

webMethods Module for ISO 8583 Installation and User's Guide

Version 9.6

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This document applies to webMethods Module for ISO_8583 9.6 and to all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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1 Overview of webMethods Module for ISO 8583

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What is webMethods Module for ISO_8583

webMethods Module for ISO_8583 provides support for the popular ISO_8583 Messaging Standards. Module for ISO_8583 runs on top of webMethods Integration Server. When you use Module for ISO_8583 along with other webMethods components, such as webMethods Trading Networks, you can extend its capabilities. Using Module for ISO_8583, you create and parse supported ISO_8583 messages. In addition, Module for ISO_8583 provides the functionality to send and receive ISO_8583 messages from other partners.

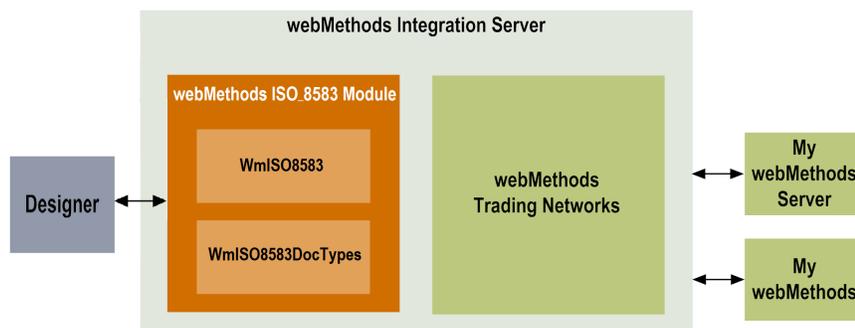
webMethods Module for ISO_8583 Features

Module for ISO_8583 provides support for the following features.

- **ISO_8583 messages.** Supports the ISO_8583 Messaging Standards.
- **ISO_8583 Message Processing.** Generates ISO_8583 messages and parses encoded ISO_8583 messages.
- **HTTP Communication Protocol.** Supports communication through HTTP only.
- **TCP/IP Communication Protocol.** Supports communication through the TCP/IP that is widely used among ISO_8583 applications.
- **Error Handling.** Reports errors encountered during the processing of the ISO_8583 message.
- **Message Persistence.** Saves all incoming and outgoing messages in the Trading Networks database.

Architecture and Components

The following diagram illustrates the Module for ISO_8583 architecture and components, and the component relationships. For further explanation, see the table that follows the diagram.



Component	Description
webMethods Module for ISO_8583	webMethods Module for ISO_8583 enables your enterprise to construct, parse, and transport ISO_8583 messages. Module for ISO_8583 is installed and runs on Integration Server.

Component	Description
	<p>Module for ISO_8583 contains the following packages:</p> <ul style="list-style-type: none"> ■ WmISO8583 ■ WmISO8583DocTypes <p>For a description of the packages, see “webMethods Module for ISO_8583 Packages” on page 8.</p>
webMethods Integration Server	<p>webMethods Integration Server is the underlying foundation of the webMethods architecture. It processes requests from and relays responses to a back-end system.</p> <p>Module for ISO_8583 uses the Integration Server WmART package to manage ISO_8583 connections and related services.</p> <p>Module for ISO_8583 uses the Integration Server built-in infrastructure services for managing the IS documents generated from the ISO_8583 Schema definition.</p> <p>The webMethods data format supported on Integration Server is based on the following elements:</p> <ul style="list-style-type: none"> ■ <i>IData object.</i> The IData object is the universal container that services use to receive input from and deliver output to other programs. It contains an ordered collection of key/value pairs on which a service operates. Each element stored in an IData object corresponds to a data type. ■ <i>An IS document type.</i> An IS document type contains a set of fields used to define the structure and type of data in a document (IData object). You can use an IS document type to specify input or output parameters for a service or specification. You can also use an IS document type to build a document or document list field and as the blueprint for pipeline validation and document (IData object) validation. <p>For more information about IData objects and IS document types, see the <i>webMethods Service Development Help</i>.</p>
webMethods Trading Networks	<p>webMethods Trading Networks enables your enterprise to link with other companies (buyers, suppliers, strategic partners) and marketplaces to form a business-to-business trading network. Trading Networks enhances the functionality of Module for ISO_8583 and facilitates the exchange of ISO_8583 messages.</p>
My webMethods Server and My webMethods	<p>My webMethods Server is a Web-based monitoring and administration user interface for managing your webMethods components. You can use My webMethods Server (and its user interface, My webMethods) with Module for ISO_8583 to define and manage Trading Networks partner</p>

Component	Description
	<p>profiles, trading partner agreements (TPAs), custom attributes, and TN document types. You also use My webMethods to monitor and manage ISO_8583 message transactions.</p> <p>For information about using My webMethods to manage Module for ISO_8583, see “Overview” on page 44.</p>
Designer	<p>At design time, use Designer or Developer to edit Module for ISO_8583 services and create customized solutions. It also provides tools for testing and debugging the solutions you create.</p>

webMethods Module for ISO_8583 Packages

Module for ISO_8583 contains the following packages (sets of services and related files) that you install on Integration Server.

Package	Description
WmISO8583	<p>Contains built-in services to:</p> <ul style="list-style-type: none">■ Generate IS document types for the supported ISO_8583 messages.■ Parse a text/plain message for the supported ISO_8583 messages.■ Create a text/plain encoded message from the IS Document format.■ Facilitate interaction between the WmISO8583 package and Trading Networks that enables you to exchange ISO_8583 messages with your trading partners.
WmISO8583DocTypes	<p>Contains the IS document types generated for the supported ISO_8583 messages using the <code>wm.estd.iso8583.service.generateDocTypes</code> service.</p>

For detailed information about the Module for ISO_8583 services and generated IS document types, see [“Overview of WmISO8583 Services” on page 70](#).

Message Configuration Files and IS Document Types

Before you use Module for ISO_8583 to parse or create ISO_8583 messages, you need to generate the IS document type from the jPOS supported message configuration file for the supported ISO_8583 messages. The generated IS document types serve as input to the service that you use to create ISO_8583 messages.

Generate Document Types

In some cases you may need to customize the document types provided by the Module for ISO_8583 to meet your business requirements. For example, you may need to add an additional field to an existing field or define a new custom field. With Module for ISO_8583, you can customize the jPOS message configuration files for the ISO_8583 message definitions by making copies of the jPOS message configuration files provided with the module and modifying them as required, or by generating new jPOS message configuration files. These customized jPOS message configuration files represent the custom message configuration. For information about how to configure Module for ISO_8583 to use the custom jPOS message configuration files, see [“Generating Document Types” on page 24](#).

Using Trading Networks, two trading partners can exchange messages that conform to a specific ISO_8583 message scheme. To use a specific ISO_8583 message scheme between two trading partners, you must generate the message scheme in Module for ISO_8583 and then associate the message scheme ID with the trading partner agreement that you use for the message exchange. For information about associating a message scheme ID with a trading partner agreement, see [“Associating a Trading Partner Agreement with a Scheme ID” on page 25](#).

Process ISO_8583 Messages with Trading Networks

Module for ISO_8583 processes inbound and outbound ISO_8583 messages with Trading Networks as follows:

- **Inbound processing.** Module for ISO_8583 receives ISO_8583 messages from a business partner and then sends them to Trading Networks for processing.
- **Outbound processing.** Module for ISO_8583 generates ISO_8583 messages from the internal representation (the IS document format supported by Integration Server) and sends them to other business partners through Trading Networks.

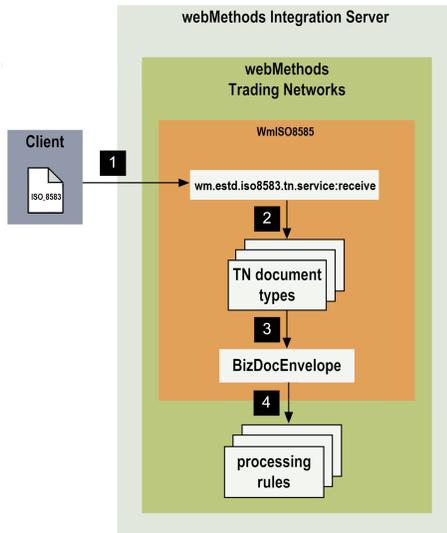
Process Inbound ISO_8583 Messages

When you install Module for ISO_8583, the WmISO8583 package of the Module for ISO_8583 enables Trading Networks to recognize and to process ISO_8583 messages. For inbound processing, you create clients that send ISO_8583 messages to the `wm.estd.iso8583.tn.service:receive` service of the Module for ISO_8583 and you set up information in Trading Networks to process the messages.

Note:

You can send ISO_8583 messages directly to the Trading Networks receive service. However, Module for ISO_8583 creates the BizDocEnvelope only if the incoming message is a valid ISO_8583 message. When an ISO_8583 message is sent directly to the Trading Networks receive service, Module for ISO_8583 does not perform the tasks of persisting the message, routing, and assigning process or user status.

To start the run-time processing of the ISO_8583 message in Trading Networks, Module for ISO_8583 sends the message to Trading Networks. The following diagram illustrates the steps in which Trading Networks processes inbound ISO_8583 messages.



Step	Description
1	The client sends the ISO_8583 message to Trading Networks, invoking the <code>wm.estd.iso8583.tn.service.receive</code> service to pass on the ISO_8583 message to Trading Networks for processing.
2	When Module for ISO_8583 receives the ISO_8583 message, it first determines which TN document type to use. After determining the TN document type, Module for ISO_8583 extracts field values from the ISO_8583 message and fills in the appropriate attributes in the BizDocEnvelope.
3	Module for ISO_8583 then forms a BizDocEnvelope that contains: <ul style="list-style-type: none"> ■ The original ISO_8583 message as the <code>contentPart</code> of the BizDocEnvelope. ■ The extracted fields from the ISO_8583 message added as attributes to the BizDocEnvelope. ■ Information required for persisting the message in Trading Networks. ■ Information required for routing and processing the ISO_8583 message.
4	After forming the BizDocEnvelope, Module for ISO_8583 determines the processing rule to use to process the document and executes the processing rule. Processing rules define the pre-processing and processing actions you want performed on each type of document.

Processing Outbound ISO_8583 Messages

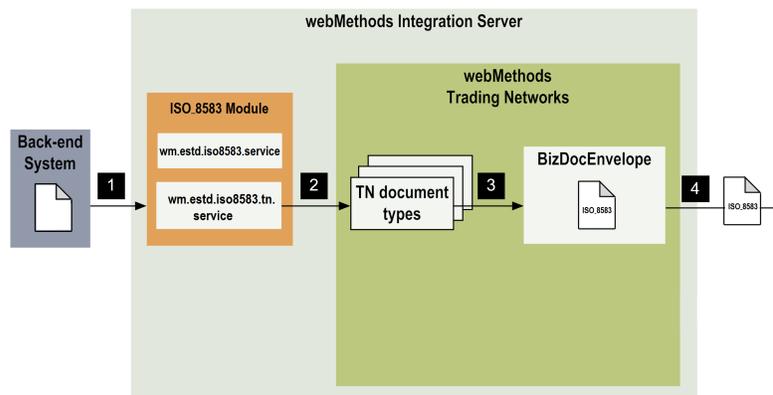
For outbound processing, you create an ISO_8583 message that can be sent to other trading partners. For example, you might use data from an internal document (such as a document from a back-end system) to form the ISO_8583 message. To create an ISO_8583 message from the IS document, you use the Module for ISO_8583 built-in services.

