



## Enhanced Search

EnhancedSearchPkg.dnaxp  
Extension Id: 83054e24-6140-4efd-8c08-90337b3839c4

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**Overview:**

The Enhanced Search DNAapp gives core users the ability to perform additional search queries. It enhances traditional core screen usability by offering multiple new search criteria all on one screen.

The search options are listed below:

- Credit Card Number or CCM PAN Number (currently unavailable)
- Debit Card Number
- Account Number
- Account Description
- Phone Number
- Email Address
- Collateral Address
- Property Insurance Policy Number
- Organization Name
- Vehicle Identification Number
- Parcel Number
- Check Number
- Agreement Number
- ID Number
- Online Check Trace Number

Wild Cards (% , \_) may be entered as part of search criteria, except for the CCM PAN Number and search where the user must enter the actual credit card number or “%” and the last 4 digits. Online Check Trace Number cannot be wild card searched.

**Key Benefits:**

- Additional search queries on other criteria that were not offered before
- Searches can now be performed faster and easier than ever before

**Processing:**

In the **Search** Criteria frame, the user inputs one of the search options and clicks on the **Query** button. The search process is done only on one criterion; the first populated criterion met in the Search Criteria frame (the considered order of the criteria is “Credit Card Number”, “Debit Card Number”, “Account Number”, “Account Description”...).

The matching data is displayed in the **Results** frame. When the user double clicks on a row, the **Relationship Profile** screen is displayed and populated with the selected customer. If the customer has any warnings, the Restriction dialog box is displayed first. The user is also able to select a customer from the list and copy the customer number by holding “ctrl c” or using the context menu (right click). From any screen, the user can paste the customer number by holding “ctrl v”.

The user is also able to select an account from the list and copy the account number by holding “ctrl c” or using the context menu (right click). From any screen, the user can paste the account number by holding “ctrl v”. When the customer number and the account number

are both present in a row, the application asks the user to choose between them before copying (see the Figure 3).

The Check Number search will only display checks with reference account number that is associated with a person or organization.

The search on the Collateral Address is done on the property description.

When searching by Debit Card Number, Phone Number, Email Address or Check Number for persons the list displayed may include persons and customers (or members). For other searches, the result will only provide a list of customers (or members).

If no field in Search Criteria frame is populated when the Query button is clicked, an informational popup window (Figure 4) is displayed.

### **Variables:**

Only the value of the variables 9R3C to 9R3K can be customized by the financial institution.

### Calculation Categories:

A calculation category is required to associate the variables to the application. The following calculation category is used for that purpose.

Calculation Cat Code	Description
9RFC	Custom Category

### Calculation Types:

A calculation type is required to associate the variables to the application. The following calculation variable is used for that purpose.

Calculation Cat Code	Calculation Type Code	Description (how used)	MjMiYN
9RFC	9R06	Enhanced Search	N

### Calculation Variables:

The following calculation variables are required for the application. They are populated within the '9R06' calculation type.

Variable	Code	Description (how used)	Data Type	Default
CreditCardMajor	9R3C	Major type code use for external credit cards	STR	EXT
CreditCardTyp	9R3D	External id type code use for credit cards	STR	MASK

Variable	Code	Description (how used)	Data Type	Default
DebitCardTyp	9R3E	Agreement type codes use for debit cards	STR	ATM,DBT,DBT1,DBT2
EmailTypCd	9R3F	Address use codes for email address	STR	EML,EM01,EM02,EM03,EM04,EM05,EM06,EM07,EHOM,EBUS
MaxResult	9R3G	Maximum number of search results per page	NUM	10000
CCM_YN	9R3H	Y if the Financial Institution uses Fiserv CCM Module	STR	N
CheckTypMajorCd	9R3I	Major type code use for Official Checks	STR	BKCK
CheckTypMinorCds	9R3J	Minor type codes use for Official Checks	STR	BAT,CASH,ESC,MO
ExcludeIDTypes	9R3K	Excludes ID Types from return	STR	6
ClosedCardMaskFormat	9R3L	Regular expression to find the card number inside of a closed card	STR	\d{4}
MaskCharacter	9R3M	Masking character used to mask values	STR	*

