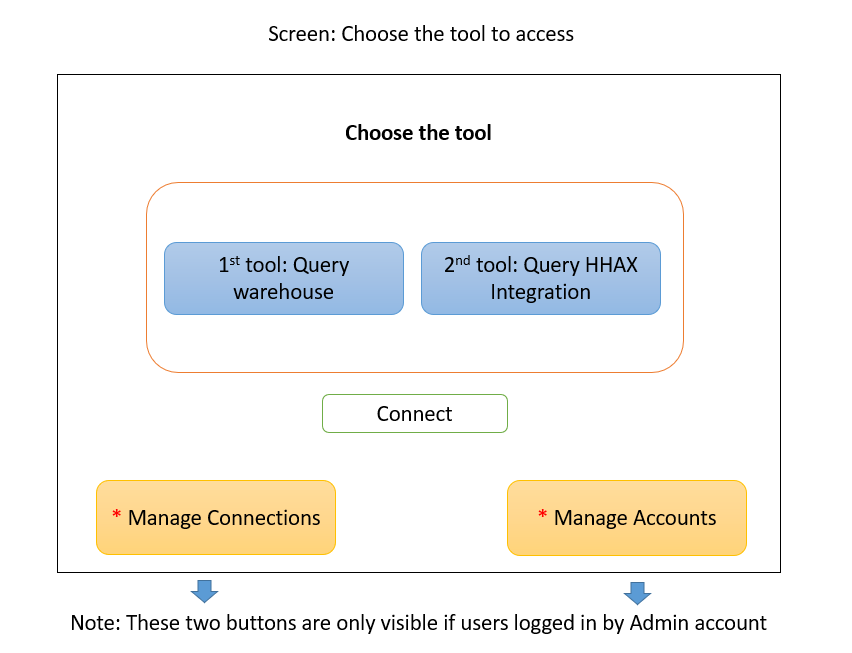


Figure 1.2 Screen choose the tool to access

* Screen 2.3: Choose the database to connect.
* If in screen 2.2: User selected the 1st tool to query in warehouse database

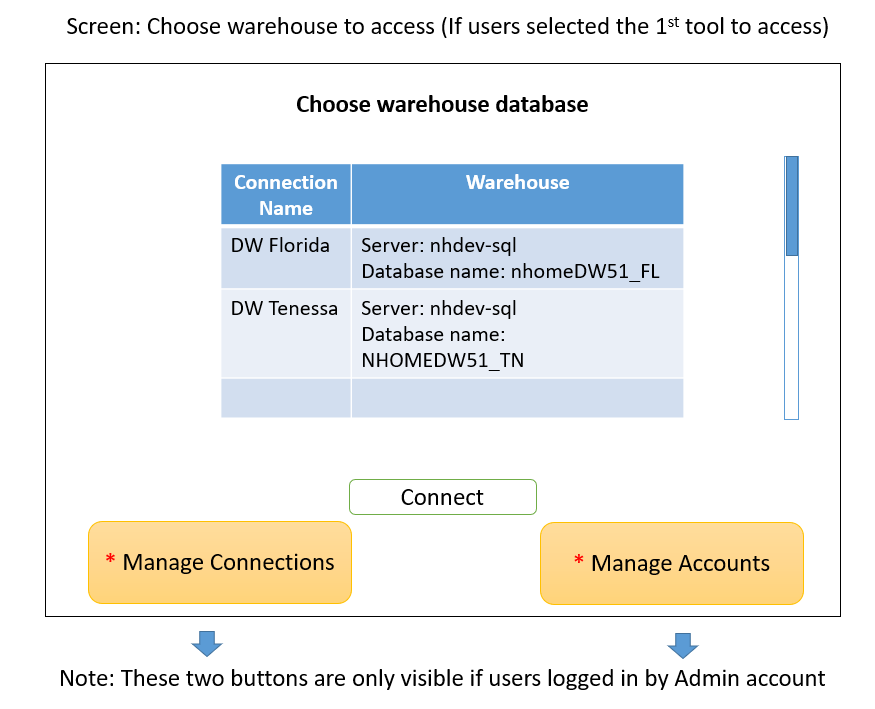


Figure 1.3 Screen choose the warehouse database to connect

* If users selected the 2nd tool to query in HHAX Integration.