To deliver the ISO_8583 messages you create using Module for ISO_8583, you have the following options:

- Send the ISO_8583 message using the Module for ISO_8583 `wm.estd.iso8583.tn.service:send` service. This service obtains the BizDocEnvelope and persists the message in Trading Networks. The send service sends the ISO_8583 message using one of the Trading Networks transport protocols.
- Submit the outbound Module for ISO_8583 messages to Trading Networks document recognition. With this method, you must have a TN document type for the outbound ISO_8583 message, and a processing rule to deliver the outbound ISO_8583 message. The outbound ISO_8583 message is always saved to the Trading Networks database before it is delivered.

Deliver Outbound ISO_8583 Messages Using the Module for ISO_8583 Send Service

The following diagram illustrates the process of receiving an internal-format document, creating an ISO_8583 message from that document, and submitting the outbound ISO_8583 message to Trading Networks for processing and delivery using the Module for ISO_8583 `wm.estd.iso8583.tn.service:send` service.



Step	Description
1	A back-end system or client sends an internal-format document to Module for ISO_8583, invoking the <code>wm.estd.iso8583.service:convertIDataToISOMsg</code> service to convert the IS document into an ISO_8583 message. For information about creating an ISO_8583 message, see “Creating Outgoing ISO_8583 Messages” on page 55.
2	After creating the ISO_8583 message, Module for ISO_8583 invokes the <code>wm.estd.iso8583.tn.service:send</code> service to submit the outbound ISO_8583 message into Trading Networks document processing.
3	During the initial processing of the ISO_8583 message, the Module for ISO_8583 <code>wm.estd.iso8583.tn.service:send</code> service either: <ul style="list-style-type: none"> ■ Obtains the BizDocEnvelope created by the <code>wm.estd.iso8583.tn.utils:createBizDoc</code> service. or

Step	Description
	<ul style="list-style-type: none">■ Generates the BizDocEnvelope internally using the information from the ISO_8583 message fields. <p>The Module for ISO_8583 send service selects the BizDocEnvelope that matches the required TN document type for the outbound ISO_8583 message. The BizDocEnvelope contains the outbound ISO_8583 message as the content, and the values from the message fields as attributes.</p>
4	<p>The Module for ISO_8583 send service sends the ISO_8583 message using one of the Trading Networks transport protocols.</p> <p>For more information about configuring the Trading Networks transport protocols, see “Create ISO_8583 Clients” on page 26 and the <i>webMethods Trading Networks Administrator’s Guide</i> for your release.</p>

ISO_8583 Connections

ISO_8583 connections enable Integration Server to connect to the ISO_8583 back end at run time when using the ISO_8583 transport protocol. You create one or more connections at design time to use in integrations. The number of connections you create depends on your integration needs. You configure connections using Integration Server Administrator. You must have webMethods administrator privileges to access the administrative screens of Module for ISO_8583. For instructions on configuring, viewing, editing, enabling, and disabling ISO_8583 connections, see [“Configure TCP/IP client” on page 28](#).

For information about setting user privileges, see the *webMethods Integration Server Administrator’s Guide* for your release.

For a list of tasks that you must do before you can create your connections, see [“Preparing to Configure or Manage ISO_8583 Connections” on page 28](#).

Connection Types

Module for ISO_8583 supports two types of ISO_8583 connections:

- Permanent connections are configured as part of a connection pool and can be reused.
- Transient connections last during the execution of an Module for ISO_8583 service and are then terminated.

For information about configuring permanent and transient connections, see [“Configuring ISO_8583 Connections” on page 29](#).

Connection Pools

Integration Server includes a connection management service that dynamically manages connections and connection pools based on configuration settings that you specify for the connection. A

connection pool is a collection of connections with the same set of attributes. Integration Server maintains connection pools in memory. Connection pools improve performance by enabling Module for ISO_8583 services to reuse open connections instead of opening new connections.

For details, see the *webMethods Integration Server Built-In Services Reference* for your release.

Runtime Behavior of Connection Pools

When you enable a connection, Integration Server initializes the connection pool, creating the number of connection instances you specified in the connection's **Minimum Pool Size** field. Whenever an Module for ISO_8583 service needs a connection, Integration Server provides a connection from the pool. If no connections are available in the pool, and the maximum pool size has not been reached, the server configures one or more new connections (according to the number specified in **Pool Increment Size**) and adds them to the connection pool. If the pool is full (as specified in **Maximum Pool Size**), the requesting service will wait for the Integration Server to obtain a connection, up to the length of time specified in the **Block Timeout** field, until a connection becomes available. Periodically, Integration Server inspects the pool and removes inactive connections that have exceeded the expiration period that you specified in **Expire Timeout**.

If the connection pool initialization fails (due to a network connection failure or some other type of exception), you can enable the system to retry the initialization any number of times, at specified intervals.

For information about configuring connections, see [“Configure TCP/IP client” on page 28](#).

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Overview

This chapter explains how to install and uninstall webMethods Module for ISO_8583. The instructions use the Software AG Installer and the Software AG Uninstaller wizards. For complete information about the wizards or other installation methods, or to install other webMethods products, see the *Installing Software AG Products* guide for your release.

Requirements

For a list of the operating systems and webMethods products required for the installation and operation of webMethods, see *webMethods eStandards Modules System Requirements*, available in the webMethods area of the Software AG Documentation website.

The Integration Server Home Directory

Beginning with Integration Server 9.6, you can create and run multiple Integration Server instances under a single installation directory. Each Integration Server instance has a home directory under *Integration Server_directory \instances\instance_name* that contains the packages, configuration files, log files, and updates for the instance.

For more information about running multiple Integration Server instances, see the *webMethods Integration Server Administrator's Guide* for your release.

This guide uses the *packages_directory* as the home directory in Integration Server classpaths. For Integration Server 9.6 and above, the *packages_directory* is *Integration Server_directory \instances\instance_name\packages* directory. For Integration Server 9.5 and lower, the *packages_directory* is *Integration Server_directory \packages* directory.

Installing Module for ISO_8583

1. Download Software AG Installer from the [Empower Product Support Web site](#).
2. If you are installing the module on an existing Integration Server, shut down the Integration Server.
3. Start the Software AG Installer wizard.
4. Choose the webMethods release that includes the Integration Server on which you want to install the module.
5. Specify the installation directory to use (the default is Software AG).
 - If you are installing on an existing Integration Server, specify the Software AG installation directory that contains the host Integration Server.
 - If you are installing both the host Integration Server and the module, specify the installation directory to use.

6. In the product selection list, select **eStandards > webMethods Module for ISO_8583**. The Installer automatically selects **Program Files** and **Code Source**. **Program Files** installs the WmISO8583 package.
7. Select any required products indicated in *webMethods eStandards Modules System Requirements*.

Installer installs the following components:

- webMethods Integration Server
- webMethods Trading Networks
- webMethods Module for ISO_8583 installed as WmISO8583 package in the *Software AG_directory \ Integration Server_directory \ packages* directory.

If Integration Server and Trading Networks are already installed from a previous installation, installer does not reinstall these products.

8. After installation completes, close Installer.
9. Start the Integration Server on which you installed webMethods Module for ISO_8583.

Uninstalling Module for ISO_8583

1. Shut down the Integration Server that hosts Module for ISO_8583.
2. Start Software AG Uninstaller, as follows:

System	Instructions
Windows	In the Add or Remove Programs window, select the installation directory of the Integration Server on which Module for ISO_8583 is installed.

3. In the product selection list, select **eStandards > webMethods Module for ISO_8583**.
4. Restart the host Integration Server.
5. Uninstaller moves all Module for ISO_8583 -related files that were installed into the *Integration Server_directory \ packages*, or *Integration Server_directory \ instances \ instance_name \ packages* directory. However, Uninstaller does not delete files that you created after you installed the module (for example, user-created or configuration files), nor does it delete the module directory structure. You can select the *Integration Server_directory \ packages*, or *Integration Server_directory \ instances \ instance_name \ packages* directory and delete the Module for ISO_8583-related directory.

3 Set up webMethods Module for ISO_8583

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Overview

This chapter lists the tasks you perform to set up webMethods Module for ISO_8583 to process and exchange ISO_8583 messages with other business partners.

Step 1: Create Trading Partner Profiles and Trading Partner Agreements

Define profiles for your enterprise and the trading partners with whom you want to exchange ISO_8583 messages. A trading partner is any person or organization with whom you want to conduct business electronically. In Module for ISO_8583, a trading partner is defined by several criteria that you specify in a trading partner profile, including company name and identifying information, contact information, and delivery methods. In addition to specifying trading partner profiles for all of your trading partners, you must specify a profile for your own organization. For more information, see [“Define Trading Networks Profiles” on page 44](#).

At start up, Module for ISO_8583 creates a default trading partner agreement (TPA) that contains ISO_8583-specific information. For information about defining TPAs, see [“Define ISO_8583 Trading Partner Agreements” on page 46](#).

Step 2: Configure the Trading Networks Database

Module for ISO_8583 registers with Trading Networks the following ISO_8583-specific items that identify how Trading Networks will process ISO_8583 messages:

- TN document types for ISO_8583 messages
- Custom TN Attributes for ISO_8583 messages

For more information about these Trading Networks items for transaction processing, see [“Overview” on page 44](#).

Step 3: Prepare to Send and Receive Messages

The following lists the tasks you perform to send and receive messages using Module for ISO_8583, and provides references to the chapters in this book where you can find more information about each task:

- **Generate IS documents.** To parse or create ISO_8583 messages using Module for ISO_8583, you need to generate the IS documents for the supported ISO_8583 messages. Module for ISO_8583 provides default jPOS message configuration files (supplied by the ISO_8583 standards organization) that you use to create the default message scheme for the module. For information about using the default message scheme to generate IS documents, see [“Generating Document Types” on page 24](#).
- **Parse ISO_8583 messages.** The WmISO8583 package of Module for ISO_8583 contains built-in services that you use to convert ISO_8583 messages to IS document format and to create ISO_8583 messages from IS documents. For more information, see [“Parsing Incoming ISO_8583 Messages into IData Objects” on page 54](#).

- **Create clients and configure communication protocols.** To exchange messages using Module for ISO_8583, you create clients that use the supported communication protocols. For a list of the supported transports and the configuration steps for each transport, see [“Create ISO_8583 Clients” on page 26](#).

