IBM Sterling Gentran:Server for Microsoft Windows

CII User Guide

Version 5.3

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This edition applies to the 5.3 Version of IBM® Sterling Gentran:Server® for Microsoft Windows and to all subsequent releases and modifications until otherwise indicated in new editions.

Before using this information and the product it supports, read the information in Notices on page N-1.

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About This Guide

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Overview

Introduction

IBM® Sterling Gentran:Server® for Microsoft Windows enables you to map to and from Japanese Center for Informatization of Industry (CII) data documents, along with other electronic commerce messages in the same manner. This allows you to maintain a homogenous processing and data management environment, regardless of how the incoming and outgoing data is formatted (such as CII, XML, EDI, or proprietary message formats).

This manual is intended to explain how to use CII with Sterling Gentran:Server and assist you in performing various tasks in Sterling Gentran:Server. This manual uses a task-oriented approach, which is intended to answer any questions you may have about Sterling Gentran:Server with step-by-step instructions.

Note
This manual is *not* intended to explain or define CII.

Before you Begin

Assumptions

This list contains the items with which this manual assumes you are familiar.

- Sterling Gentran:Server
- Microsoft® Windows®
- CII

Prerequisite

This list describes the software prerequisites to use CII with Sterling Gentran:Server.

- You must have Sterling Gentran:Server version 5.0 currently installed.
- You must have installed the CII standards from the Internet or from the CII Standards Database CD.

What's in This Manual

Description of contents

This guide is organized into chapters. A brief description of the chapter contents follows.

- *About This Guide* explains the content, organization, and conventions in this guide. This chapter also describes how to get technical support.
- *Chapter 1, Sterling Gentran:Server CII Overview* provides you with a introduction of how Sterling Gentran:Server uses CII, including the new features and functions of Sterling Gentran:Server.
- *Chapter 2, Mapping CII Documents* describes tasks you need to create a CII map.
- *Chapter 3, Setting up Sterling Gentran:Server for CII* describes tasks you need to complete your CII implementation.

Getting Support

Introduction

Sterling Gentran:Server software is supported by trained product support personnel who are available to help you with product questions or concerns.

Note
IBM Customer Support does not support non-IBM products (such as SQL Server or Oracle), but can assist you in configuring non-IBM products to work with Sterling Gentran:Server.

Phone number

For assistance, please refer to your *IBM® Sterling Gentran:Server® for Microsoft Windows Getting Started Guide* to determine which support phone number you should use.

Before calling support

To help us provide prompt service, we ask that you do the following:

- Attempt to recreate any problem that you encounter and record the exact sequence of events.
- When you call product support, you should be prepared to provide us with the information below.

Information	Description
Identification	Your company name, your name, telephone number and extension, and the case number (if the question refers to a previously reported issue).
System Configuration	The Sterling Gentran:Server version (and any service packs installed) and information about the primary Sterling Gentran:Server system controller and all machines experiencing problems, including: the Windows operating system version, amount of memory, available disk space, database version, Microsoft Data Access (MDAC) version, and Internet Explorer version. Also, please describe any recent changes in your hardware, software, or the configuration of your system.
System Data Store	Which machines contain folders in the system data store?

Information	Description
Error Messages	Record the exact wording of any error messages you receive and the point in the software where the error occurred, as well as any log files.
Attempted Solutions	Record any steps that you took attempting to resolve the problem and note all the outcomes, and provide an estimate on how many times the problem occurred and whether it can be reproduced.

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 this site at: Sterling Customer Center. (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)

CHAPTER
1

Sterling Gentran:Server CII Overview

Contents

Overview

Introduction

This chapter provides you with an introduction to how Sterling Gentran:Server uses CII, including the new features and functions of Sterling Gentran:Server.

Understanding CII basics

CII provides the Japanese syntax definition for electronic data interchange messages. The CII Syntax Rule specifies the details, such as looping structures and data types, of CII messages. The CII implementation of Sterling Gentran:Server is based on the CII Syntax Rule, which is available in both Japanese and English.

Distinguishing syntax rule and standard messages

CII does not include standard message types; these are provided by industry groups (for example, EIAJ for the electronics industry). IBM includes a number of these standard messages in the CII standards database.

Reference

See the *IBM® Sterling Gentran:Server® for Microsoft Windows Getting Started Guide* for more information on installing the Sterling Gentran:Server standards.

CII Map Objects

Introduction

Sterling Gentran:Server uses a set of icons to represent CII map objects.

CII Format Components

The following table lists the components that make up the CII format, the icons that represent the components, and descriptions of the components. For information about adding a map component to a layout and information about the properties of these map components, see *CII File Properties Dialog Box* on page 2 - 13, *Group Properties Dialog Box* on page 2 - 15, and *CII TFD Properties Dialog Box* on page 2 - 17.

