

**Data Transform
User Guide
8.7**

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Introduction

This document serves as the user manual for using the Data Transformation functionality which was introduced in Gold Client version 8.0. This functionality replaces the /HTG/TRANSFORM configuration screen used in previous versions of Gold Client.

Gold Client is delivered with default configuration; however, users are provided the flexibility to define their own data transformation routines for any table and field; this configuration is defined in a simple hierarchical manner where a rule may have one or more tables defined, and each table may have one or more fields defined. Each field can then have its transformation logic defined as required (e.g. blank, fixed value, random, derived, etc.).

- Transformation Rule
 - Table 1
 - Field A
 - Table 2
 - Field A
 - Field B
 - Field C

Once defined, transformation rules can be assigned to Client Construct and Data Echo data types as per the organization's requirements. This assignment means that the data transformation logic within the assigned rule will be performed automatically during the data export irrespective of the user's actions. This is done in order to help safeguard sensitive data. To provide an example, transformation rule BP01 (designed to transform Business Partner data) could be assigned to Client Construct data type BUSINESS PARTNERS and/or to Data Echo data type CA - BUSINESS PARTNERS.

It is possible to assign a transformation rule to multiple data types, including any custom data types that may have been defined; however, it is not possible to assign multiple transformation rules to one data type.

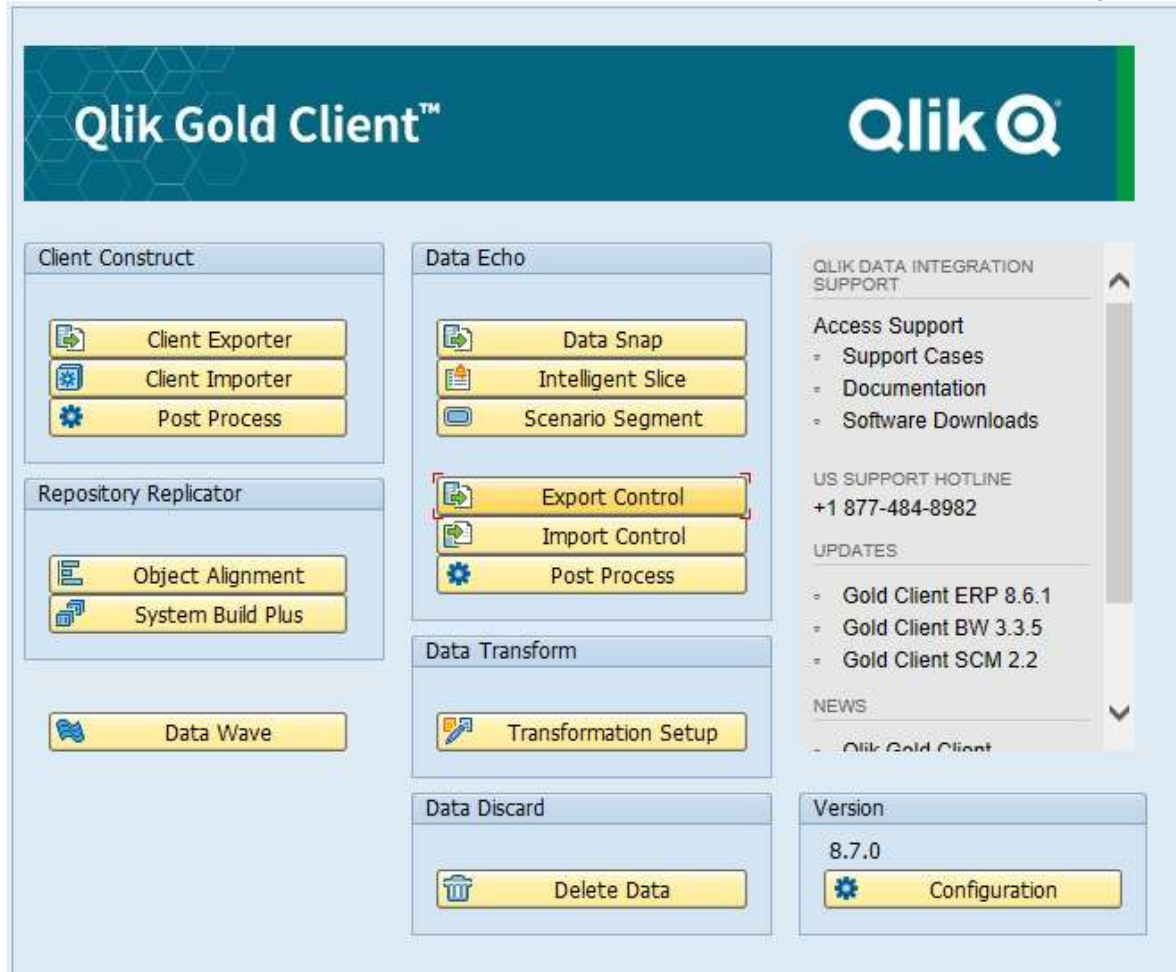
An important point to share is the best practice recommendation of not transforming key fields as doing so could significantly impact data integrity in the target client. If your organization has a requirement to transform data stored in a table's key field, it is recommended to submit a support case and to include all relevant details.

Submit a support case to Qlik's Gold Client support team if assistance is needed in defining this configuration and/or assigning the transformation rules to the Client Construct and Data Echo data types.

Gold Client Transformation Rules Front End

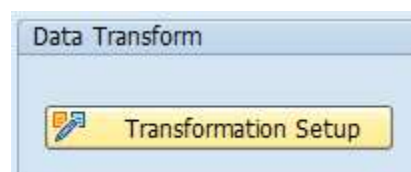
The Gold Client Front End is initiated via Transaction Code /n/HTG/ZGOLD.
The main Gold Client screen is shown (Fig. 1.0).

Figure 1.0



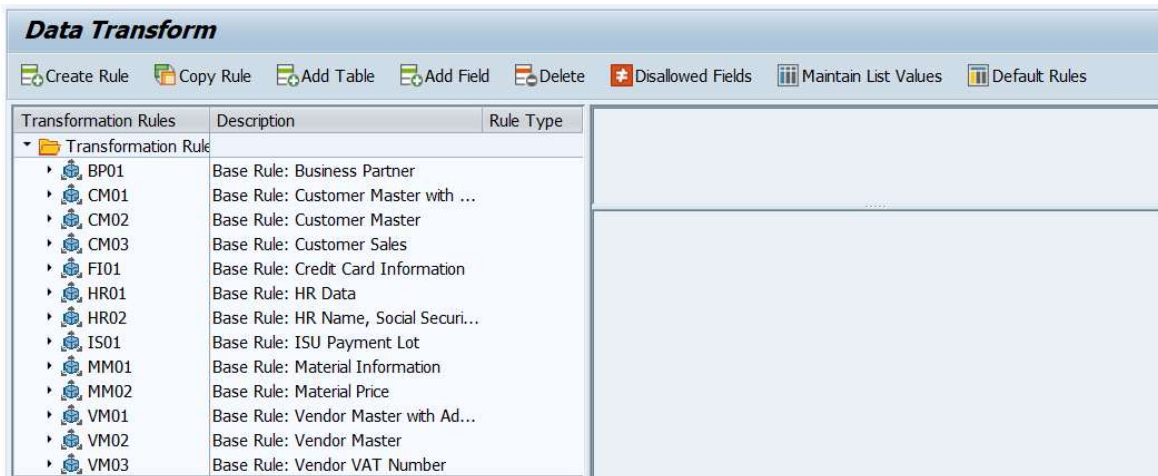
To access the Data Transform user interface, click the Transformation Rules button (Fig. 1.1).

Figure 1.1



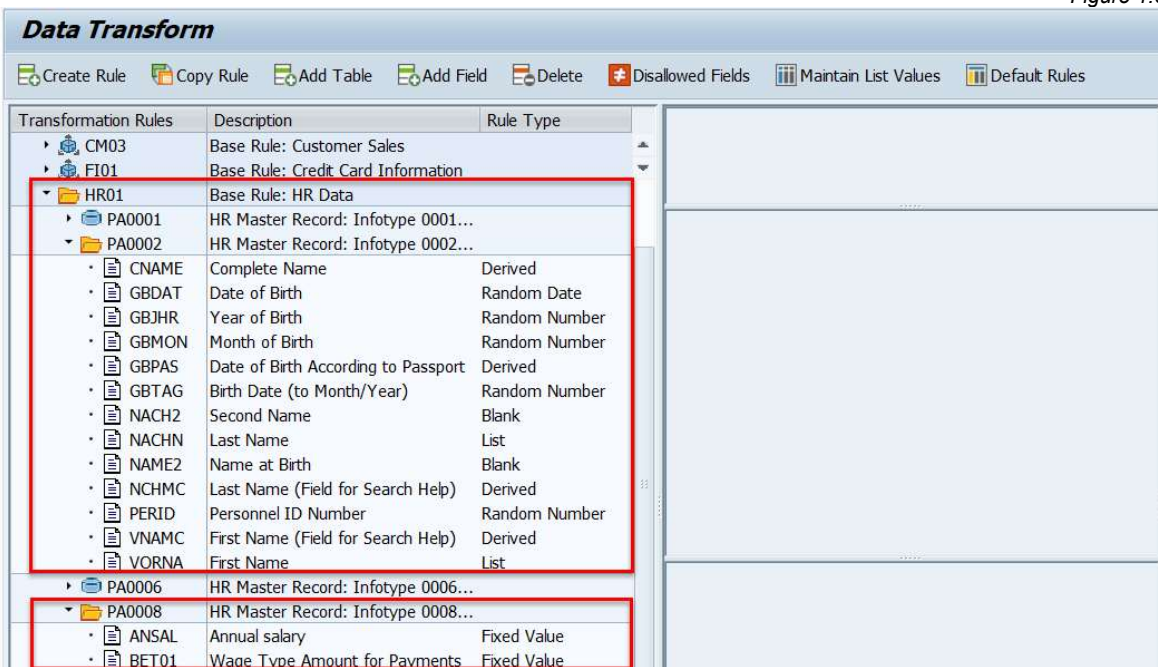
The Data Transform main screen will display (Fig. 1.2).

Figure 1.2



The details, such as tables and fields assigned to each rule, can be viewed by expanding the tree structure for each rule (Fig. 1.3).