Step 4: View Document Transactions

When you use Module for ISO_8583 with Trading Networks, you can view document transaction information about all ISO_8583 messages that have been sent or received through Trading Networks. You use My webMethods to query the Trading Networks database run-time message transactions that Module for ISO_8583 performs. For the type of transaction information you can view about ISO_8583 message transactions, see [“View ISO_8583 Messages” on page 58](#).

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Overview

Before you can process ISO_8583 messages using webMethods Module for ISO_8583, you must first configure Module for ISO_8583. This chapter describes the configuration tasks you need to complete before you can use Module for ISO_8583.

Generating Document Types

To parse or create ISO_8583 messages using Module for ISO_8583, you need to generate the IS document types for the supported ISO_8583 messages from jPOS message configuration files. To generate the IS documents types for the ISO_8583 messages, you must create a jPOS message configuration file.

Use Software AG Designer to create the default Module for ISO_8583 jPOS message configuration file. The following procedure describes how to do that using Designer.

1. Start Integration Server and Designer, if they are not already running.
2. Ensure Designer is using the Service Development perspective. If not, switch to it by selecting **Window > Open Perspective > Service Development**.
3. To connect to Integration Server:
 - a. In Package Navigator view, select the Integration Server to which you want to connect.
 - b. Right-click, and select **Connect to server**.

For more information about how to work with Integration Server in Designer, see the *webMethods Service Development Help*.

4. In Package Navigator view, expand the WmISO8583 package and locate the `wm.estd.iso8583.service:generateDocTypes` service.
5. In Designer, select **Run > Run As > Run Service**.
6. In the **Enter Input for 'generate Doc Types'** dialog box, specify:

Parameter	Value
<i>scheme ID</i>	The namespace for the new jPOS message configuration file.
<i>schemeLocation</i>	The absolute file path to the ISO_8583 jPOS message configuration file.

For details about the utility service parameters, see the [“wm.estd.iso8583.service:generateDocTypes” on page 70](#) service.

7. Click **OK**.

Designer runs the service and displays the results in the Service Result view.

Associating a Trading Partner Agreement with a Scheme ID

To use a specific ISO_8583 message scheme to exchange messages between two trading partners, you must associate the message scheme ID with the trading partner agreement that you use for the message exchange.

1. Create a trading partner agreement as described in [“Define ISO_8583 Trading Partner Agreements” on page 46](#).
2. In the `wm.estd.iso8583.tn.tpa.rec:ISO8583TPA` document, specify the namespace of the scheme in the `schemeID` parameter.
3. In Designer, run the `wm.estd.iso8583.tn.tpa:initTPA` service to populate the TPA with the values for the specified IS document type.

Viewing the IS Document Types for ISO_8583 Messages

You view the generated IS document types for ISO_8583 messages using Designer.

1. In Designer's Package Navigator view, expand the `WmISO8583DocTypes` package and locate the folder containing the IS document types.
2. Expand the folder and click on the IS document type that you want to view. The document type opens in the Document Type Editor window.
3. To view the wrapper IS document that corresponds to the generated IS document type, navigate to the namespace folder containing the IS document types.

Deleting Document Types

Module for ISO_8583 provides the `wm.estd.iso8583.service:deleteDocTypes` service that you use to delete generated IS document types for ISO_8583 messages that you no longer use.

Note:

The `deleteDocTypes` service does not check for dependencies or references before deleting the generated IS document types. Ensure that there are no dependencies or references in the IS documents before you run the service. For information about how to configure dependency checking for elements, see the *Software AG Designer Online Help* for your release.

➤ To delete the generated message schemes and IS document types

1. In Designer, in Package Navigator view, expand the `WmISO8583` package and locate the `wm.estd.iso8583.service:deleteDocTypes` service.

2. In Designer, select **Run > Run As > Run Service**.
3. In the **Enter Input for 'deleteDocTypes'** dialog box, specify the ISO_8583 message for which you want to delete the generated message schemes and IS document types.
4. Click **OK**.

Designer runs the service and displays the results in the Service Result view.

For information about the service parameters, see the “[wm.estd.iso8583.service:deleteDocTypes](#)” on [page 71](#) service.

Create ISO_8583 Clients

To send documents to Integration Server to be processed through Trading Networks, you can use a client program suitable for the communication protocol you use. Module for ISO_8583 supports HTTP and TCP/IP communication protocols to send and receive ISO_8583 messages.

The client sends the ISO_8583 messages to the Module for ISO_8583 `wm.estd.iso8583.tn.service:receive` service. When your client sends the ISO_8583 message to the Module for ISO_8583 `receive` service using HTTP, the client must associate the document with the `text/plain` content type that Module for ISO_8583 recognizes. The Module for ISO_8583 `receive` service receives and passes the ISO_8583 message to the content handler for the `text/plain` content type. The default content handler performs initial processing on the document, which includes creating the pipeline with the variable `ffdata` that contains the ISO_8583 message. After the initial processing by the content handler, the Module for ISO_8583 `receive` service processes the stream to extract the ISO_8583 message.

Configure HTTP client

You can configure HTTP transport client to,

- Send ISO_8583 messages using Integration Server
- Send ISO_8583 messages using Trading Networks
- Receive ISO_8583 messages through HTTP

Send ISO_8583 messages using Integration Server

When using HTTP, the client must include the following logic:

- Submit a POST request to Integration Server.
- Address the request to the URL of the service that is to process the ISO_8583 message (for example, `http://localhost:5555/invoke/wm.estd.iso8583.tn.service/receive`)
- In the HTTP request header, set the value of the content type field to `text/plain`.
- In the HTTP request header, set the value of the schemeID to the namespace of the scheme. This is optional.

- Put the ISO_8583 document to process in the body of the message. The document must be the only text that appears in the body of the request.

Most browsers do not allow you to modify the content type header field and so, they are not suitable clients for this type of submission. Clients that you might use to submit an ISO_8583 message in this manner include PERL scripts (which allow you to build and issue HTTP requests) and the webMethods pub.client:http service. The following table describes the values that you provide for the pub.client:http service to POST an ISO_8583 message to Integration Server:

Parameter	Description
<i>url</i>	A string that contains the URL of the service that you want to invoke to process the ISO_8583 message. For example, <code>http://localhost:5555/invoke/wm.estd.iso8583.tn.service/receive</code>
<i>method</i>	Specify post.
<i>loadAs</i>	A string that contains the data type of the input data source. Specify either bytes or stream. <ul style="list-style-type: none"> ■ bytes if the document data source is a byte[]. ■ stream if the document data source is an InputStream.
<i>data/string</i>	A string that contains the ISO_8583 message that you want to post.
<i>headers</i>	An IData object that contains the following: <ul style="list-style-type: none"> ■ <i>NameSpecifyContent-type</i> ■ <i>Value</i> The content type for the document, for example, <code>text/plain</code>. ■ <i>NameSpecify schemeID</i>. ■ <i>ValueSpecify</i> the namespace of the scheme.

The client can also set other optional HTTP variables, such as authorization information, that are required by your application. For a complete description of the pub.client:http service, see the *webMethods Trading Networks Administrator's Guide* for your release.

Send ISO_8583 messages using Trading Networks

To send ISO_8583 messages using Trading Networks, when you create trading partner profiles, you define the HTTP delivery method as part of the partner profile. For more information about creating profiles, see [“Define Trading Networks Profiles” on page 44](#) and the *webMethods Trading Networks Administrator's Guide* for your release.

Defining HTTP as the delivery method in trading partner profiles

1. In My webMethods, go to **Applications > Administration > Integration > B2B > Partner Profiles > Create Enterprise Profile**.

2. On the **Delivery Settings** tab, click **Add Delivery Method**.
3. In the **Delivery Method** field, select **Primary HTTP**. Set the following values:

Field	Description
Host	The partner's host name or IP address. For example, AcmeMedical.com.
Port	The port number on which the partner listens for incoming requests, for example, 5555.
Location	/invoke/wm.estd.iso8583.tn.service/receive
User Name	The user name that your Trading Networks system is to supply when connecting to the partner's system. This field is for a partner profile only.
Password	The password that your Trading Networks system is to supply (along with User Name). This field is for a partner profile only.

For information about other fields on the Add Delivery Methods screen, see the *webMethods Trading Networks Administrator's Guide* for your release.

4. Select the **Use as preferred protocol** checkbox if you want to use HTTP as your preferred method to deliver ISO_8583 messages to your partner.
5. Click **OK**.

Receive ISO_8583 messages through HTTP

Configure an HTTP port on Integration Server to receive ISO_8583 messages. For information about configuring an HTTP port, see the *webMethods Integration Server Administrator's Guide* for your release.

Configure TCP/IP client

You can configure TCP/IP transport client (ISO_8583 client) to send and receive ISO_8583 messages.

Preparing to Configure or Manage ISO_8583 Connections

1. Install webMethods Integration Server and Module for ISO_8583 on the same machine. For more information about the installation steps, see the *Installing Software AG Products* guide.
2. Make sure you have webMethods administrator privileges so that you can access the Module for ISO_8583's administrative screens. For information about setting user privileges, see the *webMethods Integration Server Administrator's Guide* for your release.

3. Start Integration Server and Integration Server Administrator, if they are not already running.
4. Using Integration Server Administrator, make sure the WmISO8583 package is enabled. For more information about working with packages, see the *webMethods Integration Server Administrator's Guide* for your release.
5. Using Software AG Designer, create a user-defined package to contain connections, if you have not already done so. For more information about creating packages, see the *webMethods Service Development Help*.

Configuring ISO_8583 Connections

When you configure ISO_8583 connections, you must specify the information that Integration Server uses to connect to an ISO_8583 system. You configure ISO_8583 connections using Integration Server Administrator.

1. In Integration Server Administrator, go to **Solutions > ISO_8583 Module** and click **ISO_8583 Connections**.
2. On the ISO_8583 Connections screen, click **Configure New ISO_8583 Connection**.
3. On the Connection Types screen, click **ISO_8583 Server Connection** to display the Configure Connection Type screen.
4. In the **ISO_8583 Connections** section, use the following fields:

Field	Description/Action
Package	The package in which to create the connection. You must create the package using Designer before you can specify it using this parameter. For general information about creating packages, see the <i>webMethods Service Development Help</i> for your release.
	Note: Configure the connection in a user-defined package rather than in the WmISO8583 package.
Folder Name	The folder in which to create the connection.
Connection Name	The name you want to give the connection. Connection names cannot have spaces or use special characters reserved by Integration Server and Designer. For information about the use of special characters in package, folder, and element names, see the <i>webMethods Service Development Help</i> for your release.

