



**TECHNICAL WHITE PAPER**

**COVAST OFTP ADAPTER**  
**FOR**  
**IBM WEBSHERE PARTNER GATEWAY**

**SEPTEMBER 2005**

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## 1 INTRODUCTION

This technical white paper describes the Covast OFTP Adapter for [IBM WebSphere Partner Gateway](#) (WPG), IBM's B2B product. The Covast OFTP Adapter makes it possible for WPG users to exchange messages with business partners that require the use of this protocol.

### 1.1 WHAT IS OFTP?

The ODETTE File Transfer Protocol (OFTP) was defined by the European automotive industry in 1986 to extend the traditional file-transfer capabilities of FTP to support Just In Time operations. OFTP supports end-to-end acknowledgments, binding of EDIFACT messages and runs on top of X.25 or ISDN connections.

OFTP is now used by most major European automotive manufacturers and their suppliers. It is also used by the chemical industry, white goods manufacturers and is currently being adopted by other sectors such as banking.

### 1.2 HOW DOES IT WORK?

A typical OFTP implementation links an automotive supplier to a car manufacturer. Both have implemented an OFTP software solution to exchange delivery forecasts and other EDI messages. Each has a process in place that listens for incoming OFTP calls and can make outbound calls. The peer wanting to establish a connection first tries to setup an X.25 or ISDN connection with the remote party (depending on which one of the two lower level protocols is used). Once this connection is made, the OFTP connection will be set up. Each party has a unique OFTP ID in order to identify each other. During the OFTP call setup, a negotiation takes place which results in using the ideal communication parameters for that particular peer-to-peer connection.

Once the OFTP session has been setup, both parties can send and receive EDI or other types of messages. Each party can request a 'change direction' and take control of the connection. This enables the most effective usage of a connection already set up.

Messages are acknowledged by means of the EERP (End to End Response Protocol), a special message to indicate to the sender that a message has been received by the final destination and thus assures the delivery of important business documents.



## 2 THE WEBSHERE PARTNER GATEWAY OFTP ADAPTER

The Covast OFTP Adapter for WPG is registered as a custom transport in WPG during installation of the Adapter. Since it fully leverages the WPG Adapter Framework it brings the end-user the same level of configuration, management and monitoring capabilities as a native (out-of-the-box) WPG adapter.

### 2.1 CONFIGURATION OF THE ADAPTER

The OFTP configuration information on the business partner level is stored in the Trading Partner Management database of WPG. The Trading Partner Management database is accessible via the user interface (the Console) for setting up WPG Gateways and Targets by a system administrator who is responsible for setting up new and maintaining existing trading partner relationships.

The following information can be configured per trading partner (properties indicated with a \* are mandatory):

Property	Comments
Odette ID*	This contains the unique Identification by which a business partner is identified in the Odette community. This usually is the same ID as used in the EDIFACT UNB sender and recipient fields.
ISDN or X.25 address*	Depending on the type of OFTP connection, this contains the ISDN address (ISDN number) or X.25 address (NUA) of the business partner, needed to set up a physical network connection.
Send/Receive password*	The Send Password contains the password that the partner uses when they make an OFTP connection with the local WPG system. The Receive Password contains the password that the partner wants to receive when the local WPG system makes a connection with the partner's system.
SSID identification	Depending on the business partner's requirements the identification configured here can be used as the SSID (Start Session IDentification) to set up an OFTP session. This identification will overrule the Odette ID defined above. When receiving inbound OFTP calls, the OFTP Adapter will first check if the partner's identifier has been defined as an Odette ID. If not, it will check if the SSID identification defined here matches. This can be used to send messages with different departmental sender id's over a corporate OFTP connection.
X.25 facilities	OFTP over EICON X.25 only: These are the optional X.25 facilities to be set in outgoing calls to this partner. The most commonly used facilities are: Packet size negotiation, Window size negotiation and Reversed charging.
EERP Send/Receive*	The EERP Send property defines if this partner sends EERP's (End to End Response Protocol) for the documents they receive from the local system. EERP's are treated as receipt notifications. Select `Never` or `Normal`. The outbound messages only get removed from the

