



TIBCO ActiveMatrix BusinessWorks™ Plug-in for SMPP

User's Guide

*Software Release 6.0.1
October 2019*

Important Information

SOME TIBCO SOFTWARE EMBEDS OR BUNDLES OTHER TIBCO SOFTWARE. USE OF SUCH EMBEDDED OR BUNDLED TIBCO SOFTWARE IS SOLELY TO ENABLE THE FUNCTIONALITY (OR PROVIDE LIMITED ADD-ON FUNCTIONALITY) OF THE LICENSED TIBCO SOFTWARE. THE EMBEDDED OR BUNDLED SOFTWARE IS NOT LICENSED TO BE USED OR ACCESSED BY ANY OTHER TIBCO SOFTWARE OR FOR ANY OTHER PURPOSE.

USE OF TIBCO SOFTWARE AND THIS DOCUMENT IS SUBJECT TO THE TERMS AND CONDITIONS OF A LICENSE AGREEMENT FOUND IN EITHER A SEPARATELY EXECUTED SOFTWARE LICENSE AGREEMENT, OR, IF THERE IS NO SUCH SEPARATE AGREEMENT, THE CLICKWRAP END USER LICENSE AGREEMENT WHICH IS DISPLAYED DURING DOWNLOAD OR INSTALLATION OF THE SOFTWARE (AND WHICH IS DUPLICATED IN THE LICENSE FILE) OR IF THERE IS NO SUCH SOFTWARE LICENSE AGREEMENT OR CLICKWRAP END USER LICENSE AGREEMENT, THE LICENSE(S) LOCATED IN THE "LICENSE" FILE(S) OF THE SOFTWARE. USE OF THIS DOCUMENT IS SUBJECT TO THOSE TERMS AND CONDITIONS, AND YOUR USE HEREOF SHALL CONSTITUTE ACCEPTANCE OF AND AN AGREEMENT TO BE BOUND BY THE SAME.

ANY SOFTWARE ITEM IDENTIFIED AS THIRD PARTY LIBRARY IS AVAILABLE UNDER SEPARATE SOFTWARE LICENSE TERMS AND IS NOT PART OF A TIBCO PRODUCT. AS SUCH, THESE SOFTWARE ITEMS ARE NOT COVERED BY THE TERMS OF YOUR AGREEMENT WITH TIBCO, INCLUDING ANY TERMS CONCERNING SUPPORT, MAINTENANCE, WARRANTIES, AND INDEMNITIES. DOWNLOAD AND USE OF THESE ITEMS IS SOLELY AT YOUR OWN DISCRETION AND SUBJECT TO THE LICENSE TERMS APPLICABLE TO THEM. BY PROCEEDING TO DOWNLOAD, INSTALL OR USE ANY OF THESE ITEMS, YOU ACKNOWLEDGE THE FOREGOING DISTINCTIONS BETWEEN THESE ITEMS AND TIBCO PRODUCTS.

This document is subject to U.S. and international copyright laws and treaties. No part of this document may be reproduced in any form without the written authorization of TIBCO Software Inc.

TIBCO, the TIBCO logo, the TIBCO O logo, ActiveMatrix BusinessWorks, Business Studio, and TIBCO Business Studio are either registered trademarks or trademarks of TIBCO Software Inc. in the United States and/or other countries.

Java and all Java based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

All other product and company names and marks mentioned in this document are the property of their respective owners and are mentioned for identification purposes only.

This software may be available on multiple operating systems. However, not all operating system platforms for a specific software version are released at the same time. Please see the readme.txt file for the availability of this software version on a specific operating system platform.

THIS DOCUMENT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

THIS DOCUMENT COULD INCLUDE TECHNICAL INACCURACIES OR TYPOGRAPHICAL ERRORS. CHANGES ARE PERIODICALLY ADDED TO THE INFORMATION HEREIN; THESE CHANGES WILL BE INCORPORATED IN NEW EDITIONS OF THIS DOCUMENT. TIBCO SOFTWARE INC. MAY MAKE IMPROVEMENTS AND/OR CHANGES IN THE PRODUCT(S) AND/OR THE PROGRAM(S) DESCRIBED IN THIS DOCUMENT AT ANY TIME.