Figure 1.3



Rules

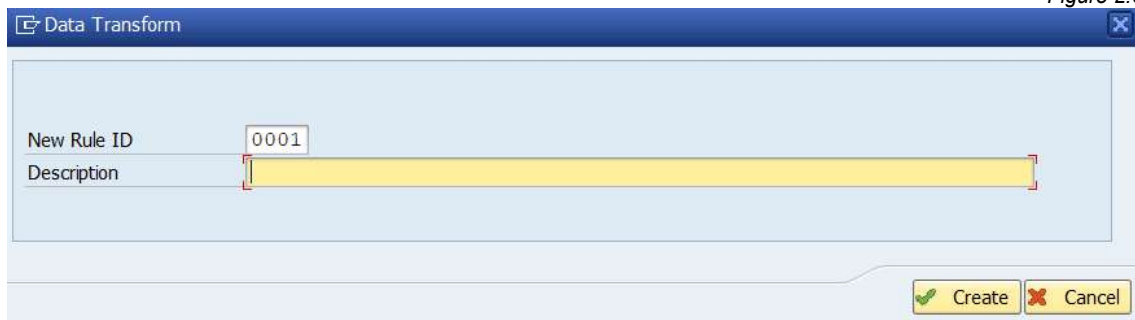
A Transformation Rule is a logical grouping of tables and fields that will be leveraged during export to transform the data based on the details defined within the rule.

It is possible to create new rules as well as copy existing rules. Copying a rule will copy all of its details (tables, fields, masking specifics) as well. It is common to copy the default rules provided by Qlik and then customize them according to the organization's specific requirements. It is not required to copy them for customization purposes, but it is recommended.

To create a new rule, select the 'Create Rule' button located on the toolbar; a child window will display (Fig. 2.0). Do the following:

- Enter a four-character value in the New Rule ID field (Required)
- Enter a description of the rule in the Description field (Required)
- Click the Create button

Figure 2.0



The screenshot shows a window titled 'Data Transform'. Inside, there are two input fields: 'New Rule ID' and 'Description'. The 'New Rule ID' field contains the text '0001'. The 'Description' field is highlighted in yellow. At the bottom right of the window, there are two buttons: 'Create' (with a green checkmark icon) and 'Cancel' (with a red X icon).

To copy an existing rule, select the 'Copy Rule' button located on the toolbar; a child window will display (Fig. 2.1). Do the following:

- Enter a four-character value in the New Rule ID field (Required)
- Enter a description of the rule in the Description field (Required)
- Click the Create button

Figure 2.1

The 'Data Transform' dialog box contains the following fields and buttons:

- Source Rule ID: CM02
- Description: Base Rule: Customer Master
- New Rule ID: 0001
- Description: (Empty text box)
- Buttons: Create (green checkmark), Cancel (red X)

Once a rule is created, tables need to be added to it. **Note:** A table can be defined in multiple Transformation Rules.

To add a table, do the following:

- Highlight a rule in the left menu by single-clicking on it
- Select the 'Add Table' button located on the toolbar
- Input the table name and click the green checkbox button (Fig. 2.2)

Figure 2.2

The 'User Input' dialog box contains the following elements:

- Tablename: (Yellow text box)
- Buttons: Green checkmark, Red X

The newly added table should appear under the rule within the list of Transformation Rules. In this example, table KNA1 has been assigned to transformation rule 0001 (Fig. 2.3).

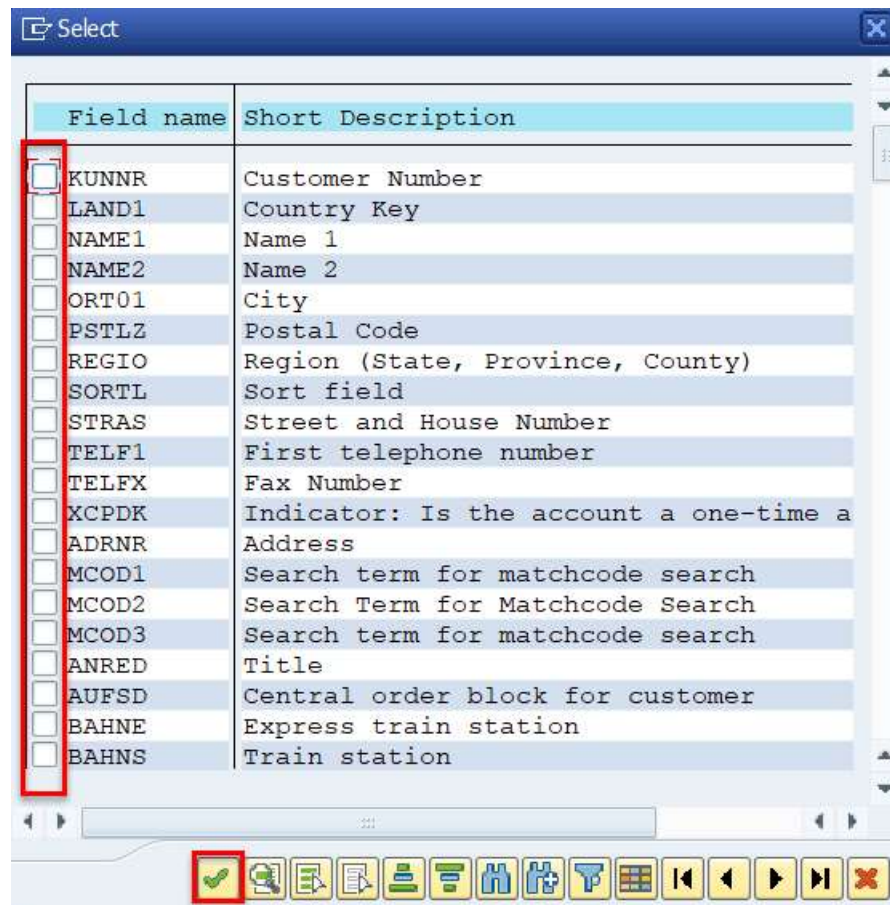
Figure 2.3

Transformation Rules	Description	R.
MM02	Base Rule: Material Price	
VM01	Base Rule: Vendor Master with Ad...	
VM02	Base Rule: Vendor Master	
VM03	Base Rule: Vendor VAT Number	
0001	New Transformation Rule	
KNA1	General Data in Customer Master	

The next task is to add one or more fields to the table. To add a field, do the following:

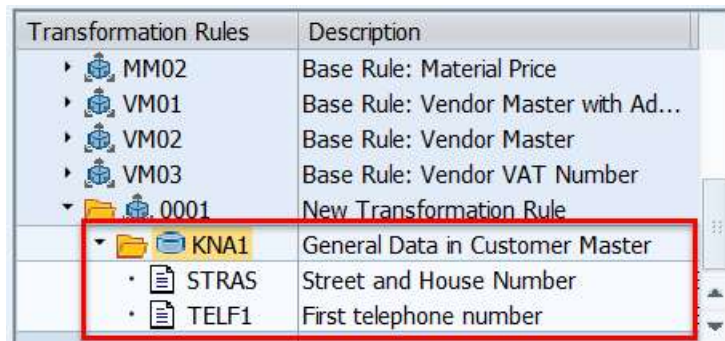
- Highlight a table in the left menu by single-clicking on it
- Click the 'Add Field' button located on the toolbar; a child window will display with the fields that exist within the selected table's structure; in this example, the fields for table KNA1 are displayed (Fig. 2.4)
- Select one or more fields by ticking the checkboxes and then click the green checkmark button

Figure 2.4



The selected fields should appear under the rule the table within the list of Transformation Rules. In this example, the fields STRAS and TEFL1 have been added to table KNA1 (Fig. 2.5).

Figure 2.5



Transformation Rules	Description
▶ MM02	Base Rule: Material Price
▶ VM01	Base Rule: Vendor Master with Ad...
▶ VM02	Base Rule: Vendor Master
▶ VM03	Base Rule: Vendor VAT Number
▼ 0001	New Transformation Rule
▼ KNA1	General Data in Customer Master
• STRAS	Street and House Number
• TELF1	First telephone number

Transformation Types

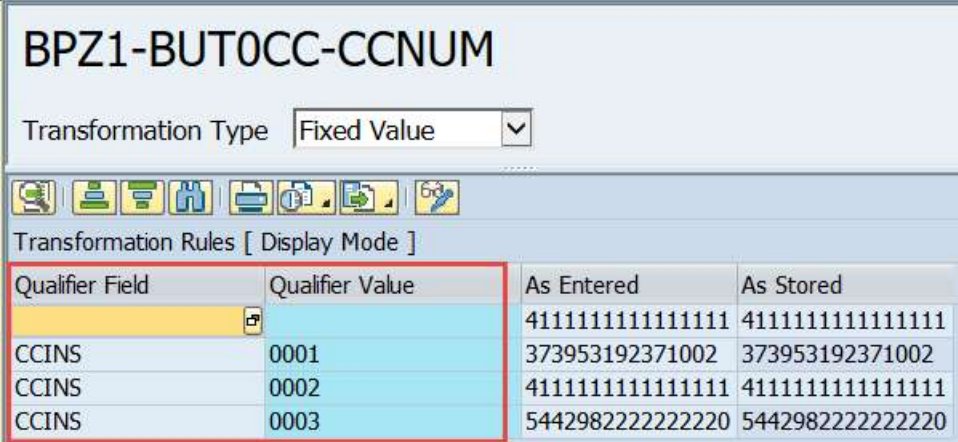
A transformation type defines the method for how the value stored in the field will be changed during export. All transformed values are written to file so that there is no risk when importing data into the target. A transformation type can be viewed by double-clicking on a field name in the Transformation Rule List.

There are eight different Transformation Types to select from and the details associated with each are displayed on the subsequent pages. When assigning a field to a table, the default Transformation Type assigned will be Blank, but the user is free to update the type as required.

It is possible to deploy qualifiers as a condition to determine if the Transformation Type is to be executed during export; this is done by populating the 'Qualifier Field' and 'Qualifier Value' fields. The Qualifier Field must be part of the same table in the Transformation Rule. The Qualifier Value must be listed in a format that is valid for the field type. Using the qualification functionality is entirely optional. As of Gold Client 8.7.2025.02, the Qualifier field can be a blank value.

Here is an example that is provided to Gold Client customers as part of the default configuration where the qualifier field is CCINS (locate in the BUT0CC table) and the qualifier values are '0001' (AMEX), '0002' (Visa), or '0003' (MasterCard) (Fig. 3.0). The values in these two columns create the conditions necessary to determine how the value should be transformed.