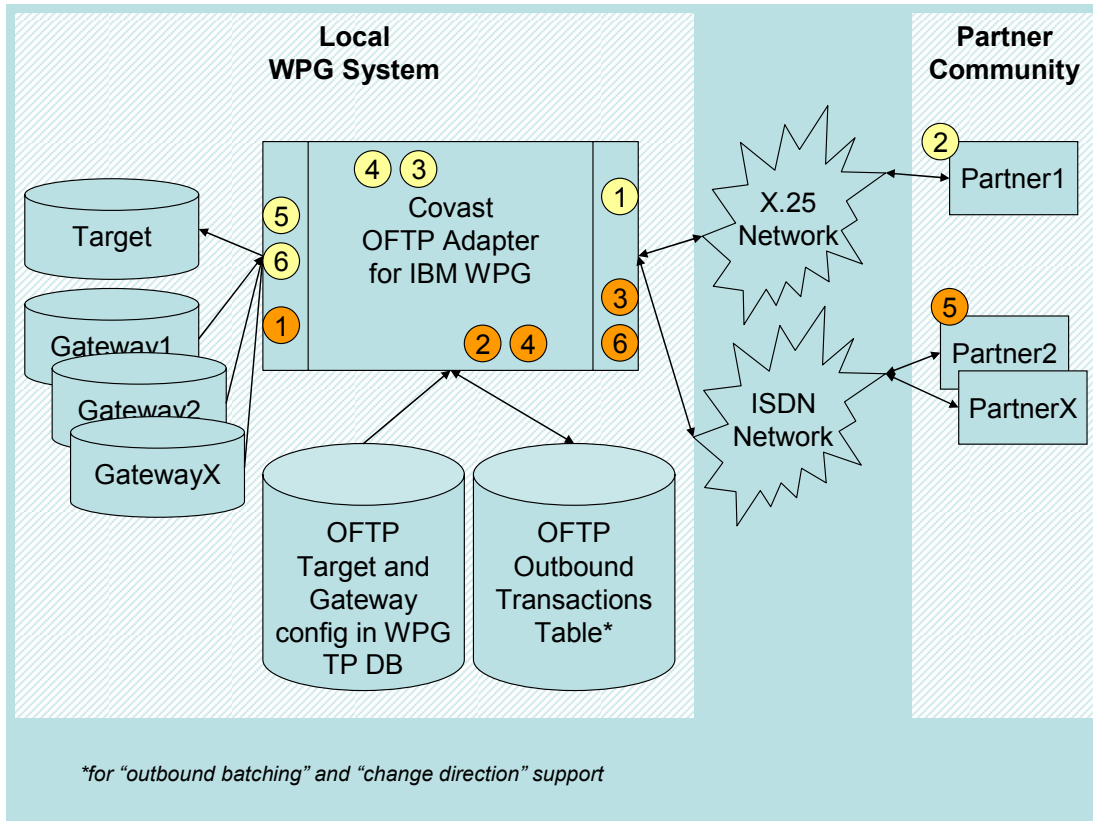


	<p>outbound transactions table when the message has been acknowledged. EERP Receive defines if this partner wants to receive EERP's. `Normal` means that the OFTP Connector will always send an EERP as soon as a document has been received and processed correctly. `Never` means that the Adapter will never send an EERP for received documents.</p>
Call directions*	<p>This specifies the call directions for this partner. Select from: Incoming, Outgoing and Both:</p> <ul style="list-style-type: none"><li>• Incoming: means that this partner will never setup a connection with the local system. They will wait for calls from the local system;</li><li>• Outgoing: means that they will always setup connections with the local system. The local system will never call them;</li><li>• Both: means that either side can initiate calls.</li></ul> <p>This setting is mutually agreed upon.</p>
File directions*	<p>This defines the file directions for this partner. Select from: Send, Receive and Both:</p> <ul style="list-style-type: none"><li>• Send: means that this partner can only send documents to the local system;</li><li>• Receive: means that this partner can only receive documents from the local system;</li><li>• Both: means that either side can send and receive documents.</li></ul> <p>This setting is mutually agreed upon.</p>
Virtual File Name layout*	<p>Information is exchanged between OFTP entities in a standard representation called a Virtual File. This allows data transfer without regard for the nature of the communication systems used. This setting defines the layout (mask) of the virtual file names sent to this partner. This layout is usually a requirement of the business partner or it is something agreed upon mutually.</p>
Exchange Buffer size*	<p>This defines the OFTP exchange buffer size. Default is 2048. This size is also negotiated during session setup. As per the OFTP specification, the smallest negotiated size is always used. Exchange Buffers are the "packets" of data exchanged between two OFTP entities.</p>
Exchange Buffer credit*	<p>This defines the OFTP exchange buffer credit. Default is 7. This value is also negotiated during session setup. As per the OFTP specification, the smallest negotiated size is always used. Exchange buffer credit is used for data flow control purposes.</p>
Character coding*	<p>The character coding used to exchange documents with this partner. Options are ASCII and EBCDIC. This setting depends on partner requirements. Messages will automatically be converted to and from ASCII on the local WPG side.</p>
Data format*	<p>The data format to be exchanged with this partner. Options are:</p> <ul style="list-style-type: none"><li>• EDIFACT/ODETTE (text)</li><li>• EDIFACT/ODETTE (unstructured)</li><li>• VDA (fixed)</li></ul> <p>This setting depends on partner requirements.</p>

Outbound messages will always be stored in the OFTP outbound transactions table in order to be able to support batching and be able to handle “change direction” requests.

