

IBM Sterling Gentran:Server for iSeries

Manager's Implementation Planner

Release 3.6



This edition applies to the 3.6 Version of IBM® Sterling Gentran:Server® for iSeries® and to all subsequent releases and modifications until otherwise indicated in new editions.

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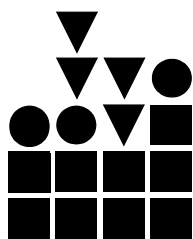
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Sterling Gentran:Server for iSeries Manager's Implementation Planner

Introduction

The IBM® Sterling Gentran:Server® for iSeries® *Manager's Implementation Planner* is designed to help you set up your new Electronic Data Interchange (EDI) system and understand how it works. We believe that a better understanding of the system can simplify the implementation process. Implementing EDI is more than just installing the Sterling Gentran:Server software. This Planner will help you to set your expectations and design your own EDI implementation plan. It details the information you must collect, the process you should follow, and the resources that are required to effectively implement EDI.

Implementing EDI for your company will have far-reaching effects. You must analyze your current systems and business procedures and develop a plan to integrate Sterling Gentran:Server for iSeries into your daily operations.

Overview

The *Manager's Implementation Planner* is designed to help you organize your implementation effort. The Planner is not intended to replace the product documentation, IBM implementation consultants, or the Product Support staff. Instead, it was created to help you understand the overall process, the necessary resources, where to find detailed information, and who to call with questions.

The *Manager's Implementation Planner* includes:

- A brief overview of EDI
- A section on how to plan an EDI implementation
- A section on how to proceed with an EDI implementation
- A model implementation plan (an example of a typical implementation plan)
- Typical questions about implementing Sterling Gentran:Server for iSeries with answers from our Product Support staff
- A blank copy of the trading partner Data Collection Form worksheet and the Sterling Gentran:Server Mapping Job Aid worksheet

Cautions

The *Manager's Implementation Planner* uses the following symbol (stop sign) to indicate an important caution:



CAUTION

Please carefully read any caution or note preceded by this symbol carefully.

Implementation Time

How long will it take to implement? This depends primarily on you and your EDI experience. A company with experience in EDI can implement Sterling Gentran:Server for iSeries in a few weeks. In fact, many such companies go from installation to full production with their first trading partner in four to six weeks. The testing of the EDI system is very important and accounts for a large portion of this time.

However, if you are just starting an EDI program, you must set your expectations based on what you need to do, what you have to learn, and what the partners' capabilities are. Planning to implement a new EDI system with 100 trading partners in six months may be unrealistic. A more reasonable goal may be to implement four partners in six months and 100 within the year.

How to Get Help

IBM® Sterling Customer Center provides a wealth of online resources that are available around the clock to enrich your business experience with IBM® Sterling Gentran®. By using Sterling Customer Center, you gain access to many self-support tools, including a Knowledge-Base, Documentation, Education, and Case Management. Access Sterling Customer Center at <http://customer.sterlingcommerce.com>.

Once logged in, select **Support Center** from the top navigation menu, and then locate Sterling Gentran product-specific support information from the left navigation menu.

Additionally, our Customer Support Reference Guide outlines our support hours, contact information, and key information that will enhance your support experience with us. For detailed information about Customer Support, please refer to the Customer Support Reference Guide accessible from the login page. (<http://customer.sterlingcommerce.com>)

Overview of EDI

What is EDI?

EDI is the computer-to-computer exchange of business transactions, such as purchase orders, invoices, and shipping notices, in a standardized, computer-processable format. EDI standards have been developed to regulate the syntax, structure, and content of the transaction data.

What is EDI? Cont.

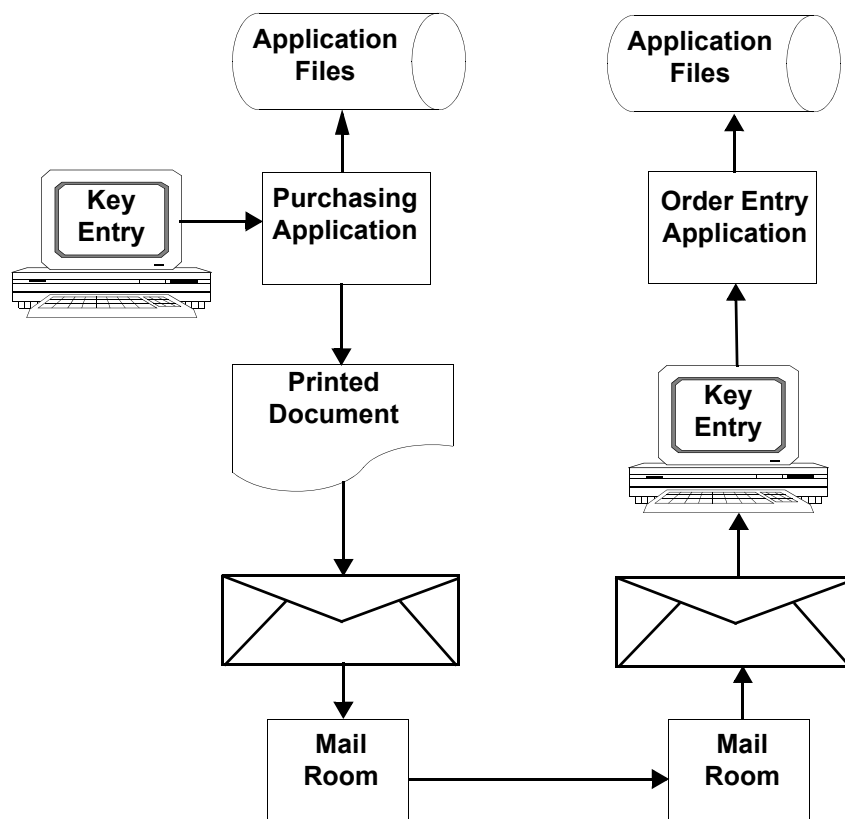
Traditionally, business transactions have been conducted using paper. In fact, the development of written language is attributed to the needs of business. Thousands of years ago, traders and merchants needed to physically record accounts of transactions. Written language helped to standardize the transactions and ensure smooth communication.

The Paper Chase

Unfortunately, paper, and the manual processes associated with it, are an incredible bottleneck. Paper-pushing is time-consuming, inefficient, and ill-equipped to handle the large flow of information between companies that occurs across the globe today.

Figure 1 illustrates the way many businesses, even today, still depend heavily on paper, conventional delivery methods, and human interpretation and data entry. A one-way exchange of data using this method takes about 5 to 8 days. The opportunity to introduce human error occurs (through key entry) in at least two areas.

Figure 1. Pre-EDI Transaction Flow



Enter the Computer

The 1960s heralded the widespread use of computers for commercial business applications, such as inventory systems and accounting systems. The use of computers allowed the first part of the EDI solution to develop. The pioneers of EDI used proprietary formats (standards that were different for each trading

Enter the Computer Cont.

partner). These formats were rigidly defined and fixed in length. Some of these original standards are still in use today.

The difficulty in maintaining many different formats to accomplish the same thing led some industry groups to form coalitions to develop industry-based EDI standards for purchasing, transportation, and financial applications. By the late 1970s, the first national EDI standard was developed by the American National Standards Institute (ANSI) to serve as a cross-industry standardization body. This resulted in the ANSI X12 business data interchange standard. Additionally, several industry-specific standards (for example, WINS for the Warehouse industry and UCS for the Grocery industry) were developed.

Within each EDI standard there are different versions. Once a version is released, it never changes. New versions are released to incorporate updates and the changing requirements of specific industries. Good EDI software enables you to work with your trading partners using any EDI standard version.

Common EDI Standards

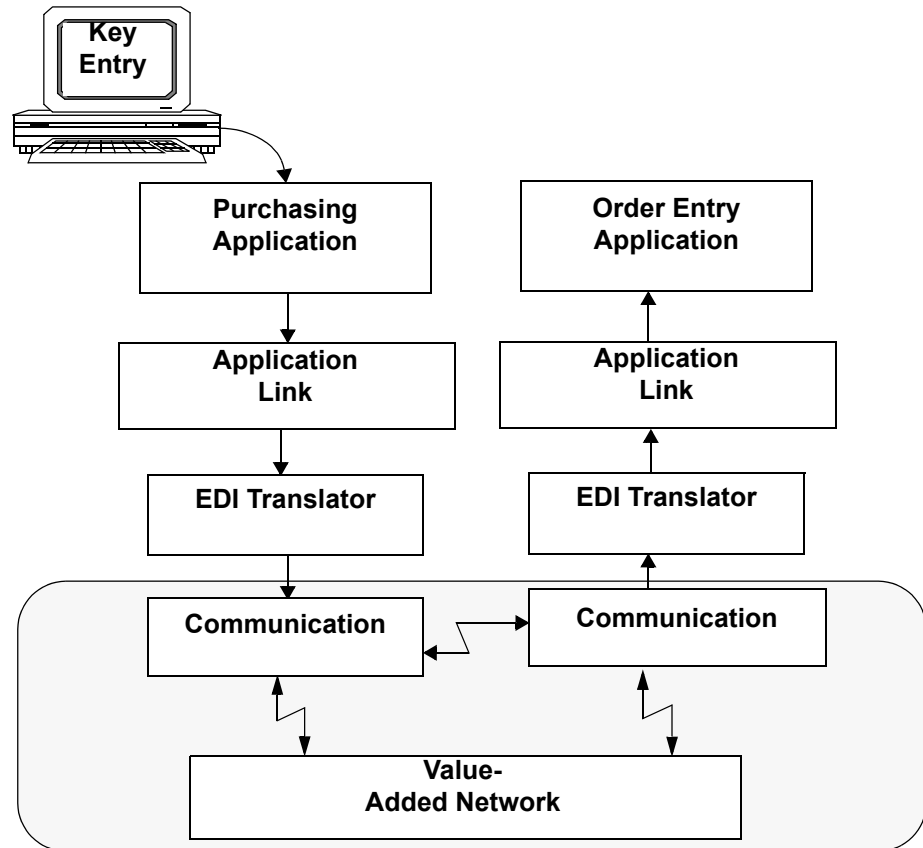
The most common EDI standards used are as follows:

Standard	Subset	Industry	Used Since
EDIA (Transportation)	AIR	Air	1979
	MOTOR	Motor	
	OCEAN	Ocean	
	RAIL	Railroad	
UCS	None	Grocery	1982
WINS	None	Warehousing	1982
ANSI X12	AIAG	Automotive	1983
	CIDX	Chemical	
	EDX	Electrical	
	EIDX	Electronics	
	HIBCC	Health Care	
	ICOPS	Office Products	
	NWDA	Pharmaceutical	
	PIDX	Petroleum	
	TCIF	Telecommunication	
VICS	Textile-apparel-retail		
TRADACOMS	————	Retail	1982
EDIFACT	————	Commercial Export and Transport	1988
ODETTE	————	Motor and Component Suppliers	1988
EANCOM	————	Retail	1990
UK EDIFACT	————	Retail	1992

EDI Transaction Flow

Figure 2 illustrates the direct advantages of EDI. This example is a computerized system in which there is minimal opportunity for human error. The same transaction that took over a week can now take place in hours or possibly even minutes.