THE CONTENTS OF THIS DOCUMENT MAY BE MODIFIED AND/OR QUALIFIED, DIRECTLY OR INDIRECTLY, BY OTHER DOCUMENTATION WHICH ACCOMPANIES THIS SOFTWARE, INCLUDING BUT NOT LIMITED TO ANY RELEASE NOTES AND "READ ME" FILES.

This and other products of TIBCO Software Inc. may be covered by registered patents. Please refer to TIBCO's Virtual Patent Marking document (<https://www.tibco.com/patents>) for details.

Copyright © 2019. TIBCO Software Inc. All Rights Reserved.

Contents

TIBCO Documentation and Support Services	6
Product Overview	7
SMPP Protocol Version	7
Getting Started	8
Creating a Project	8
Creating an SMPP Connection	9
Configuring a Process	10
Testing a Process	10
Deploying an Application	11
SMPP Connection	12
General	12
General Configuration	12
Timeout Configuration	13
Pool Configuration	13
SMPP Palette	15
SendShortMessage	15
General	15
Description	16
Encoding	16
Advanced	16
Input	16
Output	17
Fault	17
ReceiveShortMessage	17
General	18
Description	18
Advanced	18
Conversation	19
Output	19
Type of Number and Numeric Plan Indicator Values	20
Fault	20
Message Encoding	22
Log Management	23
Log Levels	23
Setting Up Log Levels	23
Exporting Logs to a File	24

Error Codes **25**

TIBCO Documentation and Support Services

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the TIBCO Product Documentation website, mainly in HTML and PDF formats.

The TIBCO Product Documentation website is updated frequently and is more current than any other documentation included with the product. To access the latest documentation, visit <https://docs.tibco.com>.

Product-Specific Documentation

Documentation for TIBCO ActiveMatrix BusinessWorks™ Plug-in for SMPP is available on the [TIBCO ActiveMatrix BusinessWorks Plug-in for SMPP](#) Product Documentation page.

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

- *TIBCO ActiveMatrix BusinessWorks Plug-in for SMPP Installation*
- *TIBCO ActiveMatrix BusinessWorks Plug-in for SMPP User's Guide*
- *TIBCO ActiveMatrix BusinessWorks Plug-in for SMPP Release Notes*

How to Contact TIBCO Support

You can contact TIBCO Support in the following ways:

- For an overview of TIBCO Support, visit <http://www.tibco.com/services/support>.
- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support portal at <https://support.tibco.com>.
- For creating a Support case, you must have a valid maintenance or support contract with TIBCO. You also need a user name and password to log in to <https://support.tibco.com>. If you do not have a user name, you can request one by clicking Register on the website.

How to Join TIBCO Community

TIBCO Community is the official channel for TIBCO customers, partners, and employee subject matter experts to share and access their collective experience. TIBCO Community offers access to Q&A forums, product wikis, and best practices. It also offers access to extensions, adapters, solution accelerators, and tools that extend and enable customers to gain full value from TIBCO products. In addition, users can submit and vote on feature requests from within the [TIBCO Ideas Portal](#). For a free registration, go to <https://community.tibco.com>.

Product Overview

TIBCO ActiveMatrix BusinessWorks™ Plug-in for SMPP provides you an environment to send and receive short messages. ActiveMatrix BusinessWorks™ Plug-in for SMPP acts as an SMPP client connected to an external SMPP server. You can send short messages to recipients who are identified by their phone numbers. You can receive short messages based on the specified event type.

The plug-in provides the following main features:

- SendShortMessage Activity
- ReceiveShortMessage Activity



Concatenating long messages and sending messages through payload is not supported.

SMPP Protocol Version

ActiveMatrix BusinessWorks Plug-in for SMPP supports short message peer to peer protocol specification v3.4 version.

For specifications of the SMPP protocol, visit the short message peer to peer specification v 3.4 version at http://docs.nimta.com/SMPP_v3_4_Issue1_2.pdf.

Getting Started

This tutorial is designed for the beginners who want to use ActiveMatrix BusinessWorks Plug-in for SMPP in TIBCO Business Studio™.

All the operations are performed in TIBCO Business Studio.

