



ClickSWITCH Integration

ClickSWITCHPack.dnaxp
DNAapp ID bbd03419-e94a-4aab-98fa-136b90aac838

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Overview:

This DNAapp is a ClickSWITCH integration with the DNA core system. ClickSWITCH is a 3rd party system that enables Financial Institutions to help their new customers/members switch their incumbent/current ACH and recurring payments to the new Financial Institution as part of the onboarding process.

ClickSWITCH connects to a Financial Institution's system via multiple channels (core, online banking) and after retrieving data from the Financial Institution's system, takes the Financial Institution's representative or customer/member through a series of interview-type screens that then allow the customer's/member's ACH or recurring payments at other Financial Institutions to be switched to the new Financial Institution.

ClickSWITCH can handle the switching for direct deposit, recurring payments, etc., through this process versus the customer/member having to do this on their own. By embedding this into the new customer/member account onboarding process as an option, this allows the Financial Institution to offer enhanced service by helping new customers/members switch information from their current/incumbent accounts to the Financial Institution more easily.

Key Benefits:

- Allows ability to launch ClickSWITCH from the new ClickSWITCH screen within DNA.
- The new ClickSWITCH screen can be reached thru the Deposit Account Maintenance screen or thru the ClickSWITCH wizard.
- Provides the User with a preview screen prior to beginning the ClickSWITCH interview process to ensure all the needed information is available from the DNA side.
- Application exception messages are provided to help the User identify any missing information so it can be corrected prior to the interview process.
- Allows ability to pass the required information to ClickSWITCH so the Financial Institution does not have to re-enter all required information in ClickSWITCH.
- Allows ability to utilize the Financial Institution's API key or the Employee's Key.
- Utilizes standard DNA authorizations practices.
- Allows ability to pass Canadian addresses.

Processing:

The ClickSWITCH screen will allow the User the ability to pass information to ClickSWITCH and perform the necessary actions within ClickSWITCH for the account that was accessed thru the Deposit Account Maintenance screen.

The new ClickSWITCH Auth (CLSW) authorization item is required to access the ClickSWITCH Keys screen and the ClickSWITCH screen. The ClickSWITCH screen can be accessed from the Deposit Account Maintenance screen or from Step 4 of the ClickSWITCH wizard. The applicable permissions must be granted to access the screens.

The ClickSWITCH Decision user field and user field values are **not** created with the installation of this application.

If the Financial Institution wishes to make use of the Decision user field (with the Userfield Required YN parameter set to Yes), they must manually create the ClickSWITCH Decision **account** user field as defined below.

User Field Code	Description	Data Type	Person	Organization	Account	Property	Override	External Entity
CSWD	ClickSWITCH Decision	String	No	No	Yes	No	No	No

User Field Code	User Field Value	Value Text
CSWD	A	Member Accepted
CSWD	D	Member Declined

The account user field created for the ClickSWITCH Decision must have values of A and D as shown above in the User Fields screen shot. The descriptions can be different, but the **values must be the same** as they are hard-coded into this application.

The new user field code must then be entered into the ClickSWITCH Decision Institution level calculation variable.

The Financial Institution **must assign** the new user field to the eligible products included in the ClickSWITCH process.

Institution API Key and Employee Keys

The Financial Institution must set the API key from ClickSWITCH for their organization on the ClickSWITCH Keys screen. The API key must be set for the Financial Institution prior to using the features of this application. If the Financial Institution utilizes employee tracking, then a separate employee key must be set for each employee. The employee key is in addition to the API key for the Financial Institution. The API key for the Organization is required even if utilizing employee keys to track individual employees' access to ClickSWITCH.

Note: The employee key is the External ID field within ClickSWITCH.

Note: The Financial Institution should contact ClickSWITCH to ensure everything is setup within ClickSWITCH. See the Additional Requirements section of this document for details.

If utilizing the employee tracking, then the employee key would be required for each employee who is accessing ClickSWITCH and the record must be created on the ClickSWITCH Keys screen. However, if a record is not created for the employee key on the ClickSWITCH Keys screen and the employee attempts to launch ClickSWITCH from the ClickSWITCH screen, the API key for the institution will be used to access ClickSWITCH.

If the Financial Institution is not utilizing the employee tracking, then a record must be created for the Financial Institution (organization #1) on the ClickSWITCH Keys screen. If this is not set, when a User attempts to launch ClickSWITCH from the ClickSWITCH screen, the following message is displayed “CLICKSWITCHKEY table APIKEY value was not set. Form will now close.”

Note: The above message is displayed when a key is required, has not been created on the ClickSWITCH Keys screen and cannot be found in the CLICKSWITCHKEY table in the EXTN schema.

If the Financial Institution has an API key and each employee has their own employee key, the Financial Institution must set the organization API key on the ClickSWITCH Keys screen first and then create each employee key on the ClickSWITCH Keys screen. The employee can be created manually if the employee key exists in ClickSWITCH or they can create the employee key and ClickSWITCH user automatically from the ClickSWITCH Keys screen.

If the Financial Institution is utilizing the employee tracking and an employee does not have an employee key record on the ClickSWITCH Keys screen, then the Financial Institution API key is used as the default when the employee attempts to launch ClickSWITCH from the ClickSWITCH screen.

To access the ClickSWITCH Keys screen, the User would navigate to Services > Services > Institution > ClickSWITCH API Key to display the ClickSWITCH Keys screen.

The screenshot shows the ClickSWITCH Keys interface. At the top, there's a search criteria section with two radio buttons: 'Person' and 'Organization' (which is selected). To the right of these is a dropdown menu labeled 'Employee' with the text '<- Select Employee ->'. Below this is a table titled 'ClickSWITCH Keys Results' with two columns: 'Entity Name' and 'Key'. The table is currently empty. Underneath the table are three buttons: 'Create', 'Edit', and 'Delete'. Below the buttons is a section titled 'ClickSWITCH Keys Details' with several input fields: 'Entity Number', 'Employee Email', 'Username', 'Entity Name', and 'Key'. At the very bottom of the screen is a footer bar with buttons for 'Close', 'Clear', 'Review', and 'Process'.

The default display is with the Organization radio button selected. The Organization record must be created first, prior to creating the employee key records. The Financial Institution must create the API key for their institution (organization #1). The screen will default with the Organization radio button selected to ensure the API key is set for Organization 1 prior to creating the employee key records.

When the Person radio button is selected, all active person records are displayed in the ClickSWITCH Keys Results.

The screenshot shows the ClickSWITCH Keys interface. At the top, the title is "ClickSWITCH Keys". Below it is a "Search Criteria" section with two radio buttons: "Person" (selected) and "Organization". To the right is an "Employee:" dropdown menu with "JoeX Banker" selected. Below this is a "ClickSWITCH Keys Results" table with two columns: "Entity Name" and "Key". The table contains one row: "JoeX Banker" and "U26771". Below the table are "Create", "Edit", and "Delete" buttons. At the bottom is a "ClickSWITCH Keys Details" section with input fields for "Entity Number:" (26771), "Employee Email:", "Username:", "Entity Name:", and "Key:". At the very bottom are "Close", "Process", and radio buttons for "Close", "Clear", and "Review".

If an employee is then selected from the Employee dropdown, only that record is displayed in the ClickSWITCH Keys Results if there is an existing record.

The screenshot shows the ClickSWITCH Keys interface. At the top, the title is "ClickSWITCH Keys". Below it is a "Search Criteria" section with two radio buttons: "Person" (selected) and "Organization". To the right is an "Employee:" dropdown menu with "Barry Learner" selected. Below this is a "ClickSWITCH Keys Results" table with two columns: "Entity Name" and "Key". The table contains one row: "Barry Learner" and "U1". Below the table are "Create", "Edit", and "Delete" buttons. At the bottom is a "ClickSWITCH Keys Details" section with input fields for "Entity Number:", "Employee Email:", "Username:", "Entity Name:", and "Key:". At the very bottom are "Close", "Process", and radio buttons for "Close", "Clear", and "Review".

If the Financial Institution is utilizing employee tracking for each employee, they must create a record for the employee key on the ClickSWITCH Keys screen for each employee who has been granted access to ClickSWITCH.

Note: The employee key must be created on the ClickSWITCH Keys screen and saved to the CLICKSWITCHKEY table in the EXTN schema to utilize the employee tracking between DNA and ClickSWITCH.

If the employee key has already been created within ClickSWITCH and an employee key assigned, they must create the employee key record manually on the ClickSWITCH Keys screen using the existing username and employee key.

Note: The employee key in ClickSWITCH is set in the External ID field within ClickSWITCH.

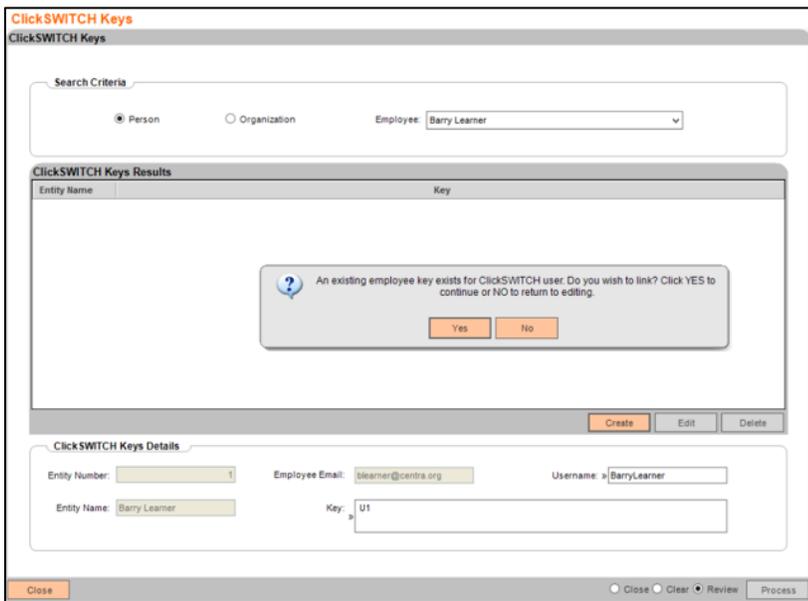
If the employee key has not been created within ClickSWITCH, the employee key can be created automatically thru the ClickSWITCH Keys screen. The employee key is created and saved to the ClickSWITCH Keys Results grid on the ClickSWITCH Keys screen, a row inserted into the CLICKSWITCHKEY table in the EXTN schema and the employee record is created within ClickSWITCH.

Important Note: The Financial Institution is responsible for linking the existing employee keys (External ID) from ClickSWITCH to the correct employees within DNA.

To create a record for an employee key on the ClickSWITCH Keys screen for an employee with an existing employee key within ClickSWITCH, the User would select the Person radio button and then select an employee from the Employee dropdown.

Once the employee has been selected, the User would then click the Create button to enable the ClickSWITCH Keys Details group box.

Because Barry Learner already exists in ClickSWITCH with a Username of BarryLearner and an employee key of U1, once Barry Learner is selected from the dropdown, the following message is displayed “An existing employee key exists for ClickSWITCH user. Do you wish to link? Click YES to continue or NO to return to editing.”



The screenshot displays the 'ClickSWITCH Keys' interface. At the top, there is a 'Search Criteria' section with radio buttons for 'Person' (selected) and 'Organization', and a dropdown menu for 'Employee' set to 'Barry Learner'. Below this is the 'ClickSWITCH Keys Results' section, which contains a table with columns 'Entity Name' and 'Key'. A modal dialog box is overlaid on the table, containing a question mark icon and the text: 'An existing employee key exists for ClickSWITCH user. Do you wish to link? Click YES to continue or NO to return to editing.' Below the text are 'Yes' and 'No' buttons. At the bottom of the results section are 'Create', 'Edit', and 'Delete' buttons. The 'ClickSWITCH Keys Details' section at the bottom contains input fields for 'Entity Number' (1), 'Employee Email' (blearner@centra.org), 'Username' (BarryLearner), 'Entity Name' (Barry Learner), and 'Key' (U1). At the very bottom of the window are 'Close', 'Clear', 'Review', and 'Process' buttons.

The above message is stating that BarryLearner already exists with an employee key (External ID) of U1 within ClickSWITCH. If the User wants to save the existing values from ClickSWITCH to DNA, they will click the Yes button.

Once selected, the values from ClickSWITCH are returned and the username field is disabled.

The screenshot shows the 'ClickSWITCH Keys' interface. At the top, there is a 'Search Criteria' section with radio buttons for 'Person' (selected) and 'Organization', and a dropdown menu for 'Employee' set to 'Barry Learner'. Below this is a 'ClickSWITCH Keys Results' section with a table that is currently empty. The table has two columns: 'Entity Name' and 'Key'. Underneath the table are 'Create', 'Edit', and 'Delete' buttons. The 'ClickSWITCH Keys Details' section contains several input fields: 'Entity Number' (1), 'Employee Email' (blearner@centra.org), 'Username' (BarryLearner), 'Entity Name' (Barry Learner), and 'Key' (U1). At the bottom right, there are radio buttons for 'Close', 'Clear', and 'Review', and a 'Process' button.

The User would then click the Process button to save the existing values from ClickSWITCH.

This screenshot shows the same 'ClickSWITCH Keys' interface after the 'Process' button has been clicked. The 'ClickSWITCH Keys Results' table now contains one row with 'Barry Learner' in the 'Entity Name' column and 'U1' in the 'Key' column. The 'ClickSWITCH Keys Details' section now has empty input fields for 'Entity Number', 'Employee Email', 'Username', 'Entity Name', and 'Key'. The 'Process' button is now disabled, and the 'Delete' button is highlighted in orange.

Once selected the existing values from ClickSWITCH for the username of BarryLearner and key of U1 are added to the ClickSWITCH Keys Results grid and a row inserted into the CLICKSWITCHKEY table within the EXTN schema.

To create a record for a new employee key and create the employee as a user in ClickSWITCH, the User would select the Person radio button and then select an employee from the Employee dropdown.

The screenshot shows the 'ClickSWITCH Keys' interface. At the top, there is a 'Search Criteria' section with radio buttons for 'Person' (selected) and 'Organization', and a dropdown menu for 'Employee' set to 'Jane Doe'. Below this is a 'ClickSWITCH Keys Results' table with columns for 'Entity Name' and 'Key', which is currently empty. At the bottom of the results table are 'Create', 'Edit', and 'Delete' buttons. Below the results is the 'ClickSWITCH Keys Details' form with fields for 'Entity Number', 'Employee Email', 'Username', 'Entity Name', and 'Key'. The 'Process' button is visible at the bottom right.

The User would then click the Create button to enable the ClickSWITCH Key Details group box.

This screenshot shows the same interface as above, but with the 'ClickSWITCH Keys Details' form populated. The 'Entity Number' field contains '27350', 'Employee Email' contains 'jdoe@anywhere.org', 'Username' contains 'JaneDoe', 'Entity Name' contains 'Jane Doe', and 'Key' contains 'U27350'. The 'Process' button is now highlighted in orange.

The Username defaults with the employee first name and last name concatenated and the Key field defaults with U and the employee person number. In the example above the record is being created for Jane Doe who is person number 27350. The screen defaults to JaneDoe and U27350, respectively.

The User can then leave the default values for the Username and Key to create an employee record with that username and employee key in DNA and ClickSWITCH or then can enter a different value for the Username and/or Key.

The screenshot shows the 'ClickSWITCH Keys' interface. At the top, there is a 'Search Criteria' section with radio buttons for 'Person' (selected) and 'Organization', and a dropdown menu for 'Employee' set to 'Jane Doe'. Below this is a 'ClickSWITCH Keys Results' table with two columns: 'Entity Name' and 'Key'. The table is currently empty. To the right of the table are 'Create', 'Edit', and 'Delete' buttons. Below the table is a 'ClickSWITCH Keys Details' form with the following fields: 'Entity Number' (27350), 'Employee Email' (jdoe@anywhere.org), 'Username' (jdoe@anywhere.org), 'Entity Name' (Jane Doe), and 'Key' (U27350). At the bottom of the form are 'Close', 'Process', and 'Review' buttons.

Note: In the above example, the Username was changed to jdoe@anywhere.org.

Once the Process button is selected, the employee record is saved to the ClickSWITCH Keys Results grid, a row is inserted in the CLICKSWITCHKEY table in the EXTN schema and the employee key is created in ClickSWITCH.

