



Teller Marketing for NEXT

NextTellerMarketingPackage.DNAapp.dnaxp
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Overview:

The goal of this DNAapp is to improve the accessibility for tellers with the Fiserv DNA NEXT application. The slide-out functionality will allow the tellers to continue with their daily duties without the disruption of member service when attempting to cross sell a product/service or inform the member of a message from Financial Institution.

Example:

As per the current process central ops, including branch ops, does not currently utilize the Fiserv DNA NEXT tool to present offers to members. The process detailed below is what the current tellers do.

1. Teller navigates to Services > Relationships > Quick Inquiries > Relationship Profile.
2. Once the Relationship Profile has populated, the teller searches for the member on the search screen or utilizes the quick search slide out.
3. Teller then navigates to Contact Management > Relationship Management > Message Presentation.
4. Once the Messages and Offers screen populates, the teller reviews the offers or messages associated with the member and delivers the message or offer at the appropriate time by selecting the deliver offer hyperlink.
5. Teller then capture response by selecting the action in which the member accepted/declined the offer.
6. Information is then sent to DNA Publisher to complete a referral activity if one is required.

Tellers have cited that the above process prolongs teller's transaction time since teller has to switch to multiple screens to present offers to members. This application will provide a separate screen setting in the form of slide-out linked to existing DNA screens. The app will show messages and offers from the existing Fiserv DNA NEXT tool.

The user interface of the application will mimic the existing screen of Fiserv NEXT to provide the teller the same user experience in terms of layout but with slight changes in terms of the navigation, easy accessibility to the screens, less clicks to view offers, design of controls, control on number of messages and offers to be shown in the application etc.

This app is designed to work with in house built RESTful web services of the institution or work with Fiserv's Next web service. The institution web services will be a wrapper on the existing Fiserv NEXT web services and will use the existing NEXT database and configuration to pull offers and messages for the application.

The app is packaged with Text Encryption Decryption app under Next Teller Marketing Package app.

Key Benefits:

- The slide out will provide accessibility from multiple DNA screens, including Relationship Profile, Transaction Express, Person Maintenance which in turn increases the operational efficiencies of financial Institution's teller since teller can offer the offers to member while present on any of these screens.
- Improves customer/member service.
- Eliminates several layers of screen navigation in showing and accessing offers to members hence better serving of members, and reducing wait times.

Processing:

Teller access the application either through Relationship Profile or Person/Member or Transaction Express screen.

Below steps shows what teller has to follow when going through the Relationship profile screen.

- Teller logs in to DNA and navigate to Services> Relationships, Quick Inquiries> Relationship Profile screen.
- Teller enters the member criteria to search for the correct profile on the search screen, and then highlights the correct profile and click continue.
- Teller scrolls over the right side of the Relationship Profile and hovers over the right side of the DNA screen to the access the application. The slide out name is shown as "Messages and Offers."
- Teller hovers on the slide out and click on the label stating "*** Click here to retrieve offers ***" at the bottom of the screen or click anywhere on the slide out. This fetches and displays all the messages and offers for the member.
- Teller clicks on any offer on the grid and captures member response and comment and then updates the information to database. The activity records are written in activity and activity sub activity table under activity category code '6NXT' ('Next Messaging') and activity type code '6NCO' ('Next Current Offers').

- The application not requires any specific tables and procedure to fetch the data but be using the same tables and procedures as those created during Fiserv NEXT product installation.
- IT – App Support team of Financial Institution is responsible for configuring NEXT Application Admin Tool.
- IT – DNA Architects team of Financial Institution is responsible for making configurations to the NEXT server.
- IT – SQL DBA team of Financial Institution is responsible for any DB changes.
- Marketing team of Financial Institution and appointed marketing officers is responsible for producing data for NEXT offers.
- If “Use Institution Service Flag” calculation variable is set to “Y” then application uses Financial Institution’s REST full API to fetch the offers and messages. The API internally calls the Fiserv’s Next service hosted by Financial Institution. The calculation variables NX01-NX07 stores the configuration parameters related to the REST full service.

Note: This mode is only specific to be used by developer’s financial institution and for no other financial institution.