A basic procedure of using ActiveMatrix BusinessWorks Plug-in for SMPP includes:

1. [Creating a Project](#)
2. [Creating an SMPP Connection](#)
3. [Configuring a Process](#)
4. [Testing a Process](#)
5. [Deploying an Application](#)

Creating a Project

The first task by using the plug-in is creating a project. After creating a project, you can add resources and processes.

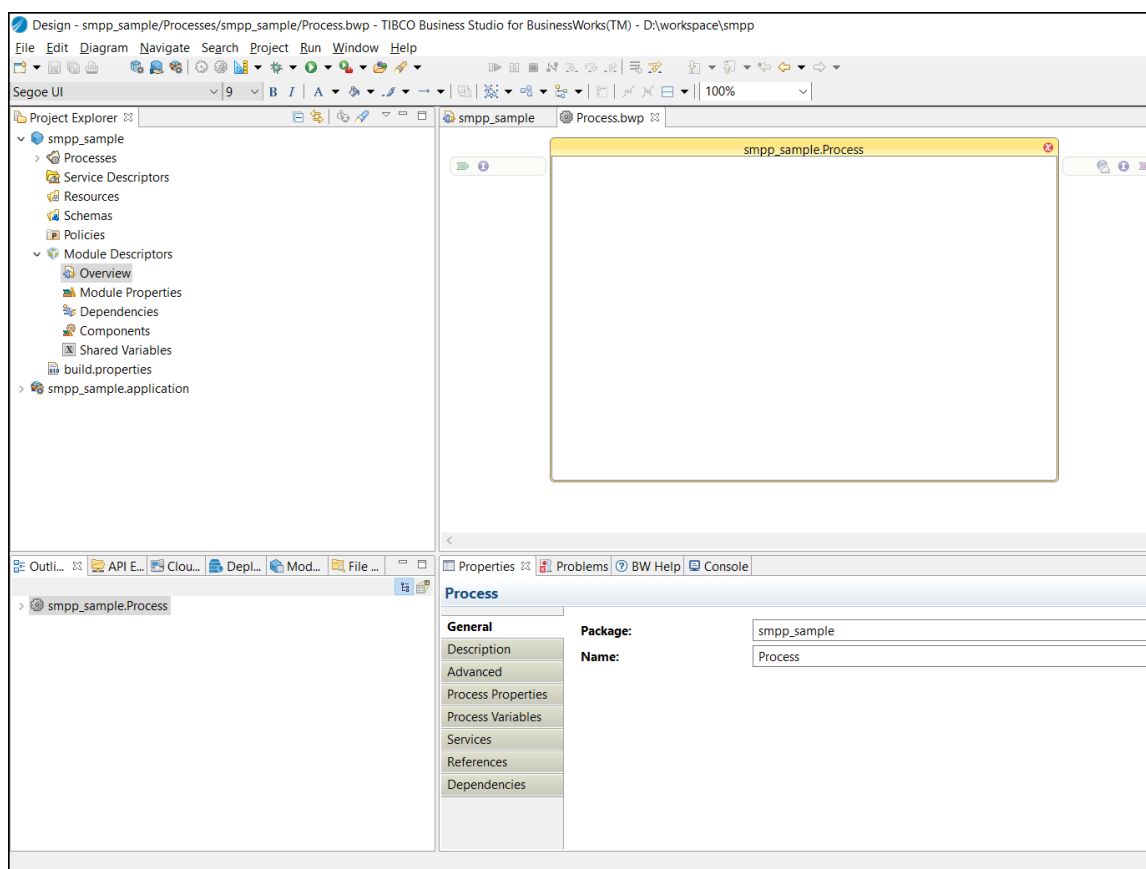
An Eclipse project is an application module configured for TIBCO ActiveMatrix BusinessWorks™. An application module is the smallest unit of resources that is named, versioned, and packaged as part of an application.