5. In the **Connection Properties** section, use the following fields:

Field	Description
Connection Type	<p>The type of the ISO_8583 connection that you want to configure. Select one of the following connection types:</p> <ul style="list-style-type: none">■ Transient The connection is terminated after running the ISO_8583 Module send service. This is the default. <div data-bbox="500 436 1224 611" style="background-color: #f0f0f0; padding: 5px;"><p>Note: When you configure a transient ISO_8583 connection, you cannot specify values in the Connection Management Properties section.</p></div> <ul style="list-style-type: none">■ Permanent The connection is added to the connection pool and can be reused.
Channel	<p>Available channels to select and configure:</p> <ul style="list-style-type: none">■ CS Channel■ Amex Channel■ ASCII Channel■ GICC Channel■ RBP Channel■ GZIP Channel■ HEX Channel■ BCD Channel■ VAP Channel■ Postilion Channel■ Raw Channel■ BASE24 Channel■ BASE24 TCP Channel■ NAC Channel■ FSD Channel■ NCC Channel■ PAD Channel
Host Name	<p>The name of the ISO_8583 server that hosts the ISO_8583 backend system.</p>

Field	Description
Host Port	The port number that the connection uses to connect to the ISO_8583 server.
Connection Timeout	The time in milliseconds for the client to wait before cancelling a connection attempt to the target server. If you do not specify a value in this field, the client uses the default value: 30000 (msec).
Response Timeout	<p>The time in milliseconds the client waits for a response after it has sent the ISO_8583 message, before closing the communication channel. If no response is received within the specified timeout, Module for ISO_8583 logs a warning in the Integration Server logs. The default is -1</p> <ul style="list-style-type: none"> ■ When you enter a negative value or do not enter an Response Timeout value, the client does not wait for the ACK response. ■ When you enter a 0 value, the client waits for the ACK response infinitely. ■ When you enter a positive value, the client waits for the ACK response for the specified number of milliseconds.

6. In the **Connection Management Properties** section, use the following fields to configure a permanent ISO_8583 connection:

Field	Description
Minimum Pool Size	<p>The number of connections to create when the connection is enabled. The module keeps open the number of connections you configure here regardless of whether these connections become idle. The default is 1</p> <div style="background-color: #f0f0f0; padding: 5px;"> <p>Important: This field cannot take a zero value. When you configure a permanent connection, you must specify a value of 1 or higher. In addition, the value should be less than or equal to the value specified for the Maximum Pool Size.</p> </div>
Maximum Pool Size	The maximum number of connections that can exist at one time in the connection pool. The default is 10
Pool Increment Size	The number of connections by which the pool is incremented if connections are needed, up to the maximum pool size. The default is 1

Field	Description
Block Timeout (msec)	<p>The number of milliseconds that the Integration Server waits to obtain a connection with the database before it times out and returns an error. For example, you have a pool with Maximum Pool Size of 20. If you receive 30 simultaneous requests for a connection, 10 requests will be waiting for a connection from the pool. If you set the Block Timeout to 5000, the 10 requests will wait for a connection for 5 seconds before they time out and return an error. If the services using the connections require 10 seconds to complete and return connections to the pool, the pending requests will fail and return an error message stating that no connections are available.</p> <p>If you set the Block Timeout value too high, you may encounter problems during error conditions. If a request contains errors that delay the response, other requests will not be sent. This setting should be tuned in conjunction with the Maximum Pool Size to accommodate such bursts in processing.</p> <p>The default is 1000</p>
Expire Timeout (msec)	<p>The number of milliseconds that an inactive connection can remain in the pool before it is closed and removed from the pool.</p> <p>The connection pool removes inactive connections until the number of connections in the pool is equal to the Minimum Pool Size. The inactivity timer for a connection is reset when the connection is used by the adapter. If you set the Expire Timeout value too high, you may have a number of unused inactive connections in the pool. This consumes local memory and a connection on your backend resource. This could have an adverse effect if your resource has a limited number of connections.</p> <p>If you set the Expire Timeout value too low, performance could degrade because of the increased activity of creating and closing connections. This setting should be tuned in conjunction with the Minimum Pool Size to avoid excessive opening/closing of connections during normal processing.</p> <p>The default is 1000</p>
Startup Retry Count	<p>The number of times that the system should attempt to initialize the connection pool at startup if the initial attempt fails. The default is 0</p>
Startup Backoff Timeout (sec)	<p>The number of seconds that the system should wait between attempts to initialize the connection pool. The default is 10</p>

7. Click **Save Connection**.

The connection you created appears on the Adapter Connections screen and in Designer.

You can enable a connection only if the parameters for the connection are valid.

Enabling ISO_8583 Connections

An ISO_8583 connection must be enabled before a Module for ISO_8583 service can use the connection at run time. You enable ISO_8583 connections using Integration Server Administrator.

Note:

When you reload a package that contains enabled connections, the connections are automatically enabled when the package reloads. If the package contains connections that are disabled, they remain disabled when the package reloads.

As you create user-defined packages in which to store connections, use the package management functionality provided in Designer and set the user-defined packages to have a dependency on the WmIOS8583 package. That way, when the WmIOS8583 package loads or reloads, the user-defined packages load automatically.

> To enable a connection

1. In the Solutions menu in Integration Server Administrator, click **ISO_8583 Module**.
2. On the Connections screen, click **No** in the **Enabled** column for the connection you want to enable.

Integration Server Administrator enables the adapter connection and displays **Yes** in the **Enabled** column.

Disabling ISO_8583 Connections

ISO_8583 connections must be disabled before you can edit or delete them. You disable ISO_8583 connections using Integration Server Administrator.

1. In the Solutions menu in Integration Server Administrator, click **ISO_8583 Module**.
2. On the Connections screen, click **Yes** in the **Enabled** column for the connection you want to disable.

Integration Server disables the adapter connection and displays **No** in the **Enabled** column.

Viewing ISO_8583 Connections

You can view ISO_8583 connections and each connection's parameters from Integration Server Administrator or Designer.

➤ **To view the parameters for a connection using Integration Server Administrator**

1. In the Solutions menu in Integration Server Administrator, click **ISO_8583 Module**.
2. On the Connections screen, click the **View** icon for the connection you want to see.

The View Connection screen displays the parameters for the connection.

3. Click **Return to ISO_8583 Connections** to return to the main connections screen.

For information about viewing ISO_8583 connection details in Designer, see the *webMethods Service Development Help*.

Editing ISO_8583 Connections

You can update a connection's parameters using Integration Server Administrator.

1. In the Solutions menu in Integration Server Administrator, click **ISO_8583 Module**.
2. Make sure the connection is disabled before editing it. For instructions, see [“Disabling ISO_8583 Connections” on page 33](#).
3. On the Connections screen, click the **Edit** icon for the connection you want to edit.

The Edit Connection screen displays the current parameters for the connection. Update the connection's parameters by typing or selecting the values you want to specify.

4. Click **Save Changes** to save the connection and return to the Connections screen.

Copying ISO_8583 Connections

You can copy an existing ISO_8583 connection to configure a new connection with the same or similar connection properties without having to re-type all of the properties for the connection. You copy ISO_8583 connections using the Integration Server Administrator.

1. In the Solutions menu in Integration Server Administrator, click **ISO_8583 Module**.
2. On the Connections screen, click the **Copy** icon for the connection you want to copy.

The Copy Connection screen displays the current parameters for the connection you want to copy. Name the new connection, specify a package name and folder name, and edit any connection parameters as needed by typing or selecting the values you want to specify.

Note:

When you copy a connection, the new connection does not save the password of the original connection. You must enter and then retype the password before you can save the new connection.

3. Click **Save Connection Copy** to save the connection and return to the Connections screen.

Deleting ISO_8583 Connections

If you no longer want to use a particular ISO_8583 connection, you can delete it by following the instructions in this section. You delete ISO_8583 connections using Integration Server Administrator.

1. In the Solutions menu in Integration Server Administrator, click **ISO_8583 Module**.
2. Make sure the connection is disabled before deleting it. For instructions, see [“Disabling ISO_8583 Connections” on page 33](#).
3. On the Connections screen click the **Delete** icon for the connection you want to delete.

Integration Server deletes the ISO_8583 connection.

Send ISO_8583 Messages

Module for ISO_8583 provides the `wm.esd.iso8583.transport:tcpip`

service that acts as an ISO_8583 client to deliver ISO_8583 messages using the TCP/IP transport protocol. The ISO_8583 delivery service registers with Trading Networks during the startup of Module for ISO_8583 as one of the supported delivery methods.

To send ISO_8583 messages using Trading Networks, when you create trading partner profiles, you define the ISO_8583 delivery method as part of the partner profile. For more information about creating profiles, see [“Define Trading Networks Profiles” on page 44](#) and the *webMethods Trading Networks Administrator’s Guide* for your release.

Defining ISO_8583 as the delivery method in trading partner profiles

1. In My webMethods, go to **Applications > Administration > Integration > B2B > Partner Profiles > Add Profile**.
2. On the **Delivery Settings** tab, click **Add Delivery Method**.
3. In the **Delivery Method** field, select **ISO_8583**. Set values for the following required fields:

Important:

When configuring the delivery settings for the ISO_8583 client, do not specify values in the **Host**, **Port**, **User Name**, and **Password** fields. Module for ISO_8583 uses the value in the **connectionAlias** field to obtain the details of the ISO_8583 server.

Field	Description
bizDoc	The document representation of the ISO_8583 message.

Field	Description
connectionAlias	The qualified namespace of the ISO_8583 connection to the ISO_8583 server, in the format <i>folder:connectionName</i> . For example, <code>connections:tcpip_host</code>

4. Select the **Use as preferred protocol** checkbox if you want to use ISO_8583 as your preferred method to deliver ISO_8583 messages to your partner.
5. Click **OK**.

Receive ISO_8583 Messages

You receive ISO_8583 messages through the TCP/IP transport protocol using the Module for ISO_8583 ISO_8583 listener. To manage the lifecycle of the Module for ISO_8583 ISO_8583 listener, you configure an ISO_8583 port where Integration Server listens for requests. The ISO_8583 port is part of the WmISO8583 package functionality and is only available after you install Module for ISO_8583 and enable the WmISO8583 package. When configuring an ISO_8583 port, you can specify the Integration Server service that the ISO_8583 listener invokes when it receives an ISO_8583 message through the TCP/IP transport protocol.

Configuring an ISO_8583 Port

1. Open Integration Server Administrator if it is not already open.
2. Go to **Security > Ports**.
3. Click **Add Port**.
4. In the **Add Port** area of the screen, select **webMethods/ISO_8583**.
5. Click **Submit**. Integration Server Administrator displays a screen requesting information about the port. Enter the following information:

Field	Description
Port	The port on which Integration Server listens for ISO_8583 requests. For example, 6000.