Figure 2. The Same Business Transaction Using EDI



Benefits of EDI

EDI provides many direct administrative and long-term strategic benefits, such as:

- Migration from paper to electronic transactions to realize savings and decrease lead times, fulfillment cycles, inventory levels, and paper use. EDI is a “green” technology — it is good for the environment
- Customer service improvement: EDI strengthens the link with your trading partner and enables personalized service
- Reduced errors and improvement in error detection, increased efficiency and information integrity by reducing manual data entry errors, discrepancies, and misinterpretations
- Reduced clerical work with one-time-only data entry and increased productivity with automatic reconciliation and faster management reporting
- Faster response time — increased speed of document transfer and reduced response time

Benefits of EDI Cont.

- Reduced inventory, allowing the implementation of just-in-time (JIT) inventory and manufacturing
- Increased competitiveness in the marketplace (some trading partners require faster response time or they will not do business with you)
- Decreased costs, such as reduced clerical effort and two-tier pricing of products with EDI clients receiving lower prices
- Uniform communication with all trading partners
- Better product planning and forecasting
- Improved delivery of goods and services

Usage and Trends of EDI in the World Today

Today's fast-paced business environment demands the use of EDI. This need is driven by JIT manufacturing schedules, customer service demands, partnering with another company or sharing information systems, increasingly competitive business environments, and the need to establish and maintain a competitive advantage.

Many companies are entering into EDI, not proactively, but reactively, in response to an EDI mandate by their customers or vendors. Businesses know that they will lose their trading relationships if they do not implement EDI. One oft-related anecdote describes a president of a multi-million dollar corporation who has a sign in his office proclaiming "Do EDI or don't sit down."

One measure of the need to not just do EDI, but do it well, is the fines that are levied by some larger companies (such as automotive manufacturers) upon the receipt of invalid data or other EDI errors. These companies specify in advance how much each error will cost their trading partners in a signed trading partner agreement.

EDI and Sterling Gentran:Server for iSeries

For successful electronic exchange of business, you must use EDI management software that includes a link to your application, an EDI translator, and data communication.

The first component, the Application Link (or Mapper), is the interface between your business application and the EDI translator. With the Mapper, you will define the structure of your internal application files and specify the relationship of the data in the files to a selected EDI standard.

The second component is the translator. The translator performs a step called compliance checking to ensure that the data that is sent or received complies with the standard. This step prevents unexpected data from entering your application system or your trading partner's application system. The translator also compresses or decompresses data, generates standard envelopes, and generates and reconciles functional acknowledgments.

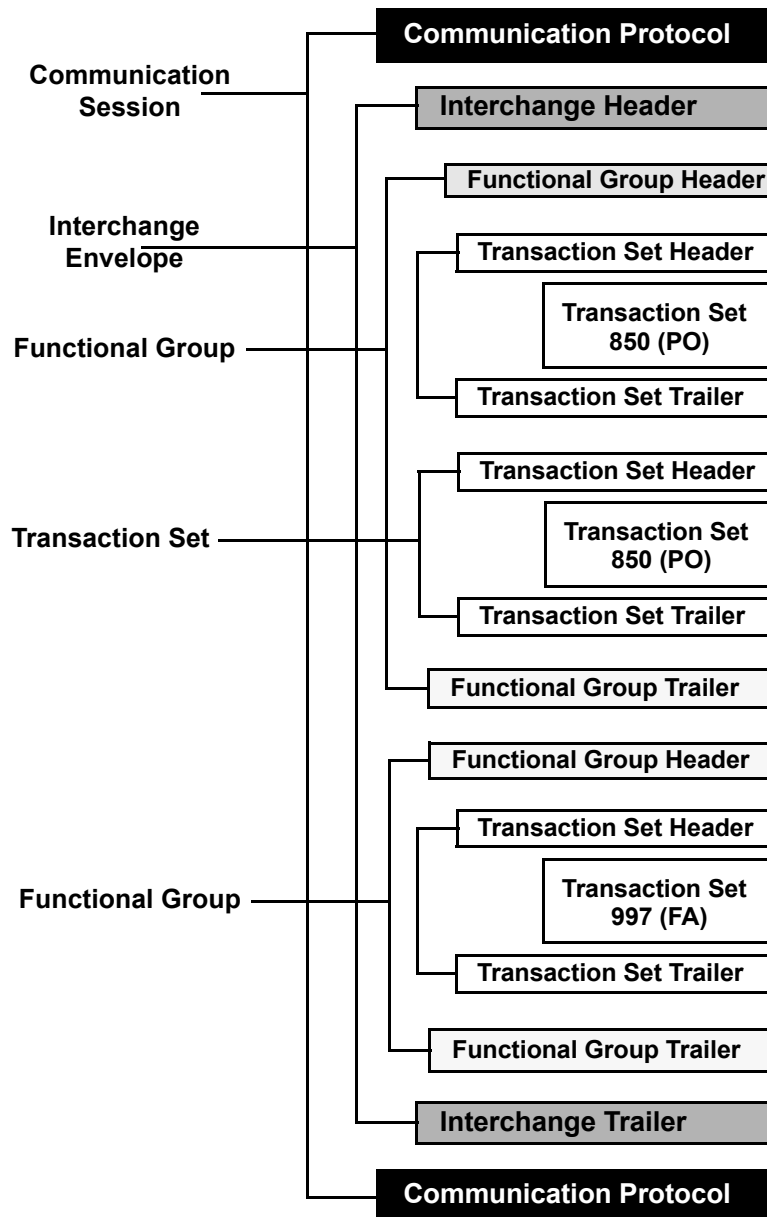
The third component, Data Communication, transmits the files. For outbound processing, it transmits the EDI file to your trading partner, either directly or through a Value Added Service Provider (VASP) such as IBM® Sterling B2B Collaboration Network. For inbound processing, it receives incoming EDI files.

Enveloping Structure

The key to EDI is that the data is standardized. When you transmit information between two computer systems, differences in the data and the format of the data must be expected. Unexpected data or formats can introduce errors and confusion. Standardized documents enable EDI to be used by multiple trading partners.

EDI structure can be divided into four levels: envelopes, transaction sets, segments, and elements. EDI envelopes are much like paper envelopes. They separate different types of data and carry the address information. Figure 3 illustrates the enveloping structure.

Figure 3. Enveloping Structure



Enveloping Structure Cont.

The outermost level of the envelope structure is the interchange, which contains an interchange header and trailer and all the data sent from one sender to one receiver in the same transmission. The next level of envelope structure, inside the interchange, is the functional group. The functional group contains a group header and trailer that surrounds a group of transaction sets of the same type. At the final level of enveloping, inside the functional group, are the transaction sets. Each set is prefaced by a transaction set header and succeeded by a transaction set trailer. A header segment contains a number identifying that particular envelope, in addition to other data used in the interpretation and transmission of the data contained in the envelope. The trailer segment must contain the same identifying number as the header, as well as a count of the number of units in the envelope.

Transaction Sets

Transaction sets are the electronic equivalent to the paper documents that EDI replaces. For instance, a purchase order corresponds to a transaction set. Transaction sets are built from segments that relay the basic information.

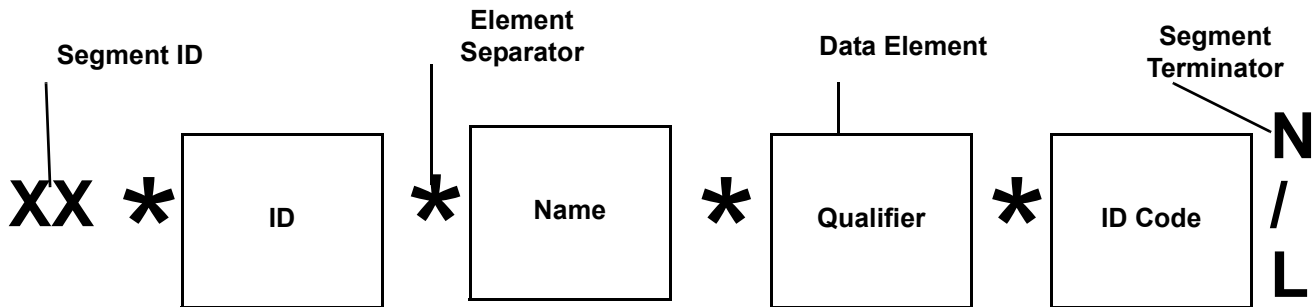
Segments

Segments are like sentences and are equivalent to the records in your application file. In the structure of EDI, the segments are groups of data elements ordered to relay information. For instance, a single data element may contain the number “4,” which is meaningless by itself, but in the proper place in a segment that relays line item information, it indicates quantity.

EDI Standards use a variable field-length architecture that requires the use of Data Element Separators and Segment Terminators. In variable field-length architecture, the leading zeros and trailing blanks are removed, and the data is compressed.

Because the fields vary in length, the system needs a flag to determine where one field ends and another begins. A Data Element Separator is a special indicator that marks the beginning of a new data element. A Segment Terminator is a special indicator that marks the end of a variable-length record (segment). Care must be taken to ensure that the chosen separators and terminators never appear in any business data. Figure 4 illustrates the structure of a segment. The Segment Terminator is N/L, which is defined as the New Line key or Hex 15.

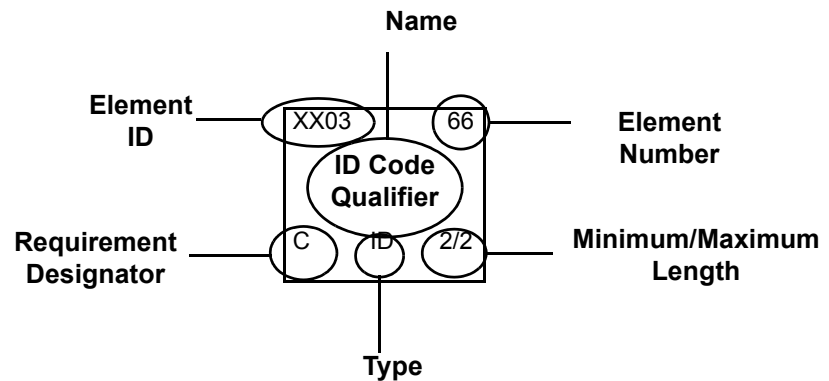
Figure 4. Segment Structure



Elements

Elements are equivalent to the fields in your application file. If a segment is a sentence, then an element is an individual word. The element is where the actual data of an EDI transaction resides. Figure 5 illustrates the structure of an EDI element, as defined in the EDI Standards manual.

