White Paper

Mapping Tips, Techniques, and Settings

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Purpose

To assist with IBM Sterling Gentran Support mapping and advanced mapping techniques, and reporting.

Mapping Rules

1. Each area of an INBOUND map must begin with a segment unique to the entire map.

2. Loop ID's must be unique throughout the map. For example: if you have an N1 Loop in the Header, and another N1 Loop in the Detail, the two Loops may not both use the same Loop ID (e.g. N1). Modify the name of one of the Loop ID's on both the application side and the translation side to be different.

3. The FIRST application record in a Loop must have a Max Use = 1.

4. The Max Loop field is entered only for the first segment in a loop.

5. If your main detail loop is surrounded by an LS/LE pair (e.g. UCS), the LS, indicating the start of the line items should be the LAST segment in your header area. The LE, indicating the end of the line items should be the FIRST segment in your summary area.

6. GENTRAN will not write over a previously created field or element. The mapper will not move a value to a unique field (Inbound) or unique element (Outbound) if the field or element was previously created.

7. For an Inbound map, data mapped from the transaction takes precedence over the value specified in the application as Field Value.

8. To determine the order in which your map will be processed, look at the Standard sequence report for Outbound, and the Application sequence report for Inbound.

    - For Inbound, each target field will have its alternate maps evaluated in sequence and data will be mapped to that field or sequence, keeping in mind that GENTRAN will not write over a previously created field. However, the remaining alternate maps will continue to be evaluated.

    - For Outbound, each element will have its alternate map evaluated in sequence UNTIL data is mapped to that element. Subsequent alternate maps would then NOT be evaluated.

9. ALL input to the mapper is buffered by document area. Maximum INPUT buffer is 800K.

10. One document area is processed at a time. No mapping is allowed between areas. Move data into CONSTANTS, HASH-TOTALS, or ACCUMULATORS to use it in a subsequent area. No movement is allowed from a lower to higher area.

11. A field MUST be mapped in order to save values in a CONSTANT, HASH-TOTAL, or ACCUMULATOR. Inbound: You cannot output a reserved word (CONSTANT, HASH-TOTAL or ACUMULATOR on a field in your application PRIOR to where the field where you mapped and saved the information into the CONSTANT, HASH-TOTAL or ACCUMULATOR (look at map

printed in *APP record type to see order of application file/record, fields). Outbound: Same rule applies only the mapping on the Segment/Element.

<div align="center"><u>**Mapping Tips and Techniques**</u></div>

<u>Force a value of zero</u>

You can force a zero in an element by changing the segment/element Mandatory Code (Md Cd) on the transaction map to M. This will force a zero value to map to the element.

<u>Inbound – Dummy Field/File</u>

If there is data coming in a header segment that you want only in your detail file, you can create a dummy header file (set the Write Flag)on the application definition to No. Map the element to a field in the dummy no write file, save it in a CONSTANT (if alpha numeric data) or HASH-TOTAL (if numeric data), and write out the CONSTANT or HASH-TOTAL to the detail field/file. For Inbound you can specify the same file in the application definition multiple times. A warning message is issued, but it will allow the occurrence.

<u>Outbound – Dummy Segment</u>

If there is data in your header file that you need to map out in the detail area, you can create a dummy segment. Copy the detail segment into the header area and set the Write Flag (WF) to N. Map the field to an element in the dummy segment, save in a CONSTANT (if alpha numeric) or HASH-TOTAL (if numeric), and write out the CONSTANT or HASH-TOTAL to the detail element/segment.

<u>Application & Map</u>

The Max Use <u>**must**</u> be equal to 1 for the first application record and segment defined to an area. This includes Header, Detail, and Summary.

The Max Use <u>**must**</u> be 1 for the first file/record starting a Loop ID. Subsequent files/records with that Loop ID can have a Max Use greater than 1.

<u>Transaction Map</u>

For outbound maps, the Loop Ids <u>**must**</u> match between the Application Definition and the Transaction Map.

Extended Element Mapping Processing Order

EDIX513   **Extended <u>Inbound</u> Mapping**
FMT01   15:18:38
Segment ID . . . . REF
Area Code. . . . .   H
Element Number 10
Segment Sequence 400
Mapping Number 1
                    Mapping of Data Element
Application Target Field . . . . . ***9***_(Used as default)_____
                Value   Op Value   Op Value
Target Field = ___***3***_____ __ _____ __ _____
                   ___***1***_____ __
   If   _____
                 ___***1***_____ __
     And/Or   _____
Table ID . . . . ***4***_____
Add to Hash Total #. . . . . ***6***___
Save in Constant # . . . . ***7***___
Add 1 to Accumulator # . . . . . ***2***___
User Exit Routine. . . . . ***5***_____

EDIX508   **Extended <u>Outbound</u> Mapping**
FMT01
Segment ID . . . . REF
Area Code. . . . .   H
Element Number 10   ***8***
Segment Sequence 400

                Mapping of Data Element
                Value   Op Value   Op Value
Element = ___***3***_____ __ _____ __ _____
                 ___***1***_____ __
   If   _____
               ___***1***_____ __
     And/Or   _____
Table ID . . . . ___***4***_____
Add to Hash Total #. . . . . ***6***___
Save in Constant # . . . . ***7***___
Add 1 to Accumulator # . . . . . ***2***___
User Exit Routine. . . .   . . ***5***_____

Description of Extended Mapping Processing Order

1. The extended map IF conditions, if used, are evaluated. If the conditions are true, processing continues. If the conditions are false, the next extended map is selected for processing.