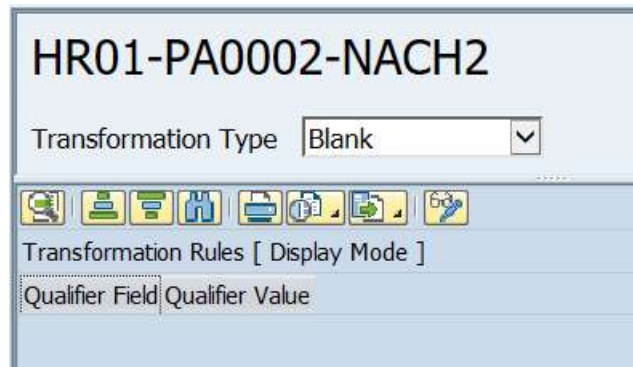
Figure 3.0



BPZ1-BUT0CC-CCNUM			
Transformation Type		Fixed Value	
Transformation Rules [Display Mode]			
Qualifier Field	Qualifier Value	As Entered	As Stored
		4111111111111111	4111111111111111
CCINS	0001	373953192371002	373953192371002
CCINS	0002	4111111111111111	4111111111111111
CCINS	0003	5442982222222220	5442982222222220

Blank – the value is replaced with a blank value. A Transformation Type of type Blank will appear like this example on the right portion of the screen (Fig. 3.1).

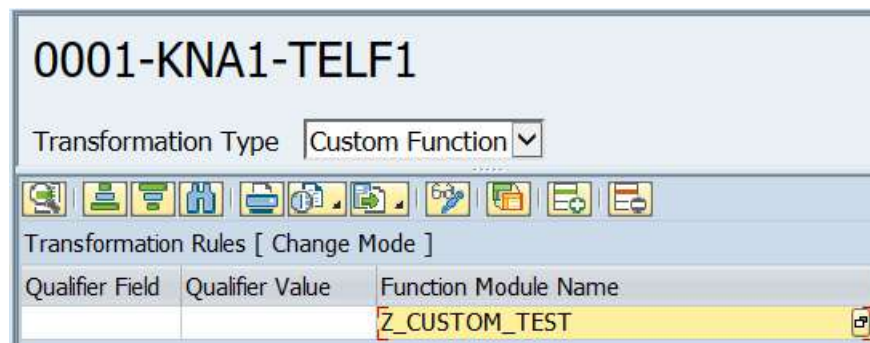
Figure 3.1



Qualifier Field / Qualifier Value – Can be used as a condition to see if the Transformation Type is executed during export. The Qualifier Field must be from the same table in the Transformation Rule. The Qualifier Value must be listed in a format that is acceptable for the field type. The Qualifier is optional functionality in assigning a condition for the Transformation Type.

Custom Function – the value is replaced with the output from a custom function. Custom functions can be used in situations where existing transformation types do not match a user's transformation requirements. An example of a Custom Function transformation type (Fig. 3.2).

Figure 3.2



Qualifier Field / Qualifier Value – Can be used as a condition to see if the Transformation Type is executed during export. The Qualifier Field must be from the same table in the Transformation Rule. The Qualifier Value must be listed in a format that is acceptable for the field type. The Qualifier is optional functionality in assigning a condition for the Transformation Type.

Function Module Name – The function module (accessible by transaction SE37) to be executed when the table is exported.

Derived (Equal) – the value is replaced with the value of another table and field in the export file. A subset of the value can be used by defining a number in the 'Src. Bytes' field to capture the first number of characters in the field. An example of a Derived (Equal) transformation type (Fig. 3.3). In this config example, the transformed value from table PA0002 and field GBTAG will be used as the source for the value being masked in table PA0002 and field GBPAS.

Figure 3.3

HR01-PA0002-GBPAS										
Transformation Type: Derived										
Transformation Rules [Display Mode]										
Qualifier Fiel...	Qual Val	Method	Table	Mltplier	Delimiter	Src.Bytes	Field	Field	Field	Field
		E	PA0002	0,00			GBTAG			

Qualifier Field / Qualifier Value – Can be used as a condition to see if the Transformation Type is executed during export. The Qualifier Field must be from the same table in the Transformation Rule. The Qualifier Value must be listed in a format that is acceptable for the field type. The Qualifier is optional functionality in assigning a condition for the Transformation Type.

Method – Set to 'E' to use Transformation Type of Derived (Equal)

Table – Table that the derived value will be sourced from

Multiplier – Not used with Derived (Equal)

Delimiter - Not used with Derived (Equal)

Src. Bytes – First number of characters that will be derived from the field

Field Name – The field that will be used for the derived value

Derived (Concatenation) – the value is replaced with a combination of field values from another table in the export file where up to four fields can be combined. The fields can be separated by a space, comma, decimal, slash, and backslash. An example of a Derived (Concatenation) transformation type (Fig. 3.4). In this config example, the transformed values from table PA0002 and fields VORNA and NACHN will be concatenated together, along with a Delimiter of 'S' (space), to create the transformed value in table PA0002 and field CNAME.

Figure 3.4

HR01-PA0002-CNAME

Transformation Type

Transformation Rules [Display Mode]

Qualifier Field	Qual Val	Method	Table	Mltplier	Delimiter	Src.Bytes	Field	Field	Field	Field
		C	PA0002	0,00	S		VORNA	NACHN		

Qualifier Field / Qualifier Value – Can be used as a condition to see if the Transformation Type is executed during export. The Qualifier Field must be from the same table in the Transformation Rule. The Qualifier Value must be listed in a format that is acceptable for the field type. The Qualifier is optional functionality in assigning a condition for the Transformation Type.

Method – Set to C to use Transformation Type of Derived (Concatenation)

Table – Table that the derived value will come from

Multiplier – Not used with Derived (Concatenation)

Delimiter – Inserts a separator between the concatenated values. The following options can be selected:

<Blank> - No separator
 S - Space
 C - Comma
 D - Decimal
 / - Slash
 \ - Backslash

Src. Bytes – First number of characters that will be derived from the fields

Field Name – The fields that will be used for the derived value. Up to four fields can be defined for concatenation.

Derived (Multiply) – the value is replaced with the product of a numeric field in the export and the value in the Multiplier field. An example of a Derived (Multiply) transformation type (Fig. 3.5). In this example, the value stored in table PA0008 field BET01 will be multiplied by 10x, and this value is then stored in PA0008 field ANSAL.

Figure 3.5

HR02-PA0008-ANSAL

Transformation Type Derived

Transformation Rules [Display Mode]

Qualifier Field	Qual Val	Method	Table	Mltplier	Delimeter	Src.Bytes	Field	Field	Field	Field
		M	PA0008	10,00			BET01			

Qualifier Field / Qualifier Value – Can be used as a condition to see if the Transformation Type is executed during export. The Qualifier Field must be from the same table in the Transformation Rule. The Qualifier Value must be listed in a format that is acceptable for the field type. The Qualifier is optional functionality in assigning a condition for the Transformation Type.

Method – Set to M to use Transformation Type of Derived (Multiply)

Table – Table that the derived value will come from.

Multiplier – The number used to multiply the value

Delimiter - Not used with Derived (Multiply)

Src. Bytes – Not used with Derived (Multiply)

Field Name – The field that will be used for the derived value

Fixed Value – the value is replaced with the value defined in the As Entered field. An example of a Fixed Value transformation type (Fig. 3.6). In this example, all values in table PA0009 and field BANKN are transformed to 9999999999999999.

Figure 3.6

HR01-PA0009-BANKN

Transformation Type

Transformation Rules [Display Mode]

Qualifier Field	Qual Val	As Entered	As Stored
		9999999999999999	9999999999999999

Qualifier Field / Qualifier Value – Can be used as a condition to see if the Transformation Type is executed during export. The Qualifier Field must be from the same table in the Transformation Rule. The Qualifier Value must be listed in a format that is acceptable for the field type. The Qualifier is optional functionality in assigning a condition for the Transformation Type.

As Entered – The value is used to replace the field value during the export. The primary difference between As Entered and As Stored is that date formatting is taken into account on As Entered, while the actual database entry is shown in As Stored. Unlike much of SAP, these fields are case-sensitive, so care should be taken to avoid assigning a lower-case value to an upper case-only field.

List – the value is replaced with one from a user-defined list of values from the entered List ID. An example of a List transformation type (Fig. 3.7). In this example, all values in table PA0006 and field STRAS will be randomly transformed based on the values that have been maintained within the list named STREET.

Figure 3.7

HR01-PA0006-STRAS

Transformation Type

Transformation Rules [Display Mode]

Qualifier Field	Qual Val	List ID
		STREET

Qualifier Field / Qualifier Value – Can be used as a condition to see if the Transformation Type is executed during export. The Qualifier Field must be from the same table in the Transformation Rule. The Qualifier Value must be listed in a format that is acceptable for the field type. The Qualifier is optional functionality in assigning a condition for the Transformation Type.

List ID – Name of the List to be used during the export. **If the list does not exist, Gold Client will prompt the user to create the list.**

Convert the screen to change mode for the Maintain List button to appear (Fig. 3.8). Selecting this button will open a new window where maintenance can be executed for any List, including the creation of new lists (Fig. 3.10).

Figure 3.8

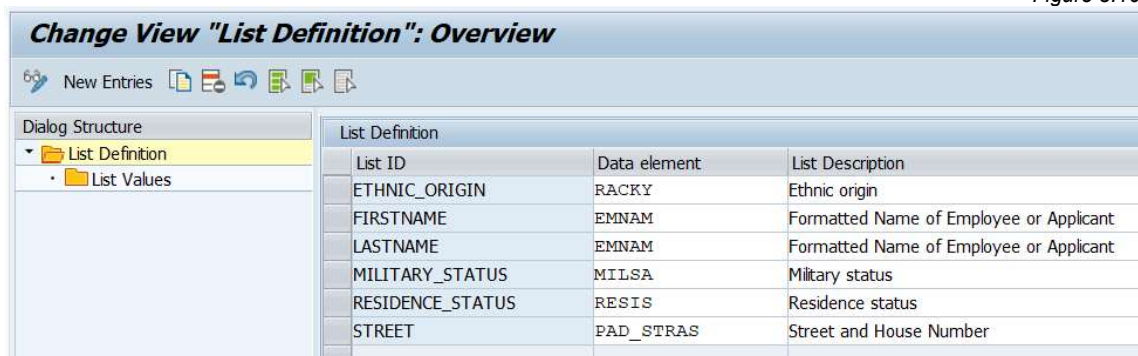


Selecting the 'Maintain List Values' button located on the toolbar of the main Transformation Rules screen (Fig. 3.9) can also be used to reach the same screen for performing list maintenance (Fig. 3.10).