Component	Icon	Description
CII root element		The *CII File root element* represents the CII document that Sterling Gentran:Server is mapping.
Group		A *group* contains related groups and transfer form data (TFDs).
TFD		*Transfer form data* (TFD) is a block of data that consists of a tag, a length indicator, and data. The length of the element is always indicated, so delimiters are unnecessary. When a TFD has a mapping operation performed against it, a red check mark appears over the TFD icon.

Using Text and Hex View in Sterling Gentran:Server Browsers

Overview

While EDIFACT and ANSI messages can easily be viewed in text mode, it is usually more appropriate to view CII messages in hex format. Therefore, this option is available to the user viewing CII data in the Sterling Gentran:Server Electronic Commerce (EC) Manager (desktop) browsers. Hex view is the default view for Raw EDI when you view CII messages, but for the following views, text mode is the default:

- Translator Report
- Tracking Information
- Audit Log

To change the view on a browser, select Text or Hex from the EC Manager **View** menu.

CHAPTER
2

Mapping CII Documents

Contents

About the CII Data Format

Overview

The *CII data format* provides the Japanese syntax definition for EDI messages. The CII implementation in Sterling Gentran:Server is based on the CII Syntax Rule, available in both Japanese and English. The CII Syntax Rule specifies details such as looping structures and data types, but it does not include standard message types. Message types are provided by industry groups. Sterling Gentran:Server provides a number of these standard message types in the EDI Standards, which you can download.

CII standard versions

The following are versions of the Japanese Center for Informatization of Industry (CII) standard that are included in the Sterling Gentran:Server standards database. Descriptions are available in the standards database, in Japanese.

Reference
See the appropriate Sterling Gentran:Server Standards card for information about installing the Sterling Gentran:Server Standards.

- CINT0110
- CINT0111
- CINT0112
- EIAJ011A
- EIAJ011B
- EIAJ011C
- EIAJ011D
- EIAJ012E
- EIAJ012F
- EIAJ012G
- EIAJ012H
- EIAJ022D
- EIAJ022T
- FEPCE12A
- FEPCO12A
- FEPCS11A
- FEPCS12B
- FEPCU12A
- HIIS0110
- HWSW001A
- HWSW001B
- JGAS0001

- JISI0105
- JISI0110
- JPCA0101
- JPCA0102
- JTRNEI00
- JTRNEI2E
- JTRNFF00
- JTRNFF1A
- JTRNFF2A
- JTRNFF2C
- JTRNFF2D
- JTRNJI00
- JTRNTR00
- NEWS0011
- TIRAAS03
- TIRARA01
- TIRARA02
- TIRARA03
- TIRATA01
- TIRATA02
- TIRATA03
- TRPT011A

Using CII with Sterling Gentran:Server

In Sterling Gentran:Server, a CII map that contains an FA, FD, or F9 data tag in extended mode on the output side of the map must have a Use Constant standard rule defined, so that a detail number is generated. A detail number is mandatory for these tags in extended mode.

For CII inbound and outbound processes, the user has to specify either 8-bit or 16-bit character set in the map. For 8-bit character set, the user can choose JIS0201, SJIS, or Default, where Default is JIS0201. For 16-bit character set, the user can choose JIS0208, JIS0212, SJIS, or Default, where Default is SJIS. If a user does not set these two values, the default value will be used in translation.

CII message

CII headers and trailers are in text, but messages are binary. To read a raw CII message outside of Sterling Gentran:Server, you need a hex editor. Using a hex editor, you can see the basic structure of a CII message, which consists of:

- Control tags
- Transfer form data (TFDs)
- Length indicators
- Data bytes

A typical TFD consists of a tag, a length indicator, and data. The length of the element is always indicated, so delimiters are unnecessary.

The Sterling Gentran:Server Translation service handles hexadecimal data in the range of 0x01 through 0xFF. Because the translator does not handle 0x00, it cannot translate pure binary data such as bitmaps.

Example
In the following sample is from a dividing-mode CII message, **bold** indicates the tag and *italics* indicates the length. The data is displayed in hex and spaces are added here for readability.

… **01** *04* 34 32 39 30 **02** *04* 30 35 30 34 **03** *06* 39 38 30 35 32 39 …

Dividing mode

Most CII files are sent in dividing mode (also translated as division mode). This mode requires the messages to be sent in chunks of 251 bytes to facilitate communications. To set dividing mode, use the Partner Editor.

Reference
See *CII File Properties Dialog Box* on page 2 - 13 for more information about how to configure dividing mode.

Dividing mode does not affect message group headers or trailers because they are always 251 bytes.

Non-transparent mode

According to the CII Syntax Rule, non-transparent mode is an option that helps you avoid interfering with communication control characters in some communications systems. Transparent mode is the default setting in Sterling Gentran:Server.

Using extended-mode tags

According to the CII specification, tags are in either compressed or extended mode. The following table illustrates the differences.

Mode	Size	Range (decimal)
Compressed	1 byte	1 - 239
Extended	2 bytes	1-61439

A TFD is in compressed mode unless an extended-mode indicator (0xF0) was previously encountered in the TFD stream.