**Screens:****Navigation:**

Relationships → Quick Inquiries → Enhanced Search

**Screen Appearance:**

**Search Criteria**

Person     Organization

Credit Card Number: <input type="text" value="%5553"/>	Debit Card Number: <input type="text"/>
Account Number: <input type="text"/>	Account Description: <input type="text"/>
Phone Number: <input type="text"/>	Email Address: <input type="text"/>
Collateral Address: <input type="text"/>	Property Insurance Policy Number: <input type="text"/>
Organization Name: <input style="background-color: #f0f0f0;" type="text"/>	Vehicle Identification Number: <input type="text"/>
Parcel Number: <input type="text"/>	Check Type: <input type="text" value="v"/> Check Nbr: <input style="background-color: #f0f0f0;" type="text"/>
Agreement Number: <input type="text"/>	ID Number: <input type="text"/>
Online Check Trace Number: <input type="text"/>	

**Results**

Member Number	Name	Person Type	Account Number	Account Status	Account Description	Card Number
123456	JENNIFER SMITH	Member	123456789	Active		*****5553
123457	JENNIFER SMITH	Member	123456789	Active		*****5553
123458	JENNIFER SMITH	Member	123456789	Active		*****5553
123459	JENNIFER SMITH	Member	123456789	Active		*****5553
123460	JENNIFER SMITH	Member	123456789	Active		*****5553
123461	JENNIFER SMITH	Member	123456789	Closed		*****5553
123462	JENNIFER SMITH	Member	123456789	Closed		*****5553
123463	JENNIFER SMITH	Non-member	123456789	Active		*****5553
123464	JENNIFER SMITH	Member	123456789	Closed		*****5553
123465	JENNIFER SMITH	Member	123456789	Active		*****5553
123466	JENNIFER SMITH	Member	123456789	Active		*****5553
123467	JENNIFER SMITH	Member	123456789	Active		*****5553
123468	JENNIFER SMITH	Member	123456789	Closed		*****5553
123469	JENNIFER SMITH	Member	123456789	Active		*****5553
123470	JENNIFER SMITH	Member	123456789	Active		*****5553
123471	JENNIFER SMITH	Member	123456789	Closed		*****5553
123472	JENNIFER SMITH	Member	123456789	Active		*****5553

   18 row(s). Page 1

Main Screen – Figure 1 (credit card number search)

“Member Number” according to the financial institution type.

**Search Criteria**

Person     Organization

Credit Card Number:       Debit Card Number:   
 Account Number:       Account Description:   
 Phone Number:       Email Address:   
 Collateral Address:       Property Insurance Policy Number:   
 Organization Name:       Vehicle Identification Number:   
 Parcel Number:       Check Type:       Check Nbr:   
 Agreement Number:       ID Number:   
 Online Check Trace Number:

**Results**

Member Number	Name	Person Type	Agreement Number	Agreement Type	Agreement Status	Issued Date
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Active	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	XXXXXXXXXXXXXXXXXXXX CARD	Closed	03-16-2011
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Closed	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Active	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	XXXXXXXXXXXXXXXXXXXX CARD	Hot Card	01-18-2008
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	XXXXXXXXXXXXXXXXXXXX CARD	Hot Card	01-29-2008
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Active	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Closed	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Closed	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Active	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Active	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Active	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Active	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	XXXXXXXXXXXXXXXXXXXX CARD	Closed	11-23-2014
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Active	10-31-2009
10000	XXXXXXXXXXXXXXXXXXXX	Member	10000	CALL-24	Closed	10-31-2009

   1363 row(s). Page 1

Main Screen – Figure 2 (agreement number search)

**Search Criteria**

Person     Organization

Credit Card Number:       Debit Card Number:   
Account Number:       Account Description:   
Phone Number:       Email Address:   
Collateral Address:       Property Insurance Policy Number:   
Organization Name:       Vehicle Identification Number:   
Parcel Number:       Check Type:       Check Nbr:   
Agreement Number:       ID Number:   
Online Check Trace Number:   
From:       To:

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**Results**

**Detail**    **Related**

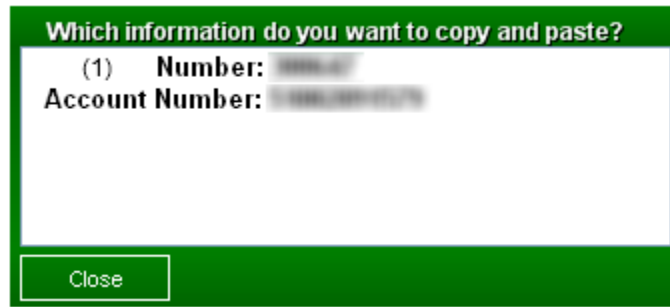
Member Number	Name	Person Type	Account Number	Post Date	Effective Date	Check Number	Amount
123456	John Doe	Member	123456789	01/02/2019	01/02/2019	1001	\$80.00
123456	John Doe	Member	123456789	01/02/2019	01/02/2019	1002	\$80.00
123456	John Doe	Member	123456789	01/02/2019	01/02/2019	1003	\$85.00

