

TIBCO ActiveMatrix BusinessWorks™ Plug-in for TIBCO® Managed File Transfer Software User's Guide

*Software Release 6.3
December 2015*

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Documentation on the TIBCO Documentation site is updated more frequently than any documentation that might be included with the product. To ensure that you are accessing the latest available help topics, please visit <https://docs.tibco.com>.

Product-Specific Documentation

Documentation for TIBCO products is not bundled with the software. Instead, it is available on the TIBCO Documentation site. To directly access documentation for this product, double-click the following file:

`TIBCO_HOME/release_notes/TIB_bwpluginmft_version_docinfo.html`

where `TIBCO_HOME` is the top-level directory in which TIBCO products are installed. On Windows, the default `TIBCO_HOME` is `C:\Program Files\tibco`. On UNIX systems, the default `TIBCO_HOME` is `/opt/tibco`.

The following documents for this product can be found on the TIBCO Documentation site:

- *TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Managed File Transfer Software Installation*
- *TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Managed File Transfer Software User's Guide*
- *TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Managed File Transfer Software Release Notes*

The following documents provide additional information and can be found on the TIBCO Documentation site:

- TIBCO ActiveMatrix BusinessWorks documentation
- *TIBCO Enterprise Administrator User's Guide*
- TIBCO Enterprise Message Service documentation
- TIBCO Managed File Transfer documentation
 - TIBCO Managed File Transfer Command Center documentation
 - TIBCO Managed File Transfer Internet Server documentation
 - TIBCO Managed File Transfer Platform Server documentation

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- For an overview of TIBCO Support, and information about getting started with TIBCO Support, visit this site:

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Plug-in Overview

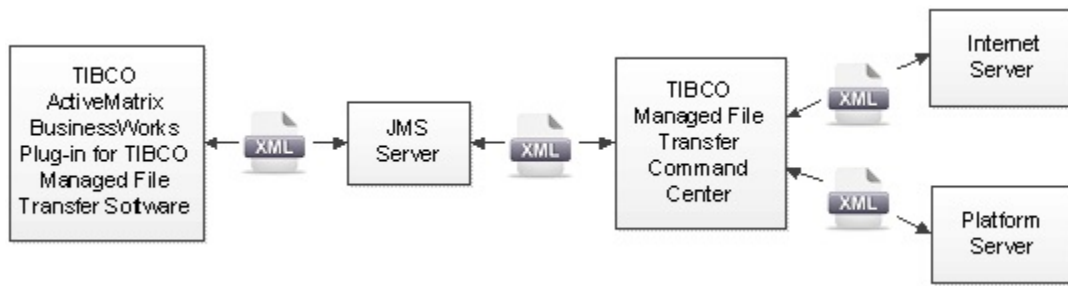
With TIBCO ActiveMatrix BusinessWorks Plug-in for TIBCO Managed File Transfer Software, you can transfer files across platforms or over the Internet, and monitor the file transfer process.

TIBCO ActiveMatrix BusinessWorks is an easy to use integration product suite for enterprise, web, and mobile applications. It uses the Eclipse graphical user interface (GUI), TIBCO Business Studio, for defining business processes and the process engine to execute them.

The plug-in provides the following functions:

- Transfer files across platforms
- Transfer files over the Internet
- Receive alert messages
- Query audit reports

The plug-in communicates with TIBCO Managed File Transfer Command Center through the JMS server, as shown in the following figure:



Getting Started

A typical workflow using the plug-in to complete a task includes creating a process, testing it in the debugger, and deploying the application.

TIBCO ActiveMatrix BusinessWorks uses the Eclipse graphical user interface (GUI) provided by TIBCO Business Studio to define business processes and generate Enterprise Archives (EAR files). The EAR files are deployed and run in the ActiveMatrix BusinessWorks runtime, and managed by using TIBCO Enterprise Administrator (TEA).

A typical workflow using the plug-in includes:

1. [Creating a Project](#)
2. [Creating MFT Shared Connection](#)
3. [Configuring a Process](#)
4. [Debugging and Running a Process](#)
5. [Deploying an Application](#)

Prerequisites

Ensure that you have configured the JMS service to allow communication between the plug-in and TIBCO Managed File Transfer. TIBCO Enterprise Message Service (EMS) is used as the JMS provider.

The JMS service is configured on the main web page of TIBCO Managed File Transfer Command Center. To start the configuration, click **Management > Manage Services > JMS Service > Configure JMS Service**.

For more information about how to configure the JMS service, see the TIBCO Managed File Transfer Command Center documentation.

Creating a Project

Projects are BusinessWorks application modules that are created in TIBCO Business Studio. A project contains various resources.

Procedure

1. Open TIBCO Business Studio using one of the following ways:
 - Microsoft Windows: Click **Start > All Programs > TIBCO > TIBCO Business Studio *version_number* > Studio for Designers**.
 - Linux or Mac OS: Run the TIBCO Business Studio executable file located in the *TIBCO_HOME/studio/version_number/eclipse* directory.
2. Click **File > New > BusinessWorks Resources**.
3. In the BusinessWorks Resource Wizard dialog, click **BusinessWorks Application Module**, and then click **Next**.

The New BusinessWorks Application Module dialog is displayed.

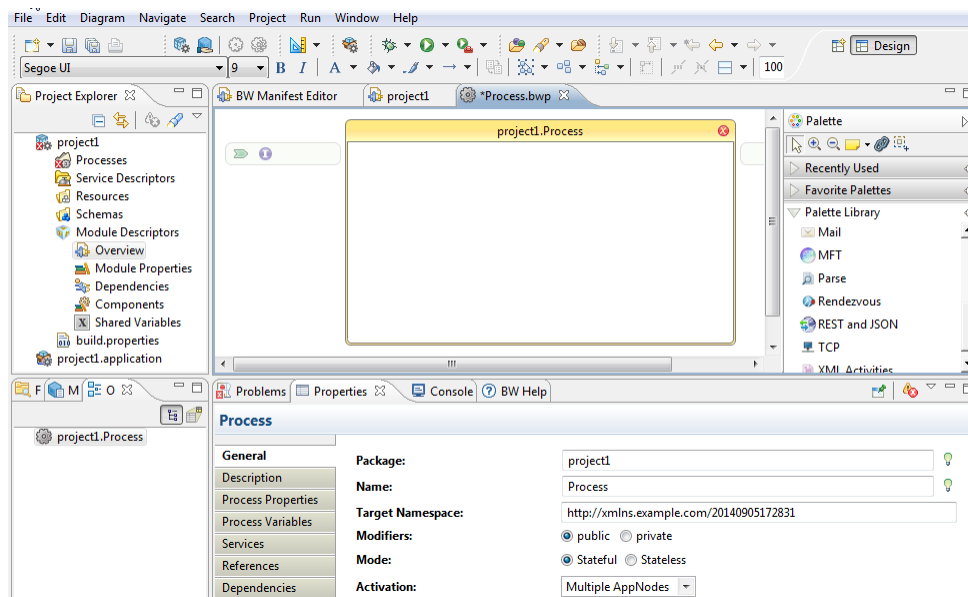


There are several ways to open the New BusinessWorks Application Module dialog and create a new project in TIBCO Business Studio. See the TIBCO ActiveMatrix BusinessWorks documentation for more information.

4. In the **Project name** field, enter a name for the project.
5. Keep the **Use default location**, **Create empty process**, and **Create Application** check boxes selected. Click **Finish**.

Result

A project and an application are created and displayed in the Project Explorer view. The Process editor is displayed automatically.



Creating MFT Shared Connection

Create an MFT Shared Connection shared resource to build connection between the plug-in and the JMS server. It can be reused by different activities and processes.


Procedure

1. In the Project Explorer view, expand the project that you created.
2. Right-click the **Resources** folder and click **New > MFT Shared Connection**.
3. In the MFT Shared Connection dialog, enter a name in the **Resource Name** field. Click **Finish**.
4. In the MFT Shared Connection Editor, configure the MFT Shared Connection shared resource, as described in [MFT Shared Connection](#).

Configuring a Process

Processes define the business logic. After you created a project, configure a process by adding activities, conditions, and services.

Procedure

1. Add activities from the Palette view to the Process editor.
For example, select the Timer activity from the General Activities palette and drop it to the Process editor and select the Request Internet Server Transfer activity from the MFT palette and drop it to the Process editor.
2. Click  to create links between the activities and configure the condition types.
3. Configure the added activities, as described in [MFT Palette](#).



An MFT Shared Connection shared resource is required when configuring activities. See [Creating MFT Shared Connection](#) for details about how to create the shared resource.

4. Click **File > Save** to save the project.

Debugging and Running a Process

Debug your BusinessWorks applications to check if the configurations are correct.