Figure 5. EDI Element Structure – Common Information



Implementation Planning

Introduction

The best way to ensure a trouble-free EDI implementation for your company is by carefully and completely planning the implementation before you begin. In very general terms, before implementing EDI with Sterling Gentran:Server for iSeries, you must gain a thorough understanding of:

- EDI
- Your application
- The requirements of *all* your trading partners
- The requirements of the EDI standard you plan to use
- Sterling Gentran:Server for iSeries

Implementation Planning

If your site has recently purchased a new iSeries, a new application system, and Sterling Gentran:Server for iSeries, it is important that you first become educated about the iSeries and application system before attempting to understand or implement Sterling Gentran:Server for iSeries. However, if Sterling Gentran:Server for iSeries is the only component from the above list that is new to your site, you should now become educated in Sterling Gentran:Server for iSeries before you implement it.

Figure 6 offers a general checklist of items to consider and complete in the planning phase of implementation. You may complete these steps in any order.

**Implementation
Planning Cont.**

**Figure 6. Sterling Gentran:Server for iSeries Checklist for
Implementation Planning**

- ✓ Identify your company's EDI goals.
- ✓ Organize for EDI (identify EDI Coordinator and Steering Committee).
- ✓ Educate in EDI.
- ✓ Select and prioritize your trading partners.
- ✓ Determine which public standard versions and transactions will be used with each trading partner.
- ✓ Confirm the envelope selection and envelope contents for each trading partner.
- ✓ Confirm communication requirements for each trading partner:
 - Communicate directly or through a value-added service provider.
 - Select modem and baud rate.
 - Determine trading partners' transmission requirements.
- ✓ Other considerations:
 - Analyze your application.
 - Consider audit and security requirements.
 - Analyze future goals and plans.
 - Determine whether you need any Sterling Gentran:Server

Identify EDI Goals

Your initial task is to identify your company's EDI goals. Even if your company is implementing EDI in a reactive mode (for example, a vendor or client mandates that you do EDI), you must be certain that you begin implementation with the *complete* support of upper management. This support is essential for your success. Upper management provides active direction to the EDI project, and only they have the authority to allocate resources (personnel and financial) and the perspective to direct a balanced EDI implementation for all departments. Management must be willing to commit resources toward a successful EDI implementation. Everyone must be involved. Making a presentation to upper management about EDI, including the benefits and requirements for a successful implementation, may be helpful.

An important part of identifying your company's EDI goals is determining not only which documents you will initially be exchanging with your trading partners, but also which documents you (and your trading partners) plan to implement in the future. It is to your advantage to review the EDI standard that you will be implementing to identify other documents that you may possibly use in the future. This initial document analysis enables you to allow for these documents in application programs and files, and thereby minimize future system modifications.

Organize for EDI

The most important step in getting organized is appointing an EDI Coordinator, whose top priority *must* be EDI implementation. A manager in the company is often appointed (managers of information services or purchasing are common candidates). However, EDI Coordinators may also be non-management employees who coordinate the activities of programmers, users, and business management.

The next organizational phase is the formation of an EDI Steering Committee and making sure all the right people are involved. The smaller the committee, the easier it is to manage. However, the committee should represent all departments affected by EDI or those controlling resources necessary for EDI success. Examples of personnel who should be included in the EDI Steering Committee are:

- Department representatives from accounting, purchasing, sales and marketing, manufacturing, and distribution (Every department that will be affected by the documents used should be included.)
- Personnel involved in daily EDI activities from the application side, such as data entry or shipping clerks
- MIS personnel such as the system administrator, database administrator, programmers, systems analysts, and system operators
- Communication administrator to aid with the configuration of the Sterling Gentran:Server for iSeries Communication module

The EDI Coordinator directs the efforts of the Steering Committee. To ensure cooperation and efficiency of effort, it is important that each member of the committee be given a clear list of his or her responsibilities. It is also helpful for the committee to issue a plan to help set the goals and expectations for the company's EDI implementation.

Consulting

E-Business Services can assist by defining new operational procedures and policies, performance measurements and monitoring criteria, and optimizing your use of EDI and the Sterling Gentran:Server product family. Our consultants are available to address a wide variety of needs:

- | | |
|------------------------------------|------------------------------------|
| ✓ Project Management | ✓ Pre-Production Review |
| ✓ Implementation Planning | ✓ Test to Production Services |
| ✓ Installation Services | ✓ Application Interface Assistance |
| ✓ Upgrade Migration | ✓ System Setup and Security |
| ✓ Sterling Gentran:Server Products | ✓ Performance and Tuning |
| ✓ Post-Production Quality Review | ✓ Trading Partner Implementation |

We customize our consulting services to your unique environment and business objectives. Consulting may be conducted at your site or, in some cases, may be conducted remotely at an IBM facility.

Select and Prioritize Trading Partners

The next step in your implementation plan is to select and prioritize your trading partners. You must choose one trading partner for the testing phase you will complete after your EDI implementation. This test partner should be a company that is already doing EDI, so they will be able to contribute to your EDI implementation. Choose a partner with whom you already have a good working relationship because the EDI verification process can be time-intensive.

Some things to consider when identifying key trading partners are:

- Volume
- Partner's influence
- Impact on production
- Cost to implement

Once you have selected your first trading partner, you and that partner must mutually agree on the acceptable ground rules of EDI. The rules should define what data will be sent, when, and how often.

We recommend that you expand your trading partner agreements to include static information that is present in all transmissions (for example, payment terms, ship-to address). This static information may then be hard-coded into your programs, eliminating the time, effort, and expense needed to enter that information for each transmission.

Determine Standard Version and Transaction Sets

Specific issues to address with each trading partner are:

- Which public standards will be used?
- Which versions will be chosen?
- Which transaction sets will be used?

Confirm Envelope Selection and Contents

What will be the envelope selection and envelope contents of your trading partners? Work with your trading partner to agree on the types of envelopes that will be used at the interchange, group, and transaction levels. This selection is limited by the standards version you agreed on, but you may have some choice. Obtain an EDI Standards manual for each standard/version that you will use. Manuals are available from standards agencies. Use the manual to identify the type of information that is required in the envelopes and work with your trading partners to agree on the contents.

Confirm Communication Requirements

Next, confirm the communication requirements of each trading partner. Will you communicate directly or through a third-party network? If you are communicating directly with your trading partner, you need to know their modem baud rate. You must also determine the transmission requirements of their EDI data, including which computer will initiate the call and which computer will answer and establish Communication IDs and passwords.

You should agree on testing and EDI implementation timetables. These ground rules may involve a trading partner agreement or contract. If you enter into a contract with a trading partner or value-added service provider (VASP), the

**Confirm
Communication
Requirements Cont.**

contract should specify exchange frequency, timing, expected acknowledgments, and the party who is responsible for transmission errors.

You can use the trading partner Data Collection Form in Appendix B of this guide to help collect the necessary information from your trading partner.

**Analyze Internal
Application
Interface**

In addition, you must also analyze the internal application interfaced with Sterling Gentran:Server for iSeries. Analyzing your application involves understanding the existing internal and external information flow, as well as identifying any manual procedures that might be automated by the implementation of EDI.

In your analysis, you must determine:

- What information is exchanged and with whom?
- What is the input and output of the application?
- What are the existing hardware and communication capabilities?
- What data and forms are currently used?
- How frequently is data processed and exchanged with trading partners?
- What is the priority of your trading partners and the priority of the documents exchanged with each trading partner?
- For manual tasks that could be automated, what are the procedures and who are they performed by?
- For existing computer tasks, what are the applications and who provides the information and maintains or updates that data?

**Consider Audit and
Security
Requirements**

Consider your audit and security requirements prior to implementation. These requirements will vary if you communicate directly with your partners or use a VASP. Migrating to EDI means that new controls are required for the electronic environment that were not needed in a paper environment. New controls may be accompanied by a change in policies and procedures so that all employees may use EDI productively.

**Consider Long-
Range Goals and
Plans**

Take long-range goals and plans into account before implementation. Also, consider the direction the industry is heading and whether you will be able to change with it. Reevaluate file design and data needs to allow for future growth and changes. For example, examine your other standards and trading partner requirements before defining your interface files — do not structure the files around only one trading partner's needs.

Determine whether add-on products to Sterling Gentran:Server are needed. You may need certain add-ons to achieve your long-range goals and plans. For example:

- IBM® Sterling Gentran:Viewpoint® enables end-users to access EDI status information. Using Sterling Gentran:Viewpoint, you can configure the EDI system with the business terminology used by your end-users.

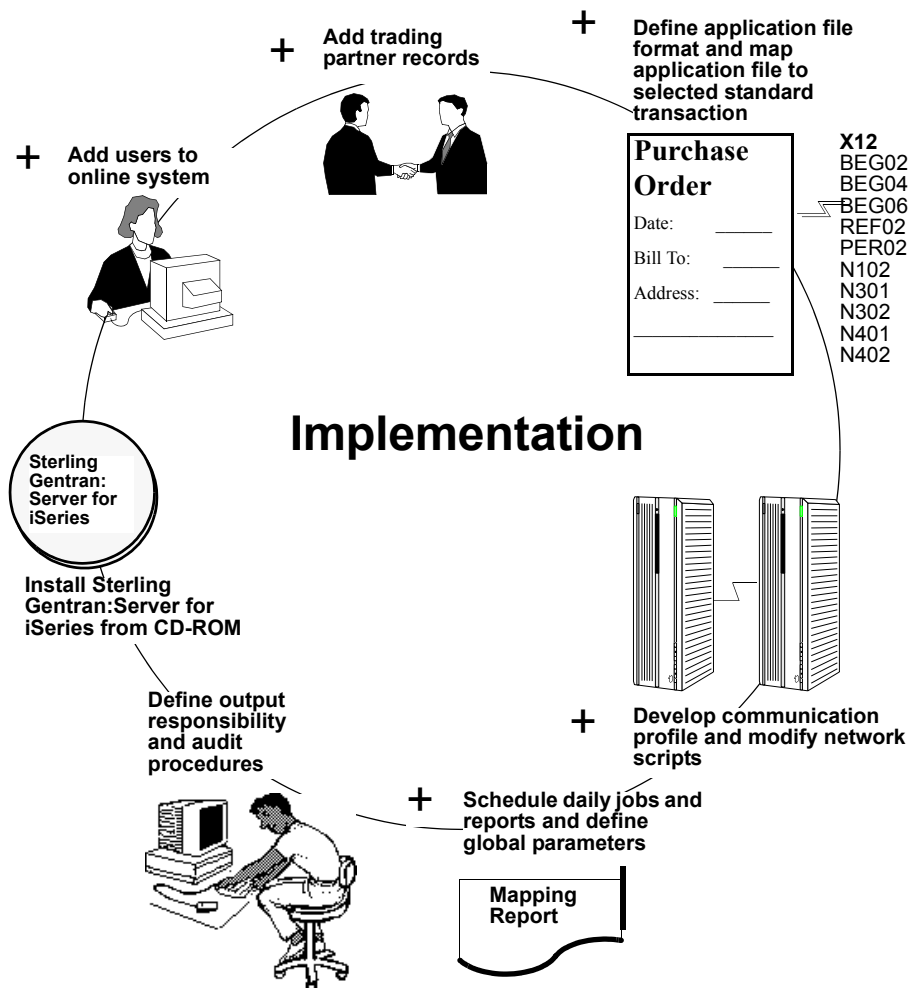
Consider Long-Range Goals and Plans Cont.