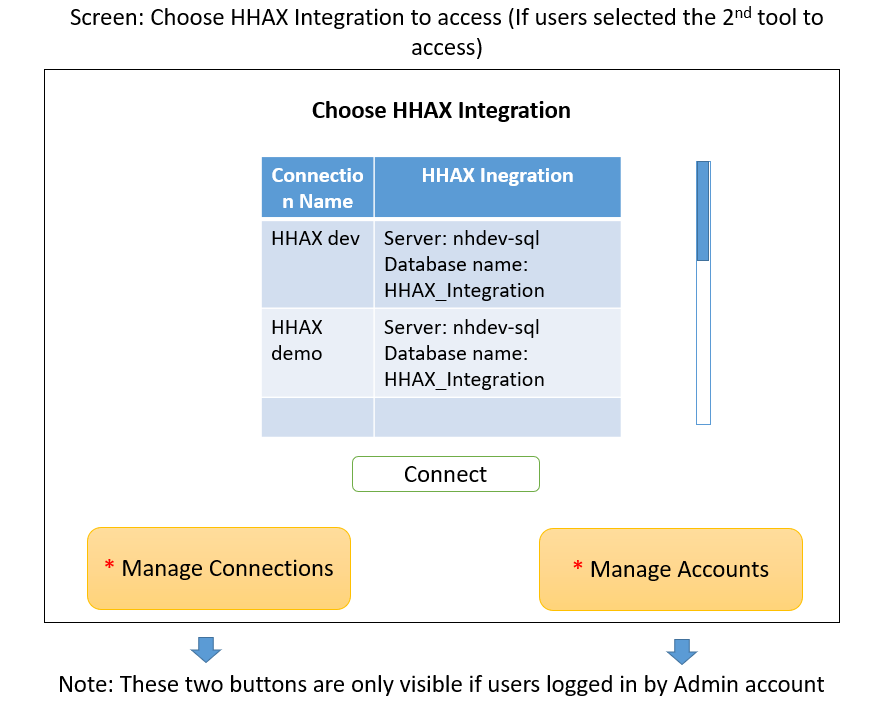


Figure 1.4 Screen choose the HHAX Integration database

* Screen 2.4: Manage connections to databases.
* From screen 2.3: If the user is Admin, then selected Manage Connections.

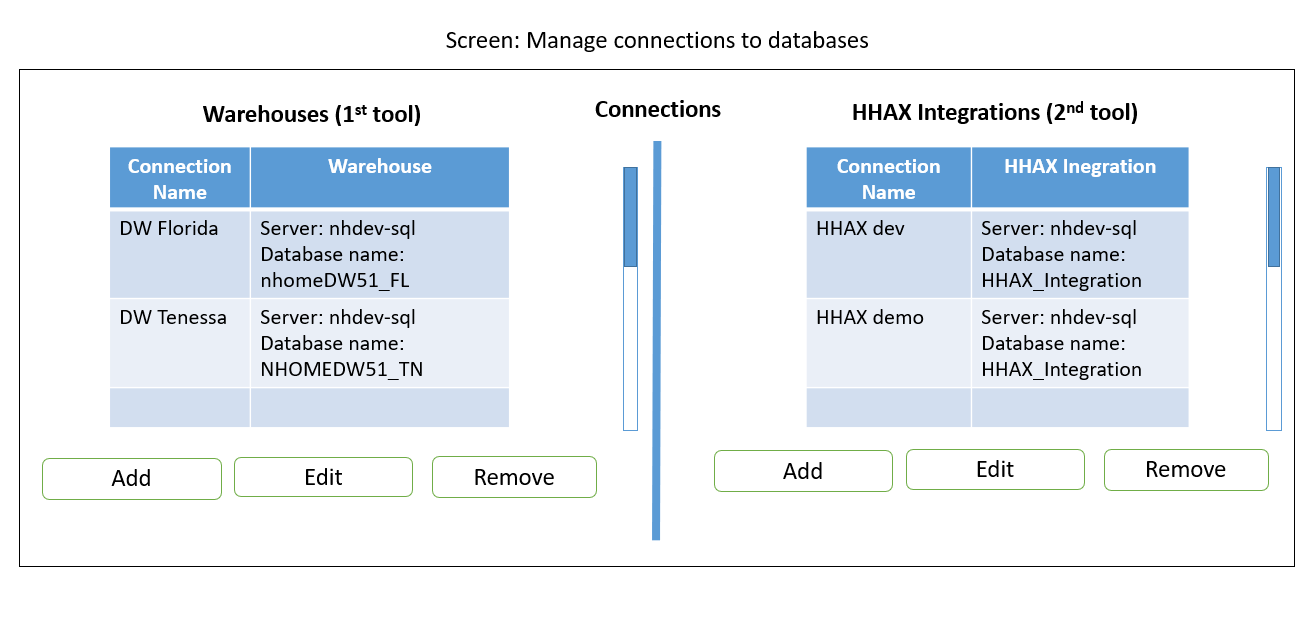


Figure 1.5 Screen manage connections to databases

* If Admin user selected Add/Edit in Warehouse, a popup will be opened like:

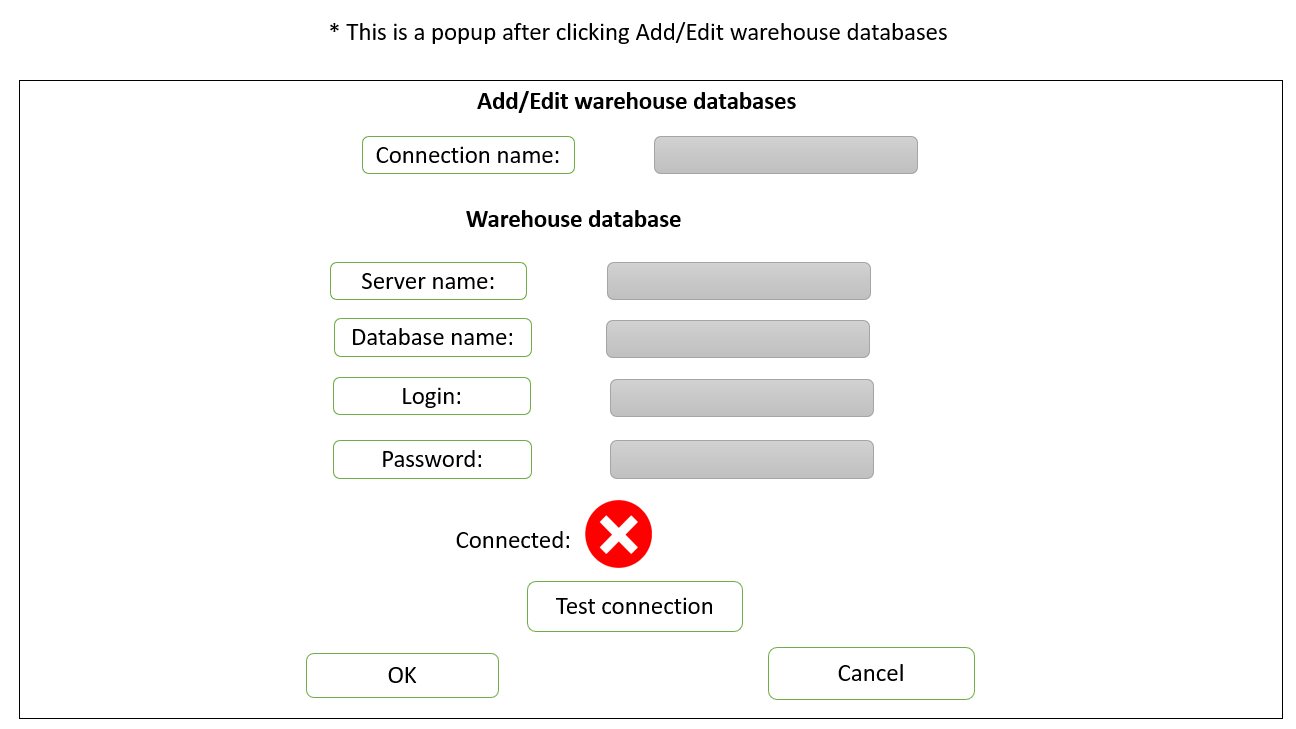


Figure 1.6 Popup Add/Edit warehouse database

* If Admin user selected Add/Edit in HHAX Integration, a popup will be opened like:

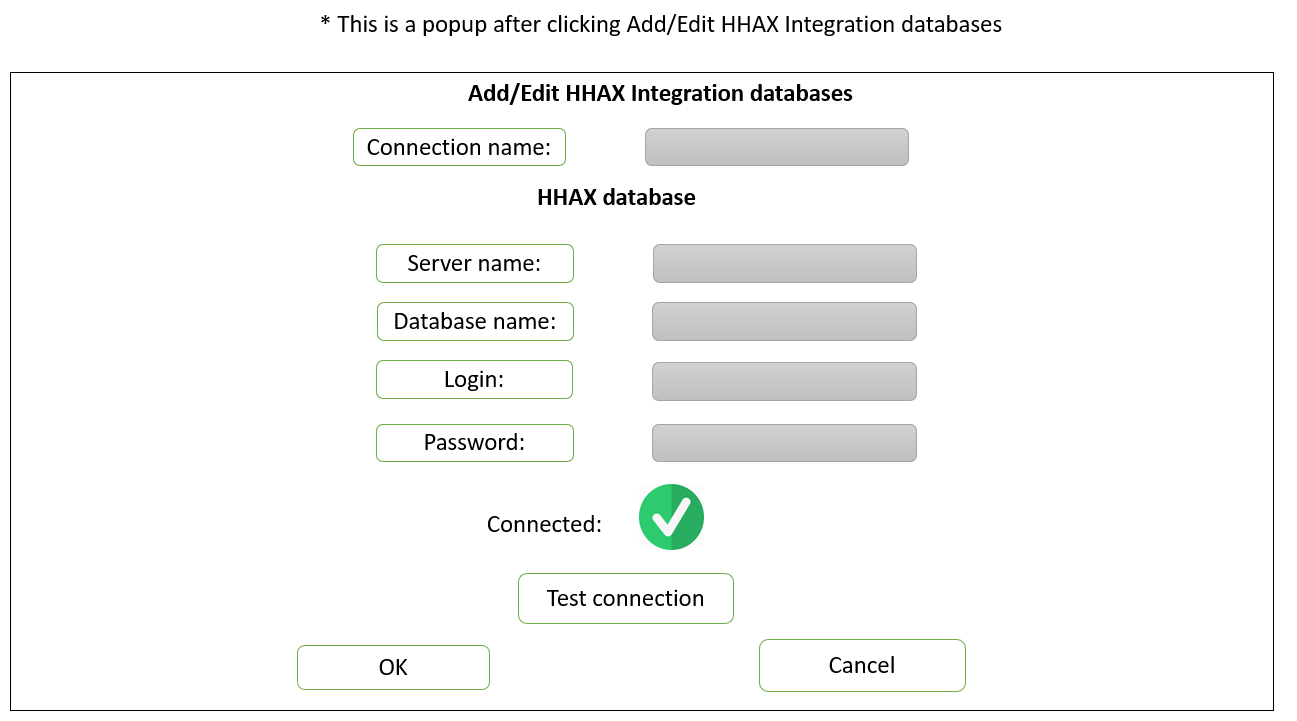


Figure 1.7 Popup Add/Edit HHAX Integration database

* Screen 2.5: Manage accounts.
* From screen 2.3: If the user is Admin, then selected Manage Accounts.

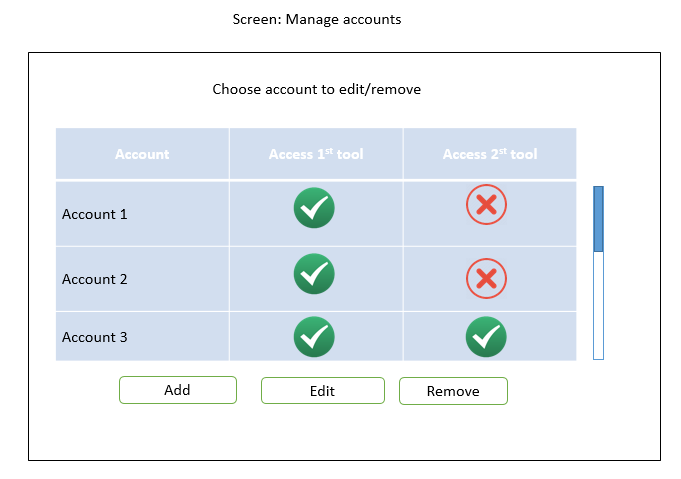


Figure 1.8 Screen manage accounts and set permissions

* When you click Add/Edit an account, a popup will be opened.