Procedure

1. In the Project Explorer view, open the process you configured.
2. On the tool bar, click **Run > Debug Configurations**.
The Debug Configurations dialog is displayed.
3. In the left panel, expand **BusinessWorks Application**, and then click **BWApplication**.
4. In the right panel, ensure that only the application you want to debug and run is selected in the **Applications** tab.
5. Click the **Advanced** tab and click **Browse** to locate the logback file.
By default, the log file is located in the `TIBCO_HOME/bw/version_number/config/design/logback` directory and error logs are captured. See [Managing Logs](#) for more details.
6. Click **Debug**.
TIBCO Business Studio changes to the Debug perspective. Logs are displayed in the Console view.

Checking the Output of an Activity

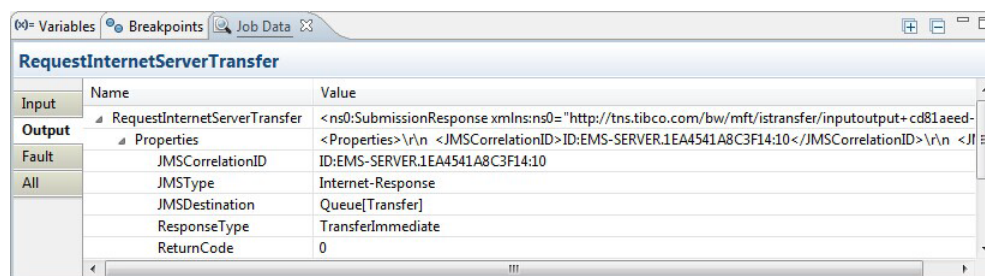
After debugging the application, you can check the output of an activity.

Procedure

1. In the Debug perspective, expand **BWApplication**, and click the activity in the upper-left panel.
2. In the upper-right panel, click the **Job Data** view and click **Output**.

Result

The output of the activity is displayed.



	Name	Value
Input	RequestInternetServerTransfer	<ns0:SubmissionResponse xmlns:ns0="http://tns.tibco.com/bw/mft/istransfer/inputoutput+cd81aeed-
Output	Properties	<Properties>\n <JMSCorrelationID>ID:EMS-SERVER.1EA4541A8C3F14:10</JMSCorrelationID>\n <JI
Fault	JMSCorrelationID	ID:EMS-SERVER.1EA4541A8C3F14:10
All	JMSType	Internet-Response
	JMSDestination	Queue[Transfer]
	ResponseType	TransferImmediate
	ReturnCode	0



You can also check the activity output in the plug-in logs. See [Managing Logs](#) for more information.

Deploying an Application

After deploying a BusinessWorks application, you can manage it by using TIBCO Enterprise Administrator.

Prerequisites

Complete the following tasks before you deploy an application:

- [Creating a Project](#)
- [Generating an EAR File](#)

A typical workflow of deployment includes:

1. Uploading an EAR file
2. Deploying an application
3. Starting an application

You can deploy an application EAR file in the command-line mode with the **bwadmin** utility. See *TIBCO ActiveMatrix BusinessWorks Administration* for details about how to deploy an application.

Generating an EAR File

Application archives are enterprise archive (EAR) files that are created in TIBCO Business Studio. An EAR file is required when deploying an application.


Prerequisites

An application project has already been created, as described in [Creating a Project](#).



The following method is one of the many ways of generating an EAR file. See *TIBCO ActiveMatrix BusinessWorks Administration* for more information.

Procedure

1. In the File Explorer view, click the **Open Directory to Browse**  icon.
2. Select the folder where you want to generate the EAR file and click **OK**.
A new folder is displayed in the File Explorer view.
3. Drag the application from the Project Explorer view to the new folder in the File Explorer view.
The EAR file is generated with the name `<name>.<application>_<version>.ear`.

Configuring SSL

Before using SSL (Secure Sockets Layer), configure it on the JMS server and in the MFT Shared Connection shared resource. TIBCO Enterprise Message Service (EMS) is used as the JMS provider.

Complete the following two tasks to use SSL:

- [Configuring SSL on the TIBCO EMS Server](#)
- [Configuring SSL in MFT Shared Connection](#)

Configuring SSL on the TIBCO EMS Server

Before using SSL, configure the `tibemsd.conf` file on the TIBCO Enterprise Message Service (EMS) server.

Procedure

1. Navigate to the `EMS_DATA_HOME/cfmgmt/ems/data` directory and open the `tibemsd.conf` file.
2. In the **Listen ports** section, specify the port that accepts SSL connections for the **listen** parameter.
For example: `listen = ssl://7243`



Ensure that the port number is consistent with the one set for **SSL connection factory URL** in the `factories.conf` file. The `factories.conf` file is in the same directory as the `tibemsd.conf` file.

3. In the **SSL Server Setup Information** section, set values for the following parameters:

Parameter	Description
<code>ssl_server_identity</code>	The digital certificate of the server. Specify the path to the file that contains the certificate. For example: <code>ssl_server_identity = D:/tibco/ems/8.0/samples/certs/server.cert.pem</code>
<code>ssl_server_key</code>	The private key of the server. Specify a path to the file that contains the key. For example: <code>ssl_server_key = D:/tibco/ems/8.0/samples/certs/server.key.pem</code>
<code>ssl_password</code>	The password for the private key. Set the password. For example: <code>ssl_server_key = password</code>


4. Keep other parameters with their default values and save the file.
5. Restart the the EMS server.
For details about how to configure SSL on the EMS server, see the TIBCO Enterprise Message Service documentation.

Configuring SSL in MFT Shared Connection

After configuring SSL on the TIBCO EMS server, configure SSL in the MFT Shared Connection shared resource.

See [Creating MFT Shared Connection](#) for details about how to create an MFT Shared Connection shared resource.

Procedure

1. Start TIBCO Business Studio.
 2. In the Project Explorer view, expand the project that you created.
See [Creating a Project](#) for details about how to create a project.
 3. Open the MFT Shared Connection shared resource that you created.
The MFT Shared Connection Editor is displayed.
 4. In the **JNDI Context URL** field, enter the SSL listen port.
The general format is: `ssl://hostname:port`.
 5. In the **Topic Connection Factory** field, enter the topic connection factory set in the `factories.conf` file.
For example: `SSLTopicConnectionFactory`
- 

The `factories.conf` file is located in the `EMS_DATA_HOME/cfmgmt/ems/data` directory.
6. In the **Queue Connection Factory** field, enter the queue connection factory set in the `factories.conf` file.
For example: `SSLQueueConnectionFactory`
 7. Select the **Use SSL** check box to enable SSL.
 8. In the **Trusted Certs Location** field, click **Add** to locate the certificates one by one that are used to verify the identities of servers and clients.
The certificates are configured in the `tibemsd.conf` file, see [Configuring SSL on the TIBCO EMS Server](#) for more information.
 9. Save the project, and click **Test Connection** to test the connection to the EMS server.

MFT Shared Connection

Use the MFT Shared Connection shared resource to build connection between the plug-in and the JMS server. It can be reused by different activities and processes.

General


The **General** panel contains the following fields:

Field	Module Property?	Description
Name	No	The name to be displayed as the label for a shared resource in a process.
Description	No	A short description for the shared resource.

MFT Shared Connection Configuration

The **MFT Shared Connection Configuration** panel contains the following fields:

Field	Module Property?	Description
JMS User	Yes	The user name used to log on to the JMS server.
JMS Password	Yes	The password used to log on to the JMS server.
JNDI Context Factory	Yes	The initial context factory class for accessing JNDI (Java Naming and Directory Interface). The default option is com.tibco.tibjms.naming.TibjmsInitialContextFactory .
JNDI Context URL	Yes	The URL of the JMS service provider. The general format is <i>protocol://hostname:port</i> .
Topic Connection Factory	Yes	The topic connection factory used to create a topic connection with a JMS provider. The default value is <code>TopicConnectionFactory</code> .
Queue Connection Factory	Yes	The queue connection factory used to create a queue connection with a JMS provider. The default value is <code>QueueConnectionFactory</code> .