## 2.2 ADAPTER ARCHITECTURE

Figure 1: High Level Architecture of the OFTP Adapter for WPG



### **Inbound calls (yellow):**

1. When WPG is started, all appropriate OFTP Targets are initialized and start detecting inbound calls on either X.25 or ISDN channels;
2. A partner tries to make an X.25 (or ISDN) call to a local OFTP Target;
3. The OFTP Target detects the incoming call and tries to setup an OFTP connection by negotiating the communication settings. The partner and the recipient -as indicated in the inbound interchanges- should be known in the WPG TP database by means of their ODETTE ID or SSID;
4. Messages are received from the partner;
5. EERP's are sent back to the partner in the same session once the received messages have been successfully committed to WPG;
6. The OFTP adapter will check for outbound messages in the OFTP outbound transactions table and either request a change of direction for sending these messages (continue with step 4 in the Outbound list below) or terminate the OFTP session when there are no messages available.



### **Outbound calls (orange):**

1. Outbound messages destined for business partners using the OFTP protocol are handed over by WPG to the right Gateway supporting the OFTP protocol;
2. The details for the sender and recipient as indicated in the outbound interchanges are retrieved from the OFTP details in the WPG TP database;
3. The local OFTP system tries to setup an X.25 or ISDN call with the remote partner. The remote partner accepts the call and now the system will try to setup an OFTP connection by negotiating the communication settings;
4. The local OFTP system will send all available outbound messages to the business partner;
5. The remote business partner will send back EERP's that will be reconciled on the local system, resulting in a final 'sent' status for these messages;
6. If the remote party requests a change of direction, the local end will allow that and wait for messages to be received (continue with step 4 in the Inbound list above). Otherwise it will terminate the session.

In case anything goes wrong during call setup, exchange of messages or in any other area, the corresponding status will be set in WPG and the appropriate error and context information will be logged and be visible in the WPG Console.



### 3 SUPPORTED FEATURES

The following table lists the supported OFTP specific features:

Feature	Supported
ISDN (CAPI 2 compatible ISDN adapter supporting Layer 2 protocol X.75 and Layer 3 protocol ISO 8208)	Yes
X.25 (EICON X.25 Card)	Yes
TCP/IP	No
Initiate calls	Yes
Respond to calls	Yes
Change direction	Yes
SSID can be different from SFID (Start File Identification)	Yes
EBCDIC to ASCII and vice versa conversion	Yes
EERP in and out	Yes



## 4 HARDWARE AND SOFTWARE PREREQUISITES

The Covast OFTP Adapter for IBM WebSphere Partner Gateway is available for the WebSphere Partner Gateway Enterprise and Advanced versions running on either Microsoft Windows or IBM AIX.

The requirements for a Microsoft Windows environment are:

- Windows 2000 Server with SP 4 or;
- Windows 2000 Advanced Server with SP 4 or;
- Windows Server 2003 Standard or;
- Windows Server 2003 Enterprise.
- Intel Pentium at 2 GHz or faster;
- Main memory: Minimum 2GB;
- Hard disk: Minimum 300 MB;
- CAPI 2 compatible ISDN adapter supporting layer 2 protocol X.75 and layer 3 protocol ISO 8208 (X.25 DTE-DTE) or;
- EICON X.25 card.

The requirements for an IBM AIX environment are:

- AIX 5L 5.2 with Recommended Maintenance package 5200-03 or;
- AIX 5L 5.3.
- IBM **@server**®pSeries® machine with 600 MHz processor or faster;
- Main memory: Minimum 2 GB;
- Hard disk: Minimum 300 MB;
- CAPI 2 compatible ISDN adapter supporting layer 2 protocol X.75 and layer 3 protocol ISO 8208 (X.25 DTE-DTE) or;
- EICON X.25 card.

Actual hardware requirements for your system may be greater, depending on the complexity of your specific environment, throughput and data object size:

- Multiserver installations require network attached shared storage;
- Additional servers for added capacity and redundancy;
- Additional hard disk capacity needed for document storage.

In both environments, the following software should be installed:

- WebSphere Partner Gateway Enterprise or Advanced 6.0;
- DB2® Enterprise Server Edition 8.2 or;
- Oracle Enterprise Edition 9i Release 2 (9.2.0.4) or;
- Oracle Enterprise Edition 10g Release 1 (10.1.0.3).



## 5 SUMMARY

The ODETTE File Transfer Protocol (OFTP) is a B2B communications protocol used predominantly in the European automotive industry, but also in the white good industry and is currently being adopted in the Banking sector as well. The Covast OFTP Adapter for IBM WebSphere Partner Gateway (WPG, IBM's B2B product) brings the ODETTE File Transfer Protocol to IBM WPG users, giving them the ability to seamlessly exchange EDI and other message types with their business partners using this specialized communications protocol.



## 6 CONTACT INFORMATION

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