

IBM WebSphere Business Connection



Document Transfer Collaboration

Version 1.1.0

Note!

Before using this information and the product it supports, be sure to read the general information under “Notices” on page 13.

First Edition (September 2002)

This edition applies to Version 1, Release 1, Modification 0, of *IBM® WebSphere® Business Connection* (5724-D26) and to all subsequent releases and modifications until otherwise indicated in new editions.

IBM welcomes your comments. You can send them to the following address:

IBM Canada Ltd. Laboratory
Information Development
8200 Warden Avenue
Markham, Ontario, Canada L6G 1C7

Include the title and order number of this book, and the page number or topic related to your comment.

When you send information to IBM, you grant IBM a nonexclusive right to use or distribute the information in any way it believes appropriate without incurring any obligation to you.

© Copyright International Business Machines Corporation 2002. All rights reserved.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

Document Transfer Collaborations 1

Use case 1 - Sending a document	1
Actors	1
Course	1
Use case 2 - Receiving a document	2
Actors	2
Course	2

BCT_DocumentTransferInbound

Collaboration 3

Required documents.	3
Collaboration setup	3
Port information	3
Setting up the collaboration	4
Synchronization process	4
Configuration properties	4
Viewing collaboration messages	4
See also	4

BCT_DocumentTransferOutbound

Collaboration 5

Required documents.	5
Collaboration setup	5
Port information	5
Setting up the collaboration	6
Synchronization process	6
Configuration properties	6
Viewing collaboration messages	6
See also	7

Generic BCT_DocumentTransfer

Business Object 9

Business object structure	9
Supported verbs	9
Examining the object	9
See also	9

Connectors 11

Notices 13

Programming interface information	14
Trademarks and service marks	15

Document Transfer Collaborations

The Document Exchange solution enables you to send or receive documents—even very large documents—reliably and securely across the Internet.

The Document Exchange solution is made up of servlets, connectors, a generic business object, and two collaboration templates—BCTDocumentTransferInbound and BCTDocumentTransferOutbound.

When Document Exchange is installed, it creates an inbox and an outbox on your system. The inbox holds references to documents that have been delivered to you. The outbox holds references to documents that you have sent or that you are preparing to send. The actual documents exist in the local file system.

Use case 1 - Sending a document

This process involves the sending of a document to a trading partner. The process begins when an administrator sends a document. It is completed when a Message Delivery Notification (MDN) ID is updated in the sender's outbox.

Actors

This use case has a single actor, the administrator who selects a document for delivery. The administrator selects the document through the use of the System Admin console, as described in the Administering the System document.

Course

The following table describes the main course that may be followed in the use case:

Table 1. Use case description

#	Activity by the actor	System activity	Reference
M1	Selects either Compose or Forward button	Displays a screen for the user to type or select the trading partner, file attachment, and so on	
M2	Selects a partner from the list		
M3	Selects the file attachment	If the user requested to send the file by using the Compose button, presents a list of files from the file system	
M4	Selects the document to send	Adds an entry to the outbox with Status_Flag set to "For Delivery" and the partner, file URL, and file ID	

Use case 2 - Receiving a document

This process involves the receipt of a document at a trading partner. The process begins when a document arrives at the Web Services Gateway of the trading partner to whom the document is sent. It ends when a reference to the document is placed in the trading partner's inbox. (The file itself is stored in the trading partner's file system.)

Actors

This use case has a single actor, the administrator who performs such tasks (from the inbox) as forwarding or deleting the document. The administrator performs these tasks through the Business Connection System Admin console, as described in the Administering the System document.

Course

The following table describes the main course that may be followed in the use case:

Table 2. Use case description

#	Activity by the actor	System activity	Reference
M1	Views the inbox	Displays a list of documents that have been received	
M2	Selects a document from the inbox	Performs the action that the administrator requested (for example, forward or delete)	

BCT_DocumentTransferInbound Collaboration

The BCT_DocumentTransferInbound collaboration is used to receive information about a document and place that information in a trading partner's inbox. Specifically, the collaboration receives a triggering event from the IBM^(R) CrossWorlds^(R) Server Access Interface with the new document information. The document itself is stored in a file system. The collaboration forwards the document information to the JDBC connector, which interacts directly with the inbox.

BCT_DocumentTransferInbound uses one generic business object—BCT_DocumentTransfer.

Required documents

To create and configure a BCT_DocumentTransferInbound collaboration object, use the following documents:

- This document for the BCT_DocumentTransferInbound-collaboration-specific information.
- *Collaboration Development Guide* for general information about creating and configuring collaboration objects.