CII control tags

The following hexadecimal control tags are used in CII:

Control Tag	Function
0xF0	Starts extended mode
0xF2	Length extender
0xF7	Length indicator
0xF8	Escape indicator
0xF9	Internal segment separator
0xFA/0xFD	Multi-detail header (loop start)
0xFB	Multi-detail return
0xFC	Multi-detail trailer (loop end)
0xFE	Message Trailer

Creating a CII Layout from a Standard

Introduction Use this procedure to create a CII layout from a standard:

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1</td><td>From the Application Integration File menu, select New.

System response
The system displays the New Map Wizard.</td></tr>
<tr><td>2</td><td>Answer the following questions and then click Next.
◗ What kind of map are you creating?
The following table defines the selections:
<table>
<tr><th>Part</th><th>Function</th></tr>
<tr><td>Import</td><td>Used for outbound maps.</td></tr>
<tr><td>Export</td><td>Used for inbound maps.</td></tr>
<tr><td>Interchange break</td><td>Used in advanced mapping to separate interchanges.</td></tr>
<tr><td>Functional Acknowledgement Inbound</td><td>Used in advanced mapping to reconcile functional acknowledgements.</td></tr>
<tr><td>Functional Acknowledgement Outbound</td><td>Used in advanced mapping to generate functional acknowledgements.</td></tr>
<tr><td>System Import Header</td><td>Used to determine which trading relationship (established in Partner Editor) corresponds to each document in the application file, so the system knows which import translation object to use to process the document.</td></tr>
<tr><td>Turnaround</td><td>Used for EDI to EDI maps.</td></tr>
<tr><td>Transaction build</td><td>Used in advanced mapping to build transaction envelopes.</td></tr>
<tr><td>Transaction break</td><td>Used in advanced mapping to separate documents.</td></tr>
<tr><td>Functional group build</td><td>Used in advanced mapping to build functional group envelopes.</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>(Contd)
Step</th><th colspan="2">Action</th></tr>
<tr><td rowspan="3">2
(contd)</td><td>Functional group break</td><td>Used in advanced mapping to separate functional groups.</td></tr>
<tr><td>Interchange build</td><td>Used in advanced mapping to build interchange envelopes.</td></tr>
<tr><td colspan="2">◗ What is the name of the map?
Type the unique name of the map. The system adds the .MAP extension.
◗ What is your name?
Type your name if it differs from the user name prompted by the system.

System response
The system displays the New Map Wizard - Input Format dialog box.

Note
You need to complete the format of the Input side of the map. This is the format of the data that is translated by the Sterling Gentran:Server system.</td></tr>
<tr><td>3</td><td colspan="2">For the input side of the map: do you want to create a new data format using a syntax that you define?
◗ If yes, select one of the following input format options and continue with step 4:
Delimited EDI (Electronic Data Interchange file)
Positional (VDA, GENCOD, application files, etc.)
CII (Japanese standard)
CII Positional (for CII Build/Break maps)

Note
For Inbound maps (Export), the Input Format Type is “CII” or “EDI”.
For Outbound maps (System Import or Import), the Input Format Type is “Positional.”
For Turnaround maps, the Input Format Type is “EDI” or “CII.”
◗ If no (you want to load the data format from a saved definition), select the Load the data format from a saved definition option, and type the path and file name of the saved definition (or click Browse to display the Open File Definition dialog box). Continue with step 6.</td></tr>
</table>

<table>
<tr><th>(Contd) Step</th><th colspan="2">Action</th></tr>
<tr><td>4</td><td colspan="2">Did you select “CII” and want to customize the format?
◗ If yes, click Customize and continue with the next step.

System response
The system displays the New CII Wizard dialog box.

Note
The CII wizard enables you to create your format from the standards database.
◗ If no, click Next and continue with step 7.

System response
The system displays the New Map Wizard - Input Format dialog box.</td></tr>
<tr><td rowspan="2">5</td><td colspan="2">Follow the steps for the appropriate dialog box and then continue with step 7.</td></tr>
<tr><td>IF the dialog box displayed is...</td><td>THEN follow this procedure...</td></tr>
<tr><td></td><td>New Delimited EDI Wizard</td><td>a. Click Next.

b. Select the ODBC data source that contains the standards database.

c. Select the standards agency, version, transaction set, and release (for TRADACOMS only) and click Next.

d. Click Finish.</td></tr>
</table>

(Contd) Step	Action	
5 (contd)	New CII Wizard	a. Click **Next**. b. Select the ODBC data source that contains the standards database. c. If you want to use Japanese descriptions, select the check box (the default is English descriptions). d. Click **Next**. e. Select the standards agency, version, transaction set, and release (for TRADACOMS only) and click **Next**. f. Select the appropriate Multi-detail header and click **Next**. **Reference** See *Using extended-mode tags* on page 2 - 5 for more information on multi-detail header extended-mode tags. g. Click **Finish**.
	System response The system displays the New Map Wizard - Output Format dialog box.	
6	Did you choose to load the data format from a saved definition and click **Browse** to display the Open File Definition dialog box? ◗ If *yes*, type the file name and click **Open** to load the selected file format definition, and then continue with step 7. **Note** You can now select either a .DDF or .IFD file. ◗ If *no*, continue with step 7. **Note** If the DDF is invalid, the system displays a message box explaining the problem and terminates the import.	