This screenshot shows the same 'ClickSWITCH Keys' interface after the 'Process' button has been clicked. The 'ClickSWITCH Keys Results' table now contains one row with 'Entity Name' 'Jane Doe' and 'Key' 'U27350'. The 'ClickSWITCH Keys Details' form is now empty, with all input fields cleared. The 'Process' button is now disabled, and the 'Review' button is active.

Note: The username and key must be a unique value and not already exist in ClickSWITCH. If the username exists in ClickSWITCH, a message is displayed on the screen.

The below scenarios further explain the steps and actions taken when creating an employee record in DNA and/or in ClickSWITCH.

Scenario #1:

1. Joe Banker has been created in ClickSWITCH with the employeeKey of U26711 and username JoeXBanker, but not yet linked into the DNA CLICKSWITCHKEY table in the EXTN schema.
2. The employee selects Joe Banker from the employee dropdown on the ClickSWITCH Keys screen. The Create button enables.
3. The employee clicks the create button, which auto-populates the Key field with U26711 and username field JoeXBanker (as per standard defaults).
4. At this time, the default employee key is passed with the GET API call to ClickSWITCH to check for an existing employee.
5. The following message is displayed “An existing employee key exists for ClickSWITCH user. Do you wish to link? Click YES to continue or NO to return to editing.”
6. If the employee clicks Yes, the username field will populate with the UserName that was returned from the GET API call which may or may not match the default value. In this scenario, the default username does match the username that was set up in ClickSWITCH. Clicking process will add the employee to the CLICKSWITCHKEY table in the EXTN schema, but nothing else is passed to ClickSWITCH since it already exists.
7. If the employee clicks No, the Key field will clear, and the username/key fields will be enabled.
 - a. If the employee types in a different key but leaves the default username (JoeXBanker) then clicks process, then the message will appear (Username already exists), and the employee will be returned to the screen.
 - b. If the employee types in a different key and changes the default username (JoeXBanker) to JoeXBanker1 and then clicks process, then a new employee is created in ClickSWITCH and linked to JoeXBanker in DNA in the CLICKSWITCHKEY table in the EXTN schema.

Scenario #2:

1. Joe Banker has not been created yet in either ClickSWITCH or DNA.
2. The employee selects Joe Banker from the employee dropdown on ClickSWITCH Keys screen. The Create button enables.
3. The employee clicks the Create button, which auto-populates the Key field with U26711 and username field JoeXBanker (as per standard defaults).
4. At this time, the default employee key is passed to a GET API call to ClickSWITCH to check for an existing employee.
5. No message will appear, and Process button is enabled.
6. Employee clicks the Process button.
8. The customer PUT API call creates the user in ClickSWITCH and is linked into DNA CLICKSWITCHKEY table in the EXTN schema.

Scenario #3:

1. Amanda Smith has not been created yet in either ClickSWITCH or DNA.

2. The employee selects Amanda Smith from the employee dropdown on ClickSWITCH Keys screen. The Create button enables.
3. The employee clicks the Create button, which auto-populates the Key field with U1151 and username field AmandaSmith (as per standard defaults).
4. At this time, the default employee key is passed to a GET API call to ClickSWITCH to check for an existing employee.
5. No message will appear, and process button is enabled.
6. Employee then changes the Key to a new value, in this case U26711. The employee key U26711 is linked to a user in ClickSWITCH called JoeXBanker, but no link exists in the DNA CLICKSWITCHKEY table in the EXTN schema.
7. User tabs out of Key field.
8. At this time, the default employee key is passed with the GET API call to ClickSWITCH to check for an existing employee.
9. The following message is displayed “An existing employee key exists for ClickSWITCH user. Do you wish to link? Click YES to continue or NO to return to editing.”
10. If employee clicks Yes, the username field will populate with the UserName that was returned from the GET API call which may or may not match the default value. In this case, the default username does not match the username that was set up in ClickSWITCH. Clicking process will add the employee to the CLICKSWITCHKEY table in the EXTN schema but nothing will be passed to ClickSWITCH since it already exists.

Note: If the User leaves the Username that is returned and changes the value in the Key field and clicks the Process button, the following message is displayed “The username is already taken.”
11. If employee clicks No, the Key field will clear, and the username/key fields will be enabled.

Note: The Financial Institution is responsible for linking the existing employee keys to the correct employees in DNA.

ClickSWITCH Workflows

The ClickSWITCH Screen can be accessed from the Deposit Account Maintenance screen for an existing deposit account or it can be accessed when creating a new deposit account thru the ClickSWITCH wizard.

When utilizing the ClickSWITCH wizard, the ClickSWITCH Decision user field value must be set after creating the account on Step 4 and then once set, the ClickSWITCH screen is displayed when the ClickSWITCH button is selected within Step 4 of the ClickSWITCH wizard.

The basic workflow to access ClickSWITCH from the Deposit Account Maintenance screen is as follows.

The ClickSWITCH screen accessible from the Deposit Account Maintenance screen is utilized in certain cases, where existing Customers/Members may ask to leverage the ClickSWITCH process to help move ACH and payments from accounts still at other Financial Institutions to the current Financial Institutions accounts. To support those instances, there is a new menu item and

new screen based on the Deposit Account Maintenance screen that allows this, so the Financial Institution can launch the ClickSWITCH process from a current account.

The basic workflow to access ClickSWITCH from the Deposit Account Maintenance screen is as follows:

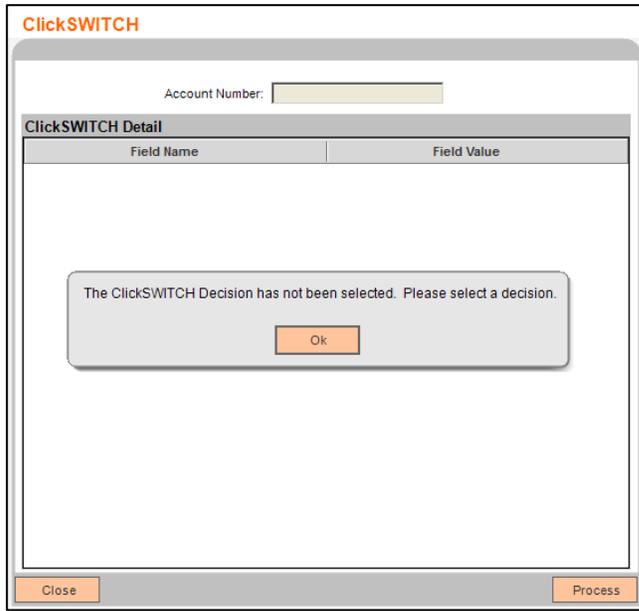
1. The User would navigate to Services > Relationships > Maintenance > Deposit Accounts to display the Deposit Account Maintenance screen.
2. Enter Account Number and hit the Tab key to populate the account data.

The screenshot shows the 'Deposit Account Maintenance' interface. At the top, there are tabs for 'Maintenance', 'Additional', 'Services', 'Inquiries', 'Messaging', and 'Monetary'. The 'Maintenance' tab is active. The main area contains several input fields and checkboxes. The 'Account Number' field is populated with '570211953'. Other fields include 'Major' (Checking), 'Minor' (Totally Free Checking), 'Branch' (Crown Colony Branch), 'Ownership Type' (Joint OR), 'Interest Rate' (0.00000), 'Statement Account Number', 'Retirement Plan Number', 'Funds Source', 'Valid' (Yes), 'Passbook Account', 'Draw From', 'Transaction', 'Positive Pay Account', 'Reg E OD Opt-In', 'Account Description', 'Hold Account', 'Account Officer', and 'Close Reason'.

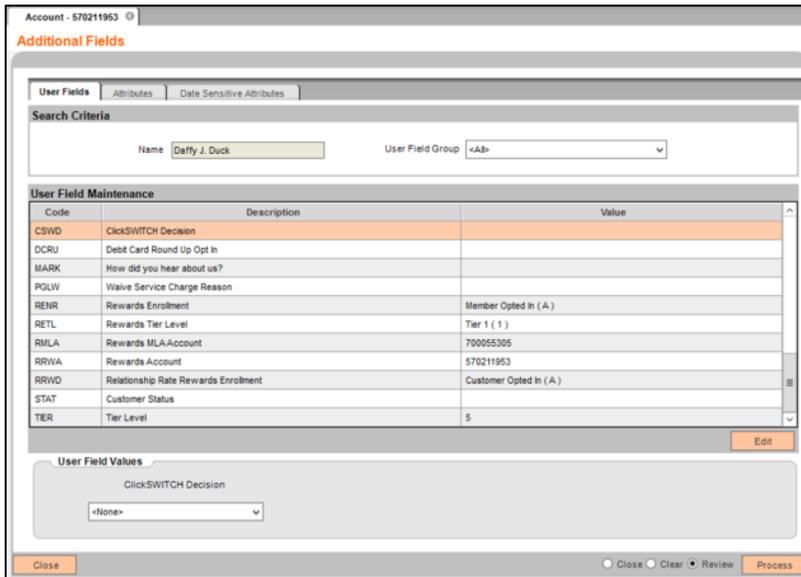
3. They would then access the new ClickSWITCH screen by selecting the Maintenance menu and then selecting the ClickSWITCH sub menu.

This screenshot shows the same 'Deposit Account Maintenance' interface, but with a sub-menu open on the left side. The sub-menu items are 'Access Services', 'Account Fields', 'ACH Transaction Limits', 'ClickSWITCH', 'Combined Statement', and 'Cycles'. The 'ClickSWITCH' item is highlighted. The 'Account Number' field now shows '70211953'. The rest of the interface remains the same as in the previous screenshot.

4. If the ClickSWITCH Auth (CLSW) authorization item was not assigned and permissions granted to the User, they would get the standard DNA authorization error messages.
5. If the ClickSWITCH Decision user field does not have a value of Member Accepted (A) or Member Declined (D) and the User attempts to access the ClickSWITCH screen, the following message is displayed "The ClickSWITCH Decision has not been selected. Please select a decision."



6. The User would click the Ok button to close the screen.
7. Navigate to Maintenance > Account Fields to update the ClickSWITCH Decision user field.



8. Highlight the ClickSWITCH Decision, click the Edit button and select the Member Accepted value.

Account - 67921993

Additional Fields

User Fields | Attributes | Data Sensitive Attributes

Search Criteria
Name: Daffy J. Duck | User Field Group: +AB-

Code	Description	Value
CSWID	ClickSWITCH Decision	Member Accepted (A)
DCRD	Debit Card Round Up Opt In	
WABK	How did you hear about us?	
PQJIV	Waive Service Charge Reason	
RENK	Rewards Enrollment	Member Opted In (A)
RETL	Rewards Tier Level	Tier 1 (1)
RMLA	Rewards MLA Account	700055305
RRWA	Rewards Account	67921993
RRWD	Relationship Rate Rewards Enrollment	Customer Opted In (A)
STAT	Customer Status	
TER	Tier Level	5

User Field Values
ClickSWITCH Decision: Member Accepted

Buttons: Close, Clear, Review, Process

9. Click Process.
10. Click the Close button to return to the Deposit Account Maintenance screen.
11. Select ClickSWITCH from the Maintenance sub menu.
12. Once accessed, the screen is displayed with the required values.

ClickSWITCH

ClickSWITCH Detail

Field Name	Field Value
Customer Key	27199
Email	spam@spam.spam
Phone Number	(407) 654-5064
Account Holder	Jennifer Ann Miller
Account Number	700031389
Routing	211170156
Major Code	CK
Minor Description	Money Market Checking
Address Line 1	501 Main St
Address Line 2	
Address Line 3	
City	Winter Garden
State	FL
Zip	34787
Country	USA

Joint Owner: <- Select Joint Owner ->

Buttons: Close, Submit

If the “Multiple Accounts YN” calculation variable is set to Yes, the Additional Account List is displayed. By checking the checkboxes for several accounts, more than one account can be submitted to ClickSWITCH at the same time.

Note: The checkbox for the account currently being maintained is checked by default.

The screenshot shows the ClickSWITCH interface. At the top left, the text "ClickSWITCH" is displayed in orange. Below it is a section titled "ClickSWITCH Detail" containing a table with two columns: "Field Name" and "Field Value". The table lists various fields such as Customer Key, Email, Phone Number, Account Holder, Account Number, Routing, Major Code, Minor Description, Address Line 1, Address Line 2, Address Line 3, City, State, Zip, and Country. The "Email" field is highlighted in orange. Below the table is a dropdown menu for "Joint Owner" with "Dawn Johnson" selected. Underneath is another section titled "Additional Account List" with a table containing columns for "All", "Account Number", and "Account Description". The "All" column has a checkbox, and the "Account Description" column has a checkmark. The table lists one account with the number "700031389" and the description "Checking Money Market Checking". At the bottom of the interface are two buttons: "Close" and "Submit".

Field Name	Field Value
Customer Key	27199
Email	
Phone Number	(407) 654-5064
Account Holder	Jennifer Ann Miller
Account Number	700031389
Routing	211170156
Major Code	CK
Minor Description	Money Market Checking
Address Line 1	501 Main St
Address Line 2	
Address Line 3	
City	Winter Garden
State	FL
Zip	34787
Country	USA

All	Account Number	Account Description
<input checked="" type="checkbox"/>	700031389	Checking Money Market Checking

13. If the Field Value is blank, the Field Name will display in “red” font to alert the User that there is missing information that is required.

Note: The Address Line 2 and Address Line 3 are not required fields, however, if there is data for those two items, the values would be displayed on the screen and passed to ClickSWITCH.

Note: The minimum address line number displays in the Address Line 1 field value, then next minimum address line number displays in Address Line 2 and the same for Address Line 3.

14. If the User attempts to click the Submit button when there is missing data, a message is displayed “The missing data must be updated prior to submitting data. Please update the data fields and try again.”

ClickSWITCH

ClickSWITCH Detail

Field Name	Field Value
Customer Key	2474
Email	
Phone Number	(203) 555-6605
Account Holder	Max D. Johnson
Account Number	350155747
Routing	211170156
Major Code	SAV
Minor Description	Statement Savings
Address Line 1	7 Effervacious Ln.
Address Line 2	
Address Line 3	
City	Bristol
State	CT
Zip	06010
Country	USA

Joint Owner: <- Select Joint Owner ->

The missing data must be updated prior to submitting. Please update the data fields and try again.

15. The User must then go to the person record and update the value.
16. Once the value has been updated, the User would return to the screen and all Field Names should be in black font and the Field Values should be displayed.

