

IBM WebSphere Business Connection



# Document Transfer Collaboration

*Version 1.1.1*

**Note!**

Before using this information and the product it supports, be sure to read the general information under “Notices” on page 15.

**Second Edition (December 2002)**

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## Document Transfer Collaboration

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.

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### 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 "Attempting Delivery" and the partner, file URL, and file ID	

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## 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 WebSphere 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<sup>(R)</sup> CrossWorlds<sup>(R)</sup> 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.

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### 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.

Note that CrossWorlds development is performed on a Windows<sup>(R)</sup> platform. If you are running WebSphere Business Connection on a UNIX platform, you should have set up a Windows client (per the *CrossWorlds System Installation Guide for UNIX*) to run the CrossWorlds System Manager. You create and configure CrossWorlds artifacts on the Windows client and then run them on the UNIX system.

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### 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. The ports and associated connectors are described in the tables that follow:



*How the 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:

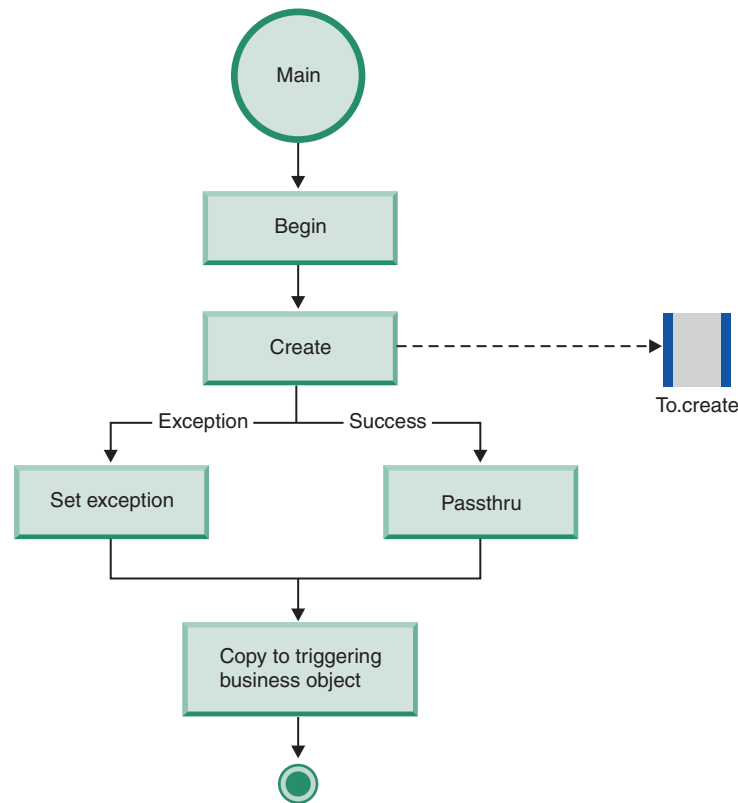
1. Create the BCT\_DocumentTransferInbound collaboration object.
2. Bind the collaboration object's port to the destination application's connector or to the Port connector.
3. Bind the remaining ports as described in "Port information" on page 3

---

## Synchronization process

The following diagram illustrates BCT\_DocumentTransferInbound process logic and shows how it receives information about the transferred file and updates the inbox with the file information. The status of the transfer is then returned to the sender.





*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 <b>lft-directory</b> 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. The Message Browser, which is part of the CrossWorlds System Manager, can be run only from a Windows platform.

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`

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## See also

For information on the related business object, see: “Generic BCT\_DocumentTransfer Business Object” on page 11

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## 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 “Attempting 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.

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### 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.

Note that CrossWorlds development is performed on a Windows platform. If you are running WebSphere Business Connection on a UNIX platform, you should have set up a Windows client (per the *CrossWorlds System Installation Guide for UNIX*) to run the CrossWorlds System Manager. You create and configure CrossWorlds artifacts on the Windows client and then run them on the UNIX system.

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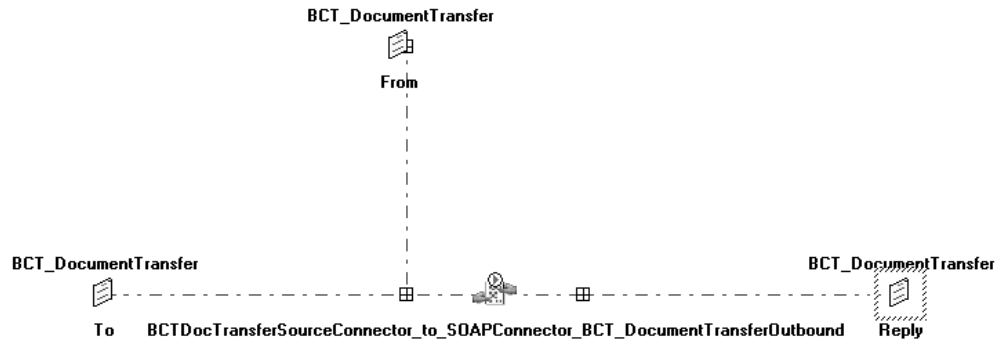
### Collaboration setup