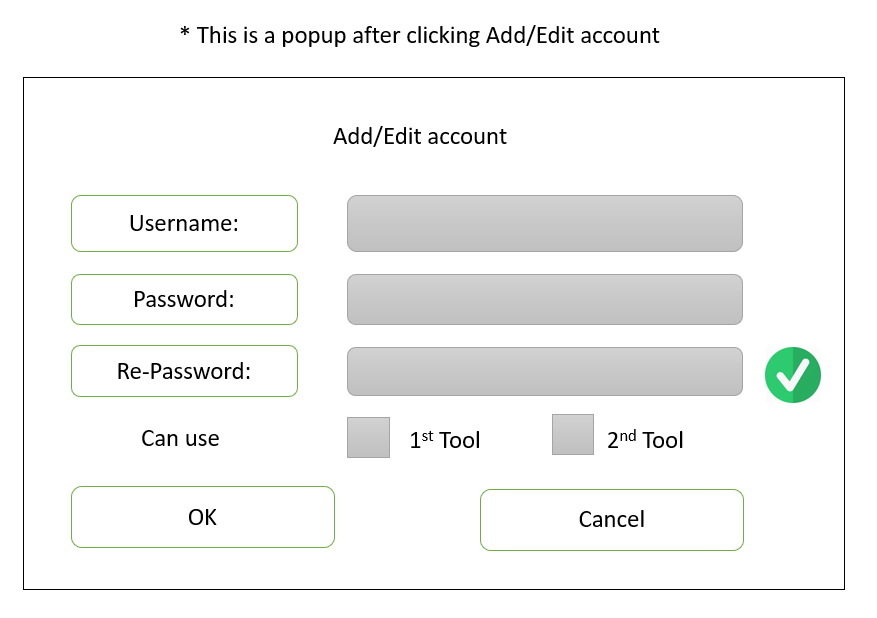


Figure 1.9 Popup Add/Edit accounts

# **The 1st tool - queries the warehouse database**

**Purpose:** A tool that can display member and authorization records for a specific jurisdiction, payer, combination. This tool queries the warehouse accounts in production to perform these lookups.

**Total time:** 96 hours – 2 weeks 2 days.

**Requirements:**

* Must use the valid accounts (the accounts are provided by KMS) and connected VPN to access, data accounts must be encrypted. ***(Included in 2nd chapter)***
* Provide way to set up the connection to the server of both warehouse database and HHAX integration, can be set on UI. ***(Included in 2nd chapter)***
* Have filters for reviewing imported Clients such as: Jurisdiction, First name, Last name, Member ID (to lookup clientOtherID), Admissions Type, ftpFileName, Row updated date range.
  + Query then show the data: Full name, Admission Type, clientOtherID, clientCustomID, diag10Code, rowCreated, rowModified, IsProcessed.
* Have filters for reviewing imported client’s authorization such as: Jurisdiction, ProviderID, First name and last name, Member ID (to lookup clientOtherID), Admissions Type, Services, Authrefno, ftpFileName, Date range of authorization, and Auth last updated (Date range filter).
* Authorization: Display the client’s full name, clientOtherID, admission type and client’s authorizations include: service, event code, authrefno, format, max, begin and end date, diag10Code, authVoided, authShared, rowCreated, rowModified, isProcessed,.

**Screens:** There are 2 screens – in two tabs.

* Screen 3.1: Searching the imported client.