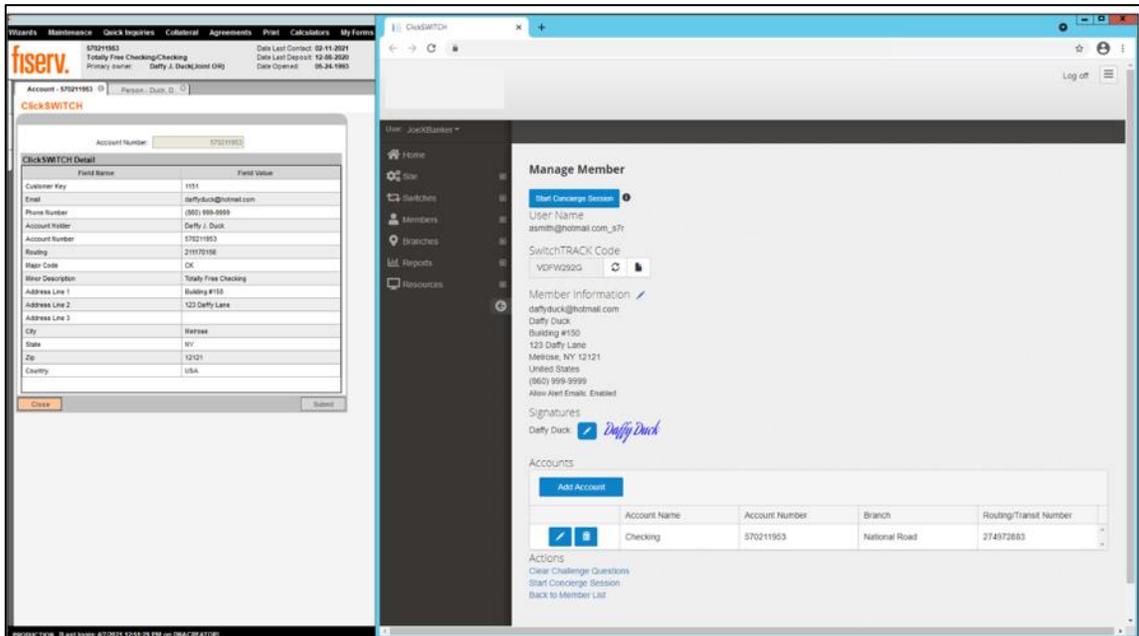
ClickSWITCH

ClickSWITCH Detail

Field Name	Field Value
Customer Key	27199
Email	spam@spam.spam
Phone Number	(407) 654-5064
Account Holder	Jennifer Ann Miller
Account Number	700031389
Routing	211170156
Major Code	CK
Minor Description	Money Market Checking
Address Line 1	501 Main St
Address Line 2	
Address Line 3	
City	Winter Garden
State	FL
Zip	34787
Country	USA

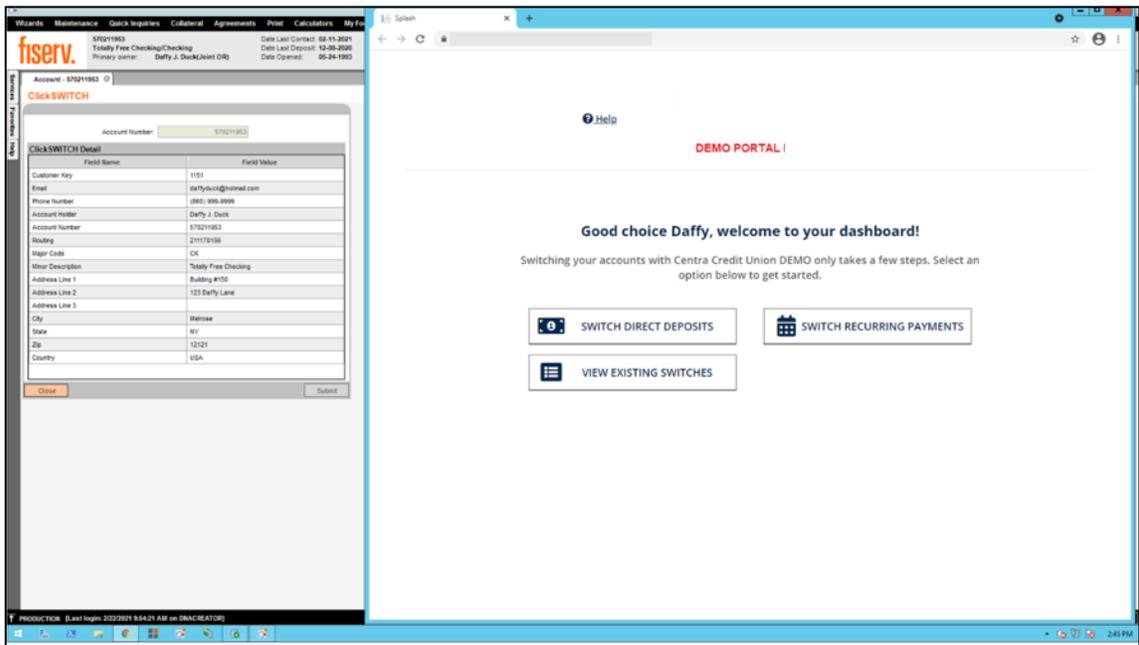
Joint Owner: <- Select Joint Owner ->

17. Once all the data is displayed, the User can then click the Submit button to launch the ClickSWITCH site and pass the required data.
18. When the Submit button is selected, the User is then launched to the ClickSWITCH site based on the value in the ClickSWITCH Link (CSWL) calculation variable which stores the ClickSWITCH URL. The Submit button is disabled when the User is launched to the ClickSWITCH site and remains disabled.
19. If the Employee opening the account has an Employee Key associated with them on the ClickSWITCH Keys screen, ClickSWITCH will display the Manage Member screen, where the employee can manage the switch directly.



Note: The ClickSWITCH Dashboard screen display may differ per Financial Institution.

20. If an employee key is not set for the employee creating the account, when ClickSWITCH is launched, the End User landing page is displayed. An example is shown below.



Note: The ClickSWITCH Dashboard screen display may differ per Financial Institution.

21. The User then completes the necessary actions within ClickSWITCH and then will select the Exit option to close the ClickSWITCH application.

22. The User is returned to the ClickSWITCH screen.

Account - 676211963

ClickSWITCH

Account Number: 676211963

Field Name	Field Value
Customer Key	1151
Email	delfy@icloud.com
Phone Number	(903) 999-9999
Account Holder	Delfy J. Dock
Account Number	676211963
Routing	211170190
Major Code	CK
Minor Description	Totally Free Checking
Address Line 1	Building #150
Address Line 2	123 Delfy Lane
Address Line 3	
City	Melrose
State	NY
Zip	12121
Country	USA

Close Submit

23. The User would then click the Close button to close the ClickSWITCH screen and return to the Deposit Account Maintenance.

24. The User would then click the Close button to close the Deposit Account Maintenance screen.

The basic workflow to access ClickSWITCH thru the ClickSWITCH wizard is as follows.

Note: Workflows may vary per Financial Institution.

1. The User would navigate to Services > Relationships > Wizards > ClickSWITCH



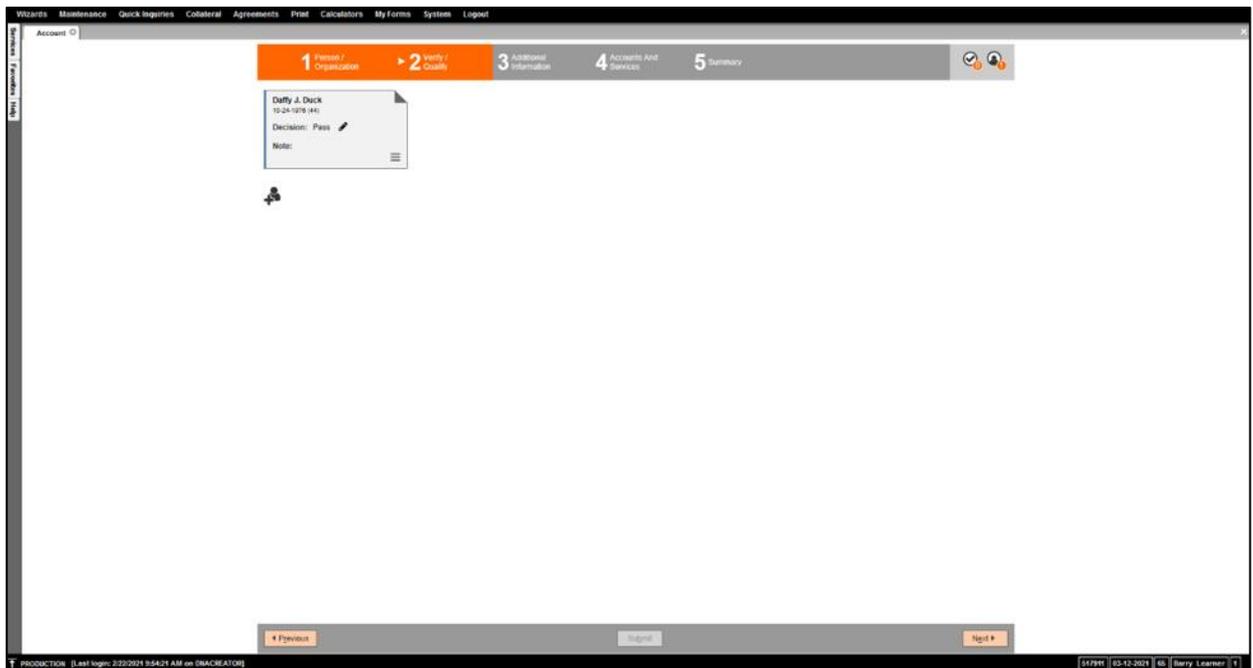
2. Once ClickSWITCH is selected, Step 1 Person/Organization of the ClickSWITCH wizard is displayed.

The screenshot shows the 'Add a Person' form in the ClickSWITCH interface. The form is part of a wizard with five steps: 1. Person / Organization, 2. Verify / Qualify, 3. Additional Information, 4. Accounts And Services, and 5. Summary. The current step is Step 1. The form includes fields for Name (First, Middle, Last, Second Surname, Suffix), Person Type (Customer), Address (USA), ZIP, City, State, Phone (Home, Mobile, Work), Email, Birth Date, ID Type (Unexpired Driver's License), ID Number, Issued By (USA), Issue Date, Expire Date, and Nickname. There are 'Create Another' and 'Next >' buttons at the bottom right.

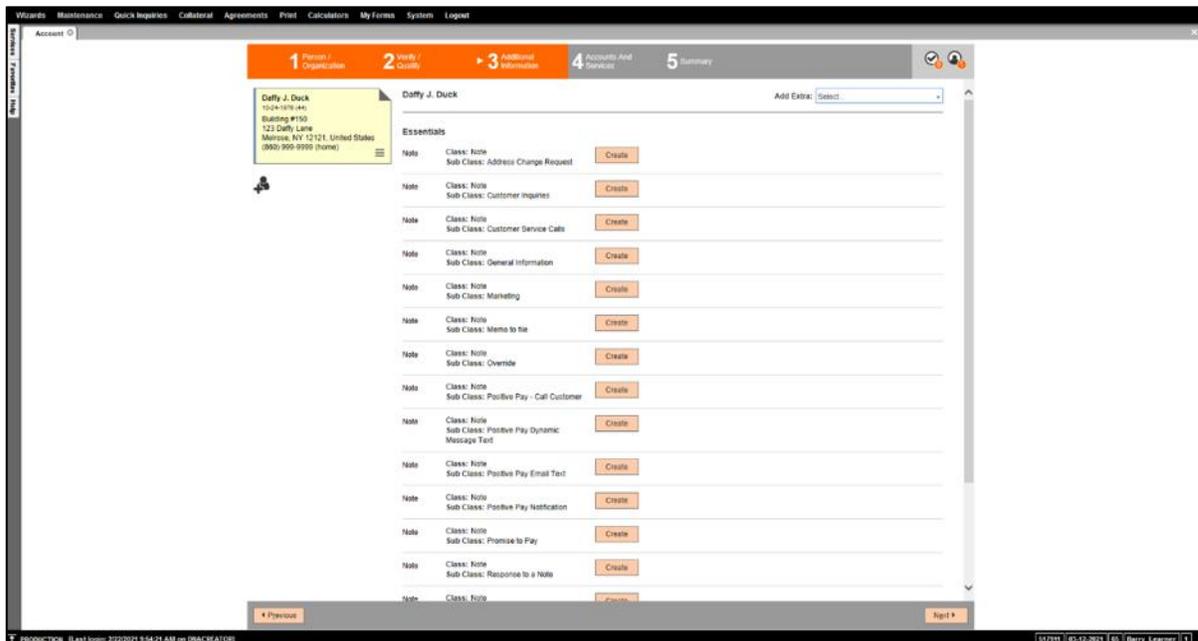
3. The User would enter the information to complete Step 1.

The screenshot shows the 'Edit a Person' form in the ClickSWITCH interface. The form is part of a wizard with five steps: 1. Person / Organization, 2. Verify / Qualify, 3. Additional Information, 4. Accounts And Services, and 5. Summary. The current step is Step 1. The form includes fields for Name (Duffy, J, Duck), Person Type (Customer), Address (123 Duffy Lane, Building #150, USA), ZIP (12121), City (Morse), State (New York), Phone (Home: (800) 999-9999), Email (E Mail Home: duffyduck@hotmail.com), Birth Date (10-24-1976), ID Type (Passport), ID Number (12345678912345678912), Issued By (USA), Issue Date (01-01-2021), Expire Date, and Nickname. There are 'Create Another' and 'Next >' buttons at the bottom right.

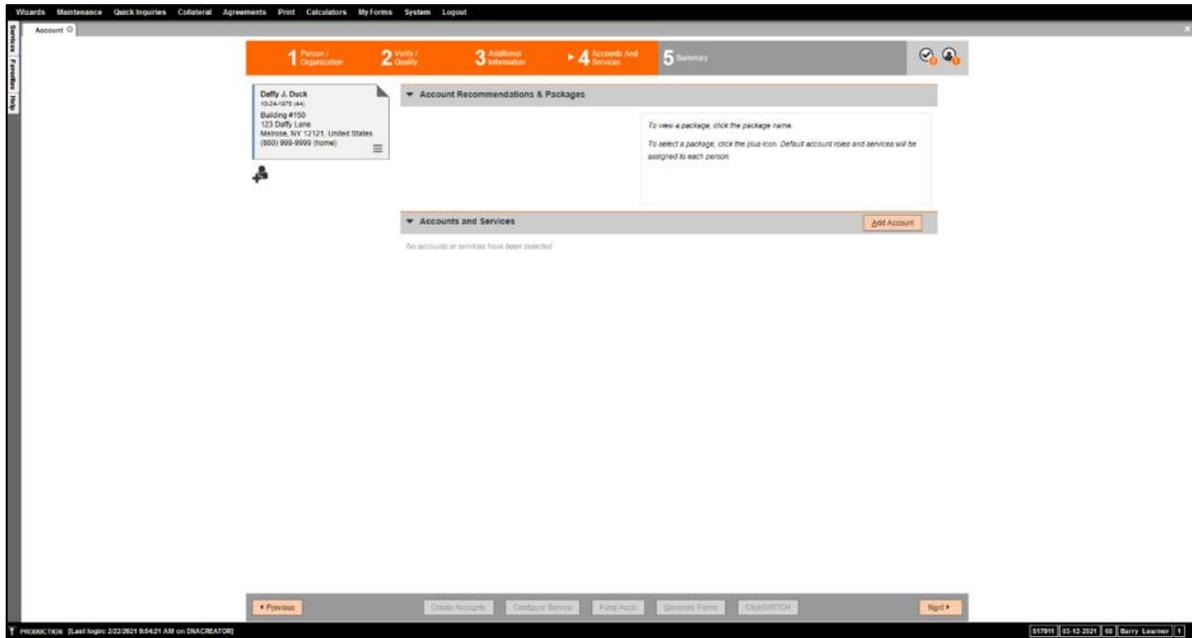
- Click Next to move to Step 2 Verify/Qualify, and enter the information to complete Step 2.



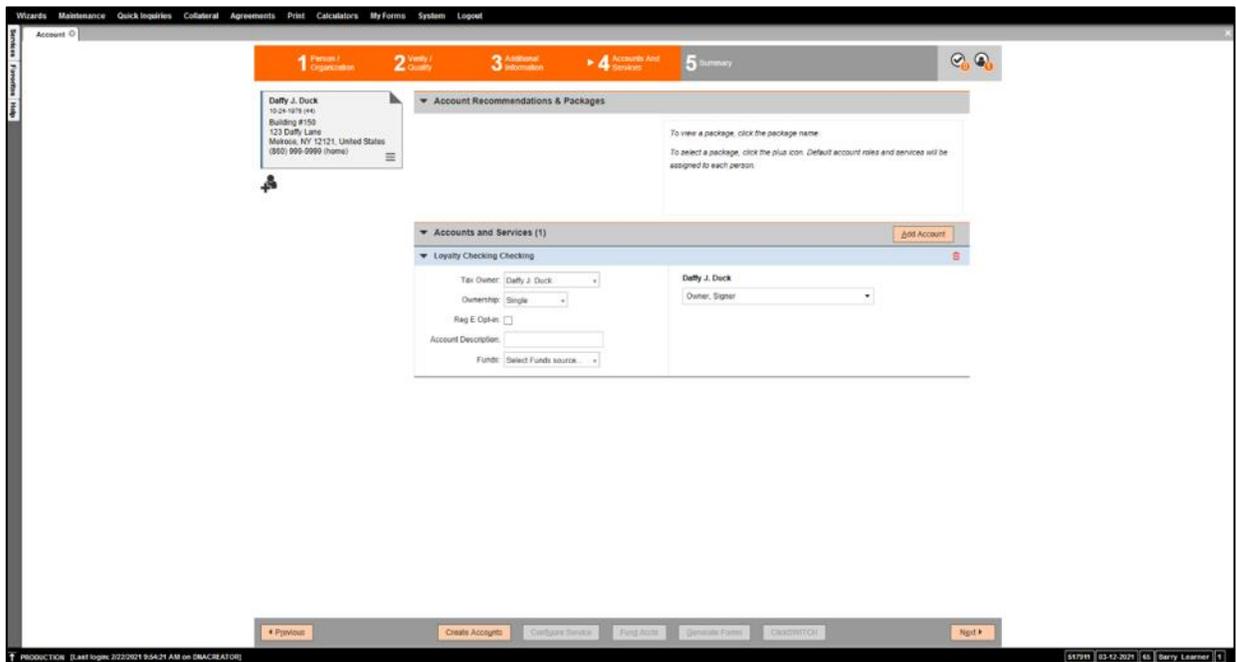
- Click Next to move to Step 3 Additional Information.