   3 row(s). Page 1

Main Screen – Figure 3 – (Online Check Trace Number search)

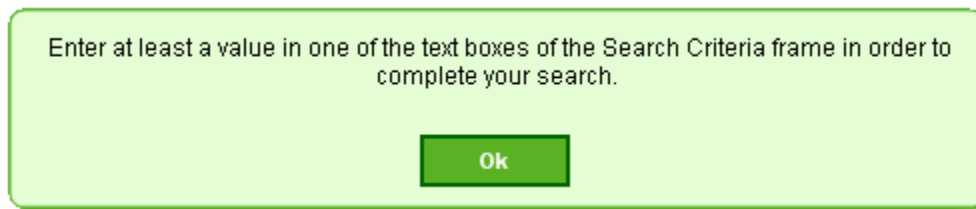
“Customer Number” according to the financial institution type.



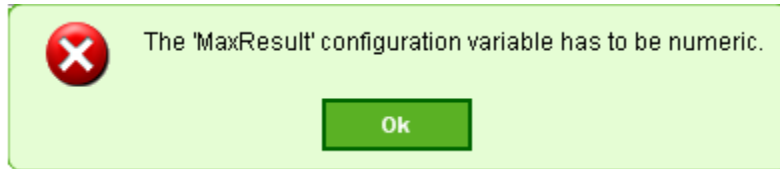


Information to copy – Figure 3

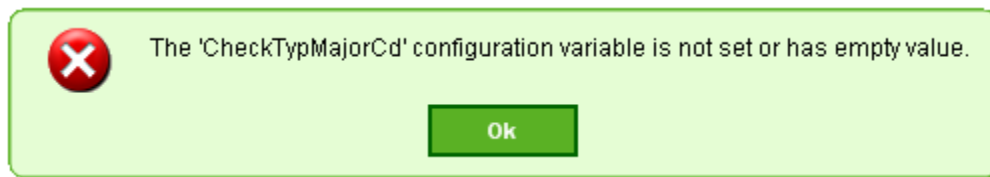
(1); “Customer” or “Member” term according to the financial institution type.



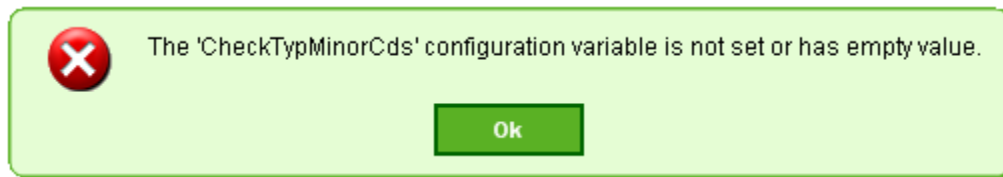
Information popup window when no field populated during query – Figure 4



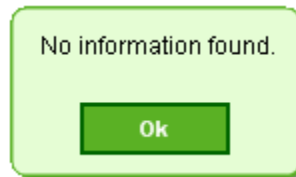
Error message popup window when MaxResult configuration variable is not numeric – Figure 5



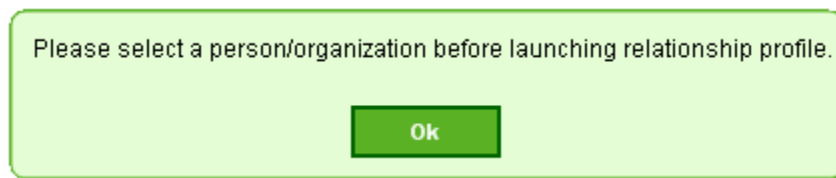
Error message popup window when CheckTypMajorCd configuration variable is empty – Figure 6



Error message popup window when CheckTypMinorCds configuration variable is empty – Figure 7



Information popup window when there is no search result – Figure 8



Information popup window when a user double click on column description on Results grid and no person or org was selected – Figure 9