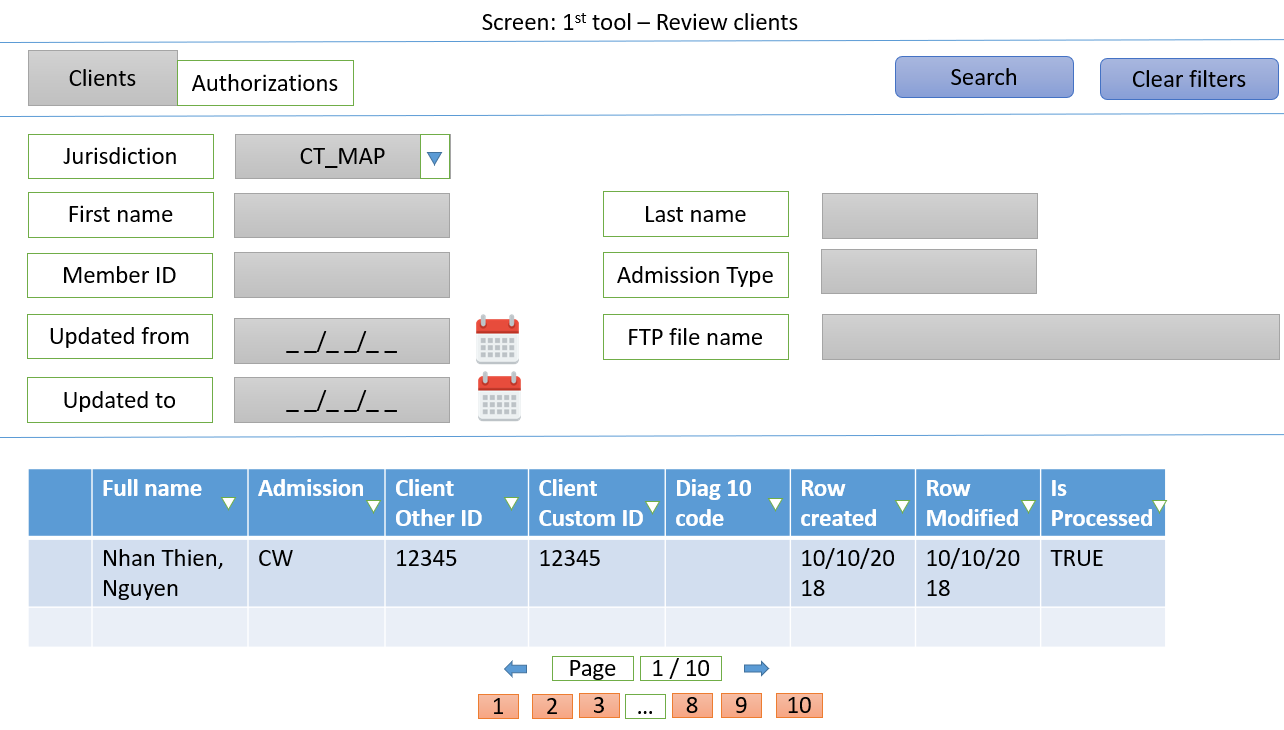


Figure 3.1 Screen reviewing clients in warehouse

|  |  |
| --- | --- |
| **Filter** | **From** |
| Jurisdiction | WarehouseDB/DataImportClient/JurisdictionID. |
| First name | Warehouse DB/DataImportClient/entFirstName. |
| Last name | Warehouse DB/DataImportClient/entLastName |
| Member ID | Warehouse DB/DataImportClient/ClientOtherID |
| Admission Type | Warehouse DB/Admissions\_Types. |
| Update from | Warehouse DB/DataImportClient/RowUpdated. |
| Update to | Warehouse DB/DataImportClient/RowUpdated. |
| FTP File name | Warehouse DB/DataImportClient/FTPFileName. |

*Table 3.1 Filters of reviewing clients - 1st tool*

* Screen 3.2: Searching the imported client’s authorization.