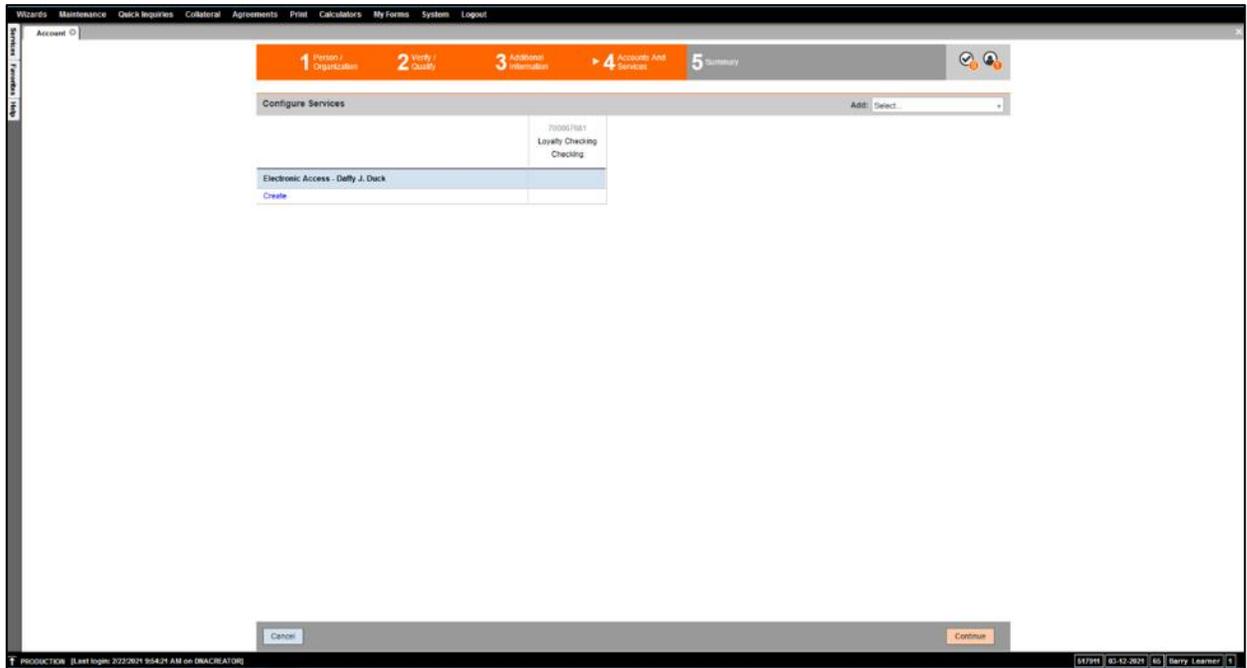
- The User would enter the information to complete Step 3.
- Click Next to move to Step 4 Accounts and Services.



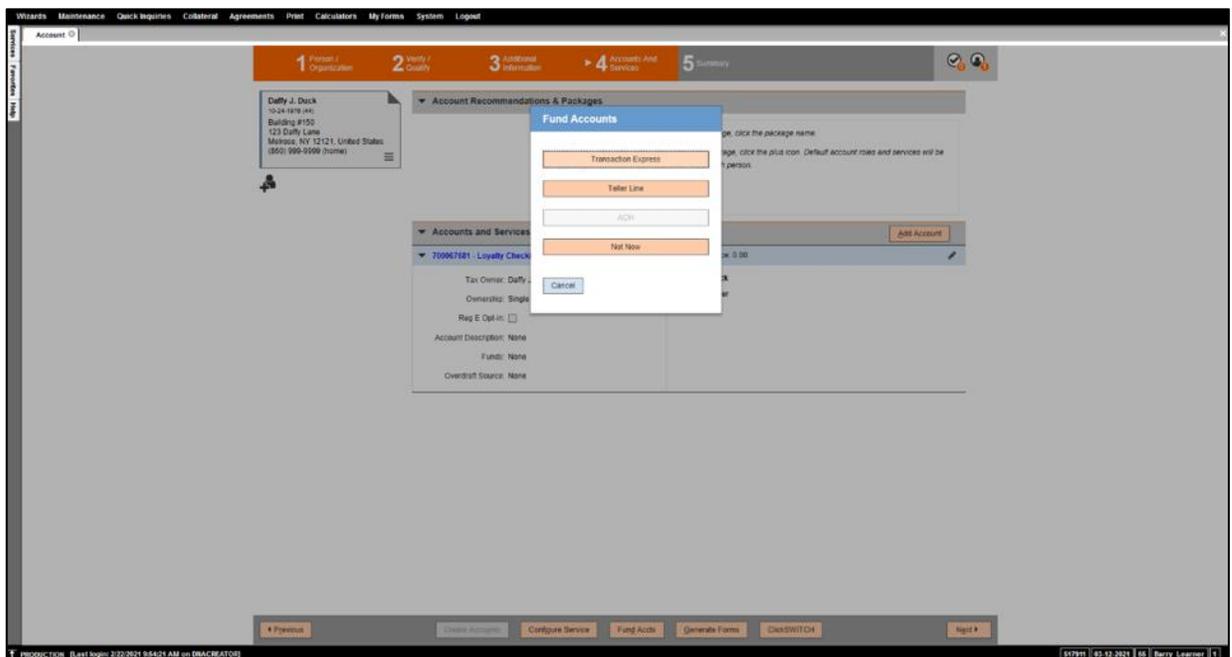
- The User would select the Add Account button, select the Major and Minor and click the Add Account button to create the account.



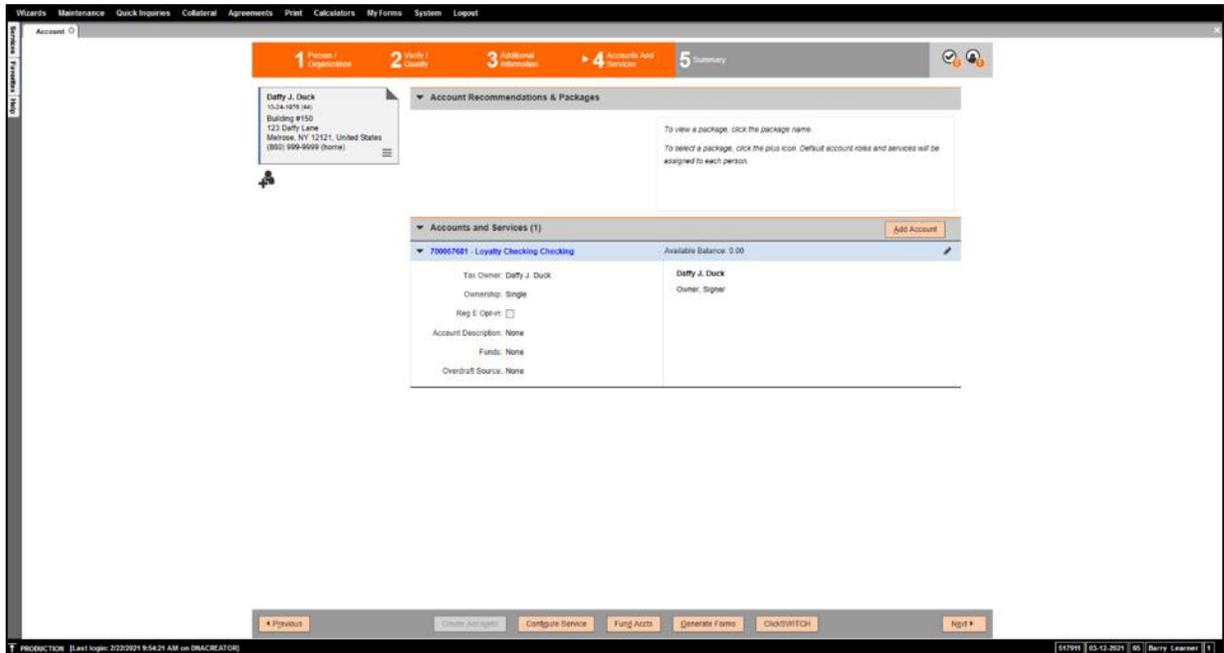
- Click Next to save the changes and display Configure Services.



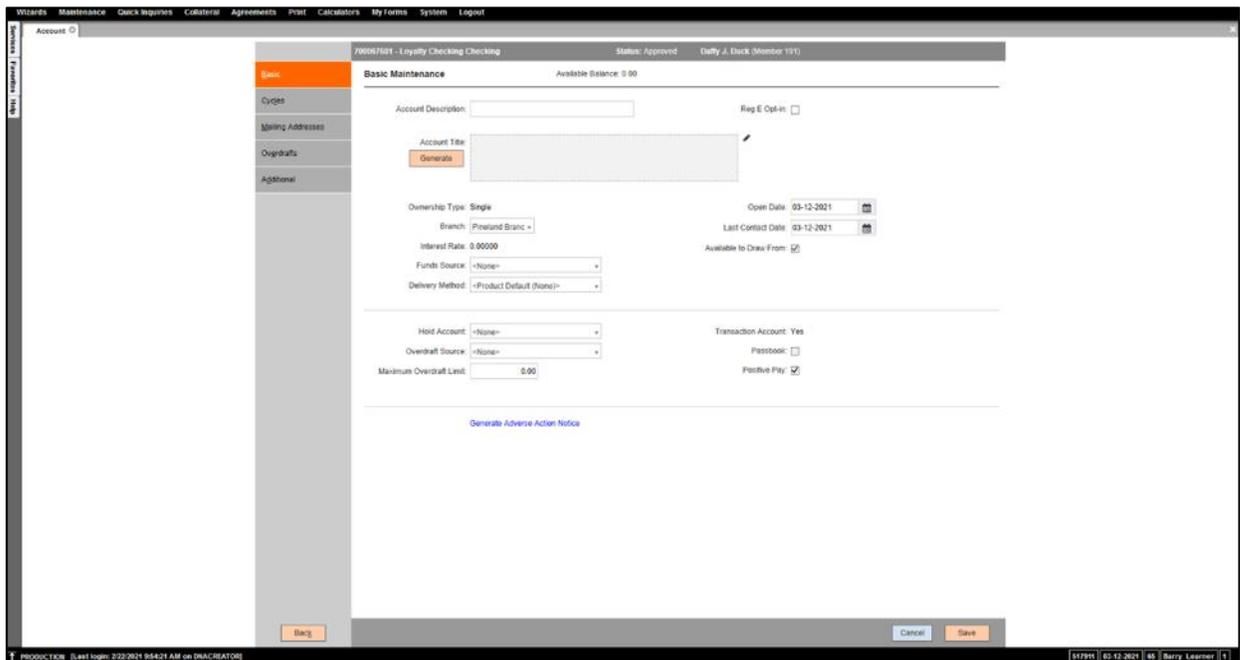
10. Complete the setup for any services and click Continue to save the changes and return to Accounts and Services.



11. Click Cancel to cancel from the Funds and Accounts screen if pops up.

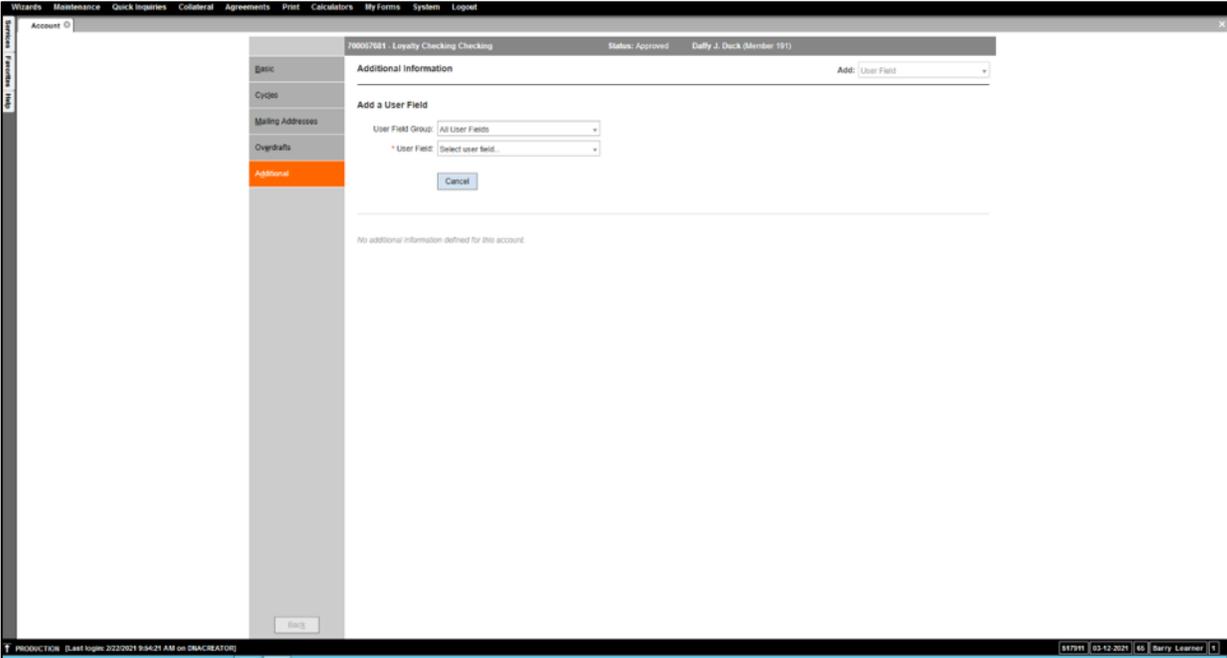


12. Click on the Account hyperlink to enter the additional information.

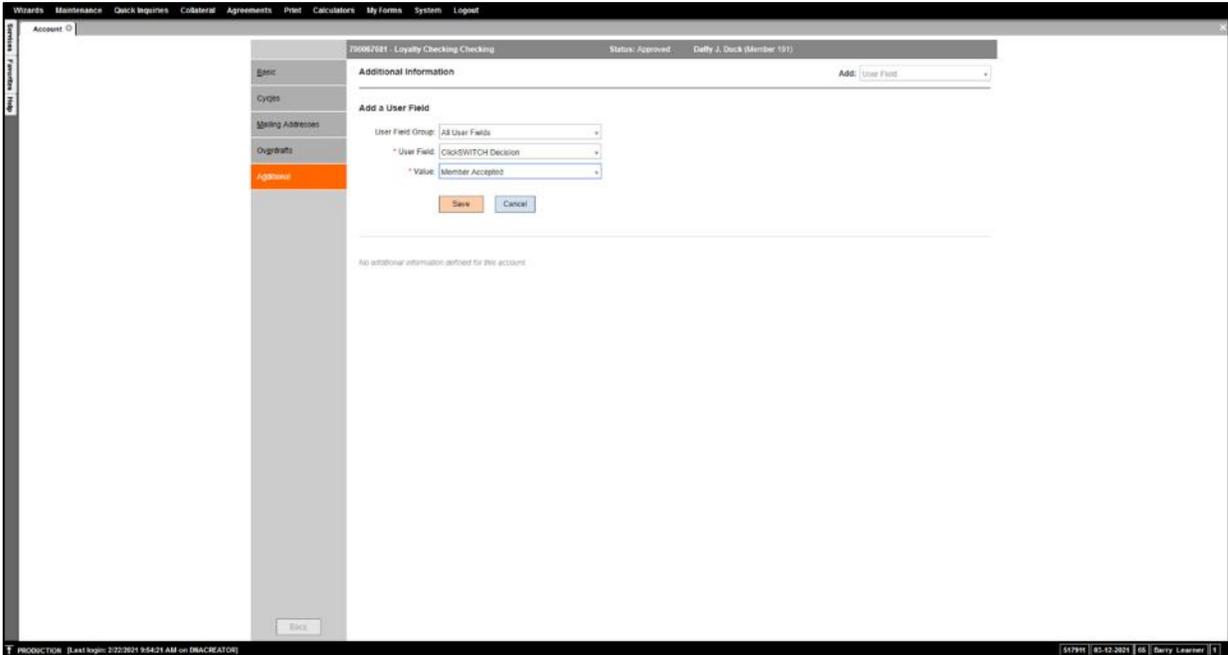


13. If the Financial Institution has elected to set the Require Userfield YN variable to “Yes”, continue with Step 14 to set the user field’s value. Otherwise, proceed with Step 17.