Figure 3.9

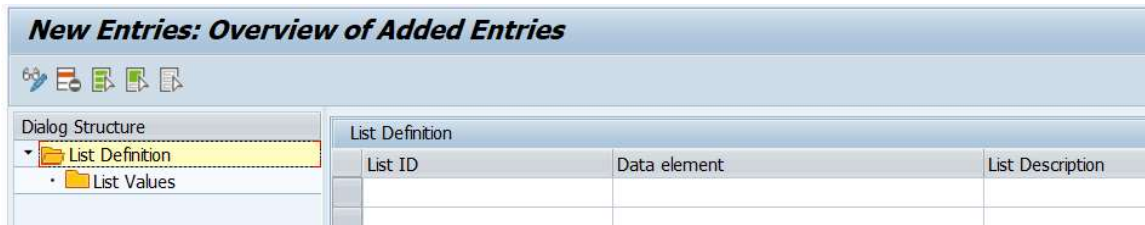


Figure 3.10



To create a new list, select the 'New Entries' button; input a List ID, the relevant Data element, and list description (Fig 3.11).

Figure 3.11



To assign entries to this new list or to change an existing list, select the row of a List ID and then open the sub-folder named List Values located in the Dialog Structure menu (Fig. 3.12). On the "List Values" screen, values can be entered manually, copied/pasted, or uploaded using the availability utility (Fig. 3.13).

Figure 3.12

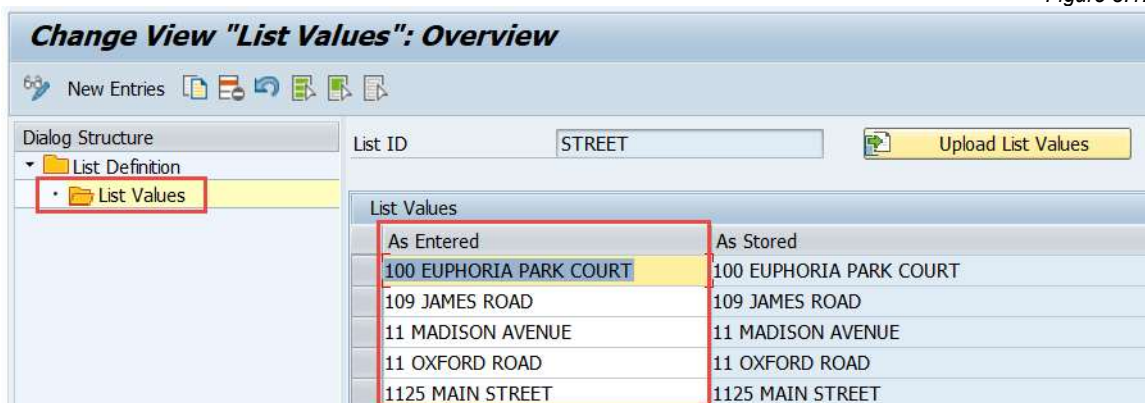


Figure 3.13



Selecting the 'Upload List Values' button directs the user to a new screen where a tab delimited (*only*) file can be selected and uploaded (Fig. 3.14).

Figure 3.14

Gold Client Values by List Uploader

Execute

Gold Client Values by List Uploader Notes

After uploading the values, you must go back to the list values overview screen for the list values changes to take effect.

Values List Uploader

List ID

Load Data From

File must be tab delimited.

File name

☒ Ignore first row (header)

Unlike much of SAP, the fields maintained in the Lists are case-sensitive, so care should be taken to avoid assigning a lower-case value to an upper case-only field.

Random Number – the existing number is replaced with a number between the entered 'Low Value' and 'High Value' with intervals based on the 'Step Value' field. Here is an example of a Random Number transformation type (Fig. 3.15). In this example, all values in table PA0002 field PERID will be randomly selected so that it falls within the range of 11111111 and 99999999, and because the step value is 1000, this will result in each transformed number ending with 000. If the user wanted to consider every available number within the numeric range, then the step value would need to be set as 1.

Figure 3.15

HR01-PA0002-PERID

Transformation Type

Transformation Rules [Display Mode]

Qualifier Field	Qual Val	Low value	High value	Step value
PERID		11111111	99999999	1000

Qualifier Field / Qualifier Value – Can be used as a condition to see if the Transformation Type is executed during export. The Qualifier Field must be from the same table in the Transformation Rule. The Qualifier Value must be listed in a

format that is acceptable for the field type. The Qualifier is optional functionality in assigning a condition for the Transformation Type.

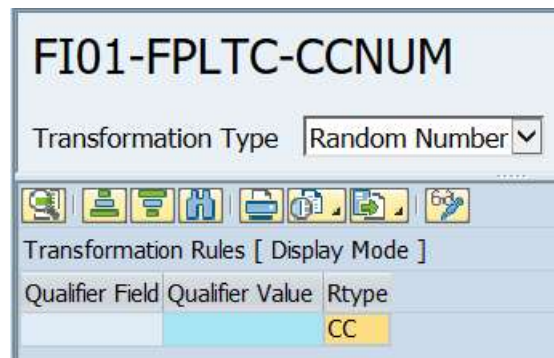
Low Value – the lowest number that could be assigned to the field during export

High Value – the highest number that could be assigned to the field during export

Step Value – the interval used to between the Low Value and High Value

For transforming credit card numbers, there exists a unique solution. There is a setting named Random Type that is available for use with Random Number transformation type. It is offered only when field CCNUM is selected for transformation (Fig. 3.16). It processes the credit card number transformation differently. Rather than using low value, high value, and step value, it will generate a valid credit card number per set validation checks in your system. This reduces the risk of error when processing the credit card number.

Figure 3.16



When you add field CCNUM to any transformation rule, random type = CC (for Credit Card Random Value) will be automatically assigned and it cannot be changed (Fig. 3.17).

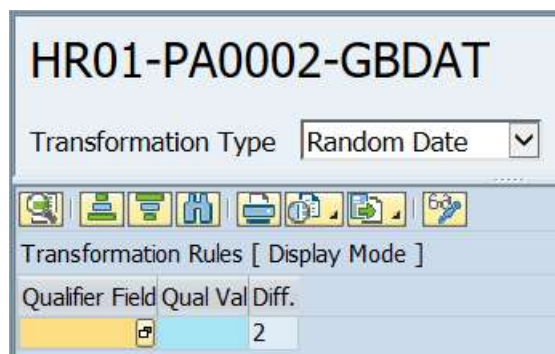
Figure 3.17



Random Date – the existing date is replaced with a date that has a random month and day. The year is increased or decreased by the factor entered in the Year Differential field. Here is an example of a Random Date transformation type (Fig. 3.18). In this example, the value in table PA0002 field GBDAT will have a random month and date, but the year will only change to be +/- 2 years from the real year

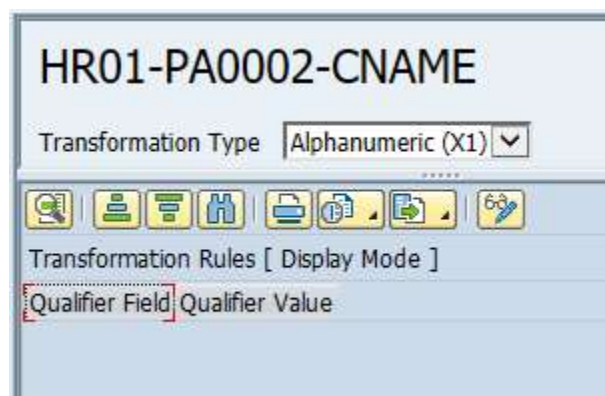
since that is the value stored in the Year Differential field. This gives the user control over how old or how recent the transformed year should be.

Figure 3.18



Alphanumeric (X1) – the value is replaced using the original value but switching any letter to X and any number to 1. An example of an Alphanumeric transformation (Fig. 3.19). In this example, if the CNAME field contains the following string “Name Test 12-23” the result will be “XXXX XXXX 11-11”.

Figure 3.19



Qualifier Field / Qualifier Value – Can be used as a condition to see if the Transformation Type is executed during export. The Qualifier Field must be from the same table in the Transformation Rule. The Qualifier Value must be listed in a format that is acceptable for the field type. The Qualifier is optional functionality in assigning a condition for the Transformation Type.

Reference Fields

To help keep transformed values for different fields consistent, Reference Fields can be defined as part of a Transformation Rule. This configuration allows values in different fields to be transformed to the same value during the export process.

Fields that are masked using the transformation type of 'Reference' cannot be maintained directly because of this relationship. If a field needs to use some other transformation type, the reference must first be deleted and then changes to it can be deployed.

Reference Fields can be defined in the lower right-hand corner of the Transformation Rules screen (Fig. 4.0). In this example, table PA0021 field FANAM will be converted to match the transformed value in table PA0002 field NACHN.

Figure 4.0

HR01-PA0002-NACHN

Transformation Type

Transformation Rules [Display Mode]

Qualifer Field	Qual Val	List ID
LASTNAME		

Create Reference [Display Mode]

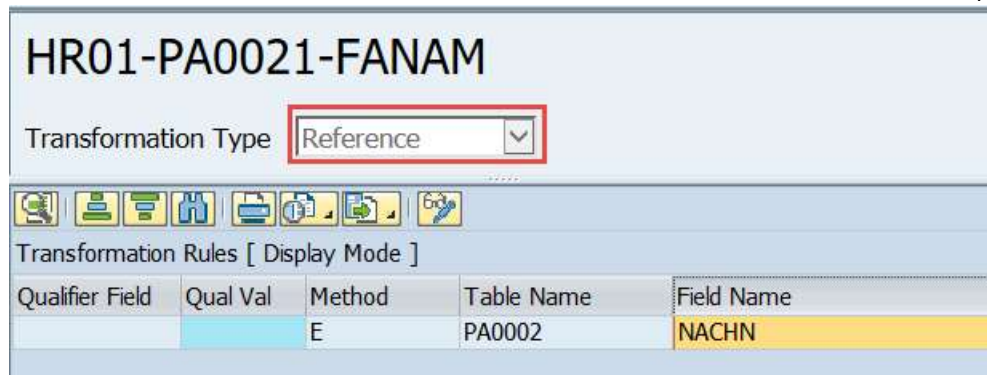
Table Name	Qualifer Field	Qualifer Value	Field Name
PA0021			FANAM

Fields that have a Reference assignment are displayed as Rule Type 'Reference' (Figs. 4.1 and 4.2).