- IBM® Sterling Gentran:Server® Extension for SAP R/3 (the Extension) is an add-on product to Sterling Gentran:Server and must be purchased separately. The Extension is a comprehensive interface product used for receipt and transmission of EDI transactions with SAP application software. The Extension includes status reporting for outbound processes.

Implementation

This section defines how to proceed with the actual implementation of Sterling Gentran:Server for iSeries, including what resources you will need and what questions you must answer. A graphic overview of the implementation process is illustrated in Figure 7. Implementation steps marked with a plus sign (+) may be executed in any order, although the diagram depicts the recommended sequence for a new customer.

Figure 7. Implementation



Installation

Before the physical installation of Sterling Gentran:Server, make sure you have completed implementation planning, including: reevaluating your application, selecting a trading partner for the testing phase, and completing a trading partner agreement to resolve any issues about responsibility. Finally, examine everything that might make the implementation fail (such as not having enough disk space allocated or failing to meet communication or hardware requirements). You also need to decide, based on your test/production process, if you want to install Sterling Gentran:Server in only one library or more than one.

SEE the *IBM® Sterling Gentran:Server® for iSeries® Installation Guide* for information on DASD requirements and instructions on how to install Sterling Gentran:Server for iSeries.

Installation Questions

Answer the following questions before proceeding with the installation:

- Do you have the Sterling Gentran:Server for iSeries installation CD-ROM and *IBM® Sterling Gentran:Server® for iSeries® Installation Guide*?
- When will the least activity be taking place on your system (for example, on a Sunday or overnight)?

 **NOTE**

The installation should occur when system activity is at a minimum.

Environment Control

The first step to implementing Environment Control is to determine the security requirements of your company.

 **NOTE**

SEE the “Environment Control” chapter in the *IBM® Sterling Gentran:Server® for iSeries® User Guide* and the online information provided for assistance with creating and maintaining user IDs and implementing environment control.

Environment Control Questions

Answer the following questions before implementing Environment Control:

- What Sterling Gentran:Server subsystems does this user need to access?
 - ✓ Partner
 - ✓ Application Definition
 - ✓ Transaction Mapping
 - ✓ Communications
 - ✓ Audit
 - ✓ Standards
 - ✓ Environment Control
 - ✓ Processing
 - ✓ System Administration
 - ✓ Message Center
- Do you need to control access to a subsystem on a program by program basis. If so, what programs will the user need to access for each subsystem chosen above?
- For each subsystem and program the user needs, what degree of access does the user require?
 - ✓ View-only access
 - ✓ Update capabilities to only those entities having an “Update Allowed” flag set to “Y”
 - ✓ Unlimited access
- Does this user only need access to files containing a specific Division Code? If so, what is that code?

After you determine your security requirements, log on to the system and add users to the online system. Each user must have a valid iSeries profile to be added.

Give each user the appropriate degree of access to only those subsystems and programs necessary. You may assign each user a Division Code that will provide access to only the partner files and maps with that code. For example, you might assign Division Code “001” to all maps and partner files related to the Purchasing Department, and then assign the code “001” to each user in the Purchasing department.



CAUTION

The “000” Division Code is typically reserved for the EDI Coordinator. Assigning a Division Code of “000” enables that user access to all divisions.

Partner

The next implementation step is to define trading partner records. These records provide detailed information about a specific partner, including name and address and the type of documents you and the partner will be exchanging.

 **NOTE**

Much of this information is used to build envelopes, so it may be helpful to refer to the EDI envelope structure in your Standards manual. SEE the “Partner” chapter in the *IBM® Sterling Gentran:Server® for iSeries® User Guide* for detailed instructions on creating and maintaining partner records and cross-reference records.

To get started, choose an initial trading partner who is already doing EDI and complete the Trading Partner Data Collection Form (a blank form is provided in Appendix B).

Partner Questions

Answer the following questions before creating partner records:

- What is the partner’s name and address information?
 - ✓ Partner Name
 - ✓ Partner Address (street, city, state, country, ZIP code)
 - ✓ EDI Contact Name
 - ✓ EDI Contact Phone Number, Fax Number, and E-Mail Address
- Which EDI Standard and Version will you use? For example, “X12” and “004010” for ANSI.
- What is the partner’s interchange envelope choice? For example, ISA, ICS, BG, GS, UNA, UNB, SCH, or STX.
- What is the trading partner’s EDI ID and Qualifier for the Interchange level? Usually, a DUNS number or phone number is used.
- What is your EDI ID and Qualifier for the Interchange level? Usually, a DUNS number or phone number is used.
- What is the partner’s Group level EDI ID and what is yours?
- Will you be sending the same EDI ID at the Group and Interchange levels?
- Are you doing inbound sequence number checking? If so, at what level—Interchange or Group? Inbound sequence number checking refers to checking inbound control numbers to verify that they are sequential.
- For ANSI X12 users only: What is the partner’s Authorization and Qualifier, if used? What is the partner’s Security Code and Qualifier, if used?
- For BG users only: What is the partner’s Communication ID, if used? What is the partner’s Password, if used?
- For BG users only: what is the partner’s Password, if used?

**Partner Questions
Cont.**

- What separators and terminators does the partner require? Are there certain characters that the partner cannot recognize?
 - ✓ Subelement Separator:
If using ISA envelopes, “>” is recommended
 - ✓ Element Separator:
If using BG or ISA envelopes, “*” is recommended.
 - ✓ Segment Terminator:
If using BG or ISA envelopes, “HEX15” is recommended.
- Will you use a value-added service provider or communicate directly?
- If you are using a network, which one? (This information will be used when you create a Communication Profile later.)
- What Purge Audit Options will you use? These options are internal. The fields that appear on the screen are:
 - ✓ “Purge Acknowledged (Y/N)”
 - ✓ “Purge Reported (Y/N)”
 - ✓ “Purge Older Than Days”
- Which documents (transactions) will you exchange with this partner and which direction are they going (inbound or outbound)? For example, an X12 Purchase Order is 850.
- If inbound, to which split file will they be routed?
- At what level (Interchange, Group, or Transaction) do you expect to receive/send Functional Acknowledgments? For example, 997 or 999 functional acknowledgments.



NOTE

Interchange Acknowledgments are not usually used.

- Will you acknowledge errors?
- Do you have another internal name (Cross-Reference) for this partner?



NOTE

IBM recommends that you list any name or ID used to reference this partner either in envelopes (for example, Receiver ID) or in your application files. All these names then need to be cross-referenced to the ID used to define this partner in the partner file

Error Rejection

Error rejection is optional, and IBM recommends that you consider it a long-range objective.



CAUTION

You should NOT set up error rejection during your initial implementation because you need to thoroughly test what errors will occur and which errors are severe enough to be rejected when they occur.

Set Up Your Company as a Partner

You can set up your company as a trading partner to define inbound data splitting instructions for all partners, or splitting can be defined differently for each partner created. “Data splitting” is the process used to separate different types of documents that are received in a single EDI transmission. It enables you to sort the documents by functional group or transaction set.

For example, you might receive invoices and purchase orders in one transmission. Ultimately, you want the invoices to go to your invoice application and the purchase orders to go to your purchase order application. You can set up your data splitting to send the invoices to one split file and the purchase orders to another. If all incoming documents of a like type (such as purchase orders) can be processed by the same application definition, it simplifies the process by setting up splitting based on the receiver ID (your company’s trading partner). If some orders need to be processed by different applications depending on who sent the data, set up splitting criteria for each partner.

After data splitting is set up, each transaction set or functional group received is routed to a different temporary split file used as input for the mapping process. You can separate data into a maximum of 80 different files.

Answer the following questions before creating a trading partner record:

- What is your name and address information?
- Which documents (transactions) will you receive from your partners? For example, an X12 Purchase Order is 850.
- Do you have another internal name (Cross-Reference) for your company? IBM recommends that you list any name or ID that your partners use to refer to your company when sending envelopes (for example, Receiver ID). All these names must then be cross-referenced to your partner ID.
- What split file will each transaction set or functional group be routed to? For example, Purchase Orders (850) may be routed to split file “0002.”

Set Up Your Company as a Partner Cont.

 **NOTE**

SEE the “Partner” chapter in the *IBM® Sterling Gentran:Server® for iSeries® User Guide* for more information on setting up your company as a partner. Also, see the “Splitting” chapter in the *IBM® Sterling Gentran:Server® for iSeries® Technical Reference Guide* for more information on inbound data splitting.

Application Definition and Transaction Mapping

Mapping enables you to define the relationship between an application file and a target EDI standard, and vice versa. We have divided mapping into two phases:

- application definition
- transaction mapping

In Application Definition, you define your applications. Transaction mapping makes connections between data fields in your application and the EDI data elements used in Sterling Gentran:Server.

 **NOTE**

Complete the Mapping Job Aid worksheet in Appendix B of this manual and read the “Mapping Overview” chapter of the *IBM® Sterling Gentran:Server® for iSeries® User Guide* to become more familiar with mapping concepts. Also see the “Application Definition” and “Transaction Mapping” chapters of the *IBM® Sterling Gentran:Server® for iSeries® User Guide* for detailed Mapping information.