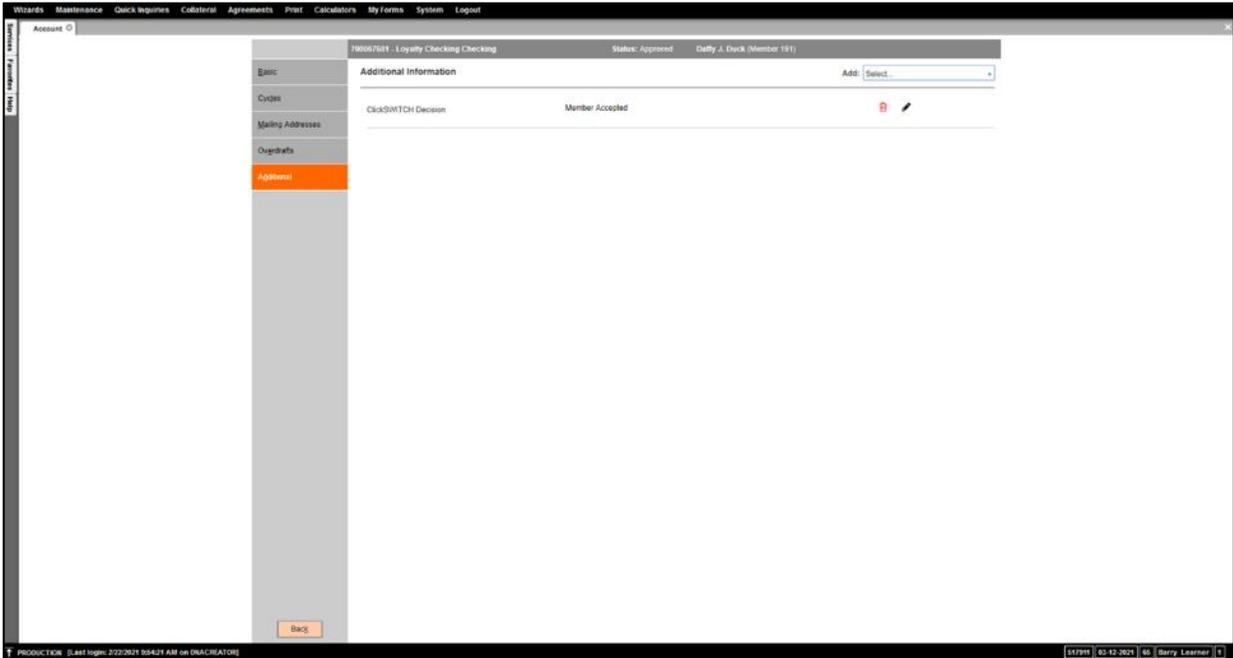
14. Select the Additional tab to display the Additional Information screen and select User Field from the Add dropdown.



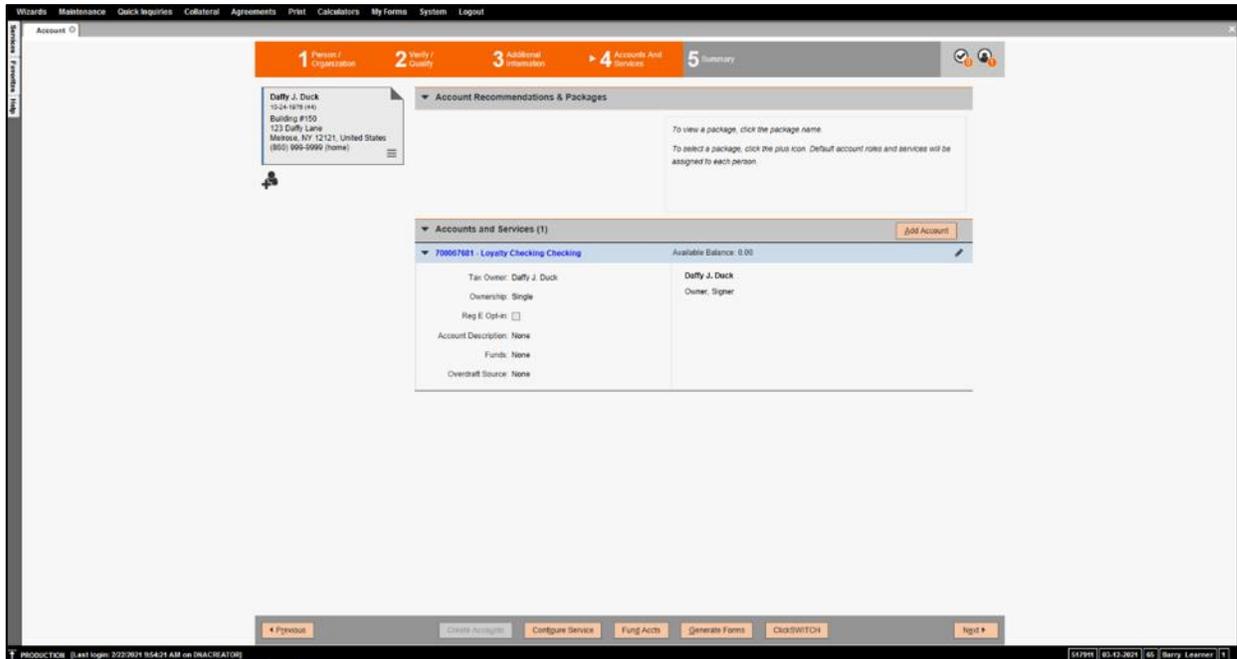
15. Select ClickSWITCH Decision from the User Field dropdown. Select Member Accepted from the Value dropdown.



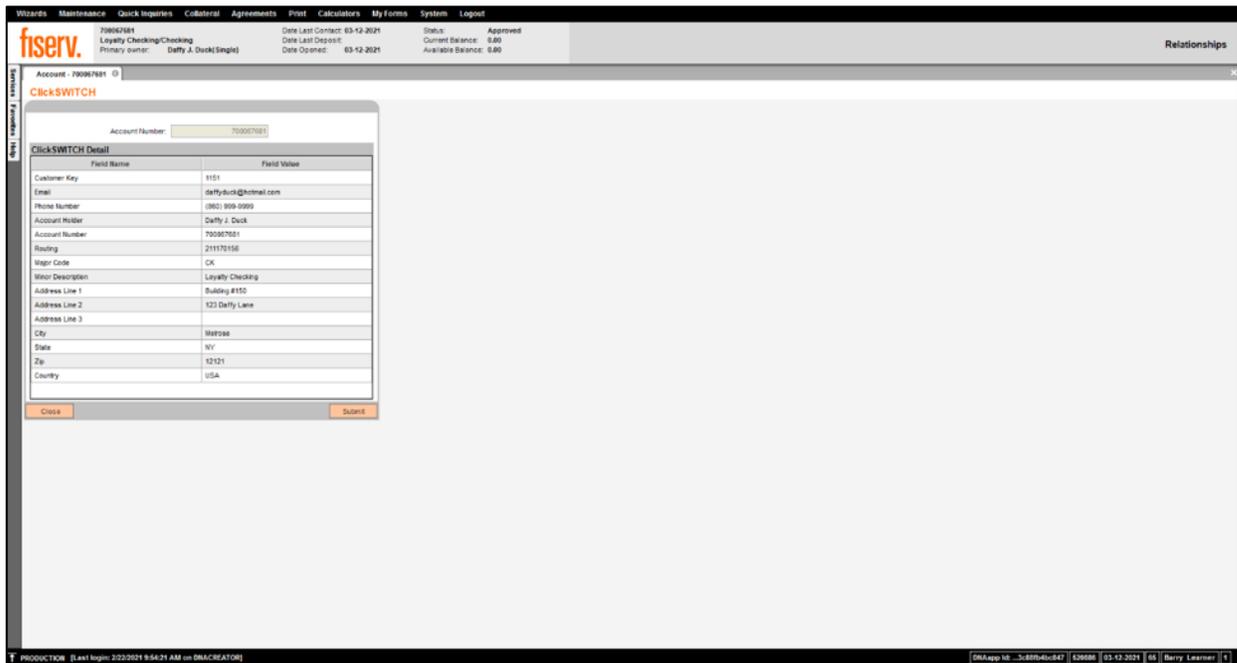
16. Click Save to save the changes.



17. Click the Back button to return to Accounts and Services.



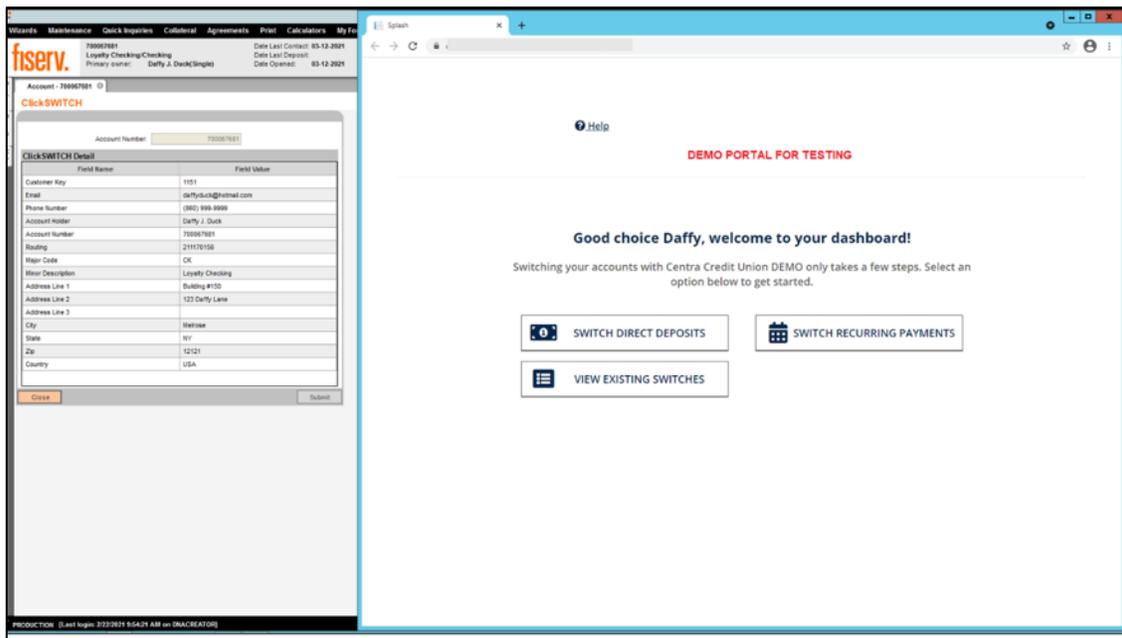
18. Click the ClickSWITCH button to launch the ClickSWITCH Screen.



Note: If there is any missing data, the fields will display in red font. The User must close and enter the data and then come back to the ClickSWITCH screen to continue.

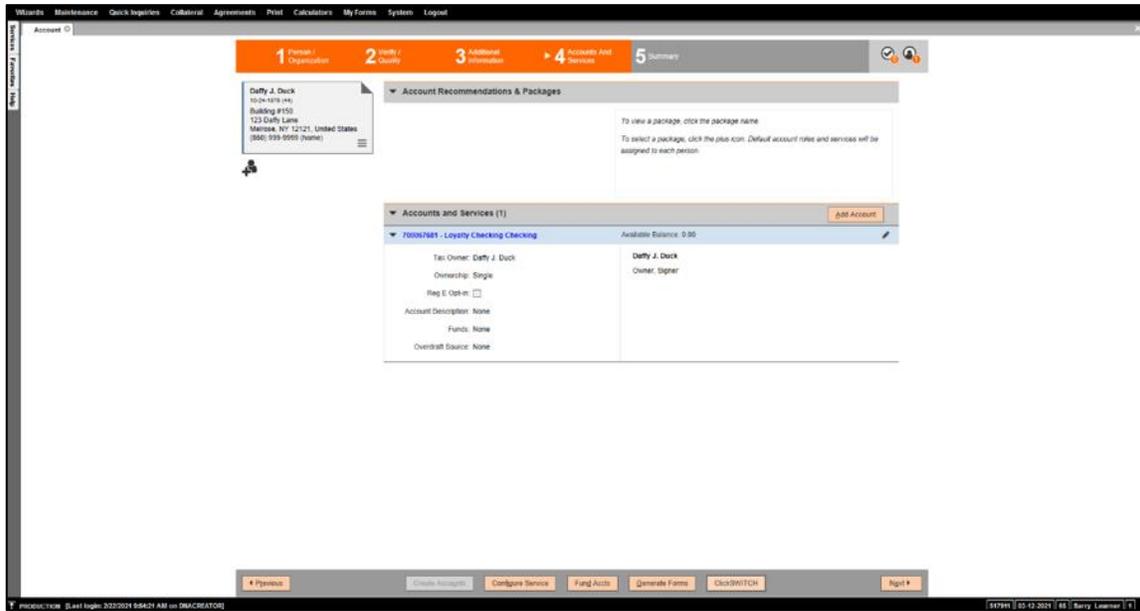
Note: If there is an exception message, the User must fix the issue and then return to the ClickSWITCH screen. If for some reason, the exception cannot be fixed while in the Wizard, the User can finish the wizard, fix the issue for the exception and then access the ClickSWITCH screen from the Maintenance menu on the Deposit Account Maintenance screen.

19. Once the data is valid, the User will click the Submit button on the ClickSWITCH screen to then launch ClickSWITCH.

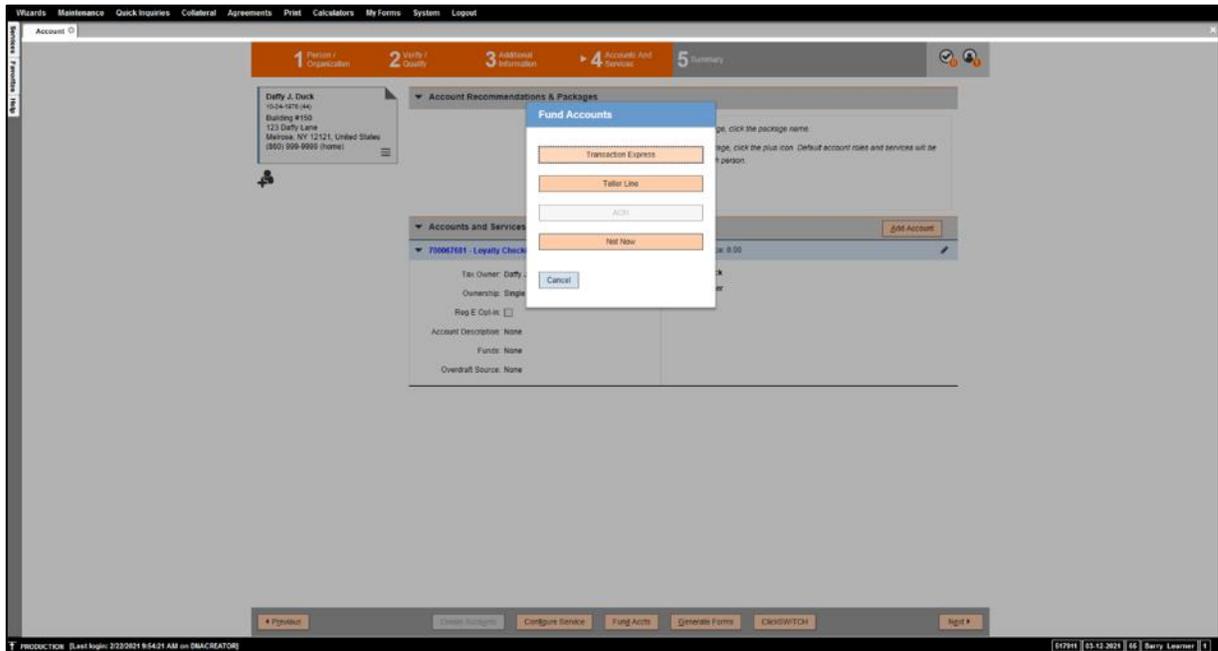


Note: If employee tracking is not used or the employee key had not been created on the ClickSWITCH Keys screen for the employee creating the account, when ClickSWITCH is launched, a different landing page is displayed.