Figure 4.1

PA0021	HR Master Record: Infotype 0021...	
EMRGN	Emergency Contact	Blank
FANAM	Last Name	Reference
FAVOR	First Name	Reference
FCNAM	Complete Name	Derived
FGBDT	Date of Birth	Reference
FGBNA	Name at Birth	Blank

Figure 4.2

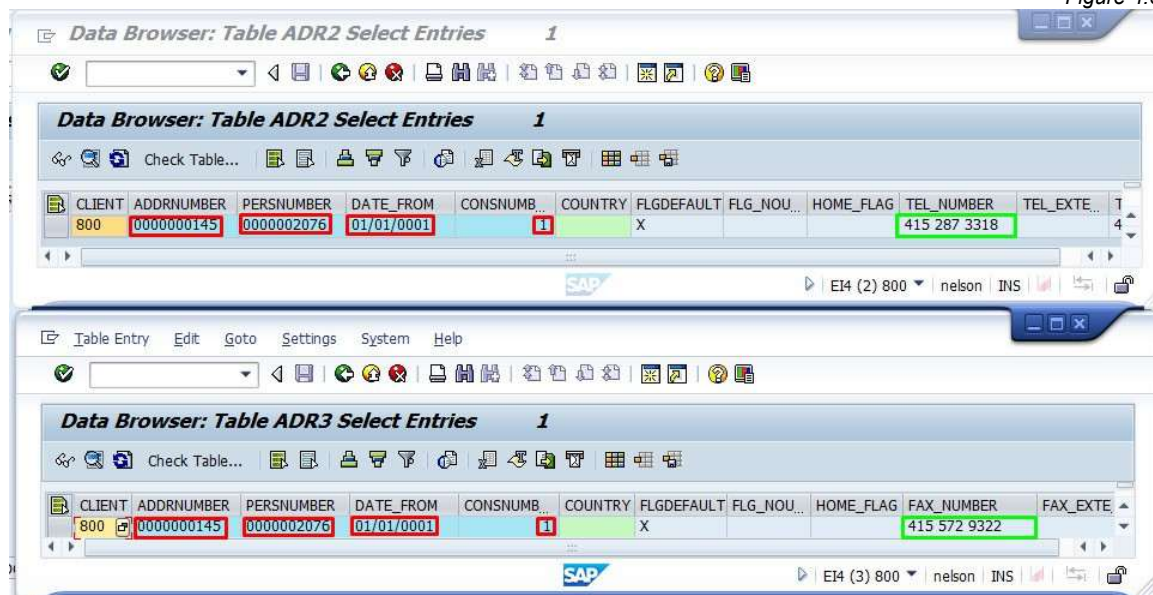


Reference and Derive Transformation Types will capitalize lower case values if the recipient field does not accept lower case values.

When a Reference/Derive is made, Gold Client will use three different methods to determine which records to keep in sync:

- If the tables have identical key fields, they will match on identical key values. For example, ADR2 and ADR3 share identical keys so any value assigned to one table can be easily referenced/derived to the other table (Fig. 4.3).

Figure 4.3



- If both the reference and derived tables are PA#### tables for HR, then the reference will only coordinate on the PERNR field.
- If neither of the above options are present, then the derived table will look for a linkage describing the relation between the two tables (Fig. 4.4).

Figure 4.4

Linkages [Display Mode]

Recipient DT	VBFA Fl.	Inactiv
CA - CENTRAL ADDR MGMT - ADR2		<input type="checkbox"/>
CA - CENTRAL ADDR MGMT - ADR3		<input type="checkbox"/>
CA - CENTRAL ADDR MGMT - ADRT		<input checked="" type="checkbox"/>
CA - CENTRAL ADDRESS MANAGEMENT		<input checked="" type="checkbox"/>

CA - CENTRAL ADDR MGMT - ADR2

OpParen	AND/OR	NOT	Rec. Tab.	Recip. Field	Operator	Prv. Field	Val	ClParen
			ADR2	ADDRNUMBER	=	ADRNR		

Important! References can only pass across one level, so a reference cannot be made to a reference. References cannot be passed across different jobs when the export is using parallel processing.

Disallowed Fields

Fields can be excluded from being defined in any Transformation Rule. This feature can be used to help ensure that data integrity is maintained during the copy process. To manage the disallowed fields, select the 'Disallowed Fields' button located on the toolbar (Fig. 5.0).

Figure 5.0



Disallowing fields can be applied at the Transformation Rule or table level. To disallow fields across all rules and tables use an asterisk in the Transformation Rule or Table Name fields (Fig. 5.1).

Figure 5.1

Display View "Disallow scrambling of these fields": Overview

63 [Icons]

Disallow scrambling of these fields

	Transformation Rule	Table Name	Field Name
	*	<input type="checkbox"/>	BEGDA
	*	*	ENDDA
	*	*	KUNNR
	*	*	PERNR
	*	PA0002	SUBTY

Default Rules

Transformation rules only add value if they are assigned to Data Echo and/or Client Construct data types. This assignment is important because the data transformation will occur automatically during the export process *but only for those data types which have a rule assigned*. Users who initiate exports do not need to take any actions for transformation to occur because of this rule assignment.

A transformation rule can be assigned to one or more data types; however, each data type can have only one transformation rule assigned.

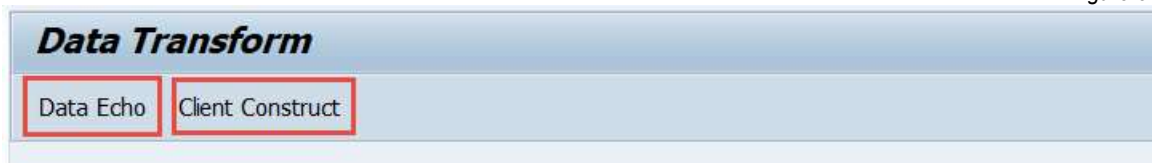
To assign a transformation rule as a default, click the 'Maintain Default Rules' button located on the Toolbar (Fig. 6.0).

Figure 6.0



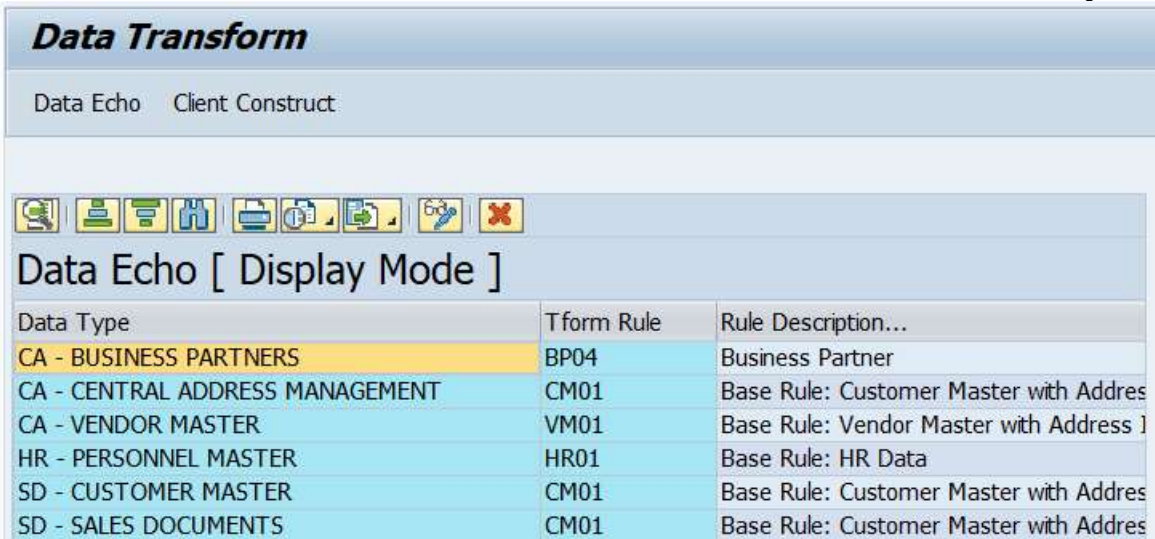
A new screen will appear where the Data Type <-> Transformation Rule assignment can be maintained. Assignments may need to occur for both Data Echo and Client Construct data types so select the respective button as required to perform maintenance (Fig. 6.1). The default view for this screen is Data Echo.

Figure 6.1



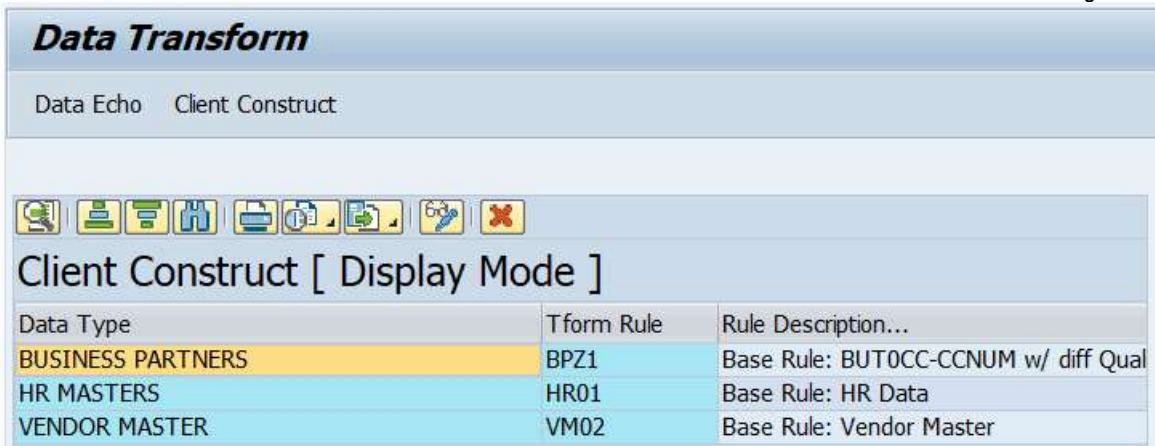
Examples of assignments for both Data Echo and Client Construct data types (Figs. 6.2 and 6.3).