Procedure

1. Start TIBCO Business Studio by using one of the following ways:
 - Microsoft Windows: click **Start > All Programs > TIBCO > TIBCO_HOME > TIBCO Business Studio version_number > Studio for Designers**.
 - Mac OS and Linux: run the TIBCO Business Studio executable file located in the *TIBCO_HOME/studio/version_number/eclipse* directory.
2. From the menu, click **File > New > BusinessWorks Resources** to open the BusinessWorks Resource wizard.
3. In the Select a wizard dialog box, click **BusinessWorks Application Module** and click **Next** to open the New BusinessWorks Application Module wizard.
4. In the Project dialog box, configure the project that you want to create:
 - a) In the **Project name** field, enter a project name.
 - b) By default, the created project is located in the workspace, which is currently in use. If you do not want to use the default location for the project, clear the **Use default location** check box and click the **Browse** button to select a new location.
 - c) Use the default version of the application module, or enter a new version in the **Version** field.
 - d) Keep the **Create empty process** and **Create Application** check boxes selected to automatically create an empty process and an application when creating the project.
 - e) Select the **Use Java configuration** check box if you want to create a Java module.
A Java module provides the Java tooling capabilities.
 - f) Click **Finish** to create the project.

Result

The project with the specified settings is displayed in the Project Explorer view.



Creating an SMPP Connection

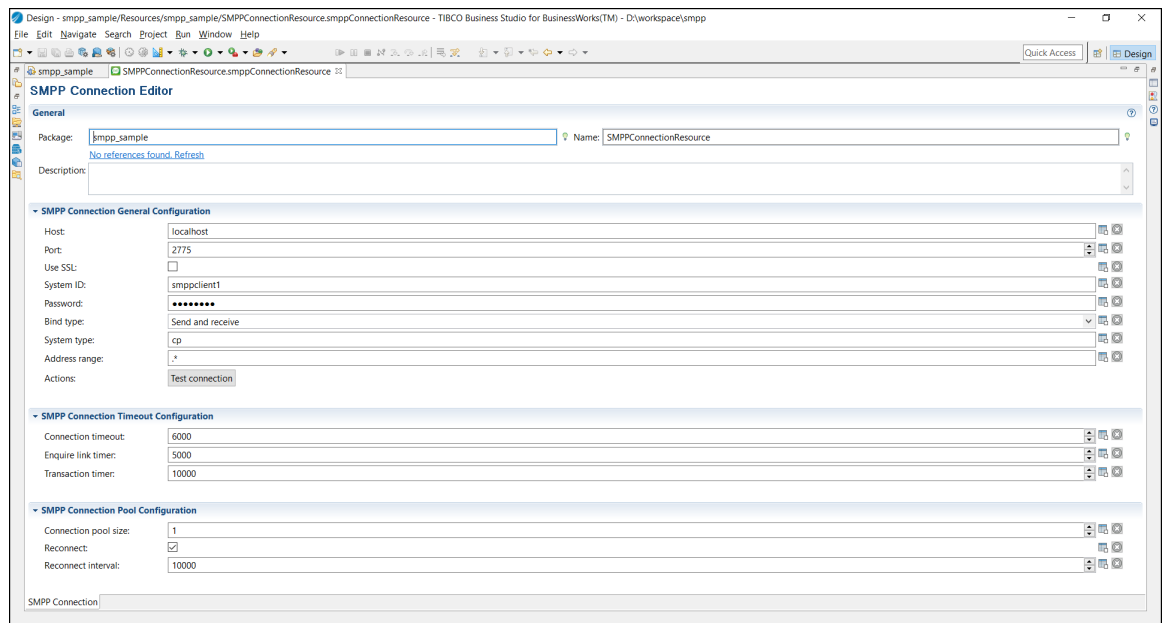
After creating a project, you must create an SMPP Connection shared resource to connect to the SMPP server. You must have a third party server hosted with SMPP services.

Prerequisites

The SMPP Connection shared resource is available at the **Resources** level. Create the project as described in [Creating a Project](#).

Procedure

1. Expand the created project in the Project Explorer view.
2. Right-click the **Resources** folder and click **New > SMPP Connection** to open the SMPP Connection wizard. The resource folder, package name, and resource name of the SMPP connection are provided by default, which can be customized.
3. Click **Finish** to open the **SMPP Connection editor**.
4. In the **SMPP Connection editor**, configure the SMPP Connection shared resource. For information about the configuration fields, see [SMPP Connection](#).
5. Click **Test Connection** to validate the connection.



Configuring a Process

An empty process is created by default when creating a project. You can add activities to the empty process to complete a task.

Prerequisites

Ensure that you have created an empty process when creating a project. For more information, see [Creating a Project](#).