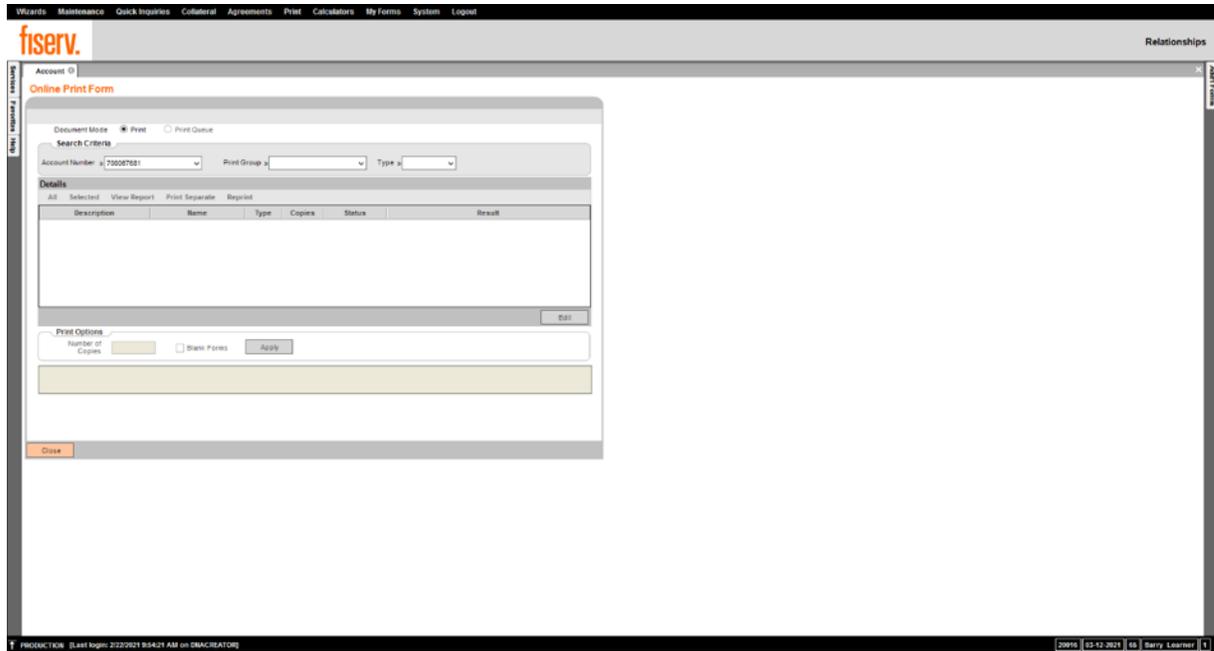
20. The User would complete their tasks in ClickSWITCH and then exit ClickSWITCH and click the Close button to close the ClickSWITCH screen and return to Step 4 of the ClickSWITCH wizard.



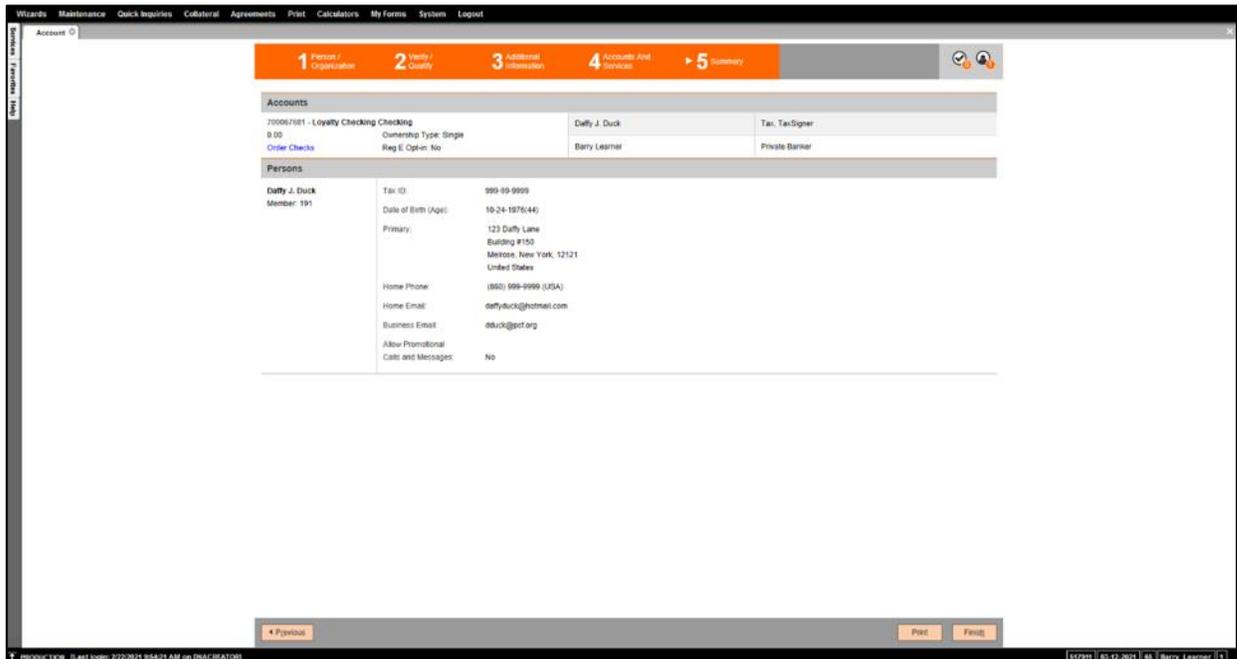
21. The User would then click Next to display the Fund Accounts pop up screen.



22. The User would complete any additional tasks on this screen. For this example, we are selecting the Not Now button launches the Online Print Form screen.



23. Click Close to return to Step 5 of the wizard.

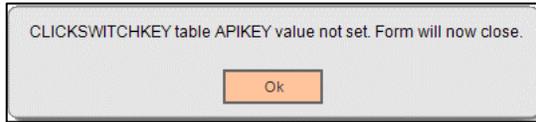


24. The User would complete Step 5 and click the Finish button to exit the ClickSWITCH wizard.

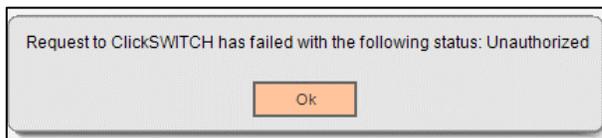
Application Messages:

The following application messages are included with this application.

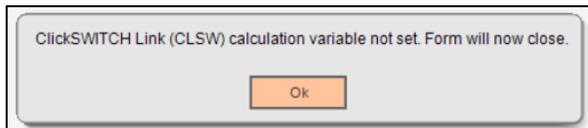
- If API key is not set for the Organization on the ClickSWITCH Keys screen and saved in the CLICKSWITCHKEY EXTN table, and the User attempts to access the ClickSWITCH screen, the following message is displayed “CLICKSWITCHKEY table APIKEY value not set. Form will now close.”



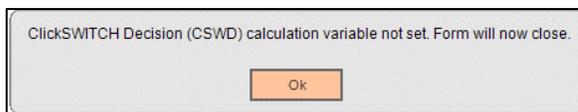
- If the API key is set for the Organization on the ClickSWITCH Keys screen and saved in the CLICKSWITCHKEY EXTN table but the Organization has not been authorized with ClickSWITCH, when the User attempts to access the ClickSWITCH screen, the following message is displayed “Request to ClickSWITCH has failed with the following status: Unauthorized”.



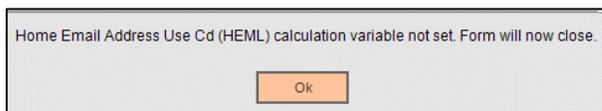
- If the ClickSWITCH URL is not set as the value for the ClickSWITCH Link calculation variable and the User attempts to access the ClickSWITCH screen or the ClickSWITCH Keys screen, the following message is displayed “ClickSWITCH Link (CLSW) calculation variable not set. Form will now close.”



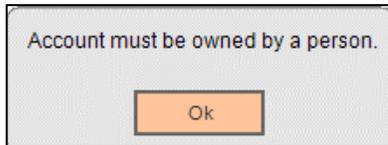
- If a value is not supplied for the ClickSWITCH Decision [userfield] calculation variable while the Userfield Required YN calculation variable is set to “Yes” and the User attempts to access the ClickSWITCH screen the following message is displayed “ClickSWITCH Decision (CSWD) calculation variable not set. Form will now close.” This message will not display if the Userfield Required YN calculation variable is set to “No”, as the userfield will not be checked in this case.



- If the value of the Home Email Use Cd (HEML) calculation variable is missing and the User attempts to access the ClickSWITCH screen, the following message is displayed “Home Email Address Use Cd (HEML) calculation variable not set. Form will now close.”



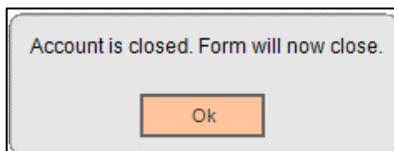
- If the User attempts to access the ClickSWITCH screen for a deposit account that is owned by an Organization, the following message is displayed “Account must be owned by a person.”



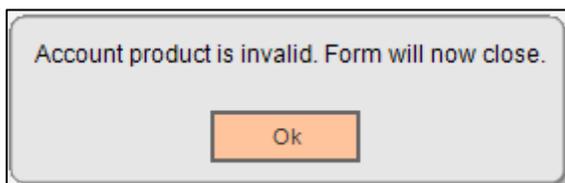
- If the User attempts to click the Submit button on the ClickSWITCH screen and there is missing data in the Field Values column, the following message is displayed “The missing data must be updated prior to submitting. Please update the data fields and try again.”



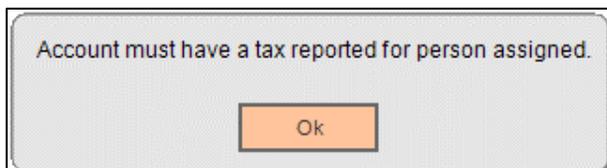
- If the User attempts to access the ClickSWITCH screen from the Deposit Account Maintenance screen for a closed account or an account with a closed with remaining balance status, the following message is displayed “Account is closed. Form will now close.”



- If the User attempts to access the ClickSWITCH screen from the Deposit Account Maintenance screen for an account of a Major Type not included in the Major Account Types to Include (CSMJ) calculation variable, the following message is displayed “Account product is invalid. Form will now close.”



- If the User attempts to access the ClickSWITCH screen from the Deposit Account Maintenance screen for an account with no Tax Reported owner, the following message is displayed “Account must have a tax reported for person assigned.”



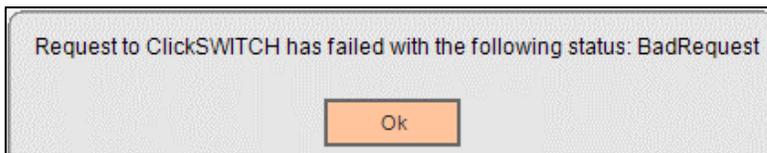
- If the User attempts to access the ClickSWITCH screen, the ClickSWITCH Userfield Required YN is set to Yes and the ClickSWITCH Decision account user field does not have a value of Member Accepted (A) or Member Declined (D), the following message is displayed “The ClickSWITCH Decision has not been selected. Please select a decision.”



- If the value of the ClickSWITCH Link calculation variable is not set with a secure https URL and the User attempts to access the ClickSWITCH Keys screen or launch ClickSWITCH from the ClickSWITCH screen by clicking the Submit button, the following message is displayed "ClickSWITCH URL is not secure. Form will now close."

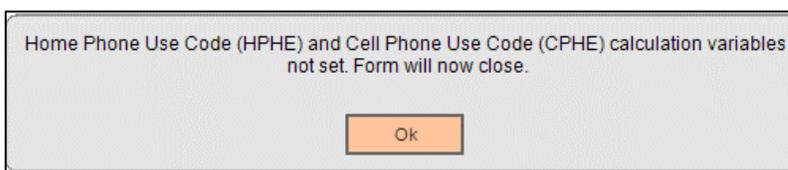


- If the User clicks the Submit button on the ClickSWITCH screen to launch ClickSWITCH and ClickSWITCH is responding with an unsuccessful response, the following message is displayed "Request to ClickSWITCH has failed with the following status: BadRequest"

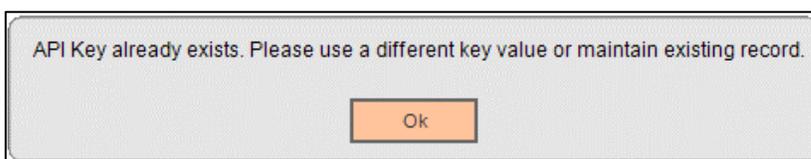


Note: BadRequest as displayed in the message above represents the response status code provided by ClickSWITCH. The response code varies based on the ClickSWITCH status code received.

- If the value of the Home Phone Use Code (HPHE) and the value of the Cell Phone Use Code (CPHE) calculation variables are null and the User attempts to access the ClickSWITCH screen, the following message is displayed "Home Phone Use Code (HPHE) and Cell Phone Use Code (CPHE) calculation variables not set. Form will now close."



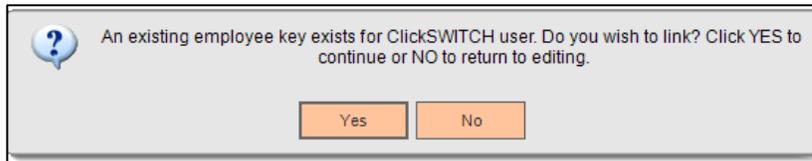
- If the key exists in the CLICKSWITCHKEY table in the EXTN schema and did not exist in ClickSWITCH and the User attempts to enter a value in the Key field on the ClickSWITCH Keys screen, the following message is displayed "API Key already exists. Please use a different key value or maintain existing record."



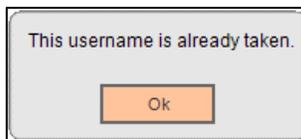
- If an employee does not have the Employee Access permission assigned and attempts to create a record for themselves on the ClickSWITCH Keys screen, the following message is displayed “Cannot maintain employee record for logged user.”



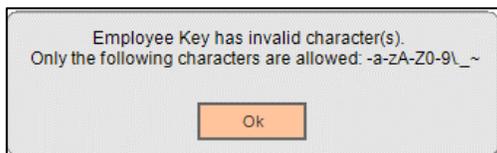
- When creating an employee record on the ClickSWITCH Keys screen, if the User selects and employee from the Employee dropdown that has an existing employee key in ClickSWITCH, the following message is displayed “An existing employee key exists for ClickSWITCH user. Do you wish to link? Click YES to continue or NO to return to editing.”



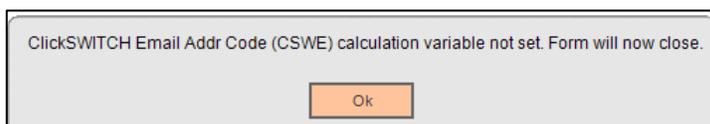
- When creating an employee record on the ClickSWITCH Keys screen, if the User enters a value in the Key field that already exists in ClickSWITCH, they are prompted with the message above. If they click Yes to the message, the existing values are returned from ClickSWITCH. If the User then attempt to change the Key value and click the Process button, the following message is displayed “The username is already taken.”



- If the User attempts to enter an invalid character in the Key field when creating an employee key on the ClickSWITCH Keys screen, the following message is displayed “Employee Key has invalid character(s). Only the following characters are allowed: -a-zA-Z0-9\ _~”.



- If the ClickSWITCH Email Addr Code calculation variable is null when the User attempts to create an employee key on the ClickSWITCH Keys screen and selects the employee from the Employee dropdown, the following message is displayed “ClickSWITCH Email Addr Code (CSWE) calculation variable not set. Form will now close.”



Variables:

The ClickSWITCH Integration DNAapp utilizes new Calculation Variables that the Financial Institution must assign values to according to their system settings.

A new Calculation Type ClickSWITCH has been created to associate the new calculation variables. This new calculation type will be under the calculation category of Inst Processing.