Note:
If your Integration Server runs on a UNIX system, using a port number below 1024 requires that the server run as 'root.' For security reasons, Software AG discourages this practice. Instead, run your Integration Server using an unprivileged user ID on a high number port (for example 1024 or above) and use the port remapping

Field	Description
	capabilities present in most firewalls to move requests to the higher numbered ports.
Package Name	<p>The name of the package associated with the ISO_8583 port. The default is WmISO8583.</p> <p>When you enable the package, the server enables the port. When you disable the package, the server disables the port and the ISO_8583 port option is not visible on the Integration Server Administrator Add Port screen.</p> <p>Important: When you specify a package name other than the default value, the package associated with the ISO_8583 port must have package dependency set to either the WmISO8583 package, or to a package that is dependent on the WmISO8583 package. In this way you ensure that when the WmISO8583 package is disabled, the ISO_8583 port package will be also disabled.</p> <p>For information about specifying package dependencies, see the <i>webMethods Service Development Help</i>.</p> <p>Note: If you replicate this package, Integration Server creates a port with this number and the same settings on the target server. If a port with this number already exists on the target server, its settings remain intact. Module for ISO_8583 will continue to work after it is replicated to another server.</p>
Bind Address (optional)	<p>The IP address to which to bind this port. For example, 10.60.25.217 or myiso8583.server.com.</p> <p>Specify a bind address if your machine has multiple IP addresses and you want the port to use this specific address. If you do not specify a bind address, the server picks one for you.</p>
Service	<p>The name of the Integration Server service that the ISO_8583 listener invokes when it receives an ISO_8583 message through the TCP/IP transport. The default value is wm.estd.iso8583.tn.service:receive.</p> <p>Note: When you use a custom service, the input and output signature of the custom service should have <i>ffdata</i> (byte array) and <i>schemeID</i> (string) as input parameters and <i>response</i> as an output parameter (similar to the <code>wm.estd.iso8583.tn.service:receive</code> service). When the ISO_8583 Listener receives the ISO_8583 message, it sets the received content to the <i>ffdata</i> parameter and picks the response from the <i>response</i> output parameter. The listener sends this response as a</p>

Field	Description
	ResponseMessage for the received message when you use the synchronous delivery mode.
Run service Synchronously	Specify whether Module for ISO_8583 sends a response synchronously or asynchronously. The default is No . Valid values: <ul style="list-style-type: none"> ■ Yes Module for ISO_8583 sends a synchronous response using the same connection channel. ■ No Module for ISO_8583 sends an asynchronous response through a new channel.
Run As User	The name of the Integration Server User that the ISO_8583 listener uses to invoke the service specified in the Service field. By default no user is specified in the field. To specify a user, click the  icon and select a User Name from the Select User box.

6. Click **Save Changes**.
7. On the Ports screen, click **Edit** in the IP Access column to restrict the IP addresses that can connect to the ISO_8583 port as follows:
 - **Allow by Default.** Set up the port to allow requests from all hosts except for ones you explicitly deny. Use this approach if you want to allow most hosts and deny a few. This is the default setting.
 - **Deny by Default.** Set up the port to deny requests from all hosts except for ones you explicitly allow. Use this approach if you want to deny most hosts and allow a few.

Viewing and Editing the ISO_8583 Port Configuration

1. Open the Integration Server Administrator if it is not already open.
2. Go to **Security > Ports**.
3. Find the ISO_8583 port in the Port List and click the number in the **Port** column.
4. On the View ISO_8583 Listener Details page, you can view or edit the ISO_8583 listener configuration. To edit the ISO_8583 listener configuration, click **Edit ISO_8583 Listener Configuration**.

Integration Server Administrator displays the Edit ISO_8583 Listener Configuration screen, where you can edit the ISO_8583 listener configuration as described in .

For more information about configuring ports on Integration Server, see the *webMethods Integration Server Administrator's Guide* for your release.

Manage the ISO_8583 Listener

When you want to start the ISO_8583 listener, you enable the ISO_8583 port. When you want to shut down the ISO_8583 listener, you disable the ISO_8583 port. Disabling the ISO_8583 port blocks incoming requests from reaching the ISO_8583 listener. When the ISO_8583 port is disabled, clients receive an error message when they issue requests to it.

You can use the Integration Server Administrator to enable or disable the ISO_8583 port. On the **Security > Ports** screen, find the ISO_8583 port in the list of ports and change the status in the **Enabled** column to **Yes** when you want to enable the port. When you want to disable the port, change the status to **No**.

Another way to enable or disable the ISO_8583 port is to enable or disable the package associated with the port. For the procedure how to enable or disable a port, see the *webMethods Integration Server Administrator's Guide* for your release.

Module for ISO_8583 Support for Multiple ISO_8583 Listeners

You can configure more than one ISO_8583 port on the same Integration Server and consequently you can have multiple ISO_8583 listeners running on one Integration Server.

Viewing ISO_8583 listener status using the listener status service in Designer

1. Start Integration Server and Designer, if they are not already running.
2. Make sure Designer is using the Service Development perspective. If not, switch to it by selecting **Window > Open Perspective > Service Development**.
3. To connect to Integration Server:
 - a. In Package Navigator view, select the Integration Server to which you want to connect.
 - b. Right-click, and select **Connect to server**.

For more information about how to work with Integration Server in Designer, see the *Software AG Designer Online Help*.
4. In the Package Navigator view, expand the WmISO8583 package and locate the `wm.estd.iso8583.tn.transport:tcpipListenerStatus` service.
5. In Designer, select **Run > Run As > Run Service**.
6. In the **Enter Input for 'tcpipListenerStatus'** dialog box, specify input values for the service.
7. Click **OK**. Designer runs the service and displays the results in the Service Result view.

Receive More Than One ISO_8583 Message through an ISO_8583 Listener

Module for ISO_8583 supports receiving one or more ISO_8583 messages through an ISO_8583 listener. The ISO_8583 listener receives and processes the ISO_8583 messages one by one.

Send and Receive ISO_8583 Messages

Bi-directional communication with TCP Server is achieved in Module for ISO_8583 by configuring the Request Response Listener. The messages are sent and received using Request Response Listener. The Request Response Listener invokes the configured Response Handler service, on receiving an inbound message. The SendAsync service is used to send the messages through Request Response Listener. For more information on SendAsync service, refer “[wm.estd.iso8583.service:sendAsync](#)” on page 73.

Configuring a Request Response Listener

1. In Integration Server Administrator's navigation area, go to **Solutions > webMethods Module for ISO_8583**.

You will see a new section for configuring the listeners.

2. Click **Create a new Listener**, and select **Request Response Listener**.

The Request Response Listener opens the socket channel through which ISO_8583 messages can be send and received.

3. On the Request Response Listener screen, use the following fields:

Parameter	Description/Action
Package	The package in which to create the listener. Create the listener in a user-defined package rather than in the adapter's package. You must create the package using Developer or Designer before you can specify it using this parameter. For general information about creating packages, see the <i>webmethods Developer User's Guide</i> or <i>webMethods Service Development Help</i> for your release.
Folder Name	The folder in which to create the listener.
Listener Name	The name of the listener that listens for messages on a queue.
Retry Limit	The number of times the module tries to reconnect if the module fails to connect, or loses connection with the TCP server. Default: 5
Retry Backoff Timeout	The number of seconds that elapse between each of the retries specified in the retry limit. Default: 10

Important:

The listener name is prefixed by the folder name and is separated by a colon. For example: If the folder name is "Folder1" and the listener name is "Listener1", then the listener name in the "Listeners" screen will be "Folder1:Listener1".

4. In the **Listener Properties** section, use the following fields:

Parameter	Action/Description
Host Name	Required for remote connection. The name of the destination TCP server.
Port	Required. The port number of the destination TCP server.
Channel	Required for remote connection. The name of the JPOS channel.
Channel Timeout(msec)	Required. Specifies the amount of time the socket waits for sending and receiving the messages.
Response Handler Service	Required. Specify the service whose signature is in line with the specification : wm.estd.iso8583.specification:listenerServiceSpec. This service is invoked on receiving a message.
Request Timeout(sec)	Required: The expiry Timeout for the sent messages.
Request Expiry Service	The configured service is invoked on receiving an expiry event notification from the cache.
Keep Alive	By default, the value is true. It ignores all the exceptions, except connection exceptions while reading for the inbound messages. Reconnect is issued only on connection exceptions.

Note:

The Request Timeout(sec) and Request Expiry Service fields are crucial only in case of use case for Request/Response Mapping. You can configure the request timeout of minimal, if you do not need the Request/Response Mapping. The default value for Request Timeout is 1 sec.

5 Defining Trading Networks Information

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Overview

To use Trading Networks as a gateway for ISO_8583 message exchange with your trading partners, you define the following Trading Networks information:

- Trading partner profiles help define how you and your trading partners exchange ISO_8583 messages.
- A Trading Partner Agreement (TPA) is a set of parameters that you can use to govern how business documents are exchanged between two trading partners.

In addition, you register the following ISO_8583-specific items with Trading Networks to define how Trading Networks processes message transactions:

- TN document types for ISO_8583 messages
- Custom Trading Networks Attributes for ISO_8583 messages

Define Trading Networks Profiles

For Module for ISO_8583, you define a single trading partner profile for your organization (**My Enterprise**), and then you define a trading partner profile for each trading partner with whom you want to exchange ISO_8583 messages using Trading Networks.

Define Enterprise Profile

Before you define your trading partner profiles in Trading Networks and exchange business documents with your trading partners, you must first define your Enterprise profile. You define your enterprise profile by completing the fields on the Partner Profiles page in My webMethods.

The following section specifies the required fields you must complete to define an enterprise profile for use with Module for ISO_8583.

Required Enterprise Profile Fields

Profile information is displayed on the **Applications > Administration > Integration > B2B > Partner Profiles** tab in My webMethods. The following table lists and describes the required fields you must set when defining your enterprise profile (**My Enterprise**).

Required Profile Field for Enterprise	Description
Corporation Name	The name of your enterprise.
Unit Name	Optional. Specify the name of your unit.
External IDs > Add ID	The value for the external ID type that your enterprise uses within documents.

Required Profile Field Description for Enterprise

When exchanging documents, partners typically identify themselves within a document using Merchant Identifier (MID) number. You must specify the value that identifies your enterprise for that ID type.

Delivery Settings > Add Delivery Method

Specify the delivery method that you want Trading Networks to use to send ISO_8583 messages to your partner's system.

You must specify at least one delivery method as your preferred method by selecting the **Use as preferred protocol** check box. If you do not specify a preferred delivery method in Trading Networks, Module for ISO_8583 will not be able to determine how to send and receive the ISO_8583 messages.

You can specify any of the transport protocols that Module for ISO_8583 supports. For more information about the supported protocols, see ["Create ISO_8583 Clients" on page 26](#).

For procedural information about defining your enterprise profile, as well as descriptions of the fields you must complete when defining your enterprise profile, see the *webMethods Trading Networks Administrator's Guide* for your release.

Activate Enterprise Profile

You must activate (or enable) your enterprise profile before you can exchange documents with trading partners. For instructions, see the *webMethods Trading Networks Administrator's Guide* for your release.

Define your Trading Partners' Profiles

Each trading partner with whom you want to exchange business documents must have a trading partner profile in Trading Networks. After you have defined your enterprise profile, you are ready to define your trading partners' profiles. You define a trading partner profile by completing the required fields in My webMethods.