Field	Module Property?	Description
Auto-gen Client ID	Yes	<p>Select or clear this check box to specify whether or not you want the client ID for the connection to be automatically generated.</p> <p>The format of an automatically generated client ID is:</p> <p><i>BW - appDomain - appSpace - appNode - moduleName - resourceName - domain</i></p> <p>If this check box is not selected, then the value in the Client ID field is used for the connection.</p>
Client ID	Yes	<p>The client ID for the connection. The format of a manually entered client ID is:</p> <p><i>BW - appDomain - appSpace - appNode - moduleName - resourceName - domain - ClientID</i>, where <i>Client ID</i> is the one you specify.</p> <p>See the TIBCO Enterprise Message Service documentation for more information about client ID.</p>
Use SSL	Yes	<p>Select or clear the check box to specify whether or not you want to use SSL (Secure Sockets Layer) for connection to the JMS server.</p> <p>For information about how to configure SSL, see Configuring SSL.</p>
Trusted Certs Location	No	<p>This field is enabled only when the Use SSL check box is selected.</p> <p>Click Add to locate the certificates used to verify the identities of servers and clients. You must add the certificates one by one.</p>
Command Center User	Yes	The user name used to log on to TIBCO Managed File Transfer Command Center.
Command Center Password	Yes	The password used to log on to TIBCO Managed File Transfer Command Center.
Management Queue Name	Yes	<p>The predefined JMS queue used to store the configuration and management related messages defined in TIBCO Managed File Transfer Command Center.</p> <div>  <p>Ensure that the queue name you specify is consistent with the one defined in TIBCO Managed File Transfer Command Center.</p> </div>

Field	Module Property?	Description
Management Request Timeout(Sec)	No	<p>Specify how long (in seconds) the plug-in waits for a management reply message.</p> <p>An error occurs if no management reply message is sent back from TIBCO Managed File Transfer Command Center during this time.</p> <p>The default value is 30. A value of 0 indicates that the request never times out. TIBCO recommends that this value be set to no less than 10 seconds.</p>

Click **Test Connection** to test whether or not the specified configuration fields result in valid connections to the JMS server and TIBCO Managed File Transfer Command Center.

MFT Palette

The MFT palette contains several activities. You can use these activities to design business processes according to your need.

The following activities are available in the MFT palette:

- [Request Platform Server Transfer](#)
- [Wait for Platform Server Completion](#)
- [Request Internet Server Transfer](#)
- [Wait for Internet Server Completion](#)
- [Listen for Alert Message](#)
- [Retrieve Audit Records](#)


Request Platform Server Transfer


The Request Platform Server Transfer activity sends a platform server transfer request to a queue in the JMS server, and then TIBCO Managed File Transfer Command Center retrieves the request message from the queue.




Once TIBCO Managed File Transfer Command Center receives the request, the activity immediately gets a response.

General

The **General** tab of the Request Platform Server Transfer activity contains the following fields:

Field	Module Properties?	Description
Name	No	The name to be displayed as the label for the activity in a process.
MFT Connection	Yes	<p>The MFT Shared Connection shared resource used to build connection between the plug-in and the JMS server.</p> <p>Click  to select an MFT Shared Connection shared resource. If no matching MFT Shared Connection shared resources are available, click Create Shared Resource to create one.</p> <p>For details about how to create an MFT Shared Connection shared resource, see Creating MFT Shared Connection.</p>

Field	Module Properties?	Description
Definition Type	Yes	<p>The type of file transfer definition used to submit a platform server transfer request.</p> <p>Select a type of file transfer definition from the list:</p> <ul style="list-style-type: none"> Defined Type If you select this option, the plug-in retrieves the file transfer definition from TIBCO Managed File Transfer Command Center according to the definition ID in the Definition ID field. Ad Hoc If you select this option, define your own file transfer definition for this activity.
Platform Server Name	No	<p>The platform server where a file transfer request is initiated.</p> <p>Click Get Server to select a server in the Pick Server Name dialog. Or enter a server name or part of the server name in SQL format as the search criteria. SQL wildcards are accepted, for example, % wildcard represents one or more characters.</p> <p>A maximum of 100 servers can be retrieved from TIBCO Managed File Transfer Command Center at a time. If more than 100 servers match the search criteria, an error occurs and you must refine your search criteria to retrieve the server again. The value in this field can be used as the search criteria to retrieve the transfer definition.</p> <p>If you do not provide any criteria in this field, the plug-in retrieves all of the defined servers.</p>
Definition Desc	Yes	<p>The description of the definition.</p> <p>You can use this description as the search criteria to retrieve the transfer definition. SQL wildcards are accepted, for example, % wildcard represents one or more characters.</p> <div>  <p>This field is available only when you select Defined Type from the Definition Type list.</p> </div>

Field	Module Properties?	Description
Definition ID	No	<p>The ID of the file transfer definition.</p> <p>Click Get Transfer Definition to select the file transfer definition in the Pick Transfer Definition dialog.</p> <p>A maximum of 100 definitions can be retrieved from TIBCO Managed File Transfer Command Center at a time. If more than 100 definitions match the search criteria, an error occurs and you need to refine your search criteria to retrieve the definition again.</p> <p>If you provide values in the Platform Server Name field, Definition Desc field, or both, these values are used as the search criteria to retrieve the transfer definition.</p> <p>The value in the Definition ID field cannot be used as the search criteria to retrieve the transfer definition.</p> <div>  <p>This field is available only when you select Defined Type from the Definition Type list.</p> </div>
Initiator User	Yes	The user ID used to log on to a platform server.
Initiator Password	Yes	The password used to log on to a platform server.
Responder User	Yes	The user ID that an initiator sends to a responder to access the responder system.
Responder Password	Yes	The password that an initiator sends to a responder to access the responder system.
Check Transfer Status	Yes	<p>Select or clear the check box to specify whether or not you want to retrieve the transfer status from TIBCO Managed File Transfer Command Center.</p> <p>If you select this check box, TIBCO Managed File Transfer Command Center sends back a detailed transfer status message. Otherwise, no status message is sent back. This check box is selected by default.</p> <div>  <p>Use the Wait for Platform Server Completion activity to receive the transfer status message.</p> </div>
CC Check Interval (second)	No	<p>Specify how long (in seconds) TIBCO Managed File Transfer Command Center waits between checks to see if the platform server transfer is completed.</p> <p>The valid range is 1 to 60. The default value is 5 seconds.</p> <div>  <p>CC Check Interval must be less than CC Check Timeout. Otherwise, an error message is prompted.</p> </div>

Field	Module Properties?	Description
CC Check Timeout (second)	No	Specify how long (in seconds) TIBCO Managed File Transfer Command Center waits before timing out a request. The valid range is 1 to 86400. The default value is 3600.
Activity Timeout (second)	No	Specify how long (in seconds) the plug-in waits for a submission response from TIBCO Managed File Transfer Command Center. The valid range is 1 to 3600. The default value is 30. If no message is returned before timing out, a timeout exception occurs.
Refresh Management	Yes	Select or clear the check box to specify whether or not you want to refresh the configuration and management related information defined in TIBCO Managed File Transfer Command Center. If you select this check box, the plug-in requests the management messages for the activity. Otherwise, the plug-in uses the cached management information.

Description

A short description for the Request Platform Server Transfer activity.

Definition

The **Definition** tab of the Request Platform Server Transfer activity displays the properties of a predefined transfer definition (Defined Type) retrieved from TIBCO Managed File Transfer Command Center. You can select the transfer definition type from the **Definition Type** list in the **General** tab.

To override the values of the properties, select the check boxes in the Override column, click **Apply**, and then provide new values in the **Input** tab. To reset your configurations, click **Reset**.

To use the property values of a predefined transfer definition retrieved from TIBCO Managed File Transfer Command Center, do the following steps:

1. In the **Definition** tab, select the check boxes in the Override column for the desired properties, and click **Apply**.



Do not update the property values in the **Input** tab. Leave the values empty.

2. Save the process when you are prompted.

FILE TRANSFER :

Apply Reset

Override	Property	Value
<input type="checkbox"/>	ServerName	psserver
<input type="checkbox"/>	TransferTemplateID	T704E000001
<input type="checkbox"/>	Description	psstransfer
<input type="checkbox"/>	InitiatorUserId	administrator
<input type="checkbox"/>	ResponderUserId	administrator
<input checked="" type="checkbox"/>	InitiatorFileName	c:\test.txt
<input checked="" type="checkbox"/>	ResponderFileName	c:\test_1.txt
<input type="checkbox"/>	Conversion	
<input type="checkbox"/>	Delimiter	
<input type="checkbox"/>	FileWriteMode	CreateReplace
<input type="checkbox"/>	HostName	192.168.1.102
<input type="checkbox"/>	HostType	IPAddress
<input type="checkbox"/>	IPPort	46464
<input type="checkbox"/>	SSLFlag	
<input type="checkbox"/>	SendRecv	Send
<input type="checkbox"/>	Encryption	None



The value of a property set in the **Input** tab overwrites the one set in the predefined transfer definition.

For information about the meaning of each property, see the TIBCO Managed File Transfer Command Center documentation.

Input

The input of the Request Platform Server Transfer activity is different depending on the definition type you select to submit a platform server transfer request. You can select the transfer definition type from the **Definition Type** list in the **General** tab.

- Ad Hoc**

If you select this option, define your own file transfer definition in the **Input** tab.

For information about the meaning of each input element, see the TIBCO Managed File Transfer Command Center documentation.