Procedure

1. In the Project Explorer view, click the created project and open the empty process from the **Processes** folder.
2. Select activities from the Palette view and drop them in the Process editor.
For example, select and drop the Timer activity from the General Activities palette, and the SendShortMessage activity from the SMPP palette.
3. Click an activity in the Process editor and drag the icon to create a transition between the added activities.
4. Configure the added SMPP activities, as described in [SMPP Palette](#).
5. Click **File > Save** to save the process.


Testing a Process

After configuring a process, you can test the process to check if the process completes your task.

Prerequisites

Ensure that you have configured a process, as described in [Configuring a Process](#).

Procedure

1. Open the process that you have configured in TIBCO Business Studio.
2. On the toolbar, click  **Debug > Debug Configurations**.
3. In the left panel, click **BusinessWorks Application > BWApplication**.
By default, all the applications in the current workspace are selected on the **Applications** tab. Ensure that only the application you want to debug is selected on the **Applications** tab in the right panel.
4. Click **Debug** to test the process in the selected application.
TIBCO Business Studio changes to the Debug perspective. The debug information is displayed in the Console view.
5. On the **Debug** tab, expand the running process and click an activity, such as the `SendShortMessage` activity.
6. In the upper-right corner, click the **Job Data** tab, and then click the **Output** tab to check the activity output.

Deploying an Application

After testing, if the configured process works as expected, you can deploy the application that contains the configured process into a runtime environment, and then use the `bwadmin` utility to manage the deployed application.

Before deploying an application, you must generate an application archive, which is an enterprise archive (EAR) file that is created in TIBCO Business Studio.

Deploying an application involves the following tasks:

1. Uploading an application archive
2. Deploying an application archive
3. Starting an application

For more details about how to deploy an application, see *TIBCO ActiveMatrix BusinessWorks Administration* guide.

SMPP Connection

The SMPP Connection shared resource contains all the parameters that must be configured when you use the plug-in to connect to the SMPP server. The SMPP Connection is used by all the activities in the SMPP palette.

For more details about how to create an SMPP connection, see [Creating an SMPP Connection](#).

General

The following table describes the fields in the General panel:

Field	Module Property?	Description
Package	No	The name of the package where the shared resource is located.
Name	No	The name of the shared resource.
Description	No	The short description of the shared resource.

General Configuration

The following table describes the fields in the General Configuration panel:

Field	Module Property?	Description
Host	Yes	Specify the host name of your SMPP server.
Port	Yes	Specify the port on which your server is running.
Use SSL	Yes	Select this check box if your server connection is secured with SSL.
System ID	Yes	Enter the system ID of your SMPP hosted server.
Password	Yes	Specify the password used to connect to the SMPP server.
Bind type	Yes	Select a bind type from the list: <ul style="list-style-type: none"> • Send: To configure your connection for only sending messages. • Receive: To configure your connection for only receiving messages. • Send and receive: To configure your connection for sending and receiving messages.

Field	Module Property?	Description
System type	Yes	Set the optional login field only when a value is provided by the system administrator. The value must be a short text string.
Address range	Yes	Use the field primarily to receive messages. You must set this field only if you are instructed by the SMPP service provider.
Actions	Yes	Click Test connection to ensure successful connection with your SMPP server.
SMSC Default Alphabet	Yes	Alphabet (text encoding) that encodes the message. See Message Encoding for details.

Timeout Configuration

The following table describes the fields in the Timeout Configuration panel:

Field	Module Property?	Description
Connection timeout	Yes	Specify the maximum amount of time that an SMPP Connection Resource waits for a connection to be established with an SMPP server. The default value is 10000 milliseconds.
Enquire link timer	Yes	Specify the time lapse allowed between operations, after which the SMPP entity should interfere, even when its peer entity has an active session. The default value is 5000 milliseconds.
Transaction timer	Yes	Specify the time lapse allowed between an SMPP request and SMPP response. The default value is 10000 milliseconds.

Pool Configuration

The following table describes the fields in the Pool Configuration panel:

Field	Module Property?	Description
Connection pool size	Yes	Specify the maximum number of connections in the connection pool. The default value is 1.

Field	Module Property?	Description
Reconnect	Yes	Select this check box if you want to reestablish a lost connection. It is selected by default.
Reconnect interval	Yes	Available if Reconnection check box is selected. Specify the time interval in which an attempt is made to reestablish a lost connection with the server. Default time interval is 10000 milliseconds.