(Contd) Step	Action
7	For the output side of the map: do you want to create a new data format using a syntax that you define? ◗ If *yes*, select one of the following output format options and continue with step 8: **Delimited EDI** (Electronic Data Interchange file) **Positional** (VDA, GENCOD, application files, etc.) **CII** (Japanese standard) **CII Positional** (for CII Build/Break maps) **Note** For Inbound maps (Export), the Output Format Type is "Positional." For Outbound maps (System Import or Import), the Output Format Type is "CII" or "EDI." For Turnaround maps, the Output Format Type is "EDI" or "CII." ◗ If *no* (you want to load the data format from a saved definition), select the Load the data format from a saved definition option and type the path and file name of the saved definition (or click **Browse** to display the Open File Definition dialog box). Continue with step 9.
8	Did you select "CII" and want to customize the format? ◗ If *yes*, click **Customize** and continue with the next step. **System response** The system displays the New CII Wizard dialog box. **Note** The CII wizard enables you to create your format from the standards database. ◗ If *no*, click **Finish** to load the standards information you selected and create the new map (this may take a few seconds). **System response** The system displays the new map in the Application Integration Window.

<table>
<tr><th>(Contd) Step</th><th colspan="2">Action</th></tr>
<tr><td rowspan="4">9</td><td colspan="2">Follow the steps for the appropriate dialog box and then continue with step 11.</td></tr>
<tr><td>IF the dialog box displayed is...</td><td>THEN follow this procedure...</td></tr>
<tr><td>New Delimited EDI Wizard</td><td>a. Click Next.
b. Select the ODBC data source that contains the standards database.
c. Select the standards agency, version, transaction set, and release (for TRADACOMS only) and click Next.
d. Click Finish.</td></tr>
<tr><td>New CII Wizard</td><td>a. Click Next.
b. Select the ODBC data source that contains the standards database.
c. If you want to use Japanese descriptions, select the check box (the default is English descriptions).
d. Click Next.
e. Select the standards agency, version, transaction set, and release (for TRADACOMS only) and click Next.
f. Select the appropriate Multi-detail header and click Next.
Reference
See Using extended-mode tags on page 2 - 5 for more information on multi-detail header extended-mode tags.
g. Click Finish.</td></tr>
<tr><td colspan="2">System response
The system displays the New Map Wizard dialog box.</td></tr>
</table>

(Contd) Step	Action
10	Did you choose to load the data format from a saved definition and click **Browse** to display the Open File Definition dialog box? ◗ If *yes*, type the file name and click **Open** to load the selected file format definition, and then continue with step 11. **Note** You can now select either a .DDF or .IFD file. ◗ If *no*, continue with step 11.
11	Click **Finish** to load the standards information you selected and create the new map (this may take a few seconds). **System response** The system displays the new map in the Application Integration Window. **Note** After you finish creating and saving a new map, you need to define the Input and Output sides of the map. The steps you take are different, depending on whether the map is an Import, System Import, Export, or Turnaround map.

CII File Properties Dialog Box

Parts and functions

This table contains the parts and functions for the CII FIle Properties dialog box:

Part	Function
Name tab	
Name	Map component name. **Note** Do not use spaces or hyphens (-) in the name. You can use the underscore (_) to separate words.
Description	Description of the map component.
Additional notes	When you import an XML schema, the annotation attached to each XML map component is saved in this box. For non-XML map components, contains any user-defined comments.
Mode tab	
Dividing Mode	Most CII files are sent in dividing mode (also translated as division mode). This mode requires the messages to be sent in chunks of 251 bytes to facilitate communications. To set dividing mode, use the Partner Editor.
Non-Transparent Mode	According to the CII Syntax Rule, non-transparent mode is an option that helps you avoid interfering with communication control characters in some communications systems. Transparent mode is the default setting in Sterling Gentran:Server.
Character Sets tab	
Select 8 Bit Character Set	Valid values are Default, JIS-X0201, and Other. Default instructs the translator to use the default character setting of the computer on which the translator is running. Use Other if you must specify any other type of character encoding.
Select 16 Bit Character Set	Valid values are Default, JIS-X0208, and Other. Default instructs the translator to use the default character setting of the computer on which the translator is running. Use Other if you must specify any other type of character encoding.