2. The accumulator, if used, is incremented by '1'.

3. The element or application field is loaded into a work area (simple map), or the arithmetic line is evaluated and the result is moved to the work area. Arithmetic operations are performed left to right.

4. Table operations, if used, are performed using the work area generated above. If the table operation fails, spaces are moved to the work area and the field used flag is NOT set to yes.

5. The work area is passed to the specified user exit, if used. The user exit can change the work field and/or any CONSTANT, HASH-TOTAL, or ACCUMULATOR.

6. The specified HASH-TOTAL, if used, is incremented by the amount in the work area.

7. The work area is moved to any CONSTANT specified.

8. The work area is moved to the EDI data element or application target field.

9. If the result of the mapping is spaces, the value specified in the Application Field Value is loaded as the default (Inbound ONLY).

Mapping Report Generation

NOTE: See document 'Gather Reports for Mapping Support' for how to produce mapping reports and processing reports in debug purposes for support

In the past, there has never been a method of turning off the mapping reports when they are not needed. The Editor reports can be bypassed by setting the Global Parameters, Error Report and Detail Report, to 'N'. The major benefits of these parameters are to provide the ability to only produce mapping reports when errors exist. This will drastically reduce the number of spooled files for your job runs and will assist you in error determination.

General Description

The Mapping Reports can now be bypassed, provided there were no errors during the mapping run, by setting a Mapping Print flag. This flag is stored in field SCFLG04 in the SYSCFG file. You can update this field by selecting option 7 from the GENSYSCFG menu.

GENSYSCFG   Sterling Gentran:Server System Configuration 3.6

Select one of the following:

       1. Set Sterling Gentran Break Year   (SETGENYR)
       2. Set Date Format for Commands   (SETGENFMT)
       3. Set Extended Map More/Less Option   (SETEXTMAP)
       4. Set Network Report Archive Flag   (SETNETARC)
       5. Set Binary Data Library   (SETBINLIB)
       6. Set Binary Mapping Option   (SETBINMAP)
       7. **Set Mapper Reports Option   (SETMAPRPT)**
       8. Set User Exit Detail Option   (SETUSREXT)

      10. Set Partner Sort Option   (SETPARSRT)
      11. Set Application Definition Sort Option   (SETAPPSRT)
      12. Set Transaction Mapping Sort Option   (SETTRNSRT)
      13. Set Audit Interchange Sort Option   (SETAUDISRT)
      14. Set Audit Group Sort Option   (SETAUDGSRT)

By selecting '*YES' on the SETMAPRPT command, a mapping report will be generated regardless of whether any errors were produced or not. The default for this mapping print option is '*YES'.

By setting this field to *NO, the mapping reports will not be generated, provided there were no errors generated for that run.

NOTE: The SETMAPRPT field is also used in conjunction with the Mapper Debug Report parameter on the PRCTRNIN and PRCTRNOUT command. The Mapper Debug Report parameter must also be set to '*NO' in order to bypass the mapping reports.

Inbound Mapping Selection

1. If the Global Parameter, Verify Partner Group is turned off, it does not need to find a partner on the Group Level (GS02)
2. A table is built in memory for all maps linked to the Application Data ID specified on the Processing Inbound command (PRCTRNIN)
3. The Inbound Editor (EBDI001) report writes a ### MAP record for each document received containing all of the data needed to select a map from the partner file.
4. The table of maps is searched for a 'P'artner specific map matching the transaction identified in the ###MAP record, if it is found, the map is selected.
5. The table of maps is searched for a 'G'eneral type map matching the transaction identified in the ###MAP record. If it is found, the map is selected.
6. If no match is found, at this point, the data is moved to the Mapping Suspense File and an Error 613, 'Transaction cannot be selected, document will be skipped' will be produced.

Outbound Mapping Selection

1. A table is built in memory for ALL maps linked to the Application Data ID specified on the Processing Outbound command (PRCTRNOUT).
2. The functional group(s) is determined from the Application Data ID. The RECEIVER (trading partner) is determined from the data found in the application field specified in the Application Partner Reference Screen –or- the RECEIVER ID specified on the PRCTRNOUT command.
3. The partner's envelope is retrieved from the partner records. The Interchange, Group and Transaction envelope data is stored for use in the envelope processing that follows the mapping steps.
4. If the partner transaction record shows a Partner Specific map name on the Transaction ID Outbound Map parameter, the table of maps is searched for that specific map with a 'P' designation. If found, the map is selected.
5. If the Partner Specific map is NOT found or the Transaction ID Outbound Map parameter is blank, the table of maps is searched for a 'G'eneral map for the same standards version as found on the partner group record (group compliance version). If a match is found the map is selected.
6. If no match is found, at this point the data is moved to the Mapping Suspense File with an Error 613 'Transaction cannot be selected, document will be skipped'.