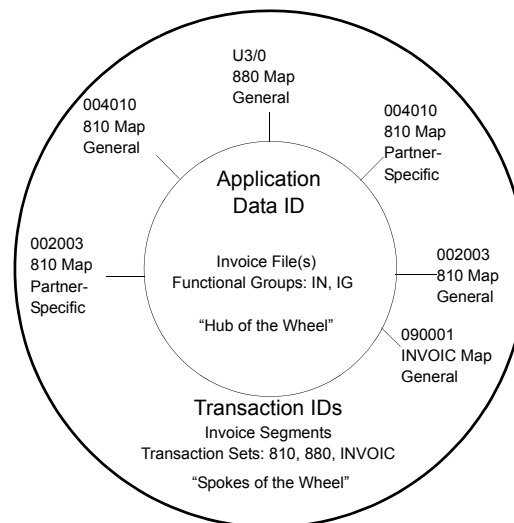
It is helpful to review the EDI Standards you will be using before analyzing your application. Obtain an EDI Standards manual for each standard/version that you will use. Manuals are available from standards agencies.

Complete the following tasks:

Step 1. Offline preparation — These tasks should be performed first because they save setup time when you begin working online.

- Define the structure of the application file.
- Select the standard, standard version, transaction set, and segments to be used.
- Analyze the application data fields and determine which EDI elements of the segment will be logically linked (define loops if necessary).
- Determine what translation Sterling Gentran:Server for iSeries will perform and what translation your application will perform.
 - ✓ Determine whether or not you will use constants. Use constants for duplicating information (for example, mapping one occurrence to multiple places).
 - ✓ Determine whether or not you will use code and/or data tables. Code and data tables are used to translate input values to different output values (for example, a part number you use is different than the number your partner uses to refer to the same part).
 - ✓ Determine whether or not you will use validation tables. Validation tables check for the occurrence of multiple if-then conditions.
 - ✓ Determine whether or not you will use conditional relationships (if-then-else), subfields, arithmetic operations (addition, subtraction, multiplication, division), or user exits.

Figure 8. Bicycle Wheel Concept (One-to-Many Relationship)



Complete the following tasks Cont.

Step 2. Define the application to Sterling Gentran:Server. From this definition of file(s) and fields, you can create multiple transaction maps defining the EDI layout — one map for each version, each direction, and for each partner (if necessary).

- Define the Application Data ID (the Application Data ID is the hub of the wheel in **Figure 9** above).
 - ✓ Is it for sending or receiving?
 - ✓ What functional groups are used?
 - ✓ Does it use internal, logical, or physical files?
- Define the application file(s).
 - ✓ Define unique files.
 - ✓ Define header, detail, and summary areas.
 - ✓ Specify loop IDs, maximum times the record can occur, and record description.
- Define application fields.
- Define the Application Partner Reference for outbound maps to identify which partner this data is going to.

Step 3. Define Code, Data, and Validation Tables in Transaction Mapping (this step is optional).

Step 4. Define the Transaction (Map) in Transaction Mapping. Refer to **Figure 9** on page 25 for a graphic representation of the relationship of the transaction map to the application.

- Determine the standard version and transaction sets that were used in the partner file (for example, X12 version and 850 transaction set).
- Determine whether the map will be test, development, or production status.
- Determine whether the map is partner-specific or for general use.
 - ✓ Partner-specific maps are easy to create by copying from a general map and modifying it for one specific partner, without interfering with your current map. This promotes greater integrity but more mapping maintenance.
 - ✓ A general map is one map per standard version that is used for one or many partners. This makes migrating to a new version easier.
- Specify the Application Data ID. This relates the EDI format to your application format.

Complete the following tasks Cont.**Step 5.** Copy Standard Segments in Transaction Mapping.

- Copy the needed segments from the standard version into the map. Mandatory segments are automatically selected.
- Modify multiple occurrences, maximum use, and loop IDs to correspond to your application structure.

Step 6. Perform Simple Element Mapping in transaction mapping. This means “connect the dots” between the EDI standard and the application at the field and element level.

- Map literals, constants or reserved words, and application field names to the applicable elements in each segment. Refer to the Glossary of the *IBM® Sterling Gentrans:Server® for iSeries® User Guide* for a listing of Reserved Word Constants.
- Specify any code, data, or validation tables, if used.
- Use the subfield option, if needed, to divide an EDI element into several elements to enable mapping of each to a different application data field.

Step 7. Perform Extended Mapping in transaction mapping.

- Add conditions (if-then-else) and advanced logic.
- Specify translation tables for conversion or validation.
- Create accumulator and hash-total support, if needed.
- Determine if values need to be saved in constants. Refer to the Glossary of the *IBM® Sterling Gentrans:Server® for iSeries® User Guide* for a listing of Reserved Word Constants.
- Multiple extended maps may be used (up to 99 alternate maps per element are available).
- Specify user exits, if needed.
- Add notes, if needed.

**CAUTION**

User exits specify a program name to be called. This program name must be within your library lists when processing.

Step 8. Print the Standard, Application, and Validation Mapping Reports (for outbound only). Validate and review the map, making modifications, as needed.**Step 9.** Develop test data or request test data from your partner, and thoroughly test the data through inbound and outbound processing.

Communications

The Communication subsystem within Sterling Gentran:Server enables you to communicate with each of your trading partners. The following optional features are available for purchase separately:

- ✓ **LU6.2/APPC Communication:** Customers may use LU6.2/APPC over both dial and leased SDLC connections, as well as X.25 network connections. This support is an ideal option for intra-company communication between iSeries machines in enterprise SNA networks.
- ✓ **Asynchronous Communication:** This includes l-up connections and X.25 leased lines. This supports connectivity with a variety of networks, including BT/MCI EDI*NET and Sterling B2B Collaboration Network, and also enables connections with other networks and async remotes using user-defined communication scripts. The ODETTE FTP (OFTP) and XMODEM file transfer protocols provide additional communications options for remotes such as European networks and PCs.
- ✓ **FTP (File Transfer Protocol) Communication:** Customers may use the OS/400 FTP support with Sterling Gentran:Server for TCP/IP connections through a corporate LAN/WAN or Internet. This optional FTP interface supports both FTP client and server functionality. It integrates the iSeries FTP with Sterling Gentran:Server and simplifies FTP implementation through familiar Sterling Gentran:Server communication facilities, including communication profiles, scripts, job scheduling, inbound and outbound data queues, and the communications history log.

 **NOTE**

SEE the “Using Communications” chapter in the *IBM® Sterling Gentran:Server® for iSeries® Communications Guide* for more information.

Whether you communicate directly with your trading partners or using a value-added service provider, you must consider several additional issues. For example, you must know the make and model of your modem. The following table lists the modems that have been used on the iSeries with Sterling Gentran:Server software.

 **NOTE**

Not all modems will work with all dialing methods and protocols. SEE Appendix A, “Modems: Configuration and Troubleshooting,” in the *IBM® Sterling Gentran:Server® for iSeries® Communications Guide* for the dialing methods and protocols that can be used with each modem listed in Figure 9.

Communications
Cont.

Figure 9. Modems approved for use with Sterling Gentran:Server for iSeries

Speed	Modem
2400 bps	UDS 201 C
	UDS 201 C/D
	UDS 2140
	IBM 5853
4800 bps	UDS 208 B
	UDS 208 B/D
	UDS 2860
	UDS 9648T (See Note below.)
9600 bps	UDS V.3225
	UDS V.3227
	UDS V.3229
	UDS V.34
	IBM 7855-10
	IBM 7857

 **NOTE**

This modem can be configured to operate in Bell 208 mode. Bell 208 mode has been tested and shown to work with Sterling Gentran:Server. The modem has not been proven to work in any other mode.

When you communicate through a VASP, the VASP specifies many of the answers to the general questions asked in this section. Also, the VASP must provide the Mailbox ID and Password. Whether you communicate directly or by using a VASP, you must either modify an existing Communication Profile or create a new one with specific information.

If you communicate through a VASP, you must update existing scripts (session control records) with the Mailbox ID and password. Sterling Gentran:Server provides an automated interface to help you update scripts. If you communicate

Communications Cont.

directly with your partners, you will create send and receive transmission scripts with specific communication commands.

 **NOTE**

SEE the “Using Communications” chapter in the *IBM® Sterling Gentran:Server® for iSeries® Communications Guide* for more information about setting up communications.

Communications Questions

Answer the following questions before implementing communications:

- How will you transmit data to the partner?
 - ✓ Using a third-party network (VASP)
 - ✓ Directly
 - ✓ Interconnectively from your VASP to the partner’s VASP
- What phone number is dialed to transmit data?
- What protocol will you use (for example, BSC, SNA, or LU6.2)? This must be compatible with the protocol used by the receiver of the transmission.
- Who will initiate the communication sessions—you, the partner, or a VASP?
- Is your modem auto- or manual-dial?
- If it is manual, do you have an auto-call unit attached to a secondary port to automate the dial?
- If your modem auto-dials (for example, it is NOT manual dial and does NOT use an auto-call unit), how does your modem expect to receive the signal to dial?
 - ✓ Dial on DTR high
 - ✓ V.25bis synchronous
 - ✓ Asynchronous AT commands
 - ✓ Asynchronous V.25bis commands
- If you will dial using an auto-call unit, what port is your auto-call unit connected to?
- What port is your modem connected to (for example: LIN011, LIN031, CMN01)?
- Is the configuration of your modem compatible with the receiver? Your modem and the remote modem **both** must be configured for the same use (both synchronous or both asynchronous). Both modems also **must** be configured to use the same modulation standard (for example: CCITT/ITU-T V.32 or BELL212).

Communications Questions Cont.

- What is the line speed of the modem you will be transmitting to (for example: 2400, 4800, 9600)? You may have a 2400 baud modem that will need to dial a 9600 baud modem. In most cases, the 9600 baud modem will step down to “talk” at the 2400 rate.
- Will you be using a leased (dedicated) line or dial up?
- In what record length and block size (for example, 80 and 512 bytes respectively) does the partner expect to receive data from you? The two systems must be configured to agree on these characteristics.
- Do you have documentation for the communications interface to the system with which you will communicate? This information should describe the logon commands, network commands/responses, end-of-file indicators, that Sterling Gentran:Server needs to send/receive in order to conduct a communication session.

Prepare for Daily Processing

To effectively use Sterling Gentran:Server, you must spend some time outlining what your daily processing involves so that all tasks are completed on a timely basis. You must determine which jobs, reports, and purges will run each day and at what time they will run. You will also need to decide whether they are automatically generated or must be requested. Next, determine what global parameters must be defined. This setup for daily processing is completed using the System Administration subsystem. This section focuses on the two main setup areas: Global Parameters and Job Scheduling.