The following nine new institution level calculation variables will be created under the ClickSWITCH calculation type:

- The ClickSWITCH Branch YN calculation variable allows an option for the branch organization number for the workstation to be passed to ClickSWITCH, which adds detail to the ClickSWITCH reports by identifying and grouping the ClickSWITCH enrollments by branch.
- The ClickSWITCH Link calculation variable defines the URL link to access the ClickSWITCH site. The URL is provided to the Financial Institution from ClickSWITCH.
- The ClickSWITCH Decision calculation variable defines the account user field required to track whether the person has accepted or declined the ClickSWITCH process. The account user field must be created by the Financial Institution and then set the user field code for the value of this calculation variable.
- The Userfield Required YN calculation variable defines whether or not the Decision userfield is required to be populated. When set to Yes, the Decision Userfield is required. When set to No, the Decision Userfield is not required.
- The Major Account Types to Include calculation variable defines which Major Account Types are allowed to be used with the ClickSWITCH screens. Major Account Types not included in this variable will be unable to access the screens directly, and will not be included in the Additional Accounts grid.
- The ClickSWITCH Email Addr Code calculation variable defines the business email address for the employee to be used when utilizing the employee tracking and accessing ClickSWITCH. If the Financial Institution is using the employee tracking, the calculation variable must contain the email address code to define the email address for the employee.
- The ClickSWITCH Multiple Accounts YN calculation variable defines whether or not the integration allows for passing more than one account at a time to ClickSWITCH. If the parameter is set to Yes, then the Additional Account List appears and allows the user to select one or more additional accounts where the active Person is the Tax reported for owner or a joint owner.
- The ClickSWITCH Account Statuses to Include (CSAS) variable defines the statuses which will filter the accounts displayed in the Additional Account Grid. This variable defaults to 'ACT', but institutions may choose to include accounts in ORIG or APPR statuses as well.
- The Customer Key Type calculation variable indicates whether the Person Number or the Member Number will be passed to ClickSWITCH as the Customer Key. Valid values are P, indicating that the Person Number is to be passed, and M, indicating that the Member Agreement Number is to be passed.

Note: The Member option is only to be used by credit unions.

Calculation Categories:

The existing calculation category is required to associate the variables to the application.

Calculation Category Code	Description
BANK	Inst Processing

Calculation Types:

The new calculation type is required for the application.

Calculation Category Code	Calculation Type Code	Description (how used)	MjMiYN
BANK	CLSW	ClickSWITCH	N

Calculation Variables:

The following Institution level calculation variables are required for the application. They are populated with the 'CLSW' calculation type.

Variable	Code	Description (how used)	Data Type	Default
ClickSWITCH Branch YN	CSWB	<p>An optional feature that allows the branch organization number (DNA-assigned organization number) where the workstation is currently assigned to be passed to ClickSWITCH, which helps the ClickSWITCH reporting system by identifying and grouping the ClickSWITCH enrollments by branch.</p> <p>Options: N – the branch organization is not passed to ClickSWITCH (default) Y – the branch organization number is passed to ClickSWITCH</p> <p>Note: if this feature is to be utilized, coordination with ClickSWITCH is required to ensure the branch organization numbers are set up as branch external id numbers on the ClickSWITCH side.</p>	YN	N

Variable	Code	Description (how used)	Data Type	Default
ClickSWITCH Link	CLSW	The default URL link to access the ClickSWITCH site to pass the required data. Note: The URL link must end with a forward slash (/). UAT Environment: https://uat.api.clickswitch.com/v3/ Production Environment: https://prod.api.clickswitch.com/v3/ .	STR	
ClickSWITCH Decision	CSWD	The default account user field which identifies if the member has accepted or declined to switch their accounts with ClickSWITCH. If the Userfield Required YN variable is set to "No", this variable has no effect, and the user field does not need to be set up.	CHAR	
ClickSWITCH Email Addr Code	CSWE	Enter the email address code that identifies the business email for the employee. The employee business email address is used when utilizing the employee tracking and setting up the employee key on the ClickSWITCH Keys screen.	STR	
Userfield Required YN	UFRQ	An optional feature that allows an institution to control whether or not the Decision userfield is required to be populated. Options: Yes – The decision Userfield is required No – The decision Userfield is not required	YN	Y
Customer Key Type	CUKY	Determines whether the Person Number or the Member Number will be passed to ClickSWITCH as the Customer Key. Options: P - The Person Number is to be passed. M - The Member Agreement Number is to be passed.	CHAR	P
Multiple Accounts YN	MAYN	When this parameter is set to Yes, the Additional Account List will display. When No, the List will be hidden.	YN	Y
Account Statuses to Include	CSAS	Contains a list of account statuses which will filter the accounts displayed in the Additional Account Grid. If the Multiple Accounts YN variable is set to No, this variable has no effect.	STR	ACT

Variable	Code	Description (how used)	Data Type	Default
Major Account Types to Include	CSMJ	Contains a list of Major Account Type codes which are allowed to be used with the ClickSWITCH screens. Major Account Type codes not included in this variable will be unable to access the screens directly, and will not be included in the Additional Accounts grid. If this variable is blank, CK and SAV majors will be allowed.	STR	CK,SAV

Tables:

The CLICKSWITCHKEY EXTN table is associated with the application that allows storage and/or access to the ClickSWITCH API key for the Organization and the employee keys for the employees if utilizing employee tracking.

Field Name	Field Description	Primary Key YN	Nullable YN	Data Type	Length	Default
ENTITYNBR	Person or Organization Number	Y	N	NUMBER	22,0	
ENTITYTYPE	P for Person or O for Organization	Y	N	CHAR	1	
APIKEY	ClickSWITCH API key for Org 1 or employee key for employees	Y	N	VARCHAR2	1000	
DATELASTMAINT	Date the data was last maintained	N	N	DATE		SYSDATE

Activity:

This application updates activity, using the following Activity Category and Activity Type.

- Activity Category of Account Maintenance (AMNT) and Activity Type of Account (ACCT) for maintaining the account user fields.
- Activity Category of Person Maintenance (PMNT) and Activity Type of Person (PERS) for person maintenance on the Person record.
- Activity Category of System Maintenance (SMNT) and Activity Type of Table Maintenance (TBL) for activity on the ClickSWITCH Keys screen.

Real-time Interaction with Other Applications:

The purpose of this application is to launch the ClickSWITCH website and pass pertinent information to ClickSWITCH to streamline the data entry process.

This application utilizes the “Customer PUT - Create or update a customer” ClickSWITCH API call to send the customer information to ClickSWITCH. This call is used when launching ClickSWITCH when the Submit button is selected on the ClickSWITCH Screen.

Customer PUT API Values:

Parameter	Description
customerKey	<p>A unique identifier for the customer. Can be any string between 1 and 64 characters. It is case sensitive.</p> <p>The application is passing the Person Number in this field.</p>
email	<p>The email address for the customer you are creating or updating.</p> <p>The application is passing the person's email address.</p>
phoneNumber	<p>The phone number for the customer you are creating or updating.</p> <p>The phone number is identified using the phone use code that is set as the value of the Home Phone Use Code (HPHE) calculation variable. If the phone use code of the phone number equals the value of the calculation variable, that phone number is displayed.</p> <p>If the Home Phone Use Code (HPHE) calculation variable is blank or the phone use code on the person record does not equal the value of the calculation variable, the system then looks at the Cell Phone Use Code (CPHE) calculation variable. If the phone use code equals the value of the calculation variable the cell phone number is displayed for the phone number.</p> <p>Note: Maximum length of 10 digits for the phone number.</p>
accountHolders	<p>An array of account holder objects containing the following properties:</p> <ul style="list-style-type: none"> firstName (string): The account holders first name. middleInitial (string): The account holder's middle initial. lastName (string): The account holder's last name. <p>The application is passing the person's first name, middle initial, and last name.</p>
accounts	<p>An array of account objects containing the following properties:</p> <ul style="list-style-type: none"> number (string): The account number for the given account. routingNumber (string): The routing number for the given account. type (string): The type of account (e.g. checking). name (string): A name used to identify the account (e.g. Personal Checking). <p>The application is passing the person's account number, the routing number for Organization #1, the major account type code, and the minor account type code.</p>
addresses	<p>An array of address objects containing the following properties:</p> <ul style="list-style-type: none"> line1 (string): The first line of the street address. line2 (string): The second line of the street address. line3 (string): The third line of the street address. city (string): The name of the city. zip (string): The zip code of the city. state (string): The two-digit state code. country (string): The two-digit country code. <p>The application is passing the person's primary address.</p>

Parameter	Description
enrollingUserExternalId	A unique identifier for the employee determined by the calling application, may be string of 1 to 64. It is case sensitive.
branch	ClickSWITCH branch ID The application is passing the ClickSWITCH branch ID that corresponds to the DNA branch location of the workstation that the User is signed into.

If utilizing the employee tracking, there are three ClickSWITCH API calls used. The first two calls are used when creating an employee key record on the ClickSWITCH Keys screen.

- Employee PUT – Create or update an employee.
- Employee GET (employee key) – Returns an employee.

Employee PUT API Values:

Parameter	Description
employeeKey	A unique identifier for the employee determined by the calling application, may be string of 1 to 64. It is case sensitive. This application is passing the default value is U26771 which is derived by the value of U plus the person number. Or if the user entered a different value for the username when creating the employee record, that value is passed.
username	The username which may be used by the employee to login to the ClickSWITCH white label web application. If provided, it should be a value that the employee will know such as their email address or employee number. If username is not provided, but email address is, the username will default to their email address. This application is passing the default value of the first name and last name where the first and last name are concatenated or if a different value was entered when creating the employee record, that value is passed.
email	This is optional. The email address of the employee. This field is optional, and if not provided, the employee will not receive notification emails when a customer has an incomplete switch. The application is passing the employees email address if exists based on the address use code defined in the ClickSWITCH Email Addr Code calculation variable.
firstName	The first (given) name of the employee. This application is passing the first name of the employee.
middleInitial	This is optional. The middle initial of the employee. This application is passing the middle initial of the employee if exists
lastName	The last name (surname) of the employee.

Parameter	Description
	This application is passing the last name of the employee.

Employee GET (employee key) API Values:

With the Employee GET API call, this application is passing the employeeKey and returning the remaining fields.

Parameter	Description
employeeKey	A unique identifier for the employee determined by the calling application, may be string of 1 to 64. It is case sensitive.
username	The username which may be used by the employee to login to the ClickSWITCH white label web application. If provided, it should be a value that the employee will know such as their email address or employee number. If username is not provided, but email address is, the username will default to their email address.
email	This is optional. The email address of the employee. This field is optional, and if not provided, the employee will not receive notification emails when a customer has an incomplete switch. The application is passing the employees email address if exists based on the address use code defined in the ClickSWITCH Email Addr Code calculation variable.
firstName	The first (given) name of the employee.
middleInitial	This is optional. The middle initial of the employee.
lastName	The last name (surname) of the employee.

The third call is used when the employee key exists in the CLICKSWITCHKEY table in the EXTN schema and the User is launching ClickSWITCH when the Submit button is selected on the ClickSWITCH Screen.

- Employee GET (employee key auth) – Returns and authorization URL for employee.

Employee GET (employee key auth) Values:

Note: With this API call, the application is passing the below information and returning the Clicks SWITCH URL.

Parameter	Description
employeeKey	A unique identifier for the employee determined by the calling application, may be string of 1 to 64. It is case sensitive. This application is passing the key value for the employee from the CLICKSWITCHKEY table in the EXTN schema.
Customer	A valid customerKey. If provided, the resulting URL will open directly onto the Manage Customer screen for the specific customer so that the employee can begin the switch for the customer. This application is passing the customer key that was retrieved from the Customer PUT API Call.

Screens:**Navigation:**

Services > Relationships > Maintenance > Deposit Accounts > Enter Account Number > Maintenance > ClickSWITCH

Services > Relationships > Wizards > ClickSWITCH > Navigate to Step 4 Accounts and Services > ClickSWITCH <button>

Screen Appearance: (ClickSWITCH)

ClickSWITCH

Field Name	Field Value
Customer Key	27199
Email	spam@spam.spam
Phone Number	(407) 654-5064
Account Holder	Jennifer Ann Miller
Account Number	700031389
Routing	211170156
Major Code	CK
Minor Description	Money Market Checking
Address Line 1	501 Main St
Address Line 2	
Address Line 3	
City	Winter Garden
State	FL
Zip	34787
Country	USA

Joint Owner: <- Select Joint Owner ->

Close Submit

Screen Appearance: (ClickSWITCH) with Additional Account List displayed

ClickSWITCH

ClickSWITCH Detail	
Field Name	Field Value
Customer Key	27199
Email	
Phone Number	(407) 654-5064
Account Holder	Jennifer Ann Miller
Account Number	700031389
Routing	211170156
Major Code	CK
Minor Description	Money Market Checking
Address Line 1	501 Main St
Address Line 2	
Address Line 3	
City	Winter Garden
State	FL
Zip	34787
Country	USA

Joint Owner: Dawn Johnson

Additional Account List		
<input type="checkbox"/> All	Account Number	Account Description
<input checked="" type="checkbox"/>	700031389	Checking Money Market Checking

Close Submit

Field Listing:

Field	Description
Customer Key:	<p>Person number, or member agreement number for the tax owner.</p> <p>Which value is used is controlled by the Customer Key Type (CUKY) calculation variable.</p>
Email:	<p>Email address for the tax owner of the deposit account.</p> <p>This field is required. If the email address does not exist on the person record, the Field Name displays in 'red' font. The email address must be updated on the person record and display in the ClickSWITCH Detail grid box to submit the information to ClickSWITCH.</p> <p>The email address is identified using the address use code that is set as the value of the Home Email Address Use Cd (HEML) calculation variable.</p>
Phone Number:	<p>Phone number for the tax owner of the deposit account.</p> <p>This field is required. If the phone number does not exist on the person record or the phone use code is not equal to the value of the Home Phone Use Code (HPHE) or Cell Phone Use Code (CPHE) calculation variables, the Field Name displays in 'red' font. The phone number must be updated on the person record and display in the ClickSWITCH Detail grid box to submit the information to ClickSWITCH.</p>

Field	Description
	<p>The phone number is identified using the phone use code that is set as the value of the Home Phone Use Code (HPHE) calculation variable. If the phone use code of the phone number equals the value of the calculation variable, that phone number is displayed.</p> <p>If the Home Phone Use Code (HPHE) calculation variable is blank or the phone use code on the person record does not equal the value of the calculation variable, the system then looks at the Cell Phone Use Code (CPHE) calculation variable. If the phone use code equals the value of the calculation variable the cell phone number is displayed for the phone number.</p> <p>Note: Maximum length of 10 digits for the phone number.</p>
Account Holder:	<p>Person first name, middle initial and last name who is the tax owner of the deposit account.</p> <p>This field is required. If the tax owner does not exist on the account, the Field Name displays in 'red' font. The tax owner must be updated on the account record and display in the ClickSWITCH Detail grid box to submit the information to ClickSWITCH.</p>
Account Number:	Deposit account number.
Routing Number:	<p>The routing number for the Financial Institution which is assigned to Organization Number 1.</p> <p>This field is required.</p> <p>If the routing number does not exist on the organization record for Organization Number 1, the Field Name displays in 'red' font. The routing number must be updated on the organization record and display in the ClickSWITCH Detail grid box to submit the information to ClickSWITCH.</p> <p>If a Financial Institution has a routing number that begins with a "0" and the zero is dropped when stored in the database, the application will add a preceding 0 to the routing number to complete the nine digit routing number.</p>
Major:	Major Account Type Code for the deposit account.
Minor:	Minor Account Type Description for the deposit account.
Address Line 1:	<p>Address Line 1 for the tax owners primary address.</p> <p>This field is required. If the address line 1 does not exist on the person record, the Field Name displays in 'red' font. The address line 1 must be updated on the person record and display in the ClickSWITCH Detail grid box to submit the information to ClickSWITCH.</p> <p>Note: The minimum address line number displays in the Address Line 1 field value.</p>
Address Line 2:	Address Line 2 for the tax owners primary address if applicable.