(Contd) Part	Function
Loop Extended Rules tab	
On Begin	Extended rule to be run before the translator processes the map object.
On End	Extended rule to be run after the translator concludes processing the map object. Application Integration processes On End rules at the end of each loop occurrence, not at the end of all loops.
Full Screen	Maximizes the dialog box.
Compile	Compiles the extended rule. This function enables you to view compile errors for this rule prior to compiling the translation object. This function gives you immediate feedback about the accuracy of your rule. Double-click an error to immediately navigate to the line containing the error. The rule is also compiled when you compile the map.
Extended rule	Defines the extended rule.
Errors	Displays any errors generated when you clicked the Compile button to compile the extended rule. Double-click an error to make the cursor go to the line containing the error.

Group Properties Dialog Box

Parts and functions

This table contains the parts and functions for the Group Properties dialog box:

Part	Function
Name tab	
Name	Map component name. **Note** Do not use spaces or hyphens (-) in the name. You can use the underscore (_) to separate words.
Description	Description of the map component.
Additional notes	When you import an XML schema, the annotation attached to each XML map component is saved in this box. For non-XML map components, contains any user-defined comments.
Looping tab	
Minimum usage	Minimum number of times the loop must be repeated. For a conditional loop, the minimum usage is zero.
Maximum usage	Maximum number of times the loop must be repeated.
Promote records to parent	Select this check box to specify that when the group is compiled, the subordinate records and groups are extracted from the loop and located in the parent group. This function is valid for single iteration subgroups only. **Note** Select this check box if you are mapping the fields in this group to data that is not grouped in the output.
Loop Extended Rules tab	
On Begin	Extended rule to be run before the translator processes the map object.
On End	Extended rule to be run after the translator concludes processing the map object. Application Integration processes On End rules at the end of each loop occurrence, not at the end of all loops.

(Contd) Part	Function
Full Screen	Maximizes the dialog box.
Compile	Compiles the extended rule. This function enables you to view compile errors for this rule prior to compiling the translation object. This function gives you immediate feedback about the accuracy of your rule. Double-click an error to immediately navigate to the line containing the error. The rule is also compiled when you compile the map.
Extended rule	Defines the extended rule.
Errors	Displays any errors generated when you clicked the Compile button to compile the extended rule. Double-click an error to make the cursor go to the line containing the error.

CII TFD Properties Dialog Box

Parts and functions

This table contains the parts and functions for the CII TFD Properties dialog box:

Part	Function
Name tab	
Name	Map component name. **Note** Do not use spaces or hyphens (-) in the name. You can use the underscore (_) to separate words.
Description	Description of the map component.
Additional notes	When you import an XML schema, the annotation attached to each XML map component is saved in this box. For non-XML map components, contains any user-defined comments.
Tag tab	
Tag	The element ID, which is defined by a CII standard.
Hex Decimal	Whether you view the tag in hexadecimal or decimal and applies only to what you see in Application Integration. This setting does not affect translation.
Looping tab	
Normal Loop Start Loop End Loop Repeat	Type of loop. Values are: ◗ Normal – In the loop, but is not the beginning or ending ◗ Loop Start – Marks the beginning of the loop ◗ Loop End – Marks the end of the loop ◗ Loop Repeat – Marks the end of one loop iteration and the beginning of the next iteration
Validation tab	
Mandatory field	Select this check box to indicate that the map component is required.
Minimum length	Minimum number of characters in the map component.

(Contd) Part	Function
Maximum length	Maximum number of characters of the map component.
Data-type	Type of data for this map component. Valid values are: ◗ String - Alphanumeric ◗ Number - Numeric, real, overpunched, or packed (for Positional only) ◗ Date/time - Date or time ◗ Bin Data - binary data (only available if you select “Binary” on the Special tab of the EDI Segment Properties dialog box) ◗ Bin Length - length of binary data (only available if you select “Binary” on the Special tab of the EDI Segment Properties dialog box) **Note** If you select “Binary,” you must define an element of data-type “Bin Length” and another element of data-type “Bin Data.” The “Bin Length” element must precede the “Bin Data” element.
Data format	How the data in the map component will be formatted. Depending on the data type you selected, you can either: ◗ For the String data-type, select a syntax token to denote that this map component must be formatted as the syntax token dictates. ◗ Free Format indicates that any characters are acceptable in the field. The translator does not check the characters for compliance. ◗ For Number or Date/Time data-type, select the data format from a list.
Data is Read/written as Raw Bytes	Type of byte ordering: ◗ Little-endian byte ordering specifies that the least significant character is first. Intel and Windows use this order. ◗ Big-endian byte ordering specifies that the most significant character is first. UNIX and Java use this order.