- If “Use Institution Service Flag” calculation variable is set to “N” then application uses Fiserv’s Next web service to fetch the offers and messages. The calculation variables NX02, NX05 & NX08-NX15 will store the configuration parameters related to the Fiserv’s Next service.

Note: This mode is used by any other financial institution who has Fiserv next web service installed in their environment and has Next set up.

Financial Institution uses the Next app with “N” mode so they don’t have to extract the service from DNAX, they just need to update the fiserv next service URL and its configuration parameters in NX02, NX05 & NX08-NX15 calcvars.

- Slide-out is configured to show only 5 offers maximum with 2 messages maximum. Teller can set the values in “NXTM-Offers Count” and “NXTM-Messages Count” calculation variables to do the same.

Validations

- In case the teller doesn’t select person number on the Relationship Profile or on the Person/Member screen or doesn’t select Transacting person on the Transaction Express screen, the slide out is disabled.



- In case the members search for the organization on the Relationship Profile the slide out is disabled.



- In case teller doesn't select the response and press Update button, below message is shown.

Deliver Offer - Money Market

Carrying a high balance in your Savings? Open a Money Market account today!

- Minimum balance of \$2,500

[More Information](#)

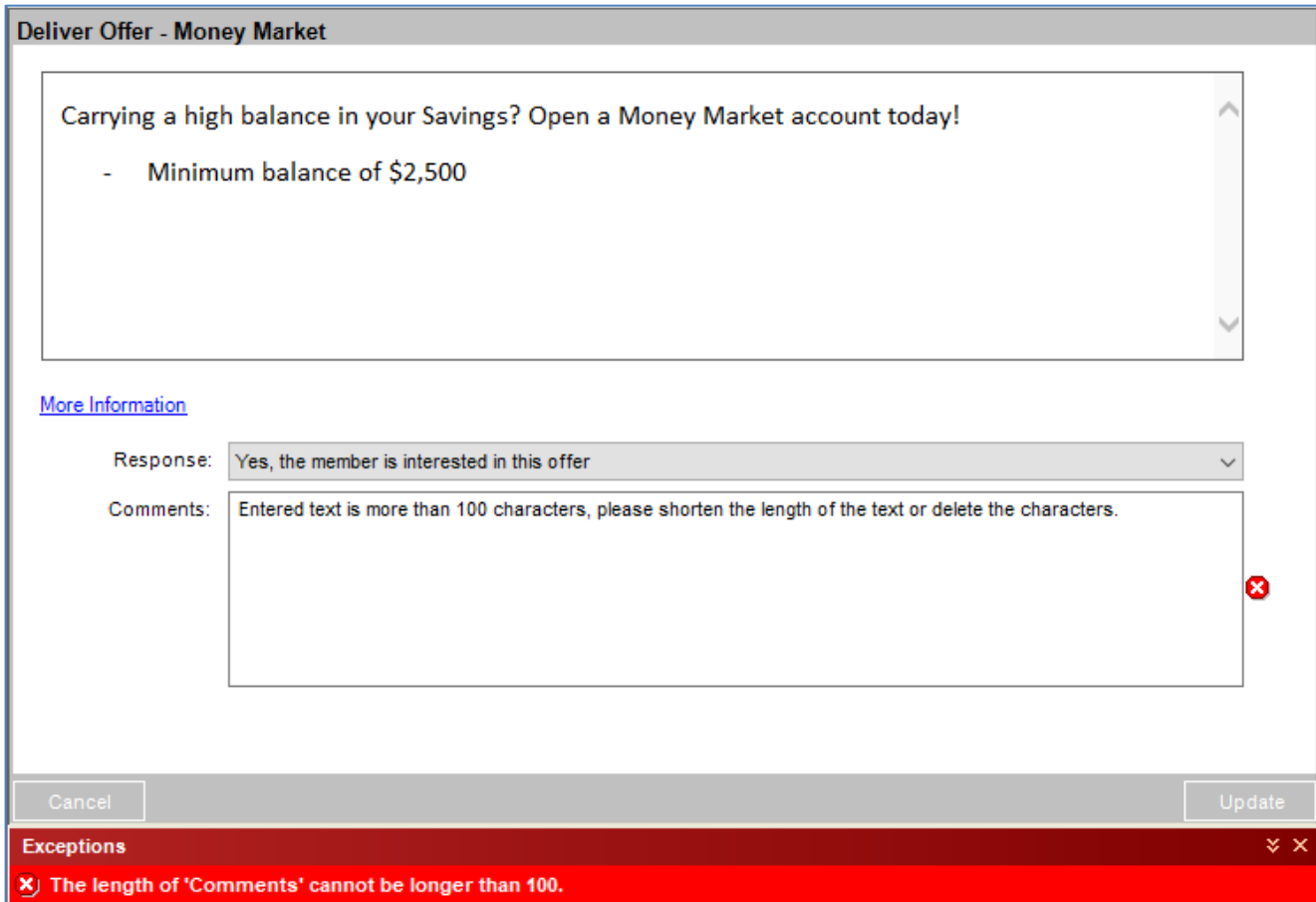
Response:

Comments:

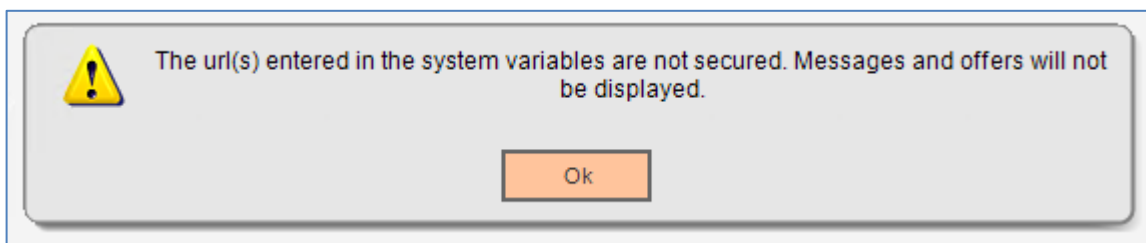
Exceptions

This field is required and requires that a value be entered.

- In case teller enters more than 100 characters in the comments textbox then below message is shown.



- If the URL(s) that are set in calculation variables NX01, NX03, NX04 and NX09 are not secured and do not contain Uri scheme as https then the messages and offers are not displayed in the application and below message is shown.



Authorizations:

Since the application is a slide out it will inherit the same authorization item code and authorization permissions as set for the parent screen. The application will not install any application specific authorization item code as part of installation process.

- If the slide out is accessed via the Relationship Profile screen then it will inherit the authorization item code specified for the Relationship Profile screen that is “RS”
- If the slide out is accessed via the Person/Member screen then it will inherit the authorization item code specified for the Person/Member screen that is “PMNT”
- If the slide out is accessed via the Transaction Express screen then it will inherit the authorization specified for the Transaction Express screen that is “TE”

Variables:

Calculation Categories:

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

| Calculation Cat Code | Description |
|----------------------|------------------------|
| BANK | Institution Processing |

Calculation Types:

The following calculation type is required to associate the variables to the application.

| Calculation Type Code | Description |
|-----------------------|------------------|
| NXTM | Marketing Offers |

Calculation Variables:

New institution level calculation variables have been added for the ‘NXTM’ calculation type. These calculation variables are used to hold various values for configuring Next offers and Next URL for Next Marketing Offers functionality.

| Variable | Code | Description (how used) | Data Type | Default |
|-----------------------------|------|--|-----------|-----------------------|
| Institution Pull Offers URL | NX01 | Code to represent the custom web service end point url for pulling offers and messages for the member. | STR | Click |
| Offers Count | NX02 | Code to represent the number of offers to be pulled by custom web service for the member. | INTG | 5 |
| Inst Save Offer Comment URL | NX03 | Code to represent the custom web service end point url for saving the response and comment for the offer provided to the member. | STR | Click |