Collaboration setup

This section includes the following information:

- "Port information"
- "Setting up the collaboration" on page 4

Port information

The following diagram illustrates BCT_DocumentTransferInbound's ports, as they are displayed in CrossWorlds System Manager:

Figure: How the inbound collaboration object connects to ports

Note: To keep the collaboration from using a port, bind that port to the Port connector. Doing so indicates that the port is unused without causing the collaboration to provide additional functionality.

Table 3. Port name: From

Business Object	Bound To	Function	Verbs Used
BCT_Document Transfer	External connector	Receives the triggering business object.	Create

Table 4. Port name: To

Business Object	Bound To	Function	Verbs Used
BCT_Document Transfer	BCT_DocTransfer TargetConnector	Sends the triggering business object out of the collaboration	Create

Setting up the collaboration

To set up BCT_DocumentTransferInbound as a stand-alone collaboration object, complete the following steps:

1. Create the BCT_DocumentTransferInbound collaboration object.
2. Bind the collaboration object's port to the destination application's connector or to the Port connector.
3. Bind the remaining ports as described in "Port information" on page 3

Synchronization process

The following diagram illustrates BCT_DocumentTransferInbound process logic.

Figure: Inbound collaboration flow diagram

Configuration properties

BCT_DocumentTransferInbound has two collaboration-specific properties:

Table 5. Setting properties of BCT_DocumentTransferInbound

Goal	Property	Setting
Specify logging in to the Solution Manager.	BCT_LOG	Yes/No
Point to the directory where the Web Services Gateway downloads the file. For reference, check the attribute lft-directory on the application server on WebSphere Application Server where the LFT channel is deployed.	BCT_FILE_DOWNLOAD_DIR	

Viewing collaboration messages

To view an explanation of this collaboration's messages, invoke Message Browser and open the collaboration's message file.

To invoke Message Browser and open the collaboration message file, complete the following actions:

1. In the Start menu, click **Programs > CrossWorlds > Server and Tools > Message Browser**.
2. On the **File** menu, click **Open**.
3. Use the **Look In** field to change the current folder to `\collaborations\messages\BCT_DocumentTransferInbound.txt`

See also

For information on the related business object, see: "Generic BCT_DocumentTransfer Business Object" on page 9

BCT_DocumentTransferOutbound Collaboration

The BCT_DocumentTransferOutbound collaboration is used to send a document from one trading partner to another. Specifically, it receives from a JDBC connector a generic business object (BCT_DocumentTransfer). The JDBC connector is attached to the system outbox. BCT_DocumentTransferOutbound updates the Status_Flag of the outbox from "For Delivery" to "Sending." Finally, it calls an API to fetch the WSDL file for the trading partner ID and service. This information is then passed on to the SOAP connector, for eventual transport to the trading partner.

BCT_DocumentTransferOutbound uses one generic business object—BCT_DocumentTransfer.

Required documents

To create and configure a BCT_DocumentTransferOutbound collaboration object, use the following documents:

- This document for the BCT_DocumentTransferOutbound-collaboration-specific information.
- *Collaboration Development Guide* for general information about creating and configuring collaboration objects.

Collaboration setup

This section includes the following information:

- "Port information"
- "Setting up the collaboration" on page 6

Port information

The following diagram illustrates BCT_DocumentTransferOutbound's ports, as they are displayed in CrossWorlds System Manager

Figure: How the outbound collaboration object connects to ports

Note: To keep the collaboration from using a port, bind that port to the Port connector. Doing so indicates that the port is unused without causing the collaboration to provide additional functionality.

Table 6. Port name: From

Business Object	Bound To	Function	Verbs Used
BCT_Document Transfer	JDBC Connector (BCT_DocTransfer SourceConnector)	Receives the triggering business object	Create

Table 7. Port name: To

Business Object	Bound To	Function	Verbs Used
BCT_Document Transfer	SOAP Connector (BCT_DocTransfer SOAPConnector)	Sends the triggering business object out of the collaboration	Create

Table 8. Port name: Reply

Business Object	Bound To	Function	Verbs Used
BCT_Document Transfer	JDBC Connector (BCT_DocTransfer SourceConnector)	Updates the outbox by setting the status_flag to 'Send Success' or 'Send Error'	Create

Setting up the collaboration

To set up BCT_DocumentTransferOutbound as a stand-alone collaboration object, complete the following steps:

1. Create the BCT_DocumentTransferOutbound collaboration object.
2. Bind the collaboration object's port to the destination application's connector or to the Port connector.
3. Bind the remaining ports as described in "Port information" on page 5

Synchronization process

The following diagram illustrates BCT_DocumentTransferOutbound process logic.