SMPP Palette

A palette groups the activities that connect the same external applications together. The SMPP palette is added to TIBCO Business Studio after installing ActiveMatrix BusinessWorks Plug-in for SMPP.

The SMPP palette contains the following activities:

- [SendShortMessage](#)
- [ReceiveShortMessage](#)

SendShortMessage


You can use the SendShortMessage activity to send a message over a specified resource. You must have a source phone number, destination phone number, and a text message.

The SendShortMessage activity has the following tabs:

- [General](#)
- [Description](#)
- [Encoding](#)
- [Advanced](#)
- [Input](#)
- [Output](#)
- [Fault](#)

General

The following table describes the fields on the **General** tab of the SendShortMessage activity.

Field	Module Property ?	Description
Name	No	The name of the activity displayed in the process. The default value is SendShortMessage.
SMPP Connection	Yes	<p>Select a shared resource by completing the following steps:</p> <ol style="list-style-type: none"> 1. Click the Choose/Create Default Resource  icon to open the Select smppConnectionResource Resource Template window, where all the available resources are listed. 2. In the Matching items panel, select one shared resource by clicking it. Then, click OK.

Description

On the **Description** tab, add a short description for the SendShortMessage activity.

Encoding

The following table describes the fields on the **Encoding** tab of the SendShortMessage activity.

Field	Module Property ?	Description
Alphabet	Yes	Alphabet (text encoding) that encodes the message. See Message Encoding for details.
Message class	Yes	Message class For more information, see Digital cellular telecommunications system (Phase 2+); Alphabets and language-specific information (GSM 03.38) .

Advanced

The following table describes the field on the **Advanced** tab of the SendShortMessage activity.

Field	Module Property ?	Description
Source Type of Number	Yes	Specifies the type of number for the source number.
Source Numeric Plan Indicator	Yes	Specifies the numeric plan indicator for the source number.
Destination Type of Number	Yes	Specifies the type of number for the destination number.
Destination Numeric Plan Indicator	Yes	Specifies the numeric plan indicator for the destination number.
SMSC Delivery Receipt	Yes	Selects the field to request a delivery receipt for the message.

Input

The following table describes the fields on the **Input** tab of the SendShortMessage activity.

Field	Data Type	Description
SourceNumber	String	Specifies the source number from where you want to send a short message.
DestinationNumber	String	Specifies the destination number to which you want to send a short message. You can specify multiple destination numbers by duplicating this field.

Field	Data Type	Description
Priority	Byte	Designates the priority level of the message.
ScheduleDelivery	dateTime	Specifies the scheduled time at which the message delivery is first attempted by the short message service center (SMSC). By default, no value is specified for immediate delivery.
ValidityPeriod	dateTime	Specifies the short message service center expiration time, after which the message is discarded if it is not delivered to the destination. By default, you can set the field to NULL to request the short message service center to consider default validity period.
ReplacePresent	Boolean	Specifies a flag to request the short message service center to replace a previously submitted message, whose delivery is still pending.
Message	String	Sends short message.

Output

The following table describes the fields on the **Output** tab of the SendShortMessage activity.

Field	Data Type	Description
MessageID	String	The sendShortMessage activity returns the message ID in the output of the operation.

Fault

The **Fault** tab has the following exception:

- [GenericSMPPEException](#)

The exception has the following fields:

Field	Data Type	Description
msg	String	The error message description returned by the plug-in.
msgCode	String	The error code returned by the plug-in.

ReceiveShortMessage

You can use the ReceiveShortMessage activity to receive regular messages based on the specified event type. ReceiveShortMessage is a process starter activity that listens to the new messages.


The ReceiveShortMessage activity has the following tabs:

- [General](#)

- [Description](#)
- [Advanced](#)
- [Conversation](#)
- [Output](#)
- [Fault](#)

General

The following table describes the fields on the **General** tab of the ReceiveShortMessage activity.