The following section specifies the required fields you must complete to define a trading partner profile for use with Module for ISO_8583.

Required Trading Partner Profile Fields

In My webMethods, go to **Application > Administration > Integration > B2B > Partner Profiles > Add Profile** and set the following required fields to define your partner's profile.

Required Profile Field for Trading Partner	Description
Corporation Name	The name of your partner's enterprise.
Unit Name	Optional. Specify the name of your unit.
External IDs > Add ID	<p>The value for the external ID type that your partner uses within documents.</p> <p>When exchanging documents, partners typically identify themselves within a document using Merchant Identifier (MID) number. You must specify the value that identifies your enterprise for that ID type.</p>
Delivery Settings > Add Delivery Method	<p>Specify the delivery method that you want Trading Networks to use to send ISO_8583 messages to your partner's system.</p> <p>You must specify at least one delivery method as your preferred method by selecting the Use as preferred protocol check box. If you do not specify a preferred delivery method in Trading Networks, Module for ISO_8583 will not be able to determine how to send and receive the ISO_8583 messages.</p> <p>You can specify any of the transport protocols that Module for ISO_8583 supports. For more information about the supported protocols, see "Create ISO_8583 Clients" on page 26.</p>

For procedural information about defining a trading partner profile, as well as descriptions of the fields you must complete when defining a trading partner profile, see the *webMethods Trading Networks Administrator's Guide* for your release.

Activate your Trading Partners' Profile

You must activate (or enable) your trading partner profile before you can exchange documents with your trading partners. For instructions, see the *webMethods Trading Networks Administrator's Guide* for your release.

Define ISO_8583 Trading Partner Agreements

Every TPA is uniquely identified by a Sender, Receiver, and an ISO8583 TPA agreement ID. During a transaction between trading partners, Module for ISO_8583 uses this information to retrieve the TPAs for the initiator/sender and fulfiller/receiver in the transaction and to process the business documents exchanged. Every message that is exchanged in Module for ISO_8583 is associated with a TPA.

You define and view TPAs in My webMethods on the **Administration > Integration > B2B > Trading Partner Agreements** page. For detailed information about working with TPAs in My webMethods, see the *webMethods Trading Networks Administrator's Guide*.

Note:

You must configure at least one TPA (or use the default Module for ISO_8583 TPA) to be able to execute message transactions.

With Module for ISO_8583, you can create a TPA in one of the following ways:

- **Create a default TPA.** Module for ISO_8583 automatically creates a default TPA when you run the module for the first time. Use the default TPA to meet the requirements of the majority of your trading partners. For example, when you want to prevent multiple Trading Networks queries to the database to assess what TPA should be used.

The default TPA is created with the following values:

Parameter	Value
ISO8583 TPA	ISO8583TPA
Sender	Unknown
Receiver	Unknown

Note:

The parameter, **schemeID** contains no value by default. **senderQualifier** is set to 2 and **receiverQualifier** is set to 32 by default.

You must define a schemeID in the default TPA. The module uses the schemeID defined in the default TPA to construct the ISO_8583 message if the value is missing in the HTTP and TCP/IP clients.

During message processing, Module for ISO_8583 first searches for a TPA with unique values for the Sender, Receiver, and the ISO8583 TPA, and a Status value of **agreed**. If that TPA exists, Module for ISO_8583 uses it. If no such TPA exists, the module uses the default TPA.

- **Create a partner-specific TPA.** Use this option when you must define partner-specific values in the TPA fields that are different from the default values in the Module for ISO_8583 default TPA. When creating a partner-specific TPA, you have to specify only the information that is different from the defaults.

TPA for Inbound and Outbound communication

TPA with agreement ID ISO8583TPA, contains wm.estd.iso8583.tn.tpa.rec:ISO8583TPA IS document type with the following information.

Parameter	Description
schemeID	Parses incoming ISO_8583 messages.
senderQualifier	The field number in the ISO_8583 message that contains the external ID of the sender profile.

Parameter	Description
receiverQualifier	The field number in the ISO_8583 message that contains the external ID of the receiver profile.

Inbound communication always uses the default TPA to retrieve the schemeID, senderQualifier, and receiverQualifier details.

Outbound communication uses either message bytes or bizDoc to send messages to the trading partner.

When using message bytes,

- if the schemeID is provided in the HTTP or TCP/IP clients, the module does not use TPA.
- if the schemeID is not provided in the HTTP or TCP/IP clients, the module retrieves the schemeID from the TPA's "ISO8583TPA" agreement ID and, the senderID and receiverID details from the `wm.estd.iso8583.tn.service:send` service.

When using bizDoc,

- if the schemeID is provided in the HTTP or TCP/IP clients, the module does not use TPA.
- if the schemeID is not provided in the HTTP or TCP/IP clients, the module retrieves the schemeID from the TPA's "ISO8583TPA" agreement ID and, the senderID and receiverID details from the bizDoc.

Note:

If a senderID and receiverID with agreement ID "ISO8583TPA" does not exist, the module uses the default TPA to get the schemeID.

Create a Partner-Specific TPA

You create a partner-specific TPA in one of the following ways:

- Using the Module for ISO_8583 `wm.estd.iso8583.tn.tpa:createISO8583TPA` service as described in [“Creating a Partner-Specific TPA using createISO8583TPA service” on page 48](#).
- Duplicate the default TPA and modify the values in the partner-specific fields. For information on duplicating a TPA, see the *webMethods Trading Networks Administrator’s Guide* for your release.
- Create a new TPA manually as described in [“Creating a Partner-Specific TPA manually” on page 49](#).

Creating a Partner-Specific TPA using createISO8583TPA service

Module for ISO_8583 provides the `wm.estd.iso8583.tn.tpa:createISO8583TPA` service that you use to create a partner-specific TPA and associate it with ISO_8583-specific parameters and values.

Note:

You can also use the `createISO8583TPA` service to create the Module for ISO_8583 default TPA. For example, when the default TPA is deleted instead of reloading the `WmISO8583` package to generate the default TPA, you can create a default TPA by running the `createISO8583TPA` without providing any input values.

➤ **To create a partner-specific TPA using the `wm.estd.iso8583.tn.tpa:createISO8583TPA` service**

1. Start Integration Server and Designer, if they are not already running.
2. Make sure Designer is using the Service Development perspective. If not, switch to it by selecting **Window > Open Perspective > Service Development**.
3. To connect to Integration Server:
 - a. In Package Navigator view, select the Integration Server to which you want to connect.
 - b. Right click, and select **Connect to server**.

For more information about how to work with Integration Server in Designer, see the *webMethods Service Development Help*.

4. In Package Navigator view, expand the `WmISO8583` package and locate the `wm.estd.iso8583.tn.tpa:createISO8583TPA` service.
5. In Designer, select **Run > Run As > Run Service**.
6. In the **Enter Input for 'createDefaultTPA'** dialog box, specify input values for the service.
7. Click **OK**. Designer runs the service and displays the results in the Service Result view.

Creating a Partner-Specific TPA manually

You can manually create a TPA by using the Trading Partner Agreements page in My webMethods.

1. In My webMethods, go to **Administration > Integration > B2B > Trading Partner Agreements > Add TPA**.
2. Specify the following values for the TPA fields on the Trading Partner Agreements page:

TPA Field	Value
ISO8583 TPA	ISO8583TPA
Sender	The name of the trading partner that has the sender role in the TPA.
Receiver	The name of the trading partner that has the receiver role in the TPA.

TPA Field	Value
Initialization Service	wm.estd.iso8583.tn.tpa:initTPA service, which sets default values for the wm.estd.iso8583.tn.tpa.rec:ISO8583TPA IS document type.
Export Service	Leave this field blank.
IS Document Type	wm.estd.iso8583.tn.tpa.rec:ISO8583TPA

3. Do one of the following:

- Click **Save** to save the changes you have made and continue working on the TPA.
- Click **Save and Close** to save the changes and close the TPA.

4. In Designer, run the wm.estd.iso8583.tn.tpa:initTPA service to populate the TPA with default values for the specified **IS Document Type**.

You can keep the values that you want to use and modify the values that do not suit your requirements.

For more information about creating a TPA and modifying the default values in the TPA, see the *webMethods Trading Networks Administrator's Guide* for your release.

Viewing TN Document Types for ISO_8583 messages

Module for ISO_8583 provides IS-8583 Default as the default TN document type. You can view the default TN document types for ISO_8583 messages using the Document Types page in My webMethods.

1. In My webMethods, go to **Administration > Integration > B2B > Document Types Administration > Document Types**.

Trading Networks displays the TN document type.

2. You can search for the IS-8583 Default TN document type. For information about how to perform a TN document type search in My webMethods, see the *webMethods Trading Networks Administrator's Guide*.

Custom Trading Networks Attributes for ISO_8583 Messages

The custom attributes for ISO_8583 messages are added to Trading Networks when you install Module for ISO_8583. The module checks if all the ISO_8583 Trading Networks attributes are already present during startup. If they are not present, the attributes are registered with Trading Networks. For information about how to view and manage document attributes, see the *webMethods Trading Networks Administrator's Guide* for your release.

Module for ISO_8583 extracts the values for these attributes from the corresponding fields of the ISO_8583 message.

Custom Attributes Associated with ISO_8583 Default

In My webMethods, you can view the following custom attributes associated with the ISO_8583 Default TN document type:

Custom Attribute	Field	Description
ISO 8583 Acquirer	32	Contains the acquiring institution identification code from the message.
ISO 8583 Message Forwarder	33	Contains the forwarding institution identification code from the message.
ISO 8583 Message Receiver	100	Contains the receiving institution identification code from the message.
ISO 8583 Card Issuer	2	Contains the primary account number (PAN) from the message.
ISO 8583 Message Type	0	Message type identifier extracted from first 4 digits of the message.
ISO 8583 System Trace Audit Number	11	Holds the system trace audit number from the message.
Forwarding Institution Country Code	21	Holds the forwarding institution country code from the message.
Processing Code	3	Holds the processing code from the message.
Message ID	11 + "_" + 7	Uniquely identifies ISO_8583 message stored in Trading Networks. This is a concatenation of field 11, system trace audit number and field 7, transmission date & time.
Merchant Type	18	Holds the merchant type information from the message.

6 Processing ISO_8583 Messages

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Overview

webMethods Module for ISO_8583 provides built-in services that you use to:

- Parse incoming ISO_8583 messages into the IS document format supported by Integration Server (IData objects).
- Generate ISO_8583 messages from the internal representation supported by Integration Server (IS document types).

For more information on IData objects and IS document types, see [“Architecture and Components” on page 6](#) and the *webMethods Service Development Help*.

Important:

To process ISO_8583 messages with Module for ISO_8583 correctly, you must verify that the ISO_8583 message contains all required fields as per the message scheme.

Parsing Incoming ISO_8583 Messages into IData Objects

When converting an incoming ISO_8583 message into an IData object, for example to send it to Integration Server for processing, you use the [“wm.estd.iso8583.service:convertISOMsgToIData” on page 70](#) service. To run the service, use Designer. The following procedure describes how to run the service in Designer.