**Field Listing:**

Field	Description
<b>Search Criteria</b>	
Person radio button	Select when the search should be done on Persons.
Organization radio button	Select when the search should be done on Organizations.
Credit Card Number/ CCM PAN Number	Credit Card Number with/without wild cards. 16 characters max. If the CCM_YN calculation variable is set to Y, CCM PAN Number search is used instead. In this case, the user must input the credit card number without wild cards, 16 characters max.
Debit Card Number	Debit Card Number with/without wild cards. 20 characters max.
Account Number	Account Number with/without wild cards. 22 characters max.
Account Description	Account Description with/without wild cards. 40 characters max.
Phone Number	Phone Number with/without wild cards. 12 characters max.
Email Address	Email Address with/without wild cards. 40 characters max.
Collateral Address	Collateral Address with/without wild cards. The search is on the property description. 40 characters max.
Property Insurance Policy Number	Property Insurance Policy Number with/without wild cards. 30 characters max.

Field	Description
Organization Name	Organization Name with/without wild cards; available only when the Organization radio button is checked. 60 characters max.
Vehicle Identification Number	VIN with/without wild cards. 30 characters max.
Parcel Number	Parcel Number with/without wild cards. The parcel number is a number assigned to a parcel of real property by the tax assessor of a particular jurisdiction for the purpose of identification and record keeping. 40 characters max.
Check Type	Check type is the type of official check. Required if searching by check number.
Check Nbr	Check number is the check number issued for the official check. 22 characters max. Disabled until check type is selected.
Agreement Number	Agreement Number with/without wild cards. 22 characters max.
ID Number	ID Value. 20 characters max.
Online Check Trace Number	Online Check Trace Number value without wild cards. Numeric value only.
From Date	From Date to search for Online Check Trace Number value by. DateTime value.
To Date	To Date to search for Online Check Trace Number value by. Date Time value.
Query Button	To invoke the information to be retrieved based on the first search populated field.
Clear Button	Clears any entered or data populated on the screen.
<b>Results</b>	
Customer Number/Member Number column	Customer Number or Member Number depending on the Financial Institution; always displayed.
Name column	Customer or Member Name; always displayed.
Person Type/Organization Type column	Person Type or Organization Type depending on the selected search; always displayed.
Account Number column	Account Number; displayed only if search by Credit Card Number, CCM PAN Number, Debit Card Number, Account Number, Account Description, Collateral Address, Property Insurance Policy Number, Vehicle Identification Number, Parcel Number and Check Number.
Account Description column	Account Description; displayed only if search by Credit Card Number, CCM PAN Number, Debit Card Number, Account Number, Account Description, Collateral Address, Property Insurance Policy Number, Vehicle Identification Number and Parcel Number.
Account Status column	Account current status; displayed only if search by Credit Card Number, CCM PAN Number, Debit Card Number, Account Number, Account Description, Collateral Address, Property Insurance Policy Number, Vehicle Identification Number and Parcel Number.
Card Number column	Card Number; displayed only if search by Credit Card Number, CCM PAN Number and Debit Card Number. The Card Number is masked except if CCM PAN search is used.

Field	Description
Phone Number column	Phone Number; displayed only if search by Phone Number.
Email Address column	Email Address; displayed only if search by Email Address.
Collateral Address column	Collateral Address; displayed only if search by Collateral Address.
Property Insurance Policy Number column	Property Insurance Policy Number; displayed only if search by Property Insurance Policy Number.
VIN Number column	VIN Number; displayed only if search by VIN Number.
Parcel Number column	Parcel Number; displayed only if search by Parcel Number.
Check Number column	Check Number; displayed only if search by Check Number.
Pay To column	Check Payee; displayed only if search by Check Number.
Check Status column	Check Current Status; displayed only if search by Check Number.
Issued Date column	Check Issued Date; displayed only if search by Check Number and Agreement Number.
Agreement Number	Agreement Number; displayed only if search by Agreement Number.
Agreement Type	Agreement Type; displayed only if search by Agreement Number.
Agreement Status	Agreement Status; displayed only if search by Agreement Number.
Post Date	Post Date; displayed only if search by Online Check Trace Number.
Effective Date	Effective Date; displayed only if search by Online Check Trace Number.
Check Number	Check Number; displayed only if search by Online Check Trace Number.
Amount	Amount; displayed only if search by Online Check Trace Number.
Description	Description; displayed only if search by Online Check Trace Number.
Check Hold	Check Hold; displayed only if search by Online Check Trace Number.
Hold Account Number	Hold Account Number; displayed only if search by Online Check Trace Number.
Online Check Trace Number	Online Check Trace Number; displayed only if search by Online Check Trace Number.
Trace Number	Trace Number; displayed only if search by Online Check Trace Number.
Sequence Number	Sequence Number; displayed only if search by Online Check Trace Number.
Close button	Close the form.
Previous button	Go to the previous page of the results grid.
Next button	Go to the next page of the results grid.

