White Paper

IBM Sterling Gentran:Server for iSeries
Inbound Processing (PRCTRNIN)

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Purpose - Inbound processing (PRCTRNIN) includes a few actions initiated by the user and many "behind the scenes" operations that Sterling Gentran:Server performs.

Inbound processing (PRCTRNIN) includes a few actions initiated by the user and many "behind the scenes" operations that Sterling Gentran:Server performs. This section divides the process flow into twelve main stages:

1. The PRCTRNIN Command initiates inbound processing.
2. The System retrieves and prints processing options.
3. The System extracts data from inbound queue.
4. The Inbound Editor compliance checks the data, generates acknowledgments, writes records to the audit file (AUDREC)
5. The Envelope Generator builds envelopes for acknowledgments.
6. $$ADD records are added to acknowledgments for mailboxing.
7. The Outbound Editor checks the acknowledgments for compliance, update records on audit file (AUDREC).
8. The Splitter sorts and routes the EDI data to the appropriate split files.
9. The Inbound Mapper translates the EDI data into the application format.
10. Your application interface program loads, reformats, and validates the data.
11. You send the acknowledgments to your partner with the STRCOMSSN command.

Main parameters on the Process Inbound (PRCTRNIN) command and descriptions

Comm Profile ID (Editor) . . . . COMPRF
Application ID (Mapper) . . . . APPID
Mapper Debug Report? . . . . . . DEBUG
Clear Split Files? . . . . PURGE
Replace Data in App. Files? . . REPLACE

Communication Profile (COMPRF): If COMPRF(s) are entered on the PRCTRNIN, the program looks at the data in the inbound queue for that communication profile that has a RN status and processes it through the Editor. If *NONE is entered on this parameter then no additional data from the communication profile is processed.

Application ID (APPID): If APPID(s) are entered on the PRCTRNIN, the program looks at the data in the split file for that application id and runs the translation mapper program. If *NONE is entered on this parameter than the translation mapper is not run.

Mapper Debug Report (DEBUG): Change this parameter to *YES when you need to determine a problem with your mapping or when support asks for a EBDI041 mapper report.

Clear Split Files (PURGE): Default is *YES, if you want the split files cleared after the entered application id mapper process is run, so that the data is not reprocessed. Change to *NO if you have multiple application id for the same transaction or you are in test mode and want to reprocess through the mapper multiple times while resolving errors.

Replace Data in App Files (REPLACE): Default is *YES.   Data in your application files will be cleared PRIOR to the translation mapper mapping new data to the application files. If you wish to not have Gentran clear your application files, and you will do it post processing or on your own, change this Parameter to *NO

Processing Inbound (PRCTRNIN) consists of 2 CL's

1. Communication Profile Parameter (COMPRF) - Inbound Editor/Compliance checking (EBDI001), Outbound Editor/Compliance checking for Functional Acknowledgements (EBDI002), Data Separation (EBDI015).

    a. The program looks for data in the inbound queue for the communication profile(s) specified with an RN status and selects it for processing.   The Editor will resolve the selected data to the partner (using ISA05/06 and GS02 Sender Id values and cross references), compliance checks the data against the Batch Standards File (GT00TBP), sends back Functional Acknowledgements (if applicable), AND it also performs data separation (splitting) of the data if applicable.

    b. Data Separation (splitting) is setup on Receiver ID (your company), for example: ALL 850 data might go to split file 1, while ALL 810 data will go to split file 2. To view the designated data separation (split file); select option 15-Data Separation on your Receiver ID Partner (ISA07/08 and GS03 values on the inbound data must be cross referenced to this partner).

2. Application ID parameter (APPID) - Inbound Mapping (EBDI041) If you put an application id on the PRCTRNIN also, each application id has a split file assigned to it (5-view on each application id to see applicable split file), processing will go to that split file and read the data and pass it through the mapper.