| Variable | Code | Description (how used) | Data Type | Default |
|-------------------------------|------|--|-----------|-----------------------|
| Institution Auth Web URL | NX04 | Code to represent the custom web service end point url parameters to authenticate user. | STR | Click |
| Messages Count | NX05 | Code to represent the number of messages to be pulled by custom web service for the member. | INTG | 2 |
| Inst Webserv Encrypt Password | NX06 | Code to represent the custom web service encrypted password to connect to web service | STR | Click |
| Inst Webservice Version | NX07 | Code to represent the custom web service end point version information. | STR | latest |
| Use Institution Service Flag | NX08 | Code used for holding the boolean flag to use Institution service or Fiserv next service to pull or save offers. | YN | N |
| Fiserv's NEXT Service URL | NX09 | Code used for holding Fiserv's Next service url. | STR | Click |
| Fiserv's NEXT Connector Key | NX10 | Code used for holding Fiserv's Next service connector key. | STR | Click |
| Fiserv's NEXT User Name | NX11 | Code used for holding Fiserv's Next service user name. | STR | Click |
| Fiserv's NEXT Encrypt UsrPasw | NX12 | Code used for holding Fiserv's Next service encrypted user password. | STR | Click |
| Fiserv's NEXT InstitutionCode | NX13 | Code used for holding Fiserv's Next service institution code. | STR | Click |
| Fiserv's NEXT Vendor ID | NX14 | Code used for holding Fiserv's Next service vendor id. | STR | Web |
| Fiserv's NEXT Channel ID | NX15 | Code used for holding Fiserv's Next service channel id. | INTG | 2 |

Calculation Variable values

| Code | Default |
|------|---|
| NX01 | https://bravo.xxxx.org/RbWebService-v11/marketingoffer/pulloffers |
| NX03 | https://bravo.xxxx.org/RbWebService-v11/marketingoffer/sendofferreply |
| NX04 | https://bravo.xxxx.org/RbWebService-v11/security/authenticate |
| NX06 | UPE+/8egVrJGskZHhNrOtdrTW3Dyke7lwylBYzZRvCo= |
| NX09 | https://dnatest-nextapp/NEXTWebService/NEXTService.asmx |
| NX10 | ZUNkTmJ82mJlImnaPej9LXk5FWFRLRVk0 |
| NX11 | nextintegration |

| Code | Default |
|------|--|
| NX12 | FGMHoxvSAwOekWZLx6M+ouyWVSLQLbOR7kmlgDtKE6l= |
| NX13 | DNATESTNEXT |

xxxx – Developer’s financial institution name.

Real-time Interaction with Other Applications: Financial Institution RESTful Web Service

Financial Institution has an online banking product called NetBranch which shows NEXT offers and messages to members configured in NEXT product. A custom in house web service is created which is a wrapper over the Fiserv’s NEXT web services to retrieve these offers. These services are exposed as a RESTful web service layer which provides access to core functionalities of institution. The app will make use of these already exposed web services to fetch the offers and messages for the member in case “Use Institution Service Flag” is set to “Y”.

Financial Institution’s web services are maintained and deployed internally by Institution’s web development team and are not meant for distribution, sell or use by any other financial institutions.

API Versioning

Financial Institution supports multiple versions of its web service for historical support and backward compatibility. As a consumer of the web service, app will request which API version it wants to consume. The API version should be provided for each request with the **Accept-Version** HTTP header.

The following are sample versions supported by the institution:

- 12
- latest (unversioned)

Using the latest version indicates that app wants the highest available version of the web service. Neglecting to send the Accept-Version header will result in request being fulfilled by the latest version. It is recommended to send a specific version so that future versions will not break the implementation.

Data Formats

Both JSON and XML are supported by the web service. App will use JSON format using the Accept HTTP header.

Service Endpoints

To know about all available Institution's services, internal service endpoint documentation has to be referred. Each endpoint specifies the request and response object, includes a code sample, and links to any documentation for the endpoint.

Authentication

Authentication to the service is required before trying to utilize any of the endpoints. To authenticate, app need to send the values of below tags in JSON format:

| Tags | Description |
|----------|--|
| clientId | An Institution issued identifier that uniquely identifies the application that is consuming the web service. |
| userId | This is the DNA user id of the teller logged on to DNA. |
| password | The password issued for the client id. This is the value provided by institution and is stored in encrypted format in the calculation variables. |

After authentication, app will receive a session token from the web service that should be passed in future requests with the Authorization HTTP header.