**Additional Requirements:**

- Fiserv DNA 4.2.2 or higher
- .NET Framework 4.5.2
- CoreAPIService 2.2.0 or above

- Previous version of Enhanced Search DNAApp must be uninstalled first before installing the latest version.
- Authorization needs to be granted to employees who will be using the Enhanced Search DNAApp.
  1. If the app is going to be used by a small number of employees, you may elect to use the "auth" created in the script as follows:
    - Go into Security module
    - Search for employee
    - Select Assign Authorizations tab
    - Authorizations available are on left, and assigned ones are on right. The Enhanced Search Auth would show up on left. It should be selected (moved to right) and processed.
  2. If the app is going to be used by one or more already established classes of employees (e.g., all Tellers) then there is already an existing Auth that represents the class of employees. Using this Auth, and the AuthItem code for Enhanced Search DNAApp, assign the newly created AuthItem into this Auth.
    - Go into Security module, then Authorizations menu
    - Search for the Auth that represents the class of employees
    - Select the Authorization Item Maintenance tab
    - Authorization Items available are on left, and assigned ones are on right. The CAPR 7821, 7714, 7720, 7756, 7821, 86000-9600, 86021-9013 and Enhanced Search AuthItem would show up on left. They should be selected (moved to right) and processed.
    - Select each of the above CAPR from the Selected list and click on the Authorization Permission Maintenance. For each one, move all the available permission to the Selected list and processed.
    - Select the Enhanced Search AuthItem from the Selected list and click on the Authorization Permission Maintenance. Move all the available permission to the Selected list and processed.

**Configuration Checklist:**

Item	Test Environment	Production Environment
Variables		

**Revisions:**

Date	App Version #	Change
12/2019	1.5.0.0	Added ID Number Search.

Date	App Version #	Change
		Added Online Check Trace Number Search. Added Encrypted Credit Card Number Search.
07/2016	1.4.0.0	Added Agreement Number search. Upgraded to DNA 4.2.2.
10/2015	1.3.0.0	Display the Restriction dialog box before showing the Relationship Profile screen if the customer has any warnings.
11/2012	1.2.2.0	Fixed document and script issue.
11/2012	1.2.1.0	Properly displayed the Check Type combo box. Change display message when a user double click on column description on Results grid. Clear Check Number textbox and Results grid when Check Type combo box selection changed.
10/2012	1.2.0.0	Added CCM PAN Number search and Check Number search. Added person type / organization type on the result grid. Updated the Collateral Address search to look into the property description instead.
11/2011	1.1.2.0	Color of the border of the Previous and Next buttons has been changed to white. Results frame is cleared when no field has been set for querying. The columns of the results frame fill the complete width of the grid.
11/2011	1.1.1.0	The size of the Credit and Debit Card Numbers can be more than 16 digits and the masking process considers it. When the user tries to search with all the fields empty in the Search Criteria frame, a new message is displayed. The Query button is disabled after clearing the screen. All the input text boxes sizes have been set to proper values.
10/2011	1.1.0.0	Card Status column has been removed from the results frame when searching on Debit Card. Either member number or customer number is used depending on the financial institution type. The "Ctrl+Alt+F8" key set is used to display, in the results frame title, the current assembly name, version and date/time. The Credit and Debit Card Numbers are masked like 123456xxxxx1234 before DNA 3.3, and masked according to the PMSK Bank Option for DNA 3.3 or higher. When the Person or Organization radio button is clicked, the results frame is cleared.
09/2011	1.0.3.0	Searching on Person for Debit Card, Phone and Email address instead of searching on Member.
08/2011	1.0.2.0	Checking if the parameter "MaxResult" is numeric. If no row is returned, displaying this message: "No information found". Displaying "Customer" or "Member" according to the financial institution type.
08/2011	1.0.1.0	Parcel Number added in the Search criteria.

Date	App Version #	Change
07/2011	1.0.0.0	Application Created