- Defined Type**

If you select this option and you do not override any transfer properties in the **Definition** tab, the activity requires only the basic input:

Input Item		Data Type	Description
required TransferInfo	UserID	String	The user name used to log on to TIBCO Managed File Transfer Command Center.
	Password	String	The password used to log on to TIBCO Managed File Transfer Command Center.
credentials Properties	Initiator	String	The password used to log on to a platform server.
	Password		
	Responder Password	String	The password that an initiator sends to a responder to access the system.

If you override any value of the definition properties, besides the basic input, you must provide a new value for each of the properties selected in the **Definition** tab.



The values set in the **Input** tab overwrites those set in the **General** tab, and those set in TIBCO Managed File Transfer Command Center.

For information about mapping and transforming input data, see *TIBCO ActiveMatrix BusinessWorks Application Development*.

Output

The following is the output of the Request Platform Server Transfer activity:

Output Item	Data Type	Description
JMSCorrelationID	String	The message ID of an original request message. The value is the same as the value of the JMSCorrelationID input element.
JMSType	String	The message type used to distinguish between the messages stored in the same JMS queue.
JMSDestination	String	The destination where a message is received.
ResponseType	String	The response type. The value is always <code>TransferStatus</code> .
ReturnCode	String	The numeric code returned by TIBCO Managed File Transfer Command Center. A value of 0 indicates that the command was executed successfully. A non-zero value usually indicates termination of the command due to an error. See Return Codes for more details.
NumRecords	Integer	The number of audit records in the body of message. The value is always 1.
Message	String	A detailed transfer submission message or an error message.
SubmitStatus	String	The transfer status, for example, <code>Submit Success</code> .
CheckTransferStatus	String	A value of <code>No</code> indicates that the transfer status is not retrieved.
InitiatorTransactionID	String	The unique ID indicating that a request was submitted successfully.

Fault

The **Fault** tab lists exceptions that are thrown by the Request Platform Server Transfer activity:

Exception	Thrown when...
MFTConnectionException	The plug-in fails to connect to the JMS server or TIBCO Managed File Transfer Command Center.

Exception	Thrown when...
MFTSendException	The plug-in fails to send a file transfer request.
MFTReceiveException	The plug-in fails to receive a submission response.
MFTValidationException	A request message does not match the predefined request schema.

Wait for Platform Server Completion

The Wait for Platform Server Completion activity receives a platform transfer status response with its related request message based on a JMSCorrelationID.

The response indicates whether or not the transfer is completed successfully. The activity receives the status response from a JMS queue which is the same as the one used by the [Request Platform Server Transfer](#) activity.


Use this activity together with the Request Platform Server Transfer activity.



Ensure that you have selected the **Check Transfer Status** check box in the **General** tab of the Request Platform Server Transfer activity. Otherwise, no status message is returned, and a `TimedOutException` exception occurs.

General

The **General** tab of the Wait for Platform Server Completion activity contains the following fields:

Field	Module Property?	Description
Name	No	The name to be displayed as the label for the activity in a process.
MFT Connection	Yes	<p>The MFT Shared Connection shared resource used to build connection between the plug-in and the JMS server.</p> <p>Click  to select an MFT Shared Connection shared resource. If no matching MFT Shared Connection shared resources are available, click Create Shared Resource to create one.</p> <p>For details about how to create an MFT Shared Connection shared resource, see Creating MFT Shared Connection.</p>
Activity Timeout (second)	No	<p>The amount of time (in seconds) the activity waits before getting a status response.</p> <p>The valid range is 1 to 86400. The default value is 3600. This value overrides the default timeout value set on the JMS Configuration page in TIBCO Managed File Transfer Command Center.</p>

Field	Module Property?	Description
Refresh Management	Yes	<p>Select or clear the check box to specify whether or not you want to refresh the configuration and management related information defined in TIBCO Managed File Transfer Command Center.</p> <p>When you select this check box, the plug-in requests the management messages for the activity. Otherwise, the plug-in uses the cached management information.</p>

Description

A short description for the Wait for Platform Server Completion activity.

Input

The following is the input of the Wait for Platform Server Completion activity:

Input Item	Data Type	Description
JMSCorrelationID	String	The JMS message ID of an original request message. The activity uses this ID to link a response message with its related request message.

For information about mapping and transforming input data, see *TIBCO ActiveMatrix BusinessWorks Application Development*.

Output

The following is the output of the Wait for Platform Server Completion activity:

Output Item		Data Type	Description
Properties	JMSCorrelationID	String	<p>The message ID of an original request message.</p> <p>The value is the same as the value of the JMSCorrelationID input element.</p>
	JMSType	String	The message type used to distinguish between the messages stored in the same JMS queue.
	JMSDestination	String	The destination where a message is received.
	ResponseType	String	The response type. The value is always <code>TransferStatus</code> .

Output Item	Data Type	Description
ReturnCode	String	The numeric code returned by TIBCO Managed File Transfer Command Center. A value of 0 in this element indicates that the command was executed successfully. A non-zero value usually indicates termination of the command due to an error. See Return Codes for more details.
NumRecords	Integer	The number of audit records in the body of message. The value is always 1.
Message	String	A detailed transfer status message or an error message.
TransferStatus	String	The transfer status, for example, Transfer Complete.
Initiator TransactionID	String	The unique ID indicating that a request was submitted successfully.
Body	ResponseType	The type of the response. The value is TransferStatus.
	ServerName	The platform server that executes the current transfer.
	HostName	The host that the transferred files are uploaded to or downloaded from.
	NumRecords	The number of audit records in the body of message. The value is always 1.
	AuditRecord	This node contains details about the audit record. For information about the definition of each property of the audit record, see the TIBCO Managed File Transfer Command Center documentation.

Fault

The **Fault** tab lists exceptions that are thrown by the Wait for Platform Server Completion activity:

Exception	Thrown when...
ActivityTimedOutException	The plug-in fails to get a status response due to a timeout error.
MFTConnectionException	The plug-in fails to connect to the JMS server or TIBCO Managed File Transfer Command Center.

Exception	Thrown when...
MFTReceiveException	The plug-in fails to receive a status response.
MFTValidationException	A request message does not match the predefined request schema.


Request Internet Server Transfer


The Request Internet Server Transfer activity sends an Internet server request to a queue, and then TIBCO Managed File Transfer Command Center retrieves the request message from the queue.

Once TIBCO Managed File Transfer Command Center receives the request, the activity immediately gets a response.

General

The **General** tab of the Request Internet Server Transfer activity contains the following fields:

Field	Module Properties?	Description
Name	No	The name to be displayed as the label for the activity in a process.
MFT Connection	Yes	<p>The MFT Shared Connection shared resource used to build connection between the plug-in and the JMS server.</p> <p>Click  to select an MFT Shared Connection shared resource. If no matching MFT Shared Connection shared resources are available, click Create Shared Resource to create one.</p> <p>For details about how to create an MFT Shared Connection shared resource, see Creating MFT Shared Connection.</p>
Internet Server Name	No	<p>The Internet server where a file transfer request is initiated.</p> <p>Click Get Server to select a server in the Pick Server Name dialog. Or type a server name or part of the server name in SQL format as the search criteria. SQL wildcards are accepted, for example, % wildcard represents one or more characters.</p> <p>A maximum of 100 servers can be retrieved from TIBCO Managed File Transfer Command Center at a time. If more than 100 servers match the search criteria, an error occurs and you must refine your search criteria to retrieve the server again. The value in this field can be used as the search criteria to retrieve the transfer definition.</p> <p>If you do not provide any criteria in this field, the plug-in retrieves all of the defined servers.</p>




Field	Module Properties?	Description
Definition Desc	Yes	<p>The description of the definition.</p> <p>You can use this description as search criteria to retrieve the transfer definition in the Definition Alias Name field. SQL wildcards are accepted, for example, % wildcard represents one or more characters.</p>
Definition Alias Name	No	<p>A unique transfer definition.</p> <p>Click Get Alias Name to select an alias from the Pick Alias Name dialog. Or enter a server name or part of the server name in SQL format as the search criteria. SQL wildcards are accepted, for example, % wildcard which represents one or more characters.</p> <p>A maximum of 100 definition aliases can be retrieved from TIBCO Managed File Transfer Command Center at a time. If more than 100 results match the search criteria, an error occurs and you must refine your search criteria to get the definition alias. The value in the Definition Desc field can be used as the search criteria to retrieve the definition.</p> <p>If you do not provide any criteria in this field, the plug-in retrieves all of the definition aliases.</p>
Check Transfer Status	Yes	<p>Select or clear the check box to specify whether or not you want to retrieve the transfer status from TIBCO Managed File Transfer Command Center.</p> <p>If you select this check box, TIBCO Managed File Transfer Command Center sends back a detailed transfer status message. Otherwise, no status message is sent back. This check box is selected by default.</p> <div>  <p>Use the Wait for Internet Server Completion activity to receive the transfer status message.</p> </div>
Activity Timeout (second)	No	<p>Specify how long (in seconds) the plug-in waits for a submission response from TIBCO Managed File Transfer Command Center.</p> <p>The valid range is 1 to 3600. The default value is 30.</p> <p>If no message is returned before timing out, a timeout exception occurs.</p>
Refresh Management	Yes	<p>Select or clear the check box to specify whether or not you want to refresh the configuration and management related information defined in TIBCO Managed File Transfer Command Center.</p> <p>If you select this check box, the plug-in requests the management messages for the activity. Otherwise, the plug-in uses the cached management information.</p>

Description


A short description for the Request Internet Server Transfer activity.