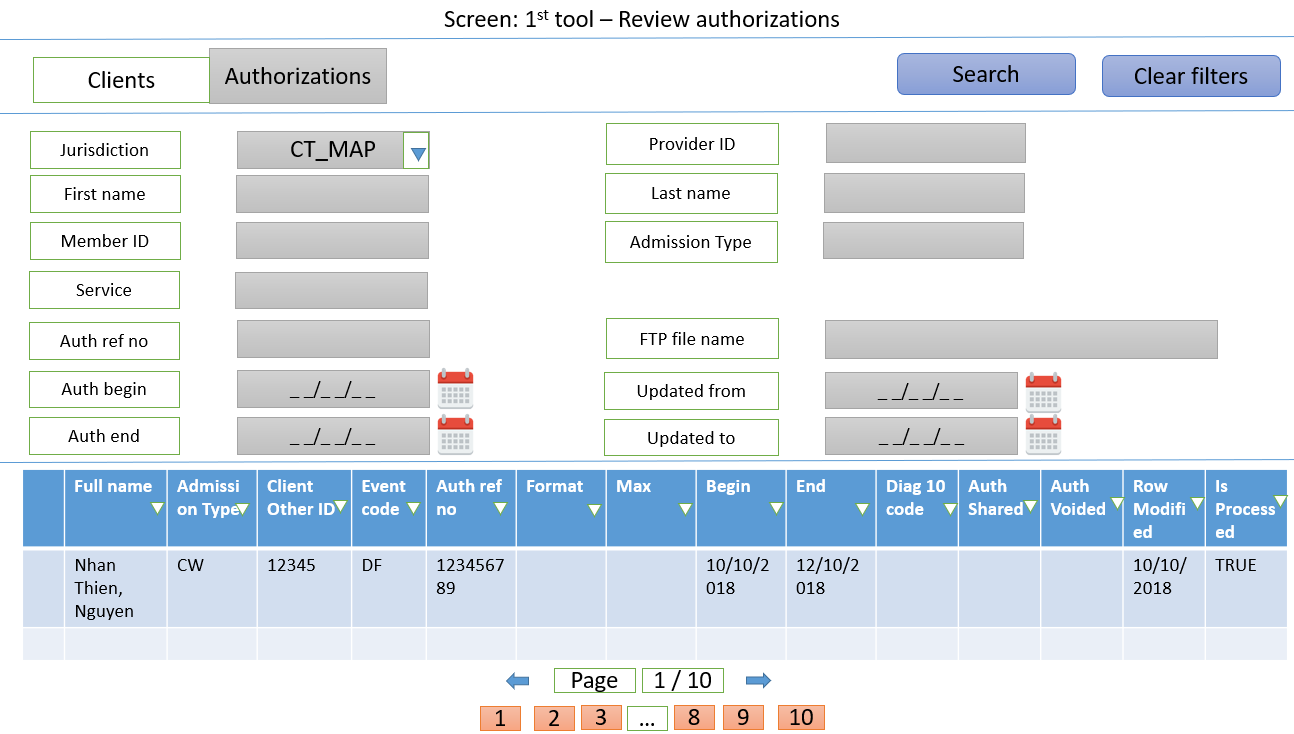


Figure 3.2 Screen reviewing authorizations in warehouse

|  |  |
| --- | --- |
| **Filter** | **From** |
| Jurisdiction | WarehouseDB/DataImport\_Client/JurisdictionID. |
| Provider ID | Warehouse DB/ DataImport\_Authorization/AgencyID |
| First name | Warehouse DB/DataImport\_Client/entFirstName |
| Last name | Warehouse DB/DataImport\_Client/entLastName |
| Member ID | Warehouse DB/ DataImport\_Authorization /ClientOtherID |
| Admission Type | Warehouse DB/ DataImport\_Authorization/adTypeID |
| Service | WarehouseDB/DataImport\_Authorization/ServiceID |
| Auth ref no | WarehouseDB/DataImport\_Authorization/authrefno |
| Auth begin | WarehouseDB/DataImport\_Authorization/authDateFrom |
| Auth end | WarehouseDB/DataImport\_Authorization/authDateTo |
| Update from | WarehouseDB/DataImport\_Authorization/authUpdated |
| Update to | WarehouseDB/DataImport\_Authorization/authUpdated |
| FTP File name | WarehouseDB/DataImport\_Authorization/ftpFileName |

*Table 3.2 Filters of reviewing authorizations in 1st tool*

# **The 2nd tool - queries the HHAX data feed**

**Purpose:** A tool that can display staged data from the HHAX data feed. This provides the ability to review inbound member and authorization database.

**Total:** 64 hours – 1 week 3 days.

**Requirements:**

* Must use the valid accounts (the accounts are provided by KMS) and connected VPN to access, data accounts must be encrypted. ***(#Included in the 2nd chapter***)
* Have filters for reviewing client: Agency Name, Client first and last name , Patient ID, Admission ID, Patient status, MR Number, Inserted date range, Modified date range.
  + Query then show the records include: Patient ID, Patient’s full name, Admission ID, MR Number, Patient status, Discharge Date, Created date, Modified date, Invalid Data.
* Have filters for reviewing Patient’s authorization such as: Agency Name, Patient first & last name, Service, Admissions ID, MR Number, Authorization ID, Authorization Number, Date range of authorization, Inserted date range and Modified date range.
  + Query then show the records of authorizations group by Patient: Patient full name, Admission ID, MR Number, Authorization ID, Authorization Number, Service Type, Billing Service Code, Begin date, End date, Modified date and Invalid Data.

**Screens:** there are 2 screens – 2 tabs. They all are responses from HHAX to SANDATA.

* Screen 4.1: Search for Patients.



Figure 4.1 Screen review Patients in HHAX responses

|  |  |
| --- | --- |
| **Filter** | **From** |
| Agency | HHAX/Agency\_Config/AgencyName |
| First name | HHAX/Patient\_Demog/First\_Name |
| Last name | HHAX/Patient\_Demog/Last\_Name |
| Patient ID | HHAX/Patient\_Demog/Patient\_ID |
| MR Number | HHAX.Patient\_Demog.MR\_Number |
| Admission ID | HHAX/Patient\_Demog/Admission\_ID |
| Status | HHAX/Patient\_Demog/Patient\_Status |
| Inserted date from | HHAX/Patient\_Demog/Datetime\_Inserted |
| Inserted date from | HHAX/Patient\_Demog/Datetime\_Inserted |
| Modified date from | HHAX/Patient\_Demog/Modified\_date |
| Modified date to | HHAX/Patient\_Demog/Modified\_date |

Table 4.1 Filters of reviewing patients in 2nd tool.

* Screen 4.2: Search for Patient’s authorizations.

