

White Paper

PRCTRNOU – Process Outbound
Control Record Passthru

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Purpose

CNTL Record Passthru for Outbound Processing is not commonly used in IBM Sterling Gentran Server for iSeries. CNTL Record Passthru allows a Gentran user on outbound processing to bypass the automatic generation of envelopes that GSI performs. By using CNTRL Record Passthru, the user can control when envelopes are to be generated during an outbound process. For example, if a user wants a new GS envelope generated for each ST, they would need to use CNTRL Record Passthru because GSI would put all of the ST envelopes for the same document type under the same GS envelope.

How is CNTL Record Passthru initiated?

A user should specify *YES on the PRCTRNOU command for the CNTL Record Passthru (PASTHR) parameter in order to use CNTL Record Passthru. In addition, they will need to add CNTL records to their application files as defined later in this section.

NOTE: if a customer specifies *YES on the CNTL Record Passthru parameter and they do not have any control records in their application files, they will not have any envelopes generated by the mapper and they will most likely get an Error #20 on EBDI002. If they are no really trying to use CNTRL Record Passthru, just have them set the parameter to *NO on the PRCTRNOU command.

CNTL Record Passthru

CNTL Record Passthru is a Gentran Server for iSeries feature which allows you to override Gentran's automatic creation of envelopes. Gentran: Server for iSeries is designed to automatically generate the interchange, group and transaction envelopes during outbound processing. If you have a reason to force envelopes to be generated at different intervals than are normally required in the standards, you will need to use the CNTL Record Passthru feature of Gentran.

There are three types of CNTL records, one for each EDI envelope type. See Appendix A of this document for the record layout of the CNTL record.

'I' Type CNTL Record

The 'I' Type CNTL record indicates the beginning of an interchange. The 'I' type CNTL record contains the Partner ID (must be the actual partner id on the Gentran Partner file), a text/production indicator, and an interchange control number (optional).

When GSI encounters an 'I' type record, it generates an interchange envelope in the following manner:

- Gentran uses the partner id on the CNTL record to read the Gentran partner file. The information on the Partner file is used to generate the elements in the interchange envelope except for the test/production indicator and possibly the interchange control number.
- Gentran generates the test/production indicator based solely on the value in the CNTL record. The test/production flags on the partner file and the transaction map are not used when the CNTL Record Passthru is being used.
- If a control number is coded on the 'I' type record, it is loaded into the control number field on the interchange envelope and the control number on the partner file is not updated. If the control number is not coded on the 'I' type record, the interchange control number will be read from the partner file and loaded to the interchange envelope. The interchange control number on the partner file will be then incremented by one.

When a new 'I' type CNTL record is found in the application input data or the end of the input is reached Gentran builds the corresponding interchange trailer envelope.

'G' Type CNTL Record

The second type of CNTL record is the 'G' type record, which indicates the beginning of a functional group. The 'G' type record contains the functional group ID, the group control number (optional) and the Partner id (optional).

When Gentran finds a 'G' type CNTL record, it reads the partner file using either the partner id found on the 'G' record, or if not on the 'G' record, the partner id from the previous 'I' record. The partner id on the 'G' record may be different than the partner id on the 'I' record if desired. The partner file is read using this partner id to obtain the specified functional group id. If this functional group record exists on the partner profile, information from the group record is used to generate the functional group envelope. If the specified functional group record does not exist, the '!!!DFT' group record is used to generate the functional group envelope.

The control number for the group envelope is generated in the following manner:

1. If a control number is coded on the 'G' type record, it is loaded into the control number field on the group envelope and the control number on the partner file is not updated.
2. If the control number is not coded on the 'G' type record:
 - a. If the specified functional group record exists on the partner file, the group control number will be read from the group record on the partner file and loaded to the group envelope. The control number on the partner group record will be incremented by one.
 - b. If the specified functional group record does not exist on the partner file, the group control number will be read from the !!!DFT group record on the partner file and loaded to the group envelope. The control number on the !!!DFT group record will be incremented by one.

'T' Type CNTL Record

The 'T' type CNTL record indicates the beginning of a transaction set (e.g. 810, 850, etc.). The 'T' record contains the transaction set ID, the functional group id(optional), the transaction set control number (optional) and the Partner ID (optional). When the system finds a 'T' type record it uses the Partner ID found on the 'T' record, if present. Otherwise, it uses, in order, the Partner ID from the 'G' record or the 'I' record.