Input

The following is the input of the Request Internet Server Transfer activity:

Input Item	Data Type	Description
UserID	String	<p>Optional.</p> <p>The user name used to log on to TIBCO Managed File Transfer Command Center.</p> <div>  <p>This value overwrites the one set in the MFT Shared Connection Configuration panel of the MFT Shared Connection editor.</p> </div>
Password	String	<p>Optional.</p> <p>The password used to log on to TIBCO Managed File Transfer Command Center.</p> <div>  <p>This value overwrites the one set in the MFT Shared Connection Configuration panel of the MFT Shared Connection editor.</p> </div>
ServerName	String	<p>Optional.</p> <p>The Internet server where a file transfer request is initiated.</p> <div>  <p>This value overwrites the one set in the General tab.</p> </div>
JMSOrFile	String	<p>Required.</p> <p>The Internet transfer request type to be used, queue or file.</p> <p>Enter Queue for the queue type, and File for the file type.</p>
JMSNameOrFilePath	String	<p>Required.</p> <p>The name of a queue when the queue type is used, or a fully qualified file name when the file type is used.</p>
MessageSelector	String	<p>Optional.</p> <p>If you enter queue for the transfer request type and upload for the transfer direction, specify the message selector used to filter messages read from the JMS queue.</p> <p>For example: <code>PropertyName='SelectorValue'</code></p>

Input Item	Data Type	Description
RemoteFileName	String	Optional. The name of the file to be uploaded to or downloaded from a remote server.
UploadDownload	String	Required. The transfer direction. Valid value is Upload or Download: <ul style="list-style-type: none">• Upload: Read a message from a queue or a file, and write it to a remote server.• Download: Read a file from a remote server, and write a message to a queue or a file.
Property	String	Optional. If you enter queue for the transfer request type and download for the transfer direction, specify the property in the created message. For example: <code>PropertyName='propertyValue'</code>
TextBinary	String	Optional. If you enter queue for the transfer request type and upload for the transfer direction, define the format of data written to the JMS queue. Valid value is Text or Binary: <ul style="list-style-type: none">• Text: JMS Text Data.• Binary: JMS Binary Stream.
MessageDelimiter	String	Optional. If you enter queue for the transfer request type, specify whether the file transfer converts Carriage Return (CR), Line Feed (LF), or both. There are three available values: <ul style="list-style-type: none">• CRLF: Indicates that CR, LF, or both can be used.• LF: Indicates that only LF can be used.• None: Indicates that no conversion is used. This is the default value. For the Upload transfer, add this delimiter after each message. For the Download transfer, parse stream into messages based on this delimiter.

Input Item	Data Type	Description
MaxMessageSize	String	<p>Optional.</p> <p>If you enter queue for the transfer request type, specify the maximum size of any JMS message. For example: 1024K or 1M (K stands for kilobytes and M stands for megabytes).</p> <div>  <p>If a message is larger than the maximum size, it splits into multiple messages.</p> </div>

For information about mapping and transforming input data, see *TIBCO ActiveMatrix BusinessWorks Application Development*.

Output

The following is the output of the Request Internet Server Transfer activity:

Output Item	Data Type	Description
JMSCorrelationID	String	<p>The message ID of an original request message.</p> <p>This ID is used to link a response message with its related request message.</p>
JMSType	String	The message type used to distinguish between the messages stored in the same JMS queue.
JMSDestination	String	The destination where a message is sent.
ResponseType	String	The response type. The value is always <code>TransferImmediate</code> .
ReturnCode	String	<p>The numeric code returned by TIBCO Managed File Transfer Command Center.</p> <p>A value of 0 indicates that the command was executed successfully. A non-zero value usually indicates termination of the command due to an error. See Return Codes for more details.</p>
NumRecords	Integer	The number of audit records in the body of message. The value is always 1.
Message	String	A detailed transfer submission message or an error message.
SubmitStatus	String	The transfer status, for example, <code>Submit Success</code> .
CheckTransferStatus	String	A value of <code>No</code> indicates that the transfer status is not retrieved.
InitiatorTransactionID	String	The unique ID indicating that a request was submitted successfully.

Fault

The **Fault** tab lists exceptions that are thrown by the Request Internet Server Transfer activity:

Exception	Thrown when...
MFTConnectionException	The plug-in fails to connect to the JMS server or TIBCO Managed File Transfer Command Center.
MFTSendException	The plug-in fails to send a file transfer request.
MFTReceiveException	The plug-in fails to receive a submission response.
MFTValidationException	A request message does not match the predefined request schema.

Wait for Internet Server Completion

The Wait for Internet Server Completion activity receives an Internet transfer status response with its related request message based on a JMSCorrelationID.

The response indicates whether or not the transfer is completed successfully. The activity receives the status response from a JMS queue which is the same as the queue used by the [Request Internet Server Transfer](#) activity.


Use this activity together with the Request Internet Server Transfer activity.



Ensure that you have selected the **Check Transfer Status** check box in the **General** tab of the Request Internet Server Transfer activity. Otherwise, no status message is returned, and a TimeoutException occurs.

General

The **General** tab of the Wait for Internet Server Completion activity contains the following fields:

Field	Module Property?	Description
Name	No	The name to be displayed as the label for the activity in a process.
MFT Connection	Yes	<p>The MFT Shared Connection shared resource used to build connection between the plug-in and the JMS server.</p> <p>Click  to select an MFT Shared Connection shared resource. If no matching MFT Shared Connection shared resources are available, click Create Shared Resource to create one.</p> <p>For details about how to create an MFT Shared Connection shared resource, see Creating MFT Shared Connection.</p>

Field	Module Property?	Description
Activity Timeout (second)	No	<p>The amount of time the activity waits before getting a status response.</p> <p>The valid range is 1 to 86400. The default value is 3600. This value overrides the default timeout value set on the JMS Configuration page in TIBCO Managed File Transfer Command Center.</p>
Refresh Management	Yes	<p>Select or clear the check box to specify whether or not you want to refresh the configuration and management related information defined in TIBCO Managed File Transfer Command Center.</p> <p>If you select this check box, the plug-in requests the management messages for the activity. Otherwise, the plug-in uses the cached management information.</p>

Description

A short description for the Wait for Internet Server Completion activity.

Input

The following is the input of the Wait for Internet Server Completion activity:

Input Item	Data Type	Description
JMSCorrelationID	String	The JMS message ID of the original request message. The activity uses this ID to link a response message with its related request message.

For information about mapping and transforming input data, see *TIBCO ActiveMatrix BusinessWorks Application Development*.

Output

The following is the output of the Wait for Internet Server Completion activity:

Output Item	Data Type	Description
Properties	JMSCorrelationID	<p>String</p> <p>The message ID of an original request message.</p> <p>The value is the same as the JMSCorrelationID input element.</p>
	JMSType	<p>String</p> <p>The message type used to distinguish between the messages stored in the same JMS queue.</p>
	JMSDestination	<p>String</p> <p>The destination where a message is received.</p>

Output Item	Data Type	Description
	ResponseType	String
	ReturnCode	String
	NumRecords	Integer
	Message	String
	TransferStatus	String
	Initiator TransactionID	String
Body	ResponseType	String
	ServerName	String
	HostName	String
	NumRecords	Integer
	AuditRecord	None

Fault

The **Fault** tab lists exceptions that are thrown by the Wait for Internet Server Completion activity:

Exception	Thrown when...
ActivityTimedOutException	The plug-in fails to get a status response due to a timeout error.
MFTConnectionException	The plug-in fails to connect to the JMS server or TIBCO Managed File Transfer Command Center.

Exception	Thrown when...
MFTReceiveException	The plug-in fails to receive a status response.
MFTValidationException	A request message does not match the predefined request schema.

Listen for Alert Message

The Listen for Alert Message activity starts a process when an alert is triggered in TIBCO Managed File Transfer Command Center.

The JMS alert action is triggered when a transfer matches all the alert trigger criteria defined in TIBCO Managed File Transfer Command Center. Then, TIBCO Managed File Transfer Command Center sends an alert message to a JMS topic to which the Listen for Alert Message activity listens with the specified message selector.


Alerts can be triggered by either internet server transfers or platform server transfers.




The Listen for Alert Message activity only supports the Transfer Event Alert type that is defined in TIBCO Managed File Transfer Command Center.