Pull Offers

Pull offers call to the service will pull all the offers related to the member. The app needs to send the values of below tags in JSON format:

Request tags:

| Tags | Description |
|---------------------|--|
| personNumber | Person number of the member whose offers needs to be pulled. |
| channel | It holds the value for the channel that will be used by web service to fetch the offers from NEXT product. The default value is "DNA_TELLER" |
| maximumOfferLimit | This will fetch all the offers and messages for the member, the default value = -1 |
| offerRequestDetails | This is the request object that contains below tags required to pull the offers. |
| type | This is the type specified to pull the service message. The default value is "SERVICE_MESSAGE" |
| limit | This is the count of the messages that needs to be pulled by web service. |

| Tags | Description |
|-----------|---|
| sortOrder | This the sort order in which messages needs to be pulled. The default value is "TOP". |
| type | This is the type specified to pull the offers. The default value is "BASIC_OFFER" |
| limit | This is the count of the offers that needs to be pulled by web service. |
| sortOrder | This the sort order in which offers needs to be pulled. The default value is "TOP". |

Response tags:

| Tags | Description |
|--------------------|--|
| personNumber | Person number of the member whose offers are pulled. |
| sessionId | Session token sent by web service after authentication. |
| Offers | This is the collection of offers send by web service, it will contain both messages and offers. Each offer has below tags. |
| id | This is the offer id. |
| name | This is offer name. |
| moreInformationUrl | This contains the URL containing more information about the offer. |
| responseScript | This is the detail content of the offer. |
| presentationId | This is the presentation Id of the offer. |
| type | This is to hold whether offer is basic offer or a message. |
| offerResponses | This will hold all the master responses associated with that offer that teller can choose from based on the interaction with member at the time of offering the offer. |

Save Offers

Save offers call to the service will save the member response for the offer .The app needs to send the values of below tags in JSON format:

Request tags:

| Tags | Description |
|----------------------|---|
| personNumber | Person number of the member whose offers needs to be saved. |
| channel | It holds the value of the channel that will be used by web service to fetch the offers from NEXT product. The default value is "DNA_TELLER" |
| sessionId | Session token sent by web service after authentication. |
| offerIdplaceholder | This is the offer id. |
| presentIdplaceholder | This is the presentation Id of the offer. |
| responseCode | This is the response code capture by teller after member's response to an offer. |
| comment | This is the additional comment capture by teller after member's response to an offer. |

Response tags:

| Tags | Description |
|-------|--|
| valid | This will be "TRUE" if the response is saved successfully in database. |

Real-time Interaction with Other Applications: Fiserv's NEXT web service

In case "Use Institution Service Flag" is set to "N" then the app will make use of existing Fiserv's NEXT web service configured at the institution for the NEXT product.

To know about all available Fiserv's NEXT web services, methods and Integration process please refer "Next_WS_Integration_Guide.pdf" from the developer portal.

Screens:

New screen at below locations will be part of Next Teller Marketing app.

Navigation

Relationship Profile:

Services > Relationships > Quick Inquiries > Relationship Profile

Person / Member:

Services > Relationships > Maintenance > Person / Member

Transaction Express:

Services > Transactions > Transaction Express

Transaction Express:

Services > Relationships > Quick Inquiries > Relationship Profile > Transaction Express

Screen Appearance:

General use of screen and button layout:

New slide out has been added to the Relationship Profile, Person / Member and Transaction Express Screen. The new slide out is "Messages and Offers"

Messages and Offers

Messages (2)

Happy Birthday from all of us here at RBFCU!
Happy 5 year credit union Anniversary! Thank you for choosing RBFCU. We appreciate your membership!