➤ **To convert ISO_8583 messages into IData objects:**

1. Start Integration Server and Designer, if they are not already running.
2. Make sure Designer is using the Service Development perspective. If not, switch to it by selecting **Window > Open Perspective > Service Development**.
3. To connect to Integration Server:
 - a. In Package Navigator view, select the Integration Server to which you want to connect.
 - b. Right-click, and select **Connect to server**.

For more information about how to work with Integration Server in Designer, see the *webMethods Service Development Help*.

4. In Package Navigator view, expand the ISO_8583 package and locate the `wm.estd.iso8583.service:convertISOMsgToIData` service.
5. In Designer, select **Run > Run As > Run Service**.
6. In the **Enter Input for 'convertISOMsgToIData'** dialog box, specify input values for the service.

For information about the service parameters, see the [“wm.estd.iso8583.service:convertISOMsgToIData” on page 70](#) service.

7. Click **OK**. Designer runs the service and displays the results in the Service Result view.

Creating Outgoing ISO_8583 Messages

webMethods Module for ISO_8583 provides the [“wm.estd.iso8583.service:convertIDataToISOMsg” on page 70](#) service that you use to convert an IS document type of a specific ISO_8583 message into the respective ISO_8583 message format. Examples of each message format follow the procedure.

➤ To create ISO_8583 messages:

1. Start Integration Server and Designer, if they are not already running.
2. Make sure Designer is using the Service Development perspective. If not, switch to it by selecting **Window > Open Perspective > Service Development**.
3. To connect to Integration Server:
 - a. In Package Navigator view, select the Integration Server to which you want to connect.
 - b. Right click, and select **Connect to server**.

For more information about how to work with Integration Server in Designer, see the *webMethods Service Development Help*.

4. In Package Navigator view, expand the ISO_8583 package and locate the `wm.estd.iso8583.service:convertIDataToISOMsg` service.
5. In Designer, select **Run > Run As > Run Service**.
6. In the **Enter Input for 'convertIDataToISOMsg'** dialog box, specify input values for the service.

For information about the service parameters, see the [“wm.estd.iso8583.service:convertIDataToISOMsg” on page 70](#) service.

7. Click **OK**. Designer runs the service and displays the results in the Service Result view.

7 View Information about ISO_8583 Messages

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Overview of Viewing ISO_8583 Messages

When you use Module for ISO_8583 with Trading Networks, you can view the ISO_8583 messages that have passed through your system and have been saved to the Trading Networks database. You view documents (transactions) for every ISO_8583 message that is sent or received through Module for ISO_8583 from My webMethods. For more information about viewing documents, see the *webMethods Trading Networks Administrator's Guide* for your release.

View ISO_8583 Messages

You can view the following types of information about your ISO_8583 messages on the Transactions page in My webMethods:

- Sender and receiver of the ISO_8583 message.
- Date the document was received.
- Processing status of the ISO_8583 message.
- User status.
- Document type.
- Related documents (for example, the response document).
- On the **Content** tab, you view the ISO_8583 text/plain Data content part that contains the actual ISO_8583 message.
- On the **Activity Log** tab, you view the steps that the document goes through during inbound or outbound processing.

For steps to view documents, see the *webMethods Trading Networks Administrator's Guide* for your release.

Processing Status

The following tables list the processing statuses that Trading Networks sets while processing ISO_8583 messages, along with their meanings. You can use these statuses as criteria for selecting the ISO_8583 messages that you want to view.

Status Values When Sending ISO_8583 Messages

Processing Status	User Status	Meaning
IN PROGRESS	Persisted	Message is ready for transmission and is stored in the Trading Networks database.
DONE	SendMessage:sent	Message sent to the receiver successfully.

Processing Status	User Status	Meaning
DONE	ResponseMessage	The response message is delivered to the specified host.
DONE W/ ERRORS	SendMessage:error	Message could not be send to the receiver. An error message is logged into the Trading Networks Activity Log stating the exact reason for the failure.
DONE W/ ERRORS	SendMessage:sent:Duplicate	Message sent to the receiver successfully but the sent message is a duplicate. Two messages are duplicated if they have the same Sender, Receiver, and Message ID. In this case Module for ISO_8583 creates a relationship between the message and all duplicate messages with a relationship name = Duplicate

Status Values When Receiving ISO_8583 Messages

Processing Status	User Status	Meaning
IN PROGRESS	Persisted	Message has been received successfully by Module for ISO_8583 and is stored in the Trading Networks database.
DONE	ResponseMessage	If the message type is response, processing of the ISO_8583 message is successful. Module for ISO_8583 relates the response with the original message sent. If the original message is a duplicate, the module relates the response with all messages duplicating the original and logs in a warning message in the Activity Log.
DONE	ReceiveMessage:default	Message received and processed successfully.
DONE	ReceiveMessage: ErrorInMessage	Module for ISO_8583 received response message for a message not sent by Module for ISO_8583.
DONE W/ ERRORS	ReceiveMessage: error	Message received but processing failed. An error message is logged into the Trading Networks Activity Log stating the exact reason for the failure.
DONE W/ ERRORS	ReceiveMessage: default:Duplicate	Message received and processed successfully, but the received message is a duplicate. Two messages are duplicated if they have the same

Processing Status	User Status	Meaning
		Sender, Receiver, and Message ID. In this case Module for ISO_8583 creates a relationship between the message and all duplicate messages with a relationship name = Duplicate

8 Logging and Error Handling

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Overview

The following sections describe webMethods Module for ISO_8583 error, and message logging. A list of error codes and supporting information appears at the end of this chapter.

Module for ISO_8583 Message Logging

Module for ISO_8583 uses the Integration Server logging mechanism to log messages. Module for ISO_8583 logs informational, warning, and error messages to the server log of the Integration Server. To view the server log, use the Integration Server Administrator. For steps to view and configure the server log, see the *webMethods Integration Server Administrator's Guide* for your release.

The messages that Module for ISO_8583 adds to the server log appear in the following format: WHL.000*n.nnnn*, where:

- WHL is the product code that indicates this message is issued by Module for ISO_8583.
- 000*n* is the Module for ISO_8583 major error code, where *n* can take the following values:
 - 1 indicates that the error, warning or informational message is generated by Module for ISO_8583 to log a general error.
 - 2 indicates that the error, warning or informational message is generated during the serialization of the message; that is, when using the `convertIDataToHL7` service to convert the HL7 data from the IData format into the HL7 ER7 or XML representation.
 - 3 indicates that the error, warning or informational message is generated during the deserialization of the message; that is, when using the `convertHL7ToIData` service to convert the HL7 representation into IData format.
 - 4 indicates that the error, warning or informational message is generated during the processing of the message in Trading Networks.
 - 5 indicates that the error, warning or informational message is generated during a code table operation.
- *nnnn* represents the error's minor code. For detailed descriptions of the Module for ISO_8583 error codes, see .

The messages that Module for ISO_8583 adds to the server log for MLLP connections appear in the following format: ADA.0515.*nnnn*, where:

- ADA is the product code for the MLLP Adapter that manages MLLP connections.
- 515 indicates the MLLP Adapter major code.
- *nnnn* represents the error's minor code.

Module for ISO_8583 Error Codes

The following section lists the major and minor Module for ISO_8583 error codes and provides information on the error message, reason, and possible action for each error.

1004 Invalid input found for parameter *parameter_name*. Value: *parameter_value*

Explanation: Error. The value of the *parameter_name* input to the service and the value implied from the input message do not match.

Action: Ensure that the input value for *parameter_name* is correct.

1014 Error while extracting request data. Exception: *error_text*.

Explanation: Error. Module for ISO_8583 has encountered an error during the processing of an incoming request.

Action: See the Integration Server Error log for more details..

1016 No Module for ISO_8583 message found in the pipeline

Explanation: Error. Module for ISO_8583 did not find an ISO-8583 message in the pipeline.

Action: Ensure that the Module for ISO_8583 message is sent.

1021 Protocol "*transport_protocol*" specified by the user/auto selected by system is invalid. Set valid protocol explicitly in input or configure preferred protocol in the receivers TN profile.

Explanation: Error. Module for ISO_8583 found that the specified transport protocol is incorrect or the preferred protocol for the receiver is either not set or not supported.

Action: Ensure that the protocol name passed to the service is valid and supported by Module for ISO_8583. If the protocol is not passed to the service, ensure that the preferred protocol in the receiver Trading Networks profile is set and is one of the transports supported by Module for ISO_8583.

1031 No partner profile found for External ID: *External_ID* and ID Type: *ID_Type*, will treat the partner as Unknown.

Explanation: Error. Module for ISO_8583 can not find the internal Trading Networks profile IDs for the specified external ID.

Action: See the Integration Server Error log for more details about the error. Ensure that you have set up trading partner profiles for the specified external ID as described in the webMethods Module for ISO_8583 documentation.

1032 Internal ID not found for Sender/Receiver in message ID: *message_ID*.

Explanation: Warning. The incoming Module for ISO_8583 message with the specified *message_ID* contains an Internal ID for Sender/Receiver that does not have corresponding trading partner profiles in Trading Networks.

Action: Set up trading partner profiles for the sender and receiver involved in the message exchange.

1033 No partner profile found for corporation name: *corporation_name* and organizational unit: *unit_name*, and will treat the partner as Unknown.

Explanation: Warning. Module for ISO_8583 did not find a partner profile for the specified *corporation name* and *unit name* combination and will use the default Unknown profile.

Action: Ensure that you have a unique trading partner represented by the *corporation name* and *unit name* combination.

1034 Multiple partner profile found for corporation name: *corporation_name* and organizational unit: *unit_name*, will use partner ID *partner_ID*.

Explanation: Warning. Module for ISO_8583 found multiple partner profiles for the specified *corporation_name* and *unit_name* combination and will use the first found partner ID.

Action: Ensure that you have a unique trading partner represented by the *corporation_name* and *unit_name* combination.

1053 ISO_8583 TCP/IP Client unable to get end point information for profile: *profile_name*.

Explanation: Error. Module for ISO_8583 can not find the details required to establish connection to the ISO_8583 listener in the trading partner profile.

Action: Ensure that the trading partner profile is set up correctly as described in the webMethods Module for ISO_8583 documentation. See the Integration Server Error log for more details.

2051 Error while registering default ISO_8583 TN document types. Exception: *error_text*.

Explanation: Error. Module for ISO_8583 encountered an error when registering the default ISO-8583 BizDocEnvelope types with Trading Networks during startup.

Action: See the Integration Server Error log for more details.

2053 Error while registering default ISO_8583 TN BizDocEnvelope attributes. Exception: *error_text*.

Explanation: Error. Module for ISO_8583 encountered an error when registering the default ISO-8583 document attributes with Trading Networks during startup.

Action: See the Integration Server Error log for more details.