(Contd) Part	Function
Standard Rule tab	
Please select the standard rule to use	◗ Select ◗ Update ◗ Use System Variable ◗ Use Constant ◗ Use Accumulator ◗ Loop Count ◗ Use Code **Reference** For more information on using standard rules, see the *IBM® Sterling Gentran:Server® for Microsoft Windows Application Integration User Guide*.
Extended Rule tab	
Extended Rule	Area where you type the extended rule. **Reference** For more information on using extended rules, see the *IBM® Sterling Gentran:Server® for Microsoft Windows Application Integration User Guide*.
Full Screen	Enlarges the extended rule area to the size of your entire display to give you more room to see what you type.
Compile	Compiles the extended rule. This function enables you to view compile errors for this rule prior to compiling the translation object. This function gives you immediate feedback about the accuracy of your rule. Double-click an error to immediately navigate to the line containing the error. The rule is also compiled when you compile the map.
Errors	If you compiled this extended rule, any warnings or errors are displayed in the Errors list. Double-click an error to make the cursor go to the line containing the error.
Character Set tab	
Character Set	Select 8 Bit if the TFD is single-byte, and 16 Bit if the TFD is double-byte.

Configuring a Loop

Introduction

In CII terminology, a loop is expressed as a multi-detail. Multi-details are indicated through the use of specific TFDs. Before the start of a loop is a multi-detail header (MDH). At the end of each iteration is the multi-detail return (MDR). The multi-detail trailer (MDT) is at the end of the loop. The following table shows how a multi-detail is typically configured:

TFD Type	Tag	Properties
Multi-detail header (MDH)	0xFA	One-byte string
MDH	0xFD	Two-byte binary numeric type N0
Multi-detail return (MDR)	0xFB	No data
Multi-detail trailer (MDT)	0xFC	No data

Configuring Key Fields for Multi-Detail Headers

In extended mode, multi-detail headers must be identified with key fields. You must also specify key fields if there is any possibility of ambiguity in the data (for example, if a multi-detail in the CII file layout has no corresponding data).

To configure a key field for a multi-detail header:

Step	Action
1	In Application Integration, double-click or right-click the multi-detail header and select **Properties**.
2	Click the **Key Field** tab. **Reference** For more information about properties, press F1 for Help.
3	Select **Use constant** and click **Edit**.
4	In the **Map Constants** dialog box, type the constant you need.

Tag	Data Type	Range of Values
0xFA	String	A to Z, 1 to 9

Tag	Data Type	Range of Values
0xFD	String	0000 to 65535

About Character Encoding

Introduction

An encoding system determines the hexadecimal values that represent display characters. Application Integration uses the default character set of the computer you are working on. The default encoding for Japanese Windows is Shift-JIS although there are several other encoding systems for Japanese characters.

The Sterling Gentran:Server CII implementation supports the following character conversions:

- Shift-JIS to JIS x0201 (no conversion required)
- Shift-JIS to JIS x0208
- JIS x0201 to Shift-JIS (no conversion required)
- JIS x0208 to Shift-JIS

When you are specifying character sets for the CII side of a map, you must indicate one character set each for 8-bit and 16-bit characters in the **CII File Properties** dialog box. Then in the **CII TFD Properties** dialog box, you indicate whether the TFD uses an 8-bit or 16-bit character set.

Procedure

Use this procedure to set up character set conversion:

Step	Action
1	In the **CII File Properties** dialog box, select the Character Sets tab.
2	From the lists, select an 8-bit character set and a 16-bit character set. The choices for 8-bit are Default and JIS-X0201. The choices for 16-bit are Default, JIS-X0208, and Other.
3	Double-click the first string-type TFD and select the **Character Set** tab. You must open the dialog box to select 8-bit or 16-bit. This selection refers to the choices made in the CII File Properties dialog. The default will be 8-bit. If a user changes a 16-bit TFD to numeric, and changes again to string, the default will be 8-bit.

Step	Action
4	Select either the **8 bit (Default)** or **16 bit** option. **Notes** ◗ This selection refers to the choice you made in step 2 on the CII File Properties dialog box. ◗ If you change a 16-bit TFD to numeric, and change it again to string, the default will be 8-bit. ◗ The settings in Partner Editor override the settings in the map. See *Setting up a CII Partner* on page 3 - 5 for more information.

Relating CII Data Attributes to Application Integration Data Types

CII Attributes and Data Types

The following table shows how CII data attributes correspond to the data types in Application Integration:

Description of Data	CII Attribute	Application Integration Data Type
Numeric, implied decimal	9	N0 to N9
Numeric, explicit decimal	N	R0 to R9
8-bit characters	X	X, J, or other single-byte syntax token
16-bit characters	K	K, double-byte syntax token
8-digit date	Y	Date: YYYYMMDD

About Syntax Tokens

To process Japanese characters, you must use a syntax token that enables non-Latin characters in the data that the map will process. Application Integration provides the syntax token K, which enables all double-byte Japanese characters.

You can create a syntax token to meet your specific needs. For more information about syntax tokens and creating them, see the *IBM® Sterling Gentran:Server® for Microsoft Windows Application Integration User Guide*. If you create a double-byte character set (DBCS) syntax token, you must configure the syntax tokens on a computer with a DBCS operating system (Japanese, Korean, Traditional Chinese, or Simplified Chinese) or a Windows 2000 system to which you have added font support for one of those languages. If you do not, the DBCS button is inactive; you cannot use it. Note that syntax tokens cannot be imported.