Job Scheduling

The Job Scheduling feature of the System Administration subsystem provides you with a parameter-driven method to schedule and execute your EDI processing.

If you currently use job scheduling or automation software from another vendor, you may continue using that software with Sterling Gentran:Server instead of using the Sterling Gentran:Server Job Scheduling feature.

NOTE

SEE the “Job Scheduler” chapter in the *IBM® Sterling Gentran:Server® for iSeries® Technical Reference Guide* for information on Job Scheduling. Also see the online information provided within the subsystem.

Job Scheduling Questions

Answer the following questions before scheduling jobs:

- How often will you be sending and receiving data from each trading partner?
- Do some trading partners have more impact on your operations? If so, do you need to be more responsive (process more often) to those partners?
- How many types of documents will you be processing?
- Are there any jobs that need to be run in series. If so, what are those jobs?

Job Scheduling Questions Cont.

When you have answered these questions, you should know the series of events that must take place daily and when each should be done. You will know what jobs, reports, and purges must be run daily for each of the following categories and when each should be run:

- ✓ Outbound jobs
- ✓ Communication jobs
- ✓ Inbound jobs
- ✓ Reports and purges

Global Parameters Maintenance

Global Parameters, a function in the Sterling Gentran:Server System Administration subsystem, enables you to control the compliance checking function of the translator. For example, you can set up Sterling Gentran:Server to automatically generate acknowledgments on a global basis for all partners at a specified level or on a partner-by-partner basis, depending on how a global parameter is set. Some of the features controlled by Global Parameters are:

- ✓ Verification
- ✓ Partner-specific Version Conversion
- ✓ Auditing
- ✓ Acknowledgments
- ✓ BG Password Check
- ✓ Error Checking

 **NOTE**

SEE the “Global Parameters” chapter in the *IBM® Sterling Gentran:Server® for iSeries® Technical Reference Guide* for information on maintaining Global Parameters. Also, see the online information provided.

Global Parameter Questions

Answer the following questions before choosing Global Parameters:

- Do you have inbound splitting criteria defined for each partner or did you define them once under your company’s partner profile?
- Do you have a need to perform sub-splitting to further break out the data prior to mapping?
- Do you want to verify (secure your system) at the Interchange, Group, or Transaction levels?
- Do you want unexpected documents to error out?
- Do you want to log the Interchange, Group, or Transaction in the Audit file? This is useful for acknowledgment reconciliation and necessary if you want to requeue EDI data.
- Do you want a Detail Report generated? The Detail Report adds additional information to the Editor Report.

Global Parameter Questions Cont.

- Do you want the Error Report to be generated only when errors exist or to always be generated?

More Global Parameters Questions

Other considerations when working with global parameters include:

- Do you want to use Error Rejection?



CAUTION

We recommend that you do not use this function until after you have received data from a partner so you can see what types of errors occur.

- Do you want to globally acknowledge documents at the same level for all partners or acknowledge on a partner-by-partner basis?
- Do you want to monitor incoming control numbers (use Sequential Checking) to ensure that no inbound EDI data from the partner is lost?
- At what level (Interchange, Group, Transaction, or Segment) do you want to compress outbound data? Compressing data enables you to send the minimum number of characters in an outbound transmission to reduce telecommunication costs and improve the transmission efficiency.

- ✓ **Hint:** We recommend setting compression at the Interchange level to save you time and money.



CAUTION

Default global parameters are supplied with the Sterling Gentran:Server for iSeries system. We recommend that you use those defaults.

System Configuration

The System Configuration file contains system-level parameters that enable you to configure the Sterling Gentran:Server software differently to meet your business needs. Some of the options controlled by the System Configuration parameters are:

- Break year (cut-off year) for windowing Year 2000 compliant dates
- Date format for commands
- Archive option for network reports
- Extended mapping screen; more or less information mode
- Overriding the default sort option for the 'Work with' screens



NOTE

SEE the "System Configuration" chapter in the *IBM® Sterling Gentran:Server® for iSeries® Technical Reference Guide* for more information on maintaining the system parameters.

Message Center Configuration

The Message Center Configuration enables you to activate or deactivate the entire feature or individual processing commands that you may or may not want to track.

 **NOTE**

We recommend that you leave all default settings until you have been processing for awhile and are able to work with tracked data.

Daily Processing Tasks

Operational activities that must be executed continually as a part of daily processing include the following:

- Execute communication either manually or schedule automatically. The Communications History Log is generated from this job. The following job must be executed on a daily basis:
 - ✓ STRCOMSSN (communication job) in Work with Communications
- Execute inbound and outbound processing either manually or schedule automatically. The minimum jobs that must be executed on a daily basis are:
 - ✓ PRCTRNOU (outbound job) in Sterling Gentran:Server Processing
 - ✓ PRCTRNI (inbound job) in Sterling Gentran:Server Processing
- Run all data received through the mapper, either into designated application files or into interim files (for example, all purchase orders routed to an interim PO file).

 **NOTE**

We recommend that you map data to interim files rather than directly to application files. This procedure ensures that data containing errors is not placed into an application file.

- Review Communications History Log for communication errors (for example, a line drop).
- Review the Message Center for jobs ending with warnings or errors.
- Execute and review the Audit Report for unacknowledged transactions. Executing the Audit Report every time you receive inbound data is important to ensure that the data you received is the exact data that was sent by the partner.

Daily Processing Task Example

This process can be simplified using a paper analogy. If you mail a letter, you address the envelope and then put the letter in the mailbox (transmitting data). A mail carrier takes the letter out of the mailbox (the carrier is a communication line). However, he accidentally drops the letter before it reaches the addressee. You do not know that the addressee did not receive the letter, and the partner does not know

Daily Processing Task Example Cont.

that he or she should have received the letter. The Audit Report is communication between partners about what data was sent and received and if the setup of the data was the same when received as it was when sent.

More Daily Processing Tasks

- Review the Editor Report for errors (for example, data that is not syntactically correct). This report is generated automatically for each inbound and outbound processing run.
- Review the Mapper Report for errors (for example, ensure all data is processed without errors). This report is generated automatically for each inbound and outbound processing run.
- Take appropriate action for any errors that occur.

Weekly Processing Tasks

The operational tasks that must be executed continually on a weekly basis are:

- Purge and reorganize the Scheduling queues.
- Purge and reorganize the Communication queues.
- Purge and reorganize the Audit files.

**CAUTION**

Depending on how heavy your processing load is, you may need to purge more frequently than once a week. On an iSeries, a purge only logically deletes the indicated record. To free up the disk space that the purged records are occupying, you must reorganize the files.

Other Processing Tasks

The following activities must be executed on an as-needed basis, depending on your company operations:

- Archive (copy to tape) the inbound queues to save the legally binding copy of data you received from the partners. You will probably want to keep this archive until the specific contracts are closed with the partners (for example, the invoice is paid).
- Set up new trading partners and review partner information.
- Reorganize the online standards files whenever a Standards Selective Delete (DLTSTD) is performed.

**NOTE**

SEE the “Audit” and “Processing” chapters in the *IBM® Sterling Gentran:Server® for iSeries® Technical Reference Guide*, and the “Using Communications” chapter in the *IBM® Sterling Gentran:Server® for iSeries® Communications Guide* for more detailed information on running the suggested daily jobs and reports and the subsystems discussed in this section.

Appendix A: Model Implementation Plan

Introduction

On the following pages is a fictitious example of an Implementation Plan for Sterling Gentran:Server. This model plan was designed as an example to assist you in creating your own Implementation Plan.

Sample Scenario

Martin's Motorcycle Repair is a large chain of repair shops operating in a Midwestern state, dedicated to the repair of domestic and foreign motorcycles. The owner, Mr. Martin, has been pressured for several years by the companies supplying parts to his shops to use EDI. Since Martin's Motorcycle Repair attempts to be as diverse as possible and repairs any make of motorcycle, they have many different parts suppliers, and all of those suppliers use EDI to conduct their business. Mr. Martin decided that doing EDI would dramatically improve his business in many ways, so he formed an EDI Steering Committee from some of his existing data processing personnel and designated an EDI Coordinator. The Steering Committee, to date, has:

- Purchased EDI software – Sterling Gentran:Server for iSeries.
- Decided to use the Sterling B2B Collaboration Network value-added service provider to communicate with their trading partners (motorcycle parts suppliers).
- Provided Sterling Gentran:Server for iSeries and EDI training for key personnel.

Now, Martin's Motorcycle Repair needs to implement Sterling Gentran:Server for iSeries. The first step is to choose an initial trading partner (Peterson Parts) that is already doing EDI. After adding this first partner, the EDI Coordinator will add one to three more partners to be tested in the first few months after implementation. After the testing phase is completed, the EDI Coordinator will add the rest of the trading partners (five more at this point), along with the necessary documents.

Martin's Implementation Plan

The first step of any Sterling Gentran:Server for iSeries implementation is installation. After Sterling Gentran:Server for iSeries is installed, the following steps may be executed in any order:

- ✓ Environment Control
- ✓ Partner Maintenance
- ✓ Application Definition and Transaction Mapping
- ✓ Communication
- ✓ System Administration and System Processing

The final step of implementation is defining output responsibility and audit procedures, and maintaining the system on a daily basis. The Steering Committee will determine output responsibility, audit procedures, and system maintenance and delegate these responsibilities to the appropriate personnel after the testing phase of implementation is complete.

Installation

Personnel: Systems Staff

Time: Varies depending on model of the machine, the DASD and main storage space available, and the amount of activity on the machine at the time of installation.

Use the installation program provided to install Sterling Gentran:Server for iSeries. Use the libraries designated in the installation documentation.

Environment Control

Personnel: EDI Coordinator

Time: 5 minutes for each user

Step 1. Determine security requirements.

Step 2. Add users to the online system.

- Control access by Division Code
- Grant access only as-needed
- The "000" Division Code is reserved for the EDI Coordinator; assign others

-1-

Partner**Personnel:** EDI Coordinator**Time:** The online addition of the first trading partner will take 1 to 2 hours. Each additional partner will take significantly less time.