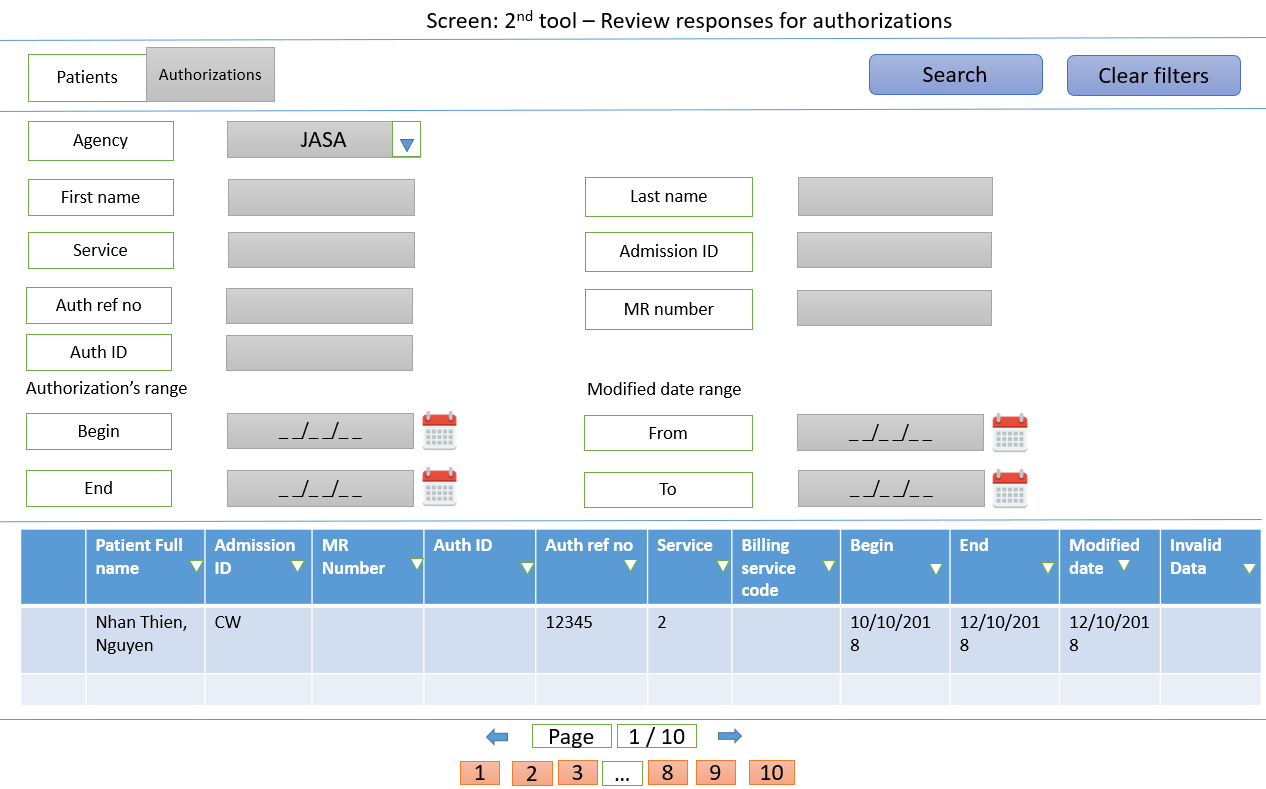


Figure 4.2 Screen review authorizations in HHAX responses

|  |  |
| --- | --- |
| **Filter** | **From** |
| Agency | HHAX/Agency\_Config/AgencyName |
| First name | HHAX/Patient\_Demog/First\_Name |
| Last name | HHAX/Patient\_Demog/Last\_Name |
| Patient ID | HHAX/Patient\_Authorizations/Patient\_ID |
| MR Number | HHAX.Patient\_Demog.MR\_Number |
| Admission ID | HHAX/ Patient\_Authorizations/Admission\_ID |
| Service | HHAX/ Patient\_Authorizations/Service\_Type |
| Auth ID | HHAX/ Patient\_Authorizations/Authorization\_ID |
| Auth ref no | HHAX/ Patient\_Authorizations/Authorization\_Number |
| Auth begin | HHAX/ Patient\_Authorizations/From\_Date |
| Auth end | HHAX/ Patient\_Authorizations/End\_Date |
| Modified date from | HHAX/ Patient\_Authorizations/Modified\_Date |
| Modified date to | HHAX/ Patient\_Authorizations/Modified\_Date |

Table 4.2 Filters of reviewing authorizations in 2nd tool