Setting Up Syntax Tokens for CII

Introduction

Some syntax tokens are provided in Application Integration. If you need a different syntax token, you can create a syntax token to meet your needs.

Note
When you create a syntax token, it applies only to the current map. You must create a syntax token for each map you create.

Creating a Syntax Token for Asian Languages

Double-byte character set (DBCS) syntax tokens enable you to create a map that accepts double-byte characters. The DBCS button is active on the Syntax Tokens dialog box if:

- You are running Application Integration on a Chinese, Japanese, or Korean version of the supported Windows operating systems (see the *IBM® Sterling Gentran:Server® for Microsoft Windows Getting Started Guide* for information on which operating systems are supported).
- You have added font support for one of these languages to a Windows 2000 system.

DBCS tokens are displayed only in the DBCS Syntax Tokens dialog box, not in the list on the Syntax Tokens dialog box.

To create a DBCS token:

Step	Action
1	From the Application Integration **Edit** menu, select **Syntax Tokens**.
2	Click **DBCS**. **System response** The system displays the DBCS Syntax Tokens dialog box.
3	From the **Codepage** list, select the 932 codepage because you are mapping Japanese characters.
4	Click **New**.
5	In the **Edit DBCS Syntax Token** dialog box, in the **Token** field, type the unique one-character alphanumeric value that Application Integration recognizes as containing the allowed range of characters you designate.

(Contd) Step	Action
6	Select the lead byte from the **Lead-Byte** box. Double-byte characters are composed of a lead byte and a trail byte. For example, the character ⊟ is code point 93F9 (lead byte 93, trail byte F9).
7	To exclude individual characters or groups of characters from the token (you do this if there are certain characters that you will not accept in your data), make characters unavailable by either: ◗ Clicking a character to make it appear shaded. ◗ Dragging the cursor across a group of characters to make them appear shaded
8	Click **Close** to save the syntax token.

Deleting a Syntax Token

To delete a syntax token:

Step	Action
1	From the Application Integration **Edit** menu, select **Syntax Tokens**.
2	If you are deleting a DBCS syntax token, click **DBCS**.
3	Select the token that you want to delete and, if you are certain, click **Delete**. The selected syntax token is deleted without a warning message.

Deleting a Character Range

To delete a character range from a syntax token:

Step	Action
1	From the Application Integration **Edit** menu, select **Syntax Tokens**.
2	If you are deleting a character range for a DBCS syntax token, click **DBCS**.
3	Select a syntax token and click **Change**.
4	Select the character range that you want to delete and, if you are certain, click **Delete**. The selected syntax token is deleted without a warning message.

Preserving Leading Spaces When Mapping to a Positional Data Format

Introduction

In the EDIFACT and ANSI standards, leading spaces in fields are eliminated. However, in the CII format, according to the CII Syntax Rule, leading spaces are typically preserved (although they can be eliminated).

Procedure

To preserve leading spaces in a map for translating CII to the positional format:

Step	Action
1	From the Application Integration **Edit** menu, select **Details**.
2	In the **Map Details** dialog box, select **Use Configurable Trimming** and click **OK** to close the dialog box.
3	In each field on the positional side of the map, open the **Field Properties** dialog box, and click the **Position** tab.
4	If the spaces are single-byte: ◗ In the **characters used in empty portions of the map** box, type **SP**. ◗ From the data alignment options, select **beginning of the field**.
5	If the spaces in the field are double-byte and the data is encoded in Shift-JIS (windows codepage 932), for **Enter the character used in empty portions of the field**, type **0x8140** or the appropriate key code combination.
6	Click **OK**.

Changing to Non-Transparent Mode

Introduction

According to the CII Syntax Rule, non-transparent mode is an option that helps you avoid interfering with communication control characters in some communications systems. Transparent mode is the default setting in Sterling Gentran:Server.

Procedure

Use this procedure to change to non-transparent mode:

Step	Action
1	Open a map in Application Integration.
2	Right-click the top icon on the CII side of the map, and select **Properties** from the shortcut menu.
3	Select the **Mode** tab, and check the **Non-Transparent Mode** box. **Note** Note that the settings in Partner Editor override the settings in the above dialogs. See *Setting up a CII Partner* on page 3 - 5 for more information.

Finalizing your CII Map

Reference

See the *IBM® Sterling Gentran:Server® for Microsoft Windows Application Integration User Guide* for information on how to finalize your CII map (all maps, regardless of format, follow the same steps).

CHAPTER
3

Setting Up Sterling Gentran:Server for CII

Contents

Registering your CII Maps

Introduction

The Register Translation Object function enables you to register your CII translation object file with Sterling Gentran:Server so the system can identify the translation object.

Procedure

Use this procedure to register a translation object.