General

The **General** tab of the Listen for Alert Message activity contains the following fields:

Field	Module Property?	Description
Name	No	The name to be displayed as the label for the activity in a process.
MFT Connection	Yes	<p>The MFT Shared Connection shared resource used to build connection between the plug-in and the JMS server.</p> <p>Click  to select an MFT Shared Connection shared resource. If no matching MFT Shared Connection shared resources are available, click Create Shared Resource to create one.</p> <p>For details about how to create an MFT Shared Connection shared resource, see Creating MFT Shared Connection.</p>

Field	Module Property?	Description
MFT Message Selector	Yes	<p>A JMS message selector used to determine which message is received.</p> <p>The following properties can be used as the selector: JMSType, AlertID, AlertDescription, Severity, TransferType, ServerName, TransferDirection, Department, ClientFileName, ServerFileName, TransferStatus, ProcessName, TransferDescription, TemplateFile, and Comment.</p> <p>For example:</p> <p>JMSType= 'valueInCCAlert ', TransferType= 'Internet Transfer ', or AlertID= 'L50920000001 '</p> <p>These plug-in properties correspond to those in TIBCO Managed File Transfer Command Center, see Property Correspondence for more information.</p> <p>See the JMS specification or the TIBCO Enterprise Message Service documentation for more information about the syntax of a message selector string.</p>
Durable Subscriber	Yes	<p>A durable subscription.</p> <p>Select this check box to create a durable subscription. Otherwise, a non-durable subscription is created.</p> <p>If you select this check box, specify a name in the Subscription Name field that is registered with the JMS application as the durable subscriber name.</p> <p>After a durable subscription is created, it can only be removed by accessing an administration tool of the JMS provider. For more information about managing durable subscriptions, see the TIBCO Enterprise Message Service documentation.</p>
Subscription Name	Yes	<p>The subscription name registered with the JMS application for durable subscriptions.</p> <div>  <p>This field is available only when the Durable Subscriber check box is selected.</p> </div>
Refresh Management	Yes	<p>Select or clear the check box to specify whether or not you want to refresh the configuration and management related information defined in TIBCO Managed File Transfer Command Center.</p> <p>If you select this check box, the plug-in requests the management messages for the activity. Otherwise, the plug-in uses the cached management information.</p>

Description

A short description for the Listen for Alert Message activity.


Advanced

The **Advanced** tab of the Listen for Alert Message activity contains the following fields:

Field	Module Property?	Description
Sequence Key	No	This field contains an XPath expression that specifies the order of running processes. Process instances with sequencing keys that evaluate to the same value are executed sequentially in the order the process instances were created. See <i>TIBCO ActiveMatrix BusinessWorks Application Development</i> for more information about controlling the execution order of process instances and about XPath expressions.
Custom Job ID	No	This field contains an XPath expression that specifies a custom ID for the process instance.

Conversations

In the **Conversations** tab of the Listen for Alert Message activity, you can initiate or join a conversation.

Conversations receive a message after creating a process instance, which is initiated or joined by an activity. This activity can be used to initiate a conversation. Click the **Add New Conversation**  icon to initiate a conversation. For details about conversations, see *TIBCO ActiveMatrix BusinessWorks Application Development*.

Output

The following is the output of the Listen for Alert Message activity:

Output Item		Data Type	Description
Properties	JMSCorrelationID	String	The message ID of an original request message. The value is the same as the value of the JMSCorrelationID input element.
	JMSType	String	The message type used to distinguish between the messages stored in the same JMS queue.
	JMSDestination	String	The destination where a message is received.
	Comment	String	The comment defined on the alert configuration page in TIBCO Managed File Transfer Command Center.
Body	ResponseType	String	The response type.
	ServerName	String	The platform or Internet sever that executes the current transfer.

Output Item	Data Type	Description
HostName	String	The host that the transferred files are uploaded to or downloaded from.
NumRecords	Integer	The number of audit records in the body of message. The value is always 1.
AuditRecord	None	This node contains details about the audit record. For information about the definition of each property of the audit record, see the TIBCO Managed File Transfer Command Center documentation.

Fault

The **Fault** tab lists exceptions that are thrown by the Listen for Alert Message activity:

Exception	Thrown when...
MFTConnectionException	The plug-in fails to connect to the JMS server or TIBCO Managed File Transfer Command Center.
MFTValidationException	A request message does not match the predefined request schema.

Property Correspondence

Some plug-in properties have their corresponding properties in TIBCO Managed File Transfer Command Center (MFTCC).

The following table shows the properties of the plug-in that correspond to those in TIBCO MFTCC.

Properties in the Plug-in	Properties in TIBCO MFTCC
JMSType	Type
AlertID	Alert Id
AlertDescription	Alert Description
Severity	Severity
TransferType	Transfer Type
ServerName	Server Name
TransferDirection	Transfer Direction
Department	Department
ClientFileName	Client File Name

Properties in the Plug-in	Properties in TIBCO MFTCC
ServerFileName	Server File Name
TransferStatus	Transfer Status
ProcessName	Process Name
TransferDescription	Transfer Description
TemplateFile	Template File for Additional Criteria
Comment	Comment


Retrieve Audit Records

The Retrieve Audit Records activity sends an audit request to TIBCO Managed File Transfer Command Center through a JMS queue, and receives an audit response that contains detailed information about a completed file transfer.

Use this activity to search for the audit report of the platform or Internet server transfers. A maximum of 100 audit records can be retrieved from TIBCO Managed File Transfer Command Center at a time. If more than 100 audits match the search criteria, an error occurs.

General

The **General** tab of the Retrieve Audit Records activity contains the following fields:

Field	Module Property?	Description
Name	No	The name to be displayed as the label for the activity in a process.
MFT Connection	Yes	<p>The MFT Shared Connection shared resource used to build connection between the plug-in and the JMS server.</p> <p>Click  to select an MFT Shared Connection shared resource. If no matching MFT Shared Connection shared resources are available, click Create Shared Resource to create one.</p> <p>For details about how to create an MFT Shared Connection shared resource, see Creating MFT Shared Connection.</p>
Activity Timeout (second)	No	<p>Specify how long (in seconds) the application waits before reconnecting to the JMS server when an error occurs.</p> <p>The valid range is 1 to 3600. The default value is 30.</p>

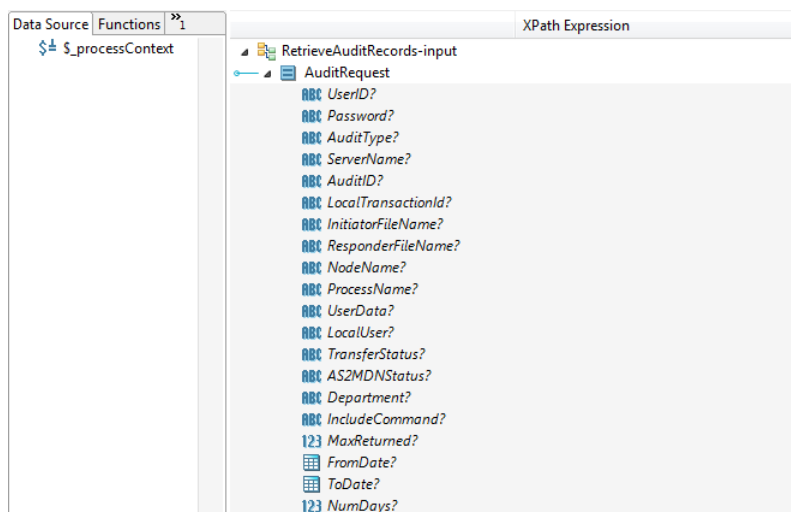
Field	Module Property?	Description
Refresh Management	Yes	<p>Select or clear the check box to specify whether or not you want to refresh the configuration and management related information defined in TIBCO Managed File Transfer Command Center.</p> <p>If you select this check box, the plug-in requests the management messages for the activity. Otherwise, the plug-in uses the cached management information.</p>

Description

A short description for the Retrieve Audit Records activity.

Input

The input of the Retrieve Audit Records activity is shown in the following figure. For information about the meaning of each input element, see the TIBCO Managed File Transfer Command Center documentation.



The value of the **AuditType** input element is required, for example: PlatformServer.

The values of the **FromDate**, **ToDate**, and **NumDays** input elements are optional:

- If you do not set any values for the three input elements, only the audits for the current day are returned.
- If you set values for the **FromDate** and **ToDate** input elements, the value of the **NumDays** input element is ignored.
- If you only set a value for the **NumDays** input element, audits in **NumDays** input element are returned, starting from the current day. For example, if you set the value of the **NumDays** input element to 2, audits from the current and the previous day are returned.

For information about mapping and transforming input data, see *TIBCO ActiveMatrix BusinessWorks Application Development*.