The only value that needs to be obtained to create a transaction set envelope is the transaction control number. Gentran goes through the following steps, in succession, until it encounters a transaction control number that it can use to load to the transaction envelope:

1. Read the 'T' type CNTL record. IF a transaction control number exists, load it to the transaction envelope.
2. Read the transaction record on the partner file. If the transaction record exists and the control number exists, load it to the transaction envelope. Increment the transaction control number on the partner file by one.
3. Read the functional group record on the partner file. If the functional group record exists and the transaction control number exists on the group record, load it the control number to the transaction envelope. Increment the transaction control number on the partner file group record by one.
4. Read the !!!DFT transaction record and load the transaction control number to the transaction envelope. Increment the transaction control number on the partner !!!DFT transaction record by one.

Appendix A

Record layout for CNTL Records

Positions	Field Content	COBOL Pic	Format	Length	Description
1-4	Label	X(04)	AN	4	Literal 'CNTL'
5-39	Partner ID	X(35)	AN	35	Partner ID on the Gentran Partner File. This must be the actual partner id, not a cross reference. This field is required on at least the first CNTRL record
40-43	Partner Qualifier	X(04)	AN	4	Partner qualifier for the Gentran Partner id. This should only be used if the partner id On the partner file was setup with a qualifier
40-44	Record Type	X(01)	AN	1	Must be one of the following: 'I' = Interchange 'G' = Group 'T' = Transaction
45-53	Control Number	X(09)	AN	9	Control number to be used on the envelopes of the level indicated by the record type. If this field is blank, the control number must be present in the partner file.
54-58	Unused	X(05)	AN	5	Unused
59-59	Test	X(01)	AN	1	Meaningful only in the interchange control record. This field completely overrides the Test/production flag in the partner file and the transaction map. If this field is blank, Gentran will default to the production interchange. If this field is 'T', Gentran will send the interchange as a test interchange.
60-65	Transaction Type	X(06)	AN	6	Identifies the transaction type of the following data.
66-71	Functional Group	X(06)	AN	6	Identifies the functional group of the following data.

Appendix B

Using Internally Described Files (I)

The CNTL records should be added to the input application file at each point in the data where an envelope should be generated by Gentran. There should be an ‘I’ type record for each interchange, a ‘G’ type record for each group and a ‘T’ type record for each transaction. The CNTL record does not have to be defined as one of the application record types in the Gentran application definition. The application definition does not have to be changed at all to introduce CNTL record passthru. The following two changes must be made:

- The CNTL records must be added to the input data stream
- The CNTL Record Passthru (PASTHR) parameter on the process outbound command (PRCTRNOU) must be set to *YES

Example Input Data to the outbound process

```

CNTLTSTPARTNER      I000000050  T
CNTLTSTPARTNER      G000000052   SH
CNTL                 T000000023  856
00101SHIPMENT       .55555AAA.51TSTPARTNER
002 X0217161212
005DPJUST AN EXAMPLE
007PRODUCT SERVICE  00020000AN
007PRODUCT SERVICE  00030000AN
CNTLTSTPARTNER      G000000053   SH
CNTL                 T000000024  856
00101SHIPMENT       .56555AAA.51TSTPARTNER
002 X0217161212
005DPJUST AN EXAMPLE
007PRODUCT SERVICE  00020000AN
007PRODUCT SERVICE  00040000AN
    
```

In the input data above, there are CNTL records for the interchange, group and transaction envelopes. These are followed by the various input records for the document. Notice that there are additional CNTL records for the group and transaction envelopes before the input records for the next document. As you can see on the next page in the report produced by the EBDI042, a new group envelope is forced out before the second document, even though the partner id did not change. Without CNTL record passthru, only a transaction envelope would have been generated by Gentran for the second document

Example EBDI042 Outbound Mapper Report (from PRCTRNOU command with Debug parm = *YES)