- Step 1.** Set your company up as a partner (for inbound data splitting).
- Step 2.** Choose the first trading partner (Peterson Parts), a company that is already doing EDI.
- Step 3.** Complete the trading partner Data Collection Form worksheet, identify trading partner requirements, and complete a trading partner agreement.
- EDI ID for trading partner = 222222222 and for self = 131313131 (use DUNS number)
 - Qualifier for trading partner and self = 01 (meaning that both the trading partner's EDI ID and our EDI ID are DUNS numbers)
 - ANSI X12 Version = 004010
 - Partner's interchange envelope choice = ISA
 - Partner's Group ID (use DUNS Number) = 666666666
 - Inbound sequence number checking = Y (Yes)
 - Checking at the Interchange and Group levels
 - Partner's Authorization = N (No), and Qualifier = 00 (the 00 Qualifier means that this option is not being used)
 - Partner's Security Code = N (No), and Qualifier = 00 (the 00 Qualifier means that this option is not being used)
 - Separators: Element Separator = *, Subelement Separator = ≥, Segment Terminator = Hex 15
 - The first document that will be sent is 850 outbound
 - Functional acknowledgments = Y (Yes)
Level = T (Transaction)
Acknowledge Errors = Y (Yes)
 - Cross-reference internal names for partner – reference EDI ID to name (222222222 to Peterson Parts)
 - Split files on inbound Invoice (810) to 0025, and Functional Acknowledgments (997) to 0013
 - Purge Audit Option: Purge Acknowledged and Reported
Purge older than: 14 days
 - We will not set up error rejection because we have not received any data yet, so we do not yet know which errors will occur

The completed trading partner worksheet appears on the next pages.

-2-



Sterling Gentran:Server Trading Partner Data Collection Form

Use this form to collect the base information from your trading partner, then follow the instructions on the back of this form to create your Sterling Gentran:Server partner profile. A blank form for your use is provided in Appendix B.

Section 1 – Questions for your partner.

Ask these Questions	Answers																					
Partner Name	<i>Peterson Parts</i>																					
Mailing Address (including Street, City, State, Country, and ZIP Code)	<i>123 Any Street Columbus, OH USA 55555</i>																					
Contact Name	<i>Jerry S. Peterson</i>																					
Contact Phone Number	<i>(123) 555-4790</i>																					
<p>Which EDI Standard and Version will you use? The EDI standard refers to a single-character code that is used to indicate the standard setting body. The codes are as follows: X = ANSI X.12 T = EDIA (TDCC) U = UCS V = VICS A = AIAG</p>	<i>ANSI X12 Version = 004010</i>																					
<p>What is the partner's header choice? This refers to the type of interchange envelope header the partner uses to send data.</p>	<input checked="" type="radio"/> ISA <input type="radio"/> ICS <input type="radio"/> BG <input type="radio"/> GS <input type="radio"/> UNA/UNB <input type="radio"/> SCH/STX																					
<p>Partner's EDI ID and Qualifier This EDI ID identifies the partner in the interchange envelope as the receiver in outgoing messages and as the sender in incoming messages. It corresponds to the following EDI control segments:</p> <table border="0" data-bbox="228 1119 646 1213"> <tr> <td></td> <td>Incoming</td> <td>Outgoing</td> </tr> <tr> <td>BG</td> <td>BG03</td> <td>BG04</td> </tr> <tr> <td>ISA</td> <td>ISA06</td> <td>ISA08</td> </tr> <tr> <td>ICS</td> <td>ICS06</td> <td>ICS08</td> </tr> </table> <p>The qualifier describes the type of EDI ID that is used. It corresponds to the following EDI control segments:</p> <table border="0" data-bbox="228 1287 646 1362"> <tr> <td></td> <td>Incoming</td> <td>Outgoing</td> </tr> <tr> <td>ISA</td> <td>ISA05</td> <td>ISA07</td> </tr> <tr> <td>ICS</td> <td>ICS05</td> <td>ICS07</td> </tr> </table>		Incoming	Outgoing	BG	BG03	BG04	ISA	ISA06	ISA08	ICS	ICS06	ICS08		Incoming	Outgoing	ISA	ISA05	ISA07	ICS	ICS05	ICS07	ID: <u>22222222</u> Qualifier: <u>01</u>
	Incoming	Outgoing																				
BG	BG03	BG04																				
ISA	ISA06	ISA08																				
ICS	ICS06	ICS08																				
	Incoming	Outgoing																				
ISA	ISA05	ISA07																				
ICS	ICS05	ICS07																				
<p>Your EDI ID and Qualifier This EDI ID identifies you in the interchange envelope as the sender in outgoing messages and as the receiver in incoming messages. It corresponds to the following EDI control segments:</p> <table border="0" data-bbox="228 1467 646 1562"> <tr> <td></td> <td>Incoming</td> <td>Outgoing</td> </tr> <tr> <td>BG</td> <td>BG04</td> <td>BG03</td> </tr> <tr> <td>ISA</td> <td>ISA08</td> <td>ISA06</td> </tr> <tr> <td>ICS</td> <td>ICS08</td> <td>ICS06</td> </tr> </table> <p>The qualifier describes the type of EDI ID that is used. It corresponds to the following EDI control segments:</p> <table border="0" data-bbox="228 1635 646 1709"> <tr> <td></td> <td>Incoming</td> <td>Outgoing</td> </tr> <tr> <td>ISA</td> <td>ISA07</td> <td>ISA05</td> </tr> <tr> <td>ICS</td> <td>ICS07</td> <td>ICS05</td> </tr> </table>		Incoming	Outgoing	BG	BG04	BG03	ISA	ISA08	ISA06	ICS	ICS08	ICS06		Incoming	Outgoing	ISA	ISA07	ISA05	ICS	ICS07	ICS05	ID: <u>131313131</u> Qualifier: <u>01</u>
	Incoming	Outgoing																				
BG	BG04	BG03																				
ISA	ISA08	ISA06																				
ICS	ICS08	ICS06																				
	Incoming	Outgoing																				
ISA	ISA07	ISA05																				
ICS	ICS07	ICS05																				

Global Parameters

Personnel: EDI Coordinator
Time: Approximately 10 minutes

Use the default setup that IBM recommends:

Global Parameter Settings	
Verify Interchange	Y
Verify Group	Y
Verify Transaction	Y
Interchange Version	Y
Group Version	Y
Update Allowed	Y
Audit Interchange	Y
Audit Group	Y
Audit Transaction	Y
Relationship Mode Auditing	N
Error Report	Y
Detail Report	N
Error Rejection	N
Split Output Files	Y
Subsplit Output Files	N
Split by Partner	N
ICS Tables	N
BG partner	Y
BG Version	DEFAULT
Generate 999 for	blank
Acknowledge Interchange	N
Acknowledge Group	N
Acknowledge Transaction	N
Acknowledge Error	N
Partner Acknowledge	Y
Use CNTL for Acknowledgments	N
Active Overdue Acknowledgments	Y
Include Saturdays	Y
Include Sundays	Y
Holidays to Exclude	blank
Sequential Check Control	N
Sequential Error Control	N
Compression Level	I
ANSI Subelements	N

Mapping Tasks (continued)		
Task	Subtask	Approximate Time
Perform Simple Element Mapping	<ul style="list-style-type: none"> • Map literals, constants or reserved words, and application field names to the applicable elements in each segment. • Specify code, data, and validation tables. • Use the subfield option to divide an EDI element into several elements to allow mapping of each to a different application data field. 	2.5-5 hours
Perform Extended Mapping	<ul style="list-style-type: none"> • Add conditions and advanced logic. • Specify translation table for conversion or validation. • Determine if values need to be saved in constants. • Create accumulator and hash-total support, if needed. • Specify user exits, if needed. • Add comments, if needed. 	2.5-5 hours
Print the Standard, Application, and Validation Mapping Reports (for outbound only), review the map, making modifications, as needed.	_____	1 hour
Request test data from Peterson Parts and thoroughly test the data through inbound and outbound processing	_____	A week for the first map. After the learning curve is eliminated, additional maps should take about two days from analysis to test.
Total Approximate Time to Complete Mapping =		1 to 3 weeks

Communication

Personnel: EDI Coordinator and/or Communication personnel

Time: Approximately 15 to 20 minutes for developing and 0.5 hour to several days for testing. The time needed will depend on what hardware you have. You will also need to coordinate with your VASP to test communication (this may increase the length of time testing takes).

Step 1. Develop Communication Profile:

- ID for Trading Partner (get from Sterling B2B Collaboration Network)
- ID for Networks (get from Sterling B2B Collaboration Network)
- Connect Communication Profile ID and Partner File

Step 2. Modify existing EDI Network script with own ID and passwords:

- Update phone number

Step 3. Test with your modem and communication equipment.

Step 4. Once communication is established and tested, the EDI Coordinator will schedule the Communication Purge to be run at least once a week.

Job Scheduling

Personnel: EDI Coordinator to schedule, systems personnel to review Audit report

Time: 1 hour

Step 1. Enter jobs scheduled to run daily – the minimum needed:

- Outbound job – PRCTRNOU
- Communication job – STRCOMSSN
- Inbound job – PRCTRNI

Step 2. Schedule the Audit Report and Audit Purge to run daily.

Step 3. Schedule the Job Scheduling Purge to be run at least once a week.

Testing

Personnel: EDI Coordinator

Time: At least a week of parallel testing with hard copies

Step 1. Run test data from Peterson Parts through inbound and outbound processing.

Step 2. Verify acknowledgment processing.

Step 3. Verify communication to network

Appendix B: Common Implementation Questions/Answers

These are the five most common questions encountered while implementing Sterling Gentran:Server for iSeries and their answers.

1 How can I set up a test and production environment with Sterling Gentran:Server for iSeries?

When you install Sterling Gentran:Server for iSeries, all the files are kept in a library called G3X6DTA by default. This library may be renamed. The Sterling Gentran:Server programs are kept in G3X6PGM or whatever you named that library. A third library may be created to store test copies of each of the Sterling Gentran:Server files. Use the SAVLIB and RSTLIB procedures to save G3X6DTA and then restore it to a test library (for example, G3X6TSTDTA).

When you are processing data, you must make sure that your library list includes the correct Sterling Gentran:Server data library and that this library is ordered first in the hierarchy of the library list. (SEE the Sterling Gentran:Server for iSeries *Installation Guide* for more information.)

2 How can I reduce the amount of DASD required by the Sterling Gentran:Server data files?

The Standards files use a majority of the DASD required by Sterling Gentran:Server. Two sets of Standards files exist in Sterling Gentran:Server:

- one for online file maintenance functions
- one for compliance checking of the EDI data during batch processing (the Batch Standards file)

You can reduce the amount of DASD required in three ways:

- Standards Selective Download (DWNSTD)

When you install/convert Sterling Gentran:Server, you can selectively download from CD-ROM only the Standards you need. (SEE the “Standards Selective Download” section in the “Processing” chapter of the *Technical Reference Guide* for more information.)