Offers (5)

| | |
|-----------------|-------------------------------|
| Money Market | Deliver Offer |
| eStatements | Deliver Offer |
| ID Protect Plus | Deliver Offer |
| Mastercard | Deliver Offer |
| Vehicle Loan | Deliver Offer |

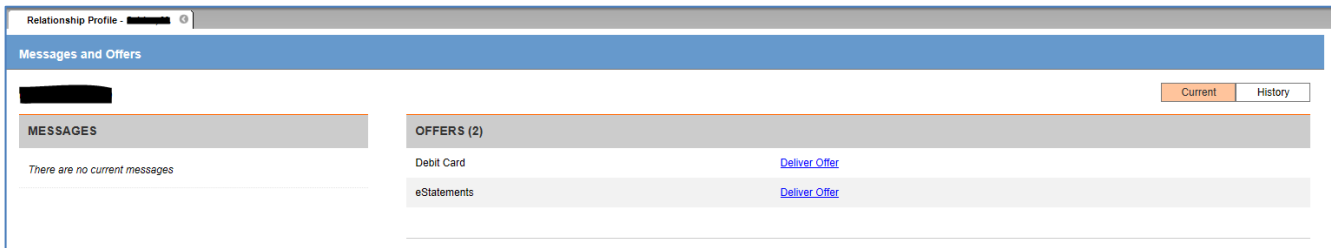
Deliver Offer

Response:

Comments:

Cancel Update

Existing Fiserv’s NEXT product screen



Field Listing Details Area:

| Field | Description |
|-----------------------|---|
| Member Name | The label of the field will be hidden, the value will show members first name, middle initials and last name. Cannot be edited. |
| Messages Frame | The title of the message frame will show the message count, the frame will contain a browser control that will render html messages from the custom web service or Fiserv’s NEXT web service. |
| Offers Frame | The title of the offers frame will show the offers count; the frame will contain a grid control that will show the offers returned from the custom web service or Fiserv’s NEXT web service. |
| Deliver Offer Frame | The title of the Deliver Offer frame will show the description of the offer clicked on the offers grid. |
| Deliver Offer Browser | The label of the control will be hidden; it will render the HTML content of description of the offer clicked by teller on the offer grid. |
| Response | This combo box will contain the description of the responses that teller can choose from for a particular offer provided to member. |
| Comments | This text box will hold any additional comments entered by teller after choosing a response to an offer from the combo box. |
| Update | This button will update the response code and comments for an offer in next database. |
| Cancel | This will undo the changes made by teller for offer. |

Column Listing Grid:

| Field | Description |
|--------------------|--|
| Offers grid | |
| Offers Grid | The label of the field will be hidden. The grid will show the offer descriptions and “Deliver Offer” hyperlink for the offers retrieved from the custom web service, The click on the “Deliver Offer” link will populate the offer details in deliver offer frame. |

Text Encryption-Decryption Application

This app is packaged with NEXT app to create encrypted password text using advance encryption standard from raw password text before these text can be set in NX06 and NX12 calculation variables.

In case the “Use Institution Service Flag” is set to “Y” then encrypted password is generated for financial institution web service and updated in NX06 calculation variable.

In case the “Use Institution Service Flag” is set to “N” then encrypted password is generated for the Fiserv’s Next service user password and updated in NX12 calculation variable.

Screens:

New screen at below location will be part of Text Encryption-Decryption app.

Authorizations:

The application will be set up with view access permissions only.

The system administrator will assign the application authorization item to the corresponding authorization group(s) to grant users access to the application. Since the applications deals with password generation it is suggested that access/authorization of the application must be tightly controlled.