Step	Action
1	From the Sterling Gentran:Server EC Manager **View** menu, select **Translation Objects**. **System response** The system displays the EDI Translation Object browser.
2	Click **New**. **System response** The system displays the Register Translation Object dialog box.
3	Select the CII translation object file that you want to register with the system from the list or type it in the File name box. **Note** To highlight a group of CII translation objects, click on the first translation object and then press the **SHIFT** key and then click on the last translation object in the group. To highlight several translation objects that are not adjacent to each other, press the **CTRL** key and click on the translation objects.
4	Click **Open**. **System response** The system registers the translation object files exits the Register Translation Object dialog box. **Note** If the selected file is invalid, you receive a warning message. Only valid Sterling Gentran:Server translation object files can be installed. If the translation object is a duplicate, you are prompted with a message asking whether or not you want to overwrite the existing translation object.

How to Define a New Import Specification

Introduction

You need to define an import specification for each type of file (e.g., file location, file name, file extension, etc.) that you are importing. If you want to import files from a location, from a specific file name, or from files with a specific extension that is not currently defined in an import specification, you need to create a new import specification.

Procedure

Use this procedure to define a new import specification.

Step	Action
1	From the Start menu, select **Programs\Gentran Server\Gentran Server Configuration**. **System response** The system displays the System Configuration dialog box (Controllers tab).
2	Select the **Imports** tab.
3	Click **New**. **System response** The system allows you to define a new import specification.

(Contd) Step	Action
4	In the File Path box, ◗ type the file type or ◗ click **Browse** to select the folder. **System response** The system displays the Choose Directory dialog box (select the file path and click **OK**). **Recommendation** We recommend that you enter a file type in this box, rather than specifying a path and folder. This ensures that users can import files of the specified type from their local drives without using UNC file names. **Note** For a Mailbox Import, you must specify the UNC path and file name. This must exactly match the path you set for the TRANSIN directory on the Directories tab. **Reference** See the *IBM® Sterling Gentran:Server® for Microsoft Windows Administration Guide* for more information on setting up directories.
5	From the Translation Object list, select the CII import or system import translation object that you want the system to use to begin translation when a file of the specified type is imported. **Note** Some Japanese import files use a six-character field for the version number, while others use an eight-character field.
6	◗ Click **OK** to exit the System Configuration program or ◗ click **Apply** to save the import specification without exiting System Configuration.

Setting up a CII Partner

Introduction

Setting up a CII partner is similar to setting up other partners, with the following exceptions:

- There are several values that can be configured on the Generic Interchange Envelope dialog box.
- The structure of CII messages dictates that you must select **<none>** for Groups for both Inbound and Outbound relationships.

Reference
See the *IBM® Sterling Gentran:Server® for Microsoft Windows User Guide* for comprehensive information on how to create partner relationships.

Configuring the Generic Interchange Envelope dialog box

To access the Generic Interchange Envelope dialog box, from the EC Manager, select **Partners > Outbound > Interchanges >Edit > Envelope**.

The following table describes the non-generic fields on this dialog box, and the CII column indicates how they are used for CII partners.

Dialog Box Component	How it is used in CII	Valid Values
Decimal notation	Not used.	Not used.
Segment code separator	Non-transparent mode	S or space = transparent M = non-transparent
Release indicator	Not used.	Not used.
Component element separator	16-bit character set	S or space = JISX0208 D = Shift-JIS
Element separator	8-bit character set	S or space = JISX0201 M = Shift-JIS
Segment terminator	Dividing mode	S = non-dividing M or space = dividing

Note
These settings override anything you configured in the map.

Using the CII Total-Items-Number Feature

Introduction

According to the CII Syntax Rule, there are two areas in the message group header reserved for total-items number, a checksum function. Each area consists of two fields, which hold the TFDs to be totalled. One area is for compressed-mode TFDs, and the other is for extended-mode TFDs; they are mutually exclusive.

In Sterling Gentran:Server, you identify these fields in Partner Editor.

Procedure

Use this procedure to configure the CII total-items-number feature:

Step	Action
1	From the **Outbound Relationship** dialog box, click **Interchanges** to access the Outbound Interchange Select dialog.
2	Select the appropriate interchange, and click **Edit**. **System response** The system displays the Outbound Interchange Entry dialog box.
3	From the **Outbound Interchange Entry** dialog box, click **Envelope**. **System response** The system displays the Generic Interchange Envelope dialog box.
4	Type the tags (in decimal) of the two TFDs that you want to sum. If your map uses compressed-mode tags, type the tags in **Field 21** and **Field 22**. If the map uses extended-mode tags, type the tags **Field 23** and **Field 24**.

Compressed mode example

To sum TFDs 00003 and 00011, type the following on the Generic Interchange Envelope dialog box:

Field	Value you type
Field 21	003
Field 22	011

Notes

- The TFDs must be numeric or string type.

- The TFDs must contain only single-byte numeric characters, not alphabetic characters.
- Sterling Gentran:Server sums all TFDs with the identified TFD tag.
- In the output file, the totals are placed in 15-byte fields in the message group trailer, as specified in the CII Syntax Rule.

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