Figure 6.2



Data Type	Tform Rule	Rule Description...
CA - BUSINESS PARTNERS	BP04	Business Partner
CA - CENTRAL ADDRESS MANAGEMENT	CM01	Base Rule: Customer Master with Address
CA - VENDOR MASTER	VM01	Base Rule: Vendor Master with Address
HR - PERSONNEL MASTER	HR01	Base Rule: HR Data
SD - CUSTOMER MASTER	CM01	Base Rule: Customer Master with Address
SD - SALES DOCUMENTS	CM01	Base Rule: Customer Master with Address

Figure 6.3



Data Type	Tform Rule	Rule Description...
BUSINESS PARTNERS	BPZ1	Base Rule: BUT0CC-CCNUM w/ diff Qual
HR MASTERS	HR01	Base Rule: HR Data
VENDOR MASTER	VM02	Base Rule: Vendor Master

Select the 'pencil' icon to convert the screen from display mode to change mode (Fig. 6.4). Select the 'add row' icon to add a new entry. When changes are complete, use the 'save' icon (Fig. 6.5).

Figure 6.4

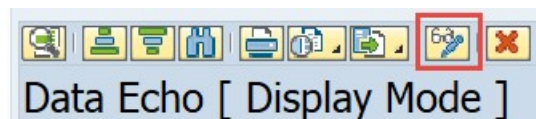


Figure 6.5



Additional Settings

There are two additional settings named 'Transform Blank' and 'Inactive' (Fig. 6.6).

The 'Transform Blank' setting can be used to transform data even when it is blank in the source environment. It is important to understand that Gold Client, by default, does not transform data if it does not exist; however, this setting overrides that default. So, setting this box informs the export program to transform the data regardless. It is worth noting that one exception exists where this option cannot be selected for transformation type Random Date and that is because this rule requires data to exist for the transformation logic to be applied.

The 'Inactive' setting can be used to disable transformation at either the table or field level. This informs the export program to ignore that configuration object.

Figure 6.6

Transformation Ru...	Description	Rule Type	Transform Blank	Inactive
▼ HR01	Base Rule: HR Data			
▶ PA0001	HR Master Record: Infotype ...			<input type="checkbox"/>
▼ PA0002	HR Master Record: Infotype ...			<input type="checkbox"/>
• CNAME	Complete Name	Derived	<input type="checkbox"/>	<input type="checkbox"/>
• GBDA	Date of Birth	Random D...		<input type="checkbox"/>
• GBJHR	Year of Birth	Random N...	<input type="checkbox"/>	<input type="checkbox"/>
• GBMOI	Month of Birth	Random N...	<input type="checkbox"/>	<input type="checkbox"/>
• GBPAS	Date of Birth According to P...	Blank	<input type="checkbox"/>	<input type="checkbox"/>
• GBTA	Birth Date (to Month/Year)	Random N...	<input type="checkbox"/>	<input type="checkbox"/>
• NACH2	Second Name	Blank	<input type="checkbox"/>	<input type="checkbox"/>
• NACH1	Last Name	List	<input type="checkbox"/>	<input type="checkbox"/>
• NAME2	Name at Birth	Blank	<input type="checkbox"/>	<input type="checkbox"/>
• NCHM	Last Name (Field for Search ...	Derived	<input type="checkbox"/>	<input type="checkbox"/>
• PERID	Personnel ID Number	Random N...	<input type="checkbox"/>	<input type="checkbox"/>
• VNAM	First Name (Field for Search ...	Derived	<input type="checkbox"/>	<input type="checkbox"/>
• VORN	First Name	List	<input type="checkbox"/>	<input type="checkbox"/>

Export using Transformation Rules

As stated in the previous section, if transformation rules have been assigned to Data Echo and/or Client Construct data types, data transformation will occur for those data types automatically during the export process whether initiated via the Data Snap, Export Control, or Client Exporter functions; however, there is the ability to change the rule or inactivate it for a given export. Taking this action has no impact on the actual configuration.

The ability to circumvent the Data Transformation config is controlled through Gold Client security and this access should be provided to a very limited number of users. For example, end-users should not be granted this ability but perhaps the team's 2-3 administrators should have this access as there may be times when the team needs to perform data copies without data transformation on a case-by-case basis. If the user does not have this exceptional access assigned, the 'Data Transform' button will either be suppressed or not displayed thereby preventing the user from selecting it. Reference the [Gold Client Security Document](#) for more details.

The content in this section focuses first on export functions Data Snap and Export Control and following that is content on the Client Exporter function.

Export Control and Data Snap

To overwrite or inactivate the transformation rule from the Export Control or Data Snap screens, select the 'Data Transform' button located on the toolbar of the respective screen (Figs. 7.0 - 7.1).

Any changes to the transformation must occur prior to initiating the export.

Figure 7.0

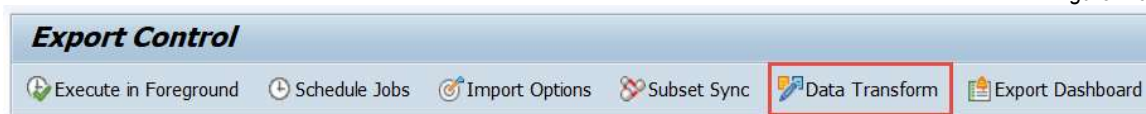
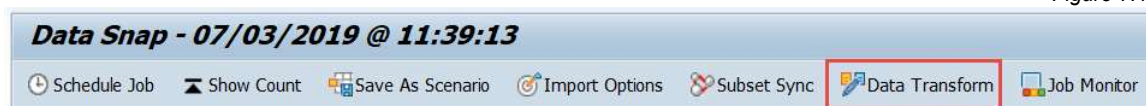
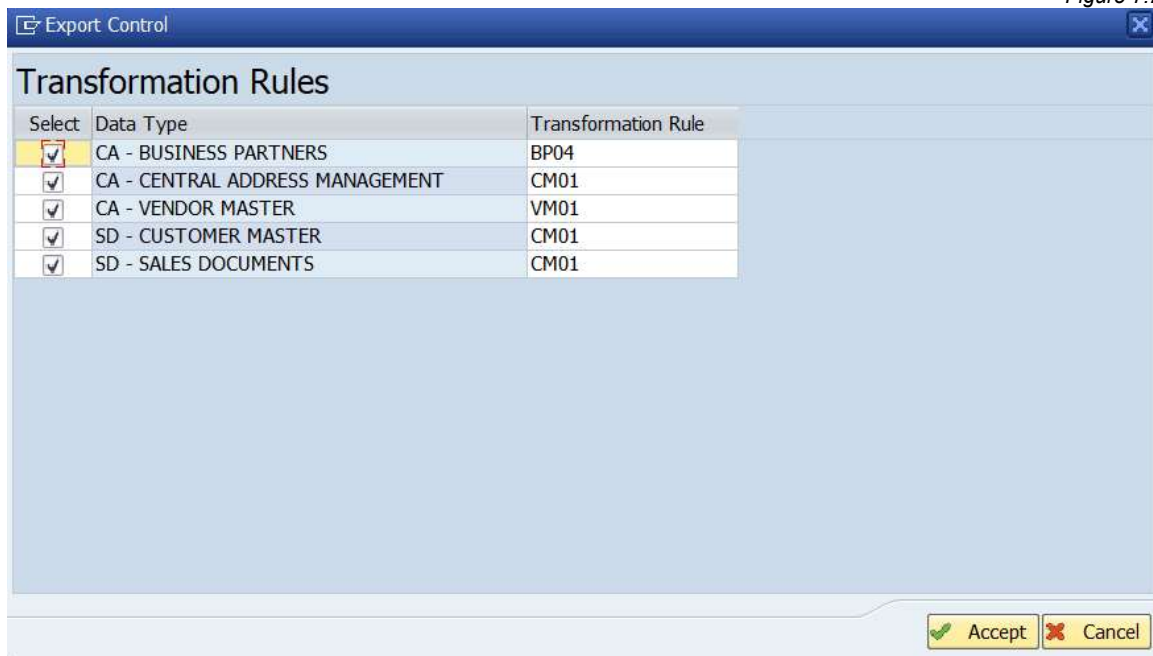


Figure 7.1



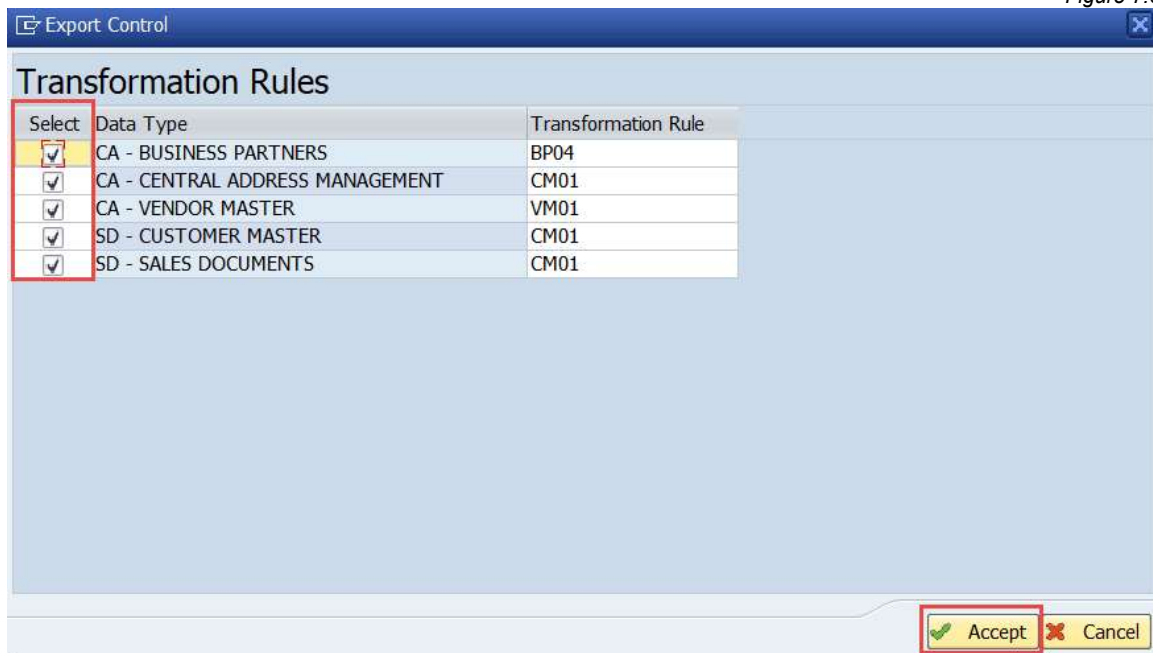
When selecting the 'Data Transform' button, a child window will appear with only those Data Types which have a default transformation rule assigned *and* are relevant to the export being initiated. In this example, five data types are relevant to the given export and have rules assigned (Fig. 7.2).