4001 Error occurred while persisting the BizDocEnvelope. Error: *error_text*

Explanation: Error. Saving the BizDocEnvelope for an ISO-8583 message in the Trading Networks database has failed.

Action: See the Integration Server Error log for more details. Ensure that the Trading Networks database is set up and the connection details properly configured. For information about configuring the Trading Networks database, see the webMethods Trading Networks documentation.

5001 Cannot process the incoming ISO_8583 message. Received message is invalid ISO_8583 message.

Explanation: Error. The received ISO-8583 message is not valid as per the scheme.

Action: Ensure that all required fields and components are present in the ISO-8583 message with valid data as per scheme.

5008 Could not send the message.

Explanation: Error. Error occurred while sending the ISO-8583 message to the specified recipient.

Action: Ensure that the ISO-8583 message is valid and the transport protocol is configured in the receiver partner profile, set explicitly in the send service, or a preferred valid delivery protocol is set in the TPA.

5010 Error occurred while setting an HTTP response code.

Explanation: Error. ISO-8583 Module uses the `pub.flow:setResponseCode` service to set the response code for a received HTTP request after processing the request. Occurs when there is an error setting the HTTP response code.

Action: Contact Software AG Global Support.

5013 Preferred protocol is not set for the receiver profile *Receiver_ID*.

Explanation: Error. The preferred transport protocol is not set in the Trading Networks receiver partner profile.

Action: Ensure that a valid preferred protocol value is set for all receiver's Trading Networks profiles.

5015 Invalid receiver ID: *receiver_ID* type: *receiver_ID* type. No such partner profile exists in trading network.

Explanation: Error. This exception is thrown when trying to generate a BizDoc but the Receiver details specified in the enclosed ISO-8583 message are invalid, that is they do not exist in the trading network profiles.

Action: Ensure that a partner profile entry exists in Trading Networks for the Receiver ID and Receiver ID type combination.

6001 ISO_8583 TCP/IP listener thread started up at *port_number*, but listener has invalid state. listener STATE: *status_value*. Terminating listener thread.

Explanation: Warning. The specified ISO_8583 listener failed to initialize.

Action: See the Integration Server Error log for more details. Contact Software AG Global Support.

6003 Error starting to listen: *port_number*

Explanation: Error. The specified port number is already in use.

Action: Specify a different port number and retry.

6004 ISO_8583 TCP/IP listener failed to open non-blocking listener port *port_number*. Listener stopped.

Explanation: Error. The ISO_8583 listener failed to start.

Action: See the Integration Server Error log for more details.

6014 | Error during ISO_8583 listener (*listener_name*) cleanup. Exception: *exception_text*

Explanation: Error. The error occurred while shutting down or disabling the ISO_8583 listener when input and output operations are in progress.

Action: Before disabling the ISO_8583 listener, make sure that no I/O operations are in progress by running the Module for ISO_8583 listener status service. For more information about the service, see the webMethods Module for ISO_8583 documentation.

6019 ISO_8583 listener startup request at port *port_number* ignored. Listener status: *listener_status*

Explanation: Warning. You attempted to start an ISO_8583 listener that is not stopped.

Action: Check the status of the listener.

6020 ISO_8583 listener (*listener_details*) shutdown request ignored. Listener status: *listener_status*

Explanation: Warning. The listener is not running.

Action: Check the status of the listener.

6033 Could not initialize ISO_8583 listener. Invalid port specified: *port_number*

Explanation: Error. The specified port number is incorrect.

Action: Specify a valid value for the port number. Valid values for port numbers range from 1 to 65536. Retry.

7001 Error while creating TPA for Sender ID: *sender_ID* Receiver ID: *receiver_ID* Agreement ID: *agreement_ID*

Explanation: Error. Module for ISO_8583 encountered an error when creating the trading partner agreement between trading partners with the specified *sender_ID* and *receiver_ID*.

Action: See the Integration Server Error log for more details.

7002 Error while getting profile details for the profile ID *profile_ID*. Error: *error_text*

Explanation: Error. Module for ISO_8583 could not find the Trading Networks delivery method of the sending partner when replying to an incoming message on the receiver side.

Action: Set up the required Trading Networks delivery method details of the sending trading partner as described in the webMethods Module for ISO_8583 documentation. For more details about the error, see the Integration Server Error log.

7003 Invalid TPA state found for sender ID: *sender_ID*, receiver ID: *receiver_ID*, agreement ID: *agreement_ID*. Expected: *agreed* Found: *agreement_status*

Explanation: Error. ISO-8583 Module found the required trading partner agreement but its status is not "Agreed".

Action: Set the TPA status to "Agreed".

7007 Could not find TPA for Receiver ID: *receiver_ID* Sender ID: *sender_ID* Agreement ID: *agreement_ID*

Explanation: Error. An Module for ISO_8583 TPA is not available for the specified Sender and Receiver ID combination.

Action: Ensure that a valid Module for ISO_8583 TPA exists between the Sender ID and Receiver ID and it is in agreed state.

8000 | DocType : *Doc_Name* already exists.

Explanation: Error. The error occurred because doctype already exists.

Action: Delete the existing doctype using `deleteDocTypes` service, to create a doctype with same namespace.

8001 DocType : *Doc_Name* does not exist.

Explanation: The doctype mentioned in the transaction does not exist.

Action: Create a doctype *Doc_Name* using Integration Server Service `generateDocTypes` or change the doctype to a different one in the transaction.

9 WmISO8583 Services

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Overview of WmISO8583 Services

This chapter describes the built-in services and other elements, provided with the WmISO8583 and WmISO8583DocTypes packages of Module for ISO_8583.

wm.estd.iso8583.service:convertIDataToISOMsg

Converts an IS document (IData object) of a specific ISO_8583 scheme into an ISO_8583 message.

Input Variables

<i>data</i>	Document Mandatory. The IS document to be converted into ISO_8583 message.
<i>schemeID</i>	String Mandatory. The namespace of the unique ISO_8583 message document type to use for conversion.

Output Variables

<i>isoMsg</i>	Object Conditional. Contains the ISO_8583 message converted from the IS document for the specified document type.
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wm.estd.iso8583.service:convertISOMsgToIData

Converts an ISO_8583 message of a specific ISO_8583 scheme into its respective IS document.

Input Variables

<i>isoMsg</i>	Object Mandatory. The ISO_8583 message to be converted into IS document.
<i>schemeID</i>	String Mandatory. The namespace of the unique ISO_8583 message document type to use for conversion.

Output Variables

<i>data</i>	Document Conditional. Contains the IS document for the specified ISO_8583 message document type.
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wm.estd.iso8583.service:generateDocTypes

Generates an IS document for the specified ISO_8583 scheme.

Input Variables

<i>schemeID</i>	String Mandatory. The namespace for the new scheme.
<i>schemeLocation</i>	String Mandatory. The absolute file path to the ISO_8583 jPOS message configuration file.

Output Variables

<i>doc</i>	Document Conditional. Contains the generated IS document.
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wm.estd.iso8583.service:deleteDocTypes

Deletes an existing ISO_8583 scheme.

Input Variables

<i>schemeID</i>	String Mandatory. The namespace for the document type to be deleted.
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Output Variables

<i>success</i>	boolean Conditional. <code>True</code> if the scheme is successfully deleted. Else, <code>False</code> .
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wm.estd.iso8583.service:send

Send an ISO_8583 message to an ISO_8583 server.

Input Variables

<i>isoMsg</i>	Object Mandatory. The ISO_8583 message to be sent to the ISO_8583 server.
<i>connectionAlias</i>	String Mandatory. The namespace of ISO_8583 connection.

Output Variables

<i>response</i>	Object Conditional. When you use the synchronous delivery mode, the value of the response parameter is the payload of the ISO_8583 message. The value of the response parameter is sent as a response to the Sender.
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wm.estd.iso8583.tn.service:receive

Receives, recognizes, and saves ISO_8583 messages sent by a trading partner using the specified Trading Networks transport protocol.

Input Variables

ffdata **Object** Optional. The incoming ISO_8583 message in the form of a stream.

Note:

This parameter is filled in internally with the ISO_8583 message when it is received through HTTP or TCP/IP.

Output Variables

response **byte[]** Optional. When you use the synchronous delivery mode, the value of the response parameter is the payload of the ISO_8583 message. The value of the response parameter is sent as a response to the Sender.

wm.estd.iso8583.tn.service:send

Sends ISO_8583 messages to a trading partner using the specified Trading Networks transport protocol.

Input Variables

message **Object** Optional. The incoming ISO_8583 message in the form of bytes.

bizDoc **Document** Optional. The Trading Networks document representation of an ISO_8583 message.

schemeID **String** Optional. The namespace for the message scheme.

tnProtocol **String** Optional. The Trading Networks transport protocol to use for sending the message.

- For HTTP, set to Primary HTTP.
- For TCP/IP, set to ISO_8583.

If you provide a value for *tnProtocol*, it will take precedence over the preferred protocol set for the trading partner in his Trading Networks profile.

senderID **String** Optional. External ID of the sender.

senderIDType **String** Optional. External ID type of the sender.

<i>receiverID</i>	String Optional. External ID of the receiver.
<i>receiverIDType</i>	String Optional. External ID type of the receiver.

Output Parameters

<i>sendStatus</i>	<p>Document Contains the outcome of the send operation. The output of the delivery is determined by the Trading Networks <code>wm.tn.rec:DeliveryServiceOutput</code> document record type. For more information about this document record type, see the <i>webMethods Trading Networks Built-In Services Reference</i> for your release. The document <code>sendStatus</code> has the following parameters:</p> <ul style="list-style-type: none"> ■ <i>status</i> String The status the delivery service returns. Valid values are: <ul style="list-style-type: none"> ■ <code>success</code> - The send operation is successful. ■ <code>failure</code> - The send operation has failed. ■ <i>status Message</i> String The delivery-specific message that the delivery service returns along with the status. ■ <i>transport Time</i> String The total time (in milliseconds) that the delivery service used to deliver the document. ■ <i>bizDocID</i> String The BizDocEnvelope ID of the sent document. ■ <i>messageID</i> String The ISO_8583 message Control ID of the sent message. ■ <i>response</i> Object The incoming ISO_8583 message in the form of bytes.
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wm.estd.iso8583.service:sendAsync

The `sendAsync` is used to send messages to the destination host. Module for ISO_8583 uses ehcache to store messages that needs to be sent to the destination host. The `sendAsync` service puts messages in cache and the Request Response Listener picks the messages from the cache to send it to the destination. Cache configuration is located at `<webM_Home>\IntegrationServer\<instance>\config\Caching\SoftwareAG-ISO_8583.xml`

Input Variables

<i>isoMsg</i>	The iso8583 message.
<i>key</i>	The unique key to identify the iso8583 message.

Note:

The existing key can be used, if you do not want to uniquely identify the messages in the cache.

listenerName

The listener name of the Request/Response Listener

Note:

You can send the messages only if the Listener is enabled.