Field	Module Property ?	Description
Name	No	The name of the activity displayed in the process. The default value is <code>ReceiveShortMessage</code> .
SMPP Connection	Yes	Select a shared resource by completing the following steps: <ol style="list-style-type: none"> 1. Click the Choose/Create Default Resource  icon to open the Select smppConnectionResource Resource Template window, where all the available resources are listed. 2. In the Matching items panel, select one shared resource by clicking it. Click OK.
Event type	Yes	The list has the following options: <p>Default message: to start the activity on receiving a text message.</p> <p>SMSC delivery receipt: to start the activity on receiving a message delivery notification.</p>

Description

On the **Description** tab, add a short description for the ReceiveShortMessage activity.


Advanced

The following table describes the fields on the **Advanced** tab of the ReceiveShortMessage activity.

Field	Module Property ?	Description
Sequence Key	No	This field contains an XPath expression that specifies which processes should run in sequence. Process instances with sequencing keys evaluating to the same value, are executed sequentially in the sequence the process instance was created.

Field	Module Property ?	Description
Custom Job Id	No	This field contains an XPath expression that specifies a custom job ID for every job in the process instance.

Conversation

You can initiate the conversation here. Click the **Add New Conversation**  button to initiate multiple conversations.



Output

The following table describes the fields on the **Output** tab of the ReceiveShortMessage activity.

Field	Data Type	Description
SourceNumber	String	The source number from where the short message is sent.
DestinationNumber	String	The destination number where the short message is received.
Priority	Byte	The priority level for the short message.
ScheduleDeliveryTime	dateTime	The delivery time scheduled for the short message.
ValidityPeriod	dateTime	The validity period for the short message.
SourceTypeOfNumber	String	The type of number for the source number.
SourceNumericPlanIndicator	String	The numeric plan indicator for the source number.
DestTypeOfNumber	String	The type of number for the destination number.
DestNumericPlanIndicator	String	The numeric plan indicator for the destination number.
Message	String	The content of the received short message.

Type of Number and Numeric Plan Indicator Values

The following table describes the **SourceTypeOfNumber**, **DestTypeOfNumber**, **SourceNumericPlanIndicator**, and **DestNumericPlanIndicator** fields returned by the **Output** tab of the **ReceiveShortMessage** activity.

Field	Values
SourceTypeOfNumber or DestTypeOfNumber	<ul style="list-style-type: none"> • Unknown • International • National • Network Specific • Subscriber Number • Alphanumeric • Abbreviated <p> If the SMPP server returns a non-standard value for SourceTypeOfNumber field or DestTypeOfNumber field, the ReceiveShortMessage activity returns a value in decimal format.</p>
SourceNumericPlanIndicator or DestNumericPlanIndicator	<ul style="list-style-type: none"> • Unknown • International • National • Network Specific • Subscriber Number • Alphanumeric • Abbreviated <p> If the SMPP server returns a non-standard value for SourceTypeOfNumber field or DestTypeOfNumber field, the ReceiveShortMessage activity returns a value in decimal format.</p>

Fault

The **Fault** tab has the following exception:

- **GenericSMPPEException**

The exception has the following fields:

Field	Data Type	Description
msg	String	The error message description returned by the plug-in.
msgCode	String	The error code returned by the plug-in.

Message Encoding

A message is encoded with different encoding schemes. A message can be composed in the following ways:

- With a non-zero `data_coding` indicator that defines the encoding used, for example ASCII. Encoding schemes are explained in section 5.2.19 `data_coding` of [SMPP Protocol Specification v3.4](#).
- With a zero `data_coding` indicator (SMSC Default Alphabet). A message is created by using default settings on the SMPP server (also referred to as SMSC) or client. The exact encoding scheme is not indicated in the message and both the server and the client are configured to use the same encoding scheme.



The default encoding used by the SMPP servers is not governed by SMPP Protocol Specification. GSM-7 encoding is commonly used.

SMSC Default Alphabet is configured through a list on the SMPP Connection shared resource. In addition to the standard encoding, the list contains GSM-7BIT and GSM-7BIT-PACKED. GSM-7BIT is a GSM-7 encoding and GSM-7BIT-PACKED is a GSM-7 encoding with each byte packed into 7 bits. You must always configure your SMPP Connection resource with the short message service center settings.

Message encoding is handled by various activities in the following way:

SendShortMessage

You must indicate a specific encoding for your message on the **Encoding** tab. If you select "SMSC Default Alphabet", then SMSC default alphabet is used from the SMPP Connection resource. The message contains `data_coding` 0, which means that SMCS should use it as a default alphabet to decode the text.