This section includes the following information:

- “Port information”
- “Setting up the collaboration” on page 8

#### Port information

The following diagram illustrates BCT\_DocumentTransferOutbound’s ports, as they are displayed in CrossWorlds System Manager. The ports and associated connectors are described in the tables that follow:



*How the 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 'Sent Successfully' or 'Send Error'	Create

## Setting up the collaboration

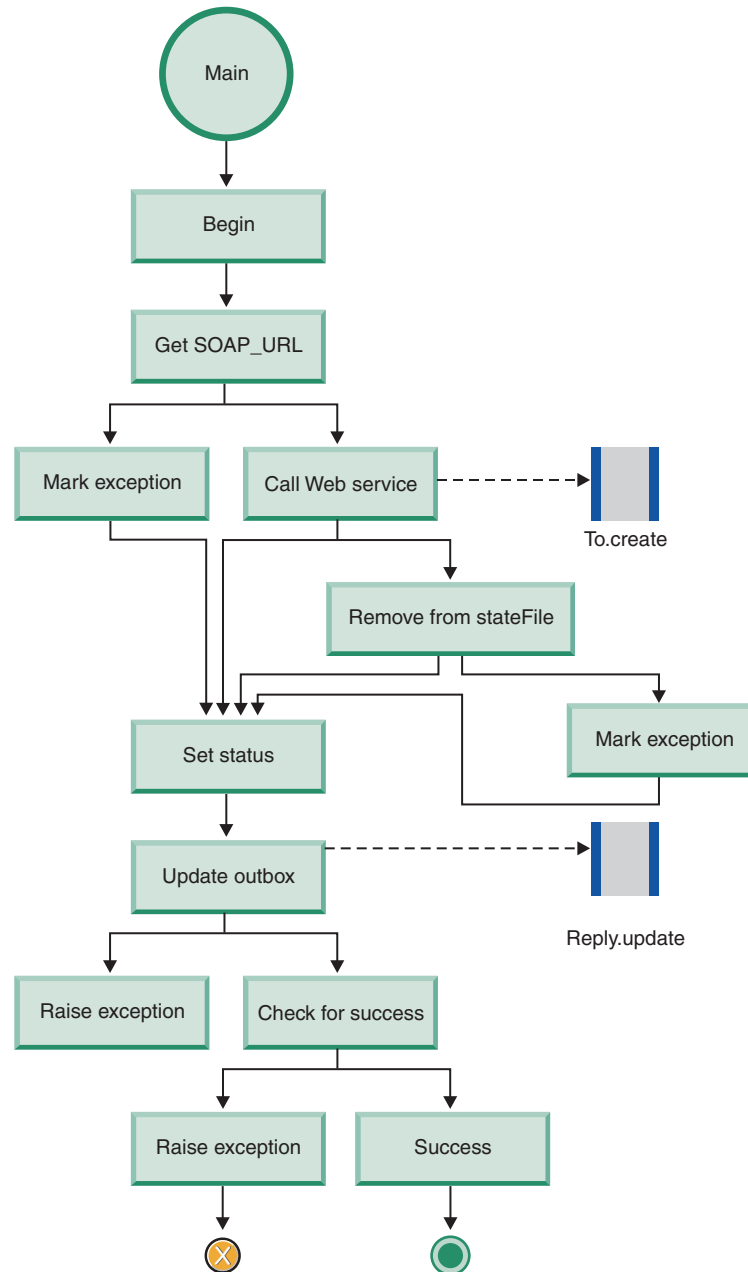
To set up BCT\_DocumentTransferOutbound as a stand-alone collaboration object, complete the following steps:

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 7

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## Synchronization process

The following diagram illustrates BCT\_DocumentTransferOutbound process logic and shows how it gets the SOAP URL, calls the Web service (to send the business object), and then updates the status of the sender's outbox.



*Outbound collaboration flow diagram*

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## 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	

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## Viewing collaboration messages

To view an explanation of this collaboration's messages, invoke Message Browser and open the collaboration's message file. The Message Browser, which is part of the CrossWorlds System Manager, can be run only from a Windows platform.

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`

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## See also

For information on the related business object, see: "Generic BCT\_DocumentTransfer Business Object" on page 11

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## 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.

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### 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		

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### Supported verbs

The generic BCT\_DocumentTransfer business object supports the Create verb.

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### 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.

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### See also

For more information on related collaborations, see:

- “BCT\_DocumentTransferInbound Collaboration” on page 3
- “BCT\_DocumentTransferOutbound Collaboration” on page 7





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## 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.



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