Figure 7.2



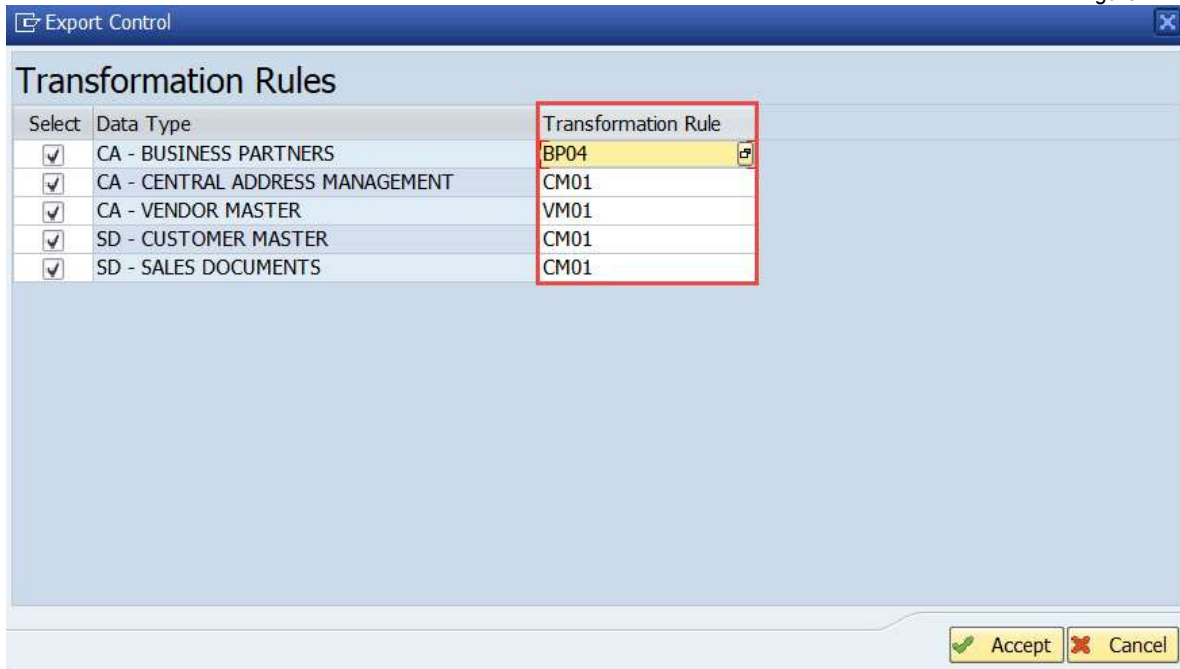
The user has the choice whether to accept using the default transformation rule(s). To accept, simply click the 'Accept' button; to decline, uncheck the 'Select' checkbox next to one or more data types and then click the 'Accept' button (Fig. 7.3).

Figure 7.3



The user may also select a different transformation rule when needed (Fig. 7.4).

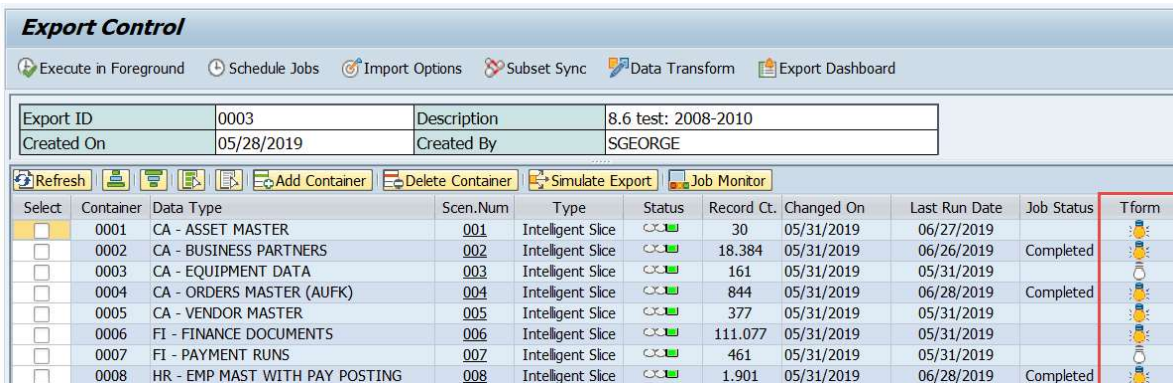
Figure 7.4



To help provide the user visibility to those data types having a default transformation rule assigned, the Export Control screen contains a column called "Tform". If the data type has a transformation rule assigned, the light bulb will be lit (Fig. 7.5).

Selecting or deselecting the transformation rule (as noted in the previous steps) will not change whether the bulb is lit or not as this indicator is driven only by what is defined in the Data Transformation config.

Figure 7.5

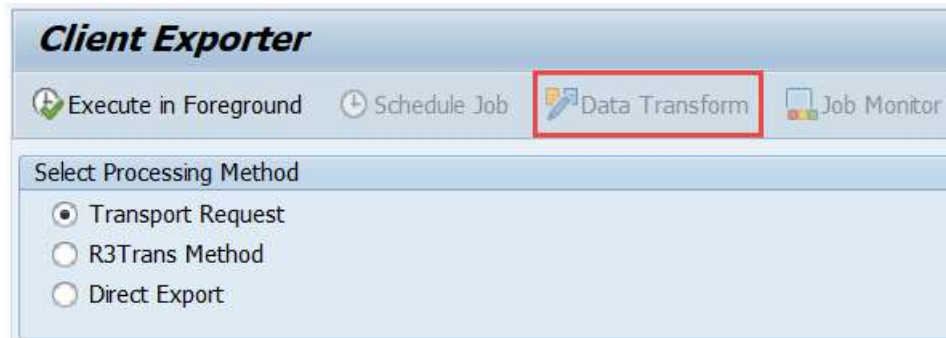


Client Exporter

To apply transformation to an export initiated via the Client Exporter function, you must use the processing method named Direct Export as the other processing methods utilize SAP's R3Trans functionality and therefore do not support data transformation.

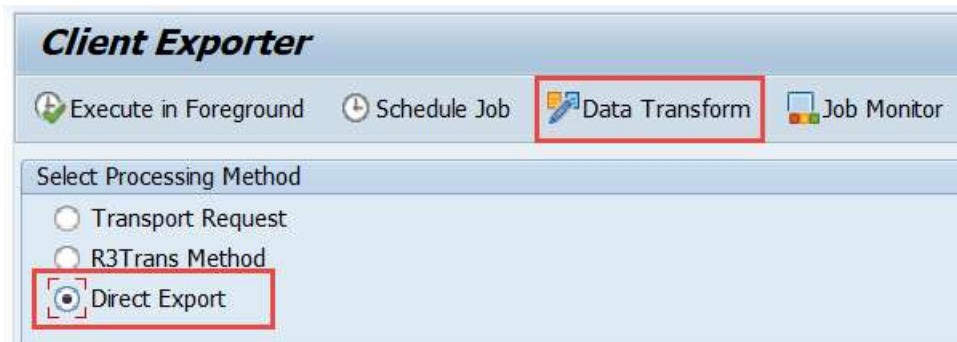
This is the default screen when first accessing Client Exporter and the 'Data Transform' button is suppressed (Fig 7.6).

Figure 7.6



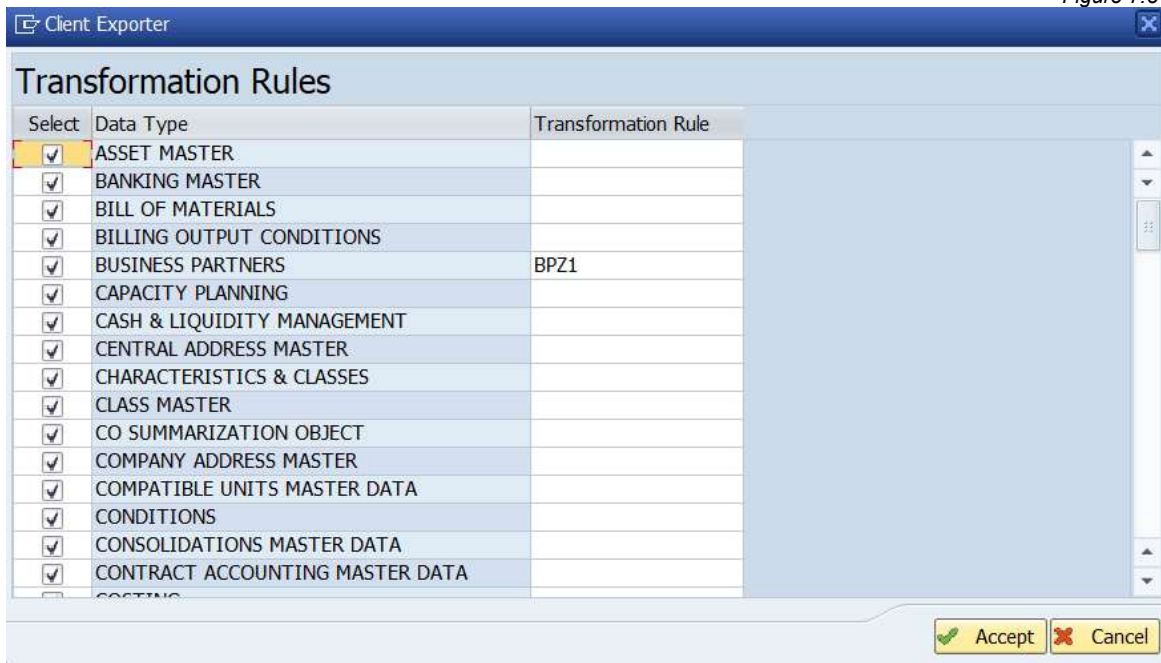
Once the Direct Export method is selected, the screen will refresh and the 'Data Transform' button can be selected (Fig. 7.7).