Processing Inbound (PRCTRNIN) Processing Options

-   Combination of both Communication Profile and Application Id on PRCTRNIN: Keeps the data selected from the inbound queue in a queue member throughout processing and split files. The application id looks in the unique member and processed through the mapper.
-   Communication Profile only listed on PRCTRNIN: Selects data from Inbound Queue and processes through editor, splits the data but moves data up to *FIRST member of the designated split file.
-   Application Id only on the PRCTRNIN: No data is picked up from the inbound queue, looks for data in the *FIRST member of the split file designated on the application id.

Common Inbound Processing Errors and Solutions

676/685 – EDI INPUT FILE IS EMPTY/UNABLE TO OPEN EDI INPUT FILE
The specified Application Id (APPID) on the PRCTRNIN opens the assigned split file and it does not find any data to process. This could mean one of two things:
1. No data was received for this application id in the inbound queue.
2. Data separation/splitting is not setup properly. Inbound data ISA07/08 and GS03 values must be cross referenced against your RECEIVER ID partner. Splitting/Data separation must be setup on this RECEIVER ID partner (Option 15-Data Separation from Work with Partners option), that matches the split file defined on the application id.

613 Errors – TRANSACTION CANNOT BE SELECTED – DOCUMENT WILL BE SKIPPED:
If there is data in that split file that is linked to a map that is tied to a DIFFERENT application id, it will error with a 613 Error Transaction cannot be selected message (we call this legitimate 613 errors, it just means that this data does not belong to this application and so it will be skipped and not processed). Please note: Once the data is processed through the mapper, if Clear Split Files (PURGE) is set to YES then the split file is cleared. If you run ANOTHER application and it is linked to that same split file, the data will not be there any longer, that is it is important to determine if you want this parameter, Clear Split files (PURGE) = *NO, the next application will process the very same data and will also 613 error on the data that was previously processed through the first application, thus not losing any data.

A couple solutions to get rid of the 613 error messages:
1. If you want to have Clear Split Files (PURGE) = *YES, yet you want to make sure you don't delete data prior to being able to run an application against the data. You could have ALL 850 (I'm using 850 data as an example) data go split to 2 different split files, example: split file 1 AND split file 2), then your 1st application would look in split file 1 and your 2nd application would look in split file 2. PLEASE NOTE: You will still receive 613 errors on both of these mapping processes if both sets of data are received.
2. You can accomplish kind of the same thing as above by setting the CLEAR SPLIT FILES (PURGE) =*NO on the PRCTRNIN, this leaves the data in the split file so when the second application gets run it will still have data in the split file. PLEASE NOTE: this process will ALSO still have 613 errors, AND you will have to remember to clear the split file afterwards and run RMVGENMBR periodically to clean up temporary work files.
3. You can setup SUB-SPLITTING. Sub-splitting is based on a value in the data that can be selected by using an IF condition, for example: IF SEG/ELEM = 'ABC' then sub-split this data. If the data meets this condition the data is pulled OUT of the split file and placed into a sub-split file, and then your application id for this unique data looks in the sub-split file for the data, and the original application id still looks in the split file. There is no downside to this and there are no errors. The only gotcha would be if there was nothing you could IF condition on the data to do sub-splitting. NOTE: If the application id for sub-splitting (unique data) is using the SAME application files/records, you will need to change the PRCTRNIN parameter REPLACE DATA IN APP FILES (REPLACE) = *NO, this way the application files/records will NOT be cleared after the first application runs, prior to the second application (which uses the same files/records) You need to either manually clear, or create a CL that will clear these files prior to doing a PRCTRNIN.

The Inbound Editor Processes the Data and Acknowledgments

The system passes the extracted batches of EDI data (interchanges) to the Inbound Editor (Program EBDI001), which performs these operations:

- Unwraps and decompresses the EDI data
- Checks the data for compliance to the EDI standard
- Logs the data in the Audit file
- Generates functional acknowledgments for the EDI data received
- Optionally generates envelopes for generated acknowledgments
- Reconciles functional acknowledgments received in the Audit file against the EDI data previously sent.