Field	Description
	<p>This field is not required. If it exists in the tax owners primary address, it will display on the screen.</p> <p>Note: The minimum address line number displays in the Address Line 1 field value. The next address line number in Address Line 2 field value, if applicable.</p>
Address Line 3:	<p>Address Line 3 for the tax owners primary address if applicable. This field is not required. If it exists in the tax owners primary address, it will display on the screen.</p> <p>Note: The minimum address line number displays in the Address Line 1 field value. The next address line number in Address Line 2 field value, if applicable and then the next address line number in Address Line 3, if applicable.</p>
City:	<p>City for the tax owners primary address.</p> <p>This field is required. If the city does not exist on the person record, the Field Name displays in 'red' font. The city must be updated on the person record and display in the ClickSWITCH Detail grid box to submit the information to ClickSWITCH.</p>
State:	<p>State for the tax owners primary address.</p> <p>This field is required. If the state does not exist on the person record, the Field Name displays in 'red' font. The state must be updated on the person record and display in the ClickSWITCH Detail grid box to submit the information to ClickSWITCH.</p> <p>If the primary address is a Canadian address where the country code of the primary address is 'CAN', the country sub division code is displayed for the state.</p>
Zip:	<p>The 5-digit Zip Code for the tax owners primary address.</p> <p>This field is required. If the zip code does not exist on the person record, the Field Name displays in 'red' font. The zip code must be updated on the person record and display in the ClickSWITCH Detail grid box to submit the information to ClickSWITCH.</p> <p>If the primary address is a Canadian address where the country code of the primary address is 'CAN', the country mail code is displayed for the zip code.</p>
Country:	<p>Country code for the tax owners primary address.</p> <p>This field is required. If the country does not exist on the person record, the Field Name displays in 'red' font. The country must be updated on the person record and display in the ClickSWITCH Detail grid box to submit the information to ClickSWITCH.</p>
Joint Owner Dropdown	
Joint Owner	This field lists any joint owners attached to the primary account. If a Joint Owner is selected from the dropdown, the accounts in the Additional

Field	Description
	Accounts List are filtered to include only those that include the selected joint owner as well as the primary owner. If a Joint Owner is selected, their information is also sent to ClickSWITCH as part of the submission.
Additional Account List	
All (Checkbox)	Checkbox to include additional accounts in Switch. If "All" checkbox is selected, each account in the list is also selected, and can be unselected individually if needed. Note that at least one account must be checked to submit the Switch request, or the process will fail.
Account Number:	Deposit account number.
Account Description:	Major and Minor Account Type Description for the deposit account.

Navigation:

Services > Services > Institution > ClickSWITCH API Key

Screen Appearance: (ClickSWITCH Keys)

The screenshot shows the 'ClickSWITCH Keys' application interface. At the top, there is a 'Search Criteria' section with radio buttons for 'Person' (selected) and 'Organization', and a dropdown menu for 'Employee' set to 'Select Employee'. Below this is a 'ClickSWITCH Keys Results' table with two columns: 'Entity Name' and 'Key'. The table contains two rows: 'Jane Doe' with key 'U27350' and 'JoeX Banker' with key 'U26771'. Below the table are 'Create', 'Edit', and 'Delete' buttons. At the bottom is a 'ClickSWITCH Keys Details' form with input fields for 'Entity Number', 'Employee Email', 'Username', 'Entity Name', and 'Key'. At the very bottom of the interface are 'Close', 'Process', and 'Review' buttons.

Field Listing:

Field	Description
	Search Criteria

Field	Description
Person <radio button>	<p>The Person radio button is not enabled until the Organization API key has been created on the ClickSWITCH Keys screen.</p> <p>When the Person radio button is selected, the Employee dropdown is enabled. If there are existing employee records, they are displayed in the ClickSWITCH Keys Results grid when the Person radio button is selected.</p> <p>The User would select the employee from the Employee dropdown to create a new employee key for that employee. Once the employee is selected, the Create button is enabled.</p> <p>If the Organization radio button is selected, the Employee dropdown is disabled.</p>
Organization <radio button>	<p>The Organization radio button is defaulted when accessing the screen and the Employee dropdown is disabled.</p> <p>While selected, only the existing organization record is displayed in the ClickSWITCH Keys Results grid for Organization #1. To see the employee records, the Person radio button must be selected.</p>
Employee <dropdown>	<p>The Employee dropdown is enabled when the Person radio button is selected. If the Organization radio button is selected, the Employee dropdown is disabled.</p> <p>The existing employee records are displayed in the ClickSWITCH Keys Results grid when the Person radio button is selected. Once an employee is selected from the dropdown, only that existing record displays in the ClickSWITCH Keys Results.</p> <p>Once the person radio button is selected and an employee is selected from the Employee dropdown, the Create button is enabled.</p>
Create <button>	<p>The Create button will allow a new record to be created in the ClickSWITCH Keys Details group box, saved in the ClickSWITCH Keys Results grid and the CLICKSWITCHKEY table in the EXTN schema. It also allows a new employee key to be created in ClickSWITCH.</p> <p>If the Person radio button is selected, an employee must be selected from the Employee dropdown to enable the Create button. Once enabled, the User would click the Create button to add the employee key for that employee.</p> <p>If the Organization radio button is selected and there is not an existing record for Organization #1, the Create button is enabled. If the record exists, the Create button is disabled.</p>
Edit <button>	<p>The Edit button is enabled for an existing organization record only. If the Organization radio button is selected and the organization record for Organization #1 exists, once highlighted in the ClickSWITCH Keys Results grid, the Edit button is enabled. The User can then edit the API</p>

Field	Description
	<p>Key for the Organization record in the ClickSWITCH Key Details group box and save the changes in the ClickSWITCH Key Results grid and the CLICKSWITCHKEY table in the EXTN schema.</p> <p>If the Person radio button is selected, the Edit button is disabled. The User can create a new employee record or delete the employee record. If the employee record was created in error, the record must be deleted and then a new record created with the correct information.</p>
Delete <button>	<p>The Delete button will be enabled when an existing record is selected in the ClickSWITCH Keys Results grid.</p> <p>Once the Delete button is selected, the following message is displayed "Are you sure you wish to delete this record? Click OK to continue or CANCEL to return." If click Ok, the record is removed from the ClickSWITCH Keys Results grid and the CLICKSWITCHKEY extension table. If click CANCEL, the User is returned to the screen and no action is taken.</p>
ClickSWITCH Keys Results	
Entity Name	The name of the organization or person.
Key	The API key for the organization or the employee key for the employee.
ClickSWITCH Keys Details	
Entity Number	<p>Person number or Organization number.</p> <p>If the Person radio button was selected, displays the person number of the employee selected from the Employee dropdown.</p> <p>If the Organization radio button was selected, displays 1 for organization #1.</p>
Employee Email	<p>The employees email address.</p> <p>The employees email address if exists based on the address use code defined in the ClickSWITCH Email Addr Code calculation variable.</p>
Username	<p>Disabled for Organization. Defaults to the employees first and last name concatenated.</p> <p>If the employee is an existing user in ClickSWITCH, enter the existing username for ClickSWITCH for the employee.</p> <p>If the employee does not exist as a user in ClickSWITCH, accept the default value or enter the username to be sent to ClickSWITCH to create the user and username in ClickSWITCH.</p>
Entity Name	The name of the employee selected or the organization name for organization #1.
Key	<p>For the Institution, enter the API key for Organization #1.</p> <p>For the employee, defaults to U and the person number. Example: person number is 2500, the Key field would default to U2500.</p>

Field	Description
	<p>If the employee is an existing user in ClickSWITCH, enter the employee key for the employee assigned by the third-party vendor ClickSWITCH.</p> <p>If the employee does not exist as a user in ClickSWITCH, accept the default value or enter an employee key to be sent to ClickSWITCH to create the user in ClickSWITCH.</p> <p>The valid values for the Key field are A-Z, a-z, ~ . - (Tilde, Period or Hyphen)</p>
Close / Cancel <button>	<p>When button displays as Close, selecting the button will close the screen.</p> <p>When the button displays as Cancel, the following message is displayed "Select YES to discard changes you have made, or No to return to editing information." If click No, the user is returned to the screen. If click YES, the changes are discarded, and the screen remains open.</p>
Close <radio button>	An option for how the screen refreshes after the 'Process' button is selected. The screen will close, and changes will be saved.
Clear <radio button>	An option for how the screen refreshes after the 'Process' button is selected. All fields will clear.
Review <radio button>	An option for how the screen refreshes after the 'Process' button is selected. The screen will remain open and changes will be saved.
Process <button>	Saves the changes to the ClickSWITCH Keys Results grid and the CLICKSWITCHKEY table in the extension schema.

Authorization:

These Authorization Items must be linked to an Authorization Code. Users with the Authorization Code will have access to the ClickSWITCH and ClickSWITCH Keys screens.

Authorization Item Code	Description
CLSW	The ClickSWITCH Auth authorization item is required to access the new ClickSWITCH screen from the Deposit Account Maintenance screen or thru the ClickSWITCH wizard. The auth item is also required to access the ClickSWITCH Keys screen. The appropriate permissions should be assigned.

Additional Requirements:

- DNA 4.7.2 or higher.
- Oracle 12c.
- The ClickSWITCH API server now requires certain TLS ciphers which are only present in Windows Server 2016 and higher; the SAF servers must be running an operating system with support these ciphers.
- Organizations are excluded from this application.

- If the Financial Institution has the ClickSWITCH.dnax version 1.0.0.0 or version 1.0.0.1, there are specific instructions that are required prior to installing the ClickSWITCHPack.dnaxp version 1.0.0.3 or greater. Please see the Installation section in this document below for the detailed instructions.
- The Financial Institution must first ensure their setup has been completed within ClickSWITCH prior to using this application.
- For assistance with the ClickSWITCH integration and setup, please contact setup@clickswitch.com. A ClickSWITCH representative will set up a quick meeting to go over ClickSWITCH setup instructions and then provide the API key.
- ClickSWITCH must provide the API key for the Financial Institution. When ClickSWITCH provides the API keys for the client integration, the ClickSWITCH portal is built out and ready to use, but there are details that should be reviewed. The three areas are listed below with examples of discussion points.
 - Branches – which branch listed in ClickSWITCH should enrollments be associated with, or should a new branch be added?
 - Account Names – does the list of checking and savings accounts in ClickSWITCH match the list of checking and savings accounts used by your institution? Do you have Account Names that need to be added or edited in your ClickSWITCH portal? They must be an exact match.
 - Staff Users – what is being sent by the DNA app for the EmployeeKey? Is that value displayed in ClickSWITCH as the staff user External ID? Add or edit the External ID fields as needed.

Additional Information:

Within this application, a new step was not added to the New Account Deposit Wizard. Instead, a new ClickSWITCH button was added to Step 4 in the standard New Deposit Account Wizard. When the button is selected, the ClickSWITCH URL is launched. This passes the required information (CustomData) to ClickSWITCH as shown below and as documented elsewhere in this guide.

Item	Description
CustomData	"{"parties":[{"id":1151,"code":"PERS","cannotBeDeleted":true},{ "id":1255,"code":"PERS","cannotBeDeleted":true}], "ticklers":[{"partyId":1151,"ticklerId":4268,"reminderId":804,"targetDataId":799},{ "partyId":1255,"ticklerId":4269,"reminderId":805,"targetDataId":800},{ "accountId":"8EB976EE0AD972BFC31D1F2A6ED08714236F4AFE80902CA63B0EAC5DB3FE2EF6","ticklerId":4270,"reminderId":806,"targetDataId":801}], "accounts":[{"id":"8EB976EE0AD972BFC31D1F2A6ED08714236F4AFE80902CA63B0EAC5DB3FE2EF6","partyServices":{"PERS1151":[], "PERS1255":[]}, "dateLastMaintained":"2020-12-29T13:04:10-06:00"}]"}"

The Step Collection session information uses the standard PartiesInSession/PartiesInService from the New Account Deposit Wizard standard process. A separate Wizard is required (the ClickSWITCH Wizard) which uses all the standard functionality of the New Account Deposit Wizard with a new button on the “Accounts and Services” workflow step; this separate Wizard is

required to maintain the integrity/availability of the standard New Account Deposit Wizard as provided.

Configuration Checklist:

Item	Test Environment	Production Environment
Ensure the ClickSWITCH Auth (CLSW) authorization item has been assigned and permissions granted.		
Create the API key for the Institution and/or employee key for Employees on the ClickSWITCH Keys screen.		
Ensure the ClickSWITCH calculation type exists in the Institution calculation variables.		
Ensure the ClickSWITCH Branch YN, ClickSWITCH Link, ClickSWITCH Email Addr Code, Userfield Required YN, Customer Key Type, Multiple Accounts YN calculation variables have been set.		
If the Multiple Accounts Required YN calculation variable is set to Yes, ensure that the Account Statuses to Include (CSAS) calculation variable has been set.		
If the Userfield Required YN calculation variable is set to Yes, ensure that an appropriate user field has been configured and that the user field code is set in the ClickSWITCH Decision calculation variable.		
Confirm values for the Major Account Types to Include (CSMJ) calculation variable.		

Installation:

An Upgrade cannot be performed for the installation if the Financial Institution has version 1.0.0.0 or version 1.0.0.1 installed because the table structure for the CLICKSWITCHKEY table in the Extension schema has been changed.

If a Financial Institution has the ClickSWITCH.dnax version 1.0.0.0 or version 1.0.0.1 installed, they must **uninstall** the current version and follow the steps below **prior** to installing version 1.0.0.2 or greater which is ClickSWITCHPack.dnaxp:

1. The APIKEY in the CLICKSWITCHKEY table in the Extension schema must be deleted.
2. The ClickSWITCH.dnax must be uninstalled.
3. Install ClickSWITCHPack.dnaxp.

Note: The CLICKSWITCHKEY table must be dropped when uninstalling the ClickSWITCH.dnax version 1.0.0.0 or version 1.0.0.1 and **prior** to the installation of the ClickSWITCHPack.dnaxp.

If the Financial Institution has ClickSWITCHPack.dnaxp version 1.0.0.2 or greater installed, the upgrade can be performed for the installation and it is not required to uninstall the previous code.

Revisions:

Date	App Version #	Change
08/2023	1.0.0.9	Updated the Additional Account functionality to resolve a defect where accounts where a person had the OEMP role were sometimes included.
12/2022	1.0.0.8	Updated ClickSWITCH API call to address a defect preventing Branch and Employee IDs from passing properly.
11/2022	1.0.0.7	Enhanced the Switch process to allow Joint Owners' information to be submitted to ClickSWITCH along with the primary owner.
09/2022	1.0.0.6	Enhanced Account Selection grid with "select all" functionality. Added Major Account Types to Include (CSMJ) calculation variable to allow institutions to control which Major Account Types are allowed to be sent to ClickSWITCH.
05/2022	1.0.0.5	Added new ClickSWITCH Userfield required YN calculation variable as an enhancement to allow the institution to decide whether or not the decision userfield requires a value. Added the ClickSWITCH Customer Key Type calculation variable as an enhancement to allow the institution to choose whether to pass the Person Number or Member Agreement Number as the Customer Key. Added new ClickSWITCH Multiple Accounts YN calculation variable as an enhancement to allow the institution to send multiple accounts at once.
10/2021	1.0.0.4	Added new ClickSWITCH Branch YN calculation variable as an enhancement so the branch organization number could be passed to ClickSWITCH, which helps with ClickSWITCH reporting from the ClickSWITCH side. Use of this new feature also requires coordination with ClickSWITCH so they can ensure the valid branch organization numbers are set up as valid external branch id numbers on the ClickSWITCH side.
05/2021	1.0.0.3	Added new ClickSWITCH Email Addr Code calculation variable to identify the business email address for the employee when utilizing the employee tracking. This was added based on feedback from clients. Updated call back to ClickSWITCH to update the email address. Updated to allow Canadian Addresses. Removed default values for the ClickSWITCH Decision and ClickSWITCH Link calculation variables. Removed hard-coded version specification for ClickSWITCH url ("v3") to account for future versions. The version specification must be included in the calculation variable.
12/2020	1.0.0.2	Added new ClickSWITCH wizard with access to the ClickSWITCH Screen from the ClickSWITCH button on Step 4. Added ClickSWITCH Keys screen with the ability to add the Institution API Key and ability to create the Employee Key manually or automatically to be utilized when launching ClickSWITCH. Added additional functionality for the phone number to look at the HPHE calculation variable first and then to the CPHE calculation variable when displaying the phone number on the ClickSWITCH screen.
10/2020	1.0.0.1	Application updated to correct defect – when a Financial Institution had a Routing/Transit number that began with a '0', this was dropped when stored in the database and the code consequentially picked up only 8 digits to be passed to ClickSWITCH which caused an error as the

Date	App Version #	Change
		Routing/Transit number was incomplete. The code was updated to handle this situation.
08/2020	1.0.0.0	Application Created