Output

The following is the output of the Retrieve Audit Records activity:

Output Item		Data Type	Description
Properties	JMSCorrelationID	String	The message ID of an original request message. The value is the same as the value of the JMSCorrelationID input element.
	JMSType	String	The message type used to distinguish between the messages stored in the same JMS queue.
	JMSDestination	String	The destination where a message is received.
	ResponseType	String	The response type.
	ReturnCode	String	The numeric code returned by TIBCO Managed File Transfer Command Center. A value of 0 indicates that the command was executed successfully. A non-zero value usually indicates termination of the command due to an error. See Return Codes for more details.
	NumRecords	Integer	The number of audit records in the body of message. The value is always 1.
	Message	String	A detailed transfer status message or an error message.
Body	ResponseType	String	The response type.
	ServerName	String	The platform or Internet server that executes the current transfer.
	HostName	String	The host that the transferred files are uploaded to or downloaded from.
	NumRecords	Integer	The number of audit records in the message body. The value is always 1.
	AuditRecord	None	This node contains details about the audit record. See the TIBCO Managed File Transfer Command Center documentation for information about the definition of each property of the audit record.

Fault

The **Fault** tab lists exceptions that are thrown by the Retrieve Audit Records activity:

Exception	Thrown when...
MFTConnectionException	The plug-in fails to connect to the JMS server or TIBCO Managed File Transfer Command Center.
MFTSendException	The plug-in fails to request an Audit response.
MFTReceiveException	The plug-in fails to receive an Audit response.
MFTValidationException	A request message does not match the predefined request schema.

Return Codes

A return code is a numeric code returned by TIBCO Managed File Transfer Command Center. Different return codes represent different file transfer status.

A value of 0 signifies the command was executed successfully. A non-zero value usually indicates termination of the command due to an error. See the following table for more information about the meaning of each return code:

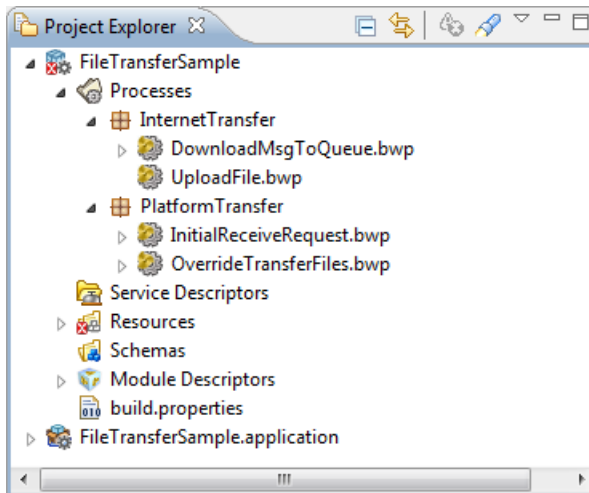
Return Code	Description
0	Success.
1	Catch-all failure code (default value).
201	Invalid message format.
202	Invalid message data.
301	Authentication or authorization failure.
401	Fails to submit transfer request to a platform server.
501	Fails to retrieve audits from a platform server.
502	Fails to retrieve audits from a platform server due to a timeout error.
503	Fails to retrieved the audit indicating a platform server transfer.
600	Fails to retrieve audits from TIBCO Managed File Transfer Command Center.
700	Fails to process a management request.
801	TIBCO Managed File Transfer Command Center fails to submit a transfer request to an Internet server.
802	Internet server fails to transfer a request.

Working with the Sample Project

The FileTransferSample project shipped with the plug-in demonstrates how to use the plug-in to transfer files.

The sample project is located in the *TIBCO_HOME/bw/palettes/mft/version_number/samples* directory.

The sample project contains two process folders: **InternetTransfer** and **PlatformTransfer**. Each folder contains two processes.



InternetTransfer

The processes in the **InternetTransfer** folder demonstrate how to use the [Request Internet Server Transfer](#) and [Wait for Internet Server Completion](#) activities to transfer files using the Internet server.

- DownloadMsgToQueue

In this process, the TIBDemoIS Internet server downloads a file from a remote server to the Demo.MSG.Queue JMS queue on the TIBCO EMS server.



The remote server and the file are defined in the transfer definition in TIBCO Managed File Transfer Command Center.

- Uploadfile

In this process, the TIBDemoIS Internet server uploads the ISLocalFile.txt file to a remote server. The name for the uploaded file is ISTargetFile.txt on the remote server.



The remote server is defined in the transfer definition in TIBCO Managed File Transfer Command Center.

PlatformTransfer

The processes in the **PlatformTransfer** folder demonstrate how to use the [Request Platform Server Transfer](#) and [Wait for Platform Server Completion](#) activities to transfer files across platforms.

- InitialReceiveRequest

In this process, the TIBDemoPS platform server receives the SourceFile.txt file from a responder server to the PSLocalFile.txt file on a initiator server.

This process uses the Ad Hoc definition. Modify the definition in the **Input** tab of the Request Platform Server Transfer activity based on your working environment.

- `OverrideTransferFiles`

This process demonstrates how to override the values of a predefined transfer definition properties. In this process, the values of the `InitiatorFileName` and `ResponderFileName` properties are overridden by their corresponding values specified in the **Input** tab of the Request Platform Server Transfer activity.

Importing the Sample Project

Before running the project, import the sample project to TIBCO Business Studio.

Procedure

1. Open TIBCO Business Studio using one of the following ways:
 - Microsoft Windows: Click **Start > All Programs > TIBCO > TIBCO Business Studio version_number > Studio for Designers**.
 - Linux or Mac OS: Run the TIBCO Business Studio executable file located in the `TIBCO_HOME/studio/version_number/eclipse` directory.
2. Click **File > Import**.
3. In the Import dialog, expand the **General** folder, and select the **Existing Studio Projects into Workspace** item. Click **Next**.
4. Click **Browse** next to the **Select root directory** field to find the samples. Click **Finish**.
The sample project is located in the `TIBCO_HOME/bw/palettes/mft/version_number/samples` directory.

Result

The sample project is imported to TIBCO Business Studio.

Configuring MFT Shared Connection

Configure the MFT Shared Connection shared resource based on your working environment.

Procedure

1. In the Project Explorer view, open the MFT Shared Connection shared resource of the sample project.
The MFT Shared Connection Editor is displayed.
2. In the **MFT Shared Connection Configuration** panel, configure the following fields based on your working environment:
 - **JNDI Context Factory**
TIBCO Enterprise Message Service (EMS) is used as the JMS provider. Ensure that the `com.tibco.tibjms.naming.TibjmsInitialContextFactory` factory class is selected.
 - **JNDI Context URL, Command Center User, and Command Center Password**
The values in these three fields are mapped from the following module properties:

Fields	Module Properties	Description
JNDI Context URL	ContextURL	The URL of the JMS service provider.
Command Center User	CCUserID	The user name used to log on to TIBCO Managed File Transfer Command Center.
Command Center Password	CCPassword	The password used to log on to TIBCO Managed File Transfer Command Center.

To update these module properties, expand **FileTransferSample > Module Descriptors**, and then double-click **Module Properties**. You can then change the values for these module properties in the Module Properties dialog. For more information about module properties, see *TIBCO ActiveMatrix BusinessWorks Application Development*.

- **Management Queue Name**

The default value is Management, which is a predefined JMS queue. Create this queue in EMS and ensure that the queue is the same one used in TIBCO Managed File Transfer Command Center.

3. Click **Test Connection** to test whether or not all the connections are successfully configured.

Running the Sample Project

The sample project contains four processes that show how to use the plug-in to transfer files.

Prerequisites

- Configure the MFT Shared Connection shared resource based on your working environment, as described in [Configuring MFT Shared Connection](#).
- Complete the following tasks before running the processes. See the TIBCO Managed File Transfer Command Center documentation for more information.

Process	Prerequisites
DownloadMsgToQueue	<p>Complete the following tasks:</p> <ul style="list-style-type: none"> • Create a JMS queue on the TIBCO EMS server. In this sample, the Demo.MSG.Queue queue is used. • Complete the following tasks in TIBCO Managed File Transfer Command Center: <ul style="list-style-type: none"> – Add an Internet server and name it as TIBDemoIS. – Create an Internet transfer definition with the TIBDemoDownloadQueue virtual alias on the TIBDemoIS Internet server. Set the value of the Directory Transfer property to No, and the value of the Transfer Direction property to Download.

Process	Prerequisites
UploadFile	<p>Complete the following tasks in TIBCO Managed File Transfer Command Center:</p> <ul style="list-style-type: none"> • Add an Internet server and name it as TIBDemoIS. • Create an Internet transfer definition with the TIBDemoUploadFile virtual alias on the TIBDemoIS Internet server. Set the Directory Transfer property to Yes, and the Transfer Direction property to Upload To Server.
InitialReceiveRequest	Add a platform server and name it as TIBDemoPS in TIBCO Managed File Transfer Command Center.
OverrideTransferFiles	<p>Complete the following tasks in TIBCO Managed File Transfer Command Center:</p> <ul style="list-style-type: none"> • Add a platform server and name it as TIBDemoPS. • Create a platform transfer definition on the TIBDemoPS platform server.