Alternatively, if you can select a specific value, such as "Latin 1 (ISO-8859-1)", your message is encoded with that encoding and `data_coding` is set to indicate it. SMCS is expected to follow the `data_coding` and decode the message correctly.

ReceiveShortMessage

The activity examines `data_coding` embedded in a message. If `data_coding` is zero, it uses the SMSC Default Alphabet from the SMPP Connection resource. Otherwise, it selects an encoding as indicated by the `data_coding`.

SMPP protocol does not explicitly define the encoding schemes for "Octet unspecified (8-bit binary)" `data_codings`. The plug-in attempts to decode those messages as UTF-8. Any other `data_coding` values that do not have a clear encoding associated with them (such as "reserved") fall back to SMSC Default Alphabet from the SMPP Connection resource.



The SMCS you are connecting to, may not be compliant with all the encoding schemes listed in SMPP Protocol Specification 3.4.

Log Management

When an error occurs, you can check logs to trace and troubleshoot the plug-in exception.

By default, error logs are displayed in the Console view when you run a process in the debug mode. You can change the log level of the plug-in to trace different messages and export logs to a file. Different log levels correspond to different messages as described in Log Levels.

Log Levels

Different log levels include different information. The plug-in supports the following log levels:

Log Level	Description
Trace	Includes all information regarding the running process.
Debug	Indicates a developer-defined tracing message.
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.
Error	Indicates that an unrecoverable error occurred. Depending on the severity of the error, the plug-in might either continue with the next operation or stop.

Setting Up Log Levels

You can configure different log levels for the plug-in and plug-in activities to trace different messages. By default, the plug-in uses the log level configured for TIBCO ActiveMatrix BusinessWorks. The default log level of TIBCO ActiveMatrix BusinessWorks is Error.

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 BusinessWorks Palette and Activity logger area to specify a log level for the plug-in:

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

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

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

The value of the level element can be Trace, Debug, Info, or Error.



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

3. Save the file.

Exporting Logs to a File

You can update the `logback.xml` file to export plug-in logs to a file.

Procedure

1. In Windows system, navigate to `TIBCO_HOME\bw\version_number\config\design\logback` directory and open the `logback.xml` file.



After deploying an application in TIBCO Enterprise Administrator, navigate to the `TIBCO_HOME\bw\version_number\domains\domain_name\appnodes\space_name\node_name` directory to find the `logback.xml` file.

2. Save the file.

Error Codes

The following table lists error codes, detailed explanation of each error, where they are applicable, and ways to solve different errors.

Error Code and Error Message	Role	Category	Description	Solution
BW-SMPP-500001 Creating Shared Resource failed.	Error	BW-Plug-in	An error occurred while creating an SMPP Connection resource.	Examine the failure and correct accordingly.
BW-SMPP-500002 SMPP shared resource failed to establish a connection.	Error	BW-Plug-in	SMPP Connection resource failed to establish an SMPP connection.	Examine the failure and correct accordingly.
BW-SMPP-500003 Connection pool in SMPP shared resource is too small. It must be at least one.	Error	BW-Plug-in	Connection pool cannot be less than 1.	Increase the pool size.
BW-SMPP-500004 Exception occurred while invoking execute method for activity.	Error	BW-Plug-in	This wrapper message appears in the log and carries the details of the failure.	Examine the failure and correct accordingly.
BW-SMPP-500005 Exception occurred while sending short message in activity.	Error	BW-Plug-in	SendShortMessage failed to send a message.	Examine the failure and correct accordingly.
BW-SMPP-500006 Exception occurred while receiving short message in activity.	Error	BW-Plug-in	ReceiveShortMessage failed to receive a message.	Examine the failure and correct accordingly.
BW-SMPP-500008 Cannot receive messages on a resource configured with Bind type "Send".	Error	BW-Plug-in	ReceiveShortMessage cannot be used with SMPP Connection with Bind type "Send".	Reconfigure the SMPP Connection.

Error Code and Error Message	Role	Category	Description	Solution
BW-SMPP-500009 Cannot send messages on a resource configured with Bind type "Receive".	Error	BW-Plug-in	SendShortMessage cannot be used with SMPP Connection with Bind type "Receive".	Reconfigure the SMPP Connection.