The Editor unwraps the data so each segment starts a new record. The Editor also decompresses each element to the full field length.

During compliance checking, the Editor accesses several files. It checks the syntax of the EDI data against the **Standards file**. It also uses the **Global Parameters file** in conjunction with the **Partner file** and **Error Message file** to determine how to process the data (for example, what error rejection scheme or version overrides to use).

The Editor prints any syntax errors (such as invalid codes or missing mandatory elements) on the Inbound Editor Processing Report. To determine whether the data should be rejected due to an error, the Editor checks if the global parameter **Error Rejection** is set to 'Y' and also examines the error rejection rules defined in the **Partner file**. Throughout the compliance checking process, the Editor also accesses the **Error Message file**, which contains Status Flags that affect error rejection. In addition, the Editor uses other information from the Global Parameters file and Partner file to determine if it should generate functional acknowledgments, and if so, whether envelopes should be generated now or at a later time.

Acknowledgements: If acknowledgements (FA/997) are setup for generation globally and on the partner, then the EBDI002 Outbound Editor will execute and create outbound FA/997 transactions by flipping the sender/receiver id and place these in the outbound queue of the communication profile.

Data Separation/Splitting (685, 676 errors)
Data separation/splitting are setup on your RECEIVER ID partner (a partner setup for your OWN Company). Inbound data ISA07/08 and GS03 values must be cross referenced against your RECEIVER ID partner. Data separation must be setup on this RECEIVER ID partner (option 15-Data Separation from Work with Partners option).

The system passes the EDI data to the Inbound Splitter (Program EBDI015), which groups together like documents and routes them to a **split file**, a **sub-split file**, the **Slide file**, **Suspense file**, or the **Reject file**. The bottom of the EBDI001 report will show where the data was routed.

- A **split file** is one of 80 work files that the Splitter uses to sort EDI data by application type in preparation for mapping. (SEE the "Splitting" chapter for instructions on designating split files.)

- A **sub-split file** is a further division of the data within each of the 80 split files. You can use sub-split files to separate EDI data by more specific criteria than just application type by using an element in the data to assign it to a sub-split file. Each of the split files and the Slide file contains 80 sub-split files.
- The **Suspense file** holds data that is suspended by the Inbound Editor.
- The **Slide file** is a default file that holds any data that does not meet the requirements to go into one of the split files. The Slide file also stores any envelope errors that occur during inbound processing.
- The **Reject file** holds the inbound data that was marked for rejection by the Inbound Editor.

The way the Splitter sorts EDI data is similar to how you might sort your family's laundry. Suppose everyone in the family carries their laundry hampers into the laundry room. So as you begin, the laundry is grouped by person. You need to sort the laundry by colors before you wash it.

In the same way, EDI data arrives on the inbound queue grouped by trading partner. The Splitter sorts the data by document type so the Mapper can translate the data more efficiently. Just as you wash the white clothes for several family members in one load, and then wash the bright clothes for everyone in another load, the Mapper translates all the invoices (from all the trading partners who transmitted invoices) together and all the purchase orders (from all the trading partners who transmitted purchase orders) in another group.

If the global parameter Split Output Files is set to '*YES,' then as the system sorts the EDI data, it also writes the data to one of the 80 split files based on the data separation records you defined under your Partner ID. Recall that the Partner ID you set up for your own company specifically handles inbound splitting. (SEE the "Partner" chapter in the *IBM® Sterling Gentran:Server® for iSeries® Release 3.6 User Guide*.) If no specific split file is defined in the data separation records for a particular document type, the Splitter writes that EDI data to the Slide file.

Inbound Mapper

Finally, the system passes the EDI data from each split file to the Inbound Mapper (Program EBDI041) (possible 613 errors). This program uses the maps you have already created in the Transaction Mapping subsystem to convert EDI data into the proper format for your applications. This completes the inbound processing job (the operations performed by PRCTRNIN).