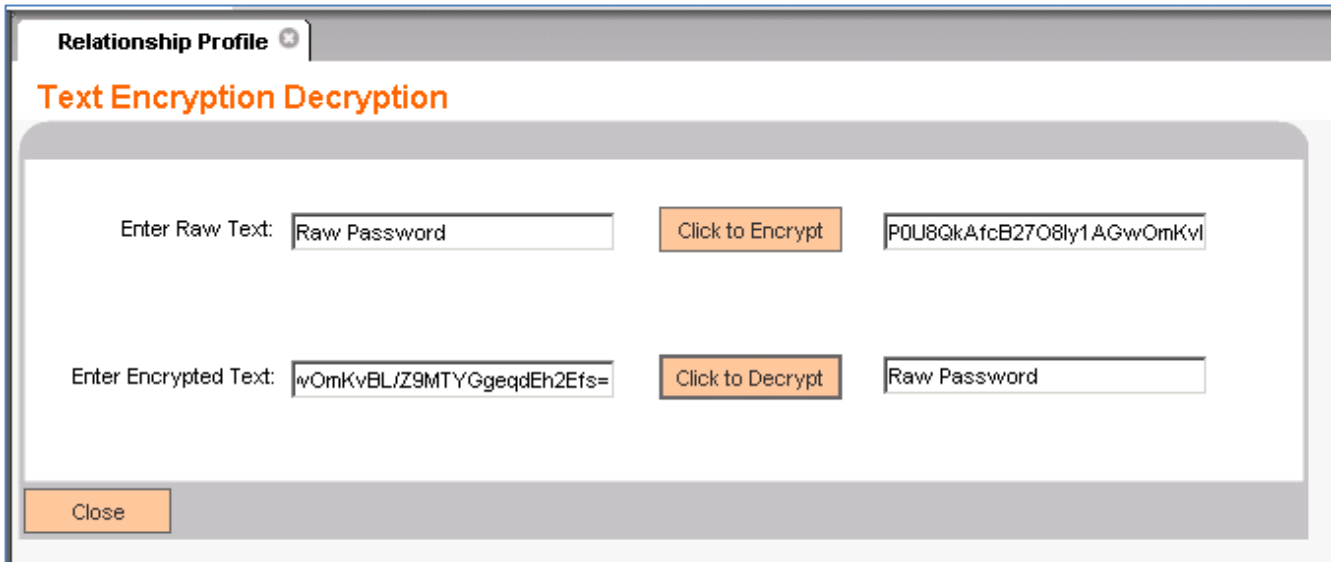
The below application authorization item is included as part of the application installation:

| Authitemcd | Authitemdesc | PermissionDesc(s) |
|------------|----------------------------|-------------------|
| TXED | Text Encryption Decryption | VIEW |

Navigation

Services > System > Institution > Text Encryption Decryption Application

Screen Appearance:
General use of screen and button layout:



Field Listing Details Area:

| Field | Description |
|----------------------|---|
| Enter Raw Text | This textbox will hold the raw password text that needs to be encrypted. |
| Click to Encrypt | This button will convert the raw text entered in the raw text textbox to encrypted text and display that text in the adjacent textbox. |
| Enter Encrypted Text | This textbox will hold the encrypted text password text that needs to be decrypted. |
| Click to Decrypt | This button will convert the encrypted text entered in the encrypted textbox to raw text that is decrypted and display that text in the adjacent textbox. |
| Close | This button will close the screen. |

Additional Requirements:

- .NET Framework 4.5.2 or higher
- DNA 4.2 or higher
- Fiserv’s NEXT product set up if “Use Institution Service Flag” is set to “N”
- Financial Institution in house RESTful web services if “Use Institution Service Flag” is set to “Y”

Configuration Checklist:

| Item | Test Environment | Production Environment |
|--|------------------|------------------------|
| Variables | | |
| AuthItem Authorizations and Permissions | | |
| Fiserv's NEXT product set up | | |
| Financial institution's RESTful web service Installation | | |

Revisions

| Date | App Version # | Change |
|---------|---------------|--|
| 04/2022 | 1.0.0.5 | Updated the code to enable update button when Fiserv's smart search app is used to search for any member. |
| 09/2021 | 1.0.0.4 | Updated the code to display internal scroll bar in the application according to the DNA screen size. |
| 05/2021 | 1.0.0.3 | Updated the hashing algorithm to SHA-512 in the application. Fixed the issue in the application where messages and offers not populating when using Fiserv's Next web service. |
| 02/2021 | 1.0.0.2 | Removed the calculation variable NX16 which was used to set the channel instance id field to blank in Fiserv's Next web service. The code is enhanced such that the person number of logged on teller in DNA is set in the channel instance id field of Fiserv's Next web service. |
| 09/2019 | 1.0.0.1 | Added the option to populate offers and messages using the Fiserv's Next Service directly. Added the app to generate encrypted and decrypted password to be set for NX06 and NX12 calculation variables. Added the code to populate the offers and messages on the app when the user clicks the "*** Click here to retrieve offers ***" label on the screen. |
| 09/2018 | 1.0.0.0 | Application Created |