Figure: Outbound collaboration flow diagram

Configuration properties

BCT_DocumentTransferOutbound has two collaboration-specific properties:

Table 9. Setting properties of BCT_DocumentTransferOutbound

Goal	Property	Setting
Specify logging in to the Solution Manager	BCT_LOG	Yes/No
Contain the value of the outbound Web Services Gateway SOAP-server URL	BCT_SOAP_SERVER_URL	

Viewing collaboration messages

To view an explanation of this collaboration's messages, invoke Message Browser and open the collaboration's message file.

To invoke Message Browser and open the collaboration message file, complete the following actions:

1. In the Start menu, click **Programs > CrossWorlds > Server and Tools > Message Browser**.
2. On the **File** menu, click **Open**.

3. Use the **Look In** field to change the current folder to
`\collaborations\messages\BCT_DocumentTransferOutbound.txt`

See also

For information on the related business object, see: “Generic BCT_DocumentTransfer Business Object” on page 9

Generic BCT_DocumentTransfer Business Object

The generic BCT_DocumentTransfer business object is used to carry new and updated information about a document, where it should be delivered, and from whom it was sent.

The result of the BCT_DocumentTransfer business object is a populated table of information about the recipient's documents. The user can forward a document, save it under another name, or delete it. The user can also sort the list of documents. The user performs these tasks through the Business Connection System Admin console, which is described in the Administering the System document.

Business object structure

BCT_DocumentTransfer includes the following attributes:

Table 10. Business object attributes

Name	Type	Key	Cardinality
Instance_ID	String	1	
fileReference	String		
File_ID	String		
Subject	String		
From_Partner	String		
To_Partner	String		
Status_Flag	String		
Date	String		
MDN_ID	String		
error	String		
Soap_Server_URL	String		
ObjectEventID	String		

Supported verbs

The generic BCT_DocumentTransfer business object supports the Create verb.

Examining the object

To examine a listing of the attributes of the generic BCT_DocumentTransfer business object, use CrossWorlds System Manager or CrossWorlds Business Object Designer.

See also

For more information on related collaborations, see:

- “BCT_DocumentTransferInbound Collaboration” on page 3
- “BCT_DocumentTransferOutbound Collaboration” on page 5

Connectors

The Document Exchange collaborations communicate with the following connectors:

Table 11. BCT_DocumentTransferInbound collaboration connectors

Document Exchange Connector	Based on CrossWorlds:
BCT_DocTransferTargetConnector	JDBC Connector
External Connector	Server Access Interface

The External connector (Server Access Interface) receives the document information and transforms and forwards it to the BCT_DocumentTransferInbound collaboration. That collaboration forwards the information to the BCT_DocTransferTargetConnector, which is based on the CrossWorlds JDBC connector. This connector interacts directly with the database.

Table 12. BCT_DocumentTransferOutbound collaboration connectors

Document Exchange Connector	Based on CrossWorlds:
BCT_DocTransferSourceConnector	JDBC Connector
BCT_DocTransferSOAPConnector	SOAP Connector

The JDBC connector is also the basis for connectors that interact with the BCT_DocumentTransferOutbound collaboration. It receives document information from the outbox, and sends it to the collaboration, which then sends it to the SOAP Connector. The SOAP Connector interacts with the Web Services Gateway to send the document out onto the Internet.

The Server Access Interface and the JDBC and SOAP connectors are described in the CrossWorlds documentation.

Notices

IBM may not offer the products, services, or features discussed in this document in all countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

WebSphere Business Connection Lab Director
IBM RTP Laboratory
3039 Cornwallis Road
P.O. BOX 12195

Raleigh, NC 27709-2195
U.S.A

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurement may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples may include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrates programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. You may copy, modify, and distribute these sample programs in any form without payment to IBM for the purposes of developing, using, marketing, or distributing application programs conforming to IBM's application programming interfaces.

Programming interface information

Programming interface information is intended to help you create application software using this program.

General-use programming interfaces allow you to write application software that obtain the services of this program's tools.

However, this information may also contain diagnosis, modification, and tuning information. Diagnosis, modification and tuning information is provided to help you debug your application software.

Warning: Do not use this diagnosis, modification, and tuning information as a programming interface because it is subject to change.

Trademarks and service marks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

IBM
alphaWorks
AIX
CrossWorlds
DB2
DB2 OLAP Server
DB2 Universal Database
DeveloperWorks
MQSeries
SecureWay
WebSphere

Lotus is a trademark of International Business Machines Corporation and Lotus Development Corporation in the United States, other countries, or both.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

MMX, Pentium and ProShare are trademarks of Intel Corporation in the United States, other countries, or both.

Other company, product or service names may be trademarks or service marks of others.