Figure 7.7



When selecting the 'Data Transform' button, a child window will appear with those Data Types selected by the user and a transformation rule displayed next to those data types where a rule has been assigned within the Data Transformation config. In this example, all data types are displayed, but only a few of them - one being BUSINESS PARTNERS - show a rule being assigned (Fig. 7.8).

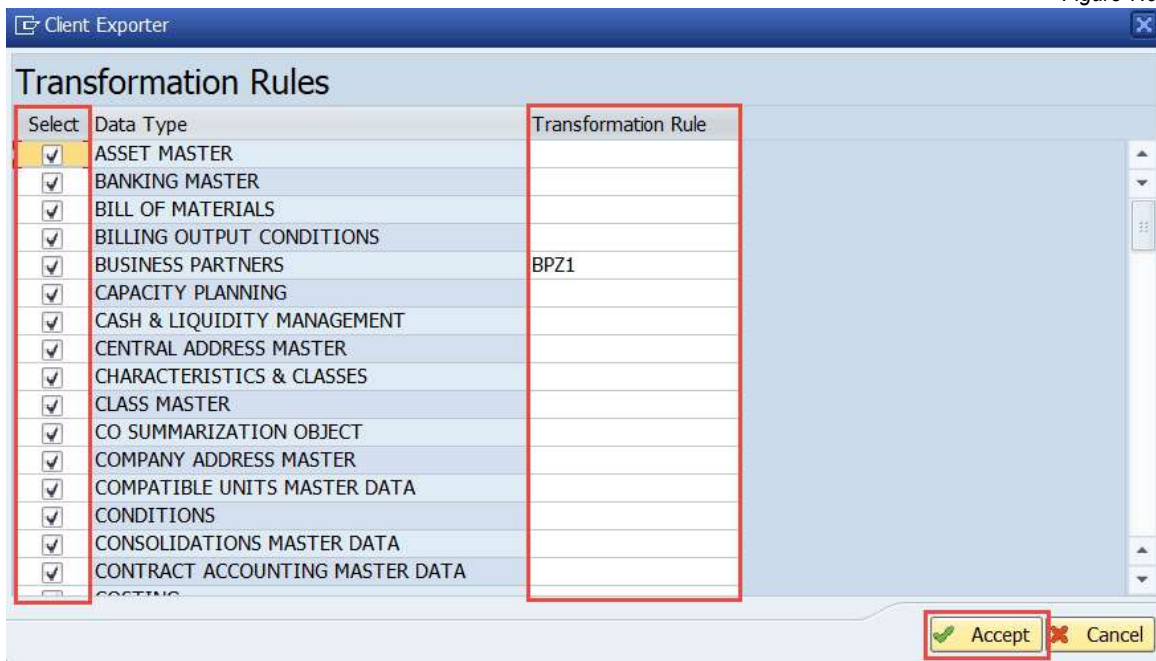
Figure 7.8



The user has the choice whether to accept using the default transformation rule(s). To accept, simply click the 'Accept' button; if choosing not to accept, uncheck the 'Select' checkbox next to one or more data types and then click the 'Accept' button. The user may also select a different transformation rule when needed (Fig. 7.9).

Be aware that deselecting a data type which has no transformation rule assigned has no impact since no transformation will occur.

Figure 7.9

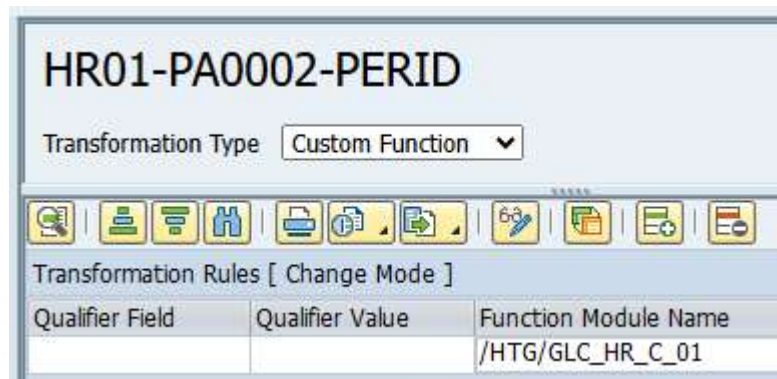


Function module for Personnel ID Number

In some cases, data transformation on field Personnel ID Number (PERID) on table PA0002 when using transformation type 'Random Number' is not random enough with large data exports as it may result in duplicate transformed values. To avoid this result, Qlik advises using the 'Custom Function' transformation type instead.

Within the respective transformation rule, configure table PA0002 and field PERID to use transformation type 'Custom Function' and then assign function module /HTG/GLC_HR_C_01 (Fig. 8.0).

Figure 8.0



A number range object named /HTG/PERID exists in Qlik Gold Client as part of this solution (Figs. 8.1 and 8.2). To achieve the desired result, do the following.

1. In the source environment, execute t-code SNRO
2. Enter object /HTG/PERID and select the 'Number Ranges' button
3. Select the appropriate Country Grouping from the dropdown menu and select the 'Change Intervals' button
4. Add the desired interval
 - a. Be sure **not** to select the External Numbering option
5. Save changes
6. Repeat these steps for all other Country Groupings accordingly

Please note that if your organization uses a particular Country Grouping but it is not defined in the /HTG/PERID number range, and if a PERNR is exported with data transformation applied, then Gold Client will not know what number range to use and so the PERID value is set to blank in this situation.

Figure 8.1

Number Range Object: Change

Change Documents Number Ranges

Object: /HTG/PERID Number range object has intervals

Short text: /HTG/PERID

Long text: Gold Client Personnel Identification By Country

Interval characteristics

Subobject data element: MOLGA

To-year flag: ☐

Number length domain: NUMC20

No interval rolling: ☐

Customizing specifications

Number range transaction:

Warning %: 10.0

Main memory buffering: ☒ No. of numbers in buffer: 10

Figure 8.2

Display Number Range Intervals

NR Object: /HTG/PERID

Subobject: 10

No.	From number	To number	Current number	Ext
01	00000000000911111111	00000000000999999999	911111790	<input type="checkbox"/>

Upon export, Gold Client configuration table, /HTG/TF_SSNNO, is populated in the source system containing the transformation values for table PA0002 and field PERID. Every time a personnel number (PERNR) with PA0002-PERID is exported, and data transformation is enabled, this table is checked. If the PERNR is already stored in this table, it will use the transformed PERID that is listed, and if not, it will transform the value using the relevant number range configuration and then update this table so that the combination of PERNR and PERID values are saved.

To delete any PERNR values for a given Country Grouping from table /HTG/TF_SSNNO, use t-code /HTG/ZDELPERID (Fig. 8.3). Then, upon a new export of that PERNR, assuming that data transformation is applied, it will be added to this table again but with a newly transformed PERID value. The result is a guaranteed unique PA0002-PERID value.

Figure 8.3

HR: cleanup period

Selection Criteria

Country Grouping	<input type="text"/>	to	<input type="text"/>	
Delete Records	<input type="checkbox"/>			

Security

There are several activities within the Gold Client authorization object ZGCSGCSGCS with which to manage the various maintenance tasks that can be performed within the Transformation Setup config (Fig. 9.0). Reference the [Gold Client Security Document](#) for more details.

Figure 9.0

60	Data Transform: Transformation Setup
61	Data Transform: Change Rules
62	Data Transform: Maintain Disallowed Fields
63	Data Transform: Maintain List Values
64	Data Transform: Maintain Default Rules
65	Data Transform: Client Construct
66	Data Transform: Export TRA Details
67	Data Transform: Display Transformed Fields

Activity 60: Data Transformation: Transformation Setup

This activity gives the user access to the Transformation Rules button located on the main Gold Client screen. It also provides read-only access to the Transformation Rules screen. If this activity is not assigned, then the Transformation Rules button will be disabled.

Activity 61: Data Transformation: Change Rules

This activity gives the user access to create and copy rules, add tables and fields to new and existing rules, delete rules, delete tables and fields from existing rules. If this activity is not assigned, then the various buttons that are used to perform these functions will be disabled.

Activity 62: Data Transformation: Maintain Disallowed Fields

This activity gives the user access to maintain entries in the Disallowed Fields table. If this activity is not assigned, the Disallowed Fields button can still be selected by the user; however, it does not provide access to the maintenance functions.

Activity 63: Data Transformation: Maintain List Values

This activity gives the user access to maintain entries within the various (random) Lists. If this activity is not assigned, the Display List Values button can still be selected by the user; however, it does not provide access to the maintenance functions.

Activity 64: Data Transformation: Maintain Default Rules

This activity gives the user access to manage Default Rules. If this activity is not assigned, the Default Rules button can still be selected by the user; however, it does not provide access to the maintenance functions.

Activity 65: Data Transformation: Client Construct

This activity gives the user access to select or deselect the Data Transformation button located on the Client Exporter screen (but only when using the Direct Export method as this is the only method that allows data transformation to occur).

Activity 67: Data Transformation: Display Transformed Fields

This activity gives the user access to display what fields were transformed from an export. This allows users to see sensitive data in the source and target system and so access to this utility should be thoroughly considered before providing it to users.

Support Information

Qlik Analytics (ISR) Ltd. can be contacted either by telephone or via email. Any support related issue regarding problems with or use of the Gold Client software and process can be reported for resolution.

If our offices are closed, or the staff is unable to directly respond to a support request, we will respond within 24 hours of the initial call. Problems related to the export or import processing may require code enhancements. If a code enhancement or fix is required, resolution time may vary.

As per the maintenance agreement, any repairs or enhancements to the Gold Client software will immediately be deployed to all customers up to date with their maintenance contract. It is the choice of the customer as to if and when such enhancements are implemented. In addition, customers may request a planning session with Qlik to review changes in the software and how the changes might have an impact on their environment.

We can also be contacted to discuss application or feasibility of using the Gold Client process to resolve a current challenge the project team faces. When this is required, a planning session can be scheduled in advance to ensure proper participation by both Qlik and the client.

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