- Standards Selective Delete (DLTSTD)

If you downloaded all the Standards from CD-ROM during installation, you can selectively delete from disk the online versions or transactions that are not being used. This function can also be used at any time to delete online versions or transactions that are no longer being used. (See the “Selective Delete” section in the “Processing” chapter of the *Technical Reference Guide* for more information.)

- Standard File Extract (EXTSTD)

The Batch Standards file can be reduced by selecting from your online Standards only the transactions from each version that are being used. (SEE the “Transactions in Use” section of the “Standards” chapter of the *User Guide* for more information.)

*Common Questions/
Answers Cont.*

3 Do the Sterling Gentran:Server for iSeries jobs have to be submitted from online Sterling Gentran:Server?

No. You can use several methods to submit the Sterling Gentran:Server reports and processes:

- From online Sterling Gentran:Server (invoked by the command GO GENMAIN), you can submit jobs from the Work with Processing menu. Select the desired job, and you will be prompted automatically for runtime parameters.
- All of the system reports and processes are associated with a command. For example, the command to run inbound processing is PRCTRIN (process transaction inbound). These commands can be entered on the command line within Sterling Gentran:Server for iSeries, if you have access to the command line. These commands can either be prompted or submitted with a string of parameters without prompting. This method can also be used outside the Sterling Gentran:Server system on the native iSeries by either prompting, running, or submitting the command with a string of parameters. Please refer to the “Program and Command Names” chapter in the *IBM® Sterling Gentran:Server® for iSeries® Technical Reference Guide* for a list of executable programs.
- Because all jobs are command-driven, they can be incorporated into a user-written CL program. This user-written CL program enables you to combine more than one process into a stream and to incorporate restart capability into the CL. For example, a CL may be written for outbound processing to perform the following:
 - ✓ Application extract
 - ✓ Outbound translation processing (PRCTRNOOUT)
 - ✓ Print reports generated from outbound processing using iSeries commands
 - ✓ Initiate communication (STRCOMSSN)
 - ✓ File clean up (performing any backup and deletion of work files used to extract the data or preserve the resulting EDI data)

Please refer to the “System Considerations” chapter in the *IBM® Sterling Gentran:Server® for iSeries® Technical Reference Guide* for a sample CL program.

*Common Questions/
Answers Cont.*

4 What reports should be reviewed when processing inbound and outbound?

There are two reports for translation processing: the Mapping Report and the Editor Report. See table below.

Report	Inbound Processing	Outbound Processing
Mapping Report	EBDI041	EBDI042
Editor Report	EBDI001	EBDI002

 **NOTE**

Please note that the Job Log generated from the iSeries is also an excellent source of information to assist debugging in a test environment.

Appendix C: Blank Trading Partner and Mapping Forms

A blank copy of the Sterling Gentran:Server Trading Partner Data Collection Form and the Sterling Gentran:Server Mapping Job Aid worksheets are provided on the following pages.

Section 2 – Questions for your site implementation – Internal

Ask These Questions	Answers
What is your partner's Group ID?	
Are you doing inbound sequence number checking?	
At what level?	
Partner's Authorization and Qualifier This is the authorization used when the partner is sending messages (incoming transmission to you). It is normally assigned by the partner. The qualifier describes the type of authorization being used.	Auth: _____ Qual: _____
Partner's Security Code and Qualifier This is the security code used when the partner is sending messages (incoming transmission to you). It is normally assigned by the partner. The qualifier describes the type of security code being used.	Auth: _____ Qual: _____
Partner's Subelement Separator The Subelement Separator, Element Separator, and Segment Terminator refer to the delimiters the partner is going to use in data transmission. A common Subelement Separator is ">."	Subelement: _____
Partner's Element Separator The Subelement Separator, Element Separator, and Segment Terminator refer to the delimiters the partner is going to use in data transmission. A common Element Separator is "*"	Element: _____
Partner's Segment Terminator The Subelement Separator, Element Separator, and Segment Terminator refer to the delimiters the partner is going to use in data transmission. A common Segment Terminator is "~."	Segment: _____
Will you use a value-added service provider or communicate direct? (If communicating directly with a partner, review the "Using Communications" chapter in the Communications Guide.)	VASP: _____ COMM ID: _____
Purge Audit Options	Purge: Acknowledged Reported Older than: ____ days
Documents (transactions) you will exchange with partner and the direction	
Functional Acknowledgments at what level(s)? Acknowledge Errors?	Interchange Group Transaction None Error: Y/N
Do you have another (internal) name for this partner?	XREF Name:
If your partner is sending you multiple documents, to which file should each translated file be directed?	Document: _____ File: _____ Document: _____ File: _____
Which errors will you reject for each document type? Inbound or Outbound?	In/Out Doc: _____ File: _____ Error#: _____

Partner Data Collection Tips

- 1 Start EDI with an experienced trading partner. They will help you through the learning process.
- 2 When adding a new partner, determine if their requirements are similar to an existing partner profile. If they are, copy the records to expedite the creation of a new profile. In addition, copied records are less likely to contain errors, since you already know they work.
- 3 Rely on your network for communication help. Value-added-networks have communication specialists that can help you get your communication set up in days. This could be a major time savings for you.
- 4 When you have completed setting up a partner you consider to be typical, use the Sterling Gentran:Server Partner print feature to print a hard copy of the partner profile. You can use this report as a reference when setting up new partners and when determining which records to copy.

Appendix D: Sterling Gentran:Server Mapping Job Aid

Use this form as a checklist/reference when building a data map. We recommend that you complete the Mapping Tutorial before building your first production map.

Question	Action	Checklist
<p>1. Application Items</p> <p>a. Is the application defined as an external or internal file?</p> <p>b. What functional group will you be mapping to/from?</p> <p>c. Partner requirements.</p> <p>d. Define each field in the application.</p> <p>e. Inbound application requirements.</p>	<p>If internal: Define application – What are the record types?</p> <p>If external: Is it a physical or logical file structure? List file names for importing DDS.</p> <p>Review standard for group enveloping requirements.</p> <p>List any field that references the Partner file.</p> <p>Define all fields, validate data types and positioning.</p> <p>Define the inbound file name and/or split file number.</p>	<p>Internal <input type="checkbox"/></p> <p>External <input type="checkbox"/></p> <p>Review Complete <input type="checkbox"/></p> <p>Listed <input type="checkbox"/></p> <p>Defined <input type="checkbox"/></p> <p>Split <input type="checkbox"/></p>
<p>2. Table Items</p>	<p>List any code, data, or validation tables to be defined.</p>	<p>Tables <input type="checkbox"/></p>
<p>3. Mapping Items</p>	<ul style="list-style-type: none"> • Review the standard and determine which segments will be mapped to/from your application. • Review each segment to determine which elements will be mapped to/from your application fields. • Determine if application fields or standard elements need to be broken apart or concatenated. • Do you need to map constants? • Is there a need to perform arithmetic operations or conditions? • Is there a need to reference a table for conversion or validation? Is there a need to create hash-totals or accumulators? Define values to be calculated. • Is there a need for a user exit? • Add necessary comments. 	<p>Segments <input type="checkbox"/></p> <p>Elements <input type="checkbox"/></p> <p>Subfields <input type="checkbox"/></p> <p>Constants <input type="checkbox"/></p> <p>Calculations <input type="checkbox"/></p> <p>Table and reference points <input type="checkbox"/></p> <p>Define exit point(s) <input type="checkbox"/></p> <p>Notes <input type="checkbox"/></p>

Appendix E: Mapping Tips and Suggested Analysis Techniques

The following is a suggested method for construction of a data map. This method simplifies map building. The mapping tips are expressed in inbound (receiving) data mapping terms, but these tips also apply to outbound (sending) mapping.

The First and Most Important Step

Mapping Analysis – If you complete a mapping analysis before you log on to Sterling Gentran:Server, you will find mapping to be much easier. During this analysis you will actually build your map on paper. If you separate the mapping steps, you can measure your progress.

Your analysis should answer the following questions:

Question	Answer
What will I receive?	What will be the EDI document you receive? What is its structure, down to the element? Most importantly, what is the data contained in each element?
How does this data fit into my application?	You will need to understand how your application is structured. When you correlate your application to the EDI document, which EDI elements are directly related to your application fields?
What data do I need to adjust?	After you have eliminated all of the directly-related fields, what is the remaining information in the EDI document? Will you need to convert it, translate it, or alter it in some way? Use this step to identify where you will need to create tables, perform calculations, or build extended maps.

The main points of mapping analysis are as follows:

- Determine the structure of the EDI document and organize your application definition to match it as closely as possible (such as, header, detail, summary).
- Identify what application fields have direct relationships with EDI segments.
- Determine what application fields/elements have multiple occurrences. These fields/elements will be the loops.
- Next, indicate which fields/elements will need to be concatenated or split – these will require subfield maps.
- Indicate which elements/fields require tables.
- Last, indicate any created elements or fields – these will require constants, calculations, or summaries.

Log on to Sterling Gentran:Server and Create your Map

Use this procedure to create your map.

Step	Action
1	<p>Define your application – Create your Application ID and Functional ID (GS01 element). If the application is inbound, create a split file name.</p> <p>Internally Described File: Use the Application Definition feature to define your application structure.</p> <p>Externally Described File (DDS): Import the definition.</p>
2	<p>Tables and Conversions – Build any necessary tables for Code or Data Translation or Validation.</p> <p>When you use a table, make sure that you do not duplicate what your application does, or duplicate information that is already in an existing table. You must build your tables before you build your map.</p>
3	<p>Build your Map – Use the Sterling Gentran:Server tools and your analysis to complete your map.</p> <p>Copy all the mandatory and required segments from the online Standards file. Import only those segments that you will be using. You now have a skeleton map with your application and the EDI elements defined. You can print this skeleton map and mark the relationships or proceed with online mapping.</p> <p>Map all of the directly related fields and elements first. Follow with subelements and then extended maps (calculations, constants).</p>

After you have completed the map, run the mapping report to ensure that all of the fields/elements are mapped and that all issues have been resolved.

You can now test the map by completing the following:

- Set up or use a test partner profile and relate the map to that profile.
- Set aside a copy of the production data to process through the map.
- Process the test data through the map.
- If inbound, examine the data in the intended application to ensure that it is correct.
- If outbound, first examine the processed data for obvious problems. The Sterling Gentran:Server editors will ensure EDI compliance, but they do not verify that the data is correct or that the right data is in the right element.

- When you are confident with the map, contact your initial trading partner and conduct a test.



NOTE

We strongly recommend that you complete the Sterling Gentran:Server Mapping Tutorial before you build your first production map.

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