EBDI042 RUN 04/20/16 TIME 9:33 ERRORS ENCOUNTERED MAPPING OUTGOING DATA

Page 1

ERROR ***RECORD*** FIELD SEG ELE
NUMBER NBR ID SEQ# ID SEQ INFORMATION ERROR MESSAGE

INTERMEDIATE FILE MEMBER NAME – M09333501

***** APPLICATION DEFINITION – CNTLEX – LOADED *****

INPUT: 001 00101SHIPMENT .55555AAA.51TSTPARTNER
INPUT: 002 002 X0217161212
INPUT: 005 005DPJUST AN EXAMPLE

***** TRANSACTION DEFINITION – CNTLEX – LOADED *****

OUTPUT: \$\$ADD ID=TSTPART BATCHID=0000000000050 'MULTXMIT=N
OUTPUT: ISA*00* *00* *ZZ*COPARTNER *ZZ*TSTPARTNER
*160420*0934*U*00401*000000050^~
OUTPUT: GS*SH*COPARTNER *TSTPARTNER *160420*0934* *000000052*X*004010~
OUTPUT: ST*856*000000023~
OUTPUT: BSN*09*TEST**0933~
OUTPUT: DTM*001*160316*1212~
OUTPUT: HL*1**S~
OUTPUT: TD1***1****.55555~
INPUT: 007 007PRODUCT SERVICE 00020000AN
OUTPUT: HL*2*1*T~
INPUT: 007 007PRODUCT SERVICE 00030000AN
OUTPUT: HL*3**P~
OUTPUT: LIN*1*BP*PRODUCT SERVICE~
OUTPUT: SN1**2000*AN~
INPUT: 001 00101SHIPMENT .56555AAA.51TSTPARTNER
OUTPUT: HL*4**P~
OUTPUT: LIN*2*BP*PRODUCT SERVICE~
OUTPUT: SN1**3000*AN~
OUTPUT: CTT*0*50000*G0~
INPUT: 002 002 X0217161212
INPUT: 005 005DPJUST AN EXAMPLE
OUTPUT: SE*000014*000000023~
OUTPUT: GE*000001*000000052~
OUTPUT: \$\$ADD ID=TSTPART BATCHID=0000000000050 'MULTXMIT=N
OUTPUT: ISA*00* *00* *ZZ*COPARTNER *ZZ*TSTPARTNER
*160420*0934*U*00401*000000050^~
OUTPUT: GS*SH*COPARTNER *TSTPARTNER *160420*0934* *000000053*X*004010~
OUTPUT: ST*856*000000024~
OUTPUT: BSN*09*TEST**0933~
OUTPUT: DTM*001*160316*1212~
OUTPUT: HL*1**S~
OUTPUT: TD1***1****.55555~
INPUT: 007 007PRODUCT SERVICE 00020000AN
OUTPUT: HL*2*1*T~
INPUT: 007 007PRODUCT SERVICE 00040000AN
OUTPUT: HL*3**P~
OUTPUT: LIN*1*BP*PRODUCT SERVICE~
OUTPUT: SN1**2000*AN~

OUTPUT: HL*4**P~
OUTPUT: LIN*2*BP*PRODUCT SERVICE~
OUTPUT: SN1**40000*AN~
OUTPUT: CTT*0*50000*G0~
OUTPUT: SE*000014*000000024~
OUTPUT: GE*000001*000000053~
OUTPUT: IEA *00002*000000050~

NO ERRORS OCCURRED DURING PROCESSING

PROCESSING ENDED NORMALL – PROCESSING COUNTS BELOW

APPLICATION RECORDS READ..... 15
APPLICATION RECORDS SUSPENDED..... 0
EDI SEGMENTS WRITTEN..... 36
RETURN CODE FOR MAPPING..... 0

Appendix C

Using a Logical File (L)

Several steps will need to be followed in order to introduce CNTL Record Passthru in an application definition using logical files.

- A new physical file containing the CNTL records. There should be an 'I' type record for each interchange, a 'G' type record for each group, and a 'T' type record for each transaction.
- In the CNTL file, you will need to add additional fields to the end of the record layout provided in Appendix A that identifies your key fields.
- The new logical will need to be retrieved into the Gentran application definition using option 2-revise on the application id, and F18-Retrieve DDS
- After the retrieve, go to the application records/files screen and delete the CNTL files. You do not need to have file appear on the application records/files screen.
- The CNTL Record Passthru (PASTHR) parameter on the process outbound command (PRCTRNOU) must be set to *YES.