Procedure

1. In the Project Explorer view, open the process that you configured.
2. Click **Run > Run Configurations**.
The Run Configurations window opens.
3. In the left panel, expand **BusinessWorks Application**, and then click **BWApplication**.
4. In the right panel, ensure that the **FileTransferSample.application** check box is selected in the **Applications** tab.
5. Click **Run** to start running the process.

Managing Logs

Logs are used to trace and troubleshoot plug-in exceptions.

A `logback.xml` file is located in the `TIBCO_HOME/bw/version_number/config/design/logback` directory. Update this file to [set up a log level](#) and [export logs to a file](#).

Log Levels

The plug-in captures logs at different levels.

Log Level	Description
Info	Indicates normal plug-in operations. No action is required. A tracing message tagged with Info indicates that a significant processing step is reached, and logged for tracking or auditing purposes. Only info messages preceding a tracking identifier are considered as significant steps.
Warn	Indicates that an abnormal condition occurred. Processing continues, but special attention from an administrator is recommended.
Error	Indicates that an unrecoverable error occurred. Depending on the severity of the error, the plug-in might continue with the next operation or stop.
Debug	Indicates a developer-defined tracing message.
Trace	Includes all information regarding the running process.

Setting Up a Log Level

By default, the log level is `Error`. You can change the log level to trace different messages.



If neither the plug-in log nor the BusinessWorks log is configured in the `logback.xml` file, the error logs of the plug-in are displayed in the Console view by default.

If the plug-in log is not configured but the BusinessWorks log is configured in the `logback.xml` file, the configuration for the BusinessWorks log is implemented by the plug-in.

Procedure

1. Navigate to the `TIBCO_HOME/bw/version_number/config/design/logback` directory and open the `logback.xml` file.
2. Add the following node in the User loggers area to specify the log level for the plug-in.

```
<logger name="com.tibco.bw.palette.mft.runtime">
  <level value="DEBUG"/>
</logger>
```

The `level` tag defines the log level and the value is `Error` or `Debug`.



When the `level` is set to `Debug`, the input and output for the plug-in activities are also displayed in the Console view. See [Log Levels](#) for more details regarding each log level.

3. Optional: Add the following node in the User loggers area to specify the log level for an activity.
- ```
<logger name="com.tibco.bw.palette.mft.runtime.ActivityNameActivity">
 <level value="DEBUG"/>
</logger>
```



For each activity, the *ActivityName* is:

- Request Platform Server Transfer: PSTransfer
- Wait for Platform Server Completion: PSTransferWaiter
- Request Platform Server Transfer: ISTransfer
- Wait for Platform Server Completion: ISTransferWaiter
- Retrieve Audit Records: AuditMessage

For example, to set the log level of the Request Platform Server Transfer activity to Debug, add the following node:

```
<logger name="com.tibco.bw.palette.mft.runtime.PSTransferActivity">
 <level value="DEBUG"/>
</logger>
```



If you do not configure a specific log level for an activity, the activity applies the log levels that you configured for the plug-in.

4. Save the file.

## Exporting Logs to a File

Modify the `logback.xml` file to export plug-in logs to a file.

### Procedure

1. Navigate to the `TIBCO_HOME/bw/version_number/config/design/logback` directory and open the `logback.xml` file.



When deploying an application in TIBCO Enterprise Administrator, navigate to the `TIBCO_HOME/bw/domains/mydomain/appnodes/myspace/mynode` directory to find the `logback.xml` file.

2. Add the following node to specify the file location.

```
<appender name="FILE" class="ch.qos.logback.core.FileAppender">
 <file>c:/bw6-mft.log</file>
 <encoder>
 <pattern>%d{HH:mm:ss.SSS} [%thread] %-5level %logger{36}-%msg%n</pattern>
 </encoder>
</appender>
```

The `file` tag defines the location to which the log to be exported, and the value is the absolute path of the file.



You also have to add the file name to the file path.

3. Add the following node to the root node at the bottom of the `logback.xml` file to export the logs to a file.

```
<appender-ref ref="FILE" />

<root level="DEBUG">
 <appender-ref ref="STDOUT" />
 <appender-ref ref="FILE" />
</root>
```

4. Save the file.

## Error Codes

The exceptions that are thrown by the plug-in are listed with the corresponding descriptions and resolutions.

Error Code and Message	Role	Category	Description	Resolution
BW-Plugin.BW-MFT-100103 There's no management message returned. Maybe the command center server is not available or connection timeout or network broken.	errorRole	BW-Plug-in	No management message is returned.	Check if the TIBCO Managed File Transfer Command Center (MFTCC) server is working, if the connection to MFTCC server times out, or if your network is connected.
BW-Plugin.BW-MFT-100104 Failed to connect with JMS server due to [1].	errorRole	BW-Plug-in	Fails to connect with the JMS server due to [1].	Check if your network or the TIBCO Message Service (EMS) server is working.
BW-Plugin.BW-MFT-100109 Failed to parse the response message, [%1].	errorRole	BW-Plug-in	Fails to parse the response message, [%1].	Check if the versions of MFTCC and TIBCO Managed File Transfer Internet Server (MFTIS) are 7.2.3 or above, or if the content of JMS topic for MFT is output by MFTCC.
BW-Plugin.BW-MFT-100110 The received message is not a valid JMS message.	errorRole	BW-Plug-in	The received message is not a valid JMS message.	Check if your network or the EMS server is working.
BW-Plugin.BW-MFT-100111 The received message with error in it, and return code is not 0 [%1].	errorRole	BW-Plug-in	An error occurs in the received message. The return code is not 0, [%1].	Check if the platform server transfer or the Internet transfer in MFTCC is configured correctly, or if the input parameters in the plug-in are configured correctly.
BW-Plugin.BW-MFT-100112 Send request failed.The detail information is [%1]	errorRole	BW-Plug-in	Fails to send the request. The detailed information is [%1].	Check if the server of EMS, MFTCC or MFTIS is working, or if the JMS service in MFTCC is configured correctly.

Error Code and Message	Role	Category	Description	Resolution
BW-Plugin.BW-MFT-100113 Create request failed.The detail information is [%1].	errorRole	BW-Plug-in	Fails to create the request. The detailed information is [%1].	Check if the server of EMS, MFTCC or MFTIS is working, or if the JMS service in MFTCC is configured correctly.
BW-Plugin.BW-MFT-100114 Receive message failed.The detail information is [%1].	errorRole	BW-Plug-in	Fails to receive the message. The detailed information is [%1].	Check if EMS, MFTCC or MFTIS is configured correctly.
BW-Plugin.BW-MFT-100118 The received message is not a JMS Text Message.	errorRole	BW-Plug-in	Fails to parse the response message, [%1].	Check if the versions of MFTCC and MFTIS are 7.2.3 or above, or if the content of JMS topic for MFT is output by MFTCC.
BW-Plugin.BW-MFT-100119 Create JMS destination failed.	errorRole	BW-Plug-in	Fails to create a JMS destination.	Check if the EMS server is started correctly, or if EMS is configured correctly.
BW-Plugin.BW-MFT-100120 Waiting timeout,there's no message returned. Maybe Command Center fail to connect to JMS server.	errorRole	BW-Plug-in	The waiting times out and no message is returned.	Check if your network is working, or if the JMS service in MFTCC is configured correctly.
BW-Plugin.BW-MFT-100121 Destroy session failed.	errorRole	BW-Plug-in	Fails to destroy the session.	Check if your network or the EMS server is working.
BW-Plugin.BW-MFT-100122 Registering listener failed.	errorRole	BW-Plug-in	Fails to register the listener.	Check if your network or the EMS server is working.
BW-Plugin.BW-MFT-100123 Creation topic session failed.	errorRole	BW-Plug-in	Fails to create the topic session.	Check if your network or the EMS server is working.
BW-Plugin.BW-MFT-100124 Initialization [%1] failed.	errorRole	BW-Plug-in	Fails to initialize.	Check if your network or the EMS server is working



Error Code and Message	Role	Category	Description	Resolution
BW-Plugin.BW-MFT-100125 The property configured on Command Center is not correct. %1.	errorRole	BW-Plug-in	The property configured in TIBCO Managed File Command Center is incorrect. %1.	Check if the platform server transfer or the Internet transfer in MFTCC is configured correctly, or if the input parameters in the plug-in are configured correctly.
BW-Plugin.BW-MFT-100126 Receiving message with exception [%1].	errorRole	BW-Plug-in	An error occurs when receiving the message. The error is [%1].	Check if your network or the EMS server is working.